

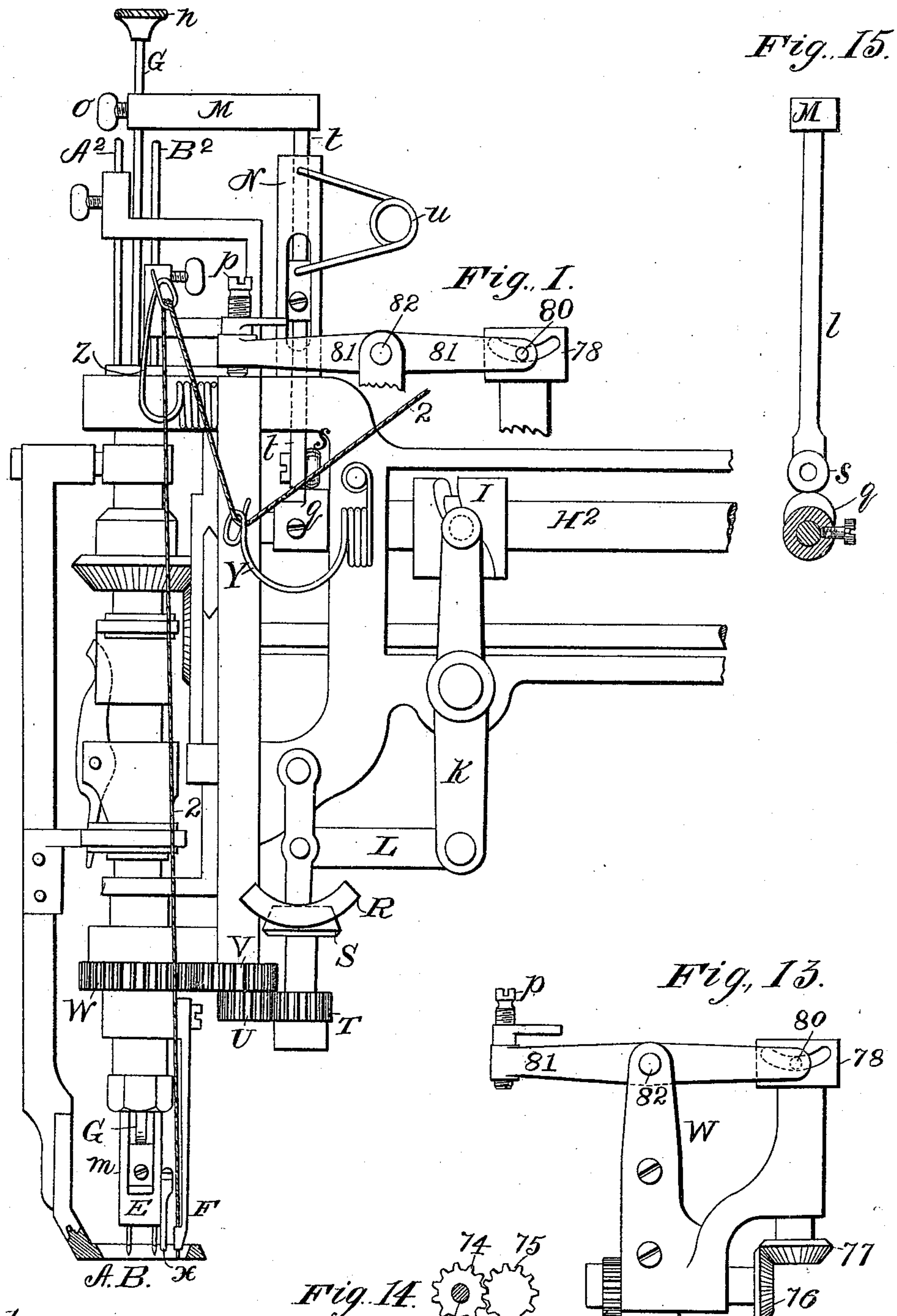
(No Model.)

2 Sheets—Sheet 1.

E. & R. CORNELY.  
EMBROIDERING MACHINE.

No. 544,723.

Patented Aug. 20, 1895.



Witnesses  
W. R. Eddon,  
Ray Lewis

Inventors  
Emile Cornely & Robert Cornely,  
by J. H. M. M. M.,  
their attorneys.

(No Model.)

