(No Model.)

H. M. ESSINGTON.

CLAMP CENTERING DEVICE FOR BUTTON HOLE SEWING MACHINES.

No. 377,932. Patented Feb. 14, 1888.

Fig. 1.

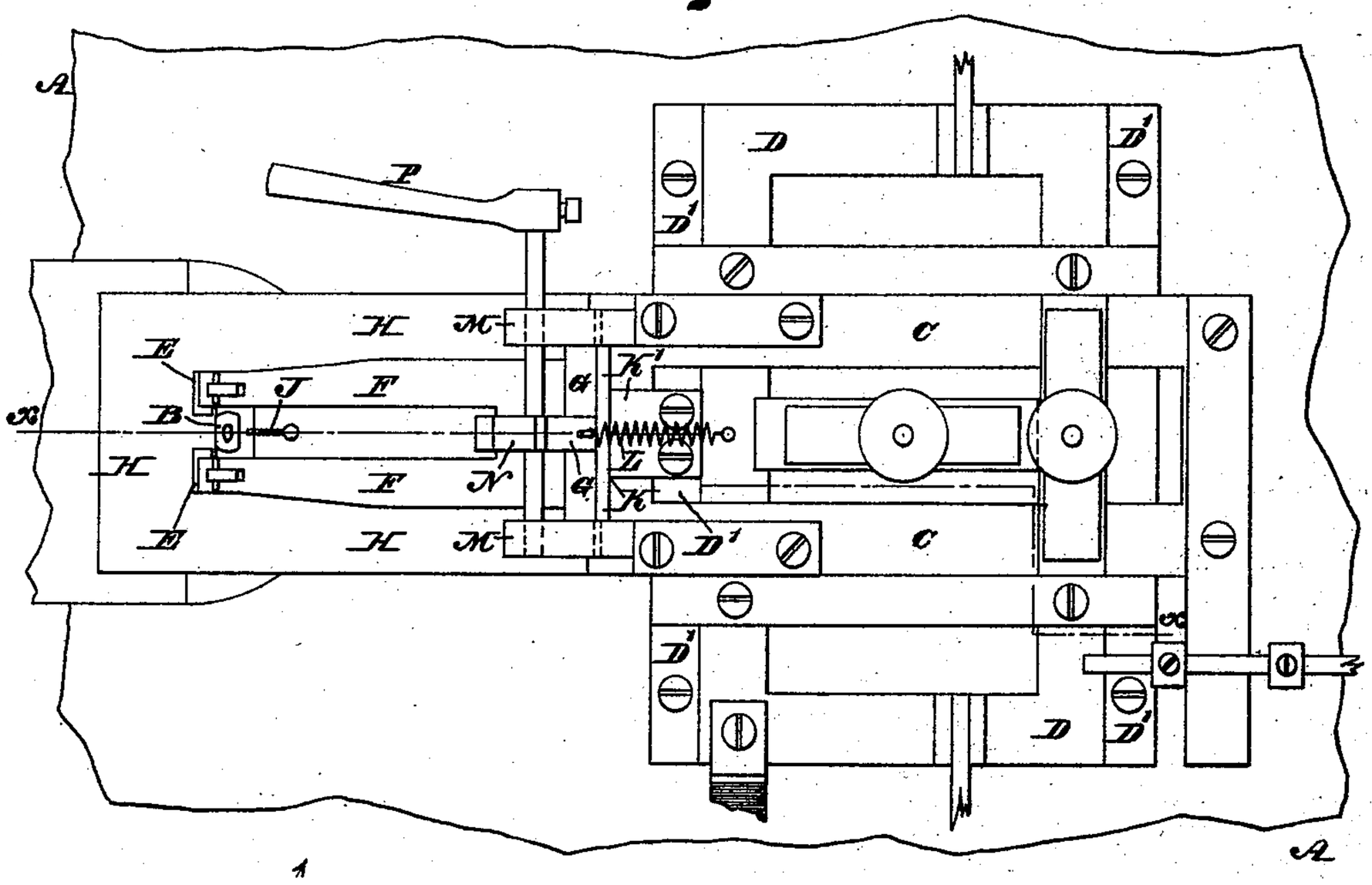
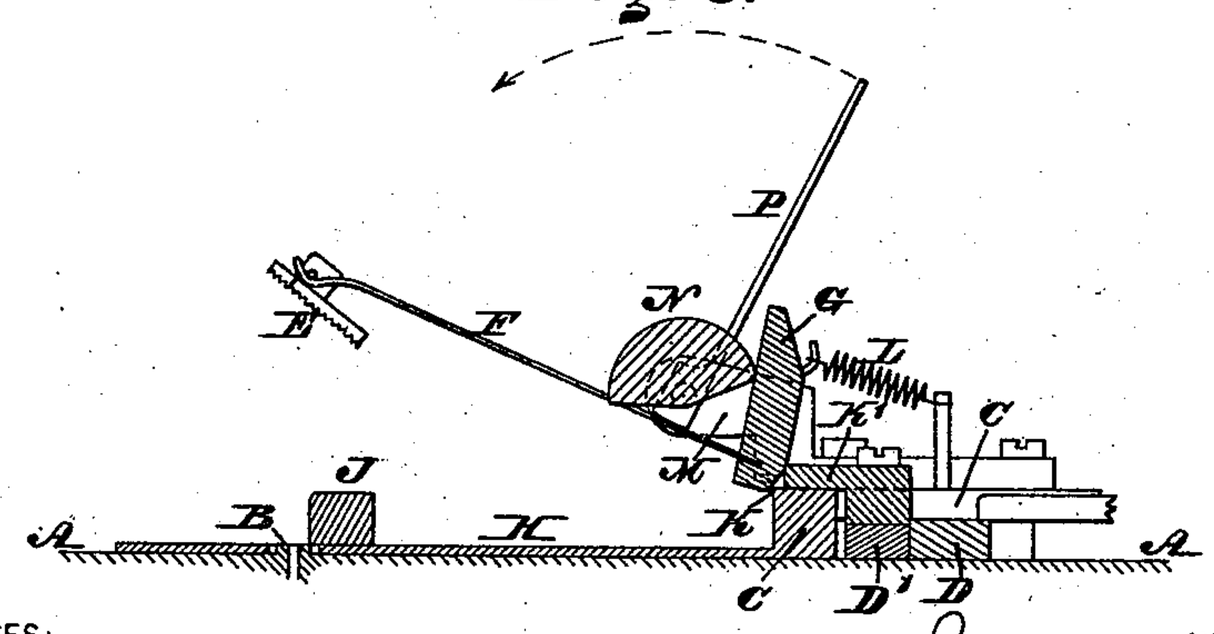


