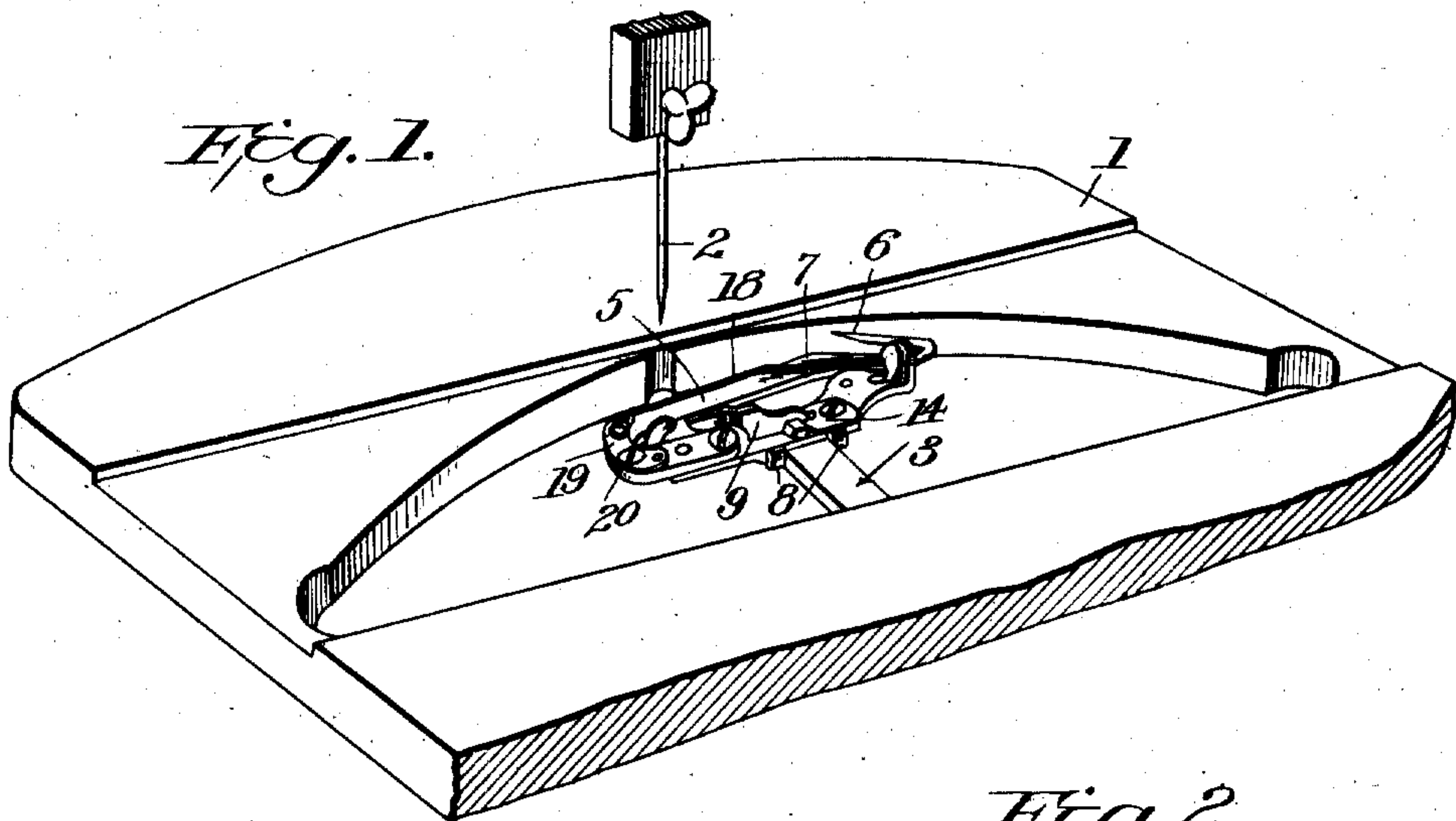


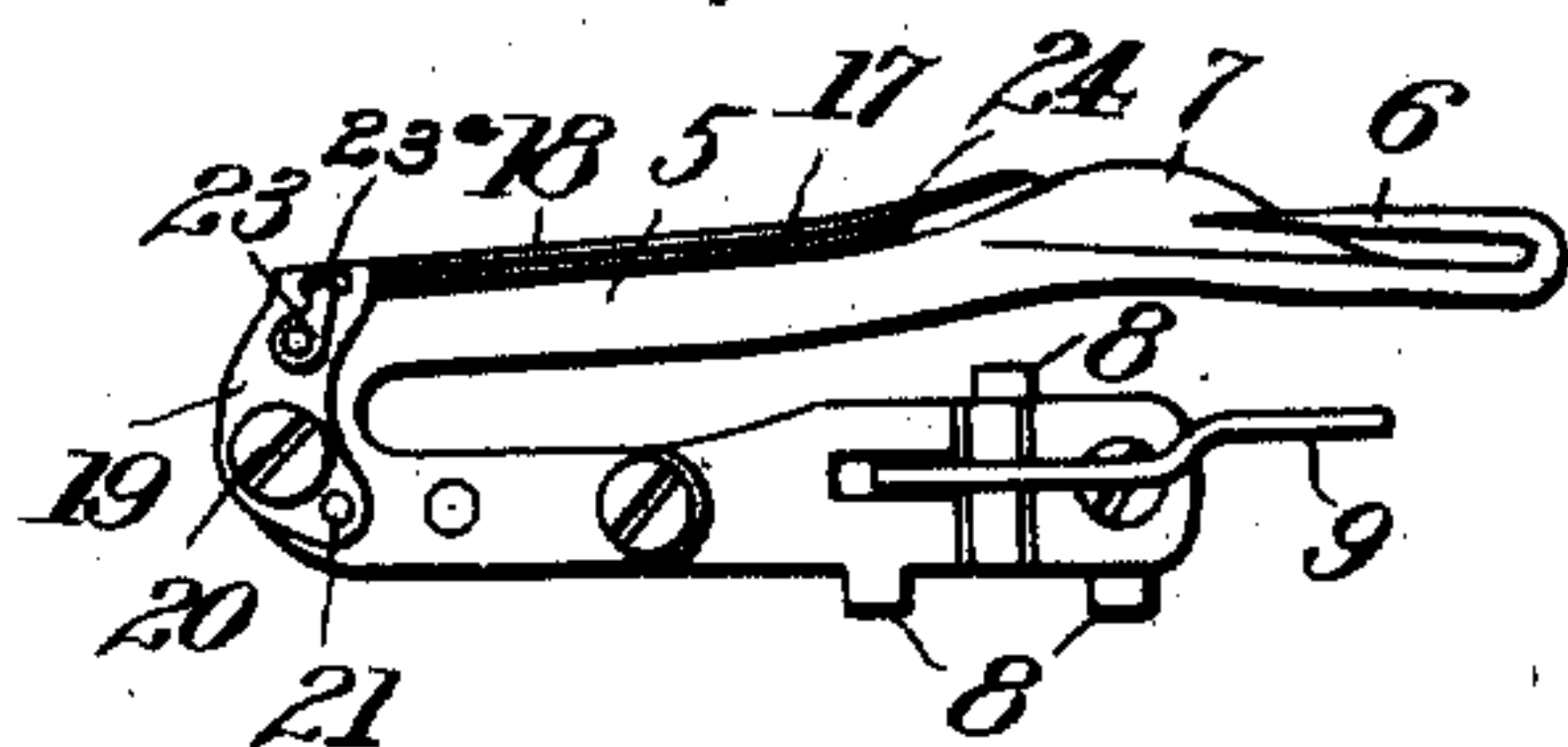
A. G. LAMB.  
CHAIN STITCH LOOPER FOR LOCK STITCH SEWING MACHINES.  
APPLICATION FILED JAN. 15, 1910.

990,660.

