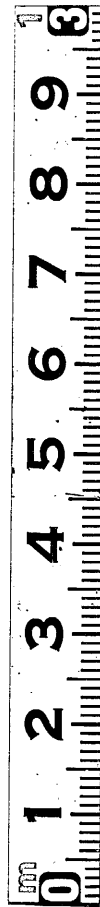


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0157

POISON DETECTED:

OR

FRIGHTFUL TRUTHS;

AND

Alarming to the *British* Metropolis.

IN A

TREATISE ON BREAD;

AND THE

ABUSES practised in making that FOOD,

As occasioning the decrease and degeneracy of the people; destroying infants; and producing innumerable diseases.

SHEWING ALSO,

The virtues of GOOD BREAD, and the manner of making it.

To which is added,

A CHARGE to the confederacy of bakers, corn-dealers, farmers, and millers; concerning short weight, adulterations, and artificial scarcities; with easy methods to prevent all such abuses.

By MY FRIEND, a Physician.

*If thy brother wants bread, wilt thou give him a stone?
or if he asks a fish, wilt thou give him a serpent?*

JESUS CHRIST.

Dicere vix possis haud multi talia plorent. JUVENAL.

LONDON:

Printed for Mess. DODSLEY, in *Pall-Mall*; OSBORNE, in *Gray's-Inn*; CORBET, in *Fleet-street*; GRIFFITH, in *Pater-noster-row*; and JAMES, at the *Royal Exchange*.

MDCCLVII.

[Price One Shilling and Six-pence.]

0158

DEDICATED
TO THE
PEOPLE
OF THE
Metropolis of Great Britain,

By

Their devoted Well-wisher,

MY FRIEND.

E R R A T A.

Page 2. line 6, for *ungrate* read *ungratefully*. p. 11.
 l. 4. for *ascessent* r. *accescent*, &c. p. 28. l. for *lo-*
negvity r. *longevity*. p. 37. l. 22. for *he* r. *it*. p. 39.
 l. 6. for *principis* r. *princeps*. p. 45. l. 33. for *Lan-*
cashire r. *Lancaster*.



P R E F A C E

T O T H E

C I T Y.

A V I L L A G E was once prodigiously
 pestered with rats; they were the
 gray-colour'd kind; indeed their multi-
 tude was innumerable. A youth who
 had observed them with singular dili-
 gence, advertised the neighbourhood that
 rats-bane had been distributed in fundry
 parts; and that the vermin had not only
 eat of it, but had carried away on their
 feet and whiskers much of the poison,
 which, he was assured, was dispersed in
 the common fountain of the place, which
 was certainly contaminated, for they drank

B

and

P R E F A C E.

and washed themselves in the spring. 'Tis poison'd, he said, *refrain!* Some of the villagers scorn'd and derided the kind precaution—They drank—The fatal consequences justified the young man's assertion—and they who had ungrate-scoffed him, lingered away, unlamented in diseases, reproach, and repentance.



O F



O F
B R E A D,
AND THE
Abuses of BAKERS.

— *Hoc vincite, cives,*
Et prohibite nefas. — VIRG.

A MIND matured by philosophy, whose chain of reason is strong enough to combine ideas, deep enough to fathom the abstruse deductions of concatenated efficient; and whose vigor of intellect, and keenness of sense, is able to investigate successive causes that were before unknown, from a minute observance, and diligent pursuit of obvious effects; is frequently convinced by a small portion of reflection, that all the malignant productions, and morbid qualities, in this sublunary globe, are not more destructive and injurious to mankind, than man alone. Run over the gloomy
B 2 roll

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roll of horrors; earthquakes, inundations, tempests, famine, lightening, fiery eruptions, venomous or savage animals, and deleterious plants; they will be found less baleful to human existence than the excentricities of ambition, the sinister deviations of nefarious art, or the secret craft of impetuous avidity. Nay, many of those very calamities which the misguided tongues of plebeian ignorance and superficiality so lavishly and clamorously charge upon elements, seasons, climates, situations, and natural contingencies, afford a more pleasing contemplation to the percipient eye of wisdom. Yet it is surprising how frequent and copious our invectives and complaints are against the ways of providence; tho' we are mighty careful of offending man by an exposure of his delinquencies: as if fear of the vengeance of our fellows prevailed over our respect, love, and gratitude due to heaven; or as if we had a more acute perspicacity to remark, and more boldness to declaim against, the supposed errors above us, than those that are upon our own level; or as if the longpatient mercy of providence had made us, as we really have great reason to be, less fearful of him, than we are of each other. An egregious truth, which is manifested by nothing so evidently as the subject which dictates these sheets. Can it be supposed that the common food which we live upon may possibly be mix'd with malignant qualities, and ourselves escape injury from it? Or can it be doubted, that the native constitutions of any place habitually conform themselves to the disposition of their natural climate, country, and other contingencies? When then we see the inhabitants of a place in health, longevity, vigor, comeliness of feature, and numbers manifestly degenerated and

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and decayed from their progenitors, we are apt to consider the cause of that strange defection: 'tis hard to charge it upon providence, which we are certain guides the rotation of seasons, still in the original circle of their primæval simplicity. Can we think ourselves afflicted with more intemperate severities of elements, and inclemencies of seasons, than our more beloved ancestors? No, providence is the same, though man is changed.

Applying these reflections to the metropolis of our country: its obvious decrease of people, degeneracy of constitution, and frequency of diseases, will soon be charged to some other account than a bad air, nay even the depravity of manners is inadequate to the charge; for I would not deny libidinisism a share in producing those effects, but it is far from maintaining a principal one. And though less moral, it will be more physical and rational to account for it other ways. For can we suppose a city-fountain to be privily poisoned, and the inhabitants to escape the mischief?

Tea, detrimental alone, is frequently coloured with copperas; wine is purified with drugs of as noxious properties, or roughened with pernicious asperants; veal is whitened with chalk, and puffed up with, perhaps, the unwholesome breath of the distempered butcher; the brazier may poison us with the lethiferous fusion of arsenical metals in tin with which he lines our culinary vessels; our beer, the common beverage of the populace, is pernicated with the baleful properties of vitriol, or unwholesome intoxicants: but, above all, our bread, the universal basis of

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the food of all ranks and ages of people, is mixed with most noxious and morbiferous matters. Of these, in their effects, we propose to give a full exposure. We may expect indeed to incur the confederate enmity of the abusers, which will soon collect itself, and perhaps break forth upon us in some furious public invective. But we shall esteem their most angrily rancorous indignation as much more inoffensive than their loaves, and shall rather with sport than concern see them mouth-maul, worry, and break their teeth upon the stone we throw at them. Patriotism stimulates it, conscience urges it, 'tis to defend the public, to expose and exterminate the artifices of the bakers detrimental avidity.

The abuses of bakers have by wise men been thought of sufficient importance and evil influence, not only on the property but the health of people, to draw upon them penalties more or less severe, from the jurisdiction of all civilized governments; and the malpractices of these men have, from almost unchronicled ages, irritated the public obloquy of vulgar derision. But perhaps no place was ever more justifiable for the reproaches with which it has branded the fronts of particular villainies, than London, at present, for those excited by the frauds of confederate bakers. So, is not that metropolis to be admired for the penalties decreed against their pernicious artifices? Yet the scourge of popular mockery, united with the wholesome provision of penal statutes, are defied and outbraved by the perpetrators of those consummate iniquities: though every sensible man implores a remedy of ills disgraceful to his country, detrimental to himself and his family, oppressive to the poor, and

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and injurious to all ranks and ages of people; though the populace objurgate with declamatory asseverations of the fraudulent facts; though the laws inflict penalties upon, and though the imposters are unable to deny the bare-faced crimes; though the public papers are filled with daily admonitions and expository invectives against them; nevertheless the bakers persevere in their lucrative arts, and manifest the ineffectuality of shame, equity, and conviction, to the reformation of inveterate villainy. Surely then the bad consequences of their practices, both to the private and public constitution, have been insufficiently considered, too little exposed, and less understood; to make them detested, dreaded, deprecated, redressed.

Good bread, that most substantial and principal part of human food, ought to be composed of flour well kneaded with the lightest water, seasoned with a little salt, fermented with fine yeast or leaven, and sufficiently baked with a proper fire. But instead of this wholesome bread, the craft of iniquitous bakers has found out a more advantageous method of making this food, by the mischievous admixture of many pernicious ingredients, to increase its weight, and deceive the buyer by its fraudulent fineness. Lime, chalk, alum, &c. mixed up with flour, yeast, salt, and leaven, in certain proportion, are constituent parts of that most common food, to which in the city of London the deluded inhabitants give the name of BREAD.

Alum, as a medicine, is one of remarkable contraindication, and every physician knows how hazardous such drugs are, promiscuously and

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preposterously taken; it is a very powerful astringent and styptic, occasioning heat and costiveness; the frequent use of it closes up the mouths of the small alimentary ducts, and by its corrosive concretions, seals up the lacteals, indurates every mass it is mixed with upon the stomach, makes it hard of digestion, and consolidates the faeces in the intestines, so as to bind up the passages which should be open.

It therefore prevents the nourishment which we expect from bread, and induces disorders which we should not suspect from a food reputed not only harmless but wholesome. Nay, experience convinces me, that any animal will live longer in health and vigor upon two ounces of good and wholesome bread, than upon one pound of this adulterated compound. A consideration which may be useful, if attended to in the times of scarcity.

Alum is a good medicine properly administered; but when we remember it to be an extract from human excrement, the delicate part of the world will readily resign its use in their common food, or even in physic, to its more proper uses in dying of stuffs and dressing of leather. Even the most stercorian stomach fastidiates the nastiness of a food made up with such a disgusting admixture. Nor is it used even in striking a colour, without manifest danger to the health of the dyers; and if it has that effect upon the artificer, who uses it only in his business, how much must he suffer from it, who daily receives it internally. This will give us a reason for the frequency of the acid acrimony, and the many disorders which it produces, very troublesome and dangerous to the animal economy;

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as burning acid eructations, with an insatiable appetite, though not nourished by the food it voraciously devours.

Cardialgia, or heart-burn, produced by a stimulation of the cardia, or left orifice of the stomach, which is endued with a most exquisite sense by the acid juices contained in the stomach.

Coagulation of the aliment taken into the stomach, especially if it happens to be milk, which brings on pains, flatulencies, and spasmodic contractions of the intestines, but particularly of the ileum; these symptoms may even arise to that degree of violence, as to constitute that distemper which is called Cholera Morbus; and which, without a great deal of care, will sometimes be so acute as in a very few hours to prove fatal.

As these acidities mix with the bile in the duodenum, they must necessarily alter its nature, and render it inactive; and as the bile has a considerable share in assimilating the aliment, and converting it into good chyle, this assimilation must be prevented in proportion as the bile, by reason of any foreign admixture, deviates from its own nature. The same holds good in regard to the pancreatic juice and the saliva, both which, in a natural state, contribute to the digestion of the aliment, and the conversion of it into a balsamic chyle, capable of entering the lacteal vessels and mixing with the blood, without communicating to it any acrimony either alkaline or acid. But when the action of the above-mentioned juices is impaired by an acid in the Primæ Viæ, an acid chyle is formed, and the very excrement

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ment discharged from the intestines, betrays an acid in the smell.

But chiefly when the glands and glandular secretions are affected, the case becomes much more difficult and dangerous. From the stomach and small intestines, this acidity by slow degrees is propagated to the receptacle of the chyle, and from thence to the blood, and finally to all the humours separated from it.

So likewise when the blood becomes acidulated, obstructions are frequently formed in the capillary vessels, producing troublesome itchings of the skin; pustules, very frequent after eating great quantities of fruit; ulcers, which are pale, slow in their progress, and difficult to heal.

Hence also coagulations of the blood, which render it unfit for circulation, and consequently for nutrition, and the uses of the animal œconomy.

But the acid acrimony has yet a worse effect when it reaches the nerves, nervous membranes, and the brain; for then by stimulating these sensible parts, it is productive of convulsions, epileptic fits, an irregular circulation of the blood, and at last death, of which children afford too frequent examples.

