

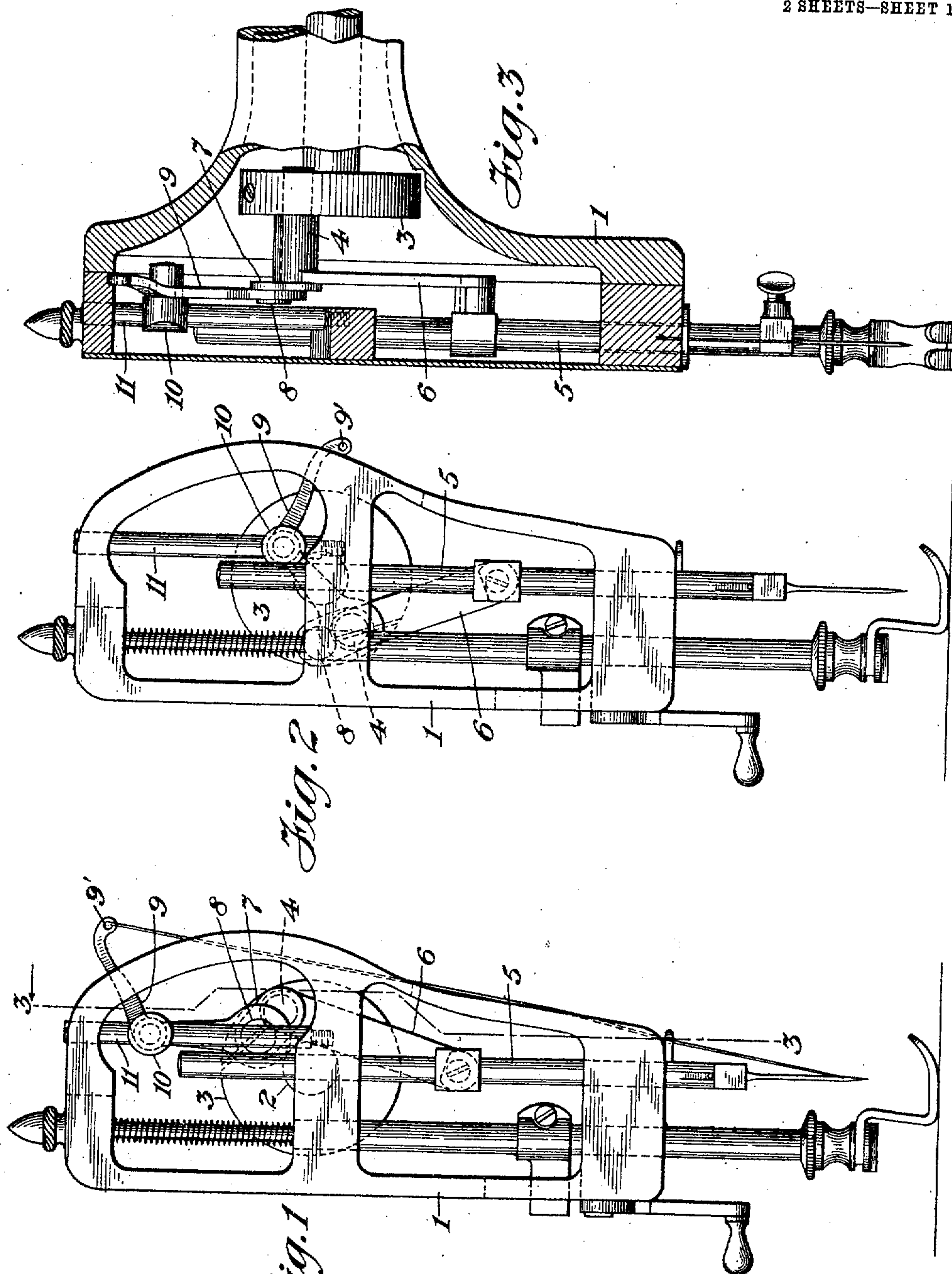
No. 886,574.

PATENTED MAY 5, 1908.

W. M. AMMERMAN.
SEWING MACHINE TAKE-UP.

APPLICATION FILED MAR. 3, 1908.

2 SHEETS—SHEET 1.



Witnesses
Chas. Claggett
May E. Stanton

Inventor
William M. Ammerman
By his Attorney
Chas. F. Dane

No. 886,574.

