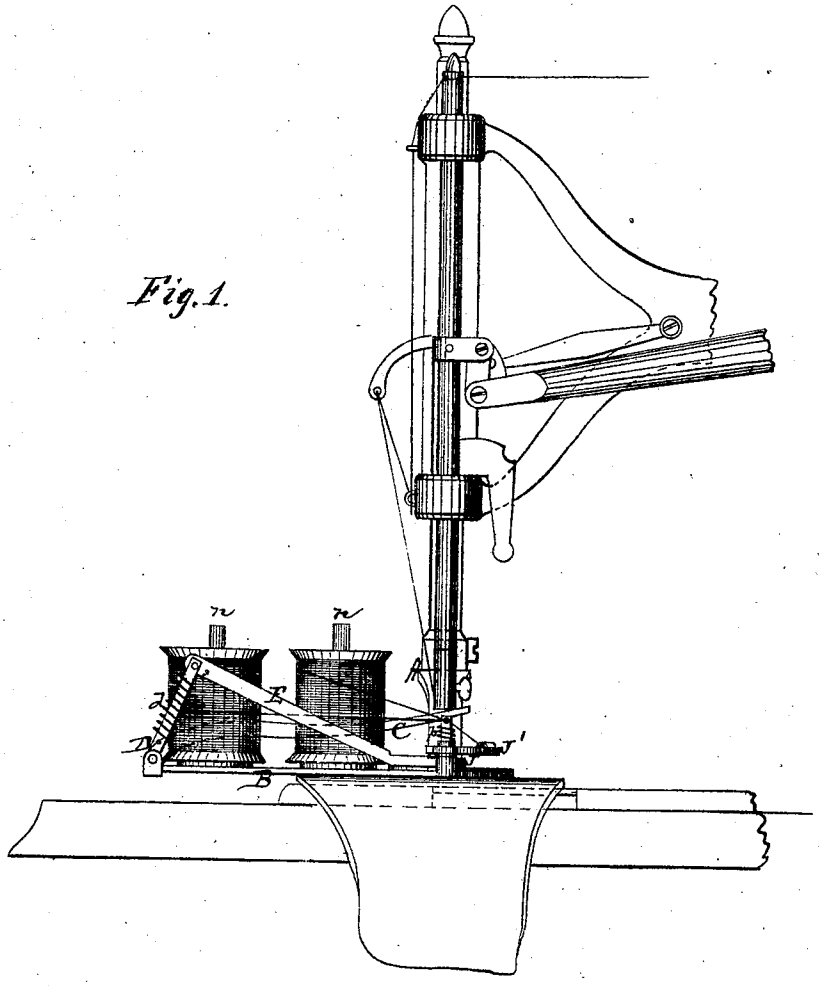
2 Sheets--Sheet 1.

WILLIAM CARPENTER.

Improvement in Embroidering Attachment for Sewing Machines.

No. 121,332. Patented Nov. 28, 1871.

Fig. 1.



Witnesses:

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2 Sheets--Sheet 2.

WILLIAM CARPENTER.

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Fig. 2.

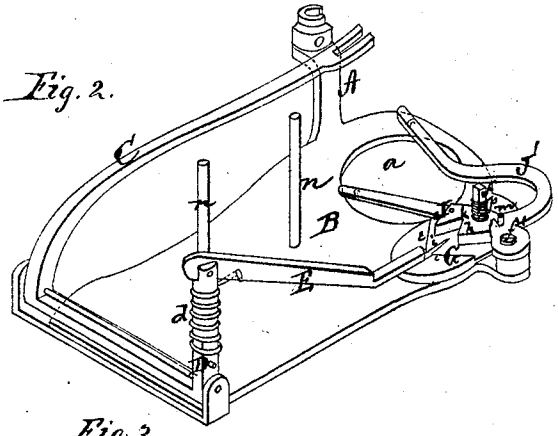
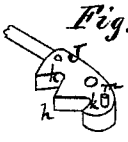


Fig. 3.

Fig. 4.

Fig. 5



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UNITED STATES PATENT OFFICE.

WILLIAM CARPENTER, OF LAWRENCE, KANSAS, ASSIGNOR TO HIMSELF AND SAMUEL POOLE, OF SAME PLACE.

