(No Model.)

J. W. DEWEES.

TRIMMING ATTACHMENT FOR SEWING MACHINES.

No. 266,783. Patented Oct. 31, 1882.

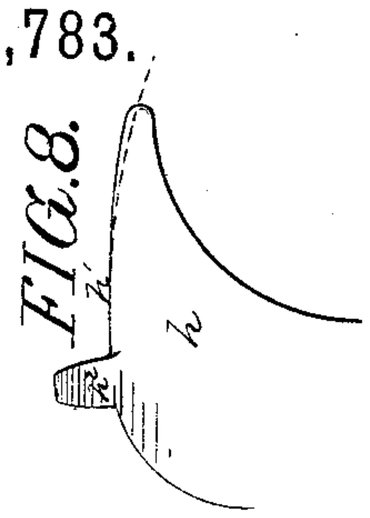
FIG. 8.

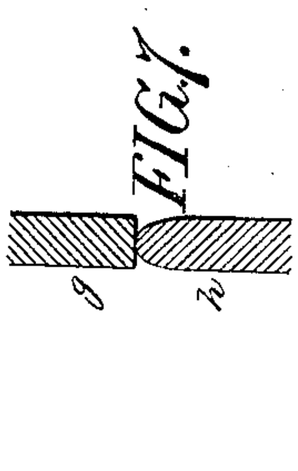
FIG. 7.

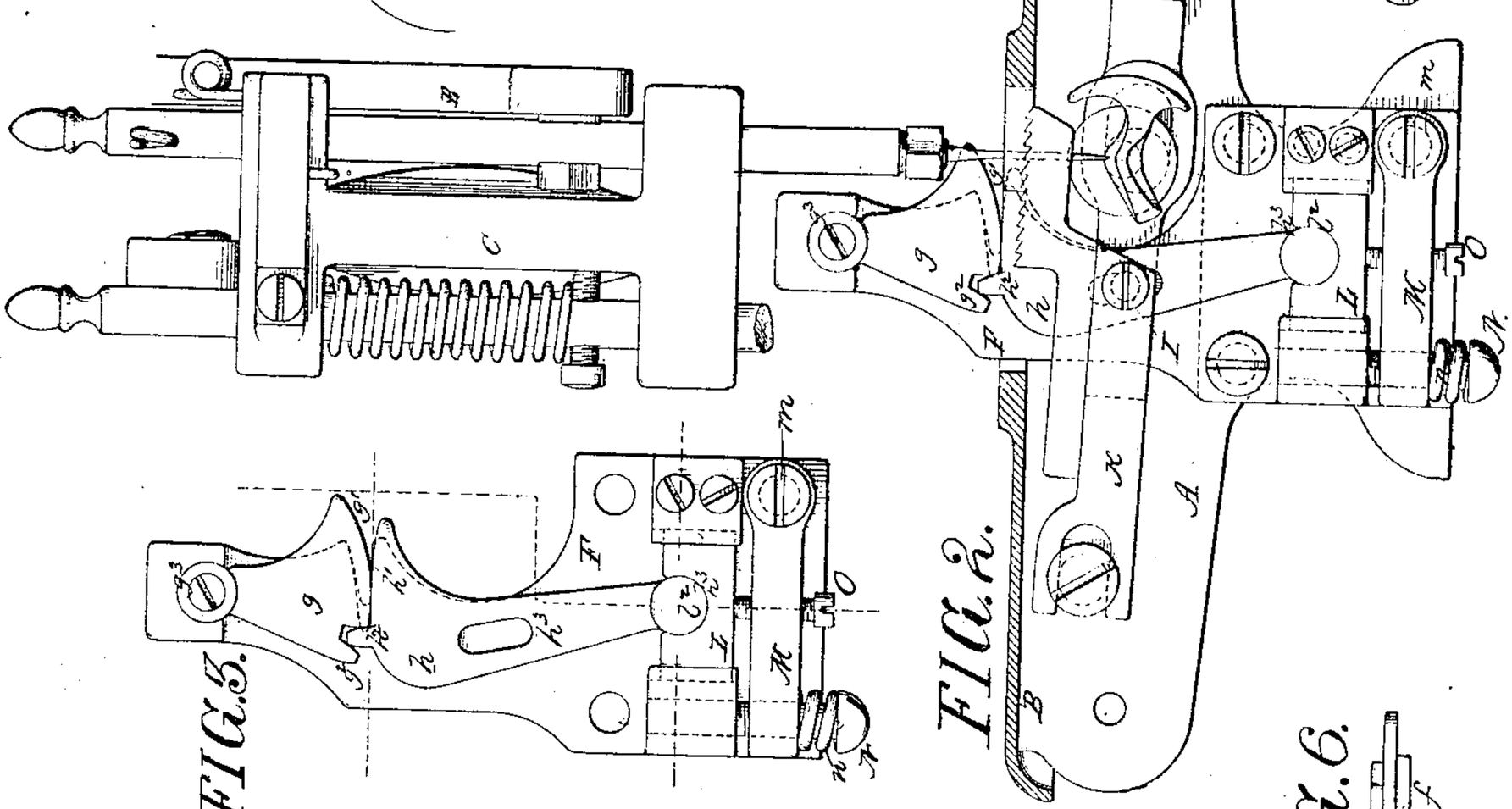
FIG. 2.

