

(No Model.)

E. SHAW.

TRIMMING KNIFE FOR SEWING MACHINES.

No. 304,868.

Patented Sept. 9, 1884.

Fig. 1

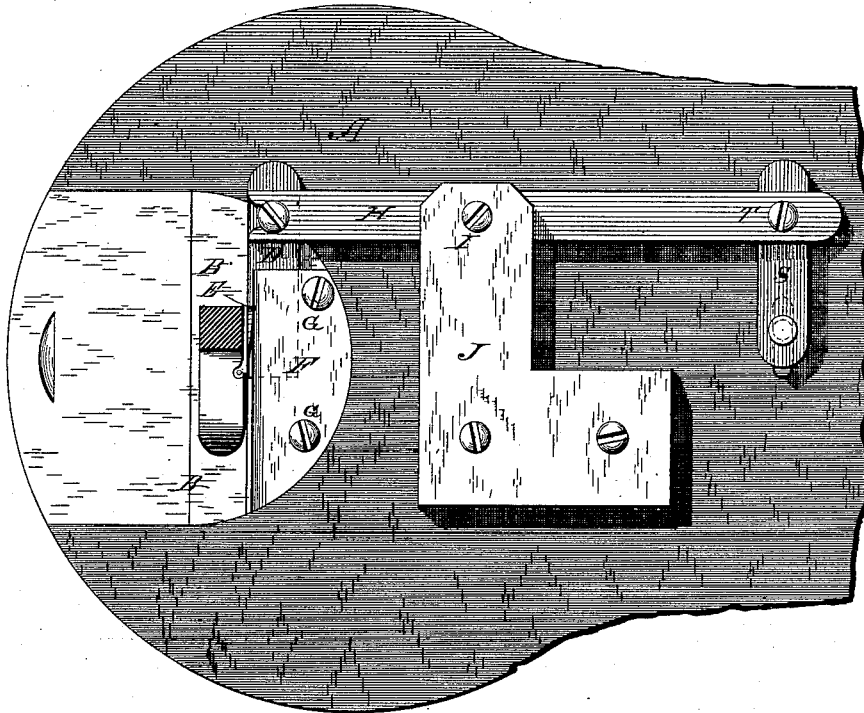


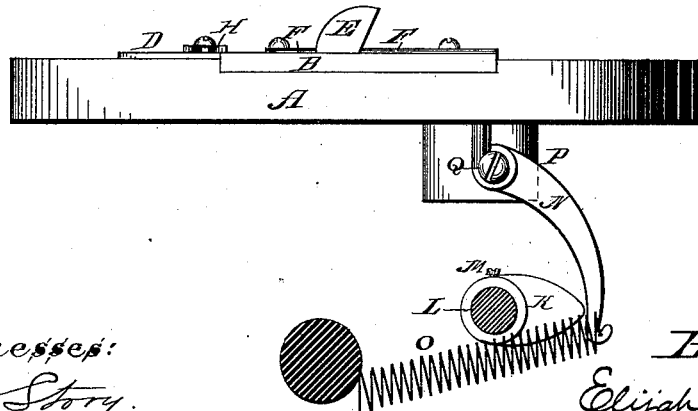
Fig. 3



Fig. 4



Fig. 2



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ELIJAH SHAW, OF MILWAUKEE, WIS., ASSIGNOR OF ONE-HALF TO CHARLES T. BRADLEY AND WILLIAM H. METCALF, BOTH OF SAME PLACE.

TRIMMING-KNIFE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 304,868, dated September 9, 1887.

Application filed August 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, ELIJAH SHAW, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Trimming-Knives for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in trimming-knives for sewing-machines, and the device for operating the same.

The object of my invention is to provide a device for cutting and trimming the margin of leather or fabrics, the knife of which reciprocates horizontally backward and forward in a straight line, and is adapted to produce a clean straight cut through the fabric.

The construction of my invention is further explained by reference to the accompanying drawings, in which—

Figure 1 represents a top view of my invention attached to a machine. Fig. 2 is a side view from the end of the machine. Fig. 3 is an end view of the cutting-knife, showing one manner of attaching it to the needle-plate. Fig. 4 represents a perspective view of the cutting-knife detached from the machine.

Like parts are indicated by the same reference-letters throughout the several views.

A represents the bed of the machine. B is the needle-plate. E is a vertical cutting-knife, which is formed on or rigidly attached to the slide D. F is a retaining-plate, which is secured to the needle-plate B above the slide D by screws G. The fabric is fed forward by the feed-dog of the machine toward the cutting-edge of the knife in the ordinary manner, while the cutting-knife is caused to reciprocate rapidly backward and forward in line with the line of movement of and against the fabric. Motion is communicated to the slide D by the oscillating lever H. The lever H is centrally pivoted to the bed-plate, by screw I, 50 beneath the retaining-plate J. Motion may

be communicated to the reciprocating knife E from any part of the operative mechanism of the machine most convenient, and may be varied according to the construction of the machine to which it is attached, a convenient method, however, being illustrated in Fig. 2, in which an eccentric, K, is secured to the rotating shaft L by set-screw M. The eccentric K is adapted as it revolves to bear against the lever N, whereby said arm is moved forward; and as said eccentric revolves away from said arm it is drawn backward by the spiral spring O. The lever N is pivoted to the block P by a screw, Q. The upper end of the lever N extends through a slot in the bed-plate, and is connected with a plate, S. (Shown in Fig. 1.) The front end of the plate S is attached to the lever H by screw T. Thus, as the eccentric K is revolved, motion is communicated therefrom through said lever N, plate S, and lever H to the reciprocating slide D, whereby the knife E, attached thereto, is caused to reciprocate backward and forward in its guideways beneath the plate F in a straight line. Thus, as the leather or fabric is fed forward beneath the presser-foot of the machine, the same is trimmed or severed by a smooth straight cut.

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

1. In a sewing-machine, the combination, with a needle-plate, of the reciprocating slide D, provided with cutting-knife E, retaining-plate F, and lever H, said lever H being centrally pivoted to the bed of the machine, and connected at one end with the operative mechanism of said machine, substantially as and for the purpose specified.

2. The combination of the needle-plate B, retaining-plate F, slide D, provided with vertical cutting-knife E, lever H, plate S, lever N, spring O, eccentric K, and shaft L, all substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

ELIJAH SHAW.

Witnesses:

JAS. B. ERWIN,
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