

W. H. BAYNARD.
 SEWING MACHINE ATTACHMENT.
 APPLICATION FILED AUG. 27, 1917.

1,298,280.

Patented Mar. 25, 1919.

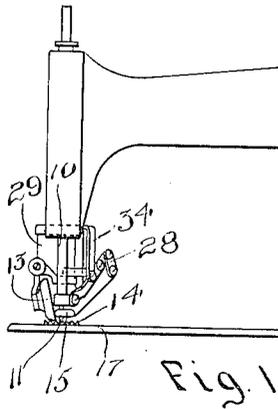


Fig. 1

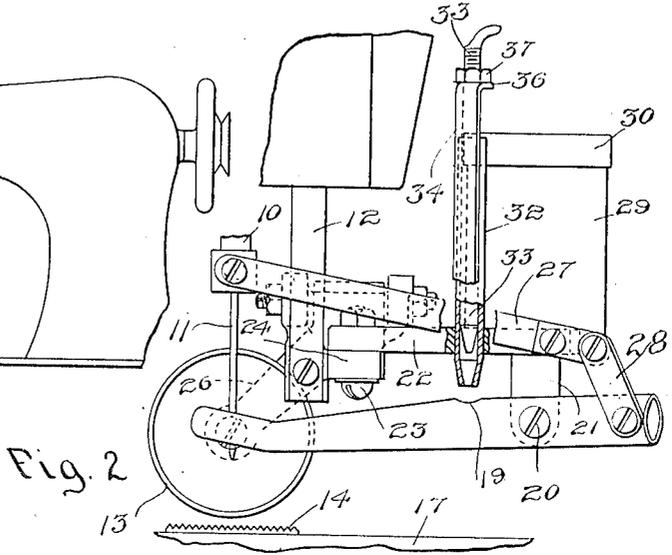


Fig. 2

Fig. 3

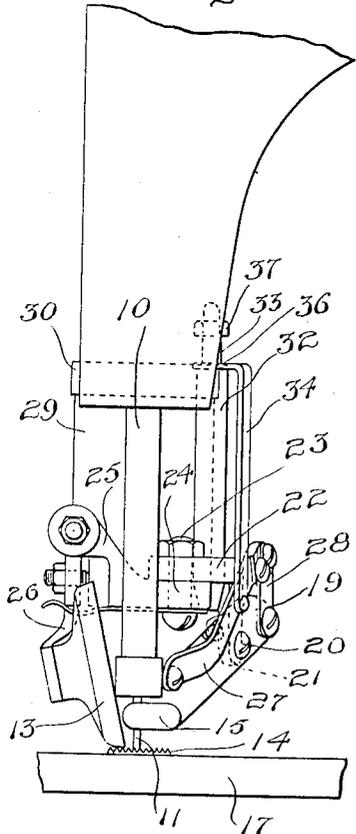
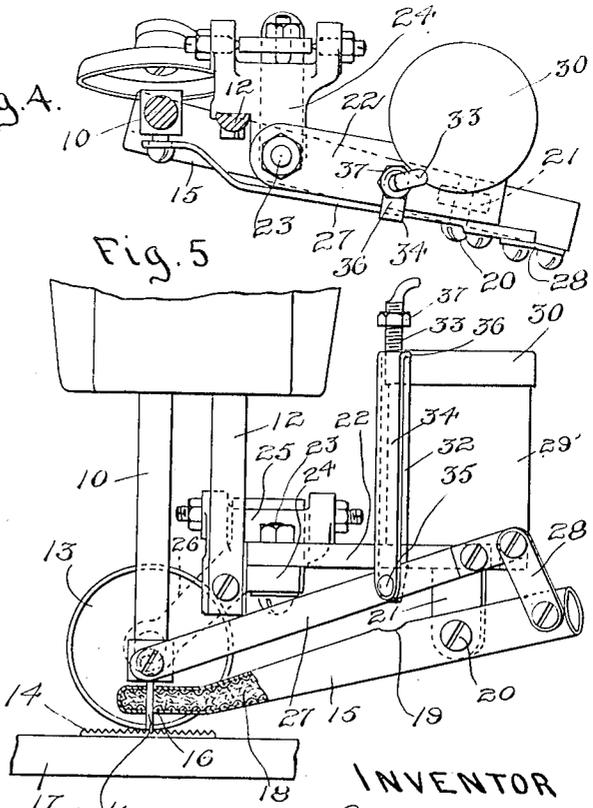


Fig. 4

Fig. 5



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SEWING-MACHINE ATTACHMENT.

