

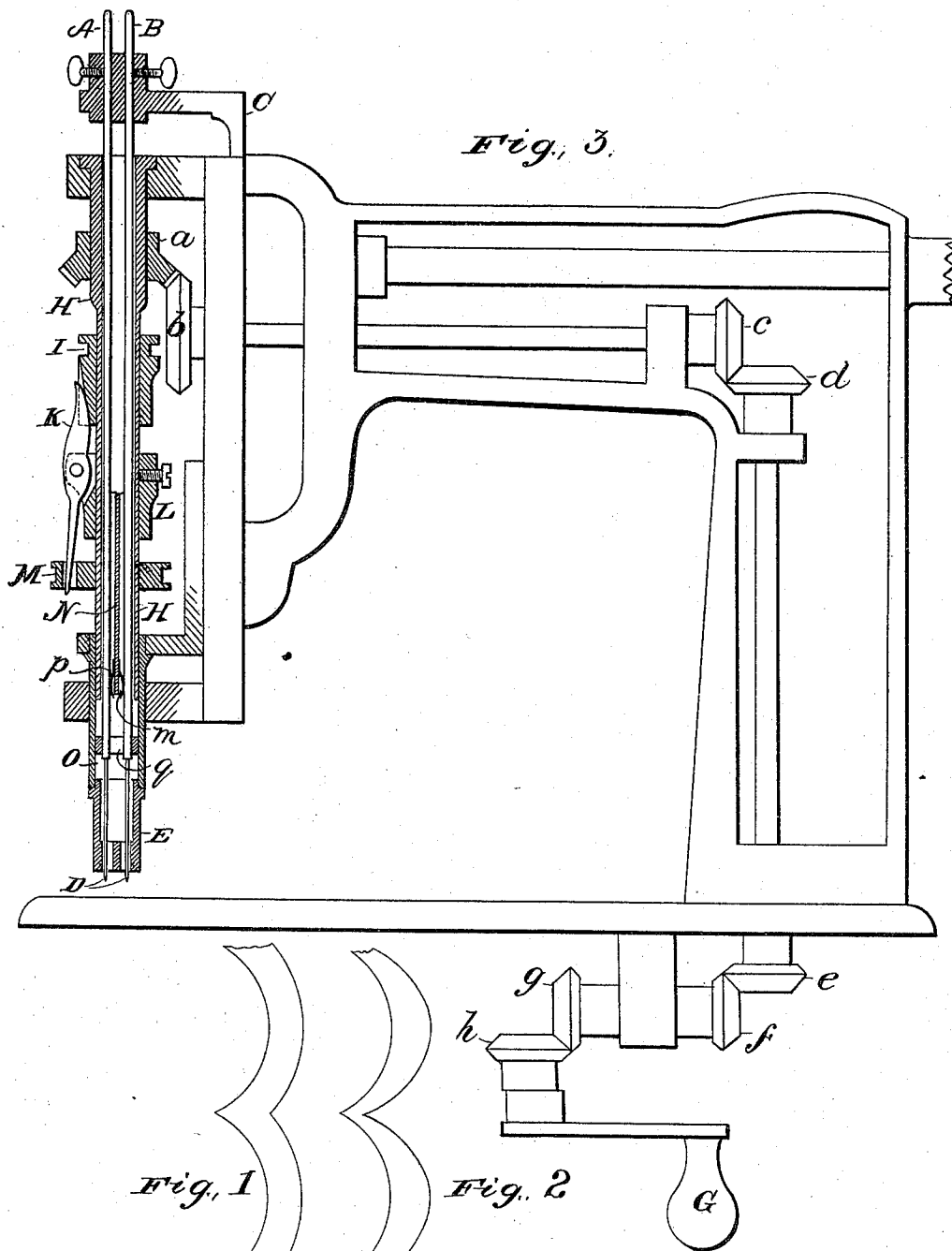
(No Model.)

2 Sheets—Sheet 1.

E. & R. CORNELY.
SEWING MACHINE FOR EDGING.

No. 533,163.

Patented Jan. 29, 1895.



