THE

Weaver and Housewife's Pocket-book;

CONTAINING

RULES

FOR

The right Making of Linen Cloth,

Wherein is shown,

What should be the Weight of each Hank of Yarn, that is fit for any Hundred of the Reed; and likewise, the Number of right telled Yarn, in Spinels, Slips, and Cuts, that will be sufficient to make any Number of Ells, from 1 to 60, in a 6 to a 25 Hundred *inclusive*.

WITH

Several useful Tables of *Dutch* Weight, and the Measure of the *Dutch* Reeds on the *Scots* Ell.

To which is subjoined,

A distinct Receipt for boiling of Yarn after the *Dutch* Method.

All necessary for the Improvement of the Linen Trade.

By DAVID RAMSAY, Weaver in *Dalkeith*.

Entred in Stationers Hall.

EDINBURGH:
Printed for the Author, and sold by him in *Dalkeith*.
M DCC L.

TO

The Right Honourable,

The TRUSTEES for the Manufactures in *Scotland*,

This ſmall TREATISE on the Right Manner of Making Linen Cloth, is moſt humbly offered by,

Their HONOURS

Moſt obedient

and moſt humble

Servant,

DAVID RAMSAY.

THE PREFACE.

THE Linen Manufacture in *Scotland*, being a moſt valuable Branch of its Trade; and Perſons of all Ranks having of late very much diſtinguiſhed themſelves, by their moſt laudable Attempts towards its Improvement, in which they have happily ſucceeded, to the great Benefit and Glory of their Country; and it being the Duty of every one, who ſincerely wiſhes the Welfare of it, to contribute what they can to ſo valuable a Purpoſe, I have preſumed to offer the Publick ſome Rules and Regulations for the right Making of Linen Cloth: Altho' a great many have attained to great Improvement on the Subject; yet, it is humbly hoped, theſe Rules will help Apprentices and Journeymen, in ſome Meaſure, for their further Improvement.

I have

PREFACE.

I have confined this little Book within as narrow Bounds as poſſible, that it may be ſold cheap; where, every one that underſtands Figures will plainly ſee the Weight of each Slip of Yarn, that will be fit for any Hundred, from a 6 to a 25 Hundred *inclusive*; and likewiſe, the Number of Spinels, Slips and Cuts, that will be ſufficient for making any Number of Yards of Cloth from 1 to 60 Yards; which will be uſeful, as is hoped, not only for Apprentices and Journeymen; but every Houſewife may, by the Help of this little Book, know how to prepare her Yarn, and have it right woven into Cloth, ſo as to anſwer the Market; and thus not a little contribute to the Improvement of our Linen Trade.

RULES

RULES to be obſerved in making of plain Linen Cloth.

Of Yarn in general.

ALL Yarn, according to Act of Parliament, is to be reeled on a Reel of 10 Quarters of a Yard, or 90 Inches in Circumference; the Half of the Length, when folded together, is 45 Inches, which is allowed for one Ell of Cloth, which, with the Thumb-breadth, or Inch to the Ell, makes 38 Inches. The Difference betwixt 45 Inches of Yarn, and 38 Inches of Cloth, is 7 Inches, which is allowed to ſink up in the Weaving and Bleaching.

N. B. That all Yarn muſt be reeled and tied up according to Order, that is to ſay, each Spinel of Yarn is to contain 4 Slips or Hanks, and each Slip or Hank is to contain 12 Cuts, and each Cut is to contain 120 Threads: Now, there being 120 Threads in one Cut, this makes 6 Porters to one Hundred of the Reed, whether fine or coarſe; becauſe

cauſe 20 Threads make one Porter, and 5 Porters make one Hundred: Now, one Slip, or 12 Cuts, will be 12 Times 6, which is 72 Porters, or 14 Hundred and 2 Porters for one Ell of Cloth.

A Table of the Tell of Yarn.

1 Spinel.
4 Slips or Hanks in one Spinel.
4 Slips.
12 Cuts in one Slip or Hank.
48 Cuts in one Spinel.
120 Threads in one Cut.
5760 Threads in one Spinel.

N. B. That all along thro' this Book, it is ſuppoſed the Yarn is juſt reeled, and right telled; for in an exact Calculation of this kind, there is no Allowance for Deficiency, either of bad Tell or ſhort Reels: The Maker, and not the Buyer, is to ſuffer for bad Tell, and unjuſt Reels.

A Table ſhewing how much true counted Yarn will warp one Ell of Cloth, from a 6 to a 25 Hundred, incluſive.

H.	C.	T.	L.
6	5	00	0
7	5	100	5
8	6	80	4
9	7	60	3
10	8	40	2
11	9	20	1
12	10	00	0
13	10	100	5
14	11	80	4
15	12	60	3
16	13	40	2
17	14	20	1
18	15	00	0
19	15	100	5
20	16	80	4
21	17	60	3
22	18	40	2
23	19	20	1
24	20	00	0
25	20	100	5

N. B. That the firſt Column towards the left Hand, is the Hundreds of Warps; and oppoſite to them, is, the Number of Cuts and Threads that will warp one Ell of ſuch a Hundred; and the laſt Column, is the Loops, or Porters, that is contained in ſuch a Number of Threads; as for Example, and one will ſerve for both this and ſeveral other Tables.

Suppoſe you want to know how much Yarn will warp one Ell of a 13 Hundred; look for 13 Hundred in the Column of Hundreds, and oppoſite to it ſtands 10 Cuts and a 100 Threads, or 5 Loops or Porters, which is the Number of Yarn that 13 Hundred of Warp will require for one Ell: And ſo of all the reſt in this Table.

For the better underſtanding of the following Tables, obſerve the true Calculation as was ſaid before, that is to ſay, 20 Threads make one Loop or Porter; and 6 Loops or Porters, make one Cut; and 12 Cuts make one Slip; and 4 Slips make one Spinel: Likewiſe in ſome Hundreds, it will take equal Yarn in Cuts for one Ell. As for Example, I ſhall ſuppoſe a 12 Hundred; now if 12 Hundred be multiplied by 5, the Porters in one Hundred will produce 60 Porters: Now if one Cut will give 6 Porters, for one Ell of any Hundred, conſequently 10 Cuts muſt give 60 Porters of Warp, which is equal to 12 Hundred, as may be ſeen in the foregoing Table.

