

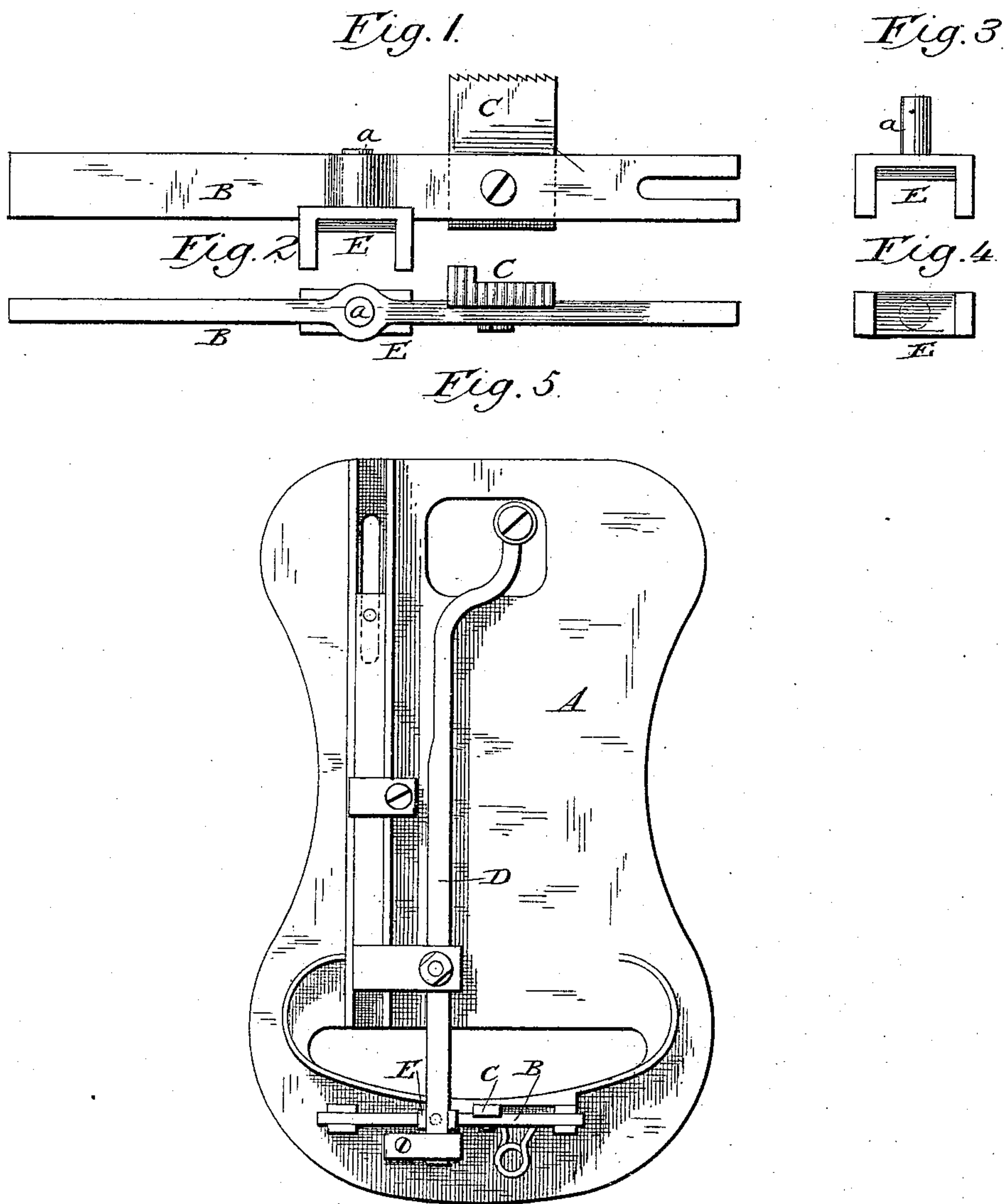
(No Model.)

J. HOEFLER.

FEED MECHANISM FOR SEWING MACHINES.

No. 309,950.

Patented Dec. 30, 1884.



Attest.

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# UNITED STATES PATENT OFFICE.

