

RECENT DEVELOPMENTS IN THE TEXTILE INDUSTRIES.

This paper, by Dr. A. Liebmann, is also of considerable interest. It deals chiefly with silk imitations. Woollen yarns showing the scroop and lustre of silk were introduced in 1894. They were obtained by means of chlorination, treating the material with hydrochloric acid and bleaching powder. Unfortunately the chlorine did not act uniformly, so that the dyed fibre looked streaky afterwards, making it suitable only for wefts and knitting yarns. Then the fibre turned yellow; it was further left, in some cases, in a condition very sensitive to alkalis, so that only acid baths could be applied with which no delicate shades can be produced. As regards artificial silks prepared from cotton and cellulose, some remarks made by Réaumur in 1734 were very interesting. Réaumur points out that as silk is nothing but a solidified gum, we ought to be able to produce silk threads from gums or their derivatives. Chardonnet's experiments became known in 1885. His threads, Dr. Liebmann stated, look irregular under the microscope, which is due to shrinkage during drying. Lehner's thread is similar; Vivier's looks like an eight, Millar's is quite round, Pauly's round or oval. In strength they are all inferior to natural silk; cotton silks are probably stronger than cellulose products; all lose considerably in strength when moist. Though the inflammability danger has quite been overcome, artificial silk remains suitable only where appearance, apart from quality, permits. Unsuitable for dresses, it makes splendid wraps, trimmings, borders, &c., and is largely used as weft for silk and cotton fabrics.

Mercerisation, Dr. Liebmann continued, has become very important. Cotton fibre treated with strong caustic alkalis shrinks and afterwards displays a silky lustre, which persists through bleaching and dyeing; the fibre further becomes stronger and attracts mordants and colouring matters more readily. Yarns have to be selected, spun from long-staple cottons; they should be double yarns, the more slackly doubled the better. Pieces to be treated should be woven from such yarns. Whether the stretching of the yarn is simultaneous with the mercerisation or subsequent to it, a much-contested question, does not matter at all in Liebmann's opinion. As novelties he mentioned Kleinewever's process, who applies centrifugal force as stretching power, and a mercerisation machine exhibited at Paris, which aspirates the caustic through the stretched cloth.

A good exhibition of artificial silks had been arranged at the Technical College, to which the chairman, Dr. Perkin, Sen., drew attention. Mr. A. Rowbotham strongly recommended ramizfibre, but Dr. Liebmann thought it was not sufficiently elastic for silk production. Mr. A. F. Reid pointed out that artificial silk made us less dependent on American cotton; and mentioned that he possessed specimens of silk, produced biologically from sugar. Chemists had a wide field open for further investigation.

We have been obliged to pass over purely chemical papers, presented by Messrs. Cross, H. B. Dakin and J. B. Cohen, W. R. Hodgkinson and Simpach, Ruhemann and H. E. Stapleton-Fenton, H. O. Jones, and Miss Gossling.

The British Association is to meet at Glasgow on September 11, next year.