Secondly, Every Hundred of Warp will not agree with equal Cuts of Yarn for one Ells Warp. For a ſecond Example, Take a 15 Hundred; now 15 Hundred being multiplied by 5, produces 75 Porters, and every Cut is to give 6 Porters, conſequently 12 Cuts gives 72 Porters, and then I want 3 Porters, or Loops, to make out 75, which is 60 Threads, or 3 Loops, as you may ſee in the Table which will warp one Ell of a 15 Hundred.

There may be ſome Difficulty in a fewer Number of Ells, for ſome Hundreds; but as the following Table will ſhew the exact Number of Yarn for any Hundred, and Number of Ells; and when the Number of Ells turn high, the odd Threads, or Porters, make very often equal Yarn, in Spinels, Slips, and Cuts: And as this is the old Way of calculating of Warps, I ſhall give a Table for each Hundred, only for Warps, and then give other Tables for Warp and Woof together, which will be an exact Calculation.

N. B. That the Characters of each Column, is marked in the Tables, a Y. for Yards, S. for Spinels, Sl. for Slips, and C. for Cuts, L. for Loops, on the Top of each Column, and when Hundreds occur in ſome Tables, H.

Theſe

Theſe TABLES ſhew how much true counted Yarn will warp a 6 and 7 Hundred, from 1 Ell to 60 Ells.

6 Hundred.

Y.	S.	Sl.	C.	L.
1	0	0	5	0
2	0	0	10	0
3	0	1	3	0
4	0	1	8	0
5	0	2	1	0
10	1	0	2	0
20	2	0	4	0
30	3	0	6	0
40	4	0	8	0
50	5	0	10	0
60	6	1	0	0

7 Hundred.

Y.	S.	Sl.	C.	L.
1	0	0	5	5
2	0	0	11	4
3	0	1	5	3
4	0	1	11	3
5	0	2	5	1
10	1	0	10	2
20	2	1	8	4
30	3	2	7	0
40	4	3	5	2
50	6	0	3	4
60	7	1	2	0

N. B. That the firſt Column towards the left Hand, is the Number of Ells from one to 60; and the next oppoſite Columns, is the Spinels, Slips, Cuts, and Loops, that any of the ſaid Number of Ells will require.

Theſe

These TABLES shew how much true counted Yarn will warp a 8 and 9 Hundred, from one Ell to 60 Ells.

8 Hundred.

Y.	S.	Sl.	C.	L.
1	0	0	6	4
2	0	1	1	2
3	0	1	8	0
4	0	2	2	4
5	0	2	9	2
10	1	1	6	4
20	2	3	1	2
30	4	0	8	0
40	5	2	2	4
50	6	3	8	2
60	8	1	4	0

9 Hundred.

Y.	S.	Sl.	C.	L.
1	0	0	7½	0
2	0	1	3	0
3	0	1	10½	0
4	0	2	6	0
5	0	3	1½	0
10	1	2	3	0
20	3	0	6	0
30	4	2	9	0
40	6	1	0	0
50	7	3	3	0
60	9	1	6	0

N. B. That the first Column towards the left Hand, is the Number of Ells from one to 60; and the next opposite Columns, is the Spinels, Slips, Cuts, and Loops, that any of the said Number of Ells will require.

These

These TABLES shew how much true counted Yarn will warp a 10 and 11 Hundred, from one Ell to 60 Ells.

10 Hundred.

Y.	S.	Sl.	C.	L.
1	0	0	8	2
2	0	1	4	4
3	0	2	1	0
4	0	2	9	2
5	0	3	5	4
10	1	2	11	2
20	3	1	10	4
30	5	0	10	0
40	6	3	9	2
50	8	2	8	4
60	10	1	8	0

11 Hundred.

Y.	S.	Sl.	C.	L.
1	0	0	9	1
2	0	1	6	2
3	0	2	3	3
4	0	3	0	4
5	0	3	9	5
10	1	3	7	4
20	3	3	3	2
30	5	2	11	0
40	7	2	6	4
50	9	2	1	2
60	11	1	10	0

N. B. That the first Column towards the left Hand, is the Number of Ells from one to 60; and the next opposite Columns, is the Spinels, Slips, Cuts, and Loops, that any of the said Number of Ells will require.

These

These TABLES shew how much true counted Yarn will warp a 12 and 13 Hundred, from one Ell to 60 Ells.

12 Hundred.

Y.	S.	Sl.	C.	L.
1	0	0	10	0
2	0	1	8	0
3	0	2	6	0
4	0	3	4	0
5	1	0	2	0
10	2	0	4	0
20	4	0	8	0
30	6	1	0	0
40	8	1	4	0
50	10	1	8	0
60	12	2	0	0

13 Hundred.

Y.	S.	Sl.	C.	L.
1	0	0	10	5
2	0	1	9	4
3	0	2	8	3
4	0	3	7	2
5	1	0	6	1
10	2	1	0	2
20	4	2	0	4
30	6	3	1	0
40	9	0	1	2
50	11	1	1	4
60	13	2	2	0

N. B. That the first Column towards the left Hand, is the Number of Ells from one to 60; and the next oppofite Columns, is the Spinels, Slips, Cuts, and Loops, that any of the faid Number of Ells will require.

Thefe

These TABLES shew how much true counted Yarn will warp a 14 and 15 Hundred, from one Ell to 60 Ells.

14 Hundred.

Y.	S.	Sl.	C.	L.
1	0	0	11	4
2	0	1	11	2
3	0	2	11	0
4	0	3	10	4
5	1	0	10	2
10	2	1	8	4
20	4	3	5	2
30	7	1	2	0
40	9	2	10	4
50	12	0	6	2
60	14	2	4	0

15 Hundred.

Y.	S.	Sl.	C.	L.
1	0	0	12½	0
2	0	2	1	0
3	0	3	1½	0
4	1	0	2	0
5	1	1	2½	0
10	2	2	5	0
20	5	0	10	0
30	7	3	3	0
40	10	1	8	0
50	13	0	1	0
60	15	2	6	0

N. B. That the first Column towards the left Hand, is the Number of Ells from one to 60; and the next oppofite Columns, is the Spinels, Slips, Cuts, and Loops, that any of the faid Number of Ells will require.

Thefe

These TABLES shew how much true counted Yarn will warp a 16 and 17 Hundred, from one Ell to 60 Ells.