From what has been said with respect to an acid abounding in animal bodies, many disorders to which sedentary people and women of a lax habit are liable, may be discovered and understood; but it will be particularly useful

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ful in attending to the distempers to which children are subject, in whom all the causes of an acid acrimony seem to contribute to their destruction, as acceffant aliment, laxity, and want of motion.

Poor people, whose food is principally of the farinaceous kind of vegetables, and especially such as eat but little flesh meat, are particularly obnoxious to these disorders, and would be much more so without the strong exercise they generally use; for exercise, by strengthening the animal fibres, and promoting the digestion of the aliment and assimilation of the chyle, prevents an acid acrimony from prevailing in the juices.

The fluid which circulates thro' the vessels, in order to be fit for nutrition, ought to be mild and destitute of acrimony, but where acidity prevails it is very far from being accommodated to that salutary purpose; instead of nourishing, it stimulates, abrades, and carries away a part of the solids, corrodes, destroys, and devellicates the extremely minute vessels, to which those of the brain are above all others subject; whence a train of those frightful symptoms which are usually called nervous, as deliriousness, convulsions, epilepsies, hysterics, comas or watchfulness.

All these bad consequences are successive to the frequent internal use of acceffant foods, as all farinaceous ones are, but more especially when mixed up with alum; which by its corrosive crust stops the entrance of the chyle into the lacteals, whilst its acrimony erodes the alimentary ducts.

Some

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Some people may say, that as a styptic and acid no mixture can be more proper, as it must be of singular prevalence against disorders proceeding from putrid alcalescence; but any good effects will be defeated by its constant use, and only its ill ones prevail; for it will injure where acids are noxious; and will prevent their utility where they should be serviceable. Custom enables the Turk to swallow as much opium as would destroy several men who never used that drug; and the poison taken by the king of Pontus is well known. Perhaps this may be turned upon me to put by my argument against the use of alum. Custom it may be said will make even alum innoxious: but let us not forget how many infants and strangers unhabituated to this baleful mixture, must receive destruction from their first use of that drug.

Alum also from its excessive drying quality is to be imputed with no less danger than what it acquires from its acescency, for as its acidity closes up the mouths of the lacteals and lubricating glandules, so by its drying power it acquires accumulated force of malignancy. These two qualities combined are more dangerous than separate, for the one compresses the vessels of the intestines, the other absorbs the lixivial juices which nature prepared to lubricate and soften the passages, and thus hardens their membranous tender contexture, and consolidates their contents, so that erosions and obstructions are formed, productive of fevers, vertigos, dizziness, flatulences, cholics, and hectics, inducing consumptions, for which our island is no less remarkable than for the hypocondria; disorders which in reality seem rather occasioned by these abuses
in

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in diet, than from any singular or evident malignancy in the climate, which is I believe the most temperate and homogeneal of any in Europe; for as it is an isle, we are neither scorched with excessive heats in the summer, nor frozen with intolerable cold in the winter season.

But those people, who labour under many disorders in which styptics and astringents are inimicable, and sometimes attended with fatal effects, are particularly eminent sufferers by this bread mixed with alum. In many diseases it is an absolute degree of poison; to all acute disorders indeed it is extremely perilous, especially in the gout, rheumatism, cholic, and venereal complaints; nor is it likely to prove very friendly to chronic affects. Hence perhaps we may account for the melancholic hypocondria, hysterics, and other nervous calamities being so frequent in England, especially in the metropolis; insomuch that some of them are by foreigners esteemed endemic to our isle, though almost unknown in those places where they have not the detestable art of mixing their food with poisonous matters. Such astringent diet is particularly prejudicial in the hospitals, and all other places where the patients are afflicted with inveterate scrofulas, malignant ulcers, or any other cacochemical scurvies, which it is not unusual to attack with mercury, antimony, drastic medicines, which add moment to the blood, impetuate the velocity of the animal circulation by their ponderous and stimulating force, and propel and deobstruate the oppilations; in such cases then as these, I appeal to the faculty, if a long habit and use of styptic and aluminous diet is not found to be of the most dangerous effects; insomuch that all acids are to
be

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be avoided and inhibited, as inductors of various ill consequences, ensuing the frequent use and repetition of those herculean medicines: for it is a common usage before the administration of mercurials, to prepare the vessels of the body for their reception by balsamics and alexipharmic anodynes, to open their texture and lubricate their tubes, that the deobstruating force, and the impacted matter together may the more easily slide through their soupled capacities, stave off the irrisistable violence of the medicine, which, without such a preparation, might endanger the tender coats of the vessels of a more delicate texture, lacerate and erode their fine fabric, and greatly distress and harass the nervous system, inducing paralas, palsies, tumors, flutterings, and even sometimes hæmorrhages, bringing on consumptions; and this is the only plausible reason to be assigned for the more frequent bad consequences attending the use of these medicines in London than in other parts of the world, as we have often remarked, which would be much less dangerous was the patient forbidden the use of such bread as is whitened by artful abuses: for though these medicines, judiciously administered, are the most noble and specific of any in the *Materia Medica*, and though our physicians are the most perfectly skilled of all others in their powers and virtues, yet this one bad article, occasioned by the villainy of the baker, often casts unmerited reproach upon the most worthy professor of the healing science, and brings an unjust dislike upon the medicine he prescribes. But it is not the physician or the medicine are culpable; for often some latent quality may defeat the designs of the one, and prevent or counteract the specific power of the other: or, though it may not in-

tirely

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tirely frustrate the attempt in the particular disease; yet may it induce a series of consequential calamities, as is often the case with respect to the medicine in question: for though the physician cautiously prepares the frame for its reception in its full virtue and efficacy, yet the aluminous astringents and fiery adscendants imposed upon the patient with his daily bread, unhinge the physician's design, and disconcert his measures, and bring on the events he was so careful to guard against, in defiance of his precautions. For it must be remembered, as it has been said, that alum contracts the lites of the vessels, and indurates their coats, so as to make them more liable to injury from the requisite ptyalism, which, though it may eradicate one disease, too often substitutes another in its room, though the physician exerted his best endeavour to ward off the threatened evil.—In short, the villainy of the baker confounds and disappoints the best formed designs of the wisest physician.

But it is not alum alone that suffices the lucrative iniquity of bakers to impose upon us; but there is also added a considerable portion of lime and chalk; so that if alum be prejudicial alone, what must be the consequences of eating our bread mingled with alum, chalk, and lime?

Lime and alum engender an acrimony which erodes the bowels and intestines, if they are not defended, or its spiculæ sheathed by the lubricating oliginous pituite provided for such purposes; but the use of that provision is defeated by this diabolical compound; for the absorbent quality of chalk, and the fiery effects of lime, entirely destroy that lixivium.

So

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So that if the chalk obstructs or impacts the cavities of the vessels, lime dries up the juices prepared to dissolve and pretermitt such obstructions. —And, lastly, alum completes the destruction, by contracting the capacity of the vessels, and imprisoning thereby the matter detained in them. So that obstructions, the causes of most diseases, are naturally formed by bread thus abused.

I have seen a quantity of lime and chalk, in the proportion of one to six, extracted from this kind of bread; possibly the baker was not so expert at his craft as to conceal it; the larger granules were visible enough: perhaps a more minute analysis would have produced a much greater portion of these pernicious materials.

Nor are alum, lime and chalk the only pernicious mixtures employed by the artifice of bakers to abuse the people with; there is another ingredient, which is more shocking to the heart, and if possible more hurtful to the health of mankind: it must stagger human belief; I shall only just mention it, to make it abhorred. It is averred by very credible authority, that sacks of old ground bones are not unfrequently used by some of the bakers amongst their other impurities, to increase the quantity, and injure the quality of flour and bread. The charnel houses of the dead are raked to add filthiness to the food of the living.

But that the mischief done by the bakers may be more extensive, these impurities, all, except alum, are not only mixed with our bread, but have a part in all other farinaceous foods, a very great part of the common victuals of our island.

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island. But as the bulk and activity of these mischievous ingredients are not, we suppose, in a reciprocal proportion, their effects must be vague, indeterminate, dangerous.

Acids (as alum) and alcalis (as chalk, lime, and burned bones) occurring, ferment with a great effervescence, so as to generate in the body various and intolerable pains, especially in all arthritic, rheumatic and scorbutic cacochemies.

Alum, without lime or chalk, erodes, constipates, incrusts; lime and chalk, without alum, occasion immeability to the juices, producing lethargies in old people, and convulsions in young: thus separate, they are very hurtful; but united, they are eminently detrimental. Chalk and lime are singularly inimicable in a putrid alcallescent state of the body; and alum is as little friendly to acidity and all disorders of a crude nature: acidity and alcallescence are the two fountains from whence the lamentable streams of most human maladies derive their origin.

As vitriol to the cholic; opium to an epilepsy; or bark to an asthma; so is alum to prevalent acidities; so is lime to all inflammations; so is chalk to a putrid alcallescence.

We are not unaware, that all such acid salts, as alum, spirit of nitre, &c. being mixed with absorbents, cause an effervescence, as alcalis do, when mixed with them. Salt of tartar, spirit of urine, and spirit of hart's-horn, being mingled with alum, juice of lemon or vinegar, cause such an effervescence as those acids would do, if mixed

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ed with chalk, ceruse, crabs-eyes, &c. from which quality they obtained the name of alcalis; but we are persuaded a few experiments will shew the impropriety of that name, and will evidently demonstrate, that tho' they are called alcalis, they have no property common with them, but merely their effervescent quality, as is affirmed by Dr. Arbuthnot.

It is observable, that the frequent internal use of any corrosive styptic, in time, contracts and shuts up the mouths of the small alimentary tubes; and all tophaceous or chalky and testaceous substances absorb and exhaust the lixivial fluids, provided by nature to facilitate digestion; obtund acrimony; lubricate the vessels, and constitute by their proportionate admixture an healthy nutrition; thereby preventing a due restoration to, and reparation of, the wastes of the animal attrition: the one clogs and impedes the oscillatory vibrations of the solids; the other incrassates the fluids; two bad consequences, which are not only dependent upon, but coadjutants of, each other. To keep the blood in an healthy state of tenuity, the solids must be stimulated to actuate and attenuate it, by more frequently impelling it upon the divisions of the small vessels, with accelerated velocity; and in this case their vibrations should be irritated, and not obtunded. Besides, it is affirmed, and some think not without reason, that all tophaceous ingesta collect and incrust the folds of the stomach, like argyl in the wine vessel, having mixed with the most prevalent humours in that organ, and thus ingender many chronic diseases: and it is no secret that alum or chalk are singularly prejudicial in the stone or gravel.

This

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This sort of bread, or rather this morbiferous compound, dries up the lubricating juices, and impacts the glands which should secrete the lixivial oil or pituite destined to soften and mollify the faeces, to cool and supple the intestines: the alum compacts and compresses their fibres, erodes and devellicates the fine membranes of the vessels dispersed thro' its fabric: the chalk absorbs and dries up the juices, and calx adds fire and inflammation. We may suppose then that so many concurrent pernicious qualities in confederacy, will not be unable to generate violent obstructions in the intestines and viscera, which are pregnant, as is well known to physicians, of various diseases; for costiveness is the fore-runner of an infinite number of maladies. Whenever the humours are obstructed in their ideosyncratic circulation, they will soon find out other passages, and force their way thro' some unnatural channels: a fountain cannot more easily be stopped in the little than in the great world; it may be diverted thro' some other course, but if its original source be closed, it will instantly break forth some where else: hence it is that so many evils are consequents of costiveness: few of the capital diseases but are preceded by that habit: the humours impeded in their proper receivers urge their passage thro' erroneous channels, invading the tenderest parts, which most easily give way to their impetuosity. Hence come catarrhs, defluxions, convulsions, fevers, apoplexies, rheumatisms, consumptions, ascites, anasarcas, tymphanies, dropsies, asthmas, and diabetes, with many other terrible diseases. How frequent this ill-boding complaint is in this city, I leave every one to prove, who has eat of the city bread. The occasion of this fore-runner of many mortal diseases,

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diseases, we must refer to the bakers. Physicians may attempt to redress the effects, but civil magistrates ought to prohibit the cause.

