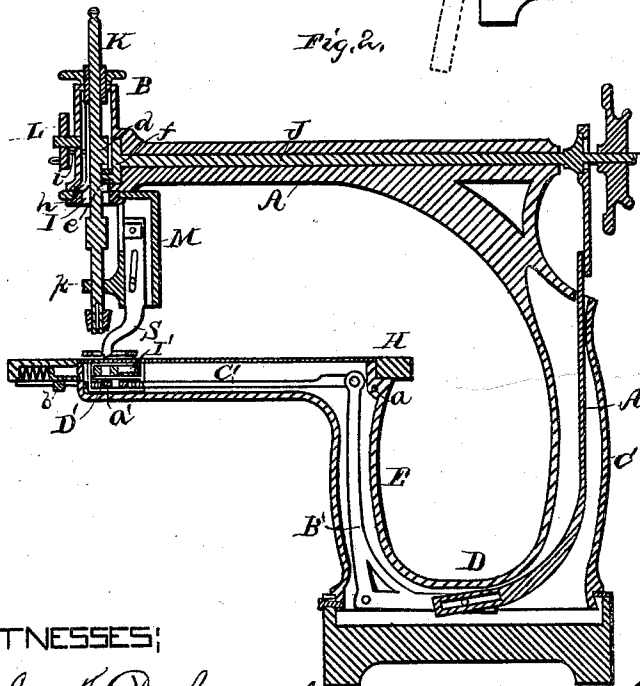
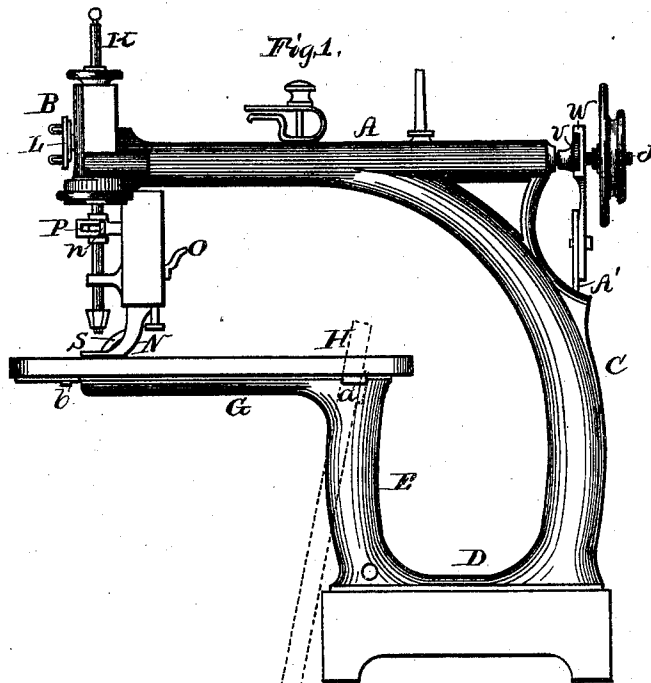


A. PLOSS.  
SEWING-MACHINE.

No. 171,485.

Patented Dec. 28, 1875.



WITNESSES:

*Jas. F. Duhamel,  
 Thomas. Byrnes.*

INVENTOR:

*Adam. Ploss.*

PER

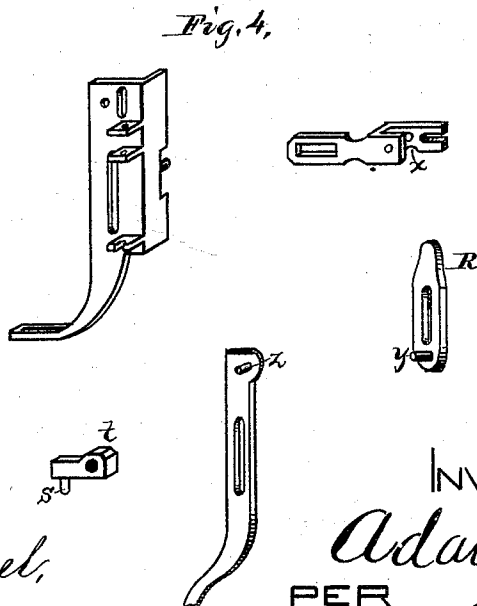
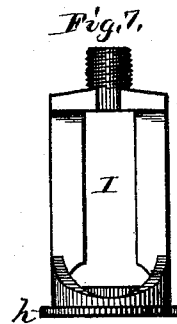
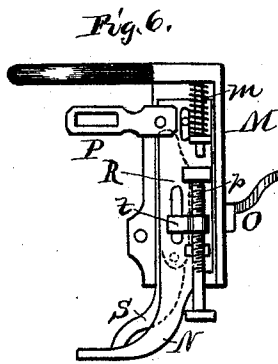
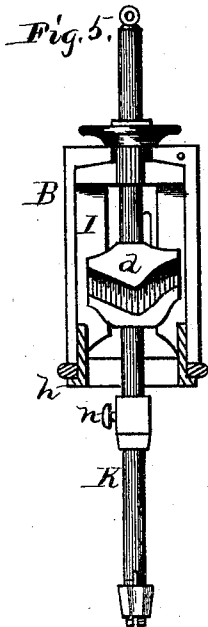
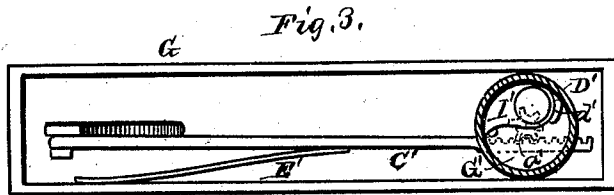
*H. J. Abbot.*