16 Hundred.

Y.	S.	Sl.	C.	L.
1	0	1	1	2
2	0	2	2	4
3	0	3	4	0
4	1	0	5	2
5	1	1	6	4
10	2	3	1	2
20	5	2	2	4
30	8	1	4	0
40	11	0	4	2
50	13	3	5	4
60	16	2	8	0

17 Hundred.

Y.	S.	Sl.	C.	L.
1	0	1	2	1
2	0	2	4	2
3	0	3	6	3
4	1	0	8	4
5	1	1	10	5
10	2	3	9	4
20	5	3	7	2
30	8	3	5	0
40	11	3	2	4
50	14	3	0	2
60	17	2	10	0

N. B. That the first Column towards the left Hand, is the Number of Ells from one to 60; and the next opposite Columns, is the Spinels, Slips, Cuts, and Loops, that any of the said Number of Ells will require.

These

These TABLES shew how much true counted Yarn will warp a 18 and 19 Hundred, from 1 Ell to 60 Ells.

18 Hundred.

Y.	S.	Sl.	C.	L.
1	0	1	3	0
2	0	2	6	0
3	0	3	9	0
4	1	1	0	0
5	1	2	3	0
10	3	0	6	0
20	6	1	0	0
30	9	1	6	0
40	12	2	0	0
50	15	2	6	0
60	18	3	0	0

19 Hundred.

Y.	S.	Sl.	C.	L.
1	0	1	3	3
2	0	2	7	4
3	0	3	11	3
4	1	1	3	2
5	1	2	7	1
10	3	1	2	4
20	6	2	4	0
30	9	3	7	2
40	13	0	9	2
50	16	1	11	4
60	19	3	2	0

N. B. That the first Column towards the left Hand, is the Number of Ells from one to 60; and the next opposite Columns, is the Spinels, Slips, Cuts, and Loops, that any of the said Number of Ells will require.

These

These TABLES shew how much true counted Yarn will warp a 20 and 21 Hundred, from one Ell to 60 Ells.

20 Hundred.

Y.	S.	Sl.	C.	L.
1	0	1	4	4
2	0	2	9	2
3	1	0	2	0
4	1	1	6	4
5	1	2	11	2
10	3	1	10	4
20	6	3	9	2
30	10	1	8	0
40	13	3	4	4
50	17	1	3	2
60	20	3	4	0

21 Hundred.

Y.	S.	Sl.	C.	L.
1	0	1	5½	0
2	0	2	[illegible]	0
3	1	0	4½	0
4	1	1	10	0
5	1	3	3½	0
10	3	2	7	0
20	7	1	2	0
30	10	3	9	0
40	14	2	4	0
50	18	0	11	0
60	21	3	6	0

N. B. That the first Column towards the left Hand, is the Number of Ells from one to 60; and the next oppoſite Columns, is the Spinels, Slips, Cuts, and Loops, that any of the ſaid Number of Ells will require.

These

These TABLES ſhew how much true counted Yarn will warp a 22 and 23 Hundred, from one Ell to 60 Ells.

22 Hundred.

Y.	S.	Sl.	C.	L.
1	0	1	6	2
2	[illegible]	3	0	4
3	1	0	7	0
4	1	2	1	2
5	1	3	7	4
10	3	3	3	2
20	7	2	6	4
30	11	1	10	0
40	15	1	1	2
50	19	0	4	4
60	22	3	8	0

23 Hundred.

Y.	S.	Sl.	C.	L.
1	0	1	7	1
2	0	3	2	2
3	1	0	9	3
4	1	2	4	4
5	1	3	11	5
10	3	3	11	4
20	7	3	11	2
30	11	3	11	0
40	15	3	10	4
50	19	3	10	2
60	23	3	10	0

N. B. That the first Column towards the left Hand, is the Number of Ells from one to 60; and the next oppoſite Columns, is the Spinels, Slips, Cuts, and Loops, that any of the ſaid Number of Ells will require.

These

These TABLES shew how much true counted Yarn will warp a 24 and 25 Hundred, from one Ell to 60 Ells.

	24 Hundred.					25 Hundred.				
E.	S.	Sl.	C.	L.		E.	S.	Sl.	C.	L.
1	0	1	8	0		1	0	1	8	5
2	0	3	4	0		2	0	3	5	4
3	1	1	0	0		3	1	1	2	3
4	1	2	8	0		4	1	2	11	2
5	2	0	4	0		5	2	0	8	1
10	4	0	8	0		10	4	1	4	2
20	8	1	4	0		20	8	2	8	4
30	12	2	0	0		30	13	0	1	0
40	16	2	8	0		40	17	1	5	2
50	20	3	4	0		50	21	2	9	4
60	25	0	0	0		60	26	0	2	0

N. B. That the first Column towards the left Hand, is the Number of Ells from one to 60; and the next opposite Columns, is the Spinels, Slips, Cuts, and Loops, that any of the said Number of Ells will require.

EXPLA-

EXPLANATION of the foregoing Tables.

EXAMPLE, and one will serve for all.

SUppose you want to know how much Yarn will warp 40 Yards of 13 Hundred, look in the Table of 13 Hundred, and opposite to 40 Yards stands 9 Spinel, 1 Cut, and 2 Loops, which will warp 40 Yards; and for 50 Yards stands opposite, 11 Spinel, 1 Slip, 1 Cut, and 4 Loops, which will warp 50 Yards; but if you should require 35 Yards, add the Number of Yarn that stands opposite to 30 Yards, and the Number of Yarn that stands opposite to 5 Yards together, and that will amount to 7 Spinel, 3 Slips, 7 Cuts, and 1 Loop, which is the Number of Yarn that 35 Yards will require; and so for any other odd Number of Yards, as 41, 42, 43, 44, *&c.* always adding the first greatest Number, and the next lesser together, which makes up the Sum of Yarn.

