

by Dioscorides and Pliny as being used for cleansing wool in their time. At the present day, the soap nut (*sapindus mukorossi*) and soap-bark (*quillaya saponaria*) are used to some extent, the former principally in India, and the latter in South America. The employment of soap and soda-ash as scouring agents, is also of considerable antiquity. In treating of the structure of wool fibre, and again, when discussing its chemical composition, reference has been made to the greasy matter secreted by the sebaceous glands and excluded upon the fibre during its growth. This is termed the yolk or suint, and is of great service during the growth of the fleece in preventing the mechanical injury to the fibres which would arise if they became matted together. The suppleness and general suitability of wool for textile purposes are probably largely due to the protective action of the yolk. The presence of the greasy matter upon the shorn fleece also serves as a complete protection against the depredations of moths, the fact that moths will not attack unwashed wool, and that any material may indeed be protected from moths by contact with greasy wool, being first published by Keaumer in 1738. There is a certain small proportion of oily matter in wool fibre, amounting perhaps to about 1 per cent. of its weight, which appears to have a different function to that of the yolk, with some constituent of which it may or may not be identical in composition. This may be termed the lubricant of the fibre, since if it is removed, the fibre becomes harsh to the feel, brittle and less tenacious. The greasy matter constituting the yolk may be termed the preservative agent, and only after its removal does the fibre show its valuable properties to the fullest extent. In addition to the yolk, raw wool always contains dirt and earthy matter, sometimes to the extent of 20 to 25 per cent. of its weight. Scoured wool must always be oiled before carding or combing, various vegetable or sometimes mineral oils being used for the purpose. This, along with any dirt which the fibre may have acquired in the various stages of manufacture, must, of course, be removed from the yarn or cloth. The object of the scouring process may therefore be defined as that of completely removing from raw wool the yolk or preservative greasy matter, along with all the dirt, etc., or from yarn or cloth all oily matter and dirt which may be present. In no case, however, should the small amount of lubricating oily matter be extracted. It is, of course, of very great importance that while care is taken not to injure the fibre, the scouring process should be thorough, since any grease left in the wool is likely to cause irregularity of shade in dyeing, and other defects in the finished material.

HOSIERY NOTES.

Continued

There is no doubt that it was a mark of popular approval when the English Government commenced their experiments with the seamless foot hosiery for their soldiers to wear, but, we may remark, because of the loose way of manufacturing seamless goods at that time (owing to the variety and unreliability of the operators), the Government came near condemning this article. It is also remarkable how the prejudice in the wrought fashioned leg business is losing its hold, since the introduction of the stiffened ankle, which is fast gaining popularity. As it is now possible to automatically graduate the width of the ankle to two thirds of the calf, without disfiguring the hose or increasing the price of a circular article, we say the wrought fashioning will no longer be regarded as a standard, but as a style. It has been said by doctors that in these days of low shoes, and fancy opened front uppers, the thickening brought about at the ankle in this style of fashioned legged hose, is most desirable, firstly, it prevents the colds attributed to low shoes and exposed ankles, secondly, it acts as a reinforcing thread, and an additional protection from the eyelet holes, buckles, clips, etc., of fancy footwear that are apt to wear. Apart, however, from this aspect, we believe the rising generations will regard the fashionings down the leg as a disfigurement, and, perhaps, refuse to buy an article so distorted. It may not turn out so, but it is quite within the bounds of possibility. As with the introduction of

automatic boot and shoe machinery, so with auto hosiery machines and other simplified systems of manufacture, the trade is once again being centralized, particularly so in regard to seamless footwear. In our opinion, the country knitter will be found a few years hence sticking to the knitter, and working on the impoverished conditions that the hand seamer experienced some years ago on the introduction of automatic seaming machines. We will not stop to question the liberty of any land of the free, that allows a wife or daughter, by undercutting the price of labor, to impoverish her needy neighbor, because the husband or father happens to earn sufficient to render their labor a pastime, some say it is the manufacturer who cuts down the prices, but we believe the blame is traceable to the operative in the main. As a result of the depreciated wages, the bag hosiery will for many years to come compete favorably with the manufacturer's costly systems of machines, skilled operators, etc., that is, unless some new automatic machine comes forward as cheap and simple as the present domestic knitter, in which case the present conditions of distributed country labor would obtain, as such a small automatic machine would find its way into the country homes, as the Branson & Griswold knitter did, that is, unless the price was prohibitive and the manufacturers monopolized it.

However, still the markets anxiously await the advent of that genius who can reduce the complications of hosiery production to small issues, and still every sanguine inventor is certain that he has discovered the Philosopher's Stone, that will knit the stockings with the golden thread. As to the increase or decrease of competition, the only competition we are conscious of is the new bogies of the machine trade who have cropped up, viz., the outside engineers who build machines by contract at a low price for machine dealers (supposed builders). This build of machine is well got up in style and finish usually, but whether they are as durable as machines built to order by skilled hosiery mechanics, in the established concerns who build knitting machinery exclusively and under the best technical conditions, is hard to say. So far as foreign competition is concerned, many thousands of pounds worth of knitting machinery are sent abroad, notwithstanding the high tariffs and the fact that there are many machines sent in return. This goes on in the manner of exchange that balances up pretty evenly, the imports being thereabouts equal to the exports as far as intrinsic value is concerned.

We know of no one machine that is likely to entirely predominate in any hosiery department, unless such features of advantage are to be found in the camless and latchless machine just introduced. Undoubtedly, many things can be suggested to further the interest of home trade abroad. We notice that trade interests are not conserved abroad to the extent that they might be, and the sooner the producer of a new article of universal adaptation takes the stand in the foreign markets he merits, the less his rights will be infringed, and the better for the public and himself. Admittedly, inventions are the foundation of every industry, whether the benefits reach the inventor's pocket or not, and to better our trade abroad we should lead out with that master card, the patent seal. Why inventors do not protect and consolidate their international rights, by banding together and instituting an inventors' trust, we cannot think. 'Til such action is taken as this, no bettered conditions may be expected for them.

The trade has to thank you and publishers of contemporary organs for the great help you give the manufacturers as a body, for after all, success turns on a very small pivot, and only by the dissemination of trade news and technical literature can a slumbering business be aroused sufficiently to realize that newer and more up-to-date changes abroad demand greater activity at home. Why make a technical paper of your standard exclusively a manufacturer's organ? A comparison of the workers of different countries prove some workers to be in sore need of instruction. We suggest that you publish the paper weekly and circulate it amongst the workers, as all such technical papers should be dealt with, to our way of thinking. Your price is a popular one, and we see no reason why a large circulation should not follow a practical change in your paper on the lines suggested."