

J. S. McCURDY.
Sewing Machine.

No. 26,234.

Patented Nov. 22, 1859.

Fig. 3

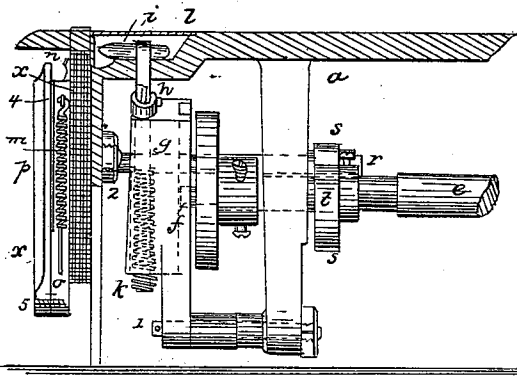


Fig. 2

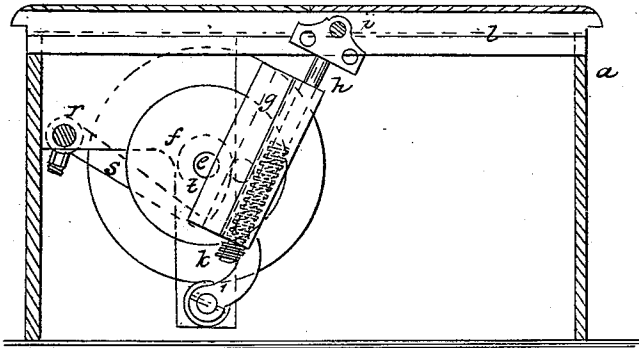


Fig. 1

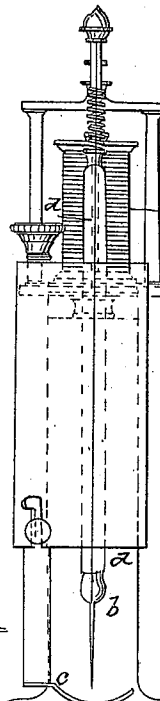
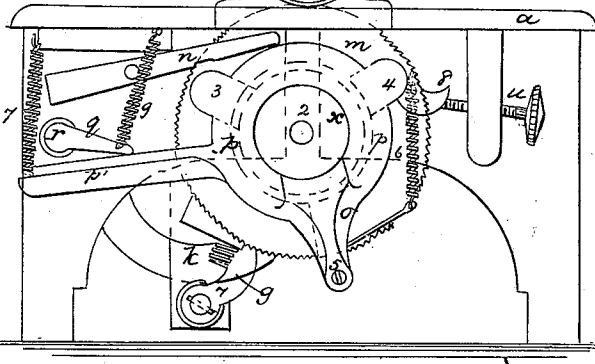
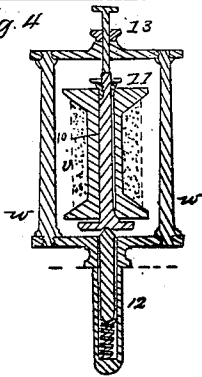


Fig. 4



Witnesses
Lemuel W. Lovell

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JAS. S. McCURDY, OF BROOKLYN, ASSIGNOR TO J. M. MYERS, OF NEW YORK, N. Y.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 26,234, dated November 22, 1859.

To all whom it may concern:

Be it known that I, JAMES S. McCURDY, of Brooklyn, in the county of Kings and State of New York, have invented, made, and applied to use certain new and useful Improvements in Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is an end view of my machine. Fig. 2 is a view of the shuttle-driver transversely of the bed. Fig. 3 is a side view of the shuttle-driver and feeding device, the bed being in section; and Fig. 4 is a section of the spool-carrier.

Similar marks of reference indicate the same parts.

The nature of my said invention consists in a compound shuttle-driver that acts in a very reliable manner in giving the right motion and at the right time to the shuttle, avoiding the wear on the shuttle-driver now usual, and consequently insuring a continuance of the proper timing between the needle and shuttle.

