

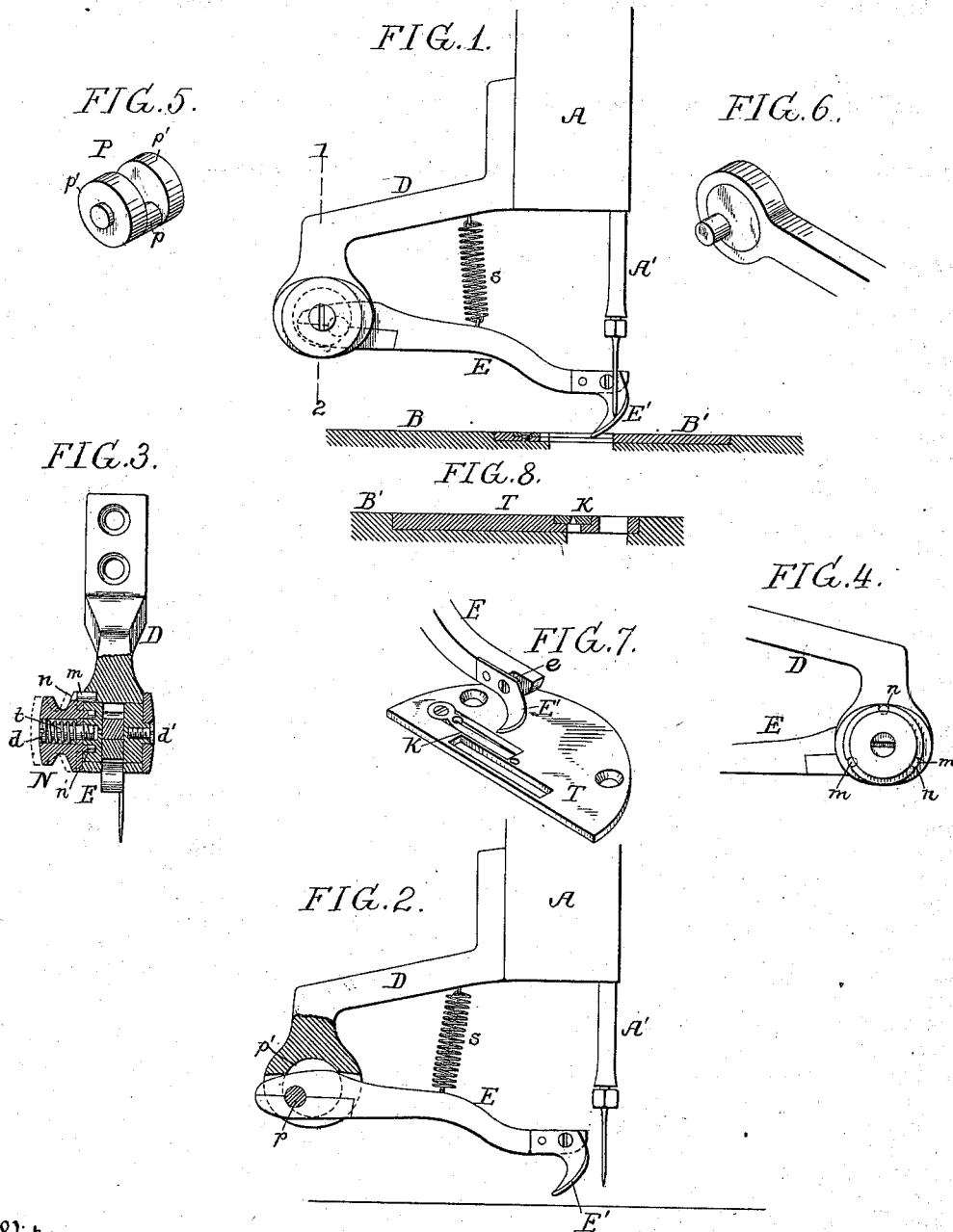
(No Model.)

H. LEFEBER.

CUTTING ATTACHMENT FOR SEWING MACHINES.

No. 382,169.

Patented May 1, 1888.



Witnesses.

David S. Williams.

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# UNITED STATES PATENT OFFICE.

HENRY LEFEBER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-  
HALF TO JOHN C. WILSON, OF SAME PLACE.

## CUTTING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 382,169, dated May 1, 1888.

Application filed June 28, 1887. Serial No. 242,739. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY LEFEBER, a subject of the King of Bavaria, and a resident of Philadelphia, Pennsylvania, have invented an  
5 Improved Cutting Attachment for Sewing-Machines, of which the following is a specification.

My invention has reference more especially to that class of trimming or cutting attachments for sewing-machines in which the knife or cutter is operated by the needle-bar.

The main object of my invention is to so construct the cutting attachment that the cutter may be thrown into and out of action with  
15 ease and certainty, and without undue wear on the parts.

In the accompanying drawings, Figure 1 is a side view of my improved attachment applied to the sewing-machine, and with a portion of the bed-plate and throat-plate in section. Fig. 2 is a view partly in section and showing the cutter thrown out of action. Fig. 3 is a vertical section of the attachment on the line 1 2, Fig. 1. Fig. 4 is a view of a  
25 part of the device. Fig. 5 is a detached view of the crank. Fig. 6 is a detached view of a modification. Fig. 7 is a perspective view of the cutter and the plate in which it works, and Fig. 8 is an enlarged transverse section of  
30 the throat-plate and spring-jaws.

