(No Model.)

# B. F. GILBERT.

## TRIMMING ATTACHMENT FOR SEWING MACHINES.

No. 260,291. Patented June 27, 1882.

FIG. 1.

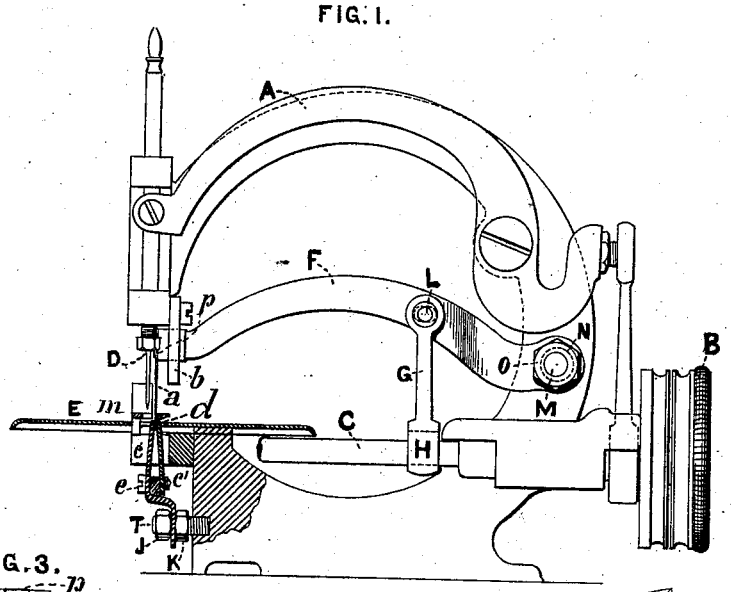



FIG. 3.

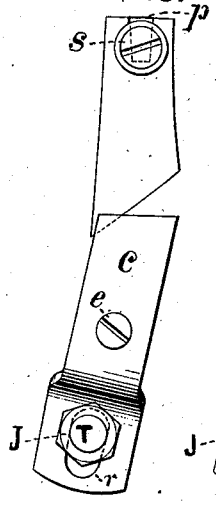



FIG. 4.

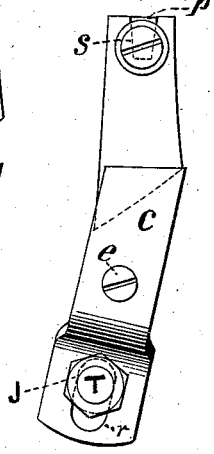



FIG. 5.

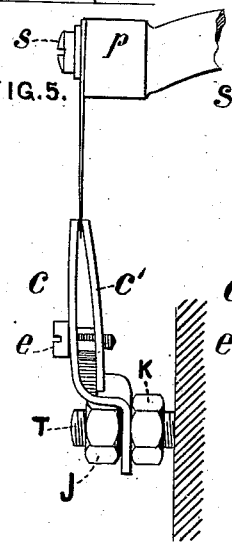



FIG. 6.

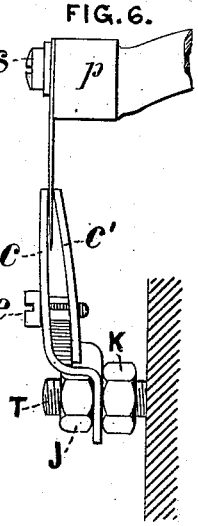
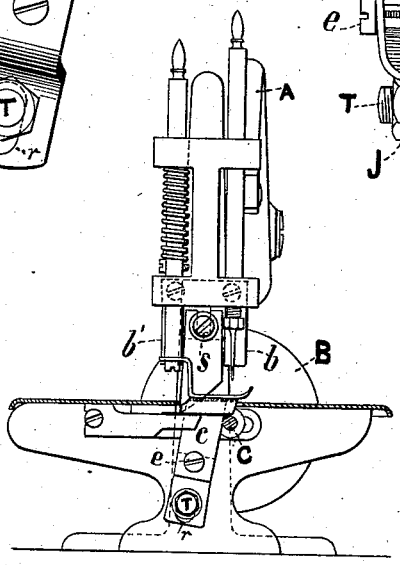



FIG. 2.




WITNESSES:

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# UNITED STATES PATENT OFFICE.

BENJAMIN F. GILBERT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO CHARLES H. SPENCER, OF SAME PLACE.

## TRIMMING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 260,291, dated June 27, 1882.

Application filed February 1, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN F. GILBERT, of Germantown, Philadelphia, Pennsylvania, have invented certain new and useful Improvements in Cutting and Trimming Attachments for Sewing-Machines; and I do hereby declare that the following is a specification of my improvements, reference being had to the accompanying drawings, wherein—

Figure 1 is a side view, partly in elevation and partly in section, showing the general arrangement of a sewing-machine with my improved attachment applied thereto. Fig. 2 is an end view, in elevation, of the same. Figs. 3 and 4 are side views, on an enlarged scale, of the cutter in its extreme positions, showing adjacent parts of the mechanism. Figs. 5 and 6 are views of the same parts and in the same positions, respectively, as those shown in Figs. 3 and 4, but at right angles to the position there indicated.

