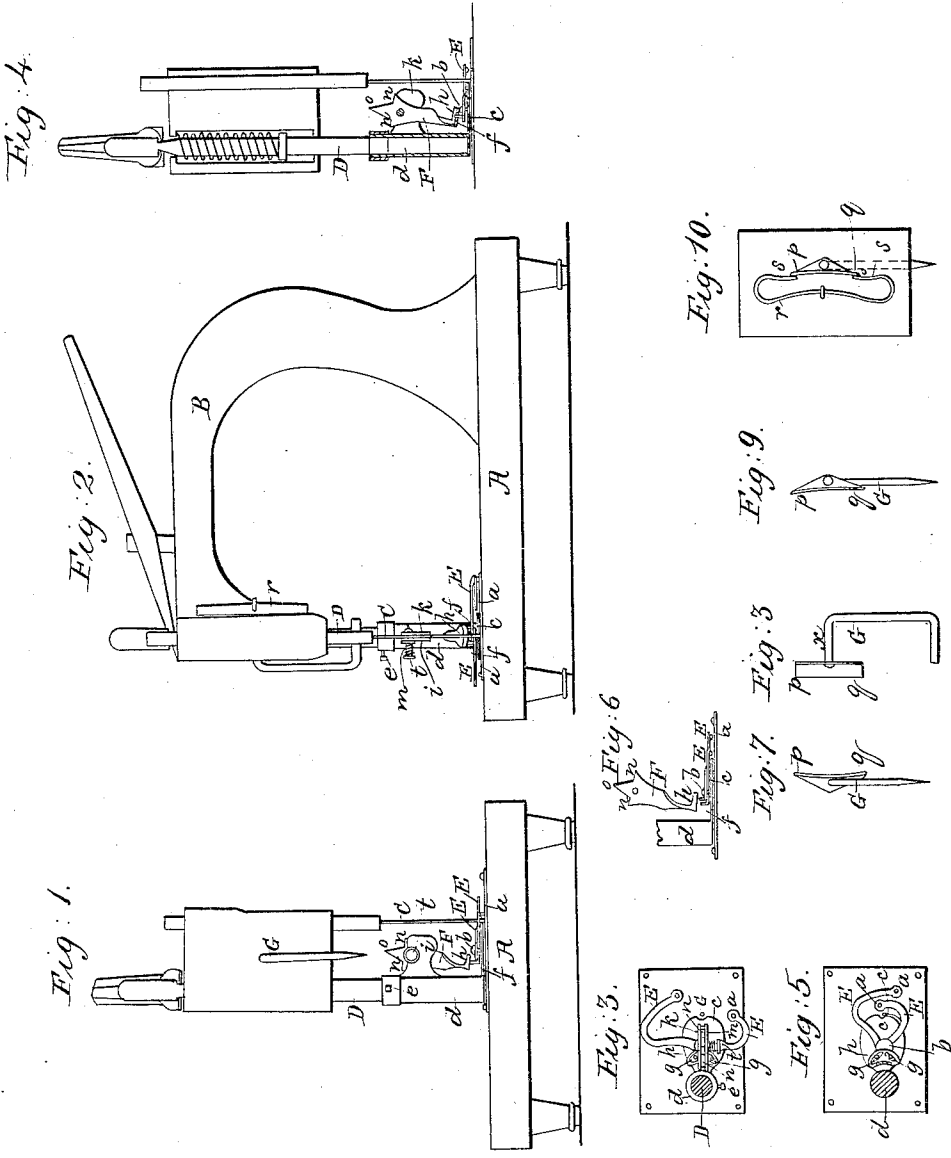


M. W. STEVENS.

Embroidering Attachment for Sewing Machines.

No. 51,239.

Patented Nov. 28, 1865.



Witnesses.

Wm. P. Hall
& G. Washburn

Inventor

Martin W. Stevens
 By his Attorney,
J. C. & Co. Wash.

UNITED STATES PATENT OFFICE.

MARTIN W. STEVENS, OF STOUGHTON, MASSACHUSETTS.

IMPROVEMENT IN EMBROIDERING ATTACHMENT FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 51,239, dated November 28, 1865.

