

(No Model.)

2 Sheets—Sheet 1.

E. & R. CORNELY.
EMBROIDERING MACHINE.

No. 466,889.

Patented Jan. 12, 1892.

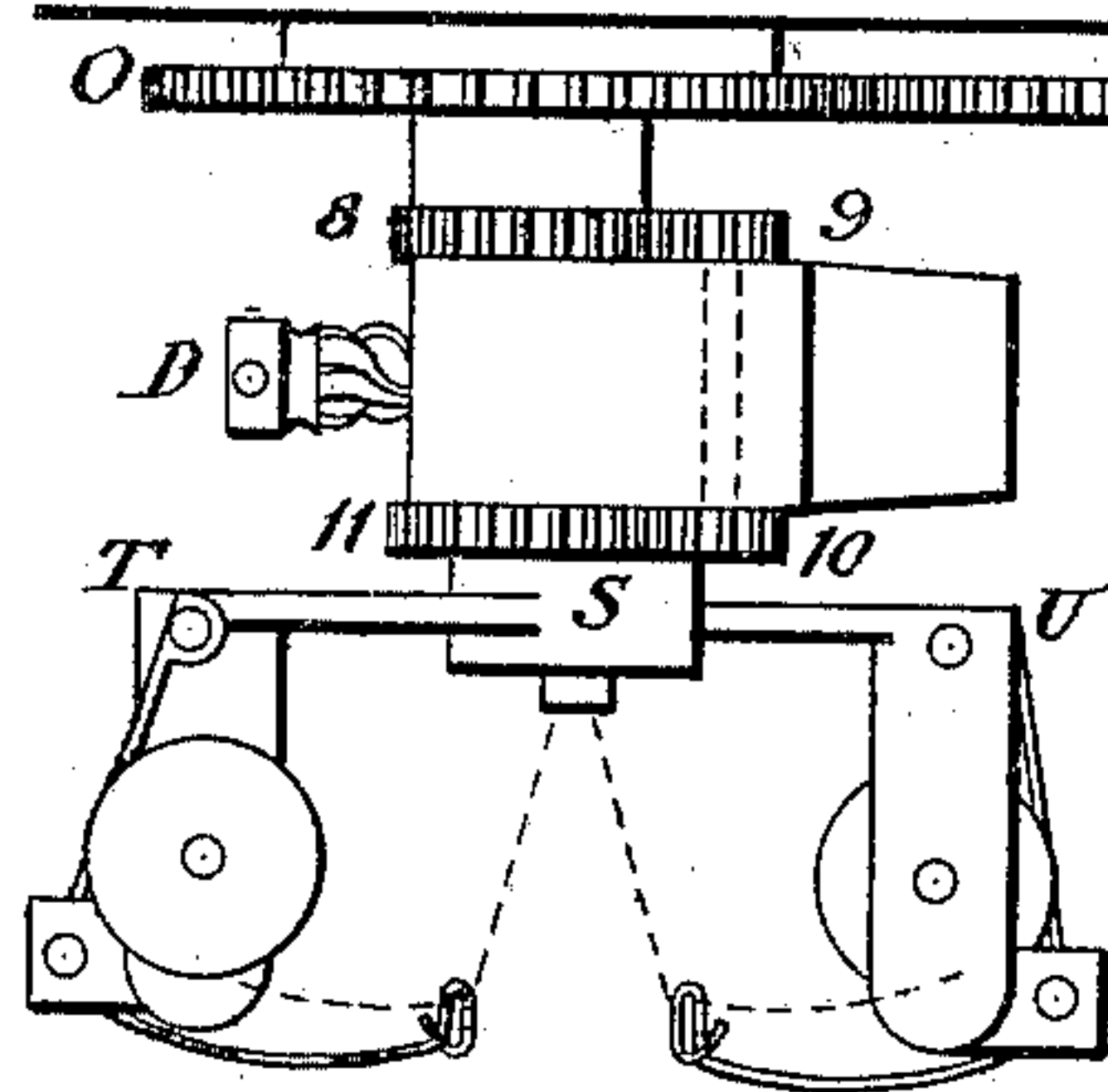
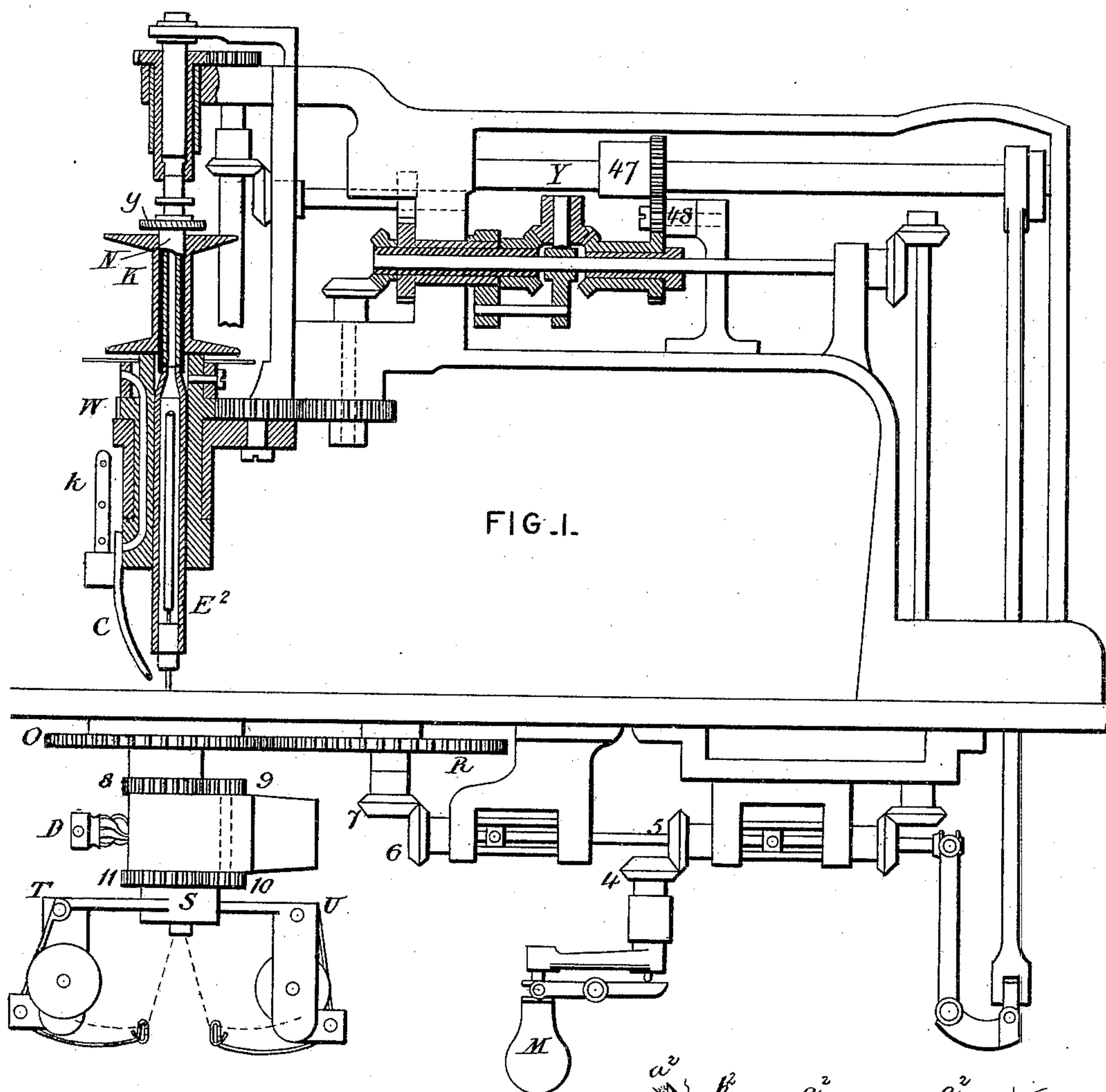


