TRACTS;

CHIEFLY RELATING TO

IRELAND.

CONTAINING:

I. A TREATISE of TAXES and CONTRIBUTIONS.

II. ESSAYS in POLITICAL ARITHMETIC.

III. The POLITICAL ANATOMY of IRELAND.

By the late Sir WILLIAM PETTY.

To which is prefixed

HIS LAST WILL.

DUBLIN:
Printed by BOULTER GRIERSON, Printer to the King's Most Excellent Majesty.
MDCCLXIX.

The Principal Conclusions of this Treatise are,

CHAP. I. That a small country, and few people, may by their situation, trade, and policy, be equivalent in wealth and strength, to a far greater people, and territory. And particularly, how conveniencies for shipping, and water carriage, do most eminently, and fundamentally, conduce thereunto. Page 213

CHAP. II. That some kind of taxes, and public levies, may rather increase than diminish the common-wealth. 234

CHAP. III. That France cannot, by reason of natural and perpetual impediments, be more powerful at sea, than the English, or Hollanders. 244

CHAP. IV. That the people, and territories of the king of England, are naturally near as considerable, for wealth, and strength, as those of France. 251

CHAP. V. That the impediments of England's greatness, are but contingent and removeable. 264

CHAP. VI. That the power and wealth of England, hath increased above this forty years. 270

CHAP. VII. That one tenth part of the whole expence, of the king of England's ſubjects, is ſufficient to maintain one hundred thouſand foot, thirty thouſand horſe, and forty thouſand men at ſea, and to defray all other charges of the government, both ordinary and extraordinary, if the ſame were regularly taxed and raiſed. Page 273

CHAP. VIII. That there are ſpared hands enough among the king of England's ſubjects, to earn two millions *per annum*, more than they now do, and there are employments, ready, proper, and ſufficient for that purpoſe. 275

CHAP. IX. That there is money ſufficient to drive the trade of the nation. 278

CHAP. X. That the king of England's ſubjects, have ſtock competent and convenient to drive the trade of the whole commercial world. 279

POLITICAL

The laſt will of that great maſter of political arithmetic, Sir William Petty, knight, founder of the noble family of Shelburne; containing a very curious account of his life, and affording a ſtronger character of him, perhaps, than could be expected from any other pen.

IN the name of God, Amen. I Sir William Petty, Knt. born at Rumſey in Hantſhire *, do, revoking all other and former wills, make this my laſt will and teſtament, premiſing the enſuing preface to the ſame, whereby to expreſs my condition, deſign, intentions, and deſires, concerning the perſons and things contained in and relating to my ſaid will, for the better expounding any thing, which may hereafter ſeem doubtful therein, and alſo for juſtifying, on behalf of my children, the manner and means of getting and acquiring the eſtate, which I hereby bequeath unto them; exhorting them to improve the ſame by no worſe negocia-

* He was ſon to Mr. Anthony Petty, of Rumney, in Hampſhire, Clothier.

 tions.

tions. In the firſt place, I declare and affirm, that at the full age of fifteen years I had obtained the Latin, Greek, and French tongues, the whole body of common arithmetick, the practical geometry and aſtronomy, conducing to navigation, dialling, &c. with the knowledge of ſeveral mathematical trades, all which, and having been at the univerſity of Oxon, preferred me to the king's navy; where, at the age of twenty years, I had gotten up about threeſcore pounds, with as much mathematicks as any of my age was known to have had. With this proviſion, anno 1643, when the civil wars betwixt the king and parliament grew hot, I went into the Netherlands and France for three years, and having vigorouſly followed my ſtudies, eſpecially that of medicine, at Utrecht, Leyden, Amſterdam, and Paris, I returned to Rumſey, where I was born, bringing back with me my brother Anthony, whom I had bred, with about 10l. more than I had carried out of England. With this 70l. and my endeavours, in leſs than four years more I obtained my degree of M. D. in Oxford, and forthwith thereupon to be admitted into the college of phyſicians, London, and into ſeveral clubs of the virtuous; after all which expences defrayed, I had left 28l. and in the next two years, being made fellow of Brazen Noſe, and anatomy profeſſor in Oxford, and alſo reader at Greſham college, I advanced my ſaid ſtock to about 400l. and with 100l. more advanced and given me to go for Ireland, unto full 500l. Upon the 10th of September 1652, I landed at Waterford in Ireland, phyſician to the army, who had ſuppreſſed the rebellion begun in 1641, and to

to the general of the ſame, and the head-quarters, at the rate of 20s. per diem, at which I continued till June 1659, gaining by my practice 400l. a year above the ſaid ſalary. About September 1654, I perceiving that the admeaſurement of the lands, forfeited by the aforementioned rebellion, and intended to regulate the ſatisfaction of the ſoldiers, who had ſuppreſſed the ſame, was moſt unſufficiently and abſurdly managed; I obtained a contract, dated 11th December 1654, for making the ſame admeaſurement, and, by God's bleſſing, ſo performed the ſame, as that I gained about 9000l. thereby; which, with the 500l. abovementioned, my ſalary of 20s. per diem, the benefit of my practice, together with 60l. given me for directing an after-ſurvey of the adventurers land, and 800l. more for two years ſalary, as clerk of the council, raiſed me an eſtate of about 13000l. in ready and real money, at a time, when, without art, intereſt, or authority, men bought as much lands for 10s. in real money, as in this year 1685 yields 10s. per ann. rent, above his majeſty's quit-rents. Now, I beſtowed part of the ſaid 13000l. in ſoldiers debentures, part in purchaſing the earl of Arundel's houſe and garden in Lothbury, London, and part I keep in caſh, to anſwer emergencies? hereupon I purchaſed lands in Ireland, with ſoldiers debentures, bought at above the market rates, great part whereof I loſt by the court of Innocents, anno 1663 *; and built the ſaid garden, called

 Token-

* In 1663, he raiſed his reputation by the invention of the double bottomed ſhip, againſt the judgment

Token-houſe-yard, in Lothbury, which was for the moſt part deſtroyed by the dreadful fire, anno 1666. Afterwards, anno 1667, I married Elizabeth, the relict of Sir Maurice Fenton, bart. I ſet up iron-works and pilchard-fiſhing in Kerry, and opened the lead mines and timber trade in Kerry; by all which, and ſome advantageous bargains; and with living under my income, I have at the making this my will the real and perſonal eſtate following, viz. a large houſe and four tenements in Rumſey, with four acres of meadow upon the cauſeway, and about four acres of arable in the fields, called Marks and Woollſworth, in all about 30l. per annum.

ment of almoſt all mankind; for in July, when at firſt the ſhip ventured from Dublin to Holyhead, ſhe ſtayed there many days before her return, which made her adverſaries inſult, and diſcourſe the ſeveral neceſſities why ſhe muſt be caſt away: but her return in triumph, with thoſe viſible advantages above other veſſels, checked the deriſion of ſome, and encalmed the violence of others, the firſt point being clearly gained, that ſhe could bear the ſea. She turned into that narrow harbour againſt wind and tide, among the rocks and ſhips with ſuch dexterity, as many ancient ſeamen confeſſed they had never ſeen the like. It appeared much to excel all other forms of ſhips in ſailing, carriage, and ſecurity; but at length, in its return from a voyage, was deſtroyed by a common fate, and ſuch a dreadful tempeſt, as overwhelmed a great fleet the ſame night; ſo that the ancient fabrick of ſhips had no reaſon to triumph over the new model; when of ſeventy ſail, that were in the ſame ſtorm, there was not one eſcaped to bring the news. A model of this ſhip is ſtill kept in the repoſitory of Greſham college, which he preſented them, made with his own hands.

Houſes

Houſes in Token-houſe yard, near Lothbury, London, with a leaſe in Piccadilly, and the Seven Stars and the Blazing Star in Birching-lane, London, worth about 500l. per ann. beſides mortgages upon certain houſes in Hog-lane, near Shoreditch in London, and in Erith in Kent, worth about 20l. per ann. I have three fourth parts of the ſhip Charles whereof Derych Paine is maſter, which I value at 80l. per ann. As alſo the copper-plates for the maps of Ireland with the king's privilege, which I rate at 100l. per ann. in all 730l. per ann. I have in Ireland, without the county of Kerry, in lands, remainders, and reverſions, about 3100l. per ann. I have of neat profits out of the lands and woods of Kerry, 1100l. per ann. beſides iron-works, fiſhing, and lead mines, and marble quarries, worth 600l. per ann. in all 4800l. I have as my wife's jointure, during her life, about 850l. per ann. and for fourteen years after her death about 200l. per ann. I have, by 3300l. money at intereſt, 320l. per ann. in all about 6700l. per annum.

The perſonal eſtate is as follows, viz. In cheſt 6600l. in the hands of Adam Loftus, 1296l. of Mr. John Cogs, goldſmith, of London, 1251l. in ſilver, plate and jewels, about 3000l. in furniture, goods, pictures, coach-horſes, books, and watches, 1150l. per eſtimate in all 12000l. I value my three cheſts of original maps and field-books, the copies of the Downe-ſurvey, with the barony maps, and the cheſt of diſtribution books, with two cheſts of looſe papers relating to the ſurvey, the too great barony books, and the book of the hiſtory of the ſurvey, all together at 2000l. I have due out of Kerry, for arrears of my

rent

rent and iron, before the 24th of June 1685, the ſum of 1912 *l.* for the next half year's rent out of my lands in Ireland, my wife's jointure, and England, on or before the 24th of June next, 2000 *l.* Moreover, by arrears due 30th of April 1685, out of all my eſtate, by eſtimate, and intereſt of money, 1800 *l.* By other good debts, due upon bonds and bills at this time, per eſtimate, 900 *l.* By debts, which I call bad, 4000 *l.* worth perhaps 800 *l.* By debts which I call doubtful, 50,000 *l.* worth perhaps 25,000 *l.* in all 34,412 *l.* and the total of the whole perſonal eſtate, 46,412 *l.* So as my preſent income for the year 1685, may be 6700 *l.* the profits of the perſonal eſtate may be 4641 *l.* and the demonſtrable improvement of my Iriſh eſtate may be 3659 *l.* per ann. to make in all 15,000 *l.* per ann. in and by all manner of effects, abating for bad debts about 28,000 *l.* whereupon I ſay in groſs, that my real eſtate or income may be 6700 *l.* per annum, my perſonal eſtate about 45,000 *l.* my bad and deſperate debts 30,000 *l.* and the improvements may be 4000 *l.* per annum, in all 15,000 *l.* per ann. *ut ſupra.* Now my opinion and deſire is, (if I could effect it, and if I were clear from the law, cuſtom, and all other impediments) to add to my wife's jointure three fourths of what it is now computed at, viz. 637 *l.* per ann. to make the whole 1587 *l.* per ann. which addition of 637 *l.* and 850 *l.* being deducted out of the aforementioned 6700 *l.* leaves 5113 *l.* for my two ſons; whereof I would my eldeſt ſon ſhould have two thirds, or 3408 *l.* and the younger 1705 *l.* and that after their mother's death, the aforeſaid addition of 637 *l.* ſhould be added in like proportion, making for the eldeſt

eldeſt 3832 *l.* and for the youngeſt 1916 *l.* And I would that the improvement of the eſtate ſhould be equally divided between my two ſons; and that the perſonal eſtate (firſt taking out 10,000 *l.* for my only daughter) that the reſt ſhould be equally divided between my wife and three children; by which method my wife would have 1587 *l.* per ann. and 9000 *l.* in perſonal effects; my daughter would have 10000 *l.* of the craem, and 9000 *l.* more with leſs certainty; my eldeſt ſon would have 3800 *l.* per ann. and half the expected improvement, with 9000 *l.* in hopeful effects, over and above his wife's portion; and my youngeſt ſon would have the ſame within 1900 *l.* per ann. I would adviſe my wife in this caſe, to ſpend her whole 1587 *l.* per ann. that is to ſay, on her own entertainment, charity, and munificence, without care of increaſing her children's fortunes; and I would ſhe ſhould give away one third of the above mentioned 9000 *l.* at her death, even from her children, upon any worthy object, and diſpoſe of the other two thirds to ſuch of her children and grand children as pleaſed her beſt, without regard to any other rule or proportion. In caſe of either of my three children's death under age, I adviſe as follows, viz. if my eldeſt, Charles, die without iſſue, I would that Henry ſhould have three fourths of what he leaves, and my daughter Anne the reſt. If Henry die, I would that what he leaves may be equally divided between Charles and Anne; and if Anne die, that her ſhare be equally divided between Charles and Henry.

Memorandum, That I think fit to rate the 30,000 *l.* deſperate debts at 1000 *l.* only, and to

 give

give it my daughter, to make her abovementioned 10,000 *l.* and 9000 l. to be full 20,000 l. which is much ſhort of what I have given her younger brother; and the elder brother may have 3800 l. per ann. 9000 l. in money, worth 900 l. more, 2000 l. by improvements, and 1300l. by marriage, to make up the whole to 8000l. per ann. which is very well for the eldeſt ſon, as 20,000l. for the daughter. ——— He then leaves his wife executrix and guardian during her widowhood, and in caſe of her marriage, her brother James Waller and Thomas Dance; recommending to them and his children to uſe the ſame ſervants and inſtruments for management of the eſtate as were in his lifetime, at certain ſalaries to continue during their lives, or until his youngeſt child ſhould be 21 years, which would be the 22d of October 1696, after which his children might put the management of their reſpective concerns into what hand they pleaſed. And then proceeds——— I would not have my funeral charges to exceed 300l. over and above what ſum I allow, and give 150l. to ſet up a monument in the church of Rumſey. near where my grandfather, father, and mother were buried, in memory of them, and of all my brothers and ſiſters. I alſo give 5l. for a ſtone to be ſet up in Lothbury church, London, in memory of my brother Anthony, there buried about the 18th of October 1649: I alſo give 50l. for a ſmall monument, to be ſet up in St. Bride's church, Dublin, in memory of my ſon John, and my near kinſman John Petty; ſuppoſing may wife will add thereunto for her excellent ſon Sir. William Fenton, bart. who was buried there 18th March 1670-1, and if I my ſelf be buried

buried in any of the ſaid three places, I would have 100l. only added to the abovenamed ſums, or that the ſaid 100l. ſhall be beſtowed on a monument for me in any other place, where I ſhall die. As for legacies for the poor I am at a ſtand; as for beggars by trade and election I give them nothing; as for impotents by the hand of God, the publick ought to maintain them; as for thoſe who have been bred to no calling nor eſtate, they ſhould be put upon their kindred; as for thoſe who can get no work, the magiſtrate ſhould cauſe them to be employed, which may be well done in Ireland, where is fifteen acres of improveable land for every head; priſoners for crimes, by the King; for debt by their proſecutors; as for thoſe who compaſſionate the ſufferings of any object, let them relive themſelves by relieving ſuch ſufferers, that is, giving them alms *pro re nata*, and for God's ſake relieve thoſe ſeveral ſpecies abovementioned, where the abovementioned obligers fail in their duties; wherefore I am contented that I have aſſiſted all my poor relations, and put many into a way of getting their own bread, and have laboured in publick works, and by inventions have ſought out real objects of charity; and do hereby conjure all, who partake of my eſtate, from time to time to do the ſame at their peril. Nevertheleſs to anſwer cuſtom, and to take the ſurer ſide, I give 20l. to the moſt wanting of the pariſh wherein I die. As for the education of my children, I would that my daughter might marry in Ireland, deſiring that ſuch a ſum as I have left her, might not be carried out of Ireland. I wiſh that my eldeſt ſon may get a gentlman's eſtate in England, which, by what I have gotten

ten already, intend to purchaſe, and by what I preſume he may have with a wife, may amount to between 2 and 3000*l.* per ann. and by ſome office he may get there, together with an ordinary ſuperlucration, may reaſonably be expected; ſo as I deſign my youngeſt ſon's trade and employment to be the prudent management of our Iriſh eſtate for himſelf and his elder brother, which I ſuppoſe his ſaid brother muſt conſider him for. As for myſelf, I being now about three ſcore and two years old, I intend to attend the improvement of my lands in Ireland, and to get in the many debts owing unto me; and to promote the trade of iron, lead, marble, fiſh and timber, whereof my eſtate is capable: and as for ſtudies and experiments, I think now to confine the ſame to the anatomy of the people and political arithmetic; as alſo to the improvement of ſhips, land carriages, guns, and pumps, as of moſt uſe to mankind, not blaming the ſtudies of other men. As for religion, I die in the profeſſion of that faith, and in the practice of ſuch worſhip, as I find eſtabliſhed by the law of my country, not being able to believe what I myſelf pleaſe, nor to worſhip God better than by doing as I would be done unto, and obſerving the laws of my country, and expreſſing my love and honour to almighty God, by ſuch ſigns and tokens, as are underſtood to be ſuch by the people with whom I live, God knowing my heart even without any at all; and thus begging the divine Majeſty to make me what he would have me to be, both as to faith and good works, I willingly reſign my ſoul into his hands, relying only on his infinite mercy and the merits of my Saviour, for my happineſs after this life; where I ex-

I expect to know and ſee God more clearly, than, by the ſtudy of the ſcriptures and of his works, I have been hitherto able to do. Grant me, O Lord, an eaſy paſſage to thy ſelf, that as I have lived in thy fear, I may be known to die in thy favour. Amen.

[In 1667 he married Elizabeth, daughter to ſir Hardreſs Waller, of Caſtletown, in the county of Limerick, and widow of ſir Maurice Fenton; and dying at his houſe in Piccadilly-ſtreet, Weſtminſter, of a gangren in his foot, occaſioned by the ſwelling of the gout, 16th December, 1617, was buried in the church of Rumſey, near the bodies of his father and mother.]

THE

A

TREATISE

OF

TAXES and CONTRIBUTIONS,

Shewing the Nature and Measures of

CROWN-LANDS,
ASSESMENTS,
CUSTOMS,
POLL-MONIES,
LOTTERIES,
BENEVOLENCE,
PENALTIES,
MONOPOLIES,
OFFICES,
TYTHES,
RAISING OF COINS,
HEARTH-MONEY,
EXCISE, &c.

With several interspersst Discourses and Digressions concerning

WARS,
THE CHURCH,
UNIVERSITIES.
RENTS AND PURCHASES,
USURY AND EXCHANGE,
BANKS AND LOMBARDS,
REGISTERS FOR CONVEYANCES,
BEGGARS,
ENSURANCE,
EXPORTATION OF MONEY, WOOL,
FREE PORTS,
COINS,
HOUSING,
LIBERTY OF CONSCIENCE &c.

The same being frequently applied to the State and Affairs of Ireland, and is now thought seasonable for the present Affairs of England.

THE

PREFACE.

YOung and vain perſons, though perhaps they marry not primarily and only on purpoſe to get children, much leſs to get ſuch as may be fit for ſome one particular vocation; yet having children, they diſpoſe of them as well as they can according to their reſpective inclinations: even ſo, although I wrote theſe ſheets but to rid my head of ſo many troubleſome conceits, and not to apply them to the uſe of any one particular people or concernment; yet now they are born, and that their birth happened to be about the time of the duke of Ormond's going lord lieutenant into Ireland, I thought they might be as proper for the conſideration of that place, as of any other, though perhaps of effect little enough in any.

Ireland

Ireland is a place which muſt have ſo great an army kept up in it, as may make the Iriſh deſiſt from doing themſelves or the Engliſh harm by their future rebellions. And this great army muſt occaſion great and heavy levies upon a poor people and waſted country; it is therefore not amiſs that Ireland ſhould underſtand the nature and meaſure of taxes and contributions.

2. The pariſhes of Ireland do much want regulation, by uniting and dividing them; ſo as to make them fit encloſures wherein to plant the goſpel: wherefore what I have ſaid as to the danger of ſupernumerary miniſters, may alſo be ſeaſonable there, when the new geography we expect of that iſland ſhall have afforded means for the regulation abovementioned.

3. The great plenty of Ireland will but undo it, unleſs a way be found for advantageous exportations, the which will depend upon the due meaſure of cuſtom and exciſe here treated on.

4. Since Ireland is under peopled in the whole, and ſince the government there can never be ſafe without chargeable armies, until the major part of the inhabitants be Engliſh, whether by carrying over

over theſe, or withdrawing the other; I think there can be no better encouragement to draw Engliſhmen thither, than to let them know, that the king's revenue being about a tenth part of the whole wealth, rent, and proceed of the nation; that the public charge in the next age will be no more felt there, than that of tythes is here; and that as the king's revenue encreaſe, ſo the cauſes of his expence will decreaſe proportionably, which is a double advantage.

6. The employing the beggars in England about mending the highways, and making rivers navigable, will make the wool and cattle of Ireland vend the better.

7. The full underſtanding of the nature of money, the effects of the various ſpecies of coins, and of their uncertain values, as alſo of raiſing or embaſing them, is a learning moſt proper for Ireland, which hath been lately much and often abuſed for the want of it.

8. Since lands are worth but ſix or ſeven years purchaſe, and yet twenty years juſt croſs the channel, 'twere good the people of Ireland knew the reaſons of it at a time when there is means of help.

Laſtly, if any man hath any notions which probably may be good for Ireland, he may with moſt advantage expoſe them to public examination now, when the duke of Ormond is chief governor: for,

1. His grace knows that country perfectly well, as well in times and matters of peace as war, and underſtands the intereſts as well of particular perſons, as of all and every factions and parties ſtruggling with each other in that kingdom; underſtanding withal the ſtate of England, and alſo of ſeveral foreign nations, with reference to Ireland.

2. His grace hath given freſh demonſtration of his care of an Engliſh intereſt in Ireland, and of his wiſdom in reconciling the ſeveral croſs concernments there ſo far as the ſame is poſſible.

3. His graces eſtate in lands there is the greateſt that ever was in Ireland, and conſequently he is out of the danger incident to thoſe proreges againſt whom Cambden ſays, *Hibernia eſt ſemper querula*; there being no reaſon for ones getting more land, who hath already the moſt of any.

4. Whereas ſome chief governors who have gone into Ireland, chiefly to repair or raiſe fortunes, have withdrawn themſelves

ſelves again when their work hath been done, not abiding the clamours and complaints of the people afterwards: but his grace hath given hoſtages to that nation for his good government, and yet hath taken away aforehand all fears of the contrary.

5. His grace dares do whatever he underſtands to be fitting, even to the doing of a ſingle ſubject juſtice to a confederate multitude; being above the ſiniſter interpretations of the jealous and querulous; for his known liberality and magnificence ſhall ever keep him free from the clamour of the people, and his through-tried fidelity ſhall fruſtrate the force of any ſubdolous whiſperings in the ears of his majeſty.

6. His good acceptance of all ingenious endeavours, ſhall make the wiſe men of this eaſtern England be led by his ſtar into Ireland, and there preſent him with their choiceſt advices, who can moſt judiciouſly ſelect and apply them.

Laſtly, this great perſon takes the great ſettlement in hand, when Ireland is as a white paper, when there ſits a parliament moſt affectionate to his perſon, and capable of his counſel, under a king curious as well as careful of reformation; and when

when there is opportunity, to paſs into poſitive laws whatſoever is right reaſon and the law of nature.

Wherefore by applying thoſe notions unto Ireland, I think I have harped upon the right ſtring, and have ſtruck whilſt the iron is hot; by publiſhing them now, when, if ever at all, they be uſeful. I would now advertiſe the world, that I do not think I can mend it, and that I hold it beſt for every mans particular quiet, to let it *vadere ſicut vult*; I know well, that *res nolunt male adminiſtrari*; and that (ſay I what I will or can) things will have their courſe, nor will nature be couzened: wherefore what I have writ, (as I ſaid before) was done but to eaſe and deliver my ſelf, my head having been impregnated with theſe things by the daily talk I hear about advancing and regulating trade, and by the murmurs about taxes, &c. Now whether what I have ſaid be contemned or cavilled at, I care not, being of the ſame mind about this, as ſome thriving men are concerning the profuſeneſs of their children; for as they take pleaſure to get even what they believe will be afterwards piſſed againſt the wall, ſo do I to write what I ſuſpect will ſignify nothing: Wherefore

Wherefore the race being not to the ſwift, &c. but time and chance happening to all men, I leave the judgment of the whole to the candid, of whoſe correction I ſhall never be impatient.

THE

INDEX.

AN enumeration and description of the ſeveral branches of the publick charge page 1
The maintenance of governors ought to be in greater ſplendor than private callings can reach to 2
The honour of being truſted, and the pleaſure of being feared, is reward enough for ſome offices. ib.
The paſtorage of ſouls ought to be a publick charge, even upon a civil account. ibid.
The uſe of ſchools and univerſities as they are a publick charge 3
The common and general cauſes which encreaſe and aggravate the burthen of paying taxes 4
The cauſes that excite foreign and offenſive wars 5
The cauſes of defenſive and civil wars 6
A cauſe of unneceſſary eccleſiaſtical charge, is the not ſizing of pariſhes according to the alterations which have been in religion and trade 7
That five thouſand pariſhes are enough for England and Wales, ſo as to give unto each but a thouſand pariſhioners, and ſo as that none need go two miles to church 8

Antiqua-

Antiquated offices, and overgrown fees, a cauſe of unneceſſary charge in the government and adminiſtration of juſtice. 10
Regiſters for conveyances of land, and depoſitories for moveable pawns, and alſo banks of money will leſſen the charge of lawſuits and writings 11
How the number of ſuch as relate to the faculty of medicine may be adjuſted. ib.
How the number of ſtudents in the univerſities intending to make learning the way of their livelihood, may be adjuſted. 12
An uſe propounded for the choice pariſh-children and foundlings, to force on an uſeful work, which hath hitherto been but perfunctorily purſued. ib.
That the number of unneceſſary merchants and retailers be retrenched. id.
The careful maintenance and education of expoſed children, and concealing their names and families, is a matter of great conſequence. 13
A propoſal of ſeveral imployments for beggars, and ſuch as have now no work. 14
Great works of labour, though in themſelves unneceſſary, are nevertheleſs of advantage to the public. ib.
The mending of highways, building bridges and cauſeys, and the making of rivers navigable in England, would make Engliſh horſes an exportable commodity, and help to vend the commodities of Ireland. 16
The cauſes of unquiet bearing of taxes, viz. 17
Firſt, that the ſovereign exacts too much ib.
Secondly, that aſſeſſments are unequally laid. 18
Thirdly That the monies levied are vainly expended. ib.
Fourthly, or given to favourites. ib.

Fifthly,

Fifthly, ignorance of the number, trade, and wealth of the people. 19
Sixthly, obſcurity about the right of impoſing. ib.
Seventhly, fewneſs of people. ib.
Eighthly Scarcity of money, and confuſion of coins 20
Ninthly, that ſcare an hundredth part of the riches of this nation is coined bullion. ib.
Tenthly, the non-acceptance of ſome commodities in ſpecie in diſcharge of taxes. ib.
The conſequences of a tax too heavy if there be too much money in the nation, which may be; or if there be too little, and that either in a ſtate well or ill governed. 21
The firſt way of providing for the publick charge, is the excinding or ſetting apart of a proportion of the territory, in the nature of crown-lands. ib.
The ſecond is taking away the ſame proportion of the rents of all lands. 24
The nation is happy, where either of the ſaid two ways is practiſed *ab antiquo*, and upon original agreement, and not exacted as a ſudden contingent ſurcharge upon the people. 25
The owners of ſettled rents bear the burthen of a land-tax, or aſſeſſment, others probably gaining thereby. ib.
A land-tax upon free eſtates reſolves into an exciſe upon conſumptions ib.
Aſſeſſment upon houſing more uncertain than that of land, houſing being of a double nature, viz. either an inſtrument of gain, or way of expence. 26
The heavy taxing of houſing no diſcourage ent to new buildings, nor is the diſcouragement of new buildings any means to prevent the populouſneſs of a city. ib.
Prohibition to build upon new foundations ſerves only to fix the ground plot of a city. 27

The

The reason why the city of London removes its ground plot west-ward. ib.
That 'tis probable the King of England's palace will in process of time be towards Chelsea. 28
That the present seat of London will be the greatest cohabitation of people ever whilst this island is inhabited. ib.
The nature and natural measures of the rent of land, computed in commodities of the growth of the said land. 29
The par between food or other proceed of land, and bullion or coin. ib.
The par between gold and silver. 30
Gold and silver are not natural standards of the values of the τὰ χρήματα ib.
The prime denomination of the τὰ χρήματα are but two, viz. land and labour, as the denominations of money in England are pounds, shillings, pence. 31
Of the par between land and labour. ib.
The reason of the number of years purchase that land is worth in several countries. 32
Why land in Ireland is worth fewer years purchase than in England ib.
The description and *ratio formalis* of usury 34
The same of exchange. ib.
The measures of both. 35
Why usury hath been limited more than exchange. ibid.
A parallel between the charges of the price of money, and that of land. ib.
How to compute and compare the rents of lands, in order to a just land-tax or assessment. 36
The intrinsick value of land is found by surveys of the quantity, figure and situation 37

And

And by the survey of the quality, viz. its aptitude to bear; first precious commodities; secondly, the best of the kind; thirdly, most in quantity. 38
The extrinsick or accidental value depends upon the plenty of money, luxurious or frugal living; the opinions civil, natural, and religious of the people. ib.
It is necessary to these enquires to know how to tell the gold and silver coins of this present age, and compare the same with that of former times. ib.
How to compare not only the money of this present age with that of the former but the entire riches of the present with the former people. ib.
By the numbers of people, and the proportion of money amongst them, the accidental values of lands are to be computed. 39
How to proportion the rates of a commodity in one place, unto the rates of the same in another place. ibid.
That the day wages of labourers, and several other of the most vulgar tradesmen, ought to be ascertained and well adapted to the changes of time. ibid.
That though the difficulty of computing the contingent values of land be great, yet there be greater reasons for undergoing it. 40
The nature of credit, as the said word is commonly used among tradesmen, and otherwise. ib.
That the sovereigns exact knowledge of the subjects estates would do them no harm. 41
A description of the duty of Customs. ib.
A conjecture that customs at first were a kind of præmium for ensurance against pirates. 42
The measure of the said duty upon exported goods. ibid.
The inconvenience of too heavy customs. 43

What

What commodities may be forced to pay cuſtoms. ib.
The meaſures of cuſtoms upon imported goods. ib.
The inconveniences of raiſing money by the way of cuſtoms. 44
A propoſal, that inſtead of tunnage and poundage upon ſhipped goods, a tunnage were paid out of the ſhips freight. 45
Or that the cuſtoms were taken as an enſurance præmium. ibid.
Of prohibited commodities in general. ibid.
Of prohibiting the exportation of money and bullion. ibid.
The ſaid prohibition of money ſerves as a ſumptuary law. 46
About the exportation of wool. 46, 47
The leſſening of our ſheep-trade, and increaſe of corn-tillage, is an expedient in this caſe for many reaſons. 47
Other conſiderations tending to ſhew, that the too vehement prohibitions of wool may be ineffectual, or to do more harm than good. 47, 48
Of prohibiting importations. 48
It were better to make and raiſe commodities, though to burn them, than not to make them, or let the makers loſe their faculty, and be idle. ibid.
Of free-ports, and in what caſes they may do good or harm. 49
Of poll-money, and the ſorts of it. 50
The faults of the late poll-monies. ibid.
Of the moſt ſimple poll-money, where all pay alike, its conveniences and inconveniences. 51
Of poll-money upon titles, offices, and faculties. ib.
Hearth-money is of the ſame nature with ſimple poll-money, but both are rather accumulative excizes. 52

Grants

Grants for public lotteries are taxes upon the people. 53
Why lotteries ought not to be allowed but by good authority. ibid.
Raiſing of money by benevolence is a real tax. ibid.
Three caſes where the way of a benevolence may be made good. 54
Several reaſons againſt it. 55
The ſeveral ſpecies of penalties. ibid.
A doubt whether the penalties ſet down in Moſes law ought to be inflicted now. 58
The proper uſe and reaſon of every ſort of penalty. ibid.
Perpetual impriſonment is a kind of ſlow death. 59
In what caſe death, mutilation, impriſonment, diſgrace, &c. ought to be commuted for pecuniary mulcts. ibid.
The meaning of the double and multiple reſtitutions mentioned in the law of Moſes. ibid.
Of the ways for puniſhing or permitting heterodox believers in religion. ibid.
That the ſoveraign may do either. 60
That all pſeudodoxies whatſoever may be ſafely muzled from doing harm by pecuniary mulcts. 60, 61
That the ſoveraign by puniſhing them with death, mutilations, or impriſonments, doth therein puniſh himſelf, and that too *re infecta*, very often. 61
That the paſtors ought in ſome meaſure to be puniſhed for the errors and defections of their flocks. ibid.
The true uſe of the clergy is rather to be paterns of holineſs than to teach men variety of opinions *de rebus divinis*. 62
The ſubſtance of all that hath been ſaid in this whole diſcourſe about the church. 62, 63

The

The abuſe of penal laws. 63
Of monopolies. ibid.
The uſe and reaſon of inſtituting monopolies. 64
A digreſſion about new inventions, and the vexations incident to the projectors of new practices. ibid.
Offices inſtituted by the ſtate, with fees of their own appointment, are of a parallel nature to monopolies. 65
Why the fees of offices were great heretofore. 66
How offices are become as a ſaleable commodity. 66, 67
Why many ſuperfluous offices are not aboliſhed. 67
A deſcription of tythes in ſeveral particulars. ibid.
The cauſes why tythes increaſe. 68
The rent of the lands of England is but a quarter of the expence of the people. ibid.
The tythes in England are ſix times as much as they were four hundred years ago. ibid.
The clergy are far richer now than they were in ancient times, and yet have leſs work to do. 69
The danger of too many church-men. ibid.
How to adjuſt the number of church-men and ſtudents in divinity. 70
Tythes is now no tax or burthen upon the people. 71
The way of tythes is a good pattern for a tax. ibid.
The way of paying tythes in the city and country is very diſproportionable. 71, 72
The inconveniences of contributing to the public charge after the manner of tythes. 72
A reaſon why the ways of taxing the people are often ſhifted. ibid.
The ſtate gains in ſeveral countries by being common caſhier, uſurer, enſurer, monopoliſt, &c. 73
The caſe of the Jews (every where ſubject to great taxes) briefly ſtated. 74

The

The way of levying an *aliquot*, part of mens eſtates, very dangerous. 75
Alterations in the values of coins is a tax upon ſuch as live by determined rents, penſions, fees, &c. ib.
What is embaſing of monies, and what is not. 76
Of tin and copper money, as well curiouſly as courſly wrought. ibid.
Of the tokens coined by retailing ſhop-keepers. ibid.
What is gold and ſilver embaſed. 77
The reaſons for embaſing of money. ibid.
Reaſons againſt the ſame. ibid.
What is properly raiſing of money. 78
The effect of raiſing both domeſtick and foreign coins. ibid.
Raiſing of money changes the ſpecies of monies, but leſſens the bullion. 79
Why many wiſe ſtates have raiſed their monies. ib.
Raiſing of foreign money to a double value, or abating the price of our native commodities to half, is all one, but the former is better. 80
The way of computing and comparing the prices of commodities upon natural grounds. 81
Men are really and actually rich according to what they ſpend and enjoy in their own perſons. 82
Excize being a tax upon ſuch riches, is a juſt way by which to defray the public charge. 83
That a proportion ought to be pitched between the expence or conſumption of the whole nation, and the public charge thereof. ibid.
Commodities ought not to be taxed until they be juſt ripe for conſumption. 83, 84
Commodities of equal value may be unequally exciſed with juſtice. 84
Of accumulating the excize of many things upon ſome one thing. ibid.

Whether

Whether native commodities exported ought to pay excize. ibid.
The explication of accumulative excize. 85
Reasons for accumulating the excize of all things upon some one thing. ibid.
Why beer ought not to be that one thing. 86
Hearth or smoak-money is an accumulative excise, with the reasons for and against it. ibid.
Reasons in behalf of the excize. 87
Of framing persons to be fit for great trusts, as to be cashiers, store-keepers, cheques, &c. 88

A

TREATISE

OF

TAXES AND CONTRIBUTIONS.

CHAP. I.

Of the several sorts of public charges.

THE public charges of a state, are, that of its defence by land and sea, of its peace at home and abroad, as also of its honourable vindication from the injuries of other states; all which we may call the charge of the militia, which commonly is in ordinary as great as any other branch of the whole; but extraordinary, (that is, in time of war, or fear of war) is much the greatest.

2. Another branch of the public charge is, the maintenance of the governors, chief and ſubordinate; I mean, ſuch not only as ſpend their whole time in the execution of their reſpective offices, but alſo who ſpend much in fitting themſelves as well with abilities to that end, as in begetting an opinion in their ſuperiors of ſuch their ability and truſtworthineſs.

3. Which maintenance of the governors is to be in ſuch a degree of plenty and ſplendor; as private endeavours and callings ſeldom reach unto: to the end, that ſuch governors may have the natural as well as the artificial cauſes of power to act with.

4. For if a great multitude of men ſhould call one of their number king, unleſs this inſtituted prince appear in greater viſible ſplendor than others, can reward thoſe that obey and pleaſe him, and do the contrary to others; his inſtitution ſignifies little, even although he chance to have greater corporal or mental faculties, than any other of the number.

5. There be offices which are but παρεργα, as ſheriffs, juſtices of the peace, conſtables, churchwardens, &c. which men may attend without much prejudice to their ordinary ways of livelihood, and for which the honour of being truſted, and the pleaſure of being feared, hath been thought a competent reward.

6. Unto this head, the charge of the adminiſtring juſtice may be referred, as well between man and man, as between the whole ſtate or commonalty and particular members of it; as well that of righting and puniſhing paſt injuries and crimes, as of preventing the ſame in time to come.

7. A third branch of the public charge is that of the paſtorage of mens ſouls, and the guidance of their conſciences; which, one would think (becauſe it

it reſpects another world, and but the particular intereſt of each man there) ſhould not be a public charge in this: nevertheleſs, if we conſider how eaſy it is to elude the laws of man, to commit unproveable crimes, to corrupt and divert teſtimonies, to wreſt the ſenſe and meaning of the laws, &c. there follows a neceſſity of contributing towards a public charge, wherewith to have men inſtructed in the laws of God, that take notice of evil thoughts and deſigns, and much more of ſecret deeds, and that puniſheth eternally in another world, what man can but ſlightly chaſtiſe in this.

8. Now thoſe who labour in this public ſervice, muſt alſo be maintained in a proportionable ſplendor; and muſt withal have the means to allure men with ſome kind of reward, even in this life; foraſmuch as many heretofore followed, even Chriſt himſelf, but for the loaves he gave them.

9. Another branch is, the charge of ſchools and univerſities, eſpecially for ſo much as they teach above reading, writing and arithmetic; theſe being of particular uſe to every man, as being helps and ſubſtitutes of memory and reaſon, reckoning being of the later, as writing and reading are of the former; for whether divinity, &c. ought to be made a private trade, is to me a queſtion.

10. 'Tis true, that ſchools and colleges are now for the moſt part but the donations of particular men, or places where particular men ſpend their money and time upon their own private accounts; but no doubt it were not amiſs, if the end of them were to furniſh all imaginable helps unto the higheſt and fineſt natural wits, towards the diſcovery of nature in all its operations; in which ſenſe they ought to be a public charge: the which wits ſhould not be ſelected for that work, according to the fond con-

 ceits

ceits of their own parents and friends, (crows that think their own birds ever fairest) but rather by the approbation of others more impartial; such as they are, who pick from out of the christians children the ablest instruments and support of the Turkish government. Of which selections more hereafter.

11. Another branch is, that of the maintenance of orphans, found and exposed children, which also are orphans; as also of impotents of all sorts, and moreover such as want employment.

12. For the permitting of any to beg is a more chargeable way of maintaining them whom the law of nature will not suffer to starve, where food may possibly be had: besides, it is unjust to let any starve, when we think it is just to limit the wages of the poor, so as they can lay up nothing against the time of their impotency and want of work.

13. A last branch may be, the charge of high-ways, navigable rivers, aqueducts, bridges, havens, and other things of universal good and concernment.

14. Other branches may be thought on, which let other men either refer unto these, or add over and above. For it suffices for my purpose to have for the present set down these the chief and most obvious of all the rest.

CHAP. II.

Of the causes which increase and aggravate the several sorts of public charges.

HAVING thus spoken of the several sorts of public charges, we shall next consider the causes which increase them both in general and in particular.

Among

Among the general causes is, first, the unwillingness of the people to pay them, arising from an opinion, that, by delay and reluctancy they may wholly avoid them, with a suspicion that what is imposed is too much, or that what is collected is embezzled or ill expended, or that it is unequally levied and assessed. All these resolving into an unnecessary charge to collect them, and of forcing their prince to hardships towards the people.

2. Another cause which aggravates taxes, is the force of paying them in money at a certain time, and not in commodities at the most convenient seasons.

3. Thirdly, obscurities and doubts concerning the right of imposing.

4. Fourthly, scarcity of money, and confusion of coins.

5. Fifthly, fewness of people, especially of labourers and artificers.

6. Sixthly, ignorance of the numbers, wealth and trade of the people, causing a needless repetition of the charge and trouble of new additional levies, in order to amend mistakes.

7. As to particulars. The causes of increasing the military charge are the same with those that increase wars, or fears of war, which are foreign or civil.

8. An offensive foreign war is caused by many, and those very various, secret, personal distastes coloured with public pretences; of which we can say nothing, but that the common encouragement unto them particularly here in England is a false opinion, that our country is full peopled, or that if we wanted more territory, we could take it with less charge from our neighbours, than purchase it from the Americans; and a mistake, that the greatness and glory

 of

of a prince lieth rather in the extent of his territory, than in the number, art, and induſtry of his people well united and governed. And moreover, that it is more glorious to take from others by fraud or rapine, than to gain ones ſelf out of the bowels of the earth and ſea.

9. Now thoſe ſtates are free from foreign offenſive wars (ariſing as aboveſaid out of perſonal and private cauſes) where the chief governors revenue is but ſmall, and not ſufficient to carry on ſuch wars, the which if they happen to be begun, and ſo far carried on as to want general contributions, then thoſe who have the power to impoſe them, do commonly enquire what private perſons and ends occaſioned the war, and ſo fall upon the authors, rather than contribute to the effect; otherwiſe than to quench it.

10. Defenſive wars are cauſed from unpreparedneſs of the offended ſtate for war, as when defective ſtores are ſerved into the magazines by corrupt officers at the rate of good; when armies are falſely muſtered; when ſoldiers are either tenants or ſervants to their commanders, or elſe perſons, who for their crimes or debts, want protection from juſtice; when the officers are ignorant of their buſineſs, and abſent from their commands; and withal afraid to puniſh, becauſe unwilling to pay. Wherefore, to be always in a poſture of war at home, is the cheapeſt way to keep off war from abroad.

11. The cauſes of civil wars here in Europe proceed very much from religion, viz. the puniſhing of believers heterodox from the authorized way, in public and open places, before great multitudes of ignorant people, with loſs of life, liberty, and limbs, rather than by well proportioned tolerable pecuniary mulcts, ſuch as every conſcientious non-conformiſt would gladly

gladly pay, and hypocrites by refuſing, diſcover themſelves to be ſuch.

12. Civil wars are likewiſe cauſed by peoples fanſying, that their own uneaſy condition may be beſt remedied by an univerſal confuſion; although indeed upon the upſhot of ſuch diſcorders they ſhall probably be in a worſe, even although they ſurvive and ſucceed, but more probably periſh in the conteſt.

13. Moreover, the peoples believing that forms of government ſhall in a few years produce any conſiderable alteration as to the wealth of the ſubject; that the form which is moſt antient and preſent is not the beſt for the place; that any eſtabliſhed family or perſon is not better than any new pretender, or even than the beſt election that can be made; that ſovereignty is inviſible, and that it is not certainly annexed unto ſome certain perſon or perſons.

14. Cauſes of civil war are alſo, that the wealth of the nation is in too few mens hands, and that no certain means are provided to keep all men from a neceſſity either to beg, or ſteal, or be ſoldiers. Moreover, the allowing luxury in ſome, whilſt others needleſly ſtarve.

The diſpenſing of benefits upon caſual and uncertain motives; the giving vaſt emoluments to perſons and parties of no certain viſible merit. Theſe are the things which cauſe animoſities among the totter-headed multitude, who are the tinder that the ſparks of a few deſigners may eaſily inflame.

15. One cauſe of public charge in matters of religion, is the not having changed the limits of pariſhes and cures with the change of religion from popery, and with the changes in plantation and trade. For now when the miniſters of the goſpel preach unto multitudes aſſembled in one place, may not pariſhes be bigger; that is, may not flocks be more

 numerous,

numerous, than when every particular ſheep was, as heretofore, dreſt and ſhorn three or four times *per annum* by ſhrift. If there be in England and Wales but about five millions of people, what needs be more than 5000 pariſhes; that is, 1000 ſheep under every ſhepherd. Whereas in the middling pariſhes of London there are about 5000 ſouls in each. Upon which account there needs be in England and Wales but 1000 pariſhes, whereas there are near 10000.

16. Now the ſaving of half the pariſhes would (reckoning the benefices one with another, but at 100l. *per annum* a piece) ſave 500000l. Beſides, when the number of parochial parſons were halved, then there would need but half the preſent number of biſhops, deans and chapters, colleges and cathedrals, which perhaps would amount to two or three hundred thouſand pounds more: and yet the church of God would be more regularly ſerved than now, and that without prejudice to that ſacred, antient order of epiſcopacy, and the way of their maintenance by tithes; and all this in a method of greater reformation and ſuitableneſs thereunto.

17. But ſuppoſe it be ſaid, that in ſome wild countries, a thouſand people do not live in a leſs ſcope of ground than of eight miles ſquare. To which I anſwer, that there are few or no ſuch places, the largeſt pariſhes I know, being not more capacious than of three or four miles ſquare, in which is no difficulty, for the people to meet once a week at ſome central place within that ſcope.

18. Moreover I ſay, that a curate of ſmall learning, if of good life, and duly ordained, may officiate in four chapels of eaſe every Sunday, and the preacher, who indeed ſhould be a perſon of learning and eloquence, may preach every other Sunday in every of the ſaid chapels, by preaching in two of them one day, and in the other two the other day: and this with catechizing, and extra-lectures upon the week-days, would perform as much as now is performed, and as much as by the bleſſing of God is neceſſary to ſalvation; for the yoak of Chriſt is eaſy, and his burthen light.

19. But to put an end to this doubt, I affirm, that if England and Wales were cut out in parcels of three miles ſquare, there would be found few above four thouſand ſuch, of which to make pariſhes.

20. Now if it be ſaid, that the alienation of theſe tithes is ſacrilege; I anſwer, that if the ſame be employed to defend the church of God againſt the Turk and Pope, and the nations who adhere to them, it is not at all, or leſs, than to give three fourths of the ſame to the wives and children of the prieſts which were not in being when thoſe allowances were ſet forth?

21. If I had not an abhorrence from propounding the leſſening of the church-means, I could ſay, that the retrenching part of each remaining parſons tithes and emoluments, and leaving them for part, to the free contributions of their flocks, were a way to promote the goſpel, and to give leſs offence to ſuch as think that their whole maintenance ſhould be made in that manner.

22. I might alſo ſay, that foraſmuch as there be more males than females in England, (the ſaid diſproportion *pro tanto*, hindering procreation) that it were good for the miniſters to return to their cælibat; or that none ſhould be miniſters, whilſt they were married, it being eaſy among five millions of people to find out 5000 that could and would live ſingle, that is one in a thouſand. And then our unmarried parſon might live as well with half, as now with the whole of his benefice.

23. Always

23. Always provided, that though the number of parishes, and the measure of benefices were lessened, yet that the same ought to be done without damage to the present incumbents.

24. As for lessening the charge of offices relating to the government and the law, the same will consist in abolishing the superfluous, supernumerary, and antiquated; and withal, in retrenching the fees of others, to what the labour, art, and trust of their respective employments do require. For there be many offices wholly executed by deputies for small wages, whereas the masters of them have ten times as much, although they know nothing either of what is done or ought to be done in the business.

25. Now such surplusages as these should be either restored unto the people who gave them unto the King, at a time when those fees made up but a just reward for the officer; or else the King keeping them still might take them for so much toward the publick charge, but not give them away to stop the importunate suits of any particular person, in whom and in all his dependants, such benefits do but cause lazinesS as to the true original gain of the nation, and themselves in particular, together with a total negligence and ignorance of the publick good.

26. Many are the particulars that might be instanced of this kind; but my aim not being to prejudice any man in particular, I descend no lower, wishing only that there might be an universal reformation of what length of time hath warpped awry, in which case no particular men are to be troubled; for if all suffer, none suffers, and all men would be no poorer than now they are if they should lose half their estates; nor would they be a whit the richer

richer if the same were doubled, the *Ratio formalis* of riches lying rather in proportion than quantity.

27. To lessen the charge of universities, unto which I add the inns of court, which is not much, were to lessen the number of the students in divinity, law, and medicine, by lessening the use of those professions.

Now having spoken already of divinity, I come next to the law, and say, that if registers were kept of all mens estates in lands, and of all the conveyances of, and engagements upon them; and withal, if publick loan-banks, lombards, or banks of credit upon deposited money, plate, jewels, cloth, wool, silk, leather, linen, mettals, and other durable commodities were erected, I cannot apprehend how there could be above one tenth part of the law-suits and writings, as now there are.

28. And moreover, if by accompt of the people, of their land and other wealth, the number of lawyers and scriveners were adjusted, I cannot conceive how there should remain above one hundredth part of what now are; forasmuch as I have heard some affirm, that there be now ten times as many as are even now necessary; and that there are now ten times as many law-suits, as upon the abovementioned reformation, there would be. It follows therefore, that upon the whole there would not need one in a hundred of the present number of retainers to the law, and offices of justice, the occasions as well of crimes as injuries being so much retrenched.

29. As for physicians, it is not hard by the help of the observations which have been lately made upon the bills of mortality, to know how many are sick in London by the number of them that die, and by the proportions of the city to find out the same of the country: and by both, by the advice of the learned college

lege of that faculty to calculate how many physicians were requisite for the whole nation; and consequently how many students in that art to permit and encourage; and lastly, having calculated these numbers, to adoptate a proportion of chirurgeons, apothecaries, and nurses to them, and so by the whole to cut off and extinguish that infinite swarm of vain pretenders unto, and abusers of that god-like faculty, which of all secular employments our saviour himself after he began to preach engaged himself upon.

30. Moreover, if it were agreed, what number of divines, physicians and civilians (that is, of men bred in universities) were requisite to the publick service? as suppose 13000 in the present way, and perhaps not above 6000 in that way of retrenchment which we propound; then supposing that but one in forty dies *per annum*, it follows that less than 350 might suffice to be sent yearly out of the universities: where supposing they stay five years one with another, it followeth also that about 1800 is the number of students fit to be allowed in the universities at a time; I mean, of such as intend to make learning their trade, and way of livelihood.

31. I might intimate, that if 1800 students were enough, and that if there were 40000 parish-children and foundlings in England, it were probable that one in twenty of them might be of excellent wit and towardness.

Now since the publick may dispose of these children as they please, and since there is maintenance in both universities for above 1800, what if our professors of art were in this manner selected and educated? but of this but *in transitu*.

32. Hereunto may be added, that by reason of loan banks afore-mentioned, whereby the credits and estates of all dealers may be known, and all the mysterious

mysterious dangers of money prevented, and that by good accounts of our growth, manufacture, consumption, and importation, it might be known how many merchants were able to manage the exchange of our superfluous commodities with the same of other countries: and also how many retailers are needful to make the subdistributions into every village of this nation, and to receive back their superfluities. Upon these grounds I presume a large proportion of these also might be retrenched, who properly and originally earn nothing from the public, being only a kind of gamesters, that play with one another for the labours of the poor; yielding of themselves no fruit at all, otherwise than as veins and arteries, to distribute forth and back the blood and nutritive juices of the body politic, namely, the product of husbandry and manufacture.

33. Now if the numerous offices and fees relating to the government, law, and church; and if the number of Divines, lawyers, physicians, merchants, and retailers were also lessened, all which do receive great wages for little work done to the publick, with how much greater ease would common expences be defrayed? and with how much more equality would the same be assessed?

34. We enumerated six branches of the publick charge, and have slightly spoken how four of them might be lessened; we come next to the other two branches, whereof we shall rather recommend the augmentation.

The first of these two branches I call, generally speaking, care of the poor, consisting of receptacles for the aged, blind, lame, &c. in health; hospitals for noysome, chronical, curable and uncurable, inward and outward diseases; with others for acute and contagious. Others for orphans, found and exposed children;

children; of which later ſort none ſhould be refuſed, let the number be never ſo great provided their names, families, and relations were well concealed: the choice of which children being made at their being about eight or ten years old, might afford the King the fitteſt inſtruments for all kinds of his affairs, and be as firmly obliged to be his faithful ſervants as his own natural children.

35. This is no new nor rare thing, only the neglect of it in theſe countries, is rather to be eſteemed a rare and new project: nor is it unknown what excellent fruits there have been of this inſtitution, of which we ſhall ſay much more upon another occaſion hereafter.

36. When all helpleſs and impotent perſons were thus provided for, and the lazy and thievish reſtrained and puniſhed by the miniſter of juſtice, it follows now that we find out certain conſtant imployments for all other indigent people, who labouring according to the rules upon them, may require a ſufficiency of food and rayment. Their children alſo (if ſmall and impotent) as aforeſaid, being provided for elſewhere.

37. But what ſhall theſe employments be? I anſwer, ſuch as were reckoned as the ſixth branch of the public expence, *viz.* making all highways ſo broad, firm, and even, as whereby the charge and tedium of travelling and carriages may be greatly leſſened. The cutting and ſcouring of rivers into navigable; the planting of uſeful trees for timber, delight, and fruit in convenient places.

The making of bridges and cawſeys.

The working in mines, quarries, and colleries.

The manufactures of Iron, &c.

38. I pitch upon all theſe particulars, firſt, as works wanting in this nation; ſecondly, as works of much labour,

labour, and little art; and thirdly, as introductive of new trades into England, to ſupply that of cloth, which we have almoſt totally loſt.

In the next place it will be aſked, who ſhall pay theſe men? I anſwer, every body; for if there be 1000 men in a territory, and if 100 of theſe can raiſe neceſſary food and rayment for the whole 1000; if 200 more make as much commodities, as other nations will give either their commodities or money for, and if 400 more be employed in the ornaments, pleaſure, and magnificence of the whole? if there be 200 governors, divines, lawyers, phyſicians, merchants, and retailers, making in all 900, the queſtion is, ſince there is food enough for this ſupernumery 100 alſo, how they ſhould come by it? whether by begging, or by ſtealing; or whether they ſhall ſuffer themſelves to ſtarve, finding no fruit of their begging, or being taken in their ſtealing, be put to death another way? or whether they ſhall be given away to another nation that will take them? I think 'tis plain, they ought neither to be ſtarved, nor hanged, nor given away; now if they beg, they may pine for hunger to day, and be gorged and glutted to morrow, which will occaſion diſeaſes, and evil habits; the ſame may be ſaid of ſtealing: moreover, perhaps they may get either by begging or ſtealing more than will ſuffice them, which will for ever after indiſpoſe them to labour, even upon the greateſt occaſions which may ſuddenly and unexpecedly happen.

39. For all theſe reaſons, it will be certainly the ſafer way to afford them the ſuperfluity which would otherwiſe be loſt and waſted, or wantonly ſpent: or in caſe there be no overplus, then 'tis fit to retrench a little from the delicacy of others feeding in quantity or quality, few men ſpending leſs than double of what

what might ſuffice them as the bare neceſſities of nature.

40. Now as to the work of theſe ſupernumeraries, let it be without expence of foreign commodities, and then 'tis no matter if it be imployed to build a uſeleſs pyramid upon Salisbury Plain, bring the ſtones at Stonehenge to Towerhill, or the like; for at worſt this would keep their minds to diſcipline and obedience, and their bodies to a patience of more profitable labours when need ſhall require it.

41. In the next place, as an inſtance of the uſefulneſs of what hath been propounded, I aſk what benefit will the mending of highways, the building of bridges and cawſeys, with making rivers navigable produce, beſides the pleaſure and beauty of them? to which I alſo anſwer, as an inſtance of the premiſſes, that the ſame, together with the numerous miſſions of cattle and ſheep out of Ireland ſhall produce a vaſt ſuperfluity of Engliſh horſes, the which becauſe they have the many excellent qualities of beauty, ſtrength, courage, ſwiftneſs, and patience concentrated in them, beyond the horſes of other places, would be a very vendible commodity all over Europe; and ſuch as depending upon the intrinſick nature of the Engliſh ſoyl could not be counterfeited, nor taken away by others. Moreover, an horſe is ſuch a commodity as will carry both himſelf and his merchant to the market, be the ſame never ſo diſtant.

CHAP.

CHAP. III.

How the cauſes of the unquiet bearing of taxes may be leſſened.

WE have ſlightly gone through all the ſix branches of the publick charge, and have (though imperfectly, and in haſte) ſhewn what would encreaſe, and what would abate them.

We come next to take away ſome of the general cauſes of the unquiet bearing of taxes, and yielding to contributions, *viz.*

2. 1. That the people think the ſovereign aſks more than he needs. To which we anſwer: 1. That if the ſovereign were ſure to have what he wanted in due time, it were his own great damage to draw away the money out of his ſubjects hands, who by trade increaſe it, and to hoard it up in his own coffers, where 'tis of no uſe even to himſelf, but liable to be begged, or vainly expended.

3. 2. Let the tax be never ſo great, if it be proportionable unto all, then no man ſuffers the loſs of any riches by it. For men (as we ſaid but now) if the eſtates of them all were either halfed or doubled, would in both caſes remain equally rich: for they would each man have his former ſtate, dignity and degree; and moreover, the money levied not going out of the nation, the ſame alſo would remain as rich in compariſon of any other nation, only the riches of the prince and people would differ for a little while, namely, until the money levied from ſome, were again refunded upon the ſame, or other perſons that paid it: in which caſe every man alſo ſhould have his chance and opportunity to be made the

 better

better or worſe by the new diſtribution: or if he loſt by one, yet to gain by another.

4. 3. Now that which angers men moſt, is to be taxed above their neighbours. To which I anſwer, that many times theſe ſurmizes are miſtakes, many times they are chances, which in the next tax may run more favourable; and if they be by deſign, yet it cannot be imagined, that it was by deſign of the ſovereign, but of ſome temporary aſſeſſor, whoſe turn it may be to receive the *Talio* upon the next occaſion from the very man he has wronged.

5. 4. Men repine much, if they think the money levied will be expended on entertainments, magnificent ſhews, triumphal arches, *&c.* To which I anſwer, that the ſame is a refunding the ſaid monies to the tradeſmen who work upon thoſe things; which trades, though they ſeem vain and only of ornament, yet they refund preſently to the moſt uſeful; namely, to brewers, bakers, taylors, ſhoemakers, &c. Moreover the prince hath no more pleaſure in theſe ſhews and entertainments than 100,000 others of his meaneſt ſubjects have, whom, for all their grumbling, we ſee to travel many miles to be ſpectators of theſe miſtaken and diſtaſted vanities.

6. 5. The people often complain that the King beſtows the money he raiſes from the people upon his favourities: to which we anſwer; that what is given to favourites, may at the next ſtep or tranſmigration come into our own hands, or theirs whom we wiſh well, and think do deſerve it.

7. Secondly, as this man is a favourite to day, ſo another, or ourſelves, may be hereafter; favour being of a very ſlippery and moveable nature, and not ſuch a thing as we need much to envy; for the ſame way that——leads up an hill, leads alſo down the ſame. Beſides, there is nothing in the laws or cuſtoms

cuſtoms of England, which excludes any the meaneſt man's child, from arriving to the higheſt offices in this kingdom, much leſs debars him from the perſonal kindneſs of his prince.

8. All theſe imaginations (whereunto the vulgar heads are ſubject) do cauſe a backwardneſs to pay, and that neceſſitates the prince to ſeverity. Now this lighting upon ſome poor, though ſtubborn, ſtiff-necked refuſer, charged with wife and children, gives the credulous great occaſion to complain of oppreſſion, and breeds ill blood as to all other matters; feeding the ill humours already in being.

9. 6. Ignorance of the number, trade, and wealth of the people, is often the reaſon why the ſaid people are needleſly troubled, *viz.* with the double charge and vexation of two, or many levies, when one might have ſerved: examples whereof have been ſeen in late poll-moneys; in which (by reaſon of not knowing the ſtate of the people, *viz.* how many there were of each taxable ſort, and the want of ſenſible marks whereby to rate men, and the confounding of eſtates with titles and offices) great miſtakes were committed.

10. Beſides, for not knowing the wealth of the people, the prince knows not what they can bear; and for not knowing the trade, he can make no judgment of the proper ſeaſon when to demand his exhibitions.

11. 7. Obſcurities and doubts, about the right of impoſing, hath been the cauſe of great and ugly reluctances in the people, and of involuntary ſeverities in the prince, an eminent example whereof was the ſhip-money, no ſmall cauſe of twenty years calamity to the whole kingdom.

12. 8. Fewneſs of people, is real poverty; and a nation wherein are eight millions of people, are more

than twice as rich as the ſame ſcope of land wherein are but four; for the ſame governors which are the great charge, may ſerve near as well for the greater, as the leſſer number.

13. Secondly, if the people be ſo few, as that they can live, *Exſponte Creatis*, or with little labour, ſuch as is grazing, *&c.* they become wholly without art. No man that will not exerciſe his hands, being able to endure the tortures of the mind, which much thoughtfulneſs doth occaſion.

14. 9. Scarcity of money, is another cauſe of the bad payment of taxes; for if we conſider, that of all the wealth of this nation, *viz.* lands, houſing, ſhipping, commodities, furniture, plate, and money, that ſcarce one part of an hundred is coin; and that perhaps there is ſcarce ſix millions of pounds now in England, that is but twenty ſhillings a head for every head in the nation: we may eaſily judge, how difficult it is for men of competent eſtates, to pay a ſum of money on a ſudden; which if they cannot compaſs, ſeverities and charges enſue; and that with reaſon, though unlucky enough, it being more tolerable to undo one particular member, than to endanger the whole, notwithſtanding indeed it be more tolerable for one particular member to be undone with the whole, than alone.

15. 10. It ſeems ſomewhat hard, that all taxes ſhould be paid in money, that is, (when the King hath occaſion to victual his ſhips at Portſmouth) that fat oxen and corn ſhould not be received in kind, but that farmers muſt firſt carry their corn perhaps ten miles to ſell, and turn into money; which being paid to the King, is again reconverted into corn, fetched many miles further.

16. Moreover, the farmer for haſte is forced to under-ſell his corn, and the King for haſte likewiſe is forced

forced to overbuy his proviſions. Whereas the paying in kind, *Pro Hic & Nunc*, would leſſen a conſiderable grievance to the poor people.

17. The next conſideration ſhall be of the conſequences, and effects of two great a tax, not in reſpect of particular men, of which we have ſpoken before, but to the whole people in general: to which I ſay, that there is a certain meaſure, and proportion of money requiſite to drive the trade of a nation, more or leſs than which would prejudice the ſame. Juſt as there is a certain proportion of farthings neceſſary in a ſmall retail trade, to change ſilver money, and to even ſuch reckonings, as cannot be adjuſted with the ſmalleſt ſilver pieces. For money, (made of gold and ſilver) is to the τὰ χρηματα (that is to the matter of our food and covering) but as farthings and other local extrinſick money, is to the gold and ſilver ſpecies.

18. Now as the proportion of the number of farthings requiſite in commerce is to be taken from the number of people, the frequency of their exchanges; as alſo, and principally from the value of the ſmalleſt ſilver pieces of money; ſo in like manner, the proportion of money requiſite to our trade, is to be likewiſe taken from the frequency of commutations, and from the bigneſs of the payments that are by law or cuſtom uſually made otherwiſe. From whence it follows, that where there are regiſters of lands whereby the juſt value of each man's intereſt in them may be well known; and where there are depoſitories of the τὰ χρηματα, as of metals, cloth, linen, leather, and other uſefuls; and where there are banks of money alſo, there leſs money is neceſſary to drive the trade. For if all the greateſt payments be made in lands, and the other perhaps down to ten pound, or twenty pound be made by credit in lombars or money-banks:

it follows that there needs only money to pay ſums leſs than thoſe aforementioned; juſt as fewer farthings are requiſite for change, where there be plenty of ſilver two-pences, than where the leaſt ſilver piece is ſix pence.

19. To apply all this, I ſay, that if there be too much money in a nation, it were good for the commonalty, as well as the King, and no harm even to particular men, if the King had in his coffers, all that is ſuperfluous: no more than if men were permitted to pay their taxes in any thing they could beſt ſpare.

23. On the other ſide, if the largeneſs of a publick exhibition ſhould leave leſs money than is neceſſary to drive the nations trade, then the miſchief thereof would be the doing of leſs work, which is the ſame as leſſening the people, or their art and induſtry; for a hundred pound paſſing a hundred hands for wages, cauſes a thouſand pound worth of commodities to be produced, which hands would have been idle and uſeleſs, had there not been this continual motive to their employment.

21. Taxes if they be preſently expended upon our own domeſtick commodities, ſeem to me to do little harm to the whole body of the people, only they work a change in the riches and fortunes of particular men; and particularly by transferring the ſame from the landed and lazy, to the crafty and induſtrious. As for example, if a gentleman have let his lands to farm for a hundred pound *per annum*, for ſeveral years or lives, and he be taxed twenty pound *per annum*, to maintain a navy; then the effect hereof will be, that this gentleman's twenty pound *per annum*, will be diſtributed amongſt ſeamen, ſhip-carpenters, and other trades relating to naval matters; but if the gentleman had the land in his own hands, then being taxed a fifth part, he would raiſe his rents near the ſame proportion upon his under tenants, or would ſell his cattle, corn, and wooll a fifth part dearer; the like alſo would all other ſubdependents on him do; and thereby recover in ſome meaſure, what he paid. Laſtly, but if all the money levied were thrown into the ſea, then the ultimate effect would only be, that every man muſt work a fifth part the harder, or retrench a fifth part of his conſumptions, *viz.* the former if foreign trade be improveable, and the latter, if it be not.

22. This I conceive, were the worſt of taxes in a well-policyed ſtate; but in other ſtates where is not a certain prevention of beggary and thievery, that is a ſure livelihood for men wanting imployment; there I muſt confeſs, an exceſſive tax, cauſes exceſſive and inſuperable want, even of natural neceſſities, and that on a ſudden ſo as ignorant particular perſons, cannot find out what way to ſubſiſt by; and this by the law of Nature, muſt cauſe ſudden effects to relieve itſelf, that is rapines, frauds; and this again muſt bring death, mutilitions, and impriſonments according to the preſent laws which are miſchiefs, and puniſhments, as well unto the ſtates as to the particular ſufferers of them.

CHAP. IV.

Of the ſeveral ways of tax, and firſt, of ſetting a part, a proportion of the whole territory for publick uſes, in the nature of crown-lands; and ſecondly, by way of aſſeſment, or land tax.

BUT ſuppoſing, that the ſeveral cauſes of public charge are leſſened as much as may be, and that the people be well ſatisfied, and contented to pay their

juſt ſhares of what is needful for their government and protection, as alſo for the honour of their prince and country: it follows now to propoſe the ſeveral ways and expedients, how the ſame may be moſt eaſily, ſpeedily, and inſenſibly collected. The which I ſhall do, by expoſing the conveniences and inconveniences of ſome of the principle ways of levyings, uſed of later years within the ſeveral ſtates of Europe: unto which others of ſmaller and more rarer uſe may be referred.

2. Imagine then a number of people, planted in a territory, who had upon computation concluded that two millions of pounds *per annum*, is neceſſary to the public charges. Or rather, who going more wiſely to work had computed a twenty fifth part of the proceed of all their lands and labours, were to be the *exciſum*, or the part to be cut out, and laid aſide for publick uſes. Which proportions perhaps are fit enough to the affairs of England, but of that hereafter.

3. Now the queſtion is, how the one or the other ſhall be raiſed. The firſt way we propoſe, is, to exciſe the very land itſelf in kind; that is, to cut out of the whole twenty five millions, which are ſaid to be in England and Wales, as much land *in ſpeice*, as whereof the rack-rent would be two millions, *viz.* about four millions of acres, which is about a ſixth part of the whole; making the ſaid four millions to be crown lands, and as the four counties intended to be reſerved in Ireland upon the forfeitures were. Or elſe to exciſe a ſixth part of the rent of the whole, which is about the proportion, that the adventurers and ſoldiers in Ireland retribute to the King, as quit rents. Of which two ways, the latter is manifeſtly the better, the King having more ſecurity; and more obligees; provided the trouble and charge of this univerſal

verſal collection, exceed not that of the other advantage conſiderably.

4. This way in a new ſtate would be goods, being agreed upon, as it was in Ireland, before men had even the poſſeſſion of any land at all; wherefore whoſoever buys land in Ireland hereafter is no more concerned with the quit rents wherewith they are charged, than if the acres were ſo much the fewer; or then men are who buy land, out of which they know tythes are to be paid. And truly that country is happy in which by original accord, ſuch a rent is reſerved, as whereby the public charge may be borne without contigent, ſudden ſuperadditions, in which lies the very *ratio* of the burthen of all contributions and exactions. For in ſuch caſes as was ſaid before, it is not only the landlord pays, but every man who eats but an egg, or an onion of the growth of his lands; or who uſeth the help of any artiſan, which feedeth on the ſame.

5. But if the ſame were propounded in England, *viz.* if an aliquot part of every landlords rent were excined or retrenched, then thoſe whoſe rents were ſettled, and determined for long times to come, would chiefly bear the burthen of ſuch an impoſition, and others have a benefit thereby. For ſuppoſe A and B have each of them a parcel of land, of equal goodneſs and value; ſuppoſe alſo that A hath let his parcel for twenty one years at twenty pound *per annum*, but that B is free; now there comes out a tax of a fifth part; hereupon B will not let under 25l. that his remainder may be twenty, whereas A muſt be contented with ſixteen neat; nevertheleſs the tenants of A. will ſell the proceed of their bargain at the ſame rate, that the tenants of B ſhall do. The effect of all this is; firſt, that the King's fifth part of B. his farm ſhall be greater than before. Secondly,

condly, that the farmer to B ſhall gain more than before the tax. Thirdly, that the tenant or farmer of A ſhall gain as much as the King and tenant to B both. Fourthly, the tax doth ultimately light upon the landlord A and the conſumptioners. From whence it follows that a land-tax reſolves into an irregular exciſe upon conſumptions, that thoſe bear it moſt, who leaſt complain. And laſtly, that ſome landlords may gain, and only ſuch whoſe rents are predetermined ſhall loſe; and that doubly, viz. one way by the raiſing of their revenues, and the other by enhanſing the prices of proviſions upon them.

6. Another way is an *exciſium* out of the rent of houſing, which is much more uncertain than that of land. For an houſe is of a double nature, viz. one, wherein it is a way and means of expence; the other, as 'tis an inſtrument and tool of gain: for a ſhop in London of leſs capacity and leſs charge in building then a fair dining-room in the ſame houſe unto which both do belong, ſhall nevertheleſs be of the greater value, ſo alſo ſhall a dungeon, cellar, then a pleaſant chamber; becauſe the one is expence, the other profit. Now the way of a land-tax rates houſing, as of the latter nature, but the exciſe as of the former.

7. We might add hereunto, that houſing is ſometimes diſproportionally taxed to diſcourage building, eſpecially upon new foundations, thereby to prevent the growth of a city; ſuppoſe London, ſuch exceſſive and overgrown cities being dangerous to monarchy, though the more ſecure when the ſupremacy is in citizens of ſuch places themſelves, as in Venice.

8. But we ſay, that ſuch checking of new buildings ſignifies nothing to this purpoſe; foraſmuch as buildings do not encreaſe, until the people already have increaſed: but the remedy of the above mentioned dangers

gers is to be ſought in the cauſes of the encreaſe of people, the which if they can be nipt, the other work will neceſſarily be done.

But what then is the true effect of forbidding to build upon new foundations? I anſwer, to keep and faſten the city to its old ſeat and ground plot, the which encouragement for new buildings will remove, as it comes to paſs almoſt in all great cities, though inſenſibly, and not under many years progreſſion.

9. The reaſon whereof is, becauſe men are unwilling to build new houſes at the charge of pulling down their old, where both the old houſe it ſelf, and the ground it ſtands upon do make a much dearer ground-plot for a new houſe, and yet far leſs free and convenient; wherefore men build upon new free foundations, and cobble up old houſes, until they become fundamentally irreparable, at which time they become either the dwelling of the raſcality, or in proceſs of time return to waſte and gardens again, examples whereof are many even about London.

Now if great cities are naturally apt to remove their ſeats, I aſk which way? I ſay in the caſe of London, it muſt be weſtward, becauſe the winds blowing near three fourths of the year from the weſt, the dwellings of the weſt end are ſo much the more free from the fumes, ſteams and ſtinks of the whole eaſterly pyle; which where ſeacole is burnt is a great matter. Now if it follow from hence, that the palaces of the greateſt men will remove weſtward, it will alſo naturally follow, that the dwellings of others who depend upon them will creep after them. This we ſee in London, where the noblemens ancient houſes are now become halls for companies, or turned into tenements, and all the palaces are gotten weſtward; inſomuch that I do not doubt but that five hundred years hence, the King's palace will be near

near Chelſea, and the old building of Whitehall converted to uſes more anſwerable to their quality. For to build a new royal palace upon the ſame ground will be too great a confinement, in reſpect of gardens and other magnificencies, and withal a diſaccommodation in the time of the work: but it rather ſeems to me, that the next palace will be built from the whole preſent contignation of houſes at ſuch a diſtance as the whole palace of Weſtminſter was from the city of London, when the archers began to bend their bows juſt without Ludgate, and when all the ſpace between the Thames, Fleet-ſtreet, and Holborn was as Finisbury-fields are now.

10. This digreſſion I confeſs to be both impertinent to the buſineſs of taxes, and in it ſelf almoſt needleſs; for why ſhould we trouble ourſelves what ſhall be five hundred years hence, not knowing what a day may bring forth; and ſince 'tis not unlikely, but that before that time we may be all tranſplanted from hence into America, theſe countries being overrun with Turks, and made waſte, as the ſeats of the famous eaſtern empires at this day are.

11. Only I think 'tis certain, that while ever there are people in England, the greateſt cohabitation of them will be about the place which is now London, the Thames being the moſt commodious river of this iſland, and the ſeat of London the moſt commodious part of the Thames; ſo much doth the means of facilitating carriage greaten a city, which may put us in mind of employing our idle hands about mending the highways, making bridges, cawſeys and rivers navigable: which conſiderations brings me back round into my way of taxes, from whence I digreſt.

12. But before we talk too much of rents, we ſhould endeavour to explain the myſterious nature of them, with reference as well to money, the rent of which

which we call uſury; as to that of lands and houſes aforementioned.

13. Suppoſe a man could with his own hands plant a certain ſcope of land with corn, that is, could dig, or plough; harrow, weed, reap, carry home, threſh, and winnow ſo much as the huſbandry of this land requires; and had withal ſeed wherewith to ſow the ſame. I ſay, that when this man hath ſubducted his ſeed out of the proceed of his harveſt, and alſo what himſelf hath both eaten and given to others in exchange for cloathes, and other natural neceſſaries; that the remainder of corn is the natural and true rent of the land for that year; and the medium of ſeven years, or rather of ſo many years as makes up the cycle, within which dearths and plenties make their revolution, doth give the ordinary rent of the land in corn.

14. But a further, though collateral queſtion may be, how much Engliſh money this corn or rent is worth; I anſwer, ſo much as the money which another ſingle man can ſave within the ſame time, over and above his expence, if he employed himſelf wholly to produce and make it; viz. Let another man go travel into a country where is ſilver, there dig it, refine it, bring it to the ſame place where the other man planted his corn; coin it, &c. the ſame perſon, all the while of his working for ſilver, gathering alſo food for his neceſſary livelihood, and procuring himſelf covering, &c. I ſay, the ſilver of the one muſt be eſteemed of equal value with the corn of the other: the one, being perhaps twenty ounces and the other twenty buſhels. From whence it follows that the price of a buſhel of this corn to be an ounce of ſilver.

15. And foraſmuch as poſſibly there may be more art and hazard in working about the ſilver, then about

bout the corn, yet all comes to the ſame paſs; for let a hundred men work ten years upon corn, and the ſame number of men the ſame time upon ſilver; I ſay, that the neat proceed of the ſilver is the price of the whole neat proceed of the corn, and like parts of the one, the price of like parts of the other. Although not ſo many of thoſe who wrought in ſilver, learned the art of refining and coyning, or out-lived the dangers and diſeaſes of working in the mines. And this alſo is the way of pitching the true proportion, between the values of gold and ſilver, which many times is ſet but by popular error, ſometimes more, ſometimes leſs diffuſed in the world; which error (by the way) is the cauſe of our having been peſtered with too much gold heretofore, and wanting it now.

16. This, I ſay to be the foundation of equalizing and balancing of values; yet in the ſuperſtructures and practices hereupon, I confeſs there is much variety and intricacy; of which hereafter.

17. The world meaſures things by gold and ſilver, but principally the latter; for there may not be two meaſures, and conſequently the better of many muſt be the only of all; that is, by fine ſilver of a certain weight: but now if it be hard to meaſure the weight and fineneſs of ſilver, as by the different reports of the ableſt ſay-maſters I have known it to be; and if ſilver granted to be of the ſame fineneſs and weight, riſe and fall in its price, and be more worth at one place than another, not only for being farther from the mines, but for other accidents, and may be more worth at preſent, than a month or other ſmall time hence; and if it differ in its proportion unto the ſeveral things valued by it, in ſeveral ages upon the increaſe and diminution thereof, we ſhall endeavour to examine

mine ſome other natural ſtandards and meaſures, without derogating from the excellent uſe of theſe.

18. Our ſilver and gold we call by ſeveral names, as in England by pounds, ſhillings, and pence; all which may be called and underſtood by either of the three. But that which I would ſay upon this matter is, that all things ought to be valued by two natural denominations, which is land and labour; that is, we ought to ſay, a ſhip or garment is worth ſuch a meaſure of land, with ſuch another meaſure of labour; foraſmuch as both ſhips and garments were the creatures of lands and mens labours thereupon: this being true, we ſhould be glad to find out a natural par between land and labour, ſo as we might expreſs the value by either of them alone, as well or better than by both, and reduce one into the other, as eaſily and certainly, as we reduce pence into pounds. Wherefore we would be glad to find the natural values of the fee-ſimple of land, though but no better than we have done that of the *uſus fructus* above-mentioned, which we attempt as followeth.

19. Having found the rent or value of the *uſus fructus per annum*, the queſtion is, how many years purchaſe (as we uſually ſay) is the fee-ſimple naturally worth? if we ſay an infinite number, then an acre of land would be equal in value to a thouſand acres of the ſame land; which is abſurd, an infinity of units being equal to an infinity of thouſands: wherefore we muſt pitch upon ſome limited number, and that I apprehend to be the number of years, which I conceive one man of fifty years old, another of twenty eight, and another of ſeven years old, all being alive together may be thought to live; that is to ſay, of a grandfather, father, and child; few men having reaſon to take care of more remote poſterity; for if a man be a great grandfather, he himſelf is ſo much

much the nearer his end, ſo as there are but three in a continual line of deſcent uſually co-exiſting together; and as ſome are grandfathers at forty years, yet as many are not till above ſixty, and *ſic de cæteris*.