As there is no Woof mentioned in the 20 foregoing Tables, the Proportion will be in the *Dutch* Method at 6 Spinel Warp to 5 of Woof; but if they be fine of the Set, it will take 8 to 7, or 9 to 8; and as a great many Persons are of Opinion, especially the *Irish*, that setting them one Set finer of Warp, by which Means they take a greater Quantity of Woof, and consequently brings the Cloth nearer to a Square, the Proportion in the *Irish* Method, will be as 13 Spinel of Warp is to 12 Spinel of Woof, or near equal; and I am of Opinion that this Way would answer private Persons better than the *Dutch* Method, because a great many have not a Stock of Yarn to make such a Piece, or Pieces, of Cloth. The 20 following Tables will shew how much true counted Yarn will make any Number of Yards in Warp and Woof; and as the Length of the Reels and Tell of Yarn was mentioned before, I shall give a se-

cond

cond Direction as follows; 45 Inches of Yarn being too long for one Yard of Cloth, I ſhall allow that 42 or 41½ Inches, without taking a very ſtrick Calculation on Inches, or Parts of Threads, which would be troubleſome for thoſe that want Figures, but 42 Inches, or 41½, is to be allowed for the Length of one Yard, which is 36 Inches, and the Thumb-Breadth makes 37 Inches, the Difference to ſink up in the weaving is 4½ or 5 Inches, and then there remains 3½ or 3 Inches over, which will amount, in one Slip of Yarn, to about Half a Cut, which being added to the former Calculation, 72 Porters, makes 75 Porters, which is 15 hundred Warp: That by this Rule, one Slip of Yarn will give 15 hundred of Warp for one Yard of Cloth.

Before I begin with the Tables, take theſe few Directions; *firſt*, If ye take 1½ Cuts for one Yard of Cloth, for one Hundred of the Reed, whether fine or coarſe, it will be a ſtanding Rule for the better underſtanding of the following Tables: Suppoſe ye want to know how much Yarn will warp and woof a 12 Hundred, for one Yard's Length, then ſay in your Mind, 12 Cuts for 12 Hundred, and 12 Half Cuts for 12 Hundred, is 6 whole Cuts, which being added together, makes 18 Cuts, or 1 Slip and 6 Cuts, which will warp and woof one Yard of a 12 Hundred.

Secondly, For 20 Yards of a 12 Hundred, how much Yarn will it take for Warp and Woof? ſay by the foregoing Rule, 20 Cuts, and 20 half Cuts, which is 10 Cuts being added together, makes 30 Cuts, which is 2 Slips and 6 Cuts for one Hundred; now 12 Hundred is the Queſtion, then ſay, 12 and 12, is 24 Slips, and the Half of 12 is 6, which being added together makes 30 Slips, which is 7 Spinel and 2 Slips, that will warp and woof 20 Yards of a 12 Hundred; and ſo of all the reſt throughout all the following Tables.

Theſe

Theſe TABLES ſhew how much true counted Yarn will warp and woof a 6 and 7 Hundred, from one Yard to 60 Yards.

6 Hundred.

Y.	S.	Sl.	C.
1	0	0	9
2	0	1	6
3	0	2	3
4	0	3	0
5	0	3	9
10	1	3	6
20	3	3	0
30	5	2	6
40	7	2	0
50	9	1	6
60	11	1	0

7 Hundred.

Y.	S.	Sl.	C.
1	0	0	10½
2	0	1	9
3	0	2	7½
4	0	3	6
5	1	0	4½
10	2	0	9
20	4	1	6
30	6	2	3
40	8	3	0
50	10	3	9
60	13	0	6

N. B. That the firſt Column towards the left Hand, is the Number of Yards from one to 60; and the next oppoſite Columns, is the Spinels, Slips, and Cuts, that will be ſufficient for any of the ſaid Number of Yards in Warp and Woof.

Theſe

These TABLES shew how much true counted Yarn will warp and woof a 8 and 9 Hundred, from one Yard to 60 Yards.

8 Hundred.

Y.	S.	Sl.	C.
1	0	1	10
2	0	2	0
3	0	3	0
4	1	0	0
5	1	1	0
10	2	2	0
20	5	0	0
30	7	2	0
40	10	0	0
50	12	2	0
60	15	0	0

9 Hundred.

Y.	S.	Sl.	C.
1	0	1	1½
2	0	2	3
3	0	3	4½
4	1	0	6
5	1	1	7½
10	2	3	3
20	5	2	6
30	8	1	9
40	11	1	0
50	14	0	3
60	16	3	6

N. B. That the first Column towards the left Hand, is the Number of Yards from one to 60; and the next opposite Columns, is the Spinels, Slips, and Cuts, that will be sufficient for any of the said Number of Yards in Warp and Woof.

These TABLES shew how much true counted Yarn will warp and woof a 10 and 11 Hundred, from one Yard to 60 Yards.

10 Hundred.

Y.	S.	Sl.	C.
1	0	1	3
2	0	2	6
3	0	3	9
4	1	1	0
5	1	2	3
10	3	0	6
20	6	1	0
30	9	1	6
40	12	2	0
50	15	2	6
60	18	3	0

11 Hundred.

Y.	S.	Sl.	C.
1	0	1	4½
2	0	2	9
3	1	0	1½
4	1	1	6
5	1	2	10½
10	3	1	9
20	6	3	6
30	10	1	3
40	13	3	0
50	17	0	9
60	20	2	6

N. B. That the first Column towards the left Hand, is the Number of Yards from one to 60; and the next opposite Columns, is the Spinels, Slips, and Cuts, that will be sufficient for any of the said Number of Yards in Warp and Woof.

These TABLES shew how much true counted Yarn will warp and woof a 12 and 13 Hundred, from one Yard to 60 Yards.

12 Hundred.

Y.	S.	Sl.	C.
1	0	1	6
2	0	3	0
3	1	0	6
4	1	2	0
5	1	3	6
10	3	3	0
20	7	2	0
30	11	1	0
40	15	0	0
50	18	3	0
60	22	2	0

13 Hundred.

Y.	S.	Sl.	C.
1	0	1	$7\frac{1}{2}$
2	0	3	3
3	1	0	$10\frac{1}{2}$
4	1	2	6
5	2	0	$1\frac{1}{2}$
10	4	0	3
20	8	0	6
30	12	0	9
40	16	1	0
50	20	1	3
60	24	1	6

N. B. That the first Column towards the left Hand, is the Number of Yards from one to 60; and the next oppoſite Columns, is the Spinels, Slips, and Cuts, that will be ſufficient for any of the ſaid Number of Yards, in Warp and Woof.

Theſe

Theſe TABLES ſhew how much true counted Yarn will warp and woof a 14 and 15 Hundred, from one Yard to 60 Yards.

14 Hundred.

Y.	S.	Sl.	C.
1	0	1	9
2	0	3	6
3	1	1	3
4	1	3	0
5	2	0	9
10	4	1	6
20	8	3	0
30	13	0	6
40	17	2	0
50	21	3	6
60	26	1	0

15 Hundred.

Y.	S.	Sl.	C.
1	0	1	$10\frac{1}{2}$
2	0	2	9
3	1	0	$7\frac{1}{2}$
4	1	1	6
5	2	1	$4\frac{1}{2}$
10	4	2	9
20	9	1	6
30	14	0	3
40	18	3	0
50	23	1	9
60	28	0	6

N. B. That the firſt Column towards the left Hand, is the Number of Yards from one to 60; and the next oppoſite Columns, is the Spinels, Slips, and Cuts, that will be ſufficient for any of the ſaid Number of Yards in Warp and Woof.