FIG. V.

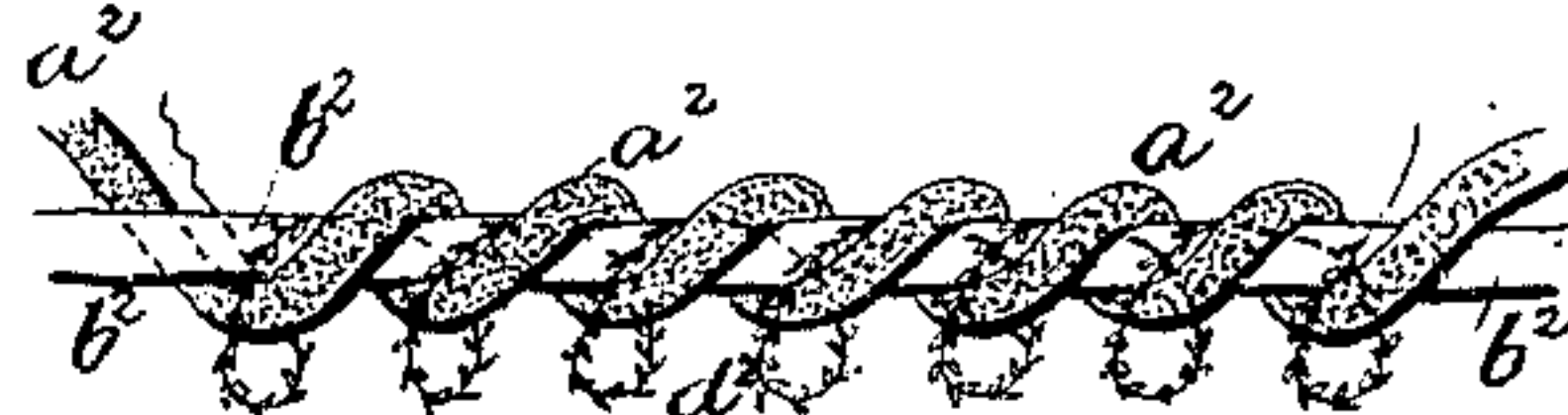


FIG. VII.

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(No Model.)

2 Sheets—Sheet 2.

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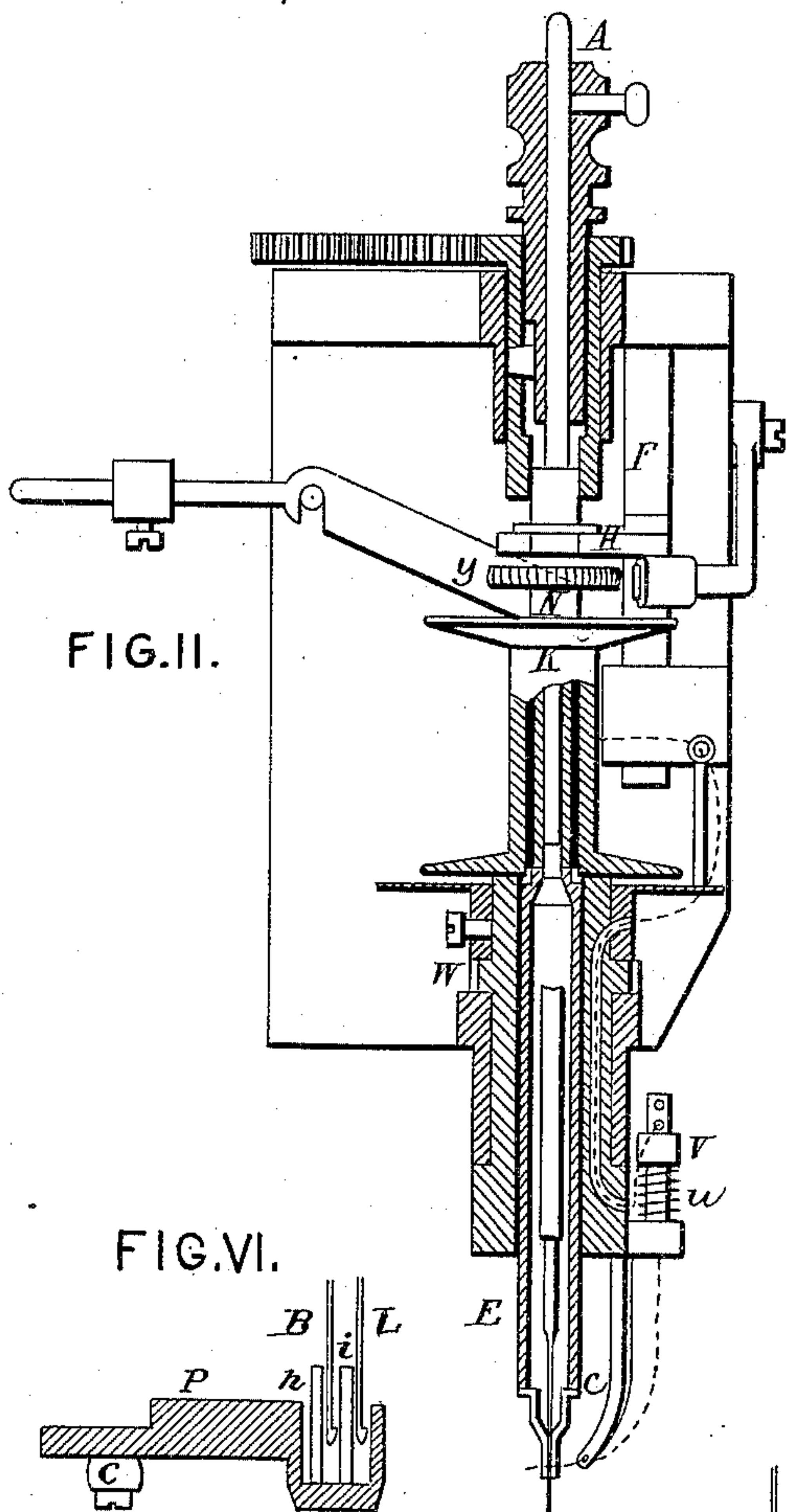