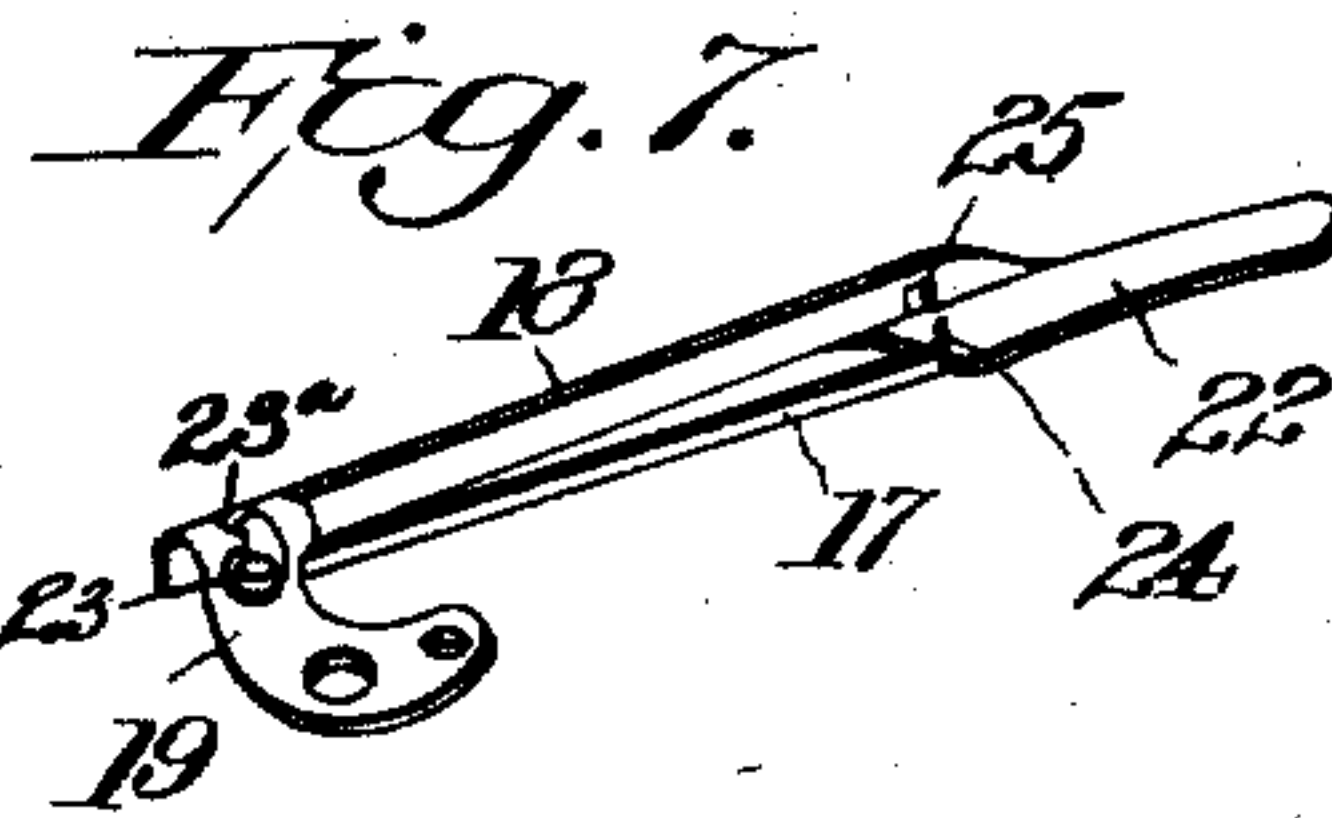
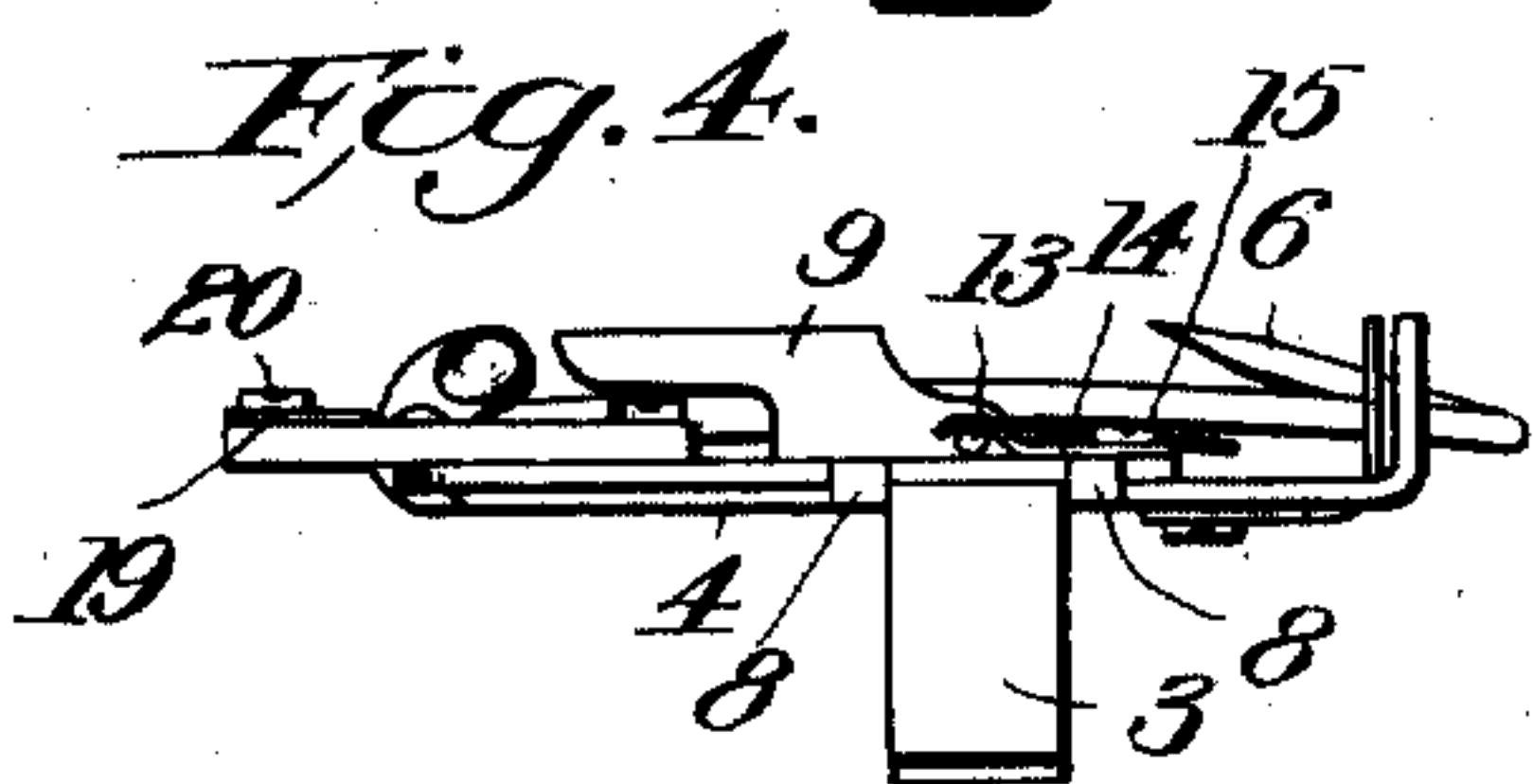