Theſe

These TABLES shew how much true counted Yarn will warp and woof a 16 and 17 Hundred, from one Yard to 60 Yards.

16 Hundred.

Y.	S.	Sl.	C.
1	0	2	0
2	1	0	0
3	1	2	0
4	2	0	0
5	2	2	0
10	5	0	0
20	10	0	0
30	15	0	0
40	20	0	0
50	25	0	0
60	30	0	0

17 Hundred.

Y.	S.	Sl.	C.
1	0	2	1½
2	1	0	3
3	1	2	4½
4	2	0	6
5	2	2	7½
10	5	1	3
20	10	2	6
30	15	3	9
40	21	1	0
50	26	2	3
60	31	3	6

N. B. That the first Column towards the left Hand, is the Number of Yards from one to 60; and the next opposite Columns, is the Spinels, Slips, and Cuts, that will be sufficient for any of the said Number of Yards in Warp and Woof.

These

These TABLES shew how much true counted Yarn will warp and woof a 18 and 19 Hundred, from one Yard to 60 Yards.

18 Hundred.

Y.	S.	Sl.	C.
1	0	2	3
2	1	0	6
3	1	2	9
4	2	1	0
5	2	3	3
10	5	2	6
20	11	1	0
30	16	3	6
40	22	2	0
50	28	0	6
60	33	3	0

19 Hundred.

Y.	S.	Sl.	C.
1	0	2	4½
2	1	0	9
3	1	3	1½
4	2	1	6
5	2	3	10½
10	5	3	9
20	11	3	6
30	17	3	3
40	23	3	0
50	29	2	9
60	35	2	6

N. B. That the first Column towards the left Hand, is the Number of Yards from one to 60; and the next opposite Columns, is the Spinels, Slips, and Cuts, that will be sufficient for any of the said Number of Yards in Warp and Woof.

These

These TABLES shew how much true counted Yarn will warp and woof a 20 and 21 Hundred, from one Yard to 60 Yards.

20 Hundred.

Y.	S.	Sl.	C.
1	0	2	6
2	1	1	0
3	1	3	6
4	2	2	0
5	3	0	6
10	6	1	0
20	12	2	0
30	18	3	0
40	25	0	0
50	31	1	0
60	37	2	0

21 Hundred.

Y.	S.	Sl.	C.
1	0	2	7½
2	1	1	3
3	1	3	10½
4	2	2	6
5	3	1	1½
10	6	2	3
20	13	0	6
30	19	2	9
40	26	1	0
50	32	3	3
60	39	1	6

N. B. That the first Column towards the left Hand, is the Number of Yards from one to 60; and the next opposite Columns, is the Spinels, Slips, and Cuts, that will be sufficient for any of the said Number of Yards in Warp and Woof.

These

These TABLES shew how much true counted Yarn will warp and woof a 22 and 23 Hundred, from one Yard to 60 Yards.

22 Hundred.

Y.	S.	Sl.	C.
1	0	2	9
2	1	1	6
3	2	0	3
4	2	3	0
5	3	1	9
10	6	3	6
20	13	3	0
30	20	2	6
40	27	2	0
50	34	1	6
60	41	1	0

23 Hundred.

Y.	S.	Sl.	C.
1	0	2	10½
2	1	1	9
3	2	0	7½
4	2	3	6
5	3	2	4½
10	7	0	9
20	14	1	6
30	21	2	3
40	28	3	0
50	35	3	9
60	43	0	6

N. B. That the first Column towards the left Hand, is the Number of Yards from one to 60; and the next opposite Columns, is the Spinels, Slips, and Cuts, that will be sufficient for any of the said Number of Yards in Warp and Woof.

These

These TABLES shew how much true counted Yarn will warp and woof a 24 and 25 Hundred, from one Yard to 60 Yards.

24 Hundred.

Y.	S.	Sl.	C.
1	0	3	0
2	1	2	0
3	2	1	0
4	3	0	0
5	3	3	0
10	7	2	0
20	15	0	0
30	22	2	0
40	30	0	0
50	37	2	0
60	45	0	0

25 Hundred.

Y.	S.	Sl.	C.
1	0	3	1½
2	1	2	3
3	2	1	4½
4	3	0	6
5	3	3	7½
10	7	3	3
20	15	2	6
30	23	1	9
40	31	1	0
50	38	2	3
60	46	3	6

N. B. That the first Column towards the left Hand, is the Number of Yards from one to 60; and the next oppofite Columns, is the Spinels, Slips, and Cuts, that will be ſufficient for any of the ſaid Number of Yards in Warp and Woof.

Theſe

A TABLE ſhewing, by the Weight of each Hank of Yarn, *Dutch* Weight, what Fineneſs is fit for any Hundred, from a 6 to a 25 incluſive; and how many Slips, Cuts, and Threads will weigh one Pound *Dutch*.

H.	W.	Sl.	C.	T.
6	11	1	5	54
7	9	1	9	40
8	7½	2	1	77
9	6¼	2	6	86
10	5½	2	10	101
11	4¾	3	4	50
12	4¼	3	9	21
13	3¾	4	3	24
14	3½	4	6	102
15	3¼	4	11	9
16	3	5	4	00
17	2¾	5	9	98
18	2½	6	4	96
19	2¼	7	1	40
20	2	8	0	00
21	1¾	9	1	80
22	1½	10	8	00
23	1⅜	11	7	75
24	1¼	12	11	72
25	1⅛	14	2	72

N. B. That the firſt Column towards the left Hand, is the Hundreds of the Reed; and next oppoſite to them, is the Weight of Yarn *per* Hank, fit for any of the ſaid Hundreds; and the other 3 Columns, is the Slips, Cuts, and Threads (omiting Fractions of Threads) that is contained in one Pound of the ſaid Weight.

Example.

If each Slip of your Yarn that is deſigned for Warp, weigh 2½ Ounces *Dutch* Weight; then oppoſite to 2½ Ounces, ſtands 18 Hundred, which is the Reed that that Fineneſs of Yarn may be wrought in, and it is 6 Slips, 4 Cuts, and 96 Threads, that will weigh one Pound of that Yarn.

