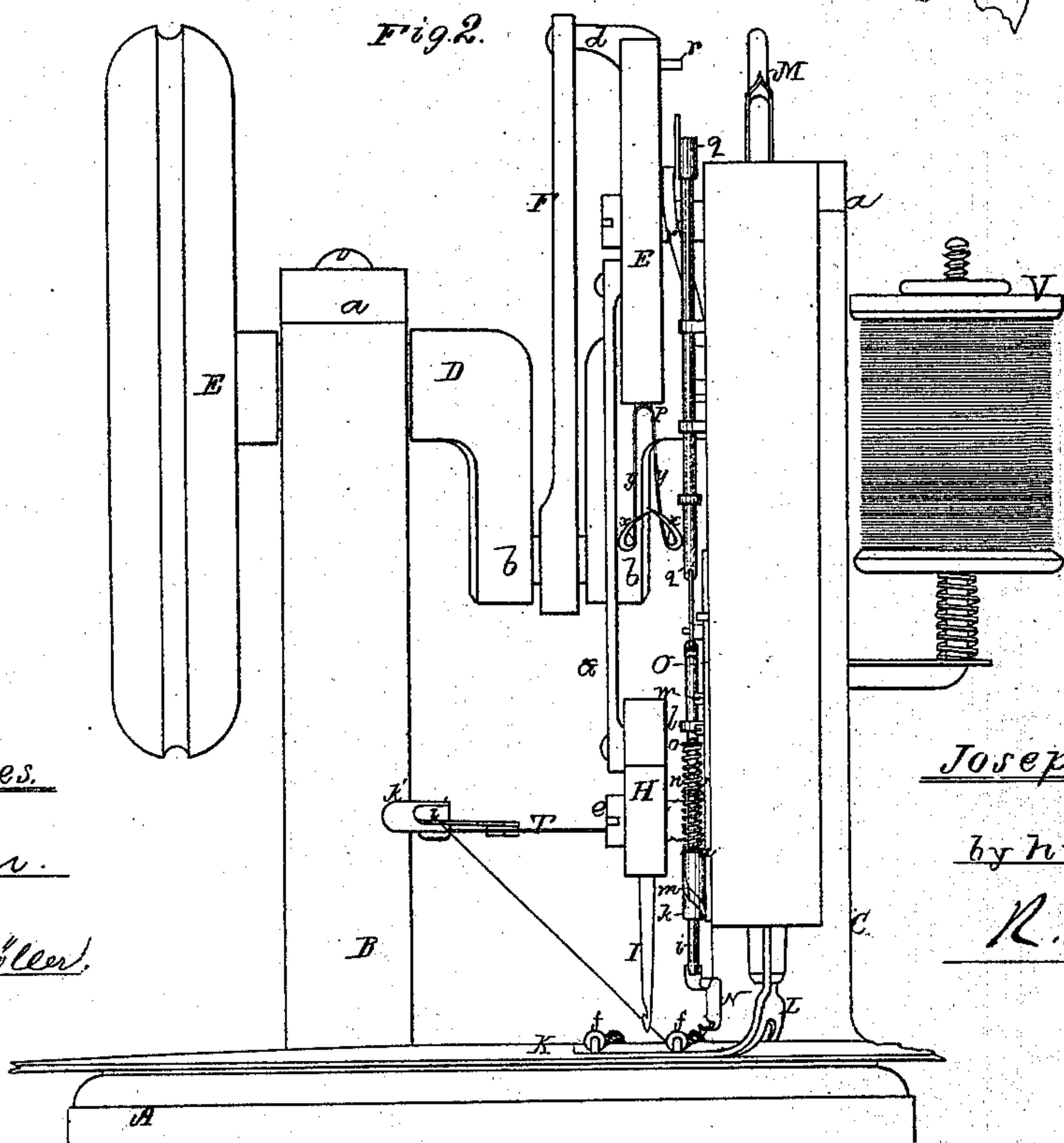
