

ABSTRACT OF CONTENTS.

THE COTTON FIBRE.

	PAGE.
Botany	1
Advantages	1
Origin and its Introduction into the U. S.	2
Foreign Varieties	4
Structure of the Fibre	4
Physical Properties	5
Ripe and Unripe Fibres	6
Chemical Composition	7
Scientific Classification	7
Staple	8
Cultivation	9
Atmosphere and Climate	10
Soil	11
Seed	11
Planting and Cultivating	12
Picking	14
Diseases of and Enemies to the Cotton Plant	16
Sea Island Cotton	17
American or Mainland Cotton	17
Foreign Cottons	19
Egyptian Cotton	19
Peruvian Cotton	19
Brazilian Cotton	20
Indian Cotton	20
Chinese Cotton	21
Defects to the Fibre and Impurities Found in Cotton	21
Unripe Cotton	21
Broken Fibres	22
Broken Leaves	22
Seeds	23
Sand and Mineral Matter	23
Moisture in Cotton	23
Stained Cotton	24

ABSTRACT OF CONTENTS.

	PAGE.
Bye Products of Cotton Seed	24
Grading of Cotton	26

CLEANING, GINNING AND BALING.

Cleaning	30
Ginning	32
The Roller Gin	33
The Saw Gin	40
The Huller or Double Breasted Gin	47
Linting Machine	49
Baling	49

PREPARATORY PROCESSES.

Bale Breakers	55
The Roller Bale Breaker	56
The Comber Bale Breaker	57
Mixing	60
Staple	61
Character	61
Color	61
Cleanliness	62
Price	62
Waste	62
Warp or Filling	63
Testing the Loss in a Fresh Supply of Cotton	64
Proper Mixing	64
Picking	68
Open Feeding	68
Hopper Feeding	69
Combined Picker and Hopper Feed	75
Horizontal Conical Exhaust Picker	77
Vertical Picker	78
Feeding Round Bales	79
Cleaning Trunks	82
Inclined Trunks	82
Horizontal Trunks	85

ABSTRACT OF CONTENTS.

	PAGE.
Breaker Scutcher	87
Intermediate and Finisher Scutcher with Lap Machine	95
Draft Regulating Devices for Scutchers	97
The Evening Mechanism	100
Feeding Arrangements	104
Beaters	107
Grids	110
Lapping	113
Notes on Picking and Scutching	115
Mill Plans for the Preparatory Department	121
Calculations	126
Driving of Scutchers	129

CARDING.

The Revolving Flat Card	135
Cleaning Action of the Card	139
Laps	141
The Object of Perfect Feeding	141
Setting of the Mote Knives, Undercasing and Lickerin	142
Setting of the Flats	143
Setting of Doffer, Comb and Cylinder Undercasings	146
The Waste Made on a Card	147
The Coiler	147
Railway Head	148
Double Carding	150
Carding Bleached and Colored Cotton	150
Card Clothing	152
Card Wire	158
Grinding	159
Re-covering Grinding Rollers	166
Burnishing	166
Stripping	167
The Drive for a Card	175
Draft	180
Calculations	182
Index of Illustrations	187
