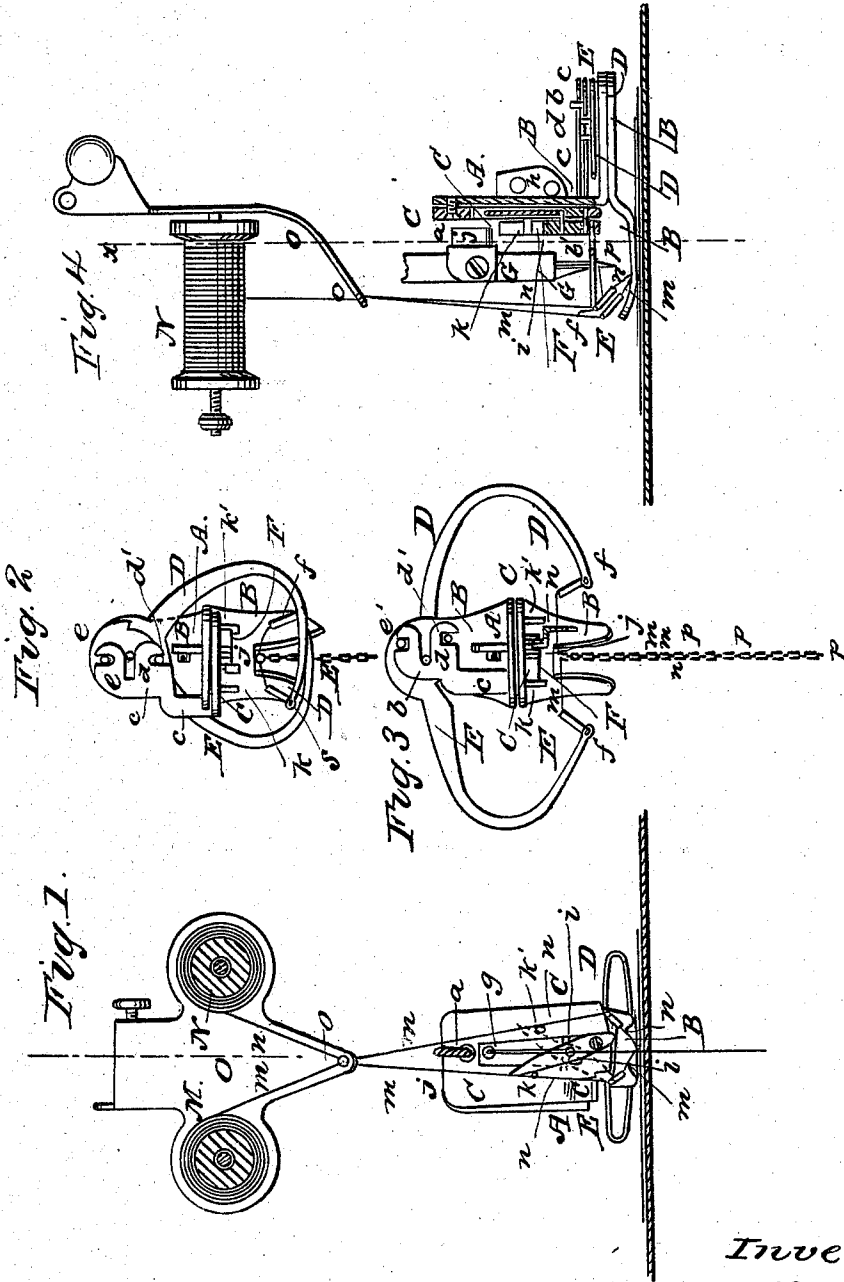


W. CARPENTER.

Embroidering Attachment for Sewing Machines.

No. 87,633.

Patented March 9, 1869.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

WILLIAM CARPENTER, OF FAIRBURY, ILLINOIS.

