CONTENTS

CHAPTER I

CLASSIFICATION	OF	POWER-LOOMS

Installation and Arrangement of Looms—Right and Left
Hand Looms—Driving of Looms—Brake Motions
—Balance Wheel—Friction Driving—Features and
Advantages of the Indirect Driving Motion—Speed
and Production—Speed Calculations—Transmitting
Motion throughout the Loom

1

PAGE

CHAPTER II MOTIONS OF THE LOOM

Beating-up Motion—Construction of the Going Part—Wood and Iron Shuttle Races—Movement of the Going Part and Flying Shuttle—Stroke of the Going Part—Its Effect on Speed of the Loom and Weaving Qualities of the Warp—Nature of the Motion Imparted to the Going Part—Motion of the Going Part during the time the Crank is turning about the four Centres—Factors which Influence the Eccentric Motion of the Going Part—

Crank is turning about the four Centres—Factors which Influence the Eccentric Motion of the Going Part—Position of the Reed when Beating-up—Resistance of the Warp to the Beat-up in different Weaves—Relation and Timing of the Various Motions—Picking Motion—Shedding Motion—Box Motion—Letting-off and Setting-up Motions

28

CHAPTER III

SHEDDING MECHANISM

Sectional Tappet — Barrel Tappet — Bradford Tappet —
Driving the Tappets and Change Wheel Calculation—
Variety of Weave Effect — Tappet Construction—
Method of Drawing the Outline of a Tappet—Nature
of the Motion desirable for the Healds—Reversing
Motions for Tappet Mechanism—Weights—Springs—
Heald Pulleys—Stocks and Bowls—Kenyon's and
similar Under-motions—Positive Tappet Mechanism .

46

CHAPTER IV.

DOBBY MECHANISM

Timing and Setting—Harmonic Motion of the Heald— Jack-missings—Lever Dobby—Hattersley Doubleaction Open-shed Dobby—Centre Closed-shed Dobby— —Cross Border Dobby—Defective Shedding—Reediness in Cloth—Uneven Shedding—Badly-formed

V

CONTENTS 15	•
CONTENT	ı

viii	CONTENTS	
	Selvages — Weft Staplings — Depth of Shed and its Effect on the Warp—Perfect Slope of Shed—Easing the Strain on Dobby Mechanism	PAGE
Shuttl	CHAPTER V PICKING MECHANISM es—Shuttle-box and its Influence on the Shuttle— The Pick—Picking Motions—Timing and Setting— Defective Picking—Over-pick—Pick-at-will Motion— Shuttle-easing Motions—Shuttle-checking Motion— Defective Checking—Under-pick Motion—Timing of the Pick—Setting the Pick—Early and Late Picking— Defects in Picking Motions—Tight and Slack Shuttle-boxes—Waste of Weft—Pickers and Picking Straps	105
Settin	CHAPTER VI SHUTTLE-BOX MECHANISM g the Boxes — Chain-making for Box Motions — Features in Chain-making—Building up Box Chains— Complicated Weft Plans—Circular Box Motion—Indicating to the Boxes—Circular Skip-box Motion— Working of Circular Box Motions—Pattern Chains .	128
Negai	CHAPTER VII LET-OFF MECHANISM tive Let-off Motions — Varying the Tension of the Warp—Causes of Defective Working—Advantages and Disadvantages of this Class of Motion—Positive Let-off Motions—Regulating this Class of Motion	161
Negai	CHAPTER VIII TAKE-UP MECHANISM live Motions—Automatic Regulating Motion—Features of Negative Motions—Positive Take-up Motions —Features of Positive Motions—Calculations for Take-up Motions	178
Weft	CHAPTER IX AUXILIARY MECHANISM Stop-motion—Centre Weft-fork—Defects due to Weft Stop-motions—Warp Protector Motion—Fast Reed Motion—Warp Stop-motion—Electrical Warp Stop-motion—Temples—Types of Temples—Roller Temples—Summary of Defects Caused by Temples—Selvages—Selvage Motions—Centre Selvages—Doup Heald.	191
INDE	· ·	217