(No Model.) 2 Sheets—Sheet 1.

O. KORUP & J. McGILL.

FEED MECHANISM FOR SEWING MACHINES.

No. 261,161. Patented July 18, 1882.

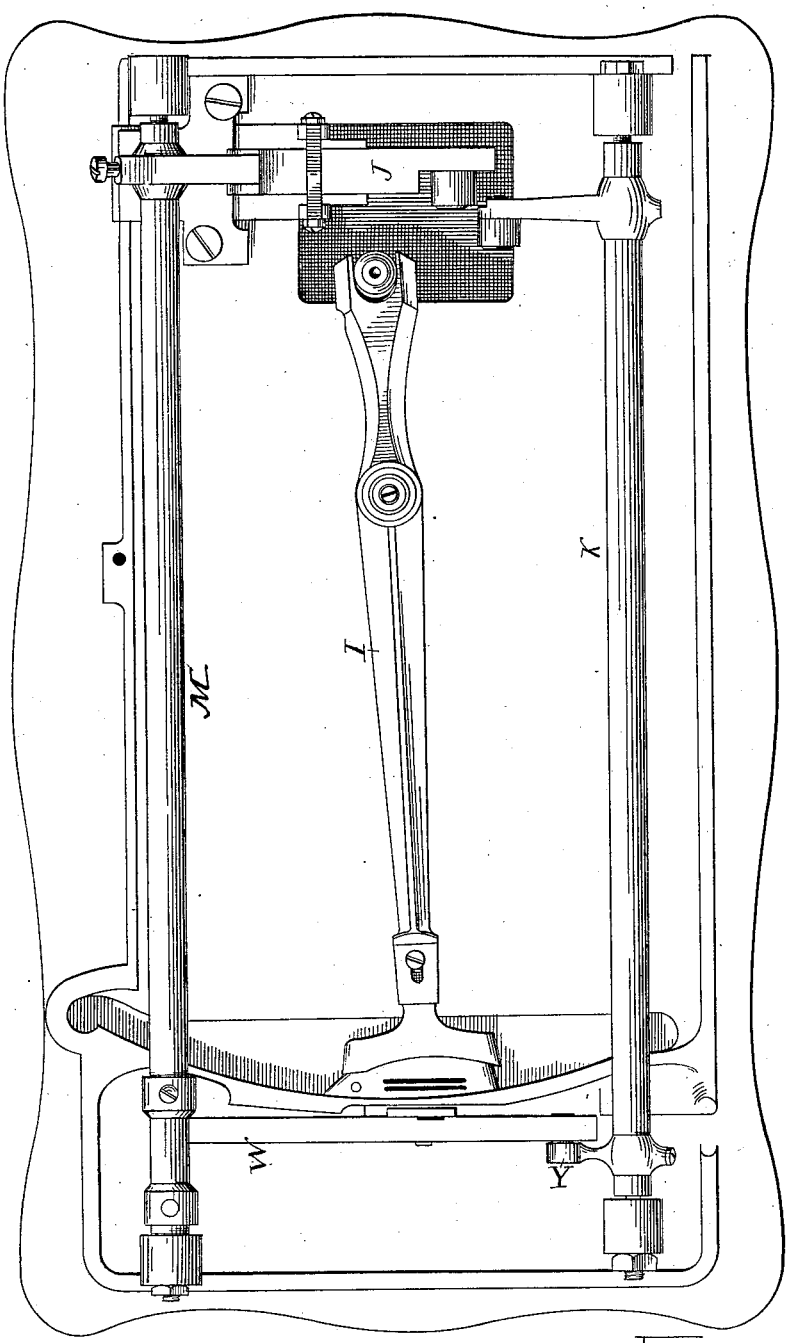

Fig. 1.

Witnesses
Frank Thomason
F. U. Adams.

