

No. 711,171.

Patented Oct. 14, 1902.

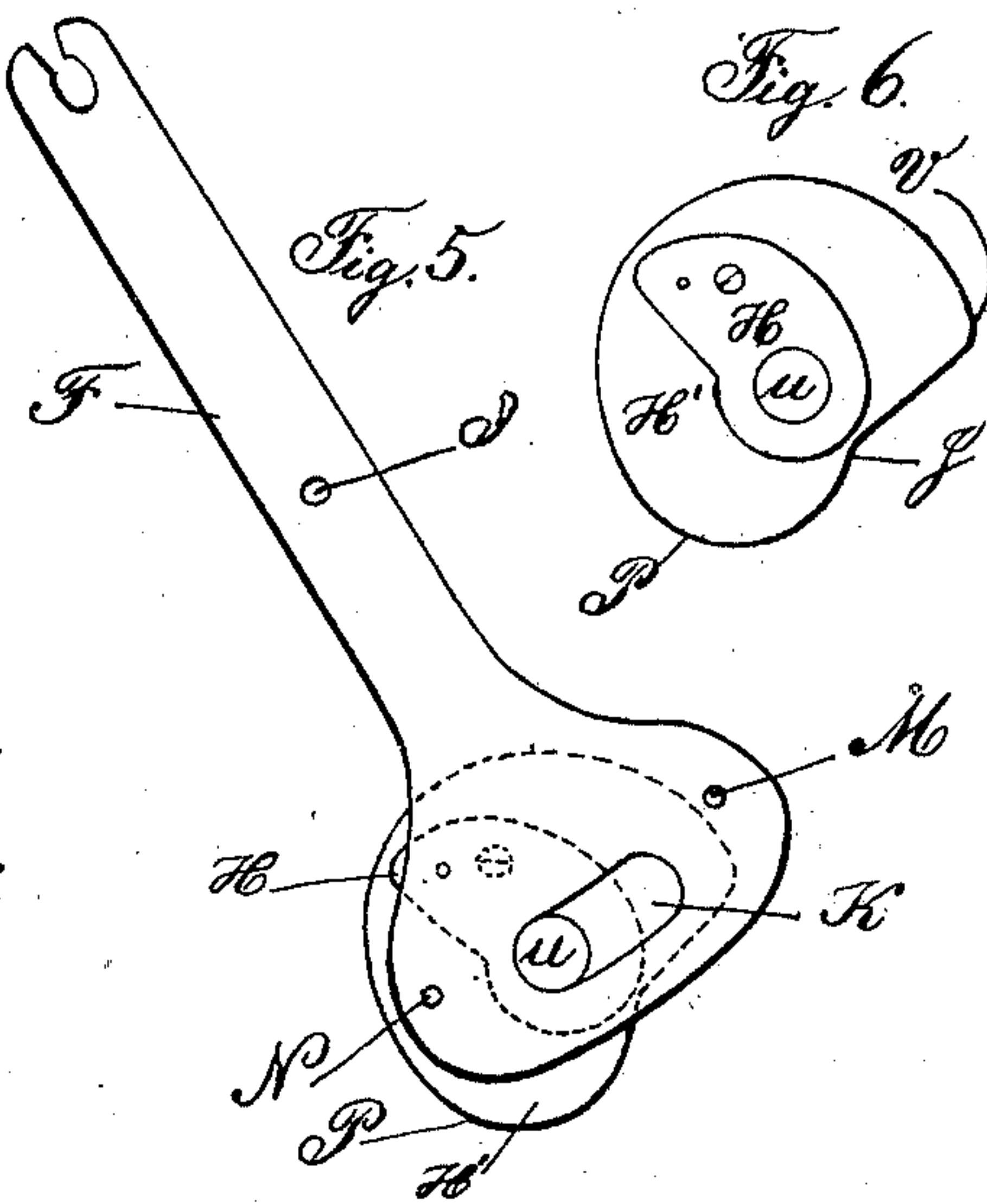
