C. H. PALMER.

**Embroidering Attachments for Sewing-Machines.**

No. 152,248. Patented June 23, 1874.

*Fig. 1.*

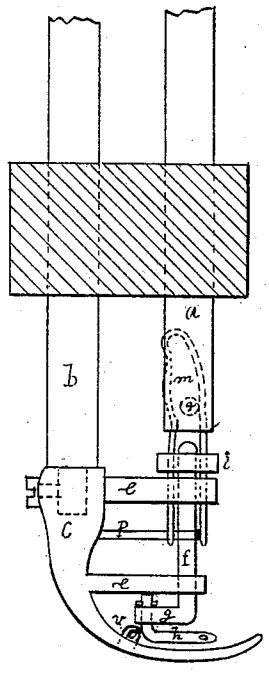



*Fig. 3.*

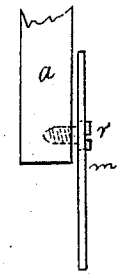
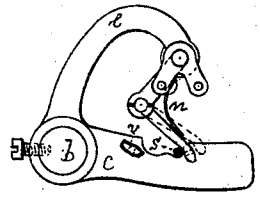



*Fig. 2.*




*Witnesses:*
Geo. H. Ramsay
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*Inventor.*
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# UNITED STATES PATENT OFFICE.

CHARLES H. PALMER, OF NEW YORK, N. Y.

## IMPROVEMENT IN EMBROIDERING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **152,248**, dated June 23, 1874; application filed May 14, 1874.

*To all whom it may concern:*

Be it known that I, CHARLES H. PALMER, of the city, county, and State of New York, have invented an Embroidering Apparatus, which is attached to, and operated with, sewing machinery, the object of which is to interlock a heavy embroidering-thread with the sewing-thread in such a manner as to show embroidery on the upper side of the fabric, of which the following is a specification:

Figure 1 represents a vertical view, seen from the front. Fig. 2 is a plan view. Fig. 3 is a side view of the needle-bar and cam.

Like letters refer to like parts.

*a* is the needle-bar of a sewing-machine. *b* is the foot-bar, with foot *c* attached; *e e*, horizontal bearings, projecting from *c; f*, vertical oscillating shaft, with horizontal arm or disk *g* on the lower end, to which the embroidering-needle *h* is hinged, and by which it is operated. *i* is a collar, affixed on top of the shaft *f*, and to which is attached the positive cam *m*, formed by a wire staple, twisted sufficiently to produce oscillation, in which the head of the set-screw *r* (which holds the sewing-needle in the needle-bar) works up and down with the needle-bar, and by which operation the oscillation of shaft *f* is effected. P is a friction-spring, impinging upon shaft *f*. Needle *h* is hinged in such a manner that when it is thrown forward toward the sewing-needle *s* (when the sewing-needle is up) it comes in front of the sewing-thread, and moves beyond the vertical line of motion of the sewing-needle *s*, carrying the sewing-thread with it, to enable the sewing-needle to descend between the embroidering-needle and the embroidering-thread it holds. The screw-head *r* within the cam *m* ascends about one-half its whole distance without producing any oscillation of shaft *f;* then shaft *f* is thrown to the right, and needle *h* is thereby thrown forward. But when the sewing-needle commences to descend, shaft *f* remains at rest for a moment, in order that the sewing-needle *g* may glide between needle *h* and its thread before needle *h* is thrown backward to the left, by which operation the embroidering-thread is interlocked with the sewing-thread on the upper surface of the fabric, thus producing an embroidered surface.

To enable the embroidering-needle to pass back while the sewing-needle is in the fabric, it is hinged in such a manner as to move (caused by impinging against the sewing-needle) upon the oscillating arm *g*, and is immediately extended again by the spring *n*. *v* is an eyelet, through which the slack is given out and taken up.

I claim—

The twisted spiral guide or cam *m*, in combination with vertical shaft *f*, horizontal arm *g*, and needle *h*, operating, substantially as set forth, in connection with needle *s*, as described.

CHARLES H. PALMER.

Witnesses:

GEO. M. RAMSAY,

A. J. DE LACY.