FIG. II.

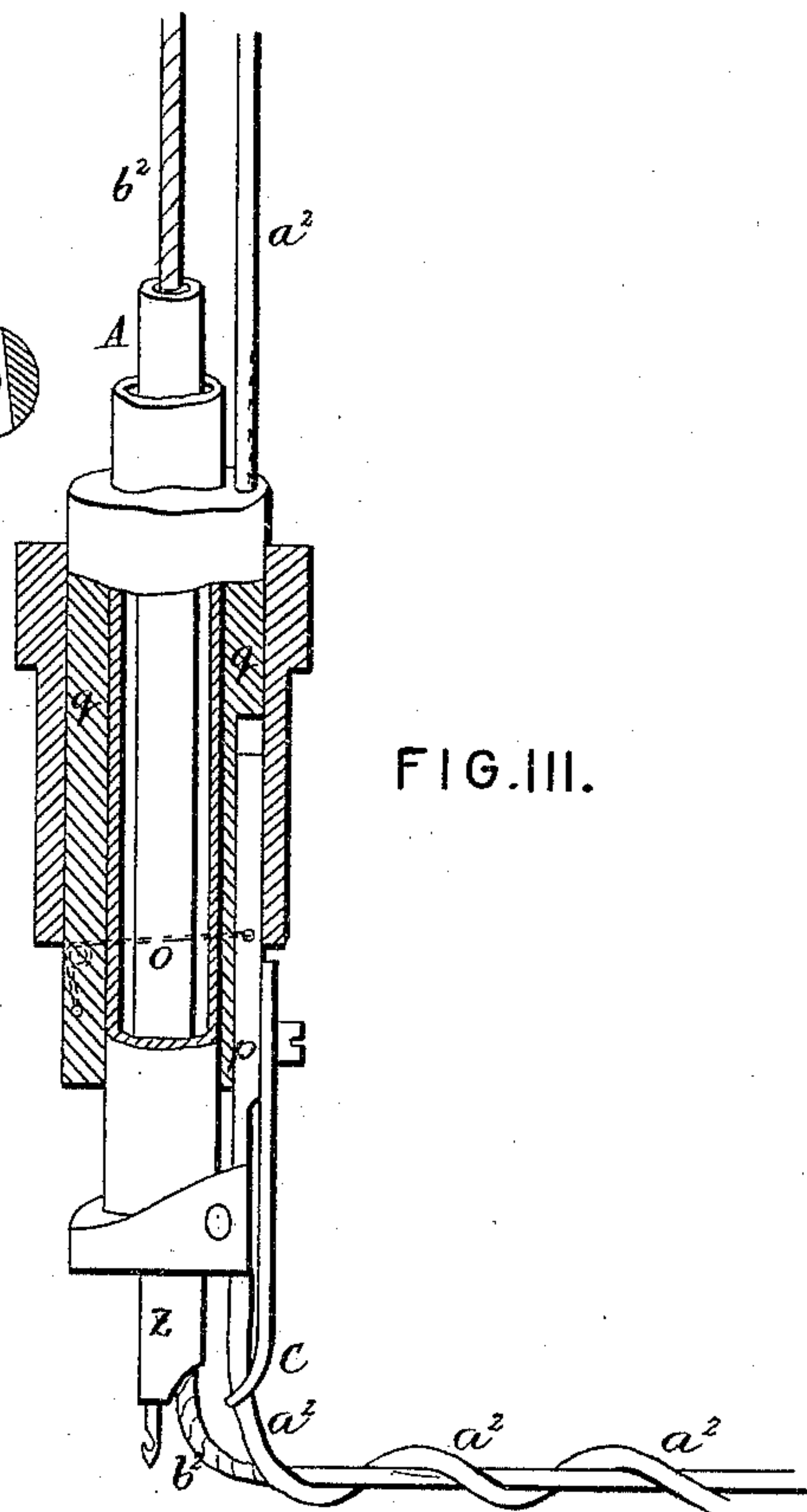