20. Wherefore I pitch the number of years purchaſe, that any land is naturally worth, to be the ordinary extent of three ſuch perſons their lives. Now in England we eſteem three lives equal to one and twenty years, and conſequently the value of land, to be about the ſame number of years purchaſe. Poſſibly if they thought themſelves miſtaken in the one, (as the obſervator of the bills of mortality thinks they are) they would alter in the other, unleſs the conſideration of the force of popular error and dependance of things already concatenated, did hinder them.

21. This I eſteem to be the number of years purchaſe where titles are good, and where there is a moral certainty of enjoying the purchaſe. But in other countries lands are worth nearer thirty years purchaſe, by reaſon of the better titles, more people, and perhaps truer opinion of the value and duration of three lives.

22. And in ſome places, lands are worth yet more years purchaſe, by reaſon of ſome ſpecial honour, pleaſures, privilege or juriſdiction annexed unto them.

23. On the other hand, lands are worth fewer years purchaſe (as in Ireland) for the following reaſons, which I have here ſet down, as unto the like whereof the cauſe of the like cheapneſs in any other place may be imputed.

Firſt, in Ireland, by reaſon of the frequent rebellions, (in which if you are conquered, all is loſt; or if you conquer, yet you are ſubject to ſwarms of thieves and robbers) and the envy which precedent miſſions

miſſions of Engliſh have againſt the ſubſequent, perpetuity it ſelf is but forty years long, as within which time ſome ugly diſturbance hath hitherto happened almoſt ever ſince the firſt coming of the Engliſh thither.

24. 2. The claims upon claims which each hath to the others eſtates, and the facility of making good any pretence whatſoever by the favour of ſome one or other of the many governors and miniſters which within forty years ſhall be in power there; as alſo by the frequency of falſe teſtimonies, and abuſe of ſolemn oaths.

25. 3. The paucity of inhabitants, there being not above the fifth part ſo many as the territory would maintain, and of thoſe but a ſmall part do work at all, and yet a ſmaller work ſo much as in other countries.

26. 4. That a great part of the eſtates, both real and perſonal in Ireland, are owned by abſentees, and ſuch as draw over the profits raiſed out of Ireland, refunding nothing; ſo as Ireland exporting than more it imports, doth yet grow poorer to a paradox.

27. 5. The difficulty of executing juſtice, ſo many of thoſe in power being themſelves protected by offices, and protecting others. Moreover, the number of criminous and indebted perſons being great, they favour their like in juries, offices, and wereſoever they can: beſides, the country is ſeldom rich enough to give due encouragement to profound judges and lawyers, which makes judgments very caſual, ignorant men being more bold to be apt and arbitrary, than ſuch as underſtand the dangers of it. But all this, a little care in due ſeaſon might remedy, ſo as to bring Ireland in a few years to the ſame level of value with other places; but of this alſo elſewhere more at large, for in the next place we ſhall come to uſury.

CHAP. V.

Of Usury.

WHAT reason there is for taking or giving interest or usury for any thing which we may certainly have again whensoever we call for it, I see not; nor why usury should be scrupled, where money or other necessaries valued by it, is lent to be paid at such a time and place as the borrower chuseth, so as the lender cannot have his money paid him back where and when himself pleaseth, I also see not. Wherefore when a man giveth out his money upon condition that he may not demand it back until a certain time to come, whatsoever his own necessities shall be in the mean time, he certainly may take a compensation for this inconvenience which he admits against himself: and this allowance is that we commonly call usury.

2. And when one man furnisheth another with money at some distant place, and engages under great penalties to pay him there, and at a certain day besides; the consideration for this, is that we call exchange, or local usury.

As for example, if a man wanting money at Carlisle in the heat of the late civil wars, when the way was full of soldiers and robbers, and the passage by sea very long, troublesome, and dangerous, and seldom passed; why might not another take much more than an 100l. at London for warranting the like sum to be paid at Carlisle on a certain day?

3. Now the questions arising hence are; what are the natural standards of usury and exchange? as for usury, the least than can be, is the rent of so much land as the money lent will buy, where the security is undoubted; but where the security is casual, then a kind of ensurance must be enterwoven with the simple natural interest, which may advance the usury very conscionably unto any height below the principal it self. Now if things are so in England, that really there is no such security as above-mentioned, but that all are more or less hazardous, troublesome, or chargeable to make, I see no reason for endeavouring to limit usury upon time, any more than that upon place, which the practice of the world doth not, unless it be that those who make such laws were rather borrowers than lenders: but of the vanity and fruitlesness of making civil positive laws against the laws of nature, I have spoken elsewhere, and instanced in several particulars.

4. As for the natural measures of exchange, I say, that in times of peace, the greatest exchange can be but the labour of carrying the money in specie; but where are hazards and emergent uses for money more in one place than another, &c. or opinions of these true or false, the exchange will be governed by them.

5. Parallel unto this, is something which we omitted concerning the price of land; for as great need of money heightens exchange, so doth great need of corn raise the price of that likewise, and consequently of the rent of the land that bears corn, and lastly of the land it self; as for example, if the corn which feedeth London, or an army, be brought forty miles together, then the corn growing within a mile of London, or the quarters of such army, shall have added unto its natural price, so much as the charge of bringing it thirty nine miles doth amount unto: and unto perishable commodities, as fresh fish, fruits, &c. the insurance upon the hazard of corrupting, &c. shall be added also; and finally, unto him that eats

eats these things, there (suppose in taverns) shall be added the charge of all the circumstantial apparatus of house-rent, furniture, attendance, and the cooks skill as well as his labour to accompany the same.

6. Hence it comes to pass, that lands intrinsically alike near populous places, such as were the perimeter of the area that feeds them is great, will not only yield more rent for these reasons, but also more years purchase than in remote places, by reason of the pleasure and honour extraordinary of having lands there; for

——*Omne tulit punctum qui miscuit utile dulci.*

7. Having finished our digression upon the measures of the rents and values of lands and monies, we now return to our second way of levying public charges, which was the taking of a proportion of the rent (commonly called assessment) it follows next to speak of the way of computing the said rents, otherwise than according to the bargains which a few men make one with another through ignorance, haste, false suggestion, or else in their passion or drink: although I acknowledge, that the medium or common result of all the bargains made within three years (or other such cycle of time, as within which all contingencies of land revolve) may be very sufficient to this purpose, being but the sum synthetically computed by casual opinions, as I would endeavour to cast up analytically by a distinct particularizing of the causes.

8. 1. Therefore I propound a survey of the figures, quantities, and situations of all the lands, both according to the civil bounds of parishes, farms, &c. and the natural distinctions thereof by the sea, rivers, ridges of rocks, or mountains, &c.

9. 2. I propound that the quality of each denomination were described by the commodities it had usually

usually born, in some land, some sort of timber, grain, pulse or root growing more happily than in others: also by the increase of things sown or planted, which it hath yielded *communibus annis*; and withal, the comparative goodness of the said commodities not unto the common standard money, but to one another. As for example; if there be ten acres of land, I would have it judged whether they be better for hay or corn; if for hay, whether the said ten acres will bear more or less of hay than ten other acres; and whether an hundred weight of the said hay will feed or fatten more or less than the same weight of other hay, and not as yet comparing it to money, in which the value of the said hay will be more or less, according to the plenty of money, which hath changed strangely since the discovery of the West-Indies, and according to the multitudes of people living near this land, together with the luxurious or frugal living of them; and besides all, according to the civil, natural, and religious opinions of the said people: as for example, eggs in the fore-part of Lent (because their goodness and delicacy decays before Lent be done) being worth little in some popish countries; nor swines flesh among the Jews, nor hedgehogs, frogs, snails, mushrooms, &c. to those that fear to eat them, as poisonous or unwholesome: nor currans, and Spanish wines, if they were all to be destroyed as the great thieves of this nation, by an edict of the state.

10. This I call a survey or inquisition into the former intrinsic values of land, this latter of extrinsic or accidental follows. We said, that the change of the store of money would change the rates of commodities, according to our reckoning, in names and words (pounds, shillings and pence being nothing else) as for example:

If a man can bring to London an ounce of ſilver out of the earth in Peru, in the ſame time that he can produce a buſhel of corn, then one is the natural price of the other; now if by reaſon of new and more eaſy mines a man can get two ounces of ſilver as eaſily as formerly he did one, then corn will be as cheap at ten ſhillings the buſhel, as it was before at five ſhillings *cæteris paribus*.

11. It behoves us therefore to have a way, whereby to tell the money of our country (which I think I have, and that in a ſhort time, and that without coſt, and (which is more) without looking into particular mens pockets; of which hereafter.) Now if we know what gold and ſilver we had in England two hundred years ago, and could tell it again now; and though we alſo knew the difference of our denominations then, when thirty ſeven ſhillings were made out the ſame quantity of ſilver as ſixty two are now; alſo that of the alloy, labour in coinage, remedies for weight and fineneſs, and duties to the king; nay, if we alſo knew the labourers wages then and now, yet all this would not ſhew the difference of the riches of our nation, even in money alone.

12. Wherefore we muſt add to the premiſes the knowledge of the difference of the numbers of the people, and conclude, that if all the money in the nation were equally divided amongſt all the people both then and now, that that time wherein each deviſee had wherewith to hire moſt labourers, was the richer. So that we want the knowledge of the people and bullion which is now in this land, and which was heretofore; all which I think may be found out even for the time paſt, but more probably for the time preſent, and to come.

13. But to proceed; ſuppoſe we had them, then we would pitch the accidental values upon our lands about

about London; as thus; viz. we would firſt at hazard compute the materials for food and covering, which the ſhires of Eſſex, Kent, Surry, Middleſex, and Hertford; next circumjacent to London, did *communibus annis* produce, and would withal compute the conſumptioners of them living in the ſaid five ſhires, and London. The which if I found to be more than were the conſumptioners living upon the like ſcope of other land, or rather upon as much other land as bore the like quantity of proviſions; then I ſay, that proviſions muſt be dearer in the ſaid five ſhires than in the other; and within the ſaid ſhires cheaper or dearer, as the way to London was more or leſs long, or rather more or leſs chargeable.

14. For if the ſaid five ſhires did already produce as much commodity, as by all endeavour was poſſible; then what is wanting muſt be brought from afar, and that which is near, advanced in price accordingly; or if the ſaid ſhires by greater labour than now is uſed (as by digging inſtead of ploughing, ſetting inſtead of ſowing, picking of choice ſeed inſtead of taking it promiſcuouſly, ſteeping it inſtead of uſing it wholly unprepared, and manuring the ground with ſalt inſtead of rotten ſtraw, &c.) could be fertilized, then will the rent be as much more advanced, as the exceſs of increaſe exceeds that of the labour.

15. Now the price of labour muſt be certain (as we ſee it made by the ſtatutes which limit the day-wages of ſeveral work-men;) the non-obſervance of which laws, and the not adapting them to the change of times, is by the way very dangerous, and confuſive to all endeavours of bettering the trade of the nation.

16. Moreover, the touch-ſtone to try whether it be better to uſe thoſe improvements or not, is to examine

examine whether the labour of fetching theſe things even from the places where they grow wild, or with leſs culture, be not leſs than that of the ſaid improvements.

17. Againſt all this will be objected, that theſe computations are very hard, if not impoſſible to make; to which I anſwer only this, that they are ſo, eſpecially if none will trouble their hands or heads to make them, or give authority for ſo doing: but withal, I ſay, that until this be done, trade will be too conjectural a work for any man to employ his thoughts about; for it will be the ſame wiſdom, in order to win with fair dice, to ſpend much time in conſidering how to hold them, how much to ſhake them, and how hard to throw them, and on what angles they ſhould hit the ſide of the tables, as to conſider how to advance the trade of this nation; where at preſent particular men get from their neighbours (not from the earth and ſea) rather by hit than wit, and by the falſe opinions of others, rather than their own judgments; credit every where, but chiefly in London, being become a meer conceit, that a man is reſponſible or not, without any certain knowledge of his wealth or true eſtate. Whereas I think the nature of credit ſhould be limited only to an opinion of a mans faculties to get by his art and induſtry. The way of knowing his eſtate being to be made certain, and the way of making him pay what he owes to the utmoſt of his ability, being to be expected from the good execution of our laws.

18. I ſhould here enlarge upon a paradox, to prove, that if every mans eſtate could be always read in his forehead, our trade would much be advanced thereby, although the poorer ambitious man be commonly the more induſtrious. But of this elſewhere.

19. The

19. The next objection againſt this ſo exact computation of the rents and worth of lands, &c. is that the ſovereign would know too exactly every mans eſtate: to which I anſwer, that if the charge of the nation be brought as low as it may be (which depends much upon the people in parliament to do) and if the people be willing and ready to pay, and if care be taken, that although they have not ready money; the credit of their lands and goods ſhall be as good; and laſtly, that it would be a great diſcommodity to the prince to take more than he needs, as was proved before; where is the evil of this ſo exact knowledge? and as for the proportion of every contributor, why ſhould any man hope or expect to eaſe himſelf by his craft and intereſt in a confuſion? or why ſhould he not fear, though he may be advantaged this time, to ſuffer in the next.

CHAP. VI.

Of cuſtoms and free ports.

CUSTOM is a contribution or exciſium out of goods ſent out or imported into the princes dominions: in theſe countries of a twentieth part not according to the prices currant among merchants of each reſpective commodity, but according to other ſtanding rates ſet by the ſtate, though adviſed for the moſt part by concerned perſons.

2. I cannot well imagine what ſhould be the natural reaſons, why a prince ſhould be paid this duty inward and outward both; there ſeems indeed to be ſome, why he ſhould be paid for indulging the exportation of ſome ſuch things as other countries do really want.

3. Wherefore

3. Wherefore I think, that cuſtoms at the firſt were a præmium allowed the prince for protecting the carriage of goods both inward and outward from the pirates; and this I ſhould verily believe, if the prince were bound to make good loſſes of that kind. And I thought that the proportion of five pound *per cent.* was pitched upon computation, that the merchants before the ſaid undertaking and compoſition, had uſually loſt more by piracy: and finally, that the cuſtoms had been an inſurance upon loſſes by enemies, as the inſurance now uſual is of the caſualties of ſea, wind, weather, and veſſel, or altogether; or like the inſurance in ſome countries of houſes from fires for a certain ſmall part of their yearly rent. But be it what it will, it is anciently eſtabliſhed by law, and ought to be paid until it ſhall be aboliſhed. Only I take leave as an idle philoſopher to diſcourſe upon the nature and meaſures of it.

4. The meaſures of cuſtoms outwards may be ſuch, as after reaſonable profit to the exporter will leave ſuch of our own commodities as are neceſſary to foreigners ſomewhat cheaper unto them than they can be had from elſewhere.

As for example, tin is a native commodity, which governs the market abroad, that is, there is none ſo good, and ſo eaſy to be had and exported.

Now ſuppoſe tin might be made in Cornwall for four pence the pound, and that the ſame would yield twelve pence at the neareſt part in France, I ſay, that this extraordinary profit ought to be eſteemed as a mine-royal, or *treſor trouve*, and the ſovereign ought to have his ſhare in it: which he will have, by impoſing ſo great a duty upon tin exported, as on one ſide may leave a ſubſiſtence to the workmen (and no more) with a competent profit to the owners of the ground; and on the other ſide, may leave the price abroad

abroad leſs than that for which tin may be had from any other place.

5. The ſame impoſition might alſo be made on the tin ſpent at home, unleſs it be as impoſſible ſo to do, as for the king of France to impoſe the gabel upon ſalt in the very places where it is made.

6. But it is obſerved, that ſuch high duties make men endeavour not to enter any ſuch goods at all, or pay for them, provided the charge of ſmugling and bribing, with the hazard of being ſeized do not *communibus vicibus* exceed the duty.

7. Wherefore the meaſures of this nature are, that it be more eaſy, ſafe, and profitable for men to keep the law, than to break it, unleſs it be in ſuch caſes where the magiſtrate can with certainty execute the law. As for example, it would be hard to ſave the duties upon horſes ſhipped at a ſmall port, without adjacent creeks, and that but ſome certain two hours every tide, foraſmuch as horſes cannot be diſguiſed, put up in bags or caſks, nor ſhipped without noiſe and the help of many hands.

8. The meaſures of cuſtoms upon imported commodities are; 1. That all things ready and ripe for conſumption may be made ſomewhat dearer than the ſame things grown or made at home, if the ſame be ſeaſible *cæteris paribus*.

2. That all ſuperfluities tending to luxury and ſin, might be loaded with ſo much impoſt, as to ſerve inſtead of a ſumptuary law to reſtrain the uſe of them. But here alſo care is to be had, that it be not better to ſmuggle than to pay.

9. On the contrary, all things not fully wrought and manufactured, as raw hides, wool, beaver, raw ſilk, cotton; as alſo all tools and materials for manufacture; as alſo dying-ſtuff, &c. ought to be gently dealt with.

10. If

10. If to levy the payment of these duties could be most exactly performed, princes might strangely practice one upon another; wherefore since they cannot, the people pay no more than they cannot with greater safety upon the whole matter save, nor observe any more of these laws, than they cannot elude.

11. The inconveniences of the way of customs, are, viz.

1. That duties are laid upon things not yet ripe for use, upon commodities in *fieri*, and but in the way of their full improvements, which seems the same ill husbandry, as to make fuel of young saplings, instead of dotards and pollards.

2. The great number of officers requisite to collect the said duties, especially in a country where the harbours are many, and the tides convenient for shipping of goods at any time.

3. The great facility of smuggling by briberies, collusions, hiding and disguising of commodities, &c. and all this notwithstanding oaths and penalties, and withal by the several ways of mitigating and taking off the said penalties, even after discovery.

4. The customs or duties upon the few commodities of the growth of England exchanged with foreigners, make too small a part of the whole expence of the people of this kingdom, which (perhaps is not less than fifty millions of pounds *per annum)* out of which to bear the common charges thereof, so as some other way of levy must be practised together with it; whereas by some one way, if the best, the whole work may be absolved: wherefore 'tis an inconvenience in the way of customs, that it necessitates other ways than it self.

12. Now as a small attempt of a remedy or expedient herein, I offer rather, that instead of the customs upon goods shipped, every ship that goes in or out, may pay a tonnage, the same being collectible by a very few hands, as a matter visible to all the world; and that the said duty be but such a part of the freight, as the like whereof being excinded out of the whole consumption, would defray all the public charge; which part perhaps is four *per cent.* or thereabouts, viz. two millions *per ann.* out of fifty.

13. The other is, that the customs be reduced into the nature of an insurance præmium, and that the same be augmented and fitted, as whereby the king may afford to ensure the goods as well against the sea as enemies; by which means the whole nation would be concerned in all such losses, and then the merchant for his own sake would more willingly enter and pay for whatsoever he would have insured.

14. But it will be here objected, that although the duty of customs be abrogated, yet that there must be always the same number of officers maintained as now to prevent the bringing in and carrying out of prohibited commodities. Wherefore we shall here state the nature of such prohibitions by two or three grand instances.

15. To prohibit the exportation of money, in that it is a thing almost impracticable; it is almost nugatory and vain; and the danger of it resolves either into a kind of insurance answerable to the danger of being seized, or unto a surcharge of a composition by bribing the searchers. As for example, if but one in fifty exportations are seized, or if twenty shillings be usually taken for conniving at fifty pounds, then the commodities bought with this money must be sold two at least *per cent.* the dearer to the consumptioner. Now if the trade will not bear this surcharge, then money will not be exported with discretion. Now the use of this prohibition, supposing it practicable, is

is to ſerve as a ſumptuary law, and to bind the nation in general not to ſpend more than they get; for if we could export no commodity of our own growth or manufacture than by prohibiting the going out of money, it is alſo *ipſo facto* commanded that nothing foreign ſhould be brought in. Again ſuppoſing, that ordinary we export enough to furniſh us with all foreign commodities, but upon ſome extraordinary decay of our land or hands, we are able to export but half as much as would procure our ordinary proportion of foreign goods, then the prohibition of money performs indeed the part of a ſumptuary law, in hindring us to bring in any more than half as much foreign commodities as we formerly uſed, only it leaves it to the diſcretion of the merchant, to chuſe which he will neglect or forbear to bring in, and which not; whereas in ſumptuary laws the ſtate taketh this care upon themſelves. As for example, if we wanted exportations to ballance our importations by forty thouſand pounds, and ſuppoſe for examples ſake, that the importation of forty thouſand pounds worth of coffee-berries, or the like of Spaniſh wine muſt be retrenched; in this caſe, the ſaid prohibition of money will do one, or ſome of the one, and ſome of the other, as the merchant himſelf pleaſes: but the ſumptuary law determines, whether we ſhall encourage and keep fair with the nation that ſends us wine, rather than that which ſends us coffee, and whether the expence of wine or coffee be moſt prejudical to our people, &c.

16. The benefits alledged for the free exportation of money is meerly this, viz. that if a ſhip carrying out of England forty thouſand pounds worth of cloth, might alſo carry with it forty thouſand pounds in money, then could the merchant ſtand the ſtiffer upon his terms, and in fine would buy cheaper, and ſell

ſell dearer; but by the way, the merchant buys this power with the intereſt and advantage of the money he carries, which if it amount to five pound *per cent.* then he had better ſold his goods at four pound *per cent.* under rate, than to have fortified himſelf with monies as aforeſaid. But of this more may be ſaid; we haſten to the great point of wool.

17. The Hollanders having gotten away our manufacture of cloth, by becoming able to work with more art, to labour and fare harder, to take leſs freight, duties and inſurance, hath ſo madded us here in England, that we have been apt to think of ſuch exorbitantly fierce ways of prohibiting wool and earth to be exported, as perhaps would do us twice as much harm as the loſs of our ſaid trade. Wherefore to return to our wits and trade again, before we can tell what to do in this caſe, we muſt conſider;

1. That we are often forced to buy corn from abroad, and as often complain that we are peſtered with abundance of idle hands at home, and withal that we cannot vend the woollen manufactures even which our few working hands do produce. In this caſe were it not better to leſſen our ſheep-trade, and convert our hands to more tillage? becauſe 1. fleſh becoming dearer, there would be encouragement for fiſh, which will never be till then. 2. Our money would not run ſo faſt away for corn. 3. We ſhould have no ſuch gluts of wool upon our hands. 4. Our idle hands would be employed in tillage and fiſhing, one man by the way of grazing tilling as it were many thouſand acres of land by himſelf and his dog.

2. Suppoſe we wanted no corn, nor had any idle hands, and yet that we abounded with more wool than we can work up; in this caſe, certainly wool might be exported, becauſe 'tis ſuppoſed, that the hands

hands which work, are already employed upon a better trade.

3. Suppose the Hollander out-do us by more art, were it not better to draw over a number of their choice workmen, or send our most ingenious men thither to learn; which if they succeed, it is most manifest, that this were the more natural way, than to keep that infinite clutter about resisting of nature, stopping up the winds and seas, &c.

4. If we can make victual much cheaper here than in Holland, take away burthensome, frivilous, and antiquated impositions and offices.

I conceive even this were better than to perswade water to rise of it self above its natural spring.

5. We must consider in general, that as wiser physicians tamper not excessively with their patients, rather observing and complying with the motions of nature, than contradicting it with vehement administrations of their own; so in politicks and œconomicks the same must be used; for

Naturam expellas furca licet usque recurrit.

18. Nevertheless, if the Hollanders advantages in making cloth be but small and few in comparison of ours, that is, if they have but a little the better of us, then I conceive that prohibitions to export wool may sufficiently turn the scales. But whether this be so or not, I leave to others, being my self neither merchant nor statesman.

19. As for prohibition of importations, I say that it needs not be, until they much exceed our exportations. For if we should think it hard to give good necessary cloth for debauching wines, yet if we cannot dispose of our cloth to others, 'twere better to give it for wine or worse, than to cease making it; nay, better to burn a thousand mens labours for a time, than to let those thousand men by non-employment

ment lose their faculty of labouring. In brief, what may be further said hereupon, resolves into the doctrine and *ingenium* of making sumptuary laws, and judicious use of them *pro hic & nunc.*

20. Unto this discourse of customs appertains that of free ports, which (in a nation that only trades for it self, viz. vents its own superfluities, and imports only necessaries for it self) are of no use, but rather harm; for suppose wines be brought into a free port, be there housed and privately sold, but the cask filled up with stained water, and put on ship-board again to be staved as soon as the ship is out at sea: in this case, the duties of those wines are defrauded, as it also may be many other ways.

21. Now if it be said, that although we should trade but for ourselves, yet that our ports (being more commodious than those of other nations) would be the more frequented; for being free, and consequently the more enriched, by the expence of seamen and passengers, hire of labourers, and warehouses, &c. even without any custom at all upon the goods. Nevertheless 'tis reason that a small duty should be paid upon the ship as aforesaid, for such use of our ports, and that *eo nomine*; not expecting all our benefit from the said hire of cellarage, porters, and carmen, which also might be had over and above for their proper reasons.

22. But if we could attain to be the merchants between other nations, there is then no reason for exacting duties (as was said before) upon things *in fieri*, and which are but in the way of their improvement: and as for the fraud that may be committed, as in the case of wines above-mentioned, I affirm that our excise upon the consumption, would overcome and elude them.

CHAP. VII.

Of poll-money.

POLL-MONEY is a tax upon the persons of men, either upon all simply and indifferently, or else according to some known title or mark of distinction upon each; and that either of bare honour, or else of some office sought or imposed, or of some faculty and calling without respect to riches or poverty, incomes or expence, gain or loss accruing by the said title, office or faculty.

2. The poll-monies which have been levied of late, have been wonderfully confused; as taxing some rich single persons at the lowest rate; some knights, though wanting necessaries, at twenty pounds, encouraging some vain fellows to pay as esquires, on purpose to have themselves written esquires in the receipts; making some pay ten pounds as doctors of physic or law, who get nothing by the faculty, nor mind the practice; making some poor tradesmen forced to be of the liveries of their companies to pay beyond their strength; and lastly, some to pay according to their estates, the same to be valued by those that know them not; thereby also giving opportunity to some bankrupts to make the world credit them as men of such estates, at which the assessors did rate them by collusion.

3. So as by this confusion, arbitraries, irregularities and hotch pot of qualifications, no estimate could be made of the fitness of this plaister to the sore, nor no check or way to examine whether the respective receipts were duly accompted for, &c.

4. Wherefore wholly rejecting the said complicated way of tax, I shall speak of poll-money more distinctly,

tinctly, and first of the simple poll-money upon every head of all mankind alike; the parish paying for those that receive alms, parents for their children under age, and masters for their apprentices and others who receive no wages.

5. The evil of this way is, that it is very unequal; men of unequal abilities, all paying alike, and those who have greatest charges of children paying most; that is, that by how much the poorer they are, by so much the harder are they taxed.

6. The conveniencies are; first, that it may be suddenly collected, and with small charge: secondly, that the number of the people being always known, it may be sufficiently computed what the same will amount unto. Thirdly, it seems to be a spur unto all men, to set their children to some profitable employment upon their very first capacity, out of the proceed whereof, to pay each child his own poll-money.

7. The next poll-money is upon every head, but distinguished by titles of meer honour, without any kind of office or faculty; as dukes, marquesses, earls, viscounts, barons, baronets, knights, and esquires, viz. the eldest sons of knights *in perpetuum*, and gentlemen if they write themselves so. This way is much more equal than the other; forasmuch as those who are titled, are for the most part rich proportionably; or if they were not, yet men so dignified shall command a preheminence and place, even although they do not or cannot buy it of the vulgar by their expence: my meaning hereby is, that a title may possibly save a man as much as his poll-money may exceed the plebean level by reason of such title.

8. Moreover, good and multiform accompts being kept of the people, this tax may be also easily, speedily and inexpensively collected; and also being capable

pable of being computed aforehand, may be fitted and ſeized according to the needs of the prince.

9. As for offices, they are indeed dignities for the moſt part, but paid for by the trouble of adminiſtring them; as for example, to be an alderman ſuppoſe of London, is indeed an honour, yet many pay five hundred pounds to be excuſed from receiving it.

Nevertheleſs it may not be improper to tax offices ſought, or ſuch as are accepted, although they might be refuſed: and on the other ſide no *tituladoo* ſhould be forced to pay poll-money according to this title, if he be contented to lay it down, and never reſume it more.

10. The titles of faculties and callings ought to be no qualification in a poll-money, becauſe they do not neceſſarily nor probably infer ability to pay, but carry with them vaſt inequalities. But therefore if a man by his licence to practiſe get much, it may be preſumed he will ſpend accordingly; in which net the way of exciſe will certainly take him, as it will all the officers aforementioned.

11. Hearth-money ſeems to be a poll-money, but is not, being rather a way of accumulative exciſe; of which hereafter.

CHAP. VIII.

Of Lotteries.

MEN that accept titles may foreſee, that they may be taxed by them as aforeſaid, (although it be unlikely (one houſe of parliament being all *tituladoes*, and the greateſt part of the other being ſuch alſo) that any ſuch way of levy ſhould paſs) and therefore they do as it were *a priori* conſent unto the tax in their own individuals.

2. Now

2. Now in the way of lottery, men do alſo tax themſelves in the general, though out of hopes of advantage in particular: a lottery therefore is properly a tax upon unfortunate ſelf-conceited fools; men that have good opinion of their own luckineſs, or that have believed ſome fortune-teller or aſtrologer, who had promiſed them great ſucceſs about the time and place of the lottery, lying ſouthweſt perhaps from the place where the deſtiny was read.

3. Now becauſe the world abounds with this kind of fools, it is not fit that every man that will, may cheat every man that would be cheated, but it is rather ordained, that the ſovereign ſhould have the guardianſhip of theſe fools, or that ſome favourite ſhould beg the ſovereigns right of taking advantage of ſuch mens folly, even as in the caſe of lunaticks and ideots.

4. Wherefore a lottery is not tollerated without authority, aſſigning the proportion in which the people ſhall pay for their errors, and taking care that they be not ſo much and ſo often couzened, as they themſelves would be.

5. This way of lottery is uſed but for ſmall levies, and rather upon privato public accounts, (than for maintaining armies or equipping fleets,) ſuch as are aqueducts, bridges, and perhaps highways, &c. Wherefore we ſhall ſay no more of it upon this occaſion.

CHAP. IX.

Of Benevolence.

THE raiſing of money by benevolence, ſeems to be no force upon any man, nor to take from any man but what himſelf knows he can ſpare,

 never-

nevertheleſs there is more in it; for to be but brow-beaten by a prince or grandee, proves often as heavy as to be diſtrained upon for an aſſeſſment or ſubſidy; and the danger of being miſrepreſented by linſy pick-thanks and informers as diſaffected to the cauſe for wh ch the levy is made, is more frequent than the payment of any ſum in a due proportion with all other men (which I have ſaid is no impoveriſhment) can poſſibly be hurtful.

The benefits of this way are theſe, viz. that for-aſmuch as it ſometimes falls out (as in the late differences with the Scots, *annis* 1638 and 1639 when the church dignitaries were moſt concerned) that the cauſe of the expence concerns ſome men more than others, that then an impoſition ſhould not paſs upon all for the ſakes of a part; ſometimes it happens that one ſort of men have received greater and freſher favours than another: as upon the late reſtauration of his Majeſty *anno* 1660, thoſe who needed an act of imdemnity did: and ſometimes it is viſible, that ſome men have had better times of gain and advantages than others, as the clergy moſt eminently have had ſince his Majeſty's ſaid reſtauration. In all theſe caſes, the propoſal of a benevolence may be offered, although in no caſes it be without its inconveniences; the which are principally theſe.

1. The abovementioned brow-beating and diſtaſte given, if a man have not contributed as largely as envious obſervers think he ſhould have done.

2. A benevolence in many caſes may divide a whole nation into parties, or at leaſt make the ſtrength of parties too well known to ſuch as need not know it: and withal it may (on the contrary and upon deſign) diſguiſe the ſame, and elude the meaſures which the governors thought to have taken by ſuch an exploratory artifice.

3. Some

3. Some men may have particular reaſons to contribute large, viz. complacency with, and hopes of being repaired by the favour of ſome grandee, who favours the buſineſs, and the very ſame may make to the prejudice of others.

4. Men of ſinking eſtates, (who nevertheleſs love to live high, and appear ſplendid, and ſuch who make themſelves friends, (by their hoſpitality paid for, in effect by others) enough to be protected, even from juſtice) do often upon this occaſion of benevolence ſet extravagant examples unto others, who have laboured hardly for what they have; thoſe not caring what they pay, becauſe it encreaſeth their credit, to borrow the more, ſo as at length the whole burthen of ſuch bankrupts benevolence, lights upon the frugal patriots, by whom the public weal ſubſiſts.

CHAP. X.

Of Penalties.

THE uſual penalties are death, mutilations, impriſonment, publick diſgrace, corporal tranſient pains, and great tortures, beſides the pecuniary mulcts. On which laſt we ſhall moſt inſiſt, ſpeaking of the others but in order to examine whether they may not be commuted for theſe.

2. There be ſome certain crimes, for which the law of God appoints death, and theſe muſt be puniſhed with it, unleſs we ſay that thoſe were but the civil laws of the Jewiſh commonwealth, although given by God himſelf: of which opinion certainly moſt modern ſtates are, in as much as they puniſh not adulterers, &c. with death as when among the Jews, and yet puniſh ſmall thefts with death inſtead of multiple reparation.

3. Upon

3. Upon this ſuppoſition we ſhall venture to offer; whether the reaſon of ſimple death be not to puniſh incorrigible committers of great faults?

4. Of publick death with torments, to affright men from treaſons, which cauſe the deaths and miſeries of many thouſand innocent and uſeful people?

5. Of death ſecretly executed, to puniſh ſecret and unknown crimes, ſuch as publick executions would teach to the world? or elſe to ſuffocate betimes ſome dangerous novelties in religion; which the patient ſuffering of the worſt man would much ſpread and encourage.

6. Mutilations ſuppoſe of ears, noſe, &c. are uſed for perpetual diſgrace, as ſtanding in the pillory is for temporary and tranſient; which and ſuch other puniſhments have (by the way) made ſome corrigible offenders, to become deſperate and incurable.

7. Mutilations of parts as of fingers, are proper to diſable ſuch as have abuſed their dextrous uſe of them by pocket-picking, counterfeiting of ſeals and writings, &c. Mutilations of other parts, may ſerve to puniſh and prevent adulteries, rapes, inceſts, &c. And the ſmaller corporal pains, ſerve to puniſh thoſe, who can pay no pecuniary mulcts.

8. Impriſonment ſeems rather to be the puniſhments of ſuſpected than guilty perſons, and ſuch as by their carriage give the magiſtrate occaſion to think, either they have done ſome ſmaller particular crime, as thefts, &c. or that they would commit greater, as treaſons and ſeditions. But where impriſonment is not a ſecuring men until their trials, but a ſentence after trial, it ſeems to me proper only to ſeclude ſuch men from converſation, whoſe diſcourſes are bewitching, and practices infectious, and in whom nevertheleſs remains ſome hopes of their future amendments,

mendments, or uſefulneſs for ſome ſervice not yet appearing.

9. As for perpetual impriſonment by ſentence, it ſeems but the ſame with death it ſelf, to be executed by nature it ſelf, quickned with ſuch diſeaſes, as cloſe living, ſadneſs, ſolitude, and reflections upon a paſt and better condition, doth commonly beget: nor do men ſentenced hereunto live longer, though they be longer in dying.

10. Here we are to remember that in conſequence of our opinion, [that labour is the father and active principle of wealth, as lands are the mother] that the ſtate by killing, mutilating, or impriſoning their members, do withal puniſh themſelves; wherefore ſuch puniſhments ought (as much as poſſible) to be avoided and commuted for pecuniary mulcts, which will encreaſe labour and publick wealth.

11. Upon which account, why ſhould not a man of eſtate, found guilty of man-ſlaughter rather pay a certain proportion of his whole eſtate, than be burnt in the hand?

12. Why ſhould not inſolvent thieves be rather puniſhed with ſlavery than death? ſo as being ſlaves they may be forced to as much labour, and as cheap fare as nature will endure, and thereby become as two men added to the commonwealth; and not as one taken away from it; for if England be under peopled, (ſuppoſe by half) I ſay that next to the bringing in of as many more as now are, is the making theſe that are, to do double the work which now they do; that is, to make ſome ſlaves; but of this elſewhere.

13. And why ſhould not the ſolvent thieves and cheats be rather puniſhed with multiple reſtitutions than death, pillory, whipping, &c. But it will be aſked with how manifold reſtitutions ſhould picking a pocket

pocket (for example) be punished? I say 'twere good in order to the solution hereof, to enquire of some candid artists in that trade, how often they are taken one time with another practising in this work? if but once in ten times; then to restore even but seven-fold would be a fair profit; and to restore but ten-fold, were but an even lay; wherefore to restore twenty fold, that is, double to the hazard, is rather the true *ratio* and measure of punishment by double reparation.

14. And surely the restoring two, three, four, and seven-fold mentioned in Moses law must be thus understood, or else a man might make thieving a very fair and lawful profession.

15. The next question is, in such multiple restitutions how many parts should be given to the sufferer. To which I answer, never above one, and scarce that, to oblige him to more care, and self preservation, with three parts to discoverers, and the rest to publick uses.

16. Thirdly, In the case of fornications, most of the punishments not made by pecuniary mulcts and commuted, are but shame, and that too but towards some few persons, which shame for ever after obdurates the offender, what ever it work upon such whose fames are yet intire: of all which men take little consideration, standing upon the brink of such precipices as make them giddy; and when they are in danger of such faults as are rather madnesses, distempers, and alienations of mind and reason, as also insurrections of the passions, than deliberate act of the understanding.

17. Moreover, according to that axiom of, *in quo quis peccat, in eodem puniatur*; if the *ratio formalis* of the sin of *concubitus vagi*, be the hindering of procreation, let those who by their miscarriages of this kind are

are guilty thereof, repair unto the state the miss of another pair of hands with the double labour of their own, or which is all one, by a pecuniary mulct; and this is the practice of some wise states in punishing what they will never be able to prevent: nor doth the gospel specify any punishment in this world, only declaring they shall not be received into the joys of the next.

18. I could instance in more particulars, but if what I have already said be reasonable, this little is enough; if not, then all the rest would be too little also: wherefore I shall add but one instance more, as most suitable to our present times and occasions, which is the way of punishing heterodox professors of religion.

19 That the magistrate may punish false believers, if he believe he shall offend God in forbearing it, is true; for the same reasons that men give for liberty of conscience, and universal toleration; and on the other side, that he may permit false worships, seems clearly at least by the practice of all states, who allow ambassadors their freedom (be their worship never so abominable (even when they come to negociate but upon temporal and small matters.

20. Wherefore, since the magistrate may allow or connive at such worships as himself thinks fit, and yet may also punish; and since by death, mutilations and imprisonments of the subjects, the state not only punisheth it self, but spreadeth the pseudodoxies; it follows, that pecuniary mulcts are the fittest ways of checking the wantonness of men in this particular: forasmuch as that course favours of no bitterness at all, but rather argues a desire to indulge, provided such indulgence may consist with the indemnity of the state; for no heterodox believer will desire to be tollerated longer than he keeps the public peace; the which

which if he means to do, he cannot take it ill of the magiſtrate, to keep him ſteddy unto that his duty, nor grudge to contribute towards ſo much charge for that purpoſe as himſelf occaſions.

21. Moreover, as there ſeems a reaſon for indulging ſome conſcientious miſbelievers, ſo there is as much for being ſevere towards hypocrites, eſpecially ſuch as abuſe holy religion to cloak and vizzard worldly ends: now what more eaſy and yet effectual way is there to diſcern between theſe two, then well proportioned pecuniary mulcts? for who deſiring to ſerve God without fear, and labouring ten hours *per diem* at his calling, would not labour one hour more for ſuch a freedom? even as religious men ſpend an hour *per diem* more than the looſer ſort at their devotions; or who wearing cloth of one and twenty ſhillings the yard, would not be contented with that of twenty ſhillings for the ſame advantage of his liberty in worſhip? Thoſe that kick at this being unwilling either to do or ſuffer for God, for whoſe ſake they pretend ſo much.

22. It may be here objected, that although ſome bad religions might be tollerated, yet that all may not, *viz.* ſuch as conſiſt not with the civil peace. To which I anſwer.

Firſt, that there is no ſchiſm or ſeparation, be it never ſo ſmall, conſiſtent with that unity and peace as could be wiſht; nor none ſo perfectly conſcientious, but may alſo be civilly moſt pernicious: for that *venner* and his complices acted upon internal motives, the moſt free of expoſing themſelves to death may evince; and yet their holding the King to be an uſurper upon the throne and right of Jeſus Chriſt was a civil miſchief neither to be pardoned or paralled.

28. And yet on the other hand there is no pſeudodoxy ſo great, but may be muzled from doing much harm

harm in the ſtate, without either death, impriſonment, or mutilation: to make ſhort, no opinion can be more dangerous, than to diſbelieve the immortality of the ſoul, as rendering man a beaſt, and without conſcience, or fear of committing any evil, if he can but elude the penalties of human laws made againſt it, and letting men looſe all to evil thoughts and deſigns whereof man can take no notice: now I ſay, that even this miſbeliever may be adæquately puniſhed if he be kept as a beaſt, be proprietor of nothing, as making no conſcience how he gets; be never admitted in evidence or teſtimony, as under no obligation to ſpeak truth; be excluded all honours and offices, as caring only for himſelf, not the protecting of others; and be withal kept to extream bodily labour, the profit whereof to the ſtate is the pecuniary mulct we ſpeak of, though the greateſt.

24. As for opinions leſs horrible than this, the mulct may be fitted to each of them reſpectively, according to the meaſure of danger which the magiſtrate apprehends from their allowance, and the charge neceſſary to prevent it.

25. And now we are ſpeaking of the ways how to prevent and correct heterodoxies in religion, which we have hitherto done by deſigning puniſhments for the erring ſheep, I think it not a miſs to add, that in all theſe caſes the ſhepherds themſelves ſhould not wholly eſcape free: for if in this nation there be ſuch abundance of free-ſchools, and of liberal maintenance provided in our univerſities and elſewhere for inſtructing more than enough in all ſuch learning as is fit to defend the eſtabliſhed religion, together with ſuperabundant libraries for that purpoſe. Moreover, if the church preferments be ſo numerous and ample both for wealth, honour, and power, as ſcarce any where more; it ſeems ſtrange that when by lazineſs, formality,

lity, ignorance, and loose lives of our pastors, the sheep have gone astray, grown scabbed, or have been devoured by wolves and foxes, that the remedy of all this should be only sought by frighting those that have strayed from ever returning again, and by tearing off as well the skins as the wool of those that are scabbed; whereas Almighty God will rather require the blood even of them that have been devoured from the shepherds themselves.

26. Wherefore if the minister should lose part of the tythes of those whom he suffers to defect from the church, (the defector not saving, but the state wholly gaining them) and the defector paying some pecuniary mulct for his schism, and withal himself defraying the charge of his new particular church and pastorage, methinks the burthen would be thus more equally born.

27. Besides, the judicious world do not believe our clergy can deserve the vast preferments they have, only because they preach, give a better account of opinions concerning religion then others, or can express their conceptions in the words of the fathers, or the scriptures, *&c.* Whereas certainly the great honour we give them, is for being patterns of holiness, for shewing by their own self-denials, mortifications, and austerities, that 'tis possible for us to imitate them in the precepts of God; for if it were but for their bare pulpit-discourses, some men might think there is ten thousand times as much already printed as can be necessary, and as good as any that ever hereafter may be expected. And it is much suspected, that the discipline of the cloisters hath kept up the Roman religion, which the luxury of the cardinals and prelates might have destroyed.

28. The substance therefore of all we have said in this discourse concerning the church is, that it would make

make much for its peace, if the nursery of ministers be not too bigg, that austerities in the priests lives would reconcile them to the people; and that it is not unreasonable, that when the whole church suffers by the defection of her members, that the pastors of it by bearing a small part should be made sensible of the loss; the manner and measures of all which I leave unto those unto whom it belongs.

29. Concerning penalties and penal laws I shall add but this, that the abuse of them is, when they are made not to keep men from sin, but to draw them into punishment; and when the executors of them keep them hid until a fault be done, and then shew them terrible to the poor immalicious offender: just like centinels, who never shew men the advertisements against pissing near their guards, till they have catched them by the coats for the forfeiture they claim.

CHAP. X.

Of Monopolies and Offices.

MOnopoly (as the word signifies) is the sole selling power, which whosoever hath, can vend the commodity whereupon he hath this power, either qualified as himself pleases, or at what price he pleaseth, or both, within the limits of his commission.

2. The great example of a monoply is the King of France his gable upon salt, whereby he sells that for sixty which costs him but one; now salt being a thing of universal use to all degrees of men, and scarce more to the poor then the rich, it seems to be of the same effect with the simple poll-money abovementioned, in case all men spent equally of it, or if men be forced to take it whether they spend it or not, as

as in ſome places they are. But if men ſpend or eat ſalt unequally, as they commonly do, nor are bound to take or pay for more then they ſpend, then it is no other then an accumulative exciſe, eſpecially if the ſalt be all of one uniform goodneſs; otherwiſe it is a diſtinct ſpecies of leavy, *viz.* monopoly.

3. The uſe or pretence of inſtituting a monopoly is.

Firſt, right or invention; foraſmuch as the laws do reward inventions, by granting them a monopoly of them for a certain time; (as here in England for fourteen years) for thereby the inventor is rewarded more or leſs according to the acceptance which his invention finds amongſt men.

Where note by the way, that few new inventions were ever rewarded by a monopoly; for although the inventor often-times drunk with the opinion of his own merit, thinks all the world will invade and incroach upon him, yet I have obſerved, that the generality of men will ſcarce be hired to make uſe of new practices, which themſelves have not throughly tried, and which length of time hath not vindicated from latent inconveniences; ſo as when a new invention is firſt propounded, in the beginning every man objects, and the poor inventor runs the gantloop of all petulent wits; every man finding his ſeveral flaw, no man approving it, unleſs mended according to his own advice: now not one of an hundred out-lives this torture, and thoſe that do, are at length ſo changed by the various contrivances of others, that not any one man can pretend to the invention of the whole, nor well agree about their reſpective ſhares in the parts. And moreover, this commonly is ſo long a doing, that the poor inventor is either dead, or diſabled by the debts contracted to purſue his deſign; and withal railed upon as a projector, or worſe, by thoſe who joined

joined their money in partnerſhip with his wit; ſo as the ſaid inventor and his pretences are wholly loſt and vaniſht.

Secondly, a monopoly may be of real uſe for a time *viz.* at the firſt introducing of a new manufacture, wherein is much nicety to make it well, and which the generality of men cannot judge of as to the performance. As for example; ſuppoſe there were ſome moſt approved medicament which one certain man could make moſt exactly well, although ſeveral others could alſo make the ſame leſs perfectly: in this caſe this ſame chief artiſt may be allowed a monopoly for a time, *viz.* until others have had experience enough under him, how to make the medicament as well as himſelf. Firſt, becauſe the world may not have the medicament variouſly made, when as they can neither diſcern the difference by their ſenſes, nor judge of the effects thereof *a poſteriori*, by their reaſons. Secondly, becauſe others may be fully inſtructed by him that can beſt do it; and thirdly, becauſe he may have a reward for ſuch his communications: But foraſmuch as by monopolies of this kind, great levies are ſeldom made, they are ſcarce pertinent to our deſign.

Offices inſtituted by the ſtate with fees of their own appointment, are of parallel nature to monopolies; the one relating to actions and employments as the other to things, and have the ſame to be ſaid for and againſt them as monopolies have.

As a kingdom encreaſeth and flouriſheth, ſo doth variety of things, of actions, and even of words encreaſe alſo; for we ſee that the language of the moſt flouriſhing empiers was ever the moſt copious and elegant, and that of mountanious cantons the contrary: now as the actions of this kingdom encreaſed, ſo did the offices (that is, the power and faculty of ſolely executing

 and

and performing the ſaid actions) encreaſe likewiſe; and on the contrary, as the buſineſs of offices encreaſed, ſo did the difficulty and danger of diſcharging them amiſs decreaſe proportionably: from whence 'tis come to paſs, that the offices which at their firſt erecting were not performed but by the ableſt, moſt inventive, and verſatile inſtruments, (ſuch as could wreſtle with all emergent difficulties, and collect rules and axioms out of the ſeries of their own obſervations, (with reference to the various caſualties of their employments) whereby to direct poſterity) are now performed by the moſt ordinary, formal, pack-horſe deputies and ſub-deputies.

And whereas at firſt ſuch large fees were allowed as (conſidering even the paucity of them which might then be received) ſhould compenſate the art, truſt, and induſtry of the adminiſtrator; yet the ſaid large fees are ſtill continued, although the ſkill and truſt be leſſened, and the number of the ſaid fees ſo extreamly multiplied: ſo as now the profits of ſuch offices (being become clear, and the work ſo eaſy as any man is capable of it, even thoſe that never ſaw it,) are bought and ſold for years or lives, as any other annuity may be; and withal, the ſplendor ariſing from the eaſy gains of thoſe places in courts of juſtice, is called the flouriſhing of the law, which certainly flouriſheth beſt, when the profeſſors and miniſters of it have leaſt to do. And moreover, when the burthen and uſeleſneſs of ſuch an office is taken notice of, 'tis nevertheleſs ſpared as a ſubjects freehold in favour of him that bought it.

Of theſe offices are many in this nation, and ſuch as might be a revenue to the King, either by their annual profits, or the ſale of them for many years together. And theſe are the offices that are properly ſealable, *viz.* where the fees are large, as appointed when the number

number of them was few, and alſo numerous, as multiplying upon the encreaſe of buſineſs, and where the buſineſs is only the labour of the meaneſt men: length of time having made all the work ſo eaſy, and found out ſecurity againſt all the frauds, breaches of truſt, and male-adminiſtrations, whereunto the infancies of thoſe places were obnoxious.

Theſe offices are therefore taxes upon ſuch as can or will not avoid the paſſing through them, and are born as men endure and run themſelves into the miſchiefs of duelling, the which are very great, which ſide ſoever prevails; for certainly men do not always go to law to obtain right, or prevent wrong, which judicious neighbours might perform as well as a jury of no abler men; and men might tell the judge himſelf the merits of their cauſe; as well as now they inſtruct their council. This therefore of offices is a voluntary tax upon contentious men, as exciſe upon drink is to good fellows to love it.

CHAP. XII.

Of Tythes.

THE word tythes, being the ſame with tenths, ſignify of itſelf no more then the proportion of the *exciſium*, or part retrenched, as if cuſtoms upon imported and exported commodities ſhould be called by the name of twentieths, as it is ſometimes called tunnage and poundage; wherefore it remains to ſay, that tythes in this place, do together with the ſaid proportion, conſignify the uſe of it, *viz.* the maintenance of the clergy, as alſo the matter or ſubſtance out of which this maintenance is cut, *viz.* the immediate fruit of the land and waters, or the pro-

 ceed

ceed of men's labour, art, and ſtock laid out upon them. It ſignifies alſo the manner of paying it, *viz.* in *ſpecie*, and not (but upon ſpecial and voluntary cauſes) in money.

2. We ſaid the matters of tythes was the immediate fruits of the earth, *viz.* of grain as ſoon as 'tis ready to be removed from the ground that bare it; and not of bread which is corn threſht, winnowed, ground, tempered with liquour and baked.

3. 'Tis alſo the ſecond choice out of the young of multiparous cattle taken in *ſpecie*, ſo ſoon as the ſaid younglins can ſubſiſt without their dams, or elſe a compoſition in money for the uniparons.

4. 'Tis wooll, ſo ſoon as it is ſhorn; 'tis fowl and fiſh, where fowling and fiſhing is rather a trade then a meer recreation, *& ſic de cæteris.*

5. Moreover, in great cities, tythes are a kind of compoſition in money for the labour and profit of the artiſans who work upon the materials which have paid tythes before.

6. Tythes therefore encreaſe within any territory, as the labour of that country encreaſes; and labour doth or ought to increaſe as the people do; now within four hundred years the people of England are about quadroupled, as doubling every two hundred years, and the proportion of the rent of all the lands in England, is about the fourth part of the expence of the people in it, ſo as the other three parts is labour and ſtock.

7. Wherefore the tythes now ſhould be twelve times as good as they were four hundred years ago; which the rates of benefices in the Kings books do pretty well ſhew, by comparing of times; ſomething of this ſhould be abated becauſe the proportion between the proceed of land and labour do vary as the hands of labourers vary: wherefore we ſhall rather ſay, that the

the tythes are but ſix times as good now as four hundred years ago, that is, that the tythes now would pay ſix times as many labourers, or feed ſix times as many mouths, as the tythes four hundred years ago would have done.

8. Now if there were not only as many pariſhes then as now, more prieſts in every pariſh, and alſo more religious men who were alſo prieſts, and the religion of thoſe times being more operoſe, and fuller of work than now, by reaſon of confeſſions, holy-days, offices, &c. more than in thoſe days than now, (the great work in theſe days being a compendious teaching of above a thouſand at once without much particular confeſſion and catechiſing, or trouble about the dead; it ſeems clear, that the clergy now is far richer than heretofore, and that to be a clergyman then was a kind of a mortification, whereas now (praiſed be God) 'tis matter of ſplendor and magnificence; unleſs any will ſay, that there were golden prieſts when the chalices were wood, and but wooden prieſts when the chalices were gold; or that religion beſt flouriſheth when the prieſts are moſt mortified, as was before ſaid of the law, which beſt flouriſheth when lawyers have leaſt to do.

9. But what ever the increaſe of the churches goods are, I grudge it them not, only wiſh that they would take a courſe to enjoy it with ſafety and peace to themſelves; whereof one is, not to breed more church-men than the benefices as they now ſtand ſhared out will receive; that is to ſay, if there be places but for about twelve thouſand in England and Wales, it will not be ſafe to breed up 24000 miniſters, upon a view or conceit that the church-means otherwiſe diſtributed might ſuffice them all; for then the twelve thouſand which are unprovided for, will ſeek ways how to get themſelves a livelihood; which they cannot do more eaſily, than by perſwading the people, that the twelve thouſand incumbents do poiſon

ſon or ſtarve their ſouls, and miſguide them in their way to heaven: which needy men upon a ſtrong temptation will do effectually; we have obſerved, that lecturers being ſuch a ſort of ſupernumeraries, have preached more times in a week, more hours in the day, and with greater vehemence every time, than the incumbents could afford to do; for *græculus eſuriens in cœlum juſſeris, ibit.* Now this vehemence, this pain, this zeal, and this living upon particular donations, makes the people think, that thoſe who act them are withal more orthodox, nay better aſſiſted from God than the others. Now let any man judge, whether men reputed to be inſpired will not get help to lift themſelves into church-livings, &c. But theſe things are two plain from the leaſt experiences.

10. Now you will aſk, how ſhall that be done, or how may we know how to adjuſt our nurſery to our orchard? To which I anſwer, that if there be twelve thouſand church-livings in England, dignitaries included, then that about four hundred being ſent forth *per ann.* in the vineyard, may keep it well ſerved, without luxuriency; for according to the mortality-bill-obſervation, about that number will die yearly out of twelve thouſand adult-perſons, ſuch as miniſters are as to age, and ought to be as well as to ſpeculative knowledge, as practical experience, both of themſelves and others.

11. But I have digreſſed, my main ſcope being to explain the nature of the tax and tythes; nevertheleſs, ſince the end of ſuch explination is but to perſwade men to bear quietly ſo much tax as is neceſſary, and to kick againſt the pricks; and ſince the end of that again, and the end of all elſe we are to do, is but to preſerve publick peace, I think I have not been impertinent

impertinent in inſerting this little advertiſement, making ſo much for the peace of Jeruſalem.

12. But to return to tythes as a tax or levy, I ſay, that in England it is none, whatſoever it might be, or ſeem to be in the firſt age of its inſtitution; nor will the King's quit-rents in Ireland, as they are properly none now, ſeem any in the next age, when every man will proportion his expence to the remainder of his own rent after the King is paid his; for 'tis ſurprize, and the ſuddenneſs of the charge, which a tax ſupervenient to a mans other expences and iſſues makes, that renders it a burthen, and that intolerable to ſuch as will not underſtand it, making men even to take up arms to withſtand it; that is, leap out of the frying-pan upon earth into the fire even of hell, which is war, and the conſequences thereof.

13. Now tythes being no tax, I ſpeak of it but as the *modus* or pattern of a tax, affirming it to be next to one, the moſt equal and indifferent which can be appointed in order to defray the publick charge of the whole nation, as well as that of the church; for hereby is collected a proportion of all the corn, cattle, fiſh, fowl, fruit, wooll, honey, wax, oyl, hemp, and flax of the nation, as a reſult of the lands, art, labour and ſtock which produced them; only it is ſcarce regular in reſpect of houſing, cloth, drinks, leather, feathers, and the ſeveral manufactures of them; inſomuch, as if the difference of tythes which the country pays in proportion to the city, were now *de novo* to be eſtabliſhed, I do not ſee what in likelihood would ſooner cauſe a grand ſedition about it.

14. The payment of an *aliquot* part to the King out of the ſame things as now pay tythes, in ſpecie, would have inconvenience, becauſe the Kings rents would be like the dividend in colleges, viz. higher

or lower according to the prices of thoſe commodities, unleſs the ſaid inequality in colleges happened by reaſon of the fewneſs of particulars, according to the market rates whereof, their rents are paid in money; whereas the whole of all the particulars might well enough ballance each other, a dear or plentiful year being but an appellation *ſecundum quid*, viz. with reference as to corn only, as the chief food of the multitude; whereas 'tis likely, that the ſame cauſes which makes corn ſcarce, may make other things in plenty of no leſs uſe to the King, as repairing in one thing what he wants in another.

15. Another inconvenience would be that which was obſerved in Ireland, when the miniſtry were paid by ſalary, and the tythes in kind paid to the ſtate; who becauſe they could not actually receive them in ſpecie, let them at farm to the moſt bidder; in the tranſaction whereof was much jugling, combination and colluſion, which perhaps might have been remedied, had not that courſe been uſed but as a ſudden temporary ſhift, without intention of continuing it.

16. The third inconvenience is that above-mentioned, viz. the neceſſity of another way of tax, to take in the manufactures of thoſe commodities which pay the tax of tythes; whereas poſſibly there is a way of tax equal in its own nature, and which needs not to be pieced up by any other; ſo as the officers about that may have a full employment, and none others wanted, whoſe wide intervals of leiſure ſhall make them ſeem drones, as they are alſo the caterpillars of any ſtate.

CHAP.

CHAP. XIII.

Of ſeveral ſmaller ways of levying money.

WHEN the people are weary of any one ſort of tax, preſently ſome projector propounds another, and gets himſelf audience, by affirming he can propound a way how all the publick charge may be born without the way that is. As for example, if a land-tax be the preſent diſtaſted way, and the people weary of it, then he offers to do the buſineſs without ſuch a land-tax, and propound either a poll-money, exciſe, or the inſtitution of ſome new office or monopoly; and hereby draws ſome or other to hearken to him; which is readily enough done by thoſe who are not in the places of profit, relating to the way of levies in uſe, but hope to make themſelves offices in the new inſtitution.

2. I ſhall enumerate a few of the ſmaller ways which I have obſerved in ſeveral places of Europe, viz.

Firſt, In ſome places of ſtate is common caſhier for all or moſt monies, as where banks are, thereby gaining the intereſt of as much money as is depoſited in their hands.

Secondly, ſometimes the ſtate is the common uſurer; as where loan banks, and *montes pietatis* are in uſe, and might be more copiouſly and effectually where regiſters of lands are kept.

Thirdly, ſometimes the ſtate is or may be common enſurer, either upon the danger only of enemies at ſea, according to the ſuppoſed primitive end of our cuſtoms in England, or elſe of the caſualties of the enemy, weather, ſea, and veſſel taken together.

Fourthly,

Fourthly, ſometimes the ſtate hath the whole ſale and benefit of certain commodities, as of amber in the Duke of Brandenburghs country, tobacco formerly in Ireland, ſalt in France, *&c.*

Fifthly, ſometimes the ſtate is common beggar, as 'tis almoſt in Holland, where particular charity ſeems only to ſerve for the relief of concealed wants, and to ſave theſe wanting from the ſhame of diſcovering their poverty, and not ſo much to relieve any wants that are declared, and already publickly known.

Sixthly, in ſome places the ſtate is the ſole guardian of minors, lunaticks, and idiots.

Seventhly, in ſome other countries the ſtate ſets up and maintains play-houſes, and publick entertainments, giving ſalaries to the actors, but receiving the bulk of the profit to themſelves.

Eightly, in ſome places houſes are enſured from fire by the ſtate at a ſmall rent *per annum* upon each.

Ninthly, in ſome places tolls are taken upon paſſage over bridges, cauſeys, and ferries built and maintained at the publick charge.

Tenthly, in ſome places men that die are obliged to leave a certain pittance to the publick, the ſame is practiſed in other places upon marriages, and may be in others upon births.

Eleventhly, in ſome places ſtrangers, eſpecially Jews, are particularly taxed; which may be good in over-peopled countries, though bad in the contrary caſe.

3. As for Jews, they may well bear ſomewhat extraordinary, becauſe they ſeldom eat and drink with chriſtians, hold it no diſparagement to live frugally, and even ſordidly among themſelves, by which way alone they become able to under-ſell any other traders, to elude the exciſe, which bears but according to mean

mean expences; as alſo other duties by dealing ſo much in bills of exchange, jewels, and money, and by practiſing of ſeveral frauds with more impunity than others; but by their being at home every where, and yet no where they become reſponſible almoſt for nothing.

4. Twelfthly, there have been in our times ways of levying an *aliquot*, part of mens eſtates, as a fifth, and twentieth, viz. of their eſtates real and perſonal, yea, of their offices, faculties, and imaginary eſtates alſo, in and about which way may be ſo much fraud, colluſion, oppreſſion, and trouble, ſome purpoſely getting themſelves taxed to gain more truſt; others bribing to be taxed low, and it being impoſſible to check or examine, or trace theſe collections by the print of any foot-ſteps they leave (ſuch as the hearths of chimneys are) that I have not patience to ſpeak more againſt it; daring rather conclude without more ado, in the words of our comick to be naught, yea exceeding naught, very abominable, and not good.

CHAP. XIV.

Of raiſing, depreſſing, or embaſſing money.

SOmetimes it hath happened that ſtates (I know not by what raw advice) have raiſed or embaſed their money, hoping thereby, as it were, to multiply it, and make it paſs for more than it did before; that is, to purchaſe more commodity or labour with it: all which indeed and in truth, amounts to no more than a tax upon ſuch people unto whom the ſtate is indebted, or a defalcation of what is due; as alſo the like burthen upon all that live upon penſions, eſtabliſhed rents, annuities, fees, gratuities, *&c.*

2. To

2. To explain this fully, one might lanch out into the deep ocean of all the myſteries concerning money, which is done for other ends elſewhere: nevertheleſs I ſhall do it the beſt I can, by expounding the reaſons *pro & contra* for embaſing and raiſing of money: and firſt of embaſing.

3. Cooper or Tin-money made *ad valorem* in its matter, is no embaſing; the ſame being only cumberſom and baſer than ſilver money, only becauſe leſs convenient and portable.

And copper money *ad valorem* in workmanſhip and matter both together, (ſuch as on which the effigies and ſcutcheon are ſo curiouſly graven and impreſſed, as the monies ſeem rather medals) is not embaſing, unleſs the numbers of ſuch pieces be exceſſive, (the meaſures whereof I ſhall not ſet down, until I ſhall hereafter propound the fitteſt ſections of the abſtracted pound into which I would have money coined, and determine how many pieces of each ſection ſhould be in a hundred pound) for in caſe of ſuch exceſs, the workmanſhip being of no other uſe but to look upon, becomes baſe by its being too common.

4. Nor are ſuch tokens baſe as are coined for exchange in retailing by particular men, (if ſuch men be reſponſible and able to take them back, and give ſilver for them.)

5. But that gold I count to be embaſed, which hath more allay either of copper or ſilver in it, than ſerves to correct its too great natural ſoftneſs and flexibility, whereby it wears too faſt in money: and that ſilver I reckon alſo embaſed, wherein is commixed more copper than will ſufficiently toughen it, and ſave it from cracking under the hammer, preſs, or mill that muſt coin it, or the like.

6. Baſe money is therefore ſuch as Dutch ſhillings, ſtivers, French ſoulz, Iriſt bon-galls, &c. and for the moſt part conſiſting of great pieces, though of ſmall value. To anſwer the firſt reaſon or pretence of making them, which is, that the ſaid pieces might be more bulky, handleable, and the ſilver in them leſs apt to be loſt, or worn away.

7. The other reaſon (beſides that of allay, which we muſt allow in the meaſures above-mentioned) is to ſave it from being melted down by goldſmiths and bullioners, or exported by ſtrangers; neither of which can happen but to their loſs: for ſuppoſe a ſtiver of two pence had a peny of pure ſilver, if the bullioner melts it for the ſake of the ſilver only, in the ſeparation he ſhall loſe the copper and charge of refining the ſilver; nor will the ſtrangers export it into places where the local value of the piece periſheth, the intrinſick leaving him to loſs.

7. Now the reaſons againſt this kind of money are; firſt, the greater danger of falſification, becauſe the colour, ſound, and weight by which men (without the teſt) gueſs at the goodneſs of the material of money is too much confounded, for the vulgar (whom it concerns) to make uſe of them for their marks and guides in the buſineſs.

8. Secondly, in caſe ſmall pieces of this money, viz. pieces of two pence ſhould happen to be raiſed or depreſſed twelve, fifteen, or ſixteen *per cent.* then there will be a certain loſs by reaſon of the fractions, which the vulgar cannot reckon: as for example, if ſuch money were depreſſed but ten, eleven, or twelve *per cent.* then the two pence piece would be worth but three half pence, which is twenty five *per cent.* and ſo of other proportions.

9. Thirdly, in caſe the inconvenience of this money ſhould be ſo great as to neceſſitate a new coinage of it, then

then will happen all the loſſes we mentioned before in melting it down by bullioners.

10. Fourthly, if the two pence piece contained but the eighth part of the ſilver uſually in a ſhilling, then dealers would have fifteen pence paid in this money for the ſame commodity, for which they would take a ſhilling in ſtandard ſilver.

11. Raiſing of money is either the cutting the pound Troy of ſtandard ſilver into more pieces than formerly, as into above ſixty, whereas heretofore the ſame was made but into twenty, and yet both ſorts called ſhillings, or elſe calling the money already made by higher names: the reaſons or pretences given for ſuch raiſing are theſe; viz. that the raiſing of money will bring it in, and the material thereof more plentifully; for trial whereof, ſuppoſe one ſhilling were proclaimed to be worth two, what other effect could this have, than the raiſing of all commodities unto a double price? now if it were proclaimed, that labourers wages, &c. ſhould not riſe at all upon this raiſing of money, then would this act be as only a tax upon the ſaid labourers, as forcing them to loſe half their wages, which would not be only unjuſt, but impoſſible, unleſs they could live with the ſaid half, (which is not to be ſuppoſed) for then the law that appoints ſuch wages were ill made, which ſhould allow the labourer but juſt wherewithal to live; for if you allow double, then he works but half ſo much as he could have done, and otherwiſe would; which is a loſs to the public of the fruit of ſo much labour.

12. But ſuppoſe the *quart d' eſcu* of France, commonly eſteemed worth eighteen pence, were raiſed to three ſhillings, then 'tis true, that all the monies of England would be indeed *quart d' eſcu* pieces; but as true, that all the Engliſh money would be carried away, and that our *quart d' eſcu* would contain but half

half ſo much bullion as our own money did; ſo that raiſing of money may indeed change the ſpecies, but with ſo much loſs as the foreign pieces were raiſed unto, above their intrinſick value.

13. But for remedy of this ſuppoſe we raiſed the *quart d' eſcu* double, and prohibited the exportation of our own money in exchange thereof. I anſwer, that ſuch a prohibition is nugatory, and impoſſible to be executed; and if it were not, yet the raiſing of the ſaid ſpecies would but make us ſell the commodities bought with raiſed *quart d' eſcues*, in effect but at half the uſual rate, which unto them that want ſuch commodities will as well yield the full; ſo that abating our prices, will as well allure ſtrangers to buy extraordinary proportions of our commodities, as raiſing their money will do: but neither that, nor abating the price will make ſtrangers uſe more of our commodities, then they want; for although the firſt year they ſhould carry away an unuſeful and ſuperfluous proportion, yet afterwards they would take ſo much the leſs.

14. If this be true, as in ſubſtance it is, why then have ſo many wiſe ſtates in ſeveral antient, as well as modern times frequently practiſed this artifice as a means to draw in money into their reſpective dominions?

I anſwer, that ſomething is to be attributed to the ſtupidity and ignorance of the people, who cannot of a ſudden underſtand this matter: for I find many men wiſe enough, who though they be well informed that raiſing of money ſignifies little, yet cannot ſuddenly digeſt it. As for example, an unengaged perſon who had money in his purſe in England, and ſhould hear that a ſhilling was made fourteen pence in Ireland, would more readily run thither to buy land then before; not ſuddenly apprehending, that for

for the ſame land which he might have bought before for ſix years purchaſe, he ſhall now pay ſeven. Nor will ſellers in Ireland of a ſudden apprehend cauſe to raiſe their land proportionally, but will at leaſt be contented to compound the buſineſs, viz. to ſell at ſix and an half; and if the difference be a more ragged fraction, men under a long time will not apprehend it, nor ever be able exactly to govern their practice according to it.

15. Secondly, although I apprehend little real difference between raiſing foreign money to double, and abating half in the price of our own commodities, yet to ſell them on a tacite condition to be paid in foreign preſent money, ſhall increaſe our money; foraſmuch as between raiſing the money, and abaſing the price, is the ſame difference as between ſelling for money and in barter, which latter is the dearer; or between ſelling for preſent money, and for time; barter reſolving into the nature of uncertain time.

19. I ſay, ſuppoſe Engliſh cloth were ſold at ſix ſhillings a yard, and French canvas at eighteen pence the ell, the queſtion is, whether it were all one in order to increaſe money in England to raiſe the French money double, or to abate half of the price of our cloth? I think the former better, becauſe that former way or propoſition carries with it a condition having foreign money in ſpecie, and not canvas in barter, between which two ways the world generally agrees there is a difference. Wherefore if we can afford to abate half our price, but will not do it but for our neighbours money, then we gain ſo much as the ſaid difference between money and barter amounts unto, by ſuch raiſing of our neighbours money.

17. But the fundamental ſolution of this queſtion depends upon a real and not an imaginary way of computing

computing the prices of commodities; in order to which real way I premiſe theſe ſuppoſitions: firſt then, ſuppoſe there be in a territory a thouſand people, let theſe people be ſuppoſed ſufficient to till this whole territory as to the huſbandry of corn, which we will ſuppoſe to contain all neceſſaries for life, as in the Lords prayer we ſuppoſe the word bread doth; and let the production of a buſhel of this corn be ſuppoſed of equal labour to that of producing an ounce of ſilver. Suppoſe again that a tenth part of this land and tenth of the people, viz. an hundred of them can produce corn enough for the whole; ſuppoſe that the rent of land (found out as abovementioned) be a fourth part of the whole product, (about which proportion it really is, as we may perceive by paying a fourth ſheaf inſtead of rent in ſome places) ſuppoſe alſo that whereas but an hundred are neceſſary for this huſbandry, yet that two hundred have taken up the trade; and ſuppoſe that where a buſhel of corn would ſuffice, yet men out of delicacy will uſe two, making uſe of the flour only of both. Now the inferences from hence are;

Firſt, that the goodneſs or badneſs, or the value of land depends upon the greater or leſſer ſhare of the product given for it in proportion to the ſimple labour beſtowed to raiſe the ſaid product.

Secondly, that the proportions between corn and ſilver ſignify only an artificial value, not a natural; becauſe the compariſon is between a thing naturally uſeful, and a thing in itſelf unneceſſary, which (by the way) is part of the reaſon why there are not ſo great changes and leaps in the prices of ſilver as of other commodities.

Thirdly, that natural dearneſs and cheapneſs depends upon the few or more hands requiſite to neceſſaries of nature: as corn is cheaper where one man

 produces

produces corn for ten, then where he can do the like but for ſix; and withal, according as the climate diſpoſes men to a neceſſity of ſpending more or leſs. But political cheapneſs depends upon the paucity of ſupernumerary interlopers into and trade over and above all that are neceſſary, viz. corn will be twice as dear where are two hundred huſbandmen to do the ſame work which an hundred could perform: the proportion thereof being compounded with the proportion of ſuperfluous expence (viz. if to the cauſe of dearneſs abovementioned be added to the double expence to what is neceſſary) then the natural price will appear quadrupled; and this quadruple price is the true political price computed upon natural grounds.

And this again proportioned to the common artificial ſtandard ſilver gives what was ſought; that is, the true price currant.

18. But foraſmuch as almoſt all commodities have their ſubſtitutes or ſuccedanea, and that a moſt all uſes may be anſwered ſeveral ways; and for that novelty, ſurprize, example of ſuperiors, and opinion of unexaminable effects do add or take away from the price of things, me muſt add theſe contingent cauſes to the permanent cauſes abovementioned, in the judicious foreſight and computation whereof lies the excellency of a merchant.

Now to apply this digreſſion, I ſay, that to increaſe money, it is as well neceſſary to know how to abate as raiſe, the price of commodities, and that of money, which was the ſcope of the ſaid digreſſion.

19. To conclude this whole chapter, we ſay, that raiſing or embaſing of monies is a very pitiful and unequal way of taxing the people; and 'tis a ſign that the ſtate ſinketh, which catcheth hold on ſuch weeds as are accompanied with the diſhonour of impreſſing a princes effigies to juſtify adulterate commodities,

dities, and the breach of public faith, ſuch as is the calling a thing what it really is not.

CHAP. XV.

Of Exciſe.

IT is generally allowed by all, that men ſhould contribute to the public charge but according to the ſhare and intereſt they have in the public peace; that is, according to their eſtates or riches: now there are two ſorts of riches, one actual, and the other potential. A man is actually and truly rich according to what he eateth, drinketh, weareth, or any other way really and actually enjoyeth; others are but potentially or imaginatively rich, who though they have power overmuch, make little uſe of it; theſe being rather ſtewards and exchangers for the other ſort, then owners for themſelves.

2. Concluding therefore that every man ought to contribute according to what he taketh to himſelf, and actually enjoyeth. The firſt thing to be done is, to compute what the total of the expence of this nation is by particular men upon themſelves, and then what part thereof is neceſſary for the public; both which (no not the former) are ſo difficult as moſt men imagine.

3. In the next place we muſt conceive, that the very perfect idea of making a levy upon conſumptions, is to rate every particular neceſſary, juſt when it is ripe for conſumption; that is to ſay, not to rate corn until it be bread, nor wool until it be cloth, or rather until it be a very garment; ſo as the value of wool, clothing, and tayloring, even to the thread and needles might be comprehended: but this being perhaps too laborious to be performed, we ought to

 enumerate

enumerate a catalogue of commodities both native and artificial, ſuch whereof accompts may be moſt eaſily taken, and can bear the office marks either on themſelves, or on what contains them; being withal ſuch, as are to be as near conſumption as poſſible: and then we are to compute what further labour or charge is to be beſtowed on each of them, before conſumption, that ſo an allowance be given accordingly. As for example, ſuppoſe there be an hundred pounds worth of ſtript ſtuff for hangings, and an hundred pounds worth of cloth or ſtuff for the beſt mens clothes; I conceive, that the cloth ſhould bear a greater exciſe then the ſaid ſtript ſtuff, the one wanting nothing but tacking up, to be at its ways end; and the other tayloring, thread, ſilk, needles, thimbles, buttons, and ſeveral other particulars: the exciſe of all which muſt be accumulated upon the exciſe of the cloth, unleſs they be ſo great (as perhaps buttons, lace, or ribbons may be) to be taxed apart, and inſerted into the catalogue abovementioned.

4. Now the things to be accumulated upon cloth are, as near as poſſible, to be ſuch particulars as are uſed only to cloth, or very rarely to any other particular, as the ſeveral ſorts of peculiar trimmings; ſo on corn ſhould be accumulated the charge of grinding, bolting, yeaſt, &c. for the baking of it into bread, unleſs, as was ſaid before, any of theſe particulars can be better rated a part.

5. A queſtion ariſeth hence, whether any native commodities exported ought to pay the exciſe, or that what is imported in lieu of it ſhould pay none? I anſwer, no, becauſe they are not ſpent here in ſpecie; but I conceive that the goods returned from abroad for them, and ſpent here ſhould pay, if the exported have not already, for ſo ſhall what we ſpend pay once, but not oftner. Now if bullion be returned, then

then if it be coined into money, it ought not to pay, becauſe money will beget other commodities which ſhall pay; but if the ſaid bullion be wrought into plate and utenſils, or diſgroſt into wire or lace, or beaten into fueilles, then it alſo ought to pay, becauſe it is conſumed and abſolutely ſpent, as in lace and gilding is too notorious; and this is the reaſon why I think the levy we commonly call cuſtoms to be unſeaſonable and prepoſterous, the ſame being a payment before conſumption.

6. We have ſeveral times ſpoken of accumulative exciſe, by which we mean taxing many things together as one: as for example, ſuppoſe the many drugs uſed in treacle or mithridate were uſed only in thoſe compoſitions, in ſuch caſe by taxing any one of them, the whole number will be taxed as certainly as that one, becauſe they all bear a certain proportion one to another: in cloth, the workmanſhip and tools as well as the wool may be well enough taxed, &c.

7. But ſome have ſtrained this accumulation ſo, as they would have all things together taxed upon ſome one ſingle particular, ſuch as they think to be neareſt the common ſtandard of all expence, the principal ends of their propoſition being theſe, viz.

Firſt, to diſguiſe the name of exciſe, as odious to them that do neither know the payment of taxes to be as indiſpenſible as eating, and as have not conſidered the natural juſtice of this way of exciſing or proportionating.

Secondly, to avoid the trouble and charge of collecting. Thirdly, to bring the buſineſs *ad firmum*, and to a certainty of all which we ſhall ſpeak hereafter, when we examine the ſeveral reaſons for and againſt the way of exciſe, proceeding now to the

ſeveral ſpecies of accumulative exciſes, propounded in the world.

8. Some propound beer to be the only exciſeable commodity, ſuppoſing that in the proportion that men drink, they make all other expences; which certainly will not hold, eſpecially if ſtrong beer pay quintuple unto, (as now) or any more exciſe then the ſmall: for poor carpenters, ſmiths, felt-makers, &c. drinking twice as much ſtrong beer as gentlemen do of ſmall, muſt conſequently pay ten times as much exciſe. Moreover, upon the artiſans beer is accumulated, only a little bread and cheeſe, leathern clothes, neck beef, and inwards twice a week, ſtale fiſh, old peaſe without butter, &c. Whereas on the other, beſide drink, is accumulated as many more things as nature and art can produce; beſides this way of exciſing, though it be never ſo well adminiſtred, is neither ſo equal nor ſo eaſy, nor ſo examinable as the ſimple poll-money before ſpoken of, which is alſo but an accumulative exciſe.

6. What hath been propounded for beer, may be of ſalt, fuel, bread, &c. and the propoſitions would all labour under the ſame inconveniences; for ſome ſpent more, ſome leſs of theſe commodities; and ſometimes families (each whereof are propounded to be farmed, without deſcending to individual heads) are more numerous at ſome time then at others according as their eſtates or other intereſts ſhall wax or wane.

10. Of all the accumulative exciſes, that of hearth-money or ſmoak-money ſeems the beſt; and that only becauſe the eaſieſt, and cleareſt, and fitteſt to ground a certain revenue upon; it being eaſy to tell the number of hearths, which remove not as heads or polls do: moreover, 'tis more eaſy to pay a ſmall tax, then to alter or abrogate hearths, even though they

they are uſeleſs and ſupernumerary; nor is it poſſible to cover them, becauſe moſt of the neighbours know them; nor in new building will any man who gives forty ſhillings for making a chimney be without it for two.