SECTION II.

*Æquè pauperibus prodest, locupletibus æquè,
Neglectum, pueris senibusque nocebit.*

Horat. Epist.

IT is said by Hippocrates, repeated by Galen, approved by reason, confirmed by experience, and undenied by the rational part of mankind; that health depends chiefly upon the choice of aliment: the wholesome nourishes; the bad disorders and destroys. No food can promote the good purposes of nutrition, except such as is well digested; that which is difficult of digestion impregnates with the seeds of many disorders, but imparts no laudable nourishment. Hence it is the business of cookery to diminish the cohesion of the component parts of alimentary substances, and partially to digest them, before they are received into the stomach. To render them therefore the more compact and hard by preparative dressing, is an error of the most malignant consequence with respect to health.

Bread in Latin is called *panis*, from whence the Italian *pané*, the Spanish *pan*, the French *pein*, all successively derived from the Greek word *παιν*; very

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very likely because bread is the most universal food; for, as Lemery says, it agrees with *all* men at *all* ages and in *all* places. Corn is an universal produce, and wherever that is, bread is the staple food. It is natural therefore to inquire, which is bad? and which is wholesome?

Bread contains much salt, oil, earth, water, and phlegm, so admirably combined, that each part of the analysis serves as an attemperament and vehicle to the other. In proportion as any of these prevail, it is pronounced unpalatable and unwholesome; for oils turn rancid, and acid salts produce acidities, of which alum is a notorious proof. Substances are apt to turn upon the stomach, if they are difficultly digested. That bread which is the lightest, and most easily soluble in liquid, is the wholesomest; digested with greatest facility, and soonest converted to laudable nutrition. But reason persuades, and experiments convince us, that lime and chalk are of qualities quite opposite to dissolution; I mean extinct lime (that commonly used in bread,) and alum is properly applied to the fixing of colours and tanning of leather, which it effects by its powerful astringency. Lime is used, very properly used, for constringing and uniting materials designed to resist the inclemency of seasons, the rotations of time, which it performs in such a manner as it seems rather than to cement, to petrify with an hardness equal to stones, the very stones it unites. Is it not therefore very unlikely that the particles of flour, compressed by the one and constringed by the other, with the intervening chalk, must necessarily acquire not only an hardness and indissolubility superior to digestion, but also heaviness and cohesion equal to the petrify-

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ing, constringing, condensing powers of those admixtures? All those properties therefore conjoined, make this sort of bread the most unreasonable to the sense, unfit for the digestion, inimicable to the stomach, and improper to pass thro' the bowels of man.

The principal powers of digestion are friction and fermentation, or an expansion of that air which is inherent in matter. And when we consider the vast force of that elastic fluid in its expanding state, we shall not be surprized to find it disunite and comminute every digestible consistence, which the pressure of the surrounding air obliges to cohere to its particles. Its elastic power effectuates this, and admirably contributes to the solution of the aliments in the stomach; for when that, which is contained in every part of the food, becomes rarified and expanded by the heat it meets with, it soon destroys the cohesion of the component particles, and assists in reducing it to a state of fluidity, at the same time it is confined in the stomach, all the action of that member must be determined to the aliment, which it reduces to such a degree of liquidity, as it may easily mix with the nutrimental fluids, enter the lacteals, and nourish the body; but if it is not digestible, then the stomach acquires heat and erosion from every heterogeneal ingesta; and if digestion be effected by the expansion of the air globules contained in the food, (for this is sure the principal power in that operation, as friction only produces heat, and heat rarifies the expanding air) and if the lixivium is absorbed by lime and chalk, and the food more consolidated and compacted by such a corrosive acid as alum, it not only imprisons the air, so
that

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that it cannot exert its needful force upon the food, but it also incrusts with a rough, piculated, cold, inert, and saline-acid scurf the external surface of the particles of the ingested matter with which it is mingled, so as to enable it to lacerate, wound, and inflame the fine folds of the stomach even at that time when it is heated with its labour, and by exerting its attrition upon the substances; and now whilst it stands in more particular need of the cooling lixivial juices of the stomach, the glands that should secrete them are dried up, and obstructed with adhesive absorbent chalk, or burned with fiery erosive lime, which also stimulates, abrades, and destroys a part of the solids. By confining a small quantity of lime, a short time to any one part, it will then act as a caustic, and raise an eschar: if it has such power upon the external skin, what an erosion and mischief must attend its application to the delicate and tender fabric of the most sensible internal membranes?

Every substance which has properties and effects upon the animal which feeds on it so malignant as to impair the health, destroy the constitution, counteract nutrition, and induce disorders, may surely be justly pronounced *POISON*: it is denominated from its effects. He therefore, who sells such lethiferous properties latent in the food he prepares for mankind, instead of that wholesome nourishing bread they ask, pay for, and hope they may safely eat, is not less guilty of rapine and murder than the daring assassin, who, by a bold stab, hazards his own to take away the innocent life, that he may freely rifle the pockets of the unhappy, and satisfy the cravings of irresistible hunger. Every crime is greater in proportion as the inducement is less. The one perpetrates

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petrates this horrid fact through a determined attention to the iniquitous dictates of atrocious avidity; the other hearkens to the pressing call of hungry nature, aggravated perhaps by the exorbitant frauds of the baker; invaded and impelled by uncontrollable famine, he murders with a sigh. — The other, thro' excessive avarice, actuated by artful inordinate concupiscence of lucre, defrauds unrelenting at the vast expence of health, which he privily destroys; and the life he ruins by a most insidious nefandous poison. Is the slow poison of the negro less deserving that name, than that which dispatches instantaneously? They are both from the same plant, the proportion the only dissimilitude. Does not the highwayman deserve the ignominious death he suffers? Does the baker merit impunity for a crime so enormously devilish, as the clandestine destruction of thousands of lives? Sure a punishment of condign ignominy is his due, who slays in the gross, as well as the villain's who has but stilettoed one.

Quid refert, morbo, an furtis, periamve rapinis.
HOR.

That the phlogistic nature of inflammatory lime, the obstructive drying quality of chalk, and the astringent, corrosive, acid properties of alum united (if in food) are attended with the many terrible effects and pernicious consequences already mentioned, if taken for some time, is a truth as easily intelligible to men of conception and physical science, as it is to a mathematician to comprehend the three angles of a triangle to be = to a semicircle. Our bakers have metamorphosed the staff that should support life, to a serpent that poisons; and they communicate death with our daily bread; re-
versing

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versing the miracles of heaven, which changed the stones into loaves, they make loaves into stones.

If even the robust constitution is so greatly endangered by this insalutary composition, what evil, in the name of God, may we not expect to be by it conveyed to tender infants? They are delicate, feeble, naturally subject to many diseases, and bread is the principal part of their food. Every one knows the difficulty of bringing up children in London, yet I believe no body will say it is a bad air. The disorders to which young children are subject in this city, are chiefly such as proceed from acidities. For any accessent food, or liquid, succeeding, preceding, or accompanying their natural nourishment, their mothers milk, curdles it instantly, prevents its digestion, or nutriment, and throws the babe into retching, and too often convulsive spasms, which, in a short period, terminate in death.

Besides, if an acid acrimony prevails in the blood of the nurse, then the tender infant suffers a twofold infelicity; for it is very material to have especial regard to the diet of the creatures, whose milk even adults use, but more particularly if appointed for the use of young children.

Galen tells a story of a friend's child of his which, having lost its wholesome nurse by a sudden death, was put out to another; who was, in time of scarcity, forced to feed chiefly upon fruits, roots, acorn-bread, and such sorts of crude accessent food, by which the babe became infected with many nauseous exulcerations, and caco-
chemic

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chemic scrofulas. And Moffet says, that a certain hectic dieted upon the milk of a goat with admirable advantage, so long as she fed upon his own pasture; but her food being changed by her removal to another field, where several noxious herbs grew, the consumptive youth presently died of a coliquative diarrhoea. A sickly nurse disorders a healthy child; and a sickly child is recovered by an healthy nurse. Nay, it is even affirmed, and many think not without reason, that not only the qualities of body, but disposition of mind, is imbibed with mother's milk; and that an ill-tempered woman will not only bear, but nurse a fretful and choleric child.—Very careful then ought the fond parent to be to what breast he commits his darling, for by this one act he may intail transferable wretchedness upon it: its disposition, as well as constitution, may be venommed and contaminated with the virulent acrimony of a poisonous pap; or improved in both by the communicative virtues of a salubrious happy-tempered woman.

We shall not at all then be surpris'd to find this bread, which has been observed sometimes to be of such acidity, as even, like runnet, or the ranunculus flammeus minor, to coagulate the milk it was boiled in, attended with extremely bad consequences to the tender stomachs of infants, which it is a common practice, in defect of nurses, to feed with bread boiled in milk, or, in want of cow-milk, with pannados, which, when made of this kind of bread, are hard of digestion, and productive of all the long train of diseases to which the little children of London are notoriously subject; such as cholics, gripes, crudities, acid frigidities, rickets, convulsions. By this prepo-

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preposterous diet of their substituted mothers, the wisest precautions of our general mother nature are evidently frustrated; for, as was said, if this food is unwholsome to the robust adult, surely the tender stomachs of infants must abhor the pernicious compound; nay, even the food, which, commonly taken by those, is assimilated to laudable nourishment, such as beef, potatoes, cheese, and all the farinaceous kind of baked and boiled victuals, would be nothing less than mortal poison to these; who not only fastidiate it with a natural aversion and loathing, but are also, by the wise precautions of our common parent, who does not rely upon the discretion of mankind intirely in their diet, denied the power of mastication and chewing it, from her kindly detention of the instruments, which she is careful to provide time enough for that purpose; so likewise old age is a second infancy, and equally favoured by a merciful resumption of those organs, when they are no longer useful, but might be dangerous when the temptation is prevalent. Though we have in infancy no teeth provided; though in old age they are retaken from us; yet both are blessings no less than their gift in the middle age. Milk is remarked to be extremely prejudicial to the teeth. Can we then enough venerate the wisdom of providence, which produces those organs after the milk-diet begins to be relinquished, as no longer necessary, and indicates thereby the period when the infant may venture to eat stronger foods: so also the teeth are withdrawn and deceded, when that kind of diet becomes proper again. The language of providence is intelligible to the eye of wisdom.

A very

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A very short enquiry then discovers to us the true reason, why parents generally find it so difficult to rear their children in London (and all the great cities of England where their bread must needs be as white as in town) though born in that air; and nature adapts every complexion in a singular manner to the place of its birth. — The African is healthy and robust beneath a vertical sun; and the Laplander's health unimpaired by winters which freeze strong spirits. The opake fogs of Arabia offend not its natives; and the malignant air of Scanderoon to foreigners is only fatal. The climate of Guinea is comfortable to its own children; and even the people of Borneo enjoy a longevity equal to that of other countries. This persuades me that the air of a country naturally befriends its productions, as well animal as vegetable: but the air of London is far from being unwholsome to strangers; and why then is it reputed destructive to its own infants? Their native air is so homogeneal and salutiferous to all people when diseased whilst abroad, even though in a climate celebrated for its salubrity, that the physician, though the last, oft finds the most happy resource in prescribing it; oft it gives honour to himself, and health and joy to the patient. The sole reason of the difficulty of bringing up children in London and its precincts, may then be more justly charged to some malignant quality in the diet than the air of this metropolis; and the city-bread derives such properties from its composition as produce the effects complained of. How can we account for the difficult rearing of children upon better principles? if they are costive, afflicted with acidities, crudities, gripes, cholics, convulsions, or fevers; it must be observed,

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served, that milk, flour, yeast, salt, compounded with acid alum, corrosive chalk, and inflammatory lime, with other impurities, are their chief aliments.

