(No Model.)

J. E. OLIVER.

WORK GUIDING DEVICE FOR SEWING MACHINES.

No. 518,623. Patented Apr. 24, 1894.

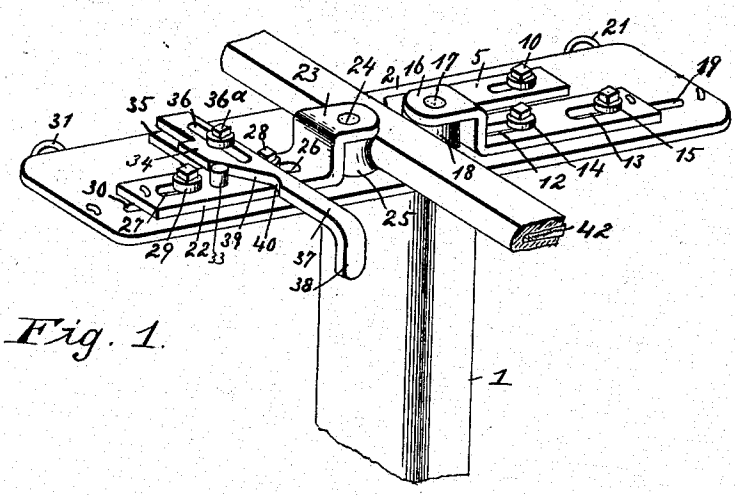

Fig. 1.

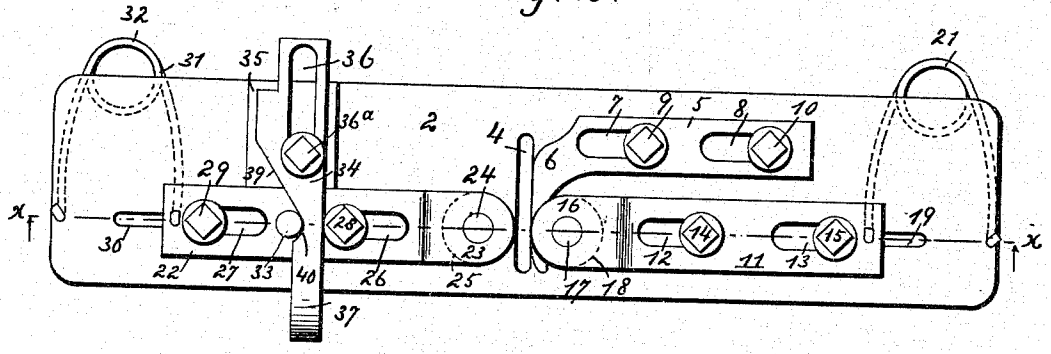

Fig. 2.

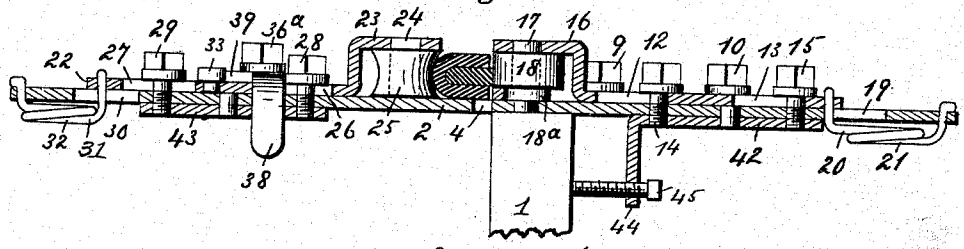

Fig. 3.

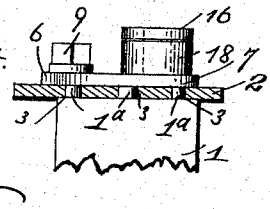

Fig. 4.

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JAMES E. OLIVER, OF KANSAS CITY, MISSOURI.

WORK-GUIDING DEVICE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 518,623, dated April 24, 1894.

Application filed July 13, 1893. Serial No. 480,436. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. OLIVER, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Work-Guiding Attachments for Sewing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in rein-guiding attachments for sewing machines, and has for its object to provide an attachment of this character which is quickly and easily attached to the prominent wax thread sewing machines now in use, and wherein the operative mechanism is entirely out of the way of the operator, and also an attachment which is simple, strong, durable, inexpensive and not liable to get out of order.

With these objects in view, my invention consists in certain peculiar and novel features of construction and combination of parts as will be hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1, is a perspective view of the attachment, and showing therein in operative position a round rein and its filling, and also showing said attachment mounted in operative position upon the standard or post of the sewing machine. Fig. 2, is a plan view of the same with the rein and filling therefor removed. Fig. 3, is a vertical longitudinal sectional view taken on the line *x*—*x* of Fig. 2, and showing the locking lever in elevation. Fig. 4, is a detail sectional view to show the means of securing the attachment upon the standard or post of the sewing machine.