11. Here is to be noted, that a hearth-money muſt be but ſmall, or elſe 'twill be intolerable; it being more eaſy for a gentleman of a thouſand pound *per annum* to pay for an hundred chimneys (few of their manſion houſes having more) then for labourers to pay for two. Moreover if the landlord only pay this tax, then is it not an accumulative exciſe for all, but a particular exciſe upon but one only commodity, namely houſing.

12. Now the reaſons for exciſe are theſe, viz.

Firſt, the natural juſtice that every man ſhould pay according to what he actually enjoyeth; upon which account this tax is ſcarce forced upon any, and is very light to theſe, who pleaſe to be content with natural neceſſaries.

Secondly, this tax if it be not farmed, but regularly collected, engages to thrift, the only way to enrich a nation, as by the Dutch and Jews, and by all other men, who have come to vaſt eſtates by trade, doth appear.

Thirdly, no man pays double or twice for the ſame thing, foraſmuch as nothing can be ſpent but once; whereas it is frequently ſeen, that otherwiſe men pay both by the rent of their lands, by their ſmoaks, by their titles, and by cuſtoms, (which all men do, though merchants chiefly talk of it) they alſo pay by benevolence and by tithes; whereas in this way of exciſe no man need pay but one way, nor but once, properly ſpeaking.

Fifthly, by this way an excellent account may be taken of the wealth, growth, trade, and ſtrength of the

the nation at all times. All which reaſons do make not for particular compoundings with families, nor for letting the whole to farm, but for collecting it by ſpecial officers, who having a full employment, will not be a fourth of the charge of our preſent many multiform levies; for to put extraordinary trouble and hazard upon the country officers, is a ſorer taxing of them, then to make them pay a ſmall reward unto practiſed perſons to be their ſubſtitutes. All which are the common objections againſt exciſe.

13. I ſhould here add the manner of collecting it, but I refer this to the practice of Holland; and I might alſo offer how men may be framed to be fit for this and other public truſts, as to be caſhiers, ſtore-keepers, collectors, &c. but I refer this enquiry unto a more ample and fit occaſion.

SEVERAL

SEVERAL

ESSAYS

IN

Political Arithmetic:

The Titles of which follow in the enſuing Pages.

By Sir WILLIAM PETTY, late Fellow of the ROYAL SOCIETY.

CONTENTS.

1. AN eſſay concerning the multiplication of mankind: together with another eſſay in Political Arithmetic, concerning the growth of the city of London, with the meaſures, periods, cauſes, and conſequences thereof, 1682. Page 97

2. Further obſervations upon the Dublin bills or accounts of the houſes, hearths, baptiſms, and burials in that city. 127

3. Two eſſays in Political Arithmetic, concerning the people, houſing, hoſpitals, &c. of London and Paris. 149

4. Obſervations upon the cities of London and Rome. 167

5. Five eſſays in Political Arithmetic, viz. 170

I. Objections from the city of Rey in Perſia, and from Monſ. Auzout, againſt two former eſſays, anſwered, and that London hath as many people as Paris, Rome and Rouen put together. 173

II. A compariſon between London and Paris in 14 particulars. 178

III. Proofs that at London, within its 134 pariſhes named in the bills of mortality, there live about 696 thouſand people. 181

IV. An

IV. An eſtimate of the people in London, Paris, Amſterdam, Venice, Rome, Dublin, Briſtol and Rouen, with ſeveral obſervations upon the ſame. 186

V. Concerning Holland and the reſt of the ſeven United provinces. 192

6. Political Arithmetic, or a diſcourſe concerning the extent and value of lands, people, buildings; husbandry, manufactures, commerce, fiſhery, artizans, ſeamen, ſoldiers; publick revenues, intereſt, taxes, ſuperlucration, regiſtries, banks; valuation of men, increaſing of ſeamen, of militia's, harbours, ſituation, ſhipping, power at ſea, &c. As the ſame relates to every country in general, but more particularly to the territories of his majeſty of Great Britain, and his neighbours of Holland, Zealand, and France. 213

AN

AN

ESSAY

CONCERNING THE

MULTIPLICATION of MANKIND:

Together with another ESSAY in POLITICAL ARITHMETICK, concerning the Growth of the City of *LONDON*: With the Meaſures, Periods, Cauſes, and Conſequences thereof. 1682.

By Sir WILLIAM PETTY, late Fellow of the ROYAL-SOCIETY.

THE STATIONER TO THE READER.

THE enſuing eſſay concerning the growth of the city of London, was intitled (another eſſay) intimating that ſome other eſſay had preceded it, which was not to be found. I having been much importuned for that precedent eſſay, have found that the ſame was about the growth, increaſe, and multiplication of mankind, which ſubject ſhould in order of nature, precede that of the growth of the city of London, but am not able to procure the eſſay it ſelf, only I have obtained

tained from a gentleman, who ſometimes correſponded with ſir William Petty, an extract of a letter from ſir William to him, which I verily believe containeth the ſcope thereof; wherefore, I muſt deſire the reader to be content therewith, till more can be had.

THE

The extract of a letter concerning the ſcope of an Eſſay intended to precede another Eſſay concerning the growth of the city of London, *&c.*

An Eſſay in political arithmetic, concerning the value and increaſe of people and colonies.

THE ſcope of this eſſay, is concerning people and colonies, and to make way for another eſſay concerning the growth of the city of London. I deſire in this firſt eſſay, to give the world ſome light, concerning the numbers of people in England, with Wales, and in Ireland; as alſo, of the number of houſes and families, wherein they live, and of acres they occupy.

2. How many live upon their lands, how many upon their perſonal eſtates and commerce, and how many upon art and labour; how many upon alms, how many upon offices and public employments, and how

how many as cheats and thieves; how many are impotent, children, and decrepit old men.

3. How many upon the poll-taxes in England, do pay extraordinary rates, and how many at the level.

4. How many men and women are prolific, and how many of each are married and unmarried.

5. What the value of people are in England, and what in Ireland at a medium, both as members of the church or commonwealth, or as ſlaves and ſervants to one another; with a method how to eſtimate the ſame, in any other country or colony.

6. How to compute the value of land in colonies, in compariſon to England and Ireland.

7. How ten thouſand people in a colony may be, and planted to the beſt advantage.

8. A conjecture in what number of years England and Ireland may be fully peopled, as alſo all America; and laſtly the whole habitable earth.

9. What ſpot of the earth's-globe were fitteſt for a general and univerſal *emporium*, whereby all the people thereof may beſt enjoy one anothers labours and commodities.

10. Whether the ſpeedy peopling of the earth would make,

1. For the good of mankind.
2. To fulfil the revealed will of God.
3. To what prince or ſtate the ſame would be moſt advantageous.

11. An exhortation to all thinking men, to ſalve the ſcriptures and other good hiſtories, concerning the number of people in all ages of the world, in the great cities thereof, and elſewhere.

12. An appendix concerning the different number of ſea-fiſh and wild-fowl, at the end of every thouſand years, ſince Noah's flood.

13. An

13. An hypotheſis of the uſe of thoſe ſpaces (of about 8000 miles through) within the globe of our earth, ſuppoſing a ſhell of 150 miles thick.

14. What may be the meaning of glorified bodies, in caſe the place of the bleſſed ſhall be without the convex of the orb of the fixed ſtars, if that the whole ſyſtem of the world was made for the uſe of our earth's men.

The

The principal Points of this Discourſe.

1. *THAT London doubles in forty years, and all England in three hundred and ſixty years.*

2. *That there be,* anno 1682, *about ſix hundred and ſeventy thouſand ſouls in London; and about ſeven millions, four hundred thouſand in all England and Wales, and about twenty eight millions of acres of profitable land.*

3. *That the periods of doubling the people, are found to be in all degrees, from between ten to twelve hundred years.*

4. *That the growth of London muſt ſtop of itſelf, before the year* 1800.

5. *A table helping to underſtand the ſcriptures, concerning the number of people mentioned in them.*

6. *That the world will be fully peopled within the next two thouſand years.*

7. *Twelve ways whereby to try any propoſal, pretended for the public good.*

8. *How the city of London may be made (morally ſpeaking) invincible.*

9. *An help to uniformity in religion.*

10. *That 'tis poſſible to increaſe mankind by generation four times more than at preſent.*

11. *The plagues of London are the chief impediment and objection againſt the growth of the city.*

12. *That an exact account of the people is neceſſary in this matter.*

Of

Of the growth of the city of LONDON, and of the meaſures, periods, cauſes, and conſequences thereof.

BY the city of London, we mean the houſing within the walls of the old city, with the liberties thereof, Weſtminſter, the borough of Southwark, and ſo much of the built ground in Middleſex and Surry, whoſe houſes are contiguous unto, or within call of thoſe afore-mentioned. Or elſe we mean the houſing which ſtand upon the ninety ſeven pariſhes within the walls of London; upon the ſixteen pariſhes next, without them; the ſix pariſhes of Weſtminſter, and the fourteen out-pariſhes in Middleſex and Surry, contiguous to the former, all which one hundred and thirty three pariſhes are comprehended within the weekly bills of mortality.

The growth of this city is meaſured, 1. By the quantity of ground, or number of acres upon which it ſtands. 2. By the number of houſes, as the ſame appears by the hearth-books and late maps. 3. By the cubical content of the ſaid houſing. 4. By the flooring of the ſame. 5. By the number of days-work, or charge of building the ſaid houſes. 6. By the value of the ſaid houſes, according to their yearly rent, and number of years purchaſe. 7. By the

number of inhabitants; according to which latter ſenſe only, we make our computation in this eſſay.

Till a better rule can be obtained, we conceive that the proportion of the people may be ſufficiently meaſured by the proportion of the burials in ſuch years as were neither remarkable for extraordinary healthfulneſs or ſicklineſs.

That the city hath increaſed in this latter ſenſe, appears from the bills of mortality, repreſented in the two following tables, viz. one whereof is a continuation for eighteen years, ending 1682, of that table which was publiſhed in the 117 page of the book of the obſervations upon the London bills of mortality, printed in the year 1676. The other ſheweth what number of people died at a medium of two years, indifferently taken, at about twenty years diſtance from each other.

The firſt of the ſaid two tables.

Anno Dom.	*97 pariſhes.*	*16 pariſhes.*	*Out-pariſhes.*	*Buried in all.*	*Beſides of plag.*	*Chriſtened.*
1665	5320	12463	10925	28708	68596	9967
1666	1689	3969	5082	10740	1998	8997
1667	761	6405	8641	15807	35	10938
1668	796	6865	9603	17267	14	11633
1669	1323	7500	10440	19263	3	12335
1670	1890	7808	10500	20198		11997
1671	1723	5938	8063	15724	5	12510
1672	2237	6788	9200	18225	5	12593
1673	2307	6302	8890	17499	5	11895
1674	2801	7522	10875	21198	3	11851
1675	2555	5986	8702	17243	1	11775
1676	2756	6508	9466	18730	2	12399
1677	2817	6632	9616	19065	2	12626
1678	3060	6705	10908	20673	5	12601
1679	3074	7481	11173	21728	2	12288
1680	3076	7066	10911	21053		12747
1681	3669	8136	12166	23971		13355
1682	2975	7009	10707	20691		12443

According

According to which latter table there died as followeth.

The latter of the ſaid two tables.

There died in London, at a medium between the years

1604 and 1605	5135.	A.
1621 and 1622	8527.	B.
1641 and 1642	11883.	C.
1661 and 1662	15148.	D.
1681 and 1682	22331.	E.

Wherein obſerve, that the number C is double to A and 806 over. That D is double to B within 1906. That C and D is double to A B within 293. That E is double to C within 1435. That D and E is double to B and C within 3341. And that C and D and E are double to A and B and C within 1736. And that E is above quadruple to A. All which differences (every way conſidered) do allow the doubling of the people of London in forty years, to be a ſufficient eſtimate thereof in round numbers, and without the trouble of fractions. We alſo ſay, that 669930 is near the number of people now in London, becauſe the burials are 22331, which multiplied by 30, (one dying yearly out of 30, as appears in the 94 page of the afore-mentioned obſervations) maketh the ſaid number; and becauſe there are 84000 tenanted houſes (as we are credibly informed) which at eight in each, makes 672000 ſouls; the ſaid two accounts differing inconſiderably from each other.

We have thus pretty well found out in what number of years (viz. in about 40) that the city of London hath doubled, and the preſent number of in-

 habitants

habitants to be about 670000. We muſt now alſo endeavour the ſame for the whole territory of England and Wales. In order whereunto, we

Firſt ſay, that the aſſeſſment of London is about an eleventh part of the whole territory, and therefore that the people of the whole may well be eleven times that of London, viz. about ſeven millions, three hundred ſixty nine thouſand ſouls; with which account that of the poll-money, hearth-money, and the biſhops late numbring of the communicants, do pretty well agree; wherefore although the ſaid number of ſeven millions, three hundred ſixty nine thouſand, be not (as it cannot be) a demonſtrated truth, yet it will ſerve for a good ſuppoſition, which is as much as we want at preſent.

As for the time in which the people double, it is yet more hard to be found: for we have good experience (in the ſaid 94 page of the afore-mentioned obſervations) that in the country, but one of fifty die *per annum*; and by other late accounts, that there have been ſometimes but twenty four births for twenty three burials: the which two points, if they were univerſally, and conſtantly true, there would be colour enough to ſay, that the people doubled but in about 1200 years. As for example: ſuppoſe there be 600 people, of which let a fiftieth part die *per annum*, then there ſhall die twelve *per annum*; and if the births be as twenty four to twenty three, then the increaſe of the people ſhall be ſomewhat above half a man *per annum*, and conſequently the ſuppoſed number of 600, cannot be doubled but in 1126 years, which to reckon in round numbers, and for that the afore-mentioned fractions were not exact, we had rather call 1200.

There are alſo other good obſervations, that even in the country, one in about 30 or 32 *per annum* hath died, and that there have been five births for four burials.

burials. Now, according to this doctrine, 20 will die *per annum* out of the above 600, and 25 will be born, ſo as the increaſe will be 5, which is a hundred and twentieth part of the ſaid 600. So as we have two fair computations, differing from each other as one to ten; and there are alſo ſeveral other good obſervations for other meaſures.

I might here inſert, that altho' the births in this laſt computation be 25 of 600, or a twenty fourth part of the people; yet that in natural poſſibility, they may be near thrice as many, and near 75. For that by ſome late obſervations, the teeming females between 15 and 44, are about 180 of the ſaid 600, and the males of between 18 and 59, are about 180 alſo, and that every teeming woman can bear a child once in two years; from all which it is plain, that the births may be 90, (and abating 15 for ſickneſs, young abortions, and natural barenneſs) there may remain 75 births, which is an eighth of the people; which by ſome obſervations we have found to be but a two and thirtieth part, or but a quarter of what is thus ſhewn to be naturally poſſible. Now, according to this reckoning, if the births may be 75 of 600, and the burials but 15, then the annual increaſe of the people will be 60; and ſo the ſaid 600 people may double in 10 years, which differs yet more from 1200, abovementioned. Now to get out of this difficulty, and to temper thoſe vaſt diſagreements, I took the medium of 50 and 30 dying *per annum*, and pitched upon 40; and I alſo took the medium between 24 births and 23 burials, and 5 births for 4 burials, viz. allowing about 10 births for 9 burials; upon which ſuppoſition, there muſt die 15 *per annum* out of the above-mentioned 600, and the births muſt be 16 and two thirds, and the increaſe 1, and two thirds, or five thirds of a man, which number compared

pared with 1800 thirds, or 600 men, gives 360 years for the time of doubling (including ſome allowance for wars, plagues, and famine; the effects whereof, though they be terrible at the times and places where they happen, yet in a period of 360 years, is no great matter in the whole nation. For the plagues of England in 20 years hath carried away ſcarce an eightieth part of the people of the whole nation; and the late 10 years civil wars, (the like whereof hath not been in ſeveral ages before) did not take away above a fortieth part of the whole people.)

According to which account or meaſure of doubling, if there be now in England and Wales, 7 millions 400 thouſand people, there were about 5 millions 526 thouſand in the beginning of queen Elizabeths reign, *anno* 1560, and about two millions at the Norman conqueſt; of which conſult the Doomsday book, and my lord Hale's origination of mankind.

Memorandum, that if the people double in 360 years, that the preſent 320 millions, computed by ſome learned men, (from the meaſures of all the nations of the world, their degrees of being peopled, and good accounts of the people in ſeveral of them) to be now upon the face of the earth, will within the next 2000 years, ſo increaſe, as to give one head for every two acres of land in the habitable part of the earth. And then, according to the prediction of the ſcriptures, there muſt be wars and great ſlaughter, &c.

Wherefore, as an expedient againſt the above-mentioned difference between 10 and 1200 years, we do for the preſent, and in this country admit of 360 years to be the time wherein the people of England do double, according to the preſent laws and practice of marriages.

Now,

Now, if the city double its people in 40 years, and the preſent number be 670 thouſand, and if the whole territory be 7 millions 400 thouſand, and double in 360 years, as aforeſaid; then by the underwritten table it appears, that *anno* 1840, the people of the city will be 10718880, and thoſe of the whole country but 10917389, which is but inconſiderably more. Wherefore it is certain and neceſſary that the growth of the city muſt ſtop before the ſaid year 1840; and will be at its utmoſt height in the next preceding period, *anno* 1800, when the number of the city will be eight times its preſent number, viz. 5 millions 359 thouſand. And when (beſides the ſaid number) there will be 4 millions 466 thouſand to perform the tillage, paſtorage, and other rural works neceſſary to be done without the ſaid city, as by the following table, viz.

	Annis.	Burials.	People in London	People in England.
As in the former Tab.	1565	2565	77040	5526929
	1605	5138		
	1642	11883		
	1682	22331	669930	7369230
	1722	44662		
	1762	89324		
	1802	178648	5359440	9825650
	1842	357296	10718889	10917389

Now when the people of London ſhall come to be ſo near the people of all England, then it follows, that the growth of London muſt ſtop before the ſaid year 1842, as aforeſaid, and muſt be at its greateſt height *anno* 1800, when it will be eight times more than now, with above 4 millions for the ſervice of the country and ports as aforeſaid.

Of

Of the afore-mentioned vaſt difference between 10 years and 1200 years for doubling the people, we make this uſe, viz. to juſtify the ſcriptures and all other good hiſtories concerning the number of the people in ancient time. For ſuppoſing the eight perſons who came out of the Ark, increaſed by a progreſſive doubling in every 10 years, might grow in the firſt 100 years after the Flood from 8 to 8000, and that in 350 years after the Flood (when about Noah died) to one million, and by this time 1682, to 320 millions (which by rational conjecture, are thought to be now in the world) it will not be hard to compute, how in the intermediate years, the growths may be made, according to what is ſet down in the following table, wherein making the doubling to be 10 years at firſt, and within 1200 years at laſt, we take a diſcretionary liberty, but juſtifiable by obſervations and the ſcriptures for the reſt; which table we leave to be corrected by hiſtorians, who know the bigneſs of ancient cities, armies, and colonies in the reſpective ages of the world: in the mean time affirming, that without ſuch difference in the meaſures and periods for doubling (the extreams whereof we have demonſtrated to be real and true) it is impoſſible to ſolve what is written in the holy ſcriptures and other authentick books. For if we pitch upon any one number throughout for this purpoſe, 150 years is the fitteſt of all round numbers; according to which, there would have been but 512 ſouls in the whole world in Moſes's time (being 800 years after the flood) when 603 thouſand Iſraelites of above 20 years old (beſides thoſe of other ages, tribes, and nations) were found upon an exact ſurvey appointed by God; whereas our table makes 12 millions. And there would have been but 8000 in David's time, when were found 1100 thouſand of above 20 years old

old (beſides others, as aforeſaid) in Iſrael upon the ſurvey inſtigated by Satan; whereas our table makes 32 millions. And there would have been but a quarter of a million about the birth of Chriſt, or Auguſtus his time, when Rome and the Roman empire were ſo great; whereas our table makes 100 millions. Where note, that the Iſraelites in about 500 years, between their coming out of Egypt to David's reign, increaſed from 603 thouſand to 1100 thouſand.

On the other hand, if we pitch upon a leſs number, as 100 years, the world would have been overpeopled 700 years ſince. Wherefore no one number will ſolve the *Phænomena*; and therefore we have ſuppoſed ſeveral in order to make the following table, which we again deſire hiſtorians to correct, according to what they find in antiquity concerning the number of the people in each age and country of the world.

We did (not long ſince) aſſiſt a worthy divine, writing againſt ſome Sceptricks, who would have baffled our belief of the reſurrection, by ſaying, that the whole globe of the earth could not furniſh matter enough for all the bodies that muſt riſe at the laſt day, much leſs would the ſurface of the earth furniſh footing for ſo vaſt a number; whereas we did (by the method aforementioned) aſſert the number of men now living, and alſo of thoſe that had died ſince the beginning of the world; and did withal ſhew, that half the iſland of Ireland would afford them all, not only footing to ſtand upon, but graves to lie down in, for that whole number; and that two mountains in that country were as weighty as all the bodies that had ever been from the beginning of the world to the year 1680, when this diſpute happened. For which purpoſe, I have digreſſed from my intended purpoſe, to inſert this matter, intending to proſecute this hint further, upon ſome more proper occaſion.

A TABLE

A TABLE shewing how the people might have doubled in the several ages of the world.

	Anno after the flood.	
Periods of doubling	1	8 persons.
	10	16
	20	32
	30	64
	40	128
In 10 Years	50	256
	60	512
	70	1024
	80	2048
	90	4096
	100	8000 and more.
In 20 Years	120	Years after the Flood. 16 thousand
	140	32
30	170	64
	200	128
40	240	256
50	290	512
60	350	1 million and more.
70	420	2 millions.
100	520	4 millions.
190	710	8 millions.
290	1000	16 In Moses time.
400	1400	32 about David's time.
550	1950	64
750	2700	128 about the birth of Christ.
1000	3700	256
In 300 / 1000	4000	320

It

It is here to be noted, that in this table we have assigned a different number of years for the time of doubling the people in the several ages of the world, and might have done the same for the several countries of the world, and therefore the said several periods assigned to the whole world in the lump, may well enough consist with the three hundred and sixty years especially assigned to England, between this day, and the Norman conquest; and the said three hundred and sixty years may well enough serve for a supposition between this time, and that of the world's being fully peopled: nor do we lay any stress upon one or the other in this disquisition concerning the growth of the city of London.

We have spoken of the growth of London with the measures and periods thereof, we come next to the causes and consequences of the same.

The causes of its growth from 1642 to 1682, may be said to have been as followeth, viz. from 1642 to 1650, that men came out of the country to London, to shelter themselves from the outrages of the civil wars, during that time; from 1650 to 1660, the royal party came to London, for their more private and inexpensive living; from 1660 to 1670, the King's friends and party came to receive his favours after his happy restoration; from 1670 to 1680, the frequency of plots and parliaments, might bring extraordinary numbers to the city; but what reasons to assign for the like increase from 1604 to 1642, I know not, unless I should pick out some remarkable accident happening in each part of the said period, and make that to be the cause of this increase (as vulgar people make the cause of every man's sickness to be what he did last eat) wherefore, rather than so to say, *quidlibet de quolibet*; I rather quit even what I have above-said to be the cause of London's increase from

1642

1642 to 1682, and put the whole upon ſome natural and ſpontaneous benefits and advantage that men find by living in great more than in ſmall ſocieties; and ſhall therefore ſeek for the antecedent cauſes of this growth, in the conſequences of the like, conſidered in greater characters and proportions.

Now, whereas in arithmetic, out of two falſe poſitions the truth is extracted, ſo I hope out of two extravagant contrary ſuppoſitions, to draw forth ſome ſolid and conſiſtent concluſion, viz.

The firſt of the ſaid two ſuppoſitions is, that the city of London is ſeven times bigger than now, and that the inhabitants of it are four millions ſix hundred and ninety thouſand people; and that in all the other cities, ports, towns and villages, there are but two millions ſeven hundred and ten thouſand more.

The other ſuppoſition is, that the city of London is but a ſeventh part of its preſent bigneſs, and that the inhabitants of it are but ninety ſix thouſand, and that the reſt of the inhabitants (being ſeven millions three hundred four thouſand) do co-habit thus, one hundred four thouſand of them in ſmall cities and towns, and that the reſt, being ſeven millions two hundred thouſand, do inhabit in houſes not contiguous to one another, viz. in twelve hundred thouſand houſes, having about twenty four acres of ground belonging to each of them, accounting about twenty eight millions of acres to be in the whole territory of England, Wales, and the adjacent iſlands; which any man that pleaſes may examine upon a good map.

Now, the queſtion is, in which of theſe imaginary ſtates would be the moſt convenient, commodious and comfortable livings?

But

But this general queſtion divides it ſelf into the ſeveral queſtions, relating to the following particulars, viz.

1. For the defence of the kingdom againſt foreign powers.
2. For preventing the inteſtine commotions of parties and factions.
3. For peace and uniformity in religion.
4. For the adminiſtration of juſtice.
5. For the proportionably taxing of the people, and eaſy levying of the ſame.
6. For gain by foreign commerce.
7. For husbandry, manufacture, and for arts of delight and ornament.
8. For leſſening the fatigue of carriages and travelling.
9. For preventing beggars and thieves.
10. For the advancement and propagation of uſeful learning.
11. For increaſing the people by generation.
12. For preventing the miſchiefs of plagues and contagions. And withal, which of the ſaid two ſtates is moſt practicable and natural; for in theſe and the like particulars, do lie the teſts and touchſtones of all propoſals, that can be made for the public good.

Firſt, as to practicable, we ſay, that although our ſaid extravagant propoſals are both in nature poſſible, yet it is not obvious to every man to conceive, how London, now ſeven times bigger than in the beginning of Queen Elizabeth's reign, ſhould be ſeven times bigger than now it is, and forty nine times bigger than *Anno*. 1560. To which I ſay, 1. That the preſent city of London ſtands upon leſs than two thouſand five hundred acres of ground; wherefore a city

city ſeven times as large may ſtand upon ten thouſand five hundred acres, which is about equivalent to a circle of four miles and a half in diameter, and leſs than fifteen miles in circumference. 2. That a circle of ground of thirty five miles ſemi-diameter will bear corn, garden-ſtuff, fruits, hay, and timber for the four millions ſix hundred and ninety thouſand inhabitants of the ſaid city and circle, ſo as nothing of that kind need be brought from above thirty five miles diſtance from the ſaid city; for the number of acres within the ſaid circle, reckoning two acres ſufficient to furniſh bread and drink-corn for every head, and two acres will furniſh hay for every neceſſary horſe; and that the trees which may grow in the hedge-rows of the fields within the ſaid circle, may furniſh timber for ſix hundred thouſand houſes. 3. That all live cattle and great animals can bring themſelves to the ſaid city; and that fiſh can be brought from the Lands-end and Berwick, as eaſily as now. 4. Of coals there is no doubt. And for water, twenty ſhillings *per* family (or ſix hundred thouſand pounds *per annum* in the whole) will ſerve this city, eſpecially with the help of the new river. But if by practicable be underſtood, that the preſent ſtate may be ſuddenly changed into either of the two above-mentioned propoſals, I think it is not practicable. Wherefore the true queſtion is, unto or towards which of the ſaid two extravagant ſtates is the beſt to bend the preſent ſtate by degrees, viz. whether it be beſt to leſſen or enlarge the preſent city? In order whereunto, we enquire (as to the firſt queſtion) which ſtate is moſt defenſible againſt foreign powers; ſaying, that if the above-mentioned houſing, and a border of ground, of three quarters of a mile broad, were encompaſſed with a wall and ditch of twenty miles about (as ſtrong as any in Europe, which would coſt but a mil-

a million, or about a penny in the ſhilling of the houſe-rent for one year) what foreign prince could bring an army from beyond ſeas, able to beat. 1. Our ſea-forces, and next with horſe harraſs'd at ſea, to reſiſt all the freſh horſe that England could make, and then conquer above a million of men, well united, diſciplined, and guarded within ſuch a wall, diſtant every where three quarters of a mile from the houſing to elude the granadoes and great ſhot of the enemy? 2. As to inteſtine parties and factions, I ſuppoſe that four millions ſix hundred and ninety thouſand people united within this great city, could eaſily govern half the ſaid number ſcattered without it; and that a few men in arms within the ſaid city and wall, could alſo eaſily govern the reſt unarmed, or armed in ſuch a manner as the ſovereign ſhall think fit. 3. As to uniformity in religion, I conceive, that if St. Martin's pariſh (may as it doth) conſiſt of about forty thouſand ſouls, that this great city alſo may as well be made but as one pariſh, with ſeven times one hundred and thirty chapels, in which might not only be an uniformity of common prayer, but in preaching alſo; for that a thouſand copies of one judiciouſly and authentically compoſed ſermon, might be every week read in each of the ſaid chapels without any ſubſequent repetition of the ſame, as in the caſe of homilies. Whereas in England (wherein are near ten thouſand pariſhes, in each of which upon Sundays, Holy-days, and other extraordinary occaſions, there ſhould be about one hundred ſermons *per annum*, making about a million of ſermons *per annum* in the whole:) it were a miracle, if a million of ſermons compoſed by ſo many men, and of ſo many minds and methods, ſhould produce uniformity upon the diſcompoſed underſtandings of above eighty millions of hearers.

4. As

4. As to the adminiſtration of juſtice. If in this great city ſhall dwell the owners of all the lands and other valuable things in England; if within it ſhall be all the traders, and all the courts, offices, records, juries and witneſſes; then it follows, that juſtice may be done with ſpeed and eaſe.

5. As to the equality and eaſy levying of taxes. It is too certain, that London hath at ſome times paid near half the exciſe of England; and that the people pay thrice as much for the hearths in London, as thoſe in the country, in proportion to the people of each; and that the charge of collecting theſe duties, have been about a ſixth part of the duty it ſelf. Now in this great city, the exciſe alone, according to the preſent laws, would not only be double to the whole kingdom, but alſo more equal. And the duty of hearths of the ſaid city, would exceed the preſent proceed of the whole kingdom. And as for the cuſtoms, we mention them not at preſent.

6. Whether more would be gained by foreign commerce?

The gain which England makes by lead, coals, the freight of ſhipping, *&c.* may be the ſame, for ought I ſee, in both caſes. But the gain which is made by manufacturers, will be greater, as the manufacture it ſelf is greater and better. For in ſo vaſt a city manufactures will beget one another, and each manufacture will be divided into as many parts as poſſible, whereby the work of each artiſan will be ſimple and eaſy; as for example. In the making of a watch, if one man ſhall make the wheels, another the ſpring, another ſhall engrave the dial-plate, and another ſhall make the caſes, then the watch will be better and cheaper, then if the whole work be put upon any one man. And we alſo ſee that in towns, and in the ſtreets of a great town, where all the inhabitants

tants are almoſt of one trade, the commodity peculiar to thoſe places is made better and cheaper than elſewhere. Moreover, when all ſorts of manufactures are made in one place, there every ſhip that goeth forth, can ſuddenly have its loading of ſo many ſeveral particulars and ſpecies, as the port whereunto ſhe is bound can take off. Again, when the ſeveral manufactures are made in one place, and ſhipped off in another, the carriage, poſtage, and travelling-charges will inhance the price of ſuch manufacture, and leſſen the gain upon foreign commerce. And laſtly, when the imported goods are ſpent in the port it ſelf, where they are landed, the carriage of the ſame into other places will create no ſurcharge upon ſuch commodity; all which particulars tend to the greater gain by foreign commerce.

7. As for arts of delight and ornament.

They are beſt promoted by the greateſt number of emulators. And it is more likely that one ingenious, curious man may rather be found out amongſt four millions than four hundred perſons. But as for husbandry, viz. tillage and paſturage, I ſee no reaſon, but the ſecond ſtate (when each family is charged with the culture of about twenty four acres) will beſt promote the ſame.

8. As for leſſening the fatigue of carriage and travelling.

The thing ſpeakes it ſelf; for if all the men of buſineſs, and all artiſans do live within five miles of each other: and if thoſe who live without the great city, do ſpend only ſuch commodities as grow where they live, then the charge of carriage and travelling could be little.

9. As to the preventing of beggars and thieves.

I do not find how the differences of the ſaid two ſtates ſhould make much difference in this particular;

for impotents (which are but one in about ſix hundred) ought to be maintained by the reſt. 2. Thoſe who are unable to work, through the evil education of their parents, ought (for ought I know) to be maintained by their neareſt kindred, as a juſt puniſhment upon them. 3. And thoſe who cannot find work (though able and willing to perform it) by reaſon of the unequal application of hands to lands ought to be provided for by the magiſtrate and landlord till that can be done: for there needs be no beggars in countries, where there are many acres of unimproved improveable land to every head, as there are in England. As for thieves, they are for the moſt part begotten from the ſame cauſe; for it is againſt nature, that any man ſhould venture his life, limb, or liberty, for a wretched livelihood, whereas moderate labour will produce a better. But of this ſee ſir Thomas Moor, in the firſt part of his Utopia.

10. As to the propagation and improvement of uſeful learning.

The ſame may be ſaid concerning it, as was above-ſaid concerning manufactures, and the arts of delight and ornament; for in the great vaſt city, there can be no ſo odd a conceit or deſign, whereunto ſome aſſiſtance may not be found, which in the thin, ſcattered way of habitation may not be.

11. As for the increaſe of people by generation,

I ſee no great difference from either of the two ſtates, for the ſame may be hindred or promoted in either, from the ſame cauſes.

12. As to the plague.

It is to be remembred, that one time with another, a plague happeneth in London once in twenty years, or thereabouts; for in the laſt hundred years, between the years 1582 and 1682, there have been five great plagues, *viz. anno.* 1592, 1603, 1625, 1636 and

and 1665. And it is alſo to be remembred, that the plagues of London do commonly kill one fifth part of the inhabitants. Now, if the whole people of England do double but in three hundred and ſixty years, then the annual increaſe of the ſame is but twenty thouſand, and in twenty years four hundred thouſand. But if in the city of London there ſhould be two millions of people, (as there will be about ſixty years hence) then the plague (killing one fifth of them, namely, four hundred thouſand once, in twenty years) will deſtroy as many in one year, as the whole nation can re-furniſh in twenty: and conſequently the people of the nation ſhall never increaſe. But if the people of London ſhall be above four millions (as in the firſt of our two extravagant ſuppoſitions is premiſed) then the people of the whole nation ſhall leſſen above twenty thouſand *per annum*. So as if people be worth ſeventy pounds *per* head (as hath elſewhere been ſhewn) then the ſaid greatneſs of the city will be a damage to it ſelf and the whole nation of fourteen hundred thouſand pounds *per annum*, and ſo *pro rata*, for a greater or leſſer number; wherefore to determine which of the two ſtates is beſt, (that is to ſay, towards which of the ſaid two ſtates, authority ſhould bend the preſent ſtate) a juſt ballance ought to be made between the diſadvantages from the plague, with the advantages accruing from the other particulars above-mentioned; unto which balance a more exact account of the people, and a better rule for the meaſure of its growth is neceſſary, that what we have here given, or are yet able to lay down.

POSTSCRIPT.

IT was not very pertinent to a discourse concerning the growth of the city of London, to thrust in considerations of the time when the whole world will be fully peopled; and how to justify the scriptures concerning the number of people mentioned in them; and concerning the number of the quick and the dead, that may rise at the last day, &c. Nevertheless, since some friends liking the said digressions and impertinences (perhaps as sawce to a dry discourse) have desired that the same might be explained and made out: I therefore say as followeth.

1. If the number of acres in the habitable part of the earth, be under fifty thousand millions; if twenty thousand millions of people, are more than the said number of acres will feed; (few or no countries being so fully peopled;) and for that in six doublings (which will be in two thousand years) the present three hundred and twenty millions will exceed the said twenty thousand millions.

2. That the number of all those who have died since the flood, is the sum of all the products made by multiplying the number of the doubling periods mentioned in the first column of the last table, by the number

number of people respectively affixed to them, in the third column of the same table; the said sum being divided by forty (one dying out of forty *per annum*, out of the whole mass of mankind) which quotient is twelve thousand five hundred and seventy millions; whereunto may be added, for those that died before the flood, enough to make the last mentioned number twenty thousand millions, as the full number of all that died, from the beginning of the world, to the year 1682; unto which, if three hundred and twenty millions, the number of those who are now alive, be added, the total of the quick and the dead will amount but to one fifth part of the graves, which the surface of Ireland will afford, without ever putting two bodies into one grave; for there be in Ireland twenty eight thousand square English miles, each whereof will afford about four millions of graves, and consequently above one hundred and fourteen thousand millions of graves, viz. about five times the number of the quick and the dead, which should arise at the last day, in case the same had been in the year 1682.

3. Now, if there may be place for five times as many graves in Ireland, as are sufficient for all that ever died; and if the earth of one grave weigh five times as much as the body interred therein, then a turf, less than a foot thick, pared off from a fifth part of the surface of Ireland, will be equivalent in bulk and weight to all the bodies that ever were buried; and may serve as well for that purpose, as the two mountains afore-mentioned in the body of this discourse. From all which it is plain, how madly they were mistaken, who did so petulantly vilify what the holy scriptures have delivered.

FURTHER

OBSERVATIONS

UPON THE

DUBLIN BILLS: or, Accounts of the Houſes, Hearths, Baptiſms, and Burials in that CITY.

By Sir WILLIAM PETTY, late Fellow of the ROYAL-SOCIETY.

THE STATIONER TO THE READER.

I HAVE not thought fit to make any alteration of the firſt edition, but have only added a new table, with obſervations upon it, placing the ſame in the front of what

what was before; which perhaps might have been as well placed after the like table at the eighth page of the firſt edition.

DUBLIN,

DUBLIN, 1682.

Pariſhes.	Houſ.	Fire-pl.	Bapt	Buri.
St. James	272	836	122	306
St. Catherines	540	2198		
St. Nicholas without, and St. Patricks	1064	4082	154	414
St. Bridgets	395	1903	68	149
St. Audeons	276	1510	56	164
St. Michaels	174	884	34	50
St. Johns	302	1636	74	101
St. Nicholas within, and Chriſt-church liber.	153	902	26	52
St. Werburghs	240	1638	45	105
St. Michans	938	3516	124	389
St. Andrews	864	3638	131	300
St. Kevans	554	2120	87	233
Donebrook	253	506		
	6025	25369	912	22—

Further obſervations upon the Dublin accounts of baptiſms and burials, houſes and hearths, viz.

THE table hath been made for the year 1682, wherein is noted,

1. That the houſes which *anno* 1671, were but three thouſand eight hundred and fifty, are *anno* 1682, ſix thouſand and twenty five; but whether this difference is cauſed by the real increaſe of houſing, or by fraud and defect in the former

mer accounts, is left to consideration. For the burials or people have increased but from one thousand six hundred ninety six, to two thousand two hundred sixty three; according to which proportion, the three thousand eight hundred and fifty houses *anno* 1671, should *anno* 1682, have been but five thousand one hundred and forty three, wherefore some fault may be suspected as aforesaid, when farming the hearth-money was in agitation.

2. The hearths have increased according to the burials, and one third of the said increase more, viz. The burials, *anno* 1671, were one thousand six hundred ninety six, the one third whereof is five hundred sixty three, which put together, makes two thousand two hundred fifty nine, which is near the number of burials *anno* 1682. But the hearths *anno* 1671, were seventeen thousand five hundred, whereof the one third is five thousand eight hundred thirty three, making in all but twenty three thousand three hundred and thirty three; whereas the whole hearths *anno* 1682, were twenty five thousand three hundred and sixty nine, viz. one third and better of the said five thousand eight hundred and thirty three more.

3. The housing were *anno* 1671, but three thousand eight hundred and fifty, which if they had increased *anno* 1682, but according to the burials, they had been but five thousand one hundred and forty three, or according to the hearths, had been but five thousand four hundred and eighty eight, whereas they appear six thousand and twenty five, increasing double to the hearths. So as 'tis likely there hath been some error in the said account of the housing, unless the new housing be very small, and have but one chimney apiece, and that one fourth part of them are untenanted. On the other hand, 'tis more likely that when sixteen hundred ninety six died *per annum*, there

there were near six thousand; for six thousand houses at eight inhabitants *per* house, would make the number of the people to be forty eight thousand, and the number of sixteen hundred ninety six that died according to the rule of one out of thirty, would have made the number of inhabitants about fifty thousand: for which reason I continue to believe there was some error in the account of three thousand eight hundred and fifty houses as aforesaid, and the rather because there is no ground from experience to think, that in eleven years, the houses in Dublin have increased from three thousand eight hundred and fifty, to six thousand and twenty five.

Moreover, I rather think that the number of six thousand and twenty five is yet short, because that number at eight heads *per* house makes the inhabitants to be but forty eight thousand two hundred; whereas the two thousand two hundred and sixty three who died in the year 1682, according to the afore-mentioned rule of one dying out of thirty, makes the number of people to be sixty seven thousand eight hundred and ninety; the medium betwixt which number and forty eight thousand two hundred, is fifty eight thousand and forty five, which is the best estimate I can make of that matter, which I hope authority will e'er long rectify, by direct and exact enquiries.

4. As to the births, we say that *anno* 1640, 1641, and 1642, at London, just before the troubles in religion began, the births were five sixths of the burials, by reason I suppose of the greatness of families in London above the country, and the fewer breeders, and not for want of registring. Wherefore deducting one sixth of two thousand two hundred and sixty three, which is three hundred and seventy seven, there remains one thousand eight hundred and eighty

eighty ſix for the probable number of births in Dublin, for the year 1682; whereas but nine hundred and twelve are repreſented to have been chriſtened in that year, though one thouſand and twenty three were chriſtened *anno* 1671, when there died but one thouſand ſix hundred and ninety ſix; which decreaſing of the chriſtnings, and increaſing of the burials, ſhews the increaſe of non-regiſtring in the legal books, which muſt be the increaſe of Roman-catholicks in Dublin.

The ſcope of this whole paper therefore is, that the people of Dublin are rather fifty eight thouſand, than thirty two thouſand; and that the diſſenters, who do not regiſter their baptiſms, have increaſed from three hundred ninety one to nine hundred ſeventy four; but of diſſenters, none have increaſed but the Roman-catholicks, whoſe numbers have increaſed from about two to five in the ſaid years. The exacter knowledge whereof, may alſo be better had from direct enquiries.

OBSER-

OBSERVATIONS

UPON THE

DUBLIN

BILLS of MORTALITY, 1681.

And the State of that

CITY.

THE obſervations upon the London bills of mortality have been a new light to the world; and the like obſervations upon thoſe of Dublin, may ſerve as ſnuffers to make the ſame candle burn clearer.

The London obſervations flowed from bills regularly kept for near one hundred years; but theſe are ſqueezed out of ſix ſtragling London bills, out of fifteen Dublin bills, and from a note of the families and hearths in each pariſh in Dublin; which are all digeſted into the following tables, conſiſting of three parts, marked ABC; being indeed the ABC of public

publick œconomy, and even of that policy which tends to peace and plenty.

Obſervations upon the table A.

THE total of the burials in London (for the ſaid ſix ſtragling years mentioned in the table A) is one hundred twenty thouſand one hundred and ſeventy; whereof the medium or ſixth part is twenty thouſand and twenty eight; and exceeds the burials of Paris, as may appear by the late bills of that city.

2. The births, for the ſame time, are ſeventy three thouſand ſix hundred eighty and three, the medium or ſixth part whereof is twelve thouſand two hundred and eighty, which is about five eighth parts of the burials; and ſhews, that London would in time decreaſe quite away, were it not ſupplied out of the country, where are about five births for four burials, the proportion of breeders in the country being greater than in the city.

3. The burials in Dublin for the ſaid ſix years, were nine thouſand eight hundred ſixty five, the ſixth part or medium whereof is, one thouſand ſix hundred forty and four, which is about the twelfth part of the London burials, and about a fifth part over. So as the people of London do hereby ſeem to be above twelve times as many as thoſe of Dublin.

4. The births in the ſame time at Dublin, are ſix thouſand one hundred fifty and ſeven, the ſixth part or medium whereof is one thouſand twenty and ſix, which is alſo about five eighth parts of the one thouſand ſix hundred forty and four burials; which ſhews, that the proportion between burials and births are

are alike at London and Dublin, and that the accounts are kept alike; and conſequently are likely to be true, there being no confederacy for that purpoſe: which if they be true, we then ſay,

5. That the births are the beſt way (till the accounts of the people ſhall be purpoſely taken) whereby to judge of the increaſe and decreaſe of people, that of burials being ſubject to more contingencies and variety of cauſes.

6. If births be as yet the meaſure of the people, and that the births (as has been ſhewn) are as five to eight, then eight fifths of the births is the number of the burials, where the year was not conſiderable for extraordinary ſickneſs or ſalubrity; and is the rule whereby to meaſure the ſame. As for example: the medium of births in Dublin was one thouſand twenty and ſix, the eight fifths whereof is one thouſand ſix hundred forty and one, but the real burials were one thouſand ſix hundred forty and four; ſo as in the ſaid years they differed little from the one thouſand ſix hundred forty and one, which was the ſtandard of health; and conſequently, the years 1680, 1674, and 1668, were ſickly years, more or leſs, as they exceeded the ſaid number one thouſand ſix hundred forty and one; and the reſt were healthful years, more or leſs, as they fell ſhort of the ſame number. But the city was more or leſs populous, as the births differed from the number one thouſand twenty and ſix; viz. populous in the years 1680, 1679, 1678, and 1668: for other cauſes of this difference in births, are very occult and uncertain.

7. What hath been ſaid of Dublin, ſerves alſo for London.

8. It hath already been obſerved by the London bills, that there are more males than females. It is to be further noted, that in theſe ſix London bills

 alſo,

alſo, there is not one inſtance either in the births or burials to the contrary.

9. It hath been formerly obſerved, that in the years wherein moſt die, feweſt are born, *& vice verſa*. The ſame may be further obſerved in males and females, viz. When feweſt males are born, then moſt die: for here the males died as twelve to eleven, which is above the mean proportion of fourteen to thirteen; but were born but as nineteen to eighteen, which is below the ſame.

Obſervations upon the table B.

1. FROM the table B, it appears, that the medium of the fifteen years burials, (being twenty four thouſand one hundred ninety and nine) is one thouſand ſix hundred and thirteen; whereas the medium of the other ſix years in the table A, was one thouſand ſix hundred forty and four, and that the medium of the fifteen years births (being in all fourteen thouſand ſeven hundred ſixty and five) is nine hundred eighty and four, whereas the medium of the ſaid other ſix years, was one thouſand twenty and ſix. That is to ſay, there were both fewer births and burials in theſe fifteen years, than in the other ſix years; which is a probable ſign that at a medium there were fewer people alſo.

2. The medium of births for the fifteen years being nine hundred eighty and four, whereof eight fifths (being one thouſand five hundred ſeventy and ſix) is the ſtandard of health for the ſaid fifteen years; and the triple of the ſaid one thouſand five hundred ſeventy and ſix, being four thouſand ſeven hundred twenty

twenty and eight, is the ſtandard for each of the ternaries of the fifteen years within the ſaid table.

3. That two thouſand nine hundred fifty and two, the triple of nine hundred eighty and four births, is for each ternary the ſtandard of peoples increaſe and decreaſe from the year 1666 to 1680 incluſive, viz. The people increaſed in the ſecond ternary, and decreaſed from the ſame in the third and fourth ternaries, but re-increaſed in the fifth ternary beyond any other.

4. That the laſt ternary was withal very healthful, the burials being but four thouſand ſix hundred twenty and four, viz. below four thouſand ſeven hundred twenty and eight, the ſtandard.

5. That according to this proportion of increaſe, the houſing of Dublin have probably increaſed alſo.

Obſervations upon the table C.

1. FIRST, from the table C, it appears, that the houſing of Dublin is ſuch, as that there are not five hearths in each houſe one with another, but nearer five than four.

2. That in St. Werburgh's pariſh are near ſix hearths to an houſe. In St. John's five. In St. Michael's above five. In St. Nicholas within above ſix. In Chriſt-church above ſeven. In St. James's, and St. Katherine's, and in St. Michan's, not four. In St. Kevan's about four.

3. That in St. James's, St. Michan's, St. Bride's, St. Werburgh's, St. Andrew's, St. Michael's, and St. Patrick's, all the chriſtenings were but five hundred and fifty, and the burials one thouſand fifty and five, viz. near double; and that in the reſt of the

 pariſhes

parifhes the chriftenings were five, and the burials feven, viz. as four hundred fifty to fix hundred thirty and four. Now whether the caufe of this difference were negligence in accounts, or the greatnefs of the families, &c. is worth inquiring.

4. It is hard to fay in what order (as to greatnefs) thefe parifhes ought to ftand, fome having moft families, fome moft hearths, fome moft births, and others moft burials. Some parifhes exceeding the reft in two, others in three of the faid four particulars, but none in all four. Wherefore this table ranketh them according to plurality of the faid four particulars wherein each excelleth the other.

5. The London obfervations reckon eight heads to be in each family; according to which eftimation, there are thirty two thoufand fouls in the four thoufand families of Dublin; which is but half of what moft men imagine; of which but about one fixth part are able to bear arms, befides the royal regiment.

6. Without the knowledge of the true number of people, as a principle, the whole fcope and ufe of the keeping bills of births and burials is impaired; wherefore by laborious conjectures and calculations to deduce the number of people from the births and burials, may be ingenious, but very prepofterous.

7. If the number of families in Dublin be about four thoufand, then ten men in one week (at the charge of about five pound, furveying eight families in an hour) may directly, and without algebra, make an account of the whole people, expreffing their feveral ages, fex, marriages, title, trade, religion, &c. and thofe who furvey the hearths, or the conftables or parifh-clerks, (may, if required) do the fame *ex officio*, and without other charge, by the

the command of the chief governor, the diocefan, or the mayor.

8. The bills of London have fince their beginning, admitted feveral alterations and improvements; and eight or ten pound *per annum* furcharge, would make the bills of Dublin to exceed all others, and become an excellent inftrument of government. To which purpofe the forms for weekly, quarterly, and yearly bills are humbly recommended, viz.

Yearly Bills of Mortality for LONDON and DUBLIN.					LONDON.			
					Burials.		Births.	
Anno	Burials.	Births.	Burials.	Births.	Males.	Femal.	Males.	Femal.
1680	21053	12747	1826	1096	11039	10044	6543	6199
1679	21730	12288	1397	1061	11154	10567	6247	6041
1678	20678	12601	1401	1045	10681	9977	6568	6033
1674	21201	11851	2106	942	11000	10196	6113	5738
1672	18230	12563	1436	987	9560	8070	6443	6120
1668	17278	11633	1699	1026	9111	8167	6073	5566
	120170	73683	9863	6157	62545	57030	37992	35697
The medium or 6th part whereof is	20028	12280	1644	1026	10424	9505	6332	5949

B

D U B L I N.

Anno	Burials.	Births.	In Ternaries of Years.	
1666	1480	952	4821	2979
1667	1642	1001		
1668	1699	1026		
1669	1666	1000	5353	3070
1670	1713	1067		
1671	1974	1003		
1672	1436	967	5073	2842
1673	1531	933		
1674	2106	942		
1675	1578	823	4328	2672
1676	1391	952		
1677	1359	897		
1678	1401	1045	4624	3202
1679	1397	1061		
1680	1826	1096		
	24199	14765	24199	14765
The medium or 15th part whereof is	1613	984	1613	984

The

C

The Parishes of *D U B L I N.*	*Anno.* 1671. Famil.	*Anno.* 1671. Hearths	*An.* 1670, 71, & 72 at a Med. Births.	*An.* 1670, 71, & 72 at a Med. Buri.
1 St. Catherine's and S. James's,	661	2399	161	290
2 St. Nicholas without,	490	2348	207	262
3 St. Michans,	656	2301	127	221
4 St. Andrews with Donebrook,	483	2123	108	178
5 St. Bridgets,	416	198[illegible]	70	100
6 St. Johns,	244	1337	70	138
7 St. Warburgh,	267	1650	54	108
8 St. Audeons,	216	1081	53	121
9 St. Michael,	140	793	44	59
10 St. Kevans,	106	433	64	133
11 St. Nicholas within,	93	614	28	34
12 St. Patrick's Liberties,	52	255	21	44
13 Christ-Church and Trinity-College *per* estimate,	26	197		1
	3850	17500	1013	1696
Houses built between 1671, and 1681 *per* estimate,	150	550		
	4000	18150		

A

A Quarterly Bill

Beginning and end-

	PARISHES Names.	Births. 1.	Marriages. 2.	Buried of Under 16 years old.	Above 60 years old.
1	St. Catherine's and St. Jam.				
2	St. Nicholas without,				
3	St. Michans,				
4	St. Andr. with Donebrook,				
5	St. Bridgets,				
6	St. Johns,				
7	St. Warburgh,				
8	St. Audeons,				
9	St. Michael,				
10	St. Kevans,				
11	St. Nicholas within,				
12	St. Patrick's Liberties				
13	Christ-Church and Trinity-college.				
	Totals,				

of

# of Mortality,

ing for the City of Dublin.

All other Casualties.	Infants under 2 years old	Aged above 70 years old.	Sudden Death	Quinsey,	Pluriſy,	Fever,	Stone,	Gout,	Dropsy,	Consumption,	Plague,	Small-Pox	Spotted Fever,	Measels.

A

A Weekly Bill of Mortality for the City of *Dublin*,

Ending the day of 1681.

	PARISHES Names.	Births.	Males.	Females.	Spotted Fever.	Measles.	Small-pox.	Plague.	Above 6 years old.	Under 16 years old.	Burials.
1	St. Catherine's and St. James's,										
2	St. Nicholas without,										
3	St. Michan's,										
4	St. Andrews with Donebrook,										
5	St. Bridget's,										
6	St. John's,										
7	St. Werburgh's,										
8	St. Audeon's,										
9	St. Michael's,										
10	St. Kevan's,										
11	St. Nicholas within,										
12	St. Patrick's liberties,										
13	Christ-church and Trinity college,										
	Totals,										

An

An Account of the People

Ending the 24th

	PARISHES Names.	Number of persons.	where-of Males	where-of Females
1	St. Catherine's and St. James's,			
2	St. Nicholas without,			
3	St. Michan's,			
4	St. Andrews with Donebrook,			
5	St. Bridgets,			
6	St. John's,			
7	St. Werburgh's,			
8	St. Audeon's,			
9	St. Michael's,			
10	St. Kevan's,			
11	St. Nicholas within,			
12	St. Patrick's liberties,			
13	Christ-church and Trinity-college,			
	Totals,			

of *Dublin* for one Year,

of *March*, 168½.

Marriages.	Burials.	Births.	Of all other Religions	Papists	Protestants	Persons of Above 60 years old.	Persons of Under 16 years old.	Married persons.
					of above 16 years old.			

Casualties

A

POSTSCRIPT

TO THE

STATIONER.

WHEREAS you complain, that these observations make no sufficient bulk, I could answer you, that I with the bulk of all books were less; but do nevertheless comply with you in adding what follows, viz.

1. That the parishes of Dublin are very unequal; some having in them above six hundred families, and others under thirty.

2. That thirteen parishes are too few for four thousand families; the midling parishes of London containing one hundred and twenty families; according to which rate, there should be about thirty three parishes in Dublin.

3. It is said, that there are eighty four thousand houses or families in London, which is twenty one times more than are in Dublin; and yet the births and burials of London are but twelve times those of

Casualties and Diseases.	
Aged above 70 years	Head-ach, and Megrim
Abortive and still-born	Epilepsy, and Planet
Childbed-women	Fever, and Ague
Convulsion	Plurisy
Teeth	Quinsey
Worms	Executed, Murdered, Drowned
Gout, and Sciatica	Plague, and Spotted-fever
Stone	Griping of the Guts
Palsey	Scouring, vomiting, bleeding
Consumption, and French pox	Small-pox
Dropsey, and Tympany	Meazles
Rickets, and Livergrown	Neither of all the other sorts.

Dublin: which ſhews, that the inhabitants of Dublin, are more crowded and ſtreightened in their houſing, than thoſe of London; and conſequently, that to increaſe the buildings of Dublin, will make that city more conformable to London.

4. I ſhall alſo add ſome reaſons for altering the preſent forms of the Dublin bills of mortality, according to what hath been here recommended, viz.

1. We give the diſtinctions of males and females in the births only; for that the burials muſt, at one time or another, be in the ſame proportion with the births.

2. We do in the weekly and quarterly bills propoſe, that notice be taken in the burials of what numbers die above ſixty and ſeventy, and what under ſixteen, ſix, and two years old; foreſeeing good uſes to be made of that diſtinction.

3. We do in the yearly bill, reduce the caſualties to about twenty four, being ſuch as may be diſcerned by common ſenſe and without art; conceiving that more will but perplex and imbroil the account. And in the quarterly bills we reduce the diſeaſes to three heads, viz. contagious, acute, and chronical; applying this diſtinction to pariſhes, in order to know how the different ſituation, ſoil, and way of living in each pariſh, doth diſpoſe men to each of the ſaid three ſpecies: and in the weekly bills we take notice not only of the plague, but of the other contagious diſeaſes in each pariſh; that ſtrangers and fearful perſons may thereby know how to diſpoſe of themſelves.

4. We mention the number of the people, as the fundamental term in all our proportions; and without which, all the reſt will be almoſt fruitleſs.

5. We mention the number of marriages made in every quarter, and in every year; as alſo the proportion

tion which married perſons bear to the whole; expecting in ſuch obſervations to read the improvement of the nation.

6. As for religions, we reduce them to three, viz. 1. Thoſe who have the Pope of Rome for their head. 2. Who are governed by the laws of their country. 3. Thoſe who rely reſpectively upon their own private judgments. Now whether theſe diſtinctions ſhould be taken notice of or not, we do but faintly recommend, ſeeing many reaſons *pro* and *con* for the ſame: and therefore although we have mentioned it as a matter fit to be conſidered, yet we humbly leave it to authority.

TWO

ESSAYS

IN

POLITICAL ARITHMETIC,

CONCERNING THE

People, Housing, Hospitals, &c.

OF

LONDON and PARIS.

By Sir WILLIAM PETTY, late
Fellow of the ROYAL-SOCIETY.

——Qui sciret Regibus uti
Fastidiret olus——

TO THE

KING'S

MOST EXCELLENT

MAJESTY.

I DO preſume, in a very ſmall paper, to ſhew your Majeſty, that your city of London ſeems more conſiderable than the two beſt cities of the French monarchy, and for ought I can find, greater than any other of the Univerſe; which becauſe I can ſay without flattery, and by ſuch demonſtration

as your Majesty can examine, I humbly pray your Majesty to accept from

Your Majesty's

Most humble, loyal,

And obedient subject,

WILLIAM PETTY.

A N

A N

E S S A Y

I N

POLITICAL ARITHMETIC,

B Y

SIR WILLIAM PETTY,

Tending to prove, that London hath more people and housing than the cities of Paris and Rouen put together, and is also more considerable in several other respects.

THE medium of the burials at London in the three last years, viz. 1683, 1684 and 1685, (wherein there was no extraordinary sickness, and wherein the christenings do correspond in their ordinary proportions with the burials and christenings of each year one with another)

ther) was twenty two thouſand three hundred thirty and ſeven, and the like medium of burials for the three laſt Paris bills we could procure, viz. for the years 1682, 1683 and 1684 (whereof the laſt, as appears by the chriſtenings, ſeems to have been very ſickly) is nineteen thouſand eight hundred eighty and ſeven.

2. The city of Briſtol in England appears to be by good eſtimate of its trade and cuſtoms as great as Rouen in France; and the city of Dublin in Ireland appears to have more chimnies than Briſtol, and conſequently more people; and the burials in Dublin were *anno* 1682 (being a ſickly year) but two thouſand two hundred ſixty and three.

3. Now the burials of Paris (being nineteen thouſand eight hundred eighty and ſeven) being added to the burials of Dublin (ſuppoſed more than at Rouen) being two thouſand two hundred ſixty and three, makes but twenty two thouſand one hundred and fifty, whereas the burials of London were one hundred eighty and ſeven more, or twenty two thouſand three hundred thirty and ſeven, or as about ſix to ſeven.

4. If thoſe who die unneceſſarily, and by miſcarriage in *l'hoſtel Dieu* in Paris (being above three thouſand) as hath been elſewhere ſhewn, or any part thereof, ſhould be ſubtracted out of the Paris burials aforementioned, then our aſſertion will be ſtronger, and more proportionable to what follows concerning the houſing of thoſe cities, viz.

5. There were burnt in London, *anno* 1666, above thirteen thouſand houſes, which being but a fifth part

part of the whole, the whole number of houſes in the ſaid year, were above ſixty five thouſand; and whereas the ordinary burials of London have increaſed between the years 1666 and 1686, above one third, the total of the houſes at London, *anno* 1686, muſt be about eighty ſeven thouſand, which *anno* 1682, appeared by account to have been eighty four thouſand.

6. Monſieur Morery, the great French author of the late Geographical Dictionaries, who makes Paris the greateſt city in the world, doth reckon but fifty thouſand houſes in the ſame, and other authors and knowing men much leſs; nor are there full ſeven thouſand houſes in the city of Dublin; ſo as if the fifty thouſand houſes of Paris, and the ſeven thouſand houſes in the city of Dublin were added together, the total is but fifty ſeven thouſand houſes, whereas thoſe of London are eighty ſeven thouſand as aforeſaid, or as ſix to nine.

7. As for the ſhipping and foreign commerce of London, the common ſenſe of all men doth judge it to be far greater than that of Paris and Rouen put together.

8. As to the wealth and gain accruing to the inhabitants of London and Paris by law ſuits (or *la chicane*) I only ſay, that the courts of London extend to all England and Wales, and affect ſeven millions of people, whereas thoſe of Paris do not extend near ſo far; moreover there is no palpable conſpicuous argument at Paris for the number and wealth of lawyers, like the buildings and chambers in the Two Temples, Lincoln's-Inn, Gray's-Inn, Doctors-commons, and the ſeven other inns in which are chimnies,

chimnies, which are to be ſeen at London, beſides many lodgings, halls and offices relating to the ſame.

9. As to the plentiful and eaſy living of the people; we ſay,

1. That the people of Paris to thoſe of London, being as about ſix to ſeven, and the houſing of the ſame as about ſix to nine, we infer, that the people do not live at London ſo cloſe and crouded as at Paris, but can afford themſelves more room and liberty.

2. That at London the hoſpitals are better and more deſirable than thoſe of Paris; for that in the beſt at Paris there die two out of fifteen, whereas at London there die out of the worſt ſcarce two of ſixteen, and yet but a fiftieth part of the whole die out of the hoſpitals at London, and two fifths, or twenty times that proportion die out of the Paris hoſpitals, which are of the ſame kind; that is to ſay, the number of thoſe at London who chuſe to lie ſick in hoſpitals rather than in their own houſes, are to the like people of Paris as one to twenty; which ſhews the greater poverty or want of means in the people of Paris than thoſe of London.

3. We infer from the premiſſes, viz. the dying ſcarce two out of ſixteen out of the London hoſpitals, and about two of fifteen in the beſt of Paris, (to ſay nothing of *l'hoſtel Dieu)* that either the phyſicians and chirurgeons of London are better than thoſe of Paris, or that the air of London is more wholeſome.

10. As for the other great cities of the world, if Paris wers the greateſt, we need ſay no more in behalf

half of London. As for Pequin in China, we have no account fit to reaſon upon; nor is there any thing in the deſcription of the two late voyages of the Chineſe emperor from that city into eaſt and weſt Tartary, in the years 1682 and 1683, which can make us recant what we have ſaid concerning London. As for Dely and Agra belonging to the Mogul, we find nothing againſt our poſition, but much to ſhew the vaſt numbers which attend that emperor in his buſineſs and pleaſures.

11. We ſhall conclude with Conſtantinople and Grand Cairo; as for Conſtantinople it hath been ſaid by one who endeavoured to ſhew the greatneſs of that city, and the greatneſs of the plague which reigned in it, that there died one thouſand five hundred *per diem*, without other circumſtances; to which we anſwer, that in the year 1665 there died in London one thouſand two hundred *per diem*, and it hath been well proved, that the plague of London never carried away above one fifth of the people, whereas it is commonly believed that in Conſtantinople, and other eaſtern cities, and even in Italy and Spain, that the plague takes away two fifths, one half or more; wherefore where one thouſand two hundred is but one fifth of the people, it is probable that the number was greater than where one thouſand five hundred was two fifths, or one half, &c.

12. As for Grand Cairo it is reported, that ſeventy three thouſand died in ten weeks or one thouſand *per diem*; where note, that at Grand Cairo the plague comes and goes away ſuddenly, and that the plague takes away two or three fifth parts of the people as aforeſaid; ſo as ſeventy three thouſand was probably the number of thoſe that died of the plague in

in one whole year at Grand Cairo, whereas at London *anno* 1665, ninety ſeven thouſand were brought to account to have died in that year. Wherefore it is certain, that that city wherein ninety ſeven thouſand was but one fifth of the people, the number was greater than where ſeventy three thouſand was two fifths or the half.

We therefore conclude, that London hath more people, houſing, ſhipping and wealth, than Paris and Rouen put together; and for ought yet appears, is more conſiderable than any other city in the univerſe, which was propounded to be proved.

A N

A N

E S S A Y

I N

POLITICAL ARITHMETIC,

B Y

SIR WILLIAM PETTY,

Tending to prove that in the hoſpital called *l'hoſtel Dieu* at Paris, there die above three thouſand *per annum* by reaſon of ill accommodation.

1. IT appears that *anno* 1678, there entered into the hoſpital of *la charite* two thouſand ſix hundred forty and ſeven ſouls, of which there died there within the ſaid year three hundred thirty and eight, which is above an eighth part of the ſaid two thouſand ſix hundred forty and ſeven, and that in the ſame

ſame year there entered into *l'hoſtel Dieu* twenty one thouſand four hundred ninety and one, and that there died out of that number five thouſand ſix hundred and thirty, which is above one quarter; ſo as about half the ſaid five thouſand ſix hundred and thirty, being two thouſand eight hundred and fifteen, ſeem to have died for want of as good uſage and accommodation as might have been had at *la charite*.

2. Moreover in the year 1679 there entered into *la charite* three thouſand one hundred and eighteen, of which there died four hundred fifty and two, which is above a ſeventh part; and in the ſame year there entered into *l'hoſtel Dieu* twenty eight thouſand ſix hundred thirty and five, of which there died eight thouſand three hundred ninety and ſeven: and in both the ſaid years 1678 and 1679 (being very different in their degrees of mortality) there entered into *l'hoſtel Dieu* twenty eight thouſand ſix hundred thirty and five, and twenty one thouſand four hundred ninety and one, in all fifty thouſand one hundred twenty and ſix, the medium whereof is twenty five thouſand ſixty and three, and there died out of the ſame in the ſaid two years five thouſand ſix hundred and thirty, and eight thouſand three hundred ninety and ſeven, in all fourteen thouſand twenty and ſeven, the medium whereof is ſeven thouſand and thirteen.

3. There entered in the ſaid years into *la charite* two thouſand ſix hundred forty and ſeven, and three thouſand one hundred and eighteen, in all five thouſand ſeven hundred ſixty and five, the medium whereof is two thouſand eight hundred eighty and two, wherefore there died three hundred thirty and eight, and four hundred fifty and two, in all ſeven hundred ninety, the medium whereof is three hundred ninety and five.

4. Now

4. Now if there died out of *l'hoſtel Dieu* ſeven thouſand and thirteen *per annum*, and that the proportion of thoſe that died out of *l'hoſtel Dieu* is double to thoſe that died out of *la charite* (as by the above numbers it appears to be near thereabouts) then it follows, that half the ſaid numbers of ſeven thouſand and thirteen, being three thouſand five hundred and ſix, did not die by natural neceſſity, but by the evil adminiſtration of that hoſpital.

5. This concluſion ſeemed at the firſt ſight very ſtrange, and rather to be ſome miſtake or chance than a ſolid and real truth; but conſidering the ſame matter as it appeared at London, we were more reconciled to the belief of it, viz.

1. In the hoſpital of St. Bartholomew in London there were ſent out and cured in the year 1685, 1764 perſons, and there died out of the ſaid hoſpital two hundred fifty and two. Moreover there were ſent out and cured out of St Thomas's hoſpital one thouſand five hundred twenty and three, and buried two hundred and nine, that is to ſay, there were cured in both hoſpitals three thouſand two hundred eighty and ſeven, and buried out of both hoſpitals four hundred ſixty and one, and conſequently cured and buried three thouſand ſeven hundred and forty and eight, of which number the four hundred ſixty and one buried is leſs than an eighth part, whereas at *la charite* the part that died was more than an eighth part, which ſhews that out of the moſt poor and wretched hoſpitals of London there died fewer in proportion than out of the beſt in Paris.

2. Farthermore, it hath been above ſhewn that there died out of *la charite* at a medium three hundred ninety and five *per annum*, and one hundred forty and one out of *les incurables*, making in all five hundred thirty and ſix; and that out of St. Bartholomew's

 and

and St. Thomas's hospitals, London, there died at a medium but four hundred sixty and one, of which *les Incurables* are part; which shews, that although there be more people in London than in Paris, yet there went at London not so many people to hospitals as there did at Paris, although the poorest hospitals at London, were better than the best at Paris; which shews that the poorest people at London have better accommodation in their own houses, than the best hospital of Paris affordeth.

6. Having proved that there die about three thousand five hundred and six persons at Paris unnecessarily to the damage of France, we come next to compute the value of the said damage, and of the remedy thereof, as follows, viz. the value of the said three thousand five hundred and six persons at 60l. sterling *per* head, being about the value of Algier slaves, (which is less than the intrinsick value of people at Paris) the whole loss of the subjects of France in that hospital seems to be sixty times 3506 li. sterl. *per annum*, viz. 210360 li. sterl. equivalent to about 2524320 French livres.

7. It hath appeared that there came into *l'hostel Dieu* at a medium twenty five thousand sixty and three *per annum*, or two thousand eighty and nine *per mensem*, and that the whole stock of what remained in the precedent months is, at a medium, about two thousand one hundred and eight (as may appear by the third line of the table No. 5, which shall be shortly published) viz. the medium of months is two thousand four hundred and ten for the sickly year 1679, whereunto one thousand eight hundred and six, being added as the medium of months for the year 1678 makes four thousand two hundred and sixteen, the medium whereof is the two thousand one hundred and eight above mentioned; which number being

being added to the two thousand eighty and nine which entered each month, makes four thousand one hundred ninety and seven for the number of sick which are supposed to be always in *l'hostel Dieu* one time with another.

8. Now if sixty French livres *per annum* for each of the said four thousand one hundred ninety and seven sick persons, were added to the present ordinary expence of that hospital (amounting to an addition of two hundred fifty one thousand eight hundred and twenty livres) it seems that so many livres might be saved as are worth above ten times that sum, and this by doing a manifest deed of charity to mankind.

****

Memorandum, *That* anno 1685, *the burials of London were twenty three thousand two hundred twenty and two, and those of Amsterdam six thousand two hundred forty and five; from whence, and the difference of air, 'tis probable that the people of London are quadruple to those of Amsterdam.*

OBSERVATIONS

UPON THE

CITIES

OF

LONDON and ROME.

OBSERVATIONS

UPON THE

CITIES

OF

LONDON and ROME.

1. THAT before the year 1630, the christnings at London exceeded the burials of the ſame; but about the year 1655, they were ſcarce half; and now about two thirds.

2. Before the reſtoration of monarchy in England, *Anno* 1660, the people of Paris were more than

than thoſe of London and Dublin put together, whereas now, the people of London are more than thoſe of Paris and Rome, or of Paris and Rouen.

3. *Anno.* 1665, one fifth part of the then people of London, or ninety ſeven thouſand died of the plague, and in the next year, 1666, thirteen thouſand houſes, or one fifth part of all the houſing of London were burnt alſo.

4. At the birth of Chriſt, old Rome was the greateſt city of the world, and London the greateſt at the coronation of King James the ſecond, and near ſix times as great as the preſent Rome, wherein are one hundred and nineteen thouſand ſouls, beſides Jews.

5. In the years of King Charles the ſecond his death, and King James the ſecond his coronation (which were neither of them remarkable for extraordinary ſicklineſs of healthfulneſs) the burials did wonderfully agree, viz. *Anno* 1684, they were twenty three thouſand two hundred and two, and *Anno* 1685, they were twenty three thouſand two hundred and twenty two, the medium whereof is twenty three thouſand two hundred and twelve. And the chriſtnings did very wonderfully agree alſo, having been *Anno* 1684, fourteen thouſand ſeven hundred and two, and *Anno* 1685, fourteen thouſand ſeven hundred and thirty two, the medium whereof is fourteen thouſand ſeven hundred and ſixteen, which conſiſtence was never ſeen before; the ſaid number of twenty three thouſand two hundred and twelve burials making the people of London to be ſix hundred and ninety ſix thouſand three hundred and ſixty, at the rate of one dying *per annum* out of thirty.

6. Since

6. Since the great fire of London, *Anno* 1666, about ſeven parts of fifteen of the preſent vaſt city hath been new built, and is with its people increaſed near one half, and become equal to Paris and Rome put together, the one being the ſeat of the great French monarchy, and the other of the papacy.

CINQ ESSAYS

SUR

L'Arithmetique Politique.

I. Ou Repond aux objections tirees de la ville de Rey en Perse, & a celles de Mr. Auzout contre les deux premiers essays, & l'on fait voir qu'il-y-a autant de monde a Londres qu'a Paris, Rome & Rouen pris ensemble.

II. Comparaison entre Londres & Paris en 14 choses particuliers.

III. Preuves qu'il demeure dans les 134 paroisses de Londres marquees dans les billets de mortalite, environ 696 mille personnes.

IV. Combien l'on estime qu'il-y-a de monde a Londres, Paris, Amsterdam, Venice, Rome, Dublin, Bristol & Rouen, avec plusieurs remarques sur ce sujet.

V. Touchant la Hollande & les autres VII Provinces Unies.

Par le Chevalier PETTY de la Societe Royale.

Invidiam augendo ulciscar.

FIVE ESSAYS

IN

POLITICAL ARITHMETIC,

VIZ.

I. Objections from the city of Rey in Persia, and from monf. Auzout, against two former essays, answered, and that London hath as many people as Paris, Rome and Rouen put together.

II. A comparison between London and Paris in 14 particulars.

III. Proofs that at London, within its 134 parishes named in the bills of mortality, there live about 696 thousand people.

IV. An estimate of the people in London, Paris, Amsterdam, Venice, Rome, Dublin, Bristol and Rouen, with several observations upon the same.

V. Concerning Holland and the rest of the seven United Provinces.

By SIR WILLIAM PETTY, late Fellow of the ROYAL SOCIETY.

Invidiam augendo ulciscar.

A U

R O Y.

SIRE,

VOſtre Majeſte ayant bien voulu recevoir favorablement mes deux derniers eſſays ſur les villes & hopitaux de Londres & de Paris, & mes obſervations ſur Rome & Rouen, je prens la liberte (apres avoir attendu pendant ſix mois ce que pourroient dire les ſcavants de L'Europe contre) ce que j'y avance de luy preſenter quelques autres ecrits ſur ce meme ſujet pour confirmer, eclaircir, & etendre, les premiers, croiant louer beaucoup meux voſtre Majeſte par ces ſortes d'arguments

TO THE

K I N G ' S

Moſt Excellent MAJESTY.

SIR,

YOUR Majeſty having graciouſly accepted my two late eſſays, about the cities and hoſpitals of London and Paris, as alſo my obſervations on Rome and Rouen; I do (after ſix months waiting for what may be ſaid againſt my ſeveral doctrines, by the able men of Europe) humbly preſent your Majeſty with a few other papers upon the ſame ſubject, to ſtrengthen, explain and enlarge the former; hoping by ſuch real arguments,

guments reels, que par les diſcours les plus etudiez & les eloges les plus eclatans que pourroit imaginer celuy qui eſt

De voſtre Majeſte

Le tres-humble, tres-fidele

& tres-obeiſſant Sujet,

PETTY.

PREMIER

arguments, better to praiſe and magnify your Majeſty, than by any other the moſt ſpecious words and elogies that can be imagined by

Your Majeſty's

Moſt humble, loyal,

and obedient ſubject,

WILLIAM PETTY.

The

PREMIER ESSAY.

ON devoit bien s'attendre qu'une aſſertion que Londres eſt plus grand que Paris & Rouen, ou que Paris & Rome pris enſemble, ou meme plus qu' aucune ville du monde, ne manqueroit pas d'eſtre contredite, & l'on a du s'attendre auſſi que (ſi je continuois dans le meme ſentiment,) je ne manquerois pas de repliquer a ces contradictions. Dans ce deſſein.

Je commence par l' ingenieux auteur de la republique des lettres, qui dit que Rey en Perſe eſt beaucoup plus grand que Londres, parce que dans la 6 centurie du chriſtianiſme (je ſuppoſe l'an 550, le milieu de ce ſiecle) il y avoit 15000, ou plutoſt 44000 moſquees ou temples mahometans; a quoy je repons que ce ne peut eſtre qu'une raillerie de l'auteur puiſque Mahomet n'eſt venu au monde que vers l'an 570 & n'a eu des moſquees qu'environ 50 ans apres.

Enſuite je repons aux lettres que l'excellent Mr. Auzout ecrit de Rome. Lequel veut bien demeurer d'accord que Londres, Weſtminſter, & Southwark, ont autant d'habitans qu'il 'y en a dans Paris & ſes fauxbourgs, & ne nie que foiblement qu'il ne puiſſe y avoir preſqu'autant de monde dans tout ce qu'il-y-a de

The FIRST ESSAY.

IT could not be expected that an aſſertion of London's being bigger than Paris and Rouen, or than Paris and Rome put together, and bigger than any city of the world, ſhould ſcape uncontradicted; and 'tis alſo expected, that I (if continuing in the ſame perſuaſion) ſhould make ſome reply to thoſe contradictions. In order whereunto,

I begin with the ingenious author of the *Republique des Lettres*, who ſaith that Rey in Perſia is far bigger than London, for that in the ſixth century of chriſtianity (I ſuppoſe *Anno* 550, the middle of that century) it had 15 thouſand, or rather 44 thouſand Moſchees, or Mahometan temples; to which I reply, that I hope this objector is but in jeſt, for that Mahomet was not born till about the year 570, and had no Moſchees till about 50 years after.

In the next place I reply to the excellent Monſieur Auzout's letters from Rome, who is content that London, Weſtminſter, and Southwark, may have as many people as Paris and its ſuburbs; and but faint-

de maiſons compriſes dans les billets de mortalite qu'a Paris & Rouen, mais il dit que pluſieurs paroiſſes inſerees dans ces billets, ſont aſſes eloignées de Londres, & n'y ſont pas contigues, & que c'eſt ainſi que l'entend Grant.

A quoy (comme eſtant ſa capitale, pour ne pas dier ſa ſeule objection) nous repondons, 1. Qu'il paroit par le livre de Grant que les billets de Londres ont toujours eſte depuis l'an 1636. comme ils ſont maintenant. 2. Que depuis environ 50 ans, 3 ou 4 paroiſſes qui eſtoient autrefois un peu eloignees, ont eſte jointes par le moyen des batimens qui ont eſte faits entre deux aut corps de la ville & c'eſt ce qui les a fait inſerer dans les billets. 3. Que depuis 50 ans le total des batimens eſtant augmente a double a acheve cette union de belle maniere qu'il n'y a maintenant aucune des maiſons compriſes dans ces billets qui ne ſoit a la portee de la voix d'une autre maiſon. 4. Tout cecy eſt confirme par l'authorite du roy & de la ville & une coutume de 50 ans. 5. Quil n'y a que 3 parioſſes pour leſquelles on puiſſe former cette difficulte avec quelque ſorte de couleur, ce qui fait a piene $\frac{1}{52}$ partie de tout.

