

J. P. WEIS.
 LOOPER FOR SEWING MACHINES.
 APPLICATION FILED JUNE 5, 1903.

1,000,134.

Patented Aug. 8, 1911.

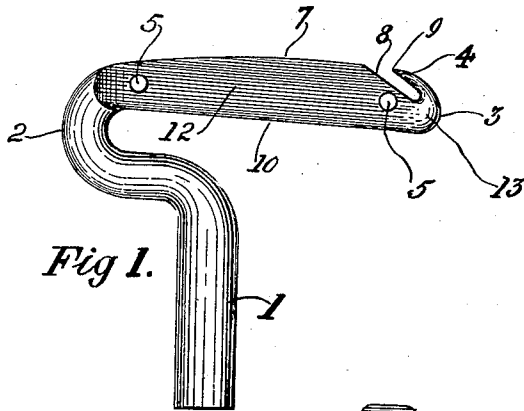


Fig 1.

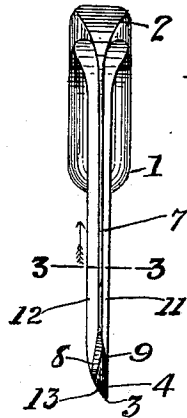


Fig 2.

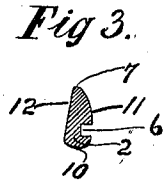


Fig 3.

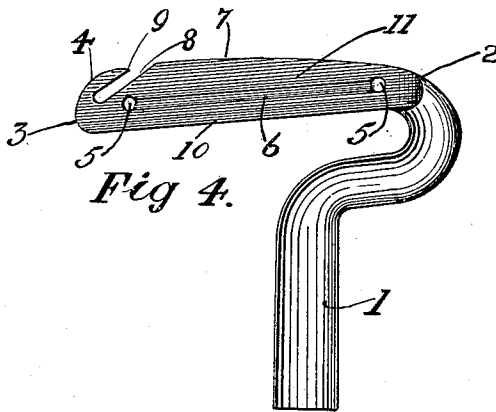


Fig 4.

WITNESSES:

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~LOOPER FOR SEWING-MACHINES.

1,000,134.

Specification of Letters Patent.

Patented Aug. 8, 1911.

Application filed June 5, 1903. Serial No. 160,205.

To all whom it may concern:

Be it known that I, JOHN P. WEIS, a citizen of the United States, residing in Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Loopers for Sewing-Machines, of which the following is a description.

This invention relates to sewing machines of the chain-stitch type; and more particularly to loopers to be used in chain-stitch machines for taking the needle loop and manipulating the same in connection with other devices, to make a stitch or to overedge the work.

The object of this invention is to provide a looper, to be used in an overedge machine, which will take the loop of needle thread and retain the same until a spreader has properly engaged said loop to carry it over the edge of the work.

With the above object in view, and others which will appear during the course of this description, this invention consists in the parts, features and combinations hereinafter described and claimed.

In the drawings: Figure 1 is a rear elevation of the looper embodying the features of this invention; Fig. 2 is a top plan view of said looper; Fig. 3 is a cross section of Fig. 2 on the line 3—3 of the latter; and Fig. 4 is a front elevation of the looper.

The stem of the looper is indicated by 1, the body of the looper by 2, the loop-taking point by 3, and the loop retaining hook by 4. The body of the looper is curved at its rear end and is suitably connected to, or formed integral with, the stem 1. The shape or form of the curvature is not of consequence, it being only necessary to provide sufficient clearance between the stem and the body to enable the thread to be properly manipulated.

The looper is constructed to carry a thread by the provision of a couple of apertures 5, extending transversely therethrough at opposite ends, which apertures are connected, on the face of the looper, by a groove 6, in which the thread lies in passing from one aperture to the other.

The body of the looper is given an irregular form in cross section, as shown in Figs. 2 and 3.

The top of the looper is brought to a narrow edge 7, and extends from the rear end

of the body to a point adjacent the forward thread aperture; and at the forward end, the looper is provided with an inclined slot 8, extending obliquely from the top 7, toward the point of the looper 3, thus forming the loop retaining hook 4. The under wall of the hook 4, is substantially parallel with the bottom of the slot; and the tip portion 9, of the hook 4, terminates slightly below the top edge 7, of the looper, and points in the general direction of the rear end or shank of the looper. The general trend of the body of the hook 4, is oblique to the looper body and from its point 3, toward its top edge 7. As shown in Figs. 2 and 3, the tip portion 9, of the hook 4, is formed and deflected so as to lie in a plane below the top edge of the looper and at one side of a vertical plane through the thin top of the looper and substantially parallel with the major axis of the looper. The base or bottom of the looper is indicated by 10, and may be slightly curved or rounded if desired, as shown in the drawings; and the face of the looper is indicated by 11, and the back of the looper by 12, said face and back being inclined from the base 10, toward the top edge 7. The face inclination, coupled with the disposition of the tip portion 9, of the hook 4, has the important function of enabling the front strand of the loop of needle-thread, as it slips toward the hook, and as the feed takes place, to be deflected so as to slide by and under tip 9, and be caught on the hook 4, this causing the loop to be twisted as it leaves the said hook.