FIG. III.

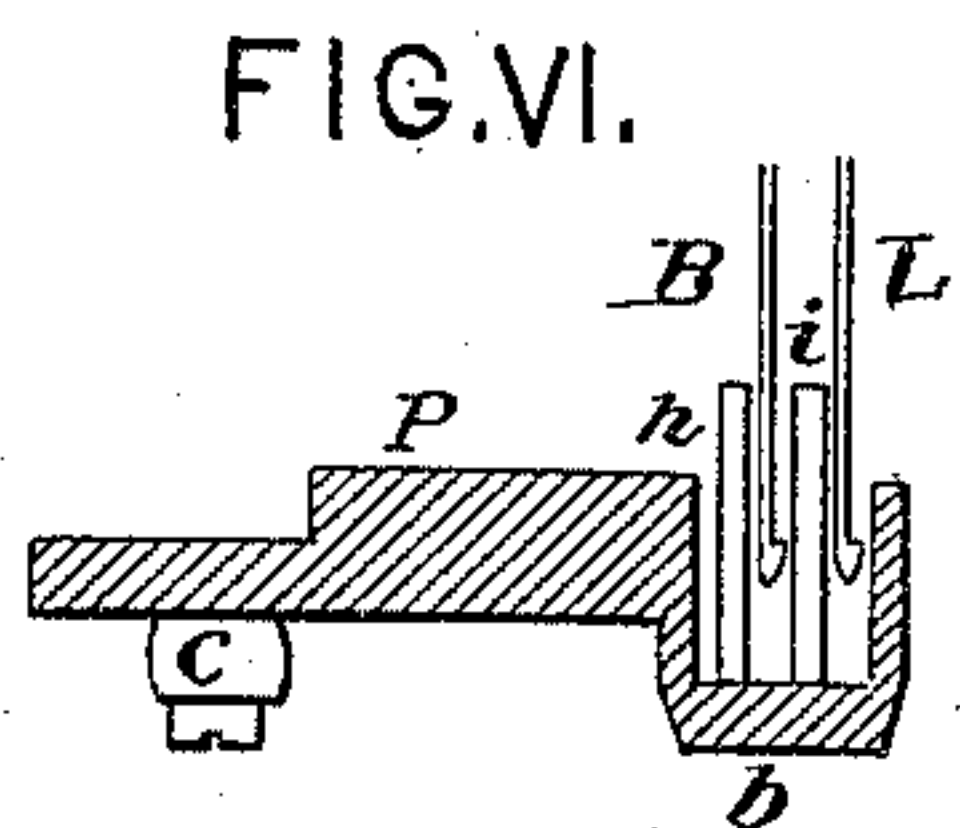


FIG. VI.