Sur le tout, a la premiere lecture de cette lettre fortample de Mr. Auzout, datee de Rome du 19 Nov. 1686, je fis des remarques ſur chaque paragraphe, mais jes les ay ſupprimees, parce que cela paroiſſoit comme une eſpece de guerre avec une perſonne de merite, avec qui je n'en voulois point avoir, quoy que ce ne fut dans le fonds qe'un eclairciſſement de quelques doutes, & j'ay choiſi un moyen plus court & plus doux pour repondre a Mr. Auzout comme nous allons faire.

Du

ly denieth, that all the houſing within the bills, may have almoſt as many people as Paris and Rouen, but ſaith that ſeveral pariſhes inſerted into theſe bills, are diſtant from, and not contiguous with London, and that Grant ſo underſtood it.

To which (as his main, if not his only objection) we anſwer: 1. That the London bills appear in Grant's book, to have been always ſince the year one thouſand ſix hundred thirty ſix, as they now are. 2. That about fifty years ſince, three or four pariſhes, formerly ſomewhat diſtant were joined by interpoſed buildings, to the bulk of the city, and therefore then inſerted into the bills. 3. That ſince fifty years, the whole buildings being more than double; have perfected that union, ſo as there is no houſe within the ſaid bills, from which one may not call to ſome other houſe. 4. All this is confirmed by authority of the King and city, and the cuſtom of fifty years. 5. That there are but three pariſhes under any colour of this exception, which are ſcarce $\frac{1}{52}$ part of the whole.

Upon the whole matter, upon ſight of Monſieur Auzout's large letter, dated the 19th of November from Rome, I made remarks upon every paragraph thereof; but ſuppreſſing it (becauſe it lookt like a war againſt a worthy perſon with whom I intended none, whereas in truth, it was but a reconciling explication of ſome doubts) I have choſen the ſhorter and ſofter way of anſwering Monſieur Auzout as followeth, *viz.*

Du nombre des habitans de Londres, comme auſſi de ceux de Paris, Rouen & Rome.

MR. Auzout cite un regiſtre authentique qui porte qu'il-y-a 23223 maiſons dans Paris ou il demeure plus de 80 mille familles, ainſi ſuppoſant qu'il demeure dans chacune de ces maiſons 3 ½ familles l' une portant l'autre, le nombre des familles ſera 81280, & Mr. Auzout mettant 6 tetes par famille, le plus grand nombre ou l'on puiſſe faire monter les habitans de Paris ſelon ſon opinion ſera. } 487,680

Mr. Auzout ne nie pas que le mediem des enterremens de Paris ne ſoit 19887; ny qu'il n'en meure 3506 ſans neceſſite a L'Hotel-Dieu, ainſi en deduiſant ce dernier nombre du premier la meilleure regle pour les enterremens de Paris ſera 16381, tellement que le nombre des habitans, ſuppoſent qu'il n'en meurt qu'un de 30 (ce qui eſt plus axantageux pour Paris que l'opinion de Mr. Auzout qu'il en meurt un de 25) le nombre des habitans de Paris ſera 491, 430, plus qu'il ne s'en trouve par le dernier conte rapporte par Mr. Auzout meme. } 491,430

Le

Concerning the Number of people in London, as alſo in Paris, Rouen and Rome, *viz.*

MOnſieur Auzout alledgeth an authentick account, that there are 23223 houſes in Paris, wherein do live about eighty thouſand families, and therefore ſuppoſing 3 ½ families to live in every of the ſaid houſes, one with another, the number of families will be 81280; and Monſ. Auzout alſo allowing ſix heads to each family, the utmoſt number of people in Paris according to that opinion will be } 487,680

The medium of the Paris burials was not denied by Monſieur Auzout to be nineteen thouſand eight hundred and eighty ſeven, nor that there died three thouſand five hundred and ſix unneceſſarily out of L'Hotel-Dieu; wherefore deducting the ſaid laſt number out of the former, the neat ſtandard for burials at Paris, will be ſixteen thouſand three hundred and eighty one, ſo as the number of people there, allowing but one to die out of thirty (which is more advantageous to Paris than Monſieur Auzout's opinion of one to die out of twenty five) the number of people at Paris will be 491, 430, more than by Monſieur Auzout's own laſt mentioned account. } 491,430

And

Le mediem de ces 2 contes Paris eſt } 488,055

Le medium des enterrements de Londres eſt reelement 23212, qui eſtant multipliez par 30 (comme on a fait pour Paris) le nombre des habitans ſera. } 696,360

Il paroit par le regiſtres des maiſons de Londres qu'il y en a 105315 ; a quoy ajoutant $\frac{1}{10}$ partie de ce meme nombre, comme le moindre nombre de familles doubles que l'on puiſſe ſuppoſer qu'il-y-a a Londres, le total des familles ſera 115840 ; & en mettant 6 perſonnes pour chaque famille comme on fait pour Paris, le total des habitans de Londres ſera. } 695,076

Le medium de ces 2 derniers contes de Londres eſt. } 695,718

Tele-

And the medium of the ſaid two Paris accounts is } 488,055

The medium of London burials is really 23212, which multiplyed by thirty (as hath been done for Paris) the number of the people there will be. } 696,360

The number of houſes at London appears by the regiſter to be 105, 315, whereunto adding $\frac{1}{10}$ part of the ſame, or 10331, as the leaſt number of double families that can be ſuppoſed in London, the total of families will be 115,840 ; and allowing ſix heads for each family as was done for Paris, the total of the people at London will be } 695,076

The medium of the two laſt London accounts is } 695,718

So

Tellement que le nombre des habitans de Paris ſuivant le conte cy deſſus eſt	488,055	693,055
De Rouen ſuivant le plus que Mr. Auzout y en mette	80,000	
De Rome ſelon ce qu'il en rapporte luy meme dans ſa lettre precedente	25,000	
Si bien qu'il-y-a plus de monde a Londres qu'a Paris, Rouen & Rome de	2,663	
Il faut obſerver que les paroiſſes de Iſlington, Newington & Hackney, qui ſont les ſeules que l'on pourroit pretendre avec quelque ſorte de couleur n'eſtre pas contigues, ne font pas $\frac{1}{52}$ partie de ce qui eſt compris dans les billets de mortalite, & que par conſequent il-y-a encore ſans ces 3 paroiſſes plus de monde a Londres qu'a Paris & a Rouen pris enſemble de	114,284	

Le quel nombre de 114,284 eſt probablement plus qu'aucune autre ville de France ne contient de monde.

SECOND

So as the people of Paris according to the above account is	488,055	693,055
Of Rouen according to Monſieur Auzout's utmoſt demands	80,000	
Of Rome according to his own report thereof in a former letter	25,000	
So as there are more people at London than at Paris, Rouen and Rome by	2,663	
Memorandum, That the pariſhes of Iſlington, Newington, and Hackney, for which only there is any colour of non-contiguity, is not $\frac{1}{52}$ part of what is contained in the bills of mortality, and conſequently London, without the ſaid three pariſhes, hath more people than Paris and Rouen put together by	114,284	

Which number of 114,284 is probably more people than any other city of France contains.

The

SECOND ESSAY.

POUR ce qui eſt des autres comparaiſons de Londres avec Paris, nous repetons encor & nous etendons ce qui a eſte dit autrefois ſur ce ſujet de la maniere qui ſuit.

1. Qu'il en meurt 40 de cent dans les hopitaux de Paris, ou il en mieurt un ſi grand nombre ſans neceſſite, & a peine $\frac{1}{20}$ de la meme proportion dans les hopitaux de Londres que l'on a fait voir eſtre meilleurs que le meilleur de Paris.

2. Qu'il-y-a a Paris 81280 familles ou cuiſines dans moins de 24000 maiſons ou portes ſur la rue, ce qui rend leur maniere de vivre moins propre & moins commode qu'a Londres.

3. La ou le nombre des batemes approche fort ou va meme au de la des enterremens, le monde y eſt plus pauvre n'ayant que peu de ſerviteurs & qu'un petit equipage.

4. La riviere de la Tamiſe eſt plus agreable & plus navigable que la Seine ſes eaues ſont meilleures & plus ſaines & le pont de Londres eſt le plus conſiderable de toute l'Europe.

5. Les vaiſſeaux & le commerce etranger de Londres, ſont incomparablement plus grands qu'a Paris & a Rouen.

6. Les chambres des gens de loy a Londres contiennent 2772 cheminees & valent 240 mille livres ſterlin ou 3 millions de livres de France, outre les logements de leurs familles en d'autres lieux.

7. L'air

The SECOND ESSAY.

AS for other compariſons of London with Paris, we farther repeat and enlarge what hath been formerly ſaid upon thoſe matters as followeth, viz.

1. That forty *per cent.* die out of the hoſpitals at Paris where ſo many die unneceſſarily, and ſcarce $\frac{1}{20}$ of that proportion out of the hoſpitals of London, which have been ſhewn to be better than the beſt of Paris.

2. That at Paris 81280 kitchens, are within leſs than 24000 ſtreet-doors, which makes a leſs cleanly and convenient way of living than at London.

3. Where the number of chriſtenings are near unto, or exceed the burials, the people are poorer, having few ſervants and little equipage.

4. The river of Thames is more pleaſant and navigable than the Seine, and its waters better and more wholeſome; and the bridge of London, is the moſt conſiderable of all Europe.

5. The ſhipping and foreign trade of London is incomparably greater than that at Paris and Rouen.

6. The lawyers chambers at London have 2772 chimnies in them, and are worth 140 thouſand pounds ſterling, or three millions of French livres, beſides the dwellings of their families elſewhere.

7. The

7. L'air y eſt plus ſain, car a Londres a peine en meurt il 2 de 16 dans les plus mechants hopiteaux, au lieu qu'a Paris il en meurt 2 de 15 dans les meilleurs, de plus les enterremens de Paris ſont $\frac{1}{5}$ partie au deſſus & au deſſous du medium, au lieu qu'a Londres ce n'eſt pas plus de $\frac{1}{12}$, d'ou il s'enſuit que l'air eſt bien moins tempere a Paris qu'a Londres.

8. Le chauftage y eſt a meilleur marche & tient moins de place, le charbon eſtant un bitume ſulfure qui eſt aſſes ſain.

9. Les vivres les plus neceſſaires & les poiſſons y ſont auſſi a meilleur marche & on y trouve de toutes ſortes de boiſſons en plus grande abondance qu'en aucun autre lieu.

10. Pour ce qui eſt des egliſes, nous en rapportons au jugement des yeux de chacun, croiant qu il n'y-a rien a Paris de ſi grand qu'eſtoit & que ſera St. Paul, ny de ſi beau que la chapelle de Henry VII.

11. D'un autre cote il eſt probable qu'il-y-a plus d'argent a Paris qu'a Londres, ſi l'on y trouve le revenu public qui pour en parler groſſierement, eſt quatre fois plus grand que celui d'Angleterre.

12. Paris n'a pas eſte ſi fort incommode de la peſte que Londres ces 50 dernieres annees. Cependant la peſte (qui a recommence 5 fois a Londres entre les annees 1591 & 1666, c'eſt a dire tous les 15 ans dans un medium & qui a chaque fois emporte $\frac{1}{5}$ des habitans, n'y-a point eſte conue pendant les 21 ans derniers paſſez, & l'on croit avoir trouve un moyen viſible, avec l'aſſiſtance ordinaire de Dieu, de la diminuer des $\frac{2}{3}$ la premiere fois qu'elle reviendra.

13. Quand au terrain ſur lequel Paris eſt bati par rapport a Londres, nous diſons que ſi les maiſons de Paris ſont a 5 etages contre celles de Londres a 4 ou a ſemblable proportion, les 82 mille

7. The air is more wholeſome, for that at London ſcarce two of ſixteen die out of the worſt hoſpitals, but at Paris above two of fifteen out of the beſt. Moreover, the burials of Paris are $\frac{1}{5}$ part above and below the medium, but at London, not above $\frac{1}{12}$, ſo as the *intemperies* of the air at Paris is far greater than at London.

8. The fuel cheaper, and lies in leſs room, the coals being an wholeſome ſulphurous bitumen.

9. All the moſt neceſſary ſorts of victuals, and of fiſh, are cheaper, and drinks of all ſorts in greater variety and plenty.

10. The churches of London we leave to be judged by thinking that nothing at Paris is ſo great as St. Paul's was, and is like to be, nor ſo beautiful as Henry the ſeventh's chapel.

11. On the other hand, 'tis probable, that there is more money in Paris than London, if the public revenue (groſly ſpeaking, quadruple to that of England) be lodged there.

12. Paris hath not been for theſe laſt fifty years ſo much infeſted with the plague as London; now that at London the plague (which between the year 1591 and 1666, made five returns, viz. every fifteen years, at a medium, and at each time carried away $\frac{1}{5}$ of the people) hath not been known for the one and twenty years laſt paſt, and there is a viſible way by God's ordinary bleſſing to leſſen the ſame by $\frac{2}{3}$ when it next appeareth.

13. As to the ground upon which Paris ſtands in reſpect of London, we ſay, that if there be five ſtories or floors of houſing at Paris, for four at London, or in that proportion, then the eighty two thouſand

mille familles de Paris ſont donc ſur un terrain equivalent a 65 mille aſſietes de maiſons de Londres; & s'il ya 115 mille familles a Londres & ſeulement 82 mille a Paris, la proportion du terrain de Londres a celuy de Paris eſt comme 115 a 65, ou comme 23 a 13.

14. De plus on dit que Paris eſt un ovale long de 3 milles d'Angleterre & large de 2 $\frac{1}{2}$ dont le plan ne contient que 5 miles & demy quarrez; aulieu que Londres a 7 miles de long & 1 $\frac{1}{4}$ de large dans un medium, ce qui fait un plan des pres de 9 miles quarrez, laquelle proportion de 5 $\frac{1}{2}$ a 9 eſt peu differente de celle de 13 a 23.

15. Il eſt a remarquer qu'au temps de Neron (comme le rapporte Mr. Chevreau) il mourut dans la vieille Rome 300 mille perſonnes de la peſte, que s'il y en mourut alors 3 de 10, a cauſe que le pays eſt plus chaud, comme il en meurt a Londres 2 de 10, le nombre des habitans n'eſtoit en ce temps la qu'un million, aulieu qu'a Londres il y en a preſent environ 700 mille, de plus le terrain enferme dans les murailles de la vieille Rome n'eſtoit qu'une cercle de 3 miles de diametre, dont le plan eſt environ 7 miles quarrez & les fauxbourgs a peine une fois autant, en tout environ 13 miles quarrez, aulieu que ce qu'il-y-a de terrain occupe par les batimens de Londres eſt environ 9 miles quarrez comme nous l'avons dit, & ces 2 ſortes de proportions s'accordant l'une avec l'autre il ſemble par conſequent que la vieille Rome n'eſtoit que de la moitie plus grande que Londres d'aujourdhuy; ce que nous laiſſons a examiner aux antiquaires.

TROISIEME

thouſand families of Paris ſtand upon the equivalent of ſixty five thouſand London houſteds, and if there be 115 thouſand families at London, and but 82 thouſand at Paris, then the proportion of the London ground to that of Paris is as 115 to 65, or as 23 to 13.

14. Moreover Paris is ſaid to be an oval of three Engliſh miles long, and two and a half broad, the area whereof contains but five and a half ſquare miles; but London is ſeven miles long, and one and a third broad at a medium, which makes an area of near nine ſquare miles, which proportion of five and a half to nine differs little from that of thirteen to twenty three.

15. Memorandum, that in Nero's time, as monſieur Chevreau reporteth, there died three hundred thouſand people of the plague in old Rome; now if there died three of ten then, and there, being a hotter country, as there dies two of ten at London, the number of people at that time, was but a million, whereas at London they are now about ſeven hundred thouſand. Moreover the ground within the walls of old Rome was a circle but of three miles diameter, whoſe area is about ſeven ſquare miles, and the ſuburbs ſcarce as much more, in all about thirteen ſquare miles, whereas the built ground at London is about nine ſquare miles as aforeſaid; which two ſorts of proportions, agree with each other, and conſequently old Rome ſeems but to have been half as big again as the preſent London, which we offer to antiquaries.

The

TROISIEME ESSAY.

PREUVES que le nombre des habitans qui ſont dans les 134 paroiſſes compriſes dans les billets de mortalite de Londres, ſans rapport aux autres villes, eſt 696 m.

Je ne connois que trois manieres de le faire.

1. Par les maiſons, les familles, & les perſonnes qui les compoſent.

2. Par le nombre des enterrements dans les annees qui ont eſte ſaines & par la proportion des vivants aux mourants.

3. Par le nombre de ceux qui meurent de la peſte dans les annees de peſtilence, a proportion de ceux qui en echappent.

Premiere maniere.

Pour ſcavoir le nombre des maiſons je me ſuis ſervi de 3 methodes.

1. Du nombre des maiſons qui furent brulees l'an 1666, qui fut, par le rapport authentique qui en a eſte fait, 13200, enſuite de la proportion de ceux qui ſont morts dans ces maiſons avec le tout, que je trouve n'avoir eſte l'annee 1686 que $\frac{1}{7}$ partie aulieu que l'annee 1666 ils faiſoient preſque $\frac{1}{5}$ d'ou j'infere que

The THIRD ESSAY.

PROOFS that the number of people in the 134 pariſhes of the London bills of mortality, without reference to other cities, is about 696 thouſand, viz.

I know but three ways of finding the ſame.

1. By the houſes, and families, and heads living in each.

2. By the number of burials in healthful times, and by the proportion of thoſe that live, to thoſe that die.

3. By the number of thoſe who die of the plague in peſtilential years, in proportion to thoſe that ſcape.

The firſt way.

To know the number of houſes I uſed three methods, viz.

1. The number of houſes which were burnt anno 1666, which by authentick report was 13200; next, what proportion the people who died out of thoſe houſes, bore to the whole; which I find anno 1686, to be but $\frac{1}{7}$ part, but anno 1666 to be almoſt $\frac{1}{5}$, from whence I infer the whole houſing of London, anno

que toutes les maiſons de Londres l'annee 1666 etoient 66 mille, aupres quoy trouvant que les enterrements l'annee 1666 eſtoient par rapport a ceux de 1686 comme 3 a 4, je m'arrete a 88 m. comme eſtant le nombre des maiſons l'an 1686.

2. Ceux qui ont eſte employez a faire la carte generale de Londres publiee l'anne 1682, m'ont aſſure que cette annee la ils avoient trouve qu'il y avoit a Londres plus de 84 m. maiſons, ainſi l'annee 1686, ou en 4 annees davantage il peut y avoir $\frac{1}{10}$ ou 8400 maiſons de plus (Londres croiſſant au double en 40 ans) tellement que l'annee 1686 le tout peut eſtre 92400.

3. Je trouve que l'annee 1685 il y avoit 29325 cheminees a Dublin & 6400 maiſons, & a Londres 388 m. cheminees & ſelon cette proportion il faudroit qu'il y eut 87 m. maiſons a Londres, d'alleurs j'ay trouve qu'il y avoit a Briſtol cette meme annee 16752 cheminees & 5307 maiſons & a Londres 388 m. cheminees, comme nous venons de dire, & ſelon cette proportion il faudroit qu'il y eut a Londres 123 m. maiſons, & dans un medium entre ces 2 proportions de Dublin & de Briſtol 105 mille maiſons.

Enfin par un certificat du greſte des cheminees je trouve que les maiſons compriſes dans las billets de mortalite ſont 105315.

Apres avoir ainſi trouve le nombre des maiſons, je viens au nombre des familles qui y demeurent, & d'abord j'ay penſe que s'il y avoit 3 ou 4 familles ou cuiſines dans chaque maiſon de Paris, il pourroit bien y avoir deux familles dans $\frac{1}{10}$ des maiſons de Londres, & en ſela le ſentiment commun de pluſieurs de mes amis ſe trouve conforme a mes conjectures particulieres pour cette ſuppoſition.

Quant au nombre des tetes pour chaque familles je m'attache a l'obſervation de Grant dans la p. de ſa

1666, to have been 66 thouſand, then finding the burials anno 1666 to be to thoſe of 1686 as 3 to 4, I pitch upon 88 thouſand to be the number of houſing anno 1686.

2. Thoſe who have been employed in making the general map of London, ſet forth in the year 1682, told me that in that year, they had found above 84 thouſand houſes to be in London, wherefore anno 1686, or in four years more, there might be $\frac{1}{10}$ or 8400 houſes more (London doubling in 40 years) ſo as the whole, anno 1686 might be 92400.

3. I found that anno 1685, there were 29325 hearths in Dublin, and 6400 houſes, and in London 388 thouſand hearths, whereby there muſt have been at that rate 87000 houſes in London. Moreover I found that in Briſtol there were in the ſame year 16752 hearths, and 5307 houſes, and in London 388 thouſand hearths as aforeſaid; at which rate there muſt have been 123 thouſand houſes in London, and at a medium between Dublin and Briſtol proportions 105 thouſand houſes.

Laſtly, by certificate from the hearth-office, I find the houſes within the bills of mortality to be 105,315.

Having thus found the houſes, I proceed next to the number of families in them, and firſt I thought that if there were 3 or 4 families or kitchens in every houſe of Paris, there might be 2 families in $\frac{1}{10}$ of the houſing of London; unto which ſuppoſition, the common opinion of ſeveral friends, doth concur with my own conjectures.

As to the number of heads in each family, I ſtick to Grant's obſervation in page of his fifth edition, that

ſa 5 edition, que dans les familles de gens de metier de Londres il-y-a 8 tetes l'une portant l'autre, dans les familles d'un rang plus eleve, plus de 10, & dans les plus pauvres plus de 5, ſuivant leſquelles proportions je m'etois arrete dans une autre occaſion a 6 $\frac{1}{3}$ pour le medium des tetes qui ſont dans toutes les familles d'Angleterre, mais en ce cas cy quittant la fraction j'aime mieux m'accorder avec Mr. Auzout pour 6.

Pour conclure y ayant a Londres 105315 maiſons, & l'addition des familles doubles eſtant 10531 davantage, en tout 115846, je les ay multipliez par 6 ce qui a produit 695076 pour le nombre des habitans.

Second maniere.

J'ay trouve que les annees 1684 & 1685 ſe ſuivant l'une l'autre, & toutes deux ſaines, ſe ſont merveilleuſement rapportees dans leurs enterrements, y en ayant eu 23202 l'an 1684 & 23222 l'an 1685, dont le medium eſt 23212. De plus que les batemes l'an 1684 eſtoient 14702 & ceux d'annee 1685 eſtoient 14730, ainſi j'ay multiplie le medium des enterrementes 23212 par 30 ſuppoſant qu'il en meurt un de 30 a Londres & cela a produit pour le nombre des habitans 696360 ames.

Maintenant pour prouver qu'il en meurt un de 30 a Londres ou environ, je dis.

1. Que Grant dans la page de ſa 5e edition aſſure ſur obſervation qu'il en mouroit 3 de 88 par an ce qui eſt a peus pres la meme proportion.

2. J'ay trouve que dans les lieux ſains & d'entre les adultes il en meurt beaucoup moins, & particulierement d'entre les membres du parlement eviron un de

that in tradeſmen of London's families, there be 8 heads one with another, in families of higher ranks, above 10, and in the pooreſt near 5, according to which proportions, I had upon another occaſion pitched the medium of heads in all the families of England to be 6 $\frac{1}{3}$, but quitting the fraction in this caſe, I agree with monſieur Auzout for 6.

To conclude, the houſes of London being 105315, and the addition of double families to 531 more, in all 115846; I multiplied the ſame by 6, which produced 695076 for the number of people.

The ſecond way.

I found that the years 1684 and 1685, being next each other, and both healthful, did wonderfully agree in their burials, viz. 1684 they were 23202, and anno 1685 23222, the medium whereof is 23212; moreover that the chriſtenings 1684 were 14702, and thoſe anno 1685 were 14730, wherefore I multiplied the medium of burials 23212 by 30, ſuppoſing that one dies out of 30 at London, which made the number of people 696360 ſouls.

Now to prove that one dies out of 30 at London, or thereabouts, I ſay,

1. That Grant in the page of his fifth edition, affirmeth from obſervation, that 3 died of 88 *per ann.* which is near the ſame proportion.

2. I found that out of healthful places, and out of adult perſons, there dies much fewer, as but 1 out of 50 among our parliament men; and that the kings of

de 50 ſeulement, & que les roys d'Angleterre ayant regne 24 ans l'un portant l'autre ils ont vecu probablement chacun plus de 30 ans.

3. Grant dans la p. a fait voir que de 20 jeunes enfans au deſſous de 10 ans il n'en meurt qu'un par an & Mr. Auzout croit qu'a Rome il n'en meurt qu'un de 40 du grand nombre de perſonnes adultes qu'il-y-a la c'eſt ce qui fait que je m'attache au nombre de 30 comme a un medium.

4. Je trouve que dans 9 paroiſſes de la campagne ſituees en differens endroits d'Angleterre il n'en eſt mort qu'un de 37 par an, ou 311 de 11507, c'eſt pourquoy juſques a ce que je voie un autre nombre rond fonde ſur pluſieurs obſervations plus pres que 30 je crois avoir aſſes bien fait de multiplier nos enterremens par 30 pour trouver le nombre du peuple dont le produit eſt 696360, & par les familles nous en trouvons 695076 comme nous avons dit.

Troiſieme maniere.

Grant a prouve qu'il mouroit $\frac{1}{5}$ des habitans de la peſte, or l'annee 1665 il en mourut de la peſte pres de 98 mille dont le quintuple eſt 490 m. comme le nombres des habitans dans l'annee 1665, a quoy ajoutant plus d'un tiers comme l'augmentation entre les annees 1665 & 1686; le total eſt 653 mille ce qui s'ecorde aſſes bien avec les deux autres contes cy deſſus.

Ainſi tenons nous en a la proportion d'un a 30 juſqu'a ce qu'on puiſſe en etablir une meilleure.

Il eſt a remarquer que 2 ou 3 cent maiſons nouvelles feroient une contiguite de 2 ou 3 autres grandes paroiſſes avec les 134 qui de ja compriſes dans les billets de

England having reigned 24 years one with another, probably lived above 30 years each.

3. Grant, page hath ſhewn that but about 1 of 20 die *per ann.* out of young children under 10 years old, and monſieur Auzout thinks that but 1 of 40 die at Rome, out of the greater proportion of adult perſons there, wherefore we ſtill ſtick at a medium to the number 30.

4. In 9 country pariſhes, lying in ſeveral parts of England, I find that but one of 37 hath died *per ann.* or 311 out of 11507, wherefore till I ſee another round number, grounded upon many obſervations, nearer than 30, I hope to have done pretty well in multiplying our burials by 30, to find the number of the people, the product being 696,360, and what we find by the families they are 695,076, as aforeſaid.

The third way.

It was proved by Grant, that $\frac{1}{5}$ of the people died of the plague, but anno 1665 there died of the plague near 98 thouſand perſons, the quintuple whereof is 490 thouſand, as the number of people in the year 1665, whereunto adding above $\frac{1}{3}$, as the increaſe between 1665 and 1686, the total is 653 thouſand, agreeing well enough with the other two computations above-mentioned.

Wherefore let the proportion of 1 to 30 continue till a better be put in its place.

Memorandum, that 2 or 3 hundred new houſes would make a contiguity of 2 or 3 other great pariſhes, with the 134 already mentioned in the bills of mortality;

de mortalite, & qu'une muraille ovale d'environ 20 mille de tour enfermeroit tout cela & tous les vaiſſeaux qui ſont a Deptford & a Blackwall & comprendroit auſſi dans cette meme enceinte 20 mille acres de terre, & jetteroient le fondement de pluſieurs avantages tres conſiderables pour les proprietaires & les habitans de ce terrain auſſi bien que pour toute la nation & le gouvernement.

QUATRIEME

mortality; and that an oval wall of about 20 miles in compaſs would encloſe the ſame, and all the ſhipping at Deptford and Black-wall, and would alſo fence in 20 thouſand acres of land, and lay the foundation or deſignation of ſeveral vaſt advantages to the owners and inhabitants of that ground, as alſo to the whole nation and government.

The

QUATRIEME ESSAY.

De la proportion des habitans des huit plus conſiderables villes de la chreſtiente.

1. PAR le nombre des enterremens dans les annees pui ont eſte ſaines, par la proportion des vivans a ceux qui meurent tous les ans, comme auſſi par le nombre des maiſons & des familles qui ſe trouvent dans les 134 paroiſſes appellees Londres & par le nombre des tetes que l'on eſtime qu'il-y-a dans chacune, nous nous ſommes arretez a 695718 comme au medium du nombre des habitans de cette ville.

2. En demeurant d'accord qu'il-y-a a Paris plus de 80 mille familles a ſcavoir 81280 qui demeurent en 23223 maiſons 32 hotels & 38 colleges, ou qu'il-y-a 81280 cuiſines dans moins de 24 mille portes ſur la rue, en mettant auſſi 30 tetes pour chacune de ceux qui y meurent par neceſſite nous avons pris pour medium des habitans qui s'y trouvent 488055, & nous ne les avons pas reſtraint a 300 m. en mettant avec Mr. Auzout 6 tetes pour chacune des 50 m. maiſons ou familles de Moreri.

3. A Amſterdam nous mettons 187350 ames a ſcavoir 30 fois le nombre de leurs enterremens qui eſtoient 6245 l'annee 1685.

4. Nous

The FOURTH ESSAY.

Concerning the proportions of people in the 8 eminent cities of chriſtendom undernamed, viz.

1. WE have by the number of burials in healthful years, and by the proportion of the living to thoſe who die yearly, as alſo by the number of houſes and families within the 134 pariſhes, called London, and the eſtimate of the heads in each, pitched upon the number of people in that city to be at a medium 695718.

2. We have, by allowing that at Paris above 80 thouſand families (viz. 81280) do live in 23223 houſes, 32 palaces, and 38 colleges, or that there are 81280 kitchens within leſs than 24 thouſand ſtreet-doors; as alſo by allowing 30 heads for every one that died neceſſarily there; we have pitched upon the number of people there at a medium to be 488055, nor have we reſtrained them to 300 thouſand, by allowing with monſieur Auzout 6 heads for each of Morery's 50 thouſand houſes or families.

3. To Amſterdam we allow 187350 ſouls, viz. 30 times the number of their burials, which were 6245 in the year 1685.

4. To

4. Nous mettons a Venise 134 mille ames selon que cela se trouva par un conte special fait par authorite il-y-a environ 10 ans lorsque cette ville se trouvoit pleine de gens qui retournoient de Candie qui venoit de se rendre aux Turcs.

5. Nous mettons a Rome 119 m. chretiens & 6000 juifs en tout 125 m. ames suivant le conte qu'en a envoye icy Mr. Auzout.

6. Nous mettons a Dublin comme a Amsterdam 30 fois ses enterremens dont le medium pour les 2 dernieres annees est 2303 c'est a dire 69090 ames.

7. A l'egard de Bristol nous disons que si les 6400 maisons de Dublin donnent 69090 ames, il faut que les 5307 maisons de Bristol donnent plus de 56 m. habitans. Dailleurs si les 29325 cheminees de Dublin donnent 69090 habitans les 16752 cheminees de Bristol en donneront environ 40 mille mais le medium de 56 mille & 40 mille est 48 mille.

8. Pour ce qui est de Rouen nous ne scaurions nous en rapporter qu'a la pensee de Mr. Auzout qu'il-y-a dans cette ville la 80 m. ames & a la conjecture d'habiles gens que Rouen est entre $\frac{1}{7}$ & $\frac{1}{8}$ partie de Paris, & qu'il est d'un tiers plus grand que Bristol, par toutes lesquelles choses nous estimons, jus qu'a ce que vous ayous de nouvelles lumieres, qu'il-y a Rouen au plus 66 m. habitans.

On pourroit maintenant s'etoner pourquoy ayant si peu de connoissance de Rouen nous en avous fait aucune mention, a quoy nous repondons, que nous n'avons pas cru qu'il fut juste de comparer Londres avec Paris pour ce qui regarde les vaisseaux & le commerce etranger sans y ajouter Rouen, Rouen estant a l'egard de Paris ce que cette partie de Londres qui est au dessous du pont est a l'egard de celle qui est au dessus.

Toutes

4. To Venice we allow 134 thousand souls, as found there in a special account taken by authority, about 10 years since, when the city abounded with such as returned from Candia, then surrendered to the Turks.

5. To Rome we allow 119 thousand christians and 6000 Jews in all 125 thousand souls, according to an account sent hither of the same by monsieur Auzout.

6. To Dublin we allow (as to Amsterdam) 30 times its burials, the medium whereof for the last 2 years is 2303, viz. 69090.

7. As to Bristol, we say that if the 6400 houses of Dublin, give 69090 people, that the 5307 houses of Bristol, must give above 56 thousand people; moreover, if the 29325 hearths of Dublin, give 69090 people, the 16752 hearths of Bristol, must give about 40 thousand; but the medium of 56 thousand and 40 thousand is 48 thousand.

8. As for Rouen, we have no help, but monsieur Auzout's fancy of 80 thousand souls to be in that city, and the conjecture of knowing men, that Rouen is between the $\frac{1}{7}$ and $\frac{1}{8}$ part of Paris, and also that it is by a third bigger than Bristol; by all which, we estimate (till farther light) that Rouen hath at most but 66 thousand people in it.

Now it may be wondered why we mentioned Rouen at all, having had so little knowledge of it; whereunto we answer, that we did not think it just to compare London with Paris, as to shipping and foreign trade, without adding Rouen thereunto; Rouen being to Paris as that part of London which is below the bridge, is to what is above it.

All

Toutes les quelles choſes nous ſoumettons de bon coeur a la correction des perſonnes curieuſes & ſinceres, faiſant cependant nos obſervations ſelon les nombres groſſiers que nous allons marquer.

	m.
Londrez	696
Paris	488
Amſterdam	187
Veniſe	134
Rome	125
Dublin	69
Briſtol	48
Rouen	66

Obſer-

All which we heartily ſubmit to the correction of the curious and candid, in the mean time obſerving according to the groſs numbers undermentioned.

	thouſands
London	696
Paris	488
Amſterdam	187
Venice	134
Rome	125
Dublin	69
Briſtol	48
Rouen	66

Obſer-

Obſervations ſur ces 8 Villes.

	m.
1. Ques les habit. de Paris eſtant	488
ceux de Rome	125
ceux de Rome	66
ne font en tout que	741

mille ou 17 mille moins que les 696 mille de Londres ſeul.

2. Que les habitans des 2 villes ou emporiums d' Angleterre a ſcavoir les 696 mille de Londres & les 48 m. de Briſtol font 744 m. ou plus.

	m.
qu'a Paris	488
Amſterdam	187
Rouen	66
faiſant	741

3. Que ces 2 memes villes d' Angleterre ſemblent equivalentes.

a Paris quia	488 mile ames.
a Rouen	66
a Lyon	100
a Thouloufe	90
en tout	744

S'il-y-a

Obſervations on the ſaid 8 cities.

	m.
1. That the people of Paris being	488
of Rome	125
of Rouen	66
do make in all but	679

thouſand, or 17 thouſand leſs than the 696 thouſand of London alone.

2. That the people of the 2 Engliſh cities and Emporiums, viz. of London 696 thouſand, and Briſtol 48 thouſand, do make 744 thouſand, or more than

	m.
In Paris	488
Amſterdam	187
Rouen	66
being in all	741

3. That the ſame 2 Engliſh cities ſeem equivalent

To Paris which hath	488 thouſ. ſouls.
To Rouen	66
To Lyons	100
To Thouloufe	90
In all	744

S'il-y-a quelque erreur dans ces contes des villes de France nous esperons estre redressez par ceux que nous apprenous qui travaillent sur se sujet.

4. Que les trois villes du Roy d' Angleterre a sçavoit

	m.			m.
Londres	696	excedent	Paris	488
Dublin	69		Amsterdam	187
Bristol	48		Venise	134
	813		ni faisant que	809

5. Que des 4 grands emporiums Londres, Amsterdam, Venise & Rouen, Londres seul est presque le double des 3 autres a sçcavoir plus que 7 a 4

	m.		m.
Amsterdam	187		
Venise	134	387	
Rouen	66	2	
	774	London	696

6. Que

If there be any error in these conjectures concerning these cities of France, we hope they will be mended by those whom we hear to be now at work upon that matter.

4. That the King of England's 3 cities, viz.

	m.			m.
London	696	exceed	Paris	488
Dublin	69		Amsterdam	187
Bristol	48		Venice	134
in all	813		being but	809

5. That of the 4 great emporiums, London, Amsterdam, Venice and Rouen, London alone is near double to the other 3, viz. above 7 to 4,

	m.		m.
Amsterdam	187		
Venice	134	387	
Rouen	66	2	
	774	London.	696

6. That

6. Que Londres, par ce qui pariot, eſt la plus grande & la plus conſiderable ville du monde, mais manifeſtiment le plus grand emporium.

Quand ces aſſertions auront eſſuye la critique, l'on fera voir par un autre eſſay quel uſage on pourra faire de ces veritez pour l'honeur & le profit du Roy & du Royaume d' Angleterre.

CINQUI-

6. That London (for ought appears) is the greateſt and moſt conſiderable city of the world, but manifeſtly the greateſt emporium.

When theſe aſſertions have paſt the examen of the criticks, we ſhall make another eſſay, ſhewing how to apply thoſe truths to the honour and profit of the King and kingdom of England.

CINQUIEME ESSAY.

Touchant la Hollande & le reste des provinces unies.

DEpuis que cet ecrit a este acheve on a objecte de Hollande qu'il-n'y-a pas d'apparence que ce que nous avons dit du nombre des maisons & des habitans de Londres soit vray car s'il l'estoit Londres seroit donc les $\frac{2}{3}$ de toute la province de Hollande. A quoy en repond que Londres est les $\frac{2}{3}$ de toute la Hollande & plus, cette province n'ayant pas un million 44 m. habitans dont 696 m. font les, $\frac{2}{3}$, ny pas plus de 800 m. comme nous l'avons souvent oui dire de fort bonne part, car suppose qu' Amsterdam comme nous l'avons remarque ailleurs ait 187 m. les 7 grandes villes suivantes, a 30 l'une portant l'autre, 210 m. les 10 suivantes a 15 m. chacune, 150 m. les 10 plus petites a 6 m. chacune, 60 mille, dans toutes les 28 villes fermees de Hollande 607 m. dans les bourgs & les villages 193 m. ce qui est environ une tete pour 4 acres

The FIFTH ESSAY.

Concerning Holland and the rest of the united Provinces.

SInce the close of this paper, it hath been objected from Holland, that what hath been said of the number of houses and people in London is not like to be true; for that if it were, then London would be the $\frac{2}{3}$ of the whole province of Holland. To which is answered, that London is the $\frac{2}{3}$ of all Holland and more, that province having not a million and 44 thousand inhabitants (whereof 696 m. is the $\frac{2}{3}$) nor above 800 thousand, as we have credibly and often heard; for suppose Amsterdam hath, as we have elsewhere noted 187 thousand, the seven next great cities at 30 thousand each one with another 210 thousand, the 10 next at 15 thousand each 150 thousand, the 10 smallest at 6 thousand each 60 thousand, in all the 28 walled cities and towns of Holland 607 thousand, in the dorps and villages 193 thousand,

 which

acres de terre au lieu qu'en Angleterre il-y-a 8 acres pour chaque tete hors des villes.

Maintenant ſuppoſe que Londres ayant 116 m. familles il y eut 5 tetes dans chacune, ce qui eſt le medium entre le conte de Mr. Auzout & celui de Grant, le total des habitans ſeroit 812 m. ou bien ſi nous contons qu'il en meurt un de 34, le medium entre 30 & 37, comme nous avons dit cy deſſus, le total des habitans ſera 34 fois 23212, c'eſt adire 789208, le medium entre ce nombre & les 812 m. ſuſdits eſt 800604 excedant de quelque peu 800 m. que l'on ſuppoſe eſtre le nombre de la Hollande.

Je dis de plus qu'ayant fait autrefois pluſieurs recherches touchant le peuplement du monde, je n'ay jamais trouve qu'il y eut en aucun pays, non pas meme dans la chine plus d'un homme pour chaque acre de terre meſure d' Angleterre pluſieurs pays paſſant pour bien peuplez ou il-n'y-a qu'un homme pour 10 de ces acres j'ay trouve en meſurant la Hollande & la Weſt-Frize autrement North-Holland ſur les milleures cartes qu'elle ne contient qu'autant de ces acres qu'il-y-a de monde a Londres, c'eſt a dire environ 696 m. acres ceſt pourquoy je ne feray point de difficulte d'avancer, juſques a ce que je ſois mieux informe, qu'il-y-a autant de monde a Londres qu'en Hollande, ou du moins plus des des $\frac{2}{3}$, ce qui ſuffit pour rendre vaine l'objection cy deſſus, ſans qu'il ſoit neceſſaire de ſe mettre en peine de faire monter le nombre des habitans de Londres de 696 m. a 800 m. quoy qu'on eut des raiſons ſuffiſantes pour le faire, & que l'autheur de 'excellente carte de Londres publiee l'an 1682, conte (comme on le peut voir par cette carte) qu'il-y-a dans cette ville 1200 m. habitans, lors meme qu'il n'y avoit que 85 mille maiſons.

La

which is about one head for every 4 acres of land; whereas in England there is 8 acres for every head, without the cities and market-towns.

Now ſuppoſe London having 116 thouſand families, ſhould have 7 heads in each, the medium between Monſieur Auzout and Grant's reckonings, the total of the people would be 812 thouſand, or if we reckon that there dies one out of 34 (the medium between 30 and 37 above mentioned) the total of the people would be 34 times 23212, viz. 789208, the medium between which number, and the above 812 thouſand is 800604, ſomewhat exceeding 800 thouſand, the ſuppoſed number of Holland.

Farthermore, I ſay, that upon former ſearches into the peopling of the world, I never found that in any country, (not in China it ſelf) there was more than one man to every Engliſh acre of land (many territories paſſing for well-peopled, where there is but one man for ten ſuch acres) I found by meaſuring Holland and Weſt-Frizia, alias North-Holland, upon the beſt maps, that it contained but as many ſuch acres as London doth of people, viz. about 696 thouſand acres; I therefore venture to pronounce (till better informed) that the people of London are as many as thoſe of Holland, or at leaſt above $\frac{2}{3}$ of the ſame; which is enough to diſable the objection abovementioned; nor is there any need to ſtrain up London from 696 thouſand to 800 thouſand, though competent reaſons have been given to that purpoſe, and though the author of the excellent map of London, ſet forth *anno* 1682, reckoned the people thereof (as by the ſaid map appears) to be 12000 thouſand, even when he thought the houſes of the ſame to be but 85 thouſand.

1. The

La perſonne qui fait cette objection dit auſſi dans la meme lettre.

1. Qu'il y-a autant de monde dans la province de Hollande que dans les 6 autres provinces unies enſemble, & en toute l'Angleterre & le double de Paris & de ſes fauxbourgs, c'eſt a dire 2 millions d'ames. 2. Il dit qu'a Londres, Amſterdam & autres villes marchandes il-y-a 10 tetes par famille & qu'a Amſterdam il-n'y-a pas 22 m. familles. 3. Il fait difficulte d'admettre le regiſtre allegue par Mr. Auzout qui met 23223 maiſons & plus de 80 mille familles a Paris, comme auſſi le regiſtre allegue par Mr. Petty qui met 105315 maiſons a Londres avec la dixieme partie de familles plus qu'il-n'y-a de maiſons, & probablement il fera la meme difficulte contre le regiſtre de 1163 m. maiſons en toute l' Angleterre, qui font a 6 tetes & un tiers par famille, environ 7 millions d'habitans. Sur toutes les quelles choſes nous faiſons les remarques ſuivantes.

1. Qu s'il-n'y-a dans Paris que 488 m. ames, il-n'y-a donc dans toute la Hollande que le double de ce nombre ou 976 m. ainſi y ayant a Londres 696 m. ames, ils'y trouve 46 m. perſonnes plus que les $\frac{2}{3}$ de toute la Hollande.

2. Si Paris contient la moitie de ce qu'il-y-a de monde en Angleterre, il faut qu'il contienne 3 millions & demy d'ames ou plus de 7 fois 488 m. & parce qu'il n'en meure pas 20 mille par an a Paris, il faut qu'il n'y en meure qu'une de 175, la ou Mr. Auzout croit qu'il en meurt un de 25, & il faut qu'il demeure 149 perſonnes dans chacune des maiſons de Paris mentionee dans le regiſtre, & qu'il demeure a peine deux perſonnes dans chaque maiſon d' Angleterre, toutes les quelles choſes meritent bien a ce que nous croions d'eſtre conſiderees de nouveau.

Je

1. The worthy perſon who makes this objection in the ſame letter alſo ſaith.

1. That the province of Holland, hath as many people as the other 6 united provinces together, and as the whole kingdom of England, and double to the city of Paris and its ſuburbs, that is to ſay, 2 millions of ſouls. 2. He ſays that in London and Amſterdam, and other trading cities there are 10 heads to every family, and that in Amſterdam there are not 22 thouſand families. 3. He excepteth againſt the regiſter alledged to Monſieur Auzout, which makes 23223 houſes, and above 80 thouſand families to be in Paris, as alſo againſt the regiſter alledged by Petty, making 105315 houſes to be in London, with a tenth part of the ſame to be of families more than houſes, and probably will except againſt the regiſter of 1163 m. houſes to be in all England, that number given at 6 $\frac{2}{3}$ heads to each family, about 7 millions of people, upon all which we remark as followeth, viz.

1. That if Paris doth contain but 488 thouſand ſouls, that then all Holland containeth but the double of that number, or 976 thouſand, wherefore London containing 696 thouſand ſouls, hath above $\frac{2}{3}$ of all Holland by 46 thouſand.

2. If Paris containeth half as many people as there are in all England, it muſt contain 3 millions and a half of ſouls, or above 7 times 488 thouſand, and becauſe there do not die 20 thouſand *per ann.* out of Paris, there muſt die but one out of 175, whereas Monſieur Auzout thinks that there dies one out of 25, and there muſt live 149 heads in every houſe of Paris mentioned in the regiſter, but there muſt be ſcarce 2 heads in every houſe of England, all which we think fit to be reconſidered.

I muſt

Je ne puis m'empecher, estant Anglois, de faire encore une remarque, c'est que ces assertions reflechissent sur l'empire d' Angleterre en ce qu'il y est dit que l' Angleterre n'a que 2 millions d'habitans, on pouroit aussi bien avoir ajoute que l'Ecosse, l' Irelande avec les isles de Man, Jersey, & Guernsey n'ont que $\frac{2}{5}$ de ce meme nombre ou 800 m. d'avantage, ou que tous les sujets du roy d'Angleterre en Europe ne sont que 2 millions 800 m. ames, aulieu qu'il nous assure que les sujets des 7 provinces unies sont 4 millions, a quoy nous repondons qu'au sentiment meme de celuy qui fait ces objections les sujets des 7 provinces ne sont que le quadruple de Paris ou 1932 m. ames, n'y en ayant a Paris que 488 m. comme on a fait voir cy devant, & nous soutenons icy qu'il-y-a en Angleterre 7 millions d'habitans & que l'Ecosse, l'Irelande avec les isles de Man de Jersey & Gernsey ont $\frac{2}{5}$ dudit nombre, ou deux millions 860 m. ames, aulieu que par sa doctrine si les 7 provinces ont 1932 m. habitans, le roy d'Angleterre n'auroit dans tous ses etats que $\frac{7}{10}$ de ce meme nombre ascavoir 1351 m. aulieu que nous disons 9800 m. mille comme nous avons dit laquelle difference est si considerable qu'elle merite bieu qu'on y fasse reflection.

Pour conclure nous attendons des critiques interressez en cecy qu'ils nous provent.

1. Qu'il-y-a en Hollande & en West-Frise & dans leurs 28 villes plus de monde qu' a Londres seul.

2. Que 3 des meilleures villes de France, ou deux de toute la Chretiente, ou une de toute la terre, ont autant de monde, ou de meilleurs logements, ou un plus grand commerce, que Londres meme que le l' annee Roy Jaques second est venu a la courone.

La Fin.

I must as an English man take notice of one point more, which is, that these assertions do reflect upon the empire of England, for that it is said, that England hath but two millions of inhabitants, and it might as well have been added, that Scotland and Ireland, with the island of Man, Jersey, and Guernsey have but $\frac{2}{5}$ of the same number, or 800 thousand more, or that all the King of England's subjects in Europe are but two millions and 800 thousand souls; whereas he saith, that the subjects of the 7 united provinces are four millions. To which we answer, that the subjects of the said 7 provinces, are by this objector's own shewing, but the quadruple of Paris, or 1932 thousand souls, Paris containing but 488000 as afore hath been proved, and we do here affirm, that England hath 7 millions of people, and that Scotland, Ireland, with the Islands of Man, Jersey and Guernsey, hath $\frac{2}{5}$ of the said number, or two millions 800 thousand more, in all 9 millions 800 thousand: whereas by the objector's doctrine, if the 7 provinces have 1932000 people, the King of England's territories should have but $\frac{7}{10}$ of the same number, viz. 1351 thousand whereas we say 9800 thousand, as aforesaid, which difference is so gross as that it deserves to be thus reflected upon.

To conclude, we expect from the concerned criticks of the world, that they would prove.

1. That Holland and West-Frizia, and the 28 towns and cities thereof, hath more people than London alone.

2. That any 3 the best cities of France, any 2 of all christendom, or any one of the world, hath the same or better housing, and more foreign trade than London, even in the year that King James the second came to the empire thereof.

POLITI-

POLITICAL ARITHMETIC,

OR A

DISCOURSE

CONCERNING

The extent and value of Lands, People, Buildings; Husbandry, Manufacture, Commerce, Fishery, Artizans, Seamen, Soldiers; Publick Revenues, Interests, Taxes, Superlucration, Registries, Banks; Valuation of Men, Increasing of Seamen, of Militia's, Harbours, Situations, Shipping, Power at Sea, &c. As the same relates to every country in general, but more particularly to the territories of His Majesty of Great Britain, and his neighbours of Holland, Zealand, and France.

By Sir WILLIAM PETTY, late Fellow of the ROYAL-SOCIETY.

TO THE

KING'S

MOST EXCELLENT

MAJESTY.

SIR,

WHILST every one meditates ſome fit offering for your Majeſty, ſuch as may beſt agree with your happy exaltation to this Throne; I preſume to offer, what my Father long ſince writ, to ſhew the weight and importance of the Engliſh Crown.

It was by him ſtiled Political Arithmetic, in as much as things of Government, and of no leſs concern and extent, then the glory of the Prince, and the happineſs and greatneſs of the People, are by the ordinary rules of Arithmetic, brought into a ſort of demonſtration. He was allowed by all, to be the inventor of this method of inſtruction; where the perplexed and intricate ways of the world, are explained by a very mean piece of ſcience; and had not the doctrines of this eſſay offended France, they had long ſince ſeen the light, and had found followers, as well as improvements before this time, to the advantage perhaps of mankind.

But this has been reſerved to the felicity of your Majeſty's reign, and to the expectation which the learned have therein; and if while in this,

this, I do ſome honour to the memory of a good father, I can alſo pay ſervice, and ſome teſtimony of my zeal and reverence to ſo great a King, it will be the utmoſt ambition of

SIR

Your Majeſty's moſt Dutiful

and moſt obedient Subject,

SHELBORNE.

PREFACE.

FORASMUCH as men, who are in a decaying condition, or who have but an ill opinion of their own concernments, inſtead of being (as ſome think) the more induſtrious to reſiſt the evils they apprehend, do contrariwiſe become the more languid and ineffectual in all their endeavours, neither caring to attempt or proſecute even the probable means of their relief. Upon this conſideration, as a member of the commonwealth, next to knowing the preciſe truth in what condition the common intereſt ſtands, I would in all doubtful caſes think the beſt, and conſequently not deſpair, without ſtrong and manifeſt reaſons, carefully examining whatever tends to leſſen my hopes of the public welfare.

I have

I have therefore thought fit to examine the following perſuaſions, which I find too currant in the world, and too much to have affected the minds of ſome, to the prejudice of all, viz.

That the rents of lands are generally fallen; therefore, and for many other reaſons, the whole kingdom grows every day poorer and poorer; that formerly it abounded with gold, but now there is a great ſcarcity both of gold and ſilver; that there is no trade nor employment for the people, and yet that the land is under-peopled; that taxes have been many and great; that Ireland and the plantations in America, and other additions to the crown, are a burthen to England; that Scotland is of no advantage; that trade in general doth lamentably decay; that the Hollanders are at our heels, in the race of naval power; the French grow too faſt upon both, and appear ſo rich and potent, that it is but their clemency that they do not devour their neighbours; and finally, that the church and ſtate of England, are in the ſame danger with the trade of England; with many other diſmal ſuggeſtions, which I had rather ſtifle than repeat.

'Tis

'Tis true, the expence of foreign commodities hath of late been too great; much of our plate, had it remained money, would have better ſerved trade; too many matters have been regulated by laws, which nature, long cuſtom, and general conſent, ought only to have governed; the ſlaughter and deſtruction of men by the late civil wars and plague have been great; the fire at London, and diſaſter at Chatham, have begotten opinions in the Vulgus of the world to our prejudice; the nonconformiſts increaſe; the people of Ireland think long of their ſettlement; the Engliſh there apprehend themſelves to be aliens, and are forced to ſeek a trade with foreigners, which they might as well maintain with their own relations in England. But notwithſtanding all this (the like whereof was always in all places,) the buildings of London grow great and glorious; the American plantations employ four hundred ſail of ſhips; actions in the Eaſt-India company are near double the principal money; thoſe who can give good ſecurity, may have money under the ſtatute-intereſt; materials for building (even oaken-timber) are little the dearer, ſome cheaper for the rebuilding

rebuilding of London; the Exchange ſeems as full of merchants as formerly; no more beggars in the ſtreet, nor executed for thieves, than heretofore; the number of coaches, and ſplendor of equipage exceeding former times; the public theatres very magnificent; the King has a greater navy, and ſtronger guards than before our calamities; the clergy rich, and the cathedrals in repair; much land has been improved, and the price of food ſo reaſonable, as that men refuſe to have it cheaper, by admitting of Iriſh cattle; and in brief, no man needs to want that will take moderate pains. That ſome are poorer than others, ever was and ever will be: and that many are naturally querulous and envious, is an evil as old as the world.

Theſe general obſervations, and that men eat, and drink, and laugh as they uſe to do, have encouraged me to try if I could alſo comfort others, being ſatisfied myſelf, that the intereſt and affairs of England are in no deplorable condition.

The method I take to do this, is not yet very uſual; for inſtead of uſing only comparative and ſuperlative words, and intellectual arguments, I have taken the courſe

courſe (as a ſpecimen of the political arithmetic I have long aimed at) to expreſs my ſelf in terms of number, weight, or meaſure; to uſe only arguments of ſenſe, and to conſider only ſuch cauſes, as have viſible foundations in nature; leaving thoſe that depend upon the mutable minds, opinions, appetites, and paſſions of particular men, to the conſideration of others: really profeſſing my ſelf as unable to ſpeak ſatisfactorily upon thoſe grounds (if they may be called grounds,) as to foretel the caſt of a dye; to play well at tennis, billiards, or bowls, (without long practice,) by virtue of the moſt elaborate conceptions that ever have been written *de projectilibus & miſſilibus*, or of the angles of incidence and reflection.

Now the obſervations or poſitions expreſſed by number, weight, and meaſure, upon which I bottom the enſuing diſcourſes, are either true, or not apparently falſe, and which if they are not already true, certain, and evident, yet may be made ſo by the ſovereign power, *nam id certum eſt quod certum reddi poteſt*, and if they are falſe, not ſo falſe as to deſtroy the argument they are brought for; but at worſt are ſufficient as ſuppoſitions to ſhew

ſhew the way to that knowledge I aim at. And I have withal for the preſent confined myſelf to the ten principal concluſions hereafter particularly handled, which if they ſhall be judged material, and worthy of a better diſcuſſion, I hope all ingenious and candid perſons will rectify the errors, defects, and imperfections, which probably may be found in any of the poſitions, upon which theſe ratiocinations were grounded. Nor would it misbecome authority itſelf, to clear the truth of thoſe matters which private endeavours cannot reach to.

THE

POLITICAL ARITHMETIC,

OR A

DISCOURSE

CONCERNING

The Extent and Value of Lands, &c.

CHAP. I.

That a ſmall country and few people, by its ſituation, trade and policy, may be equivalent in wealth and ſtrength, to a far greater people and territory: and particularly that conveniences for ſhipping and water-carriage, do moſt eminently and fundamentally conduce thereunto.

THIS firſt principal concluſion by reaſon of its length, I conſider in three parts; whereof the firſt is, that a ſmall country and few people, may be equivalent in wealth and ſtrength to a far greater people and territory.

This

This part of the firſt principal concluſion needs little proof, foraſmuch as one acre of land, may bear as much corn, and feed as many cattle, as twenty, by the difference of the ſoil; ſome parcel of ground is naturally ſo defenſible, as that an hundred men being poſſeſſed thereof, can reſiſt the invaſion of five hundred; and bad land may be improved and made good; bog may by draining be made meadow; heath-land may (as in Flanders) be made to bear flax and clover-graſs, ſo as to advance in value from one to an hundred: the ſame land being built upon, may centuple the rent which it yielded as paſture; one man is more nimble, or ſtrong, and more patient of labour than another; one man by art may do as much work, as many without it; viz. one man with a mill can grind as much corn, as twenty can pound in a mortar; one printer can make as many copies, as an hundred men can write by hand; one horſe can carry upon wheels, as much as five upon their backs; and in a boat, or upon ice, as twenty: ſo that I ſay again, this firſt point of this general poſition, needs little or no proof. But the ſecond and more material part of this concluſion is, that this difference in land and people, ariſes principally from ſituation, trade, and policy.

To clear this, I ſhall compare Holland and Zealand, with the kingdom of France, viz. Holland and Zealand do not contain above one million of Engliſh acres, whereas the kingdom of France contains above eighty.

Now the original and primitive difference, holds proportion as land to land: for it is hard to ſay, that when theſe places were firſt planted, whether an acre in France was better than the like quantity in Holland and Zealand: nor is there any reaſon to ſuppoſe, but that therefore upon the firſt plantation, the

the number of planters was in proportion to the quantity of land: wherefore, if the people are not in the ſame proportion as the land, the ſame muſt be attributed to the ſituation of the land, and to the trade and policy of the people ſuperſtructed thereupon.

The next thing to be ſhewn is, that Holland and Zealand at this day, is not only an eightieth part as rich and ſtrong as France, but that it hath advanced to one third or thereabouts: which I think will appear upon the ballance of the following particulars, viz.

As to the wealth of France, a certain map of that kingdom, ſet forth *anno* 1647, repreſents it to be fifteen millions, whereof ſix did belong to the church: the author thereof (as I ſuppoſe meaning the rents of the lands only. And the author of a moſt judicious diſcourſe of huſbandry (ſuppoſed to be ſir Richard Weſton,) doth from reaſon and experience ſhew, that lands in the Netherlands, by bearing flax, turneps, clover-graſs, madder, &c. will eaſily yield 10 l. *per* acre; ſo as the territories of Holland and Zealand, ſhould by this account yield at leaſt ten millions *per annum*. Yet I do not believe the ſame to be ſo much, nor France ſo little as above-ſaid, but rather that one bear to the other as about ſeven, or eight to one.

The people of Amſterdam, are one third of thoſe in Paris or London: which two cities differ not in people a twentieth part from each other, as hath appeared by the bills of burials and chriſtenings for each. But the value of the buildings in Amſterdam, may well be half that of Paris, by reaſon of the foundation, grafts, and bridges, which in Amſterdam are more numerous and chargeable than at Paris. Moreover the habitations of the pooreſt people in Holland

Holland and Zealand are twice or thrice as good as those of France: but the people of the one to the people of the other, being but as thirteen to one, the value of the housing must be as about five to one.

The value of the shipping of Europe being about two millions of tuns, I suppose the English have five hundred thousand, the Dutch nine hundred thousand, the French an hundred thousand, the Hamburgers and the subjects of Denmark, Sweden, and the town of Dantzick two hundred and fifty thousand, and Spain, Portugal, Italy, &c. two hundred and fifty thousand: so as the shipping in our case of France to that of Holland and Zealand, is about one to nine; which reckoned as great and small, new and old, one with another at 8l. *per* tun, makes the worth to be as eight hundred thousand pounds, to seven millions, and two hundred thousand pounds. The Hollanders capital in the East-India company, is worth above three millions; where the French as yet have little or nothing.

The value of the goods exported out of France into all parts, are supposed quadruple to what is sent to England alone; and consequently in all about five millions: but what is exported out of Holland into England is worth three millions; and what is exported thence into all the world besides, is sextuple to the same.

The monies yearly raised by the king of France, as the same appears by the book entitled (The State of France) dedicated to the King, printed *anno* 1669, and set forth several times by authority, is eighty two millions of French livers, which is about six millions and a half pounds sterl. Of which sum the author says, that one fifth part was abated for non-valuers or insolvencies; so (as I suppose) not above five millions were effectually raised: but whereas some say, that the

the king of France raised eleven millions as the one fifth of the effects of France; I humbly affirm, that all the land and sea forces, all the building and entertainments, which we have heard by common fame, to have been set forth and made in any of these seven last years, needed not to have cost six millions sterling. Wherefore, I suppose he hath not raised more, especially since there were one fifth insolvencies, when the tax was at that pitch. But Holland and Zealand, paying 67 of the 100 paid by all the united provinces; and the city of Amsterdam paying 27 of the said 67. It follows that if Amsterdam hath paid 4000 l. Flemish *per diem*, or about 1400000 l. *per annum*, or 800000 l. sterling; that all Holland and Zealand, have paid 2100000 l. *per annum*: now the reasons why I think they pay so much, are these, viz.

1. The author of the state of the Netherlands saith so.

2. Excise of victual at Amsterdam, seems above half the original value of the same, viz.

Ground-corn pays 20 stivers the bushel, or 63 gilders the last; beer 113 stivers the barrel, housing $\frac{1}{6}$ of the rent, fruit $\frac{1}{8}$ of what it cost; other commodities $\frac{1}{7}$, $\frac{1}{8}$, $\frac{1}{9}$, $\frac{1}{12}$; salt *ad libitum*. All weighed goods pay besides the premisses a vast sum. Now if the expence of the people of Amsterdam at a medium, and without excise were 8l. *per annum*, whereas in England, 'tis 7 l. then if all the several imposts above-named, raise it five pound more, there being 1600000 souls in Amsterdam, the sum of 8000000l. sterling *per annum* will thereby be raised.

3. Though the expence of each head, should be 13l. *per annum*; 'tis well known that there be few in Amsterdam, who do not earn much more than the said expence.

4. If

4. If Holland and Zealand pay *per annum* 2100000l. then all the provinces together, muſt pay about three millions: leſs than which ſum *per annum*, perhaps is not ſufficient to have maintained the naval war with England, 72000 land-forces, beſides all other the ordinary charges of their government, whereof the church is there a part. To conclude, it ſeems from the premiſſes, that all France doth not raiſe above thrice as much from the public charge, as Holland and Zealand alone do.

5. Intereſt of money in France, is 7 l. *per cent.* but in Holland ſcarce half ſo much.

6. The countries of Holland and Zealand conſiſting as it were of iſlands guarded with the ſea, ſhipping, and marſhes: is defenſible at one fourth of the charge, that a plain open country is; and where the ſeat of war may be both winter and ſummer: whereas in the others, little can be done but in the ſummer only.

7. But above all the particulars hitherto conſidered, that of ſuperlucration ought chiefly to be taken in: for if a prince have never ſo many ſubjects, and his country be never ſo good, yet if either through ſloth, or extravagant expences, or oppreſſion and injuſtice, whatever is gained ſhall be ſpent as faſt as gotten, that ſtate muſt be accounted poor. Wherefore let it be conſidered, how much or how many times rather, Holland and Zealand are now above what they were 100 years ago: which we muſt alſo do of France: now if France hath ſcarce doubled its wealth and power, and that the other have decupled theirs; I ſhall give the preference to the latter, even although the ? increaſed by the one, ſhould not exceed the one half gained by the other; becauſe one has a ſtore for nine years, the other but for one.

To

To conclude, upon the whole it ſeems, that though France be in people to Holland and Zealand as 13 to 1, and in quantity of good land, as 80 to one; yet it is not 13 times richer and ſtronger, much leſs 80 times; nor much above thrice, which was to be proved.

Having thus diſpatched the two firſt branches of the firſt principal concluſion, it follows, to ſhew that this difference of improvement in wealth and ſtrength, ariſes from the ſituation, trade, and policy of the places reſpectively; and in particular from conveniencies for ſhipping and water-carriage.

Many writing on this ſubject, do ſo magnify the Hollanders, as if they were more, and all other nations leſs than men; (as to the matters of trade and policy,) making them angels, and others fools, brutes, and ſots, as to thoſe particulars: whereas I take the foundation of their atchievements to lie originally in the ſituation of the country, whereby they do things inimitable by others, and have advantages whereof others are incapable.

Firſt, the ſoil of Holland and Zealand is low land, rich and fertile; whereby it is able to feed many men, and ſo as that men may live near each other, for their mutual aſſiſtance in trade. I ſay, that a thouſand acres, that can feed a thouſand ſouls, is better than ten thouſand acres of no more effect, for the following reaſons, viz.

1. Suppoſe ſome great fabrick were in building by a thouſand men, ſhall not much more time be ſpared if they lived all upon a thouſand acres, than if they were forced to live upon ten times as large a ſcope of land.

2. The charge of the cure of their ſouls, and the miniſtry would be far greater in one caſe than in the other; as alſo of mutual defence in caſe of invaſion,

 and

and even of thieves and robbers: moreover the charge of the adminiſtration of juſtice would be much eaſier, where witneſſes and parties may be eaſily ſummoned; attendance leſs expenſive, when mens actions would be better known; when wrongs and injuries could not be covered, as in thin peopled places they are.

Laſtly, thoſe who live in ſolitary places, muſt be their own ſoldiers, divines, phyſicians, and lawyers; and muſt have their houſes ſtored with neceſſary proviſions (like a ſhip going upon a long voyage,) to the great waſte, and needleſs expence of ſuch proviſions. The value of this firſt convenience to the Dutch, I reckon or eſtimate to be about 100000 l. *per annum.*

2dly, Holland is a level country, ſo as in any part thereof, a wind-mill may be ſet up, and by its being moiſt and vaporous, there is always wind ſtirring over it, by which advantage the labour of many thouſand hands is ſaved; foraſmuch as a mill made by one man, in half a year, will do as much labour, as four men for five years together. This advantage is greater or leſs, where employment or eaſe of labour is ſo; but in Holland 'tis eminently great, and the worth of this conveniency is near an hundred and fifty thouſand pounds.

3dly, There is much more to be gained by manufacture than huſbandry; and by merchandize than manufacture: but Holland and Zealand, being ſeated at the mouths of three long great rivers, and paſſing through rich countries; do keep all the inhabitants upon the ſides of thoſe rivers but as huſbandmen, whilſt themſelves are the manufacturers of their commodities, and do diſpenſe them into all parts of the world; making returns for the ſame, at what prices almoſt they pleaſe themſelves: and in ſhort, they keep

keep the keys of trade of thoſe countries, through which the ſaid rivers paſs. The value of this third conveniency, I ſuppoſe to be 200000 l.

4thly, In Holland and Zealand, there is ſcarce any place of work or buſineſs, one mile diſtant from a navigable water: and the charge of water-carriage is generally but $\frac{1}{15}$ or $\frac{1}{20}$ part of land-carriage. Wherefore if there be as much trade there as in France, then the Hollanders can out-ſell the French $\frac{14}{15}$ of the expence, of all travelling, poſtage, and all carriage whatſoever: which even in England I take to be 300000 l. *per annum* where the very poſtage of letters, coſts the people perhaps 50000 l. *per annum*, (though farmed at much leſs:) and all other labour of horſes, and porters, at leaſt ſix times as much. The value of this conveniency I eſtimate to be above three hundred thouſand pounds *per annum.*

5. The defenſibleneſs of the country, by reaſon of its ſituation in the ſea upon iſlands; and in the marſhes, impaſſible ground diked and trenched; eſpecially conſidering how that place is aimed at for its wealth: I ſay the charge of defending that country, is eaſier than if it were a plain champion, at leaſt 200000 l. *per annum.*

6. Holland is ſo conſiderable for keeping ſhips in harbour with ſmall expence of men, and ground tackle; that it ſaves *per annum* 200000 l. of what muſt be ſpent in France. Now if all theſe natural advantages do amount to above one million *per annum* profits; and that the trade of all Europe, nay of the whole world, with which our Europeans do trade, is not above forty five millions *per annum*, and if $\frac{1}{60}$ of the value be of the profit, it is plain that the Hollander may command and govern the whole trade.

7. Thoſe who have their ſituation thus towards the ſea, and abound with fiſh at home, and having

alſo the command of ſhipping; have by conſequence the fiſhing trade; whereof, that of herring alone, brings more yearly profit to the Hollanders than the trade of the Weſt-Indies to Spain; or of the Eaſt to themſelves: as many have affirmed: becauſe as the ſame ſay, *viis & modis*, of above three millions *per annum* profit.

8. It is not to be doubted, but thoſe who have the trade of ſhipping and fiſhing, will ſecure themſelves of the trade of timber for ſhips, boats, maſts, and caſks; of hemp for cordage, ſails, and nets; of ſalt, of iron; as alſo of pitch, tar, roſin, brimſtone, oil, and tallow, as neceſſary appurtenances to ſhipping and fiſhing.

9. Thoſe who predominate in ſhipping, and fiſhing, have more occaſions than others to frequent all parts of the world, and to obſerve what is wanting or redundant every where; and what each people can do, and what they deſire; and conſequently to be the factors and carriers, for the whole world of trade. Upon which ground they bring all native commodities to be manufactured at home; and carry the ſame back, even to that country in which they grew: all which we ſee.

For do they not work the ſugars of the Weſt-Indies? the timber and iron of the Baltick? the hemp of Ruſſia? the lead, tin, and wool of England? the quick-ſilver and ſilk of Italy? the yarns, and dying-ſtuffs of Turkey? &c. To be ſhort, in all the ancient ſtates, and empires, thoſe who had the ſhipping, had the wealth: and if 2 *per cent.* in the price of commodities, be perhaps 20 *per cent.* in the gain; it is manifeſt that they who can in forty five millions, underſell others by one million, (upon account of natural, and intrinſick advantages only;) may eaſily have the trade of the world: without ſuch

ſuch angelical wits and judgments, as ſome attribute to the Hollanders.

Having thus done with their ſituation, I come now to their trade.

It is commonly ſeen, that each country flouriſheth in the manufacture of its own native commodities, viz. England for woollen manufacture, France for paper, Luic-land for iron-ware, Portugal for confectures, Italy for ſilks: upon which principle it follows, that Holland and Zealand muſt flouriſh moſt in the trade of ſhipping, and ſo become carriers and factors of the whole world of trade. Now the advantages of the ſhipping trade are as followeth, viz.

Huſbandmen, ſeamen, ſoldiers, artizans and merchants, are the very pillars of any commonwealth; all the other great profeſſions, do riſe out of the infirmities and miſcarriages of theſe; now the ſeaman is three of theſe four. For every ſeaman of induſtry and ingenuity, is not only a navigator, but a merchant, and alſo a ſoldier; not becauſe he hath often occaſion to fight, and handle arms; but becauſe he is familiarized with hardſhip and hazards, extending to life and limbs; for training and drilling is a ſmall part of ſoldiery, in reſpect of this laſt mentioned qualification; the one being quickly and preſently learned, the other not without many years moſt painful experience: wherefore to have the occaſion of abounding in ſeamen, is a vaſt conveniency.

2. The huſbandman of England earns but about 4 s. *per* week, but the ſeamen have as good as 12 s. in wages, victuals (and as it were houſing) with other accommodations, ſo as a ſeaman is in effect three huſbandmen; wherefore there is little ploughing, and ſowing of corn in Holland and Zealand, or breeding of young cattle: but their land is improved

by building of houſes, ſhips, engines, dikes, wharfs, gardens of pleaſure, extraordinary flowers and fruits; for dairy and feeding of cattle, for rape, flax, madder, &c. The foundations of ſeveral advantageous manufactures.

3. Whereas the employment of other men is confined to their own country, that of ſeamen is free to the whole world; ſo as where trade may (as they call it) be dead here or there, now and then, it is certain that ſome where or other in the world, trade is always quick enough, and proviſions are always plentiful, the benefit whereof, thoſe who command the ſhipping enjoy, and they only.

4. The great and ultimate effect of trade is not wealth at large, but particularly abundance of ſilver, gold, and jewels, which are not periſhable, nor ſo mutable as other commodities, but are wealth at all times, and in all places: whereas abundance of wine, corn, fowls, fleſh, &c. are riches but *hic & nunc*, ſo as the raiſing of ſuch commodities, and the following of ſuch trade, which does ſtore the country with gold, ſilver, jewels, &c. is profitable before others. But the labour of ſeamen, and freight of ſhips, is always of the nature of an exported commodity, the overplus whereof, above what is imported, brings home money, &c.

5. Thoſe who have the command of the ſea-trade, may work at eaſier freight with more profit, than others at greater: for as cloth muſt be cheaper made, when one cards, another ſpins, another weaves, another draws, another dreſſes, another preſſes and packs; than when all the operations abovementioned, were clumſily performed by the ſame hand; ſo thoſe who command the trade of ſhipping, can build long ſlight ſhips for carrying maſts, fir-timber, boards, balks, &c. and ſhort ones for lead, iron, ſtones, &c. one ſort

ſort of veſſels to trade at ports where they need never lie a ground, others where they muſt jump upon the ſand twice every twelve hours; one ſort of veſſels, and way of manning in time of peace, and for cheap groſs goods, another for war and precious commodities; one ſort of veſſels for the turbulent ſea, another for inland waters and rivers; one ſort of veſſels, and rigging, where haſte is requiſite for the maidenhead of a market, another where one fifth or one fourth part of the time makes no matter. One ſort of maſting and rigging for long voyages, another for coaſting. One ſort of veſſels for fiſhing, another for trade. One ſort for war for this or that country, another for burthen only. Some for oars, ſome for poles, ſome for ſails, and ſome for draught by men or horſes, ſome for the northern navigations amongſt ice, and ſome for the ſouth againſt worms, &c. And this I take to be the chief of ſeveral reaſons, why the Hollanders can go at leſs freight than their neighbours, viz. becauſe they can afford a particular ſort of veſſels for each particular trade.

I have ſhewn how ſituation hath given them ſhipping, and how ſhipping hath given them in effect all other trade, and how foreign traffick muſt give them as much manufacture as they can manage themſelves, and as for the overplus, make the reſt of the world but as workmen to their ſhops. It now remains to ſhew the effects of their policy, ſuperſtructed upon theſe natural advantages, and not as ſome think upon the exceſs of their underſtandings.

I have omitted to mention the Hollanders were one hundred years ſince, a poor and oppreſſed people, living in a country naturally cold, moiſt, and unpleaſant: and were withal perſecuted for their heterodoxy in religion.

From hence it neceſſarily follows, that this people muſt labour hard, and ſet all hands to work: rich and poor, young and old, muſt ſtudy the art of number, weight, and meaſure; muſt fare hard, provide for impotents, and for orphans, out of hope to make profit by their labours: muſt puniſh the lazy by labour, and not by cripling them: I ſay, all theſe particulars, ſaid to be the ſubtile excogitations of the Hollanders, ſeem to me, but what could not almoſt have been otherwiſe.

Liberty of conſcience, regiſtry of conveyances, ſmall cuſtoms, banks, lumbards, and law merchant, riſe all from the ſame ſpring, and tend to the ſame ſea; as for lowneſs of intereſt, it is alſo a neceſſary effect of all the premiſſes, and not the fruit of their contrivance.

Wherefore we ſhall only ſhew in particular the efficacy of each, and firſt of liberty of conſcience; but before I enter upon theſe, I ſhall mention a practice almoſt forgotten, (whether it referreth to trade or policy is not material,) which is the Hollanders undermaſting, and ſailing ſuch of their ſhipping, as carry cheap and groſs goods, and whoſe ſale doth not depend much upon ſeaſon.

It is to be noted, that of two equal and like veſſels, if one ſpreads one thouſand ſix hundred yards of like canvaſs, and the other two thouſand five hundred, their ſpeed is but as four to five, ſo as one brings home the ſame timber in four days, as the other will in five. Now if we conſider that although thoſe ſhips be but four or five days under ſail, that they are perhaps thirty upon the voyage; ſo as the one is but one thirtieth part longer upon the whole voyage than the other, though one fifth longer under ſail. Now if maſts, yards, rigging, cables, and anchors, do all depend upon the quantity and extent of the ſails,

ſails, and conſequently hands alſo; it follows that the one veſſel, goes at one third leſs charge, loſing but one thirtieth of the time, and of what depends thereupon.

I now come to the firſt policy of the Dutch, viz. liberty of conſcience; which I conceive they grant upon theſe grounds. (But keeping up always a force to maintain the common peace,) 1. They themſelves broke with Spain to avoid the impoſition of the clergy. 2. Diſſenters of this kind, are for the moſt part, thinking, ſober, and patient men, and ſuch as believe that labour and induſtry is their duty towards God. (How erroneous ſoever their opinions be.) 3. Theſe people believing the juſtice of God, and ſeeing the moſt licentious perſons, to enjoy moſt of the world, and its beſt things, will never venture to be of the ſame religion, and profeſſion with voluptuaries, and men of extreme wealth and power, who they think have their portion in this world.

4. They cannot but know, that no man can believe what himſelf pleaſes, and to force men to ſay they believe what they do not, is vain, abſurd, and without honour to God.

5. The Hollanders knowing themſelves not to be an infallible church, and that others had the ſame ſcripture for guides as themſelves, and withal the ſame intereſt to ſave their ſouls, did not think fit to make this matter their buſineſs; not more than to take bonds of the ſeamen they employ, not to caſt away their own ſhips and lives.

6. The Hollanders obſerve that in France and Spain, (eſpecially the latter) the churchmen are about one hundred for one, to what they uſe or need; the principal care of whom is to preſerve uniformity, and this they take to be a ſuperfluous charge.

7. They

7. They obſerve where moſt endeavours have been uſed to keep uniformity, there heterodoxy hath moſt abounded.

8. They believe that if one fourth of the people were heterodox, and that if that whole quarter ſhould by miracle be removed, that within a ſmall time one fourth of the remainder would again become heterodox ſome way or other, it being natural for men to differ in opinion in matters about ſenſe and reaſon: and for thoſe who have leſs wealth, to think they have the more wit and underſtanding, eſpecially of the things of God, which they think chiefly belong to the poor.