W. M. AMMERMAN.
SEWING MACHINE TAKE-UP.
APPLICATION FILED MAR. 3, 1906.

PATENTED MAY 5, 1908.

2 SHEETS—SHEET 2.

Fig. 6



Fig. 7

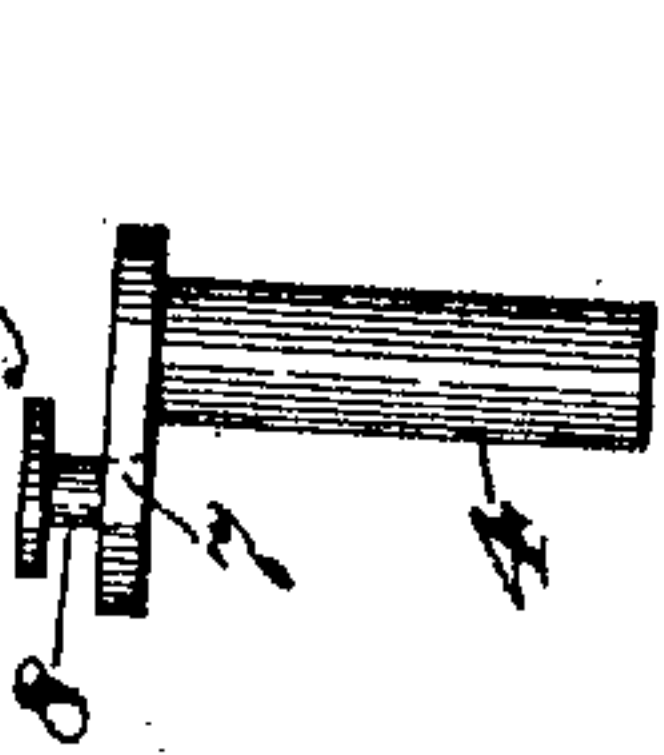


Fig. 8

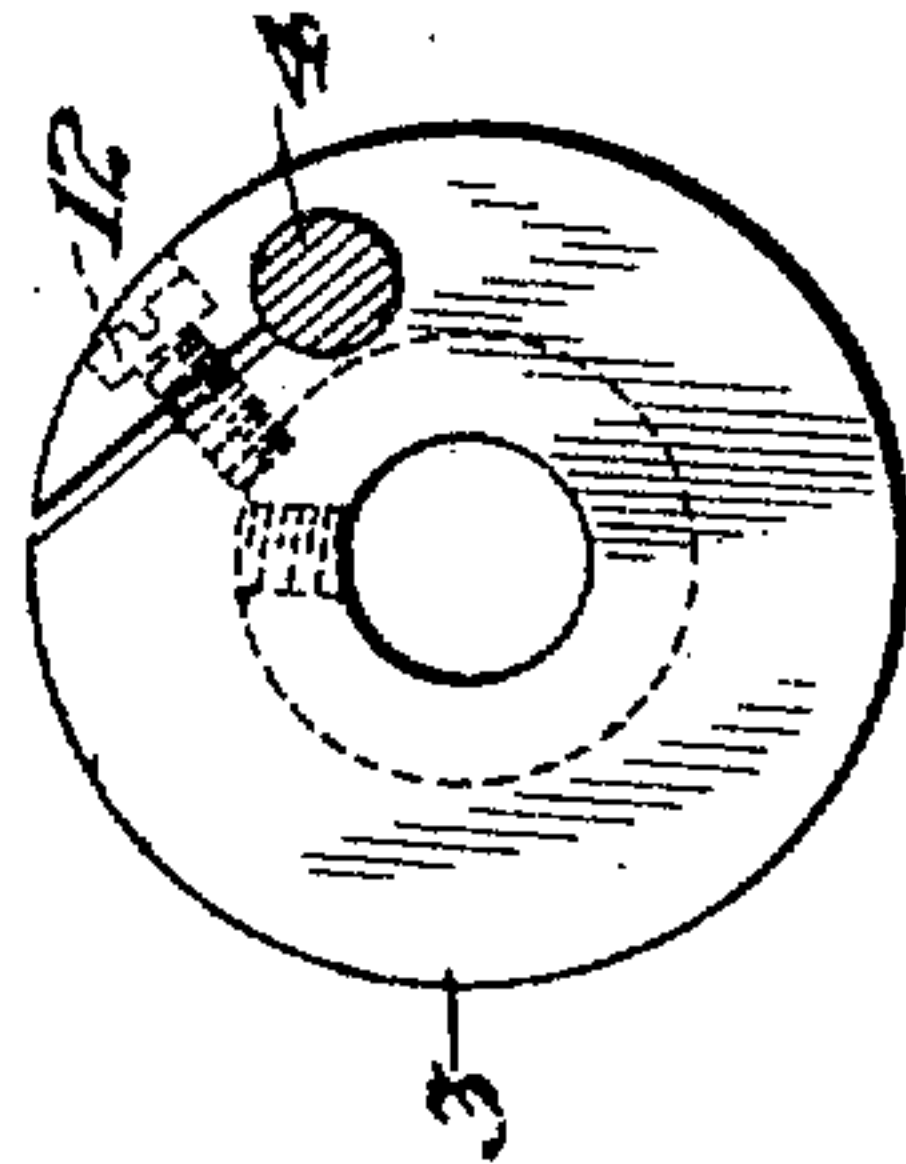