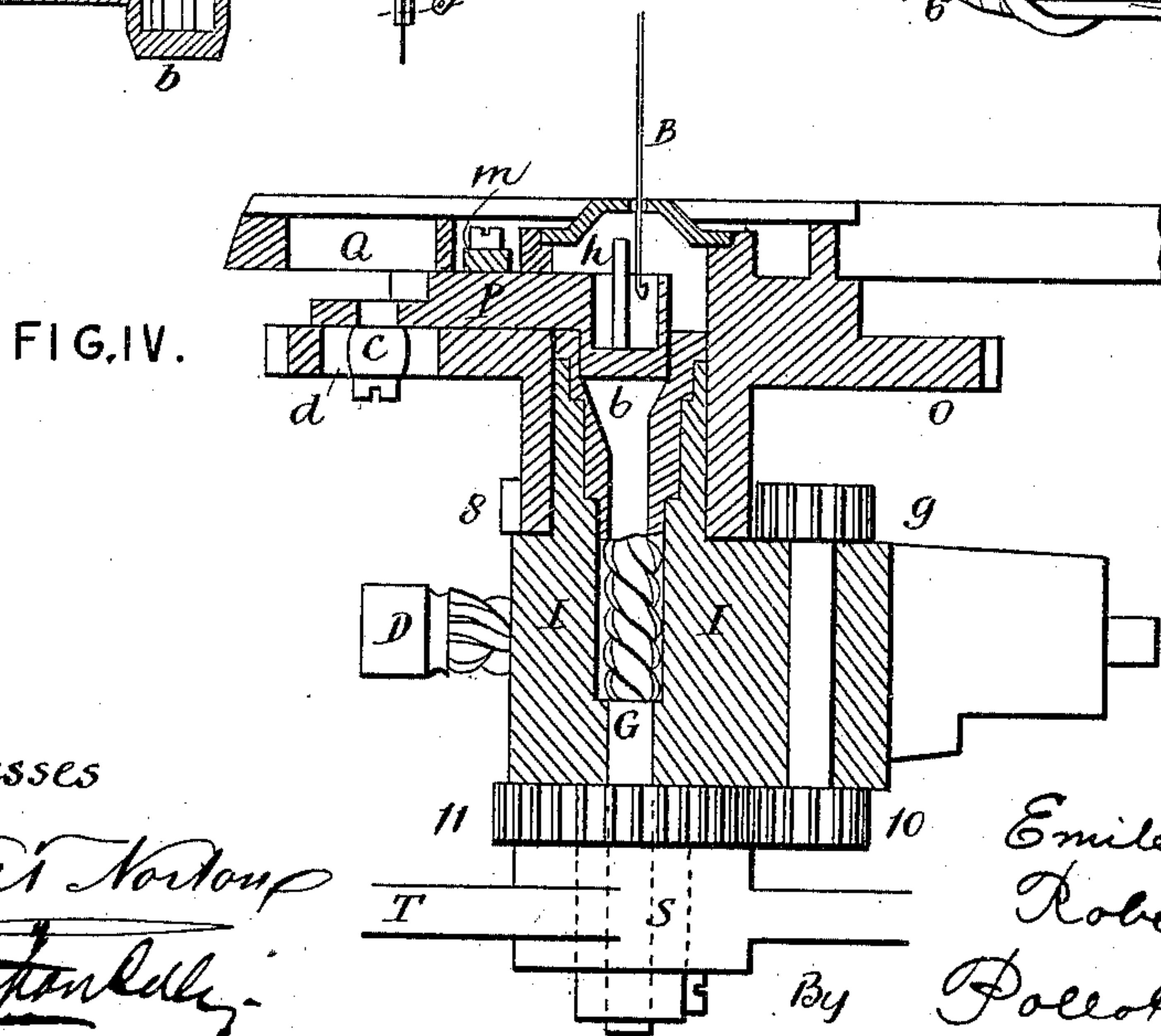


FIG. IV.

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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. 466,889, dated January 12, 1892.

Application filed July 2, 1891. Serial No. 398,243. (No model.)

To all whom it may concern:

Be it known that we, EMILE CORNELY and ROBERT CORNELY, residents of Paris, in the Republic of France, have invented new and useful Improvements in Embroidery-Machines, which are fully set forth in the following specification.

The invention will be described in connection with the accompanying drawings, in which—

Figure I is a side elevation of the improved machine, partly in vertical section. Fig. II is a vertical section through the nipple-tube. Fig. III is an elevation, partly in vertical section. Fig. IV is a vertical section showing the looper mechanism and connected parts. Figs. V and VI are details in plan and vertical section showing the looper mechanism, and Fig. VII is a view of the new embroidering-seam.

The present invention consists in the construction of the looper which lays its thread into the needle-hook and by means of which the machine can work either with one or with two needles, which latter can be employed at various distances one from the other. To obtain this result we employ a looper which works on the principle of the one shown and described in Letters Patent No. 392,010, of October 30, 1888, but of a different construction, as represented in Figs. IV, V, and VI.

