
CONTENTS.

PAGE.

INTRODUCTION—Motives for undertaking this Work —Objections considered—Historical Facts relative to the Art of Weaving—Political and Economical Causes of its Extension—General Plan and Abstract of the Contents of the Essays,	1
---	---

ESSAY I.

ON THE WEAVING OF PLAIN CLOTH.

Materials and Texture,	1
General Explanation of the Plates,	2
Winding,	4
Warping,	5
Warping Mill,	6
Operation of Warping,	9
Beaming,	11
Drawing,	12
Weaving Loom,	13
Yarn Roll, or Beam,	16

CONTENTS.

	<i>PAGE.</i>
Rods,	18
Heddles,	ib.
Lay and Reed,	21
Temples,	24
Cloth Roll, or Beam,	ib.
Shuttle and Pirn,	25
Dressing,	26
Weaving,	29
Treading,	30
Crossing the Shuttle,	33
Striking home the Woof,	ib.
Faults in Cloth,	36
Calculations and Tables,	38
Warpers' Table,	43
Ravels,	56
Beaming Table,	59
Setting of Heddles,	72
Setting Table,	75
Ornamental Weaving, with Plain Mounting,	80
Stripes,	ib.
Checks,	84

CONTENTS.

ESSAY II.

ON THE WEAVING OF TWEELED CLOTH.

	PAGE.
General Remarks,	85
Causes of the Strength of Tweels,	87
Mounting of Looms for Tweeling,	89
Draught and Cording,	92
Arrangement of Treddles,	95
Breaking the Tweel,	98
Tweel of Five Leaves,	99
——— Six Leaves,	100
——— Seven Leaves,	ib.
——— Eight Leaves,	101
——— Sixteen Leaves,	102
Tweeled Stripes,	ib.
————— of Five Leaves,	103
Broken Tweeled Stripe,	104
Design Paper,	105

Patterns for Table Cloths.

Of 2 Sets, or 10 Leaves,	108
— 3 Sets,	111
— 4 Sets,	113
— 5 Sets,	117
— 6 Sets,	119
Back Harness, or <i>Diaper Mounting</i> ,	122

CONTENTS.

	<i>PAGE.</i>
Fancy Flushing,	125
Remarks,	133
Collection of Patterns used in the Lancashire Manu- facture,	137
Serge Tweeling,	151

LIST OF THE PLATES.

- 1st, Warping Apparatus.
- 2d, Plan and Elevation of a Plain Loom.
- 3d, Elevations and Sections of do.
- 5th, Plans and Elevation of Mounting for Tweeling.
- 6th, Designs, Draughts, and Cording for Table Cloths.
- 7th, Do. illustrated by colours.
- 8th, Plans and Elevations of the Back Harness, or Diaper
Mounting.

CONTENTS.

ESSAY III.

DOUBLE CLOTH WEAVING.

	<i>PAGE.</i>
INTRODUCTORY Remarks,	153
Carpets of two Colours,	154
Draw Loom,	161
Reading on the Design,	164
Patent Draw Loom,	169
Comparison of the Draw Looms,	172
Remarks on Mounting Draw Looms,	174
Carpet Draw Loom,	176
Carpets of more than two Colours,	179
Concluding Remarks,	ib.

ESSAY IV.

CROSS WEAVING.

Introductory Remarks,	181
Gauze,	182
Description of Mounting,	186
Application of the Weights,	187

CONTENTS.

	<i>PAGE.</i>
Connections of the Mounting,	189
Whip Net,	192
Mail Net,	195
Mounting and Connections,	197
General Remarks,	199
Patent Net, or Night Thought,	200
Mounting and Connections,	202
Catgut,	204
Miscellaneous Observations,	205
Dropped Nets,	ib.
Spider Net,	206
Double Paris Net,	ib.
Balloon Nets,	ib.
Concluding Remarks,	207

ESSAY V.

SPOT WEAVING.

Common Spots,	209
Paper Spots,	212
Allover Spots,	214
Brocades, or Finger Spots,	218
Spot Draw Loom,	220
Lappets,	221
Double Frame Lappet,	222
Wheel Lappets,	ib.
Pressed Spotting,	224
Conclusion,	225

CONTENTS.

ESSAY VI.

ECONOMY OF WEAVING.

	<i>PAGE.</i>
Introductory Remarks,	227
State of the Linen Trade in 1733,	231
Advance of this Trade until 1784,	250
Remarks on the Linen Manufacture,	252
Rise and Progress of the Cotton Trade,	253
Comparison of the Trades,	256
Modes of Economy in the Cotton,	258
Winding Machines for Warp,	259
Stockport Plan,	261
Dressing Machine,	ib.
Improvement in Looms,	262
Remarks on Dressing,	263
Cylindrical Brush Machine,	266
Experiment made at Barrowfield,	267
Hints for its Improvement,	270
Power Looms,	272
Wiper Loom,	274
Crank Loom,	276
Vertical Loom,	277
Velocity of Power Looms,	282
Modes of inserting Weft,	283
Compressing of Cops,	ib.
Winding Machines for Pirns,	284

CONTENTS.

ESSAY VII.

MANUFACTURING OF CLOTH.

	<i>PAGE.</i>
Introductory Remarks,	285
Caaming, or Sleying,	286
Geometrical Principles, as published in 1759,	287
Remarks on this Theory,	296
Computation of Linen Yarn,	302
Table of Warps,	305
Principle of the Calculations,	318
Computation of Cotton Yarn,	319
————— of Woollen Yarn,	321
————— of Silk,	ib.
Scotch and English Reeds,	ib.
Bolton and Manchester Reeds,	322
Stockport Reeds,	ib.
Comparative Tables,	323
Manchester and Bolton,	324
Stockport,	325
Weavers' Glasses,	326

LIST OF THE PLATES.

- 4th, Miscellaneous Specimens of the Texture of Cloth.
- 9th, Plans and Sections of various Draw Looms.
- 10th, Plans and Sections of Gauze Mountings.
- 11th, Plans and Sections of Net Mountings.
- 12th, Designs, Draughts, and Cordings of Spots.
- 13th, Do. do.
- 14th, Plans, &c. of the Working Machinery of Power Looms.