

(No Model.)

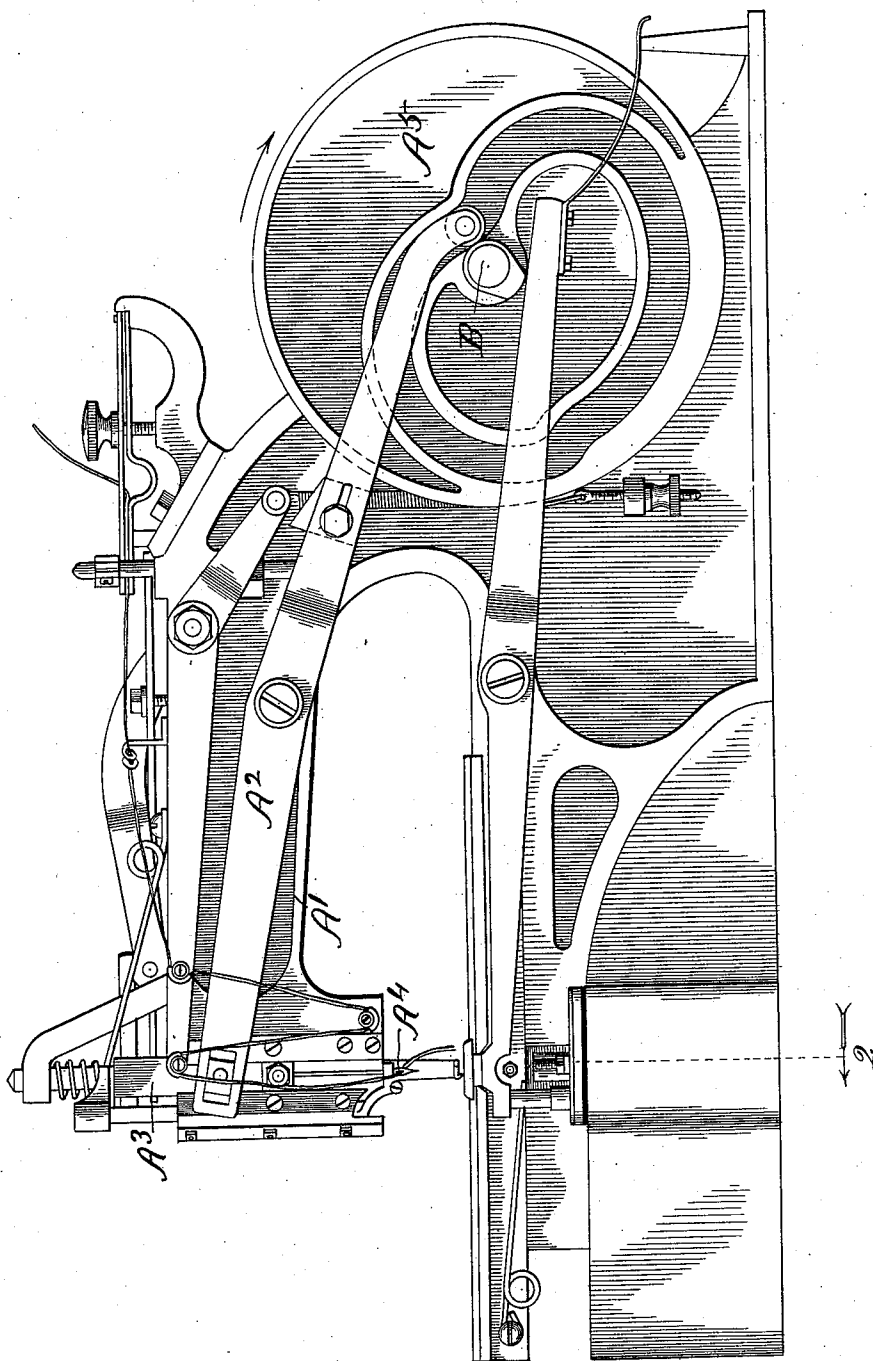
2 Sheets—Sheet 1.

