G. F. LICK.

EMBROIDERING ATTACHMENT FOR SEWING MACHINES.

APPLICATION FILED SEPT. 18, 1908.

906,903. Patented Dec. 15, 1908

Fig. 1.

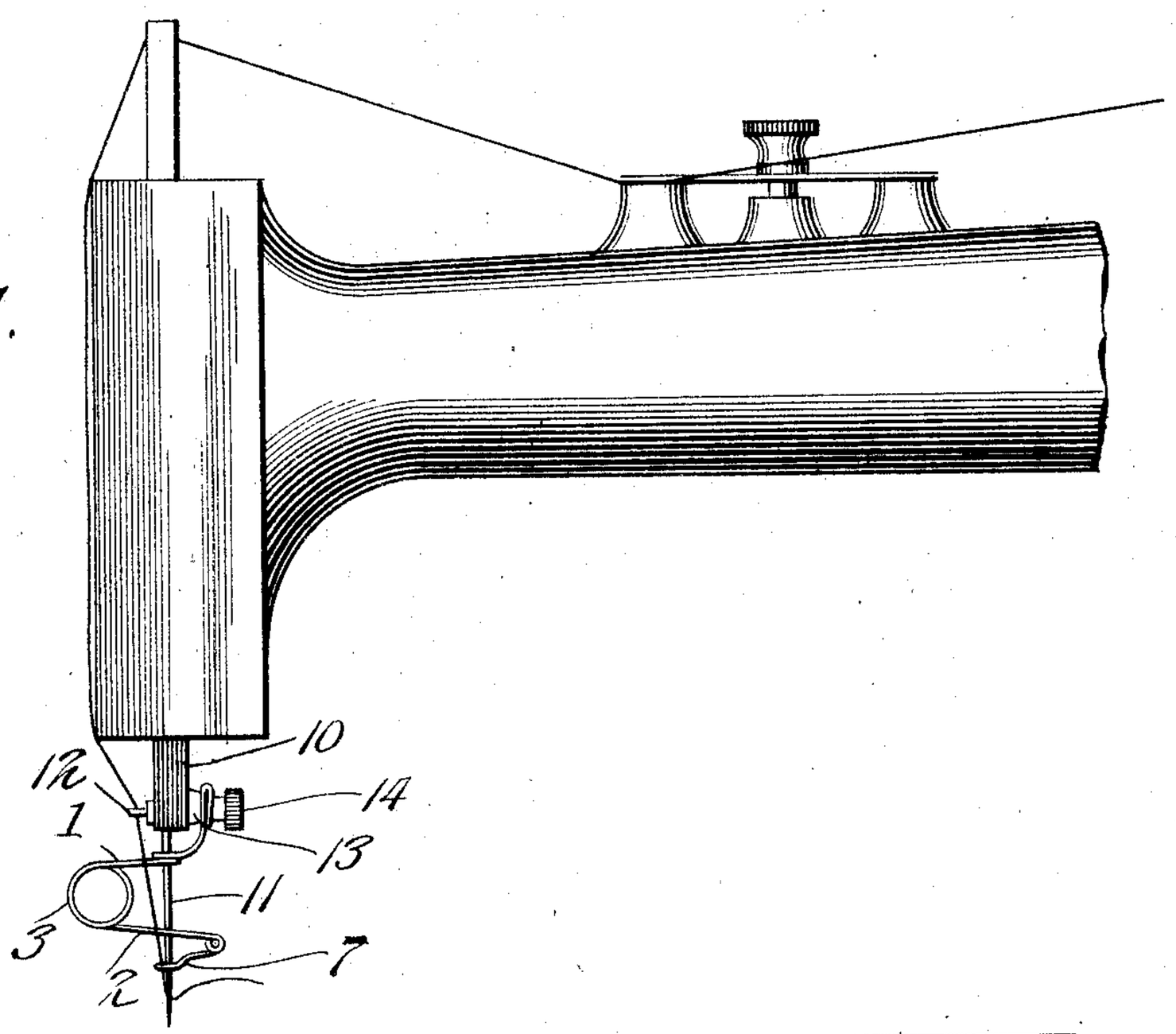
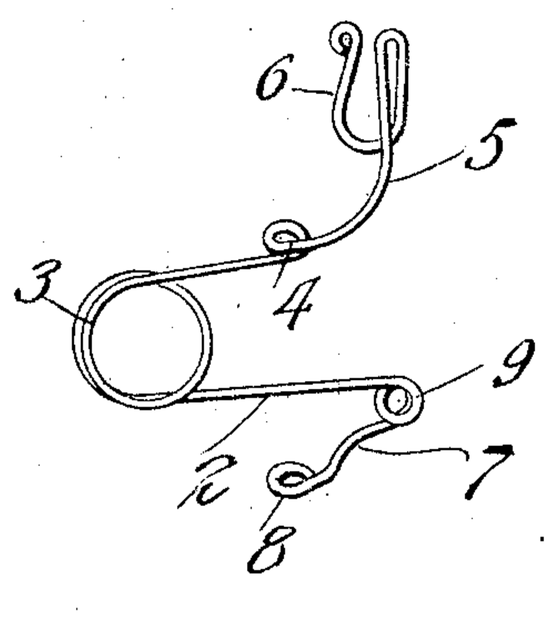


Fig. 2.



Witnesses

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EMBROIDERING ATTACHMENT FOR SEWING-MACHINES.

No. 906,903. Specification of Letters Patent. Patented Dec. 15, 1908.

Application filed September 18, 1908. Serial No. 453,614.

