J. A. PARR.
Knitting-Machine

No. 213,299. Patented Mar. 18, 1879.

fig.2.

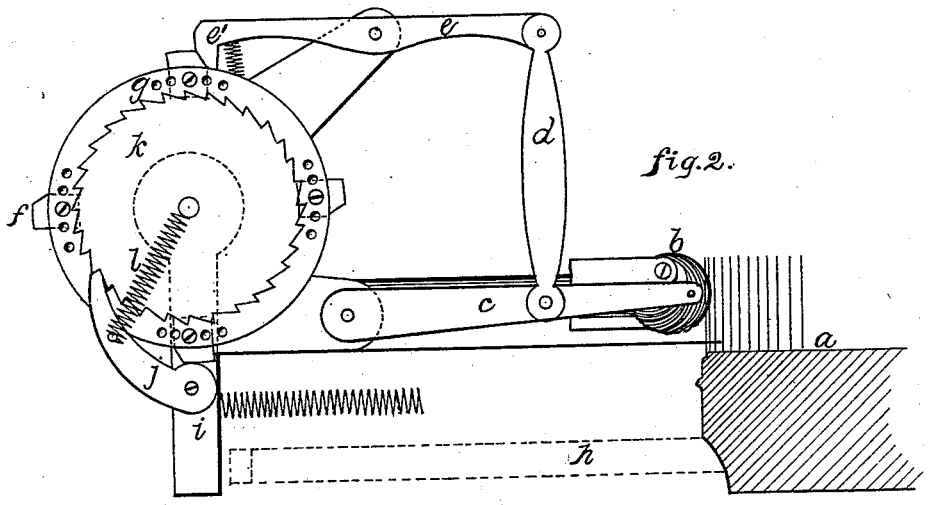


fig.3.

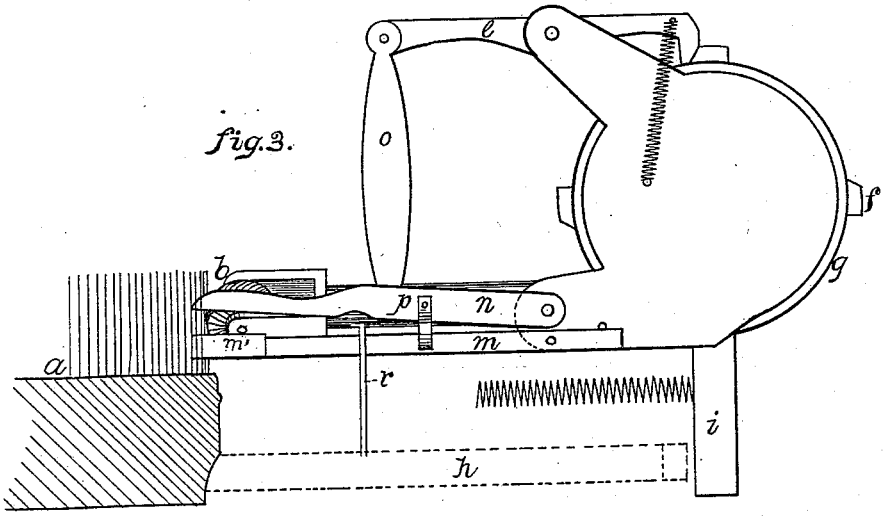
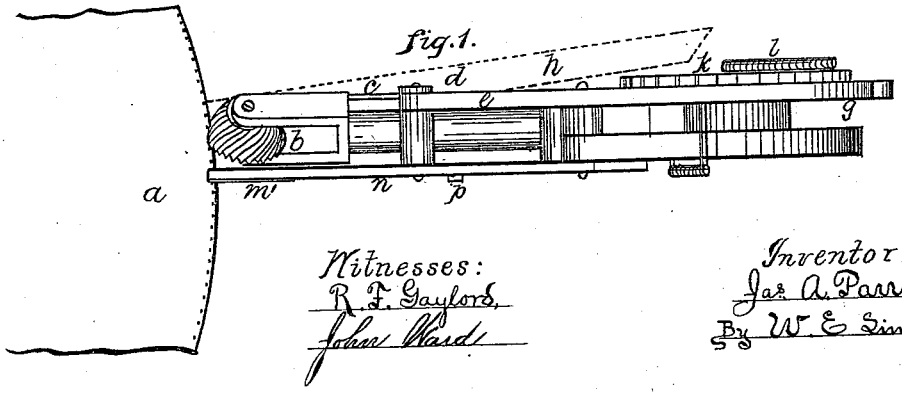


fig.1.