It is not ſuppoſed that every one that maketh Cloth can have all their Yarn of ſuch an equal Weight, for that would require a great Stock of Yarn to manufacture the Cloth according to this Weight: But ſuppoſe the whole of your Yarn be not of an equal Weight, I ſhall take a 12 Hundred; now each Slip in the Table is to weigh $4\frac{1}{4}$ Ounces, but if Part of your Yarn weigh 4 Ounces, and Part of it $4\frac{1}{4}$ Ounces, then your Yarn is of two Kinds of Weight: Wind all the 4 Ounce Yarn on the equal Half of the Bobens, and all the $4\frac{1}{4}$ Ounce Yarn on the other Half, then mark them, and ſet them in the warping Boben about, otherwiſe if you do not take particular Care, perhaps moſt of the coarſeſt of the Yarn may fall on the Side or Middle of the Web, or otherwiſe it may fall on the Side of a Porter, or Gang, and conſequently it will make ſome Parts of the Cloth thick, and ſome Parts thin, which ſpoils the Beauty of the Cloth. Any other Hundred of the Reed, may be made the ſame Way in coarſe Pieces, with them that hath not a good Stock of Yarn, as a 8 Hundred with Part of 7 Ounces, and Part of $7\frac{1}{2}$ Ounces, or 8 Ounces, as the Yarn is coarſe, ſo little diſcerned in the Odds of Half an Ounce, or an Ounce; and ſo of all the other Hundreds, obſerving the foregoing Direction of dividing the Yarn equally according to the Weight; for the Wofts again, according to this Fineneſs of Warps, will be from a 6 to a 10 Hundred; one Set finer of Woof than Warp; from a 10 to a 15 Hundred, 2 Sets finer of Woof than Warp; from a 15 Hundred and upwards, 3 Sets finer of Woof than Warp; and ſometimes, if your Woof does not anſwer your Expectation above a 20 Hundred, 4 Sets finer of Woof than Warp; and as this is the ordinary Way of Woofs, obſerve, firſt, whether the Weight of your Yarn for Warps, will bear ſuch a Fine-

Fineneſs of Woof; for if there be but a little Diſproportion of Weight, betwixt the Warp and Woof, that was deſigned for ſuch a Hundred, you muſt put that warp Yarn in a coarſer Reed, otherwiſe you have a thick Cloth by the Warp, but not by the Woof; for the Deſign of finer Woof than Warp is, to take as much Woof as may bring the Cloth as near a Square as poſſible: Theſe muſt be regulated as the Market anſwers, the Goodneſs or Badneſs of the Flax, the hard twined, or ſoft twined Yarn, the Deſire of the Owner, *&c.*

If it ſhould be asked, What is the Reaſon that there is no ſet Number of Cuts of Woof for one Ell of every Hundred? This would be a hard Queſtion: Or ſuch a certain Number of Spinels, Slips, and Cuts, for ſuch a Number of Ells, as is ſet down in the Tables? I told you, that the Proportion of Woof was, or is, in the *Dutch* Method, as 6 Spinels Warp to 5 of Woof; but if they be finer of the Set, it will take 8 to 7, or 9 to 8, and from a 10 Hundred and downwards; if very fine of the Set, as much Woof as Warp, which makes a Square Cloth. None can propoſe to make Linen Cloth mathematically in every Inch, and in every Ell, to ſtrike in ſuch a certain Number of Threads, or as much Woof as Warp; this would be hard and difficult, yea impoſſible; the Dryneſs or Moiſtneſs of the Weather would be an Impediment, the Situation of the Shop, the Loom good or bad, the Dexterity or not of the Workman, the Goodneſs or Badneſs of the Flax, the Strength or Weakneſs of the Yarn, the Dreſſing Stuff, *&c.* Every one that conſiders theſe Things, will plainly ſee that none can give a poſitive Number of Spinels, Slips, and Cuts, that any certain Number of Ells will take of Woof.

This TABLE ſhews what Ounces and Drops is contained in the Fractions of Ounces, as $\frac{1}{4}$, or $\frac{1}{2}$, or $\frac{3}{4}$ of an Ounce.

W.	O.	D.
9	9	0
8	8	0
7	7	0
$6\frac{1}{4}$	6	4
$5\frac{1}{2}$	5	8
$4\frac{3}{4}$	4	12
$4\frac{1}{4}$	4	4
$3\frac{3}{4}$	3	12
$3\frac{1}{2}$	3	8
$3\frac{1}{4}$	3	4
3	3	0
$2\frac{3}{4}$	2	12
$2\frac{1}{2}$	2	8
$2\frac{1}{4}$	2	4
2	2	0
$1\frac{3}{4}$	1	12
$1\frac{1}{2}$	1	8
$1\frac{3}{8}$	1	6
$1\frac{1}{4}$	1	4
$1\frac{1}{8}$	1	2

As every one will not ſo eaſily underſtand what Fractions of Ounces is in Drops, I have inſerted this Table for the better underſtanding of the Weight: —The firſt Column ſhews the Weight in Ounces and Fractions of Ounces; the oppoſite Columns ſhew what any of the ſaid Fractions is in Drops: Suppoſe $3\frac{1}{2}$ Ounces ſtands oppoſite to 3 Ounces and 8 Drops.

Example.

What is $\frac{3}{4}$ of an Ounce?

Rule.

Multiply the Numerator 3 by 16, the Drops in one Ounce, and divide that Product by 4, the Denominator and the Quotient is 12 Drops, and ſo of the reſt.

$\frac{3}{4}$ of an Ounce — 3 × 16 = 48 ÷ 4 = 12 Drops.

A

A TABLE ſhewing how many Yards, Quarters, and Nails, omitting Inches, will be given out of one Spinel of Yarn, from a 6 to a 25 Hundred incluſive.

H.	Y.	Q.	N.
6	5	1	1
7	4	2	1
8	4	0	0
9	3	2	1
10	3	1	0
11	2	3	2
12	2	2	2
13	2	1	3
14	2	1	2
15	2	0	2
16	2	0	0
17	1	3	2
18	1	3	0
19	1	2	2
20	1	2	1
21	1	2	0
22	1	1	3
23	1	1	2
24	1	1	1
25	1	1	0

N. B. That the firſt Column towards the left Hand, is the Hundreds of the Reed; and the next oppoſite Columns are the Yards, Quarters, and Nails, that one Spinel of true counted Yarn will make.

