W. ARBETTER.

SEWING MACHINE.

APPLICATION FILED JAN. 13, 1910.

1,050,595. Patented Jan. 14, 1913.

Fig. 1.

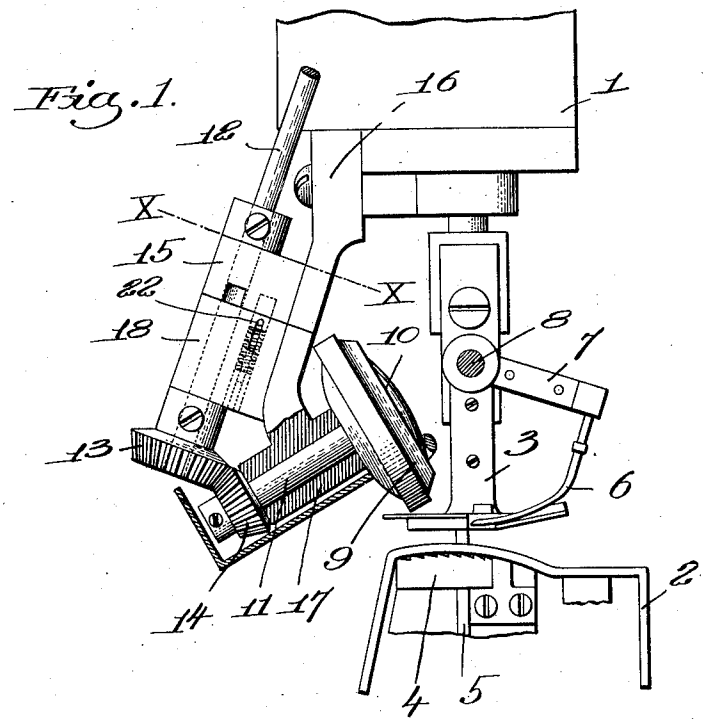


Fig. 2.

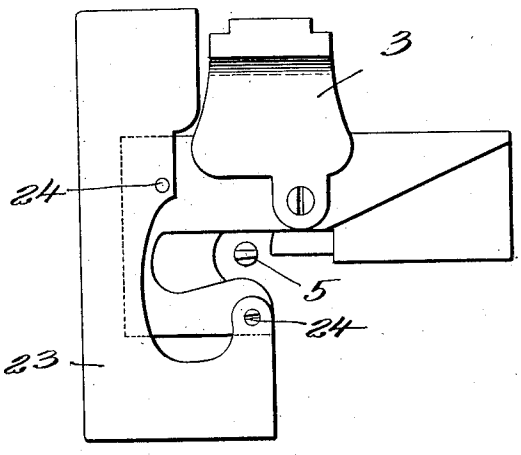


Fig. 3.

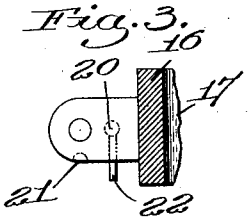
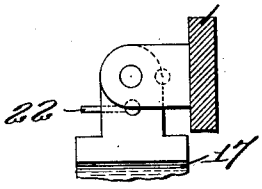


Fig. 4.



Witnesses:
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Joseph M. Ward.

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by Cornby & Gregory Attys.

UNITED STATES PATENT OFFICE.

WOLF ARBETTER, OF CHELSEA, MASSACHUSETTS, ASSIGNOR TO ARBETTER FELLING MACHINE COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

SEWING-MACHINE.

1,050,595. Specification of Letters Patent. **Patented Jan. 14, 1913.**

Original application filed June 18, 1906, Serial No. 322,132. Divided and this application filed January 13, 1910. Serial No. 537,816.

To all whom it may concern:

Be it known that I, WOLF ARBETTER, a citizen of the United States, residing at Chelsea, county of Suffolk, and State of Massachusetts, have invented an Improvement in Sewing-Machines, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to a machine for making blind stitches and in which the stitch-forming mechanism is located entirely above the work support.

The object of the invention is to provide for so mounting the looper, that portion of the stitch-forming mechanism which cooperates with the needle, as to enable it to be swung to one side in order to get at the looper or the thread supply carried thereby.

The invention also involves certain details of construction and it will more fully appear from the accompanying description and drawings and will be particularly pointed out in the claims.

The subject matter of this patent is a division of my prior Patent No. 1,001,602 granted August 29, 1911.

The type of machine referred to in this patent and in my aforesaid patent is more fully illustrated and described in my prior Patent No. 830,699 granted September 11, 1906.

The drawings represent a preferred form of the invention.

In the drawings Figure 1 is a side elevation of a sufficient portion of a sewing machine necessary to a disclosure of the invention with the preferred forms of important improvements thereto applied; Fig. 2 is a top plan view of the presser foot and sheath; Fig. 3 is a sectional view taken on the line *x—x* in Fig. 1 with the looper bracket in a closed position; Fig. 4 is a view similar to Fig. 3 with the looper bracket in open position.

It will be unnecessary to describe here more than those portions of the sewing machine directly concerned with the present invention because reference may be had to my before-mentioned patents for an understanding of the construction and operation of sewing machines of this type.

