dered it hopeless to establish the shawl-manufacture on this principle.

The part of a loom termed a lay was at last constructed, and fitted up with boxes to hold the number of shuttles for the colours required. This the weaver managed by a sim­ple application of the thumb of his left hand, whereby he was enabled, without stopping his loom, to throw in the coloured yarn, and make it catch the threads of the warp as they were raised by the draw-boy, and thus form the intended figure. Patterns required from five to twelve dif­ferent colours, and consequently as many shuttles. The loom being mounted on a plan similar to that employed for weaving damask, required one, two, and sometimes three boys, according to the extent of the pattern, to draw up the threads in their order, the shuttle being driven through : where not required to form the figure, the coloured yarn remained loose and useless over the whole breadth of the shawl, and required to be cut off with scissors. There was thus a great waste of material ; but as one weaver, with one or two boys, could produce as much work in a single week, as a Cashmerian, with still more hands, on his plan of working, could produce in twelve months, the saving was still very great. In place of using any thing like an ordinary loom, the Cashmere manufacturer had the threads called the warp placed in an upright frame, and the piece worked with the fingers much in the same way as tapestry used to be made. A single shawl of some of the most ex­tensive patterns occupied a whole family from one to two years.

The material of which the finest shawls were made, was procured from a goat found in the range of mountains lying to the north and north-west of the district of Cashmere. This animal is called by them the Thibet-goat, af­ter the mountains they inhabit. The skins of these ani­mals are covered with a coat of strong hair five or six inches in length ; at the roots of this hair is found, in small quanti­ties, the very soft woolly substance of which the shawls are made. Napoleon caused a breed of these goats to be brought to France, from the hair of which shawls were made ; and it has now become an article of commerce, and is spun in considerable quantities both in Britain and in France. France spun and manufactured it for several years before this country succeeded in importing or making it ; and to that country we are still indebted for a superior article of yarn, which sells in this country, the doubled or warp at 48s. per pound weight, and the single or weft at 30s. There are two circumstances which must at all times make this article costly : the wool is obtained from the skin after death, and not while the animal is alive ; and the fine part requires to be picked from the hairy part by the hand, no machine having yet been found capable of performing the separation adequately. It farther appears that these goats are found, in their natural state, only in ranges of the highest mountains ; and as they do not yield a fleece like sheep, it is manifest that the supply of the article must at all times be very limited. During the earlier period of the manu­facture of shawls in this country, they were cither compos­t'd of silk spun from waste, or from a mixture of this article with the finest Saxony wool, carded and spun together ; the flowering being composed of the same material, or of worsted ; and some of the colours were of cotton only. In this state of the manufacture, the makers in Edinburgh re­ceived from L.2 to L.10 sterling for each shawl ; and for several years the demand was good.

The shawl-manufacture was soon established in several places, more particularly at Norwich, Glasgow, Paisley, and at Lyons in France, and a variety of trials continued to be made to lessen the expense of production. The plan of mounting, at this stage of the manufacture, in preparing the loom and figure, cost in many instances from L.40 to L.50 before weaving was commenced ; each loom requiring

one, and some of the large patterns two and even three boys, to draw the cords during the process of weaving. There was also the expense of clipping off all the coloured yam except such as was taken up to form the figure. To lessen these expenses various means had been tried, but without success.

During the short peace of Amiens in 1802, a straw-hat maker in Lyons, of the name of Jacquard, happened to see, in an English newspaper, an advertisement offering a pre­mium to any one who should contrive a machine for mak­ing nets. This led him to turn his attention to the study of mechanics, and after many fruitless trials he succeeded in contriving a machine which fully answered the purpose. He was sent for, on this account, by Napoleon, and while at Paris, a superb shawl was about to be woven for the Empress Josephine ; and for its production they employed a very costly and complicated loom, which had cost more than 20,000 francs. It appeared to Mr Jacquard that the same results might be produced by less complicated machinery. Intense study and perseverance enabled him to produce the machine that now bears his name. Mr Jacquard was rewarded with a decoration of honour, and a pension of a thousand crowns per annum, and sent with his machine to Lyons, the seat of the shawl and figured silk manufactures. This contrivance not only superseded the use of the draw-boy, but also rendered a great deal of tackling unnecessary ; thus greatly simplifying and cheapen­ing the production, not only of shawls, but also that of figured articles of every description.

It is a striking instance of the ignorance and shortsight­edness of the operatives of Lyons, that when Jacquard in­troduced his invention, the people broke out into open re­bellion. He was denounced as an enemy of the people, and as the man who had been scheming the destruction of their trade, and the starvation of themselves and their fami­lies. Three several plots were laid to assassinate him, and twice he was in great danger of losing his life. So strong was the tide of prejudice and indignation, that the machine was ordered to be openly destroyed by the public authori­ties, and was accordingly broken in pieces in the great square of the city.

The successful competition of foreigners, and the conse­quent decline of trade at a subsequent period, induced some of the more intelligent manufacturers to think of the man whose discovery was likely to bring some relief to the then depressed manufacturers of Lyons. They made an expe­riment, and succeeded. Silks of the greatest beauty were introduced at a lower cost, and now (1840) there is not a mechanic, either in France or in Britain, who does not ac­knowledge the great importance of Mr Jacquard’s invention. This may be fully conceived, from the fact, that not only has it been very generally adopted by shawl-manufacturers, but by makers of all kinds of damask, whether of silk or of linen, in Britain. This improvement, together with a ma­chine which the French had also contrived about the same time, for cutting off the spare yam used in making the figures (which completely superseded hand-labour), were both adopted in France some time before they were intro­duced into Britain, which, with the advantage they de­rived from having good yarn from the wool of the Thibet- goat, procured for the French manufactures a decided ad­vantage over the British for several years ; and notwithstand­ing a nominal protecting duty of thirty per cent. (but in re­ality not affording more than twelve per cent. as facilities for smuggling were such, that any one could have had an insurance for goods being safely delivered in London, on paying to the French merchant twelve per cent. extra), goods were brought over in great quantities, which, together with a general desire for foreign productions, had the effect of ruining several British shawl-makers, as well as some ex­tensive dealers in the article. The improvements invented