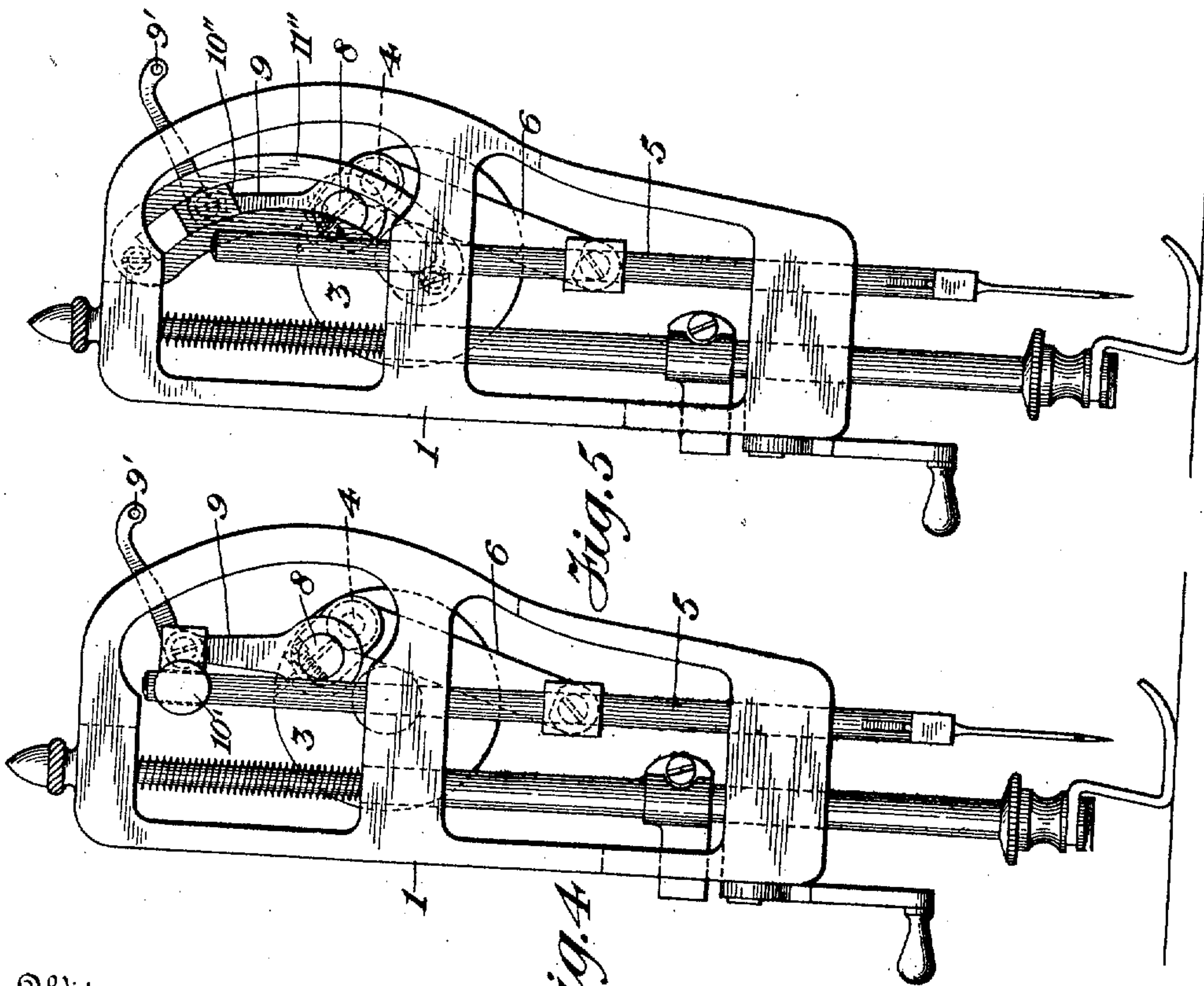
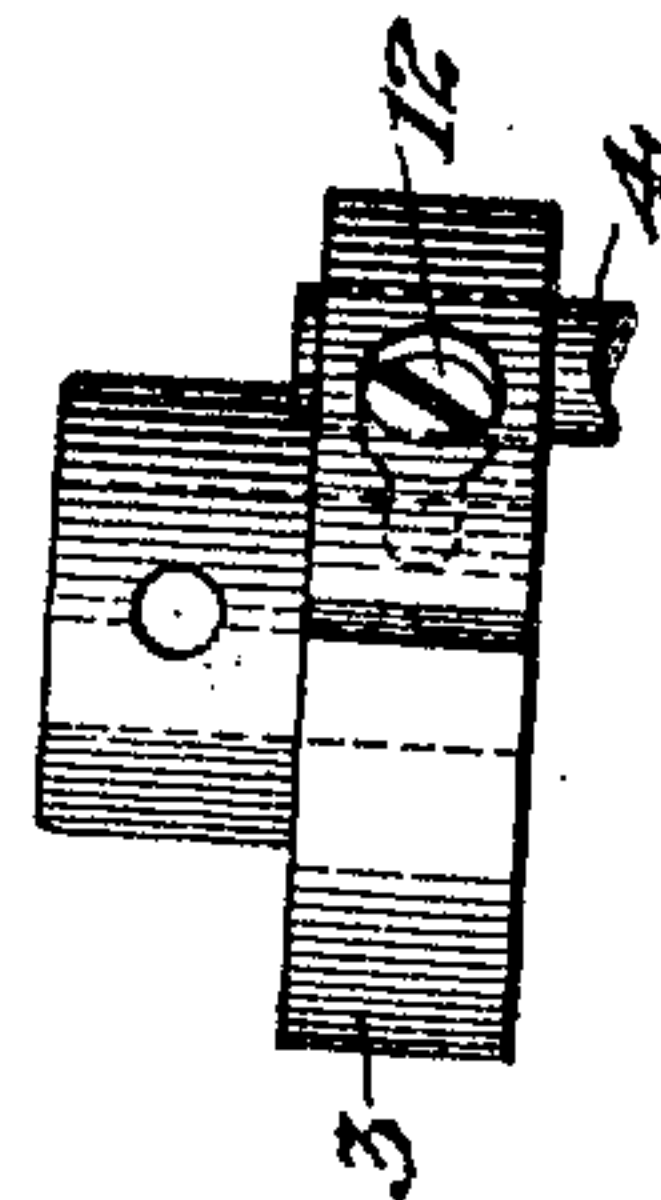