The looper consists of the part P, which is provided with a looper-tube *h*, Fig. IV, when working in conjunction with a single needle B or with two looping-tubes, Fig. VI, when working in conjunction with two needles B and L. The looper-tubes *h* *i* by their oscillating motion lay their threads into the needle-hooks, as described in Patent 392,010. The part P plays in a groove of the wheel O, which can be turned by the crank-handle M through the gearing 4, 5, 6, 7, and R. The cylindrical part *b* of part P is fitted into a hole of the gear-shaft G, which hole is bored eccentrically into said gear-shaft, and by the oscillating motion of said gear-shaft the looper-tube *h* or the looper-tubes *h* *i* execute their proper movements for laying their threads respectively into the needle-hooks B or B and L, the part P being guided also by the friction-stud *c*, which plays in the slot *d* of wheel O, Fig. IV. The looper-tubes *h* *i*,

Fig. VI, can be employed at various distances one from the other to produce larger or smaller work, and for each case the distance of the holes in the nipple and in the stitching-plate must correspond with those of the looper-tubes. The part P is held in its place by the action of a semicircular bolt *m*, which can slide on the two studs 2 and 3, Fig. V. By turning the bolt *m* so that it will clear the part P the latter can be withdrawn easily when it is to be replaced by one of another kind, and by these means the machine can work with one or with two needles, and thus produce a great variety of work.

For working with two needles two thread-spools are required. They are set on the double spool-holder composed of the boss S and arms T U, which can be turned from the crank-handle M by means of the gearings 4 5 6 7 R O 8 9 10 11, Fig. I. The thread from bobbin K is passed into the revolving thread-carrier C, as described in our Letters Patent 405,147, dated June 11, 1889. For regulating its tension a thread-guide *k*, Fig. I, is employed. It is provided with several holes, through which the thread is passed to obtain the desired tension, or a tension V, Fig. II, may be employed, whose spring *u* acts as a take-up for the thread when such should be needed. Both devices are secured to the hub of the wheel W, to which the revolving thread-carrier C is also secured, and which is operated from the main shaft Y by the action of the pinions 47 and 48 and by an intermediate series of pinions, represented at Fig. I and shown and described in former patents. By loosening the pinion 47 it can be shifted out of gear from pinion 48, and the revolving motion of the thread-carrier C will thereby be stopped, and the machine will then only produce the simple chain-stitch; but although the said thread-carrier C may be uncoupled from the main shaft it still remains connected with the crank-handle M and can be turned by it, and this modification in the machine can be employed to produce a new ornamental seam in the following manner: By employing a thick thread or chenille *a*² on the spool K and on the thread-carrier C, Fig. III, and a similar thread or chenille *b*², which passes through the hollow needle-bar A, Fig. III, and through the nipple Z, and by then turning the crank-handle M rapidly during

the work the needle-hook will produce small circles of chain-stitch embroidery d^2 , Fig. VII, and the thread-carrier C will at the same time be turned so as to wind its thread a^2 once around the thread b^2 at each turn of the crank-handle M, and will thus produce the embroidery represented in Fig. VII, the two threads a^2 and b^2 being fastened to the material by means of the chain-stitch circles d^2 .
10 The effect of this embroidery can be varied according to the colors used and to the tension employed on the threads.

We claim—

1. In an embroidering-machine, the combination, with the needle or needles and with operating mechanism therefor, of an oscillatory looper-support having an eccentric recess, a looper provided with a thread tube or tubes and having a boss which fits in said
15 recess, said looper being removable from its support, and a holding plate or bolt for secur-

ing said looper in position while in operation, substantially as described.

2. In an embroidering-machine having a universal feed, the combination of a gear-
25 wheel connected with the crank-handle of the feed mechanism, an oscillatory looper-support inclosed by the hub of said wheel and having an eccentric recess, a removable looper comprising a cylindrical part which fits said recess and a lateral extension which slides in
30 a groove in the face of said wheel, and a bolt for holding the looper in position while in operation, substantially as described.

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

EMILE CORNELLY.

ROBERT CORNELLY.

Witnesses:

ROBT. M. HOOPER,
G. CHATEL.