

No. 626,671.

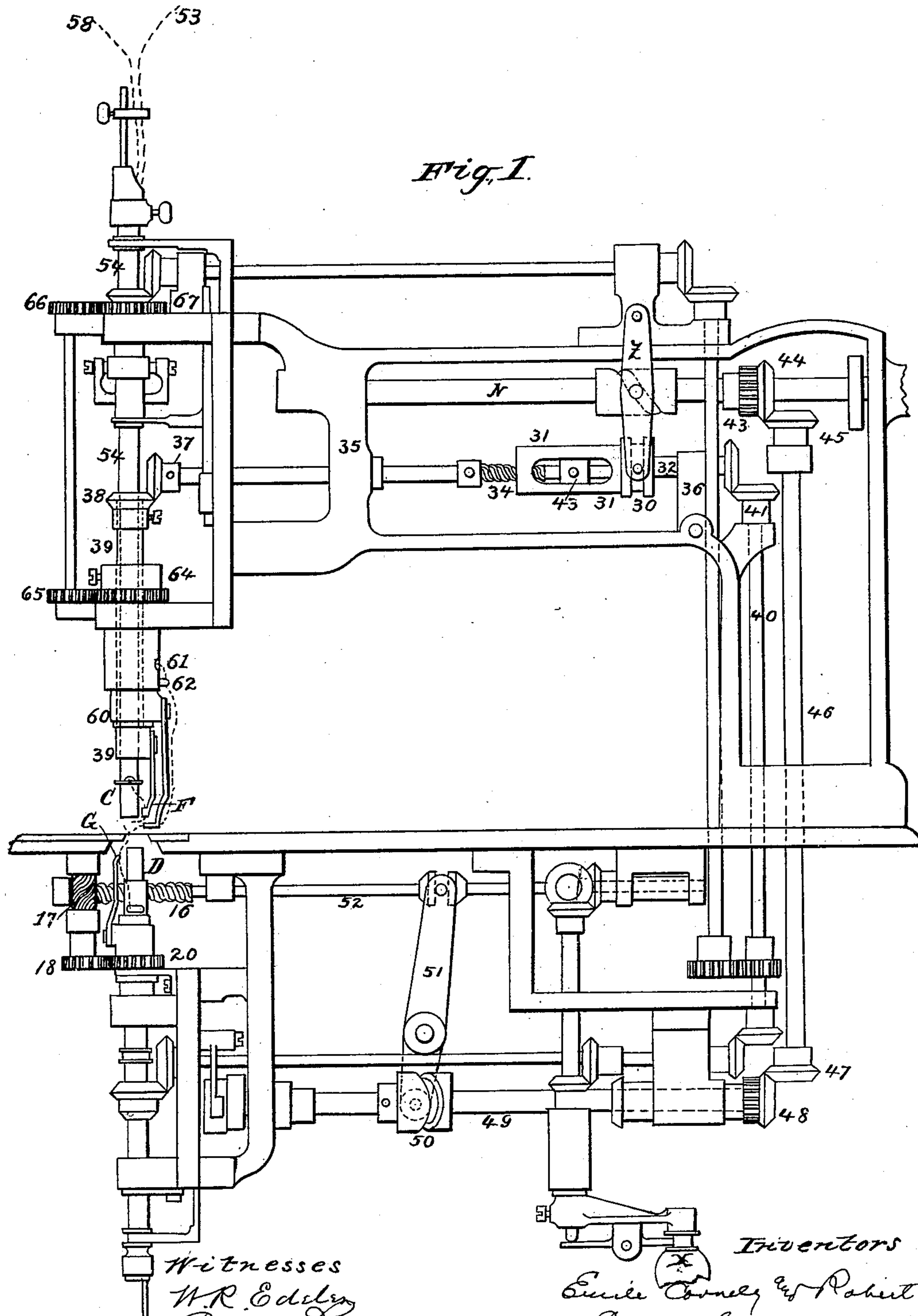
Patented June 13, 1899.

E. & R. CORNELY.  
EMBROIDERING AND EDGING MACHINE.

(Application filed July 23, 1898.)

2 Sheets—Sheet 1.

(No Model.)