Example.

Suppoſe it was demanded, how many Yards, Quarters, and Nails, out of the Spinel, Warp and Woof, for a 16 Hundred; look for 16 Hundred in the Column of Hundreds, and oppoſite to 16 Hundred ſtands 2 Yards; and for 18 Hundred ſtands 1 Yard, 3 Quarters; and for 24 Hundred ſtands 1 Yard, 1 Quarter, and 1 Nail; and ſo of all the reſt in this Table.

DIRE-

DIRECTIONS for the following TABLE.

IT is ſuppoſed thro' this Book, That when Hundreds is ſet down upon the Top of each Table, it is not meant the Hundreds of the Reed, but the Hundreds of Warps, in ſuch a Reed or Reeds; as the Cloth intended for Yard-wide when bleached, muſt be 40 Inches at Shot, ſo as to be 38 Inches from the Loom: And as ſome Reeds are made upon 40 Inches, ſome upon 42½, and ſome upon 37⅛ Inches; ſo it is always to be conſidered, that as many Hundreds and Porters of any of theſe Reeds muſt be filled, ſo as the Cloth may anſwer the common Breadths: And as the *Dutch* Reeds are much uſed; yet ſome have them not, this Table will ſhew what they meaſure on the *Scots* Ell, and ſo the eaſier calculate how much Warp you muſt have to make your Cloth anſwer the common Breadths; And ſo for any other Breadths, as Yard at Shot, for to ſtand 3½ Quarters when bleached; and ſo of any Breadths whatſoever; always obſerving the ſame Fineneſs or Coarſeneſs of Yarn, in the Tables of Weight, to give ſuch a Number of Hundreds, and Porters of Warp, as to anſwer your deſired Breadths.

A TABLE ſhewing what the *Dutch* Meaſures on the *Scots* Ell, from a 6 to a 25 Hundred, incluſive.

D. H	*Scots* Ell. H.	P.	S.
6	5	1	2
7	6	0	9
8	6	4	0
9	7	4	3
10	8	3	10
11	9	2	17
12	10	2	14
13	11	1	11
14	12	0	18
15	13	0	6
16	13	4	13
17	14	4	0
18	15	3	7
19	16	2	14
20	17	2	1
21	18	1	8
22	19	0	15
23	20	2	0
24	20	4	9
25	21	3	16

N. B. That the firſt Column towards the left Hand, is the Hundreds *Dutch* Meaſure, or what is contained in 42½ Inches; and the other 3 Columns are what each of the ſaid Hundreds meaſures on the *Scots* Ell, in Hundreds, Porters, and Splits.

Example.

If you want to know what a 16 Hundred Reed, *Dutch* Meaſure, will be on the Ell; look for 16 Hundred in the Column of Hundreds *Dutch*, and oppoſite to 16 Hundred, ſtands 13 Hundred, 4 Porters, and 13 Splits, that is contained in the Length of one Ell, and it will take 15 Hundred of Warp to anſwer the common Breadth, which will be one Hundred and 7 Splits over each Ell of the Reed filled; and ſo of the reſt thro' this Table.

A TABLE shewing the Weight of each Slip of Yarn, *Dutch* Weight, when the Cloth is fine of the Set, according to the *Iriſh* Method.

Warps. H.	Warps. W.	Woofs. W.
6	9	8½
7	8	7½
8	7	6½
9	6	5½
10	5	4½
11	4½	4
12	3¾	3½
13	3½	3¼
14	3¼	3
15	3	2¾
16	2¾	2½
17	2½	2¼
18	2¼	2
19	2	1½
20	1¾	1⅜
21	1½	1¼
22	1⅜	1⅛
23	1¼	1
24	1⅛	0⅞
25	1	0¾

N. B. That the first Column towards the left Hand, is the Hundreds of the Reed, and the next opposite Column, is the Weight of Yarn *per* Hank that will be fit for any of the said Hundreds; and the last Column is the Weight that will be fit for Woofs, being from a 6 to 18 Hundred inclusive, about one Set finer of Woof than Warp, and from a 18 to a 25 Hundred inclusive, 2 Sets finer of Woof.

Example.

If each Slip of your Yarn that is designed for Warp, weighs 3 Ounces, then opposite to 3 Ounces for Warp, stands 15 Hundred, and in the Column of Woofs stands 2¾ Ounces, which will be the Fineness of Yarn that will woof a 15 Hundred; and so of the rest thro' this Table.

DIRE-

DIRECTIONS for boiling and preparing of Yarn to be wrought into Cloth.

1. THE sooner the Yarn is boiled after spinning the better, because when it lies long, the Saltness of the Spittle, when spinning, tenders the Yarn very much.

2. The better that Yarn is cleansed from its Filth, which is best done by Boiling; because altho' Yarn may be made white, yet not well purged, and consequently in the Bleaching, it must thin the Cloth much more than if the Yarn were well cleansed at first; because what Filth is not taken out in the preparing of the Yarn, must of Necessity cleanse in the Bleaching.

3. Now Yarn that is well and throughly purged from its Filth, before wrought into Cloth, must of Necessity stand the Trial of Bleaching better; because there is nothing left in the Yarn but the pure Stuff, and consequently it doth not thin so much in the Bleaching as ill prepared Yarn doth.

Of Boiling of Linen-Yarn.

ALtho' a great many have attained to considerable Improvement in Boiling of Yarn by the Help of Receipts printed and dispersed through the Country for that End, yet one Receipt more will not be amiss, as practised by the *Dutch* Weavers when in this Kingdom; and as there is a great many different Opinions in boiling of Yarn, such as

Leys made of Aſhes, different Kinds of Aſhes, ſteeping, ſowring, graſing, &c. The *Dutch* do not ſteep; yet, in my Opinion, if Yarn is not made of ſoft ſilky Flax, ſteeping is neceſſary.

Firſt of the Kinds and Quantity of Aſhes.

The hard Wee-aſhes that are burnt of Sea-ware, are ſharpeſt and moſt penetrating, and ſome boil with the whole of theſe Aſhes, without any Mixture of Pot-aſhes amongſt them; but as the hard Wee-aſhes are of a hard Nature, a Mixture of ſoft Pot-aſhes among them doth better, becauſe they make the Yarn ſoft and more plyable than if it were boiled with the whole of the Wee-aſhes.