Fig. 9



Witnesses
Chas. Clagett
M. E. Stanton

Fig. 4

Fig. 5

Inventor
William M. Ammerman
By his Attorney
Chas. F. Dane

UNITED STATES PATENT OFFICE.

WILLIAM M. AMMERMAN, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE EDWIN J. TOOF COMPANY, OF NEW HAVEN, CONNECTICUT, A CORPORATION OF NEW JERSEY.

SEWING-MACHINE TAKE-UP.

No. 886,574.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed March 3, 1906. Serial No. 303,949.

To all whom it may concern:

Be it known that I, WILLIAM M. AMMERMAN, a citizen of the United States, and resident of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Sewing-Machine Take-Ups, of which the following is a specification.

My invention relates to improvements in that class of sewing machine take-up mechanism in which a take-up lever is operated from the needle-bar actuating crank, whereby the use of a take-up cam and the objectionable features of wear and friction incidental thereto is avoided; the object of the invention being to provide a simple and effective take-up device of the character referred to which will be positive in action and which may be accurately timed to properly cooperate with the other stitch-forming devices.

To this end the invention consists in the novel construction and arrangement of parts hereinafter set forth in detail and pointed out in the appended claims.

In the accompanying drawings forming part of this specification, Figure 1 is a front end view of a sewing machine arm provided with my improved take-up and showing the position of the parts with the take-up at or near the limit of its upward movement. Fig. 2 is a similar view showing the position of the parts with the take-up at or near the limit of its downward movement. Fig. 3 is a front side view of the same with the arm in section and with the parts in position corresponding to that of Fig. 1. Figs. 4 and 5 are front end views of sewing machine arms provided with slightly modified forms of my invention and in each instance showing the position of the parts with the take-up at or near the limit of its upward movement. Figs. 6 to 9 inclusive are detail views of the crank-pin and crank from which the take-up is actuated.

Similar reference characters designate like parts in the several figures of the drawings.

The sewing machine herein shown to which I have applied my improved take-up comprises the arm or frame 1, the rotary driving shaft 2 journaled in said arm or frame and carrying at the front end thereof a crank-disk 3 having a crank-pin 4, and the reciprocating needle-bar 5 connected with and actuated by said crank-pin 4 through the medium of a pitman 6. These parts, as

described are of usual construction and operation. The crank-pin 4, however, in the present case, is provided with a rigid arm or extension 7 having a second crank-pin 8 for connection with the take-up to be presently described.

The take-up mechanism embodying my invention as herein shown comprises a bell-crank lever 9 pivoted at its angular portion to a sliding fulcrum-block 10 and having one arm connected with the crank-pin 8 and its other arm provided with a thread-receiving eye 9'; the said fulcrum-block 10 to which the take-up lever is pivoted being slidably mounted on a suitable guide which, as shown in Figs. 1, 2, and 3, is in the form of a stationary rod 11 arranged parallel with the needle-bar and being fastened at its opposite ends in transverse portions of the machine arm as shown.

As a result of such described construction and arrangement of parts, when the machine is set in motion the take-up lever is caused to move bodily up and down as controlled by the movement of the fulcrum-block 10 on the guide 11, and is also caused to vibrate on its pivotal connection with said fulcrum-block. Such movement of the take-up lever controlled in the manner described results in the operative or thread-engaging end of the lever being caused to descend slowly and give down the required slack thread during the descent of the needle and while the looper is passing through the thread-loop thrown out by the needle, and to thereafter quickly ascend to draw up and tighten the stitch.

The timing of the take-up movements may be varied to adapt the take-up for cooperation with different forms of sewing mechanism by adjusting the position of the take-up crank-pin 8; which adjustment is provided for by the needle-bar crank-pin 4 from which said take-up crank-pin is supported being adjustably held in its seat in the crank-disk 3 by means of a set-screw 12, as most clearly shown in Figs. 8 and 9.

The sliding fulcrum-block to which the take-up lever is pivoted may, in lieu of being mounted on a stationary guide-rod as in Figs. 1, 2 and 3, be mounted directly on the needle-bar, as is the block 10' shown in Fig. 4. Such use of the needle-bar as a guide for the fulcrum-block is desirable in that there is more or less of a simultaneous reciprocating or up and down movement of said

parts and consequently a lessening of the friction to that where one of the parts is stationary, as in the previously described figures.

5 In Fig. 5 I have shown a further slightly modified form of the invention in which the fulcrum-block, indicated at 10'', is mounted in a slotted guide-bar 11'' which is made somewhat curved to further control the path
10 of movement of the operative or thread-engaging end of the take-up.

What I claim is:

1. A sewing machine take-up mechanism comprising a rotary actuating crank, a guide,
15 a block freely slidable on said guide, and a take-up lever pivotally connected at one end with said crank and at a point intermediate its ends with the said block.

2. A sewing machine take-up mechanism
20 comprising a rotary actuating crank, a guide,

a block freely slidable on said guide, and a bell-crank take-up lever pivotally connected at one end with said crank and at its angular portion with the said block.

3. In a sewing machine, the combination, 25 with a rotary actuating crank, a reciprocating needle-bar, and a pitman connecting said crank and needle-bar, of a block slidably supported on said needle-bar, and a lever pivotally connected at one end with the said 30 crank and at a point intermediate its ends with the said block.

Signed at New Haven in the county of New Haven and State of Connecticut this 21st day of February A. D. 1906.

WILLIAM M. AMMERMAN.

Witnesses:

FRANCES I. MARTIN,

HENRY W. SHELSHAUSER.