IMPROVEMENT IN EMBROIDERING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 121,332, dated November 28, 1871.

To all whom it may concern:

Be it known that I, WILLIAM CARPENTER, of Lawrence, in the county of Douglas and in the State of Kansas, have invented certain new and useful Improvements in Embroidering Attachments for Sewing-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of an embroidering attachment for sewing-machines, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a front view of a part of a sewing-machine with my embroidering attachment in position thereon. Fig. 2 is a perspective view of my attachment. Figs. 3, 4, and 5 are detached views of certain parts of my attachment.

A represents the presser-foot, made to fit the machine, upon which the embroidering attachment is to be used. At the lower end of this presser-foot is attached a metallic plate, B, which extends a suitable distance in front and to the left of the presser-foot, and is provided with an aperture, *a*, of sufficient size not only to allow the needle to pass down, but also to allow the operator to see the work for a short distance in front of the needle. The presser-foot A and plate B may be made in one piece, if so desired, the plate in fact forming a part of the presser-foot. At the outer end of the plate B is pivoted a lever, C, the inner end of which is forked, as shown in Fig. 2, and is placed under the needle-bar of the sewing-machine, with one tang on each side of the needle. The pivoted end of the lever C is bent substantially as shown, and is provided with an upright post or arm, D, in the upper end of which is pivoted an angular or bent lever, E. This lever is, at its inner end, provided with a headed pin, *b*, on the under side. Around the arm D is coiled a spring, *d*, one end of which is attached to said arm and the other end to the lever E.

The machine being in motion, it will be seen that at the downward stroke of the needle-bar the inner end of the lever C is moved downward causing the arm D and lever E both to be moved inward, and the spring *d* during this movement contracts, as the end thereof, which is attached to the lever E, becomes drawn further away from the arm D. When the needle-bar moves upward again the spring *d*, expanding, causes the lever C to follow said bar, and draws the arm D and lever E back into position again. This spring also, at all times, holds the inner end of the lever E down on the plate.

On the plate B, in front of the aperture *a*, is attached another plate, G, provided with shoulders *e e*, which are inclined toward each other, and a central groove, *i*, is also formed in the plate. This groove is deepest at or behind the angle formed by the two shoulders *e e*, and gradually rises to the surface, as shown in Fig. 4. On the plate B, near the front edge and about on a line with the needle, are pivoted two arms, J J′, by bolts or screws *f f′*, as shown. The arm J has on the side toward the lever E a **V**-shaped projection, *h*, with suitable abutments, shoulders, or rests *k k* on each side, as shown in Fig. 5. The arms J J′ extend rearward toward the needle; and upon the front end of the arm J is a pin, *m*, projecting upward through a notch or slot in the arm J′. The spools for the silk are placed upon rods *n n*, and the threads passed through holes or tubes in the rear ends of the arms J J′.

As the lever E advances by the motion above described its inner end strikes on one side of the projection *h* till it comes against the abutment *k* on that side, when it turns the arm J, and the pin *m* at the same time turns the arm J′ in the opposite direction, crossing the threads in front of the needle. As the lever E draws back the arms J J′ remain in their position; but as it advances again it strikes the other side of the projection *h*, causing the arms to cross each other, or, rather, to cross the threads in opposite directions to the first movement. At the backward movement of the lever E the pin *b* on the same strikes one of the shoulders *e*, guiding it into the groove *i*, which groove in turn guides its forward movement, so that it will act on the projection *h* just as desired.

The arm J is held down by a spring, *p*, around the bolt *f*, which spring has enough tension to retain both arms in the position given them at each forward movement of the lever E.

Having thus fully described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the lever E operated by a suitable mechanism from the needle-bar, the stationary notched and grooved plate G, the pivoted and notched plates J and J′ which carry the embroidery threads, when constructed, arranged, and operating substantially as herein set forth.

2. The combination of the plate B with the angular lever C, vertical arm D, spring *d*, lever E, stationary notched and grooved plate G, and a pivoted and notched plate, to which is connected movable arms which alternately act and feed the thread to the cloth, all connected to the extremity of the presser-foot bar and operated substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of September, 1871.

WILLIAM CARPENTER.

Witnesses:
EDM. F. BROWN,
HARRY C. SCOTT. (134)