1,298,280.

Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed August 27, 1917. Serial No. 188,514.

To all whom it may concern:

Be it known that I, WILLIAM H. BAYNARD, a citizen of the United States, residing at Braintree, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Sewing-Machine Attachments, of which the following is a specification.

This invention relates to lubricating and cooling attachments for sewing machines, such as described in my co-pending application Serial No. 180,091, filed July 12, 1917, and it has for its object to provide certain improvements which are embodied in the attachment shown on the accompanying drawing, described in the following specification and pointed out in the appended claims.

On the drawings,—

Figure 1 illustrates, conventionally, a sewing machine provided with my improved lubricating attachment.

Fig. 2 illustrates the attachment in elevation looking from the right as shown in Fig. 1, the valve casing being shown partially in section, and the needle bar being raised.

Fig. 3 represents a front elevation of the same.

Fig. 4 represents a plan view thereof.

Fig. 5 represents the attachment with the needle bar in its lowest position.

My improved attachment is illustrated as being mounted upon a Singer machine, the latter having the needle bar 10, the needle 11, the presser bar 12, and the rotatable flanged presser-foot disk 13, the latter coöperating with the feed 14. In this machine the needle bar operates through a relatively long vertical path, whereas the presser bar has a short vertical movement, as ordinarily.

My attachment comprises a lubricant or wick holder 15 disposed in the path of the needle and having a through aperture for the passage thereof, and motion-reducing mechanism operated by the needle bar for imparting a relatively short vertical movement to the holder so as intermittently to lift it from the work to permit the latter to be fed. The holder comprises a tube having one end closed and flattened, as shown in Fig. 5, with a needle receiving aperture 16 through the top and bottom walls thereof. The body of the tube is inclined from the horizontal, but its end is slightly bent so as

to lie substantially parallel with the bed plate 17 when it is in its lowest position. Within the holder there is an absorbent wick 18 (for the lubricant) preferably consisting of a body of sponge incased in cheesecloth, linen, cotton, or other textile material. Between its ends the holder has an opening 19 into which the lubricant is dropped from a reservoir. Near its outer end the holder is pivotally mounted upon a screw pin 20 which projects laterally from an ear 21 depending from a supporting plate 22. Said plate is secured by a bolt 23 to a lug 24 which forms a part of the bracket 25 on which the arm 26 for the presser disk 13 is mounted. The bracket is secured to the presser bar 12 so that the plate 22 rises and falls therewith, and consequently the wick holder is moved bodily up and down as the presser bar is reciprocated. In addition to said bodily movement, however, the wick holder is oscillated about the pivot 20, and, to secure this movement, I employ a lever 27 pivoted to said plate 22. Said lever is pivoted near one end and has a short arm pivotally connected by a link 28 with the outer or rear end of the wick holder, and a long arm pivoted to the lower end of the needle bar. As a result of this construction and arrangement of parts, the front end of the wick holder is oscillated through a path which is longer than that of the presser bar, and shorter than that of the needle. By varying the leverage, the extent of movement of the operative or needle-lubricating end of the holder may be changed. As shown, the movement is such that, while the needle is reciprocated in relation to the holder, the point of the needle is not actually withdrawn from the holder.

The lubricant is contained in a reservoir 29 which is cylindrical in shape with a removable cover 30. Said reservoir is supported by the plate 22, and has a communicating valve casing 32, in which plays a plunger valve 33. The lower end of the valve casing is directly over the hole 19 to drop the lubricant thereinto when the valve is opened. The valve is reciprocated by a bar 34 pivoted at 35 to the long arm of lever 27, and having an end 36 apertured to receive the end of the valve plunger. A nut 37 on the upper threaded end of said plunger is engaged by the bar, when it reaches a

point near its upper limit of movement, and lifted to raise the valve and permit a drop of lubricant to fall into the wick holder.

