Domestic Manufactures, &c.

NOTES ON WOOL, ON BLANKETS AND KERSEYS.

There is good reason to believe, that twelve millions of pounds weight of sheep's wool were wrought in the year 1810, into goods which are usually *fulled*, within the United States. The *unfulled* goods were also considerable in amount.—Our increase in sheep and wool is manifest and steady. Our intelligence and skill, in the woolen branch, from the breeding and care of sheep to the finishing of woolen and worsted goods, is constantly extended. Yet the business requires much improvement.

It is proposed to offer to the planters, farmers, manufacturers and capitalists of the United States, some details of the woolen branch, which it may not have been within their power to obtain.

Two of the most useful articles of woolen manufacture are the plain man's tweeled blanket, called the three *point* blanket, and the plain man's tweeled kersey, or narrow cloth.

The three *point* blanket is made well, when it is three pounds and one quarter or three pounds and one half in weight; in width one yard and one half; and in length two yards. It has a broad blue or dark stripe near to each end, and in one corner are three blue marks, woven in, of the length and breadth of a long slender finger. These are the *points*, which give the name or distinction to the blanket. The European blankets have been too often made as low in weight as two pounds and one half, and without the tweel, within the last four or five years, and yet they have been shipt from Europe under the invoice name of three point blankets. This deception greatly injures the buyer, and the consumer or wearer.

The three point blankets are of the utmost importance to *military* supply by land and by sea; in the hospitals, the garrisons and the field; as also on the ocean. They are of importance in the Indian commerce and intercourse: and are strong family blankets.

These three point blankets are made in England at the *whole* sale *cash* price of seven shillings sterling for each blanket weighing three pounds and one half, when the business is well done, and when payment is made in gold or silver. The proper wool is that of the heavy fleeced breed, called the *Lincolnshire* breed, though the wool of the breeds raised on the rich drained swamps, marches or fens throughout England is also employed. It is to be remem-

* See a note to page 462 vol. I. WEEKLY REGISTER.

bered that the average weight of the fleece of the full blooded Lincolnshire breed, raised within that county, is considered to be ten pounds. The price there for this wool is eight and one half to nine pence sterling, equal to sixteen or sixteen and one half cents.

The wool which will card will do for blankets. The rest is combed. The weight of the carcase of the sheep of that breed, fed on the rich reclaimed fens of Lincolnshire is proportionally heavy.

This wool has another peculiar value. Much of it will do for the hand comb or for the combing machine, and may be wrought into *worsted* stuffs, such as shalloons, rattinets, durants, camblets, bombazettes, moreens, worsted damasks, joans, spinnings, wildbores, callimancoes, and worsted hosiery, and into worsted chain or warp for woolen weft or fillings, by which Great Britain obtains a vast contribution from all countries. But to return to the important article of woolen blankets, which is made in the short part of the long wooled fleeces.

It is indispensibly necessary to the right manufacture of a well knapt or coated point blanket, that the longest wool be selected. In America, where we have not yet many distinct breeds of sheep, and fewer of the coarse and heavy fleeced English breeds, it is necessary to cull for these blanks the longest wool we can find in parts of the fleeces, and on the legs and other particular places, leaving the soft fine shorter wool for good coat cloths, and cassimeres. This will contribute to render our blanket wool cheaper, as the fine wool, when separated, will command a better price either in the wool or in the goods made of it. This manner of *sorting* wool will redound *much* to the profit of the manufacturer.

It is well worthy of remembrance that the English actually and regularly *chop* their wool when it is too long, to enable them to get up a rich coat of pile upon their point blankets, and to enable them to card long combing wool.

The English clean and raise their blankets, and other coarse woollens in the fulling mill, both by soap and fuller's earth, *a soapy clay*. They raise and thicken their blankets, in a great degree, by the fulling mill, and then still more by the card. They give a moderate coat to the inside; and a full rich coat of pile to the outside; making them very thick so as to fill the hand when grasped. This operation requires the careful attention and utmost exertions of our manufacturers and fullers, for their pains and skill should be much the greater, because our coarsest wool (taken by the fleece) is too fine, soft and short for blankets.

To obtain a good thickness to blankets, to make them easy and safe to card up into a moderate coat on the lower side and a rich coat on the upper side, it is absolutely necessary that even the chain or warp be not too hard twisted; and that the weft or filling be not so much twisted as the warp or chain. It should only be twisted so as to enable the weavers to work it. It is in managing those points well and in not driving the web too hard up in the loom, and not making the web too close and tight, that the first foundations of a good blanket are laid. The fuller must not omit to do his part, using his judicious endeavors to thicken the blanket, and to prepare it to yield enough of its pile easily to the card: moderately on the lower side, but considerably on the upper side. By loosening a dozen yarns of chain and filling of a point blanket, instruction will be obtained.

The *flushings* or *lion skins* for great coats are made in the same way, and indeed are nothing more than good tweeled blanketing well raised and regularly on the upper side and dyed blue, brown, olive or drab.

The kersey will be in the subject of another note being also very important to the industrious and the military portion of our citizens, and to the cultivators, manufacturers, and capitalists.