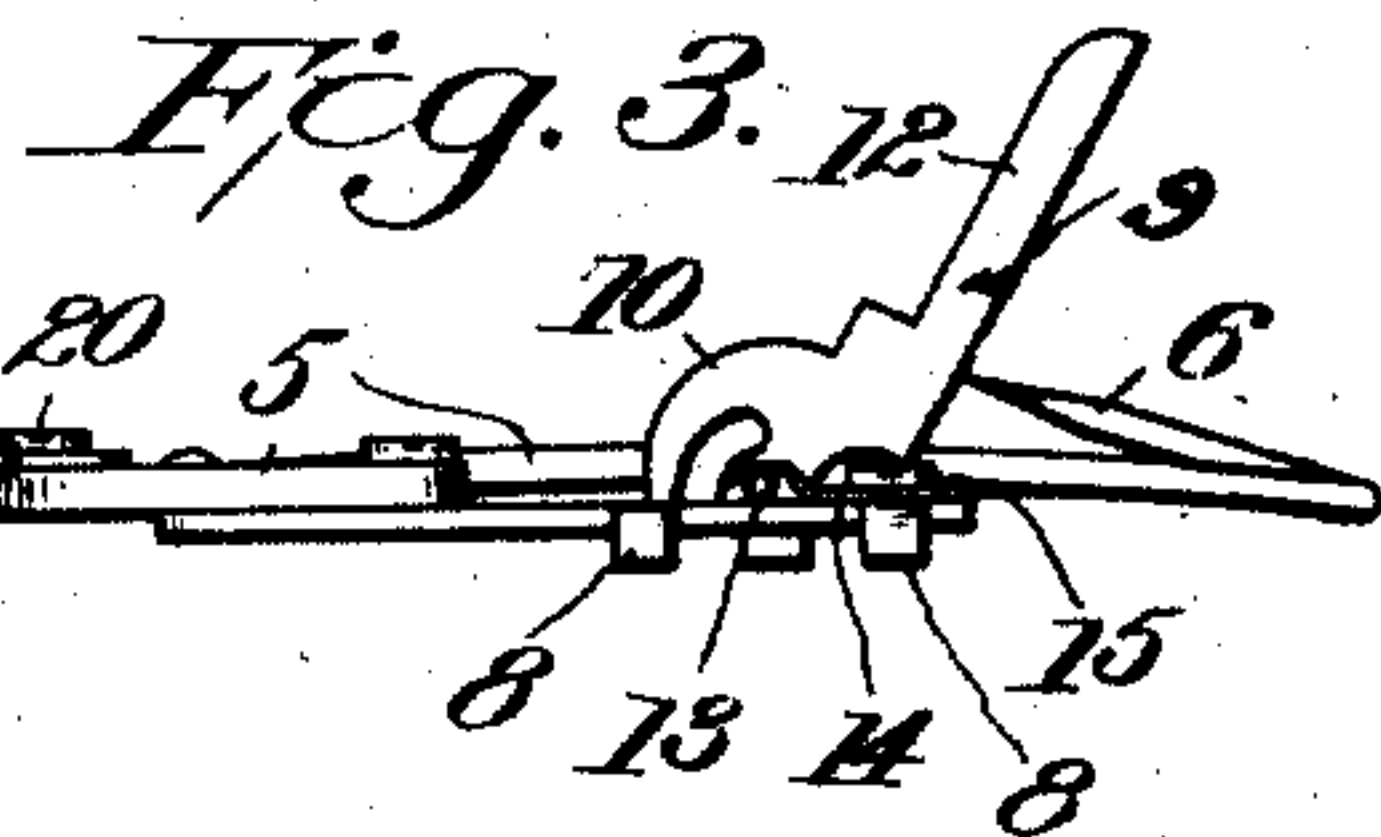
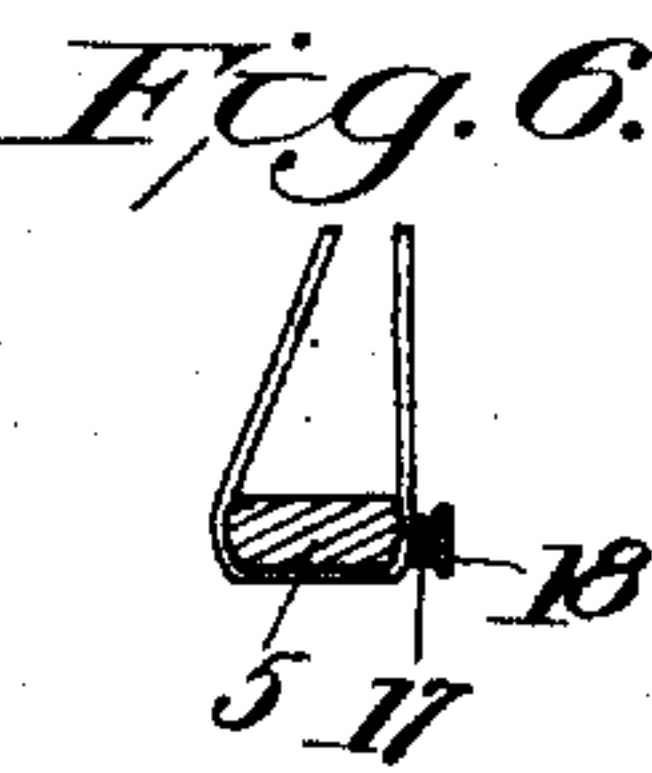