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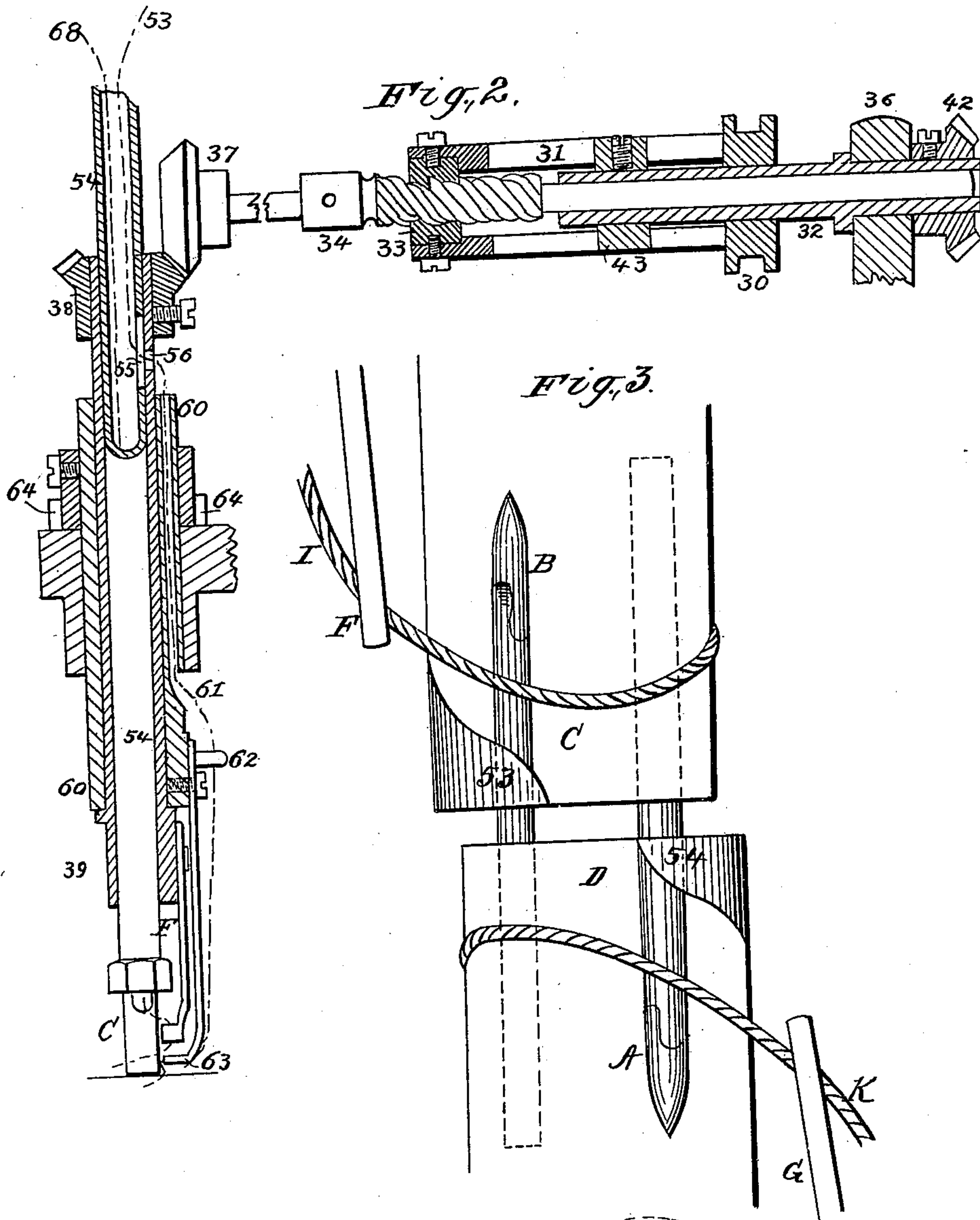
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2 Sheets—Sheet 2.

(No Model.)



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# UNITED STATES PATENT OFFICE.

EMILE CORNELY AND ROBERT CORNELY, OF PARIS, FRANCE.

## EMBROIDERING AND EDGING MACHINE.

SPECIFICATION forming part of Letters Patent No. 626,671, dated June 13, 1899.

Application filed July 23, 1898. Serial No. 686,692. (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 Embroidering and Edging Machines, which is fully set forth in the following specification.

The improvements hereinafter described relate to the machine patented in the United States, No. 566,061, August 18, 1896. These improvements relate more particularly to the means of operating the thread-carriers F and G when they perform an oscillating motion around their needles. Besides, we have also modified and improved the shape of the opened nipples C and D, as hereinafter to be described.

When the thread-carriers F and G have an oscillating motion around their needles, the stroke of this oscillation must be of about an entire circle around the needle. Experience has shown that the means described in Letters Patent No. 566,061, of August 18, 1896; for driving the upper thread-carrier F were too heavy when the machine was to be driven at high speed, and we have therefore combined a new mechanism which drives the thread-carrier F in the same manner, but allowing at the same time the machine to be driven at high speed. We have obtained this in the following manner.

The invention will be best understood by reference to the accompanying drawings, illustrating a machine embodying the same, wherein—

Figure 1 is an elevation. Fig. 2 is a sectional view of the mechanism for driving the upper thread-carrier. Fig. 3 is a detail view showing the manner in which the thread-carriers act; and Fig. 4 is a transverse sectional view through the lower extremity of the upper nipple, the relative position of the lower nipple being shown in dotted lines.