I have known some parents so careful, as not to suffer their children to eat the city-bread: they supplied its exigence with cakes baked on purpose, or biscuit. Remarkable it is, that these children were vigorous, sprightly, and in admirable health; whilst the children of their regardless fellow-citizens are for the most part pale, puny, lingering, and sickly. But to be more certain of the truth of these effects ensuing that cause; two children of apparently equal complexions, size, age, and state of health, were fed, one with bread in its milk and with pannados; the little boy was soon costive, griped, subject to shiverings, tender, fretful, and troubled with cold crudities, 'till the help of medicines restored it to health, and refraining from bread preserved it; he eat no bread for two months, except biscuit or boiled wheat in his milk. The other, who was very well during his abstinence from bread, had not eat it three weeks, but the stout rosy lad was changed to a feeble, meagre, diseased, pale child. This may be depended upon, I am ready to prove it occasionally. It cannot be wondered at, for animals of a more hardy kind have been destroyed by feeding *alone* upon this compound. A chicken soon dies with it; tho' in the country, where brown bread is used, they can have no finer nourishment. Nay, I have known a dog pined away with eating this unwholsome mixture.

The

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The use of this bread ought particularly to be rejected in that noblest of public institutions the foundling hospital, else it only serves to prevent the bloody iniquity of cruel natural parents in destroying the fruits of their reproachable pleasures by sudden murder, by reserving them perhaps to a more tedious and unhappy one at the hand of the baker; else it will be only a scene of calamity, noisomeness, diseases, and infection, tho' intended as an happy receptacle of the destitute and forlorn; not only to nurture the offspring of libidinous illegitimacy, but also to open its bosom to cherish the superfluities in the families of industrious indigence, and thereby to recruit the city with useful inhabitants, our manufactories with diligent artizans, our fleets with brave seamen, and our army with grateful and courageous warriors.

It would be needless to advise the fond parents carefully to inspect the bread that their children are fed with, and to prohibit them the aluminous; 'tis full of impregnating maladies to their tender nature; 'tis therefore POISON. Nor is the pregnant mother less injured by this bad bread; or the growing foetus than the new-born infant.

Pannado is often a principal part of the food of the aged and the sick; their digestion is delicate, and surely they cannot take a more proper sustenance, provided it is made of wholesome bread: but if this dangerous compound is its basis, then, instead of a light food, it is heavy; instead of a cooler, it inflames; it dries, when it should moisten and lubricate; and, in the place of a gentle aperient, it proves an astringent; in short,

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short, instead of nourishing, it destroys: nor is it very strange, for if noxious to the athletic constitution, 'tis to the feeble no less than mortal; it is unwholsome to all, and nourishes none. And as good bread converts to wholesome nutrition, and happily assimilates all sorts of food to the same laudable purpose; so this bad bread debases to its worst nature every kind of aliment it is mixed with, and stimulates their bad effects upon the stomach. Oil rises in disagreeable rancidities, and the saline parts become vituperated to a noxious crudity; it imparts acidity to the bile, which coagulates the chyle; and as those two fountains of the blood are vitiated, that fluid contracts impurity, and the body is filled with diseases, especially our endemic ones of a scorbutic kind.

As therefore it is observed, that fasting kills by inducing an evil habit of the blood, rather than by diminishing it*; so the baker may be said not only to poison, but to famish his fellow-citizens. In short, so mischievous and unwholsome this bread is, that one would almost think it introduced by the malice of perfidious enemies for the destruction of a people, rather than that even the most execrable avarice of impious men could invent and distribute this horrible compound: but poisoning of fountains and provisions, is no less against the laws of civilized nations, than the using of venommed weapons: let it therefore be prohibited amongst ourselves by the authority of civil magistracy.

* *Vid.* Haller's *Physiology.*

S E C T I O N III.

*Before I go I'll rip the malady,
And let the venom flow before your eyes.*

LEE.

IT is observed by travellers, that wherever there is plenty of good bread and water, the people are jolly, robust, and healthy; on the contrary, where these are bad, the inhabitants of the place are generally of meagre, unhealthy aspect; thus they rather seem to attribute their appearance to the food they eat, than to the air they live in. Many cities have been depopulated, or infected with diseases, from the necessities of siege or famine, which induced them to use these in an unwholesome state. Recent are the accounts of camps, fortresses, and fleets, suffering more for want of good bread and water, than even by the sword of the enemy.

A few ages ago the inhabitants of this metropolis were a fresh, healthy, robust, well-sized race of people; now they do not resemble the hostile nation they affect to imitate more in flimzy fashions and mockery of manners, than in a pale, meagre complexion, effeminate debility, delicate figure, and almost total degeneracy from their pristinity; then able to struggle with toils and encounter difficulties, now they are vituperated to domesticity; the athletic constitution of their ancestors is dwindled down and lost in the puny tenacity of the modern habit,
which

which is daily obnoxious to a long retinue of diseases, almost unknown to their manly progenitors; dram-drinking, laziness and libidinisism, in confederacy with this pernicious use of unwholesome bread, will, if the time to prevent it be neglected, with its degenerated people speedily precipitate this city down the descent of perdition, and level her in her ruins, as she once rivalled in renown, Persepolis, Memphis, Thebes, Athens, or Rome.

Nor upon examination will the city appear to have been a greater loser in the nature, than in the number of its inhabitants. A few years ago the people of this metropolis were computed at nearly 2000000 of souls, by the judicious calculation of Dr. Akenridge; we learn that their amount at present does not equal half that sum. Several reasons he advances as causes of so remarkable a decay; one occasion of it he draws from the prevalency of celibacy; but it is hard to prove if our age differs from those past in this respect: the increase of business in the northern parts of the kingdom, which keeps the people more at home there, is another argument he induces, but we suspect no very valid one; for was that the case, the parts which sent this supply must have undergone a very strange vicissitude; but for many years past they have not been unusually populous, nor in that time have their manufactories been increased, nor has London decreased in its manufactories; on the contrary, many new ones have been established there within these few years, tho' its people have so manifestly decreased. Dram-drinking is justly urged as a cause of this effect; for the doctor observes, it not only conveys mischief to the pa-
D rents,

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rents, but destruction to their children. But few are those who drink drams, in comparison to those who eat the city bread. Numbers escape the unnecessary liquid, but not many the substantial poison: nor is the latter less detrimental to the lives of infants than the former. On the happy production and health of their children, countries and towns depend for inhabitants; from these confluent fountains they derive their most valuable riches: whatever prevents or impedes the due course of their natural current, induces calamity, desolation, and wretchedness upon that nation or city; like Egypt upon the Nile, whose annual overflowings diffuse the exhilarations of plenty, satisfaction, joy, and festivity among the people.

Nor is the city of London, the ornament of the British nation, alone injured by the exquisite villainy of fraudulent bakers: our navy, the strength and defence of the kingdom, is I am persuaded very greatly harmed by it. Seldom do any vessels victual for long voyages in the ports where this pernicious bread is used, but they are obliged to take flour mixed up with chalk, whiting, and lime, and their bread derives a mischievous whiteness from the same alcalescent ingredients. The diseases chiefly incident to seafaring people most commonly proceed from putrid alcalescence, and are generally of the scorbutic kind; which cannot be wondered at if we remark, that no matters are more productive of such diseases than alcalis, of whose qualities the effervescent properties of those substances, make us believe them at least to participate. And it is very observable, that the ships victualled at Liverpool, Whitehaven, and other ports, and also

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also the seamen of other countries, where fraud and diabolicism never employ these noxious admixtures in their flour and bread, even tho' they go upon the longest voyages, are very seldom subject to scorbutic cachochemies; to which our mariners are rendered obnoxious, rather by bad food than any other contingency; and their common unleavened bread alone inclines to alcalescency, even when unmixed with such mischievous matters; and the air in hot climates, with their much exercise, promotes that tendency to putrefaction in the animal fluid when vitiated by such foods.

One might indeed have supposed, that if the avarice of bakers stimulated them to add mixtures which would increase the weight of their bread and the quantity of their flour, to defraud mankind of their honest property; conscience, religion, patriotism, philanthropy, or common sense, would at least so far have influenced them, as to have withheld their hands from such enormous attempts upon the lives of their fellow-citizens, compatriots, and defenders, by the admixture of deleterious qualities in their daily bread. They might continue to mix bean-meal with impunity; 'tis harmless; but to conceal that, they must needs restore a whiteness and tenacity to the flour, by staphaceous or aluminous ingredients, on purpose to give it a fraudulent weight. To remove a disease they poison the patient.

SECTION IV.

*Hoc placet,
Nostris erroribus addere crimen.*

IF we ask the bakers for what purpose they mix alum, lime, whiting, &c. their interest will not let you suppose, that it is to defraud the buyer in the weight of his bread; they therefore say, and perhaps sometimes with truth, that those admixtures make it knead, ferment, and appear fine, as it would not else do, if the flour or corn which it is made of happens to be damaged, or, as it is commonly called, unsound; a mischief which it contracts from having been beaten to the earth, whilst on the field, or wet in the shock, so that it is sprouted; or if it has been badly stored, the corn then becomes cold, inert, and dead in the hand, it appears to the eye bereaved of its glossyness, gold colour, and transparency; having deposited its natural fragor, 'tis musty; the flour is obnoxious to the same detriment; it then becomes difficult to knead, its parts will not cohere in a tough viscid paste; it is yet adhesive and clammy to the hand, and of an unpleasant colour; the bread comes to table wet, tho' burn'd; heavy, solid, black, yet mouldering to pieces; the upper crust oft parted or cloven from the crum, which seems like a settled fæces. This bread sinks in water, and even when boiled in milk returns to lumps of dough, rather than dissolves or absorbs the liquid; it is vapid, obtuse, and disrelishing in the mouth; upon the stomach it proves crude and indigestible; and finally, as the sapo-

saponaceous balsamic parts are destroyed, their energy and cohesion annihilated, their electric, or, more vulgarly, fermenting principle gone, it not only becomes difficult to make into bread, but when made is extremely pernicious to health, and void of nourishment; for all food is observed to be more or less nourishing, according to its abundance or scarcity of oily, glutinous parts, and in proportion as the contexture of its particles resembles those of our bodies. From this particular it is, that good bread derives its wholesome and nutritive virtues, and from a defect of these powers in the decayed or unsound flour, that the bread made of it acquires its many detrimental qualities.

In case of unsoundness in the flour then, the baker affirms that a little alum is a rare thing. Chalk does not more effectually restore its whiteness, or lime its requisite dryness, than alum its kneadable toughness so completely, that he defies the art of man from discovering the bread to have been made of unsound flour; he quite covers the deception; by means of these ingredients he can impose upon the buyers, for wholesome and good, a pernicious kind of bread; for tho' a noxious substance may conceal the evil qualities of another by its admixture, it will not be supposed that both acquire a wholesome nature by their union, and depositing the malignant qualities, they separately had, acquire virtues which neither of them was supposed to possess.

But if these mixtures are only employed to restore unsound flour, why are they now indiscriminately used? The damaged and the perfect are both mixed with these ingredients, or the danger

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of eating the former, which would be only accidental, would be more excusable, as the latter would always be good. But as lime, chalk, whiting, ground bones, alum, &c. by their own additional bulk, considerably increase the weight of the bread, so by their dryness and absorbency, they occasion the flour, in the baker's phrase, to knead well, or to require a much greater portion of water, and to retain it too, to make the bread tolerably moist, than unadulterated flour alone would do. There is a remarkable difference between the specific gravities of honest good bread, and such a compound, in a proportion much above the weight of the abusive admixtures alone, as experiment will soon assure the curious; so that the buyer is not only injured in his health, but suffers from a pecuniary abuse also, which is one strong reason with bakers for the general use of those mischievous mixtures to both the sound and damaged flour. Thus villainy and lucre continue a mischief which was first discovered by accident, inconsideration, or ignorance; and, had not avarice availed itself of this method of perniciating the good flour by unwholesome mixtures, some method might doubtless have been discovered to restore the unsound, or, at least, to prevent its ill effects; but the most lucrative, though the most pernicious, is practised, as if private gain superseded public utility. Poison is added to pestilence; the fountain is venom'd to purify the water, else if wholesomeness could not be restored to the damaged flour, perhaps, at least, it might, by salutary ingredients, be made not pernicious, when the exigence of necessity makes it requisite to be used for human food, as indeed should never happen among a well-governed people; unless it could, by some happy

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happy discovery, be restored or redressed for the using of damaged bread-flour; the mixing it with chalk, lime, and alum, and the vending of poison, ought equally to be prohibited, by the most severe decrees. It is the remark of a celebrated politician; *Universis debet principis ut salutem civitatis procuret; si sit absolutus ex proprio iudicio, si legibus teneatur, ex legibus.*

PUFFEN. de Ju. Nat. & Gen.