THE PROCESS OF MAKING IRON WIRE.

The best tough soft iron, such as will weld round, is drawn into rods by smiths, using charcoal fires, and taking welding heats every time, the rod is about 1-4 inch diameter, 9 or 10 feet long, containing 4lbs. each, tapered at each end to a long point; they are first anealed by being brought to a bright red heat, in a furnace excluding the air as much as possible, for if the air can be entirely excluded, no scab will rise in anealing; then these rods are drawn through holes in places formed as follows:

A bar of iron 24 inches long, 2 inches broad, 1 1-4 inches thick, is faced on one side with good steel, 3-8 inch thick, and punched with taper holes from the iron side, the largest hole just sufficient for the rods to pass through and take the hammer marks off, each hole a small degree less, until they diminish to the finest wire, six or eight plates will contain the whole series of holes from the largest to the smallest.

The holes are punched in the plates by a set of punches, made of best steel, beginning the hole with the largest first, then lesser in succession to taper the hole gradually, until it pass through of the size wanted, a dexterous hand can punch the holes down to 1-64 of inch diameter, smaller can be drilled.

The plates are rounded on the steel side, and the holes 1-4 inch assunder in a direct line in the middle, and the holes are regulated with a hammer pointed like an egg, to beat and close them as they wear too large, or lose their proper taper or size in the graduated series: after being closed by hammering round them, a smooth punch of the right taper is driven in to smooth and form them; this punch is driven in first from the steel face side, then again from the back; hammers are also used to clean out and smooth the holes; these plates may be a little tempered by fire and water, but not so much as to make them brittle, or they will not bear the hammer.

The rods are at the beginning drawn through the holes by a pair of nippers fastened to a glide, set so as to vibrate horizontally about two feet or more set in motion by a crank and heavy fly wheel drove by water, or any other power, equal to the power of two or three horses: these nippers open as they push up the plate, and shut as they draw back. The plate is firmly fixed where the nippers will just reach it, and they close on the wire and draw it through the hole, say two feet at a pull.

The rods may be reduced from 1-3 inch to say 816, when the wire will require to be anealed: it may then be reduced to say 1-3 inch, when it must be anealed again, and if the iron be good it will now be ready for the cylinders and may be drawn to the fineness suitable for wool and cotton cards. If it hardens too much it must be left for coarser purposes, for if anealed again it will not harden sufficiently by drawing to become sufficiently elastic for cards. The workmen must discover the quality of the iron, and by experience learn the smallest size at which it will bear its last anealing, to make good elastic wire.

The nippers reduce it to say 1-8 inch diameter

it then passes to cylinder which is set perpendicular, to revolve by a spindle like a millstone, so fixed that it can by a treadel be slipped in or out of geer by the foot instantly.

The hank of wire is put on a reel, and the end drawn through the plate, say two feet; it is then fastened to the cylinder, which is set in motion by the treadel, and the cylinder, by a proper motion, draws it through. The instant it is through the cylinder is stopped, and wire wound back again on the reel, and is ready to be put through the next smaller hole, the workman points the wire with a file to make it enter the holes as they are lessened, and a cloth dipped in melted tallow is always laid on the wire behind the plate, to grease it to make it slip the more easily through the holes.

This is the process used by the writer when a boy during the American revolution, and so easy was it attained that without any regular instructions from experienced artists, but from only what he could hear from persons who had transiently seen the operation, he so far succeeded as to make as good iron wire as ever was imported, and to work it into as good wool and cotton cards, of which he made thousands of pairs; so that he can from experience say, that the American iron will make good wire, and he has no doubt of the success of the manufacture, if attempted with perseverance, and supported by a protecting duty on the importation of the article.—O. E. [*Aurora.*

SALT WORKS.

By a gentleman from the Genessee country, we are informed that last summer, at a salt works, in Galen township, Cayuga county, and state of New-York, the owner had an idea that by digging, he might perhaps arrive at the salt rock; accordingly he employed a hand to try the experiment, who went down about 60 or 70 feet, when to his great satisfaction, he came to the bed of salt, and broke off a small piece, but the water broke in upon him so fast, that he had to call for assistance to get out, and had only time to bring one of his tools with him, and a small piece of salt, which was clear like a piece of allum, the water rose to the surface and ran over; they then built a wall of stone and lime round it, 4 feet high, so close as to hold water; they have a number of kettles, or salt pans, constantly boiling, but still they are unable to use it as fast as it rises; the water is so strong that as it scatters over the ground, it chrystallizes with the heat of the sun in the hot weather.

[*Cumberland Register.*

PLAISTER OF PARIS.

On the east side of the Cayuga lake, about a mile from it, they have found a large bank of Plaister of Paris, from which they are carrying it along the lake to where the turnpike from the Susquehanna joins it, from whence it is carried to that river in waggons, or in the winter by sleighs, as it is but thirty three miles distant, and from that place it can be brought down the river to any place of deposit in boats; the price is five dollars per ton at the quarry. There has also a bed of plaister been found on the west side of the lake, of which a Mr. Rittenhouse is one of the proprietors. [*ibid.*