

T. BRIGGS.
 Trimming-Mechanism for Sewing-Machines.
 No. 198,790. Patented Jan. 1, 1878.

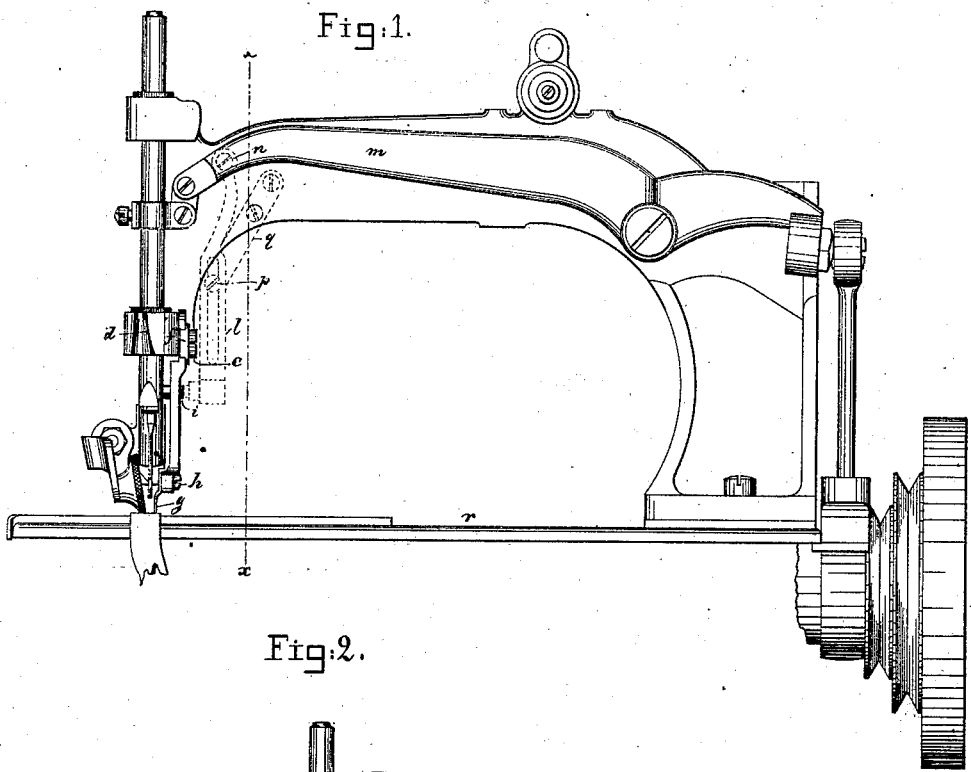


Fig. 2.

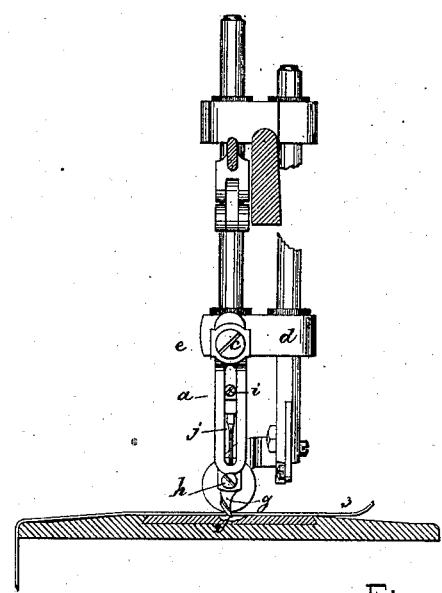


Fig. 3.

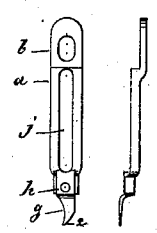


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

THOMAS BRIGGS, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN TRIMMING MECHANISMS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **198,790**, dated January 1, 1878; application filed October 11, 1877.

To all whom it may concern:

Be it known that I, THOMAS BRIGGS, of Lynn, in the county of Essex and State of Massachusetts, have invented an Improved Trimming Mechanism for Sewing-Machines, of which the following is a specification:

This invention relates to trimming mechanism to trim or cut material parallel with the seam being sewed, and is specially useful in sewing leather for shoe and other work.

In this invention the stock carrying the cutting-blade, supported and guided independently of the needle-bar, is moved vertically at or near the completion or termination of the downward and of the upward stroke of the needle, through the agency of a pin deriving its motion from the needle-operating mechanism, the pin moving the stock operating in a slot to provide for lost motion, to permit the cutter to remain stationary during the greater portion of the needle-stroke.

Figure 1 represents, in side elevation, part of a Wheeler & Wilson machine provided with my invention; Fig. 2, a section on line *x x*, Fig. 1; Fig. 3, a side and edge elevation of the cutter-stock and blade, and Fig. 4 a modified form of blade.

The cutter-stock *a* has an elongated slot, *b*, to receive the shank of the screw *c*, by which the stock is held against the inner side of the head *d* of the machine. The washer *e*, interposed between the screw-head and stock, will preferably be made as a spring, to permit the stock to be moved up and down, and it will preferably have ears *f*, to inclose the edges of the stock, to prevent the latter from turning on the screw and moving longitudinally with the feed or material.

The construction of the washer may be varied without departing from my invention.

The cutting-blade or knife *g* is attached to the stock by means of a screw, *h*. A pin, *i*, on the needle-bar, (shown in full lines, Fig. 1,) enters the longest slot *j* in the stock, and, as the needle-bar rises and falls, strikes alternately the ends of such slot, and lifts and pushes down the blade. The point of this blade is of such length that it is never lifted above and out from the guiding-slot in the usual throat-plate near the needle-hole.

When the stock is depressed near the ter-

mination of the downward stroke of the needle and its bar, the inclined cutting-edge 2 meets and moves over and down through the material 3, cutting it for a length substantially equal to the length of the last stitch. The cutting-blade and stock then remain stationary until the needle and its bar nearly complete their ascent; then the cutter-stock and blade are lifted, and the feed takes place. The shape of the blade and its times of operation are such that the forward motion of the material under the action of the feed is in no way resisted or impeded.

It is obvious that instead of placing the pin *i* on the needle-bar, it may be placed on a bar, *l*, (shown in dotted lines, Fig. 1,) such bar being pivoted to the vibrating arm *m* at *n*. This bar *l* will have a slot to receive a stud, *p*, on a fixed arm, *q*, the slot being so shaped that the pin will not reciprocate laterally in the slot *j* as the needle-bar *m* vibrates.

The shape of the cutting-blade may be changed—for instance, as shown in Fig. 4. It will be noticed that this cutter trims the material with a direct thrust at right angles to the supporting-surface *r* while the needle is at the termination of its downward stroke, and that it then rises to leave the material free to be fed forward at the proper time.

The strain on the needle-bar or its actuating mechanism to cause the blade to cut the material is exerted only after the needle is in its lowermost position, and consequently the needle-bar is worn less than were the cutter attached directly to the bar.

I claim—

In a sewing-machine, a slotted cutter-stock and cutter adapted to be moved vertically in guideways, in combination with a pin moved by the needle-operating devices, the pin co-operating with the slot in the cutter-stock to force the knife through the material at or near the termination of the downward stroke of the needle, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS BRIGGS.

Witnesses:

W. J. PRATT,
G. W. GREGORY.