The details of the construction which I have herein described may be varied considerably without departing from the scope of the invention as outlined in the claims.

Having thus explained the nature of my said invention and described a way of making and using the same, although without attempting to set forth all of the forms in which it may be made or all of the modes of its use, what I claim is:

1. An attachment for sewing machines, comprising a lubricant holder adapted to be arranged in the path of the needle, and means for connecting the said holder to the needle bar for moving said holder in lines longitudinal of the path of the needle.

2. An attachment for sewing machines, comprising a lubricant holder adapted to be arranged in the path of the needle, and having a through aperture for the needle, means for pivotally supporting said holder, and means for connecting said holder with the needle bar whereby said holder is oscillated by the needle bar.

3. An attachment for sewing machines, comprising a lubricant holder adapted to be arranged in the path of the needle and having a through aperture for the needle, means for pivotally supporting said holder upon the presser bar, and means for connecting said holder with the needle bar.

4. A sewing machine comprising a needle, a needle bar, and a presser bar, in combination with a lubricant holder having an end located below the needle bar and arranged to supply lubricant to the needle, means for movably supporting said holder, and motion-reducing means connected to the holder and to the needle bar, by which the holder is moved with the needle toward and from the work but through a shorter path of movement.

5. A sewing machine comprising a needle, a needle bar, and a presser bar, in combination with a lubricant holder having an end located below the needle bar and arranged to supply lubricant to the needle, a support connected to the machine, a pivot for pivotally connecting said holder to the support, and an operative connection between the holder and the needle bar by which said end of the holder is caused to move in approximate parallelism with the needle.

6. A sewing machine comprising a needle, a needle bar, and a presser bar, in combination with a lubricant holder having an end located below the needle bar and arranged to supply lubricant to the needle, a support connected to the presser bar, a pivot member connecting the holder to the support, and an

operating lever connected to the needle bar and holder to cause the said end of the holder to reciprocate in approximate parallelism with the needle.

7. A sewing machine comprising a needle, a needle bar, and a presser bar, in combination with a lubricant holder having an end located below the needle bar and arranged to supply lubricant to the needle, a support connected to the presser bar, a pivot member connecting the holder to the support, an operating lever pivoted to said support, a pivot connecting the lever to the needle bar, and a link connecting the lever and the holder.

8. A sewing machine comprising the combination with the stitch-forming mechanism and the presser-foot mechanism, of a lubricant holder pivotally supported by the presser-foot mechanism and movably actuated by the stitch-forming mechanism, said lubricant holder having a portion which supplies lubricant to the needle and which is movable in a path approximately parallel to the path of the needle.

9. An attachment for sewing machines, comprising a lubricant reservoir, a valve controlling the delivery of lubricant therefrom, a lubricant holder for lubricating the needle, and an operative connection between said valve and the needle bar of the machine.

10. An attachment for sewing machines, comprising a lubricant reservoir, a valve controlling the delivery of lubricant therefrom, a lubricant holder for lubricating the needle, a lever for actuating the valve, and means connecting the lever with the needle bar.

11. A sewing machine comprising a feed plate, a needle and a needle bar, in combination with a lubricant holder, arranged in the path of the needle between the feed plate and the needle bar, and mechanism operatively connected to the needle bar for moving said holder up and down with the needle but through a shorter range of movement than the needle.

12. A sewing machine comprising a feed plate, a needle and a needle bar, in combination with a lubricant holder, arranged in the path of the needle between the feed plate and the needle bar, mechanism operatively connected to the needle bar for moving said holder up and down with the needle but through a shorter range of movement than the needle, and means supported by the presser-foot mechanism for movably supporting said holder.

In testimony whereof I have affixed my signature.

WILLIAM H. BAYNARD