

Table of Contents

	page		page
A. General Terms on Weaving	1	b) Warp Beaming Machines . . .	80
B. Weaving Materials		a) Beaming Frame	80
I. General Terms	8	β) Ball Warp Beaming Machine	80
II. Kinds of Yarn	12	γ) Machine for Beaming from Warper's to Weaver's Beam	82
1. Cotton Yarns	12	c) Warp Cleaning	83
2. Flax Yarns	12	II. Preparation of the Weft	84
3. Hemp Yarns	13	1. Weft Winding	84
4. Jute Yarns	13	a) Weft	84
5. Yarns from Other Vegetable Fibres	13	b) Winding Wheel	86
6. Wool Yarns	14	c) Weft Pirn Winder	86
a) Woollen or Carded Yarns	14	α) General Terms	86
b) Worsted Yarns	14	β) Weft Winding Machine for Movable Pirns	89
7. Hair Yarns	15	γ) Weft Winding Machine for Fixed Pirns	91
8. Silk Yarns	16	γ ₁) Morrison's Weft Winder for Cross Wound Cops	91
9. Artificial Silk Yarns	17	γ ₂) Cup Winding Machine	93
10. Asbestos Yarns	17	γ ₃) Cop Winder with Guide Cones	98
11. Fancy Yarns	18	γ ₄) Weft Winding Machines with Friction Roller Thread Guide	100
C. Processes Preparatory to Weaving		2. Moistening the Weft	101
I. Preparation of the Warp	21	III. Drawing in the Warp Threads	102
1. General Terms	21	1. General Terms	103
2. Winding	22	2. Drawing in Appliances	105
a) General Terms	22	IV. Reeding	106
b) Hand Reel	26	V. Joining the Warp Threads	109
c) Warp Winding Frame	26	1. General Terms	110
α) General Terms	26	2. Apparatus for Joining the Warp Threads	111
β) Warp Winding Frame with Horizontal Spindles	30	D. Weaving	
γ) Vertical Spindle Warp Winding Frame	36	I. Movement of Warp and Cloth	114
3. Warping	40	1. General Terms	114
a) General Terms	40	2. Movement of the Warp	117
b) Bobbin Creels	43	a) General Terms	117
c) Warping Mill	45	b) Let off Motion	119
d) Warping Machines	47	α) Warp Tension Controlled by Springs	119
α) Beam Warping Machine	47	β) Tension Regulation by a Sprocket Wheel	119
β) Sectional Warping Machine	54	γ) Frictional Let off Motions	119
γ) Warping Mill for Ribbon Weaving	56	γ ₁) General Terms	119
δ) Scotch Warping Mill	56	γ ₂) Brake	120
ε) Silk Warping Machine	60	γ ₃) Rope Brake	121
ς) Cheese Warping Machine	63	γ ₄) Combination Brake	124
4. Balling and Rewinding the Warp	63	δ) Yarn Beam Regulators	126
5. Sizing, Dressing	63	δ ₁) General Terms	126
a) General Terms	63	δ ₂) Positive Let off Motions	128
b) Sizing Agents	66	δ ₃) Negative Let off Motion	129
c) Size Mixing Apparatus	68	3. Taking up	129
d) Dressing or Sizing the Yarn in Hanks	69	a) General Terms	130
e) Ball Warp Sizing	71	b) Taking up Motion	132
f) Beam Sizing	72	c) Cloth Beam Regulator	134
α) Scotch Dressing Machine	72	α) Positive Continuous Taking up Motion	134
β) Slasher Sizing Machine	73	β) Positive Intermittent Taking up Motion	136
γ) Hot Air Sizing Machine	75		
δ) Sizing Apparatus Attached to the Loom	75		
6. Warp Beaming	76		
a) General Terms	76		