ATTORNEY,

A. PLOSS.  
SEWING-MACHINE.

No. 171,485.

Patented Dec. 28, 1875.



WITNESSES:

*Jan. S. Duhamel,*  
*Thomas. Byrne,*

INVENTOR  
*Adam Ploss,*  
PER  
*A. S. Abbot,*  
ATTORNEY

A. PLOSS.  
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Fig. 8.

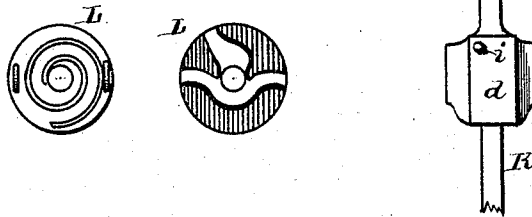


Fig. 9.

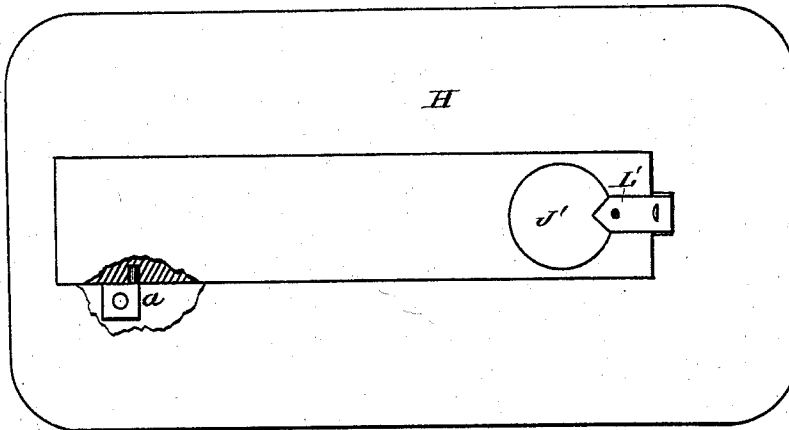
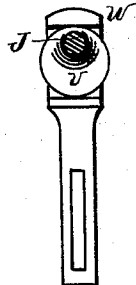


Fig. 10.



WITNESSES:

*Jas. F. Duhamel*  
*Thomas Byrne.*

INVENTOR

*Adam Ploss,*

PER

*H. S. Abbot,*

ATTORNEY

# UNITED STATES PATENT OFFICE.

ADAM PLOSS, OF MENOMONEE FALLS, WISCONSIN.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **171,485**, dated December 28, 1875; application filed October 5, 1875.

*To all whom it may concern:*

Be it known that I, ADAM PLOSS, of Menomonee Falls, county of Waukesha and State of Wisconsin, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification:

The nature of my invention consists in the construction and arrangement of a sewing-machine, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation, showing my invention. Fig. 2 is a longitudinal vertical section. Figs. 3, 4, 5, 6, 7, 8, 9, and 10 are views in detail.

The standard of my machine is composed of an upper horizontal part, A, having the head B at one end, and from near the other end the curved part C extends downward to the foot D. From the other end of this foot an arm, E, extends upward, and from the upper end of this arm a horizontal box, G, extends parallel with the part A under and slightly beyond the same. The foot D is supported in or on any suitable frame-work, and the top or table H is hinged to the box G at the inner end thereof. The table H is made with a slot just large enough for the box G, and is pivoted thereto by pins *a a* near the inner end, and fastened at the outer end by a suitable catch, *b*.

It will thus be seen that the top or table is supported by the machine from below, instead of the machine resting on top of the table, as is now usually the case. By this means I obtain room for sewing large articles of any kind, giving the same a chance to hang over all around; also a smooth surface is obtained to perform embroidery, braiding, quilting, and other similar work; and by turning the table down perpendicularly, a coat-sleeve or other similar article may be placed over the box or arm G for sewing.