9. They think the caſe of the primitive chriſtians, as it is repreſented in the Acts of the Apoſtles, looks like that of the preſent diſſenters, (I mean externally.) Moreover it is to be obſerved that trade doth not (as ſome think) beſt flouriſh under popular governments, but rather that trade is moſt vigorouſly carried on, in every ſtate and government, by the hetorodox part of the ſame, and ſuch as profeſs opinions different from what are publickly eſtabliſhed: (that is to ſay) in India where the Mahometan religion is authorized, there the Banians are the moſt conſiderable merchants. In the Turkiſh empire the Jews, and Chriſtians. At Venice, Naples, Leghorn, Genoa, and Liſbon, Jews, and non-papiſt merchant-ſtrangers: but to be ſhort, in that part of Europe, where the Roman catholick religion, now hath, or lately hath had eſtabliſhment; there three quarters of the whole trade, is in the hands of ſuch as have ſeparated from the church (that is to ſay) the inhabitants of England, Scotland, and Ireland, as alſo thoſe of the United Provinces, with Denmark, Sweden, and Norway, together with the ſubjects of the German proteſtant princes, and the Hans towns, do at this day poſſeſs three

three quarters of the trade of the world; and even in France itſelf, the Hugonots are proportionably far the greater traders; nor is it to be denied but that in Ireland, where the ſaid Roman religion is not authorized, there the profeſſors thereof have a great part of the trade. From whence it follows that trade is not fixt to any ſpecies of religion as ſuch; but rather as before hath been ſaid to the heterodox part of the whole, the truth whereof appears alſo in all the particular towns of greateſt trade in England; nor do I find reaſon to believe, that the roman catholick ſeamen in the whole world, are ſufficient to man effectually a fleet equal to what the king of England now hath; but the non-papiſt ſeamen, can do above thrice as much. Wherefore he whom this latter party doth affectionately own to be their head, cannot probably be wronged in the ſea-concernments by the other; from whence it follows, that for the advancement of trade, (if that be a ſufficient reaſon) indulgence muſt be granted in matters of opinion; though licentious actings as even in Holland, be reſtrained by force.

The ſecond policy or help to trade uſed by the Hollanders, is ſecuring the titles to lands and houſes; for although the lands and houſes may be called *terra firma & res immobiles*, yet the title unto them is more certain, than it pleaſes the lawyers and authority to make them; wherefore the Hollanders do by regiſtries, and other ways of aſſurance make the title as immoveable as the lands, for there can be no incouragement to induſtry, where there is no aſſurance of what ſhall be gotten by it; and where by fraud and corruption, one man may take away with eaſe and by a trick, and in a moment what another has gotten by many years extreme labour and pains.

There

There hath been much discourse about introducing of registries into England; the lawyers for the most part object against it, alledging, that titles of land in England are sufficiently secure already; wherefore omitting the considerations of small and oblique reasons *pro & contra*, it were good that enquiry were made from the officers of several courts, to what sum or value purchasers have been damnified for this last ten years, by such fraudulent conveyances as registers would have prevented; the tenth part whereof at a medium, is the annual loss which the people sustain for want of them, and then computation is to be made of the annual charge of registring such extraordinary conveyances, as would secure the title of lands; now by comparing these two sums, the question so much agitated may be determined; though some think that though few are actually damnified, yet that all are hindered by fear and deterred from dealing.

Their third policy is their bank, the use whereof is to encrease money, or rather to make a small sum equivalent in trade to a greater, for the effecting whereof these things are to be considered. 1. How much money will drive the trade of the nation. 2. How much current money there is actually in the nation. 3. How much money will serve to make all payments of under fifty pounds or any other more convenient sum throughout the year. 4. For what sum the keepers of the bank are unquestionable security: if all these four particulars be well known, then it may also be known, how much of the ready money above-mentioned may safely and profitably be lodged in the bank, and to how much ready current money the said deposited money is equivalent. As for example, suppose a hundred thousand pounds will drive the trade of the nation, and suppose there be

be but sixty thousand pounds of ready money in the same; suppose also that twenty thousand pounds will drive on, and answer all payments made of under fifty pounds. In this case, forty of the sixty being put into the bank, will be equivalent to eighty, which eighty and twenty kept out of the bank do make up an hundred, (that is to say) enough to drive the trade as was proposed; where note that the bank-keepers must be responsible for double the sum intrusted with them, and must have power to levy upon the general, what they happen to loose unto particular men.

Upon which grounds, the bank may freely make use of the received forty thousand pounds, whereby the said sum, with the like sum in credit, makes eighty thousand pounds, and with the twenty reserved an hundred.

I might here add many more particulars, but being the same as have already been noted by others, I shall conclude only with adding one observation which I take to be of consequence, viz. That the Hollanders do rid their hands of two trades, which are of greatest turmoil and danger, and yet of least profit; the first whereof is that of a private soldier, for such they can hire from England, Scotland, and Germany, to venture their lives for six pence a day, whilst themselves safely and quietly follow such trades, whereby the meanest of them gain six times as much, and withal by this entertaining of strangers for soldiers, their country becomes more and more peopled, for asmuch as the children of such strangers, are Hollanders and take to trades, whilst new strangers are admitted *ad infinitum*; besides these soldiers at convenient intervals, do at least as much work as is equivalent to what they spend, and consequently by this way of employing of strangers for soldiers, they people

ple the country and ſave their own perſons from danger and miſery, without any real expence, effecting by this method, what others have in vain attempted by laws for naturalizing of ſtrangers, as if men could be charmed to tranſplant themſelves from their own native, into a foreign country merely by words, and for the bare leave of being called by a new name. In Ireland, laws of naturalization have had little effect, to bring in aliens, and 'tis no wonder, ſince Engliſh men will not go thither without they may have the pay of ſoldiers, or ſome other advantage amounting to maintenance.

Having intimated the way by which the Hollanders do increaſe their people, I ſhall here digreſs to ſet down the way of computing the value of every head with another, and that by the inſtance of people in England, viz. ſuppoſe the people of England be ſix millions in number, that their expence at 7 l. *per* head be 42 millions: ſuppoſe alſo that the rent of the lands be 8 millions and the yearly profit of all the perſonal eſtate be 8 millions more; it muſt needs follow, that the labour of the people muſt have ſupplied the remaining twenty ſix millions, the which multiplied by twenty (the maſs of mankind being worth twenty years purchaſe as well as land) make five hundred and twenty millions, as the value of the whole people: which number divided by ſix millions, makes above 80l. ſterling, to be the value of each head of man, woman, and child, and of adult perſons twice as much; from whence we may learn to compute the loſs we have ſuſtained by the plague, by the ſlaughter of men in war, and by the ſending them abroad into the ſervice of foreign princes. The other trade of which the Hollanders have rid their hands, is the old patriarchal trade of being cow-keepers, and in a great meaſure of that which concerns ploughing and ſowing of corn, having put that employment

employment upon the Danes and Polanders, from whom they have their young cattle and corn. Now here we may take notice, that as trades and curious arts increaſe, ſo the trade of husbandry will decreaſe, or elſe the wages of husbandmen muſt riſe, and conſequently the rents of lands muſt fall.

For proof whereof I dare affirm, that if all the husbandmen of England, who now earn but eight pence a day or thereabouts, could become tradeſmen and earn ſixteen pence a day, (which is no great wages, two ſhillings and two ſhillings and ſix pence being uſually given) that then it would be the advantage of England to throw up their huſbandry and to make no uſe of their lands, but for graſs-horſes, milch-cows, gardens and orchards, &c. which if it be ſo, and if trade and manufacture have encreaſed in England (that is to ſay) if a greater part of the people, apply themſelves to thoſe faculties, than there did heretofore, and if the price of corn be no greater now, than when huſbandmen were more numerous, and tradeſmen fewer; it follows from that ſingle reaſon (though others may be added) that the rents of land muſt fall: as for example, ſuppoſe the price of wheat be 5s. or 60d. the buſhel; now if the rent of the land whereon it grows be the third ſheaf; then of the 60d. 20d. is for the land, and 40d. for the husbandman; but if the husbandman's wages ſhould riſe one eighth part, or from 8d. to 9d. *per diem*, then the husbandman's ſhare in the buſhel of wheat, riſes from 40d. to 45d. and conſequently the rent of the land muſt fall from 20d. to 15d. for we ſuppoſe the price of the wheat ſtill remains the ſame; eſpecially ſince we cannot raiſe it, for if we did attempt it, corn would be brought in to us, (as into Holland) from foreign parts, where the ſtate of husbandry was not changed.

And

And thus I have done with the first principal conclusion, that, *a small territory and even a few people, may by situation, trade and policy, be made equivalent to a greater; and that convenience for shipping, and water-carriage, do most eminently and fundamentally conduce thereunto.*

CHAP. II.

That some kind of taxes and publick levies, may rather increase than diminish the wealth of the kingdom.

IF the money or other effects, levyed from the people by way of tax, were destroyed and annihilated; then 'tis clear that such levies would diminish the commonwealth: or if the same were exported out of the kingdom without any return at all, then the case would be also the same or worse: but if what is levyed as aforesaid, be only transferred from one hand to another, then we are only to consider whether the said money or commodities, are taken from an improving hand, and given to an ill husband, or *vice versa:* as for example, suppose that money by way of tax, be taken from one who spendeth the same in superfluous eating and drinking; and delivered to another who employeth the same, in improving of land, in fishing, in working of mines, in manufacture, &c. It is manifest, that such tax is an advantage to the state whereof the said different persons are members: nay, if money be taken from him, who spendeth the same as aforesaid upon eating and drinking, or any other perishing commodity; and the same transferred to one that bestoweth it on cloaths; I say, that even in this case, the commonwealth hath some little advantage; because cloaths do not altogether perish so soon as meats and drinks: but if the same be spent in furniture of houses, the advantage

advantage is yet a little more; if in building of houses, yet more; if in improving of lands; working of mines, fishing, &c. yet more; but most of all, in bringing gold and silver into the country: because things are not only not perishable, but are esteemed for wealth at all times, and every where: whereas other commodities which are perishable, or whose value depends upon the fashion; or which are contingently scarce and plentiful, are wealth, but *pro hic & nunc*, as shall be elsewhere said.

In the next place if the people of any country, who have not already a full employment, should be enjoyned or taxed to work upon such commodities as are imported from abroad; I say, that such a tax, also doth improve the commonwealth.

Moreover, if persons who live by begging, cheating, stealing, gaming, borrowing without intention of restoring; who by those ways do get from the credulous and careless, more than is sufficient for the subsistence of such persons; I say, that although the state should have no present employment for such persons, and consequently should be forced to bear the whole charge of their livelihood; yet it were more for the publick profit to give all such persons a regular and competent allowance by public tax, than to suffer them to spend extravagantly, at the only charge of careless, credulous, and good natured people: and to expose the commonwealth to the loss of so many able men, whose lives are taken away, for the crimes which ill discipline doth occasion.

On the contrary, if the stocks of laborious and ingenious men, who are not only beautifying the country where they live by elegant diet, apparel, furniture, housing, pleasant gardens, orchards, and publick edifices, &c. But are also increasing the gold, silver, and jewels of the country by trade and arms; I say,

 if

if the ſtock of theſe men ſhould be diminiſhed by a tax, and transferred to ſuch as do nothing at all, but eat, drink, ſing, play, and dance; nay, to ſuch as ſtudy the metaphyſicks, or other needleſs ſpeculation; or elſe employ themſelves in any other way, which produce no material thing, or things of real uſe and value in the commonwealth: in this caſe, the wealth of the publick will be diminiſhed: otherwiſe than as ſuch exerciſes, are recreations and refreſhments of the mind; and which being moderately uſed, do qualifie and diſpoſe men to what in it ſelf is more conſiderable.

Wherefore upon the whole matter, to know whether a tax will do good or harm: the ſtate of the people and their employments, muſt be well known; (that is to ſay,) what part of the people are unfit for labour by their infancy or impotency; and alſo what part are exempt from the ſame, by reaſon of their wealth, function, or dignities; or by reaſon of their charge and employments; otherwiſe than in governing, directing, and preſerving thoſe, who are appointed to labour and arts.

2. In the next place computation muſt be made, what part of thoſe who are fit for labour and arts as aforeſaid, are able to perform the work of the nation in its preſent ſtate and meaſure.

3. It is to be conſidered, whether the remainder can make all or any part of thoſe commodities, which are imported from abroad; which of them, and how much in particular: the remainder of which ſort of people (if any be) may ſafely and without poſſible prejudice to the commonwealth, be employed in the arts and exerciſes of pleaſure and ornament; the greateſt whereof is the improvement of natural knowledge.

Having

Having thus in general illuſtrated this point, which I think needs no other proof but illuſtration; I come next to intimate that no part of Europe hath paid ſo much by way of tax, and publick contributions, as Holland and Zealand for this laſt 100 years; and yet no country hath in the ſame time, increaſed their wealth comparably to them: and it is manifeſt, they have followed the general conſiderations abovementioned; for they tax meats and drinks moſt heavily of all; to reſtrain the exceſſive expence of thoſe things, which twenty four hours doth (as to the uſe of man) wholly annihilate; and they are more favourable to commodities of greater duration.

Nor do they tax according to what men gain, but in extraordinary caſes; but always according to what men ſpend: and moſt of all according to what they ſpend needleſly, and without proſpect of return. Upon which grounds, their cuſtoms upon goods imported and exported, are generally low; as if they intended by them, only to keep an account of their foreign trade; and to retaliate upon their neighbour ſtates, the prejudices done them, by their prohibitions and impoſitions.

It is further to be obſerved, that ſince the year 1636, the taxes and public levies made in England, Scotland, and Ireland, have been prodigiouſly greater than at any time heretofore; and yet the ſaid kingdoms have increaſed in their wealth and ſtrength for theſe laſt forty years, as ſhall hereafter be ſhewn.

It is ſaid that the King of France, at preſent doth levy the fifth part of his peoples wealth; and yet great oſtentation is made of the preſent riches and ſtrength of that kingdom. Now great care muſt be had in diſtinguiſhing between the wealth of the people, and that of an abſolute monarch; who taketh

from

from the people, where, when, and in what proportion he pleaſeth. Moreover, the ſubjects of two monarchs may be equally rich, and yet one monarch may be double as rich as the other; viz. if one take the tenth part of the peoples ſubſtance to his own diſpoſe, and the other but the twentieth, nay the monarch of a poorer people, may appear more ſplendid and glorious, than that of a richer: which perhaps may be ſomewhat the caſe of France, as hereafter ſhall be examined. As an inſtance and application of what hath been ſaid, I conceive that in Ireland wherein are about twelve hundred thouſand people, and near three hundred thouſand ſmoakes or hearths; it were more tolerable for the people, and more profitable for the king, that each head paid two ſhillings worth of flax, than that each ſmoak ſhould pay two ſhillings in ſilver; and that for the following reaſons.

1. Ireland being under peopled, and land, and cattle being very cheap; there being every where ſtore of fiſh and fowl; the ground yielding excellent roots (and particularly that bread-like root potatoes) and withal they being able to perform their husbandry, with ſuch harneſs and tackling, as each man can make with his own hands; and living in ſuch houſes as almoſt every man can build; and every houſe-wife being a ſpinner and dyer of wool and yarn, they can live and ſubſiſt after their preſent faſhion, without the uſe of gold or ſilver money; and can ſupply themſelves with the neceſſaries above-named, without labouring two hours *per diem*: now it hath been found, that by reaſon of inſolvencies ariſing, rather from the uſefulneſs than want of money among theſe poor people; that from three hundred thouſand hearths, which ſhould have yielded thirty thouſand pound *per annum*; not fifteen thouſand pound of money could be levied; whereas it is eaſily imagined, that four or five people dwelling in that cottage, which hath but one ſmoak; could eaſily have planted a ground-plot of about forty feet ſquare with flax; or the fiftieth part of an acre; for ſo much ground will bear eight or ten ſhillings worth of that commodity; and the rent of ſo much ground, in few places amounts to a penny *per annum*, nor is there any ſkill requiſite to this practice, wherewith the country is not already familiar. Now as for a market for the flax; there is imported into Holland it ſelf, over and above what that country produces; as much flax, as is there ſold for between eight ſcore and two hundred thouſand pound; and into England and Ireland is imported as much linen cloth made of flax, and there ſpent, as is worth above one half million of money. As ſhall hereafter be ſhewn.

Wherefore having ſhewn, that ſilver money is uſeleſs to the poor people of Ireland, that half the hearth money could not be raiſed by reaſon thereof; that the people are not a fifth part employed; that the people and land of Ireland, are competently qualified for flax; that one penny worth of land, will produce ten ſhillings worth of the ſame; and that there is market enough and enough, for above a hundred thouſand pounds worth; I conceive my propoſition ſufficienty proved; at leaſt to ſet forwards and promote a practice, which both the preſent law and intereſt of the country doth require: eſpecially, ſince if all the flax ſo produced ſhould yield nothing yet, there is nothing loſt; the ſame time having been worſe ſpent before. Upon the ſame grounds, the like tax of two ſhillings *per* head, may be raiſed with the like advantage upon the people of England; which will amount to ſix hundred thouſand pound *per annum*; to be paid in flax, manufactured, into all the

 ſorts

ſorts of linens, threads, tapes, and laces; which we now receive from France, Flanders, Holland, and Germany; the value whereof doth far exceed the ſum laſt mentioned, as hath appeared by the examination of particulars.

It is obſerved by clothiers, and others, who employ great numbers of poor people, that when corn is extremely plentiful, that the labour of the poor is proportionably dear: and ſcarce to be had at all (ſo licentious are they who labour only to eat, or rather to drink.) Wherefore when ſo many acres ſown with corn, as do uſually produce a ſufficient ſtore for the nation, ſhall produce perhaps double to what is expected or neceſſary; it ſeems not unreaſonable that this common bleſſing of God, ſhould be applied, to the common good of all people, repreſented by their ſovereign; much rather than the ſame ſhould be abuſed, by the vile and brutiſh part of mankind, to the prejudice of the common-wealth: and conſequently, that ſuch ſurpluſage of corn, ſhould be ſent to public ſtore-houſes; from thence to be diſpoſed of, to the beſt advantage of the public.

Now if the corn ſpent in England, at five ſhillings *per* buſhel wheat, and two ſhillings ſix pence barley, be worth ten millions *communibus annis*; it follows that in years of great plenty, when the ſaid grains are one third part cheaper; that a vaſt advantage might accrue to the common-wealth, which now is ſpent in overfeeding of the people, in quantity or quality; and ſo indiſpoſing them to their uſual labour.

The like may be ſaid of ſugar, tobacco, and pepper; which cuſtom hath now made neceſſary to all ſorts of people; and which the over-planting of them, hath made unreaſonably cheap: I ſay it is not abſurd,

abſurd, that the public ſhould be advantaged by this extraordinary plenty.

That an exciſe ſhould be laid upon currants alſo, is not unreaſonable; not only for this, but for other reaſons alſo.

The way of the preſent militia or trained-bands, is a gentle tax upon the country; becauſe it is only a few days labour in the year, of a few men in reſpect of the whole; uſing their own goods, that is their own arms. Now if there be three millions of males in England, there be above two hundred thouſand of them, who are between the age of ſixteen and thirty, unmarried perſons; and who live by their labour and ſervice; for of ſo many or thereabouts, the preſent militia conſiſts.

Now if an hundred and fifty thouſand of theſe, were armed, and trained, as foot; and fifty thouſand as horſe; (horſe being of ſpecial advantage in iſlands) the ſaid forces at land, with thirty thouſand men at ſea; would by Gods ordinary bleſſing, defend this nation, being an iſland, againſt any force in view: but the charge of arming, diſciplining, and rendezvouſing all theſe men, twice, or thrice a year; would be a very gentle tax, levied by the people themſelves, and paid to themſelves. Moreover if out of the ſaid number one third part were ſelected, of ſuch as are more than ordinarily fit and diſpoſed for war, and to be exerciſed, and rendezvouſed fourteen or fifteen times *per annum*; the charge thereof being but a fortnights pay in the year, would be alſo a very gentle tax.

Laſtly, if out of this laſt mentioned number, one third again ſhould be ſelected, making about ſixteen thouſand foot, and near ſix thouſand horſe, to be exerciſed, and rendezvouſed forty days in the year; I ſay that the charge of all theſe three militias, allowing

ing the latter ſix weeks pay *per annum*; would not coſt above one hundred and twenty thouſand pound *per annum*; which I take to be an eaſy burthen, for ſo great a benefit.

Foraſmuch as the preſent navy of England requires thirty ſix thouſand men to man it; and for that the Engliſh trade of ſhipping, requires about forty eight thouſand men, to manage it alſo; it follows, that to perform both well, there ought to be about ſeventy two thouſand men, (and not eighty four thouſand) competently qualified for theſe ſervices: for want whereof we ſee, that it is a long while, before a royal navy can be manned; which till it be, is of no effectual uſe, but lies at charge. And we ſee likewiſe upon theſe occaſions, that merchants are put to great ſtraights, and inconveniences; and do pay exceſſive rates for the carrying on their trade. Now if twenty four thouſand able bodied tradeſmen, were by ſix thouſand of them *per annum*, brought up and fitted for ſea-ſervice; and for their encouragement allowed 20s. *per annum* for every year they had been at ſea, even when they ſtay at home, not exceeding 6l. for thoſe, who have ſerved ſix years or upward; it follows, that about 72000l. at the medium of 3l. *per* man, would ſalariate the whole number of twenty four thouſand; and ſo, foraſmuch as half the ſeamen, which manage the merchants trade, are ſuppoſed to be always in harbour, and are about twenty four thouſand men, with the ſaid half together of the auxiliaries laſt mentioned, would upon all emergencies, man out the whole royal navy with thirty ſix thouſand, and leaving to the merchants twelve thouſand of the abler auxiliaries, to perform their buſineſs in harbour, till others come home from ſea; and thus thirty ſix thouſand, twenty four thouſand, and twelve thouſand, make the ſeventy two thouſand above-

above-mentioned: I ſay that more than this ſum of 72000l. is fruitleſly ſpent, and over paid by the merchants, whenſoever a great fleet is to be fitted out. Now thoſe whom I call auxiliary ſeamen, are ſuch as have another trade beſides, wherewith to maintain themſelves, when they are not employed at ſea; and the charge of maintaining them, though 72000l. *per annum*, I take to be little or nothing, for the reaſons above-mentioned, and conſequently an eaſy tax to the people, becauſe levied by, and paid to themſelves.

As we propounded that Ireland ſhould be taxed with flax, and England by linnen, and other manufacture of the ſame; I conceive that Scotland alſo might be taxed as much, to be paid in herrings, as Ireland in flax: now the three taxes, viz. of flax, linnen, and herrings, and the maintenance of the triple militia, and of the auxiliary ſeamen above-mentioned, do all five of them together, amount to one million of money, the raiſing whereof is not a million ſpent, but gain unto the common-wealth, unleſs it can be made appear, that by reaſon of all, or any of them, the exportation of woollen manufactures, lead and tin, are leſſened; or of ſuch commodities, as our own Eaſt and Weſt-India trade do produce, foraſmuch as I conceive, that the exportation of theſe laſt mentioned commodities, is the Touch-ſtone whereby the wealth of England is tried, and the Pulſe whereby the health of the kingdom may be diſcerned.

CHAP.

CHAP. III.

That France cannot by reason of natural, and perpetual impediments, be more powerful at sea, than the English, or Hollanders now are, or may be.

POWER at sea consists chiefly of men, able to fight at sea, and that in such shipping, as is most proper for the seas wherein they serve; and those are in these northern seas, ships from between three hundred to one thousand three hundred tuns; and of those such as draw much water, and have a deep latch in the sea, in order to keep a good wind, and not to fall to leeward, a matter of vast advantage in sea service: wherefore it is to be examined, 1. Whether the king of France, hath ports in the northern seas (where he hath most occasion for his fleets of war, in any contest with England) able to receive the vessels above-mentioned, in all weathers, both in winter and summer season. For if the king of France, would bring to sea an equal number of fighting men, with the English and Hollanders, in small floaty leeward vessels, he would certainly be of the weaker side. For a vessel of one thousand tuns manned with five hundred men, fighting with five vessels of two hundred tuns, each manned with one hundred men apiece, shall in common reason have the better offensively, and defensively; forasmuch as the great ship can carry such ordnance, as can reach the small ones at a far greater distance, than those can reach, or at least hurt the other, and can batter, and sink at a distance, when small ones can scarce pierce.

Moreover it is more difficult for men out of a small vessel, to enter a tall ship, than for men from a higher

a higher place, to leap down into a lower; nor is small shot so effectual upon a tall ship, as *vice versa*.

And as for vessels drawing much water, and consequently keeping a good wind, they can take or leave leeward vessels, at pleasure, and secure themselves from being boarded by them: moreover the windward ship has a fairer mark at a leeward ship, than *vice versa*; and can place her shot upon such parts of the leeward vessel, as upon the next tack will be under water.

Now then the king of France, having no ports able to receive large windward vessels, between Dunkirk and Ushant, what other ships he can bring into those seas, will not be considerable. As for the wide ocean, which his harbours of Brest, and Charente, do look into; it affordeth him no advantage upon an enemy; there being so great a latitude of engaging or not, even when the parties are in sight of each other.

Wherefore, although the king of France were immensely rich, and could build what ships he pleased, both for number, and quality; yet if he have not ports to receive, and shelter, that sort and size of shipping, which is fit for his purpose; the said riches will in this case be fruitless, and a mere expence without any return, or profit. Some will say that other nations cannot build so good ships as the English, I do indeed hope they cannot; but because it seems too possible, that they may sooner or later, by practice and experience; I shall not make use of that argument, having bound my self to shew, that the impediments of France, (as to this purpose) are natural, and perpetual. Ships and guns do not fight of themselves, but men who act and manage them; wherefore it is more material to shew; that the king of France, neither hath, nor can have men sufficient,

cient, to man a fleet, of equal ſtrength to that of the king of England, viz.

The king of England's navy, conſiſts of about ſeventy thouſand tuns of ſhipping, which requires thirty ſix thouſand men to man it; theſe men being ſuppoſed to be divided into eight parts, I conceive that one eighth part, muſt be perſons of great experience, and reputation, in ſea ſervice: another eighth part muſt be ſuch as have uſed the ſea ſeven years and upwards; half of them, or four eighth parts more, muſt be ſuch as have uſed the ſea above a twelvemonth, viz. two, three, four, five, or ſix years, allowing but one quarter of the whole complements, to be ſuch as never were at ſea at all, or at moſt but one voyage, or upon one expedition; ſo that at a medium I reckon, that the whole fleet muſt be men of three or four years growth, one with another. Fournier, a late judicious writer, making it his buſineſs to perſuade the world, how conſiderable the king of France was, or might be at ſea, in the ninety ſecond and ninety third pages of his Hydrography, ſaith, that there was one place in Britany, which had furniſhed the king with one thouſand four hundred ſeamen, and that perhaps the whole ſea-coaſt of France, might have furniſhed him with fifteen times as many: now ſuppoſing his whole allegation were true, yet the ſaid number amounts but to twenty one thouſand; all which, if the whole trade of ſhipping in France were quite and clean abandoned, would not by above a third, man out a fleet equivalent, to that of the king of England: and if the trade were but barely kept alive, there would not be one third part men enough, to man the ſaid fleet.

But if the ſhipping trade of France, be not above a quarter as great as that of England, and that one third,

third part of the ſame, namely the fiſhing trade to the banks of Newfoundland, is not peculiar, nor fixt to the French; then I ſay that if the king of England (having power to preſs men) cannot under two or three months time man his fleet; than the king of France, with leſs than a quarter of the ſame help, can never do it at all; for in France (as ſhall elſewhere be ſhewn) there are not above one hundred and fifty thouſand tun of trading veſſels, and conſequently not above fifteen thouſand ſeamen, reckoning a man to every ten tun. As it has been ſhewn that the king of France, cannot at preſent man ſuch a fleet, as is above deſcribed, we come next to ſhew that he never can, being under natural, and perpetual impediments: viz. 1. If there be but fifteen thouſand ſeamen in all France, to manage its trade, it is not to be ſuppoſed, that the ſaid trade ſhould be extinguiſhed, nor that it ſhould ſpare above five of the ſaid fifteen thouſand towards manning the fleet which requires thirty five thouſand.

Now the deficient thirty thouſand muſt be ſupplied, one of theſe four ways, either, firſt by taking in landmen, of which ſort there muſt not be above ten thouſand, ſince the ſeamen will never be contented, without being the major part, nor do they heartily wiſh well to landmen at all, or rejoice even at thoſe ſucceſſes, of which the landmen can claim any ſhare; thinking it hard that themſelves, who are bred to miſerable, painful, and dangerous employments, (and yet profitable to the commonwealth) ſhould at a time when booty and purchaſe is to be gotten, be clogged or hindered by any conjunction with landmen, or forced to admit thoſe to an equal ſhare with themſelves. 2. The ſeamen which we ſuppoſe twenty thouſand, muſt be had, that is hired from other nations, which cannot be without tempting them

them with ſo much wages, as exceeds what is given by merchants, and withal to counterpoiſe the danger of being hanged by their own prince, and allowed no quarter if they are taken; the trouble of conveying themſelves away, when reſtraints and prohibitions are upon them; and alſo the infamy of having been apoſtates, to their own country and cauſe: I ſay their wages muſt be more than double, to what their own prince gives them, and their aſſurance muſt be very great, that they ſhall not be at long run abuſed or ſlighted by thoſe who employed them; (as hating the traitor, although they love the treaſon.) I ſay moreover, that thoſe who will be thus tempted away, muſt be of the baſeſt, and lewdeſt ſort of ſeamen, and ſuch as have not enough of honour and conſcience, to qualify them for any truſt, or gallant performance. 3. Another way to increaſe ſeamen, is to put great numbers of landmen upon ſhips of war, in order to their being ſeamen; but this courſe cannot be effectual, not only for the above-mentioned antipathy, between landmen and ſeamen; but alſo, becauſe it is ſeen, that men at ſea do not apply themſelves to labour and practice, without more neceſſity than happens in over-manned ſhipping. For where there are fifty men in a veſſel, that ten can ſufficiently navigate, the ſupernumerary forty will improve little; but where there ſhall be of ten but one or two ſupernumeraries, there neceſſity will often call upon every man to ſet his hand to the work, which muſt be well done at the peril of their own lives. Moreover, ſeamen ſhifting veſſels almoſt every ſix or twelve months, do ſometimes ſail in ſmall barks, ſometimes in middling ſhips, and ſometimes in great veſſels of defence; ſometimes in lighters, ſometimes in hoys, ſometimes in ketches, ſometimes in three-maſted ſhips, ſometimes they go to the ſouthward, ſometimes

ſometimes to the northward, ſometimes they coaſt, ſometimes they croſs the ocean; by all which variety of ſervice, they do in time compleat themſelves, in every part, and circumſtance of their faculty: whereas thoſe who go out for a ſummer, in a man of war, have not that variety of practice, nor a direct neceſſity of doing any thing at all.

Beſides, it is three or four years at a medium, wherein a ſeaman muſt be made; neither can there be leſs than three ſeamen, to make a fourth of a landman: conſequently the fifteen thouſand ſeamen of France, can increaſe but five thouſand ſeamen in three or four years, and unleſs their trade ſhould increaſe with their ſeamen in proportion, the king muſt be forced to bear the charge of this improvement, out of the public ſtock, which is intolerable. So as the queſtion which now remains, is, whether the ſhipping trade of France is like to increaſe? Upon which account it is to be conſidered, 1. That France is ſufficiently ſtored with all kind of neceſſaries within itſelf; as with corn, cattle, wine, ſalt, linnen-cloth, paper, ſilk, fruits, &c. So as they need little ſhipping, to import more commodities of weight or bulk; neither is there any thing of bulk exported out of France, but wines and ſalt; the weight whereof is under one hundred thouſand tun *per annum*, yielding not employment to above twenty five thouſand tun of ſhipping, and theſe are for the moſt part Dutch and Engliſh, who are not only already in poſſeſſion of the ſaid trade, but alſo are better fitted to maintain it, than the French are, or perhaps ever can be: and that for the following reaſons, (viz.) 1. Becauſe the French cannot victual ſo cheap as the Engliſh and Dutch, nor ſail with ſo few hands. 2. The French for want of good coaſts and harbours, cannot keep their ſhips in port, under double

double the charge that the Engliſh and Hollanders can. 3. By reaſon of paucity, and diſtance of their ports one from another, their ſeamen and tradeſmen relating to ſhipping, cannot correſpond with, and aſſiſt one another ſo eaſily, cheaply, and advantageouſly, as in other places. Wherefore if their ſhipping trade is not likely to increaſe within themſelves, and much leſs to increaſe, by their beating out the Engliſh and Hollanders from being the carriers of the world, it follows, that their ſeamen will not be increaſed by the increaſe of their ſaid trade: wherefore, and for that they are not like to be increaſed by any of the ſeveral ways above ſpecified, and for that their ports are not fit to receive ſhips of burthen and quality, fit for that purpoſe; and that by reaſon of the leſs fitneſs of their ports, than that of their neighbours; I conceive that what was propounded, hath been competently proved.

The aforenamed Fournier in the ninety ſecond and ninety third pages of his Hydrography, hath laboured to prove the contrary of all this, unto which I refer the reader: not thinking his arguments of any weight at all in the preſent caſe. Nor indeed doth he make his compariſons with the Engliſh or Hollanders, but with the Spaniards, who, nor the Grand Seignior, (the latter of whom hath greater advantages, to be powerful at ſea, than the king of France) could ever attain to any illuſtrious greatneſs in naval power: having often attempted, but never ſucceeded in the ſame.

Nor is it eaſy to believe, that the king of England ſhould for ſo many years, have continued his title to the ſovereignty of the narrow ſeas, againſt his neighbours (ambitious enough to have gotten it from him) had not their impediments been natural, and perpetual

tual, and ſuch as we ſay, do obſtruct the king of France.

CHAP. IV.

That the people and territories of the king of England, are naturally near as conſiderable for wealth and ſtrength, as thoſe of France.

THE author of the ſtate of England, among the many uſeful truths, and obſervations he hath ſet down; delivers the proportion, between the territories of England and France, to be as thirty to eighty two; the which if it be true, then England, Scotland, and Ireland, with the iſlands unto them belonging, will, taken all together, be near as big as France. Tho' I ought to take all advantages for proving the paradox in hand; yet I had rather grant that England, Scotland, and Ireland, with the iſlands before-mentioned; together with the planted parts of Newfoundland, New-England, New-Netherland, Virginia, Mary-land, Carolina, Jamaica, Bermudas, Barbadoes, and all the reſt of the Caribbee iſlands, with what the king hath in Aſia and Africa, do not contain ſo much territory as France, and what planted land the king of France hath alſo in America. And if any man will be heterodox in behalf of the French intereſt; I would be contented againſt my knowledge and judgment, to allow the king of France's territories, to be a ſeventh, ſixth, or even a fifth greater than thoſe of the king of England; believing that both princes have more land than they do employ to its utmoſt uſe.

And here I beg leave, (among the ſeveral matters which I intend for ſerious) to interpoſe a jocular, and perhaps ridiculous digreſſion, and which I indeed

deſire

desire men to look upon, rather as a dream or revery, than a rational proposition; the which is, that if all the moveables and people of Ireland, and of the highlands of Scotland, were transported into the rest of Great Britain; that then the king and his subjects would thereby become more rich and strong, both offensively and defensively, than now they are.

'Tis true, I have heard many wise men say, when they were bewailing the vast losses of the English, in preventing and suppressing rebellions in Ireland, and considering how little profit hath returned, either to the king or subjects of England, for their five hundred years doing and suffering in that country; I say, I have heard wise men (in such their melancholies) wish, that (the people of Ireland being saved) island were sunk under water: now it troubles me, that the distemper of my own mind in this point, carries me to dream, that the benefit of those wishes, may practically be obtained, without sinking that vast mountainous island under water, which I take to be somewhat difficult; for although Dutch engineers may drain its bogs; yet I know no artists that could sink its mountains. If ingenious and learned men (among whom I reckon Sir Tho. More, and Des Cartes) have disputed, that we who think our selves awake, are, or may be really in a dream; and since the greatest absurdities of dreams, are but a preposterous and tumultuary contexture of realities, I will crave the umbrage of these great men last named, to say something for this wild conception, with submission to the better judgment of all those that can prove themselves awake.

If there were but one man living in England, then the benefit of the whole territory, could be but the livelihood of that one man: but if another man were added, the rent or benefit of the same would be

be double, if three, triple; and so forward until so many men were planted in it, as the whole territory could afford food unto: for if a man would know, what any land is worth, the true and natural question must be, how many men will it feed? how many men are there to be fed? but to speak more practically, land of the same quantity and quality in England, is generally worth four or five times as much as in Ireland; and but one quarter, or third of what it is worth in Holland; because England is four or five times better peopled than Ireland, and but a quarter so well as Holland. And moreover, where the rent of land is advanced by reason of multitude of people; there the number of years purchase, for which the inheritance may be sold, is also advanced, though perhaps not in the very same proportion; for 20s. *per annum* in Ireland, may be worth but 8l. and in England where titles are very sure, above 20l. in Holland above 30l.

I suppose, that in Ireland and the Highlands in Scotland, there may be about one million and eight hundred thousand people, or about a fifth part of what is in all the three kingdoms: wherefore the first question will be, whether England, Wales, and the Low-lands of Scotland, cannot afford food, (that is to say) corn, fish, flesh, and fowl, to a fifth part more people, than are at the present planted upon it, with the same labour that the said fifth part do now take where they are? for if so, then what is propounded is naturally possible. 2. It is to be enquired, what the value of the immovables (which upon such removal must be left behind) are worth? for if they be worth less, than the advancement of the price of land in England will amount unto; then the proposal is to be considered. 3. If the relict lands and the immovables left behind upon them, may be sold for

 money;

money; or if no other nation ſhall dare meddle with them, without paying well for them; and if the nation who ſhall be admitted, ſhall be leſs able to prejudice and annoy the tranſplantees into England than before; then I conceive that the whole propoſal will be a pleaſant and a profitable dream indeed.

As to the firſt point, whether England, and the low-lands of Scotland, can maintain a fifth part more people than they now do (that is to ſay) nine millions of ſouls in all? for anſwer thereunto, I firſt ſay, that the ſaid territories of England, and the low-land of Scotland, contain about thirty ſix millions of acres, that is four acres for every head, man, woman, and child; but the United Provinces do not allow above one acre and a half, and England it ſelf reſcinding Wales, hath but three acres to every head, according to the preſent ſtate of tillage and huſbandry. Now if we conſider that England have but three acres to a head as aforeſaid, doth ſo abound in victuals, as that it maketh laws againſt the importation of cattle, fleſh, and fiſh from abroad; and that the draining of fens, improving of foreſts, incloſing of commons, ſowing of St. Foyne and clovergraſs, be grumbled againſt by landlords, as the way to depreſs the price of victuals; then it plainly follows, that leſs than three acres improved as it may be, will ſerve the turn, and conſequently that four will ſuffice abundantly. I could here ſet down the very number of acres, that would bear bread and drink, corn, together with fleſh, butter, and cheeſe, ſufficient to victual nine millions of perſons, as they are victualled in ſhips, and regular families; but ſhall only ſay in general; that twelve millions of acres, viz. one third of thirty ſix millions, will do it, ſuppoſing that roots, fruits, fowl, and fiſh, and the ordinary profit of lead, tin,

tin, iron-mines, and woods, would piece up any defect, that may be feared.

As to the ſecond, I ſay, that the land and houſing in Ireland, and the high-lands of Scotland, at the preſent market rates, are not worth thirteen millions of money; nor would the actual charge of making the tranſplantation propoſed, amount to four millions more: ſo then the queſtion will be, whether the benefit expected from this tranſplantation, will exceed ſeventeen millions?

To which I ſay, that the advantage will probably be near four times the laſt mentioned ſum, or about ſixty nine millions, three hundred thouſand pounds. For if the rent of all England and Wales, and the low-lands of Scotland, be about nine millions *per annum*; and if the fifth part of the people be ſuperadded, unto the preſent inhabitants of thoſe countries; then the rent will amount unto ten millions 8000l. and the number of years purchaſe, will riſe from ſeventeen and a half, to a fifth part more, which is twenty one. So as the land which is now worth but nine millions *per annum*, at ſeventeen and a half years purchaſe, making 157 millions and a half, will then be worth ten millions eight hundred thouſand pounds, at twenty one years purchaſe; viz. two hundred twenty ſix millions, and eight hundred thouſand pounds, that is ſixty nine millions, and three hundred thouſand pounds more than it was before.

And if any prince willing to inlarge his territories, will give any thing more than ſix and a half millions or half the preſent value of the ſaid relinquiſhed land, which are eſtimated to be worth thirteen millions; then the whole profit, will be above ſeventy five millions, and eight hundred 600l. or above four times the loſs, as the ſame was above computed. But if any man ſhall object, that it will be dangerous

unto England, that Ireland ſhould be in the hands of any other nation; I anſwer in ſhort, that that nation, whoever ſhall purchaſe it (being divided by means of the ſaid purchaſe,) ſhall not be more able to annoy England, than now in its united condition. Nor is Ireland nearer England, than France and Flanders.

Now if any man ſhall deſire a more clear explanation, how, and by what means, the rents of lands ſhall riſe by this cloſer cohabitation of people above deſcribed; I anſwer, that the advantage will ariſe in tranſplanting about eighteen hundred thouſand people, from the poor and miſerable trade of huſbandry, to more beneficial handicrafts: for when the ſuperaddition is made, a very little addition of huſbandry to the ſame lands will produce a fifth part more of food, and conſequently the additional hands, earning but 40s. *per annum* (as they may very well do, nay to 8l. *per annum*) at ſome other trade; the ſuperlucration will be above three millions and ſix hundred thouſand pounds *per annum*, which at twenty years purchaſe is ſeventy millions. Moreover, as the inhabitants of cities and towns, ſpend more commodities, and make greater conſumptions, than thoſe who live in wild thin peopled countries; ſo when England ſhall be thicker peopled, in the manner before deſcribed, the very ſame people ſhall then ſpend more, than when they lived more ſordidly and inurbanely, and further aſunder, and more out of the ſight, obſervation, and emulation of each other; every man deſiring to put on better apparel when he appears in company, than when he has no occaſion to be ſeen.

I further add, that the charge of the government, civil, military, and eccleſiaſtical, would be more cheap, ſafe, and effectual in this condition of cloſer co-habitation than otherwiſe; as not only reaſon, but the

the example of the United provinces doth demonſtrate.

But to let this whole digreſſion paſs for a mere dream, I ſuppoſe 'twill ſerve to prove, that in caſe the king of England's territories, ſhould be a little leſs than thoſe of the king of France, that foraſmuch as neither of them are overpeopled, that the difference is not material to the queſtion in hand; wherefore ſuppoſing the king of France's advantages, to be little or nothing in this point of territory; we come next to examine and compare the number of ſubjects which each of theſe monarchs doth govern.

The book called the ſtate of France, maketh that kingdom to conſiſt of twenty ſeven thouſand pariſhes; and another book written by a ſubſtantial author, who profeſſedly inquires into the ſtate of the church and church-men of France, ſets it down as an extraordinary caſe, that a pariſh in France ſhould have ſix hundred ſouls; wherefore I ſuppoſe that the ſaid author (who hath ſo well examined the matter) is not of opinion that every pariſh, one with another, hath above five hundred; by which reckoning the whole people of France, are about thirteen millions and a half; now the people of England, Scotland, and Ireland, with the iſlands adjoining, by computation from the numbers of pariſhes; which commonly have more people in proteſtant churches, than in popiſh countries; as alſo from the hearth-money, pole-money, and exciſe, do amount to about nine millions and an half.

There are in New-England, about ſixteen thouſand men muſtered in arms; about twenty four thouſand able to bear arms; and conſequently about one hundred and fifty thouſand in all: and I ſee no reaſon why in all this and the other plantations of Aſia, Africa, and America, there ſhould not be half a

million in all. But this laſt I leave to every mans conjecture; and conſequently, I ſuppoſe, that the king of England hath about ten millions of ſubjects, *ubivis terrarum orbis*; and the king of France about thirteen and an half as aforeſaid.

Although it be very material to know the number of ſubjects belonging to each prince, yet when the queſtion is concerning their wealth and ſtrength; it is alſo material to examine, how many of them do get more than they ſpend, and how many leſs.

In order whereunto it is to be conſidered, that in the king of England's dominions, there are not twenty thouſand church-men; but in France, as the afore-mentioned author of theirs doth aver, (who ſets down the particular number of each religious order) there are about two hundred and ſeventy thouſand; viz. two hundred and fifty thouſand more than we think are neceſſary, (that is to ſay) two hundred and fifty thouſand withdrawn out of the world. Now the ſaid number of adult and able bodied perſons, are equivalent to about double the ſame number, of the promiſcuous maſs of mankind. And the ſame author ſays, that the ſame religious perſons, do ſpend one with another about 18d. *per diem*, which is triple even to what a labouring man requires.

Wherefore the ſaid two hundred and fifty thouſand church-men (living as they do) makes the king of France's thirteen millions and a half, to be leſs than thirteen: now if ten men can defend themſelves as well in iſlands, as thirteen can upon the continent; then the ſaid ten being not concerned to increaſe their territory by the invaſion of others, are as effectual as the thirteen in point of ſtrength alſo; wherefore that there are more ſuperlucrators in the Engliſh, than the French dominions, we ſay as followeth.

There

There be in England, Scotland, Ireland, and the kings other territories above forty thouſand ſeamen; in France not above a quarter ſo many; but one ſeaman earneth as much as three common huſbandmen; wherefore this difference in ſeamen, addeth to the account of the king of England's ſubjects, and is an advantage equivalent to ſixty thouſand husbandmen.

There are in England, Scotland, and Ireland, and all other the king of England's territories ſix hundred thouſand tun of ſhipping, worth about four millions and an half of money; and the annual charge of maintaining the ſhipping of England, by new buildings and reparations, is about one third part of the ſame ſum; which is the wages of one hundred and fifty thouſand husbandmen, but is not the wages of above one third part of ſo many artiſans as are employed, upon ſhipping of all ſorts, viz. ſhipwrights, calkers, joiners, carvers, painters, block-makers, rope-makers, maſt-makers, ſmiths of ſeveral ſorts; flag-makers, compaſs-makers, brewers, bakers, and all other ſort of victuallers; all ſorts of tradeſmen relating to guns and gunners ſtores. Wherefore there being four times more of theſe artizans in England, &c. than in France; they further add to the account of the king of England's ſubjects, the equivalent of eighty thouſand husbandmen more.

The ſea-line of England, Scotland, and Ireland, and the adjacent iſlands, is about three thouſand eight hundred miles; according to which length, and the whole content of acres, the ſaid land would be an oblong, or parallelogram figure of three thouſand eight hundred miles long, and about twenty four miles broad; and conſequently, every part of England, Scotland, and Ireland is, one with another, but twelve miles from the ſea: whereas France, containing but about one thouſand miles of ſea-line, is

by

by the like method or computation, about ſixty five miles from the ſea ſide; and conſidering the paucity of ports, in compariſon of what are in the king of England's dominions, as good as ſeventy miles diſtant from a port: upon which grounds it is clear, that England can be ſupplied, with all groſs and bulkey commodities of foreign growth and manufacture, at far cheaper rates than France can be, viz. at about 4s. *per cent.* cheaper; the land carriage for the difference of the diſtance between England and France from a port, being ſo much or near thereabouts. Now to what advantage this conveniency amounteth, upon the importation and exportation of bulkey commodities, cannot be leſs than the labour of one million of people, &c. meaning by bulkey commodities all ſorts of timber, plank, and ſtaves for caſk; all iron, lead, ſtones, bricks, and tiles for building; all corn, ſalt, and drinks; all fleſh and fiſh, and indeed all other commodities, wherein the gain and loſs of 4s. *per cent.* is conſiderable; where note that the like wines are ſold in the inner parts of France for four or five pound a tun, which near the ports yield 7 l. Moreover upon this principal, the decay of timber in England is no very formidable thing, as the rebuilding of London, and of the ſhips waſted by the Dutch war do clearly manifeſt; nor can there be any want of corn, or other neceſſary proviſions in England, unleſs the weather hath been univerſally unſeaſonable for the growth of the ſame; which ſeldom or never happens; for the ſame cauſes which make dearth in one place, do often cauſe plenty in another; wet weather being propitious to highlands, which drowneth the low.

It is obſerved that the poor of France, have generally leſs wages than in England; and yet their victuals are generally dearer there; which being ſo, there

there may be more ſuperlucration in England than in France.

Laſtly, I offer it to the conſideration of all thoſe, who have travelled through England and France; whether the plebeians of England (for they conſtitute the bulk of any nation) do not ſpend a ſixth part more than the plebeians of France? and if ſo, it is neceſſary that they muſt firſt get it; and conſequently that ten millions of the king of England's ſubjects, are equivalent to twelve of the king of France's; and upon the whole matter, to the thirteen millions, at which the French nation was eſtimated.

It will here be objected, that the ſplendor and magnificencies of the king of France, appearing greater than thoſe of England, that the wealth of France muſt be proportionably greater, than that of England: but that doth not follow, foraſmuch as the apparent greatneſs of the king, doth depend upon the *quota pars* of the peoples wealth which he levieth from them; for ſuppoſing of the people to be equally rich, if one of the ſovereigns levy a fifth part, and another a fifteenth, the one ſeems actually thrice as rich as the other, whereas potentially, they are but equal.

Having thus diſcourſed of the territory, people, ſuperlucration, and defenciblenes of both dominions, and in ſome meaſure of their trade, ſo far as we had occaſion to mention ſhips, ſhipping, and nearneſs to ports; we come next to inlarge a little further, upon the trade of each.

Some have eſtimated, that there are not above three hundred millions of people in the whole world. Whether that be ſo or no, is not very material to be known; but I have fair grounds to conjecture, and would be glad to know it more certainly, that there are not above eighty millions, with whom the Engliſh and

and Dutch have commerce; no Europeans that I know of, trading directly nor indirectly, where they do not; so as the whole commercial world, or world of trade, consisteth of about eighty millions of souls, as aforesaid.

And I further estimate, that the value of all commodities yearly exchanged amongst them, doth not exceed the value of forty five millions: now the wealth of every nation, consisting chiefly, in the share which they have in the foreign trade with the whole commercial world, rather than in the domestick trade, of ordinary meat, drink, and cloaths, &c. which bringing in little gold, silver, jewels, and other universal wealth; we are to consider, whether the subjects of the king of England, head for head, have not a greater share, than those of France.

To which purpose it hath been considered, that the manufactures of wool, yearly exported out of England, into several parts of the world, viz. All sorts of cloth, serges, stuffs, cottons, bays, says, frize, perpetuanas; as also stockings, caps, rugs, &c. Exported out of England, Scotland, and Ireland, do amount unto five millions *per annum*.

The value of lead, tin, and coals, to be five hundred thousand pounds.

The value of all cloaths, houshold-stuff, &c. carried into America, two hundred thousand pounds.

The value of silver and gold, taken from the Spaniards, sixty thousand pounds.

The value of sugar, indico, tobacco, cotton, and cocoa, brought from the southward parts of America six hundred thousand pounds.

The value of the fish, pipe-staves, masts, bever, &c. brought from New-England, and the northern parts of America, two hundred thousand pounds.

The

The value of the wool, butter, hides, tallow, beef, herring, pilchers, and salmon, exported out of Ireland, eight hundred thousand pounds.

The value of the coals, salt, linnen, yarn, herrings, pilchers, salmon, linnen-cloth, and yarn, brought out of Scotland and Ireland, 500000l.

The value of saltpetre, pepper, calicoes, diamonds, drugs, and silks, brought out of the East-Indies, above what was spent in England; eight hundred thousand pounds.

The value of the slaves, brought out of Africa, to serve in our American plantations twenty thousand pounds; which with the freight of English shipping, trading into foreign parts, being above a million and an half, makes in all ten millions one hundred and eighty thousand pounds.

Which computation is sufficiently justified by the customs of the three kingdoms, whose intrinsick value are thought to be near a million *per annum*, viz. six hundred thousand pounds, payable to the king; one hundred thousand pounds, for the charges of collecting, &c. two hundred thousand pounds smuggled by the merchants, and one hundred thousand pounds gained by the farmers; according to common opinion, and mens sayings; and this agrees also with that proportion, or part of the whole trade of the world, which I have estimated the subjects of the king of England to be possessed of, viz. of about ten of forty five millions.

But the value of the French commodities, brought into England, (notwithstanding some currant estimates,) are not above one million two hundred thousand pounds *per annum*; and the value of all they export into all the world besides, not above three or four times as much; which computation also agreeth well enough, with the account we have of the

customs

cuſtoms of France; ſo as France not exporting above one half the value of what England doth, and for that all the commodities of France (except wines, brandy, paper, and the firſt patterns and faſhions for cloaths, and furniture of which France is the mint) are imitable by the Engliſh; and having withal more people than England; it follows that the people of England, &c. have head for head, thrice as much foreign trade as the people of France; and about two parts of nine of the trade of the whole commercial world; and about two parts in ſeven of all the ſhipping: notwithſtanding all which it is not to be denied, that the king and ſome great men of France, appear more rich and ſplendid, than thoſe of the like quality in England; all which ariſes rather from the nature of their government, than from the intrinſick and natural cauſes of wealth and power.

CHAP. V.

That the impediments of Englands greatneſs, are but contingent and removable.

THE firſt impediment of Englands greatneſs is, that the territories thereunto belonging, are too far aſunder, and divided by the ſea into many ſeveral iſlands and countries; and I may ſay, into ſo many kingdoms, and ſeveral governments, (viz.) there be three diſtinct legiſlative powers in England, Scotland, and Ireland; the which inſtead of uniting together, do often croſs one anothers intereſt; putting bars and impediments upon one anothers trades, not only as if they were foreigners to each other, but ſometimes as enemies.

2. The iſlands of Jerſey and Guernſey, and the iſle of man, are under juriſdictions different from thoſe, either of England, Scotland, or Ireland.

3. The

3. The government of New-England (both civil and eccleſiaſtical) doth ſo differ from that of his Majeſty's other dominions, that 'tis hard to ſay what may be the conſequence of it.

And the government of the other plantations, doth alſo differ very much from any of the reſt; although there be not naturally ſubſtantial reaſons from the ſituation, trade, and condition of the people, why there ſhould be ſuch differences.

From all which it comes to paſs, that ſmall divided remote governments, being ſeldom able to defend themſelves, the burthen of protecting of them all, muſt lie upon the chief kingdom England, and ſo all the ſmaller kingdoms and dominions, inſtead of being additions, are really dimunitions; but the ſame is remedied by making two ſuch grand councils, as may equally repreſent the whole empire, one to be choſen by the king, the other by the people. The wealth of a king is threefold, one is the wealth of his ſubjects, the ſecond is the *quota pars* of his ſubjects wealth, given him for the public defence, honour, and ornament of the people, and to manage ſuch undertaking for the common good, as no one or a few private men, are ſufficient for.

The third ſort are the *quota*, of the laſt mention *quota pars*, which the king may diſpoſe of, as his own perſonal inclination and diſcretion ſhall direct him; without account. Now it is moſt manifeſt, that the afore-mentioned diſtances, and differencies of kingdoms, and juriſdictions, are great impediments to all the ſaid ſeveral ſorts of wealth, as may be ſeen in the following particulars. Firſt in caſe of war with foreign nations, England commonly beareth the whole burthen and charge, whereby many in England are utterly undone.

Secondly,

Secondly, England ſometimes prohibiting the commodities of Ireland and Scotland, as of late it did the cattle, fleſh, and fiſh of Ireland; did not only make food, and conſequently labour, dearer in England, but alſo hath forced the people of Ireland, to fetch thoſe commodities from France, Holland, and other places, which before was ſold them from England, to the great prejudice of both nations.

Thirdly, it occaſions an unneceſſary trouble, and charge, in collecting of cuſtoms, upon commodities paſſing between the ſeveral nations.

Fourthly, it is a damage to our Barbadoes, and other American trades, that the goods which might paſs thence immediately, to ſeveral parts of the world, and to be ſold at moderate rates, muſt firſt come into England, and there pay duties, and afterwards (if at all) paſs into thoſe countries, whither they might have gone immediately.

Fifthly, the iſlands of Jerſey and Guernſey, are protected at the charge of England, nevertheleſs the labour, and induſtry of that people (which is very great) redounds moſt to the profit of the French.

Sixthly, in New-England, there are vaſt numbers of able bodied Engliſhmen, employed chiefly in huſbandry, and in the meaneſt part of it, (which is breeding of cattle) whereas Ireland would have contained all thoſe perſons, and at worſt would have afforded them lands on better terms, than they have them in America, if not ſome other better trade withal, than now they can have.

Seventhly, the inhabitants of the other plantations, although they do indeed plant commodities, which will not grow ſo well in England; yet graſping at more land, than will ſuffice to produce the ſaid exotics in a ſufficient quantity to ſerve the whole world,

world, they do therein but diſtract, and confounds the effect of their own endeavours.

Eighthly, There is no doubt that the ſame people, far and wide diſperſed, muſt ſpend more upon their government, and protection, than the ſame living compactly, and when they have no occaſion to depend upon the wind, weather, and all the accidents of the ſea.

A ſecond impediment to the greatneſs of England, is the different underſtanding of ſeveral material points, *viz.* of the King's prerogative, privileges of parliament, the obſcure differences between law and equity; as alſo between civil and eccleſiaſtical juriſdictions; doubts whether the kingdom of England, hath power over the kingdom of Ireland, beſides the wonderful parodox that Engliſh-men, lawfully ſent to ſuppreſs rebellions in Ireland, ſhould after having effected the ſame, (be as it were) disfranchiſed, and loſe that intereſt in the legiſlative power, which they had in England, and pay cuſtoms as foreigners for all they ſpend in Ireland, whether they were ſent, for the honour and benefit of England.

The third impediment is, that Ireland being a conquered country, and containing not the tenth part as many Iriſh natives, as there are Engliſh in both kingdoms, that natural and firm union, is not made, between the two peoples, by tranſplantations, and proportionable mixture, ſo as there may be but a tenth part, of the Iriſh in Ireland, and the ſame proportion in England; whereby the neceſſity of maintaining an army in Ireland, at the expence of a quarter of all the rents of that kingdom may be taken away.

The fourth impediment is, that taxes in England are not levied upon the expence, but upon the whole eſtate; not upon lands, ſtock, and labour, but chiefly upon land alone; and that not by an equal, and indifferent ſtandard, but the caſual predominancy, of parties and factions: and moreover, that theſe taxes are not levied with the leaſt trouble and charge, but let out to farmers, who alſo let them from one to another without explicite knowledge of what they do; but ſo as in concluſion, the poor people pay twice as much as the king receives.

The fifth impediment is the inequality of ſhires, dioceſes, pariſhes, church-livings, and other precincts, as alſo the repreſentation of the people in parliament; all which do hinder the operations of authority in the ſame manner, as a wheel irregularly made, and excentrically hung; neither moves ſo eaſily, nor performs its work ſo truly, as if the ſame were duly framed and poiſed.

Sixthly, whether it be an impediment, that the power of making war, and raiſing money be not in the ſame hand, much may be ſaid; but I leave it to thoſe, who may more properly meddle with fundamental laws.

None of theſe impediments are natural, but did ariſe as the irregularity of buildings do, by being built, part at one time and part at another; and by the changing of the ſtate of things, from what they were at the reſpective times, when the practices we complain of, were firſt admitted, and perhaps, are but the warpings of time, from the rectitude of the firſt inſtitution.

As theſe impediments are contingent, ſo they are alſo removeable; for may not the land of ſuperfluous territories be ſold, and the people with their moveables brought away? May not the Engliſh in the American

American plantations (who plant tobacco, ſugar, &c.) compute what land will ſerve their turn, and then contract their habitations to that proportion, both for quantity and quality? as for the people of New-England, I can but wiſh they were tranſplanted into Old-England, or Ireland (according to propoſals of their own, made within this twenty years) although they were allowed more liberty of conſcience, than they allow one another.

May not the three kingdoms be united into one, and equally repreſented in parliament? Might not the ſeveral ſpecies of the King's ſubjects, be equally mixt in their habitations? Might not the pariſhes, and other precincts be better equalized? Might not juriſdictions, and pretences of power, be determined and aſcertained? Might not the taxes be equally applotted, and directly applied to their ultimate uſe? Might not diſſenters in religion be indulged, they paying for a competent force to keep the publick peace? I humbly venture to ſay, all theſe things may be done, if it be ſo thought fit by the ſovereign power, becauſe the like hath often been done already, at ſeveral places and times.

CHAP. VI.

That the power and wealth of England hath increaſed this laſt forty years.

IT is not much to be doubted, but that the territories under the king's dominions have increaſed; foraſmuch as New-England, Virginia, Barbadoes, and Jamaica, Tangier, and Bombay, have ſince that time, been either added to his Majeſty's territories, or improved from a deſart condition, to abound with people, building, ſhipping, and the production of many uſeful commodities. And as for the land of England, Scotland, and Ireland, as it is not leſs in quantity, than it was forty years ſince; ſo it is manifeſt that by reaſon of the draining of fens, watering of dry grounds, improving of foreſts, and commons, making of heathy and barren grounds, to bear ſaintfoyne, and clovergraſs; meliorating, and multiplying ſeveral ſorts of fruits, and garden-ſtuff, making ſome rivers navigable, &c. I ſay it is manifeſt, that the land in its preſent condition, is able to bear more proviſion, and commodities, than it was forty years ago.

Secondly, although the people in England, Scotland, and Ireland, which have extraordinarily periſhed by the plague and ſword, within this laſt forty years, do amount to about three hundred thouſand, above what have died in the ordinary way; yet the ordinary increaſe by generation of ten millions, which doubles in two hundred years, as hath been ſhewn by the obſervators upon the bills of mortality, may in forty years (which is a fifth part of the ſame time) have increaſed one fifth part of the whole number, or two millions. Where note by the way, that

that the acceſſion of the negroes to the American plantations (being all men of great labour and little expence) is not inconſiderable; beſides, it is hoped that New-England, where few or no women are barren, and moſt have many children, and where people live long, and healthfully, hath produced an increaſe of as many people, as were deſtroyed in the late tumults in Ireland.

As for houſing, the ſtreets of London it ſelf ſpeaks it, I conceive it is double in value in that city, to what it was forty years ſince; and for houſing in the country, they have increaſed at New-Caſtle, Yarmouth, Norwich, Exeter, Portſmouth, Cowes, Dublin, Kingſale, Londonderry, and Colerain in Ireland, far beyond the proportion of what I can learn have been dilapidated in other places. For in Ireland where the ruin was greateſt, the houſing (taking all together) is now more valuable than forty years ago, nor is this to be doubted, ſince houſing is now more ſplendid, than in thoſe days, and the number of dwellers is increaſed, by near one fifth part; as in the laſt paragraph is ſet forth.

As for ſhipping, his Majeſty's navy is now triple, or quadruple, to what it was forty years ſince, and before the ſovereign was built; the ſhipping trading into Newcaſtle, which are now about eighty thouſand tuns, could not be then above a quarter of that quantity. Firſt, Becauſe the city of London, is doubled. 2. Becauſe the uſe of coals is alſo at leaſt doubled, becauſe they were heretofore ſeldom uſed in chambers, as now they are, nor were there ſo many bricks burned with them as of late, nor did the country on both ſides the Thames, make uſe of them as now. Beſides there are employed in the Guiney and American trade, above forty thouſand tun of ſhipping *per annum*; which trade in thoſe days

was inconſiderable. The quantity of wines imported was not near ſo much as now; and to be ſhort, the cuſtoms upon imported and exported commodities, did not then yield a third part of the preſent value; which ſhews that not only ſhipping, but trade itſelf hath increaſed, ſomewhat near that proportion.

As to money, the intereſt thereof was within this fifty years, at 10l. *per cent.* forty years ago, at 8l. and now at 6l. no thanks to any laws which have been made to that purpoſe, foraſmuch as thoſe who can give good ſecurity, may now have it at leſs: but the natural fall of intereſt, is the effect of the increaſe of money.

Moreover, if rented lands, and houſes, have increaſed; and if trade hath increaſed alſo, it is certain that money which payeth thoſe rents, and driveth on trade, muſt have increaſed alſo.

Laſtly, I leave it to the conſideration of all obſervers, whether the number, and ſplendor of coaches, equipage, and houſhold furniture, hath not increaſed, ſince that time; to ſay nothing of the poſtage of letters, which have increaſed from one to twenty, which argues the increaſe of buſineſs, and negotiation. I might add that his majeſty's revenue is near tripled, and therefore the means to pay, and bear the ſame, have increaſed alſo.

CHAP.

CHAP. VII.

That one tenth part of the whole expence, of the king of England's ſubjects, is ſufficient to maintain ten thouſand foot, forty thouſand horſe, and forty thouſand men at ſea; and defray all other charges of the government, both ordinary and extraordinary, if the ſame were regularly taxed and raiſed.

TO clear this point, we are to find out, what is the middle expence of each head in the king's dominions, between the higheſt and the loweſt; to which I ſay, it is not probably leſs, than the expence of a labourer, who earneth about 8d. a day; for the wages of ſuch a man is 4s. *per* week, without victuals, or 2s. with it; wherefore the value of his victuals is 2s. *per* week, or 5l. 4s. *per annum*: now the value of clothes cannot be leſs than the wages given to the pooreſt maid-ſervant in the country, which is 30s. *per annum*, nor can the charge of all other neceſſaries be leſs than 6s. *per annum* more; wherefore the whole charge is 7l.

It is not likely that this diſcourſe will fall into the hands of any that live at 7l. *per annum*, and therefore ſuch will wonder at this ſuppoſition: but if they conſider how much the number of the poor, and their children, is greater than that of the rich; although the perſonal expence of ſome rich men, ſhould be twenty times more than that of a labourer; yet the expence of the labourer above-mentioned, may well enough ſtand for the ſtandard of the expence of the whole maſs of mankind.

Now if the expence of each man, one with another, be 7 l. *per annum*, and if the number of the king's ſubjects, be ten millions, then the tenth part

of the whole expence, will be ſeven millions; but about five millions, or a very little more, will amount to one year's pay for one hundred thouſand foot, forty thouſand horſe, and forty thouſand men at ſea, winter and ſummer; which can rarely be neceſſary And the ordinary charge of the government, in times of deep, and ſerene peace, was not 600000 l. *per annum.*

Where a people thrive, there the income is greater than the expence, and conſequently, the tenth part of the expence is not a tenth part of the income; now for men to pay a tenth part of their expence, in a time of the greateſt exigency (for which it muſt be when ſo great forces are requiſite) can be no hardſhip, much leſs a deplorable condition, for to bear the tenth part, a man needs ſpend but a twentieth part leſs, and labour a twentieth part more, or half an hour *per diem* extraordinary, both which within common experience are very tolerable; there being very few in England, who do not eat by a twentieth part more than does them good; and what miſery were it, inſtead of wearing cloth of 20s. *per* yard, to be contented with that of 19s. few men having ſkill enough to diſcern the difference.

Memorandum, That all this while I ſuppoſe, that all of theſe ten millions of people, are obedient to their ſovereign, and within the reach of his power; for as things are otherwiſe, ſo the calculation muſt be varied.

CHAP.

CHAP. VIII.

That there are ſpare hands enough among the king of England's ſubjects, to earn two millions per annum, *more than they now do; and that there are alſo employments, ready, proper, and ſufficient, for that purpoſe.*

TO prove this point we muſt enquire, how much all the people could earn, if they were diſpoſed, or neceſſitated to labour, and had work whereupon to employ themſelves; and compare that ſum with that of the total expence above-mentioned; deducting the rents and profits of their land, and ſtock, which properly ſpeaking, ſaveth ſo much labour. Now the proceed of the ſaid lands, and ſtock in the countries, is about three parts of ſeven, of the whole expence; ſo as where the expence is ſeventy millions, the rent of the land, and the profit of all the perſonal eſtate, intereſt of money, &c. muſt be about thirty millions; and conſequently the value of the labour forty millions, that is four pound *per* head.

But it is to be noted, that about a quarter of the maſs of mankind, are children, males, and females, under ſeven years old, from whom little labour is to be expected. It is alſo to be noted, that about another tenth part of the whole people, are ſuch as by reaſon of their great eſtates, titles, dignities, offices, and profeſſions, are exempt from that kind of labour we now ſpeak of; their buſineſs being, or ought to be, to govern, regulate, and direct their labours, and actions of others. So that of ten millions, there may be about ſix millions and an half, which (if need require)

require) might actually labour: and of these some might earn 3s. *per* week, some 5 s. and some 7 s. That is all of them might earn 5 s. *per* week at a medium one with another; or at least 10l. *per annum*, (allowing for sickness, and other accidents;) whereby the whole might earn sixty five millions *per annum*, that is twenty five more than the expence.

The author of the state of England, says that the children of Norwich, between six and sixteen years old, do earn 12000l. *per annum*, more than they spend. Now forasmuch as the people of Norwich, are a three hundredth part of the people of England, as appears by the accounts of the hearth-money; and about a five hundredth part of all the King's subjects throughout the world; it follows that all his Majesty's subjects, between six and sixteen years old, might earn five millions *per annum* more than they spend.

Again, forasmuch as the number of people, above sixteen years old, are double the number, of those between six and sixteen; and that each of the men can earn double to each of the children; it is plain that if the men and children every where did do as they do in Norwich, they might earn twenty five millions *per annum*, more than they spend; which estimate grounded upon matter of fact and experience, agrees with the former.

Although as hath been proved, the people of England do thrive, and that it is possible they might superlucrate twenty five millions *per annum*; yet it is manifest that they do not, nor twenty three, which is less by the two millions herein meant; for if they did superlucrate twenty three millions, then in about five or six years time the whole stock, and personal estate

estate of the nation would be doubled, which I wish were true, but find no manner of reason to believe; wherefore if they can superlucrate twenty five, but do not actually superlucrate twenty three, nor twenty, nor ten, nor perhaps five, I have then proved what was propounded; *viz.* that there are spare hands among the king's subjects, to earn two millions more than they do.

But to speak a little more particularly concerning this matter: it is to be noted that since the fire of London, there was earned in four years by tradesmen, (relating to building only) the sum of four millions; *viz.* one million *per annum*, without lessening any other sort of work, labour, or manufacture, which was usually done in any other four years before the said occasion. But if the tradesmen relating to building only, and such of them only as wrought in and about London, could do one millions worth of work extraordinary; I think that from thence, and from what hath been said before, all the rest of the spare hands, might very well double the same, which is as much as was propounded.

Now if there were spare hands to superlucrate millions of millions, they signify nothing unless there were employment for them; and may as well follow their pleasures, and speculations, as labour to no purpose; therefore the more material point is, to prove that there is two millions worth of work to be done, which at present the king's subjects do neglect.

For the proof of this there needs little more to be done, than to compute 1. how much money is paid, by the king of England's subjects, to foreigners for freights of shipping. 2. How much the Hollanders gain by their fishing trade, practised upon our seas.

3. What

3. What the value is of all the commodities imported into and ſpent in England; which might by diligence be produced, and manufactured here. To make ſhort of this matter, upon peruſal of the moſt authentick accounts relating to theſe ſeveral particulars, I affirm that the ſame amounteth to above five millions, whereas I propounded but two millions.

For a further proof whereof Mr. Samuel Fortry in his ingenious diſcourſe of trade, exhibits the particulars, wherein it appears, that the goods imported out of France only, amount yearly to two millions ſix hundred thouſand pounds. And I affirm, that the wine, paper, corke, roſin, capers, and a few other commodities, which England cannot produce, do not amount to one fifth part of the ſaid ſum. From whence it follows, that (if Mr. Fortry hath not erred) the two millions here mentioned, may ariſe from France alone; and conſequently five or ſix millions, from all the three heads laſt above ſpecified.

CHAP. IX.

That there is money ſufficient to drive the trade of the nation.

SInce his Majeſty's happy reſtauration, it was thought fit to call in, and new coin the money, which was made in the times of uſurpation. Now it was obſerved by the general conſent of caſhiers, that the ſaid money (being by frequent revolutions well mixed with old) was about a ſeventh part thereof; and that the ſaid money being called in, was about 800000 l. and conſequently the whole five millions ſix hundred thouſand pound. Whereby it is probable

ble that (ſome allowance being given for hoarded money) the whole caſh of England was then about ſix millions, which I conceive is ſufficient to drive the trade of England, not doubting but the reſt of his Majeſty's dominions have the like means to do the ſame reſpectively.

If there be ſix millions of ſouls in England, and that each ſpendeth 7 l. *per annum*, then the whole expence is forty two millions, or about eight hundred thouſand pound *per* week; and conſequently, if every man did pay his expence weekly, and that the money could circulate within the compaſs of a week, then leſs than one million would anſwer the ends propoſed. But foraſmuch as the rents of the lands in England (which are paid half yearly) are eight millions *per annum*, there muſt be four millions to pay them. And foraſmuch as the rent of the houſing of England, paid quarterly, are worth about four millions *per annum*, there needs but one million to pay the ſaid rents; wherefore ſix millions being enough to make good the three ſorts of circulations above-mentioned, I conceive what was propoſed, is competently proved, at leaſt till ſomething better be held forth to the contrary.

CHAP. X.

That the king of England's ſubjects, have ſtock competent and convenient to drive the trade of the whole commercial world.

NOW for the further encouragement of trade, as we have ſhewn that there is money enough in England to manage the affairs thereof; ſo we ſhall now offer to conſideration, whether there be not a competent and convenient ſtock to drive the trade of the

the whole commercial world. To which purpose it is to be remembred, that all the commodities, yearly exported out of every part of the last mentioned world, may be bought for forty five millions; and that the shipping employed in the same world, are not worth above fifteen millions more, and consequently, that sixty millions at most, would drive the whole trade above-mentioned, without any trust at all, but forasmuch as the growers of commodities, do commonly trust them to such merchants or factors, as are worth but such a part of the full value of their commodities, as may possibly be lost upon the sale of them, whereas gain is rather to be expected; it follows that less than a stock of sixty millions, nay less than half the same sum, is sufficient to drive the trade above-mentioned: it being well known that any tradesman of good reputation worth 500l. will be trusted with above 1000l. worth of commodities: wherefore less than thirty millions, will suffice for the said purpose; of which sum the coin, shipping, and stock, already in trade, do at least make one half.

And it hath been shewn, how by the policy of a bank, any sum of money may be made equivalent in trade, unto near double of the same; by all which it seems, that even at present much is not wanting, to perform what is propounded. But suppose twenty millions or more were wanting, it is not improbable, that since the generality of gentlemen, and some noblemen, do put their younger sons to merchandize; they will see it reasonable, as they increase in the number of merchants, so to increase the magnitude of trade, and consequently to increase stock; which may effectually be done, by inbanking twenty millions worth of land, not being above a sixth or seventh of the whole territory of England; (that is to say) by making a fund of such value, to be security

rity for all commodities, bought and sold upon the account of that universal trade here mentioned.

And thus it having appeared, that England having in it, as much land, like Holland and Zealand, as the said two provinces do themselves contain, with abundance of other land, not inconvenient for trade; and that there are spare hands enough, to earn many millions of money, more than they now do, and that there is also employment to earn several millions, (even from the consumption of England it self) it follows from thence, and from what hath been said in the last paragraph, about enlarging of stock, both of money and land; that it is not impossible, nay a very feasible matter, for the King of England's subjects, to gain the universal trade of the whole commercial world.

Nor is it unseasonable to intimate this matter, forasmuch as the younger brothers, of the good families of England, cannot otherwise be provided for, so as to live according to their birth and breeding: for if the lands of England are worth eighth millions *per annum*, then there be at a medium about ten thousand families, of about 800l. *per annum*; in each of which, one with another, we may suppose there is a younger brother, whom less than two or 300l. *per annum* will not maintain suitable to his relations: now I say that neither the offices at court, nor commands in our ordinary army and navy, nor church preferments; nor the usual gains by the profession of the law, and physick; nor the employments under noblemen, and prelates; will, all of them put together, furnish livelihoods of above 300 l. *per annum*, to three thousand of the said ten thousand younger brothers: wherefore it remains that trade alone must supply the rest. But if the said seven thousand gentlemen be applied to trade, without increasing of trade; or if we hope

hope to increaſe trade, without increaſing of ſtock, which for ought appears is only to be done, by imbanking a due proportion of lands, and money; we muſt neceſſarily be diſappointed. Where note, that ſelling of lands to foreigners for gold and ſilver, would enlarge the ſtock of the kingdom: whereas doing the ſame between one another, doth effect nothing. Fot he that turneth all his land into money, diſpoſes himſelf for trade; and he that parteth with his money for land, doth the contrary: but to ſell land to foreigners, increaſeth both money and people, and conſequently trade. Wherefore it is to be thought, that when the laws denying ſtrangers to purchaſe, and not permitting them to trade, without paying extraordinary duties, were made; that then, the publick ſtate of things, and intereſt of the nation, were far different from what they now are.

Having handled theſe ten principal concluſions, I might go on with others, *ad infinitum*; but what hath been already ſaid, I look upon as ſufficient, for to ſhew what I mean by Political Arithmetic; and to ſhew the uſes of knowing the true ſtate of the people, land, ſtock, trade, &c. 2. That the King's ſubjects are not in ſo bad a condition, as diſcontented men would make them. 3. To ſhew the great effect of unity, induſtry, and obedience. in order to the common ſafety, and each man's particular happineſs.

Sir William Petty's POLITICAL SURVEY OF IRELAND, WITH THE

Eſtabliſhment of that Kingdom, when the late Duke of *Ormond* was Lord Lieutenant; And alſo an exact LIST of the preſent Peers, Members of Parliament, and principal Officers of State. To which is added, An Account of the Wealth and expences of *England*, and the Method of raiſing taxes in the moſt equal manner: Shewing likewiſe that *England* can bear the Charge of four Millions *per Ann.* when the occaſions of the Government require it.

The Second Edition, carefully corrected, with Additions.

By a FELLOW of the ROYAL SOCIETY.

To the Right Honourable

THOMAS, Lord PARKER,

Baron of Macclesfield in the County of Chester; Lord High Chancellor of GREAT BRITAIN.

My Lord,

THE following treatise of Sir William Petty's having already met with a favourable reception from the publick, even when it was imperfect in some of its parts: I beg leave to offer it now to your lordship, with some additions, necessary for the better understanding of it.

As the whole design of this treatise tends to the enriching of a kingdom, by advancing its trade and publick credit, I am naturally led to put it under the patronage of a minister of state, whose love for his nation's welfare and glory is so generally known to all the world; and more especially, my lord, this work, being founded upon mathematical truth, claims a right to the protection of your lordship, who is so great a master in that science.

The good effect which the advice of my learned author has had in the improvement of Ireland in a few years, may in some measure determine how much any nation may be advanced in riches and reputation

putation by following some such like rules as are laid down by the same person at the end of the book, under the title of Verbum Sapienti: what is treated of in that part relates altogether to the interest of England, and therefore I am fully assured it cannot be unacceptable to your lordship, whose genius leads you to the maintaining of its established religion, laws, and liberties, and with them every thing that can contribute to the honour of the King, and ease of the subject.

I am,

May it please your lordship,

Your lordship's,

Most obliged, and most

Obedient, humble servant.

THE

Author's Preface.

SIR Francis Bacon, in his advancement of learning, hath made a judicious parallel in many particulars, between the body natural and body politick and between the arts of preſerving both in health and ſtrength: and it is as reaſonable, that as anatomy is the beſt foundation of one, ſo alſo of the other; and that to practiſe upon the politick, without knowing the ſymmetry, fabrick, and proportion of it, is as caſual as the practice of old-women and empyricks.

Now, becauſe anatomy is not only neceſſary in phyſicians, but laudable in every philoſophical perſon whatſoever; I have therefore, for my curioſity, attempted the firſt eſſay of political anatomy.

Furthermore, as ſtudents in medicine practiſe their inquiries upon cheap and common animals, and ſuch whoſe actions they are beſt acquainted with, and where there is the leaſt confuſion and perplexure of parts; I have choſen Ireland as ſuch a political animal, who is ſcarce twenty years old; where the intrigue of ſtate is not very complicate, and with which I have been converſant

ſant from an embrion; and in which, if I have done amiſs, the fault may be eaſily mended by another.