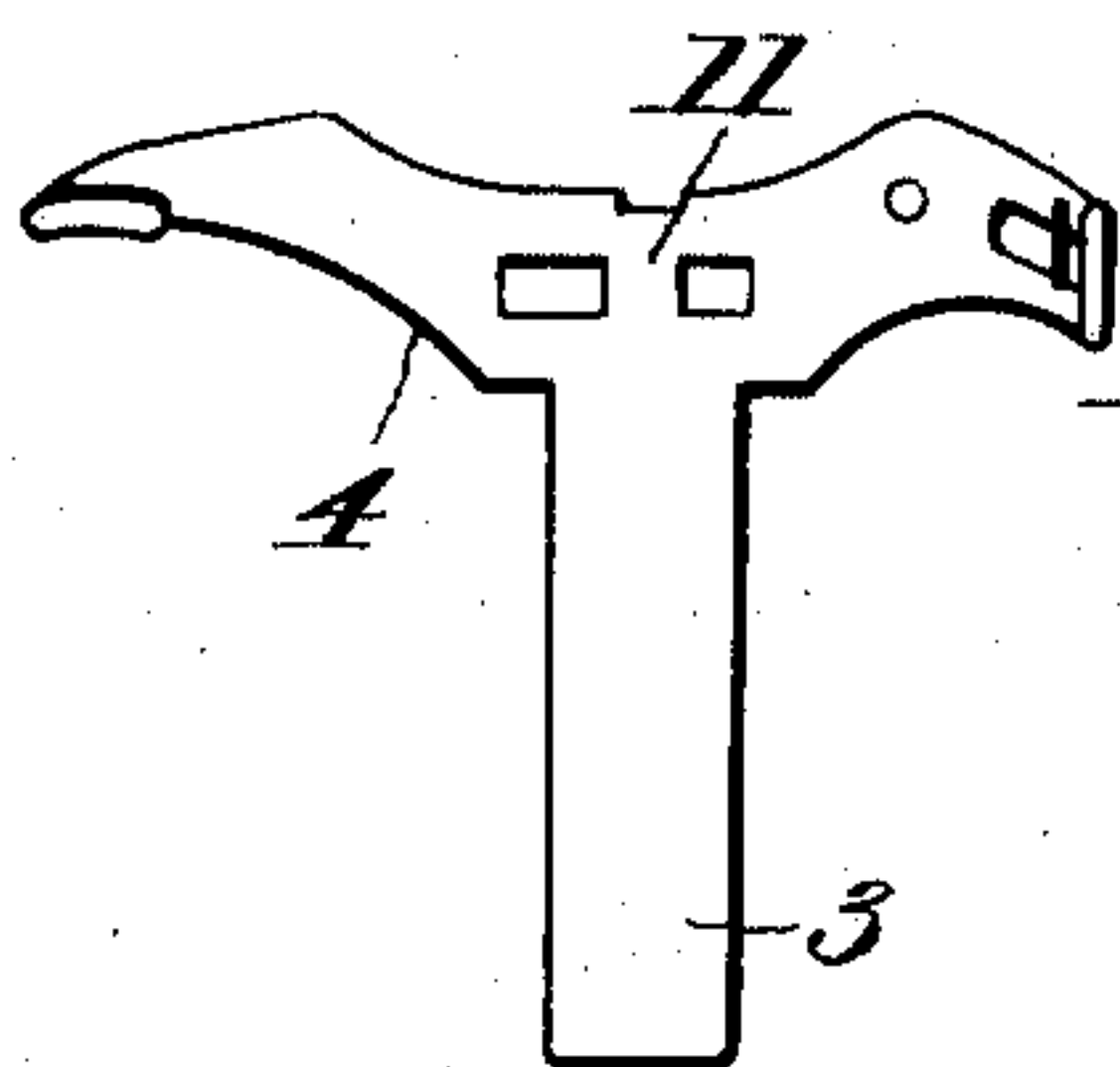
Patented Apr. 25, 1911.



