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WOOL, in general, signifies the hairy substance, which forms the covering of sheep.

The growth of wool is always completed in one year, when it spontaneously decays, and is naturally renewed; in which respect it resembles the hair of most of the lower animals; though that of sheep is considerably finer, and grows with more uniformity, each filament advancing at an equal distance; separating from the skin nearly at the same time; and, if it be not previously shorn, it falls off naturally; the animal being already provided with a short coat of young wool, that undergoes similar changes in the subsequent year. Another circumstance that distinguishes wool from hair, is its various thickness in different parts of the same sheep; being closer at the points than at the roots; and the part which grows during the winter, being considerably finer than that produced in the summer.

Wool, when first shorn, is called a *fleece*, and every fleece is divided into three kinds, namely, The *prime* or mother wool, which is taken from the neck and back; the *seconds*, or that of the tails and legs; and the *thirds*, which is obtained from the breast, and beneath the belly.

Other authorities say, that the back and belly give superfine wool; the neck and sides fine, and that the breast, shoulders and thighs yield a coarse quality.

The finest and most esteemed sorts of British wool, at present, are those obtained from the Ryeland, South-Downe, Shetland, Cotswold, Herefordshire, and Cheviot sheep: and as this article forms the most extensive staple commodity of British commerce, various and successful attempts have lately been made to improve its quality. To effect this desirable object, recourse has been had to intermixing or crossing the different breeds; and, by the patriotic exertions of the *British Wool Society*, the *Board of Agriculture*, Lord SOMERVILLE, and Dr. PARRY, the British wool is now little inferior to the best kind imported from Spain.

Our limits not permitting us to detail the results of their useful and interesting experiments, we shall only remark, that those who are about to select a flock of sheep, whether for fattening, or chiefly on account of their

wool, should not venture to purchase any animals without the assistance of an eminent wool-stapler; for such person, being conversant with the different qualities of wool, is doubtless better enabled to form an accurate judgment, than could be expected from any farmer or agriculturist. Besides, the situations to which sheep have been accustomed, ought to be carefully investigated. Those, for instance, which have been habituated to hilly or mountainous pastures, should not be removed to a verdant plain: nor must the reverse plan ever be adopted; for it is not the gigantic size that constitutes the value of sheep, but an ability to withstand the seasons, together with a disposition to fatten *kindly*, and to produce the largest quantity of fine wool, in poor lands. It is principally by attending to the *natural* habits of this noble animal, that the Spanish wool has acquired such celebrity. But as a complete account of the management of sheep in Spain, would exceed the limits of this work, we shall only recommend to the consideration of our country readers:

Lord SOMERVILLE's "*System followed during the Two last Years by the Board of Agriculture,*" &c. 1800; also the 2d vol. of "*Communications to the Board of Agriculture,*" and lastly, Dr. PARRY's "*Facts and Observations tending to shew the Practicability and Advantage to the Individual and Nation, of producing in the British Isles, Clothing Wool, equal to that of Spain,*" &c.

The utility of wool, as a warm and useful clothing (see CLOTH, FLANNEL, &c;) and when no longer serviceable as a garment, its shreds or rags in the manufacture of SOAP, having already been sufficiently explained, it will be needless to enter into farther detail.

Process for Cleaning, Carding, and Spinning, Clothing Wool.—The first thing which is to be done to the wool, when it is put into the hands of the manufacturer, is to clean and free it, as much as possible, from the greasy matter, which, by perspiration, issues from the body of the animal; adheres to the wool; gives it nourishment, and brings it to the requisite degree of maturity.

For this purpose, a liquor is prepared, consisting of three parts of rain or river water, and one part of urine: when this liquor is brought to a scalding heat, so as that the hand can hardly be borne in it; about 20, 30, or 40 lbs. of wool, according to the size of the

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kettle, must be put into a net, and plunged into the hot liquor. It must then be well stirred, and agitated for about ten minutes, so that all the parts of the wool may be well soaked, and the perspirable matter drawn out or loosened by this bouking, that it may be brought out by the washing which is immediately to follow.

