THE TEXTILE MERCURY.

Machinery and Appliances.

IMPROVED PATENTED SLUBBING, INTERMEDIATE AND ROVING FRAMES.


Mechanical science possesses only a poor vocabulary. This is forcibly enough brought home to its students in their examinations of its productions in the shape of machines and their component parts. Many illustrations could be given of this truth, some of which would be amusing, but it will serve our present purpose to bring forward as a sufficient one the series of machines grouped together in the title of this paper. Here are three machines whose principles, functions, and construction are exactly alike in every detail save that of the dimensions of their parts. Their function is to attenuate the sliver which has come from the carding-engine, and has subsequently passed through the drawing frames. The first "slubber," attenuates the sliver as it comes from the last head of the drawing frame, when it is usually of the same count of hanks as delivered by the card; the "intermediate" is the next machine, which, if we gave it its full name, would be the "intermediate slubber" or "sliding frame," but which for the sake of brevity has been reduced to the single word we have given, and even this bids fair in process of time to be curtailed to the insignificant and meaningless form of "inter." The "intermediate" is so called from no better reason than the fact that it stands between two other machines. The "roveng frame," which is the next, takes the reduced strand of cotton from the intermediate, and still further attenuates it. The performances of this machine afford no better clue to the origin or meaning of its name than do the others. The names are all unsatisfactory. When an attempt is made to gym them and give them a distinctive name, no attempt exhibits no improvement. They are then termed "frames" or "speeds," both of which are lame and fail to meet the requirements of the case. The preceding machine of the preparatory series has been rather more fortunate in its baptismal experience, being called, as we have stated, the "drawing frame," but this is not accurate, or at least is only superficially so, its function being to arrange the fibres in parallel order, and also to render the sliver more perfectly even. It might at least with equal justice be called the sliver evener. It however "draws" the material, and therefore the name is really to some extent significant of its function. As the function of the machines under notice is to successively attenuate or reduce the strand of cotton as they receive it to a finer hank, we submit that a better name for them would be "Reducing Machines," or more briefly "Reducers." This would serve for them both and of greater length than usual, and their distance apart has been increased, so as to admit of the use of a longer cone strap, the advantage of which will be obvious. They can also be furnished with their new patent self-adjusting cone driving strap, which bears as uniformly upon the smaller as upon the larger diameter of the cones, and hence ensures more perfect driving, with a greatly reduced wear and tear of strapping. The makers have also introduced a new and improved method of raising the bottom cone bodily, and preserving its parallel position, thus admitting of the more speedy re-adjustment of the driving strap at the commencement of every new set of bobbins. Another new arrangement permits of the bottom cone being lowered, by which any slack in the strap can easily be taken up instead of cutting it away and re-piecing it. Fully 7 in. of strap can be taken up in this manner. The old method of balancing the top-rail by the customary weights and chains, which threw the rail forward and caused it to bind in the side, has been discarded for an improved arrangement, in which a lever is introduced, one end of which passes under the centre of the rail, while the other end carries the balance weight. The centre of the lever is carried by the spring piece, and a perfectly vertical lift is thus obtained without friction in the side. This improvement admits of the filler shaft being placed behind the rails instead of between the spindles, greatly increasing the facilities for cleaning and keeping the frame free from fly. The top-rail has been furnished with a circular sheet-steel front casing, so constructed and arranged that empty bobbins can be placed upon it without risk of their being shaken off by any vibration, furnished with their usual placed more readily to the hands of the worker, and thus save time. The space between the iron casings is filled in with polished baywood. In the differential motion several improvements in details have been made, considerably obviating risks of breakages, by the removal of the screws and loose parts from inside the box, the covering case of which ordinarily entails considerable mischief in breakages. The arrangement for
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in their working with considerably more steadiness. The parts with which the detents engage being further removed from the axis of the reversing lever, the detaining strain is reduced and correspondingly the wear and tear of the parts and the margin for error in time of action is contracted. These changes admit of another important one—namely, the use of a larger ratchet wheel, by which a more extensive range of regulation is obtained with a greatly reduced number of change wheels. With a ratchet wheel of about 24 teeth, two or three change wheels a few teeth above and below that number will suffice for every requirement. The ratchet wheel is connected by spur wheels with the rack and pinion shaft. On the ordinary system the range of change wheels is required to run from 7 to 40 teeth. It will be obvious that a considerable advantage will accrue from this source.

The only remains for us to add that these machines are made in all the gauges usually required in the various departments of the trade and for the various lifts and diameters of bobbins. Of the quality of the work turned out from the establishment in which these machines are made it is not necessary to speak; it requires no encomiums from us, having been tested, tried, and approved a sufficient length of time to inspire perfect confidence in it all over the world. The makers will be pleased to afford any other information that may be desired in addition to the above.

EMBROIDERY BY STEAM POWER.

The firm of Säurer, in Arbon, one of the largest makers of embroidery machines in Switzerland, is reported to have invented a machine to be driven by steam power. Many specialists are of opinion that its introduction will mean an important crisis in the embroidery industry.

In reference to this our German contemporary, Dassau's Textilveredlungsgebecke; "If it be true that four of the new machines will need no more attention than one of the old machines the use of the former is likely to deprive many thousands of those who at present get their living out of the embroidery trade of their means of subsistence. There are said to be 2000 machines in the district included within the embroidery union, so that the practical consequences of the introduction of such an invention as that under discussion must be very serious, at any rate for a time. There seems, however, to be some probability that the