To all whom it may concern:

Be it known that I, GEORGE FRANKLIN LICK, a citizen of the United States, residing at Hartford, in the county of Sebastian and State of Arkansas, have invented new and useful Improvements in Embroidering Attachments for Sewing-Machines, of which the following is a specification.

This invention relates to an embroidering attachment for sewing machines adapted to be applied to the needle-bar of the machine in lieu of the ordinary presser-foot for executing various kinds of embroidery or fancy work.

The object of the invention is to provide a simple and inexpensive device of this character which may be conveniently applied and removed, which is efficient in use, which will operate without obscuring the design or pattern, and in which the parts are combined and arranged in such manner as to reduce the number of parts and to secure maximum simplicity of construction.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawing, in which:—

Figure 1 is a front elevation of a portion of a sewing machine head showing the application of the invention. Fig. 2 is a perspective view of the attachment.

The embroidery attachment embodying my invention is preferably formed of a single piece of spring wire. It comprises a body portion of substantially U-form and composed of upper and lower substantially horizontal arms 1 and 2 connected at one end by a main spring coil 3, which coil operates to exert upward pressure on the arm 1 and downward pressure on the arm 2. The inner end of the arm 1, which is relatively shorter than the arm 2, terminates on a line slightly inward of the center of the arm 2 and is bent to form an upper guide loop 4, the wire being extended on an upward curvature from said loop to provide an attaching shank 5. One of the ends of the wire constitutes a continuation of the shank and is bent downwardly and upwardly to form a U-shaped spring clasp 6 having its receiving end uppermost, as clearly shown in Fig. 2. The lower arm 2 of the attachment has its free end terminating inwardly beyond the plane of the clasp and bent downwardly at an angle to form an extension 7 serving as a presser foot, said extension being provided at its lower or free end with an eye or loop 8 to rest upon the fabric and to serve as a guide for the needle. At the angle of intersection of the arm 2 and extension 7 the wire is bent to form an auxiliary spring coil 9, whereby the presser foot is rendered freely resilient independent of the resiliency of the coil 3.

The device is shown in Fig. 1 as applied in practice for use upon a sewing machine of ordinary construction, which machine is provided with the usual vertically reciprocating needle-bar 10 provided at its lower end with a socket to receive the upper end of the needle and having at one side a thread guide 12 and at its opposite side an internally threaded boss 13 in which operates a thumb-screw 14 for clamping the needle in said socket.

In applying the device, the needle-bar is elevated to raise the needle its full extent above the surface of the work table and the ordinary presser foot is removed and the attachment applied by slipping the same onto the needle from the free end of the latter, so that the needle will pass through the guides 4 and 8, and so that the attachment will lie transversely of the line of feed of the fabric. The device is then slipped upward to its operative position in which the clasp 6 is forced in engagement with the boss 13 or shank of the thumb-screw 14, after which the thread is passed downward through the guide 12, loop 8 and eye of the needle.

In the operation of the device for executing embroidery or fancy work the loop or eye 8 of the presser foot bears lightly and easily on the fabric, its pressure force being sufficient to hold the fabric in position while the needle is in action but light enough to permit the fabric being shifted in any direction to properly work the design which is being embroidered.

It will be understood that the device is held in position in a secure manner against displacement by the frictional clamping grip of the clasp 6, which is held from any possibility of displacement under the vibration of the machine by the upward pressure of the main spring 3 on the arm 1, and that the downward pressure of said spring on the arm 2 serves to hold the presser foot in engagement with the fabric with a determined degree of force. By this means any possibility of the fabric slipping while the shuttle per-

forms its function in making the stitch is prevented, while at the same time the presser foot is permitted to have a limited yielding independent motion to compensate for any irregularities in the thickness or surface of the fabric and avoid possible injury to the stitching during the shifting of the fabric.

By the construction described, it will be apparent that the device is held in position by the combined grip of the clasp 6 and the upward pressure of the arm 1, and that the arrangement of the parts for securing this result is simple and avoids the necessity of using a complexity of members, as would be necessary in employing an attaching member hooked to engage over the top of the boss or thumb-screw. It will also be apparent that the double spring action of the coils 3 and 9 in holding the presser foot to its work and permitting of a limited resilient motion thereof is productive of substantial advantages in preventing shifting of the fabric in operation and possible injury to the work when the fabric is shifted by the operator. The construction described also adapts the device to be easily and conveniently applied and removed without the necessity of detaching or adjusting the thumb-screw 14.

Having thus fully described the invention, what is claimed as new is:—

1. A sewing machine attachment of the character described comprising a single piece of spring metal embodying upper and lower substantially horizontal arms, a main spring coil connecting the arms at one end, a guide loop upon the upper arm, an attaching device extending upward from said upper arm, an extension from the lower arm forming a presser foot having a guide loop at its free end, and a spring coil connecting said presser foot with said lower arm and adapted to permit yielding movement of the presser foot independent of said arm.

2. A sewing machine attachment of the character described, comprising a single piece of spring metal embodying upper and lower substantially horizontal arms, a main spring coil connecting the arms at one end, a guide loop upon the upper arm, a shank extending upwardly from the free end of the upper arm and provided at its free end with a vertically disposed laterally extending U-shaped clasp having the entrance to its receiving space at the upper end thereof, an extension from the lower arm forming a presser foot having a guide loop at its free end, and a spring coil connecting said presser foot with said lower arm and adapted to permit yielding movement of the presser foot independent of said arm.

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

GEORGE F. LICK.

Witnesses:
M. R. PARKS,
W. H. HEARN.