Inventors
Otto Korup
Jas McGill
by Jas A Cowles Attorney

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

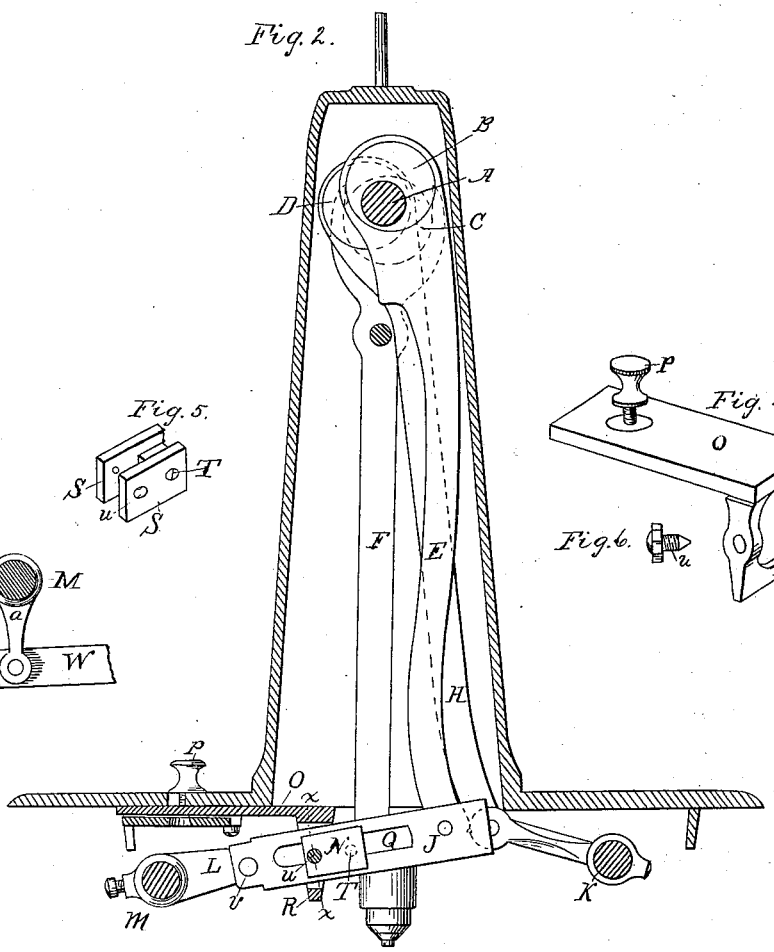


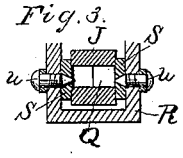
Fig. 5.

Fig. 4.

Fig. 6.

Fig. 7.

Fig. 3.



Witnesses:
Frank Thomason
D. U. Adams.

Inventors:
Otto Korup
Jas McGill.
by Jas A Cowles.
Attorney

UNITED STATES PATENT OFFICE.

OTTO KORUP AND JAMES McGILL, OF CHICAGO, ILLINOIS.

FEED MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 261,161, dated July 18, 1882.

Application filed August 9, 1881. (No model.)

To all whom it may concern:

Be it known that we, OTTO KORUP and JAMES McGILL, of the city of Chicago, in the State of Illinois, have made certain new and useful Improvements in Stitch-Regulators for Sewing-Machines, of which the following is the specification, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Only such parts of the sewing-machine are represented in the drawings as will illustrate our invention.

Figure 1 shows a cross-section of a sewing-machine just in front of the drive-wheel, showing the connections between the driving-shaft and the operative parts immediately below the table of the machine. Fig. 2 is a view of the under side of the machine, showing the working of the feed-motion and the shuttle movement. Fig. 3 is a cross-section of lever J through line *x x*, Fig. 2. Fig. 4 is a perspective view of the sliding bar and fulcrum-arm. Fig. 5 is a perspective view of the fulcrum-block. Fig. 6 is a view of a bolt, used as shown. Fig. 7 is a view of the connection between the feed-bar and rocking shaft.

The object of this improvement is to provide a safe, cheap, and positive feed-regulator.

Similar letters of reference refer to similar parts in the different figures.

A is the driving-shaft of the machine, from which all the operative parts of the machine receive their motion. On this shaft are the eccentrics B, C, and D, and they work respectively the following rods and their lower end connections: B works the rod E, which works the lever J, to which it is loosely attached at one end. C works the rod F, which works the shuttle-bar I. D works the rod H, which works the rocking shaft K.

J is a lever loosely attached at one end to the arm L. This arm L is attached rigidly to the shaft M. The lever J works on the adjustable fulcrum-block N, which is attached to the arm R of the sliding bar O. This sliding bar O is pushed forward and back by means of the set-screw P, thus moving the fulcrum-block N in the slot Q at pleasure. The fulcrum-block N has a peculiar construction. The arm R, extending from the sliding bar O, has a mortise in it, through which passes the lever J, as shown in Fig. 3. The fulcrum-block N is made in two parts, S S, Figs. 3 and 5, each part having a projection extending into the slot Q of the lever J, as shown in Figs. 3 and 5. The bolt T passes through the two sides and their projections through the slot Q, which holds the two pieces together and forms the fulcrum-block N. The short bolts *u u* pass through the sides of the arm R and into the fulcrum-block N near the end opposite to the bolt T, as shown in Figs. 3 and 5, and form the pivoting-point of the fulcrum-block. As the set-screw P is moved backward or forward the fulcrum-block N is moved accordingly, and when the short bolts *u u* register with the pin *v*, then the movement of the feeder is neutral, as the shaft M does not vibrate, and in proportion as the fulcrum is moved away from the pin *v* in such proportion does the shaft M vibrate. At the opposite end of the shaft M is a short arm, *a*, Fig. 7, reaching out at right angles with the shaft M, and to this short arm is loosely attached the feed-bar W. As the shaft M is vibrated a greater or less degree by moving the fulcrum-block N, as above described, in such proportion does the feeder-bar W travel backward and forward across the bed of the machine under the needle, and thus regulates the stitch. One end of feed-bar W is forked, which fork embraces a short arm, Y, extending from end of shaft K, and as the shaft K is rocked the forked end of the feed-bar is raised and lowered vertically. It will be observed that as the eccentric B revolves an up-and-down motion is communicated to the end of lever J, which, revolving upon the pivotal point of the fulcrum-block N, causes the shaft M to rock in proportion as the fulcrum-block is removed from the pin *v*.

We claim—

1. The combination of the main shaft A, pitman-rod E, and lever J, having for its fulcrum the block N, pivoted in the slotted arm R of the sliding bar O, with rock-shaft M, having the arms L and *a* and the feed-bar W, substantially as shown and described.

2. The combination of the sliding bar O, having the downwardly-projecting arm R, provided with a slot, with the fulcrum-block N, pivoted within the said slot, and the lever J, embracing the said fulcrum-block by means of the slot Q, said lever being connected at one end with the pitman-rod E and at the other end with the arm L of the rock-shaft M, substantially as set forth.

OTTO KORUP.
JAMES McGILL.

Witnesses:
WALLACE McGILL,
A. A. HOWARD.