VIII

	page		page
γ) Negative Taking up Motion worked by Weighted Lever	137	δ) Jacquard for Weaving	231
δ) Spring Weighted Negative Taking up Motion	137	Damask	233
4. Lease Bar	137	Twilling Jacquards	235
5. Temples	138	Repeating Apparatus	235
a) Hand Temple	138	III. Picking	236
b) Mechanical Temple	139	1. Weft	236
II. Shedding	141	2. Shuttle	237
1. General Terms	141	3. Movement of the Shuttle	246
2. Principles of Interlacing	143	a) Picking by Hand	246
a) General Terms	143	b) Pick, Shot	246
b) Kinds of Weave	145	c) Pneumatic Operation of the Shuttle	256
α) Weave for Plain Cloths	145	d) Positive Picking Motion	256
β) Weave for Stripes, Checks and Figured Weaves	153	4. Weft Insertion by Gripping Shuttles	257
γ) Weave for Extra Weighted Cloths	154	5. Insertion of Weft without Shuttles	259
δ) Weave for Fabrics with Patterns Woven in by Extra Floating Weft	162	6. Weft Supply	260
ε) Weave for Brocaded Fabrics	162	a) Change of Bobbins by Hand	260
ζ) Weave for Leno Cloths	163	b) Automatic Weft Supply	260
η) Weave for Looped Fabrics	166	c) Automatic Shuttle Changing	266
θ) Weave for Velvet and Velvetlike Fabrics	166	7. Weft Change	271
3. Means for Forming the Shed	170	a) General Terms	271
a) Shedding by Healds	171	b) Drop Box Change Motion	273
α) Shafts	171	c) Circular Box Motion	279
β) Kinds of Healds	173	d) Change Box Card	280
γ) Heald Knitting Machine	176	IV. Beating up of the Weft	282
δ) Heald Braiding Machine	178	1. Reed	282
ε) Dressing of the Twine Healds	179	a) General Terms	282
ζ) Wire Heald Twisting Machine	180	b) Kinds of Reeds	284
η) General Terms in Shaft Weaving	181	c) Reed Making	286
θ) Treadle Loom	182	2. Slay, Lathe, Batten	288
b) Shedding by Dobbies	186	3. Movement of the Slay	292
α) Types of Dobbies	186	E. Details of Hand Loom Weaving	
β) Details of the Dobby Machine	197	I. General Terms	296
β ₁) Heald Levelling Motion	197	II. Loom Framing	297
β ₂) Shedding Motion	197	III. Letting off and Taking up Motion	298
β ₃) Dobby Drive	203	IV. Pattern Loom	299
β ₄) Needle Board	204	F. Details of Power Loom Weaving	
β ₅) Cylinder Movement	205	I. Types of Looms	300
β ₆) Pattern Card Rails	206	II. Loom Drive	305
β ₇) Dobby Loom	206	1. General Terms	305
c) Shedding by Harness	207	2. Belt Driving	307
a) General Terms	207	3. Gear Driving	307
β) Predecessors of the Jacquard	208	4. Electric Driving	309
γ) Jacquard Machine	209	5. Loom Brake	311
γ ₁) General Terms	209	III. Safety Appliances	312
γ ₂) Numbering of Jacquard Machines	214	1. Shuttle Guard	312
γ ₃) Classification of Jacquard Machines	215	2. Safety Appliances against Picking Motion Breakages	313
γ ₄) Pitch of Jacquard	216	3. Warp Protector	315
γ ₅) Shedding Operated by Jacquard Machine	216	4. Weft Stop Motion	317
d) Gaiting of the Jacquard Loom	217	5. Warp Stop Motion	319
e) Tie up	220	G. Special Looms	
ζ) Jacquards with Special Arrangements	225	I. Cotton Loom	321
ζ ₁) English Cord Machine	225	II. Hand Loom for Linen Weaving	323
ζ ₂) Jacquard with Swing Needle Box	226	III. Hand Loom for Silk Weaving	323
ζ ₃) Jacquard Machine with Double Griffes Blocks	226		
ζ ₄) Open Shed Jacquard Machine	226		
ζ ₅) Centre Shed Jacquard	228		
ζ ₆) Jacquard Machine for Clean Shedding	228		
ζ ₇) Verdol Jacquard	229		
ζ ₈) Double Cylinder Jacquard	230		

