IMPROVED SEWING MACHINE.

The sewing machine has become an institution of the present age, and among the many labor-saving inventions almost daily introduced it stands pre-eminent as an article of household economy. Within a few years many thousands have been sold by different companies, and the great reduction of price has rapidly increased the demand. Simplicity, cheapness and practicability are the necessary requisites for a popular sewing machine. The "Moore double lock-stitch sewing machine" here illustrated combines these features most effectually and is sold at the reasonable price of thirty dollars. The peculiar features of this machine are the patent feed, so constructed as to support the cloth on every side of the cloth during the process of feeding, thereby preventing the cloth from drawing or "puckering," a fault with many machines, and the elastic jaws for forming the loops. These are clearly illustrated in Fig. 4.

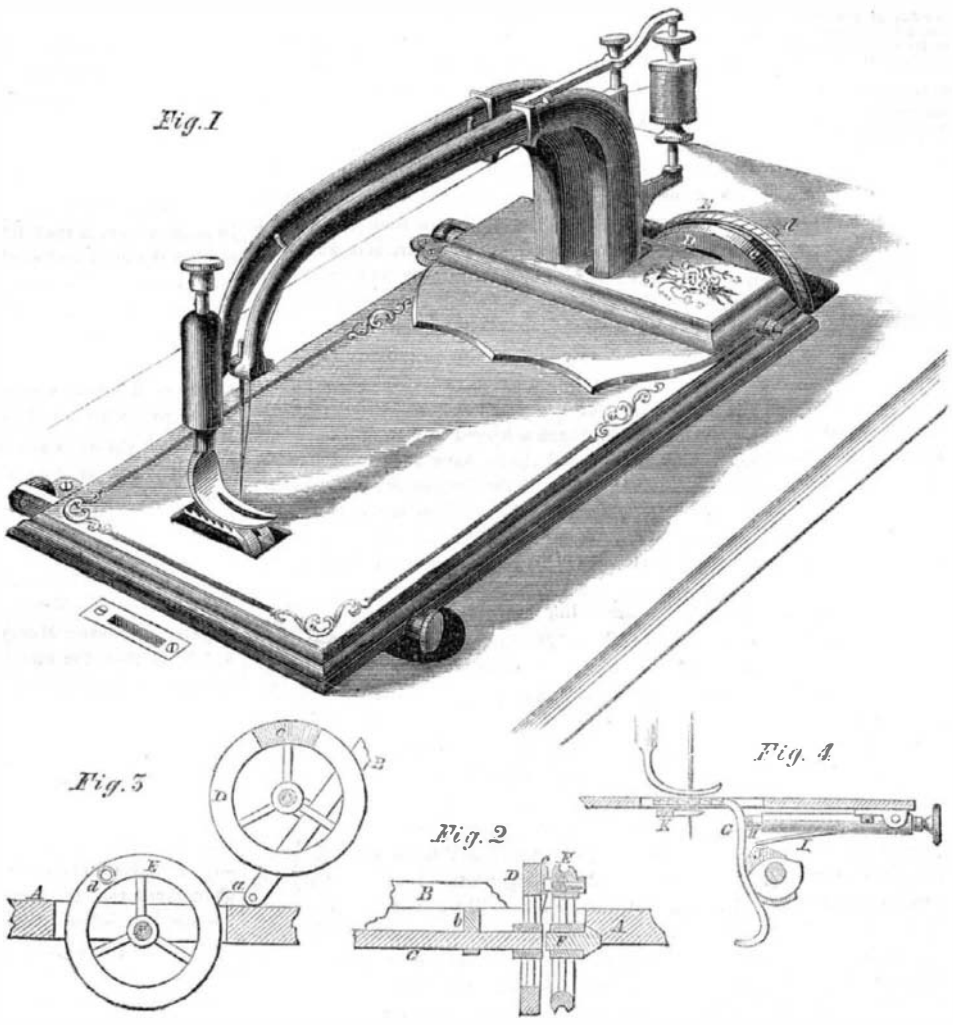
The feed ratchet, G, is made in one piece with the piston, H, and the case of this piston is attached to the frame of the machine by an axle, allowing it a slight oscillating motion. Secured to the same axle is the spring, I, which is operated upon by the cam, J, upon the main driving shaft. It will be seen that as the cam presses upon the spring the ratchet is forced upward, thus supporting the cloth while the needle is passing through it.

As the needle comes down through the table, it passes between the two soft, elastic, steel jaws, K, which are made exactly in the form of the jaws used by harness-makers. While the needle is still between them, the jaws are carried downward by a cam, and grasping the needle are opened by it, but close and seize the thread drawing open the loop, which is then entered by a pin and held for the succeeding stitch. The motions of this machine are all positive, and being strongly made, it does not seem liable to get out of order.

The attachment patented by Jonas Perkins April 17, 1860, is fully illustrated in Figs. 1, 2 and 3. Its principal object is to prevent the backward movement of the machinewhen, from carelessness or ignorance, the driving wheel is turned in the wrong direction, and it certainly accomplishes this object in a very simple and effectual manner. The driving pulley, E, and its shaft F, are entirely disconnected from the shaft, C, which carries the works. Upon the face of the pulley, D, on the end of the shaft, C, is formed a wedge-shaped projection, *c*, having a square shoulder at one end and inclining to a thin edge at the other. From the pulley, E, a pin, *d*, projects, which is pressed outward by a soft, spiral spring, bringing it in contact with the square projection, *c*, on the wheel, D, when the pulley, E, is turned in the right direction, and allowing the pin to recede and thus pass over the projection, *c*, when the pulley is turned in the opposite direction.