The legislacy is the physician of the community; and, when a disease is grown dangerous, it must be encountered with medicines of a drastic efficacy. Some vigorous exemplary penalty must be inflicted when abuses and enormities are become so virulent, as to endanger the constitution. Does not this we speak of impeach the power of every great man, scandalize the patience of every upright man, light up the indignation of every sensible man, and alarm the fears of every relative one? And surely, on the other hand, equal encouragements ought to stimulate the invention and industry; and equal gratuities to recompence the discoveries of the ingenious, in such things as are not perhaps less useful to the preservation of health, than many of those profound secrets of empiricism, which have been so amply rewarded for their boasted power to restore it. I think it is Rhazes, or Avenzoar the Arab, who tells us of a certain city which was supplied with water from a neighbouring rivulet. The people were remarkably short-lived, and the air of the place generally reputed most balefully unwholesome. A poor peasant digging nigh the source of the stream, happened to discover a bed of a certain poisonous mineral production, through which the water was

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filtrated,

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filtrated, and from which it drew very pernicious qualities. The physicians of the place examined it, found it to be as represented, and experiments convinced them of the lethiferous properties of the metallic strata.—The course of the water was changed; the city became wholesome; its endemic maladies ceased; and the peasant received an ample gratuity; and was moreover dignified with a title of the same import as *Conservator civitatis*.

And Pisanelus tells us, that the natives of Sicily, who live in a hot climate, were formerly annually visited by a very malignant kind of fever which was extremely fatal to those islanders, till such time as a certain person introduced the use of ice amongst them, and brought them to relinquish an hurtful sort of strong liquors. After which, according to an exact account that was taken, a thousand people less than before, died every year in the town of Messina only; and this occasioned the common people there, ever after, to be as careful to lay in stores of ice against summer, as corn for the winter, that they might escape the diseases to which they were formerly liable.

Such researches into the nature and properties of things, would much more usefully, nor perhaps less agreeably, employ the disquisitions of minute philosophy, than many of those which preposterous sophistry, or capricious curiosity, often engage her in; nay one might almost venture to say, more commendably too. And some men may be so illiterately unfashionable as to persuade themselves, that the person whose inquiries have found out a method of producing one

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one additional grain of corn from the ear, more than it commonly yields, utilitates mankind more than he who can, from a life spent upon the subject, tell us the exact dimension, circuit, and weight of an ignis fatuus; or who can demonstrate beyond denial that a spider works by mathematic ideas. He surely more deserves an honourable epithet, who can, by his inquiries and study, contribute to feed the hungry, suppress disease, increase the people, or add to their comfort and health, than the shrewd wit who has enjoyed himself a whole age, in profoundly contemplating, whether a flea or a louse destroys the greater portion of air. Let not physical inquiries lose sight of the good of mankind, lest they expose their professors to its derision. It is as easy to examine the nature of plants and of aliments, and might prove as entertaining, as to pore upon sea-shells and butterflies. One superior pleasure I am sure must prefer it in the opinion of every good man, arising from a *mens conscia recti*, when he perceives his studies employed to befriend his species, by a diligent investigation of useful and ingenious enquiries. The other with a blush must review a life busied in frivolous and trivial pursuits, tho' vainly dignified with so pompous a title as the love of virtú.

That Cecrops who taught the people of Greece to relinquish their unwholesome food, mast and acorns, improved them so much in other arts, that they no more resembled the beasts in their manners than in their food. Tripolemus, who invented the plough, benefited mankind by that discovery, as much as the author of the Iliad by his study. The great emperor

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emperor Fohi taught the Chinese music, and instructed them in the arts of taylorship; and Chintong, who taught them medicine, improved their agriculture. So, that Hoangti, from whom they learned the humble feminine art of spinning and the use of wheel-carriages, informed them in the divine science of astronomy. Their names are venerated, and immortal glory attends these heroes of antiquity. And whoever can discover a method to add fertility to the furrow, fruitfulness to the tree, who can increase the milk of the herd, or the wool of the flocks, or can find out a means to improve and meliorate our common food, or ascertain the particular properties of a plant, merits the grateful praise of a people; he feeds the hungry, clothes the naked, heals the diseased, and diffuses strength, gladness, and opulence over a country.

To attain such noble purposes, the good of the whole must supersede every selfish view: private interest is a sacrifice which a patriot bosom loves to make to the public emolument: benevolence has no partial beams: 'tis the part of a miser to lock up a treasure which, like an angel, might go forth to bless mankind: and tho' a secret in a private possession, urged to its utmost advantage, might prove a fountain of inexhaustible lucre, a good heart disdains to withhold it from its utmost scope of utility.

If then at any time the bread-corn proves to be unsound or damaged, if it must necessarily be used for human food, rather than to mix it with any noxious materials, let the baker, who has some share of conscience, add an admixture of fine barley meal to the unsound flour, in proportion

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portion as it is more or less damaged; if a little finely-ground rice be added, it will not be the worse for it. This method of restoring the flour, not only makes the bread fine, beautiful, and delicious, but wholesome and nutritious; it restores its cohesion of parts, supplies it with a fresh glutinity, and revives its extinguished *igneæ vis intus*, or fermenting quality; so that it kneads without alum, and rises well in the oven. This remedy is of inconsiderable charge, or rather none at all; it is also procured with as much ease as the other bread-corn; and requires no particular art to apply it successfully.

S E C T I O N . V .

HAVING said enough of the bad bread of London; analyzed its component parts; exposed its pernicious properties; mentioned the many mischievous effects succeeding its use; the bad consequences likely to ensue its continuance, upon all degrees of people in general, from the robust to the feeble, from infancy to old age: having exhorted its redress, and shewed the method: it may not be amiss here to subjoin a few of the most accurate observations, which we have, from time to time, had opportunities of making upon the subject, as well here as in other parts of the world.

Good bread is not only the most universal, but also the most salutary of all human aliments; in-somuch that it has been thought, that a crust of bread alone, eat the first thing in the morning before

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before exercise, is a specific against many diseases *; and a poultice of bread has been oft externally applied to very sad maladies with marvellous success. Nay, when we mention its various virtues, so numerous they are, we shall almost seem to pronounce contrarieties: it admirably comforts the stomach; befriends digestion; fortifies the solids; purifies the fluids; benevolates the nerves; restores strength; and revigorates the whole human frame. It is found, by experience, to absorb and carry away redundant humidity, and to moisten, by its balsamic oiliness, prevailing ficcity, by the same power as it cools in heats; and diffuses a genial warmth through frigid and crude constitutions. It proves a styptic without binding, and an aperient that never fluxes. It recruits the health with the noblest nutrition; and for the diseased there is not a more excellent food. Good bread is the only meat of all others which never produces any bad effect: it restores a salubrious ideofincency to the perverted animal functions; felicitates nature, and comforts the nervous system; relumines and vivifies the electrical principal which pervades those tubes, and replenishes them as it decays; it corroborates and elevates to a noble vigor the corporeal, and animates the mental faculties with an exhilarating dawn of alacrity. It is remarkable that seamen, who have been reduced to the most deplorable extremity by a long unhealthy voyage, and the use of unwholsome bread, soon recover their former health, vigor, and spirits, if they happen for a few days only to meet with a plentiful supply of that most recruiting aliment in its perfection: an argument however

* A treatise on a crust of bread. By Dr. Robinson.

despised

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despised by some people, will have its weight with the experienced and judicious part of mankind. The benevolence of providence has improved, with many and admirable virtues, the utility of this most common of all human foods, in like manner as it has endued with many happy qualities, simple water, that general beverage of all his creatures: so that these great blessings are not only the most universally bestowed, but are also the most wanted, and the most salubrious of all productions. It is obvious to remark, how emphatic the ancients are through all their writings, in praise of the virtues of bread. In the sacred scriptures, it is commonly put in the place of all other foods, as if it comprized the good qualities of them all; and may perhaps have been one first-rate physical efficient (whatever the religious design and ultimate purpose of heaven might be) of the longevity of our antediluvian progenitors, whose principal food was bread, leguminous or farinaceous, with fruits and herbs. Certain it is, that the few among our compatriots, who have passed over the threshold of a second century, are noted to have made this substance their principal aliment, as is instanced in the lives of Parr, and one of these venerable seniors we have seen, who is arrived at the age of one hundred and fourteen; the chief of his food is eggs and bread of oatmeal. Old Jenkins lived, if we mistake not, to one hundred sixty-two, principally upon the same kind of victuals. The two last-mentioned were born in the palatine of Lancashire, which is not very celebrated for the most propitious air; their bread is mostly made of oatmeal; and perhaps as many men have passed the age of an hundred in that district, as in one eighth part of the island besides. And in Cheshire,

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Cheshire, that succumbs to no other county in England for a stout race of hale, robust, jolly people, bread made of barley with a small portion of wheat (which they call munk-corn) is their chief nourishment.—But this observation is not only verified by a few domestic singular instances of particular provinces in our own isle; the world through all its regions and countries supplies materials to strengthen the foundation of this argument. The Banians of India, the Persian priests, the Mandarins of China, the Circassians, and the Kalmuck Tartars, are all as remarkable for making bread almost solely their food, as famed for health and longevity. In short, we cannot doubt of the many admirable virtues of good bread, since it is known, that no other food produces such laudable chyle, or bile so excellent in its lixivial dissolvent effects; and the nourishment it recruits nature with is of such a noble sort as to surpass every thing; by this means it dissolves all corrosive oppilations and concreted qualities; digests other substances as an happy temperament; purges down and shames the mischievous acrimonies of all hurtful matters, and restores the wastes of attrition with the most permanent and salubrious renovation.

But when I speak of good bread, we would not be misunderstood to mean the unleavened; it is accounted pernicious. Hippocrates excommunicates it as the most unwholsome of all human foods, and Galen subscribes to his anathema.

The Flamines Diales were forbidden to eat a morsel of unleavened bread, or the leaven or meal alone;

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alone; the reason † Plutarch tells us; “ They might not eat meal, because it is an imperfect, raw nourishment; neither being wheat, which it was; nor bread, which it should be; for meal has lost, which it had, the form of grain; and wants, what it should have, the form of bread. They might not eat leaven, because it is the mother and daughter of corruption, souring all if too much, and distasting all if it be too little. But when a just proportion is kept between them both, leaven corrects the meal’s imperfection, and meal resists the leaven’s corruption, making a well-relished mass called bread, which is justly termed the staff of life.” Thus sometimes physical precautions are veiled under religious institutions. Unleavened bread is an alcali, which might be dangerous in warm climates, and where scurvies are endemic; the leavened bread is ascessent; they may be reciprocally good, properly eat in particular habits and diseases. Those troubled with scurvies ought carefully to avoid eating of the former, which is very hurtful in all acute diseases, or those of an epidemic sort, which carry off at least two thirds of mankind; and those afflicted with cholics, rheumatisms, and many other calamities proceeding from acrimonious acidities, ought as cautiously to abstain from the latter.

Seamen who go upon long voyages suffer more by eating unleavened bread only, than the change of climates. This makes them, both in cold and hot regions, so very obnoxious to scurvies,

† Vide Moffet.

which

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which possibly they would escape had they a good supply of fresh leaven'd bread. *Vide pag. 34.*

Bread that is moderately leavened, is then the most universally wholesome of all others; this bread it is which, as Lemery says, is a nourishing, good food; it produces no ill effects if properly made, baked, and eat in a due proportion; it agrees at all times with all ages and all constitutions.

The best bread is that made of the flour of good, sound wheat, all ground down together; the bran is necessary to make it wholesome, to which a proportion of barley meal, as one to sixteen, may very usefully be added; let this be well kneaden with the lightest, pure rain water, or if from fountains, it should be purified;* let it be sufficiently fermented with fine, sweet yeast or leaven: and lastly, it should be well baked with a moderate heat, in an oven heated with wood fire preferably to coals; it ought to be neither too hard nor too soft; it should be, when eaten, neither very stale, nor warm from the oven. This bread will digest easily, and admirably nourish.