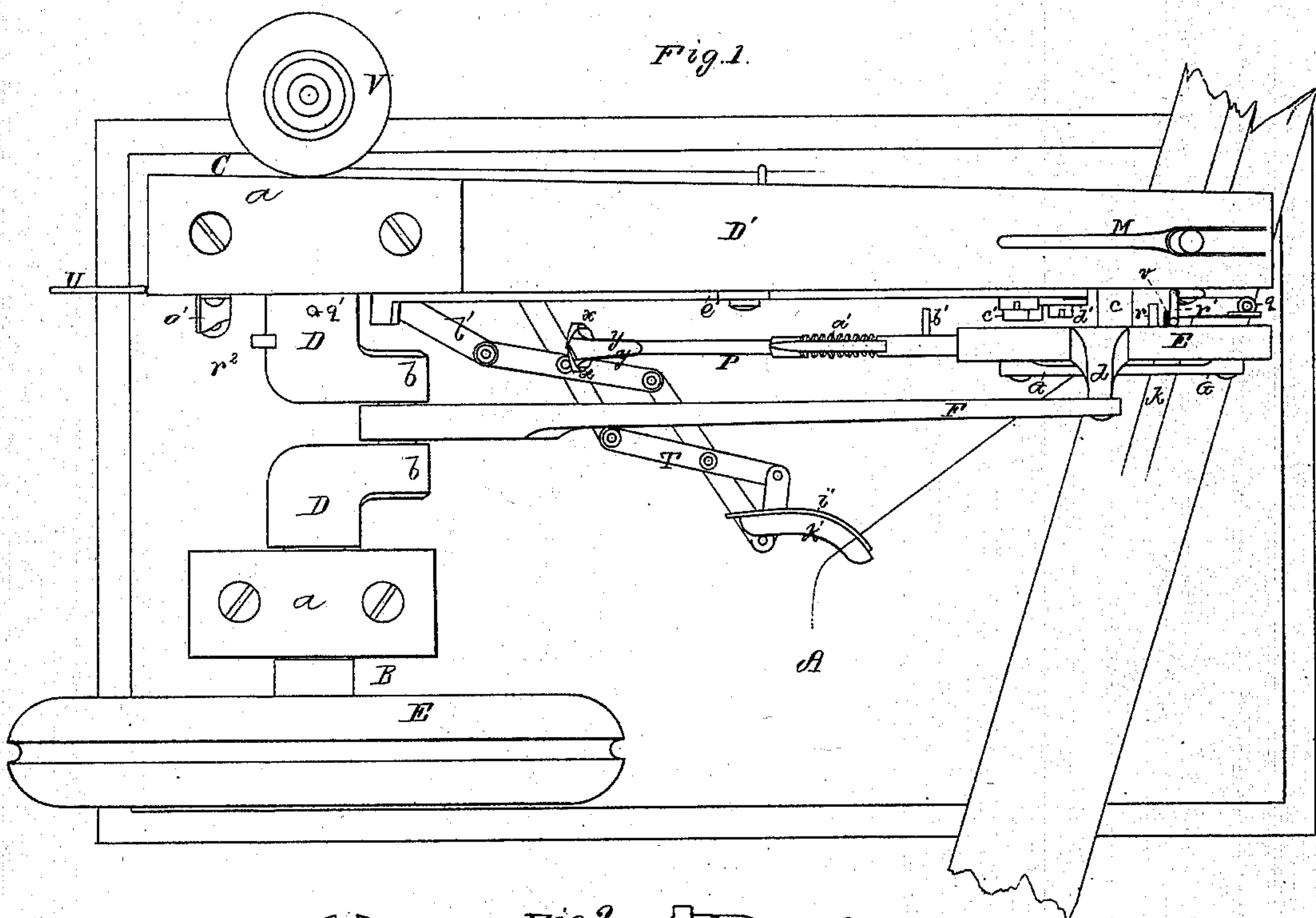


