

HISTORY OF DYEING

(Continued from March issue)

According to Bischoff, the first regulations for dyers were issued in Venice in 1429 under the name of "Mariegola dell'arte tintori." It is stated that an edition of these regulations appeared also in 1510.

Gioanventura Rosetti, the Director of the Arsenal in Venice, found these regulations very incomplete. In order to obtain further knowledge as regards the



Fig. 1

art of dyeing, he traveled in Italy and in other countries, and ultimately published his experiences in 1540, under the title: "Plicthos de Larte de tentori che insegna tenger panitelle banbasi et sede si perlarthe maggiore come per la comune."

Plictho was an assumed name, and the title translated means:—"Plictho's Art of Dyeing, which teaches how to dye cloth, linen, cotton and silk in durable, as well as false, or common colors."

The book contains two pictures, one of a cloth dyer, the other of a yarn dyer (Figs. 1 and 2), which are of interest because they are the earliest prints relating to dyeing to be found.

Below Fig. 1 the dyeing of scarlet on woolen cloth with cochineal, alum, and Brazil wood was described according to the "Great Art," while general instructions for the scouring and dyeing of silk yarn, as practiced by "the great Masters of Florence and other towns of Italy" was given below Fig. 2.

Rosetti does not mention Indigo in his book, and we must, therefore, assume that it was not used in dyeing in his time in Italy. Another edition of Rosetti's work was published in 1611.

The first book printed in black letter in the English language which deals with the subject of dyeing, and which is not mentioned by Bischoff, is "A profitable boke declaring dyuers approued remedies, to take out spottes and staines, in Silkes, Veluets, Limmen and Woollen clothes. With diuers colours how to die Veluets and Silkes, Linnen and Woollen, Fustian and Threade. Also to dresse Leather and to colour Felles, &c., . . . with a perfite table hervnto, to fynde

all thinges readye, not the like reucalde in English heretofore. Taken out of Dutche and englished by L. M. Imprinted at London by Thomas Purfoote and William Pounsanbie, 1583." The methods of dyeing given in this book are highly interesting.

A licence was given to Sir Arthur Aston in 1604 (August 23rd) for 41 years, to use and sell certain woods used in dyeing, while in 1607, September 21st, duties were imposed on Blockwood, Logwood, and other woods used for the dyeing of cloths.

That foreign dyers were still largely employed in England, is shown by a "Grant to . . . Simon Russel and Peter Carpinter, dyers of Flanders, of denization," given on January 20th, 1608.

The prohibition of the importation of Logwood made it necessary in 1608 (June 13th) to issue a warrant to pay to the Earl of Dunbar £4,000 in compensation of the imposition laid upon Logwood, Brazil wood, etc., which was formerly granted him in lieu of a patent for the sole manufacture of Logwood revoked by Parliament.

That silk must have been dyed in large quantities in England in the 17th century is shown in a record dated January 22nd, 1608, Serjants' Inn. "According to his Majesty's pleasure we have considered the best remedy of the great abuse in dyeing black silks . . . no person shall dye, within England or Wales, any raw silk in skeins into the color called coal black or London heavy-weight black, but into that called light-weight black; nor shall augment, by dyeing or otherwise the weight of any kind of raw silk above the quantity of 6 oz. per lb., avoirdupois or organzine silk and 8 oz. thrown silk."

In 1608, October 21st, we find that a fixing mate-



Fig. 2

rial for Logwood had been invented, because it is stated that "the sole venting and making of the fixing stuff, and the dyeing and finishing of true wearing colors in logwood, *non obstante* any law . . ." The Lord Mayor of London called all the dyers to-

gether and examined them when "they disclaimed the use of logwood, yet the contrary was proved." They stated that "logwood bettered the dyeing."

In this document regulations are given for dyeing, and we find further that somebody asks for "Liberty for the sole making and finding of the fixing stuff to such dyers as dye with logwood . . . upon grounds of woad or madder or both"; the payments to him are then stated. He prays that if this is not granted the dyers will soon make the stuff themselves "for men of art, after sometime using the said stuff, will find the way of making it." It is further stated that "they enter into their books fustic instead of logwood, and more is so entered than there is in the Customs' book in a year," and "if dyers desisted the use of logwood . . . as their falsehoods will be discovered, it would advantage his Majesty much more in his customs, by the importation of madder, woad, cochineal, etc."

(To be continued)

New Cotton Terminal at New Orleans.

