WEAVING.

Weaving is the art of arranging yarn or thread of vari­ous materials, flax, cotton, wool, silk, &c., so as to form cloth. In all woven cloths, of whatsoever materia), one system of threads is made to pass alternately under and over another system of threads, so as to resemble, when held up to the light, a piece of close net-work.

Though, for the sake of effecting this in less time, and with less labour, than common instruments are capable of, steam power, and somewhat complicated machinery, have been resorted to, a very simple contrivance is all that is absolutely necessary to accomplish the object. The threads, which run longitudinally, or from end to end of the piece, and which are called the warp, or, among the silk-weavers, the caine (from *la chaîne,* Fr.), must be arranged evenly side by side. There must then be some contrivance, first, to raise every alternate thread, and therefore half the threads which form the warp ; second, to pass the thread which forms the weft between the alternate threads so raised; and, lastly, to strike home the thread of weft so passed through. The process is then repeated by depress­ing the half of the threads previously raised, and raising the half previously depressed; by again passing the weft through and striking it home ; and so on until the whole warp is completely wefted. The instrument for effecting this is called a loom, the different improvements of which we shall hereafter describe.

The art of weaving was probably known before that of spinning. Many of the rude nations with which we have become acquainted, even within thc last century, have practised the former, while they have been completely igno­rant of the latter. The fibrous parts of many plants, and even the bark of some trees, afford a thread which bar­barous nations know how to weave into a species of mat­ting. Specimens of this kind of weaving—for such it must be deemed, though perhaps not produced by the loom —are to be found in the British Museum ; and the mats of the New Zealanders, made from what has been called the New Zealand flax *(phormium tenax),* are of this character. Nay, even the most savage nations seem to have known how to avail themselves of the felting property of wool be­fore even the knowledge of weaving. (Wool, and its Manufactures.) Other substances are also made to co­here together, apparently after being reduced to a pulp, as in the manufacture of paper. We have before us a New Zealand production of this character, made of the fibre of the phormium tenax ; but thc matting to which we have alluded must be familiar to every reader of any one of the instructive compilations of voyages among barbarous na­tions ; books which are now happily multiplied at a very moderate price, and in every variety of form.

The art of weaving from spun yarn is of very remote antiquity. In the linen cloths in which the mummies are enveloped, we have specimens of one of the woven fabrics of ancient Egypt From the nations of the east, a knowledge of weaving gradually spread to the west, where it has rapidly improved ; while in the east it remains nearly where it was in the most ancient times ; and the very per­fect state of the manufacture shows with what rude instru­ments it is possible to produce the most perfect plain fabrics.

• It is difficult to say when the art of weaving found its way into this country. Cæsar states that it was not known when he invaded the island. This however has been contradicted, though we are at a loss to know on what authority. It is probably from a mere inference, that as the Gauls introduced other arts into Britain, they may have introduced the art of weaving from spun yarn. As for the mere art of matting, that was probably practised by them as we find it among all barbarous nations.

Among the Romans, when they invaded Britain, the manufactures of cloth and linen were in great perfection, and it is well known that they had a manufactory at Win­chester ; but it does not appear that in the Saxon times manufactures were much attended to. A specimen of very ancient manufacture is still preserved in the cathedral of Bayeux. It is a web of linen sixty-seven yards long, em­broidered with a history of the conquest of England by William the Norman, commencing with Harold’s embassy, and ending with the battle of Hastings and Harold’s death in 1066. This specimen of ancient art is supposed to have been executed by Matilda, the wife of the conqueror ; but although it may have been embroidered in England, thc cloth on which the figures are wrought was probably the production of some other country.

After the Norman invasion, manufactures seem to have sprung up in England, having probably met with some en­couragement from the conqueror ; and this seems the more probable, from the fact that the business of manufactures was for many centuries chiefly in the hands of foreigners. For two or three centuries after the conquest, the only records to be found of manufactures consist in the pream­bles of antiquated statutes for the regulation of the trade in wool and woollens (See the article Wool, and its Manufactures); but even these only show that England was immeasurably behind her neighbours in ingenuity and skill; and it was not until the reign of Edward III. that the en­couragement of foreign artisans was systematically attended to. By that monarch, direct encouragement was given to foreign weavers and cloth-workers; and the establishment of some Brabant weavers, who settled in York, soon gave a great reputation to that city.

But that which promoted the establishment of manufac­tures in this country to a far greater extent than direct encouragement, was the persecutions to which, from time to time, the Flemish and French manufacturers were sub­jected. The persecution of the duke of Alva, for instance, in 1576, drove a large number of Flemish weavers to this country, who introduced the manufacture of baizes, serges, and crapes, in various parts of England ; and the revoca­tion of the edict of Nantes had the same effect in import­ing the silk manufacture into this country. It is said that the persecutions of Louis XIV. drove about 50,000 manu­facturers to England.

A reference to the several articles on cotton, linen, silk, and woollen manufactures, will show the very remarkable manner in which our manufactures have grown up of late years ; and it will at once be seen, that our present supe­riority is owing much more to improved methods of spinning than to any improvement in weaving. The steam or power-loom, though it is certainly very superior in its results to the common hand-loom, and still more so to the loom of the East Indies, does not exhibit that marked superiority which the mule does to the ancient spinning-wheel, or the still more ancient distaff. To the multiplication of the spindle in the form of the jenny, the throstle, and the mule, we are indebted for our pre-eminence in the cotton manufacture ; and although great improvements are visible in every branch of our manufactures, the whole of these taken together do not constitute so complete a revolution as the improvements of Arkwright, Crompton, and Kelly, and the application of steam by Watt.

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