In the drawings the lower portion of the overhanging arm 1 of the machine is shown, and the throat plate or work-support 2 which supports the work in the vicinity of the stitching point. A stationary presser foot 3 is carried by the overhanging arm, and the work-support 2 is forced yieldingly up against the presser foot to clamp and hold the work therebetween, as in this type of machine. The feed dog 4 is shown by means of which the work is fed forward, and the bender 5 is also shown by means of which the work is projected up through the opening of the presser foot into the path of the needle.

The stitch-forming mechanism comprises the needle and complemental devices cooperating therewith by means of which the stitch is formed, and this entire mechanism is located entirely above the work-support, thus insuring the formation of blind stitches. In its preferred form the stitch-forming mechanism comprises the curved needle 6 carried by the needle-carrying arm 7 oscillated by suitable mechanism about the axis 8 and also given a bodily oscillation about a vertical axis whereby, preferably in alternation, it enters the fabric parallel to and then inclined to the line of feed. The stitch-forming mechanism also comprises a looper, which term I regard as generic to any device for coöperating with the needle to manipulate the thread carried thereby and which in the present instance, and in its preferred form, is shown as a rotating hook 9 with an inclosed thread-carrying bobbin case 10. The looper shaft 11 is mounted in a vertical plane in, or substantially parallel to, the line of feed, and this shaft is inclined to the horizontal so that the needle will coöperate with the looper in either or both of its paths of movement. The looper shaft is driven from above by an inclined shaft 12 geared thereto by beveled gears 13 and 14. The shaft 12 has its lower bearing in the projecting part 15 of a bracket 16 secured to and depending from the overhanging arm 1. The looper shaft 11 is journaled in a bracket 17 having the projecting part 18 journaled upon, or co-axially with, the shaft 12. The projecting portion 15 of the bracket 16 is formed with recesses 20, 21, and the projecting part 18 of the bracket 17 carries a spring-pressed sliding pin 22 adapted to enter either of the said recesses. It will thus

be seen that the looper supported in the bracket 17 may be swung to one side about the shaft 12 without separating the gears 13 and 14, and may be held locked either in its normal position by engagement of the pin 22 with the recess 20, or in its open position by engagement with the pin 22 with the recess 21. This enables free access to be had to the looper for repairing it or for changing the thread supply, or for any other purpose. In this type of machine with the looper above the work and necessarily close to the stitching point, it is difficult to obtain access to the looper and this difficulty my present invention cures. The looper is readily swung upward away from the work, away from the needle, and to a position where access may freely be had to it.

In feeding the work under the presser foot the work sometimes projects or bunches above the top of the presser foot at one or the other side thereof and the looper is liable to engage the work to cut and to injure the same. In order to obviate this I provide the presser foot, herein designated 3, with a shield 23 that projects laterally from each side of the presser foot, as shown in Fig. 2, and that is suitably connected therewith as by screws 24. It will be seen that the looper operates directly above the shield but by reason of the journaled bracket in which the looper is carried it can be swung upwardly and to one side without contacting with or interfering with the shield.

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

1. A blindstitch sewing machine comprising, a work-support, a coöperating presser foot above the same, a reciprocating needle located and operated above the work-support, a looper located above the work-support and in the rear of the presser foot, means for driving the looper from above the work-support, a bracket carrying said looper and means whereby the bracket and looper may be swung upwardly and to one side.

2. A blindstitch sewing machine comprising, a work-support, a coöperating presser foot above the same, a reciprocating needle located and operated above the work-support, a rotary looper above the work-support and in the rear of the presser foot having its axis of rotation inclined to the horizontal and in the general line of feed, a vertical, inclined shaft and connections therefrom for driving the looper from above the work-support, a bracket carrying said looper and journaled coaxially with the said inclined driving shaft whereby the looper may be swung upwardly and to one side.

3. A blindstitch sewing machine comprising, a work-support, a coöperating presser foot above the same, a reciprocating needle located and operated above the work-support, a rotary looper above the work-support and in the rear of the presser foot having its axis of rotation inclined to the horizontal and in the general line of feed, a vertical, inclined shaft and connections therefrom for driving the looper from above the work-support, a bracket carrying said looper and journaled coaxially with the said inclined driving shaft whereby the looper may be swung upwardly and to one side, and locking means for retaining the looper-supporting bracket in position.

4. A blindstitch sewing machine comprising, a work-support, a coöperating presser foot above the same, a reciprocating needle located and operated above the same, a rotary looper located above the work-support and in the rear of the presser foot, a vertically inclined driven shaft carried by the overhanging arm in the rear of the looper, a bracket journaled on said shaft and supporting the said looper whereby the looper in its bracket may be swung upwardly and to one side about the said inclined shaft.

5. A blindstitch sewing machine comprising, a work-support, a coöperating presser foot above the same, a reciprocating needle located and operated above the same, a rotary looper located above the work-support and in the rear of the presser foot, a vertically inclined driven shaft carried by the overhanging arm in the rear of the looper, a bracket journaled on said shaft and supporting the said looper whereby the looper in its bracket may be swung upwardly and to one side about the said inclined shaft, and means for locking the looper-supporting bracket in either position.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

WOLF ARBETTER.

Witnesses:
FRANK R. MORSE,
EMILY C. HODGES.