2 Sheets—Sheet 2.

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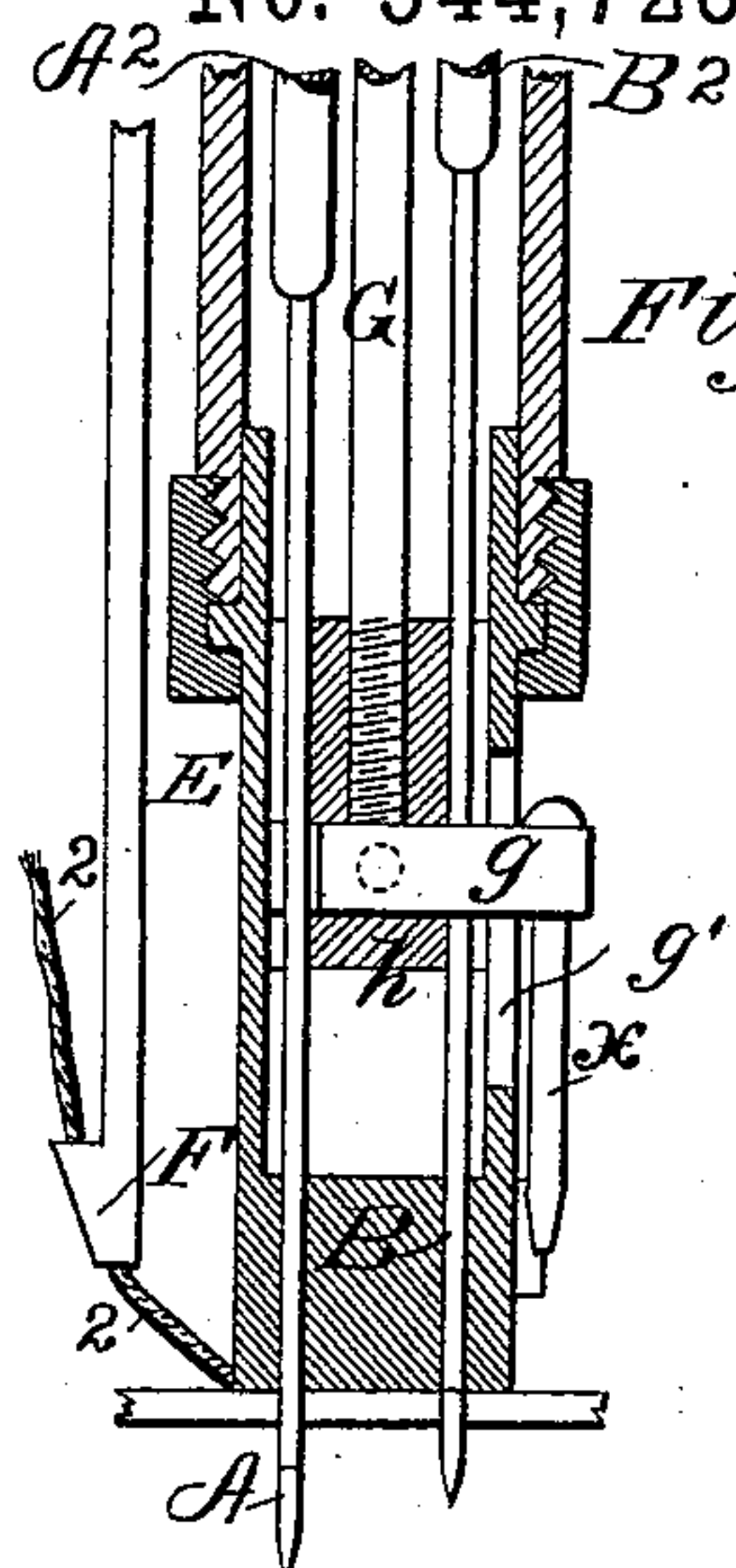


Fig. 2.

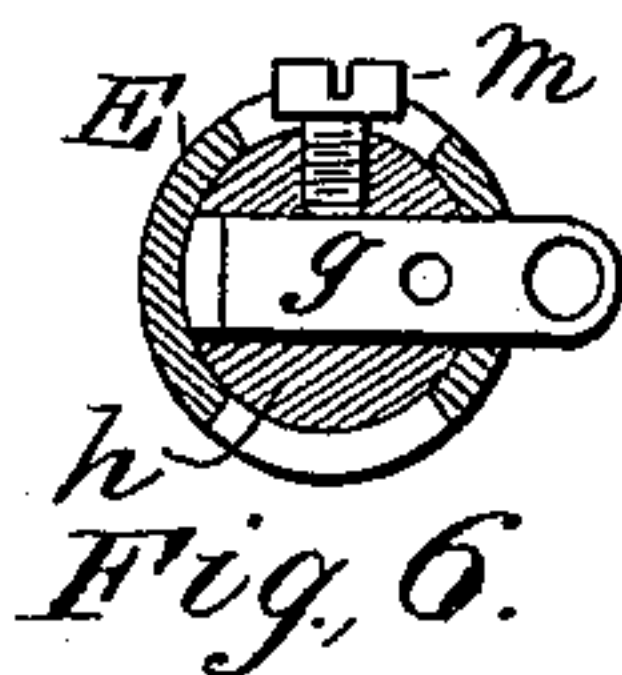


Fig. 3.

