

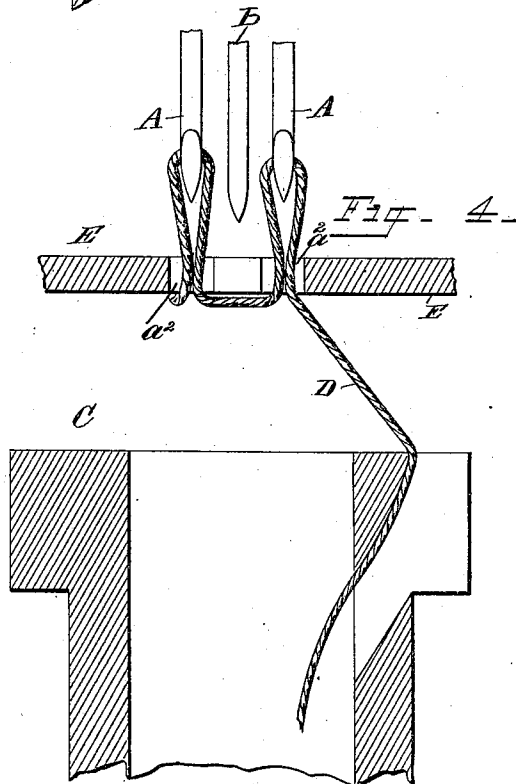
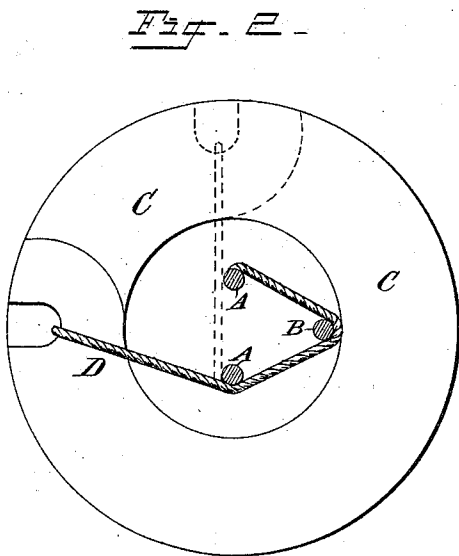
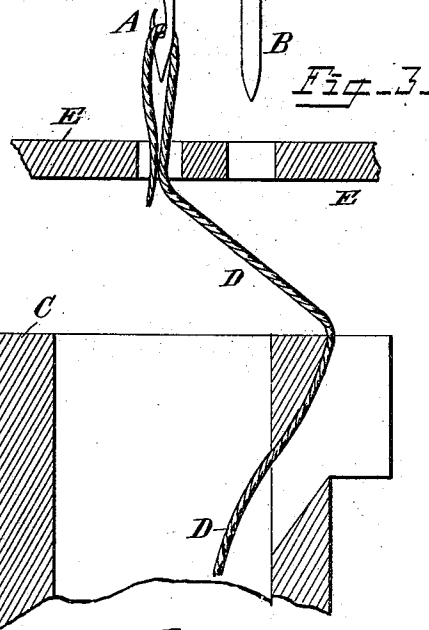
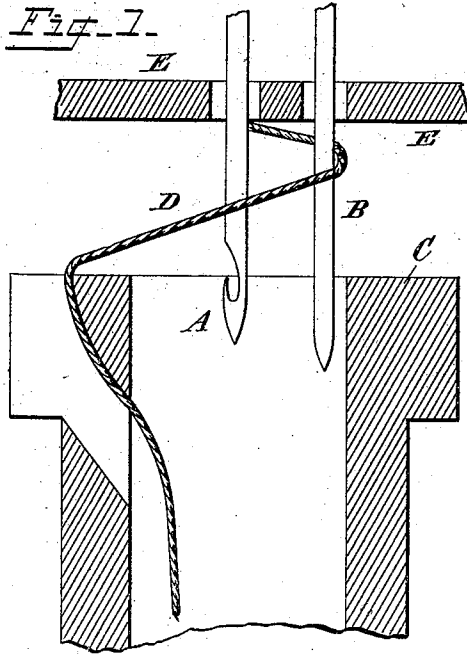
(No Model.)