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## FEED MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 309,950, dated December 30, 1884.

Application filed April 19, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN HOEFLER, of Ilion, in the county of Herkimer and State of New York, have invented certain Improvements  
5 in Feed Mechanism for Sewing-Machines, of which the following is a specification.

This invention has reference to improvements in that class of mechanism in which a four-motion feed-bar is connected to and operated by one end of a lever which has a vibratory and also a longitudinal motion.

The improvement, which consists in a swiveling connection between the feed-bar and lever, is designed more particularly for application to the feed mechanism described in Letters Patent granted to me on the 29th day of July, 1879, No. 217,872; but is also applicable to all machines which have a swinging lever to impart an upward and a forward motion to the feed-dog. The downward and rearward motions are effected by means of the bar or by means of springs.

In the accompanying drawings I have represented the invention as embodied in connection with so much of the feed mechanism of the patent referred to as is necessary to an understanding of the improvement.

For such details of the mechanism as are not herein described reference may be had to the original patent.

Referring to the accompanying drawings, Figure 1 is a side elevation of the feed bar and dog, with my swivel applied thereto. Fig. 2 is a top plan view of the same. Fig. 3 is a side elevation of the swiveling-block detached. Fig. 4 is a top plan view of the same. Fig. 5 is a bottom plan view of the bed-plate of the machine, and of such parts of the mechanism which co-operate with my improved devices.

Referring to the drawings, A represents the bed-plate of the machine; B, the horizontal feed-bar, located thereunder, and provided with the usual feed-dog, C, having a serrated or toothed upper surface, which is projected through and above the bed-plate.

D represents a horizontal lever, located beneath the bed-plate, and arranged to receive both a vibratory and a longitudinal movement, as in the original Letters Patent before mentioned. In the machine as originally con-

structed one extremity of this lever, provided with a wedge on its upper surface, was arranged to enter a transverse notch or recess in the under side of the feed-bar, for the purpose of imparting motion thereto. Instead of this arrangement I now interpose between the wedge on the feed-bar and the actuating-lever a swiveling-yoke or bearing-plate, E. It will be observed that this yoke is forked or divided to admit the end of the lever, and is provided with a vertical neck or journal, *a*, which is seated in a corresponding hole formed in the feed-bar, the bar being enlarged to avoid an undue reduction of its strength. The journal of the swivel is arranged to turn closely but freely in the feed-bar, and the lever arranged to slide freely but closely within the forked end of the swivel. It will be observed that the swivel thus applied permits the bar to play through it with freedom in a longitudinal direction, and also permits the lever-bearing to rock or swivel with respect to the feed-bar, as required by the changing position of the lever.

The swivel, applied in the manner described, admits of a close connection being maintained between the parts at all times, and also admits of the surfaces which receive the wear being readily removed and replaced in the event of their becoming unduly worn.

The improvement causes the machine to run in a perfectly noiseless manner, entirely avoiding the rattle and clatter which resulted under the previous construction when the parts became slightly worn.

The fulcrum upon which the lever D turns is movable in the original machine lengthwise of the lever, in order to vary the distance to which the active end of the lever is moved, in order to increase or diminish the rate of feed.

It is in connection with this variable stroke of the lever that my improvement is peculiarly advantageous, as it permits the parts to be fitted closely to each other, instead of fitting them loosely, as was required in the original machine, to permit a full stroke of the lever.

The essence of the invention consists in connecting the feed-bar and its actuating-lever by means of the swiveling plate or bearing fitted closely to the two parts, and it is manifest that the form of the swivel and the manner of its



connection with the other parts may be varied, as required, without departing from the limits of the invention.

Having thus described my invention, what  
5 I claim is—

1. The feed-bar and the actuating-lever, provided with the inclined surface to raise the dog, in combination with the intermediate plate, F, having a pivotal connection with one  
10 of said members and a sliding connection with the other, in the form and manner substantially as shown and described.

2. The four-motion feed-bar and the lever for actuating the same, combined with the intermediate plate fitted closely to the lever and  
15 pivoted to the feed-bar, substantially as described and shown.

JOHN HOEFLER.

Witnesses:

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R. S. HALL.