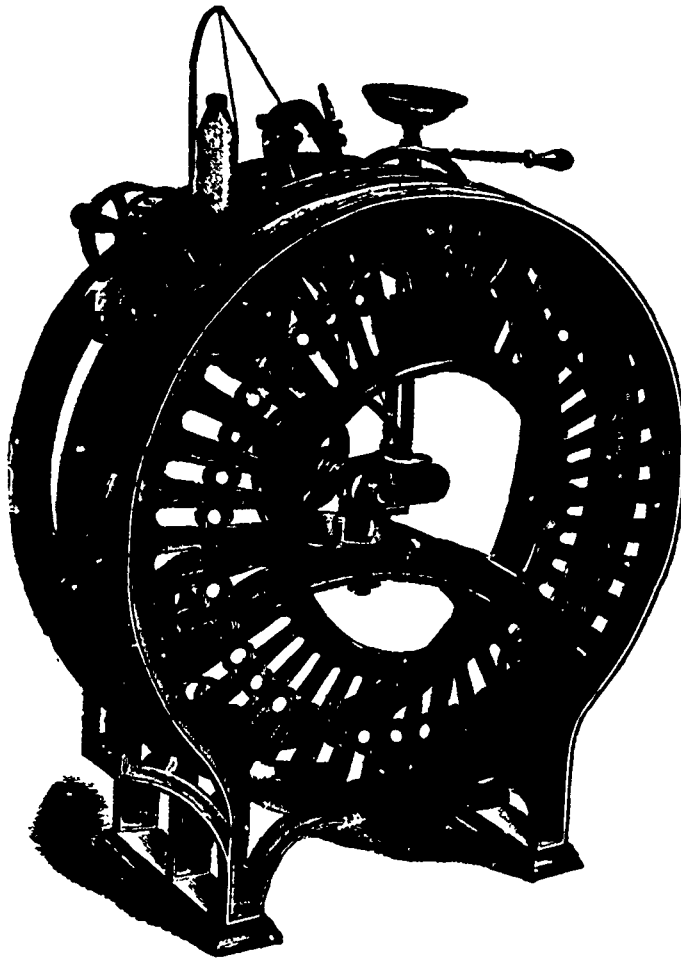


SOME TEXTILE MACHINERY.

The Expander or Stretcher, made by W. H. Harrap, engineer, machinist, etc., Richmond Hill, Blackfriars street, Salford, Manchester, is claimed by the makers to be the best expander in the market. The greater advantages of expanders of small diameter is established, and so need not be here enumerated.



The Rayer and Lincoln Combined Sewing, Trimming and Stamping Machine is, if desired, supplied without marking mechanism at reduced price. It sews the piece ends and cuts off the raw edges. This is the simplest make of this machine, having no complicated and elaborate mechanism for stripping the cloth. Repairs are therefore reduced to a minimum. Made by W. H. Harrap, Richmond Hill, Blackfriars street, Salford, Manchester.

THE MANUFACTURE OF LACES.

There are three distinct methods of making laces by machines in Chemnitz, although the kinds of machine-made laces are very numerous. There are (1) Nottingham and Calais laces, (2) St. Gall and Plauen laces; (3) Barmen laces. Nottingham and Calais lacemakers "weave" from yarn, both employing the same principles. St. Gall and Plauen do not "weave," but embroider on material. Barmen "weaves" on a circular machine on pretty much the principle by which it makes

braids. The machines for the Nottingham and Calais laces are made mostly in Nottingham, although recently Chemnitz has been selling quite a number to Calais. Many, if not most, of the so-called Nottingham and Calais laces are made on Lever's machines.

Lace making is an expensive, as well as difficult and interesting trade. Beginning with the designers or pattern makers every step in the construction, to the picking processes, calls for the employment of great skill, tact and large sums of money. Designers are dear, very dear. Only artists of excellent training are able to originate anything new or striking. This art, designing for laces, was practically exhausted by the ancients. It is very hard to hit upon anything that has not had its run in Egypt, India, or some part of the East; add to that the wonderful laces of Malines, Valenciennes, Brussels and Venice. The very mounting of patterns is expensive, hence it is that few houses can afford to have many. Besides designing or pattern making, there is weaving, or call it knitting, if you will, bleaching, dressing, mending and finishing. Goods leave the frames "grey," or, as they say in Nottingham, in a "brown" state. The single widths are made or divided off by drawing out a thread. In many cases unnecessary tissue must be "scaloped" away by hand. Threads on patterns that cross and cannot be avoided, must also be cut away or removed by hand. After the lace is "woven," the single strips are run through rollers, pressed and measured. For every 12 yards a bell rings automatically, whereupon the workman makes a cut with the scissors. The lace is then wound very quickly on a card, by a machine called a jenny. After the lace leaves the looms it undergoes a most searching examination. Then follow mending, clipping, scalloping and carding. Most of this is done by hand, by people working in their homes. The pay for such work is by the piece.

The Nottingham machines are propelled by steam, water or electricity, they are known as power "looms," as against the hand or house looms. They work on or may have the jacquard principle. Several German concerns use only the Nottingham machines. The lace, when it leaves these machines, or looms (I use the latter word because it is, perhaps, best understood), is in the form of a long, large piece, containing many pairs of curtains of the same design or pattern. This piece is afterwards bleached, dressed (starched), mended and cut into curtains. These last are then trimmed and "taped" along the edges or borders. The taping is done by machinery. Most of the German manufacturers, who use the Nottingham lace making machines, sell or send very few goods into foreign parts. In these lines, i.e., on these machines, the kinds of curtains or laces turned off, imitate Valenciennes, Chantilly, cheap, novelty, cotton and silk laces, Spanish laces, veilings, bobbinet laces and silk, so called illusion nets. In Nottingham, these machines run day and night, most of the time; i.e., when orders are in, and the demand is great. A time has come when textile producers over here are satisfied if their factories run full ten hours out of every twenty-four. The help are called twist hands, and earn, nowadays, an average of 30 shillings a week. So divided or differentiated are the lines of labor, in lace making, that it may be interesting and profitable to go a little into details.

Of designers there are two classes, independent and regularly employed. The former make for, and sell to, any one who wants their work and is willing to pay for it; the latter are engaged usually by a large concern, for only very large concerns can keep regular designers; as a rule, such men are highly educated, well trained and expensive. They serve long apprenticeships in industrial and industrial art schools. Plauen has one of the best schools of industrial art and designing. The men it has given, and is giving, to the empire's industries, entitles it to national gratitude. The draughtsman is not to be confounded with the designer, though the latter very often does