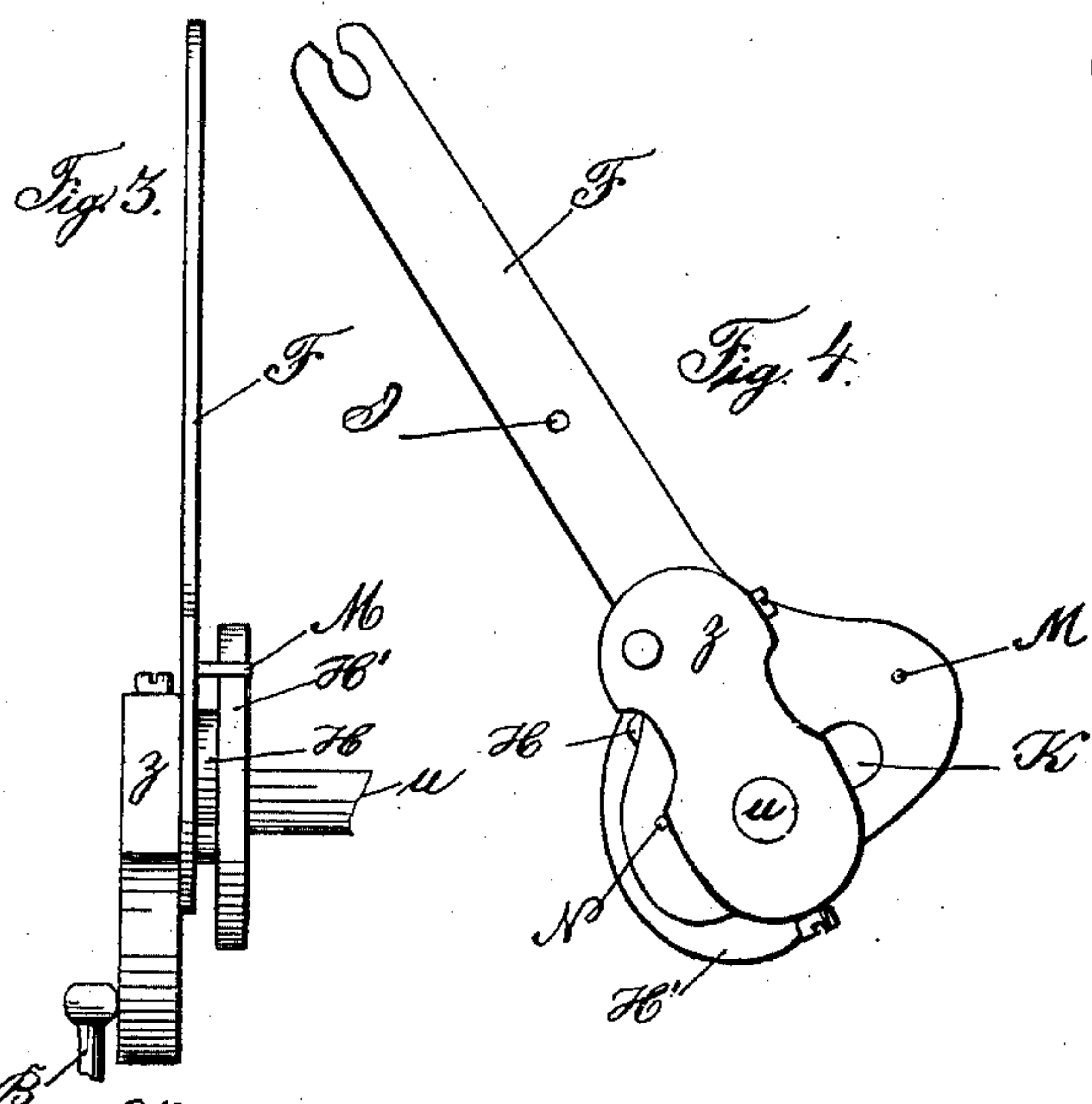
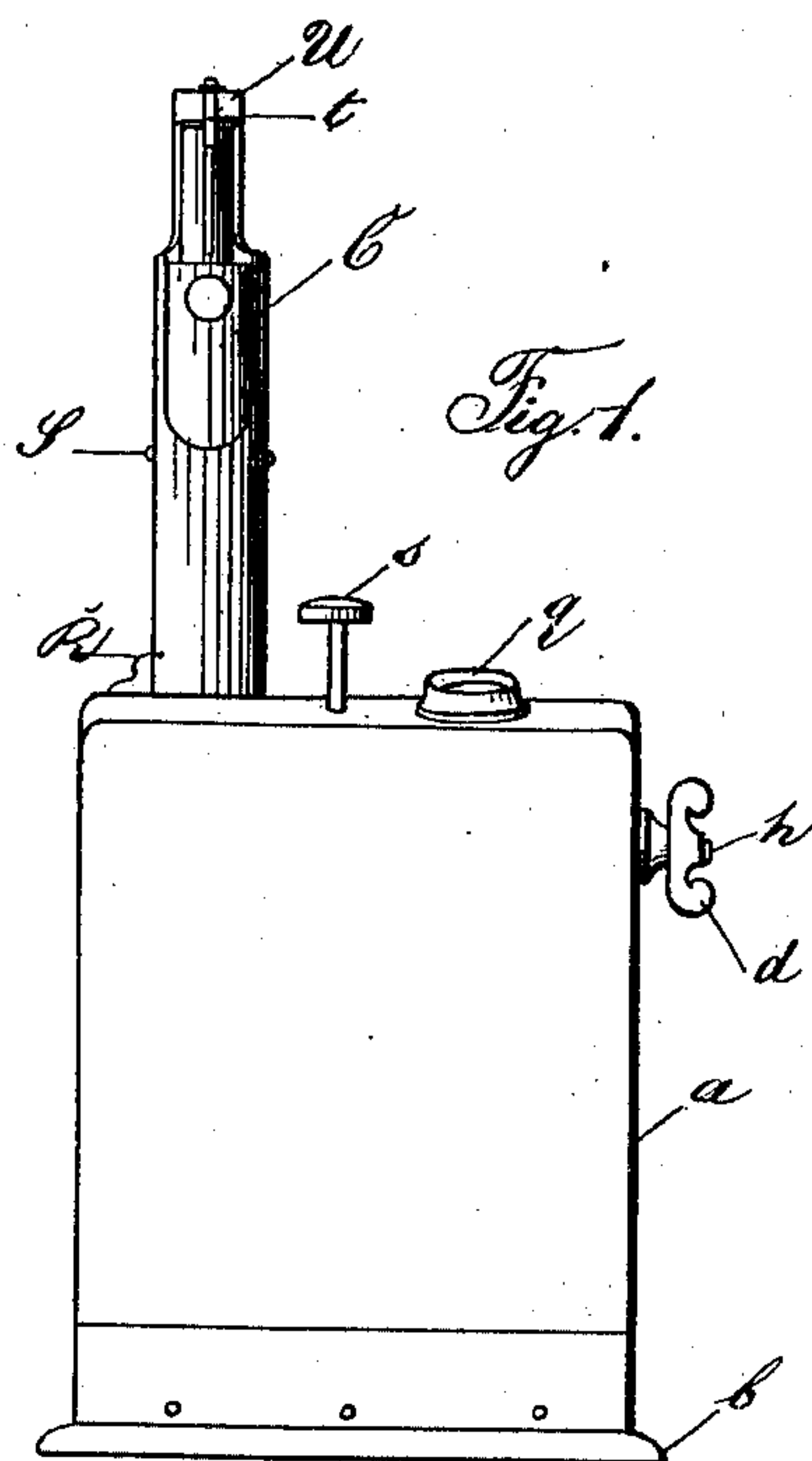
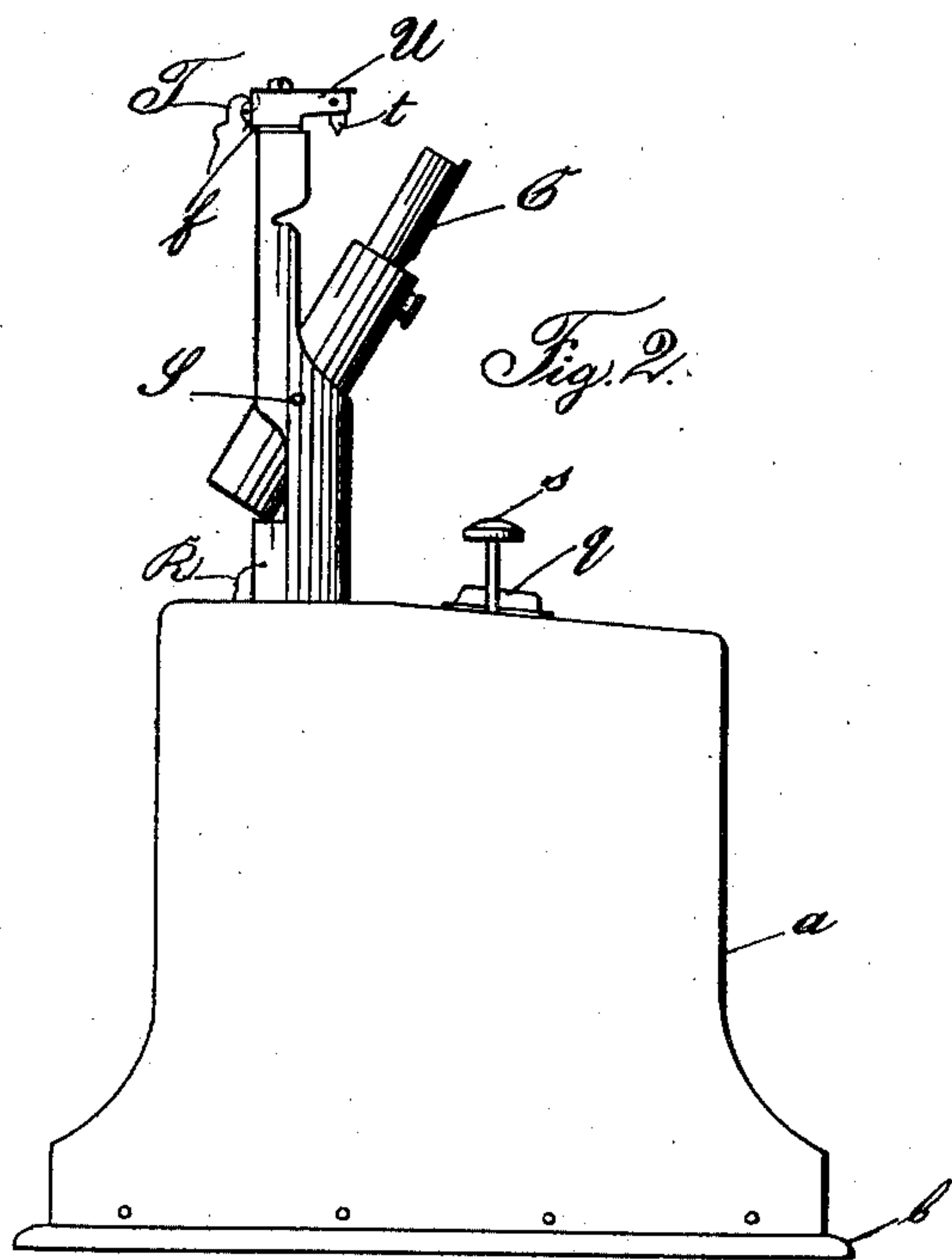