J. T. TOBEY.
Sewing-Machines.

No. 139,745.

Patented June 10, 1873.



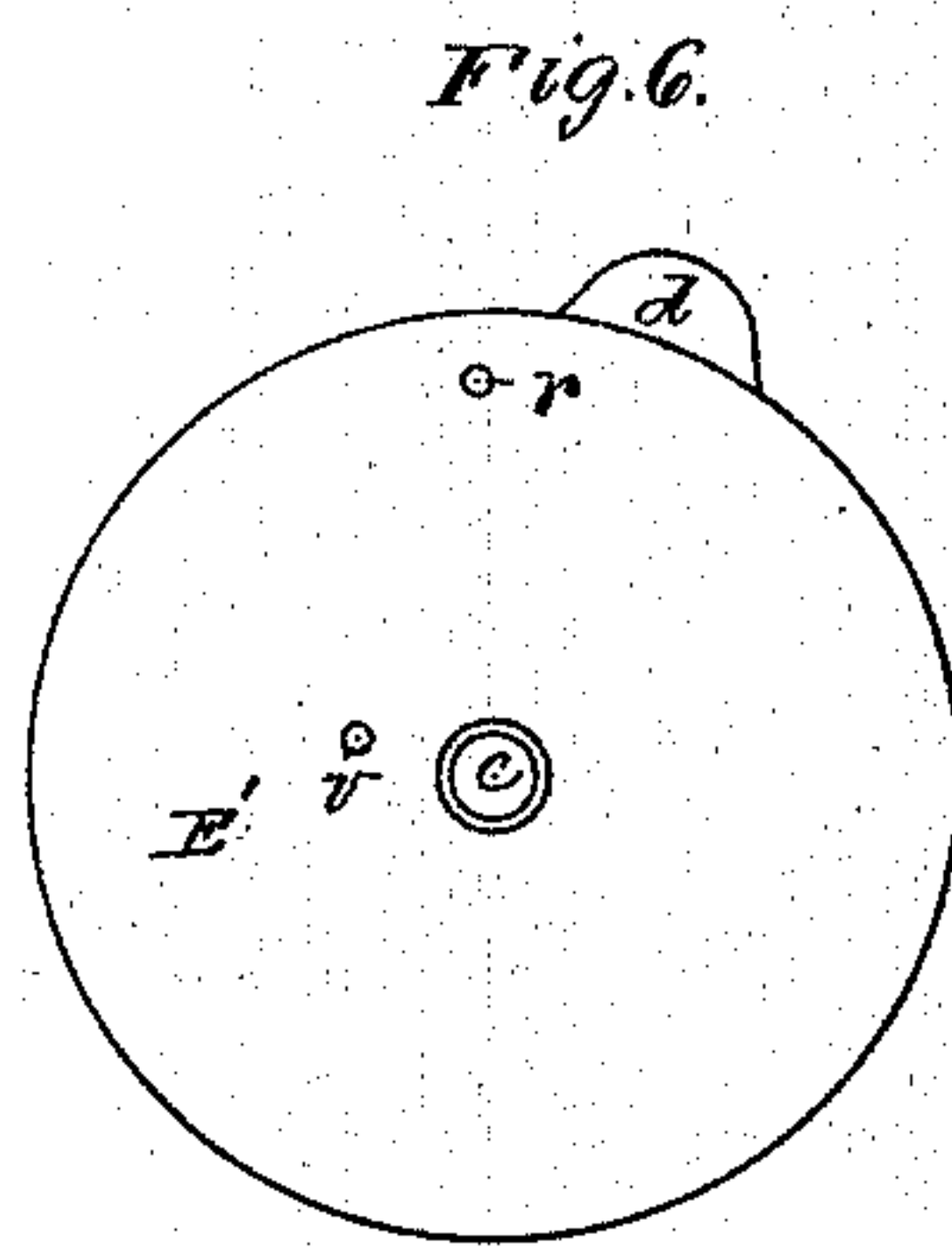
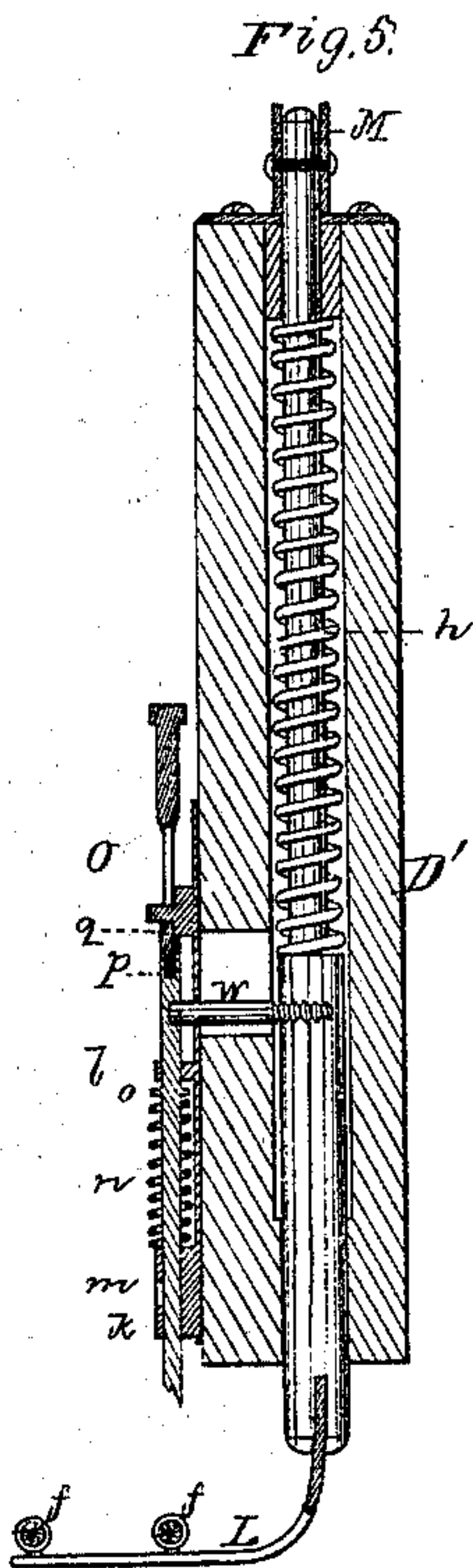