A is the head of the machine, in which reciprocates the vertical needle-bar A', and B is the bed-plate of the machine, provided with the usual removable throat-plate, B'.

To the head of the machine is attached by suitable means a fixed arm, D, carrying the  
35 cutter-lever E, to the outer end of which is affixed the knife or blade E'. In the end of this lever is formed a recess or notch, e, through  
40 which a guide on the needle-bar can pass when the cutter is in position for operation, as indicated in Fig. 1. I provide for the throwing  
of the cutter into and out of the path of the needle-bar with a positive certain motion by  
45 mounting the pivot of the cutter-lever eccentrically, as I will now describe.

The inner end of the lever is pivoted to the wrist-pin p of a crank, P, having two large  
50 journals, p' p', adapted to corresponding bearings in the lower part of the arm D, which is slit for the passage of the lever-arm E. This

crank carries a milled or thumb nut, N, by which the crank can be turned, so that when said crank is in the position indicated in Fig. 1 the outer end of the cutter-lever will lie in the path of the needle-bar, so as to be acted on by the latter in its reciprocations, the upward return movement of the lever being obtained by means of a suitable spring, s. By turning the crank in the opposite direction  
60 the cutter-lever will be carried away out of the path of the needle-bar to the position indicated in Fig. 2, so that the sewing-machine can be operated without the cutting attachment.  
65

The construction described gives the cutter-lever a pivot, which can be moved positively toward or from the needle-bar, and in order to determine the precise extent of this movement the nut N is provided with stop-notches  
70 n n, with either of which a pin or pins, m, on the fixed arm D can be made to engage. The nut N is connected to the crank by means of pins n', Fig. 3, adapted to corresponding openings in one of the journals of the crank, and  
75 a headed bolt, r, screwed into one of the disks. The nut can thus slide, to a limited extent, on this bolt, and a spiral spring, t, presses at one end against the head of the bolt and at the other end against a shoulder on the base of  
80 the nut, so as to tend to keep the nut up to the journal of the crank.

When it is desired to turn the crank from one position to the other, the nut N is first pulled outward, so as to free its notch or notches  
85 n from the fixed pin or pins n', when the nut and crank can be turned until the other notch, n, coincides with the corresponding fixed pin. Then the nut is released, and under the action of the spring t it returns into contact with the  
90 crank-journal, and the pin n' prevents the latter and the crank from turning.

I prefer to use, in connection with the crank illustrated in Fig. 5, when it is adapted to its bearings in the fixed arm D, a guide-disk, d',  
95 as shown in Fig. 3, but this is not essential.

It will be readily understood that a movement of the pivot of the cutter-lever to throw the latter into and out of action can be obtained by means of an eccentric, P', such as  
100 illustrated in Fig. 6, as positively and precisely as by means of the crank illustrated in

Fig. 5. In this case the eccentric proper constitutes the pivot of the lever, and by turning the eccentric on its journals this pivot will be moved toward or from the needle-bar. In either case the pivot is eccentrically mounted—that is, the axis of the pivot-pin for the cutter-lever is not coincident with the axis of the bearing in which the pivot is mounted.

I prefer to provide spring-jaws K, between which the cutter reciprocates when in action; and to bevel both edges of the cutter to act in conjunction with the inner edges of the spring-jaws. The spring-jaws are more clearly illustrated in Fig. 7, in which it will be seen that a recess is cut in the throat-plate T for the reception of the removable spring-jaws K. Between these spring-jaws is left a tapering slot in which the knife E' reciprocates when in action.

The beveled edges of the knife, working in contact with the inner beveled or undercut edges of the jaws, Fig. 8, give, in connection therewith, a clean shear cut. The jaws, acting on both beveled sides of the blade, tend to keep a keen edge on it, especially adapted for the cutting of leather, for which my invention is particularly useful. Either the cutter-blade or the jaws can be removed and replaced when worn.

I claim as my invention—

1. The combination of the reciprocating needle-bar of a sewing-machine with a fixed arm, a cutter-lever adapted to be acted on by the needle-bar, and an eccentrically-mounted pivot for the lever, to move the latter into and out of the path of the needle-bar, substantially as set forth.

2. The combination of the reciprocating needle-bar of a sewing-machine, the fixed arm, and a pivoted cutter-lever adapted to be acted on

by the needle-bar, with a movable crank, to which the cutter-lever is pivoted, to move it into and out of the path of the needle bar, substantially as set forth.

3. The combination of the reciprocating needle-bar of a sewing-machine and a pivoted cutter-lever with a crank for throwing the cutter-lever into and out of the path of the needle-bar, and stops for determining the extent of that movement, substantially as described.

4. The combination of the reciprocating needle-bar of a sewing-machine and a fixed arm on the sewing-machine head with a crank in the said fixed arm, a cutter-lever pivoted to the crank, and stops for determining the extent of movement of the crank, all substantially as and for the purpose set forth.

5. The combination of the reciprocating needle-bar of a sewing-machine and a cutter-lever to be operated thereby, with a crank to which the cutter-lever is pivoted, the fixed arm carrying the crank, a nut for operating the crank, and stops for the latter, all substantially as set forth.

6. The combination of the reciprocating needle bar of a sewing-machine, and a pivoted cutter-lever adapted to be acted on thereby, with a fixed arm, a crank to which the lever is pivoted, and a nut movably connected to the crank and having stop-notches, with a stop-pin on the fixed arm, substantially as specified.

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

HENRY LEFEBER.

Witnesses:

JOHN T. LEWIS,  
HARRY SMITH.