But it would be very detrimental in many respects if this bouking water or bath, has not the degree of heat which has been mentioned. For if it were but lukewarm, it would not loosen the animal perspiration sufficiently. And if it were too hot, the sweat would boil into the wool, and only settle the faster. The one, therefore, is as detrimental as the other. It would be much better to have the wool worked up without any bouking or clearing at all, than to have it done under either of those mistakes. For cloth which has been made of wool badly bouked, will never get properly clean in fulling. It must then lie much longer in the earth or soap, which renders it less valuable. There is even a great risk, that it will always remain greasy and sweaty; because it is difficult to get the sweat out when it is once hardened and boiled in.

The manufacturers know by their own experience, that the fullers, in their own way of working, follow a certain routine, and proceed in the old accustomed manner, which the smallest difficulty will be apt to stop in its progress; and likewise, that these people will not give themselves the least trouble, to obviate, or remedy even the smallest obstacles. It is therefore a great advantage, to deliver them the cloth, as well prepared for fulling as possible.

In order to avoid the too great heat of the water, the wool ought to be cooled, from time to time, by lifting it up above the kettle, with the stick, which is usual for stirring and airing it. In this case, the same care ought to be taken, as is required in dyeing the wool. For either by putting more wood under the kettle, or by taking it away from under it, the water is kept in the necessary temperature as above mentioned.

When the wool has lain a sufficient time in the bouking liquor, and is sufficiently scaked through, it is taken out of the kettle, and thrown in a heap, on a wooden railing or hurdle, where it is left for about half a quarter of an hour to drain. During this time the liquor perfectly penetrates the wool; and it gets sufficiently cool to be fit to

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must be observed between the chain and the filling. If this be not done, the manufacture of cloth never can be brought to any perfection, let the care and attention bestowed upon the other parts of the labour be ever so great.

As soon as the wool is converted into rolls, it is delivered into the hands of the spinners.

There are two kinds of spinning, the one for the chain, and the other for the filling. They ought always to be kept separate.

The yarn for the chain must be fine, close, and well twisted, that it may have strength enough to bear the constant motion of the gears; and the strokes of the reed in the box. To this may be added, that it is the chain which binds and keeps together the filling. The proportion of the thickness of the thread between the chain and the filling, which has been observed in the common cloth manufactures, is usually one third; so that if the yarn for the chain weighs 20 pounds, that for the filling must weigh at least 30 pounds, and must be less twisted, because it is intended for the purpose of spreading on the surface of the cloth, and of covering the chain.

The chain and the filling are spun on the same wheels. The wheels made in the Holland fashion are the best, because the frame of the wheel before, is even with the floor, and the hind part thereof is raised about a foot above it, whereby the wheel is kept in a kind of equilibrium, is easily moved, and can be much better governed by the spinners, than if it stood horizontal. Besides this, the spinners, who draw their thread from below upwards, are by such a sloping direction, better enabled to observe the inequalities, useless hairs, and little lumps in the wool, than if they had to draw the thread straight towards them.

The following slight sketch will shew the process pursued in preparing wool in the British manufactories, and at the same time, give an idea of the number of people to whom we are obliged for every coat we wear of English cloth. The fleece is sorted, according to its different qualities, by the wool stapler, and the Spanish has all its pitch marks clipped off. It is then carried to the Dye-house, and when cleansed from its impurities, (by scouring it in a furnace of hot water) dyed, and returned to the manufacturer; afterwards, woven in the loom, burlled, by

nipping off its knots and burs; milled by the fuller, dubbed with cards of Teazle, *Dispacus fullonum*; stretched on the tenter-hooks; dressed; sheared; pressed between heated planks and press-paper; and packed for the markets. "*Warner's excursions from Bath.*"

[The prohibition of exporting British wool, enacted to please the avarice of manufacturers, has rendered it probable that three fourths of the gains of the British woollen manufacturer has been obtained by cajoling the legislature to rob the farmer.—T. C.]