'Tis true, that curious diſſections cannot be made without variety of proper inſtruments; whereas I have had only a common knife and a clout, inſtead of the many more helps which ſuch a work requires: however, my rude approaches being enough to find whereabout the liver and ſpleen, and lungs lie, tho' not to diſcern the lymphatick veſſels; the Plexus, Choroidus, the Volvuli of veſſels within the finer parts; yet not knowing, that even what I have here readily done, was much conſidered, or indeed thought uſeful by others, I have ventured to begin a new work, which, when corrected and enlarged by better hands and helps, I believe will tend to the peace and plenty of my country; beſides which I have no other end.

A TABLE OF THE CONTENTS.

CHAP. I.

OF the lands in Ireland. Page 299

CHAP. II.

Of the people, houſes, and ſmoaks; their number, differences, and values. 305

CHAP.

CHAP. III.

Of the church and benefices. Page 311

CHAP. IV.

Concerning the late rebellion. 112

CHAP. V.

Of the future settlement of Ireland, prorogation of rebellions, and its union with England. 317

CHAP. VI.

Of the government of Ireland. 325

CHAP. VII.

Of the militia and defence of Ireland. 329

CHAP. VIII.

Of the Cœlum and Solum of Ireland. 333

CHAP. IX.

Of the proportion in value which the several counties in Ireland do bear to each other. 340

The Table. 343

CHAP.

CHAP. X.

Of the money of Ireland. Page 346

CHAP. XI.

Of the trade of Ireland. 351

The Table. 362

CHAP. XII.

Of the religion, diet, cloths, language, manners, and interest of the several inhabitants of Ireland. 363

CHAP. XIII.

Several miscellany remarks and intimations concerning Ireland, and the several matters before-mentioned. 369

The Diagram. 376

A report from the council of trade in Ireland to the lord lieutenant and council, which was drawn by Sir William Petty. 377

CHAP. XIV.

Considerations relating to the improvement of Ireland. 378

CHAP. XV.

Inferences from the premisses. 381

The

The duke of Ormond's commiſſion to be lord lieutenant of Ireland, &c. Page 389
Propoſitions to be offered to his majeſty concerning the governing of Ireland. 399

C H A P. XVI.

The liſt for civil affairs. 408
The eſtabliſhment and liſt for military affairs. 426
A catalogue of the peers. 439
A liſt of the places that return parliament men in Ireland. 442
A liſt of the lords ſpiritual and temporal in Ireland. 447
A liſt of the knights, citizens, and burgeſſes of the parliament of Ireland. 452
A liſt of the principal officers in the government of Ireland. 464

VERBUM

VERBUM SAPIENTI.

THE Introduction. Page 471

C H A P. I.

Containing ſeveral computations of the wealth of the kingdom. 473

C H A P. II.

Of the value of the people. 476

C H A P. III.

Of the ſeveral expences of the kingdom, and its revenues. 478

C H A P. IV.

Of the method of apportioning taxes. 479

C H A P. V.

Of money; and how much is neceſſary to drive the trade of the nation. 480

C H A P.

C H A P. VI.

The cauſes of irregular taxing. Page 482

C H A P. VII.

The collateral advantages of theſe taxes. 483

C H A P. VIII.

Of the expence of the navy, army, and garriſons. 484

C H A P. IX.

Motives to the quiet bearing of extraordinary taxes. 485

C H A P. X.

How to employ the people, and the end thereof. 486

ADVER-

ADVERTISEMENT.

THE Reader is desired to take notice, that by Letterees are meant persons restored to land by virtue of the letters of king Charles the second. And by Nominees, such as were restored to their land by being named in the act of settlement. The papists *per proviso* were such as had provisoes in that act for their lands. By the 49 officers is meant such commission-officers under the King, who served in Ireland before *anno* 1649.

THE

POLITICAL ANATOMY OF IRELAND.

1672.

CHAP. I.

Of the lands in Ireland.

THERE are in Ireland, Irish measure, (whereof 121 acres make 196 English) about	acres. 10500000

N. B. *A perch or pole Irish measure, is 21 foot; the acres are measured by that perch, as the acres in England are measured by a perch of 16 foot and half.*

		Acres.
Of the ſaid lands the highways, rivers, loughs, unpaſſable bogs, rocks, and ſhrubs take up about		1500000
Of very coarſe land, commonly called unprofitable there are about		1500000
Conſequently of good meadow, arable, and paſture		7500000
Which make in all		10000000
Of which *anno* 1641, there did belong to papiſts and ſequeſtered proteſtants		5200000
To the church, viz. biſhops, deans, chapters, and glebes		300000
To the proteſtants planted by queen Elizabeth and king James		2000000
In all		7500000

Of the 5200000 belonging to papiſts and ſequeſtered proteſtants *anno* 1641.

	Acres.	
There was reſtored to 26 who proved their conſtant good affection *per eſt*	30000	
To his grace the duke of Ormond	130000	200000
To the lord Inchiquin, lord Roſcommon, and others	40000	
		200000

Brought

		Acres.
Brought over		200000
To innocent papiſts, near		1200000
To the church, near	20000	140000
To the duke of York	120000	
To letterees and nominees Iriſh-men	60000	420000
To papiſts *per proviſo* with colonel Vernon	360000	
Left in the common ſtock of coarſe land	80000	470000
To adventurers	390000	
To ſoldiers ſince 49.		1410000
To the 49 officers	280000	550000
To proteſtants *per proviſo*	270000	
Upon tranſplantation decrees		700000
Reſtored to mortgagees proteſtants, about		100000
		5200000
Of all the lands ſeized by the uſurpers, the papiſts have recovered about		2340000
The new proteſtants and churches additions		2400000
Of a more indifferent nature, *ut ſupra*		460000
In all		5200000

	Acres.
Mem. The proteſtants in Connaught purchaſed of the tranſplanters *per* eſtimate.	80000
Wherefore of the whole 7500000 acres of good land, the Engliſh and proteſtants and church have this Chriſtmas 1672.	5140000
And the Iriſh have near half as much, viz.	2280000
	7500000

	£.
Remains in the common ſtock, near	80000
The ſaid 7500000 acres of good land, and 1500000 of coarſe, making together 9000000 is worth *per annum*.	900000
Out of which the king's quit-rents, old-rents, and compoſition,	90000
Reſts	810000
The tythes whereof are one fifth, viz.	162000
Reſts	648000
The benefit of leaſes, and the value of tenants improvements upon the ſaid lands, is one third, viz.	216000
For the landlords	432000
If the whole 7500000 be clearly worth but 432000 l. *per annum*, then the 2520000 gained by the rebellion is worth but about one third thereof (the 80000 in the common ſtock being worth but very little,) viz.	144000

And

	£.
And the adventurers and ſoldiers lands, who ſerved ſince 1649, worth about three fourths of the ſame, viz.	108000
And the ſaid ſoldiers alone three fifths of the whole, viz.	86400 *per ann.*

Mem. That by the ſucceſſes of the army, who ſerved ſince 1649, and who have 85400 l. *per annum*, for their labour, his Majeſty hath received the ſeveral advantages following, viz.

1. Augmented the church, the duke of York, and by proviſoes,	770000 Acres.
2. Hath paid the adventurers, and 49 officers, beſides houſing in walled towns,	670000 Acres.
3. Gained a revenue worth above 80000 l. *per annum*, and 15 years purchaſe,	£. 1200000
4. Gained the years value, &c. worth	300000

5. Hath freed himſelf from the articles of 1648 made with the Iriſh.

6. Reſtored many of his friends to their own eſtates.

	£.
The value of the ſaid army's lands at ten years purchaſe, is 854000 l. Out of which deduct a years value and charge, there remains now but	700000 For all their pay and hazard

Mem. That whereas until *anno* England always ſent money and other ſupplies into Ireland, now the revenue is 200000 l. and the charge civil and military but 170000 l. which is the gain or eaſe of England.

	£.
The debentures of commiſſion officers, who ſerved eight years till about December 1649, comes to	1800000
Wherefore the pay of private ſoldiers comes to	5400000
	7200000

The eighth part whereof is 900000l. The one half whereof being for foot, was 450000l. *per ann.* which at 15l. each, maintains 30000 foot, and the reſt 15000 horſe, general officers, and train of artillery included; ſo as there was a Britiſh army, for eight years, of at leaſt 45000 men.

The army which reduced the rebellion, did *anno* 1652, conſiſt of near 35000 men, as *per* debentures.

The Iriſh tranſported into foreign parts between 1651 and 1654, were 34000 men.

The Iriſh army could not but be more than double to the Engliſh.

The claimants of land, or the number of proprietors before the war was ———.

Of all that claimed innocency 7 in 8 obtained it.

The reſtored perſons by innocence and proviſo have more than what was their own *anno* 1641, by at leaſt one fifth.

They have gotten by forged feofments of what was more than their own, at leaſt one third.

Of thoſe adjudged innocents, not one in twenty were really ſo.

CHAP.

CHAP. II.

Of people, houſes, and ſmoaks; their number, differences, and values.

THERE are of people, men, women and children.	220000
There are of families	200000
Of ſmoaks	250000
viz.	
Of the people, there are Engliſh	200000
Of Papiſts	800000
Of non-papiſts	300000
Scots	100000
Iriſh	800000
	2200000

The Scots are preſbyterians, and the Iriſh, papiſts. But the Engliſh are above 100000 legal proteſtants or conformiſts, and the reſt are preſbyterians, independants, anabaptiſts and quakers.

Of the families.

Such as have no fixed hearths, are	160000
Such as have but one chimney	24000
Such as have more than one	16000

Of ſmoaks.

The ſingle ſmoak-houſes are *ut ſupra*	184000
And thoſe houſes that have more than one chimney, have but one with another above four in each houſe, viz. in all	66000
	250000
The number of them of all degrees, who paid poll-money, *anno* 1661, was about	360000
Dublin hath houſes of more than one ſmoak	3400
Other cities, towns, and corporations of the like	6000
The reſt of Ireland of the like	6600

And of ſmiths forges, near the ſame number, or rather one fifth more.

A more particular account of the houſes in Ireland, which have more than one chimney, viz.

The caſtle of Dublin hath chimneys	125
The earl of Meath's houſe in Dublin	27
The houſes of Dublin which have above 10, are	164

There be *(ut ſupra)* 160000 cabins without chimneys, whoſe worth are not reckoned; but as for the others, we rate as follows, viz. houſes of

1 chimney	24000 at 5 *l.* each	120000 *l.*
of 2 and 3	6800 at 40	272000
4 5 6	5600 at 100	560000
7 8 9	2500 at 300	750000
10 11 12	700 at 600	420000
13 14 15 16 17 18 19 20	400 at 1000	400000
		2522000

Brought

Brought over	2522000 *l.*
For 20 tranſcendental-houſes, *per* eſtimate	78000
Total	2600000
Memorandum, That not one eighth part of the value of all thoſe houſes do belong to other than Engliſh proteſtants	325000
To the Engliſh	2275000

There are of non-papiſts in Dublin	28000
In the other cities, towns, corporations, &c.	72000
In the country	100000
	2000000

There is in nature but one in 500 at moſt who are blind, lame, and under incurable impotence; ſo there are not above 2000 in Ireland, whom 120000 *l.* would maintain without ſcandal.

The number of young children under 7 years old, and not fit for labour, is one fourth of the whole, viz.	275000
The ſaid number of impotents	2000
The number of ſoldiers	3000
	280000
The maſters and miſtreſſes of 360 families, wherein are above ſix ſmoaks, are	7200
Their ſervants to their perſons	14400
The ſervants to the perſons of ſuch as live in 5600 families of 4 5 6 ſmoaks, are	11200
Servants in families of 2 and 3 ſmoaks	6800
Miniſters, ſtudents, &c.	400
	320000

People

People in all		1110000
Of above 6 years old	704	
16	462	
26	297	
36	198	
46	132	
56	88	
66	77	
So as there are in Ireland fit for trade		780000
Which are employed as followeth, viz.		
For the tillage of 500000 acres of land for corn, men and their wives		100000
For cowherds and ſhepherds to cattle, grazing upon ſeven millions of acres, viz. ſix millions of black cattle, or their equivalent in horſes and ſheep, men and their wives		120000
		220000
By the other ſide		220000
Employed about the taking of 5000 hogſheads of pilchards, boats, nets, hewers, &c. men and women		1000
Employed about making 1000 tuns of iron, men and women		2000
Smiths as by account, men and women		15000
Their ſervants to the trade		7500
Taylors and their wives		45000
Carpenters and maſons, and their wives		10000
Shoemakers and their wives		20000
and ſervants		2500
		323000

Millers

Brought over	323000
Millers and their wives	1600
Workers of wool, and their wives	30000
Tanners and curriers, and their wives	10000
	364600
Trades of fancy and ornament, and their wives	48400
	413000
Wherefore if the preſent employment be performed with 413000 perſons, it follows that there are to ſpare for other uſes	400000

Memorandum, That in Dublin, where are but 4000 families, there are at one time 1180 ale-houſes, and 91 public brew-houſe, viz. near one third of the whole: it ſeems, that in Ireland, there being 200000 families, that about 60000 of them ſhould uſe the ſame trade.

And conſequently, that 180000, viz. 60000 men, as many women, and as many ſervants do follow the trade of drink.	180000
So as there are yet to ſpare, who are caſherers and fait-neants	220000
	400000
Whereas it is manifeſt, that 2 thirds of the ale-houſes may be ſpared, even altho' the ſame quantity of drink ſhould be ſold; then there will be further to ſpare of them	120000 and 220000
	340000

Having

Having ſhewed that 340000 of ſpare hands are in Ireland, it follows to find employments for them, which is at 7 l. *per* head to earn *per ann.*	2380000

This employment may be either in order to local wealth, or univerſal wealth.

	£.
Local wealth I underſtand to be the building of 168000 ſmall ſtone-wall houſes, with chimneys, doors, windows, gardens and orchards, ditched and quickſetted; inſtead of the lamentable ſties now in uſe; the which may coſt 3 l. each, in all	544000
The planting 5 millions of fruit-trees at 4 d. each	83000
Planting 3 millions of timber-trees upon the bounds and mears of every denomination of lands at 3 d. each	360000
Of incloſures and quickſets one million of perches at 12 d. *per* perch	50000
Fortifying the city of Dublin	30000
Building a new palace for the chief governor	20000
Making there a mold for ſhipping	15000
Making ſeveral rivers navigable and mending highways	35000
Building of 100 churches, at 200 l. each	20000
Workhouſes of ſeveral ſorts, tan-yards, fiſhing-crofts, rape-mills, allom and copperas-works, as alſo madder, lead, ſalt, &c.	50000

In

In order to money and univerſal wealth.

	£.
For ten thouſand tuns of ſhipping	100000
For a ſtock of wool, hemp, flax and raw-hides for one years work	400000
For the labour of men to manufacture the ſame	1000000

CHAP. III.

Of the church and benefices.

IF half the non-papiſts are non-conformiſts, then there are but 50000 legal proteſtants in Dublin and all other cities, towns, &c. which require but 50 preaching miniſters.

And if there are but 50000 legal proteſtants in the reſt of Ireland, they require but 100 miniſters, at 500 to a flock, whereof one third, viz. 16600, are children.

If there be in England and Wales about 9000 pariſhes, and under 30 biſhops, then every biſhop muſt have above 300 parſons in his charge.

So as one biſhop in Ireland is more than 30 in England.

Wherefore 25000 l. would afford 150 l. *per annum* of each of 150 miniſters, and 2500 l. to the biſhop.

The value of the church-lands and appropriate tithes, is *per annum* above the king's rent due out of them.

If 100 miniſters can ſerve all Ireland, they muſt have precincts of near 13 or 14 miles ſquare, and conſequently they muſt be itinerants, and as lecturers

on

on week-days; and other honeſt ordained men muſt be prieſts.

If 150, nay, if 250 miniſters would ſerve all Ireland, then 10 *per annum*, will ſupply their mortality: and conſequently a nurſery of 10 will ſend forth 10 yearly of 10 years ſtanding. Perhaps the nurſery need not be above half ſo large.

CHAP. IV.

Concerning the late rebellion.

THE number of the people is now *anno* 1672, about 1100000, and was *anno* 1652 about 850000, becauſe I conceive that 80000 of them have in 20 years increaſed by generation, 70000 by return of baniſhed and expelled Engliſh; as alſo by the acceſs of new ones, 80000 of new Scots, and 20000 of returned Iriſh, being in all 250000.

Now if it could be known what number of people were in Ireland *anno* 1641, then the difference between the ſaid number, and 850000, adding unto it the increaſe by generation in 11 years, will ſhew the deſtruction of people made by the wars, viz. by the ſword, plague, and famine occaſioned thereby.

I find, by comparing ſuperfluous and ſpare oxen, ſheep, butter and beef, that there was exported above one third more *anno* 1664, than in 1641, which ſhews there were one third more of people, viz. 1466000; out of which ſum take what were left *anno* 1652, it appears that there were 616000 deſtroyed by the rebellion.

Whereas the preſent proportion of the Britiſh is as 3 to 11; but before the wars the proportion was leſs, viz. as 2 to 11; and then it follows that the number

number of Britiſh ſlain in 11 years was 112000 ſouls; of which I gueſs two thirds to have periſhed by war, plague and famine. So as it follows that 37000 were maſſacred in the firſt year of tumults: ſo as thoſe who think 154000 were ſo deſtroyed, ought to review the grounds of their opinion.

It follows alſo, that above 504000 of the Iriſh periſhed, and were waſted by the ſword, plague, famine, hardſhip and baniſhment, between the 23d of October 1641, and the ſame day 1652.

Wherefore thoſe who ſay, that not one 8th of them remained at the end of the wars, muſt alſo review their opinions; there being by this computation near 2 3ds of them; which opinion I alſo ſubmit.

There were tranſported of them into Spain, Flanders, France, 34000 ſoldiers; and of boys, women, prieſts, &c. no leſs than 6000 more, whereof not half are returned.	40000
If Ireland had continued in peace for the ſaid 11 years, then the 1466000 had increaſed by generation in that time to 73000 more, making in all 1539000, which were by the ſaid wars brought *anno* 1652, to 850000, ſo that were loſt 689000 ſouls, for whoſe blood ſome body ſhould anſwer both to God and the king.	689000

Anno 1650, there were before the great plague, above one million of people, viz. 2 and a half more than in London *anno* 1665. But in that year there died in London by account 97000 people, but really were 110000.

Wherefore

Wherefore if the plague was no hotter in Ireland than in England, there must have died in Ireland 275000. But 1300 dying in a week in Dublin, the plague of London was but two thirds as hot; wherefore there died in Ireland	450000

So as substracting 412000, 500 dying of the plague, and 37 massacred English, it follows that 167000 died in 11 years by the sword and famine, and other hardships. Which I think not incredible; for supposing half the number, viz. 87000 died in 11 years of famine and cold, transportation to Spain and Barbadoes, &c. it is not hard to believe, that the other 87000 perished by the sword, when the British had armies of near 40000 men, and the Irish of near double, sometimes on foot.

Anno 1653, debentures were freely and openly sold for 4s. and 5s. *per* lb. And 20s. of debenture, one place with another, did purchase two acres of land; at which rate all the land of Ireland, if it were 8 millions of profitable acres, might have been had for a million of money, which *anno* 1641, was worth above 8 millions.	1000000
The cattle and stock which *anno* 1641, was worth above 4 millions, reckoning one beef of 20s. value, or the equivalent in other stock to two acres; but *anno* 1652, the people of Dublin fetched meat from Wales, there being none here, and the whole cattle of Ireland not worth	£. 500000

Corn was then at 50s. *per* barrel, which is now, and was 1641, under 12.

The

The houses of Ireland, *anno* 1641, was worth two millions and a half; but *anno* 1652, not worth one fifth of the same	£. 500000
The value of people, men, women and children in England, some have computed to be 70l. *per* head, one with another. But if you value the people who have been destroyed in Ireland, as slaves and negroes are usually rated, viz. at about 15l. one with another; men being sold for 25l. and children 5l. each; the value of the people lost will be about	10355000
The forces kept on foot by all parties for the said 11 years, were at least 80000 horse and foot, (for even *anno* 1652, the English were 35000 and 34000 Irish transported) the charge whereof, train of artillery, and general officers included, cannot be less than 15l. *per* head *per annum*, which for 11 years comes to	13200000
The superlucration above expressed, of all which adult men (among which were no women nor children) cannot be reckoned at less than 5l. *per* head, or one third of the last mentioned sum, viz.	4400000

Wherefore the effects of the rebellion were these in pecuniary value, viz.

By loss of people	10335000
By loss of their superlucration of soldiers	4400000
	14735000

	£.
Brought over	14735000
By the ſuperlucration of the people loſt, at 10 l. *per* head for the whole 11 years, deducting 800000 ſoldiers	6000000
By impairing of the worth of lands	11000000
Of the ſtock	3500000
Of the houſing	2000000
	37235000

And the 20 years rent of all the lands forfeited, by reaſon of the ſaid rebellion, viz. ſince the year 1652 to 1673, hath not fully defrayed the charge of the Engliſh army in Ireland for the ſaid time; nor doth the ſaid rents at this day do the ſame with half as much more, or above 100000 l. *per annum* more.

And the adventurers after 10 years being out of their principal money, which now ought to be double by its intereſt, they ſold their adventures for under 10 s. *per* pound, *anno* 1652, in open and free market.

The number of landed Iriſh papiſts, or freeholders before the wars, was about 3000; whereof, as appears by 800 judgments of the court of claims, which ſat *anno* 1663, upon the innocence and effects of the Iriſh, there were not above a 7th part or 400 guilty of the rebellion, unto each of whom I allow 20 followers, which would have made up an army of 8000: but by the 49 officers account, the Britiſh army before 1649, muſt have been about 40000 men; upon whom the ſaid 8000 innocent Iriſh ſo prevailed, as that the peace ended in the articles of 1648. By which the Iriſh were made at leaſt equal partners with his majeſty in the government of Ireland; which ſheweth, that the Iriſh were men of admirable

admirable ſucceſs and courage: unleſs we ſhould rather think, that the ſaid court of claims were abuſed by their perjuries and forgeries, which one would think, that a nation, who cauſed the deſtruction of ſo many thouſand lives for the ſake of God and religion, ſhould not be ſo guilty of.

The eſtates of the Iriſh before the wars, was double to that of the Engliſh; but the number and natural force of the Iriſh quintuple to that of the Engliſh.

The cauſe of the war was a deſire of the Romiſts to recover the church-revenue, worth about 110000 l. *per annum*, and of the common Iriſh, to get all the Engliſhmens eſtates; and of the 10 or 12 grandees of Ireland, to get the empire of the whole. But upon the playing of this game or match upon ſo great odds, the Engliſh won, and have (among and beſides other pretences) a gameſter's right at leaſt to their eſtates. But as for the bloodſhed in the conteſt, God beſt knows who did occaſion it.

CHAP. V

Of the future ſettlement of Ireland, prorogation of rebellions, and its union with England.

THE Engliſh invaded Ireland about 500 years ſince; at which time, if the Iriſh were in number about 1200000. *Anno* 1641 they were but 600000 in number, 200 years ago, and not above 300000 at the ſame time of their invaſion; for 300000 people will, by the ordinary courſe of generation, become 1200000 in 500 years; allowance being made for the extraordinary effects of epidemical diſeaſes, famines, wars, &c.

There is at this day no monument or real argument that, when the Irish were first invaded, they had any stone-housing at all, any money, any foreign trade, nor any learning but the legend of the saints, psalters, missals, rituals, &c. viz. nor geometry, astronomy, anatomy, architecture, enginery, painting, carving, nor any kind of manufacture, nor the least use of navigation; or the art military.

Sir John Davys hath expressed much wit and learning, in giving the causes why Ireland was in no measure reduced to English government, till in queen Elizabeth's reign, and since; and withal offers several means, whereby what yet remains to be done, may be still effected.

The conquest made by the English, and described in the preamble of the act of parliament past *anno* 1662, for the settlement of Ireland, gave means for any thing that had been reasonable of that kind; but their forfeiters being abroad, and suffering with his majesty from the same usurping hands, made some diversion.

Wherefore *(rebus sic stantibus)* what is now to be done is the question, viz. what may be done by natural possibility, if authority saw it fit?

Some furious spirits have wished, that the Irish would rebel again, that they might be put to the sword. But I declare, that motion to be not only impious and inhuman, but withal frivolous and pernicious even to them who have rashly wished for those occasions.

That the Irish will not easily rebel again, I believe from the memory of their former successes, especially of the last, had not many providences interposed; and withal from the consideration of these following particulars, viz.

1. That

1. That the British protestants and church have three fourths of all the lands; five sixths of all the housing; nine tenths of all the housing in walled towns and places of strength, two thirds of the foreign trade. That 6 of 8 of all the Irish live in a brutish, nasty condition, as in cabins, with neither chimney, door, stairs, nor window, feed chiefly upon milk and potatoes, whereby their spirits are not disposed for war. And that although there be in Ireland 8 papists for 3 others; yet there are far more soldiers, and soldier-like men of this latter and lesser number, than of the former.

That his majesty, who formerly could do nothing for, and upon Ireland, but by the help of England, hath now a revenue upon the place, to maintain, if he pleases, 7000 men in arms, besides a protestant militia of 25000 more, the most whereof are expert in war.

That the protestants have housing enough within places of strength within 5 miles of the sea-side, to receive and protect, and harbour every man, woman, and child belonging to them, and have also places of strength of their own properly so situate in all parts of Ireland, to which they can easily travel the shortest day of the year.

That being able to secure their persons, even upon all sudden emergencies, they can be easily supplied out of England with food sufficient to maintain them, till they have burnt 160000 of their afore-described cabins, not worth 50000l. destroyed stacks and haggards of corn, and disturbed their tillage, which the embodied British can soon and easily atchieve.

That a few ships of war, whereof the Irish have none, nor no skill or practice of navigation, can hinder their relief from all foreign help.

That a few foreigners can help them if they would. But that none, not the king of France, can gain advantage by ſo doing, even though he ſucceeded. For England hath conſtantly loſt theſe 500 years by their medling with Ireland. And at this day, than when Ireland was never ſo rich and ſplendid, it were the advantage of the Engliſh to abandon their whole intereſt in that country; and fatal to any other nation to take it, as hath been elſewhere (as I think) demonſtrated; and the advantage of the landlords of England, to give them the equivalent of what they ſhould ſo quit out of their own eſtates in England.

Laſtly, let the Iriſh know, that there are, ever were, and will be men diſcontented with their preſent conditions in England, and ready for any exploit and change, more than are ſufficient to quell any inſurrection they can make and abide by.

Wherefore, declining all military means of ſettling and ſecuring Ireland in peace and plenty, what we offer ſhall tend to the tranſmuting one people into the other, and the thorough union of intereſts upon natural and laſting principles; of which I ſhall enumerate ſeveral, though ſeemingly never ſo uncouth and extravagant.

1. If Henry the 2d, had or could have brought over all the people of Ireland into England, declining the benefit of their land; he had fortified, beautified, and enriched England, and done real kindneſs to the Iriſh. But the ſame work is near four times as hard now to be done as then; but it might be done, even now, with advantage to all parties.

Whereas there are now 300000 Britiſh, and 800000 papiſts, whereof 600000 live in the wretched way above mentioned: if an exchange was made of but about 200000 Iriſh, and the like number of Britiſh

Britiſh brought over in their rooms, then the natural ſtrength of the Britiſh would be equal to that of the Iriſh; but their political and artificial ſtrength three times as great; and ſo viſible, that the Iriſh would never ſtir upon a national or religious account.

3. There are among the 600000 above-mentioned of the poor Iriſh, not above 20000 of unmarried marriageable women; nor would above two thouſand *per annum*, grow and become ſuch. Wherefore if one half of the ſaid women were in one year, and the other half the next tranſported into England, and diſpoſed one to each pariſh, and as many Engliſh brought back and married to the Iriſh, as would improve their dwelling but to an houſe and garden of 3l. value, the whole work of natural tranſmutation and union would in 4 or 5 years be accompliſhed.

The charge of making the exchange would not be 20000l. *per annum*, which is about 6 weeks pay of the preſent or late armies in Ireland.

If the Iriſh muſt have prieſts, let the number of them, which is now between 2 and 3 thouſand ſecular and regulars, be reduced to the competent number of 1000, which is 800 ſouls to the paſtorage of each prieſt; which ſhould be known perſons, and Engliſhmen, if it may be. So as that when the prieſts, who govern the conſcience, and the women, who influence other powerful appetites, ſhall be Engliſh, both of whom being in the boſom of the men, it muſt be, that no maſſacring of Engliſh, as heretofore, can happen again. Moreover, when the language of the children ſhall be Engliſh, and the whole œconomy of the family Engliſh, viz. diet, apparel, &c. the tranſmutation will be very eaſy and quick.

Add hereunto, that if both kingdoms were under one legiſlative power and parliament, the members whereof ſhould be proportionable in power and wealth of each nation, there would be no danger ſuch a parliament ſhould do any thing to the prejudice of the Engliſh intereſt in Ireland; nor could the Iriſh ever complain of partiality, when they ſhall be freely and proportionably repreſented in all legiſlatures.

The inconveniencies of the not-union, and abſurdities ſeem to be theſe, viz.

1. It is abſurd, that Engliſhmen born, ſent over into Ireland by the commiſſion of their own king, and their ſacrificing their lives for the king's intereſt, and ſucceeding in his ſervice, ſhould therefore be accounted aliens, foreigners, and alſo enemies, ſuch as were the Iriſh before Henry the VIIth's time; whom if an Engliſhman had then killed, he had ſuffered nothing for it; for it is but indulgence and connivance, that now the ſame is not ſtill in force. For ſuch formerly was the condition of Iriſhmen; and that of Engliſhmen is now the ſame, otherwiſe than as cuſtom has relieved them.

It is abſurd, that the inhabitants of Ireland, naturally and neceſſarily bound to obey their ſovereign, ſhould not be permitted to know how, or what the ſame is, *i. e.* whether the parliament of England, or that of Ireland; and in what caſes the one, and in what the other. Which uncertainty is or may be made a pretence for any diſobedience.

It is abſurd, that Engliſhmen in Ireland ſhould either be aliens there, or elſe to be bound to laws, in the making whereof they are not repreſented.

It

It is abſurd if the legiſlative power be in Ireland, that the final judgment of cauſes between man and man, ſhould be in England, *viz.* the writs of error ſhould remove cauſes out of Ireland, to the king's bench in England. That the final determination of admiralty cauſes, and of ſome cauſes eccleſiaſtical, ſhould be alſo ended in England; nor that men ſhould know whether the chancery of England have juriſdiction in Ireland; and whether the decrees of chancery in one chancery can be executed in the other.

As for inconveniences, it is one, that we ſhould do to trade between the two kingdoms, as the Spaniards in the Weſt-Indies do to all other nations; for which cauſe all other nations have war with them there.

And that a ſhip trading from Ireland into the iſlands of America, ſhould be forced to unlade the commodities ſhipt for Ireland in England, and afterwards bring them home; thereby neceſſitating the owners of ſuch goods to run unneceſſary hazard and expences.

It is inconvenient that the ſame king's ſubjects ſhould pay cuſtoms as aliens, paſſing from one part of the ſame their own king's territories to another.

The chief objection againſt the remedy of theſe evils is;

That his Majeſty would by the union loſe much of his double cuſtoms. Which being true, let's ſee what the ſame amounts unto; and if it be ſufficient to hinder the remedy of theſe evils, and if it be irreparable by ſome other way.

Anno. 1664. which was the beſt year of trade that hath been theſe many years in Ireland, when neither plague nor wars impeached it, and when men were generally diſpoſed to ſplendor and liberality, and when

when the act for hindering cattle coming out of Ireland into England, was not yet made; nor that made for unlading in England ships bound from America into Ireland; I say, in that year the customs upon exported and imported commodities, between Ireland and England, was but —— —— —— —— not but one sixth thereof, which since, how easily may it be added to the other charges upon England and Ireland, which are together perhaps 150,000l. *per annum.*

2. If it be for the good of England to keep Ireland a distinct kingdom, why do not the predominant party in Parliament (suppose the Western members) make England beyond Trent another kingdom, under commerce, and take tolls and customs upon the borders? or why was there ever union between England and Wales, and good effects and fruits whereof were never questioned? And why may not the entire kingdom of England be farther cantonized, for the advantage of parties?

As for the practice; the peers of Ireland assembled in parliament, may depute so many of their number, as make the one sixth part of the peers of England, to be called by writ into the lord's house of England: and the commons in Ireland, assembled in like manner, may depute the like proportion of other members to sit with the commons of England, the king and that house admitting of them.

But if the parliament of England be already the legislative power of Ireland; why may they not call a competent number out of Ireland, as aforesaid, or in some other more convenient manner?

All these shifts and expedients are necessary but for the first time, until the matter be agreed upon by both nations, in some one parliament.

'Tis

'Tis supposed that the wealth of Ireland is about the eighth or tenth part of that of England; and the King's revenue in both kingdoms seems about that proportion.

CHAP. VI.

Of the government of Ireland.

THE government of Ireland is by the King, 21 bishops (whereof four are arch-bishops) and the temporal peers; whereof some part, —— — —— by reason of the late rebellion, do not sit in parliament.

By about 3000 freeholders, and the members of about 100 corporations, the university of Dublin reckoned for one, represented in the house of commons, by about 270 knights, citizens, and burgesses.

The parliament so constituted, have a negative upon any law that the lord lieutenant and council shall offer to the king, and which the King and his council in England shall under the great seal remit to the said parliament.

The sheriffs of counties, and of cities and counties in Ireland are 40, finally appointed by the lord lieutenant, each of which hath about ten bailiffs.

The chief governor, called sometimes lord lieutenant, sometimes lord deputy, sometimes lords justices, with a council, at this time consisting of about 50 members, do govern in all matters belonging to the peace, prerogative, &c.

There be five courts, viz. a chancery, consisting of a lord chancellor, master of the rolls, and two, three, or four salariated masters of chancery. The King's-bench, of a lord chief justice, and two other judges,

judges. The common-pleas of the like: the exchequer, of a lord chief baron, and two other barons, with the treasurer and chancellor of the exchequer: and a prerogative, whereof the primate of Armagh is judge.

There is also a palatinate court in Tipperary, whereof the duke of Ormond is lord of the liberties and regalities to it belonging. There is also a court of admiralty: every bishop hath also two courts. And there have been formerly and lately (but now *an.* 1672. suspended) a presidency of Munster, and another of Connaught, who meddle not with life or limb, nor titles of land.

There is also a court-marshal, for the affairs of the army, who in times of peace often transmit accused persons to the civil power.

To all these courts do belong several officers and counsellors of law, whereof I reckon those of the first classes gain by estimation about 600 l. *per ann.* each ——— the second gain about 300 l. *per ann.* and the third gain not above 100l. *per ann.* There are also ——— sworn attornies, gaining about 120l. *per ann.* one with another.

There are in Ireland about 950 justices of the peace, appointed by the lord chancellor; an head constable for each barony or hundred, being 252; and a petty constable for each parish, whereof are about 2278.

The ecclesiastical government is by archbishops, bishops, archdeacons, deans of cathedral churches, in all which there are now actually but one quire entire, and that in Dublin, serving both at Christ-church and St. Patrick's. And the parsons, vicars, and curates for the protestant religion, are in all Ireland at this day near five hundred, and about half the tythes are impropriate, and belonging to lay-men.

This

This is the state of the external and apparent government of Ireland, so far as it concerns the number of species of persons managing the same. But the internal and mystical government of Ireland is thus, *viz.*

1. There are always about twenty gentlemen of the Irish nation and popish religion, who by reason of their families, good parts, courtly education and carriage, are supported by the Irish to negotiate their concernments at the court of England, and of the vice-roy in Ireland.

These men raise their contributions by the priests (who actually and immediately govern the people) The priests are governed by at least 24 Romish bishops, all of whom have a long time been conversant in France, Spain, Italy, Germany, England, where as chaplains and almoners, &c. they have made an interest with the governing men and ministers of state in those several kingdoms, and have obtained some benefits and preferments from them.

So as the body of the Irish papists (being about 800,000 whereof near 700,000 do live in wretched cabbins, without chimney or window) are governed by about 1000 secular priests, and 2500 friars and regulars of several orders; whereof most are Franciscans, next Dominicans and Augustins, but few Capuchines and Jesuits or Carthusians. These, I say, are governed by their respective bishops and superiors, whom the ministers of foreign states do also govern and direct.

So as upon the whole matter, the Irish, who are the bulk of the nation, are governed indirectly by foreign power: and so are the aforenamed lay-patriots, their support coming from the clergy constituted as aforesaid, and who do notoriously exercise their spiritual jurisdiction in Ireland: and do also exert a temporal

poral power, by prevailing with papiſt juſtices of the peace, to ſend ſuch to goal as are diſobedient to the clergy, upon feigned or frivolous complaints, which they cauſe to be brought againſt them.

The judges aforenamed, all but the chancellor, go circuits, whereof there are five twice every year, excepting only in the county of Kerry.

There is an univerſity at Dublin, but lying for the moſt part within one college, wherein are a provoſt and ſeven ſenior and ruling fellows; nine junior fellows; ſixty ſcholars; and at this time———commoners and other ſtudents.

There was about the year 1669 erected a college of phyſicians, conſiſting of a preſident, and 13 fellows.

There are belonging to the prerogative, archdeacons courts, court-martial and admiralty courts, not above 10 advocates, and 30 proctors.

There are in the city of Dublin a lord mayor, 2 ſheriffs, 24 aldermen, 48 ſheriffs peers, and 96 of the common council. There are beſides, companies or corporations of tradeſmen.

There is lately inſtituted an hoſpital for poor children, not yet fully perfected nor endowed.

There is alſo an hoſpital for ſick, lame, and old ſoldiers, but without endowment, and ſtanding but at diſcretion and pleaſure.

There are in and near Dublin, three publick priſons, and one houſe of correction.

Laſtly, I muſt intimate, that the footman-ſhip for which the Iriſh 40 years ago were very famous, is now almoſt quite loſt among them, every man now keeping a ſmall garran to ride on, unleſs in ſuch rocky and craggy places, where 'tis eaſier to go a foot than to ride.

CHAP.

CHAP. VII.

Of the militia and defence of Ireland.

THERE be in Ireland, as elſewhere, two militias; one are the juſtices of peace, their militia of high and petty conſtables; as alſo the ſheriffs militia of his ſervants and bailiffs, and *poſſe comitatus* upon extraordinary occaſions.

Of theſe all together there are in Ireland near 3000; all of which are bound within their ſeveral diſtricts, there to act, and not elſewhere.

There is, or hath lately been an army in Ireland, of about thirty troop of horſe, and ſixty companies of foot, with a regiment of guards at Dublin, as a life-guard for the lord lieutenant, making in all about 5000 men.

There is alſo a proteſtant militia, of about 24000 men, *viz.* about 10000 horſe and the reſt foot.

The people of Ireland are all in factions and parties, called Engliſh and Iriſh, proteſtants and papiſts: tho' indeed the real diſtinction is veſted and diveſted of the land belonging to papiſts, *anno* 1641. Of which the Iriſh that are veſted by reſtoration, ſeem rather to take part with the diveſted. And the chief pique which the popiſh clergy have at the proteſtant is, that they have the church livings and juriſdictions; for the exerciſe of their function they have moſt freely, and had, when they undertook their project in 1641. The differences between the old Iriſh and old Engliſh papiſts are aſleep now, becauſe they have a common enemy.

The

The old proteſtants of Queen Elizabeth and King James's plantation (till of late) did not much love the new Engliſh, who came over ſince 1641, or rather ſince 1646 and 1648, becauſe they envied the great ſhares which they had gotten of the forfeited lands from the late uſurpers. But now they alſo are well enough together, ſince the ſaid old proteſtants have had good proviſo's in the acts of ſettlement, and ſatisfaction for their ſervice before June 1649, and ſince the church revenues have been augmented by the forfeitures; but chiefly, for that the ſaid old proteſtants have all the power and preferments, civil, military, and eccleſiaſtical.

Of the new Engliſh, ſome are conformiſts, others not: and ſome have fallen in with other parties, and others not.

Of the old proteſtants, there are alſo parties, I cannot ſay factions, chiefly denominated by the names of their families, as the Butlers and Fitz-Geralds were of old.

But to return: the chief factions are the veſted and diveſted of forfeited lands; all Iriſh and papiſts generally fearing the latter, and moſt Engliſh and proteſtants the former, as appears in all juries and teſtimonies given where the lands or lives of one or other are concerned. Now in ſome counties, as in Kerry, many forfeitures happened, and few reſtorations, and there alſo few Engliſh were ever planted, nor can well endure to live: ſo as the firſt ſort of militia in theſe and other like counties, are Iriſh papiſts, diveſted and diſcontented perſons. Whereby the few Engliſh there can have no juſtice executed, for want of hands wherewith to do it: nor can they eaſily get indifferent juries, but that the ſheriffs are Engliſh for the moſt part, and moſt commonly proteſtants. In which caſe, ſome have been of opinion, that the other militia,

militia, namely, the army, may both in law and reaſon ſupply this defect, in times when there is not occaſion for them, to guard the land from invaſion and rebellion. For why might not thirty ſheriffs be taken out of one hundred and twenty officers of the army, viz. ſixty captains and lieutenants of horſe, and ſixty captains of foot? And why may not ſuch be as reſponſible for executing juſt ſentences as any other? And what terror is there in a force which a bailiff uſeth, more than in that which one called a ſoldier carries with him? And why ſhould the military officer or ſheriff uſe more force or terror than to make the debtor or malefactor anſwer the law, and obey the ſentence of a civil court? And is it not more convenient and eaſy in great riotous contempts, to bring a troop or company, whoſe trade it is to uſe arms and apply force deſterouſly, than to uſe the *poſſe comitatus*; that is, to call abundance of men from their labour and calling, to attempt things of danger, which they do not underſtand? Moreover, if the general can quarter the army where he pleaſes, and that the ſheriffs or conſtable can, in their reſpective precincts, call whom he pleaſes to his aſſiſtance; then the general can cauſe ſuch a competent force to be quartered in thoſe thin peopled counties. And the ſheriffs and juſtices can call ſuch to their aſſiſtance, excepting where ſuch ſoldiers are in formal garriſons upon actual duty, or in other caſes to be agreed upon between the civil and military powers ſo called in, although there can be no country without force, nor any army without a policy and diſcipline. But of this let the lawyers talk further.

As for the military force of Ireland, vulgarly and properly ſo called, 1. The ſtanding army is ſuch as the preſent revenue can well maintain, which perhaps is, or very lately was about ſix thouſand, and is

every year or other changed, as his Majesty seems best. 2. The protestant militia now already established and formed, is about 24 or 25 thousand men, most of them already experienced in the wars of Ireland.

The third, of grand force against foreign invasions, I conceive may be seventy thousand men of the best affected, and least pope affected Irish; for so many I conceive the thirty thousand of the standing army and present militia could well officer and command. Now that one hundred thousand may be spared to send as soldiers in a time of extremity, I think is plain, for that there are five hundred and fifty thousand males in Ireland, whereof one hundred and fifty thousand can perform all the necessary labour of husbandmen and tradesmen; two hundred thousand of them are perhaps under 16, and above 60. Nor doth the quality of the remaining exempt them from service, who are to stand for a reserve.

And this force I take to be sufficient to resist any number of men which any prince of the world hath shipping enough to bring into Ireland, with such horse, arms, ammunition and victuals as are fit for such an enterprize.

To say nothing, that the substance of Ireland is chiefly cattle, which may be easily removed to waste the country where the enemy shall land.

And how considerable the standing army of six thousand men, and the veteran militia, of above twenty four thousand, who have not only the command, but the possession and propriety of all the strong and terrible places in Ireland, and three fourths of all the horse serviceable in war, and at least three fourths of all the shipping, and England to help and countenance, hath been competently mentioned before; and that the bulk of the Irish are the inhabitants

tants of the aforenamed one hundred and sixty thousand wretched cabins-men, slavishly bred and dealt with by their own lords and patriots; and that the restored Irish, restored to their estates almost by miracle, will be careful how they engage any more upon a frivolous, impious undertaking.

CHAP. VIII.

Of the Cœlum and Solum of Ireland.

BY the cœlum or the sky, I understand the heat, coldness, drowth, moisture, weight and susceptions of air, and the impressions made upon it, viz. the state of the winds, as whether the wind blows in Ireland in comparison with, or differently from other places; as from what points of the compass the wind blows most frequently or fiercely, and what proportion of the whole year from each point. 2. As to heat and cold, I conceive the same ought to be measured by the weather-glass or thermometer. 3. As to wetness or moisture, by the shrinking of Lute-strings, by the quantity of rain falling upon a certain quantity of level superficies, and by the quantity of water dried up within the same time out of a vessel of like figure, and equal dimensions.

As for other changes in the air, supposed to depend upon the gravity or levity thereof, I suppose the same is to be known by the instrument called the barometer. Lastly, To the much or little sunshine, whereof Ireland hath been much abused; the same is to be measured by an instrument found for that purpose.

Wherefore since it is small satisfaction to say the air of Ireland is mild and temporate, inclined to moisture, &c. And since the true and clear knowledge thereof depends upon several long, tedious, and re-

iterated obſervations, ſimple and comparative, made in the ſeveral parts of Ireland, in the ſeveral ſeaſons of the year, and compared with the like obſervations, made with the ſame or like inſtruments, in the ſeveral parts of the earth; we muſt for the preſent only ſay, that there are in being the ſeveral inſtruments following, viz.

1. An Inſtrument to meaſure the motion of the wind, and conſequently its ſtrength.

2. How many hours in the day in the whole year it blows from any point of the compaſs.

3. To meaſure what quantity of rain falls in the year upon any quantity or ſpace of ground.

4. What air is moſt moiſt or dry.

5. What alterations are made in the gravity and levity of the air from hour to hour.

6. The thermometer or weather-glaſs of the better ſort.

7. The inſtrument to meaſure and foretel froſt and ſnow.

Which inſtruments many men muſt make uſe of in the ſeveral parts of Ireland, and the reſt of the world, and correſponding with each other, communicate and correct their obſervation by reaſon.

In the mean time let it ſuffice to ſay, that at Dublin the wind blows 2 parts of 5 from the ſouth-weſt to the weſt, one part from ſouth-weſt to the ſouth; one other from the weſt to north eaſt, and the reſt from the north-eaſt to the ſouth; 3 parts of 10 between weſt and ſouth-weſt, 2 of 10 between S. W. and S. S. E. 2 of 10 between S. S. E. and N. E. by N. 2. of 10 N. E. by N. to N. and W. or very near thereabouts.

2. That from the 10th of September to the 10 of March, it blows a kind of ſtorm for ſome time or other almoſt every day.

3. That

3. That the ſnow lies not long in the lower ground of Ireland. Nor doth it freeze more than what it doth in France, Holland, or England.

4. The rain falling at Dublin and London for the month October 1663, was but 20 to 19. That the windineſs of the ſame month was at Dublin 20, and at London but 17.

5. As for the healthfulneſs of the climate, city, or other ſpace of land; it muſt be firſt known how many people are in a certain day living in it, and then the *quota parts* which die *per ann.* for many years together; and for the fruitfulneſs, how many births.

6. As to Longævity, enquiry muſt be made into ſome good old regiſter of (ſuppoſe) 20 perſons, who were all born and buried in the ſame pariſh, and having caſt up the time which they all lived as one man, the total divided by 20 is the life of each one with another; which compared with the like obſervation in ſeveral other places, will ſhew the difference of Longævity, due allowance being made for extraordinary contingencies, and epidemical diſeaſes happening reſpectively within the period of each obſervation.

Wherefore matters being not as yet prepared for theſe experiments, I can ſay nothing clearly of them; only, that it ſeems by the beſt eſtimates and approaches that I have been able to make, that London is more healthful than Dublin by 3 in 32.

Having ſaid thus much of the cœlum or air, or rather of the ingenium, and way of diſtinguiſhing airs in a better manner than uſual; we come next to try the nature of the ſoil by the like expedients.

To which purpoſe, firſt know, that the perch of Ireland is 21 foot, that of England but ſixteen and a half; wherefore the acre of 160 perches is as 121 to 196, that is, 121 Iriſh acres do make 196 Engliſh

ſtatute acres. Now in Ireland a milch cow, if Engliſh breed, may be fed upon two acres of paſture, and with as much hay as will grow upon half an acre of meadow, will yield *præter propter* 3 gallons of milk for ninety days, one with another, and one gallon at a medium for ninety more, and for ninety more ſcarce one quarter of a gallon one day with another, and for ninety more dry. Wherefore it follows, that ſuch a cow upon ſuch feeding, gives above one tun and half; nay, 384 gallons of milk *per ann.* And that if the rent of the ſaid two acres of paſture be 5s. *per ann.* and of the half acre of meadow 3, in all 8s. that the gallon of milk comes but to a farthing, expecting what the value and hazard of the cow, and the labour of milking and looking to her, ſhall add unto that price; which I ſuppoſe not above as much more.

The ſaid quantity of milk will make 2 *C.* and half of raw-milk-cheeſe, and 1 *C.* of whey-butter, beſides whey for the ſwine; or elſe 2 *C.* of butter, and 1 *C.* of ſkim-milk-cheeſe, beſides whey as aboveſaid, for drink to the people and food for ſwine.

Mem. That one bull ſuffices for about twenty cows. That a cow continues milch and bearing, from 3 or 4 years old to 12, ſometimes 20, tho' ſeldom ſuffered to live ſo long. And that three dairy women will manage twenty cows, and do much work of other kind between while. And that one man will look to them and their food.

An ox of 6 or 7 years old will not require ſo much feeding as a milch-cow, but will be maintained with two acres of good paſture only, or with 1 acre and half of paſture, and half an acre of hay, in hard winters.

An

An horſe requires 2 acres and a half, as a garran, and a ſmall horſe or Iriſh garran, 1 and two thirds, or thereabouts.

Eight or ten ſheep are equivalent for feeding to an ox.

It is further to be noted, that a calf at a month old weighs half a hundred, or	56 l.
That an ox is come to its full growth at 6 years old, and then may weigh alive 7 C. or	784 l.
The 4 quarters of ſuch an ox weights. 5 *C.* or	560 l.
The hide, 3 qurs. *C.* or	84 l.
The tallow	80 l.
The offal about	60 l.
In all	784 l.
or 7 *C.* wt.	
Conſequently the ſaid ox gaineth in weight one year with another near	130 l.

The difference between lean beef and fat beef in value is as 5 to 9.

In ſheep the increaſe of their fleſh, ſkin, and tallow is about the ſame proportion. And yet ſheeps fleſh is ſold dearer than beef, becauſe of the great trouble and hazard about ſheep.

A fleece of wool in Ireland is about two pound weight.

An hog eats ſuch things as ſheep and oxen do not, viz. roots, acorns, and conſequently the ſame land will maintain a proportion of hogs above ſheep and oxen. One cow-herd will ſerve a hundred oxen, one ſhepherd a thouſand ſheep.

From all that hath been ſaid, we collect, that the natural and genuine rent of lands in Ireland, not that of money, or gold and ſilver is

Of milk, deducting charges———gall.
Of beef and mutton ———
Of hides and ſkin ———
Of offal ———
Of wool ———

So as where lands produce more or leſs *per ann. communibus annis* of theſe commodities, the ſame is to be accounted more or leſs fertil than that of Ireland.

Moreover from hence we ſhall endeavour to gather the number of cattle in Ireland, as followeth, viz.

There being 7 millions and an half of acres of good meadow, arable, and paſture-land in Ireland, beſides bog with ſhrub-wood, &c. commonly called unprofitable land; and for that half a million ſupplies the inhabitants with corn for bread and drink, man and beaſt, hemp, flax and rape, as ſhall be hereafter ſhewn from the number of the people, their manner of eating, from the number of mills, and from the value of the tythes, &c. ſuppoſing the other 7 millions to be competently well ſtocked, let us firſt ſee how many houſes there may probably be.

To which purpoſe, remember that there are 184,000 families, whoſe houſes have but one or no chimney. Now I gueſs, that about one third of this number keep a ſmall horſe called a garran, which is 61,000 garrans for tillage; and I ſuppoſe that the 16,000 families have for the coach and ſaddle near 4000 horſes. So as in Ireland there are about 100,000 horſes, whoſe food requires 100,000 acres of good paſture, 50,000 acres of meadow, and the 6th part of an acre of oat-land, viz. about 16000 acres.

acres. In all 166,000 acres. Or if the horſes be ſuch as require little or no hay and oats, as the horſes of poor people do not, then as aforeſaid, 2 or 2 acres and a half is allowed to each horſe.

The wool which is uſually exported, being a little above two millions of pounds, grows upon 100,000 ſheep: and the wool which cloaths the nation being about 1100,000 bodies, at —— l. each for cloaths, hats and ſtockings requires 6,000,000 more, and ſo 3 millions more of ſheep, in 4 millions. The feeding whereof at 5 to an acre, requires 800,000 acres. So as horſe and ſheep require one million of acres. So as there remains one half, a million being allowed for all other cattle, beaſts and vermine, 5 millions and half for great cattle, which will feed about 3 millions of that ſpecies.

If there be 3 millions of black cattle, then we ſuppoſe 1,500,000 males.

Of famales, 1,500,000, of which two thirds are milch cows, viz. 600,000.

Of calves and heifers under 3 years, 600,000, and 300,000 of other ſorts.

Males and females making in all 3 millions.

Of which we may ſuppoſe under 3 yrs old	1,400,000
Between 3 and 6	1,200,000
And above 7 years	400,000

Where note, that of all the black cattle above-named, there are 60,000 exported alive, and 30000 dead in barrels. Of the ſheep not 100,000.

Of butter, whereof one of the 600,000 milch-cows may well yield 1 *C.* weight *per ann.* but 26000 *C.* or the proceed of 26000 cows. From whence may be ſeen whether the trade of thoſe commodities be yet at beſt: for I gueſs that the 6th of the whole ſtock may be annually ſpent at home, or exported abroad.

It

It remains only to ſay, that one acre of land Iriſh, requires of ſeed, and returns as followeth.

Wheat 4 buſhels, and produces	16 to 36
Rye 4	20 to 40
Bean-barly 6	20 to 48
Oats 6	16 to 32
Barly 4	20 to 40
Peaſe 4	12 to 18

One horſe plows 10 acres, and there goes 1 man to 3 horſes.

CHAP. IX.

Of the proportion in value, which the ſeveral counties in Ireland do bear to each other, viz.

THE value or proportion of the ſeveral counties in Ireland, doth ſeem much to depend upon the number of acres which each doth contain. And therefore, and for ſeveral other reaſons, moſt of the land of Ireland hath, within theſe laſt 40 years, been meaſured by the chain and inſtrument, viz. the King and Queen's counties, about the year 1630, the county of London-derry, when the city of London undertook the plantation by one Mr. Raven; Connaught and Tipperary in the earl of Strafford's time, by ſeveral hands, ſometimes conducted by Mr. William Gilbert.

The lands belonging to papiſts *anno*. 1641, in the three provinces of Munſter, Leinſter, and Ulſter, by ſir William Petty. Other proteſtant lands in the ſame three provinces, in order to regulate contributions, by the owners of the ſaid lands themſelves; but in ſo divided and ſeparated a manner, that little account

account can be given of them, beſides what was collected by the ſaid ſir William Petty; who at his own charge, beſides thoſe maps of every pariſh, which by his agreement he delivered into the ſurveyor-general's office, he hath cauſed diſtinct maps to be made of every barony, or hundred; as alſo of every county, engraven in copper, and the like of every province, and of the whole kingdom, All which could the defects of them be ſupplied with the yet unmeaſured lands, would be expoſed to publick view.

Now as to the value of theſe lands, they were *anno*. 1642, rated to and by the adventurers as followeth, viz. in Lienſter at 12s. *per* acre, in Munſter at 9s. in Connaught at 6s. and in Ulſter at 4s. and to pay one farthing *per ann.* quit-rent to the King out of each ſhillings worth of land ſo rated, viz. 3d. or 12 faring for an acre in Lienſter rated at 12s. 9q. or 2d. 1q. an acre for lands in Munſter rated at 9 s. &c. *ſic de cæteris*. Wood, bog, and mountain, to be caſt in over and above.

Afterwards the ſoldiers, who were to have the ſatisfaction of their arrears at the ſame rate, not being willing to caſt lots upon ſuch deſparate hazards, did *anno*. 1653, equalize counties within each province, viz. took ſome in Lienſter, at 1l. 2 s. *per* acre, ſome at 1l. &c. And thoſe who were ſatisfied *anno* 1655, and afterwards, did equalize not only counties, but baronies alſo, valuing ſome baronies in Lienſter at 1l. 4s. *per* acre, and ſome but at 6s. and others at all rates between thoſe two extreams. But ſo as that, notwithſtanding all the ſaid differences, the whole province ſhould be given and taken at 12 s. *per* acre, according to the then law. And the inequality remaining after this equalization, was to be corrected by a lot.

I could

I could herein insert all the particulars of these transactions, but conceive it impertinent to my purpose, especially since they may be seen upon record. The next and best of all preceding equalizations, was that which the concerns of each county made in order to regulate the heavy contributions paid to the usurpers before his Majesty's restoration, and when no quit-rent was yet due. And in order to this work, not baronies as before, but parishes, nay, particular farms were also equalized. What was done herein, was not publickly recorded, but collected by the curious, and too bulky to be here inserted. Only take notice, that these valuations were made as parties interested could prevail upon and against one another by their attendance, friends, eloquence, and vehemence; for what other foundation of truth it had in nature, I know not.

Next to this valuation, there was, in order to a certain gift presented to his Majesty, by the adventurers and soldiers, of a years value of all their lands as it yielded *anno* 1659, next immediately before his restoration. There issued a commission, *anno* 1663, to inquire into and settle the said values. And about 1667, there were made two several valuations more; the one in order to reprize such who had restored lands to the innocent Irish in equal value; and another was a determination, what each land was worth *ann.* 1659, (whatever it yielded:) both which, especially the latter, are upon record most authentically. Moreover, *ann.* 1653, and 1654, there were inquisitions taken of the values which all and every parcel of land in Ireland yielded *ann.* 1641. There have been also several acts of the chief powers *pro tempore*, for approportioning what proportion of a certain sum to be levied in general, should in particular be charged on each county, viz. *ann.* 1657, there was an act of the

the usurper's parliament to that purpose. *Ann.* 1662, there was an act for raising 30,000 l. as a present to his grace the duke of Ormond; and another for raising of monies for several publick uses. And *ann.* 1672, for the equal raising of 30,000l. *per ann.* upon all the lands and houses of the whole nation. There be also accounts of what was raised out of each county by way of subsidy and poll-money paid *ann.* 1661. All which may be of much light to those who have such designs as the same will answer. But I being assured by whom, and for what ends, and by what means every such valuation and inquisition was respectively made, had rather attempt some rule in nature, whereby to value and proportionate the lands of Ireland: the first whereof I propose to be; that how many men, women, and children live in any country parish, that the rent of that land is near about so many times 15 s. be the quantity and quality of the land what it will. 2. That in the meanest of the 160,000 cabins, one with another are five souls, in the 24,000 six souls. In all the other houses ten a piece, one with another.

The TABLE.

BUT to make nearer approaches to the perfection of this work, 'twould be expedient to know the content of acres of every parish, and withal, what quantity of butter, cheese, corn, and wool was raised out of it for three years consequent; for thence the natural value of the land may be known, and by the number of people living within a market-days journey, and the value of their housing, which shews the quality and expence of the said people; I would hope to come to the knowledge of the value of the said commodities, and consequently the value of the land, by deducting

deducting the hire of working people upon it. And this brings me to the moſt important conſideration in political œconomies, viz. how to make a par and equation between lands and labour, ſo as to expreſs the value of any thing by either alone. To which purpoſe, ſuppoſe two acres of paſture-land incloſed, and put thereunto a weaned calf, which I ſuppoſe in twelve months will become one hundred heavier in eatable fleſh; then one hundred weight of ſuch fleſh, which I ſuppoſe fifty days food, and the intereſt of the value of the calf, is the value or years rent of the land. But if a man's labour ——— for a year can make the ſaid land to yield more than ſixty days food of the ſame, or of any other kind, then that overplus of days food is the wages of the man; both being expreſſed by the number of days food. That ſome men will eat more than others, is not material, ſince by a days food we underſtand one hundredth part of what 100 of all ſorts and ſizes will eat, ſo as to live, labour, and generate. And that a days food of one ſort may require more labour to produce, than another ſort, is alſo not material, ſince we underſtand the eaſieſt gotten food of the reſpective countries of the world.

As for example, I ſuppoſe a pint of oat-meal equal to half a pint of rice, or a quart of milk, or a pound of bread, or a pound and quarter of fleſh, &c. each, in the reſpective place where each is the eaſieſt gotten food. But if rice be brought out of India into Ireland, or oatmeal carried from Ireland thither; then in India the pint of oatmeal muſt be dearer than half a pint of rice, by the freight and hazard of carriage, *& vice verſa, & ſic de cæteris.* For as for pleaſant taſte, I queſtion whether there be any certainty, or regularity of the ſame in nature, the ſame depending upon novelty, opinion of virtue, the recommendation

tion of others, &c. Wherefore the days food of an adult man, at a medium, and not the days labour, is the common meaſure of value, and ſeems to be as regular and conſtant as the value of fine ſilver. For an ounce, ſuppoſe of ſilver in Peru is equivalent to a days food, but the ſame in Ruſſia is equivalent to four days food, by reaſon of the freight, and hazard in carrying the ſame from Peru to Ruſſia; and in Ruſſia the price of ſilver ſhall grow to be worth more days labour, if a workman can by the eſteem and requeſt of ſilver utenſils earn more than he can on other materials. Wherefore I valued an Iriſh cabbin at the number of days food, which the maker ſpent in building of it.

By the ſame way we muſt make a par and equation between art and ſimple labour; for if by ſuch ſimple labour I could dig and prepare for ſeed an hundred acres in a thouſand days; ſuppoſe then, I ſpend a hundred days in ſtudying a more compendious way, and in contriving tools for the ſame purpoſe; but in all that hundred days dig nothing, but in the remaining nine hundred days I did two hundred acres of ground; then I ſay, that the ſaid art which coſt but one hundred days invention is worth one man's labour for ever; becauſe the new art, and one man, performed as much as two men could have done without it.

By the ſame way we make an equation between art and opinion. For if a picture-maker, ſuppoſe, make pictures at 5l. each; but then, find that more perſons would employ him at that rate than his time would extend to ſerve them in, it will certainly come to paſs that this artiſt will conſider whether as many of thoſe who apply to him at 5l. each picture, will give 6l. as will take up his whole time to accommodate; and that upon this computation he pitcheth the rate of his work.

By

By the ſame way alſo an equation may be made between drudging labour, and favour, acquaintance, intereſt, friends, eloquence, reputation, power, authority, &c. All which I thought not amiſs to intimate as of the ſame kind with finding an equation between land and labour, all theſe not very pertinent to the proportioning of the ſeveral counties of Ireland.

Wherefore to return to the matter in hand, I ſay, the quantity of commodity produced, and the quantity of the labour ſhews the effects of the land; and the number of people living thereupon, with the quality of their houſing, ſhews the value of the commodity; for one days delicate and exquiſite food may be worth ten of ordinary. Now the nature of peoples feeding may be eſtimated by the viſible part of their expence, which is their houſing. But ſuch helps of knowing the value of lands, I am not yet able to furniſh.

CHAP. X.

Of the money of Ireland.

MONEY is underſtood to be the uniform meaſure and rule for the value of all commodities. But whether in that ſenſe there be any money, or ſuch rule in the world, I know not, much leſs in Ireland, though moſt are perſuaded that gold and ſilver money is ſuch. For 1. The proportion of value between pure gold and fine ſilver, alters as the earth and induſtry of men produce more of one than of the other; that is to ſay, gold has been worth but twelve times its own weight in ſilver; of late it has been worth fourteen, becauſe more ſilver has been gotten. That of gold proportionably, *i. e.* about twelve times as much ſilver has been raiſed as of gold,

gold, which makes gold dearer. So there can be but one of the two metals of gold and ſilver to be a fit matter for money. Wherefore, if ſilver be that one metal fit for money; then gold is but a commodity very like money. And as things now ſtand, ſilver only is the matter of money; and that elſewhere as well as in Ireland.

2. The value of ſilver riſes and falls itſelf; for men make veſſels of coined ſilver, if they can gain by the workmanſhip enough to defray the deſtruction of the coinage, and withal, more than they could expect by employing the ſame ſilver as money in a way of trade. Now the accidents of ſo doing, make ſilver riſe and fall, and conſequently take from the perfect aptitude for being an uniform ſteady rule and meaſure of all other things.

The miſchiefs and inconveniences hitherto mentioned, are common to all times and places; but in Ireland are more particular; and ſtand thus, viz.

A piece of 8 rials being full 17 penny weight, paſſeth for 4s. 9d. if it want but half a grain of the weight, though half a grain of ſilver be worth but the 4th part of a farthing, or the ſixteenth of a penny, then it paſſes for 3d. leſs, viz. 4s. 6d. and if it weigh ten grains above 17d. weight, it paſſes but for 4s. 9. On the other hand, if it weigh but 12d. weight, it paſſes nevertheleſs for 4s. 6d. And if the ſilver be courſe, if not ſo courſe, as not to be called ſilver, yet ſtill it paſſes for the ſame. Moreover, the fineneſs cannot be determined by common eyes ſcarce at all, by the beſt not within 4d. in an ounce, by the touchſtone not within 2d. and by the teſt itſelf not within a half-penny. Laſtly, the ſcales and weights differ ſo much from each other, as what is 4s. 9d in one houſe, is but 4s. 6d. in the next, & *vice verſa*. From whence it comes to paſs, that all

 pieces

pieces weighing above 17d. weight, are culled out to buy or make pieces of 14d. weight to paſs for 4s. 6d.

2. Other ſpecies of coin, which *pro rata* contain the ſame quantity of the like gold and ſilver, with the piece of eight rials, goes in one ſpecies for more, in another for leſs. What hath been ſaid of the ſilver-ſpecies, may be ſaid of the gold ſpecies; and what differences are between ſilver and ſilver, and between gold and gold, is alſo between ſilver and gold coins. So as it becomes a trade to ſtudy and make advantages of theſe irregularities, to the prejudice of the good people who are taught, that whatever is called money, is the ſame, and regular, and uniform, and a juſt meaſure of all commodities. From whence it hath happened, that all Engliſh money which hath a great and deſerved reputation in the world for its intrinſick goodneſs, is quite carried away out of Ireland, and ſuch money brought inſtead of it, as theſe ſtudied merchants do from time to time bring in for their advantage upon the common people, their credulity and ignorance.

But money, that is to ſay, ſilver and gold, do at this day much decreaſe in Ireland, for the following reaſons.

1. Ireland, *anno* 1664, did not export to a much greater value than it imported, viz. about 62000. Since which time there hath been a law made to prohibit the importation of great cattle and ſheep, alive or dead, into England; the value whereof carried into England in that very year 1664, was above 150000l. The which was ſaid to have been done, for that Ireland drained away the money of England. Whereas in that very year England ſent to Ireland, but 91000l. leſs than it received from thence; and yet this ſmall difference was ſaid to be the reaſon why

why the rents of England fell a fifth part, that is 1600000 in 8 millions. Which was a ſtrange conceit, if they conſider farther, that the value of the cattle alive or dead, which went out of Ireland into England, was but 132000l. the hides, tallow, and freight whereof were worth about half that money.

2. Whereas the owners of about one quarter both of all the real and perſonal eſtate of Ireland, do live in England, ſince the buſineſs of the ſeveral courts of claims was finiſhed in December 1668, all that belongs to them goes out, but returns not.

3. The gains of the commiſſioners of that court, and of the farmers of the revenue of Ireland, who live in England, have iſſued out of Ireland without returns.

4. A conſiderable part of the army of Ireland hath been ſent into England, and yet paid out of Ireland.

5. To remit ſo many great ſums out of Ireland into England, when all trade between the ſaid two kingdoms is prohibited, muſt be very chargeable; for now the goods which go out of Ireland, in order to furniſh the ſaid ſums in England, muſt for example go into the Barbadoes, and there be ſold for ſugars, which brought into England, are ſold for money to pay there what Ireland owes. Which way being ſo long, tedious, and hazardous, muſt neceſſarily ſo raiſe the exchange of money, as we have ſeen 15 *per cent.* frequently given, *anno* 1671 and *anno* 1672. Although in truth, exchange can never be naturally more than the land and water-carriage of money between the two kingdoms, and the inſurance of the ſame upon the way, if the money be alike in both places.

But men that have not had the faculty of making theſe tranſmiſſions with dexterity, have choſe rather to give 15 *per cent.* exchange, as aforeſaid, than to

put themſelves upon the hazard of ſuch undertakings, and the miſchief of being diſappointed.

Now the extraordinary decreaſe of gold and ſilver, put men, whoſe affairs were much diſturbed thereby, upon extraordinary conceits, and ſome very abſurd ones for remedy, as namely the raiſing of Spaniſh pieces of eight, called cobs in Ireland, from 4s. 9d. to 5 or 6 ſhillings, which were before about 5d. above the value of Engliſh; that is 4s. 4d. Engliſh money weighed the ſame with a cob called 4s. 9d. For theſe diſtracted people thought, that calling their money by a better name, did increaſe its value.

2. They thought that no man would carry cobs of 5s. out of Ireland into England, where they were called but 4s. 4d. although he was neceſſitated to pay 4s. 5d. in England, and had no other effects to do it with. They thought that all men who lived in England, would return to their eſtates in Ireland, rather than pay 15 *per cent.* for exchange; not conſidering, that when cobs were raiſed, that exchange would alſo riſe proportionably. They fancied, that he who ſold a ſtone of wool for two cobs, called 9s. when cobs were raiſed, would ſell his ſtone of wool for one cob and a half when called 9s. Nor did they think how this frivolous conceit would have taken away a proportionable part of all landlords eſtates in Ireland. As for example, thoſe who acted moderately, would have the money raiſed a 20th part; and the 20th part of all the money of Ireland, was then thought to be but about 20000l. The whole caſh of Ireland being then eſtimated but 400000l. whereas the landlords of Ireland, whoſe revenue is 800000l. *per annum*, muſt have loſt one 20th part of their whole eſtates for ever, viz. 40000l. *per annum* upon that empty expedient.

But

But others, no leſs ſenſible of the diſtreſs of the people, and the obſtructions of trade by reaſon of the ſaid decay of bullion, conſidering that about 600000l. would drive the trade of that kingdom; for that 300000 would pay one half years gale of all the land; 50000 would pay a quarter rent of all the houſing, and that 150000l. would more than pay a weeks expence of all the people of Ireland; and that the whole caſh moved chiefly in thoſe three circles; they therefore thought to make up their 400000l. preſent caſh by a bank of 200000l. more, the bottom and ſupport whereof ſhould be land; for the lands and houſes in Ireland being worth about 8 millions, whereof 200000l. was but the 40th part, 'twas thought eaſy to find many 40th parts ſo free from incumbrances or queſtion as to give a being to ſuch a bank.

Note, that intereſt in Ireland is 10 *per cent.* which is a great hinderance to trade; ſince the intereſt muſt inflame the price of Iriſh commodities, and conſequently give to other nations the means of underſelling.

CHAP. XI.

Of the trade of Ireland.

IF it be true, that there are but about 16000 families in Ireland, who have above one chimney in their houſes; and above 180000 others; it will be eaſily underſtood what the trade of this latter ſort can be, who uſe few commodities; and thoſe ſuch as almoſt every one can make and produce. That is to ſay, men live in ſuch cottages as themſelves can make in 3 or 4 days; eat ſuch food (tobacco excepted) as they buy not from others; wear ſuch

 cloths

cloths as the wool of their own ſheep, ſpun into yarn by themſelves, doth make; their ſhoes, called brogues, are but a quarter ſo much worth as a pair of Engliſh ſhoes; nor of more than a quarter in real uſe and value. A hat coſts 20d. a pair of ſtockings 6d. but a good ſhirt near 3s. The taylors work of a doublet, breeches and coat about 2s. 6d. In brief, the victuals of a man, his wife, three children, and ſervant, reſolved into money, may be eſtimated 3s. 6d. *per* week, or 1d. *per diem*. The cloaths of a man 30s. *per ann.* of children under 16, one with another 15s. the houſe not worth 5s. the building; fuel coſts nothing but fetching. So as the whole annual expence of ſuch a family, conſiſting of 6 in number, ſeems to be but about 52 s. *per ann.* each head one with another. So as 950000 inhabitants of theſe edifices, may ſpend 2375000 *per ann.* And the 150000 who inhabit the 16000 other houſes, may ſpend 10l. *per ann.* each one with another, viz. one million and half. So as the whole people of both ſorts ſpend under 4 millions, whereof the 10th part, viz. 400000l. for foreign commodities, tobacco included, whereof every 1000 ſouls ſpends one tun *per ann.* or every 1000 tobacco-takers, viz. people above 15 years old, ſpend two tuns one with another: for it appears by the lateſt accompt of importance, that what is here ſaid, is true to a trifle. From whence I obſerve by the way, that the king's revenue, *viis & modis*, being about 200000l. *per ann.* that it is the 20th part of the whole expence; which in ſome of the Grecian commonwealths was thought too much, although the Iſraelites allowed the tenth to the Levites only, though perhaps to defray the whole charge of the government, the ſupremacy amongſt that people being then ſacerdotal.

I obſerve

I obſerve alſo by the way, that the lands and houſing of Ireland being worth about one million *per ann.* that the labour of the people may be worth three millions, which is earned by about 750000 (of the 1100000) who by their age and quality are fit and applicable to corporal labours, and conſequently each labouring perſon earns but 4s. *per ann.* if all work. Or if each earns 8l. then but half them work, or all but half their full time, or otherwiſe in other proportions. But be it one way or the other; I am as certain that the hands of Ireland may earn a million *per ann.* more than they now do, as I am certain that there are 750000 in Ireland who could earn 2s. a week, or 5l. *per ann.* one with another, if they had ſuitable employment, and were kept to their labour.

I further obſerve, that if there be naturally but 2000 impotents in Ireland, and that 50 ſhillings *per ann.* doth maintain the poorer ſort of people; it follows, that 8000l. *per ann.* would amply maintain all the impotents of Ireland, if well applied. For other beggars, as alſo thieves, and rebels, which are but bigger thieves, are probably but the faults and defects of government and diſcipline.

As for the fitneſs of Ireland for trade, we ſay as followeth.

1ſt. That Ireland conſiſting of above 18000 ſquare miles, it is not one place with another above 24 miles from the ſea, becauſe it is 750 miles about: wherefore foraſmuch as the land-carriage of groſs that will be eaſy in ſuch a country, it is fit for trade, becauſe the greateſt and moſt profitable part of trade, and the employment of ſhipping, depends upon ſuch goods, viz. metals, ſtones, timber, grain, wood, ſalt, &c.

2dly, Ireland lieth commodiouſly for the trade of the new American world; which we ſee every day to grow and flouriſh.

It lieth well for ſending butter, cheeſe, beef, fiſh, to their proper markets, which are to the ſouthward, and the plantations of America.

Thus is Ireland by nature fit for trade, but otherwiſe very much unprepared for the ſame; for as hath been often ſaid, the houſing thereof conſiſts of 160000 naſty cabbins, in which neither butter nor cheeſe, nor linen, yarn or worſted, and I think no other, can be made to the beſt advantage; chiefly by reaſon of the ſoot and ſmoaks annoying the ſame; as alſo for the narrowneſs and naſtineſs of the place; which cannot be kept clean nor ſafe from beaſts and vermin, nor from damps and muſty ſtenches, of which all the eggs laid or kept in thoſe cabbins do partake. Wherefore to the advancement of trade, the reformation of theſe cabbins is neceſſary.

It may alſo be conſidered, whether the inſtitution of theſe following corporations would not be expedient, viz. 1. of cattle, 2. of corn, 3. of fiſh, 4. of leather, 5. of wool, 6. of linnen, 7. of butter and cheeſe, 8. of metals and minerals: for unto theſe, almoſt all the commodities exportable out of Ireland, may be referred.

It may alſo be conſidered, whether the taxing of thoſe cabbins with hearth-money be proper, but rather with days labour; the former being ſcarce poſſible for them to have, but the latter moſt eaſy. Inſomuch as 'tis more eaſy for them to give 49 days labour *per ann.* at ſeaſonable times, than to pay 2s. in ſilver at a pinch, and juſt when the collectors call for it.

The diet, houſing and clothing of the 16000 families above-mentioned, is much the ſame as in England;

England: nor is the French elegance unknown in many of them, nor the French and Latin tongues. The latter whereof is very frequent among the pooreſt Iriſh, and chiefly in Kerry, moſt remote from Dublin.

The houſing of 160000 families, is, as hath been often ſaid, very wretched. But their clothing is far better than that of the French peaſants, or the poor of moſt other countries; which advantage they have from their wool, whereof 12 ſheep furniſheth a competency to one of theſe families. Which wool, and the cloth made of it, doth coſt theſe poor people no leſs than 50000l. *per ann.* for the dying it; a trade exerciſed by the women of the country. Madder, allum, and indico, are imported, but the other dying ſtuffs they find nearer home, a certain mud taken out of the bogs ſerving them for copperas, the rind of ſeveral trees, and ſaw-duſt, for galls; as for wild and green weeds, they find enough, as alſo of Rhamnus-berries.

The diet of theſe people is milk, ſweet and ſower, thick and thin, which alſo is their drink in ſummer-time, in winter ſmall-beer or water. But tobacco taken in ſhort pipes ſeldom burnt, ſeems the pleaſure of their lives, together with ſneezing: inſomuch, that two 7ths of their expence in food, is tobacco. Their food is bread in cakes, whereof a penny ſerves a week for each; potatoes from Auguſt till May, muſcles, cockles and oyſters, near the ſea; eggs and butter made very rancid, by keeping in bogs. As for fleſh, they ſeldom eat it, notwithſtanding the great plenty thereof, unleſs it be of the ſmaller animals, becauſe it is inconvenient for one of theſe families to kill a beef, which they have no convenience to ſave. So as 'tis eaſier for them to have a hen or rabbet, than a piece of beef of equal ſubſtance.

Their

Their fewel is turf in moſt places; and of late, even where wood is moſt plentiful, and to be had for nothing, the cutting and carriage of the turf being more eaſy than that of wood. But to return from whence I digreſſed; I may ſay, that the trade of Ireland, among 19 in 22 parts of the whole people, is little or nothing, excepting for the tobacco above-mentioned, eſtimated worth about 50000 l. foraſmuch as they do not need any foreign commodities, nor ſcarce any thing made out of their own village. Nor is above one fifth part of their expence other than what their own family produceth, which condition and ſtate of living cannot beget trade.

And now I ſhall digreſs again to conſider, whether it were better for the common-wealth to reſtrain the expence of 150000 optimates below 10 l. *per ann.* each; or to beget a luxury in the 950000 plebeians, ſo as to make them ſpend, and conſequently earn double what they at preſent do.

To which I anſwer in brief, that the one ſhall increaſe the ſordidneſs and ſquallor of living already too viſible in 950000 plebeians, with little benefit to the common-wealth; the other ſhall increaſe the ſplendor, art, and induſtry of the 950000 to the great enriching of the common-wealth.

Again, why ſhould we be forbid the uſe of any foreign commodity, which our own hands and country cannot produce, when we can employ our ſpare hands and lands upon ſuch exportable commodities as will purchaſe the ſame, and more.