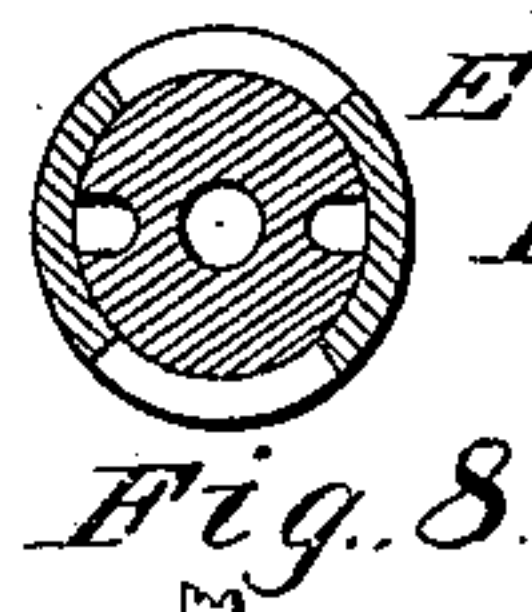


Fig. 4.

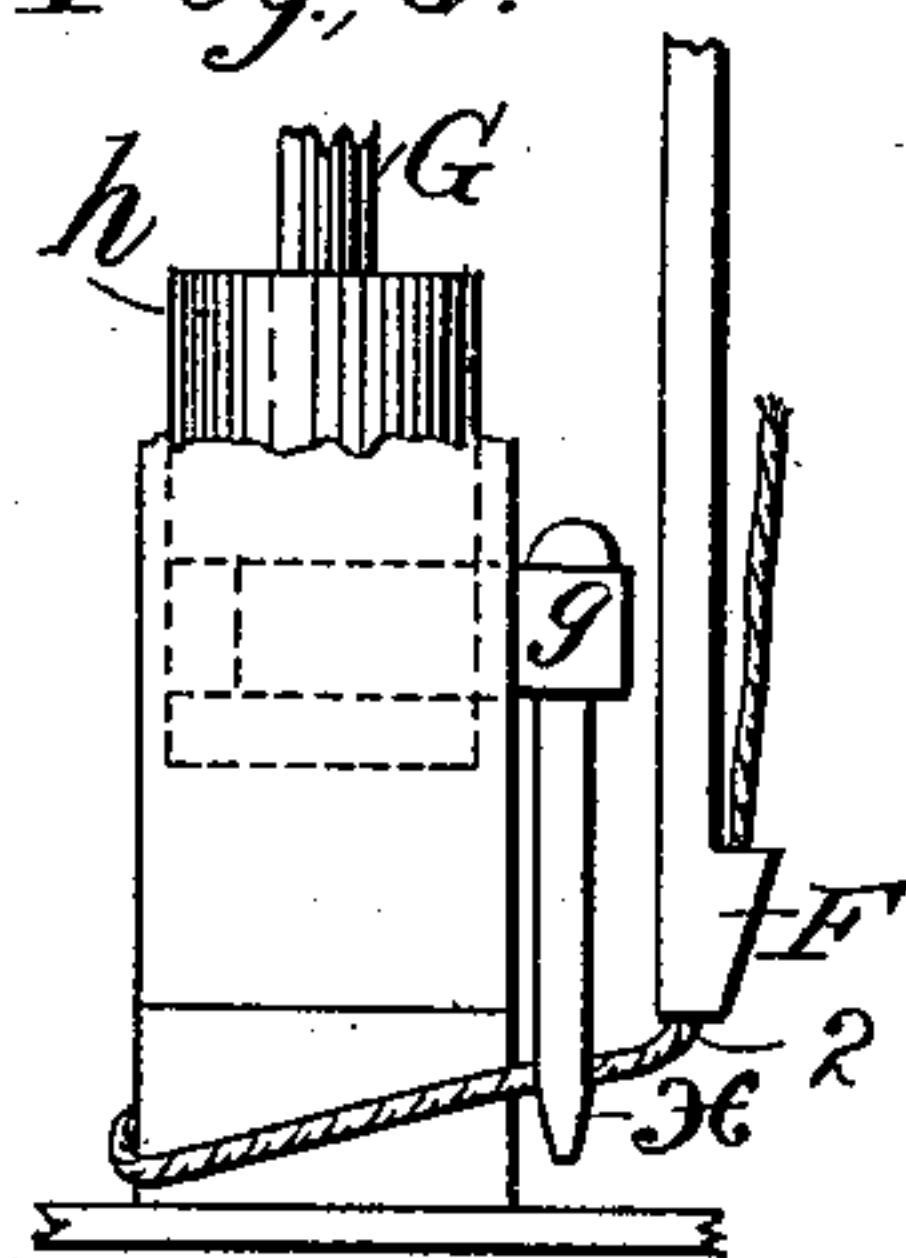


Fig. 6.

