(No Model.)

C. G. RUTZ.

TRIMMING ATTACHMENT FOR SEWING MACHINES.

No. 556,940. Patented Mar. 24, 1896.

FIG. 1.

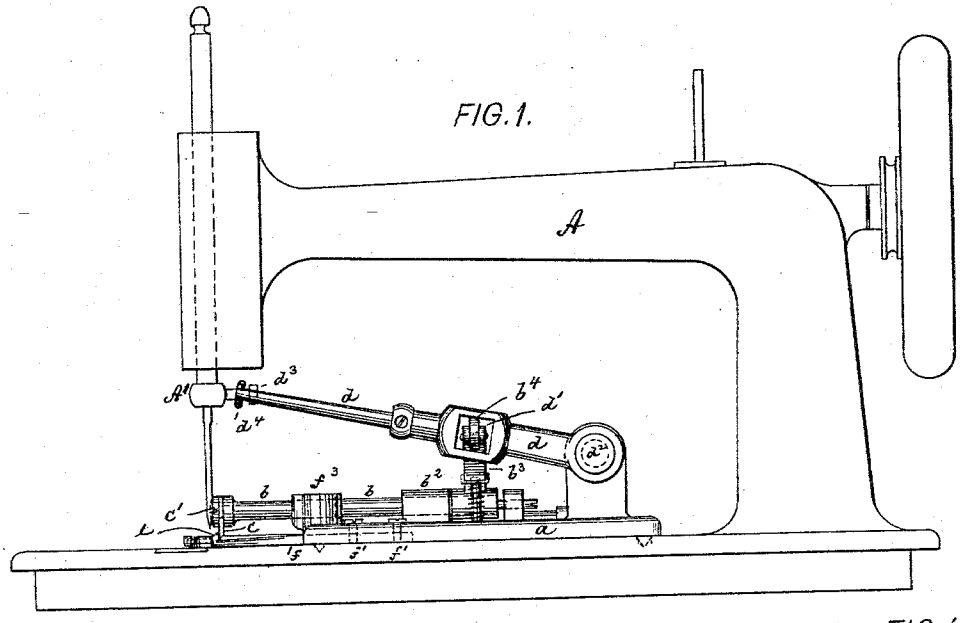


FIG. 2.

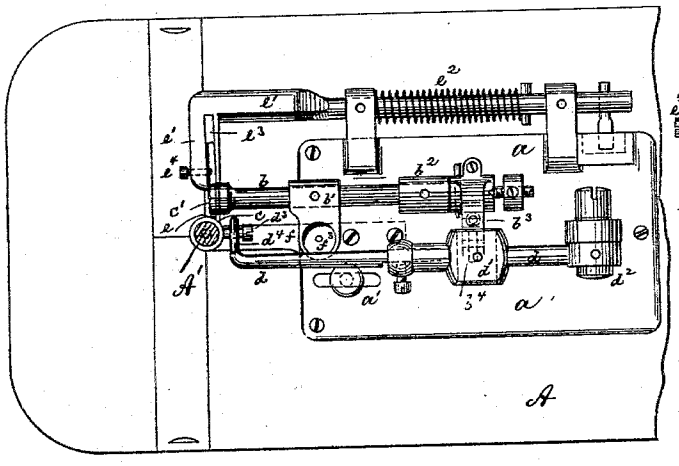


FIG. 4.

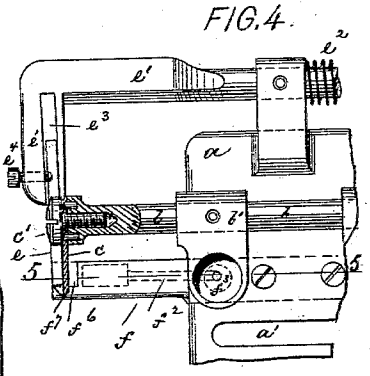


FIG. 5.

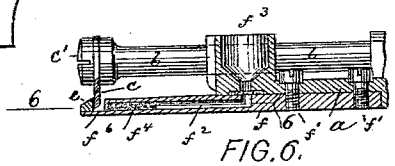


FIG. 6.

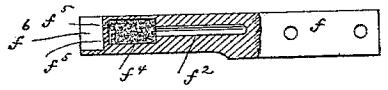


FIG. 3.

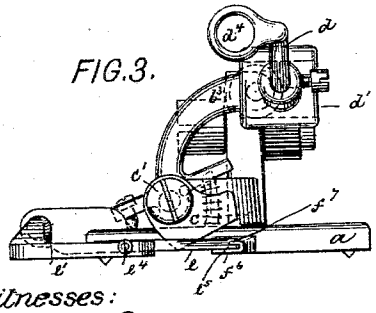
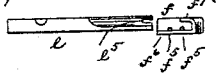


FIG. 7.



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CARL G. RUTZ, OF BROOKLYN, NEW YORK.

TRIMMING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 556,940, dated March 24, 1896.

Application filed November 9, 1895. Serial No. 568,383. (No model.)

To all whom it may concern:

Be it known that I, CARL G. RUTZ, of Brooklyn, New York, have invented an Improved Trimming Attachment for Sewing-Machines, of which the following is a specification.