J. B. DOBYNE.
LOOP FORMER FOR SEWING MACHINES.

No. 576,723.

Patented Feb. 9, 1897.

Fig. 1.



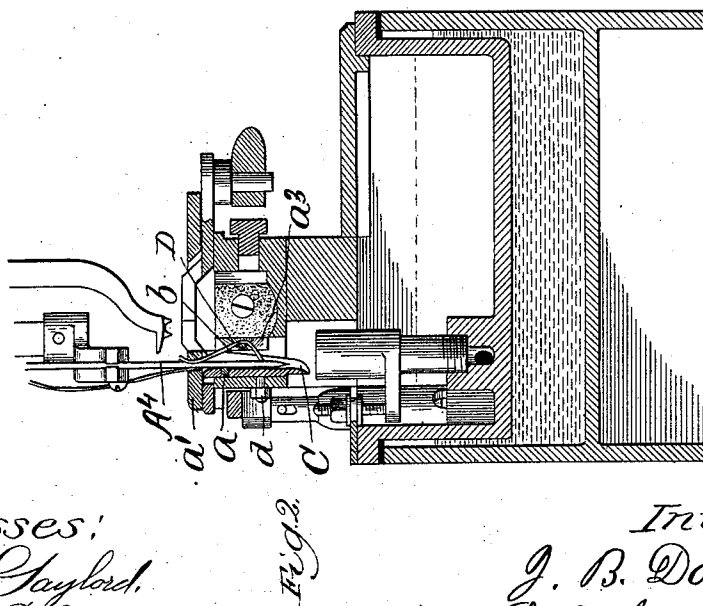
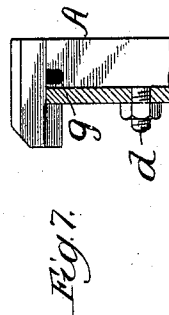
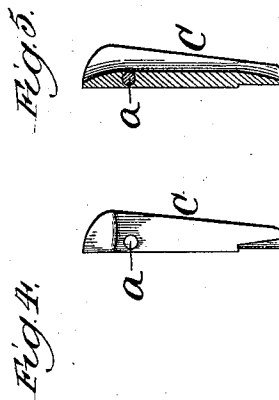
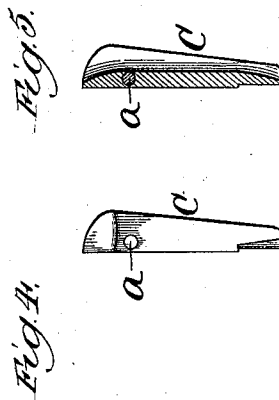
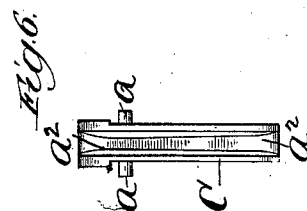
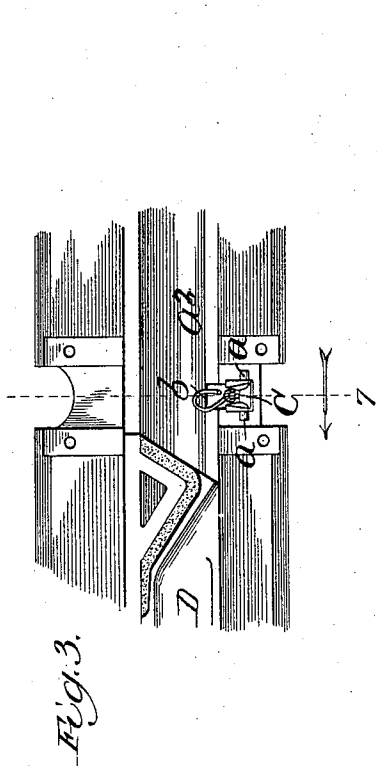
Witnesses:
E. C. Gaylord,
Lute S. Allen

Inventor:
J. B. Dobyne.
By L. B. Coupland & Co.
Attorneys

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UNITED STATES PATENT OFFICE.