## IMPROVEMENT IN EMBROIDERING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 87,633, dated March 9, 1869.

*To all whom it may concern:*

Be it known that I, WILLIAM CARPENTER, of Fairbury, in the county of Livingston and State of Illinois, have invented a new and Improved Embroidering Attachment to Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a front elevation of my improved embroidering attachment. Figs. 2 and 3 are plan or top views of the same. Fig. 4 is a side elevation, partly in section, of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new apparatus which is attached to the presser-foot of a sewing-machine, and which has the object to guide two threads and to cross them at each stroke of the needle in such position that they are caught and held firmly by the needle-thread. In this manner a beautiful embroidering-stitch can be produced by means of a very simple and effective attachment.

The invention consists chiefly in the use of two swinging arms that are pivoted to a plate which is attached to the presser-foot of any suitable sewing-machine, and in connecting these arms with an oscillating lever which is swung back and forth by a cam attached to the needle-bar. The detailed construction is hereinafter more fully described, the principle being to cause the swinging arms to cross the threads which they respectively guide, so that the needle-thread may hold them to the fabric wherever they cross each other.

A in the drawings represents a plate which is attached to the presser-foot of a suitable sewing-machine. It is in an upright position, and to its lower part is attached a horizontal plate, B, projecting from the back and front face of A. To the front of the plate A is pivoted, by means of a pin, *a*, a slotted plate, C, as shown.

To the rear part of the plate B are pivoted, by means of a pin, *b*, or by separate pins, two curved arms, D E, which fit around the plates A C, and with their front ends over the slotted front end of the plate B, as in Figs. 2 and 3.

From the rear of the pivoted plate C projects

an arm, *c*, which has two hooks, *d* and *e*, formed on it, that fit around pins *d'* *e'*, formed respectively on the bars D and E, at equal distances from, but on opposite sides of, the pivot *b*, as in Figs. 2 and 3. Thus if the plate C is oscillated on its pivot *a* it will cause the bars D E to swing on their pivot or pivots *b*, and to have their perforated front ends, *f* *f*, either drawn apart, as in Fig. 3, or brought behind each other, as in Fig. 2. A spring, *h*, is secured by a pin, *g*, at its upper end to the plate A, in line with the needle, and is at its lower end connected by a pin, *i*, to a pointed bar, F, said bar being near its lower end pivoted to a pin, *l*, projecting from the lower part of the plate C, as in Fig. 1. The spring *h* has a tendency to remain straight and to retain the pin *i* perpendicularly under the pin *g*.

To the needle-bar G, Fig. 4, is secured a pointed projection, *j*, which moves down in front of the pin *g*.

K K' are pins attached to the plate C for supporting the upper end of the bar F. When the lower end of the plate C is swung to the right, as in Fig. 1, the pressure of the spring *h* will throw the upper end of the bar F against the pin K, and by this movement of the plate the ends of the bars D E are drawn apart, as in Fig. 3. When the needle now comes down its projection *j* presses upon the inclined right-hand side of the bar F, and causes the lower end of the said bar and that of the plate C to swing over to the left, as shown by red lines in Fig. 1, causing the ends of D E to overlap, as in Fig. 2, and the upper end of F is brought against K'. When the needle moves up the bar F yields and allows the cam *j* to pass without disturbing the position of C; but when the needle next comes down it bears against the opposite end of the bar F, that now rests against the pin K, and causes the arms D E to be spread.

Two threads, *m* and *n*, are both drawn from spools M N through one common eye, *o*, in a plate, O, which plate serves also as a spool-carrier, and are then respectively drawn through the perforated eyes of the bars E D. As the ends of the bars D E are moved past each other, as aforesaid, the threads *n* and *m* will be crossed under the needle-thread *p*, so that they can be caught by the needle-thread whenever they are crossed, as in Fig. 3.

Having thus described my invention, what

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

1. The reciprocating cam *j*, the swinging bar *F*, and spring *h*, or its equivalent, in combination with the swinging plate *C*, which is moved by the bar *F*, as set forth.

2. The arrangement and combination, with each other, of the presser *A B*, swinging plate *C*, arm *c*, pivoted thread-guides *D E*, swinging

bar *F*, spring *h*, and sliding cam *j*, all made and operating substantially as and for the purpose herein shown and described.

The above specification of my invention signed by me this 24th day of April, 1868.

WILLIAM CARPENTER.

Witnesses:

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