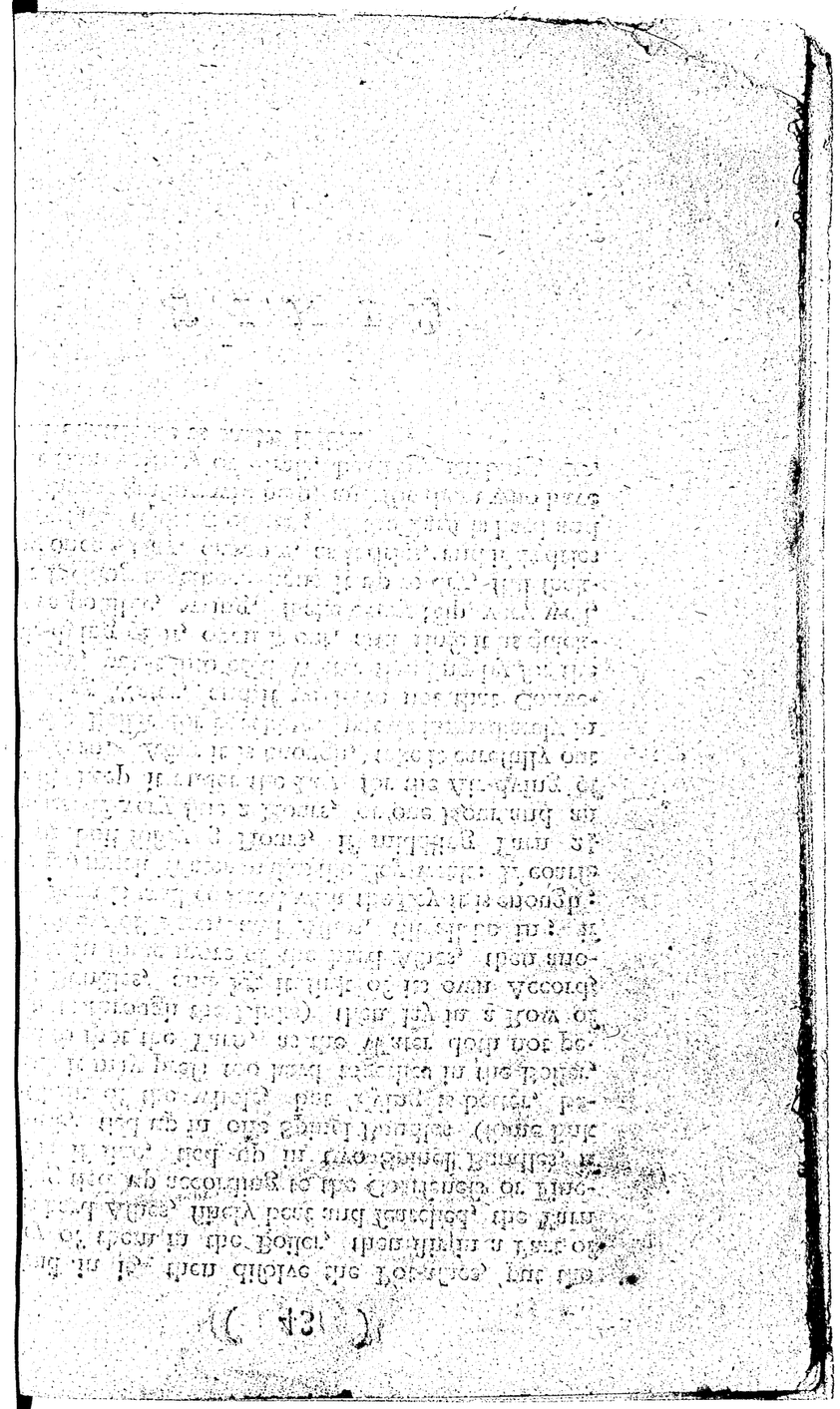
Of the Quantity of Aſhes.

For every two Pound of Yarn, one Pound of hard Aſhes, when a Mixture of Pot-aſhes is to be uſed with them; one Pound of the Pot-aſhes, is double ſtrong of the Wee-aſhes, that is to ſay, One Pound of Wee-aſhes is to boil two Pound of Yarn, and one Pound of Pot-aſhes is to boil 4 Pound of Yarn: Now then, the Quantity of Yarn that is to be boiled, is 64 Pound Weight, and then 32 Pound of hard Aſhes would be ſufficient; but for a Mixture of Pot-aſhes, take for every 6 Pound of hard Aſhes one Pound of ſoft, and then deduct ſo many of the hard Aſhes as to have Part of the ſoft, that is to ſay, 24 Pound Weight of hard Aſhes, and 4 Pound of Pot-aſhes, will be ſufficient for 64 Pound Weight of Yarn; and ſo obſerving an equal Proportion of a right Quantity of both Aſhes for any Number of Spinels according to the Weight of the Yarn.

Loch, Rain, River Water is beſt, being ſofteſt; let the Water be as hot as ye cannot hold your Hand

Hand in it, then diſolve the Pot-aſhes, put the Ley of them in the Boiler, then ſtir in a Part of the hard Aſhes, finely beat and ſearched, the Yarn being tied up according to the Coarſeneſs or Fineneſs; if fine, tied up in two Spinel Bundles, if coarſe, tied up in one Spinel Bundles (ſome link a Chain of the whole, but Tying is better, becauſe it may preſs too hard together in the Boiler, and ſo ſpot the Yarn, as the Water doth not penetrate through the Links) then lay in a Row of the Bundles, and let it ſink of its own Accord, ſtraw in ſome more of the hard Aſhes, then another Row of Yarn, and Aſhes, till all be in; if the Yarn is well covered with the Ley it is enough; for too much Water makes the Ley weak: If coarſe Yarn boil ſoftly 3 Hours, if middling Yarn 2½ Hours, if very fine 2 Hours, or one Hour and an Half, keep it under the Ley for the Air-dying of the Yarn. After it is enough, take it carefully out of the Boiler for breaking, put it immediately in running Water, and if ye have not that Conveniency, put it into cold Water ſtanding by for the Air-dying of it, open it out, and rinſe it as quickly as poſſible, wring, ſhake every Slip very well, for ſticking together, hang it up to dry, ſtill ſhaking once a Day, or more, as it dries, and if it dries very faſt, ſhake it oftner; if the Yarn is hard and ſtubborn, graſing will help, and for them who have not Conveniency of Graſs, beating, rubbing, &c. will contribute to make it ſoft.

FINIS.



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