F. ASHWORTH.

SEWING MACHINE.

APPLICATION FILED MAY 23, 1912.

1,080,877.

Patented Dec. 9, 1913.

Fig. 1.

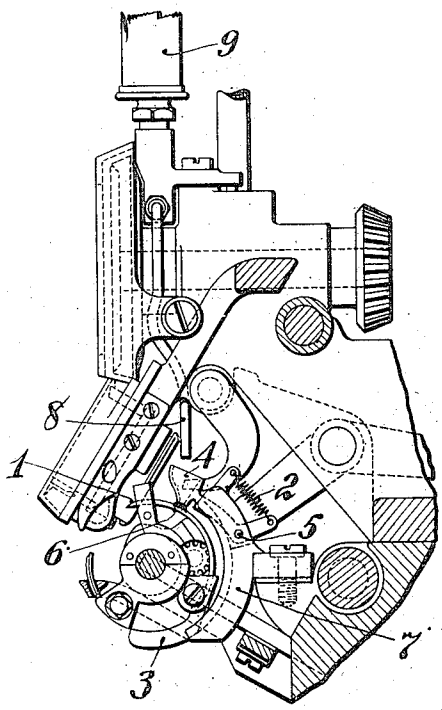
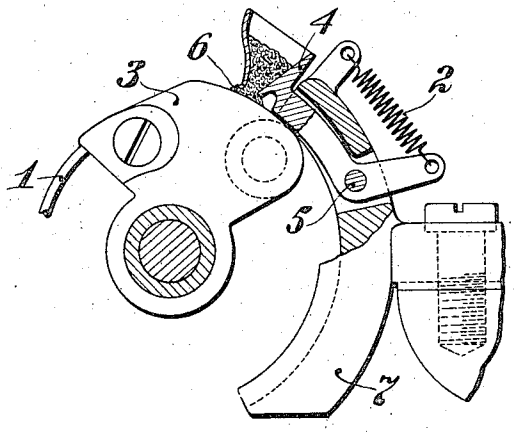


Fig. 2.



Witnesses:

E. C. Burdeman

Emily M. Munn.

Inventor:

Fred Ashworth

by his attorneys

Phillips, Van Tuyne & Fish.

UNITED STATES PATENT OFFICE.

FRED ASHWORTH, OF BEVERLY, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SEWING-MACHINE.

1,080,877. Specification of Letters Patent. Patented Dec. 9, 1913.

Original application filed October 3, 1910, Serial No. 585,116. Divided and this application filed May 23, 1912. Serial No. 699,137.

To all whom it may concern:

Be it known that I, FRED ASHWORTH, a citizen of the United States, residing at Beverly, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in 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 appertains to make and use the same.

The present invention relates to shoe sewing machines employing a curved hook needle, and more particularly to a needle oiling device for such machines.

It has heretofore been proposed to provide a curved hook needle sewing machine with a device for applying oil to the needle so as to prevent the needle from sticking in the needle guide or in the work.

The primary object of the invention is to provide an improved needle oiling or lubricating device which is simple in construction, efficient in operation, and is not liable to injury during the operation of the machine.

With the above object in view one feature of the invention contemplates the provision in a shoe sewing machine having a curved hook needle of a needle oiling device arranged to contact with the needle and to be moved away from the needle by the needle carrier during the advancing movement of the needle carrier. By arranging the oiling device so that it is moved away from the needle by the needle carrier during the advancing movement of the carrier, the oiling device is enabled to contact with and apply oil to the needle in a satisfactory manner, and is moved out of the way of the forward portion of the carrier as the carrier advances.

Further features of the invention consist of certain constructions, arrangements and combinations of parts hereinafter described and claimed, the advantages of which will be obvious to one skilled in the art from the following description.

In the drawing illustrating the invention in the best form at present known to the inventor, Figure 1 is a view in side elevation, partly in section, of a portion of a sewing machine embodying the invention, and Fig. 2 is a detail view partly in section of the needle, the needle segment and the needle oiling device.

In the drawing the needle indicated at 1 is a curved barbed needle of the usual construction and is secured by a clamping block to an oscillatory needle carrier 3 journaled in any suitable manner in the machine. The movements imparted to the needle carrier and the mechanism for operating the same in the machine illustrated in the drawing are the same as shown and described in applicant's co-pending application Serial No. 585,116, filed October 3, 1910, of which the present application is a division.

The oiling device for the needle consists of an arm 4 pivotally mounted at 5 on the guide 7 for the needle carrier and provided at its forward end with an opening to receive the mass of absorbent material 6. The rear end of the arm 4 is connected by a coiled spring 2 with a lug on the guide 7, the tendency of which spring is to move the arm 4 so as to bring the mass of absorbent material 6 into contact with the needle. The mass of absorbent material forms an oiling pad to which oil is supplied by means of a tube 8 leading from an oil cup 9 to a position directly over the forward end of the arm 4. To prevent the needle carrier during its forward movement from coming in contact with the forward end of the arm 4, the arm is so shaped and arranged that a portion of the arm substantially midway of its length extends into the path of movement of the needle carrier. The arm is thus engaged by the needle carrier during its forward movement, and the forward end of the arm and the oiling pad are raised out of the path of movement of the leading edge of the needle carrier.

Having explained the nature and object of the invention, and having described a mechanism embodying the same in its preferred form, what is claimed is:—

1. A sewing machine, having, in combination, stitch forming devices including a curved hook needle, a needle carrier, and a movably supported needle oiling device arranged to contact with the needle and means actuated by the needle carrier for moving the oiling device away from the needle during the advancing movement of the carrier.

2. A sewing machine, having, in combination, stitch forming devices including a curved hook needle, a needle carrier, and a pivotally mounted arm provided with an oiling pad arranged to contact with the needle, said arm extending into the path of the needle carrier so as to be actuated thereby during the advancing movement of the needle carrier to raise the pad from the needle.

3. A sewing machine, having, in combination, stitch forming devices including a curved hook needle, a needle carrier, an oiling pad arranged to contact with the needle, and a movable carrier for the pad mounted to extend into the path of the needle carrier so that it is engaged by the needle carrier and moved away from the needle by the needle carrier during the advancing movement of the needle carrier.

4. A sewing machine, having, in combination, stitch forming devices including a curved hook needle, a needle carrier, an oiling pad arranged to remain stationary in contact with the needle during a portion of the needle movement in each direction, and means for raising the pad from the needle during the latter portion of the advancing movement of the needle.

5. A sewing machine, having, in combination, stitch forming devices including a curved hook needle, needle actuating mechanism, an oiling pad arranged to contact with the needle, a carrier therefor mounted independently of the needle actuating mechanism, and means for raising the pad from the needle during the latter portion of the advancing movement of the needle.

FRED ASHWORTH.

Witnesses:
ALFRED B. FOWLER,
HARRY L. HOOD.

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