The pure flour, separated from the bran, is glutinous, heavy, viscid, astringent, and not so easily digestible as when mixed with the bran; the bran makes the bread light and very digestible, as the lixivial fluids more easily penetrate it, and render it less repugnant to the action of the stomach, and its own elastic air: bran contains a portion of farinaceous matter, less glutinous, but more oily than the flour, which is composed of parts that require such mixtures to give it a

* Distillation, in this case, would be extremely useful.

sapo-

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saponaceous, balsamic, nutrimental quality; so the bran and leaven together make the bread more light than it would be without those mixtures in the proportion of 18 to 23; and as it is more porous, and its fibres the more extended and finer, it becomes more subject to the action of the stomach; for by its disuniting of the parts it opens passages to its inmost recesses, capable of receiving the menstruating fluids of the stomach, which thereby exert their dissolvent energy on an enlarg'd surface, and facilitate the digestion, as an addition of sand to a stiff soil makes it more easily penetrable to the radical fibres of the tender plants it produces; nor is this apparent from reason only, but from nature too; for tho' the chaff be easily separated from the grain, how many processes of painful industry does luxury employ to strip the grain of its necessary covering the bran? So closely are they married of heaven, man should not put them asunder; as therefore bran and flour properly attemper each other, the saponaceous and the astringent qualities (each able to exert its use occasionally, unallayed by the other) compose an homogeneal nutriment; and as nature has made so compact an union between them, so the use of this bread will soon convince the world of its superior goodness and wholesomeness.

Barley has for many ages been reputed extremely wholesome; it is particularly so in the removal of lingering cachexies and hectic fevers. we have known a phthisis cur'd by a diet of barley bread and butter-milk, without the help of medicines; it is a balsamic febrifuge and vulnerary: indeed the universal use of this grain

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physically

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physically, as in ptisans and other pectoral teas, manifests the esteem it holds in the opinion of all eminent physicians of all ages and countries, from Hippocrates the glory of Chios, to Herberden of England.

As barley is therefore so wholesome a food, and not indelicious, a small admixture will be found, as experience has assured me, not only to make the bread cheaper, as pleasant, nor less beautiful; but it will certainly make it more wholesome and nourishing, especially when the wheat flour is the least damaged.

Nor will it be found improper to fire the oven with wood, preferably to pit-coal, which contains a large portion of bituminous sulphur, an enemy to fermentation: it hinders the bread from rising properly; so that the bread baked with that sort of fuel is frequently clammy and heavy: but the alkaline particles of wood promote the fermenting power in a small degree, and a little attemper and volatilize the natural acidity of all farinaceous, baked victuals. Sulphur applied to wine vessels prevents the effervescence of the must.

It is remarked, that the crust of well-baked bread is the most wholesome, and the easiest of digestion, especially to humid stomachs and cold; for it is the lightest part of the loaf, and the fæces or dregs of it always fly from the purific particles of fire, and fix upon that portion of the mass which is least baked; and also any noxious matters in the water, or other ingredients of its composition, by being exposed on the surface of the

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the loaf, are pierced and dissolved by the volatile alkali of the wood fire, so as to change or entirely deposite their malignancy.

Fine light water, of beautiful purity and delightful limpidity, without taste, smell, or colour, ought to be as carefully procured as good corn, in the making of bread; for besides that its impurity may contain inimicable particles, it makes the food terrene, gross, and unwholesome.

Wherever the air is pure and serene, it is observable the fountain water is light, transparent, wholesome, and wherever such water abounds the bread is excellent; those places are reputed salutiferous, their inhabitants are generally healthy and long-lived, and thither the physician sends the patients who have in vain run the disagreeable gauntlet of medicine, and here they oft find an easy recovery. This needs not be insisted upon to any person who knows *Montpellier, Lyons, or Aix en Provence*; but it is more particularly evident at *Frascati* and *Naples*: each of these places is not more remarkable for a ponderous, serene air, or water that is vivid, light, crystalline, than for their admirable bread; it is surprisngly fine, easy to dissolve, excellently digestible, very delicious, wholesome, and nutritious: but this is particularly observable at *Pisa* in Italy; the air is serene, soft, ponderous, salutiferous; their water, which is conveyed by an aqueduct of 5000 arches for seven miles from a branch of the Apennines, is exquisite; their bread perfect: it is firm, light, brown, delicious, wholesome, and very nourishing; and more surprisng things are not said of the salutiferous, than of the prolific virtues of that city: it is

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credibly affirmed, that one of their buxom matrons produced five children at a birth; and in the time of the late grand duke, an annuity was settled upon another of these fertile dames, who was delivered at one time of seven live children: nor is this place less friendly to the producing of children, than to their health; they are stout, rosy, brisk, and hearty: and *Naples* is not more famed for its salubrity than its popularity.

On the contrary, where the air and water are imperfect, the bread is unwholesome, the people few, and diseases endemic among them.

But the great and omnipotent argument against brown bread, is drawn from its coarse, plebeian colour; the pleasure of the eye supercedes the delight of the palate, the satisfaction of the stomach, and the health of the whole body; to gratify the eye of luxury in the buyer, and to indulge the concupiscence of lucre in the seller, availed of its additional villainous weight, it is, that the many detrimental ingredients we have exposed, are used in the city bread; that it may be white, reason, health and equity, must each undergo a severe violation; to appear finer than it really is, it becomes pernicious; nay, thro' a most preposterous libidinity, they change to a destructive food a wholesome nutriment; the blessing of heaven becomes the bane of man, that we may indulge in the whimsical weakness of a vulgar error. Health is a constituent of beauty in its definition, so wholesomeness and goodness are constituents to the perfection of bread, or any other food; therefore the fine, light brown bread, as it is the most wholesome and delicious, must also be the most beautiful
and

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and most eligible of all bread to people of reason and experience; and indeed what colour is so charming as the glossy transparency of the golden grain, of which no bread partakes so much as that we would fain recommend: in short, if any be more beautiful or pleasing, none is so wholesome, so nourishing, or delicious, as it is; I appeal to all who have eat it in its perfection, all those whom luxury or fortune have not deprived of that most delicious and exquisite food.

SECTION VI.

————— *Quid*
Conveniat nobis, rebusque sit utile nostris. PERSIUS.

AS we have therefore in the precedent section spoken of the many virtues of good brown bread, and also the manner of making it; specified the most wholesome ingredients; given some proper precautions with regard to its make, and obviated the objections to its use; we shall just beg to recommend its consideration to the legislature, who, it may be presumed, will not reject as beneath the level of their concern, a thing of such important moment. Though the indigent are oppressed by its exorbitant price, in such times of artificial scarcity as they have just experienced, and yet continue to feel the effects of; and tho' they suffer very sensibly from the flagrant abuses they receive in its unjust and scanty weight; yet these calamities may be much more easily borne by our magistrates, than others which are not less certain, tho' much more alarming.

The poor are injured in the small size of their fraudulent loaves; but all ranks and ages of people, from the coronet to the car, from infan-

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cy to old age, from the star of dignified merit to the ticketed badge of laborious drudgery, are many ways injured by the abuses of bakers; the man exalted with a magnificence of soul, energy of understanding, and fortified patriotic probity, even a Pitt or a Legge, the pillars may be taken away from the support of their country, in common with the most vulgar plebeian. These dearest possessions of a nation may be sacrificed in their health or lives (as they have voluntarily voted their private retirement, and the endearments of domestic tranquility to the good of it) to the insatiable chasm of the impious avidity of associated villainy; so that the nation is invaded at once in her glory and defence.

The dignity of the Roman empire, when at the zenith of its meridian effulgence, and when Rome was the metropolis of the globe, did not disdain to attend to the wholesomeness and just weight of the bread of her people; as is remarkably manifest from the consular stamp, still very conspicuous upon a loaf, which, tho' made in the reign of the emperor Trajan, is still preserved entire as it was found in the subterraneous ruins of the city Herculaneum, and now shewed as a curiosity among the other antiquities found in that repository. It is indeed a very singular rarity: 'tis about the size of an honest half quartern loaf in London, which would not be less curious, or an wholesome loaf more uncommon, than this extraordinary antique, which has been 1650 odd years in the oven.

The city of Genoa is fed with bread from one common oven: the state condescends to be the public baker; perhaps with other views than purely to superintend the salubrity or cheapness of

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of it; however it avails both those good purposes, for the bread is honestly made of good flour, and sold at a reasonable price. Its scarce and impious weight defrauds not the buyer; its imputed dearth famishes not the hungry; nor has it malignant properties inductive of many diseases on all ranks of people. The peasant who tills the field, can afford to eat the fruit he has cultivated with the sweat of his brow: the wholesome food inspires him with fresh vigor; his health is excellent. You see the city crowded with a jolly race of hearty people; health, strength, and spirit, the very nerves and sinews, and life and soul of the public body, which excite alacrity, emulation, and exertion in each individual, are manifest in every part; and have changed a poor obscure village of despicable fishermen, to a respectable republic, celebrated for opulence, and renowned for its majesty of senators.

At Naples the price of bread is annually established by one called, *L'Eletto del popolo*, or chosen by the people. I think the same approvable custom is used at Orleans in France.

Would it misbecome the legislator then by severer laws to reduce to decorum the irregularities and enormities of an iniquitous combination; especially when they are become so alarming as to endanger the lives, and impair the property of fellow-citizens? If laws be enacted let them be executed, else like the unwholesome bread we disclaim they are useless in their intent, or prejudicial in their end; nor either preserve, nourish, or strengthen the public body. There is a decree amongst the Persians, condemning every baker to be baked in his own oven, who shall by

E 4 lucrative

lucrative artifice abuse the people, either through the composition or short weight of the bread he sells them. Few will think cruel or disapprovable the rigorous punishment which that wise empire has allotted to a crime of such enormous atrocity, who consider its ultimate nature attentively; nor will any one hesitate to accuse the delinquent of homicide, rapine, and robbery. What but the most extreme concupiscence of criminal lucre can engage men in so noxious a dereliction of all humanity, philanthropy, or patriotism? What can protect a legislator from the reproach of supineness, or a most pusillanimated torpor for the commonweal; if, whilst they should sustain and protect the people, they see them with unconcern velocitated down the precipice of ruin?

We shall not pretend to dictate laws to the legislator, that may effectually redress all abuses and impurities in the important article of bread, Many good statutes have already been enacted to that purpose; I wish they were better observed and executed. Besides it is not a matter of doubt, if our lawgivers, or, at least, law-proposers, are not nearly as numerous as the observers of laws. Nay, we are not certain, if their number be inferior to our payers of the national debt, a race of men often as unfortunate at satisfying their own creditors, as they are expert at discharging the debt of ministerial contraction; insomuch that one would almost be no less glad to have that decree of the Persians relating to impious bakers, promulgated in our island, than the statute of the old Locrians, which condemned every proposer of a new law to the penalty of it, provided it met with rejection.

S E C-

S E C T I O N VII.

Quid emptæ? parvo. Quanti ergo? octo assibus.
Eheu! HOR.

NOR is it in the quality alone of their bread and flour, that the bakers abuse the people; as it has been observed before, that the addition of noxious ingredients considerably augments their gain, by increasing the weight of their loaves, and giving them a whiteness that may conceal the impure mixtures they contain; yet, contrary to civil decrees, as rare it is to find them honest weight as wholesome consistence; so that upon the whole, if we deduce an exact estimate of the first cost of the loaf, from the sum of every needful and fraudulent charge, and add one seventh of gain by scarce weight, to the baker's profit, we shall find upon a well-calculated average, that his lucre is not even satisfied with the clandestine appropriation of *one half* of the equitable property, for which he receives an equivalent consideration, perhaps, from abused poverty and indigence, which his frauds irritate with more poignant calamity; for, like the nastiest kind of vermin, they prey most upon misery, and grow fat from feeding upon the hungry and wretched more than upon the opulent, and, like the same vile breed of creatures, they devour the very body that feeds them.