3. The keeping or leſſening of money, is not of that conſequence that many gueſs it to be of. For in moſt places, eſpecially Ireland, nay, England itſelf, the money of the whole nation is but about a 10th part of the expence of one year; viz. Ireland is thought to have about 400000 l. in caſh, and to ſpend

ſpend about 4 millions *per ann.* Wherefore it is very ill huſbandry to double the caſh of the nation, by deſtroying half its wealth; or to increaſe the caſh otherwiſe than by increaſing the wealth *ſimul & ſemel.*

That is, when the nation hath one 10th more caſh, I require it ſhould have one 10th more wealth, if it be poſſible. For there may be as well too much money in a country, as too little. I mean, as to the beſt advantage of its trade; only the remedy is very eaſy, it may be ſoon turned into the magnificence of gold and ſilver veſſels.

Laſtly, many think that Ireland is much impoveriſhed, or at leaſt the money thereof much exhauſted, by reaſon of abſentees, who are ſuch as having lands in Ireland, do live out of the kingdom, and do therefore think it juſt that ſuch, according to former ſtatutes, ſhould loſe their ſaid eſtates.

Which opinion I oppoſe, as both unjuſt, inconvenient, and frivolous. For 1ſt, if a man carry money or other effects out of England to purchaſe lands in Ireland, why ſhould not the rents, iſſues and profits of the ſame land return into England, with the ſame reaſon that the money of England was diminiſhed to buy it?

2. I ſuppoſe one quarter of the land of Ireland did belong to the inhabitants of England, and that the ſame lay all in one place together; why may not the ſaid quarter of the whole land be cut off from the other three ſent into England, were it poſſible ſo to do? and if ſo, why may not the rents of the ſame be actually ſent, without prejudice to the other three parts of the intereſſor thereof?

3. If all men were bound to ſpend the proceed of their lands upon the land itſelf; then as all the proceed of Ireland ought to be ſpent in Ireland; ſo all

all the proceed of one county of Ireland ought to be ſpent in the ſame; of one barony, in the ſame barony; and ſo pariſh and mannor; and at length it would follow, that every eater ought to avoid what he hath eaten upon the ſame turf where the ſame grew. Moreover, this equal ſpreading of wealth would deſtroy all ſplendor and ornament; for if it were not fit that one place ſhould be more ſplendid than another, ſo alſo that no one man ſhould be greater or richer than another; for if ſo, then the wealth, ſuppoſe of Ireland, being perhaps 11 millions, being divided among 1100000 people, then no one man having above 10l. could probably build an houſe worth above 3l. which would be to leave the face of beggary upon the whole nation: and withal ſuch parity would beget anarchy and confuſion.

Of the other impediment of trade, which is the raiſing of money above the value which the generality of the whole world hath of it, that is, the intrinſick value, I have ſpoken before; and now return to other matters relating to the trade of Ireland.

Having ſhewn that there is little or no trade or commutation of commodities, where people live ſo ſimply, and as it were *ex ſponte creatis*, as the inhabitants of 184000 hutts do live; it follows, that what trade is in Ireland muſt be found in the 16000 other houſes of above one chimney in each, and amongſt the inhabitants of them. Though trade, properly ſpeaking, be the commutation of commodities; yet 'tis the way to purchaſe riches and power, the parents of pleaſure: not only by getting commodities out of the earth and ſea; by ploughing, fiſhing, mines, &c. by getting away thoſe commodities from them who firſt got them out of the earth and ſea, as aforeſaid. And not only or at all increaſing the

the whole wealth of the nation, but ones own former ſhare and proportion of the whole, that is to ſay, ſuppoſing the whole wealth of Ireland were 10 millions, and the ſhare of A. was 1000l. thereof; I ſay, 'tis commonly more the care of A. to make his 1000l. 3000, though by leſſening the whole ſtock 2000l. than to make the whole ſtock 30 millions, by leſſening his own 1000l. to 300l.

Now this is the trade of Ireland, and I think of moſt other places, but exerciſed in Ireland by the following ways, viz.

Whereas the lands of Ireland have within 150 years been moſt of them forfeited, and the lands of monaſteries have ſince then fallen into the king's hands, by the diſſolution of the ſaid monaſteries, and ſeveral defects found in the titles, older than that of time; it hath come to paſs, that all the ſaid lands have been granted to ſeveral others; ſome legally and formally, ſome otherwiſe; ſome under one condition, ſome under another. So as by ſeveral defects in the ſaid grants, or by non-performance of conditions, and many other ways needleſs to enumerate, the king in ſtrictneſs may find a title to the eſtates of many men who have been long in poſſeſſion of their reſpective holdings, (though ſome more, ſome leſs, ſome upon better, and ſome upon worſer grounds.) A principal trade in Ireland, to find out theſe flaws and defects, to procure commiſſion for ſuch inquiries. And a branch of this trade, is to give ſuch ſeekers flattering and deluſive informations to bring on other deſigns; and withal, prevail with perſons converſant with the higher powers to give grants of theſe diſcoveries, and thereupon, right or wrong, to vex the poſſeſſors, at leaſt into ſuch a compoſition as may be of profit to the proſecutors. Whereby it falls out, that the time of all the perſons exerciſed *pro & contra* in

in these matters, who do only take from one another like gamesters, (the lawyers taking from both) is lost, without advancing at all the public wealth. Now this is no trade, but a calamity upon the nation.

2. Whereas the branches of the public revenue being manifold, and the accounts of the same vast and numerous, and the laws, with the cases and accidents relating to the same, intricate and new; but chiefly the officers employed about the premises, such as could make friends for their places, whether persons of skill, experience and trustiness, or not; it hath come to pass, even in Ireland, in former times, that principal officers of the exchequer have represented the state of the public treasury near 200000l. differently from each other: so as new men have been admitted to take the whole to farm, who expected vast advantages, by mending and clearing what others had marred and confounded, though they had still their places and perquisites notwithstanding: and in this case the people thought fit to pay any thing that was required, rather than to pass the fire of this purgatory, even though they need no burning.

This and other practices of farming, taken with the whole doctrine of defalcations, hath been a great trade in Ireland, but a calamity on the people who have paid great wages to them that have made faults, but three times greater to those who would but undertake to mend them, though indeed they could not.

A third great trade and calamity to the people of Ireland, hath been the gains made by the aforementioned difference, confusion and badness of coins, exorbitant exchange, and interest of money, all following from the premises.

A fourth calamity is implicating poor workmen, and trapanning them into crimes, indictments, bishops-courts, &c. feigning and compounding of trespasses,

trespasses, not without making benefit by the office of justice of peace.

A fifth may be from the manner of making sheriffs, the execution of their offices, accounts in the exchequer, &c.

A sixth, from raising monies at the assizes, by authority of the grand juries, but raising too much, and in spending or not spending what was to be raised.

None of these six trades do add any more to the common-wealth than gamesters, and even such of them as play with false dice, do to the common stock of the whole number.

And in these trades 'tis thought 2 3ds of those who inhabit the afore-mentioned 16000 houses, do exercise themselves, and are the locusts and caterpillars of the common-wealth, as the inhabitants of the other 184000 cottages are the untilled part of the same. Wherefore it remains to see what trade is to be found among the rest; which I take to be as followeth, viz.

1. In domestick wealth: of which sort is building fine houses and gardens, orchards, groves, inns, mills, churches, bridges, highways, causeys; as also furniture for houses, coaches, &c. In which kind I guess the improvement of Ireland has from the year 1652, to *anno* 1673, advanced from one to four, and I think to a better state than before 1641, that is, than perhaps it ever was yet.

The foreign trade, if you will believe the accounts of customs, *anno* 1657, and now, hath been advanced from one to seven; but in reality, I think, from one to two; for the customs yielded *anno* 1656, clear under 12000l. but were within a year or two, let for above three times the sum, but are now at about 80000 intrinsically.

But

But to ſpeak more clearly and authentically upon this ſubject, I ſhall inſert the following tables of exported and imported commodities, and from them make the ſubnexed obſervations, viz.

The TABLE.

1. THAT the cuſtoms, managed by the ſtate-officers, yielded *anno* 1657, under 12000l. but was farmed *anno* 1658, for above thrice that ſum.

2. That the ſtock which drives the foreign trade of Ireland, doth near half of it belong to thoſe who live out of Ireland.

3. That *anno* 1664, before the cattle-ſtatute, 3 4ths of the Ireland foreign trade was with England, but now not one 4th part of the ſame.

4. That the manufacture beſtowed upon a years exportation out of Ireland, is not worth above 8000l.

5. That becauſe more eatables were exported *anno* 1664, than 1641, and more manufactures 1641, than *anno* 1664, it follows, there were more people in Ireland *anno* 1641, than 1664, and in that proportion as was formerly mentioned.

6. That the exportations appear more worth than the importations, excepting that the accounts of the former are more true, but of the latter very conjectural, and probably leſs than the truth.

CHAP.

CHAP. XII.

Of the religion, diet, cloths, language, manners, and intereſt of the ſeveral preſent inhabitants of Ireland.

WE ſaid, that of the 1100000 inhabitants of Ireland, about 800000 of them were Iriſh; and that above 600000 of them lived very ſimply in the cabbins afore-mentioned. Wherefore I ſhall in the firſt place deſcribe the religion, diet, &c. of theſe, being the major part of the whole; not wholly omitting ſome of the other ſpecies alſo.

The religion of theſe poor Iriſh is called Roman Catholick, whoſe head is the Pope of Rome, from whence they are properly enough called papiſts. This religion is well known in the world, both by the books of their divines, and the worſhip in their churches: wherefore I confine myſelf to what I think peculiar to theſe Iriſh. And firſt, I obſerve, that the prieſts among them are of ſmall learning, but are thought by their flocks to have much, becauſe they can ſpeak Latin more or leſs, and can often out-talk in Latin thoſe who diſpute with them. So as they are thereby thought both more orthodox and able than their antagoniſts.

Their reading in Latin is the lives of the ſaints, and fabulous ſtories of their country. But the ſuperior learning among them, is the philoſophy of the ſchools, and the genealogies of their anceſtors. Both which look like what St. Paul hath condemned.

The prieſts are choſen for the moſt part out of old Iriſh gentry, and thereby influence the people, as well by their intereſt as their office.

Their preaching ſeems rather bugbearing of their flocks with dreadful ſtories, than perſuading them by reaſon, or the ſcriptures. They have an incredible opinion of the pope and his ſanctity, of the happineſs of thoſe who can obtain his bleſſing at the third or fourth hand. Only ſome few, who have lately been abroad, have gotten ſo far, as to talk of a difference between the intereſt of the court of Rome, and the doctrine of the church. The common prieſts have few of them been out of Ireland; and thoſe who have, were bred in convents, or made friars for the moſt part, and have humble opinions of the Engliſh and proteſtants, and of the miſchiefs of ſetting up manufactures, and introducing of trade. They alſo comfort their flocks, partly by prophecies of their reſtoration to their ancient eſtates and liberties, which the abler ſort of them fetch from what the prophets of the old teſtament have delivered by way of God's promiſe to reſtore the Jews, and the kingdom to Iſrael. They make little eſteem of an oath upon a proteſtant bible, but will more devoutly take up a ſtone, and ſwear upon it, calling it a book, than by the ſaid book of books, the bible. But of all oaths, they think themſelves at much liberty to take a land-oath, as they call it: Which is an oath to prove a forged deed, a poſſeſſion, livery or ſeiſin, payment of rents, &c. in order to recover for their countrymen the lands which they had forfeited. They have a great opinion of holy-wells, rocks, and caves, which have been the reputed cells and receptacles of men reputed ſaints. They do not much fear death, if it be upon a tree, unto which, or the gallows, they will go upon their knees toward it, from the place they can firſt ſee it. They confeſs nothing at their executions, though never ſo guilty. In brief, there is much ſuperſtition among them, but formerly much

much more than is now; foraſmuch as by the converſation of proteſtants, they become aſhamed of their ridiculous practices, which are not *de fide*. As for the richer and better educated ſort of them, they are ſuch catholicks as are in other places. The poor, in adhering to their religion, which is rather a cuſtom than a dogma amongſt them; they ſeem rather to obey their grandees, old landlords, and the heads of their ſeptes and clans, than God. For when theſe were under clouds, tranſported into Spain, and tranſplanted into Conaught, and diſabled to ſerve them as formerly, about the year 1656, when the adventurers and ſoldiers appeared to be their landlords and patrons, they were obſerved to have been forward enough to relax the ſtiffneſs of their pertinacy to the pope, and his impoſitions. Laſtly, among the better ſort of them, many think leſs of the pope's power in temporals, as they call it, than formerly; and begin to ſay, that the ſupremacy, even in ſpirituals, lies rather in the church diffuſive, and in qualified general councils, than in the pope alone, or than in the pope and his cardinals, or other *juncto*.

The religion of the proteſtants in Ireland, is the ſame with the church of England in doctrine, only they differ in diſcipline thus, viz.

The legal proteſtants hold the power of the church to be in the king, and that biſhops and archbiſhops, with their clerks, are the beſt way of adjuſting that power under him. The preſbyterians would have the ſame thing done, and perhaps more, by claſſes of preſbyters national and provincial. The independents would have all chriſtian congregations independent from each other. The anabaptiſts are independent in diſcipline, and differ from all thoſe afore-mentioned in the baptiſm of infants, and in the inward and ſpiritual ſignification of that ordinance. The quakers

 ſalute

ſalute not by uncovering the head, ſpeak to one another in the ſecond perſon, and ſingular number; as for magiſtracy and arms, they ſeem to hold with the anabaptiſts of Germany and Holland; they pretend to a poſſibility of perfection, like the papiſts; as for other tenents, 'tis hard to fix them, or to underſtand what things they mean by their words.

The diet of the poorer Iriſh, is what was before diſcourſed in the 11th chapter.

The clothing is a narrow ſort of frieze, of about twenty inches broad, whereof two foot, called a bandle, is worth from 3d. halfpeny to 18d. Of this, ſeventeen bandles make a man's ſuit, and twelve make a cloak. According to which meaſures and proportions, and the number of people who wear this ſtuff, it ſeems, that near thrice as much wool is ſpent in Ireland as exported; whereas others have thought quite contrary, that is, that the exported wool is triple in quantity to what is ſpent at home.

As for the manners of the Iriſh, I deduce them from their original conſtitutions of body, and from the air; next from their ordinary food; next from their condition of eſtate and liberty, and from the influence of their governors and teachers, and laſtly, from their ancient cuſtoms, which affect as well their conſciences as their nature. For their ſhape, ſtature, colour, and complexion, I ſee nothing in them inferior to any other people, nor any enormous predominancy of any humour.

Their lazing ſeems to me to proceed rather from want of employment and encouragement to work, than from the natural abundance of flegm in their bowels and blood; for what need they to work, who can content themſelves with potatoes, whereof the labour of one man can feed forty; and with milk, whereof one cow will, in ſummer time, give meat and

and drink enough for three men, when they can every where gather cockles, oyſters, muſcles, crabs, &c. with boats, nets, angles, or the art of fiſhing; and can build an houſe in three days? and why ſhould they deſire to fare better, though with more labour, when they are taught, that this way of living is more like the patriarchs of old, and the ſaints of later times, by whoſe prayers and merits they are to be relieved, and whoſe examples they are therefore to follow? and why ſhould they breed more cattle, ſince 'tis penal to import them into England? why ſhould they raiſe more commodities, ſince there are not merchants ſufficiently ſtocked to take them of them, nor provided with other more pleaſing foreign commodities, to give in exchange for them? and how ſhould merchants have ſtock, ſince trade is prohibited and fettered by the ſtatutes of England? and why ſhould men endeavour to get eſtates, where the legiſlative power is not agreed upon; and where tricks and words deſtroy natural rights and property?

They are accuſed alſo of much treachery, falſeneſs, and thievery; none of all which, I conceive, is natural to them; for as to treachery, they are made believe, that they all ſhall flouriſh again, after ſome time; wherefore they will not really ſubmit to thoſe whom they hope to have their ſervants; nor will they declare ſo much, but ſay the contrary, for their preſent eaſe, which is all the treachery I have obſerved; for they have in their hearts, not only a grudging to ſee their old properties enjoyed by foreigners, but a perſuaſion they ſhall be ſhortly reſtored. As for thievery, it is affixt to all thin-peopled countries, ſuch as Ireland is, where there cannot be many eyes to prevent ſuch crimes; and where what is ſtolen, is eaſily hidden and eaten, and where 'tis eaſy to burn the houſe, or violate the

 perſons

persons of those who prosecute these crimes, and where thin-peopled countries are governed by the laws that were made and first fitted to thick-peopled countries; and where matter of small moment and value must be tried with all the formalities which belong to the highest causes. In this case there must be thieving, where there is neither encouragement, nor method, nor means for labouring, nor provision for impotents.

As for the interest of these poorer Irish, it is manifestly to be transmuted into English, so to reform and qualify their housing, as that English women may be content to be their wives, to decline their language, which continues a sensible distinction, being not now necessary; which makes those who do not understand it, suspect, that what is spoken in it, is to their prejudice. It is their interest to deal with the English, for leases, for time, and upon clear conditions, which being performed they are absolute freemen, rather than to stand always liable to the humour and caprice of their landlords, and to have every thing taken from them, which he pleases to fancy. It is their interest, that he is well-pleased with their obedience to them, when they see and know upon whose care and conduct their well-being depends, who have power over their lands and estates. Then, to believe a man at Rome has power in all these last mentioned particulars in this world, and can make them eternally happy or miserable hereafter, 'tis their interest to join with them, and follow their example, who have brought arts, civility, and freedom into their country.

On the contrary, what did they ever get by accompanying their lords into rebellion against the English? what should they have gotten if the late rebellion had absolutely succeeded, but a more absolute servitude? and when it failed, these poor people have lost all their estates, and their leaders increased theirs, and enjoyed

enjoyed the very land which their leaders caused them to lose. The poorest now in Ireland ride on horseback, when heretofore the best ran on foot like animals. They wear better cloths than ever; the gentry have better breeding, and the generality of the plebeians more money and freedom.

CHAP. XIII.

Several miscellany remarks and intimations concerning Ireland, and the several matters aforementioned.

WITHOUT recourse to the authority of story, but rather diligently observing the law and course of nature, I conjecture, that whatever is fabled of the Phœnicians, Scythians, Biscayers, &c. their first inhabiting of Ireland; that the places near Carrickfergus were first peopled, and that with those, who came from the parts of Scotland opposite thereunto; for that Ireland was planted by some body in Cæsar's time, is most certain; that the art of navigation was not before Cæsar's time so well understood and practised, as to bring men from any other part of the world thither, save from Great-Britain; that from St. David's-head in South-Wales, and from Holy-head in North-Wales, Ireland is not clearly at any time discerned, nor often at all; that the inhabitants of those two British head-lands had neither boats fit to pass that sea, is most probable; but that Carrickfergus may be always seen from Scotland, is well known; and that a small boat may row over in three or four hours, is experienced; that the language of those parts differ very little; that the country about Carrickfergus is far better than that of Scotland opposite; that the chief bishops seat of

 Ireland,

Ireland, and probably the first, is near those parts, are all notorious truths. From all which 'tis probable, that Ireland was first peopled from Scotland.

It hath been much observed, that the lieutenants and chancellors of Ireland have often been at variance; the reason whereof seems to be their powers were too near an equilibrium; for the lieutenant commands an army perhaps of 3000, and the chancellor makes 900 justices of peace, who make 2500 constables, which are the civil sword, who act in times of peace, and every where, and all matters; whereas the army acts only upon rare occasions, and are more mercenary men. So as the civil sword seems of far more extent and effect than the military sword.

The lieutenant disposes perhaps of four or five hundred places and employments; but the chancellor, the said nine hundred justices of peace, and several others. The lieutenant can hurt very few persons, who do not depend upon the favour of employments; but the chancellor can affect all men of estates and dealing in the world, by the power of his court, and by the harmony of his own will with the king's conscience.

The lieutenant is for the most part a stranger to Ireland; but the chancellor seldom such, but a person of great family and acquaintance. Moreover, all the lieutenants, deputies, and lords justices, that have been these 150 years, have not, one with another, continued two years in the office; but the chancellors have much more, and are seldom removed but by death, and general revolutions. The chancellor has ordinarily some other dignity and office annexed, for they be often eminent prelates and church-men; but the lieutenant is confined to temporals. The chancellor is speaker in parliament, and

and by keeping the seal, can check the lieutenant in many cases. The chancellors are bred to eloquence and arguing; the breeding of a lieutenant is casual.

Men that bring great estates into Ireland, do not increase them proportionably with them who come over with nothing. Not to quote the examples hereof on both sides, the reason seems not to be very abstruse, viz.

The language of Ireland is like that of the north of Scotland, in many things like the Welch and Manques; but in Ireland the Fingallians speak neither English, Irish, nor Welch; and the people about Wexford, though they agree in a language differing from English, Welch, and Irish, yet 'tis not the same with that of the Fingallians near Dublin. Both these sorts of people are honest and laborious members of the kingdom.

The Irish language, and the Welch, as also all languages that have not been the languages of flourishing empires, wherein were many things, many notions and fancies, both poetical and philosophical, hath but few words; and all the names of artificial things brought into use, since the empire of these linguists ceased, are expressed in the language of their conquerors, by altering the termination and accents only.

Ireland is now divided into provinces, counties, baronies, parishes, and farm-lands, and those, so as that they may be, and have been geometrically delineated; but formerly it was not so, but the country was called by the names of the lords who governed the people. For as a territory bounded by bogs, is greater or lesser as the bog is more dry and passable, or otherwise: so the country of a grandee or tierne in Ireland, became greater or lesser as his forces waxed

waxed or weaned; for where was a large caſtle and garriſon, there the juriſdiction was alſo large.

And when theſe grandees came to make peace, and ſettle the bounds with one another, the limits of their land-agreements were no lines geometrically drawn; but if the rain fell one way, then the land whereon it fell, did belong to A, if the other way, to B, &c.

As to their town-lands, plough-lands, colps, gneeres, bullibos, ballibelaghs, two's, horſmen's, beds, &c. they are all at this day become unequal both in quantity and value, having been made upon grounds which are now obſolete and antiquated.

For ſometimes lands were divided by what certain ſocieties of men held, which I conceive were town-lands or tythings.

Sometimes by plow-lands, viz. ſuch a parcel of lands as contained enough of every ſpecies of land arable, meadow, paſture, mountain, turf-bog, wood, &c. as ſerved for the whole uſe of man, eſpecially of the owner of ſuch a plow-land.

Sometimes by the ſhare or proportion of land, which an undertaker would engage to plant and defend according to articles.

Sometimes by the ſhare which each ſervitor had given him in reward for his ſervice, after a rebellion or inſurrection.

Sometimes by what belonged to the cell of ſome religious man or men. But now all the lands are geometrically divided, and that without aboliſhing the ancient denominations and diviſions above-mentioned. So that it is yet wanting to prevent the various ſpelling of names generally underſtood, that ſome perſon or perſons who can rightly comprehend the names of all public denominations according as they are ſpelled in the lateſt grants, ſhould be appointed by authority to determine the ſame for the time

time to come. And that where the ſame land hath other names, or hath been ſpelled with other conſcription of letters or ſyllables, that the ſame be mentioned with an *alias*. Where the public and new authenticated denominations is part of a greater antiquated denomination, that it be ſo expreſſed, as by being called the Eaſt, Weſt, South, or North part thereof. And if the ſaid denomination comprehend ſeveral obſolete or inconſiderable parcels, that the ſame be expreſſed likewiſe.

The laſt clauſe of the explanatory act, enabled men to put new names on their reſpective lands, inſtead of thoſe uncouth, unintelligible ones then upon them. And it would not be amiſs if the ſignificant part of the Iriſh names were interpreted, where they are not, or cannot be aboliſhed.

SOME

SOME have thought that little ſhipping belongs to Ireland, by the great policy of the Engliſh, who (as they wittily expreſſed it) would keep the chain or draw-bridge between both kingdoms, on the Engliſh ſide; but I never perceived any impediment of building, or having ſhips in Ireland, but mens own indiſpoſition thereunto, either wanting ſtock for ſo chargeable a work, or not having workmen of ſorts enough to fit out a ſhip in all particulars: as for that they could hire ſhips cheaper from the Dutch, than to build them; or, that the Iriſh had rather eat potatoes and milk on dry land, than conteſt with the wind and waves with better food: or that there is not ſufficient encouragement for an able ſhipright to reſide in Ireland. Nevertheleſs at this day there belongs to ſeveral ports of Ireland, veſſels between 10 and 200 tuns, amounting to about 8000 tuns of ſeveral ſorts and ſizes: and there are five light-houſes erected for ſafety of ſailing upon the coaſts.

Concerning the Ambergreece, taken upon the Weſtern coaſts of Ireland, I could never receive any clear ſatisfaction, neither of its odor, nor any other vertue, nor what uſe was or could be made of that ſtuff which has been ſo called, which is of ſeveral appearances.

What is ſaid of the herb Mackenbory, is fabulous, only that 'tis a tythimal, which will purge furiouſly, and of which there are vaſt quantities in that part of Kerry called Deſmond, where the arbutus or ſtrawberry tree groweth in great quantity.

There are not in Ireland ten iron furnaces, but above twenty forges and bloomeries, and but one lead-work, which was ever wrought, tho' many in view, which the pretended patents of them have hindered the

the working of, There is alſo a place in Kerry fit for one allum-work, attempted, but not fully proceeded upon.

There are in the Weſt of Ireland, about 20 gentlemen, who have engaged in the pilchard-fiſhing, and have among them all about 160 ſaynes, wherewith they ſometimes take about 4000 hogſheads of pilchards *per ann.* worth about ten thouſand pound. Cork, Kingſale, and Bantry are the beſt places for eating of freſh fiſh, tho' Dublin is not, or need not be ill ſupplied with the ſame.

The clothing-trade is not arrived to what it was before the late rebellion. And the art of making the excellent, thick, ſpungy, warm coverlets, ſeems to be loſt.

Near Colrane is a ſalmon-fiſhing, where ſeveral tuns of ſalmon have been taken at one draught.

The Engliſh in Ireland before Henry the VII's time, lived in Ireland as the Europeans do in America; or as ſeveral nations do now upon the ſame continent; ſo as an Engliſhman was not puniſhable for killing an Iriſhman, and they were governed by different laws; the Iriſh by the Brehan law, and the Engliſh there by the laws of England.

Regiſters of burials, births and marriages, are not yet kept in Ireland, though of late begun in Dublin, but imperfectly.

Engliſh in Ireland, growing poor and diſcontented, degenerate into Iriſh; *& vice verſa*, Iriſh growing into wealth and favour, reconcile to the Engliſh.

Eleven Iriſh miles makes 14 Engliſh, according to the proportion of the Iriſh perch of 21 feet, to the Engliſh of 16 and a half.

The admeaſurement of land in Ireland, hath hitherto been made with a circumferencer, with a needle of three two thirds long, as the moſt convenient proportion;

tion; but 'twill be henceforth better done by the help of ſome old geometrical theoremes, joyned with the new property of a circle, demonſtrated by doctor R. Wood.

The D I A G R A M.

ALtho' the proteſtants of Ireland, be to papiſts, as three to eight; yet, becauſe the former live in cities and towns, and the Scots live all in and about five of the 32 counties of Ireland; it ſeems in other open counties, and without the corporations, that the Iriſh and Papiſts are twenty to one.

A report

A report from the council of trade in Ireland, to the Lord Lieutenant and Council, which was drawn by ſir William Petty.

IN obedience to your lordſhip's Act of Council, of January the 20th 1675, we have ſpent ſeveral days in conſidering how, as well the wealth of this kingdom in general, as the money thereof in particular may be increaſed. And in order thereunto, we muſt firſt ſet down to the beſt of our knowledge, the ſtate of this kingdom in reference to trade. Secondly, We have noted ſuch inferences from the ſame as do ſhew the ſeveral cauſes of the ſmallneſs of trade, want of money, and the general poverty of this nation. And in the laſt place, we have offered ſuch general remedies and expedients, in the reſpective caſes, as may be obtained and practiſed, without any new law to be made in Ireland. And we are ready ſo to inlarge upon the branches we have offered, as to make ſuch of our propoſals practicable, as your lordſhips ſhall pleaſe to ſelect and approve of for that purpoſe.

March the 25th, 1676.

CHAP.

CHAP. XIV.

Considerations relating to the improvement of Ireland.

THE whole territory of Ireland consists of about 12 millions of acres (English measure) of arable, meadow, and good pasture land; with about two millions of rocky, boggy, and scrubby pasture, commonly called unprofitable, (tho' not altogether such:) the rest being absolute boggs, loughs, rocks, sands, strands, rivers, and highways, &c. Of all which several lands, the yearly rent (comprehending their Majesties quit-rents, tythes and tenants improvements) is supposed to be about nine hundred thousand pound, and worth to be purchased at nine millions.

2. The value of all the housing in Ireland, which have one or more chimnies in them, (excluding all cabbins which have none) is supposed to be two millions and a half.

3. The cattle and live stock, three millions.

4. Corn, furniture, merchandize, &c. about one million.

5. The coined and currant money, now running in trade, is between 300, and 350,000 l. or the 50th part of the value of the whole kingdom, which we suppose to be about 16 millions.

6. The number of the people in Ireland is about 1100,000, viz. 300,000 English, Scotch, and Welch protestants, and 800,000 papists, whereof one fourth are children unfit for labour, and about 75,000 of the remainder are, by reason of their quality and estates, above the necessity of corporal labour; so as there remains 750,000 labouring men and women, 500,000 whereof do perform the present work of the nation.

7. The

7. The said 1100,000 people do live in about 200,000 families or houses, whereof there are but about 16,000 which have more than one chimney in each; and about 24,000 which have but one; all the other houses, being 160,000, are wretched nasty cabbins, without chimney, window, or door-shut, even worse than those of the savage Americans, and wholly unfit for the making merchantable butter, cheese, or the manufactures of woollen, linen or leather.

8. The houses within the city and liberties of Dublin, are under 5000, viz. in the city 1150. And the alehouses within the same about 1200. And it seems, that in other corporations and country towns, the proportion of alehouses is yet greater than in Dublin, viz. about one third of the whole.

9. The counties, baronies, and parishes of Ireland, are now become marvellously unequal, so as some are twenty times as big as others, the county of Cork seeming in respect of people and parishes to be one 8th of the whole kingdom, and other counties not being above the 20th part of the county of Cork; it hath been found very difficult to get fit persons for sheriffs and juries; and the often holding of assizes and quarter-sessions in the said smaller counties, hath been found an unnecessary burden upon them,

10. There are now in Ireland 32 counties, 252 baronies, and 2278 parishes; so as the number of sheriffs, and sub-sheriffs, sheriff-bailiffs, high and petty-constables, are about three thousand persons, whereof not above one tenth are English or protestants. So as the remainder (being about two thousand seven hundred) are Irish papists, and are the civil militia of this kingdom, and have the executing of all decrees of courts, and of justices of the peaces warrants.

11. This

11. This civil militia, and the reſt of the Iriſh papiſts being about 800,000, are influenced and guided by about 3000 prieſts and fryars, and they governed by their biſhops and ſuperiors, who are for the moſt part, of the old Iriſh gentry, men of foreign education, and who depend upon foreign princes and prelates, for benefices and preferments.

12. The Iriſh papiſts (beſides Sundays and the 29 holidays appointed by the law) do one place with another, obſerve about 24 days more in the year, in which they do no corporal labour, ſo as they have but about 266 working days; whereas proteſtants not ſtrictly obſerving all the legal holy days, by a total forbearing of labour, have in effect 300 working days in the year, that is, 34 days more than the papiſts, or at leaſt five of ſix days in each, or one 10th part of the whole year.

13. The expence of the whole people of Ireland is about four millions *per ann.* the 50th part whereof being 80,000l. and the quarter of annual houſe rent being about 60,000 l. together with 450,000 l. more, being the value of half a years rent, tythes and quit rent, do make 590,000l. as that ſum of money which will compleatly drive the trade of this kingdom.

14. The value of the commodities exported out of Ireland, and the freight of the ſhipping employed in the trade of this nation, together with the fiſhing of herrings, is about five hundred thouſand pounds *per annum.*

15. The value of the eſtates in Ireland of ſuch perſons as do uſually live in England; the intereſt of debts of Ireland, due and payable to England; the pay of the forces of Ireland, now in England; the expence and penſions of agents and ſolicitors commonly reſiding in England about Iriſh affairs; the expence

pence of Engliſh and Iriſh youth now upon their education beyond the ſeas; and laſtly, the ſuppoſed profit of the two great farms now on foot, do altogether make up near two hundred thouſand pound, *per ann.* as a debt payable to England out of Ireland.

16. The value of the cattle, viz. live oxen and ſheep, carried out of Ireland into England, was never more than 140,000 l. *per annum*; the freight, hides, tallow, and wool of the ſaid live cattle, were worth about 60,000 l. of the ſaid 140,000 l. and the value of the goods imported out of England into Ireland (when the cattle trade was free) was between treble and quadruple, to the neat value of the ox and ſheeps fleſh tranſported from hence into England.

17. The cuſtoms of exported and imported goods, between England and Ireland, abſtracted from the exciſe thereof, was in the freeſt trade about 32,000 l. *per annum.*

CHAP. XV.

Inferences from the premiſſes.

1. BY comparing the extent of the territory with the number of people, it appears that Ireland is much under peopled; foraſmuch as there are above 10 acres of good land to every head in Ireland; whereas in England and France there are but four, and in Holland ſcarce one.

2. That if there be 250,000 ſpare hands capable of labour, who can earn 4 or 5 l. *per ann.* one with another, it follows that the people of Ireland, well employed, may earn one million *per ann.* more than they do now, which is more than the years rent of the whole country.

3. If an houſe with ſtone walls, and a chimney well covered, and half an acre of land well ditched about, may be made for 4 or 5 l. or thereabouts; then two thirds of the ſpare hands of Ireland can in one years time build and fit up 160,000 ſuch houſes and gardens, inſtead of the like number of the wretched cabbins abovementioned: and that in a time when a foreign trade is moſt dead and obſtructed, and when money is moſt ſcarce in the land.

4. The other third part of the ſaid ſpare hands within the ſame year (beſides the making of bridges, harbours, rivers. highways, &c. more fit for trade) are able to plant as many fruit and timber trees, and alſo quick-ſet hedges as, being grown up, would diſtinguiſh the bounds of lands, beautify the country, ſhade and ſhelter cattle, furniſh wood, fuel, timber and fruit, in a better manner than ever was yet known in Ireland or England. And all this in a time when trade is dead, and money moſt ſcarce.

5. If the gardens belonging to the cabbins above-mentioned, be planted with hemp and flax, according to the preſent ſtatute, there would grow 120,000 l. worth of the ſaid commodities, the manufactures whereof, as alſo of the wool and hides now exported, would by the labour of the ſpare hands above-mentioned, amount to above one million *per annum* more than at preſent.

6. The multitude and proportion of ale-houſes above-mentioned, is a ſign of want of employment in thoſe that buy, no leſs than thoſe that ſell the drink.

7. There being but 800,000 papiſts in Ireland, and little above 2000 prieſts; it is manifeſt that 500 prieſts may, in a competent manner, officiate for the ſaid number of people and pariſhes. And that two popiſh biſhops (if any at all be neceſſary) may as well govern

govern the ſaid 500 prieſts, and two thouſand pariſhes, as the 26 biſhops of England do govern near ten thouſand pariſhes.

8. If the proteſtants, according to the preſent practice and underſtanding of the law, do work one tenth part of the year more than the papiſts: and that there be 750,000 working people in Ireland, whereof about 600,000 are papiſts; it follows that the popiſh religion takes off 60,000 workers, which, at about 4 l. *per annum* each, is about 250,000 l. *per annum* of it ſelf; beſides the maintenance of 2500 ſuperfluous churchmen, which at 20 l. *per annum* each, comes to 50,000 l. *per annum* more.

9. The ſheriffs of Ireland at 100 l. *per annum*, the high conſtables at 20 l. *per annum*, and the petty conſtables at 10 l. *per annum* each, being all Engliſh proteſtants; (with ſome other incident charges for the adminiſtration of juſtice) may be ſallarated and defrayed for 30,000 l. *per annum*, conſiſtent with his majeſty's preſent revenue, forces, &c. which ſaid ſalaries may alſo be leſſened, by uniting ſome of the ſmaller counties, baronies and pariſhes, according to the proportion of people inhabiting within them.

10. If there be not 350,000 l. coined money in Ireland; and if 590,000 l. (or near double what there now is) be requiſite to drive the trade thereof; then it follows, that there is not enough in Ireland to drive the trade of the nation.

11. If the lands of Ireland and houſing in corporations, be worth above 10 millions to be now ſold, (and if leſs than one million of ſtock will drive all the trade that Ireland is capable of) reckoning but two returns *per annum*; it is certain that the leſſer part of the ſaid ten millions worth of real eſtate, being well contrived into a bank of credit, will, with the caſh yet remaining, abundantly anſwer all the ends of

domeſtick improvements and foreign traffick whatſoever.

12. If the whole ſubſtance of Ireland be worth 16 millions, as aboveſaid: if the cuſtoms between England and Ireland, were never worth above 32,000 l. *per annum:* if the titles of eſtates in Ireland be more hazardous and expenſive, for that England and Ireland be not under one legiſlative power: if Ireland till now hath been a continual charge to England: if the reducing the late rebellion did coſt England three times more in men and money, then the ſubſtance of the whole country, when reduced, is worth: if it be juſt, that men of Engliſh birth and eſtates, living in Ireland, ſhould be repreſented in the legiſlative power; and that the Iriſh ſhould not be judged by thoſe who, they pretend, do uſurp their eſtates; it then ſeems juſt and convenient that both kingdoms ſhould be united, and governed by one legiſlative power. Nor is it hard to ſhew how this may be made practicable, nor to ſatisfy, repair, or ſilence thoſe who are intereſted or affected to the contrary.

13. In the mean time, it is wonderful that men born in England, who have lands granted to them by the king, for ſervice done in Ireland to the crown of England when they have occaſion to reſide or negotiate in England, ſhould by their countrymen, kindred and friends there, be debarred to bring with them out of Ireland food whereupon to live, nor ſuffered to carry money out of Ireland, nor to bring ſuch commodities as they fetch from America directly home, but round about by England, with extream hazard and loſs, and be forced to trade only with ſtrangers, and become unacquainted with their own country; eſpecially when England gaineth more than it looſeth by a free commerce; as exporting hither three times as much as it receiveth from hence: inſomuch

ſomuch as 95l. in England, is worth about 100l. of the like money in Ireland, in the freeſt time of trade.

14. It is conceived that about one 3d of the imported manufactures might be made in Ireland, and one 3d of the remainder might be more conveniently had from foreign parts, than out of England, and conſequently that it is ſcarce neceſſary at all for Ireland to receive any goods of England, and not convenient to receive above one 4th part from hence of the whole which it needeth to import, the value whereof is under 100,000 l. *per ann.*

The application of the premiſes, in order to remedy the defects and impediments of the trade of Ireland.

1. Foraſmuch as the conſideration of raiſing money, hath already, and ſo lately, been before your lordſhips; therefore without giving this board any further trouble concerning the ſame, we humbly offer, in order to the regulation of the ſeveral ſpecies thereof, that whereas weighty plate pieces, together with ducatoons, making about three quarters of the money now current in Ireland, do already paſs at proportionable rates; and for that all other ſpecies of ſilver money, are neither rated proportionably to the ſaid weighty pieces, nor to one another; that whole, half and quarter cobbs of ſterling ſilver (if light) may paſs at 5s. 7d. *per* ounce, but that the other ſpecies of coarſer ſilver, as the Perues, &c. may paſs as commodity, or at 5s. *per* ounce until there ſhall be conveniency for new coining thereof into ſmaller money.

2. That forthwith application may be made unto England, to reſtore the trade from the plantations, and between the two kingdoms (and particularly that of cattle) as heretofore; and in the mean time to diſcover and hinder, by all means poſſible, the carrying of bullion out of Ireland into England; to the end that

that thoſe in England who are to receive monies from hence, may be neceſſitated to be very earneſt in the ſaid negotiation.

3. That endeavours be uſed in England, for the union of the kingdoms under one legiſlative power, proportionably, as was heretofore done in the caſe of Wales.

4. For reducing intereſt from ten to five or ſix *per cent.* for diſpoſing monied men to be rather merchants than uſurers, rather to trade than purchaſe, and to prevent the bad and uncertain payments which gentlemen are forced to make unto tradeſmen, whoſe ſtock and credit is thereby ſoon buried in debts, not to be received without long and expenſive ſuits, and that a bank of land be forthwith contrived and countenanced.

5. That the act of ſtate which mitigates and compounds for the cuſtoms of ſome foreign goods, purpoſely made high to hinder their importation, and to encourage the manufacture of them here, be taken into conſideration (at leaſt before it be renewed.)

6. That the lord lieutenant and council, as alſo the nobility, courts of juſtice and officers of the army, and other gentlemen in and about Dublin, may by their engagement and example, diſcountenance the uſe of ſome certain foreign commodities, to be pitched upon by your lordſhips: and that gentlemen and freeholders in the country, at their aſſizes, and other country meetings, and that the inhabitants of all corporations who live in houſes of above two chimnies each, may afterwards do the ſame.

7. That there be a corporation for the navigation of this kingdom, and that other ſocieties of men may be inſtituted, who ſhall undertake and give ſecurity to carry on the ſeveral trades and manufactures of Ireland; and to ſee that all goods exported to foreign markets, may be faithfully wrought and packt: which

which ſocieties may direct themſelves, by the many ſeveral propoſals and reports formerly, and of late made by the council of trade, and which they are now again ready to enlarge and accomodate to the ſaid ſeveral propoſals reſpectively, and more particularly to the manufactures of woollen, linen, and leather.

8. That the corporations of Ireland, may be obliged to engage no manufactures, but according to their primitive inſtructions; which was to carry on ſuch great works, as exceeded the ſtrength of ſingle perſons; and particularly that they may cauſe ſome ſuch like proportions of yarn, linnen and woollen, as alſo of worſted, to be ſpun, as Mr. Hawkins hath propounded.

9. That the patents which hinder the working of mines may be conſidered.

10. That the juſtices of peace may be admoniſhed to protect the induſtrious, and not ſuffer their labours to be interrupted by vexatious and frivolous indictments.

11. That the inhabitants of the wretched cabbins in Ireland, may be encouraged to reform them, by remitting the penalty of nine pence *per* Sunday, payable by the ſtatute; and likewiſe to make gardens, as the ſtatute for flax and hemp requires. And that other the wholeſome laws againſt idlers, vagabonds, &c. may be applied to the prevention of beggary and thievery: whereunto the orderly diſpoſing of the ſaid cabbins into townſhips would alſo conduce.

12. That the people be diſſuaded from the obſervation of the ſuperfluous holydays.

13. That the exorbitant number of popiſh prieſts and fryars, may be reduced to a bare competency, as alſo the number of ale-houſes.

14. That

14. That the conſtable, ſheriff, and bailiffs, may alſo be Engliſh proteſtants, (tho' upon ſalary.)

" From all which, and from the ſettlement of eſtates, it is to be hoped, that men ſeeing more advantage to live in Ireland than elſewhere, may be invited to remove themſelves thither; and to ſupply the want of people; the greateſt and moſt fundamental defect of this kingdom.

CAROLUS

CAROLUS *ſecundus, Dei gratia, Angliæ, Scotiæ, Franciæ & Hiberniæ rex, fidei defenſor, &c. Omnibus ad quos præſentes literæ pervenerint ſalutem. Cum prædilectus, perquam fidelis conſanguineus & conſiliarius noſter Jacobus dux Ormondiæ in regno noſtro Hiberniæ, qui plurima egregia ſervitia ſereniſſimo patri noſtro beatiſſimæ memoriæ in eodem regno, in loco & qualitate Domini locum-tenentis generalis & generalis gubernatoris ejuſdem regni noſtri per multos annos in temporibus maximæ calamitatis ſumma cum prudentia & integritate præſtiterit, ac ſeſe fidum & fortem aſſertorem coronæ Angliæ jurium continue comprobaverit, utpote qui dicto patri noſtro per totam flagitioſam illam ſubditorum ſuorum nuperam defectionem, magnanimiter adhæreſcens in prælio primus & audax, in conſilio prudens, & nemini ſecundus extiterit; atque nobis etiam tum extremis exilii noſtri anguſtiis, tum reſtitutione noſtra, inſeparabilis & indefatigabilis adfuerit comes & adjutor: nos præmiſſa perpendentes æquum duximus, in teſſeram favoris noſtri, eundem ducem Ormondiæ locum-tenentem noſtrum generalem regni noſtri Hiberniæ prædicti, & generalem in eodem regno gubernatorem conſtituere. Sciatis, quod nos de provida circumſpectione & indruſtria præfati Jacobi ducis Ormondiæ plurimum confitentes de adviſamento concilii noſtri & ex certa ſcientia & mero motu noſtri aſſignavimus, fecimus, ordinavimus, conſtituimus & deputavimus & per præſentes aſſignamus, facimus-ordinamus, conſtituimus & deputamus eundem ducem Ormondiæ locum-tenentem noſtrum generalem regni noſtri Hiberniæ prædict' necnon gubernator' noſtrum generalem regni noſtri illius, Habendum tenendum, gaudendum, exercend' & occupand' offic' præd' præfato Jacobo duci Ormondiæ una cum omnibus & ſingulis vad' feod' ſtipend' & aſſocation' eidem officio ſpectan' & pertinen' durante beneplacito noſtro; dantes & concedentes eidem locum-tenenti*

noſtro

nostro generali & gubernatori nostro generali plenam tenore præsentium potestatem & authoritatem ad pacem nostram & ad leges consuitudines regni nostri prædict' custodiend' & custodire faciend' & ad omnes & singulos ligeos nostros tam Anglicos quam Hibernicos dicti regni nostri ac alios quoscunque, per nos super dictum locum-tenent' nostrum generalem & gubernatorem nostrum generalem, stipendiatos & alias quascunque personas, ibidem contra nos, aut pacem, consuetudinem & leges prædict' qualecunque delinquend' & contraveniend' juxta eorum demerita, secundum leges & consuetudines prædictas, viis & modis quibus melius pro honore & proficuo nostro fieri poterit: ac pro bono gubernatione dicti regni nostri ac ligeorum & subditor' nostrorum ibidem juxta discretionem dicti locum-tenentis nostri general' & gubernatoris nostri general' castigand' & puniend' ac puniri & castigari faciend' necnon ordinationes & statuta pro salvo & bone regimine regni nostri ibidem ordinand' statuend' & stabiliend' ac super inde proclamationes faciend' debitæque executioni demandand' ac quoscunque contravenientes & delinquentes castigand' & incarcerand' atque incarceratos solvend' & deliberand'. Necnon ad recipiend' & admittend' per dictum advisament' consilii nostri ad fidem & pacem nostram, tam Anglicos quam Hibernicos, & alios quoscunque infra prædict' regnum nostrum Hiberniæ habitantes vel commorantes intutand' seu commorand' qui nobis, legibus nostris consuetud' prædict' rebelles & contrarii extiterint aut existunt vel existent; & ad concedend' faciend' & dand' per hujusmodi advisament' plenam pardonationem, remissionem, relaxationem & absolutionem tam general' quam specialem, illis & eorum cuilibet hujusmodi pardonationem petent' aut habere volen' ac sectam pacis nostræ quæ ad nos pertinet tam pro homicid rober' felon' murdr' rapt' mulierum, latrociniis, falsis allegation' adhæsion' inimicis utlagar' transgression' contempt' & aliis offensis quibuscunque in dicto regno nostro per aliquas

aliquas hujusmodi personas ante hæc tempora fact' seu in posterum faciend' & eorum fortisfactur' & firmam pacem nostram eis & eorum cuilibet literas patentes sub magno sigillo quo utimur in regno nostro prædicto in forma debita concedend' donand' & deliberand' ac etiam eosdem alias quoscunque ad fines & redemptiones hujus modi offens' & eorum quamlibet qui fines & redemptiones facere debuerunt seu voluerunt accipiend' & recipiend' et singul' personis juxta leges & consuetudines præd' justitiam faciend' & fieri mandand' ac etiam ad universos & singulos tam Anglos rebelles quam Hibernicos dicti regni nostri & alios quoscunque dictum regnum nostrum in posterum invadend' ac ipsum regnum nostrum subditosque nostros ejusdem deprædare, gravere seu alio modo destruere seu devastare intendent' ac se juxta leges & consuetudines prædict' justificare volentes, si necesse fuerit, cum protest' nostra regia, ac aliis viis & modis, quibus melius fieri poterit juxta eorum demerita puniend' & si opus fuerit ultimo supplicio demandend' ac subditos nostros provide commovend' convocand' & levand' ac cum eisdem subditis nostris sic levat' contra dictos rebelles congrediend' eosque invadend' vicend' & castigend' & si opus fuerit terr' ipsorum aliis qui nobis servire volunt & intendunt de advisamento prædict' locand' & demittend'. Ac etiam cum eis pacificand' & pacem componend' ac ipsos paci nostræ restorand' toties quoties in præmissis vel circa ea opus fuerit. Proviso tamen semper, quod super quamlibet talem dimissionem & location' per præfat' Jacobum ducem Ormandiæ ac prædict' advisament' consilii nostri præd' in posterum virtute harum literarum nostrarum patentiu' faciend' annual' reddit' superinde debit' sit nobis, hæredibus & successoribus nostris, omnino reservat' damus insuper & concedimus eidem Jacobo duci Ormondiæ locum tenenti nostro generali & gubernatori nostri generali, tenore presentium, plenam potestatem & authoritatem omnes proditiones, nec non felon' murdr' rapt' mulier' ibidem & alias causas

causas & offensas quascunque per subditos ejusdem regni nostri Hiberniæ, vel alios ibidem residend commiss' sive committend' predition' quæ destructionem vitæ nostræ concernerunt tantummodo except' pardonand' abolend' remittend' & relaxand' literasque nostras patentes sub dicto magno sigillo nostro superinde cuicunque personæ regni nostri Hiberniæ præd' nomine nostro concedend' componend' & ad easdem sigilland' cancellar' nostro vel custod' sigilli dicti nostri regni nostri Hiberniæ mandand' tradend' & deliberand'. Damus preterea & concessimus eidem Jacobo duci Ormandiæ locum-tenenti nostri generali & gubernatori nostro generali, plenam potestatem & authoritem quoscunque de stirpe Anglicano existend' in officio in regno prædict' tam secundo baroni scaccar' nostri & quorumcunque computand' ac aliar' officiar' perficere, ipsosque officiar' intra regnum nostrum prædictam facere, deputare & constituere; habendum eis & eorum cuilibet & quibuslibet, durante beneplacito nostro & quamdiu in eodem se bene gerunt ad libitum ejusdem locum-tenentis nostri general' & gubernatoris nostri general' una cum vad' & regard' eisdam officiar' ab antiquo debit' & consuet' offic' cancellar' thesaur' subthesaurar' justiciar' utriusque banci & capital' baron' scaccar' nostri offic' magistri rotulorum ac offic' thesaur' ad gueram offic' marescall' offic' magistri ordination' clerici de le cheque' offic' præsiden' Munster & Connaght ac officium attor & sollicitator' nostri ejusdem regni nostræ Hiberniæ tantummodo except' statut' & parliamen' Domini Henrici nuper regis Angliæ septimi progenitor' nostri inclytæ memoriæ, anno regni sui decimo, coram Edwardo Poyning milite tunc deputato regni nostri Hiberniæ tent' edit' & provis' non obstante. Concessimus etiam præfato locum-tenenti nostro generali potestatem quod ipse durante beneplacito nostro omnia officia ecclesiastica, tam jurat' quam non jurat' viz. Vicar' parsonat' præbendar' cantur' capell' hospital' dignitat' archionat' & alia beneficia quæcunque nominatione archiepiscopor' & episcopor'

episcopor' tantum except' tam in ecclesiis cathedral' quam collegiat' hospitat' & paroch' in quocunque loco in regnum nostrum Hiberniæ quocunque titulo jam vacan' seu in posterum ex causa quacunque vacare contingen' & ad præsentationem, collationem sive donationem nostrum quocunque modo spectan' personis idoneis quibuscunque sibi placuerit dand' concedend' & conferend' & ad eadem omnia & singula quorum ad nos præsentationis, donationis sive collationis spect' & pertinent' & stat' & possess' omnium & singulorum qui de eorum aliquibus possessionat' existunt ratificand' approbanda & confirmand' ac privileg' libertat' immunitat' & concess' per prædecessores nostros quoscunque aut aliquos alios ante hæc tempora fact' sive concess' prout eidem locum-tenenti nostro general' & gubernatori nostro general per advisament' & concensu consilii nostri in regno nostro præd' melius expedire videbitur ratificand' approband & confirmand'. Concessimus insuper eidem Jacobo duci Ormandiæ locum-tenenti nostro generali & gubernatori nostro general' potestat' & fidelit' provision' & renuntiation' archiepiscopor & episcopor' in eodem regno nostro Hiberniæ, tempore præterito sive futuro, fact' ordinat' & consueta acceptend' faciend' ordinand' & constituend' ac omnia alia ad nos debit' nomine nostro recipiend' eisdem archiepiscopis, episcopis & ear' quilibet temporalia sua cancellor' nostro regni nostri prædict' deliber' mandand' cum omnibus & singulis juribus emolumen' proficuis & reventionibus ratione vacationis deor' beneficior' dignitat' archiepiscopat' sive episcopat' nobis reservat' ac etiam homag' omnium & singulorum tam spiritual' quam temporal' tenen' & subditor nostrorum quorumcunque in regno nostro prædicto nomine nostro recipiend' & terras & tenement' sua de hereditate sua cancellar' nostro delibari mandand' manusque nostras exinde amovend' ac victual' sufficien' & necessar pro expens' hospitii sui & soldar' suor' in quocunque infra dictum regnum Hiberniæ per provisor' hospitii sui & alios ministr' suos una cum carriag' sufficien' pro eisdem,

eisdem, tam infra libertates quam extra, pro denar' suis rationabil' solvend' providend' & capiend' juxta formam statuti de hujusmodi provision' ante hæc tempora fact' nisi aliter per composition' fact' cum intutan' com' infra partes vulgariter vocatos, The English Pale aliosque com' extra deces partes provisum sit aut post hac provideatur, quod præd locum-tenens general' & gubernator noster general' habeat vel habere possit summam pecuniæ annuatim in dicta compositione ante hæc limitat' pro compensatione & recompensatione pro hujusmodi virtual' providend' & capiend' pro provisor' hospitii sui, quam quidem compositionem censemus observand' pro beneficio subditor' nostror' nec non ad summonend' & summonere faciend' atque tenend' secundum leges, statut' & consuetudin' regni nostri Hiberniæ prædict' unum duntaxat parliament' quandoquidem sibi melius expediri videbitur, consensu tamen nostro in ea parte semper habit' & ad idem parliament' prorogand' & adjournand' toties quoties necesse fuerit, & infra duos annos a tempore interceptionis ejusdem plene determinand' & finiend' & quoscunque sic summonit' absentes & non legitime impedit' mulctand' & puniend'. Concessimus insuper dicto locum-tenenti nostro general' & gubernator' nostro general plenam & sufficien' authoritatem & potestat' ad omnimod' officiar' computabil' thesaurar' & subthesaurar' regni nostri prædict' duntaxat except' coram eisdem thesaurar', subthesaurar' nostris & baron' scaccarii nostri dicti regni nostri Hiberniæ, computare faciend' & ad hujusmodi comput' reddend' compelland' ac etiam ad inquirend' & inquiri faciend' viis & modis quibus melius sibi videbitur, faciend' de quibuscunque bonis & catallis quæ fuer' ill' sive alior qui erga nos seu progenitores nostros foris fecerunt vel forisfacient, & a nobis concelat' existunt vel in posterum existent, & ad omnia & singula alia quæ ad offic' locum-tenentis nostri generalis & gubernatori nostri generalis jure, usu & consuetud' regni nostri

nostri præd pertinent aut pertinere deberent & pro bono regimine & salvatione & pro bono custod' pacis regni nostri præd' & quiete populi nostri ibidem, & recuperatione jurium nostrorum in regno nostro Hiberniæ necessar' fuerit; salvis super reservatis faciend' exercend' exequend' & ordinand' omnia alia nomine nostro & pro nobis in dicto regno nostro Hiberniæ faciend' exercend' & ordinand' sicut nos faceremus aut facere possemus si ibidem in propria persona nostra essemus. Damus insuper præfato Jacobo duci Ormondiæ locum-tenenti nostro generali & gubernatori nostro generali potestatem & authoritatem navibus nostris quibuscunque aut aliis quæ circa littora dicti regni nostri Hiberniæ sunt in servitio nostro, aut in posterum quacunque occasione erunt & mittentur pro defensione dicti regni nostri Hiberniæ, imperand' & utend' pro servitio nostro & tutamine dicti regni nostri, prout ipse secundum discretionem suam & per advisamentum concilii nostri ejusdem regni nostri Hiberniæ visum, erit nisi nos special' commission' nostra aut admiralli nostri Angliæ ordinante special' gubernator' & capitan' præd' navium nostrarum aut aliis mittend' speciali instructione mandat' & servic' imperaverimus aut imperaverit. Constituimus etiam præfat' Jacobum ducem Ormondiæ gubernator' & præfect' nostrum general' exercitus nostri in dicto regno nostro Hiberniæ, tam præsentis quam futuri, quam diu nobis placuerit, cum alacationibus inde debit' & consuet'. Ac eidem duci præfecto generali exercitus nostri ibidem plenam potestatem & authoritatem concedimus faciend' constituend' & ordinand' leges, ordinationes & proclamationes de tempore in tempus, ut casus exegerit, pro bono regimine exercitus nostri prædict' ac omnes quorumcunque sub mandato & gubernatione ejusdem præfectus generalis exercitus nostri easdemque leges, ordinationes & proclamationes exequendi ac debitæ executioni mandand' ac etiam infligere, adjudicare & assidere timor' pœnas corporales, im-

prisonamenta,

prisonamenta, fines, foris-factur' ac omnes alias pænas & penalitates quascunque in & super omnes delinquentes sive offendentes contra hujusmodi leges, ordinationes & proclamationes qualis & quæ eidem gubernatori & præfecto nostro exercitus nostri requisit' & necessar' fore videbuntur' quæ omnia leges, ordinationes & proclamationes, sic ut præfert' faciend' observari volumus sub pænis in eisdem continend'. Et ei damus potestatem & authoritatem utendi & exercendi infra regnum nostrum prædictum si opus fuerit, lege marisca' sive martial' necnon substituend' assignand' & appuntuand' sub se infra dictum regnum nostrum per literas nostras patentes sub magno sigillo nostro dict' regni nostri prædict' faciend' tot & tales marriscallos, commissarios & al' officiar' ad legem armor' seu legem martial' exercend' & exequend' prout præfat' locum-tenenti nostro general' & gubernator' nostro general' de tempore in tempus expedire videbit ad exercend' utend' & exequend' præd' leges, quoties opus & necesse fuerit, & juramenta præstare, aliaqua omnia per se vel per alios facere, erigere, quæ ad leges prædictas exercend' aliqualiter pertineant. Et quia valde necessar' nobis videatur ut præfat' locum-tenens noster generalis & gubernator' noster generalis pro negotiis nostris magni momenti personam nostram regiam in propria persona sua sicut nobis visum fuerit attendat' ideo ulterius damus, & per præsentes præfato Jacobo duci Ormondiæ locum-tenenti & gubernator' nostro general' plenam potestatem & authoritatem concedimus nominand' & assignand' per literas nostras patentes sub magno sigillo nostro, dicti regni nostri Hiberniæ nomine nostro, tam nunc quam de tempore in tempus inposterum, conficiend' quamcunque aut quoscunque dictus locum-tenens & gubernator' noster general' in hac parte idoneum sive idoneos duxerit fore deputat' vel deputatos quocunque nomine assignatos durante beneplacito nostro pro gubernatione dicti regni nostri Hiberniæ

Hiberniæ in absentiæ sua, donec idem locum-tenens & gubernator noster in dictum regn' Hiberniæ gubernatione ejusdem ut præfert' redierit, volentes tamen quod in eisdem literis patentibus alicui personæ seu personis sicut præfert' faciend' deputat' aut deputatos in absentia sua tantum provis' & nomine nostro mand' sit quod non licebit alicui tal' deputat' vel deputatis thesaurar' seu pecunias nostras cuicunque solvere vel erogare, authoritat' seu warrant' ipsius deputat' vel ipsorum deputat' tantum sed quod omnia erod' mandat' & warrant' per thesaur' & pecuniis nostris per ipsum fient & signabunt non solum manu propria præfat' deput' vel præfator' deputator' sed etiam manibus prædilectornm & fidel' consiliar' nostrorum magistri curiæ wardor' capital' baron' scaccar' nostri' cancellar' scaccar' nostri & primar' secretarii nostri ibidem pro tempore existente vel saltem manibus duorum illorum. Damus ulterius universis, singulis archiepiscopis, ducibus, comitibus, vice-comitibus, episcopis, baron' justiciar' militibus, liberis hominibus & aliis subditis nostris de regno nostro prædict' firme in mandatis, quod præfato Jacobo duci Ormondiæ locum-tenenti nostro general' & gubernatori nostro general' in eodem regno nostro intendentes sive assidentes, auxiliantes & consultantes, ac ipsius mandatis in omnibus prout decet aut decebit obedientes sint, aliquo statut' actu, ordinatione, provisione, jure, usu, consuetudine sive restriction' in contra' inde fact' edit' ordinat' sive provis' aut aliqua alia re, causa vel materia quacunque in aliquo non obstante. In cujus testimonium has literas nostras fieri fecimus patentes teste meipso apud Westmonaster' vicessimo primo die Februarii ann. regni nostri quarto decimo.

Inrotulat' in rotulis patentibus cancellariæ Hiberniæ de ann. regni regis Caroli ſecundi decimo quarto & examinat' per

J. TEMPLE.

Per ipſum Regem

BARKER.

At

At the Court at HAMPTON-COURT, JUNE 22, 1662.

Propoſitions to be conſidered of by his Majeſty, concerning the governing of Ireland.

CHARLES *R.*

1. THAT *his Majeſty may declare his expreſs pleaſure, that no Iriſh ſuit, by way of reward, be moved for by any of his ſervants, or others, before the ordinary revenue there become able to ſuſtain the neceſſary charge of that crown, and the debts thereof be fully cleared.*

This is moſt reaſonable, it ſtanding with no ſound rule of judgment, to exerciſe the acts of bounty in a place which doth not diſcharge itſelf, and will prove the readieſt and moſt expedient way to recover his majeſty's affairs thereby, thus carrying the revenues in their natural channel; and indeed this courſe being conſtantly purſued, will much increaſe the annual profits above what they now are, and intirely draw the dependance of the inferiors from the great lords upon his majeſty, and ſo the intereſt and aſſurance the crown ſhall have in the natives thereof, be of no leſs conſequence and advantage than the very profits.

2. *That there be an expreſs caveat entered with the ſecretary, ſignet, privy ſeal and great ſeal here,*

here, that no grant, of what nature ſoever, concerning Ireland, be ſuffered to paſs, till the lord lieutenant be made acquainted, and it firſt paſs the ſeal of that kingdom, according to the uſual manner.

This will be of great intelligence and ſafety to his majeſty; for on the one ſide he will clearly ſee into the true inward value, of things which formerly, albeit of very great worth, have from ſo great a diſtance ſlipt away here, as little underſtood by the crown; as is acknowledged by thoſe that obtain them; who generally, in theſe cauſes, ſacrifice rather to their own wit, than the goodneſs and bounty of kings. And on the other ſide, nothing can paſs to the diſadvantage of the crown; and proper miniſters, inſtructed with theſe affairs, may be immediately faulted and juſtly called to a ſevere account for their negligence and unfaithfulneſs therein; which will give them good reaſon to look more narrowly into his majeſties rights, and their own duties.

3. *That his majeſty ſignify his royal pleaſure, that ſpecial care be taken hereafter, that ſufficient and credible perſons be choſen to ſupply ſuch biſhopricks as ſhall be void, or admitted of his privy councel, or ſit as judges, and ſerve of his learned councel there; that he will vouchſafe to hear the advice of his lieutenant before he reſolve of any in theſe caſes, that the lieutenant be commanded to inform his majeſty truly and impartially, of every man's particular diligence, and care in his ſervice there, to the end his Majeſty may truly and graciouſly reward the well-deſerving, by calling them home to better preferment here.*

This

This will advantage the ſervice; it being altogether impoſſible for the lieutenant, be he never ſo induſtrious and able, to adminiſter the public juſtice of ſo great a kingdom, without the round aſſiſtance of other able and well-affected miniſters. This will encourage the beſt men to ſpend their ſtronger years there, when they ſhall ſee their elder age recompenſed with eaſe and profit in their own native ſoil; and content and ſettle the natives, when they find themſelves cared for, and put in the hands of diſcreet and good men to govern them.

4. *That no particular complaints of injuſtice or oppreſſion be admitted here againſt any, unleſs it appear, that the party made firſt his addreſs unto the lieutenant.*

This is but juſtice to the lieutenant, who muſt needs in ſome meaſure be a delinquent, if the complaint be true; for that he ought as in chief, univerſally to take care that his majeſties juſtice be truly and fully adminiſtered; and therefore good reaſon that his judgment ſhould be informed, and his integrity firſt tried, before either be impeached; nay, it is but juſtice to the government it ſelf, which would be exceedingly ſcandalized through the liberty of complaints, and the miniſters therein extreamly diſcouraged upon any petty matter to be drawn to anſwer here, when as the thing it ſelf is for the moſt part either injurious, or ſuch as the party might have received good ſatisfaction for at his own doors: but where the complaint appeareth formally grounded, that is, where due application hath been made to the lieutenant, without any help or relief to the party, as may be pretended; let it in the name of God be throughly examined, and ſeverely puniſhed, wherefoever the fault prove to be; eſpecially if it be found

to be corrupt or malicious; for thus, ſhall not his majeſty only magnify his own juſtice, but either puniſh an unfaithful miniſter or a clamorous complainer; and ſo his ſervice be bettered by either example.

5. *That no confirmation of any reverſion of office within that kingdom be had, or any new grant of reverſion hereafter do paſs.*

That diſpoſing of places thus aforehand, much abates men's endeavours, who are many times ſtirred up to deſerve eminently in the commonwealth, in hope of thoſe perferments; and being thus granted away, there is nothing left in their eye, for them to expect and aim at, which might nouriſh and quicken thoſe good deſires in them; beſides places there cloſely and covertly paſſed, the perſons are not for the moſt part ſo able and fitted to the duties thereof, as when there is choice made out of many public pretenders, which commonly occur, when they actually fall void by death.

6. *That the places in the lieutenant's gift, as well in the martial as civil liſt, be left freely to his diſpoſing; and that his majeſty may be graciouſly pleaſed not to paſs them to any perſon, upon ſuits made unto him here.*

This courſe held, preſerves the rights of the lieutenant's place, and his perſon in that honour and eſteem which can only enable him to do ſervice; and if the contrary happen, it is not only in diminution to him, but draws off all neceſſary dependance upon him, and regard that ought to be had of him, in all ready obedience in ſuch things he ſhall command, for the king's ſervice, when they ſhall diſcern that the natural powers of the place are taken from him,

him, whereby he might kindle their chearful endeavours by the preferring and furniſhing ſuch as deſerve thoſe places.

7. *That no new offices be erected within that kingdom before ſuch time as the lieutenant be therewith acquainted; his opinion firſt required and certified accordingly.*

Suits of this nature, however they may touch the public, their chief end is the private profit of the propounder; and for the moſt part, in the execution prove burthens, not benefits to the ſubjects; therefore throughly to be underſtood before they paſs, as more eaſy and leſs ſcandalous to the ſtate, to be ſtaid at firſt than afterwards recalled, and if they be really good, his majeſty may be better informed by his lieutenants approbation, and ſo proceed with more aſſurance to the effecting thereof.

8. *That his majeſty would be pleaſed, not to grant any licence of abſence out of that kingdom, to any counſellors, biſhops, governors of any province or county, or officers of ſtate, or of the army, or to any of the judges, or learned council, but that it be left to his lieutenant to give ſuch licence.*

This is but reaſonable, becauſe the lord lieutenant who is chiefly intruſted under his majeſty with the care and government of that kingdom, is the moſt competent and proper judge, who in public employment may be ſpared, and how long, without prejudice to his majeſty, or the public.

9. *That all propoſitions moving from the lieutenant, touching matters of revenue, may be directed to the lord treaſurer of England only, and*

and that the addreſs of all other diſpatches for that kingdom be by ſpecial direction of his majeſty applied to one of the ſecretaries ſingly, and his majeſty under his hand-writing doth ſpecify, that his majeſty will have this done by Mr. ſecretary Nicholas.

Theſe propoſitions made unto his Majeſty, by his grace the duke of Ormond lord ſteward of his Majeſty's houſhold, and lord lieutenant of Ireland, were received and approved at the council board, the 22d day of June 1662, there being preſent the king's moſt excellent Majeſty, his royal highneſs the duke of York, his highneſs prince Rupert, the lord chancellor, the lord treaſurer, duke of Albemarle, duke of Ormond, marqueſs of Dorcheſter, lord great chamberlain, lord chamberlain, earl of Berkſhire, earl of Portland, earl of Norwich, earl of Angleſey, earl of Lauderdale, the lord Hatton, lord Hollis, lord Aſhly, ſir William Compton, Mr. treaſurer, Mr. vice chamberlain, Mr. ſecretary Nicholas, Mr. ſecretary Morris.

By his Majeſty's command,

EDWARD NICHOLAS.

At

At the Court at HAMPTON-COURT, JUNE 22, 1662.

Preſent,

The king's moſt excellent Majeſty
His highneſs the duke of York
His highneſs prince Rupert
Lord chancellor
Lord treaſurer
Duke of Albemarle
Duke of Ormond
Marqueſs of Dorcheſter
Lord great chamberlain
Earl of Berkſhire
Earl of Portland
Earl of Norwich
Earl of Angleſey
Earl of Lauderdale
Lord Hatton
Lord Hollis
Lord Aſhly
Sir William Compton
Mr. treaſurer
Mr. vice-chamberlain
Mr. ſecretary Nicholas
Mr. ſecretary Morris.

CHARLES *R.*

HIS Majeſty's expreſs pleaſure is, that the maſters of requeſts, and every of them, in their ſeveral months of attendance at court, do conſtantly obſerve theſe enſuing directions, viz.

Not to move his Majeſty in petitions for any Iriſh ſuit, by way of reward, either for any of his Majeſty's ſervants, or others before the ordinary revenue of that kingdom become able to maintain the neceſſary charge of that crown, and the debts thereof be fully cleared.

For

For any particular complaint of injuſtice or oppreſſion, pretended to be done there, unleſs it appear the party made his firſt addreſs unto the lord lieutenant, for confirmation of any reverſion of offices within that kingdom, or any new grant of reverſion hereafter, any places in the lord lieutenant's gift, either of the civil or military liſt, when any ſuch ſhall fall void.

Any erection of a new office in that kingdom, before ſuch time as the lord lieutenant be therewithal acquainted, his opinion required and certified back accordingly.

By his Majeſty's command,

EDWARD NICHOLAS.

CHARLES

CHARLES *R.*

THERE being nothing more conducible to the quiet and ſafety of a kingdom, than a frugal and regular ordering and diſpoſing of the revenue, that is, to maintain the public charge and expence of the government, both civil and military; we have thought fit, with the advice of our council, upon a proſpect made of all our revenue, certain and caſual, and the juſt means in view upon the ſettlement of eſtate in that kingdom, now in hand, for improving thereof, to begin by this eſtabliſhment, both to bring our payments as near as may be to the compaſs of our receipts, and to provide eſpecially for our public affairs, by ſupporting civil juſtice and government, and by maintaining our forces in the preſent ſtrength and fulneſs; intending hereafter, as our charge may grow leſs, and our means increaſe, to extend our favour and bounty according to our gracious inclinations, and the merit of perſons, to the further encouragement of particulars, as cauſe ſhall require: whereof we have already given a proof, in the liberal addition we have made to the judges, for their better ſupport, in the impartial adminiſtration of juſtice.

CHAP.

CHAP. XVI.

The LIST *for Civil Affairs.*

Containing the ſeveral entertainments, by the year, of all officers and others, ſerving in our courts of juſtice, in the ſeveral provinces of Ireland: officers belonging to the ſtate; officers of our cuſtoms; officers of the exciſe: creation-money; with other perpetuities and particular payments for our ſervice; which we require henceforth to be duly paid out of our revenues there, by the hands of our vice-treaſurer, or receiver-general for the time being, according to the cautions here mentioned; the ſame to begin for, and from the firſt day of April 1666.

THESE *following payments are the conſtant fees to be continued to the ſeveral officers, without change from time to time.*

	l.	*s.*	*d.*
The right honourable Arthur, earl of Angleſey, vice-treaſurer, and general receiver.	50	0	0
Sir Robert Meredith, kt. chancellor of the exchequer.	100	0	0
John Buſſe, eſq; lord chief baron of the exchequer.	600	0	0
Sir Richard Kennedy, kt. ſecond baron of the exchequer.	300	0	0
John Povey, eſq; third baron of the exchequer.	220	0	0
Sir Audly Mervin, kt. his Majeſty's prime ſerjeant at law.	20	10	0

Sir

	l.	*s.*	*d.*
Sir William Domvile, kt. his Majeſty's attorney general.	75	6	0
Sir John Temple, kt. his Majeſty's ſolicitor-general.	75	0	0
Philip Fernely, eſq; his Majeſty's chief remembrancer.	30	0	0
Sir James Ware, kt. his Majeſty's auditor-general, for his ancient fee *per annum* 184*l.* 6*s.* 3*d.* and for an augmentation thereof, allowed by the former eſtabliſhment 50*l.* in all	234	6	3

The Court of Exchequer.

Sir Allen Brodrick, kt. his Majeſty's ſurveyor-general.	60	0	0
Francis Lee, eſcheator of the province of Leinſter.	6	13	4
Eſcheator of the province of Ulſter	20	5	0
Eſcheator of the province of Munſter.	20	5	0
Eſcheator of the province of Connaught.	20	5	0
Henry Warren, eſq; ſecond remembrancer.	7	17	6
Nicholas Loftus, eſq; clerk of the pipe.	15	0	0
Roger Moor, eſq; chief chamberlain.	10	0	0
Sir Robert Kennedy, bart. ſecond chamberlain.	5	0	0
Maurice Keating, comptroller of the pipe	7	0	0

John

	l.	s.	d.
John Longfield, usher of the exchequer, for his fee *per annum*, 2l. 10s. and for his allowance for ink, for the exchequer, 10l. *per annum*. In all, *per annum*	12	10	0
Thomas Lea, transcriptor and foreign opposer.	15	0	0
Edward Ludlow, summonitor of the exchequer.	7	5	0
John Burniston, marshal of the four courts.	4	0	0
Sir Theophilus Jones, kt. clerk of the pells.	30	0	0
John Exham, clerk of the first fruits, and twentieth parts.	27	10	0
Thomas Gibson, cryer of the court of exchequer.	1	14	4

The Court of King's-bench.

The right honourable James, baron of Santry, lord chief justice of his Majesty's bench.	800	0	0
Sir William Aston, kt. second justice of the said court.	300	0	0
Thomas Stockton, esq; third justice of the said court.	300	0	0
Sir William Usher, kt. clerk of the crown, of the said court.	7	10	0

The Court of Chancery.

The most reverend father in God, Michael, lord archbishop of Dublin, lord chancellor of Ireland.	1000	0	0

Sir

The Court of Chancery continued.

	l.	s.	d.
Sir John Temple, sen. kt. master of the rolls.	144	3	4
Dr. Dudley Loftus, one of the masters of the chancery.	20	0	0
Robert Mossom, esq; another master of the chancery.	20	0	0
George Carlton, clerk of the crown in chancery.	25	0	0
The said George Carlton, clerk of the hanaper, for his fee *per annum* 10l. 10s. and for an allowance of paper and parchment for the chancery, *per annum* 25l. In all	35	10	0
	1244	13	4

The Court of Common-pleas.

Sir Edward Smith, kt. lord chief justice of the common-pleas.	600	0	0
Sir Jerome Alexander, kt. second justice of the said court.	300	0	0
Robert Booth, esq; third justice of the said court.	300	0	4
Sir Walter Plunkett, kt. prothonotary of the said court.	7	10	0
	1207	10	0

Star-Chamber.

	l.	s.	d.
Sir George Lane, knt. clerk of the ſtar chamber.	10	0	0
George Rutlidge, marſhal of the ſtar chamber.	10	0	
	20	0	0

Officers attending the State.

Sir Paul Davis, knt. ſecretary of ſtate, for his fee	200	0	0
The ſaid ſir Paul Davis for intelligences	100	0	0
The ſaid ſir Paul, clerk of the council, for his ancient fee, *per ann.* 7l. 10s. and for an allowance for paper and parchment 40l. In all	47	10	0
Richard St. George, eſq; Ulſter king at arms	26	13	4
Richard Carvy Athlong, purſivant	10	0	0
Philip Carpenter, eſq; chief ſerjeant at arms, at 5s. 6d. *per diem.*	100	7	6
George Pigott, ſecond ſerjeant at arms for like allowance.	100	7	6
George Wakefield, purſivant,	20	0	0
William Roe, purſivant,	20	0	0
Arthur Padmor, purſivant,	20	0	0
Thomas Lee, keeper of the council-chamber.	18	5	0
Six trumpeters and a kettle-drum at 60l. each *per ann.* 420. for their fee, and 6l. *per ann.* each board-wages 42l. In all *per ann.*	462	0	0
	1125	3	4

Charge

Charge of Circuits.

	l.	s.	d.
The chief and other juſtices of aſſizes in every of the five circuits twice a year, *per ann.*	1000	00	00
Robes for the judges, viz. three in exchequer, three in the king's-bench, three in the common-pleas, maſter of the rolls, and three of the king's council, at 13l. 6s. 8. a piece *per ann.* making in all	173	06	08

Incidents.

Liberates under the ſeal of the exchequer yearly, viz. the chancellor of exchequer 13l. 6s. 8d. the chief remembrancer 6l. 13s. 4d. clerk of the pipe 6l. 13s. 4d. the uſher 10l. the ſecond remembrancer 5l. the chief chamberlain 5l. the ſecond chamberlain 5l. clerk of the common-pleas of the exchequer 5l. ſummoniter and comptroller of the pipe 5l. the cuſtomer at Dublin for wax, paper, parchment and ink, 3l. 15s. in all *per ann.*	082	10	08
Rent of a houſe for the receipts	025	00	00
Keeper of the houſe for the receipts	005	00	00
Singers of Chriſt-church in Dublin for ſinging in the exchequer, and praying for his majeſty, at 10s. for every term *per ann.*	02	00	00
Purſuivants of the exchequer for carrying writs.	71	05	00

	l.	s.	d.
Paper and parchments to the courts.	150	00	00
The nobility, bishops and councellors which shall reside and keep house in Ireland for impost of wines, according to his majesty's special grace.			
	508	13	04

Besides impost of wines.

Provincial Officers.

William Halsy esq; chief justice of the province of Munster.	100	00	4
John Nayler, second justice of Munster	066	13	04
Henry Batthurst, attorney of the province of Munster.	013	06	08
William Carr esq; clerk of the council of the said province.	007	10	00
Walter Cooper, serjeant at arms there.	020	00	00
Oliver Jones, chief justice in the province of Connaught.	100	00	00
Adam Cusack esq; second justice of that province.	066	13	04
John Shadwell esq; attorney for the said province.	020	00	00
Sir James Cuff knt. clerk of the council there.	007	10	00
Thomas Elliot, serjeant at arms there	020	00	00

OFFICERS

	l.	s.	d.

OFFICERS of the customs.

Dublin.