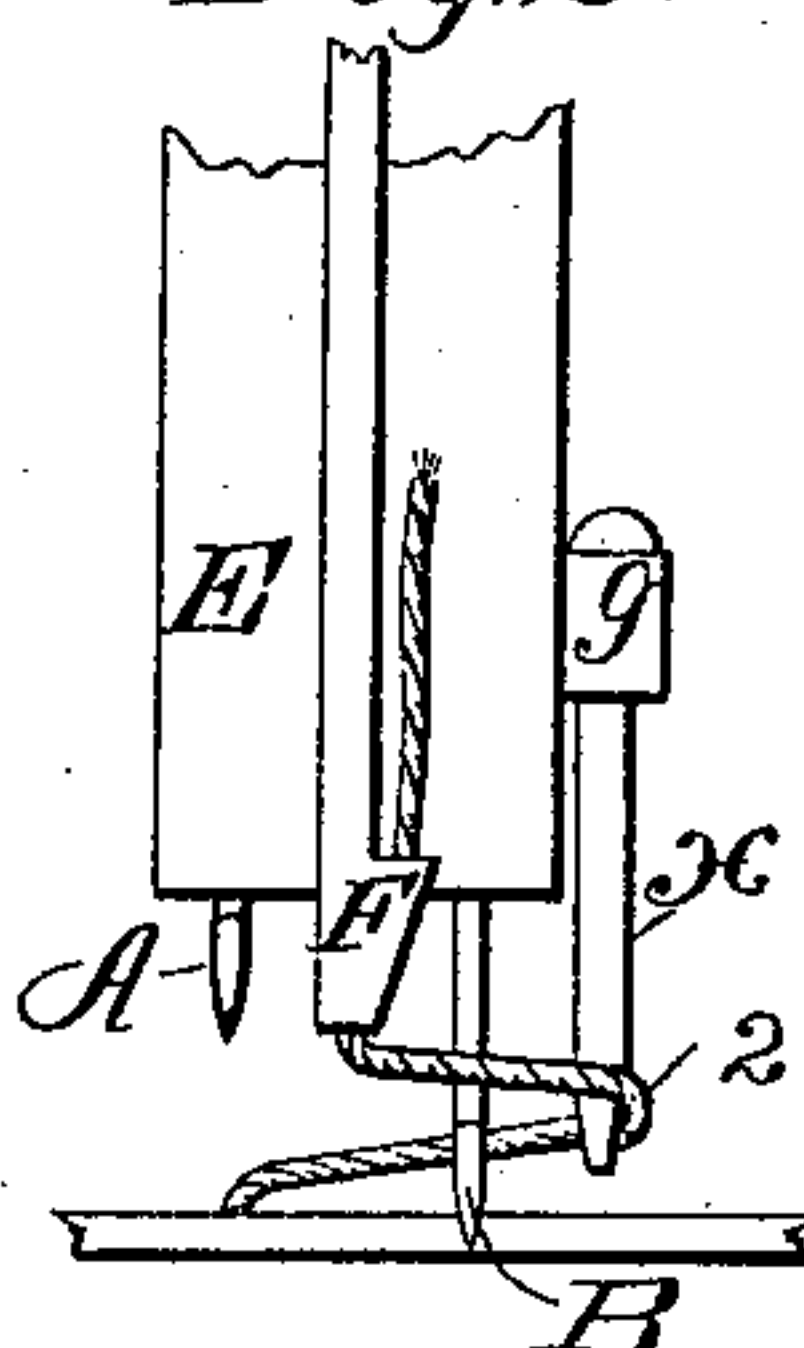


Fig. 8.