We cannot help commiserating the laborious indigent; he truly is afflicted in a manifold and very

very sensible manner, by the abuses of fraudulent bakers; he is oppressed by the exorbitant price their crafts occasion to be affixed upon bread of an unjust and scarce weight: and the quality of it; instead of restoring new energy to the evanescent spirit, strength to his limbs, and a salubrious increment to every demand of nature, which perpetually decays thro' the attrition of labour, and the defluxions of animal œconomy; instead of food answering these good purposes, he pines away abused and contaminated with an abominable, morbiferous compound, which defeats the intent of hunger; it emaciates which should nourish; which should strengthen, debilitates; and, in lieu of befriending health, preserving alacrity and vigor, it engenders a sad multitude of maladies upon the family and its dependence, so that he is no longer able to purchase by his labour the sustenance which his children implore; the very bread he has eaten bereaves him of power to exert his industry, the only means thro' which he can buy this dear food.

We are even just now while writing these sheets, alarmed with an account, that a confederacy of two hundred bakers have assembled to *consult* upon the prices of bread, and it seems, to *resolve* for the future to make no more household bread, or that of a coarser sort, which is somewhat cheaper to poor families: it is supposed the bakers designs in this are not of any great benevolence towards the people; who, it seems, these men look upon as creatures they are entitled to feed as they shall please, and who have not authority or understanding enough to choose food for themselves. Is this a compliment to human sensibility? Can so flagrant an insult at-
tack

tack the privileges, the common sense of a people dignified with the name of INHABITANTS OF THE METROPOLIS OF GREAT BRITAIN? May they sacrifice the health and property of a people to their avidity?

The people are not beasts for sacrifice. LEE.

Must the price of bread be determined by a circumventive combination of extortive men,

To whose integrity they must,
In spite of all their caution, trust?

Shall the interested confederacy, whose gain has conspired against the plenty of a country, influence the price of the food, which they so often impair in its weight? Or shall the very men, if I may dare to call them so, who have depopulated the city by their lethiferous mixtures of bread, shall they prescribe the sort the people shall eat? Have they power and authority to exert it, to famish and poison the people whenever their lucre is availed of the destruction they can make? Does the good of the community depend upon so futile a foundation as the honesty of bakers, who, it is certain, by no means countenance such a confidence? If that be the case, the desolation of London is nigher at hand than we at first imagined.

The various artifices practised in the mystery and craft of bakers are almost innumerable; their tricks to escape the penalties which stigmatize their lucrative villainy, to shun the imputation which characterizes its detection, are as infinite as secret; one of its more obvious frauds is, that of exposing loaves of full and honest weight to the public view, and to vend
amongst

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amongst careless customers those below the lawful standard ; that, should the messengers of justice appear, the expence of bribery may not be requisite to purchase the connivance of venality. Justice was anciently emblemed blind ; she is now too often made so, to serve the purposes of iniquity, as she was formerly represented to shew her just impartiality. Very few people are so public-spirited as to weigh their bread, and execute the laws. Vid. p. 62 & 63 *infra*.

Thus a large quantity of lime, alum, chalk, ground bones, &c. added to a portion of salt, yeast and water, made up to a paste, with a small admixture of flour, when baked, passes for a loaf of bread ; which we have generally found, upon an average, to want of weight from one to two ounces in ten ; which will make the profit of bakers as exorbitant as we have mentioned above : * so that was a considerate man to see this at present, he would suspect the tribe of bakers to be privately confederated with our public enemies, and that their venal iniquity was purchased to poison or famish the people, whose lives were set a price upon by a suborned conspiracy of wicked avaricious men.

Some of these abusers indeed may be ignorant of many of the bad effects the iniquities they perpetrate induce upon the people ; but even those may not need to be informed that they counteract statutes by *them* no less than by fraudulent weight. Was not this the case, one may suppose, if the divine laws of God, and the civil decrees of their country, did not prevail over their avidity, the laws of nature would stop the course of their desolating enormities, which alike involve themselves and families in the dangers and mischiefs

* Vid. p. 57. *antea*.

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mischiefs they prepare : we shall therefore pity the deluded wretches who appropriate calamities ; whilst we blame the designing villain, who scoffs at the terrors of those tremendous damnations, which revenge robbery, deceit, and homicide ; for both alike deceive themselves ; the pernicious, detestable race of vermin undermine the very granary they plunder for food : its ruin must inevitably accumulate them with destruction, or starve them with famine, if they did not poison themselves with the rest of the people.

Accursed is he that withholds bread from the hungry. * Yet the conspiracy of bakers defrauds the poor of their just portion ; and the exorbitant price their artifice occasions to be fixed upon it, makes a food which the famished man may long for in vain. He cannot pay for it ; and surely he that privily poisons mankind, and famishes them too, cannot escape a heavy damnation.

Is it less than blasphemy against the most High, who is certainly more pleased to be the God of mercy and beneficence, than of vengeance and cruelty, to call his kind dispensations afflictions, and to disgrace and vilify his most benign attributes with aspersive epithets ; to misname his blessings, cursings ; to reproach the plenty he sends, with the appellation of famine ; and to make the poor repine at scarcity, when he rains down abundance ? Is not this to blaspheme the benevolence of heaven ? Yet certain it is, that at present the whole country has been blessed with plentiful harvests ; *the clouds have dropped fatness ; the fountains of heaven have been set wide open upon our island ; the fields have rejoiced they stood so thick with corn ; the vallies have laughed and*

* The wise son of Sirach.

sung ;

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sung; and the little hills have clapt hands for joy at their abundance of grainage. Yet the present artificial scarcity is by the impious craft of corn-dealers, farmers, mealmen, and bakers,* who seem to have entered into a conspiracy against heaven and the people, profanely and falsely charged upon providence.—They give the lye to almighty God, who speaks through the progressions of nature. These men tell us, there is a scarcity of corn, when it is manifest we have plentiful harvests at home, large exportations from abroad, and vast stores of unused grain in the nation remaining from the crops of years past, as many of themselves can ocularly demonstrate; but like a kind of loathsome vermin, they grow fat in the dwellings of poverty and want: hence their lucre avails itself of factitious famine, and endeavours to create the dearth it preys upon; and indeed their combination has but too much power to exert its baleful effects; as recent instance demonstrates. They seem to hold the reins of life or death, which they can let loose upon a people as their avidity dictates, for the bread of the public is at their disposal, and they, the butlers of providence, can give or withhold our victuals. A man that has the food of a kingdom in his hands, has more power than he who holds the scepter: the influence of bread more sensibly affects mankind, than that of regal authority, even under despotic governments, if we

* By the statutes second and third of Edward the sixth, unrepealed, and now bearing force, passed A. D. 1548, it is enacted as follows:

“ Forasmuch as of late divers sellers of victuals, not contented with moderate and reasonable gain, but minding to have and take for their victuals so much as lust them, have conspired and covenanted together to sell their victuals at unreasonable prices, &c. For reformation thereof,

“ it

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we may credit some great politicians. Abuses in the articles of bread and fruit once nearly occasioned the destruction of *Naples*.

At a time when we are abused with an artificial scarcity, and feel the immediate effects of a dearth, it is something strange to hear of petitions desiring permission to *export corn*. But we shall not be surprized at these requests, when we understand, that these petitioners are the very merchants

“ it is ordained and enacted by the king our sovereign lord, the lords, and commons in this present parliament assembled, and by the authority of the same, that if any butchers, brewers, bakers, poulterers, cooks, costermongers, or fruiterers, shall at any time after the first day of March next coming [viz. 1548] conspire, covenant, promise, or make any oaths, that they shall not sell their victuals at certain prices, &c. but at a certain price or rule, &c. shall forfeit for the first offence ten pounds to the king's highness, if he have sufficient to pay the same, and do pay the same within six days after his conviction, or else shall suffer for the said offence twenty days imprisonment, and shall only have bread and water for his sustenance; and for the second offence shall forfeit twenty pounds to the king, if he have sufficient to pay the same, and do pay the same within six days after his conviction, or else shall suffer for the second offence punishment of the pillory; and for the third offence shall forfeit forty pounds to the king, if he have sufficient to pay the same, within six days next after his conviction, or else shall sit on the pillory, and lose one of his ears. And also shall at all times after that be taken as a man infamous, and his sayings and depositions on oath not to be credited at any time in any matters of judgment, &c. And it is farther ordained and enacted, by the authority aforesaid, that all and singular justices of assize, justices of peace, mayors, bailiffs, and stewards of leets and courts, shall have power and authority to enquire, hear, and determine all and singular offences committed against this statute, and to punish, or cause to be punished, the offender, according to the tenor of this statute.”

For other acts of this kind, vid. Maitland's history of London, reign of Charles II.; and Kilburn's precedents, p. 152, 1st. Gul. & Mar. c. 12.

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merchants who have imported grain in quantities, perhaps sufficient to guard off the scarcity which fraud had prepared; but lest its schemes should prove abortive, its conferters spoil the market of the imported grain, by means of their evil influence, and the stores they have ingrossed; or even under-sell it among their fraternity, rather than not prejudice its sale; which they exert every art in their power to prevent. Nor shall we wonder at their success, if we reflect upon the concatenation which binds the confederacy together in their oppressive league; for by means of their ingrossed stores, they command the markets; and, being in combination with the bakers, they monopolize the buyers. Besides this, the mischief of their forestallation has other abusive indirections to favour their avidity; for it is credibly averred, that their artifice has not spared to avail itself by malpractices upon the salutary institutions of the state; for in the time of plentiful harvests, by these men exportations of corn for neighbouring ports have been made upon bounty in such quantities, as to turn the scales of the markets at home so considerably, that the very self-same grain which they deposited abroad in stores for that purpose, in case it was under the price there, was imported at home to an advantageous market †, with the addition of the go-

† Qui de pacto id agunt, ut res supera pretium quod summum nunc est in communi plures vendantur, aut vi aut fraude, impediunt ne major copia importetur, aut ideo mercatores coemunt, ut vendant pretior, quod temporis venditionis iniquum sit, injuriam faciunt; atque eam reparare tenent. GROTIUS.

“ They who by contract so manage it, that things may be sold for more than the highest price they now in common bear, or by force or fraud prevent the importation of greater plenty, are injurious, and ought to repair the injury.”

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vernment's premium upon importation; so that the deluded nation has made them the double gratuities on exportation and importation for perhaps the self-same grain of its own production. This method of practice informs, why many thousand quarters of wheat were detained in their granaries and storehouses unexposed to sale, at a time when its price was made exorbitant, and the poor were unable to purchase daily bread; for had it been exposed the price must have abated.

It is also reported, that the mills about London, and on the river, are engaged to this confederacy; and no corn is ground by them, but with the permission or orders of the confederates; so that the oppressive schemes of this conspired divan seem so deeply projected, combined, and intricate, and likewise so consistently planned with preconsidered precautions subtending and promoting each other, that it is no wonder it is as hard to penetrate their artful designs, as to escape their baleful effects.

The farmer detains his corn in his storehouses, that the price may advance; the corn-dealer ingrosses the market; the miller mixes the flour with abundance of whiting; and the baker does the same, with the addition of more detrimental ingredients; he also increases the price, and impairs the just weight of his bread, which soon occasions all other provisions to grow dearer in proportion; and, of course, a scarcity ensues, the very end these men aim at; for, contrary to all other animals of God's creation, even locusts and caterpillars, these creatures grow fat in a famine,

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mine, and a dearth is the very delight of their souls : they rejoice at a general calamity.

The farmers complain of scanty crops ; the corn-dealers, meal-men, and millers, to screw up the price, urge its necessity with concerted arguments ; and the baker agrees, on certain lucrative terms, to buy it at a very dear rate, that a plausible and apparently just, tho' very exorbitant valuation may be put upon his loaves ; artificially and indirectly to augment the cost of them to the buyers, as much as he used to defraud them by the addition of mischievous ingredients, and impaired weight.