Within the head B is placed a sash, I, in which is a vertically-moving slide, *d*, having suitable cam-grooves to receive a pin, *e*, from

the disk *f* of the horizontal driving-shaft J, which passes through the part A of the standard. The needle-bar K passes through, and is firmly secured to, the slide *d*, and thus obtains its vertically-reciprocating motion. From the front side of the slide *d* a pin, *i*, extends through a vertical slot in the head for operating the take-up L. This consists of a centrally-pivoted disk, with two loops on opposite sides of the center, and a spiral spring to throw it back after being turned by the movement of the needle-bar. The lower end of the sash I is formed with a circular flange, *h*, around which the box M revolves. This box contains the entire mechanism for actuating the feed, and has a projection, *k*, attached to its cover, through which the needle-bar passes, thereby assisting in supporting and guiding the needle-bar. N represents the presser-foot placed in the box M, and pressed down by means of a spring, *m*. When the presser-foot is raised, it is held up by means of a catch, O, pivoted thereto, and projecting through a slot in the box. By releasing this catch, the spring *m* at once throws the presser-foot down again. At the upper end of the presser-foot is pivoted a forked lever, P, the outer end of which is slotted and placed over a headed pin, *n*, projecting from a collar on the needle-bar. One prong of the inner forked end of the lever P has a semicircular notch, *x*, into which fits the upper rounded end of a lever, R, which has a pin, *y*, near its lower end projecting into a slot in the feed-arm S. This feed-arm has a pin, *z*, near its upper end, which passes through a hole in the inner end of that prong of the lever P, and into a curved slot in the presser-foot. On the opposite side of the presser foot are two projections containing a screw, *p*, which operates a slide, *t*, having a pin, *s*, that projects through a slot in the presser-foot, and into a slot in the lever R.

It will readily be seen that as the lever P is turned on its pivot by the movement of the needle-bar, the feed-arm S is thereby moved up and down, and at the same time it is moved backward and forward by the action of the lever R, which is turned also by the lever P, the pin *s* acting as a fulcrum therefor. By moving this pin up and down, by means of the screw *p*, the length of the backward and for-

ward movement of the feed-arm is changed, and thus the length of the stitch easily regulated.

The entire box M, containing the feeding mechanism, swings upon the flange *h* around the needle-bar as its axis, so that the mechanism may be made to feed in any direction desired, which is of great importance in many kinds of work.

On the driving-shaft J is an eccentric, *v*, with saddle *w* surrounding the same, and this connects by levers A' B' with a rack-bar, C', within the box G. In this box or arm G is formed the shuttle-box D', containing the circular shuttle-carrier G', which is pivoted in the center, and provided on its under side with a pinion, *a'*, into which the rack-bar C' is held by means of a spring, E', in the arm G. On the upper side of the carrier G' are suitable projections *d'* for holding the shuttle I', the whole being covered by a removable plate, J', having a suitable notch cut therein to receive the inner end of the throat plate L'.

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

1. The combination, with the frame or standard A C D E, of the hinged work-table H, operated in the manner and for the purposes substantially as hereinbefore set forth.

2. The combination of the elongated hollow arm or box G, containing the shuttle, and the slotted top or table H, surrounding the same, and capable of being let down, substantially as and for the purposes herein set forth.

3. The box M, containing the mechanism for actuating the feed, in combination with sash I and head B, said box being provided with an arm, K, surrounding the needle-bar, whereby the entire feed mechanism is adapted to swing around the needle, substantially in the manner hereinbefore described, for the purposes set forth.

4. The combination, with the needle-bar K, of the lever P, presser-foot N, slotted lever R, with pin *y*, feed-arm S, with pin *z*, and the fulcrum-pin *s*, all constructed and arranged to operate substantially as and for the purposes herein set forth.

5. The combination, with the presser-foot N, lever R, and feed-arm S, all constructed as described, of the slide *t* with pin *s*, and the adjusting-screw *p*, substantially as and for the purposes herein set forth.

6. The combination of the centrally-pivoted shuttle-carrier G', pinion *a'*, rack-bar C', bell-crank lever B', and adjustable bent lever A', all operated from the driving-shaft by an eccentric and rod secured to said shaft, substantially in the manner hereinbefore described, for the purposes set forth.

In testimony that I claim the foregoing as my invention, I hereunto affix my signature this 25th day of September, 1875.

ADAM PLOSS.

Witnesses:

JAMES E. LOUNSBURY,  
JOSEPH H. WALTERLIN.