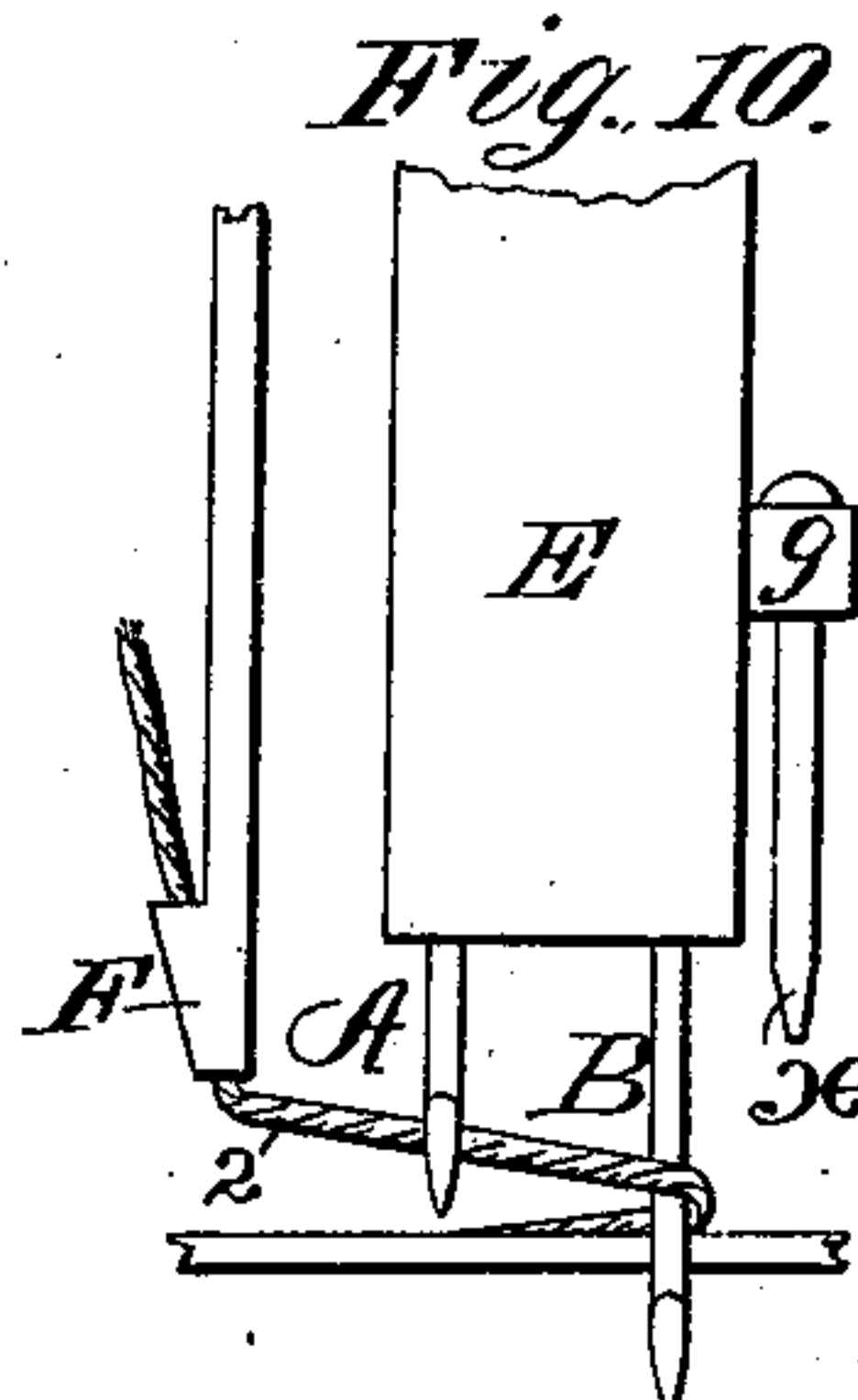


Fig. 10.

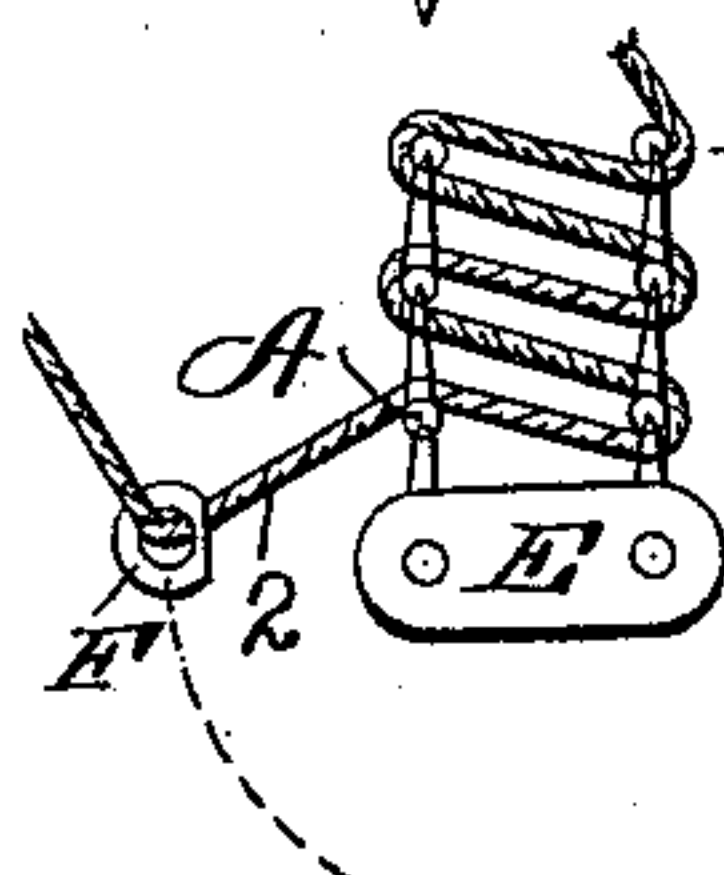


Fig. 5.

