

H. E. DIETERLE.

SEWING MACHINE.

No. 263,325.

Patented Aug. 29. 1882.

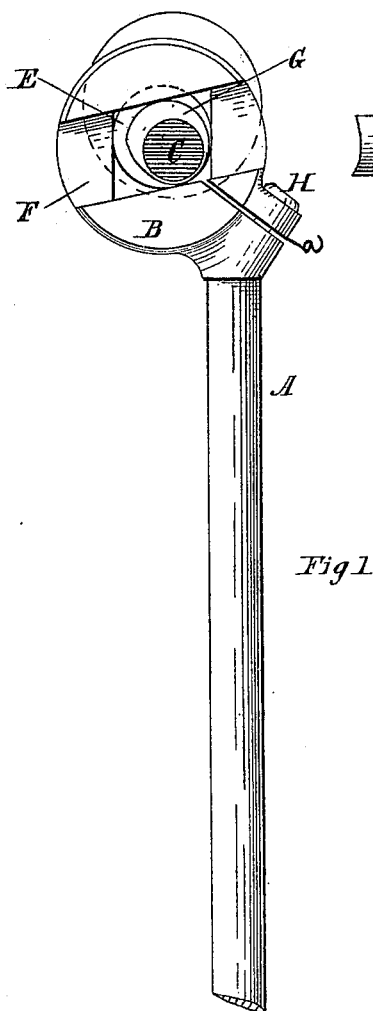


Fig 1

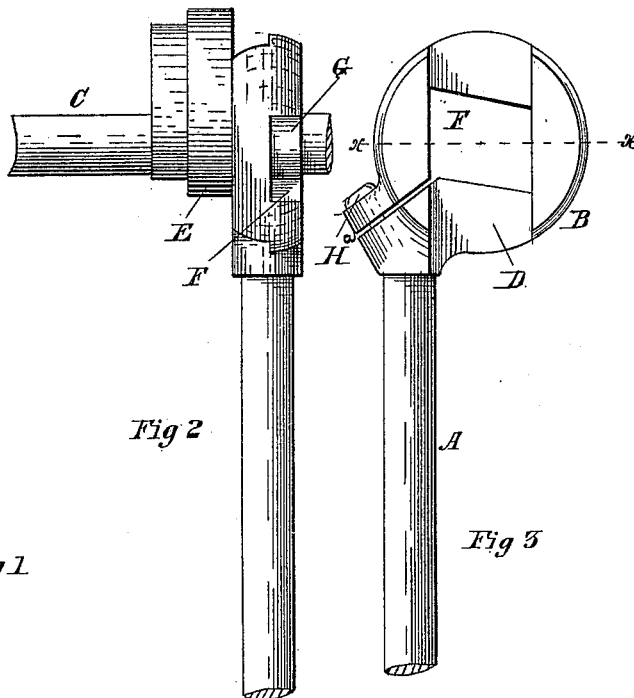


Fig 2

Fig 3

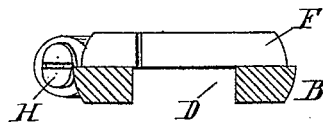


Fig 4

Witnesses

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(No Model.)

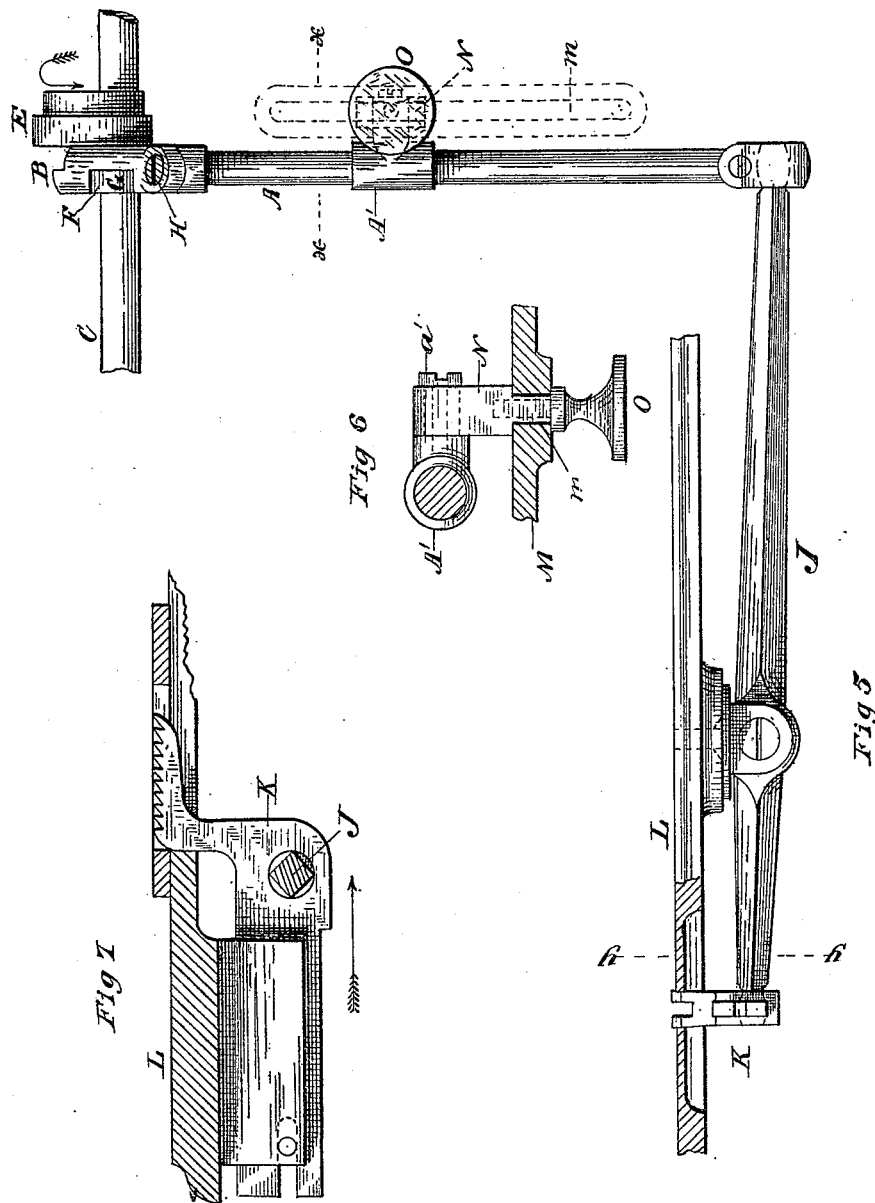
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Witnesses