JAMES B. DOBYNE, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE LANDIS
WAX THREAD SEWING MACHINE COMPANY, OF SAME PLACE.

LOOP-FORMER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 576,723, dated February 9, 1897.

Application filed May 15, 1895. Serial No. 549,368. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. DOBYNE, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in a Loop-Former for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-

10 pertains to make and use the same.
This invention relates to an adjustable loop-forming attachment, and has for its object to provide a loop former or regulator that may be adjusted with reference to different-sized

15 needles.
Figure 1 is a front elevation of a wax-thread sewing-machine; Fig. 2, a vertical transverse section on line 2, Fig. 1, looking in the direction indicated by the arrow; Fig. 3, a broken-away plan on the line of the shuttle-race, showing a part of the carrier and shuttle and the relative position of the loop-forming attachment; Fig. 4, a detached side elevation of a loop-forming shoe; Fig. 5, a vertical longitudinal section of the same; Fig. 6, a face view, and Fig. 7 a broken-away section, on line 7, Fig. 3.

20 A is the supporting-base; A', the stationary overhanging arm; A², the needle-lever; A³, the needle-bar; A⁴, the needle; A⁵, the combined needle-cam and fly-wheel, and B the driving-shaft.

30 C is a shoe or former provided with pivot-pins *a a*, Figs. 3 and 6, projecting from each side below the upper end. By means of these pins the shoe is loosely hung adjacent to the front side of the shuttle-race, Figs. 2 and 3, just below the feed plate or dog *a'* and in the pathway of the needle. This shoe is provided
40 on the face side with a channel or groove *a''* for the passage of the needle. The front side of the needle bears against the bottom of this channel on its passage through the shuttle-race *a''*, as shown in Fig. 2. This has the effect of forcing the thread out into the race
45 and forming the loop *b* in the pathway of the shuttle D at the proper time, and thus avoids skipping stitches. An adjusting bolt or screw *d*, inserted from the front side, bears against
50 that side of the shoe below its pivotal point

of support and provides for the adjustment of the shoe on its pivot, both with reference to the wear on the needles and the different sizes of the same, for the purpose of insuring a continuous contact and bearing on the front
55 side of the needle and the positive action of throwing out the thread on the opposite side and forming the loop to receive the point of the shuttle, as shown in Figs. 2 and 3.

The theory of the operation of this loop- 60 former, as understood, is that the channel in the shoe C is not wide enough to pass the needle and thread side by side. Hence as the thread must go somewhere it projects at the open front of the shoe. The shoe or former can be
65 so adjusted as to insure that the needle in its reciprocation moves the proper distance from the bottom of the groove. The channel or groove *a''* is between side walls which have rounded surfaces at top and bottom. These
70 rounded surfaces or shoulders tend to guide the thread to the desired position and prevent cutting. The groove is deepest at the upper end, as clearly shown in Fig. 5.

Having thus described my invention, what 75 I claim as new, and desire to secure by Letters Patent, is—

1. In a sewing-machine, the vertically-reciprocating needle, the shoe below the base-plate hung on horizontal pivot and having a
80 substantially vertical groove into which the needle enters, and means for adjusting said shoe on its pivot, toward or from the needle, all combined substantially as described.

2. In a sewing-machine, the vertically-re- 85 ciprocating needle, the rigid shoe below the base-plate thereof supported on horizontal pivots and having a groove in one face into which the needle enters on its descent, the shuttle reciprocating in proximity to said
90 shoe, and usual means for actuating the needle and shuttle, all combined substantially as described.

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

JAMES B. DOBYNE.

Witnesses:

L. M. FREEMAN,
L. B. COUPLAND.