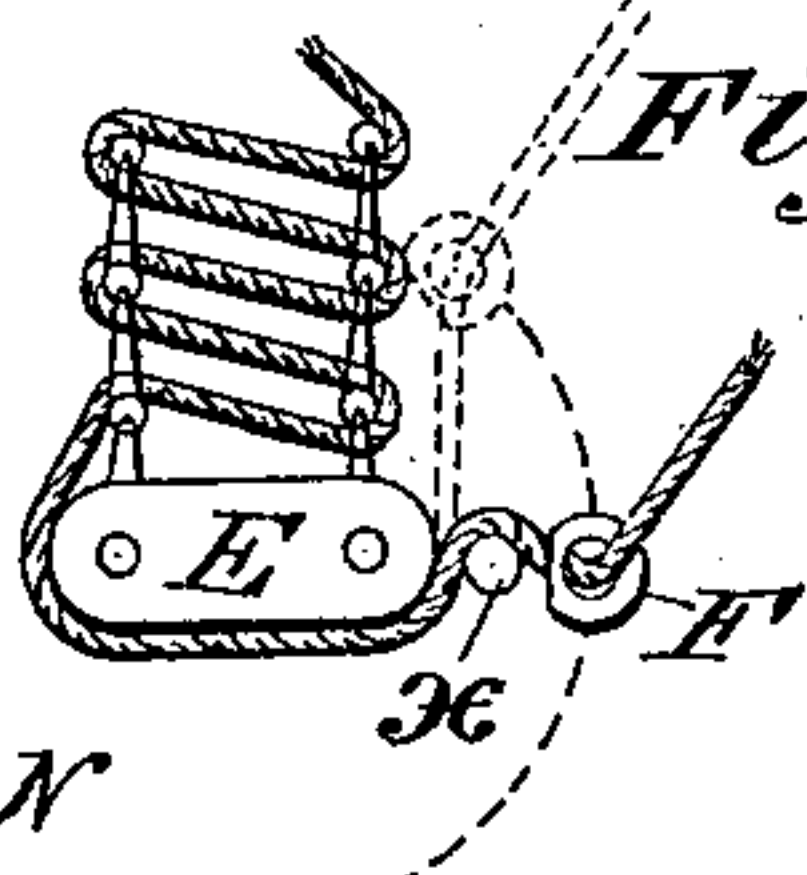


Fig. 7.

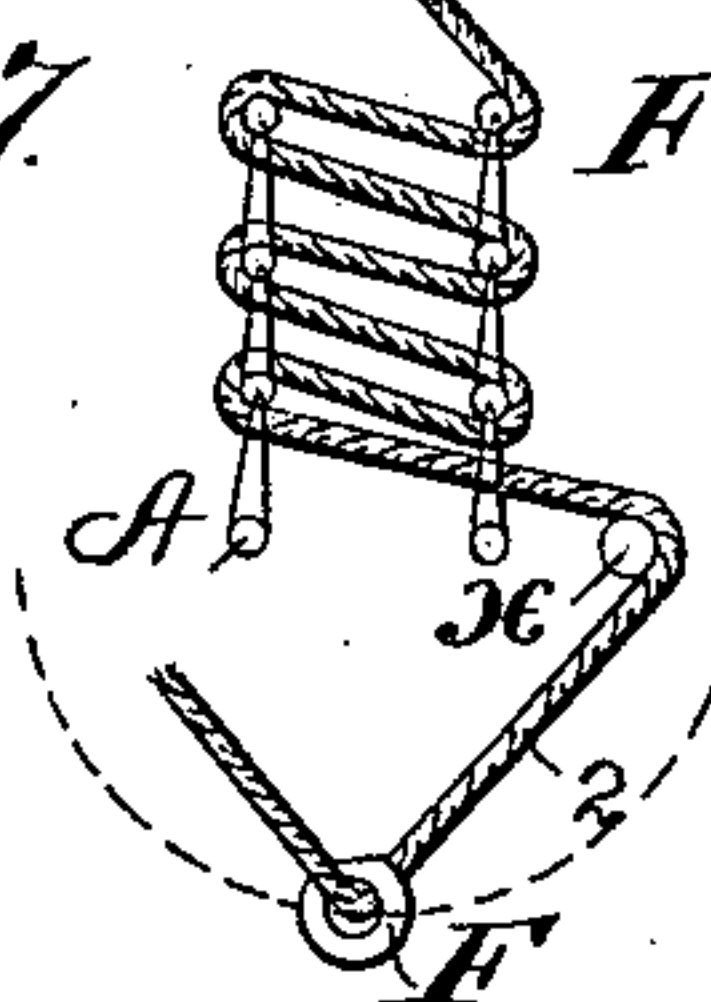


Fig. 9.

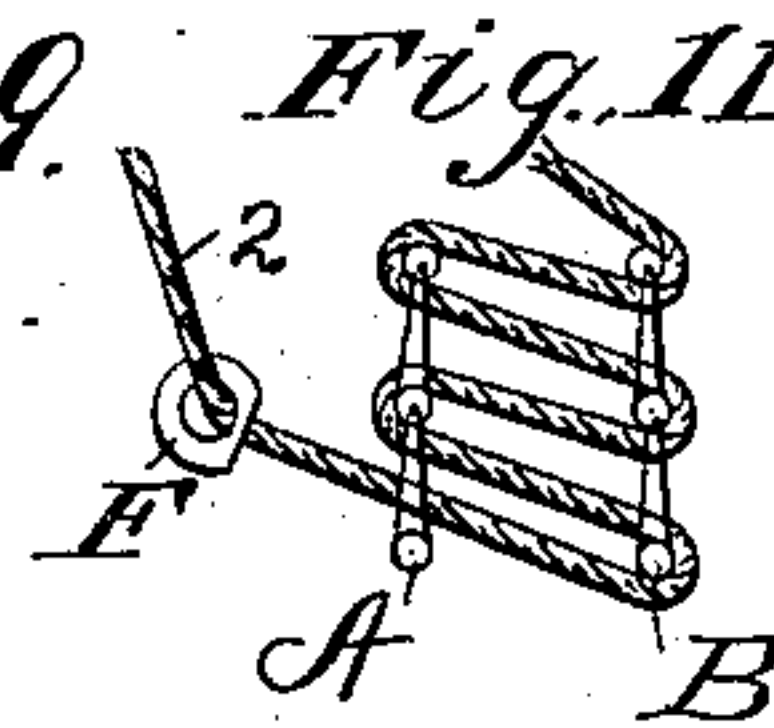


Fig. 11.