Referring now to the drawings, 1 designates the standard or post of a wax thread sewing machine of the usual construction and removably mounted and arranged horizontally upon the upper end of said standard or post is the plate or table 2 of my attachment; this plate being formed with a series of vertical apertures or holes 3 which fit snugly upon pins or lugs 1^a projecting vertically from the upper end of the standard or post 1. Extending transversely of said plate and coincident with the outer vertical side of the standard or post 1 is a slot 4, through which the needle knife and awl of the sewing machine (not shown) are adapted to vertically operate in the usual manner.

Arranged longitudinally upon the upper side of the plate at the rear or outer end of the slot 4 is a plate 5, and this plate is formed at its forward or inner end with a transversely extending guard-arm 6, one edge of this arm 6 registering vertically with the adjacent margin of the slot 4. In order to adjust this plate longitudinally toward or from said slot a pair of longitudinally aligned slots 7 and 8 are formed through the body-portion of the plate 5, and vertical screw bolts 9 and 10 are passed therethrough and enter the plate or table 2. By means of these screw bolts 9 the guard-plate 5 may be held at any desired point of adjustment relative to the slots 4, so that round reins or lines of different sizes may be formed, the arm or extension 6 of said plate being adapted to limit the outward movement of a presser roller against which said rein or line is adapted to be formed, as will be hereinafter referred to.

Arranged parallel with the body portion of the plate 5 and forward of the same is the plate 11, and this plate is formed with a pair of longitudinally extending and aligned slots 12 and 13 which are engaged by clamping bolts 14 and 15 respectively; said clamping bolts passing vertically through said slots and into the plate or table 2. The inner end of this plate is bent upwardly and then horizontally at 16, and depending vertically from said horizontal portion 16 is a stub-shaft 17; said shaft 17 being secured thereto as shown, or formed integral therewith if desired. Mounted loosely upon this stub-shaft 17 is a roller 18, the lower margin of which rests upon the upper side of the arm or extension 6 of the plate 5, and the inner side of said roller is adapted to be vertically aligned with the adjacent margin of the slot 4. This roller is also formed at its under side with the reduced cylindrical hub or portion 18^a which rests upon the upper side of the plate or table 2 and at the inner side of the extension or arm 6 of the guard-plate 5. A longitudinal slot 19 is formed in the table or plate 2

at the outer end of the plate 11, and passing vertically upward through said slot and through an aperture or hole at the rear end of the plate 11 is one end of a presser spring 20, this spring to give strength preferably having a coil 21 near its middle and having its opposite end engaging a hole or aperture in the outer end of the plate or table 2. This spring is arranged so that it shall lie horizontally against the under side of the table or plate 2, and the tendency of this spring is also to hold the roller 18 so that it shall be in the same vertical plane with the adjacent side margin of the slot 4 as shown, the length of the slot 19 limiting the outward movement of said plate carrying the roller 18.

Arranged longitudinally and in alignment with the plate 11 upon the opposite side of the slot 4 is a similar plate 22, and this plate 22 is also bent upwardly near its inner end and then extended horizontally at 23, and is provided with a depending stub shaft 24 from said portion 23. Revolubly mounted upon this stub shaft and bearing at its upper and lower ends against the under side of this portion 23 and the upper side of the plate or table 2 is a grooved or concave roller 25, the object of which will be hereinafter referred to. This plate 22 is also formed with pair of longitudinally extending and aligned slots 26 and 27, and these slots are guided upon clamping bolts 28 and 29 respectively, which are screwed into the plate or table 2. A slot 30 formed longitudinally through the plate 2 adjacent to the outer end of plate 22 has one end of a spring 31 pressed upwardly therethrough to engage a vertical hole or aperture in the outer end of the plate 22. To strengthen this spring it is preferably coiled as at 32 at its middle portion, and its opposite end is secured in a hole formed in the outer end of the plate 22 adjacent to the slot 30. It will thus be seen that the tendency of this spring 31 is to force the plate 22 in the direction of or toward the plate 11, and it will be seen that this movement of the plate 22 is limited by the length of the slot 30.

Projecting upwardly from the plate 22 adjacent to the inner end of the slot 27 is a cylindrical pin or stub 33. A locking lever 34 arranged transversely of the plate or table 2, rests upon a plate 35 which may be secured to the upper side of the plate or table 2 or formed integral therewith if desired. This transversely arranged locking lever is formed with a longitudinally extending slot 36 in its body-portion which is guided upon a vertical bolt 36^a which is screwed downward into the plate or table 2, and is adapted to limit the movement of the locking lever, as hereinafter referred to.

