

WALKS AMONG WOOLEN MILLS.

A Treatise on Wool Scouring.

First Step in the Manufacture of Cloth.

Cost of Cleaning the Farmer's Fleeces.

Reported Exclusively for The Boston Commercial Bulletin.

What is commercially known as "wool" is only about one-half or one-quarter quarter wool after all. Even the fleeces of Ohio and Michigan, which are called "washed wools," because the sheep have been washed in a brook or pond previous to shearing, must be subjected to a further cleansing at the mill and half their weight washed away. Some of the "unwashed fall wool" of California and other sections of the country suffer a reduction of 75 per cent. in avoidpools in process of scouring. The substances from which the fibres are cleaned consist not only of sand and dirt and other extraneous matter, but also of certain animal excretions and especially of a LARGE AMOUNT OF NATURAL OIL.

This oil is an important element in the growth of the fleece, its increase being usually due to an improvement in the quantity or quality of wool shorn. The weight of grease in the wools of Humboldt and Mendocino counties, California, for instance, has increased 7 or 8 per cent lately because of improvement in quality. Ohio wools, also, used to waste 5 or 10 per cent less in scouring than they do today. Every fibre of fleece upon the sheep has at its base a bulb containing the nourishing oil or "yolk" which is an absolute necessity for having Merino wool abundant or in good condition. According to this secretion of "yolk" is active, the fibres become fine, thick and long.

Millmen are sometimes inclined to speak of the many thousands of dollars which they pay annually for grease and dirt merely to be washed down the rivers from their mills. But such remarks are only partially true at best. Manufacturers are every year becoming more particular in testing the actual scoured value of wool before purchasing and a glance at the relative quotations for washed, unwashed and scoured wools, shows that the prices are so regulated that the clean fiber is about all that is paid for in any case. The cost of transportation is the principal expense which results from sending the wool to market and to the factory with the dirt and grease still in it.

ONE METHOD OF SCOURING.

Nearly all American manufacturers prefer to scour their own wool, since the success of subsequent processes depends to a great extent upon the thorough cleansing of the raw material with as little injury as possible to the fibre. Improper methods of cleansing might not only break or destroy the fibres, but also impair its felting properties or unfit it for carding, spinning or dyeing. The scouring department in a woolen factory is almost always in charge of the boss dyer. The method employed in a representative mill engaged in the manufacture of the fancy cassimeres is as follows: A series of four long iron tanks are so united that the wool can be worked directly from one tank into another. The first tank contains liquid alkali, formed by dissolving carbonated soda ash in water heated to a temperature of 120°. The wool is fed into this first tank and from there it goes between two rollers which squeeze out the alkali and deliver the wool into the second tank containing pure water heated to a temperature of 120°. The wool comes from the second tank pretty well freed from grease and dirt; but very fine goods are made in this mill, and hence the wool goes into a third tank which contains a weaker solution of alkali with warm water and soap. It then passes through a second pair of squeeze rollers into the fourth tank, through which clean cold water is continuously flowing. The wool has been handled through all the tanks by automatic forks and other labor-saving appliances. In this mill 1,200 pounds of wool are put through the tanks, after which the alkali is allowed to run off and a fresh lot is prepared.

ANOTHER PROCESS.

Another method of scouring which is employed in a large establishment principally for short and heavy wools like fall California, low pulled, &c., may be thus described: The wool is put into a tub containing a scouring liquid which is variously prepared, according to kind of wool used. The average temperature of the water is 130°, but is sometime made as low as 120°, while for very greasy wools it is brought up to 140°. Anything above 140° injures the fibre of the wool, and it is to be noted that water which is either very hot or very cold tends to felt the fibres together and injure them for spinning. In this establishment some fall Texas and Mestiza or Montevideo wools are scoured in hot water alone, without the use of other ingredients than are furnished by the wool itself. For higher bred and more greasy wools, in addition to the alkali made from carbonated soda ash, as alluded to above, a miscellaneous assortment of scouring materials are made and sold under a great variety of names.