Thomas Worsop esq; customer of the port of Dublin.	007	10	00
William Maul esq; comptroller.	007	10	00
William Scott esq; searcher.	005	00	00
	020	00	00

Wexford.

George Wakefield, customer,	010	00	00
Hugh Polder, comptroller,	005	00	00
	015	00	00

Waterford and Ross.

Sir John Stephens, customer.	015	00	00
Frederick Christian, comptroller.	015	00	00
Thomas Tint, searcher.	006	13	04
	036	13	04

Corke.

Rich. Scudamore, customer	006	13	04
Robert Williams, searcher	005	00	00
	011	13	04

Kingsale.

Robert Southwell, customer,	13	06	08
John Brown, searcher,	06	13	04
	20	00	00

Dingle-Icousch.

John Selby, customer,	05	00	00

	l.	s.	d.
Limerick.			
The cuſtomer	13	06	08
Montfort Weſtrop, comptroller,	13	06	08
John Lynch, ſearcher,	05	00	00
	31	13	04
Galloway.			
John Morgan, cuſtomer,	13	06	08
The ſearcher,	05	00	00
	18	06	08
Drogheda, Dundalk, and Carlingford.			
Thomas Willis, cuſtomer,	07	10	00
John Bulteele, comptroller,	07	10	00
Hugh Montgomery, ſearcher,	05	00	00
	20	00	00
Carrickfergus.			
Roger Lindon, cuſtomer	07	10	0
Samuel Wilby, ſearcher,	06	13	04
	14	03	04
Strangford.			
Nicholas Ward, cuſtomer	07	10	00

Newcaſtle,

	l.	s.	d.
Newcaſtle, Dundrum, &c.			
Robert Hard, ſearcher at Newcaſtle, Dundrum, Killaleagh, Bangor, Hollywood, Belfaſt, Olderfleet, St. David, Whitehead, Ardglaſſe, Strangford, Ballintogher, and Donaghadee,	06	13	04
The Office and Officers of the Exciſe.			
For the ſalaries due to the officers of the exciſe,	4269	00	00
The contingent charge of the exciſe,	1200	00	00
	5469	00	00

Theſe two ſums are to be diſtributed and appointed as the lord lieutenant, or other chief governor, or governors, and council ſhall think fit, the cuſtom and exciſe being now farmed. Theſe two ſums are to ceaſe for the time of the farm, and are not caſt up in the total.

Commiſſioner general of the cuſtoms and exciſe.

The ſaid commiſſioners, which are to be but five in number, are to have the allowance of one penny in the pound each, for all money to be received for cuſtoms and exciſe.

Commiſſioners of appeal.			
For the ſalaries of four commiſſioners of appeals in cauſes of exciſe, and new impoſt. viz. ſir James Ware, knt. John Povey, eſq; ſir William Uſher knt. and Perter Weybrants, alderman, at 150 l. a piece, *per annum*,	600	00	00

 Accom-

	l.	s.	d.
Accomptants-general of the cuſtoms and exciſe.			
Dr. Robert Wood, and James Bonnell, accomptants general of the cuſtoms and exciſe, *per annum*,	200	00	00

Creation-money.

The duke of Ormond	40	00	00
The marquis of Antrim	40	00	00
The earl of Caſtlehaven	20	00	00
The earl of Deſmond.	15	00	00
The earl of Weſtmeath	15	00	00
The earl of Arglaſſe	15	00	00
The earl of Carbury	15	00	00
The earl of Cavan	15	00	00
The earl of Donnegal	15	00	00
The earl of Clanbrazill	20	00	00
The earl of Inchiquin	20	00	00
The earl of Orrery	20	00	00
The earl of Montrath	20	00	00
The earl of Tyrconnel	20	00	00
The earl of Clancarty	20	00	00
The earl of Mount-Alexander	20	00	00
The earl of Carlingford	20	00	00
The lord viſcount Grandiſon	10	00	00
The lord viſcount Willmot	10	00	00
The lord viſcount Valentia	10	00	00
The lord viſcount Dillon	10	00	00
The lord viſcount Nettervil.	10	00	00
The lord viſcount Killulla	10	00	00
The lord viſcount Magennis	10	00	00
The lordviſcount Sarsfield and Kilmallake	10	00	00
The lord viſcount Renelaugh	10	00	00
The lord viſcount Wenman and Tuam	10	00	00

The

	l.	s.	d.
The lord viſcount Shannon	13	06	08
The lord viſcount Clare	10	00	00
The lord baron of Cahir	11	05	00
	484	11	08

Where creation-money is granted to one and the ſame perſon for two honours, that ſum which is granted with the higheſt title, is only to be paid.

Perpetuities.

The provoſt and fellows of Trinity-college, near Dublin, by patent, dated 12 Auguſt, 1612, as a perpetuity, *per annum*,	388	15	00
The dean and chapter of Chriſt-church, Dublin, granted in perpetuity, 12 *Junii*, 1604, *per annum*,	045	06	08
The lord archbiſhop of Dublin, for proxies due unto him out of divers churches belonging to the late monaſteries of Thomas Court, St. Mary's Abby, and St. John of Jeruſalem, near Dublin, *per annum*,	018	05	06
The lord biſhop of Meath, out of the mannor of Trim,	003	15	00
The mayor, ſheriffs, commons, and citizens of Dublin, *per annum*,	500	00	00
The chaunter of Chriſt-church, Dublin, for the rent of a plat of ground near his majeſty's caſtle of Dublin,	027	00	00
	983	02	02

The

The payments hereafter following, are to be continued to the present grantees, during their grants; but to cease afterwards, and not to be regranted, or paid to any other.

	l.	s.	d.
The most reverend father in God, Michael lord archbishop of Dublin, lord chancellor of Ireland,	814	17	06
The right honourable Richard earl of Cork, treasurer,	365	00	00
Nicholas Loftus esq; clerk of the pipe,	25	00	00
Maurice Keating comptroller of the pipe,	08	00	00
Sir Theophilus Jones, knt. clerk of the pells,	61	05	00
Bryan Jones esq; auditor of the foreign accounts and prests, at 6s. 8d. *per diem*, granted him by letters patents, dated 2 April, *anno 2do Caroli primi*, during his good behaviour, *per annum*,	121	13	04
Edward Cook esq; one of the masters of the Chancery,	20	00	00
John Westly esq; one of the masters of the chancery,	20	00	00
Anthony Walsh, keeper of the room, as also of the robes, hanging and clock in the castle of Dublin, at 12d. *per diem*,	18	05	00
John Crooke, printer to his majesty in Ireland,	8	00	00
Thomas Mall esq; surveyor general of the customs,	100	00	00
	1562	00	10

Temporary

	l.	s.	d.
Temporary payments.			
William Maule, comptroller of the customs at Dublin,	12	10	10
Marcus, viscount Dungannon, master of the game,	50	00	00
Sir George Lane kt. for his fee, as keeper of the records in Bermingham's tower,	10	00	00
James Buck, clerk of the markets of all Ireland,	20	00	00
The countess of Tyrconnel	300	00	00
Edward Fitz-Gerald	100	00	00
Sarah King, widow	80	00	00
Jane Cary, widow	50	00	00
John Dogharty, at 18d. *per diem*,	27	07	06
Jepson Macguire,	140	00	00
Sir Robert Meredith,	100	00	00
Sir George Blundell at 6s. *per diem*,	109	10	00
Ann Conocke	50	00	00
William Awbry, at 1l. *per* week,	52	00	00
Patrick Archer,	205	00	00

To be paid unto him until he be satisfied the sum of 5883 l. 19 s. 6 d. and 4101 l. 5 s. 6 d. by letters patents dated 13 March 1662, and his Majesty's letters of the 2d of May 1663.

Pensions and Annuities.			
Dr. John Sterne,	60	00	00
Luke German esq; *per annum*,	100	00	00
Patrick Cowurcey, and his son John Cowurcey, *per annum*,	150	00	00
Sir James Dillon, *per annum*,	500	00	00
Dr. Robert George, *per annum*,	109	10	00
Thomas Piggot esq; *per annum*,	300	00	00

Mrs.

	l.	s.	d.
Mrs. Mary Warren, *per annum*,	80	00	00
Arthur, earl of Angleſey, *per annum*,	600	00	00
Captain William Roſſe, *per annum*,	300	00	00
	3313	07	06

Commiſſioners of accounts and clerks allowances.

Commiſſioners of accounts, for the yearly accounts by them to be taken, by virtue of his Majeſty's commiſſion at 20l. each of them *per annum*, 220l. And to the clerks and others employed in the ſaid accounts, 65 l. 10 s. In all,	285	10	00

Payments for extraordinaries by Concordatum.

For fraight and tranſportation, carrying of letters, and other expreſſes, gifts and rewards, ſea-ſervice, repairing and upholding ſufficiently our houſes, maintaining our forts, finiſhing of needful undertakings of that kind, begun in other places, but not finiſhed; erecting of more ſtrengths of the like kind, and other fit and neceſſary places. Diets and charges, in keeping of poor priſoners, and ſick and maimed ſoldiers in hoſpitals; printing, riding, and travelling charges; preſts upon account, and all other payments by concordat of our lieutenant, or other chief governor or governors, and council, not to be	9000	00	00

exceeded

	l.	s.	d.
exceeded without ſpecial direction firſt had from us, or our privy council in England.			
Sum total of the payments aforeſaid upon the civil liſt amounts unto *per annum*,	2560	14	8

Memorandum. That the impoſt of wines, for the nobility, biſhops and councellors, the officers of the exciſe and commiſſioners-general of the cuſtoms and exciſe, are not included in the aboveſaid ſum.

AND our pleaſure is, that no payment or allowance be made by concordat, but by warrant drawn by the clerk of the council of Ireland, and paſſed openly at our council-board there, and ſigned by our lieutenant or other chief governor or governors, chancellor, treaſurer, or vice-treaſurer, chief-baron and ſecretary, or other four of them at leaſt, the lieutenant or chief governor, being one; and in default, either by exceeding the ſum limited by anticipation or otherwiſe, or by not obſerving of this our direction and commandment in every point; our pleaſure is, that all ſums which ſhall otherwiſe be allowed and paid there, ſhall be ſet *inſuper*, as debts upon our ſaid lieutenant, or other chief governor, or governors; and our under-treaſurer, upon his accounts to be defaulted to our uſe, upon their ſeveral entertainments.

And

And our further pleasure is, that this establishment and list, containing all our payments to be made for civil causes, be duly made according to our directions, and be not exceeded, nor any of the payments which are noted to be but temporary, or to cease after death, or surrender of the party, or upon determination of his grant, to be continued or renewed to any other, either in concurrence, reversion or otherwise. And we require our auditor-general, that once every year immediately upon the passing the accounts of our vice-treasurer, or receiver-general, a transcrip of the same accounts, both for receipts of every nature, and the particular payments, be returned to our treasurer of England, to the end we may be truly informed, both of the increase of our said revenues yearly, and also of the abatements of payments contained in this list.

ARLINGTON.

By

By the Lord Lieutenant General, and General Governor of Ireland.

INstructions for our dearest son, Thomas earl of Ossory, nominated by us by virtue of his Majesty's letters patents, under his great seal of England, bearing date the 21st day of February, in the fourteenth year of his reign, and constituted by his Majesty's letters patents, under the great seal of this kingdom of Ireland, bearing date the 21st day of May, in the 16th year of his reign, his majesty's deputy of this his said kingdom, during his majesty's pleasure, and only in our absence, until we shall return into this kingdom.

ORMOND.

WHereas we the lord lieutenant received instructions from the king's most excellent majesty under his royal signatures, bearing date the 22d day of June, 1662. We do herewith deliver you a copy of the said instructions signed by us. And we do hereby require you to observe those instructions, in all such parts of them, as were to be observed by us, and are now appliable to you, in the place of his majesty's deputy of this his kingdom.

You are to take care, that in your giving commands, or warrants for payments of any of his majesty's treasure, or monies, you observe the rule prescribed to you, in such cases, by his majesty's letters patents, whereby you are constituted his majesty's deputy of this his kingdom.

Given at his majesty's castle of Dublin, the 30th day of May, 1664.

G. LANE.

The

The ESTABLISHMENT and LIST;

Containing all the payments to be made for military affairs in Ireland, to be duly paid by the hands of our vice-treasurer, and treasurer at war, according to the cautions herein after mentioned; the the same to begin for and from the first day of April, 1666.

Signed, CHARLES REX,

OFFICERS General.

	l.	s.	d.
THE lord lieutenant and governor general of Ireland, for his fee *per an.* viz. for his diet, at 100 l. *per mensem*; a retinue of 50 horse, with officers at 2l. 19s. 6d. *per diem*; an allowance of 1000l. *per ann.* in lieu of cess, an allowance of 235 l. *per an.* in lieu of 235 beefs, formerly paid to the lord lieutenant, out of the county of Cavan, an allowance of 240l. *per ann.* formerly paid to the lord lieutenant out of the tythes of Dunbogne, making in all *per ann.*	3860	17	06

Lord Lieutenant.

As general of the army, *per annum*,	4331	06	08
As capt. of a troop of horse *per an.*	723	18	04
As colonel of foot, *per an.*	608	06	08
As capt. of a foot company, *per an.*	261	11	08
	9786	00	10

For

	l.	s.	d.
For his guard of halberteers, consisting of a captain at 11 l. 4 s. each callendar month; a lieutenant at 9 l. 16 s. two serjeants at 3 l. 10 s. each; and sixty halberteers at 2 l. 2 s. each making *per annum*,	1848	00	00
The lieutenant general of the army at 1 l. *per diem*,	365	00	00

To cease *post mortem*, or other determinations of the grant made to Thomas earl of Ossory.

The serjeant major general of the army, at 1 l. *per diem, per an.*	365	00	00

To cease *post mortem*, or other determinations of the grant made to Roger earl of Orrery.

Sir Henry Tichburn, kt. marshal of Ireland, for his entertainment at 3s. 9d. *per diem*, a trumpeter at 6d. ob. q. *per diem*, and retinue of 30 horse at 9d. a piece *per diem*, making *per an.*	489	06	07
The commissary general of the horse, at 1 l. *per diem, per an.*	365	00	00

To cease *post mortem*, or other determinations of the grant to John lord Kingston.

	l.	s.	d.
General Officers.			
The muſter maſter general, and clerk of the cheque, for his entertainment, at 4 s. *per diem*, at 10 horſemen, at 1 s. the piece *per diem*; for any encreaſe of his entertainment 3 s. 6d. *per diem*, with an allowance for one clerk at 2s. 6d. *per diem* making *per an.*	365	00	00
	3066	08	03
Six commiſſaries of the muſters, at 100l. *per ann.* each,	600	00	00
One corporal of the field, viz. collonel Beverly Uſher, at 5 s. *per diem*, *per an.*	91	05	00
To ceaſe *poſt mortem*, or other determinations of the grant in being.			
The advocate general of the army, at 6s. 8d. *per diem*	121	13	04
The phyſician general of the army at 10s. *per diem.*	182	10	00
Chirurgeon of the army in Ireland, and of the hoſpital of Dublin,	121	13	04

OFFICERS Provincial.

	l.	s.	d.	q.
THE lord preſident of Munſter, for his fee at 100l. ſterling *per an.* for his diet, and the councils there, at 7l. 10s. *per* week, and for his ritinue of 30 horſemen, and 20 footmen, at 1l. 2s. 6d. *ob. per diem*, in all *per annum*,	908	19	9	*ob*

The

	l.	s.	d.
The lord preſident of Connaught, for his fee at 100l. ſterling *per ann.* for his diet, and the councils there, at 7l. 10s. *per* week, and for his ritinue of 30 horſemen, and 20 footmen at 1l. 2s. 6d. *ob. per diem*, in all *per ann.*	908	19	9 *ob.*
The provoſt marſhal of Lemſter, for his entertainment at 4s. 2d. *ob. q. per diem*, making *per an.*	077	03	7 *ob.*
	2126	14	2 *ob.*

Provincial Officers.

The provoſt marſhal of Munſter, for his entertainment at 4s. 2d. *ob. q. per diem*, making *per an.*	077	03	7 *ob.*
The provoſt marſhal of Connaught, for his entertainment, at 4s. 2d. *ob. q. per diem*, making *per an.*	077	03	7 *ob.*
The provoſt marſhal of Ulſter, for his entertainment at 4 s. 2 d. *ob. q per diem*, making *per ann.*	077	03	7 *ob.*

All the ſaid provoſt marſhals, with the entertainment due unto them reſpectively, to ceaſe *poſt mortem*, or other determinations of their grants.

CONSTABLES.

	s.	d.	q.
The conſtable of Dublin caſtle, for his entertainment at 20 l. *per annum*,	20	0	0
The porter of Dublin caſtle at 9d. *per diem, per an.*	13	13	9

 The

	l.	s.	d.
The conſtable of Limerick caſtle, for his entertainment, at 10l. *per an.* and a porter at 6d. *ob. q. per diem per an.*	18	07	9 *ob.*
The conſtable of Athlone caſtle, for his entertainment, at 8 l. 2 s. 6d. *per ann.* and a porter at 6 d. ob. q. *per diem, per ann*	18	07	9 *ob.*
The conſtable of Roſcommon caſtle, for his entertainment at 3 s. 4 d. *per diem,*	60	16	8
The conſtable of Carrickfergus, for his entertainment, at 2s. 6d. *per diem, per ann.*	45	12	6
	178	06	0 *ob.*

The maſter of the ordnance, with other officers thereunto belonging, and train of artillery.

The maſter of the ordinance, for himſelf at 6s. 8d. *per diem*; a lieutenant at 2s. 6d. *per diem*; a cornet at 1 s. 9 d. and 18 horſemen at 1 s. the piece, *per diem, per ann,*	419	4	7
The lieutenant of the ordnance, at 7s, *per diem, per ann.*	127	15	0

To ceaſe after the death of Albert Cunnigham, now patentee, or other determination of his grant.

Officers

	l.	s.	d.
Officers of the Ordnance.			
The ingineer, overſeer, ſurveyor, and director general of his majeſty's fortifications, &c. at 5s. *per diem, per an.*	091	5	0

To ceaſe after the death of captain John Payne and captain John Hallam, now patentees, or other determinations of their grant.

Captain Hugh Magill, comptroller of the ordnance, for his fee, at 5 s. *per diem,* and for an allowance of 1s. *per diem* for his clerk, both *per ann.*	109	10	0
	819	14	07

Sundry Miniſters belonging to the Ordnance, *viz.* in

LEMSTER.

A maſter gunner at 3s. *per diem,* his mate at 1s. 6d. *per diem*; ſix gunners for the train, at 1s. 2d. each *per diem*; one gentleman of the ordnance at 3s. *per diem*; clerk of the ordnance and ſtores at Dublin at 4s. *per diem,* his clerk at 1s. *per diem*; gunſmith, blackſmith, carpenter and wheeler, at 1s. 4d. *per diem* each; armorer, cutler, cooper, at 9d. each *per diem*; ſix matroſſes at 8d. each *per diem*;	774	02	01

	l.	s.	d.
three waggoners at 10 d. each *per diem*; at Duncannon, a clerk of the ſtores 1s. 8d. *per diem*; a gunner at 1 s. *per diem*; a matroſs at 8 d. *per diem*; at Paſſage, a gunner's mate at 10d. *per diem*, making *per annum*,			

CONNAUGHT.

At Athlone, a clerk of the ſtores at 1s. 8d. *per diem*; a gunner at 1s. *per diem*; a matroſs at 8d. *per diem*. Galloway, a clerk of the ſtores at 1 s. 8d. *per diem*; a gunner at 1s. *per diem*; a matroſs at 8d. *per diem*. At Sligo a gunner at 1s. *per diem*; Iſle of Arran, a gunner at 1s. *per diem*; Inniſbuffin, a gunner at 1s. *per diem*; making *per annum*,	176	08	04

MUNSTER.

Miniſters belonging to the Ordnance.

Waterford, a gunner at 1s *per diem*; a matroſs at 8d. *per diem*. Limerick a clerk of the ſtores at 1s. 8d. *per diem*; a gunner at 1s. *per diem*; a matroſs at 8 d. *per diem*. Cork, clerk of the ſtores at 1s. 8d. *per diem*; a gunner at 1s. *per diem*; a matroſs at 8d. *per diem*. At Halvowling, a gunner's mate 10d. *per diem*; Youghall, a gunner, at 1s. *per diem*; Kingſale, a	270	14	02

gunner

	l.	s.	d.
gunner at 1s. *per diem*; at the Block-houſe, a gunner's mate, at 10d. *per diem*; at Crookhaven, a gunner at 1s. *per diem*; at Inniſherkin, a gunner's mate at 10d. *per diem*; Valentia, a gunner at 1s. *per diem*. In all *per annum*,			
	1358	02	10

ULSTER.

Londonderry, a clerk of the ſtores, at 1s. 8d. *per diem*; a gunner, at 1s. *per diem*; a matroſs at 8d. *per diem*; At Culmore a gunner's mate at 10 d. *per diem*. At Carrickfergus, a clerk of the ſtores, at 1s. 8d. *per diem*; a gunner at 1s. a matroſs at 8d. *per diem*. In all *per annum*,	136	17	06

HORSE.

The king's guard of horſe, conſiſting of a captain at 19l. 12s. each calendar month; a lieutenant at 12l. 12s. a coronet at 12l. 12s. a quartermaſter at 9l. 16s. 6 corporals at 6l. 6s. each; two of the king's trumpets at 6l. 6s. each; four more of the king's trumpets, and a kettle-drum at 3l. 10s. each, beſides their ſtanding allowances in the civil liſt. A ſadler, farrier, and armorer, at 4l. 18s. each, and 100 horſemen at 4l. 18s. each, mak-	7526	08	0

ing

	l.	s.	d.
ing in all *per menſ.* 627l. 4s. which amounts for the whole pay of the ſaid guard *per ann.* unto			
The lord lieutenant's troop, consisting of a captain at 19l. 12s. each calendar month; a lieutenant at 12l. 12s. and a cornet at 9l. 16s. a quarter maſter at 7l. 3 corporals and 2 trumpets more at 6l. 6s. each; and fifty private horſemen at 2l. 2s. each; making in all *per menſ.* 184l. 2s. which amounts for the whole pay of the ſaid troop *per annum* unto	2209	04	0
Five troops more belonging to the general officers, viz. to the lieutenant general of the army, the ſerjeant major general of the army, the lord preſident of Connaught, the commiſſary general of the horſe, and the ſcoutmaſter general of the army, each troop consisting of a captain at 19l. 12s. each calendar month, a lieutenant at 12l. 12s. a cornet at 9l. 16. a quarter maſter at 7l. 3 corporals, and 2 trumpets at 3l. 10s. each, and 50 private horſemen, at 2l. 2s. each, making in all *per menſem* for each troop, 171l. 10s. which amounts for the whole pay of the ſaid five troops *per annuum* unto	10290	00	0
	1226	08	00
Twenty three troops, which consisting of the like officers, and 45 private horſemen, making in all *per menſem* to each troop, 161l. which amounts for the whole pay of the ſaid 23 troops *per ann.* unto	44436	00	0

FOOT.

	l.	s.	d.
F O O T.			
The lord lieutenant's company, consisting of a captain at 11l. 4s. each calendar month. A lieutenant at 5l. 12s. an enſign at 4l. 4s. 2 ſerjeants at 2l. 2s. each; 3 corporals and 2 drums at 1l. 18s each, and 100 private footmen at 14s. each, making in all *per menſem* 102l. 4s. which amounts for the whole pay of the ſaid company *per annum*, unto	1226	08	0
Fifty nine companies more, each consisting of a captain at 11l. 4s. each calendar month, a lieutenant at 5l. 12s. an enſign at 4l. 4s. 2 ſerjeants at 2l. 2s. each; 3 corporals and 1 drummer at 1l 8s. each, and 60 private footmen at 14s. each, making in all *per menſ.* for each company 72l. 16s. which amounts for the whole pay of the ſaid 59 companies *per annum*, unto	51542	00	8
A ward at Sligo under the command of major Robert Edgeworth, consisting of 2 ſerjeants at 2l. 2s. each, every calendar month; 3 corporals, and one drummer at 1l. 8s. each, and 60 private footmen, at 14s. each, making in all *per menſem* 51l. 16s. which amounts *per annum* unto	0621	12	0

Regiment

	l.	s.	d.
Regiment of guards.			
The royal regiment of guards, consisting of 12 companies, viz. a colonel as colonel and captain at 28l. *per mensem*, a lieutenant colonel, and captain, at 21l. *per mensem*. A major and captain at 16l. 16s. 9 captains more at 11l. 4s. each; 12 lieutenants at 5l. 12s. each; 12 ensigns at 4l. 4s. each; 40 serjeants at 2 l. 2 s. each; 36 corporals at 1l. 8s. each; drum-major at 2l. 16s. 24 drummers at 1l. 8s. each; a piper to the king's company at 1l. 8s. 1200 soldiers at 1l. 3s. 4d. each; a chaplain at 9l. 6s. 8d. an adjutant. quartermaster, and chyrurgeon at 5l. 12s. each, and chyrurgeons mate at 3l. 10s. making in all *per mens.* at 28 days to the month, 18861 10s. 8d. which amounts unto *per an*	24518	08	8
Temporary Payments.			
Sir Hen. Tichburn knt. marshal of Ireland,	198	1	9
To cease *post mortem* or other determination of his grant.			
Sir Theophilus Jones, scout master general of the army, for his entertainment at 6s. 8d. *per diem*, and for an increase of his entertainment at 100l. *per annum* making in all,	221	13	04

To

	l.	s.	d.
To cease *post mortem* or other determination of his grant.			
Sir George Lane knight, for his entertaintment as secretary at war to his majesty, at 1l. *per diem* for himself, and 5s. *per diem* for his clerk, *ver annum*,	456	05	00
To cease *post mortem*, or other determination of his grant.			
Captain Richard St. George the pay of a captain of a foot towards his maintenance during his life being 11l. 4s, *per mensem, per annum*,	134	08	00
Arthur earl of Donnegall for his entertainment at 4s. 2d. *per diem* for himself and for 9 horsemen at 9d. each *per diem* during his life, by vertue of a grant thereof, dated the last of July in the 13th year of king James, *per ann.*	199	04	07
The mayor of the city of Dublin for his entertainment at 8s. *per diem*,	146	00	00
Particular Governors.			
The governor of the county of Clare for his fee at 10s. *per diem, per ann.*	182	10	00
The governor of the castle of Dublin for his fee 1l. *per diem per ann.*	365	00	00

The

	l.	s.	d.
The governor of the fort of Sligo for his fee at 10s. per diem, per an.	182	10	00
The governor of the fort of Halbolling, for his fee at 6s. per diem, per annum,	109	10	00
The conſtable of Hilſborough at 3s. 4d. per diem, per annum,	60	16	08
Sum total of the payments aforeſaid upon the military liſt amounts unto per ann.	163810	03	11

These temporary payments to ceaſe *poſt mortem*, or other determination of the ſaid grants, except that of the Halbolling.

By his Majeſty's Command,

ARLINGTON.

A CATA-

A

CATALOGUE

OF THE

PEERS.

DUke of Ormond
Duke of Leinſter
Marquis of Antrim

EARLS.

Kildare	Clancarty
Thomond	Orrery
Cork	Mamtroth
Deſmond	Drogheda
Barrymore	Waterford
Meath	Mount-Alexander
Offory	Down
Roſcommon	Longford
Londondery	Tyrone
Donnegall	Bellomont
Arran	Clanrikard
Conaway	Caſtlehaven
Carbery	Weſtmeath
Ardglaſs	Fingall
Rannalagh	Caſtlemaine
Cavan	Carlingford
Inchiquin	

VISCOUNTS.

VISCOUNTS.

Grandiſon	Powerſcourt
Wilmot	Bleſſington
Loftus of Ely	Granard
Swords	Laneſborough
Kilmurry	Roſs
Valentia	Caſtalo
Mareborough	Merrion
Caſtleton	Fairfax
Chaworth	Fitz Williams
Sligo	Gormanſton
Waterford	Rathcoole
Strangford	Barfore
Tuam	Brucher
Caſhell	Galmoy
Carlo	Kingſland
Cullen	Mountgaret
Shannon	Douth
Mazareene	Evagh
Dromore	Killmallock
Dungarven	Ikernie
Dungannon	Glanmalegræ
Kells	Claine
Fitzharding	Downe
Clare	Trazey
Charlemont	

Archbiſhops and Biſhopricks in IRELAND.

ARchbiſhoprick of Armagh	———Kildare
———Dublin	———Waterford
———Caſhells	———Clonfert
———Tuam	———Elphin
Biſhoprick of Meath	——Fernes and Laghlin
	———Clogher
	——Dromore

———Dromore	———Limerick
———Offory	———Cloyne
———Derry	———Killalla
———Down	———Rapho
———Killallow	———Kilmore
———Cork	

BARONS.

Kingſale	Colooney
Kerry	Sautre
Hoath	Lough
Mountjoy	Glawnalley
Folliot	Caſtle-ſteward
Maynard	Atheury
Dundalk	Caſhir
Digby	Baltimore
Lifford	Strabane
Herbert	Slane
Lochlin	Trimelſtone
Colraine	Dunſcany
Leitrim	Dunboyne
Donamore	Upper Offery
Blare	Caſtle-Come
Killard	Brittas
Kingſton	

A Liſt

A Lift of thofe places that return Parliament men in

I R E L A N D.

L E I N S T E R.

County of Catherlough	2	County of Kildare	2
Burrough of Catherlough	2	Bur. of Kildare	2
B. of Old-Leighlin	2	B. of Nafs	2
		B. of Athy	2
County of Dublin	2	*Com. Regis*	2
City of Dublin	2	B. of Philiftown	2
Univerfity of Dublin	3	B. of Byrr	2
Bur. of Newcaftle	2	B. of Banagher	2
Bur. of Swords	2	County of Meath	2
		B. of Trim	2
Village de Drogheda	2	B. of Kells	2
		B. of Navan	2
County of Kilkenny	2	B. of Athbuy	2
Bur. of Callen	2	B. of Duleek	2
B. of Thomas-town	2	B. of Ratooth	2
B. of Gowran	2		
B. of Kells	2	*Com. Regini*	2
B. of Emifteogue	2	B. of Bellakil	2
B. of Knoctopher	2	B. of Mariborough	2
B. of Sti Kennis	2	Port Arlington	2
City of Kilkenny	2		

County

County of Weftmeath	2	B. of Featherd	2
B. of Athlone	2	B. of Bannow	2
B. of Fower	2	B. of Cloghmaine	2
B. of Kilbegan	2	B. of Arklou	2
B. of Mullingar	2	B. of Taughman	2
		B. of Newburrough	2
County of Wicklow	2		
B. of Wicklow	2	County of Longford	2
B. of Carisford	2	B. of Lanisborough	2
B. of Baltinglafs	2	Town of Longford	2
County of Wexford	2	County of Lowth	2
Town of Wexford	2	B. of Dundalk	2
Town of Rofs	2	B. of Arthdee	2
B. of Enifcorthy	2	B. of Carlingford	2

M U N S T E R.

County of Cork	2	County of Limerick	2
City of Cork	2	City of Limerick	2
B. of Mallow	2	B. of Kilmallock	2
B. of Baltimore	2	B. of Afkaton	2
B. of Clognekilty	2		
B. of Bandonbridge	2	County of Tipperary	2
B. of Kingfale	2	Town of Tipperary	2
B. of Youghall	2	B. of Clonmell	2
		B. of Feathard	2
County of Clare	2	Town of Cafhell	2
B. of Infh	2	B. of Thurles	2
County of Kerry	2	County of Waterford	2
B. of Traly	2	City of Waterford	2
B. of Dinglecough	2	B. of Dungarven	2
B. of Ardfart	2	B. of Lifmore	2
		B. of Tallow	2

ULSTER.

County of Armagh	2	B. of Donegal	2
B. of Armagh	2	B. of St. John-Town's	2
B. of Charlemont	2		
County of Antrim	2	County of Fermanagh	2
B. of Belfaſt	2	B. of Inniſkilling	2
B. of Carrickfergus	2		
B. of Lisburne	2	County of Londonderry	2
B. of Antrim	2	City of Londonderry	2
County of Cavan	2	B. of Colerain	2
B. of Cavan	2	B. of Lanmevady	2
B. of Belturbet	2		
County of Down	2	County of Monaghan	2
B. of Down	2	B. of Monaghan	2
B. of Newtown	2		
B. of Newry	2	County of Tyrone	2
B. of Ballkillaleagh	2	B. of Donnegall	2
B. of Bangor	2	Town of Clogher	2
B. of Hilsborough	2	B. of Agber	2
County of Donnegal	2	B. of Strabane	2
B. of Lifford	2		
B. of Balliſhannon	2		
B. of Kilbegs	2		

CONNAUGHT.

County of Galway	2	B. of Caſtlebar	2
B. of Galway	2		
B. of Athenry	2	County of Roſcommon	2
B. of Tuam	2	B. of Roſcommon	2
		B. of Tulſk	2
County of Leitrim	2	B. of Boyle	2
B. of James-Town	2		
B. of Carickdrumruſk	2	County of Sligo	2
		B. of Sligo	2
County of Mayo	2		

The whole Number 289

THE

THE

PRESENT STATE

OF

IRELAND,

ANNO 1719.

A

LIST

OF THE

Lords Spiritual and Temporal

OF

IRELAND.

Allan Broderick, baron Broderick of Middleton, lord chancellor.

ARCH-BISHOPS.

Dr. Thomas Lyndſey, lord arch-biſhop of Armagh, primate of all Ireland.
Dr. William King, lord arch-biſhop of Dublin, primate of Ireland.
Dr. William Palliſer, lord arch-biſhop of Caſhel.
Dr. John Veſey, lord arch-biſhop of Tuam.
Charles Boyle, earl of Cork, lord treaſurer.

MARQUIS.

Philip Wharton, marquis of Catherlogh.

EARLS.

Robert Fitz-Gerald, earl of Kildare
Henry Obryen, earl of Thomond

Richard Bourk, earl of Clanricard
Alexander Macdonnell, earl of Antrim
Henry Nugent, earl of Weſtmeath
Robert Dillon, earl of Roſcommon
Bazil Feilding, earl of Deſmond
Chaworth Brabazon, earl of Meath
James Barry, earl of Barrimore
Arthur Chicheſter, earl of Donegal
Richard Lambert, earl of Cavan
William Obrien, earl of Inchiquin
Lyonel Boyle, earl of Orrery
Charles Coote, earl of Montrath
Henry Moore, earl of Drogheda
Charles Talbot, earl of Waterford and Wexford
Hugh Montgomery, earl of Mount Alexander
Sir Richard Child, earl of Caſtlemain
Nicholas Taaf, earl of Carlingford
Arthur Forbes, earl of Granard
Richard Coote, earl of Bellemont
Godart Ginkle, earl of Athlone
Charles Butler, earl of Arran
Henry de Maſſue, earl of Galway

VISCOUNTS.

Richard Butler, viſcount Mountgarret
George Villers, viſcount Grandiſon
Arthur Anneſly, viſcount Valentia
Henry Dillon, viſcount Coſtellogallen
John Netterville, viſcount Dowth
Arthur Loftus, viſcount Loftus of Ely
Thomas Beaumont, viſcount Swords
Robert Needham, viſcount Kilmurrey
Robert Bourk, viſcount Mayo
George Saunderſon, viſcount Caſtletown
Richard Lumley, viſcount Waterford

Endimion

Endimion Smith, viſcount Stranford
———Wenman, viſcount Tuam
———Molineux, viſcount Maryborrow
———Fairfax, viſcount Emely
Thomas Butler, viſcount Ikerine
Richard Fitz-Williams, viſcount Merion
Brian Cockain, viſcount Cullen
——— Tracy, viſcount Rathcoole
Francis Smith, viſcount Carrington of Barrefore
Richard Bulkley, viſcount Caſhel
Nicholas Barnwall, viſcount Maſſereen
Hugh Cholmondley, viſcount Kells
Francis Franſhaw, viſcount Dromore
John Berkley, viſcount Fitz-Harding of Beerhaven
William Caulfield, viſcount Charlemont
Folliot Wingfield, viſcount Powers-court
Morrogh Boyle, viſcount Bleſſington
James Lane, viſcount Laneſborough
Henry Dawney, viſcount Down
Richard Parſons, viſcount Roſſe
William Stewart, viſcount Mountjoy
Edward Vaughan, viſcount Lisburne
Thomas Windeſor, viſcount Windeſor
Scroop How, viſcount How
James Hamilton, viſcount Strabane
———Verney, viſcount Fermanagh
Arthur St. Leger, viſcount Downraile
Paul Davis, viſcount Mount-Caſhel
Chriſtopher Wandesford, viſcount Caſtlecomer
James Hamilton, viſcount Limerick

BISHOPS.

Dr. John Evans, lord biſhop of Meath
Dr. Welbore Ellis, lord biſhop of Kildare
Dr. Simon Digby, lord biſhop of Elphin

Dr.

Dr. Bartholomew Vigors, lord bishop of Ferns and Leighlin
Dr. William Fitz-Gerald, lord bishop of Clonfert
Dr. William Lloyd, lord bishop of Killala and Achonree
Dr. John Hartstongue, lord bishop of Derry
Dr. St. George Ash, lord bishop of Clogher
Dr. Thomas Smith, lord bishop of Limerick
Dr. Edward Smith, lord bishop of Down and Connor
Dr. Charles Crowe, lord bishop of Cloyne
Dr. Thomas Mills, lord bishop of Waterford and Lismore
Dr. Peter Brown, lord bishop of Cork and Rosse
Dr. John Sterne, lord bishop of Dromore
Sir Thomas Vesey, lord bishop of Ossery
Dr. Edward Synge, lord bishop of Raphoe
Dr. Nicholas Forster, lord bishop of Killaloe
Dr. Timothy Goodwin, lord bishop of Killmore and Ardagh

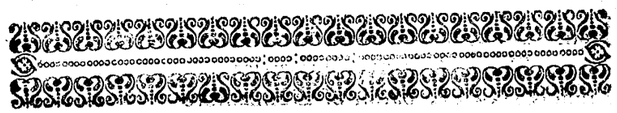
BARONS.

Edward Birmingham, baron of Athenree
Americus Coursey, baron of Kingsale
Thomas Fitz-Morris, barron of Kerry and Lixnaw
Thomas St. Laurence, baron of Howth
Barnaby Fitz-Patrick, baron of Upper-Ossery
Thomas Butler, baron of Cahir
Henry Folliot, baron of Ballyshannon
Banastre Maynard, baron of Wicklow
Richard Georges, baron of Dundalk
William Digby, baron of Geshill
William Fitz-Williams, baron of Lifford
Cadwallader Blaney, baron Blaney of Monaghan

Cadwal-

Cadwallader Herbert, baron of Castle-Island
John Calvert, baron of Baltimore
Henry Hare, baron of Colraine
Bench Sherrard, baron of Letrim
Francis Hawley, baron of Dunnamore
Hildebrand Allington, baron of Killard
John King, baron of Kingston
Henry Barry, baron of Santry
Arthur Annesly, baron of Altham
John Bellew, baron of Duleek
Thomas Coningesby, baron Coningesby of Clanbrazil
Henry Petty, baron of Shelbourne
Charles O'Hara, baron of Tyrawley
Michel Bourk, baron Bourk of Dunkellin
Francis Conway, baron Conway of Killultagh
George Cholmondelly, baron of Newborrow
Alan Broderick, baron Broderick of Middleton
George St. George, baron St. George of Hatley St. George
Sir Arthur Cole, baron of Renelagh
Sir John Percival, baron Percival of Burton
Richard Fitz-Patrick, baron of Gowran
George Evans, baron of Carberry
Sir Henry Titchborne, baron Farrard of Beaulieu
Gustavus Hamilton, baron Hamilton of Stackallen
Theophilus Butler, baron Butler of Newtown-Butler
John Moor, baron of Tullamore

A LIST



A

LIST

OF THE

Knights, Citizens, and Burgesses,

OF THE

PARLIAMENT of IRELAND,

Begun and held at DUBLIN, the 12th of November, 1715, before Charles, duke of Grafton, and his excellency, Henry, earl of Galway, lords justices general, and general governors of IRELAND.

County of Ardmagh 6.

William Browlow, esq; * William Richardson, esq;

Borough of Ardmagh.

Samuel Dopping, esq; * Silvester Cross, esq;

Borough of Charlemont.

James Caulfield, esq; * Humphry May, esq;

County

County of Amtrim, 10.

The right. hon. John Clotworthy Upton, esq; Skeffington, esq;

Borough of Lisburne.

* Edmond Francis Stafford, esq; Brent Spencer, esq;

Borough of Belfast.

* Hon. Chapel Moor, esq; * Geo. Mac Cartney, esq;

By another indenture.

* The hon. John Echingham Chichester, esq; * Geo. Mac Cartney, esq;

Borough of Antrim.

* John Mac Mullan, esq; Hugh Henry, esq;

Borough of Randalstown.

Robert Dixon, esq; James Stevenson, esq;

County and town of Carrickfergus, 2.

* Arch. Edmonstone, esq; * Alexander Dallway, esq;

County of Catherlough 6.

Francis Harrison, esq; Thomas Burdett, esq;

Borough of Catherlough.

* Richard Wolsey, esq; Walter Weldon, esq;

Borough of old Laughlin.

John Beauchamp, esq; St. Leger Gilbert, esq;

County of Cavan 6.

* Brockhill Newburgh, esq; * Mervin Prat, esq;

Borough of Cavan.

Theophilus Clements, esq; * Thomas Nesbitt, esq;

Borough of Belturbut.

Brimsley Butler, esq; * Charles Delafaye, esq;

County of Clare 4.

Francis Gore, esq; * John Ivers, esq;

Borough of Ennis.

* David Bindon, esq; * Samuel Bindon, esq;

County of Cork 26.

The hon. John Brodrick, esq; * Henry Boyle, esq;

City

City of Cork.

* Edmond Knapp, esq; Edward Hoare, esq;

Town of Youghall.

* The hon. lieut. gen. Arthur Hyde, esq; Francis Palmes, esq;

Town of Kinsale.

The right hon. Edward Southwell, esq; Henry Hawley, esq;

Town of Bandon-bridge.

* Col. Martin Balden, esq; Francis Bernard, esq;

Town of Mallow.

William Jephson, esq; Anthony Jephson, esq;

Borough of Baltimore.

The hon. col. William Southwell, esq; The hon. lieut. col. Michael Beecher, esq;

Borough of Cloghnikilty.

Sir Ralph Freke, bart. George Freke, esq;

Borough of Charleville.

* Capt. William Boyle, esq; * George Evans, esq;

Borough of Castle-Matyr.

Bartholomew Purdon, esq; * Charles Coote, esq;

Borough of Middletown.

* The right hon. Thomas Brodrick, esq; Edward Croker, esq;

Borough of Rathcormuck.

James Barry, esq; Jephson Burfted, esq;

Borough of Donerayle.

Arthur St. Ledger, esq; * William Causebon, esq;

County of Dublin 10.

* The hon. Edw. Brabazon, esq; The right hon. John Allen, esq;

City of Dublin 2.

Benjamin Burton, esq; of the same, alderman. John Rogerson, esq; his Majesty's

solicitor-general, and recorder of the city.

University of Dublin.

Marmaduke Coghall, esq; L.L.D. Samuel Dopping, esq; L.L.D.

Borough of Swords.

* Richard Molesworth, esq; Plunkett Plunkett, esq;

Borough of Newcastle.

Daniel Reading, esq; Charles Monke, esq;

County and town of Drogheda, 2.

Henry Singleton, esq; recorder. John Graham, esq; of the same, alderman.

County of Donnegal, 12.

Sir Ralph Gore, bart. Fred. Hamilton, esq;

Borough of John's Town.

* William Forward, esq; John Topham, esq;

Borough of Donnegal.

Sir Arthur Gore, bart. Henry Maxwell, esq;

Borough of Ballyshannon.

The hon. maj. gen. Owen Wynn. John Rochfort, esq;

Borough of Killibeggs.

* The hon. Charles Fane Thomas Pearson, esq;

Borough of Lifford.

The hon. brigadier David Creighton. Michael Sampson, esq;

County of Downe, 14.

* Hon. Trevor Hill, esq; Michael Ward, esq;

Borough of Down-Patrick.

* Sir Emanuel Moor, bt. * Thomas Medlycott, es.

Borough of Killyleagh.

John Halbridge, esq; * Robert Ross, esq;

Borough of Newry.

* Robert Clements, esq; Hans Hamilton, esq;

Borough

Borough of Bangor.

* Michael Ward, esq; Hans Hamilton, esq;

Borough of Newton.

* Richard Tigh, esq; Charles Campbell, esq;

Borough of Hillsborough.

* Arthur Hill, esq; Samuel Waring, esq;

County of Fermanagh, 4.

The right honourable sir Gustavus Humes, bart. * James Corry, esq;

Borough of Inniskillen.

Richard Cole of Killycreen, esq; John Cole of Inniskillen

County of Gallway, 8.

* Edward Ormsby, esq; * Frederick Trench, esq;

Town of Gallway.

John Staunton, esq; * Robert Shaw, esq;

Town of Athenrey.

John Ormsby, esq; Richard Whalley, esq;

Borough of Tuam.

Agmondisham Vesey, es. * William Vesey, esq;

County of Kerry, 8.

St. Maurice Corsbie, knt. John Blenerhasset, esq;

Borough of Dingle-Icouch.

Thomas Corsbie, esq; John Pratt, esq;

Borough of Traley.

Samuel Morris sen. esq; * Robert Taylor, esq;

Borough of Ardfert.

William Corsbie, esq; Henry Rose, esq;

County of Kildare, 10.

Joshua Allen, esq; Brabazon Ponsonby, esq;

Borough of Kildare.

* James Barry, esq; * Maurice Keaton, esq;

Borough of Naas.

Thomas Burgh, esq; Theobald Bourke, esq;

Borough of Athy.

* Richard Allen, esq; Maurice Kealing, esq;

Borough

Borough of Harrystowne.

* Robert Johnson, esq; Alexander Graydon, esq;

County of Kilkenny, 16.

William Ponsonby, esq; William Flower, esq;

City of Kilkenny.

Darby Egan, esq; recorder of the said city. * Ebenezar Warren, esq;

Borough of St. Kennis, alias Irish-town.

Sir Standish Hartstonge, bart. Sir Robert Maude, bart.

Borough of Gowram.

* The hon. maj. general James Agar, esq; John Pepper.

Borough of Thomastown.

* The hon. col. William Flower. * John Cuffe, esq;

Borough of Enisteoge.

Edward Dean sen. esq; Edward Dean jun. esq;

Borough of Cullen.

James Agar, esq; Francis Flood, esq;

Borough of Knocktopher.

Edward Worth, esq; * William Wall, esq;

County of Leitrim, 16.

William Gore, esq; Theophilus Jones, esq;

Borough of James-town.

* Hon. Algernoon Coole, esq; Gilbert King, esq;

Borough of Carrwick.

* John Usher, esq; *Richard St. George, esq;

County of Limerick, 8.

Sir Thomas Southwell, bart. Robert Oliver, esq;

City of Limerick.

George Roch, esq; William Ford, esq;

Borough of Killmallock.

* Kilner Brazier sen. esq; George King, esq;

Borough

Borough of Aſkeylon.

* John Bury, eſq; * Edward Deny, eſq;

County of Longford, 10.

The hon. ſir Robt. Newcomen knt. and bart. * Anthony Sheppard, eſq;

Borough of Longford.

George Gore, eſq; his Majeſty's attorney-general. * James Macartney, jun. eſq;

Borough of Granard.

John Parnell, eſq; one of his Majeſty's council at law. Jacob Peppard, eſq;

Borough of Lanesborough.

By another indenture.

* Wentworth Harman, eſq; * Robert Bray, eſq;

Borough of Johns-Town.

Henry Edgworth, eſq; Robert Edgworth, eſq;

County of Londonderry, 8.

The right hon. Wm. Conolley, eſq; ſpeaker of the honourable houſe of commons. Hercules Rowley, eſq;

City of Londonderry.

Charles Norman, eſq; George Tomkins, eſq;

Borough of Coleraine.

The right hon. major general Frederick Hamilton. * The hon. ſir Marcus Beresford, bart.

Borough of Newton-limivady.

* Iſaac Manley, eſq; * Joſeph Henry, eſq;

County of Louth, 10.

* The hon. Robert Moor, eſq; Richard Tiſdal, eſq;

Borough

Borough of Artherdee.

* The hon. Wm. Moore, eſq; Michael Tiſdale, eſq;

Borough of Dundalk.

James Hamilton, eſq; Henry Brooks, eſq;

Borough of Carlingford.

Blaney Townley, eſq; James Stannus, eſq;

Borough of Dunleere.

Stephen Ludlow, eſq; * Thomas Forteſcue, eſq;

County of Mayo, 4.

Sir Arthur Gore, bart. * Francis Cuffe, eſq;

Borough of Caſtlebarr.

* John Bingham, eſq; Henry Bingham, eſq;

County of Meath, 14.

John Preſton, eſq; * James Napper, eſq;

Borough of Trim.

* John Percivall, eſq; * John Keaton, eſq;

Borough of Aſhboy.

* John Bligh, eſq; Thomas Bligh, eſq;

Borough of Navan.

* Arthur Meredith, eſq; Nathaniel Preſton, eſq;

Borough of Kells.

Sir Thomas Taylor, bart. Thomas Taylor, eſq;

Borough of Duleeke.

Francis Harriſon, eſq; * Thomas Trotter, eſq;

Borough of Ratoath.

Lieut. gen. Richard Gorges George Lowther, eſq;

County of Monaghan, 4.

Alexander Montgomery, eſq; Sir Alexander Clurnes, bart.

Borough of Monagham.

Hugh Willoughby jun. eſq; Francis Lucas, eſq;

King's county, 6.

✱ Sir William Parsons, bart. ✱ William Purefoy, esq;

Borough of Banagher.

The hon. Charles Plunkett, esq; ✱ Thomas Lestrange, esq.

Borough of Phillips-town.

✱ William Tichburne, esq; James Forth, esq;

Queen's county, 10.

Dudley Cosby, esq; Ephraim Dawson, esq;

Borough of Maryborough.

Robert Piggot, esq; William Wall, esq;

Borough of Ballynekil.

By another Indenture.

Gen. Owen Winn, esq; John Barrington, esq;

Borough of Portarlington.

Richard Warburton of Portnahinch, esq; ✱ Richard Warburton of Rathrumshire, esq;

County of Roscommon, 8.

Sir Edward Crofton, kt. and bart. Sir John King, kt. and bart.

Borough of Roscommon.

Edward Crofton, esq; Henry Sandford, esq;

Borough of Boyle.

Henry King, esq; ✱ Robert Sandford, esq;

Borough of Tulsk.

✱ John French, esq; ✱ Thomas Caulfield, esq.

County of Sligoe, 4.

Chudley Coote, esq; William Ormsby, esq;

Borough of Sligoe.

Samuel Burton, esq; Owen Wynn, esq;

County of Tipperary, 8.

Kingsmill Pennyfeather, esq; ✱ Humphrey Minchin, esq;

Borough

Borough of Clonmell.

Robert Hamerton, esq; Stephen Moor, esq;

City of Cashell.

✱ Richard Buckworth, esq; Matthew Pennyfeather, esq;

Borough of Fethard.

Epaphroditus Marsh, esq; ✱ Guy Moore, esq;

County of Tyrone, 10.

Audley Mervin, esq; ✱ Charles Stuart, esq;

Borough of Dungannon.

The right hon. Thomas Nox, esq; Right hon. Oliver St. George, esq;

Borough of Strabane.

The hon. Richard Stuart, esq; Oliver Mac Causland, esq.

City of Clogher.

The hon. col. Richard St. George of Dunmore. ✱ Henry St. George sen. esq;

Borough of Augher.

Henry Mervin, esq; William Belfour, esq;

County of Waterford, 10.

✱ Edward May, esq; ✱ Stephen Stanley, esq;

City of Waterford.

Thomas Christmas, esq; ✱ John Mason, esq;

Borough of Dungarvan.

The hon. col. James Barry. Robert Carew, esq;

Borough of Tallagh.

William Maynard, esq; Benjamin Parry, esq;

Borough of Lismore.

✱ The right hon. lieut. gen. Thomas Meredith. Sir Arthur Shaen, bart.

County of Weſtmeath, 10.

Edward Packenham, eſq; * John Wood, eſq;

Borough of Athlone.

Henry St. George ſen. eſ. William Jones, eſq;

Borough of Killbegan.

* Charles Lambert, eſq; Brabazon Newconen, eſq;

Mannor of Mullingar.

* Euſtace Budgell, eſq; Thomas Bellow, eſq;

Borough of Fore.

* William Smith, eſq; * Patrick Fox, eſq;

County of Wexford, 18.

James Stapford ſen. eſq; * Nicholas Loſtus, eſq;

Town of Wexford.

* Chadwallader Edwards, eſq; Edward Jones, eſq;

Town of New-Roſs.

Edward Jones, eſq; Thomas Meredith, eſq;

Borough of Enniſcorthy.

Richard Lehunt, eſq; * William Berry, eſqs

Borough of Fethard.

Thomas Palliſer, eſq; * Henry Ponſonby, eſq;

Borough of Newbury, alias Gowrey.

* Abel Ram, eſq; George Ram, eſq;

Borough of Bannow.

John Cliffe, eſq; * Jacob Boyle, eſq;

Borough of Clomines.

George Houghton, eſq; * Philip Downe, eſq;

Borough of Saghmon.

Anderſon Saunders, eſq; Richard Saunders, eſq;

County of Wicklow, 10.

Henry Percy, eſq; Robert Allen, eſq;

Borough of Wicklow.

Richard Edwards, eſq; * Samuel Whitſhed, eſq;

Borough

Borough of Baltinglaſe.

Edward Stratford, eſq; Jeffery Paul, eſq;

Borough of Cargesfort.

Hugh Eccles, eſq; * John Sale, eſq;

Borough of Bleſſington.

The hon. Charles Boyle, eſq; John Jephſon, eſq;

N. B. Thoſe with this mark, (*) were not Members of the laſt Parliament.

A

LIST

OF THE

PRINCIPAL OFFICERS

IN THE

GOVERNMENT of IRELAND.

LORD LIEUTENANT,

His grace, Charles, Duke of Bolton.

LORDS JUSTICES.

Allan lord Brodrick.
William lord archbishop of Dublin.
William Conolly, esq; speaker of the house of commons.
Lord chancellor Broderick.
Secretary of state, Edward Southwell, esq;
Lord treasurer, earl of Burlington.
Vice treasurer, earl of Scarborough.

Vice

Vice chancellor of the exchequer, Philip Savage, esq;
Lord chief baron, Jeffery Gilbert, esq;
Second baron, John Pocklington, esq;
Third baron, sir John St. Leger, bart.
Secretary to the lord chancellor, Francis Lake, esq;

KINGS BENCH.

Prime serjeant, Robert Fitzgerald, esq;
Second serjeant, John Cliffe, esq;
Attorney general, George Gore, esq;
Solicitor general, John Rogerson, esq;
Auditor general, Charles Dering, esq;
Surveyor general, —— Molesworth, esq;

CHANCERY.

Chief remembrancer, Henry Temple, esq;
Second remembrancer, Luke King, esq;
Clerk of the pipe, Paul Barry, esq;
Chief chamberlain, Robert Fox, esq;
Second chamberlain, Robert Curtis, esq;
Comptroller of the pipe, Charles Baldwyn, esq;
Usher of the exchequer, Mr. Carpenter.
Cryer of the exchequer, Robert Fox, esq;
Pursivant of the exchequer, Edward Deering, esq;
Auditor of the foreign accounts and impreſt, Lewis Roberts, esq;

KINGS BENCH.

Lord chief justice, William Whitshed, esq;
Second justice, William Cawfield, esq;
Third justice, —— Boate, esq;
Clerk of the crown, Edward Southwell, esq;

CHANCERY.

Lord chancellor, Allan, lord Broderick.
Master of the rolls, William, lord Berkley.

Four

Four masters in Chancery.

Richard Stone, esq;
Thomas White, esq;
John Usher, esq;
William Crow, esq;
Clerk of the crown, sir Thomas Domvile, knt.
Clerk of the hanaper, Joseph Budden, esq;

COMMON PLEAS.

Lord chief justice, John Forster, esq;
Second justice, sir Gilbert Dolben, bart.
Third Justice, James Mackartney, esq;
Prothonotary, James Barry, esq;
Physician to the state, —— Mollyneux, esq;
Ulster king at arms, William Hawkins, esq;
Athlone pursuivant, Joseph Moland, esq;
Chief serjeant at arms, Richard Povey, esq;
Second serjeant, Thomas Carter, esq;

Three Pursuivants, { John Podmore. Robert Preston. William Levington.

Keeper of the council-chamber, William Palmer, junior.
Keeper of the rooms in Dublin castle, William Clark.
Porter of the castle, George Digby.
Constable of the castle of Dublin, John Pratt, esq;
State kettle-drummer, William Cooper.

Commissioners of the Revenue.

Sir Thomas Southwell, knight.
William Strickland, esq;
William Conolly, esq;
Philip Gibbon, esq;
Thomas Medlicot, esq;
Mr. Wilde.
Mr. Hopkins.

Commissioners

Commissioners of excise.

Sir Thomas Southwell, knight.
William Strickland, esq;
William Conolly, esq;
Thomas Medlycot, esq;
Mr. Wilde.
Solicitor, Richard Nuthall esq;
Comptroller and accomptant general, William Burgh, esq;

Military Officers in Ireland.

Commander in chief of the land forces in the absence of the lord lieutenant, Charles, lord Tirawley.

Major general of all the forces, George Wade, esq;

There ought to be twelve thousand men, horse, foot, and dragoons, upon the Irish establishment.

Lieutenant general of the ordnance, colonel Moldsworth.

Captain of the battle-axes, the lord lieutenant's guards, colonel William Southwell.

Muster-master general, lord Tullamoor.

Governor of the royal hospital of Kilmainham near Dublin, lieutenant general Palmes.

VERBUM

VERBUM SAPIENTI.

VERBUM SAPIENTI.

THE

INTRODUCTION.

WHEREAS many are forced to pay 1 10th of their whole eſtates towards the raiſing of but 70000l. per menſem, beſides what they pay more inſenſibly and directly, as cuſtoms, exciſe, chimney-money, &c. (viz. in London, they pay 2d. per menſem per pound rent, that is 2s. per annum, or 1 10th of the whole.) It muſt come to paſs, that the ſame perſons muſt from Chriſtmas, 1665, pay 1 3d of their whole eſtates, if the war with Holland continue two years longer, at the value of the laſt year's expence, provided his Majeſty be kept out of debt.

2. But if the public charge were laid proportionably, no man need pay above 1 10th of his whole effects, even in caſe the tax ſhould riſe to 250000l. per menſem, which God forbid.

3. That

3. That is to ſay, according to the preſent ways, ſome pay for four times as much more as they ought, or needed; which diſproportion is the true and proper grievance of taxes, and which muſt be felt when the tax happens to be great and extraordinary: whereas by meer method and proportion, the ſame may be corrected as aforeſaid; and withal, juſt accounts might be kept of the people, with the reſpective increaſes and decreaſes of them, their wealth, and foreign trade.

CHAP.

CHAP I.

Containing ſeveral computations of the wealth of the kingdom.

1. THERE are of men, women, and children, in England and Wales, about ſix millions, whoſe expence at 6l. 13s. 4d. per annum, or near 4d. 1 half per diem, for food, houſing, cloths, and all other neceſſaries, amount to 40 millions per annum.

2. There are in England and Wales, of acres of land (worth 6l. 1s. 8d. per acre, and 18 years purchaſe) 24 millions, that is, which yields 8 millions per annum rent, and which are worth 144 millions to be ſold.

3. There be 28000 houſes within the liberties of the city of London, worth 15l. per annum, and twelve years purchaſe (viz. which yields 420000l. per annum, and are worth 5040000l.

There are without the liberties, but within the bills of mortality 1 4th more in number, perhaps not of greater value, viz. 5040000l.

4. There is in all England and Wales near ten times as many chimneys as within the liberties of London, as appears by the returns; whereof thoſe within the bills are 1 5th of the whole.

5. 'Tis probable, that the houſing of all the cities and market-towns, are double in number to thoſe of all London, though of no more worth.

6. 'Tis

6. 'Tis alſo probable, that the houſing without the cities and towns, are more in number than thoſe within (London excepted) but of no more value.

7. So as the houſing of England may be eſtimated worth 310 millions; and that if their values be eſtimated by chimneys, thoſe of London are worth 12d. per chimney; thoſe in the ſuburbs 10d. other cities and market-towns 6d. and thoſe without both, about 4d.

8. The ſhipping of England, &c. is about 500000 tuns, which at 6d. per tun, including their ordnance, apparel, &c. is worth three millions.

9. The ſtock of cattle on the afore-mentioned 24 millions of land, and the waſte thereunto belonging, is worth 1 4th of the ſaid land, viz. 36 millions comprehending horſes, oxen, ſheep, ſwine, deer, fiſheries, parks and warrens,

10. The coined gold and ſilver of the kingdom, is ſcarce worth ſix millions.

11. The wares, merchandizes, and utenſils of plate, and furnitures, may be eſtimated at 31 millions to make the ſhips and money 40, and the whole 150 millions.

12. The moſt uncertain part of this eſtimate, ſeems to be rating perſonal eſtates at above 30 millions, which I make probable thus.

(1) Firſt it is not unlikely that what is contained in all the ſhops, warehouſes, cellars, barns, and graineries, together with houſehold furniture, cloths, ornaments, &c. ſhould be leſs worth than houſing it ſelf that contains them.

(2) If the value of all the cattle, viz. 36 millions, were added to the 31 perſonal eſtates, making 67 together; both will not make up one year 3 4th proviſion for the whole nation, whoſe expence we eſtimated

mated at 40 millions per annum; and poorer than ſo, we hope it is not.

(3) I find by the particular eſtimate of the values of all the plate, lead, iron, copper and tin, and of all the timber, planks and woods, and of all ſilks, linnen, and callicoes; of all cloths, ſtuffs, and leathers; of all grains and ſalts, and all wines, oyles, and other liquids; of all grocery and ſpicery, and drugs; of jewels, and hangings, beds, and other ornaments, (too troubleſome to particularize) that this general account may ſtand.

(4) The city of London being commonly eſteemed and rated at the 15th part of the whole, which we reckon at 250 millions, that is 16 millions 2 3d I think the ſum may be well made up by reckoning five millions 1 6th for the houſing as aforeſaid, and one million 1 2d for the ſhipping (half the ſhipping of the nation belonging to London) and about the double value of the houſing for what is contained in them. The which upon conſidering the ſeveral houſes, I find not unreaſonable.

(Laſtly,) Suppoſing that in the houſes within the liberties of London (worth 5 millions) there be 10 millions worth of goods; I conceive that to allow about as much more, (viz. 21 millions) to all the reſt of the houſes in the kingdom, which are ten times as many as aforeſaid, will not overcharge them.

13. Now if the land worth 144 millions, yield 8 millions *per annum*, the other eſtate converted into the like ſpecies muſt yield 5 millions 8 9ths more; but becauſe money and other perſonal eſtates yield more *per annum* than land; (that is) doubles it ſelf under 17 years purchaſe at 6l. *per centum*, then inſtead of 5 millions 8 9ths, ſuppoſe it to yield 7, making the whole annual proceed 15 millions.

CHAP. II.

Of the value of the people.

NOW if the annual proceed of the ſtock, or wealth of the nation, yields but 15 millions, and the expence be 40, then the labour of the people muſt furniſh the other 25; which may be done, if but half of them, viz. 3 millions earned but 8l. 6s. 9d. *per annum*, which is done at 7d. *per diem*, abating the 52 ſundays, and half as many other days for accidents as holy-days, ſickneſs, recreations, &c.

2. If 1 6th of theſe 3 millions of people earned but 2d. *per diem*; another 1 6th, 4d. another 1 6th, 8d. *per diem*, another 10d. and another 12d. The medium will be this, 7d. *per diem*.

3. Whereas the ſtock of the kingdom, yielding but 15 millions of proceed, is worth 250 millions; then the people who yield 25, are worth 416 millions 2 3ds. For although the individiums of mankind be reckoned at about 8 years purchaſe; the ſpecies of them is worth as many as land, being in its nature as perpetual, for ought we know.

4. If 6 millions of people be worth 417 millions of pounds ſterling, then each head is worth 69l. or each of the 3 millions of workers is worth 138l. which is 7 years purchaſe, at about 12d. *per diem*; nor is ſuperlucration above his ſubſiſtence to be reckoned in this caſe.

5. From whence it follows, that 100000 perſons dying of the plague above the ordinary number, is near 7 millions loſs to the kingdom; and conſequently how well might 700000l. have been beſtowed in preventing this centuple loſs?

6. We ſaid, that the late mortality by the peſt, is a great loſs to the kingdom; whereas ſome think it but a ſeaſonable diſcharge of its peſtilent humours: to clear which difficulty, I ſay,

7. If the plague diſcerned well, between the well and the ill affected, to peace and obedience, or between the bees and the drones, the fact would determine the queſtion: but if it deſtroy promiſcuouſly, the loſs is proportionable to the benefit we have by them that ſurvive; for 'tis they that make England worth above 600 millions as aforeſaid: it being certain, that if one perſon only had eſcaped: the whole territory, and all that is in it had been worth but a livelihood for that one; and he ſubject to be a prey to the next two that ſhould invade him.

8. It ſeems reaſonable, that what we call the wealth, ſtock, or proviſion of the nation, being the effect of the former or paſt labour, ſhould not be conceived to differ from efficiencies in being, but ſhould be rated alike, and contribute alike to the common neceſſities: and then of all and every ſum to be raiſed, the land and ſtock muſt pay 3 parts; and the people conſidered without an eſtate at all, 5 more; the whole into 8 divided.

9. If the expence of the nation be 40 millions; it ſeems but the ſame hardſhip to ſet apart 4. viz. 1 10th of the whole for the public uſe, as what now lies upon many already: but 4 millions would afford one for the ordinary expence, and three for the extraordinary wars, that is 250000l. *per menſem*; that is 3 1 half as much as 70. For the raiſing whereof, many now pay above 1 10th of their whole eſtates, for want of method and proportion.

 10. Labouring

10. Labouring men work 10 hours *per diem*, and make 20 meals *per* week, viz. 3 a day for working days, and two on Sundays; whereby it is plain, that if they could faſt on Friday nights, and dine in one hour and a half, whereas they take two, from eleven to one; thereby this working 1 20th more, and ſpending 1 20th leſs, the 1 10th abovementioned might be raiſed, at leaſt with more eaſe, than to take up arms, and reſiſt it.

CHAP. III.

Of the ſeveral expences of the kingdom, and its revenues.

1. THE ordinary expence of the kingdom for the navy, ordnance, garriſons, land-forces, Tangier, Jamaica, Bombay, ambaſſadors, penſions, intelligence, kings and royal families expence, conſiſting of the houſhold of the king, queen, duke, &c. privy-purſe, wardrobe, robes, angel-gold, maſter of the horſe, mews, armory, tents, parks, lodges, goldſmiths, jewels, &c. hath been computed to be about one million; reckoning 200000l. for the navy, 60 for the ordnance and powder, 290 for land-forces, garriſons, &c. and 450000 for other things.

2. Towards this, there is in crown-lands 70000, poſt-office 20, coynage and pre-emption of tin 12, foreſt of deer 4, courts of juſtice 6, firſt fruits 18; in all 130000. Cuſtoms at 2 *per centum* 170 in all 300000, without the duties of wares, wine-licence, aulnage, or butlerage, exciſe, chimney-money, land-tax,

tax, pole and aſſeſſments, being regulated and proportionated as followeth, viz.

CHAP. IV.

Of the method of apportioning taxes.

1. IF a million is to be raiſed above the 300000l. laſt mentioned, then 375000l. is to be levied on the ſtock, and 625000l. on the people.

Of the 375000 on the ſtock,
216 on the lands,
54 on the cattle, &c.
60 on the perſonal eſtates,
45 on the houſing.

In all 375

2. To raiſe 216000l. out of 8000000 m. rent, requires 1 37th of the rent, and 1 27th of 1 37th 1 9th, but allowing the charge of collecting, we may expreſs it to a 1 36th part.

3. To raiſe 54000l. *per annum*, out of 36000000 requires the annual payment of a 666th part of the whole value; but in regard of charges, let it be reduced to a 600th part.

4. The like for the 60000l. of perſonal eſtates.

5. To raiſe 45000l. *per annum*, from all the houſing worth 30 millions, or 7500 for the houſing in London-liberties, worth about 5 millions, and whoſe rent is 420000l. *per annum*, requires but 1 56th of the annual rent, which cannot be above 12 d. a chimney *per annum*, reckoning 5 to each houſe. Without the liberties, about 10 d. the chimney will

 effect

effect the ſame; 6d. in the cities and market-towns, and 4d. elſewhere.

6. As for the 625000l. to be raiſed by the people, it requires but 2s. 1d. *per* pole *per annum*, which let rather be divided into a pole of 6*d.* a head, and an exciſe of 19*d.* which is not the full $\frac{1}{14}$ part of the mean expence 6*l.* 13*s.* 4*d.* ſo as the $\frac{1}{84}$ of the value of conſumptions, will with the ſaid 6 *d.* pole, raiſe 625,000 *l. per annum.*

CHAP. V.

Of money; and how much is neceſſary to drive the trade of the nation.

1. IT may be aſked, if there were occaſion to raiſe 4 millions *per ann.* whether the ſame ſix millions, (which we hope we have) would ſuffice for ſuch revolutions and circulations thereof as trade requires? I anſwer yes; for the expence being 40 millions, if the revolutions were in ſuch ſhort circles, viz. weekly, as happens among poor artizans and labourers, who receive and pay every Saturday, then $\frac{40}{52}$ parts of 1 million of money would anſwer thoſe ends: but if the circles be quarterly, according to our cuſtom of paying rent, and gathering taxes, then ten millions were requiſite. Wherefore ſuppoſing payments in general to be of a mixt circle between one week and 13, then add 10 millions to $\frac{40}{5}$, the half of the which will be $5\frac{1}{2}$, ſo as if we have $5\frac{1}{2}$ millions, we have enough.

2. And thus I have ſhewed, that if one half of the ſubjects of England (playing 78 days in the year) will earn 7d. *per diem* all the reſt of the days one with another; and if they would work $\frac{1}{20}$ more, and ſpend $\frac{1}{20}$ leſs, they might enable their king to maintain double the forces he now doth, without ſuffering in the general more than many well affected perſons do now through negligence, or miſtakes in their particulars. Nor is money wanting to anſwer all the ends of a well policed ſtate, notwithſtanding the great decreaſes thereof, which have happened within theſe 20 years.

Nor were it hard to ſubſtitute in the place of money (were a competency of it wanting) what ſhould be equivalent unto it. For money is but the fat of the body politick, whereof too much doth as often hinder its agility, as too little makes it ſick. 'Tis true, that as fat lubricates the motion of the muſcles, feeds in want of victuals, fills up uneven cavities and beautifies the body; ſo doth money in the ſtate quicken its action, feeds from abroad in the time of dearth at home; even accounts by reaſon of its diviſibility, and beautifies the whole, eſpecially the particular perſons that have it in plenty.

CHAP. VI.

The causes of irregular taxing.

1. THE causes of error in this great affair of public levies, have been these. First, laying too great a stress on the matter of money, which is to the whole effect of the kingdom but as 6 to 667. That is, not one to 100. Secondly, laying the whole burthen on the past effects, and neglecting the present efficiencies, exceeding the former as 417 doth 250. Thirdly, reckoning all the personal estates of the city of London (shipping included) at scarce one half the value of the very housing, whereas they are double: which happens because the housing of London belongs to the church, companies, or gentlemen, and are taxed by the citizens their tenants. Fourthly, a fallacious tenderness towards the poor, (who now pay scarce one shilling *per* head *per ann.* towards all manner of charges) interwoven with the cruelty of not providing them work, and indulging lazinesS in them, because of our own indisposition to employ them; so some are over charged through evil custom, and others left to sordid want, and bruitish irregularity. Fifthly, an opinion, that certainty of rules is impossible, and but an idle notion; and then having made such as are not so, and training them to be applied by the affection and humour; so as one fourth of the whole paying needlesly four times too much, may be thereby so netled, as to do more mischief than the other unconcerned, and the thankless can allay.

CHAP.

CHAP. VII.

The collateral advantages of these taxes.

1. BEsides the equality of taxes, we make this further use of trying it by way of customs, poles, excises, chimney money, land-tax, and assessments upon the personal estates, viz.

(1.) Of the customs, which we reduce from $\frac{1}{20}$ to $\frac{1}{50}$ to keep an account of foreign trade and of its balance; for by levying a duty, and encreasing the penalty, these accounts will be less obscured.

(2.) The simple and universal pole keeps an account of the great wealth and strength of the kingdom, the people.

(3.) Rating the houses, *per* chimney, gives a good account of improvements and dilapidations.

(4.) Excise gives an account of domestick expences and publisheth exorbitances.

(5.) Land taxes keep the payments to the proportion of entire value, not of annual rent: so as an estate in housing pays no more than if it were in lands, nor considerably less than goods, and may bring mortgages to their just contribution; many lenders not being so formidable for their money, as some have thought them.

(6.) Assessments upon personal estates (if given in as elsewhere upon oath) would bring that branch, which of itself is most dark, to a sufficient clearness.

2. There is also a pole upon titles and dignities worth consideration, though we now omit it; which as it may check mens forwardness to undeserved pre-

eminence

eminence, ſo it may be employed in the encouragement of true worth.

3. We have hitherto computed the old immutable revenue at but 130,000l. *per annum*, nor ſuppoſed above 170,000 l. (*viz.* leſs than half what it is at preſent) to be raiſed by cuſtoms (wholly neglecting wards, butlarage, aulnage, and other obſolute impoſts.) We have alſo deſigned the ſeveral proportions towards the raiſing of a million more *per ann.* to be raiſed by the pole, exciſe, land-tax, aſſeſſments and chimneys.

CHAP. VIII.

Of the expence of the navy, army, and garriſons.

WE come next to ſhew, that if 3 millions *per ann.* or 250,000l. *per menſem* (to make up the whole 3,300,000l. *per ann.*) were raiſed, how far ſuch a ſum may be employed for the ſafety, eſtabliſhment, and honour both of the king and ſubject.

Unto which, I ſay, conſidering the preſent condition of the navy, two millions will maintain 50,000 men, in ſhips of war for eight months of the year, and 30,000 for the other four months: which I take to be near double the beſt fleet we ever have ſeen in Europe, computing the ordnance and harbour charges of the navy: nor will the maintenance of 12000 foot, and 3000 horſe, allowing 100,000l. for inland garriſons, and 60,000 l. for Tangier, &c. put altogether, exceed 600,000l. ſo as there remains 700,000l. for other matters, whereof his majeſty's royal family, by all the accounts I have ſeen, doth not ſpend five hundred thouſand *per ann.* Nor need the charge of all

thoſe levies be above 1 of the 33, (viz.) the $\frac{1}{33}$ part for the 500 officers, without ever going five miles from the center of their abode) who might perform this work; nor would more than 200l. *per ann.* for each of them, and their under inſtruments be neceſſary for their reſpective ſalaries: for there are 450 areots of 10 mile ſquare in England and Wales.

CHAP. IX.

Motives to the quiet bearing of extraordinary taxes.

HAVING ſhewed how great and glorious things may be done with no leſs difficulty than what $\frac{1}{4}$ of the king's ſubjects do already endure; I offer theſe further reaſons to quiet mens minds, in caſe this utmoſt 250,000l. *per menſem* ſhould be ever demanded upon this Holland war.

1. That of all naval expence, not $\frac{1}{30}$ is for foreign commodities, nor need it be $\frac{1}{40}$ if the people would do their part, and the governors direct them the neareſt ways.

2. That ſtoppage of trade is conſiderable, but as one to eight; for we exchange not above five millions worth *per ann.* for our 40.

3. That the expence of king, &c. being about 400,000l. *per ann.* is but $\frac{1}{100}$ part of the expence of the nation, who all have the pleaſure and honour of it.

4. That the money of the nation being but about 5 millions and a half, and the earning of the ſame 25; it is not difficult for them to encreaſe their money a million *per ann.* by an eaſy advance of their induſtry,

duſtry, applied to ſuch manufactures as will fetch money from abroad.

5. The wealth of England lies in land and people; ſo as they may make five parts of ſix of the whole: but the wealth of Holland lies more in money, houſing, ſhipping, and wares. Now ſuppoſing England three times as rich as Holland in land and people, (as it is) and Holland twice as rich as we in other particulars (as it ſcarce is;) we are ſtill upon the balance of the whole near twice as rich as they: of which I wiſh thoſe that underſtand Holland, would conſider and calculate.

6. There are in England above four acres of arable, meadow and paſture land, for every ſoul in it; and thoſe ſo fertile, as that the labour of one man in tilling them, is ſufficient to get a bare livelihood for above 10: ſo as 'tis for want of diſcipline that any poverty appears in England, and that any are hanged or ſtarved upon that account.

CHAP. X.

How to employ the people, and the end thereof.

WE ſaid, that half the people by a very gentle labour, might much enrich the kingdom, and advance its honour, by ſetting apart largely for publick uſes; but the difficulty is, upon what ſhall they employ themſelves?

To which I anſwer in general, upon producing food and neceſſaries for the whole people of the land, by few hands; whether by labouring harder, or by the introducing the compendium, and facilitations of art, which is equivalent to what men vainly hoped from

from Polygamy. Foraſmuch as he that can do the work of five men by one, effects the ſame as the begetting four adult workmen. Nor is ſuch advantage worth fewer years purchaſe than that of lands, or what we eſteem likeſt to perpetual. Now the making neceſſaries cheap, by the means aforeſaid, and not by raiſing more of them than can be ſpent whilſt they are good, will neceſſitate others to buy them with much labour of other kinds. For if one man could raiſe corn enough for the whole, better than any one man; then that man would have the natural monopoly of corn and could expect more labour for it in exchange, then if ten others raiſed ten times as much corn as is neceſſary; which would make other labour ſo much the dearer, as men were leſs under the need of engaging upon it.

2. By this way we might recover our loſt cloth-trade, which by the ſame the Dutch got from us. By this way the Eaſt-Indians furniſh us from the other end of the world with linen cheaper than ourſelves can make them, with what grows at our own doors. By this means we might fetch flax from France, and yet furniſh them with linen, (that is) if we make no more than we can vend, but ſo much with the feweſt hands, and cheapeſt food, which will be when food alſo is raiſed, by fewer hands than elſewhere.

3. I anſwer generally we ſhould employ ourſelves by raiſing ſuch commodities, as would yield and fetch in money from abroad: for that would ſupply any wants of ours from the ſame, or any other place at all times. Which ſtores of domeſtick commodities could not effect, whoſe value is to call a temporary (*i. e.*) which are of value but *pro hic & nunc.*

4 But

4. But when ſhould we reſt from this great induſtry? I anſwer, when we have certainly more money than any of our neighbour ſtates, (though never ſo little) both in arithmetical and geometrical proportion (*i. e.*) when we have more years proviſion aforehand, and more preſent effects.

5. What then ſhall we buſy our ſelves about? I anſwer, in ratiocinations upon the works and will of God, to be ſupported not only by the indolency, but alſo by the pleaſure of the body? and not only by the tranquility, but ſerenety of the mind; and this exerciſe is the natural end of man in this world, and that which beſt diſpoſeth him for his ſpiritual happineſs in that other which is to come. The motions of the mind being the quickeſt of all others, afford moſt variety, wherein is the very form and being of pleaſure; and by how much the more we have of this pleaſure, by ſo much the more we are capable of it even *ad finitum*.

F I N I S.