Fig. 2.

Fig. 3.



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CLAMP-CENTERING DEVICE FOR BUTTON-HOLE SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 377,932, dated February 14, 1888.

Application filed January 22, 1887. Serial No. 225,125. (No model.)

To all whom it may concern:

Be it known that I, HARRY M. ESSINGTON, a citizen of the United States, residing in the city and county of Camden, State of New Jersey, have invented a new and useful Improvement in Button-Hole-Finishing Machines, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a top or plan view of the portion of a button-hole-finishing machine embodying my invention. Figs. 2 and 3 represent sections thereof in line *x x*, Fig. 1, the parts being in different positions

Similar letters of reference indicate corresponding parts in the several figures.

In an application for Letters Patent for improvements in button-hole-finishing machines heretofore made by me and of date June 24, 1886, and Serial No. 206,109, there are shown features for imparting motions in right-angular directions to the clamping mechanism of said machine.

When the machine stops, the guide on which the button-hole is to be fitted while clamped in position may occupy a position so removed from the throat-plate of the machine that when the next button-hole occupies said guide the finishing of said hole may be begun at an improper place, producing irregular work, to remedy which is the object of my invention.

To this end the invention consists in adapting the plate which carries the button-hole guide to be moved, whereby the guide may be automatically centered in relation to the throat-plate.

Referring to the drawings, A represents the table of a button-hole-finishing machine, and B represents the throat-plate thereof.

C represents the slide which carries the clamping mechanism and receives motion in the longitudinal direction of the machine.

D represents the slide which has the slide C fitted to it and receives motion in the transverse direction of the machine. By these means the button-hole is carried in directions at a right angle to each other, whereby, by means of the stitch-forming mechanism, stitches may be made on the end of the button-hole, first in a direction at a right angle to that of the button-hole, and next over the first-named stitches parallel with the hole.

The clamping mechanism consists of a head, E, which is connected with a spring-arm, F, one end of the latter being secured to a head, G, which is pivoted to the plate H of the slide C, said plate resting on the table A and carrying the button-hole guide J, which receives the button-hole and is in operative position, as shown in Fig. 3, centered on the throat-plate. The heel end of the head G is cut away, rounded, or beveled, as at K, and located adjacent to a fixed block, K′, of the guide D′ of the slide D, so as to ride thereon when the arm F is raised. A spring, L, is connected with the slide C and head G for holding the clamping mechanism in elevated position, as shown in Fig. 3.

To portions of the slide C, aside of the block K′, are secured ears M, on which is mounted a rotary head, N, which is of segmental form and adapted to bear against the arm F and abut against the head G, according to the direction of rotation of said head N. The axis of the head N has secured to it a handle, P, for operating purposes.

When the machine stops, the handle P is rotated in the direction of the arrow, Fig. 2. This rotates the head N, whereby the arm F is relieved of the pressure of said head. The head also abuts against the head G and forces the same upward and backward, whereby the arm F is raised and the clamping-head E rises from the plate H, and the finished button-hole may be removed. As the head G rises, its heel K rides against the block, thus imparting motion to the plate H in the direction toward the throat-plate B, and setting the guide J in proper position to begin the work of finishing the next button-hole fitted on said guide, so that the subsequent work is true and uniform.

By rotating the head N in the direction of the arrow, Fig. 3, the head G is relieved of the action of said head N, and the face of the head N bears against the arm F, whereby the latter is lowered and the clamping-head forced against the button-hole and held locked by said head N, which acts somewhat after the manner of an eccentric or cam against the arm F.

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. A button-hole-finishing or other sewing-machine having the table A, with the throat-plate B, a slide having a plate carrying the guide J thereon, clamping mechanism, substantially as described, connected with said plate, and means, substantially as described, for imparting motion to said plate, whereby the guide J is automatically centered in relation to the throat-plate, the parts being combined substantially as described.

2. In a button-hole-finishing or other sewing-machine, a slide having a plate with a guide thereon, in combination with the oscillating head G, pivoted to the said plate and having a cloth-clamping device attached thereto, and a rotary head journaled in arms attached to the said slide and adapted to bear against either the oscillating head or the clamping mechanism, all substantially as described.

3. The table A, with throat B, the slide C, and plate H, having guide J thereon, the pivoted head G, with plate E, connected thereto by springs F, the stationary block K′ and spring L, secured to said head G, and slide C, said parts being combined substantially as described.

4. The table A, with throat B, in combination with slide C, having plate H, with guide J thereon, the head G, having beveled heel, as shown, the block K′, secured to the ways D′, and the head N, journaled in arms M and having the handle P, all substantially as and for the purpose set forth.

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Witnesses:
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