	page		page
IV. Hand Loom for Wire Weaving	324	1. Cotton Goods	392
V. Hand Loom for Terry Weaving	325	a) Plain Cotton Goods	392
VI. Hand Loom for Piqués	325	α) Close Woven Goods	392
VII. Power Loom for Pile Weaving	326	β) Loose Woven Goods	393
VIII. Looms for Weaving Plush	330	b) Cotton Goods in Twill and Satin Weave	394
IX. Looms for Tapestry and Carpets	334	c) Figured Cotton Goods	394
X. Loom for Embroidered Goods	344	d) Cotton Pile Fabrics	394
XI. Loom for Figured Goods	344	2. Linen Goods	395
XII. Lappet Loom	349	a) Plain Linen and Hemp Goods	395
XIII. Loom with Hook Bar	351	b) Linen Goods in Twill and Sateen Weave	396
XIV. Loom for Leno Weave	352	c) Figured Linen Goods	396
XV. Loom for Beaded Material	354	3. Jute Fabrics	396
XVI. Loom for Fringed Material	355	a) Plain Jute Fabrics	396
XVII. Ribbon Loom	355	b) Twilled Jute Fabrics	397
XVIII. Loom Arranged for Split Warp	361	4. Woollen and Worsted Goods	397
XIX. Bobbin Net Machines	363	a) Woollen Goods	397
1. General Terms	363	α) Plain Woollen Goods	397
2. Plain Net Machine	366	β) Woollen Fabrics in Twill and Sateen Weave	398
3. Lace Curtain Machine	368	b) Worsted Fabrics	398
4. Lace Machine	369	α) Plain Worsted Fabrics	398
		β) Worsted Fabrics in Twill and Sateen Weave	399
		γ) Figured Worsted Fabrics	399
		δ) Worsted Pile Fabrics	399
		c) Union Fabrics	400
		5. Silk Fabrics	400
		a) Plain Weave Silk Fabrics	400
		b) Gauzy Silk Fabrics	401
		c) Twilled Silk Fabrics	401
		d) Silk Fabrics in Sateen	402
		e) Figured Silk Fabrics	402
		f) Silk Pile Fabrics	403
		6. Pile Fabrics	403
		a) General Terms	403
		b) Velvets and Velvetens	403
		α) Weft Pile Fabrics, Fustian	403
		β) Velvet, Warp Pile Fabrics	404
		c) Plush	404
		α) General Terms	404
		β) Furniture Plush	404
		β ₁) General Terms	404
		β ₂) Moquette	405
		β ₃) Mohair Plush, Seal-skin	405
		γ) Decorative Plush	406
		δ) Plush Dress Material	406
		ε) Lambskin	406
		7. Carpets	407
		a) General Terms	407
		b) Ordinary Carpets	408
		c) Two Ply Carpets	408
		d) Pile Carpets	408
		α) Weft Pile Carpets	408
		α ₁) Knotted Carpets	408
		α ₂) Chenille Carpets	410
		β) Warp Pile Carpets	411
		8. Bobbin Net	412
		9. Paper Felt	414
		10. Horsehair Fabric	414
		11. Beaded Material	414
		12. Rubber Material	415
		13. Straw Material	416
		14. Material made from Wood	416
		15. Wire Fabrics	416
		16. Heavy Overcoat Materials	417
		17. Upholstery Fabrics	418
		18. Material for Curtains	418
		19. Covering Fabrics	419
		20. Body and Household Linen	420
		21. Shawls	420
		22. Patterned Fabrics	421
		23. Tapestries	422
		24. Ecclesiastical Robes and Draperies	422
		25. Woven Lace	423
		26. Small Ware	424
		a) Ribbons, Tapes, Bands	424
		b) Borders, Trimmings, Braids	427
		c) Straps, Belts, Webbing, Girths	428
H. Counting and Measuring Devices	370		
I. Accessories for Weaving Sheds	371		
K. Pattern Designing			
I. General Terms	376		
II. Pattern Sketch	376		
III. Designing	378		
L. Jacquard Card			
I. General Terms	382		
II. Card Paper Cutting	383		
III. Card Cutting	384		
IV. Card Repeating	389		
V. Card Lacing	389		
M. Woven Materials			
I. General Terms	391		
II. Division of Cloth according to Material, Weave and Application	392		

	page		page
N. Cloth Testing		O. Weaving Calculations	
I. General Terms	429	I. General Terms	441
II. Names of Fabrics	430	II. Measurement of Cloth	441
III. Names of Textile Fabrics according to their application.	432	III. Yarn Requirements	443
IV. Determining the Weave	433	1. Warp Calculation	443
V. Setting	434	2. Weft Calculation	444
VI. Yarn Testing	435	IV. Wages	444
VII. Ascertaining the Count of Yarns	435	V. Working Expenses	445
VIII. Determination of Raw Material	436	Alphabetical Index	
IX. Determination of the Dressing Processes.	436	a) German	450
X. Instruments and Apparatus for Cloth Testing	438	b) English	496
		c) Russian	537
		d) French	606
		e) Italian	641
		f) Spanish	676

Abbreviations

(m), (mp) = masculine
 (f), (fp) = feminine
 (n), (cp) = neuter
 (A) = American
 s. = siehe, see
 s. a. = siehe auch, see also

v. = voir, vedi, ver
 v. a. = voir aussi, vedi anche
 v. t. = ver también
 c. = смотри
 c. т. = смотри также