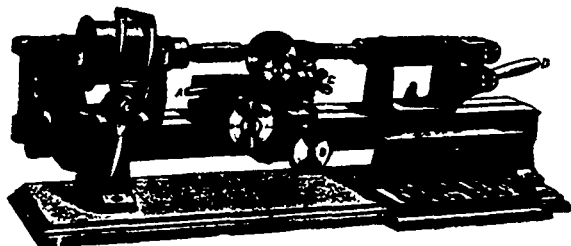


## MACHINE FOR TRUING AND VARNISHING LEATHER-COVERED ROLLERS.

The paramount importance of making the leather-covered rollers used in the manufacture of nearly all classes of yarn, and especially cotton yarns of the finer counts, truly cylindrical, is so well known that we need not dwell upon the advantages to be derived from this condition. It may, however, be as well to call to mind the methods by which this end is attained at the present time. In the first place, the strips of leather, before being placed on the rollers, generally have their soft sides ground up by special machinery to render them as nearly uniform in thickness as possible. After the leather sheaths are placed on the rollers they are subjected to a rolling action in a specially constructed machine, whilst under the influence of heat, with the result that they are made perfectly cylindrical. This cylindricity is, however, lost, in a greater or less degree, during the working of the rollers, owing to a variety of causes, and in addition they are also very often grooved. This is due to the passage of the threads between them and the bottom rollers; but the defect has been very largely minimised during late years, in some of the machines, by the adoption of differential traverse motions for working the thread-guide rods. In whatever way these defects are caused it is sometimes the practice to get rid of them by placing the rollers in a machine, one at a time, and grinding their surface with a roller covered by glass-paper or ground glass whilst they are rapidly revolved. We believe this is the only system employed at the present time, so that the machine we are about to describe should be of considerable interest to manufacturers, who will now have a choice of two systems.

The machine shown below is the invention of Mr. A. Seymour Jones, of the Cambrian Leather Works, Wrexham, and is made by Dronsfield Brothers, Limited, Atlas Works, Oldham, England, whose reputation for first-class work is so well known. The machine,



as will be seen, is in the form of a lathe with fast and loose headstocks, and is arranged to take in any length and diameter of roller. The rollers are held in position for turning by suitable chucks which receive the roller ends and are revolved by the driving pulleys; a slide rest is fitted on the bed, which is actuated by a screw fitted inside the bed, and which receives its motion by the worm and wheel gearing shown at the left-hand side of the fast headstock. The slide is put in or out of gear by the handle A; whilst the hand wheel B is for regulating the position of the cutter, and is provided with a graduated scale over which is fixed a pointer, so that the exact amount of cut is readily seen. The position of the cutter can be adjusted both in angle and in height by the thumbscrew C. To assist in the vertical adjustment, a fine micrometer thread is chased on the stud supporting the tool holder, and a milled-headed nut, formed with a corresponding thread, bears against the underside of the latter. The tool holder is also formed with a graduated scale, by means of which the tool can be set to the proper cutting angle. The rollers can be placed in the machine, or released therefrom, by depressing the handle D. The cutter employed in the machine shown is a circular steel disc which may be held stationary by means of a thumbscrew, or allowed to revolve during cutting. When kept stationary—and this has been found to be the best condition—a large extent of cutting surface is available, since it is only necessary to release the thumbscrew and rotate it a little to obtain a new and sharp cutting edge after one point has become dull. To enable the disc to be

readily sharpened by a hone, the spindle on which it is mounted carries at the opposite end a small spur wheel, and this is made to engage with a wheel chuck fixed in the spindle of the fast headstock. A chisel-shaped tool can be used when desired in place of the disc. Since the block for our illustration was cut, a slight alteration has been made in the strap-fork arrangement. The fork, instead of being pivoted as shown, is supported by a short horizontal rod, carried by brackets fixed to the headstock. One end of this rod projects beyond the inside face of the headstock in such a way that the slide rest will engage with it, when traversing in that direction, and automatically stop the machine by shifting the strap on to the loose pulley.

The *Textile Manufacturer* says of this machine: "We had an opportunity of seeing one of these neat little machines at work, and were quite pleased with its remarkable efficiency in making the rollers perfectly cylindrical and smooth. The machine can also be used for varnishing rollers, and is adapted for truing both new and old rollers, and whether covered with calf, goat, or sheepskin leather. If required, the machine is fitted on a polished hardwood baseboard, with box for receiving the chucks."

## TEXTILE PROGRESS.

BY PROF. SCHULZE.

A German proverb says, "Kleider machen Leute," which is equivalent to the English "Fine feathers make fine birds." Another proverb runs, "We receive a man according to his dress, and dismiss him according to his intellect." Accordingly, we find that it is a first principle in human nature to take special care as regards the attiring of the body. Savages only make a modest attempt by tattooing their bodies, while the civilized nations of all ages and countries have made an art in dressing themselves in splendor and rich costumes. This endeavor gave birth to an industry which, up to our days, has contributed in no slight degree to the prosperity of many towns and countries—I mean the textile industry. It is not my purpose to read a paper upon the history and development of art and industry. My particular object is to give a very general summary of the evolution of textile design from the earliest times, and to show how many interesting details can be supplied by such an apparently insignificant subject as that of woven designs. With regard to the period at which our investigations should commence, it might be considered that the art of usefully applying such perishable materials as the fragments of flax, the wool of sheep, and the fine thread spun by the silkworm, dates from no very distant time. But that is a great mistake. We should be wrong in placing the birth of the textile industry at the commencement of the Christian era. We should be equally in error if we placed this period 1,000 years further back, to the time when Greek art was not yet spoken of, much less European culture. We can, with confidence, go back 3,000 years, that is, in all 6,000 years from the present time. Monuments of the early period prove to us that, even then, there was a culture in ancient Egypt which did not exclude the existence of a textile industry; on the contrary, its existence may be proved almost with certainty. King Menes is said to have reigned over Egypt about 4,000 B.C. He was accused by his successor of having extorted his people by excessive luxury. He was cursed by the priests (who also may be taken as a token of civilization), and this curse was engraved upon a square of stone. The author Ebers informs us how an Egyptian king's mother occupied herself with the study of physic, and concocted a lotion to make the hair grow. Now, I think I may fairly conclude that a race of people who were in need of some means to make the hair grow more freely than in its natural condition, would not have neglected the protection and adornment of the other parts of the body; hence the existence of textile industry may be easily inferred. No remains of stuffs from this early period are extant, but the paintings in the Pyramid show the Egyptian dressed in gowns striped with primary colors, blue, red and yellow. Besides this, little designs have been found which are evidently reproductions of woven patterns. There are little drawings of geometrical construction, combinations of lotus flowers. There are also other