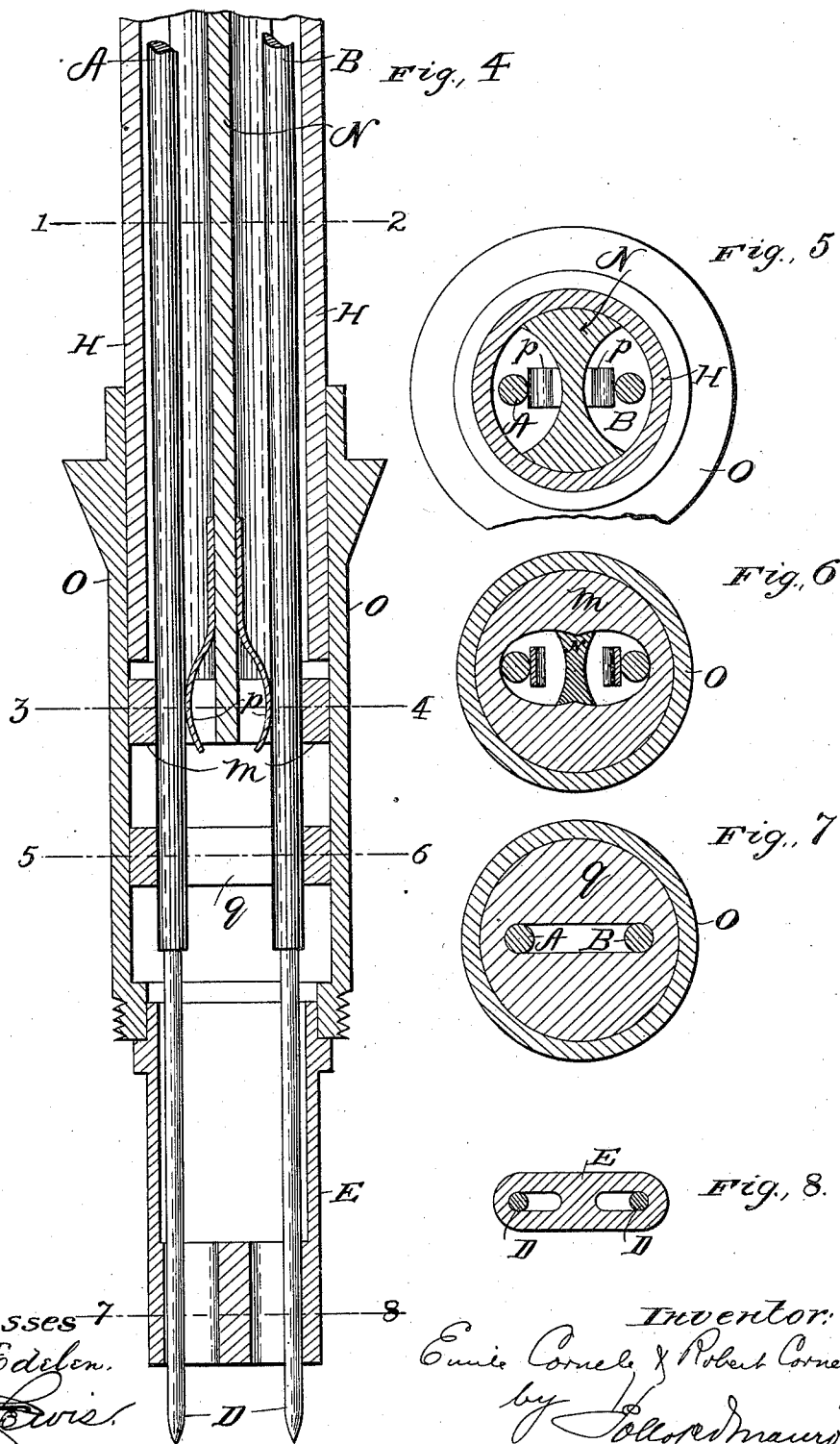
Witnesses
W. R. Edsley.
Geo. Lewis.

Inventor:
Emile Cornely, Robert Cornely
by J. J. Adams
their attorneys

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UNITED STATES PATENT OFFICE.

EMILE CORNELY AND ROBERT CORNELY, OF PARIS, FRANCE.

SEWING-MACHINE FOR EDGING.

SPECIFICATION forming part of Letters Patent No. 533,163, dated January 29, 1895.