2 Sheets—Sheet 1.

R. CORNELY.
EMBROIDERING MACHINE.

No. 503,229.

Patented Aug. 15, 1893.



Attest:
Arthur F. Ely:
Reverend Lewis

Inventor:
Robert Cornely
by Paul Mauro
his atty

(No Model.)

2 Sheets—Sheet 2.

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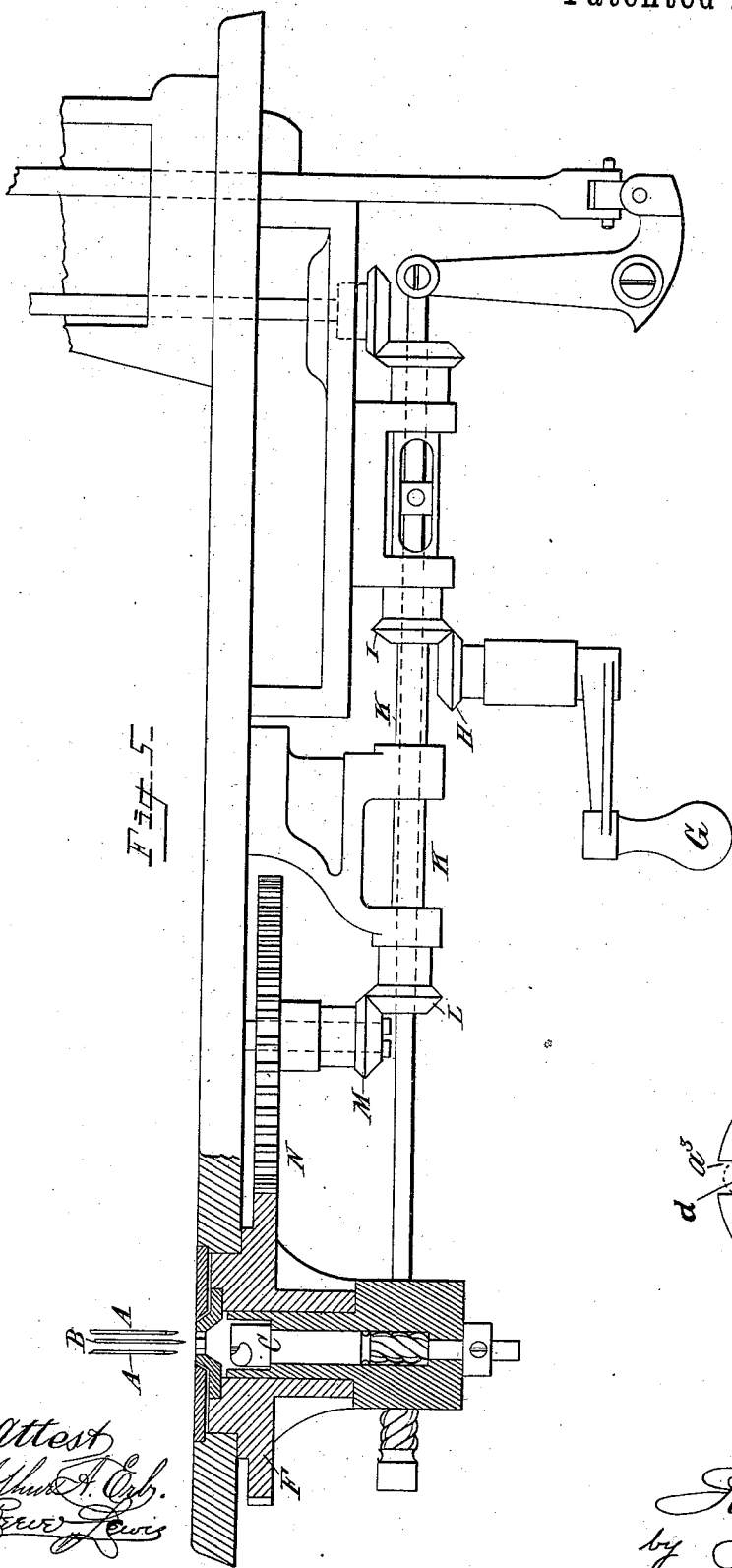
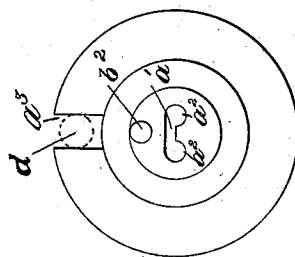


Fig. 5.