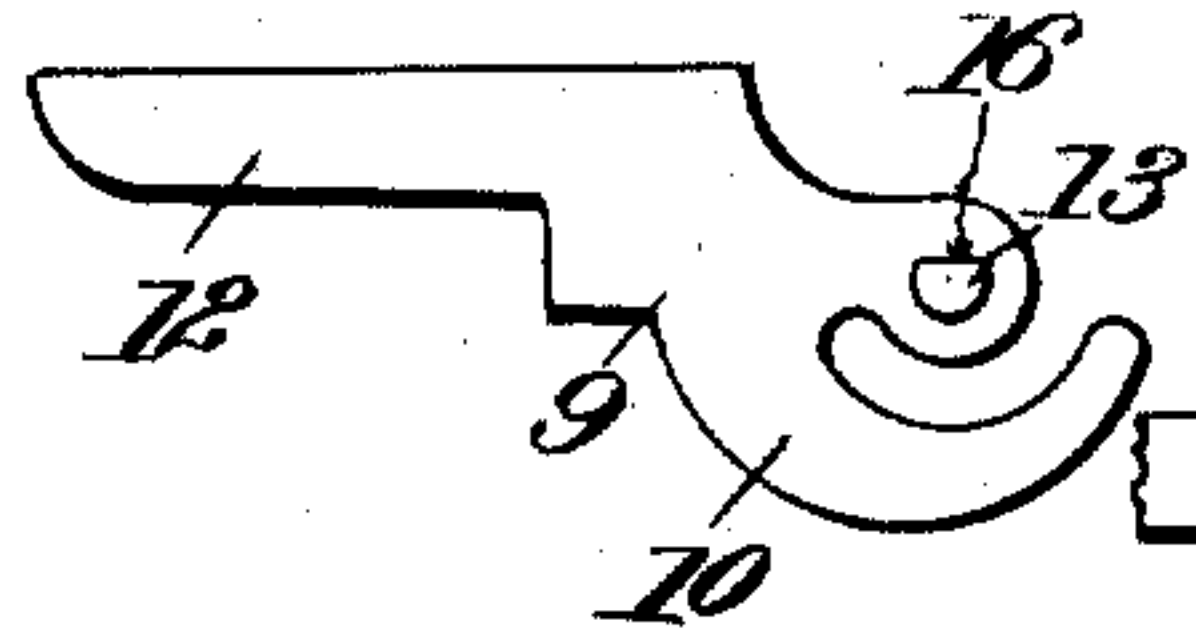
*Fig. 2.*



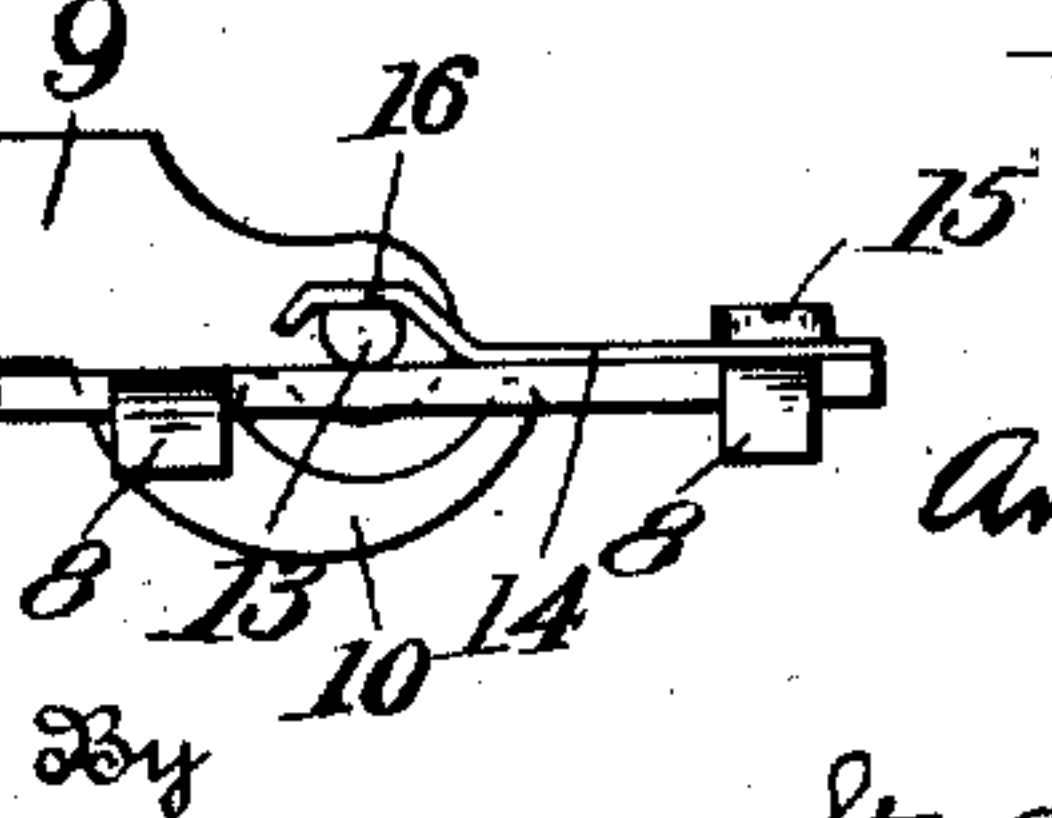
*Fig. 5.*



*Fig. 8.*



*Fig. 9.*



Witnesses  
*C. H. Walker*  
*W. C. Baughman*

Inventor  
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By *Sturtevant & Mason*  
Attorneys



# UNITED STATES PATENT OFFICE.

AMHERST G. LAMB, OF TORRINGTON, CONNECTICUT, ASSIGNOR TO EXCELSIOR NEEDLE COMPANY, OF TORRINGTON, CONNECTICUT, A CORPORATION OF CONNECTICUT.

CHAIN-STITCH LOOPER FOR LOCK-STITCH SEWING-MACHINES.

990,660.

Specification of Letters Patent.

Patented Apr. 25, 1911.

Application filed January 15, 1910. Serial No. 538,316.

To all whom it may concern:

Be it known that I, AMHERST G. LAMB, a citizen of the United States, residing at Torrington, in the county of Litchfield, State of Connecticut, have invented certain new and useful Improvements in Chain-Stitch Loopers for Lock-Stitch Sewing-Machines, of which the following is a description, reference being had to the accompanying drawing and to the letters and figures of reference marked thereon.

The invention relates to new and useful improvements in chain stitch loopers which are adapted to be substituted for the shuttle of a lock stitch sewing machine, whereby chain stitches may be formed.

An object of the invention is to provide a loop retarding spring for holding the needle loop back on the looper arm so that it may be properly cast off over the looper beak.

A further object of the invention is to provide a yielding thread guiding arm for guiding the needle loop along the looper arm, which yielding arm also serves as a means for housing the retarding spring which engages the needle loop.

A further object of the invention is to provide means for holding the locking catch of the looper in raised or released position.

These and other objects will in part be obvious, and will in part be hereinafter more fully described.

In the drawings which show by way of illustration one embodiment of the invention: Figure 1 is a perspective view showing the end of the shuttle arm with my improved chain stitch looper mounted thereon. Fig. 2 is a top plan view of the looper removed from the shuttle carrier. Fig. 3 is a side view of the same. Fig. 4 is a side view of the looper, together with a portion of the looper carrier showing the looper fastened thereto. Fig. 5 is a plan view of the forward end of the looper carrier. Fig. 6 is a sectional view through the loop guiding arm and the tension spring. Fig. 7 is a view of the loop guiding arm, and tension spring detached from the looper. Fig. 8 is an enlarged side view of the locking catch. Fig. 9 is an enlarged detail showing a portion of the locking lever when in released position.