Application filed July 9, 1894. Serial No. 516,950. (No model.)

To all whom it may concern:

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

In edging machines which work with two needles for the production of two parallel seams, into which transversal threads are interlaced, the edging stitch has nearly the same width in the center of the arcs as in the angles (as shown in Figure 1 of the accompanying drawings).

The object of the present invention is the production of an edging stitch in which the arcs present their largest width in their center and become narrower toward the angles (as shown in Fig. 2). This object is attained by causing the distance between the needles to be varied during the formation of the seams, from the middle of the arcs to the angles thereof. Thus an edging stitch is obtained which presents the same differences in width as the edging stitch which is produced by hand. The two needles and their stitch producing mechanism operate according to any system which will suit the improvements hereinafter described, such for instance as those described in Letters Patent No. 405,146, of June 11, 1889; No. 461,737, of October 20, 1891; No. 461,738, of October 20, 1891, and No. 501,057, of July 11, 1893, the description of which need not be repeated here.

In the accompanying drawings, forming part of this specification—Fig. 1, illustrates the parallel seams as ordinarily produced. Fig. 2, is a similar view illustrating the seams produced by the improvements herein described. Fig. 3, is an elevation partly in section, of our improved machine. Fig. 4 is an enlarged sectional view through a portion of the head of the machine, and Figs. 5, 6, 7 and 8 are sections on lines 1—2, 3—4, 5—6 and 7—8 respectively of Fig. 4.

Referring to the drawings, the two needle bars A and B are operated by means of the slide C and their needles D pass through a nipple E. These needles D do not turn with the crank handle G which governs the feed of the machine, but they pass through the central tube H upon which the parts I, K, L and M of the universal feed are secured, and

operate to obtain a limited turning feed motion of about a quarter of a circle, which feed is governed by the handle G by means of the cog or gear wheels *a, b, c, d, e, f, g* and *h*.

In order to obtain a stitch such as illustrated in Fig. 2 it is necessary that the distance between the needles decreases in the angles of the arcs and increases in the middle thereof and such lateral movement of the needles must be governed by the handle G in conformity with the feed of the machine. For this purpose a cam *m* (Figs. 4 and 6) is secured upon a central piece or support N fixed in the interior of tube H, as represented in Fig. 4 on an enlarged scale. The needle bars A and B which are sufficiently flexible to permit of their being bent slightly pass through cam *m* and when this cam is turned by handle G it causes the lower ends of needle-bars to approach each other. Upon reversing the direction of rotation of the cam the needle bars are released and caused to recede from each other by the action of springs *p p* secured to support N. The cam *m* is so arranged that the distance between the two needles is always proportional to the angle of the arc described by the handle G and this motion can be regulated with the greatest accuracy. At its lower end the tube H loosely engages in nipple tube O, carrying at its lower end nipple E (Fig. 8). The needles D play freely in slots in the nipple and also in similar slots in the needle plate on the table of the machine. A disk *q* provided with an elongated slot is secured in the nipple tube O. The needle bars project through said slot and as the nipple-tube O does not turn with the handle of the universal feed mechanism, the needle bars A and B are guided in a straight line during their lateral movement caused by the operation of cam *m*.

We have here illustrated and described what we consider the best embodiment of the principle of our invention, but it will be readily understood that other embodiments can be made without departing from the spirit thereof.

Having thus described our invention, what we claim is—

1. In a machine of the kind described, the combination with the crank-handle of the universal feed mechanism and the two stitch

forming needles, of means operated through the said crank-handle for varying the distance between the needles, substantially as described.

5 2. The combination with two needles and the crank handle of the universal feed mechanism, of a cam operated through the said crank handle to vary the distance between said needles, and a slotted plate *q* for guiding
10 said needles in a straight line during said lateral movement, substantially as described.

3. In a machine for producing an edging seam of the kind described of greater width in the middle of the arcs than at the angles
15 thereof, the combination with the universal

feed mechanism and the two needles, the flexible needle-bars therefor of means operated through the crank handle for forcing the free ends of said bars toward each other and varying the distance between said needles in accordance with the direction of feed, substantially as described.

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

EMILE CORNELLY.
ROBERT CORNELLY.

Witnesses:

EDWARD P. MACLEAN,
DAVID T. S. FULLER.