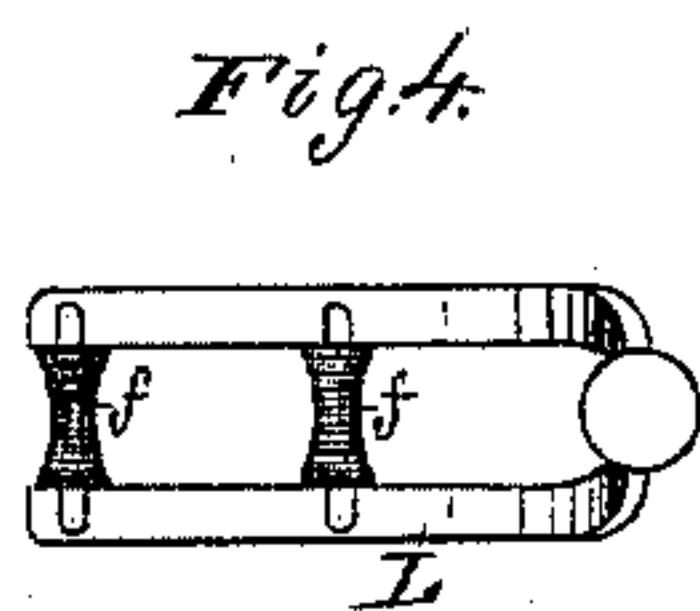
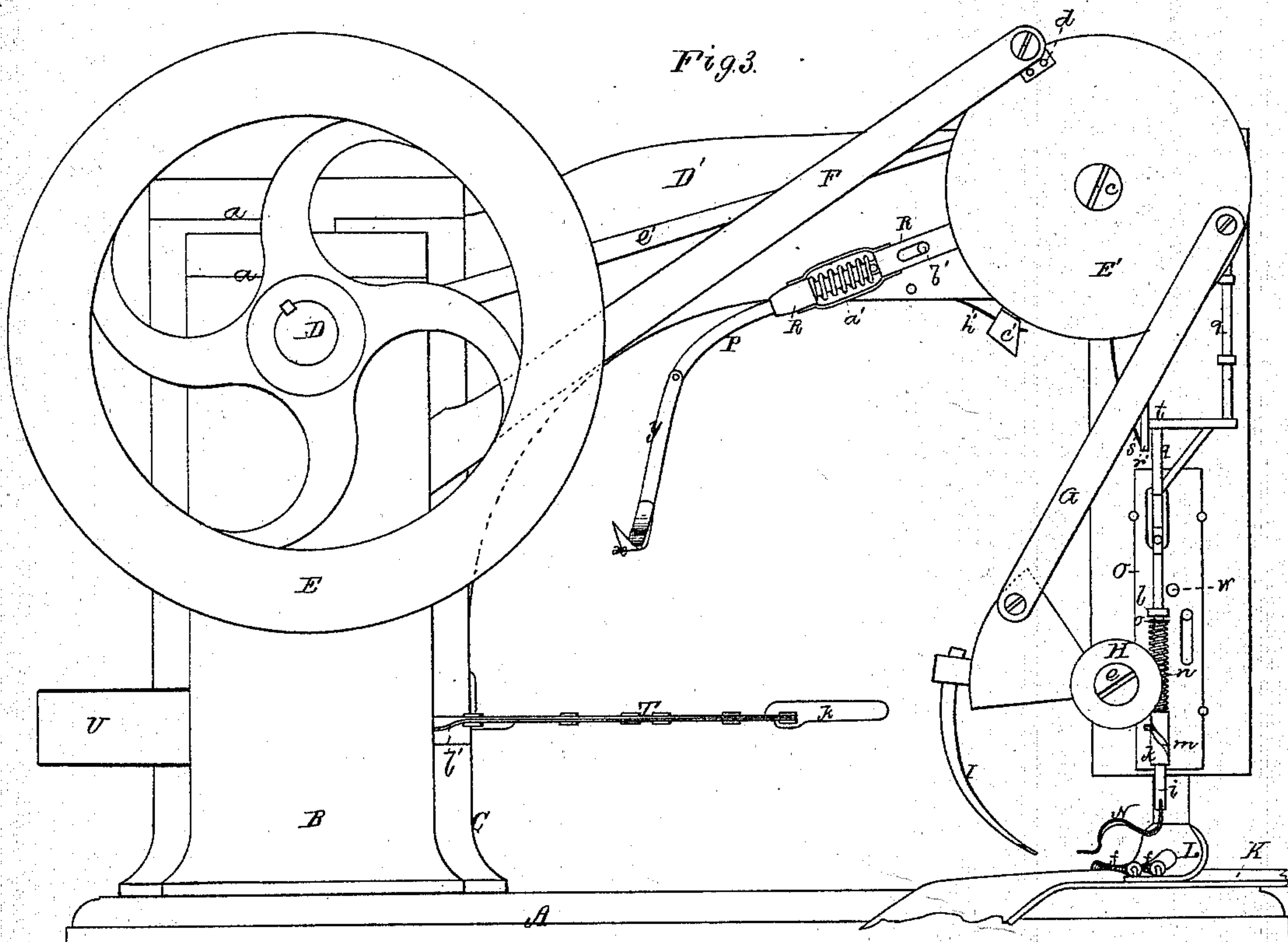
Witnesses.
S. N. Piper.
L. N. Moore.