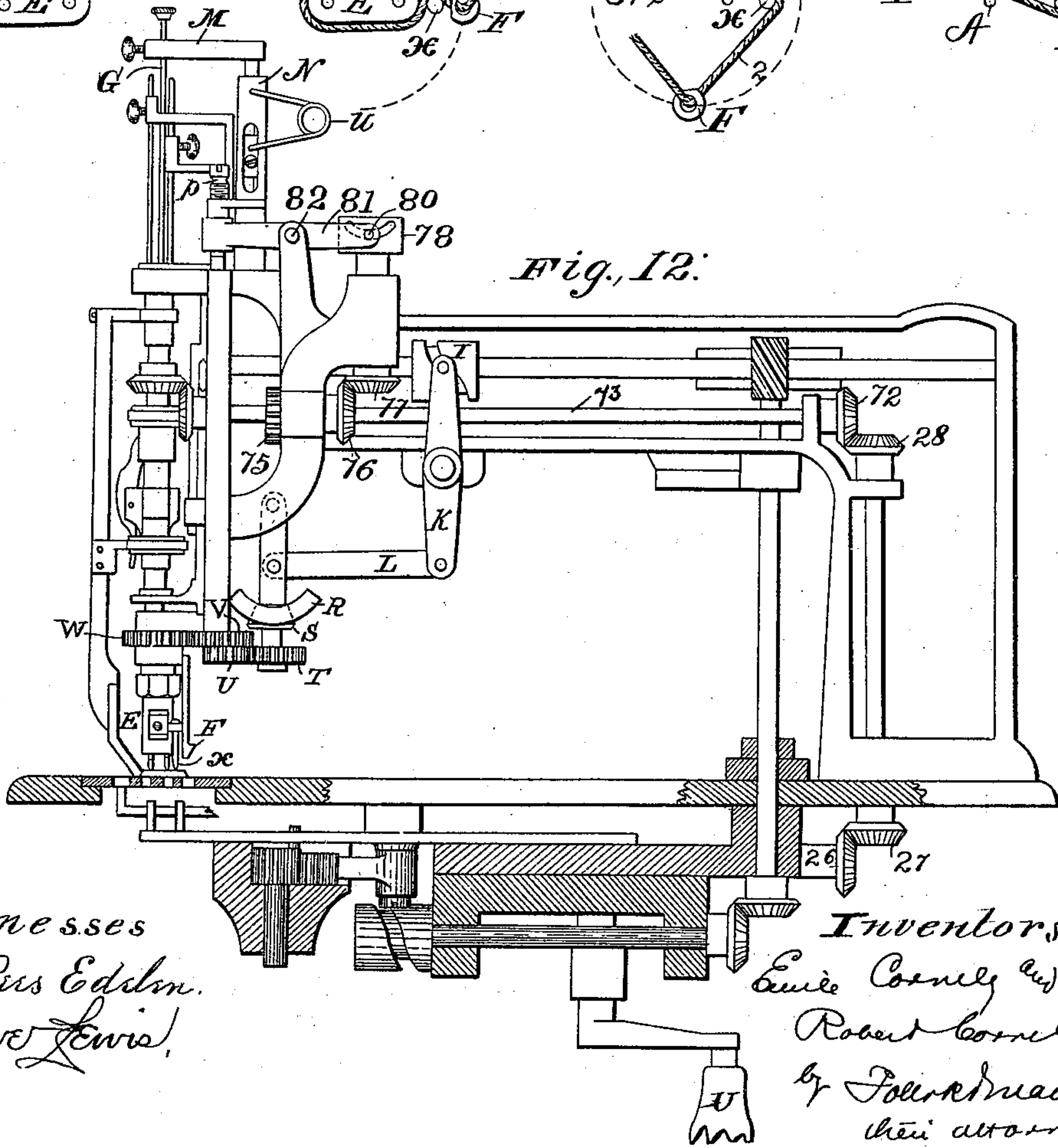


Fig. 12.

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# UNITED STATES PATENT OFFICE.

EMILE CORNELY AND ROBERT CORNELY, OF PARIS, FRANCE.

## EMBROIDERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 544,723, dated August 20, 1895.

Application filed May 20, 1895. Serial No. 549,972. (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 United States Letters Patent No. 405,146 of June 11, 1889, we have described and claimed improvements in embroidering and edging machines, which consist substantially in the operation of two needles working independently one from the other and in the production of variable lengths of stitches, so that the spaces between the cross-threads remain everywhere the same, while the lengths of the stitches would increase toward the angles of the scallop. It has been found that the speed of said machine can be much increased by the addition of an auxiliary pin to the stitch-producing mechanism, said pin operating in such manner in conjunction with the needles and the thread-carrier that the groove in the cam from which said thread-carrier is operated can be made of a uniform inclination on the entire circumference of its cylinder, whereby the machine can operate with great ease and at very high speed.

This invention also includes improvements in the mechanism for regulating the length of stitches, as described in the patent above referred to.

Our invention will be fully understood by reference to the accompanying drawings, in which—

Figure 1 represents in elevation the head of a machine constructed in accordance with our invention. Figs. 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11 are sections and plans of the nipple in conjunction with the needles and thread-carrier and enlarged views of the stitches produced by the machine. Fig. 12 is a sectional elevation of the machine; and Figs. 13, 14, and 15 are details.

Fig. 2 represents an enlarged vertical section through the nipple E of the machine at the moment when the oscillating thread-carrier F commences its movement from the left to the right to wind its thread 2 around said nipple. In this position the auxiliary pin  $x$  is in its highest position. When the thread-carrier F has terminated its oscillation to the right, the pin  $x$  descends and takes hold of

the thread 2, Figs. 6 and 7. The thread-carrier F commences now its backward oscillation from the right to the left and the pin  $x$  holds the thread until the needle B has descended to the cloth, Figs. 8 and 9, at which moment the pin  $x$  rises and liberates the thread, Figs. 10 and 12. It is the return motion to this point which formerly had to be made with great rapidity by the thread-carrier F for the proper execution of the work, and which made it necessary to form part of the curve in cam I (by which the thread-carrier is operated through lever K, link L, segment R, gears S, T, U, V, and W) somewhat steeper, and which difficulty is obviated by the pin  $x$  holding the thread 2 until the needle B has secured it to the material and until the thread has been drawn behind the needle A, as represented, Figs. 11 and 10. The thread is then stitched to the cloth by needle B, while the thread-carrier F continues its oscillation to the left until its thread is drawn behind needle A, which latter then descends in front of said thread and secures it to the material by means of its stitch. The auxiliary pin  $x$ , which thus works in conjunction with but independently of the two needles A B, is secured to a transverse bar  $g$ , projecting through slot  $g'$  in the side of the nipple, Bar  $g$  is secured in the block  $h$  by means of screw  $m$ , said block  $h$  sliding freely in the hollow nipple E. A vertical rod G, which passes through the central tube of the machine between the two needle-bars  $A^2$  and  $B^2$ , is screwed into the cylinder  $h$  by turning the button or knob  $n$  at its upper end, This rod passes through the cross-bar M and is secured therein by means of screw  $o$ . The cross-bar M is attached to rod  $t$ , which plays vertically within the hollow column N, said vertical motion being effected by means of cam  $q$  of main shaft  $H^2$  acting against the friction-roller S of rod  $t$ , to lift said rod at a certain moment, while the spring  $u$  presses it downward, when the action of cam  $q$  ceases. Thus pin  $x$  is operated by cam  $q$  to ascend and descend at certain times in conjunction with the needles A and B and with the oscillating thread-carrier F, as above described, whereby the motion of the latter is timed in such a manner that the groove of cam  $x$  is



given a uniform incline on the entire circumference of the cylinder and the machine operates at the highest speed possible, the thread 2 being constantly drawn tightly by the tension-springs Y Z, which at the same time serve as thread-guides.

In Figs. 12, 13, and 14 a new disposition is represented for the production of the variable lengths of stitches described and claimed in the patent above referred to. The stitch-regulating screw-stud *p* described in said patent is secured to a lever 81, which swings on its stud 82 of the frame W, and the pin 80 at the other end of lever 81 extends into a double inclined groove of cam 78. This cam can be turned by crank-handle U, which is connected by a series of pinions (not shown) with the shaft of pinion 26 through the latter and the pinions 27 28 72, shaft 73, Figs. 12 and 14, and pinions 74, 75, 76, and 77, which latter turns cam 78. This disposition is more substantial and stands wear better and produces superior effects to that described in the patent.

Having thus described our invention, what we claim as new is—

1. In an edging machine, the combination with the nipple and two independently operating needles, of an auxiliary pin cooperating

with said needles in the formation of the seam, and reciprocated independently thereof, substantially as described.

2. In an edging machine the combination with the hollow nipple and two independently operating needles, of a sliding block in said nipple, a transverse bar secured in said block and projecting through the side of the nipple, an auxiliary pin at the outer end of said bar cooperating with the needles in the formation of the seam, and means for reciprocating the block independently of the needle, substantially as described.

3. In a machine of the kind described the combination with the regulating screw stud, a lever in one end of which said stud is secured and a cam suitably operated from the crank handle of the machine, engaging the other end of said lever, substantially as described.

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

EMILE CORNELLY.  
ROBERT CORNELLY.

Witnesses:

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DAVID T. S. ANTLE.