To all whom it may concern:

Be it known that I, MARTIN W. STEVENS, of Stoughton, in the county of Norfolk and State of Massachusetts, have invented an Improved Embroidering Apparatus for Sewing-Machines; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, and Fig. 2 a side view, of the said apparatus as applied to the presser of a sewing-machine. Fig. 3 is a top view, and Fig. 4 is a vertical section, of that part of the apparatus which is connected with the presser-rod or slide. Fig. 5 is a separate top view of the arms and the foot of their actuator.

In the said drawings, A denotes the base-plate, and B the goose-neck, and C the needle, of a sewing-machine.

D is the slide-rod of the presser. Such slide-rod and needle are to be supposed to have the usual vertical movements imparted to them, or, in other words, to be provided with actuating mechanism such as is commonly employed in sewing-machines for effecting such movements.

E E are two curved arms, formed with eyes *a a* in their outer ends. These arms turn on a common center pin, *b*, extending from the upper side of the presser-foot *c*, such foot being projected from a tube or socket-piece, *d*, which receives, encompasses, and fits to the presser-rod D, and is fastened thereto by a set-screw, *e*.

A small stud, *f*, projects up from the head or rear part of each of the arms and enters one of the cam-holes *g g* arranged in the foot *h* of a lever or actuator, E, (a side view of which is given in Fig. 6,) in manner as shown in Fig. 5. The said actuator is placed between two plates, *i k*, projecting from the socket-piece *d*, and is supported by a pin or fulcrum-screw, *t*, which goes through one plate, screws into the other, and has a helical spring, *m*, arranged between its head and the next adjacent plate, the whole being as shown in the drawings. The upper part or shorter arm of the actuator is formed with two tripping-shoulders, *n n*, and an angular projection, *o*, extending upward between them.

Over the actuator, and supported by the goose-neck, is what I term the "vibrator," G,

which is formed in front, side, and rear elevations in manner as represented in Figs. 7, 8, and 9. Fig. 10 is a rear view of the head of the goose-neck, and exhibits the arms of the vibrator and their arrangement with respect to their operative spring. The said vibrator has a journal, *x*, which goes through and takes a bearing in the goose-neck, and has two arms, *p q*, projecting in opposite directions from its rear end, these arms being placed against the free ends of a spring, *r*, formed and being supported at its middle in manner as shown in Fig. 10. The two elastic portions of the spring bring up against stop-pins *s s*, arranged as represented.

During the upward vertical movements of the presser-rod the vibrator will be enabled to act alternately against the shoulders *n n*—that is, first against one and next against the other of them—and by so doing will vibrate the lever or actuator F on its fulcrum in a manner to cause the arms E E to be first moved apart from and next moved toward each other, their eyes *a a* passing by and beyond one another and during each of such movements.

Either one or each of the holding-plates *i k* should be elastic, so as to be capable of being sprung against the actuator F by the action of the screw *t* against the spring *m*. By such means a friction may be produced on the actuator sufficient to preserve the arms E E in either of their extreme positions while they should be at rest.

Threads of yarn or cord from separate spools are to be run through the eyes *a a* of the arms E E, and from thence are to be carried on one another and against the needle. During the operation of the sewing-machine these threads will be crossed on one another prior to each descent of the needle, and therefore the line of sewing will fasten the threads to the article in which the sewing may be formed.

I do not claim the application of two eye-carrying arms to a sewing-machine in manner and so as to operate as explained in Letters Patent No. 31,864, dated April 2, 1861, and granted to Amos H. Boyd, as with my invention or improvement the arms are applied directly to the foot of the presser, and so as to move and be moved vertically therewith.

I claim—

1. The combination of mechanism for oper-

ating the embroidering yarn carriers or arms E E, the same consisting of the studs *ff*, the actuator F, and the vibrator G, with its arms *p q*, and spring *r*, and stop-pins *s s*, the whole being substantially as specified.

2. The combination of the screw *t*, and spring *m*, and the holding-plates *i k*, and the actuator F, applied to the presser and the arms E E, substantially as specified.

3. The combination of the socket-piece *d* or its equivalent, with the presser-foot and the arms E E applied thereto, as described.

MARTIN W. STEVENS.

Witnesses:

M. H. BALLOU,

S. CLAPP.