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by his attorney.
R. H. Eady

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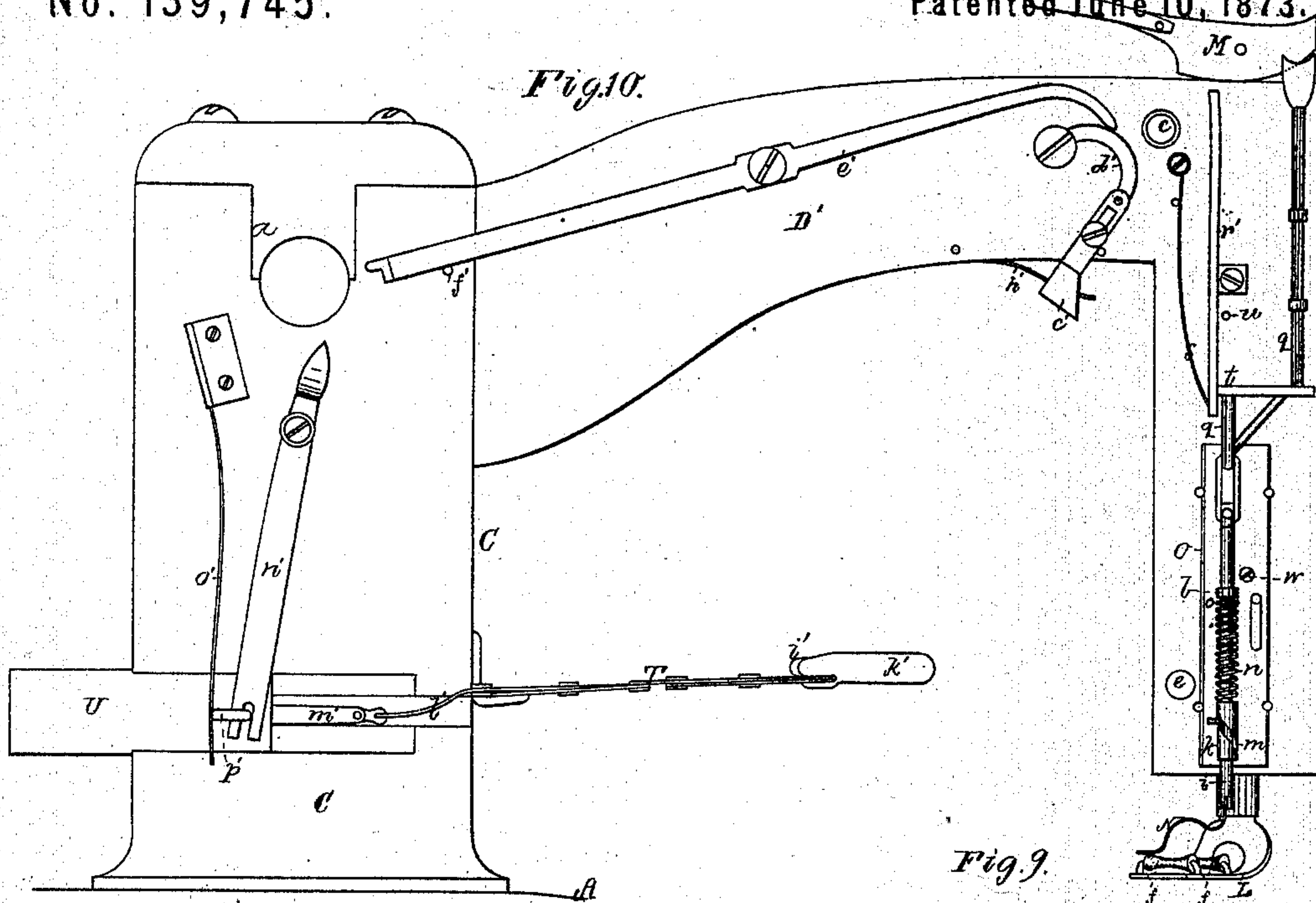


Fig. 9.

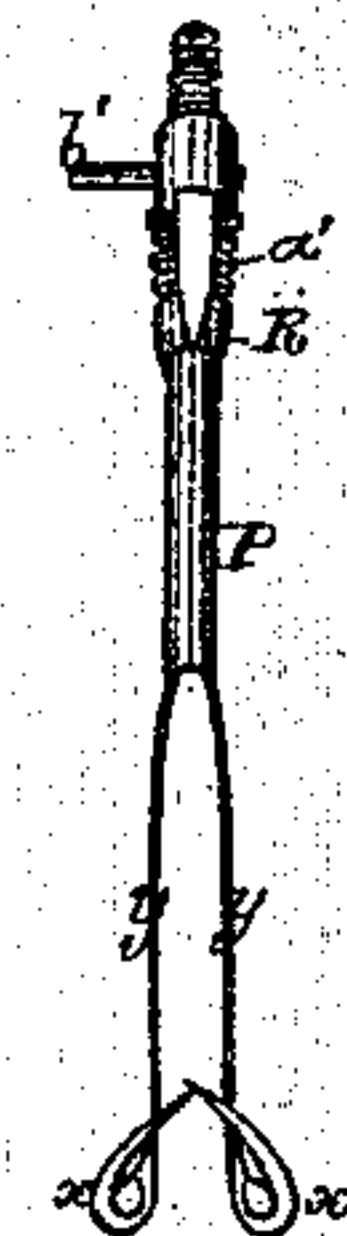


Fig. 7.

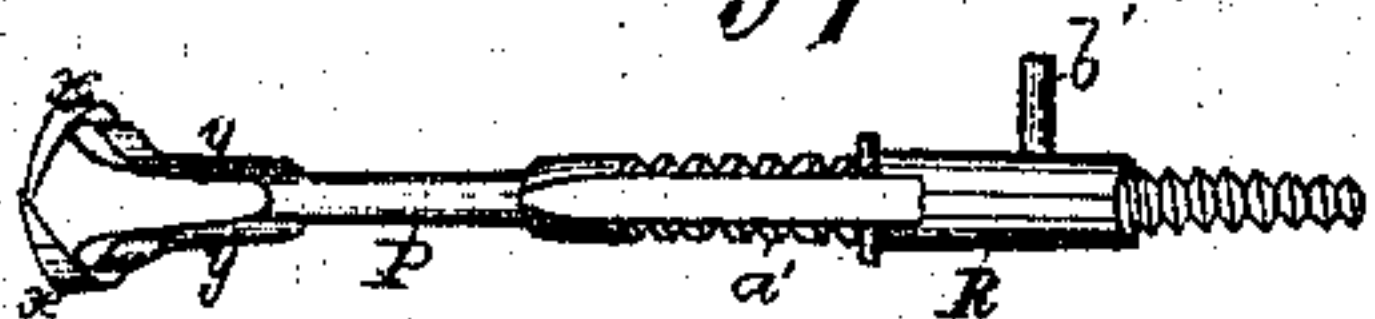


Fig. 8.