From the tub the wool is lifted by a man with a hand fork into a drainer lined with perforated zinc, through which what liquor was lifted out with the wool, runs back into the tub. This scouring liquor is used over and over again throughout the day, but is allowed to run off at night so that a fresh tubful can be made in the morning. From the drainer the wool is thrown into a rinsing box lined with perforated copper through which clear cold water is kept running. The wool must be kept in this box until it is clean, as a protracted retention of it in cold water would have the effect of "felling" or felting it. After rinsing, the wool is taken out and quickly freed from a portion of its superfluous water in a hydro-extractor—a perforated metallic basket, which makes 1,100 revolutions per minute within a metallic case and consequently throws out a great portion of the water by centrifugal force. The drying process is then speedily completed by placing the wool upon wire screens and forcing hot air through it by means of fans or blowers. In this way the wool can be thoroughly dried in two hours and a half, being turned two or three times in the meanwhile.

COST OF CLEAN WOOL.

The cost of scouring "wool," that is freeing it from dirt and grease, may be figured at an average of one cent per pound in the grease. That is to say, if a lot of wool costing 25 cents per pound in the grease, has shrunk two-thirds of its weight in the process of scouring, the bare cost of the clean wool would be 75 cents, to which should be added 1 cent per original pound, making the total cost of the wool in a clean state 75 cents. Although woolen manufacturers generally prefer to clean their own wool, yet there are several scouring establishments in the vicinity of Boston, which find plenty of business in doing work for dealers and others at a round price of a cent a pound, which includes freight to and from Boston. Dealers often have wool upon which differences of opinion exist as to value, and the differences are settled by sending it to the "job" scouring mill. Then there are a few mills which have no facilities for scouring. A large hosiery establishment, for example, which uses 60 per cent of wool in its winter goods, and only 25 per cent. in those for summer wear, buys all of its wool in a scoured state.

Much has lately been written about the wastefulness of the present practice of throwing away the grease and other resultants of the process of wool scouring. In France and other countries of Continental Europe this liquor is so treated as to obtain from it VALUABLE QUANTITIES OF POTASH, grease, etc. Much of the grease is exported to the United States under the name of "de gras," and is used in the manufacture of leather. It is also stated that the fleeces of France could supply all the potash used in that country. Estimates have been made that 50,000,000 pounds of grease might be obtained from wool in this country, and chemists have shown that wool could be readily and economically washed with naphtha or gasoline in such manner as to not only recover the waste products, but also to leave the fibre in better condition for taking dye. But some woolen mills which have made experiments in this direction have found them unprofitable, and manufacturers generally are of the opinion that the saving of the waste from wool-washing is a French idea which cannot be any more readily transplanted to this country than many of the French methods of utilizing food products.

How to secure the removal of burrs and other vegetable matter that the sheep catches in his fleece, is a subject in which woolen manufacturers everywhere feel a far more practical interest than in any of the theories in regard to waste wash water. After the scouring process is completed, the burrs still remain in the fleece. For worsted and high grade of woolen goods, burrs are either clipped from the wool with scissors in process of sorting, or the whole fleece is unhesitatingly rejected. But even in mills making these goods, some burrs escape the vigilant eye of the sorters.

EXCELLENT MACHINERY IS MADE, which remove a great portion of burrs by passing the wool between two rollers that operate so closely together as to throw out the burrs while permitting the passage of the fibres. But shives, small burrs known as "bezar grass," and other pieces of vegetable matter, find their way into the finished cloth to a greater or less extent in spite of the most ingenious manipulation of machinery.

The common soft burrs well-known to New England rural districts, as the small spiral burrs of California and South America, are great pests to the woolen manufacturer. The soft burr breaks apart and gets mixed up in the wool, and the spiral burr unwinds itself with similar malign effect. The great trouble is that the burrs, shives, pieces of grass, etc., being composed of vegetable matter, do not take dye satisfactorily in connection with the animal fibres of the wool. Hence, wherever a piece of vegetable matter has got into the cloth, a defect is apt to appear. Some mills which make fancy cassimeres and fine worsteds have as many as 50 or 100 girls employed with pen and dyeing inks removing the little imperfections in coloring caused by the presence of vegetable matter in wool.

What is wanted above everything else in the wool trade at the present time is some chemical process for removing burrs and other extraneous vegetable substances without injury to the animal fibres. Some lots of wool from Louisiana and Georgia have been found to contain 40 per cent of burrs after scouring. Such lots of wool, of course, could not be used except for "filling" in low-priced goods.

