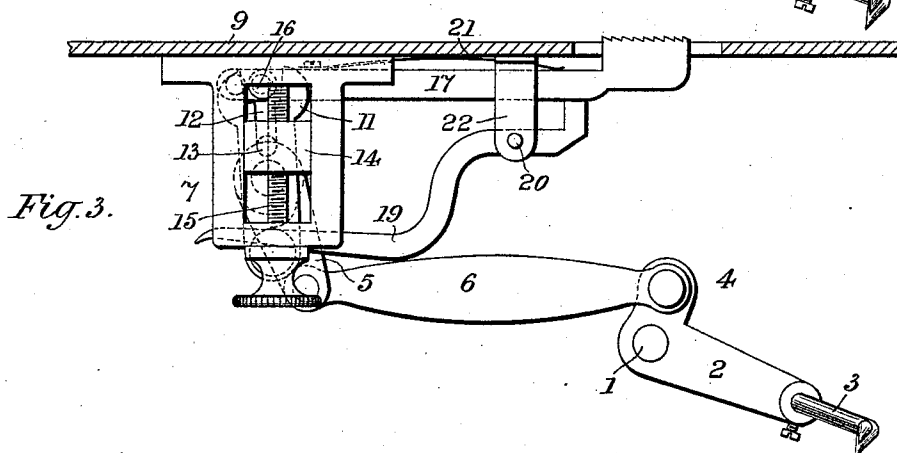
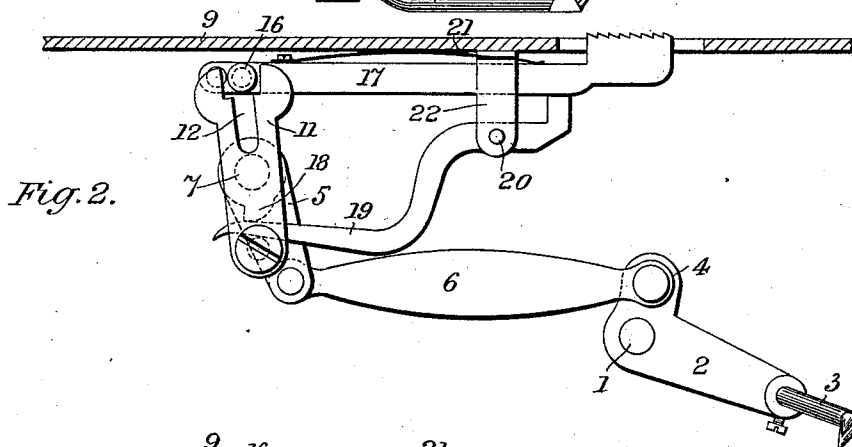
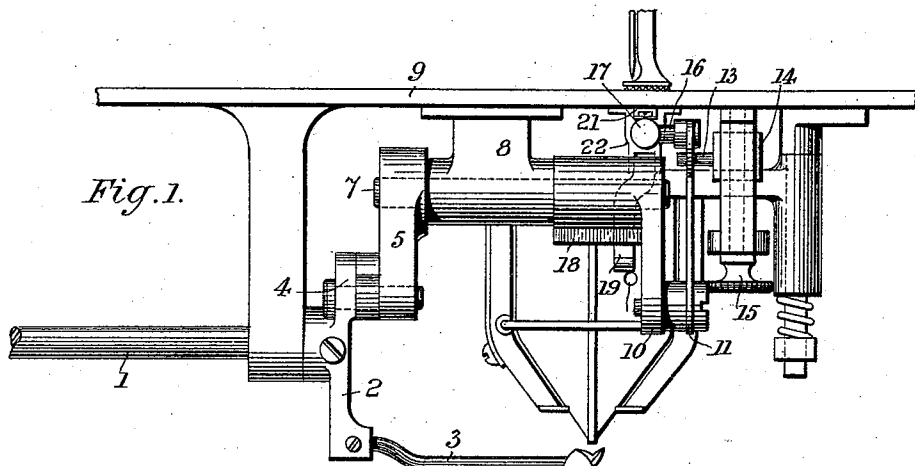


(No Model.)

D. FLANAGAN.
FEEDING MECHANISM FOR SEWING MACHINES.

No. 497,645.