To strengthen New Orleans' position as a cotton-exporting centre, Louisiana is planning the construction of a thoroughly modern cotton terminal and warehouse plant in that city. A bond issue of \$3,000,000 has been floated at par, and a tract of about 70 acres, with a frontage of 3,000 feet on the Mississippi obtained.

The probable character of the plant calls for six reinforced-concrete warehouses, each 600 feet long, 100 feet wide, and 8 stories high, equipped with mechanical devices for handling cotton, together with a loading wharf and shed along the entire water front of the property. The bottom floor of each warehouse will be made level with the floors of box cars and will be used as a receiving and sorting space. Here the cotton will be received, checked, sampled, sorted, and assigned to its proper place in the storage section on the upper floors, each of which, with the exception of the top floor, will be divided by concrete partitions into six rooms, 100 feet in length. The top floor of each warehouse will be inclosed in glass and used for delivery and shipping. There the cotton will be taken from the storage floors by elevators, sampled, classed, marked, branded, weighed, etc., and then delivered direct to ship side or into the ship's hold by gravity conveyors.

Each warehouse will have a storage capacity, exclusive of the ground and top floors, of 54,000 bales of cotton, giving the plant a maximum capacity of 324,000 bales at one time, which will take care of yearly warehouse receipts of 1,000,000 bales or more. An adequate compress plant will be part of the terminal equipment, wherein *flat* or uncompressed bales can be compressed before storage, thus conserving storage room. The wharves and sheds will provide facilities for the handling of cotton shipped on through bills of lading direct from car to ship.

The establishment of these warehouses will also permit cotton dealers to take advantage of low freight rates offered by tramp steamers in a way that is now impossible.

It is expected that the cost of handling and storage of cotton will be reduced one-half. The insurance rates will also be reduced by the greater protection afforded from fire.

THE FINISHING OF RIBBONS AND TRIMMINGS.

Actual Finishing Processes.

(Continued from page 81.)

(2.) THE BOILING OF FINISHING COMPOUNDS.

For preparing the finishing compound for use, the starch or flour as the case may be, are dissolved in a required quantity of cold water which then is gradually heated, carefully stirring the mass during this procedure, after which the other substances required, solid or in solutions, are added.

Fig. 19 shows us in its section a typical kettle for boiling finishing compounds. *a* indicates the copper kettle and *b* the casing, providing empty space *c* into which steam is introduced for heating the contents of the kettle. Frequently these apparatuses are provided with mechanically operated stirrers to keep the finish, while being prepared, under a uniform agitation. To simplify the taking out of the finish from kettle *a* when ready for use, the apparatus is provided with a tilting device operated by means of a crank through helix *d*.

In order to separate any thick, lumpy parts from the finish, the latter previously to using is drained through a sieve. The consistency of the finish de-

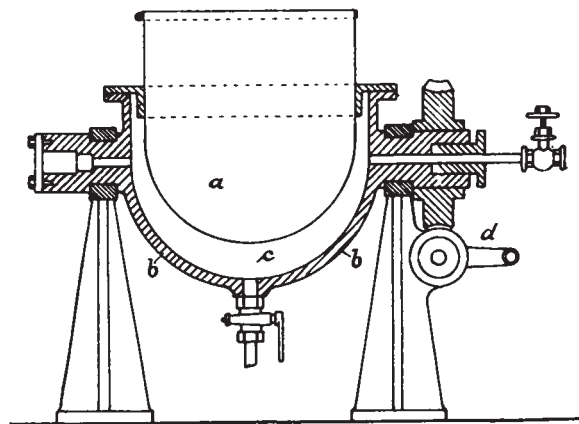


Fig. 19

pends on how the same shall act on the ribbon, *i. e.*, whether a thin or thick body is needed; again in some instances a doughlike substance may be required.

(3.) APPLICATION OF THE FINISH TO THE FABRIC.

The application of the finish to the ribbons as well as drying the latter, is done by what is known as the Ribbon Finishing Machine, and which comprises the Sizing Apparatus, the Cylinder Dryer, and the Delivery or Winding-up Apparatus. If the nature of the ribbons to be finished desire it, this ribbon finishing machine may also have added to it a brush or a steaming apparatus, whereas in some instances a calender may be found connected to it.

The most frequently used sizing apparatus consists of finishing quetsches, suitable for finishing (impregnating) one or both sides of the ribbons, whereas for finishing one side of the ribbons only the device known as a finishing mangle is used. In some instances both kinds of apparatuses are incorporated with the machine.

Finishing quetsches, although simple in their construction and operation, are made in various styles; their action upon the ribbons finished varies in the same way considerably.