The point 3, and hook 4, of the looper, on their face, are substantially flat, while on their back are considerably rounded as shown at 13, in Fig. 2. This structure enables the looper, on its face, to work closely against the body of the needle and accurately engage the loop of needle-thread as the looper is moved forward. The inclination of the back of the body of the looper has the function of properly guiding or deflecting the point of the needle in its descent during the backward movement of the looper. That is to say, the needle loop is thrown out toward the rear of the machine, and the point of the looper engages said loop at the rear of the needle and as the needle is rising. When the needle descends its point engages the inclined back of the

body of the looper as the latter is moving
backwardly. Hence, the needle, if it should
be deflected or bent from any cause, would
be prevented from striking the top of the
5 looper or getting on the wrong side of the
latter. Furthermore, by having the back
12, of the looper, inclined as shown, the
strand of the looper-thread which extends
along the back of the looper, when the lat-
10 ter is advanced, or advancing, will be pre-
vented from curling under the base of the
looper and thereby preventing the needle,
on its descent, from properly passing be-
tween the looper and looper thread. In
15 other words, the inclined back 12, affords a
support or rest for the strand of looper-
thread. The face 11, of the looper-body is
slightly convexed, as shown in Fig. 3, for the
purpose of deflecting the point of the needle
20 and preventing the same striking the lower
lip of the groove 6. This feature becomes
of importance when the looper is used with-
out its thread, in which case the needle would
descend in front of the looper in the same
25 manner it does at the back when the looper-
thread is employed. The rounded portion
13, of the point of the looper has the func-
tion of avoiding the abrasion of the loop of
needle-thread as the rear strand thereof
30 slips over the point to be held by the hook 4.

A machine in which this looper performs
its functions is made the subject-matter of
an application filed of even date herewith
and having Serial No. 160,209.

35 Having thus described my invention what
I claim and desire to secure by Letters Pat-
ent is:

1. A looper comprising a shank and a
body-portion at an angle to each other, said
40 body-portion being formed with a narrow
top-edge and a comparatively wide base,
and with the face and back converging to-
ward the top-edge, and having a thread-
retaining hook the tip portion of which
45 points toward the said shank.

2. A looper having a body-portion the
base of which is wide and the top compara-
tively narrow, and the intervening body-
portion on its face inclined so as to afford
50 a support for the looper-thread, said looper
also having a loop-holding and retaining
hook back of its point the tip portion of
which lies in a plane substantially parallel
with the major axis of the body-portion of
55 the looper.

3. A looper having a shank and body-
portion at an angle to each other, the body

portion having a wide base and compara-
tively narrow top, and a loop-holding and
retaining hook the tip portion of which lies 60
in a plane substantially parallel with the
major axis of the body-portion of the looper
and points toward the shank.

4. A looper the body of which is formed
with a wide straight base and comparatively 65
narrow curved top, and having a loop-en-
gaging point the face of which is flat and
the back of which is rounded, and also hav-
ing a loop-retaining hook back of said point.

5. A looper the body of which is formed 70
with a wide base and comparatively narrow
top, the face of the looper having a thread
groove and a convexed portion shielding
said groove.

6. A looper having a body-portion the 75
forward end of which is formed into a loop-
taking point, and also having a slot in its
forward end extending from the top of the
looper obliquely toward said point thus
forming a loop-retaining hook. 80

7. A looper having a body-portion the
face of which is convexed, and the forward
end of which is formed into a loop-engaging
point and loop-retaining hook, the face of
said point and hook being flat. 85

8. A looper having a body-portion the
face of which is convexed and the back flat,
and the forward end of which is formed
into a loop-engaging point and loop-retain-
ing hook, the face of said point and hook 90
being flat and the back rounded.

9. A looper provided with a thread-eye
and thread-receiving groove, and also hav-
ing a loop-engaging end rounded upward
and terminating in a hook positioned at one 95
side of a vertical plane through the top of
the looper so as to give a twist to the needle-
thread loop as it delivers the same.

10. A looper having a loop engaging point
for entering a needle-thread loop when mov- 100
ing in one direction, and a hook for retain-
ing said loop as the looper moves in the
opposite direction, said hook being disposed
at one side of a vertical plane through the
top of the looper so as to give a twist to the 105
said loop as the latter slips from the hook.

In testimony whereof I have hereunto
signed my name in the presence of two sub-
scribing witnesses.

JOHN P. WEIS.

Witnesses:

CHAS. MCC. CHAPMAN,
M. B. HOARE.