In the drawings, *a* is the bed of the machine.

b is the arm, carrying the pressure-foot *c* and needle-bar *d*, as usual.

e is a shaft rotated by competent power, and communicating a reciprocating movement to the needle-bar *d* and needle, as usual. On the end of this shaft *e* is a disk or crank, *f*, carrying a pin that works in a slot (shown by dotted lines in Fig. 2) in the back of a vibrating lever, *g*, that is attached by and moves on a pin, *l*, attached to the bed. In this lever *g* is a hole through which the pin *h* of the shuttle-driver passes, and *i* is the finger coming up behind the shuttle to drive the same.

k is a spring tending to keep the pin *i* down onto the raceway *l*, in which the shuttle travels. By reference to Figs. 2 and 3 the operation of this shuttle-driver will be understood, as follows: The lever *g* is vibrated by the pin of the disk *f*, traveling in the slot of said lever, and the spring *k* is compressed as the shuttle-driver *h* is drawn out of said lever *g*. This operation checks the momentum of the shuttle-driver and lever as the crank-pin passes

the center, and said spring *k* accelerates or aids in starting and propelling the shuttle. Thus the movement is more uniform, noiseless, and reliable, because that thumping and wear consequent upon suddenly arresting and reversing the motion of the shuttle-driver is avoided, and none of the parts are liable to wear loose and effect any variation in the relative movements of the needle and shuttle.

m is a feeding-wheel attached to the bed by a center pin, *2*, that can be adjusted vertically to regulate the amount said feed-wheel projects from the bed, and *n* is a spring pressed onto the flat side of said feed-wheel *m* to hold the same steady on the back movement of the feeding mechanism, next described. On the side of the wheel *m* is a hub or diverging ring, *x*, as seen in Fig. 3, over which a circular clamp, *p*, sets. This is provided with two binding-blocks, 3 and 4, and the pawl *o*, that is attached by the screw 5 and kept to the hub *x* by the spring 6.

7 is a spring tending to keep the lever *p'* of the clamp *p* toward a toe, *q*, on the short rock-shaft *r*, on which is a lever, *s*, that is operated on by a cam, *t*, on the main shaft *e*.

The operation of this feeding device is as follows: When the toe *q* presses on the lever *p'*, the pawl *o* clamps and binds against the flaring or diverging ring *x*, which draws the blocks 3 and 4 down onto the said ring, the divergence of which causes the faces of said blocks to press against the face of the feed-wheel *m*, producing a binding friction almost to the periphery of said feed-wheel, insuring that the feed-wheel will be turned the given distance; but so soon as the pressure of the toe *q* is released, the spring 7 draws back the lever *p'*, the movement of which releases the pawl *o* in consequence of its slightly-inclined position, and the parts are relieved and turn freely on the feed-wheel, around the hub *x*, the distance regulated for the stitch, which regulation is effected by the incline 8 and adjusting-screw *u*. The spring *n* prevents the feed-wheel turning back by any slight friction, and the spring 9 lifts the toe when not acted on by the cam *t*.

The spool of thread for the needle (shown at *v* in Figs. 1 and 4) is mounted on a spindle, 10, and clamped thereto by nuts 11; and this spindle is sustained on points in a frame, *w*.

One of these points is fitted to slide in a cavity and kept up by a spring 12. The other point is adjusted by the set-screw and nuts 13. The spring 12 is sufficient for resisting the screw 13 in regulating the tension; but when one spool is to be taken out and another substituted, it can be effected without changing the tension, because the spring 12 and point can be compressed sufficiently to allow the other end of the spindle to clear the point 13.

Having thus described my said invention, what I claim, and desire to secure by Letters Patent, is—

The vibrating lever *g*, carrying the shuttle-driver *h*, and provided with the spring *k*, to keep the shuttle-driver to the raceway, the whole constructed and operating as and for the purposes specified.

In witness whereof I have hereunto set my signature this 31st day of August, 1859.

JAMES S. McCURDY.

Witnesses:

LEMUEL W. SERRELL,
THOS. GEO. HAROLD.