

R. G. WOODWARD.
 LOOPER OPERATING MECHANISM FOR SEWING MACHINES.
 APPLICATION FILED OCT. 27, 1906.

947,210.

Patented Jan. 18, 1910.

Fig. 2.

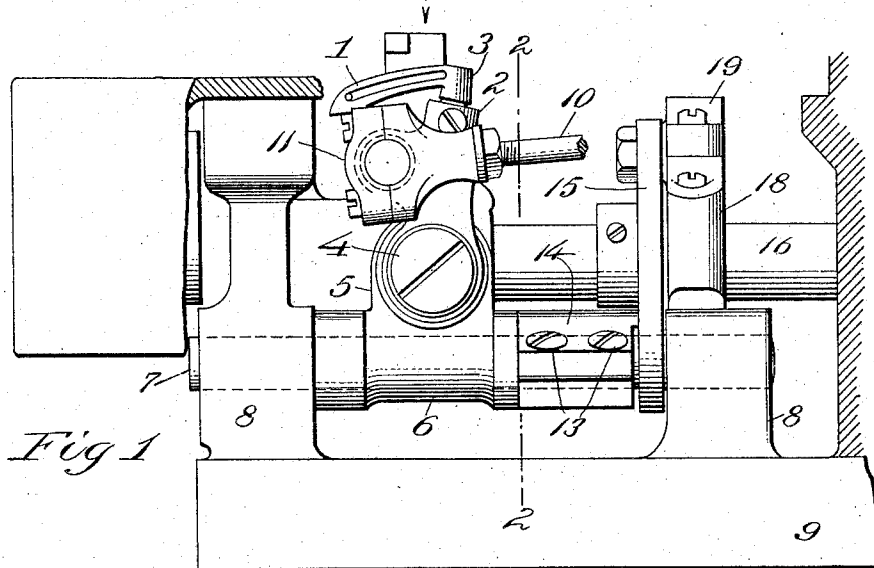
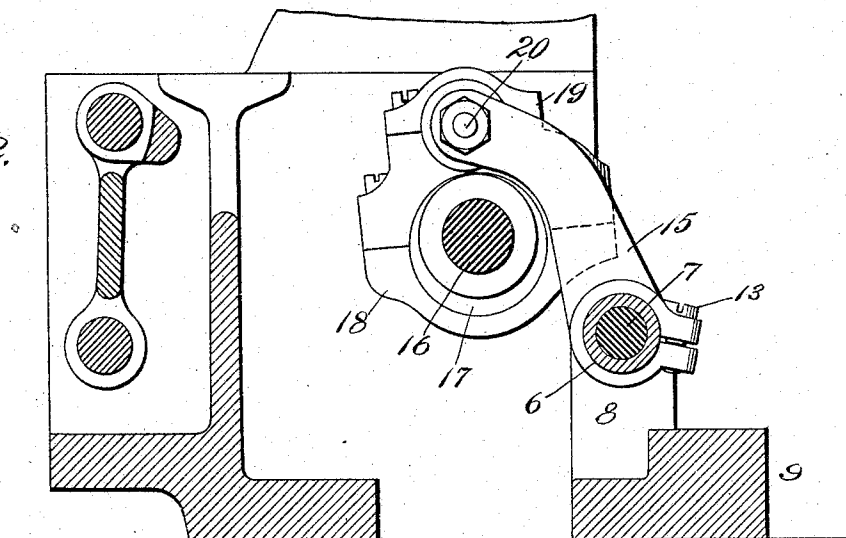


Fig. 1

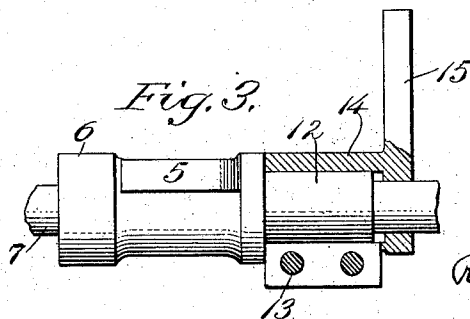


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

RUSSEL G. WOODWARD, OF WAUKEGAN, ILLINOIS, ASSIGNOR TO UNION SPECIAL MACHINE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

LOOPER-OPERATING MECHANISM FOR SEWING-MACHINES.

947,210.

Specification of Letters Patent. Patented Jan. 18, 1910.