Patented May 16, 1893.



Witnesses.

Walter Brierley
J. Brierley Howard.

Inventor.

Denis Flanagan

UNITED STATES PATENT OFFICE.

DENIS FLANAGAN, OF CLAYTON-LE-MOORS, ENGLAND.

FEEDING MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 497,645, dated May 16, 1893.

Application filed February 24, 1893. Serial No. 463,551. (No model.)

To all whom it may concern:

Be it known that I, DENIS FLANAGAN, a subject of Her Majesty the Queen of Great Britain, residing at Clayton-le-Moors, in the county of Lancaster, England, have invented a certain new and useful Improvement in Feeding Devices for Sewing-Machines, of which the following is a specification.

My invention relates to an improvement in the devices employed for feeding forward the cloth or other material to be stitched in a sewing machine.

In the accompanying drawings is illustrated my improved device as employed in connection with a sewing machine, which is shown in an application for Letters Patent of the United States, filed October 1, 1892, and serially numbered 447,531.

Figure 1 is an end elevation of a part of the mechanism below the bed plate showing the feed device and other parts which it is not necessary here to describe. Fig. 2 is a side elevation of a portion of said feed device and Fig. 3 is a similar view showing in addition the adjusting device hereinafter described.

The shaft 1 has a rocking motion imparted to same by suitable means. The end shown carries the cranked lever 2 in one arm of which is fixed a loop carrier 3 while the other short arm 4 of same is attached to the crank 5 by a link 6 such crank 5 being fixed on the short shaft 7 carried in the bracket 8 fixed to the under side of the bed plate 9.

On the end of the shaft 7 is a crank 10 (see Fig. 1) which operates the bar 11 in which is the long slot 12 (see Figs. 2 and 3) and in this slot 12 is received a regulating pin 13 carried in the block 14 which is adjusted by the screw elevator 15 so that as the regulating pin 13 is moved by the screw elevator nearer to or farther from the center of motion of the bar 11 so will a greater or less amount of motion be imparted to the same. A second pin 16 is received in the slot 12 and this pin 16 is fixed to the sliding serrated feed bar 17 and gives the requisite to and fro motion to said feed bar. When the feed bar 17 moves in a forward direction, or in the direction in which the material under operation passes, it is necessary that the serrations should protrude slightly above the bed plate 9 so that the serrations lay hold of the material and carry it forward in the usual way.

To cause the serrations to protrude at the right time I employ a tappet 18 on the short shaft 7 such tappet 18 acting on one end of a curved lever 19 mounted on a fulcrum stud 20 the other end of the curved lever 19 acting on or near the serrated end of the feed bar 17 and slightly lifting same. A spring 21 (see Figs. 4 and 5) causes the feed bar 17 and curved lever 19 to resume their normal positions when not acted upon by the tappet 18, the spring 21 bearing against the under side of the bed plate 9. The feed bar 17 is carried loosely in a bearing or bracket 22 fixed to the under side of said bed plate such bracket holding also the curved lever 19.

What I claim is—

1. In a sewing machine and in combination a feed bar loosely supported beneath the bed plate of the machine a pin 16 in said feed bar a slotted bar 11 to engage the pin 16 a crank shaft 7 to one crank of which the said slotted bar is pivoted, a fulcrum pin in the slot in the bar 11, means for raising and lowering the said fulcrum pin in the slot to adjust the feed means for raising and depressing the feed bar and means for oscillating the crank shaft 7 substantially as and for the purposes described.

2. In a machine of the character described, the combination of a feed bar loosely supported beneath the bed plate of the machine, a pin 16, in said feed bar, a slotted bar 11 to engage the pin 16, a crank shaft 7, to one crank of which said slotted bar is pivoted, a fulcrum pin in the slot in the bar 11, means for raising and lowering the said fulcrum pin in the slot to adjust the feed, a lever 19, fulcrumed beneath the feed bar with its upper end in contact therewith, a tappet on the crank shaft 7 to engage the lower end of the said lever and depress the same at intervals to raise the feed bar, and a spring to return the feed bar to its lower position, and means for oscillating the crank shaft 7, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

DENIS FLANAGAN.

Witnesses:

WALTER BRIERLEY,
J. BRIERLEY HOWARD.