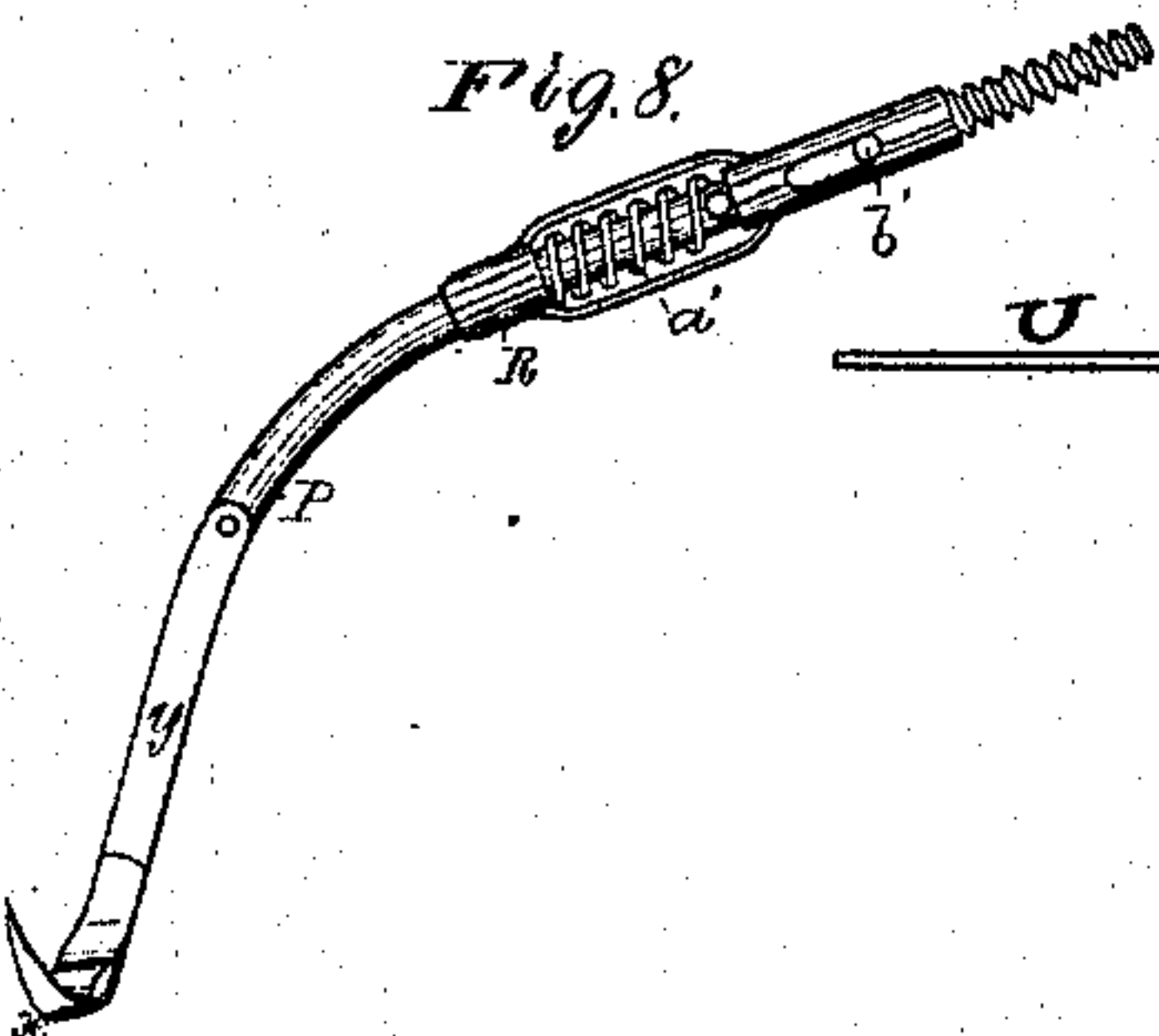
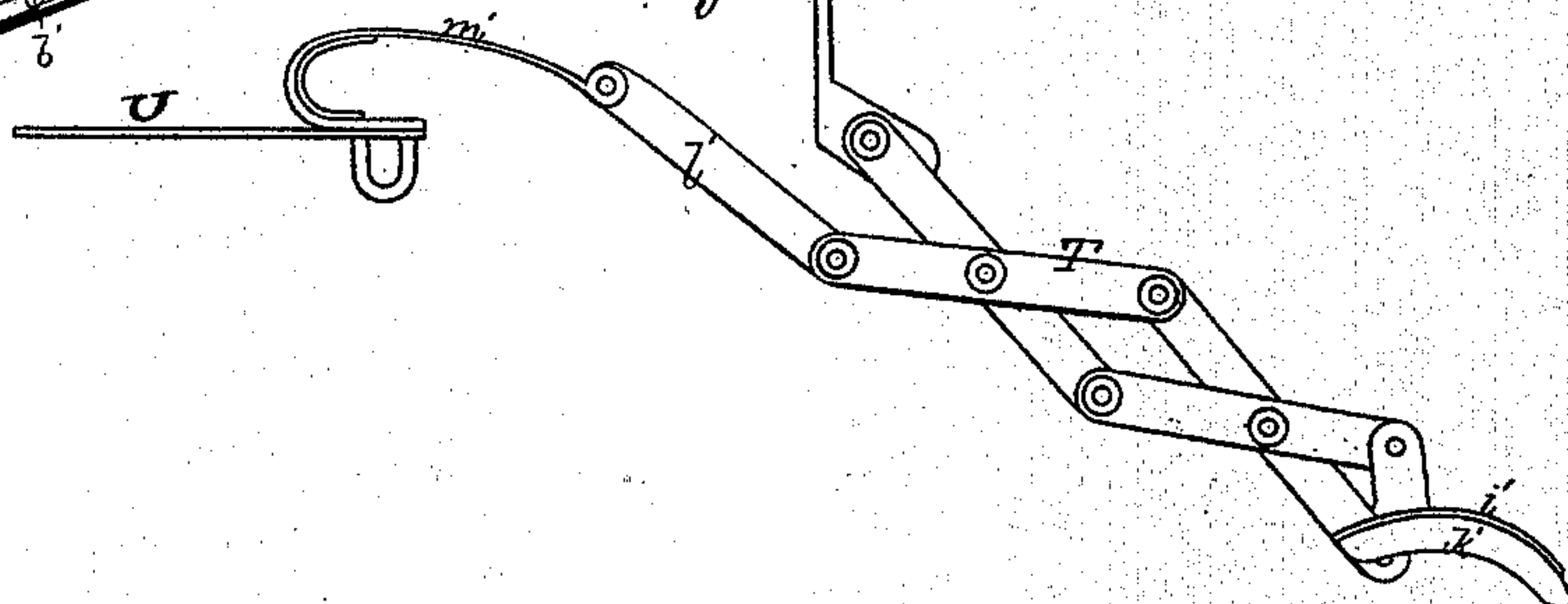