FIG. 3.

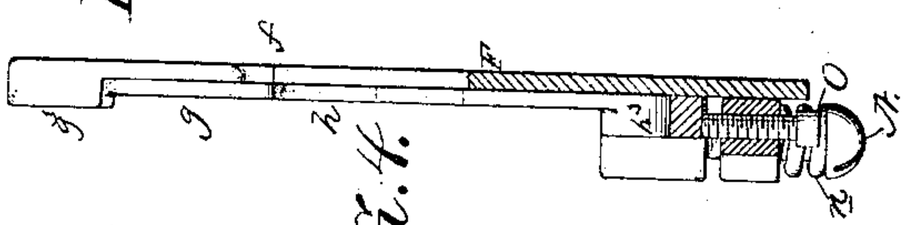
FIG. 4.


FIG. 6.

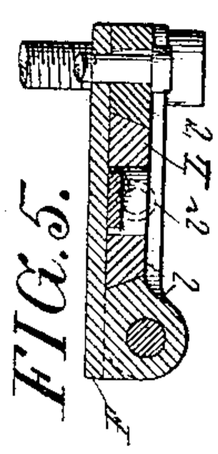
FIG. 5.

FIG. 1.

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TRIMMING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 266,783, dated October 31, 1882.

Application filed March 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. DEWEES, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Trimming-Attachments for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a vertical longitudinal section, and Fig. 2 a vertical transverse section, of a sewing-machine with my improved trimmer attachment applied. Fig. 3 is a side elevation of the trimmer. Fig. 4 is a vertical section of same. Fig. 5 is a transverse section of same. Fig. 6 is another cross-section of same. Fig. 7 is a vertical detail section of jaws of trimmer, and Fig. 8 a side elevation of upper part of lower jaw.

My invention has for its object to provide means for removing superfluous edges from hosiery and other fabrics while being stitched without employing knives, shears, or other devices having cutting-edges which require to be sharpened.

My invention consists of a trimmer which operates to sever fabric by pressure or abrasion, as distinguished from cutting or shearing, said trimmer being composed essentially of toggle-levers or cam-jaws and means for communicating a rocking motion thereto, whereby the fabric to be trimmed will be severed or ruptured in the act of passing between said jaws.

Referring to the accompanying drawings, A indicates the bed-piece, B the cloth-plate, C the head, D the main shaft, and E the needle-operating lever, of a sewing-machine to which my improvements are applied.

I would here remark that my improvements are independent of any particular kind of machine, though in the drawings they are shown in connection with a Willcox & Gibbs machine.

F represents a bracket or plate rigidly fastened to the bed-piece A, and projecting upwardly through an opening in the cloth-plate B, parallel with the line of feed.

g and *h* are two levers pivotally secured to or on said plate at g^3 and h^3, respectively. Said levers at their adjacent ends are cam-shaped, or formed with curved edges g' h', which are segments of circles of different diameters, the circle of which, h', is a segment, being the larger. Viewed transversely or in cross-section, as shown in Fig. 7, the edge g' is straight or flat, the edge h' being curved or rounded, said two edges meeting tangentially face to face, and not lapping as the edges of shears do. The levers *g h* have each a tooth, g^2 h^2, as shown, which teeth gear with each other, so that when a vibrating motion is communicated to lever *g* lever *h* will be caused to swing, the edges g' h' rocking or rolling on one another with considerable force, the effect being that if hosiery or other fabric be fed between said edges it will be severed or ruptured by the pressure or abrasion of the latter as quickly, as cleanly, and as perfectly in every respect as if cut with a knife or with shears.

To communicate a rocking or toggle motion to the jaws, various means may be employed within the scope of my invention, and I shall now proceed to describe those illustrated in the drawings.