My improvements are specially adapted for use in connection with that class of cutting attachments in which a knife or chisel is reciprocated vertically through a slot in the work-plate adjacent to the needle-hole and parallel to the line of feed, for the purpose of trimming the seam.

In the practical operation of such trimmers I have found that, as the work-plates are made of unhardened metal, the edges of the slots become rapidly worn away, owing to the presence of grit in the material operated on, and that as this wearing action progresses the tendency of the knife is to push the material down into the slot, the clogging of which interferes with the cutter. Moreover, as the cutter-slot is necessarily situated very close to the needle-hole and to the opening for the feed-bar, the thin intervening strip of the work-plate is too weak to satisfactorily resist the thrust of the knife, and is liable to be bent or broken. The frequent removal of the cutter for the purpose of sharpening it is furthermore a necessity which occasions much delay.

My present invention is designed to obviate these difficulties; and to that end it consists in a device whereby the edges of the slot and the intervening strip between it and the needle or feed openings may be conveniently formed of pieces of hardened steel placed vertically, or nearly so, in order to best resist the thrust of the knife; and, furthermore, in so combining these edges with the cutter that they shall sharpen the edge thereof in the actual operation of the machine.

In the drawings, A is the needle-arm, B the driving-pulley, C the feed-shaft, D the needle, *m* the presser-foot, and E the work-plate, of a sewing-machine, which, being familiarly known, need not be further described.

An eccentric, H, upon the shaft C actuates a link, G, which is attached to the lever-arm F by means of a pin, L, which has a slight lateral play in the link-head. The lever-arm F is pivoted upon a bearing, N, which is mounted upon a slightly-eccentric pin, M, secured to the main frame by a screw-nut, *o*. At the free end of the lever-arm F the chisel or knife *a* is attached to a head or socket, *p*, by means of a screw, *s*.

The object of suspending the arm F upon the eccentric pin M is to permit the adjustment of the knife at different distances from the needle in case it is desired to trim the seam more or less closely. The range of this adjustment being about one-sixteenth of an inch, a very slight eccentricity suffices to afford it. The side faces of the knife-socket *p* slide freely between the guide-pieces *b b'*, secured to the head of the machine.

Projecting upward through a wide slot, *d*, in the work-plate, and flush, or nearly so, with the surface of the plate, are the face-pieces *c c'*, preferably constructed of hardened steel and mounted by means of slots *r* upon the screw-pin T between jam-nuts J K. By means of a set-screw, *e*, the upper ends of these face-pieces *c c'* can be adjusted at any desired distance from one another, and I prefer to arrange them, as shown, in contact with the knife.

Conformably to the adjustment of the knife-arm F upon the eccentric pin M, the face-pieces *c c'* are to be adjusted laterally by means of the jam-nuts J K, and the wearing away of the upper ends of the face-pieces can be readily compensated, as the slots *r* permit their vertical adjustment.

From the foregoing description the mode of operation of my improvements will be obvious.

The reciprocation of the arm F causes the knife *a* to trim the fabric parallel to the seam, and when the face-pieces *c c'* are adjusted in contact with the knife their elasticity maintains them in that position during the cutting operation, and the knife constantly sharpens itself by the friction against their edges. The arrangement of the face-pieces in a substantially vertical position enables them to resist most effectually the thrust of the knife.

I have found that the use of two face-pieces is preferable; but as some of the results aimed at can be attained by the use of but one such face-piece, the slot in the work-plate being in such case made narrower, I do not confine my claim to the use of both face-pieces in combination with the cutter.

It is also obvious that the device for actuating the knife or chisel need not be of the form shown, but that any appropriate mechanism may be used to cause its vertical reciprocation, or that even a rotary cutter can be combined therewith. Hence, although I deem my attachment best adapted for use in connection with a reciprocating knife, I do not desire to limit my claim to such arrangement.

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

1. The combination of a cutter and a slotted work-plate with face-pieces which project upwardly into the slot, substantially in the manner and for the purpose set forth.

2. The upwardly-projecting face-pieces arranged, substantially as described, in a slot of the work-plate and adjustable vertically therein.

3. The upwardly-projecting face-pieces arranged, substantially as described, in a slot of the work-plate and adjustable horizontally therein.

4. The combination, with a cutter, of elastic face-pieces arranged in substantially vertical planes and bearing against the adjacent sides of the cutter, for the purposes specified.

B. F. GILBERT.

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