This invention relates to a trimming attachment for sewing-machines of the class illustrated in Patent No. 369,658, granted to me September 6, 1887. In that patent is described a cutter that is actuated by the needle-bar of the sewing-machine, and which trims the raw edge of the fabric while the latter is being stitched parallel to such edge. The motion of this cutter must be exceedingly rapid, as the cutter must open and close once during the formation of every stitch. Owing to this rapid motion of the cutter it is of great importance to so lubricate it that it will not become overheated and thus inoperative.

The present invention relates to the means for lubricating the cutter and also to the construction of the cutting mechanism generally.

In the accompanying drawings, Figure 1 is a side elevation of a sewing-machine provided with my improved trimmer. Fig. 2 is a plan of the trimmer; Fig. 3, an end view thereof; Fig. 4, a plan, partly in section, of part of the trimmer; Fig. 5, a vertical longitudinal section on line 5 5, Fig. 4; Fig. 6, a horizontal section on line 6 6, Fig. 5; and Fig. 7, a detail of the cutter.

The letter *a* represents the bed-plate of my improved trimming attachment, which is provided with an elongated slot *a'*, so that it may be secured adjustably to the table of a sewing-machine. Mounted longitudinally upon the bed-plate *a* in suitable bearings *b' b²* is a rock-shaft *b*, to the end of which the movable cutting-blade *c* is secured by screw *c'*. The rock-shaft *b* is provided with a laterally-extending arm *b³*, carrying a friction-roller *b⁴*, which is received within a socket or opening *d'* of an operating-lever *d*, turning on fulcrum *d²* and adapted to be connected at its free end *d⁴* by a screw *d³* to the needle-bar A' of the sewing-machine A. Thus it will be seen that the reciprocating motion of the needle-bar will cause an oscillation of the cutting-blade *c*.

Co-operating with the movable cutting-blade *c* there is a fixed cutting-blade *e*, which is attached to a bent rod *e'* actuated by a spring *e²* that tends to draw the fixed cutter against the movable cutter, as will be readily understood.

In order to properly lubricate the cutting-edges of the cutters *c e*, I employ the following construction: Within a longitudinal groove formed in the lower face of the plate *a* there is attached by screws *f'* an outwardly-projecting lubricating-arm *f*, which is placed parallel to the rock-shaft *b*. Within the arm *f* there is formed a duct or channel *f²*, which communicates at one end with an oil-cup *f³*, Fig. 5, formed in one piece with the bearing *b'* or otherwise. At the other end the duct *f²* opens into a chamber *f⁴*, which is inclosed within the arm *f* and which is filled with a suitable packing material or absorbent. The chamber *f⁴* opens in turn by small perforations *f⁵* upon a small platform or flattened end *f⁶*, in which the arm *f* terminates, and which is located directly beneath the free end of the movable cutter *c*.

In use the lubricant introduced into cup *f³* will flow through duct *f²* into the chamber *f⁴*, where it will be held by the absorbent and gradually delivered upon platform *f⁶*. This platform will, by the cutting operation, become covered with a fine layer of clippings or threads, which thus constitute a bed that receives the lubricant through the openings *f⁵* and transmits it to the blade *c*. Thus it will be seen that the cutting-edge of the blade is continuously supplied with a properly regulated amount of lubricant.

The fixed plate *e* is attached to its arm *e'* in the following manner: Within the upper face of arm *e'* is formed a groove *e³*, which is slightly inclined to the transverse axis of the trimming attachment, and thus holds the blade *e* at a slight inclination to the blade *c* to insure a proper cutting action. The blade *e* is held within its grooved seat by one or more clamp-screws *e⁴*. The free end of the blade *e* is notched, as at *e⁵*, Figs. 3 and 7. This notched end of the blade *e* projects across the platform *f⁶* of arm *f* and engages a flange *f⁷* formed on said arm. In this way the free end of the fixed cutting-blade is properly held in place and the operative portion of such blade is exposed to the action of the

lubricant that flows upon the platform f^6. At the same time the blade e is free to be pressed by the spring e^2 against the blade c, the flange f^7 constituting in effect a rail upon which the blade e is free to slide in a lateral direction.

It will be seen that in my improved trimmer both blades are properly lubricated, and that they will operate effectively for an indefinite length of time.

What I claim is—

1. The combination in a sewing-machine trimmer of a lubricating-arm having a flattened end to constitute a platform, and an oil-duct extending through said arm and opening upon said platform, with a pair of cutting-blades that project above the platform, substantially as specified.

2. The combination in a sewing-machine trimmer, of a lubricating-arm having an oil-duct, a perforated chamber, and a platform communicating therewith, with an absorbent within the chamber, and with a pair of cutting-blades projecting above the platform, substantially as specified.

3. The combination in a sewing-machine trimmer, of a notched and spring-actuated cutting-blade with a flanged lubricating-arm engaged by the notched end of said blade and adapted to constitute a guide-rail upon which the blade is laterally movable, substantially as specified.

4. The combination in a sewing-machine trimmer, of a lubricating-arm having an oil-duct, a perforated chamber and a flanged platform, with an absorbent within the chamber, a movable blade projecting above the platform and a notched fixed blade engaging the flange of the platform, substantially as specified.

CARL G. RUTZ.

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