

J. E. WHEELER & L. L. BARBER.

WAX-THREAD SEWING-MACHINE.

No. 173,837.

Patented Feb. 22, 1876.

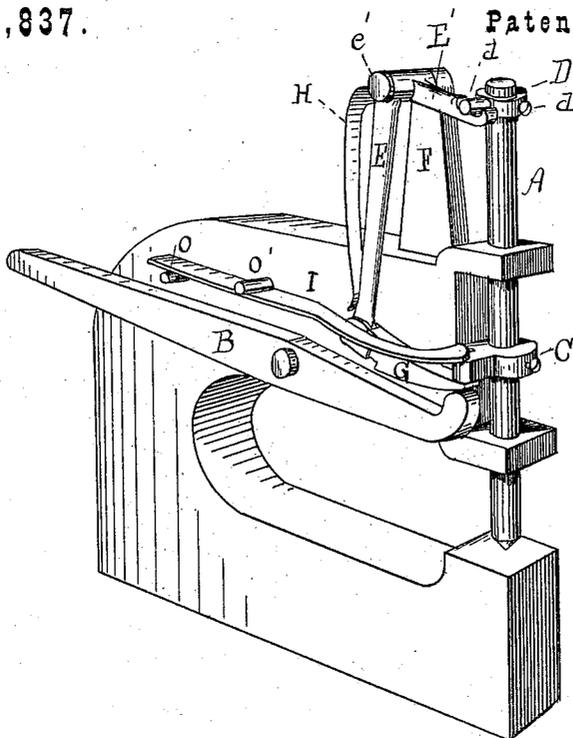


Fig. 1.

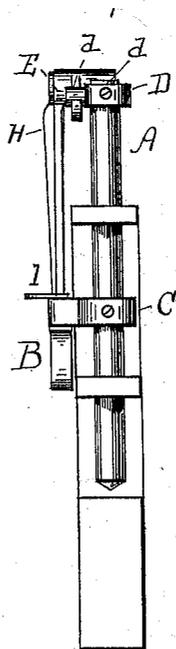


Fig. 2.

WITNESSES

E. P. Bigelow.

H. H. Raymond

John E. Wheeler
Lyman L. Barber
INVENTOR
by their Atty
Rooster Clarke.

UNITED STATES PATENT OFFICE.

JOHN E. WHEELER, OF LYNN, AND LYMAN L. BARBER, OF BOSTON, MASS.

IMPROVEMENT IN WAX-THREAD SEWING-MACHINES.

Specification forming part of Letters Patent No. 173,837, dated February 22, 1876; application filed November 10, 1875.

To all whom it may concern:

Be it known that we, JOHN E. WHEELER, of Lynn, in the State of Massachusetts, and LYMAN L. BARBER, of Boston, in said State, have invented an Improvement in Sewing-Machines, of which the following is a specification:

This invention has for its object the automatic adjustment of the presser-foot, for work of varying thicknesses, and is fully described hereafter, reference being had to the accompanying drawing, forming a part of the specification, in explaining the construction thereof, in which Figure 1 is a perspective of the attachment, and Fig. 2 is a front elevation of the same.

The presser-bar A is provided with the adjustable collar C, at or near the center of its length, and the collar D at its head. The collar C projects sufficiently to furnish a support for the spring I, and a bearing for the wedging-block G to act against. The collar D is provided with the pin *d'*, and is adjusted on the bar by the set-screw *d*. A vertical rocking lever, E, provided with the short horizontal arm *E'*, is hung upon the shaft *e*, having its bearing on standard F. The horizontal arm *E'* bears against the projecting pin *d'*, attached to the head of the presser-bar, and the vertical arm E carries at its lower end the wedge-shaped adjuster G, pivoted at its head to the lever E in such a way as to be readily operated between the shoulder on collar C and the end of lever B, when the presser-bar lifts, by the action of spring H, secured to the head of the standard, and arranged to constantly bear against the arm *E'* at or near its lower point. This wedge G is roughened on its under surface, and curved as represented, and, when in position, the point separates the end of lever B from the projection on the collar, while the spring I, with one end resting on the shoulder and the other secured to the frame of the machine by the pins O O', serves to constantly hold the shoulder upon the wedge, and make the lift of the presser-bar even and regular.

The operation of the invention is as follows: The lever B is permanently adjusted for thin work, and an increase in the thickness of the work lifts the presser-bar A, which permits

the rocking-lever E, actuated by the spring H, to force the wedge between the projecting shoulder and the end of lever B, lifting the presser-bar A a distance equivalent to that resulting from difference in the increased thickness of the work. It will thus be seen that the lever B lifts the presser-bar A a certain limited distance, and that any increase in the thickness of the work effects a corresponding increase in the lift of the presser-bar, through the medium of the rocking-lever, wedge, and springs, operating as above described.

It will also be seen that by this arrangement the presser-bar always lifts a certain and uniform distance from the work, regardless of its thickness; the lift from the thickest work being exactly that obtained on the thinnest.

The advantage consists in an automatic adjustment of the presser-bar for varying thicknesses of work, operated by the work, as the feeding advances, and preventing the binding of the work between the presser-foot and work-plate, which is the result of a fixed lift, when unequal thicknesses are operated upon.

Having thus fully described our invention, we claim, and desire to secure by Letters Patent of the United States—

1. The wedge-shaped adjusting-block G, rocking-lever E, and presser-bar A, in combination with the lever B and projecting collar C, substantially as described.

2. The combination of the shoulder C and lever B with the variable adjusting-block G and operating mechanism, substantially as described, whereby the said block is adjusted by the thickness of the work and the presser-bar thereby caused to have a uniform lift from the surface of the work, substantially as set forth.

3. The combination of the presser-bar A, adjustable collar D, with the rocking-lever E and spring H, all arranged and operated substantially as described.

JOHN E. WHEELER.
LYMAN L. BARBER.

Witnesses:

FREE. F. RAYMOND,
THOS. WM. CLARKE.