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UNITED STATES PATENT OFFICE.

JAMES A. PARR, OF NEW BRITAIN, CONNECTICUT.

IMPROVEMENT IN KNITTING-MACHINES.

Specification forming part of Letters Patent No. **213,299**, dated March 18, 1879; application filed November 1, 1878.

To all whom it may concern:

Be it known that I, JAMES A. PARR, of New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements pertaining to Knitting-Machines, of which the following is a specification, reference being had to the accompanying drawings, where—

Figure 1 is a top view. Fig. 2 is a side view; and Fig. 3 is also a side view from the opposite side.

In the knitting of striped goods—that is, goods having bars or sections of different colors—with the common knitting machinery it is the practice to break the feeding-in thread when it is desired to introduce a different color, and introduce the thread of the new color—all this by hand.

It is the purpose of my invention to effect this change automatically by machinery; and the invention consists of the combination of parts hereinafter specifically claimed.

The letter *a* denotes the ordinary rotating needle disk or cylinder, carrying at its periphery a continuous series of upright machine-needles. The letter *b* denotes the crimper or sinker wheel, rotated by intermeshing with the rotating needles. The machine has the usual appurtenances.

The thread or yarn guide *c*, through which the thread is fed to the crimper or sinker wheel and needles, in the place of being rigid and stationary, as is common, is pivoted at the rear end, so that the front end may have some up-and-down play. A pitman or connecting-rod, *d*, runs from the thread or yarn guide to the pivoted lever *e*, the rear end of which is furnished with a tappet, *e'*, acted upon from time to time by the cam-blocks *f*, which are on the disk *g*.

The needle disk or cylinder *a* is provided with an arm, *h*, rigid with it, which at each revolution of the needle disk or cylinder comes in contact with and forces back the pendule *i*, which is retracted to its place after the passage of the arm *h* by a spring or weight. On this pendule is pivoted the pawl *j*, drawn to mesh with the rotating ratchet *k* by the spring *l*. The ratchet *k* is fast with the disk *g*, so that each rotation of the needle disk or cylinder causes the disk *g* to rotate a step. At the appropriate and set time this rotation of the disk *g* brings a cam-block, *f*, under the tappet *e'*, with the effect of raising it and of correspondingly depressing the free end of the thread or yarn guide *c*, which throws the feeding-in thread out of the grasp of the crimper or sinker wheel and needles, and so stops the knitting of the color with which the yarn-guide is supplied.

The cam-blocks *f* are made adjustable on the disk *g*, so that the stopping of the feed may be made to occur at desired points. When the cam-block passes the tappet the feeding is, of course, resumed. During the interval, the length of which is regulated by the length of the cam-block, another color is thrown into feed, and knitted into the fabric, by a similar mechanism.

The lever *e* also operates, simultaneously, a knife which is on the opposite side of the crimper or sinker wheel. The letter *m* denotes the lower jaw of this knife, pivoted at its rear end, and bearing a blade, *m'*, and *n* denotes the upper jaw, also pivoted. The letter *o* denotes the connecting-rod running from the upper jaw to the lever *e*, whereby the knife is operated. When the thread or yarn guide *c* is thrown down the jaw *n* is thrown down upon the lower jaw, and the feeding-in thread is thereby severed across the blade *m'*. When the thread or yarn guide *c* rises the jaw *n* rises with it. The jaw *m* also rises a short distance, in order to assist in throwing the thread across the face of the crimper or sinker wheel, being thereto impelled by the pressure of the spring *p*, which is attached to the jaw *n* and bears against the side of the jaw *m*. The upward movement of the jaw *m* is stopped at a given point by a hook, *r*, or any other suitable device, after which the spring *p* lets up its pressure and the jaw *m* falls down again.

I claim as my invention—

The rotating needle disk or cylinder *a*, crimper or sinker wheel *b*, vibratory feeding thread or yarn guide *c*, connecting-rod *d*, lever *e*, rotating disk *g*, and cam-blocks *f*, ratchet *k*, pawl *j*, pendule *i*, arm *h*, connecting-rod *o*, and knife-jaws *m n*, all combined to operate substantially as described.

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Witnesses:

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