The bed plate 1, the needle 2, and the shuttle carrier 3, are of the ordinary con-

struction wherein the shuttle carrier is oscillated back and forth and will not need further description.

The chain stitch looper is of the general character of that shown in my prior Patent #827,642, granted July 31, 1906, and comprises a shank portion 4, a looper arm 5, which is secured at its base to the shank portion 4. The looper arm 5, carries a looper beak 6, which is bent backward and overhangs the looper arm in the usual manner in this type of looper. The looper arm is provided with an integral curved shoulder 7, which extends underneath the looper beak 6, and serves to cast the needle loop from the looper arm, over the looper beak 6, in the well known manner of operation of this type of looper.

The looper is secured to the shuttle carrier by means of lugs 8, which engage recesses formed in the looper carrier, and a locking catch 9. The locking catch 9 is formed with a curved tongue 10, which extends down through a slot in the shank of the looper carrier and through a slot in the shuttle carrier, and passing underneath the cross bar 11 of the shuttle carrier, securely locks the looper shank to the shuttle carrier. Said locking catch 10 has an operating arm 12. The locking catch is provided with a rigidly attached pivot pin 13, which lies underneath the curved ends of a spring retaining clip 14, which is secured to the shank of the looper by a screw 15. The pivot pin 13, as clearly shown in Figs. 3 and 9, is flattened at 16, and said flattened surface is so disposed relative to the operating arm 12 of the locking latch, that when said locking latch is in closed position, as shown in Fig. 9, said flat surface lies against the flat surface of the yielding clip, and will be held in this position. When pressure is applied to the arm 12, the yielding clip will allow the pivot pin 16 to be turned and the lever or locking latch moved so as to release the looper shank from the shuttle carrier.

In the operation of my device, a loop is taken from the needle by the beak 6 of the looper, which loop is transferred to the looper arm 5, and passes along said looper arm to the base thereof. In order to retard the needle loop when the looper is moving in the direction to shed the same, I have provided a tension spring 17. To guide the



needle loop along the looper arm, I have also provided a yielding loop-guiding arm 18. The loop-guiding arm 18 has a laterally extending shank 19, which is secured at the base of the looper arm by means of a screw 20 and a pin 21, which is carried by the looper arm, and extends through a suitable hole in the shank of the arm 18. Said arm 18 extends along the looper arm, and is curved to conform to the same, as clearly shown in Fig. 2. The arm 18 at a point adjacent the cast-off shoulder 7, is bent laterally at 22, and extends underneath the looper arm. Said arm 18 is slightly spaced from the looper arm so that the needle loop will pass between the loop guiding arm and the arm of the looper proper. The tension spring 17 is secured at 23 to the outer face of the arm 18 and extends through a slot 23<sup>a</sup> to the inner face of said arm, so as to engage the needle loop sliding between the guiding arm 18 and press said loop against the arm 5 of the looper. At its free end, the spring 17 is bent laterally at 24 (see Fig. 7) and the laterally bent end of the spring is adapted to engage an opening 25 formed in the yielding arm 18, whereby the free end of the spring is housed and prevents the needle loop from passing on the wrong side of the tension spring. When the needle loop is drawn along the looper arm 5, the spring 17 will engage one limb of the loop and hold it yieldingly against the looper arm, so that when the loop slides along the looper arm to be shed it will be slightly retarded, taking up the slack which might be otherwise formed in the needle

loop, and holding the same until engaged by the cast off shoulder which spreads the needle loop and sheds the same over the beak of the looper.

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

1. The combination with a looper, comprising a looper arm, a looper beak, and a cast off, of a yielding loop guiding arm rigidly secured at the base of the looper arm, and extending along the side of the same, the free end of said loop guiding arm being bent laterally underneath the looper arm, and spaced therefrom, and a retarding spring located between said loop guiding arm and the looper arm, the free end of said spring being bent laterally and housed in an opening formed in the guiding arm.

2. The combination with a looper comprising a looper arm, a looper beak, and a cast off, of a shuttle carrier, means for securing the looper to the shuttle carrier including a locking catch, a pivot pin rigidly carried by said locking catch, said pivot pin having a flattened face, and a yielding clip for holding the pivot pin to the looper, said flattened face being so disposed as to yieldingly hold the locking catch in locking position.

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

AMHERST G. LAMB.

Witnesses:

DENNIS HILDRETH,  
CHARLES M. HIBBARD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."