

**COTTON SPINNING (HONOURS, OR
THIRD YEAR). BEING A COMPANION
VOLUME TO "FIRST YEAR COTTON
SPINNING" AND "INTERMEDIATE, OR
SECOND YEAR COTTON SPINNING"**

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Cotton Spinning (Honours, or Third Year). Being a Companion Volume To "First Year Cotton Spinning" And "Intermediate, or Second Year Cotton Spinning" by Thomas Thornley

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THOMAS THORNLEY

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COTTON SPINNING

(HONOURS, OR THIRD YEAR)

BY

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ON DRAWFRAMES AND FLYFRAMES" ("SELF-ACTOR MULE," VOL. I;
"MULE-SPINNING," VOL. II), ETC.

BEING A COMPANION VOLUME TO "FIRST YEAR
COTTON SPINNING" AND "INTERMEDIATE, OR
SECOND YEAR COTTON SPINNING"

WITH SEVENTY-FIVE ILLUSTRATIONS

SECOND EDITION

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PREFACE.

SINCE the revision and extension of the scheme of the cotton spinning examinations of the City Guilds of London Institute, some four years ago, there has been greatly felt the need of a book dealing succinctly and definitely with the subjects comprised in the syllabus of the honours grade. Many times it has been pointed out to the author that no one book did cover this syllabus.

The first aim of the present work is to meet the requirements of the honours syllabus, and to more or less cover, as far as space has permitted, practically the whole of the subjects specified therein.

It must not, however, be imagined for a moment that this treatise is intended only for students in honours cotton spinning. On the contrary, it is hoped and believed that students actually attending classes will only form a comparatively small section of the readers.

It must be remembered that the present syllabus of the honours grade of the City Guilds has been expressly designed and passed by a selected committee of experts, with a view to meeting the requirements of masters, managers, foremen, salesmen and any others who already hold, or are hoping to hold, more or less responsible positions in connection with our great cotton spinning industry.

Any work, therefore, which expressly aims at fulfilling the requirements of this syllabus must necessarily appeal to all such individuals, and tend to be of more or less service to them.

To appreciate fully what is meant by these remarks, reference should be made to the honours syllabus as reprinted at the commencement of this work.

It will be seen that it comprises such subjects as the selection and commerce of cottons and cotton yarns; the practical manipulation of all the machinery con-

tained in a fully-equipped coarse, medium or fine cotton spinning concern, as well as that of a cotton doubling mill; also mill planning; waste spinning; wages and fire prevention.

Speaking, for instance, with reference to reeling, doubling, thread making, etc., there is at the present time often an inquiry for a book dealing especially with these subjects. As they come well within the scope of the present honours syllabus, they are here dealt with somewhat fully.

In like manner, there has been latterly a good deal of interest manifested in cotton waste spinning, and a considerable amount of information on this subject will be found in this treatise.

Those familiar with the present author's more exhaustive treatises on special machines and processes of cotton spinning will well understand that he makes no pretence of having fully exhausted in this treatise the subjects that are more or less treated upon. Rather has it been his special aim to provide a comprehensive treatise covering the whole of the subjects specified in the honours syllabus.

Sufficient has now been said to fully indicate the scope and aim of this work, and it remains for the reader to judge whether the objects aimed at have been attained to the extent indicated above.

It may be added that with this volume also the grateful thanks of the author are due to the gentlemen and firms specified in the first volume. It may also be added to this preface that within the last two or three months an important Committee has been formed, composed of members of the County Council of Lancashire and representatives of Technical schools, a principal duty of this Committee being the consideration of how best to promote the study of spinning and weaving, by bringing the Examination syllabuses to still greater perfection and by any other suitable means.

THOMAS THORNLEY.

BOLTON, August, 1901.

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[Below is reproduced the Official Syllabus of the City and Guilds of London Institute for the Third Year's Course in Cotton Spinning.]

HONOURS GRADE.

1. The character and quantity of waste produced at each stage in the preparation and spinning of cotton and its utilisation; the preparation of waste for spinning; spinning waste; the machinery used for this purpose; the character of the yarns produced, and the purposes for which they are suitable.

2. The production of doubled yarns; the machinery used; the preparation of yarn for doubling; the characteristics of each variety; the modes of utilising doubled yarn for different purposes, and the machinery employed therein; thread manufacture.

3. The terms and conditions on which raw cotton is bought; the method of selecting it when purchasing; the defects usually existing, and their effect upon the value; tests for moisture and the permissible limit.

4. The various uses to which cotton yarn is put; the characteristics required for each purpose; the methods of making up yarns for various markets; reeling and bundling machinery.

5. The methods of testing cotton yarns for strength, elasticity, twist and moisture; defects in yarn and their remedy; the conditioning of yarn; the terms and conditions of sale.

6. The manipulation of the cotton by the various machines; the defects occurring during work and the method of correcting them; the adjustment of the parts of each machine for