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# UNITED STATES PATENT OFFICE.

HENRY E. DIETERLE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ELDREDGE SEWING MACHINE COMPANY, OF SAME PLACE.

## SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 263,325, dated August 29, 1882.

Application filed June 13, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY E. DIETERLE, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Vertical Feed-Levers for Sewing-Machines, which are fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a side elevation of so much of the feed-lever as is necessary to illustrate my improvement; Fig. 2, a front elevation of the same; Fig. 3, a rear side elevation of the same removed from the shaft; and Fig. 4, a plan section taken on the line *x x*, Fig. 3. Fig. 5 is a rear elevation of the feed-lever with the feed-plate, the vibrating arm which carries it, and a part of the bed-plate. Fig. 6 is a section on the line *x x* in Fig. 5, the point of vision being above the section-plane. Fig. 7 is a detailed section on the line *y y* in Fig. 6.

My invention relates to that class of sewing-machines in which the feed-arm is actuated by a vertical lever connected to and operated by the main shaft; and the object of the improvement is to obviate the dropping of the feed-plate before the feed desired is accomplished.

The invention consists in providing the head of the lever in which the cam works with an inclined head, whereby the surfaces against which the cam works are inclined instead of being horizontal.

In the drawings, A represents the feed-lever, which is arranged vertically in the machine, and is attached in the usual way at its lower end to the vibrating arm J, which carries the feed. A' denotes the pivoted slide, by means of which the feed-lever receives a vibratory motion, and in which it has an upward and downward motion. This slide has a journal, *a'*, which turns in the block N, and it can be raised and lowered relatively to the lever by the sliding of the block in the slot *m*, (shown by dotted lines in Fig. 5,) cut in the standard M. The block is held in any desired position by the set-screw O. The range of vibration may thus be increased or diminished. L denotes the bed-plate, on the lower face of which the vibrating arm J is both vertically and hori-

zontally pivoted. All these devices are already known, and need not be further described here.

At its upper end the feed-lever terminates in the usual head, B, which is perforated centrally for the passage of the main shaft C. This head has on one side a vertical slot or recess, D, in which the eccentric E on the main shaft works, as usual, to vibrate the lever back and forth. It is also provided on its front side with a slot or recess, F, in which the eccentric G works, for the purpose of raising and lowering the lever to raise and lower the feed-plate K at the proper time. Heretofore this recess last named has been made directly across the head of the lever, or, in other words, horizontal; but it has been found in practical work that when thus constructed the feed-plate is not held up properly to its work at the last end of its stroke and commences to drop too soon. To remedy this I have constructed the recess F with inclined sides, inclining upward from left to right across the head, as shown in Fig. 1 of the drawings. This inclination of the recess, within which the actuating-eccentric is received, is not required to be great, but simply sufficient to hold up the feed-plate to its work in the proper plane until its stroke is entirely completed, when the eccentric permits it to drop for its backward stroke, as usual. I have found that this inclination effects the desired result with perfect satisfaction, thereby obviating a difficulty which has heretofore been experienced in the feed of this class of machines. I also cut the rim or outer portion of the lever-head near the point where it is joined to the upper end of the lever, as shown in Figs. 1 and 2 of the drawings. This permits just a little elasticity in the ring-shaped head, the metal of which is hardened, so that by means of a screw, H, passing through the lug or projecting portion at the end of the ring into the slotted portion of the lever, the head may be tightened upon the eccentrics, which are inclosed within it, to compensate for any wear, and thereby provide for a close-fitting tight joint at all times. Of course the elasticity of the ring of the head is slight; but the wear of the eccentrics is comparatively little, so that the adjust-

ment thus provided is sufficient for the purpose of always maintaining a tight joint.

Having thus described my invention, what I claim as new, and desire to secure by Letters  
5 Patent, is—

In a sewing-machine, the eccentric G, in combination with a vertical feed-lever, A, provided

with a recess, F, extending across its face at an inclination, substantially as and for the purpose set forth.

HENRY E. DIETERLE.

Witnesses:

JNO. C. MACGREGOR,  
ALICE HOLLISTER.