\$60,000 in an Old Hair Trunk.

The Surrogate of Queen's county yesterday settled the estate of Isaac Smith. The deceased was an unassuming bachelor, living on a modest farm in the town of Oyster Bay. He was never regarded as a man of wealth. After his death, when the appraisers were making an inventory of his effects, they found an old iron-bound hair trunk under the bed in the room which he occupied. It seemed to contain, at first sight, only a lot of old almanacs; but between the leaves were found government bonds of the value of over \$60,000. His whole estate was appraised at \$10,000. The money was divided among relatives, in accordance with his will.

Old Acts of Noted Men.

Alfred Tennyson is in jail in Baltimore. He is charged with assault and battery. Charley Ross was sent to jail in Petersburg, Va., last Friday, for stealing old junk. George Washington has just been sent to jail in Washington for assaulting John Sullivan. John Quincy Adams was shot in the left shoulder at Deadwood on the 4th inst. He is doing well. Benjamin Franklin Butler was arrested in East St. Louis on a charge of stealing an overcoat. George Washington Fremont, colored, has just been admitted to the bar of Prince Williams county, Virginia. George Washington grabbed a laprobe from the carriage of Dr. Ricketts, in Baltimore, and is now in jail. George is a colored man. Don Cameron of St. Louis, Gratiot county, Mich., has caused the arrest of N. A. Richards, teacher, for punishing a schoolboy.

PARIS IN THE CRISIS.

The Scene in the Chamber of Deputies—The Busy Lobby.

The Paris correspondent of the London Daily News gives a description of life in the French capital during the present political excitement. Paris, he says, has learned a good deal since the first revolution, and it takes its crises quietly as part of the political play—the end of an act. This applies chiefly to the outer life of the city, but on its inner life the crises leaves its mark. At the chamber, for instance, while it only increases the crowd at the gates by a few hundreds, within it changes the whole scene. The Salle des Pas Perdus or lobby is as full of life as an old chess. The true business of the Chamber goes on here, and long before the beginning of business and a little after it all France is there in session. It is governed in the old Gaulish way—by a public assembly of the whole tribe. The buzz is incessant and unchanging (ill it deepens into a roar. There is a momentary silence when the president of the chamber comes through to take his place. Officers with drawn swords are in front of him, a row of soldiers with fixed bayonets—this in a parliamentary chamber, seen in mind—on either side, and two trumpeters sound a loud note in his honor, strident and defiant, not unlike the crow of the Gallie bird. The president wears evening dress, though it is broad daylight, and he and his cortege for a moment awe the lobby into silence, but as the doors close on him it all begins again.

The member of the chamber of deputies is about the worst informed of all persons as to the ministerial combinations. He spends much of his time in buttonholing the journalists to know what is going on. He is a sort of slave to his clients, rude committeemen from the provinces and from the town clubs and the scribes who back him in the press. In times of crisis Rochfort may be said to have the lobby all to himself, not to say the entire chamber. He cannot speak, but he can listen—a much more formidable power. He watches the debate from the public galleries like Death waiting for his prey, and during the divisions he passes into the lobby to "fight the battle over again" before a group of idlers with the comment of his pungent wit. He has the greatest facility of the canard of any man in France, and that is saying a good deal. His latest discovery, announced in full lobby, is that M. Duclere is the first of Orleanist conspirators. Nobody wants the truth in the lobby, but everybody wants excitement, and that is just what you get. It is a great political gasometer, where the supply for the next twenty-four hours for this great city is made and stored. From the lobby everyone goes primed to his own circle.

Condition of Cattle.

There is naturally some desire to gain information as to the effect of the recent cold snap upon range cattle. It is impossible to give correctly even an approximate statement as to losses. There is one thing to be borne in mind, and which sensationalists particularly should remember, and it is this: Loose snow does not cause the loss of cattle, unless they get into ruts or gulches and are smothered. What is most to be feared is when the snow becomes packed and then frozen over so that cattle cannot break through the ice or get water. In Western and South-western Kansas; Southern Colorado New Mexico and the Panhandle of Texas the fall of snow is reported to have been light. On the North Platte in Nebraska there has been a heavy fall of snow.—K. C. Indicator.

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