Fig. 11.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOSEPH T. TOBEY, OF HAVERHILL, MASSACHUSETTS.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **139,745**, dated June 10, 1873; application filed May 7, 1873.

To all whom it may concern:

Be it known that I, JOSEPH T. TOBEY, of Haverhill, of the county of Essex and State of Massachusetts, have invented a new and useful Machine for Overstitching; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view; Fig. 2 a front end elevation; and Fig. 3 a side elevation of it, the fly-wheel and its front sustaining-standard not being shown in this latter figure, in order to particularly exhibit the parts connected with the rear standard, or that from which the goose-neck projects.

Such other figures as may be necessary to the description of such machine are hereinafter referred to.

The machine is for the performance of what is termed in common parlance an "overstitch" or an "over-and-over stitch."

In the drawings, A denotes the bed or base-plate of the machine, it having two posts or standards, B C, erected upon it, they being for supporting in suitable boxes *a a* a bell-cranked shaft, D, carrying a driving-pulley or fly-wheel, E, as shown, the crank *b* of the shaft being between the standards. From the back standard C a "goose-neck" or bent arm D' projects over the bed A, such arm being formed as represented. From the upper part of the arm a pivot, *c*, extends and supports a cranked-wheel, E', which turns freely on the pivot, and has a crank, *d*, pivoted to a connecting-rod, F, jointed to the wrist of the bell-crank. While the latter is being revolved a reciprocating rotary motion will be imparted to the cranked wheel. To this crank-wheel another connecting-rod, G, is pivoted, and also to a rocker sector, H, supported, on a center-pin, *e*, projecting from the goose-neck. From this sector a curved and hooked needle, I, projects, in manner as shown, its path of movement being across a ledge or fillet, K, raised upon the bed or base-plate. A furcated presser, L, (whose foot is formed, as shown in top view in Fig. 4, and provided with two friction-rollers *f f*, arranged and shaped as represented,) spans the fillet K and has its shank extended up through the goose-neck, and provided with an elevating and stop lever M. Such presser