The carrying shaft being entirely disconnected from the pulley and treadle, the opportunity is afforded of placing the works upon a table separate from the main table, to which it may be hinged, so that it may be turned over and the works exposed in a most convenient manner, for oiling or repair. The position of the second table when turned is shown in Fig 3. This facility for inspection is a secondary but valuable feature.

By arrangement of the patentees, this attachment is applied only to the Moore machines, which are manufactured iargely in Ohio, where they find extensive sale.



THE "MOORE" SEWING MACHINE.

Any further information can be obtained by addressing H C. Burtman, sole agent for the United States, No. 92 North Fourth-street, Cincinnati, Ohio.

IMPROVEMENTS IN CARRIAGE WHEELS.

The nature of the invention illustrated by the accompanying figures consists in securing the spokes in the fellies of the wheel in such a manner that they will not be so liable to loosen, come off or break in the fellies, as by the usual mode of connecting them. The tire is also secured upon the wheel in a novel manner, obviating effectually its liability to slip off, and preserving its strength, which is liable to be impaired by drilling holes through the tire for the admission of bolts, according to the common practice. Plates are welded upon the inside of the tire to overlap the joints of the fellies. These have female screw threads cut into them for receiving the ends of the bolts that secure the fellies and tire together at these points, which make a very strong and durable wheel. In the engravings, similar letters on the figures refer to like parts.

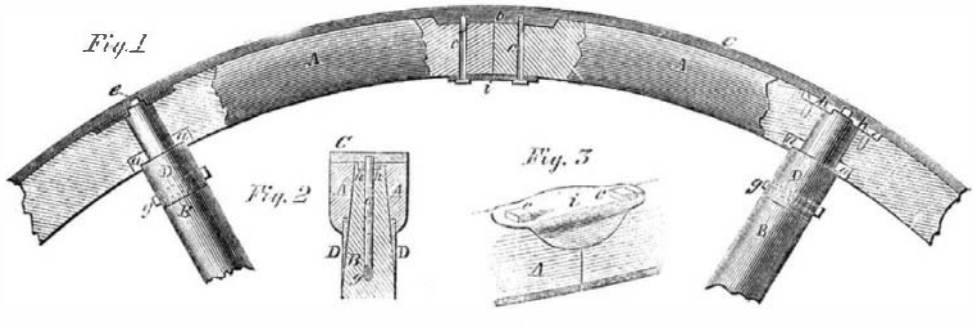
A A represent the fellies of the wheel, B the spokes, and C the tire. The ends of the spokes for fitting into the mortises of the fellies are slightly tapered just behind the tenons, so as to fit very tightly into malleable cast iron ferules, D, which have a tapering bore so as to be flush with the surface of the spokes. These ferules have wings, *a a*, cast on either side, and exactly opposite each other. They are sunk into the fellies with the tenons of the spokes as shown by Figs. 1 and 2. These wings, *a a*, assist in giving strength and stiffness to those portions of the spokes which enter the fellies; especially if rivets are placed through the fellies on both sides of their tenon holes to keep them from splitting open, which should be done in all light vehicles intended for hard service. As many short grooves, of a suitable width and depth, are made in the inner face of the tire as there are spokes in the wheel, and each groove corresponds with the hole made in the axis of the spoke. The hole in the end of the spoke passes down to a lateral oblong perforation through the ferule, D, and receives a pin, *e*, the length of which is equal to that of the hole in the spoke, including the depth of the lateral hole above-mentioned, with a notch in its end nearest the hub of the wheel so that after the tire is on the wheel, this bolt, *e*, will just reach down to the bottom of its groove in the tire, in which position it is firmly kept in place by the bolt, *g*, after having been wedged down by a suitable tool. After the bolt, *g*, has been inserted, and the bolt, *e*, forced into its groove in the tire, the ends of the key are filed off even with the ferule.

To prevent the bolts, *e*, from vibrating and working loose in the spoke, the iron plates, *h*, are let into the tire in the face of the fellies and across the ends of the spoke tenons, and they are secured by screws which have perforations through them corresponding to the diameter of the bolts, *e*. The bolts pass through these plates before entering their grooves in the tire. These devices and their arrangement, as described, completely prevent the movement of the spokes or tire laterally or sidewise, as they are otherwise liable to do in consequence of the shrinkage of the wood in the wheel.

The usual manner of "setting" the tire on a wheel is by inserting screw bolts through holes in it at certain intervals apart. These pass into the fellies, and their heads are fitted into countersunk receptacles in the tire. They are also usually secured on the inside of the fellies with nuts. When the tire is ground down considerably by use, the heads of the bolts are usually worn off, then the bolts become loose, and the tire itself—particularly in carriages which run over paved streets—is liable to break at the bolt holes. These evils are obviated by this improvement. Plates, *b* (Fig. 1), are welded to the inner face of the tire at the joints. These fit in corresponding cavities made in the face of the fellies over the joints, and holes are cut through them. These holes correspond with holes made through the fellies for receiving the bolts, *c*, which have square heads, and they have also washers, *i*.

By this method of construction and fastening, the tire is secured to the wheel without being drilled or requiring bolts passing through it. It renders the wheel much stronger and more durable for all purposes, and its merits deserve general appreciation.

A patent was issued to Joel Y. Schelly for the above invention, on Dec. 13, 1859; and more information may be obtained respecting it by addressing the patentee, at Hereford, Pa.



SCHELLY'S IMPROVED CARRIAGE WHEEL.