

the Société Alsacienne, reappeared in Yorkshire—then too late, some authorities think, to give the British manufacturer a chance in the short-combed French goods trade.

It is obvious that the author has not followed the interesting work of Prof. Ewart, of Edinburgh University, or he would not refer to the black-faced variety of sheep as being “as near to the original as any breed now existing.” The University of Leeds about a year ago purchased a flock of Soay sheep simply to maintain them as a representative pure-bred flock of a type dating back to prehistoric times. The writer’s statement that hair will not felt is obviously based on second-hand knowledge, which is not trustworthy; again, the idea that the serrations help to bind the fibres together has now been brought seriously into question. That worsteds will not felt was taught for years in our technical institutes, but thousands of pieces of worsted are now “milled” every day in the West Riding of Yorkshire alone.

There are men still living who have seen the sources of supply of fine wools change from Spain to Silesia and Saxony, and then from Silesia and Saxony to Australia; there are interesting evidences of the changes in the treatment here given to “The World’s Wool Supply.”

In dealing with “Preparation and Manufacture” the writer shows again a certain lack of grasp of fundamentals, as, for example, in explaining the difference between woollen and worsted, and in referring to healds and mails as “tiny loops of string.” Again, on p. 125 it is stated that the needles in a Jacquard are acted on by holes, whereas they are acted on, *not* by holes, but by blanks. There is a serious error in printing the illustration of wool fibres facing p. 42. The block has evidently been turned round by the printers, with the result that the references are altogether misleading.

Having criticised the defects—which, all considered, are few—it is now the author’s due that the excellences of the work should be emphasised. In many important respects the work is absolutely up to date. For example, the value of a suitable atmosphere in the spinning-room is interestingly treated. The harnessing of streams of water for power purposes is also referred to, although the author appears to be unaware of the method of electric control of water-power to attain that necessary steadiness in running otherwise unobtainable. As further illustrating the up-to-dateness of the work, reference will be found to the formation of the Agricultural Organisation Society for dealing with British wools on lines similar to those upon which Colonial wools are dealt with; to the use of a woven paper cloth for wool packing; to the development of the “automatic doffer” in the worsted spinning industry; and to the possibilities of the automatic loom in which weaving is done in the dark, any defect in the mechanism at once lighting up the loom, thus indicating the need for attention.

The psychology of the consuming public comes in for indirect attention, and the references to the trade guilds—which appear to be somewhat re-

markably resuscitated in our present-day trade combines and trusts—and other matters of historical importance all tend to make the work very interesting as well as directly useful. Upon the whole, the work may be regarded as being among the best of the shorter general guides to the wool trade and the wool-manufacturing industries; its faults are few, and its excellences many.

OUR BOOKSHELF.

Winter Botany. A Companion Volume to the Author’s “Plant Materials of Decorative Gardening.” By Prof. W. Trelease. Pp. xxxii + 394. (Urbana: Published by the Author, 1918.) Price 2.50 dollars.

In this handy and concise little volume Prof. Trelease describes the winter characters of 326 genera of trees and shrubs belonging to ninety-three families. With the exception of *Larix* and *Taxodium*, the Conifers are excluded, as these, being evergreen, have been adequately treated in the companion volume on “Plant Materials” issued in 1917. The book, though of American origin, includes most of the genera and species which the student is likely to find, wild or in cultivation, in this country, and should prove a useful handbook to the botanist who is interested in the determination of woody plants during the winter season. The generic description is in each case supplemented by a wood-cut illustrating the chief points to be observed, and by a brief key to the species which are likely to be found.

The descriptive matter is preceded by a key to the genera, and instructions are given as to its use. A good pocket-lens is essential to the examination of the characters of the twigs which is required for the use of the key. These characters include the position of the leaves, as indicated by the scars, the form of the scar, the position, number, and form of the buds and stipules (if present), the surface characters of the twigs, the form of the pith, and other easily observed internal characters. As heath-like and some other evergreen plants are included, the form and arrangement of the persistent leaves are considered in these cases. References are also given under the genus to descriptive works in which the winter characters of the plants in question are more fully treated. A useful glossary and a full index of Latin and popular names complete the volume.

The Illinois and Michigan Canal: A Study in Economic History. By Prof. J. W. Putnam. (Chicago Historical Society’s Collection, vol. x.) Pp. xiii + 213. (Chicago: The University of Chicago Press, 1918.) Price 2 dollars.

This book was originally prepared as a doctoral dissertation of the University of Wisconsin. It is a mine of facts and a concrete illustration of the thesis that canals were a success when there were no railways, but are not a success when faced with the competition of modern railway transport. At the same time the success of this canal was an