also has a spring, *h*, on its shank and within the goose-neck, the spring being to depress the presser upon the work. Fig. 5 is a vertical and transverse section of the goose-neck, its presser, and the said spring. A hooked and bent finger, N, serves to catch the thread and lay it across the needle in order that the latter, while being retracted, may seize the thread and draw it in the form of a loop through the work. The said finger N projects from a vertical shaft, *i*, supported in tubular guides *k l* projecting from a slide-plate, O, arranged, as shown, on the side of the goose-neck. The lower of the said guides has a helical groove, *m*, extending through it lengthwise to receive a stud projecting from the shaft *i*. A helical spring, *n*, encompasses and is fixed to the said shaft *i*, rests on the lower guide thereof, and at top is fixed to and bears against a shoulder, *o*, on the shaft, the purpose of said spring being to raise and revolve the shaft and its finger N at the proper times. At its top the shaft rests against a pivot, *p*, Fig. 5, situated at the lower end of a depresser, *q*, formed as represented, and applied to the goose-neck so as to slide vertically relatively thereto. A stud, *r*, extending from the crank-wheel E serves, when necessary, and through the rotary motion of the crank-wheel, to force downward the depresser *q* and cause it to correspondingly depress the shaft of the finger N. A lever-latch, *r'*, pivoted to the side of the goose-neck, and arranged as shown, has its lower arm resting against a spring, *s*. As soon as the finger N may have completed its advance, the lever-latch *r'* will be sprung forward over a shoulder, *t*, of the depresser, and will thus hold the finger from rising and also at rest, while the needle may be drawing the thread away from the finger. During such time the lower arm of the lever-latch rests against a stud, *u*, extending from the goose-neck. When the finger is to next move in order to again hook the thread and lay it across the needle, a stud, *v*, projecting from the crank-wheel will be moved against the upper arm of the lever-latch, so as to move such latch off the depresser, whereby such depresser, with the finger, will ascend, and the finger will be revolved backward. Fig. 6 is a rear view of the crank-wheel. In order

that the finger N may be elevated simultaneously with the presser the plate O is connected with the shank of the latter by a stud, *w*, which extends from the said shank through the slide-plate, the goose-neck back of the plate being suitably slotted or cut out to admit of the vertical motions of the stud *w*. After the needle may have drawn a loop of thread through the work such loop will be seized and abstracted from the needle by what I term the loop-seizer P. The said loop-seizer P may have at its lower end a single hook, *x*, provided with a tension spring or jaw *y*, or it may have two such hooks and jaws, arranged as shown, particularly in Fig. 7, which is a top view; Fig. 8, a side view; and Fig. 9, a rear view of the loop-seizer. This loop-seizer, forked at its lower part, has its shank extended into and supported by a tubular arm, R, projecting radially from the periphery of the wheel E. A helical spring, *a'*, arranged within the arm, serves to raise the loop-seizer shank within the arm. From the upper part of the said shank a stud, *b'*, extends toward the goose-neck. After the needle may have been retracted the loop-seizer will be moved down across the needle and over the loop of thread and below the needle, so that during the next or backward movement of the seizer it will hook upon the loop and draw it off the needle, and pass clear of the needle and pull the thread entirely through and closely into the work. In order to depress the loop-seizer so as to cause it to enter the loop, so as to catch it and properly escape by the needle, the stud *b'* is brought against and moved by a lever-dog, *c'*, arranged as shown, particularly in Fig. 10, which is a side view of the goose-neck, and the mechanism directly connected with it. The dog, where pivoted to the goose-neck, is slotted so as to be capable of being moved up and down. Such dog is jointed to a curved arm, *d'*, also pivoted to the goose-neck. A lever, *e'*, also pivoted to the goose-neck, as shown, has its front arm resting on the arm *d'*, the rear arm of the lever *e'* being supported on a stud, *f'*. At the proper time a stud or wiper, *g'*, projecting from the cranked shaft D comes against and trips the lever so as to cause the dog to be brought into the right position for depressing the loop-seizer, and also to move the dog downward against the stud at the top of the loop-seizer, so as to effect the necessary depression of the latter. A spring, *h'*, fixed to the goose-neck and bear-

ing against a stud extended from the dog, serves to raise the dog at the proper time.

The next part of the machine to be described is the mechanism for taking the thread from the loop-seizer, and holding it in a proper position to be caught by the finger preparatory to the thread being laid upon the needle by the finger. This mechanism consists in part of a "lazy-tongs," T, provided with jaws *i'* *k'*, arranged as shown. One back lever of the lazy-tongs is pivoted to the post C. The other back lever is pivoted to a link or connection-bar, *l'*, that in turn is jointed to an arm, *m'*, projecting back from a slide, U, arranged to move horizontally against the post. Fig. 11 is a top view of the lazy-tongs and the said slide U. To this slide the foot of a lever, *m'*, is applied, the lever being arranged as shown, and pivoted to the post. A spring, *o'*, fixed to the post, bears against a staple, *p'*, extended from the slide and through the forked lower arm of the lever. A long curved cam, *r'*, projecting from the driving-shaft, serves to actuate the lever so as to effect retraction of the slide and its maintenance at rest during the proper time. From a spool, V, arranged as shown, the thread is to be taken in short pieces, each of the suitable length to be operated by the machine.

I have not represented my mechanism for feeding the work along as may be necessary to cause the needle and other parts, as described, to perform a series of stitches.

After the formation of a stitch the work is to be advanced the necessary distance for the next stitch. The fillet projects in opposite directions from the feeder-opening of the bed-plate, and there is to be a corresponding fillet on the top of the feeder, and in range with the fillet or fillets of the bed-plate. These fillets raise the work so as to enable the needle to pass into and through it, the work being bent over the fillet or fillets by the presser.

In the said machine I claim as my invention as follows, viz.:

The combination of the curved and hooked needle I, the hooked finger N, the furcated presser L, the loop-seizer P, and the lazy-tongs T, all arranged and operated substantially as specified.

JOSEPH T. TOBEY.

Witnesses:

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J. R. SNOW.