I represents a screw passing through the feed-bar K of the machine and entering a vertical slot, h^3, in the lever *h*, said feed-bar deriving its motion, as usual, from the shaft D. As the feed-bar moves the lever *h* is vibrated, communicating motion to the lever *g* and causing the edges g' h' to rock on one another, as already described. The severance of the fabric by the trimmer-jaws is effected while said fabric is moving or being fed, the operation in this respect being unlike that of shear-trimmers, which latter effect their cut while the fabric is stationary and the feed-bar making its backward motion; but instead of moving the lever *h* from the feed-bar a shaft parallel with the main shaft, and deriving its motion therefrom by means of an eccentric collar and lever, and having a link or connecting-rod between it and the lever *h*, may be employed.

To provide for adjusting the edges of the levers or jaws *g h* toward each other, to take up wear or lost motion, the construction shown in the drawings may be employed.

L represents a cross-head or slide adapted to be moved vertically in the guides *l l'*, fastened to the bracket F.

M is a lever fulcrumed at *m* on said bracket,

and having its opposite end formed with a vertical opening for the passage of a screw, N, which enters a threaded opening in the guide *l*.

Between the lever M and the head of the screw N is a spring, *n*, designed to give an elastic bearing to the said lever; but this spring may be dispensed with and the bearing made rigid.

O represents a set-screw fitting in a threaded opening in the lever M, its upper end bearing against the cross-head or slide L, which latter affords a pivotal bearing at l^2 for the lever *h*. Now, by turning the screw O the lever *h* may be adjusted vertically or moved upwardly toward the lever *g* and wear or lost motion taken up. The jaws stand normally open—that is, touching at one point, and with their edges receding or flaring toward the operator's side of the machine. The bracket F has a flaring slot, *f*, which registers or coincides substantially with the opening or mouth of the jaws, as shown.

The advantages of the foregoing-described construction are briefly as follows: The parts are simple in construction, and therefore easily made. In operation a perfect severance or rupture of the fabric is effected as cleanly and as rapidly as by cutting or shearing. As the jaws have blunt edges normally, they do not become dull nor require sharpening as knives and shears do.

If made of suitable material—properly-hardened steel, for example—the jaws will last for a very long time without calling for any care or attention, the only wear upon them being that due to friction, which is incidental to the moving parts of all machinery. By the means described such wear may be readily taken up without removing the trimmer, so that a machine provided with my improvements can be used more constantly than one having a shearing attachment, which requires to be frequently sharpened and to be removed for that purpose.

What I claim as my invention is as follows:

1. A trimmer or device for removing parts of hosiery or other fabric, comprising two jaws or cams having blunt edges which are opposed to each other, and which operate by a rocking motion to produce a severance or rupture of the fabric by pressure or abrasion, substantially as set forth.

2. A fabric-trimmer comprising two levers arranged to form a toggle, and having segmental opposing severing or rupturing edges adapted and designed to be rocked on each other, substantially as shown and described.

3. In a fabric-trimmer, the combination of the pivoted levers *g h*, one having a flat and the other a round severing or rending edge, substantially as shown and described.

4. In a fabric-trimmer operated by or in connection with the working parts of a sewing-machine, the combination, with the bracket F, of severing or rupturing toggle-levers *g h*, having gear-teeth g^2 h^2, substantially as shown and set forth.

5. The combination, with a sewing-machine, of means for rupturing or severing by pressure or abrasion hosiery or other fabric while being stitched, such means comprising two blunt jaws between which such fabric is passed while being fed to the needle, and mechanism for rocking the abrading edges of said jaws against each other, substantially as set forth.

6. The combination, with the severing or rupturing interlocking cam or toggle levers *g h*, of feed-bar K and screw or pivot *k*, substantially as shown.

7. In a fabric-trimmer designed and adapted to be operated by or in connection with the working parts of a sewing-machine, the combination, with the severing or rupturing cam or toggle levers *g h*, and shaft D, of intermediate mechanism, substantially as shown and described, for communicating a rocking motion to said levers, as set forth.

8. In a fabric-trimmer designed and adapted to be operated by or in connection with the working parts of a sewing-machine, the combination, with the severing or rupturing cam or toggle levers *g h*, of means, substantially as set forth and shown, for adjusting one of said levers toward the other, for the purpose described.

9. In a fabric-trimmer designed and adapted to be operated by or in connection with the working parts of a sewing-machine, the combination, with the severing or rupturing cam or toggle levers *g h*, of slide L and adjusting-screw O, substantially as shown and set forth.

10. The combination of bracket F, the severing or rupturing cam or toggle levers *g h*, feed-bar K, cross-head L, guides *l l'*, lever or bar M, and adjusting-screw O, the several parts being constructed for operation substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of March, 1882.

JOHN W. DEWEES.

Witnesses:
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M. D. CONNOLLY.