Application filed October 27, 1906. Serial No. 340,895.

To all whom it may concern:

Be it known that I, RUSSELL G. WOODWARD, a citizen of the United States, residing at Waukegan, in the county of Lake, State of Illinois, have invented certain new and useful Improvements in Looper-Operating Mechanism for Sewing-Machines, of which the following is a description, reference being had to the accompanying drawing, and to the figures of reference marked thereon.

My invention relates to looper operating mechanisms for sewing machines, and has for its object, to simplify and render more durable, the means for operating said looper.

My invention consists in the novel parts, improvements and arrangement hereinafter shown and described.

In the accompanying drawing which forms a part of this specification;—Figure 1 is a side elevation of the forward portion of a sewing machine, with my improvements applied thereto, certain parts being broken away to more clearly show the construction. Fig. 2 is a sectional view of the same taken on a line 2, 2 of Fig. 1. Fig. 3 is a detail view, partly in plan and partly in section of the looper support and the means for oscillating the same.

The looper 1, is detachably secured to the looper carrier 2 by means of a screw 3. Said looper carrier 2 is pivotally connected by a pivot bolt 4, to a lug 5 formed on and extending upward from the looper supporting collar 6. Said looper supporting collar 6, is in turn mounted on a supporting rod 7 carried in brackets 8, 8 rising from the base plate 9. The looper carrier 2 is oscillated about its pivot bolt 4 by a link 10 which has a ball and socket connection through the head 11 to the carrier 2. This link 10 is connected to the needle bar extension in the usual manner and receives movement therefrom. The looper supporting collar 6 has a sleeve 12 formed integral therewith and secured to said sleeve by screws 13, 13 is a split collar 14 which carries an arm 15. This arm 15 extends upward and is deflected rearwardly over the main shaft 16. Said main shaft 16 carries an eccentric 17, which turns in an eccentric strap 18. Said strap has an upward extension 19 carrying a pivot bolt 20, which is connected to the outer end of the arm 15.

In the operation of my machine, the looper

is oscillated by means of the link 10 and this oscillation of the looper causes the same to enter the needle loop. The looper receives a lateral or needle avoiding movement from the arm 15 which is oscillated by the eccentric 17. It will be noted that a movement of the eccentric from the position shown in Fig. 2 in a clock-wise direction, will first cause the eccentric strap 18 to turn about the pivot 20 and that the arm 15 remains substantially at rest. After the eccentric has however, passed through a few degrees of angular movement, the eccentric strap will be raised, causing the arm 15 to be oscillated and giving the looper its sidewise or needle avoiding movement. The result of this arrangement of parts is that the looper is given its lateral movement substantially at the forward and backward portions of its stroke.

Various minor modifications and changes may be made in the detail construction described, without departing from the spirit of my invention.

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

1. A looper mechanism including in combination a looper, a support therefor, a main shaft, means for oscillating said looper, and means for moving the same laterally comprising an arm fixed to the looper support and extending upwardly and backwardly over the main shaft, an eccentric on the main shaft and an eccentric strap coöperating with said eccentric and pivoted to said arm, substantially as described.

2. A looper mechanism including in combination a looper, a looper carrier, means for oscillating said looper carrier, a supporting rod, a collar mounted on said rod to which said carrier is pivoted, means for oscillating said collar and said carrier laterally including an arm, a split collar carried at one end of said arm and secured to said first named collar, an eccentric, an eccentric strap co-operating therewith, and connections between the eccentric strap and the other end of said arm.

3. A looper operating mechanism including in combination a looper, a carrier therefor, means for oscillating said looper to engage the needle loop, a looper supporting collar to which said carrier is pivoted, an extending sleeve, carried by said looper supporting collar, a split collar and means for

clamping the same to said sleeve, an arm carried by said split collar and means for oscillating said arm; substantially as described.

- 5 4. A looper operating mechanism including in combination a looper, a carrier therefor, means for oscillating said looper to engage the needle loop, a looper supporting collar to which said carrier is pivoted, an
10 extending sleeve, carried by said looper supporting collar, a split collar and means for

clamping to said sleeve, an arm carried by said collar, an eccentric carried by the main shaft, an eccentric strap cooperating with said eccentric and pivotally connected to 15 said arm; substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses.

RUSSEL G. WOODWARD.

Witnesses:

CHESTER McNEIL,
R. TAUBERT.