The cam secured upon main shaft N drives in the same manner as described in Patent No. 566,061, of August 18, 1896, the lever Z, a stud of which projects into collar 30 of sleeve 31, which thus receives a horizontal to-and-fro motion upon hollow shaft 32, Figs. 1 and 2. Sleeve 31 is provided with a screw-nut 33, Fig. 2, which nut by following the to-and-fro motion of sleeve 31 imparts an oscillating mo-

tion to screw 34. The shaft of screw 34 is guided at one end in the casting 35 of the machine and at the other end in the hollow shaft 32, Fig. 2. This latter hollow shaft 32 is itself guided in the casting 36 of the machine. The screw 34 transmits its oscillating motion to the cog-wheels 37 and 38 and to tube 39, upon which the thread-carrier F is secured.

While the thread-carrier F performs its oscillating motion around the needle, said thread-carrier must at the same time be governable by the crank-handle of the machine. This is obtained in the following manner: The turning motion of the crank-handle X is transmitted in the well-known manner to shaft 40, which operates hollow shaft 32 by means of cog-wheels 41 and 42. Upon this hollow shaft 32 is secured a nut 43, which slides in a corresponding slot of sleeve 31 and transmits to the latter sleeve the turning motion of shaft 32. Sleeve 31 transmits its turning motion to screw-nut 33, screw 34, cog-wheels 37 and 38, and tube 39, upon which the thread-carrier F is secured.

The motion of the under thread-carrier G is obtained from main shaft N, which operates the under main shaft 49 by means of wheels 43 44 45, shaft 46, and wheels 47 and 48. This shaft 49 is provided with a cam 50, which communicates a to-and-fro motion to lever 51, shaft 52, and worm-screw 16. This worm-screw 16 transmits an oscillating motion to worm-wheel 17 and tooth-wheels 18 and 20, upon which latter wheel the thread-carrier G is secured. In consequence of this arrangement the motion of the under thread-carrier is entirely independent of the motion of the upper thread-carrier, which is of great importance for the regulating and timing of the machine. As this machine works without needle-plate and the cloth being therefore only maintained by the pressure of the two nipples C and D one against the other, while the needles A and B, Figs. 3 and 4, pierce the cloth, these two needles have a tendency to push the cloth in their respective directions, which is a great hindrance when the machine is driven at high speed. In order to obviate this inconvenience, we have provided the nipples C and D with a kind of shield or curved horn 53 and 54, which incloses partly the needles, Figs. 3 and 4, and



which press upon the cloth while it is traversed by the needles, so that the above-mentioned inconveniences are entirely obviated.

The section through nipples C and D and their respective positions to each other are represented at Fig. 4, in which the upper nipple C is shown in full lines and the under nipple D in dotted lines.

When the edging or embroidering seam is to be provided with a filling in order to obtain a thicker or higher effect, said filling-thread 53, Figs. 1 and 2, comes through central tube 54 from where it comes out through opening 55. Then it traverses the opening 56 of tube 39, which bears the thread-carrier F. From there it comes through a passage arranged in the side of tube 60, which can turn in the casting of the machine. It comes out from this passage at opening 61 and goes finally through the guide 63, which is near the under end of nipple C. The guide 63 of the filling 53 is governable from the crank-handle of the machine by means of tooth-wheel 64, which is secured upon tube 60 by means of wheels 65, 66, and 67. The thread 68 of the thread-carrier F comes also through the central tube of the machine from where it comes out through an opening of nipple C from where it goes through the guide of thread-carrier F.

We claim—

1. In an embroidering or edging machine, the combination with universal feed mechanism, of two hook-needles, one above and the other beneath the cloth-plate, a thread-carrier for each needle, actuating mechanism for the needles, means for driving the lower thread-carrier and means for driving the upper thread-carrier consisting of a shaft rotatably mounted but fixed against longitudinal

movement, a screw on said shaft, a hollow shaft about the screw-shaft and adapted to be rotated by the universal feed mechanism, a sleeve or frame carrying a nut engaging the screw on the screw-shaft and free to slide longitudinally on the hollow shaft but rotatable therewith, and means for imparting a longitudinal reciprocatory movement to said sleeve from the main driving-shaft of the machine.

2. In a machine of the kind described, the combination with the two needles one operating from above and the other from beneath the cloth-plate, of nipples one for each needle, each nipple being formed with a curved horn or hook adapted to extend partially around the needle from the front to the rear thereof.

3. In a machine of the kind described, the combination with the upper thread-carrier, of a central tube through which the needle-thread passes downwardly to the thread-carrier, a second tube around said central tube, carrying the thread-carrier, and an outer third tube around said second tube carrying a depending guide for the filling-thread, said thread passing downwardly through the upper end of the central tube, through lateral openings in the sides of the central and second tubes, and through a longitudinal opening in the wall of the third tube to the guide, 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,  
FINLEY P. MCGUIRE.