Mighty fruitful of reasons for a certain scarcity these confederates are, and leave no method untried to enforce the necessity of an unavoidable dearth : if they can create only an ideal famine, it enables them to prey upon the people ; like the filthy creatures which feed upon carcases in decay : canibals indeed let the body be dead before they devour it ; but these savages of a more cruel and impetuous voracity, feast upon the living ; nay they exceed the most barbaric ferocity ; for the fiercest negroes of Africa eat not the creatures which they have slain with venomous weapons ; the serpent never bites the food he feeds upon ; and the savage Indian only employs his dipt dart upon declared enemies in open battle ; but our race of destroyers privily poison the food thro' which they prey upon us ; as their infernal mischief is therefore the more secret, it is the more perilous and unavoidable by the sufferers, and under the cloak of privacy they escape the condign recompence of vindictive punishment, and enjoy

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enjoy a lucre accumulated by unparalleled iniquity, rapine, and brutality. The wise son of Sirach says, *The bread of the needy is their life, he that defrauds them of it is a man of blood.*

Locusts and caterpillars are excusable reptiles ; hunger and instinct stimulate them, and no culpable avidity : if they devour the fruits of the earth, a real dearth ensues ; but they are not so artful, nor indeed do we think them so malevolent by nature, if it was in their power, as to cause a factitious famine ; or to persuade us in the time of plenty there is a scarcity in the land.

But the lucre of these conspirators avails itself of every opportunity of oppression ; and no alteration can happen in the weather, but they forge from it reasons for advancing the price of our daily bread ; even the fairest prospects of fertility seldom proportionably abate the charges of it ; every shower extraordinary is a cause of the dearth of that food, and if it should fail to rain for a month in the precincts of London, a dearth ensues all over the kingdom ; every wind blows a famine, and a storm cannot happen but it produces a scarcity.

What an affront is by these men put upon the benevolence of providence ! would they at present persuade us, he has given the fruits of the earth with a sparing hand ? 'Tis a violation and attack upon our senses : not content to defraud men of their property, they deny the ocular demonstrations to our reason ; give the lie to our very senses, and endeavour to rob heaven of our praise and gratitude. Would they have us complain for a famine and want in the time of abundance ?

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They misname our blessings curses, blaspheming the munificence of heaven: these mercenary men aver, that we have in vain daily implored our daily bread: plenty is inexorable; the gates of mercy are shut against us, and assert that providence will not benevolate our obtestations, divine compassion is impitiable; that no deprecations can avert the calamity of scarcity; and if heaven sends famine, themselves send mortality and diseases enough a conscience to complete our misery; the harpies which destroy our food, defile it too with their impurities; so when the people should rejoice and acknowledge the immensity of celestial benevolence, they are overwhelmed with lamentation. A worse than the Egyptian swarm of locusts bereaves us of the fertility sent from heaven; a worse than Egyptian darkness permits it; this is truly a darkness that may be felt; and while the balm of health is breathed from the skies upon our island, these conspirators depopulate like the destroying spirits, and dispense maladies among the people: thus avidity is so diabolically impious as to deny the munificence of God, converting his blessings to calamities, his bounty to famine, and the salubrity of his dispensations to the poison of man: when he opens his hand to fill all things living with plenteousness, shall this confederacy prescribe limits to his bounty; rob the people of their joyous exultations in the assurance of a copious plenty, and heaven of their praise for it, declaring war against God and man, nay, and contrary to all laws of hostility, fighting with venomous weapons?

To prevent abuses of corn-dealers, flour-men, &c. from ingrossing, and of farmers from detaining their grain from the markets with a view

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to advance its price, perhaps a decree is enacted, commanding, that whenever corn rises at 7s. per bushel, † no person shall sell above a certain specified proportionate quantity the rest to be sold, or else deposited in public granaries appropriated for that purpose, where it shall be distributed to the poor at the price it first cost: this method would effectually put an end to such scarcities as are forged by combinations, from engrossing, detention, and monopoly, which in our island have seldom any other than a factitious origin.

Every man upon earth is entitled to a portion of that food which is given by providence impartially to all mankind; why then should the iniquity of lucre be permitted to deny to each their equitable share? No man can justify the monopoly of those blessings which proceed from the universal munificence of heaven's uncircumscribed bounty, but he must irritate the enmity of that power, which is jealous of the least infringement of its attributes.

The millers enable themselves by the clandestine admixture of pernicious impurities with it, undetected, to appropriate much larger portions of the flour they grind, than their equitable tolls, which are indeed very sufficient pay for their labour, when corn bears a moderate price, but when it is very dear their gains are unmerciful and exorbitant.

As these frauds are equally detrimental to the property and health of the people with many of those already exhibited, they stand in equal need of redress; which, if we are not deceived,

† As since the writing of these sheets, we find was partly the case in the time of king Edward VI. Vide Maitland's history of London.

Bread, and the Abuses of Bakers.

...e effectuated by a very simple and
...hod.

...vided our authority might propitiate re-
... we would then recommend to the public,
... such a kind of steel * hand-mills, as might be
... constructed for the use of families, that each
... might grind their own flour, for bread and other
... purposes: the many advantages derived from
... these oeconomic engines are scarce numerable;
... every house would thereby avoid the mischiefs in-
... troduced by unwholsome bread, and adulterated
... flour; for they might procure corn that was good;
... and the many impositions in weight and measure
... escaped thereby, would more than amply repay
... the charge and trouble of these utensils, which
... besides would be useful in other respects, especi-
... ally to those people who keep horses; for one
... peck of ground corn nourishes one of those va-
... luable creatures as much as a bushel of whole
... grain, of which not more than one fourth part is
... digested, and of course no more than that quan-
... tity converted to aliment; nor will these contri-
... vances appear less practicable than they would be,
... useful, amongst the islanders here, or than they are
... in other parts of the world, where they are contri-
... ved by mechanics much inferior to the British at
... promoting the utility of their works of art and in-
... genuity. In Calabria and Sicily most families grind
... their own grain, and in Sardinia the same usage
... prevails; few houses are not provided with an
... awkward stone or wooden engine for grinding
... of corn; but the opportunities which expose

* The society for encouraging arts and manufactures,
have offered rewards for the invention of such mills as shall
be constructed of the most useful and cheapest fashion, as are
here recommended.

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us to the frauds and artifices of millers, and
pernicious abuses of bakers, which would
be escaped by the provision of hand-mills, ma-
them infinitely more necessary and desira-
among us in London, than they can possibly
in any other part of the world. If these mills
were introduced, the poor would not be op-
pressed by artificial scarcities and defective
weights; and all ranks of people injured by the
lucrative admixture of morbiferous ingredients
with their common food; the city would re-
populate; health, vigor, and spirit revive among
the people.

C O N C L U S I O N .

PERhaps these sheets may excite some displeas-
ure, as containing too general a charge. Some good
people will be apt to say, we should not con-
demn in the gross, the innocent and the guilty.

As sorry should we be to hurt the name of an
honest man, as to spare the delinquent: our pen
is neither pointed at any particular, nor aimed at
the whole; it is guilt alone we would wound; and
the morbid part we have designed to dilate and
probe. The more faithful domestics may indeed
have received a shot or two of that directed at
the rapacious vermin, that defile and pilfer our
provisions; yet themselves will, in the end, be
availed by the extermination of the felons, in
common with their lords and masters; let not
then the conscious of justice think themselves
hurt by reproof levelled at the iniquitous: to
appropriate censure is to solicit suspicion, and
to

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participate the condemnation. Touch the
rod, we blaze with imputation, as tho'
its immediate influence: there are some
which affect by only handling.

But as for the guilty, let the exposure of their crimes, and the many enormous mischiefs they produce, excite in them honest reflections; and, whilst we discharge the duties of our own conscience, let it stimulate theirs to a just sensibility, and arouse in them some regard for the laws of God, of man, or of nature. We would either persuade them to relinquish their iniquities, or compel them to it by sharpening the vigilance of justice; branding the criminal, pointing him out to the eye of the law, and giving out the alarm to every man, to guard against the stigmatized convict. Who would buy bread from the hand that is seared with R. T.? It is equally dangerous plunging an arm into a recess of vipers, another sort of vermin whose venomous teeth have also gnawed their way into the world, though the very sides of their mother; so the tribe whose crimes we detect advance their lucre, by defrauding and poisoning the people.

To prevent these abuses was the sole design of writing these papers; as, therefore, in executing our purpose, we were bribed by no gain, so were we biassed by no partiality, but towards the just. Our only aim, is to rescue poverty from the jaws of artificial famine; infancy from untimely death; all ranks of men from frauds and diseases; and this metropolis from contumacy, and that desolation which seems to approach with long and quick strides. Happy should we think it, if the sacrifice of our dearest possession could avert the danger; but we already see the city once so populous, de-
populate

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populate daily; once so plentiful, pining for bread*; once so renowned for a stout race of people, decayed to an hospital of distempered invalids. What sensible man can forbear to contemplate the latent efficient of such deplorable, too obvious effects? What good man can withhold indignation, when he is convinced that they are the baleful produce of a secret confederacy?

We hope therefore with all reasonable men, and are sure that with all public-spirited ones, our censure will not be accused of any unjustifiable severity or wanton invective; and amongst the generality, we persuade ourselves, that none will condemn our charge upon the bakers as too heavy, who ever found their loaves too light; nor any think our pen dipt too deep in gall, who remembers the virulent impurities mix'd with their bread; but will rather be apt to allot them a larger share of reproach; and even allow them the honest portion themselves merit, tho' they withhold it from others, who would not so willingly resign their just property.

Confident we are, that the present exigence of a piece to this purpose, and the haste it demanded, may have betrayed its author into some inaccuracies of stile, incoherencies of arrangement and disposition, or repetition, which, at a glance, may seem needless; some modes of diction too may have escaped him, which may be censured for their novelty; and it was his aim rather to speak with the sincerity of truth, than to embellish with the formality of ornamental regularity; and he has been more careful to make

* This was the case a short time ago, and it continues at present (Sept. 2, 1757) much dearer than there is any just reason to countenance.

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use of such words as aptly expressed his conception, than to adopt the more explanatory periphrasis, that he might not appear too didactic to the intelligent, by becoming a little more easy to the generality of mankind; in short, elegance of composition is superseded by the occasional expedition he thought requisite; and the public utility he was desirous to vindicate: we therefore hope, that every one who reads these papers will comprehend enough, to make him circumspect and careful what bread he eats, and to learn from them how to avoid abuses, either in its weight or quality. As in this we have only discharged the commands of conscience, and the duty of a good citizen, we persuade ourselves the manner will scandalize the sense of none but the bad.

Was every individual of the people to think himself appointed as a centinel over the utility and good of the community he participates, as far as the influence of his sphere might admit, what happiness would ensue? Then would no culpable self-interest affect ministerial or legislative integrity; no private views unedge the spirit of military or naval virtue; no lucrative arts would impair medicinal properties, or perniate the wholesome necessaries of human life with the deceptions of admixed, morbiferous qualities; every individual would be the guardian and protector of his compatriots: the brewer would not hear his conscience reproach him with mixing vitriol to purify, or intoxicants, to impart apparent but detrimental strength to the common drink he sells; the butcher would disdain to use linseed cakes to puff up with a cadaverous fatness, chalk to give whiteness, or foul breath to add a deceptive beauty on the meat he exposes to sale; the wine-vault would receive no
more

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more copperas, or mischievous asperants; the sellers of tea would not heighten the nature of that herb, alone malignant, in our climate, with Terra Japonica; our culinary vessels would not poison with the arsenical virulence fused in their tinning; the sugar-boilers would abhor to endanger the internal use of their refined sweets, by the imposition of a species of rats-bane, to give them a fine, but excessively dangerous sparkle: then would there be no distillers of fiery corn-spirits; no selfish corn-dealers, flour-men, farmers, or millers, conspired with bakers, to create factitious famines, oppress the people in the artificial scarcity of it, and destroy them thro' the impious admixture of poisonous qualities in the salutary common food of mankind; plenty would take place, mutual confidence revive, health, vigor, and noble alacrity would kindle a fine emulation amongst the British metropolitans, and animate them with the same glorious spirit of exertion, which dignified the annals of their renowned progenitors.

The E N D.

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