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UNITED STATES PATENT OFFICE.

ROBERT CORNELY, OF PARIS, FRANCE.

EMBROIDERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 503,229, dated August 15, 1893.

Application filed April 25, 1893. Serial No. 471,803. (No model.)

To all whom it may concern:

Be it known that I, ROBERT CORNELY, a resident of Paris, France, have invented a new and useful Improvement in Embroidering-Machines, which is fully set forth in the following specification.

In Patents Nos. 219,225, 262,743 and 292,285 embroidering machines were described for producing several rows of chain stitches by means of several needles by the use of a single thread and an oscillating looper which lays the thread around the needles. The thread is then pushed forward by blades, which operate between the needles, and the latter upon rising draw their thread loops upward and lay them on the upper side of the fabric. The said blades provide the needles with the length of thread which is necessary for the formation of the stitch, such device being usually termed a pull-off. The object of this invention is to do away entirely with said blades and thus to simplify, to a considerable extent, the construction of the machine.

In the drawings forming part of this specification: Figures 1 and 3 are enlarged sectional views of portions of the looper, needle-plate and needles, illustrating different relative positions of the parts in the formation of a stitch. Fig. 2, is a top plan view (the needles being shown in section) of the looper in the position shown in Fig. 1. Fig. 4 is a view similar to Fig. 3 at right angles thereto. Fig. 5 is an elevation, partly in section of the parts below the bed-plate, in a machine embodying the present invention, and Fig. 6, is a plan view of the needle-plate.

In the drawings B represents a pull-off consisting of a pointed pin or rod about the size of a needle situated behind the hook-needles A, A and oscillating with the latter, but not participating directly in the production of the stitch and need therefore possess none of the essential characteristics of an operative needle, such as a hook or an eye. When the needles A, A and pull-off B have passed through the material they descend into the tubular oscillatory thread-carrier C which winds the thread around said needles (as shown in Figs. 1 and 2). Upon the upward movement, the hook-needles A, A engage the

thread D, while the pull-off B serves to spread the latter in the form of a triangle (as shown in Fig. 2). The farther ascent of the needles causes the disengagement of the thread from the pull-off B when the said thread comes in contact with the under face of the needle-plate E. The thread thus set free is utilized by the needles A (as they descend still farther) in the formation of the loops. It will thus be seen that the necessary supply of thread is furnished without the use of the oscillating blades shown in the patents above referred to.

When three hook-needles are employed for producing three rows of chain stitching, either two pull-offs B may be employed, or when only one is used it may be set at a sufficient distance from the needles A to supply the requisite length of thread necessary to form the several loops.

The needle-plate E is formed with openings a^2 a^2 and b^2 therein for the passage of the needles therethrough, the openings a^2 and a^2 being connected by a slot a' (as represented on an enlarged scale in Fig. 6) whereby the thread connecting the loops is drawn upwardly through said plate against the under side of the fabric.

When the machine is supplied with universal feed mechanism the needle-plate and needles are so arranged as to respond to the movement of the crank-handle G. For this purpose the circular needle-plate E is set into a circular recess in the gear-wheel F and is prevented from turning therein by a pin a engaging in a recess a^3 in said plate.

The gear-wheel F is operated from the crank handle G through the pinions H, I, tubular shaft K, pinions, L, M and gear N.

What I claim is—

1. In an embroidering machine the combination with the hook-needle and thread-carrier, of a pull-off consisting of an oscillating pin or rod piercing the fabric at each oscillation and around which the thread is wound by the thread-carrier on the under side of the bed-plate in the formation of each stitch, substantially as described.

2. In an embroidering machine the combination with the loop-forming hook-needle and

a thread-carrier, of a pull-off consisting of a pin or rod oscillating with the needle, piercing the fabric at each oscillation, and around which the stitch forming thread is wound by
5 the thread carrier on the under side of the bed-plate in the formation of each stitch, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ROBERT CORNELLY.

Witnesses:

CHARLES F. THIRION,
HUGH P. KING.