Extending forwardly from the front end of the body-portion is an arm 37 which projects beyond the forward edge or margin of the plate or table 2, and is then bent vertically downward as at 38 to form a finger-hold or handle, as hereinafter referred to. This extension 37 is of considerable less width than the body-portion of the locking lever and one side of said body-portion is tapered or inclined for a suitable distance from its rear end to form a cam face 39; this cam face 39 beginning preferably adjacent to the front end of the slot 36 and connecting at its front end with a recess 40 formed in the side of the arm 37 at its junction with the front end of the body-portion. This cam face 39 is adapted when the finger-hold or handle is grasped and the locking-lever pulled outwardly to travel upon the inner side of the cylindrical stub 33 and force the spring-actuated plate 22 outwardly, so that the roller 25 thereof shall be moved away from the slot 4. When the locking lever is pulled outward sufficiently to allow the opposite and parallel sides of its body-portion in rear of the end of the cam face 39 to bear against the stud 33 and bolt 28, the plate 22 will be held to its withdrawn position, and the round rein consisting principally of a strap of suitable width and bent to approximately U-form as shown in the drawings is placed upon the table or plate so that its bent or rounded portion shall be adjacent to the grooved roller 25 and its side portion shall be arranged horizontally with their margins arranged toward the roller 18. The strap or filling 42 being inserted between the side portions of the bent strap as shown more clearly in Fig. 3 is of suitable width to project slightly beyond the marginal edges of said side portions. The forwardly projecting handle portion of the locking lever is now pushed quickly inward, allowing the spring 31 to force the plate 22 so that the roller 25 shall bear against the rounded portion of the bent strap, and the cam face 39 of the locking lever shall be in engagement with the cylindrical stud 23 of the said plate.

The sewing machine is now operated in the usual manner to sew its bent strap and the filling together, the said strap being fed transversely of the plate in the usual manner. It will now be seen that should the strap or filling 42 be narrower in some places than others the continuous pressure of the spring actuated roller 25 will cause these narrow portions of the strap to be forced tightly between the horizontal portions of the bent strap as well as the wider portion of said filling, so that when the sewing is completed the rein or line shall be substantial and solid. After the rein or line is completed the projecting edge of the filling or strap 42 is trimmed as is also the margins of the horizontal portion of the bent strap in the usual manner. This attachment is entirely independent of the operative mechanism of the sewing machine, and is designed simply to hold the straps in their proper relation to each other while being sewed together; and as an attachment, is adapted to be secured to the standards or posts of the sewing machine without altering or tampering with the operative mechanism of the sewing machine at all. To afford a

more extended bearing for the screw bolts 14—15 and 28—29 additional plates 42 and 43 are secured respectively to the under side of the plate or table 2, for the reception of the threaded ends of said bolts, or these plates if desired may be formed as enlargements or integral portions at the under side of the plate or table 2. The plate or enlargement 42 is preferably formed at its inner end with the vertically depending arm 44, through which a screw bolt 45 is passed to bear against the adjacent side of the standard or post 1 to afford an additional brace or support for the table or plate 2. By forming the adjustable roller 25 concave as shown it resists any tendency toward upward movement of the straps being sewed, and therefore allows the attendant or operator free to apply his attention to the sewing of the strap only; obviating the necessity also of holding the straps down to their work upon the plate or table.

From the above description it will be seen that I have produced an attachment which may be easily and quickly applied to wax thread sewing machines now in use, and which is simple, strong, durable and inexpensive of construction.

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

1. An attachment for wax thread sewing machines, comprising a horizontal plate or table detachably mounted upon the post or standard of the machine, a plate carrying a roller at its forward end and slotted longitudinally and guide bolts passing through said slots and engaging the table or plate, and a spring secured to the under side of said plate and bearing against the rear end of said sliding plate, and a second slide plate also having slots, and bolts carried by the table and engaging said slots, and a spring secured to the under side of said table and bearing against the outer end of said sliding plate, and a grooved roller carried at the inner end of said plate, and a stud projecting upwardly from said sliding plate, and a locking lever arranged transversely of said sliding plate and having a slot therein, and a bolt carried by the table and engaging said slot, and a handle portion at its front end, and a cam face adapted to bear and operate against the stud of said plate, and terminating in a recess at its forward end, substantially as set forth.

2. An attachment for wax thread sewing machines, comprising a plate or table mounted upon the post or standard thereof and slotted transversely, and a guard-plate having an arm arranged at the side margin of said side slot and having longitudinally extending slots, and bolts engaging said slots and passing into the plate or table, in combination with a sliding plate carrying a roller on its forward end resting upon the arm of said guard plate, and a spring-actuated grooved roller carrying plate adjustable toward said slot, and means to lock said spring-actuated carrying plate at any desired position, substantially as set forth.

3. In a work-guiding attachment for sewing machines, the combination with a bed-plate slotted transversely, a guard-plate mounted upon the bed-plate and having an extension arm arranged coincident with the adjacent side margin of the bed-plate slot, and a plate mounted upon the bed-plate, a roller carried by said plate and arranged above the extension or arm, and also reduced to bear against the outer margin of the said arm or extension, of a spring-actuated plate mounted upon the bed-plate at the opposite end of the slot and having a pin or stud, a grooved roller carried by the said plate at its inner end, a slide-lever resting upon and arranged transversely of the said plate, and provided with a cam or inclined face to operate against the pin or stud of the said plate, and also provided with a handle-portion, and a guide projecting from the bed-plate and engaging the said lever, substantially as set forth.

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

JAMES E. OLIVER.

Witnesses:
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