F. L. MILLER.

COMBINED CIGAR TIP CUTTER AND LIGHTER.

(Application filed Jan. 17, 1902.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:  
Roy P. Clark  
Geo. Sharf

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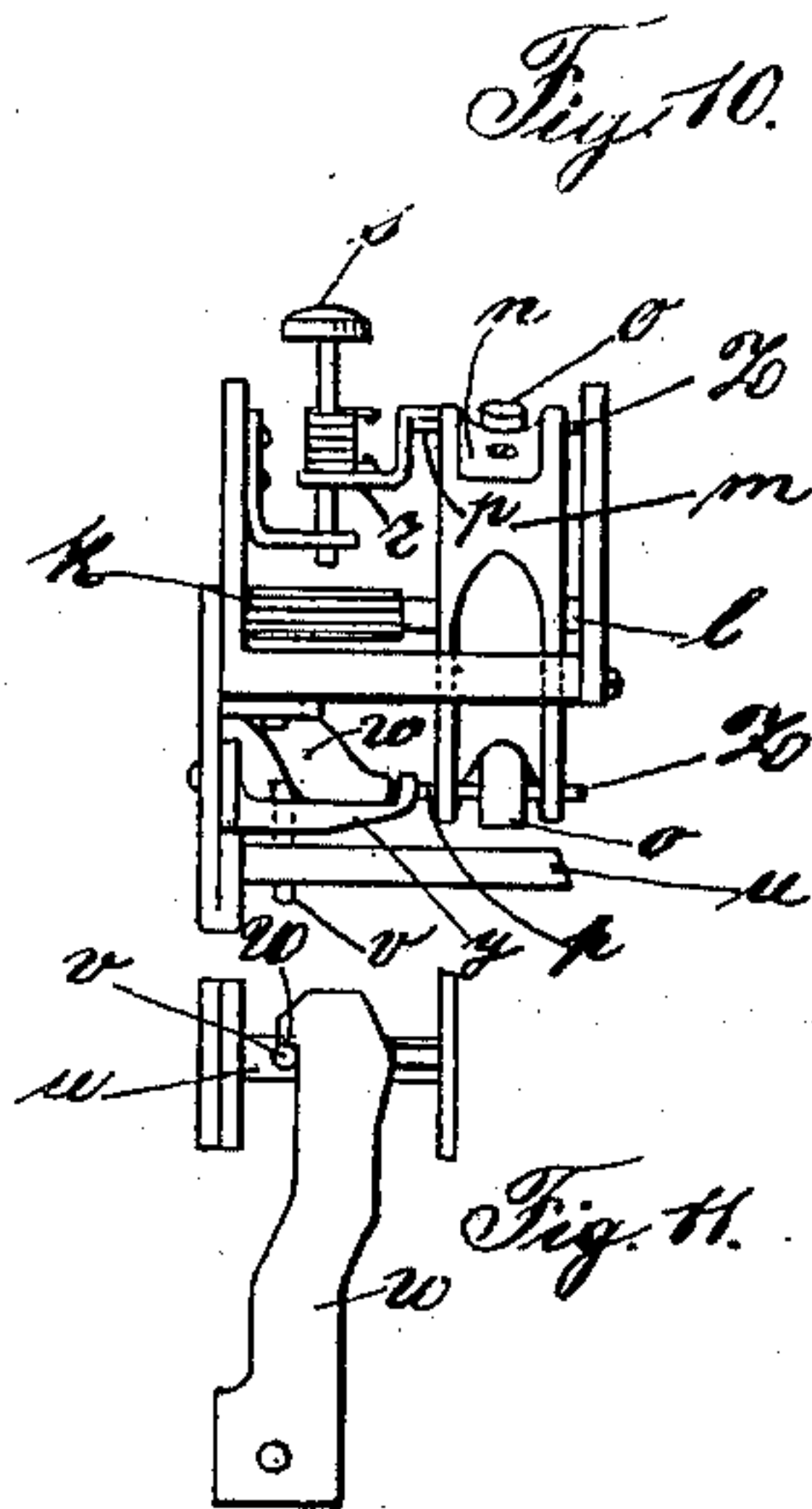
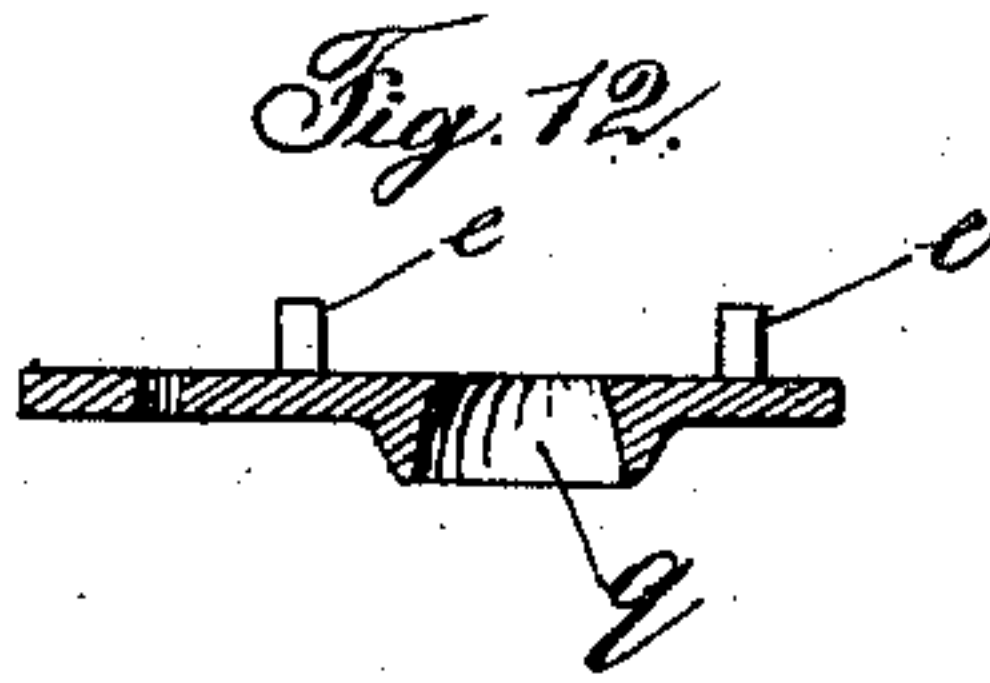
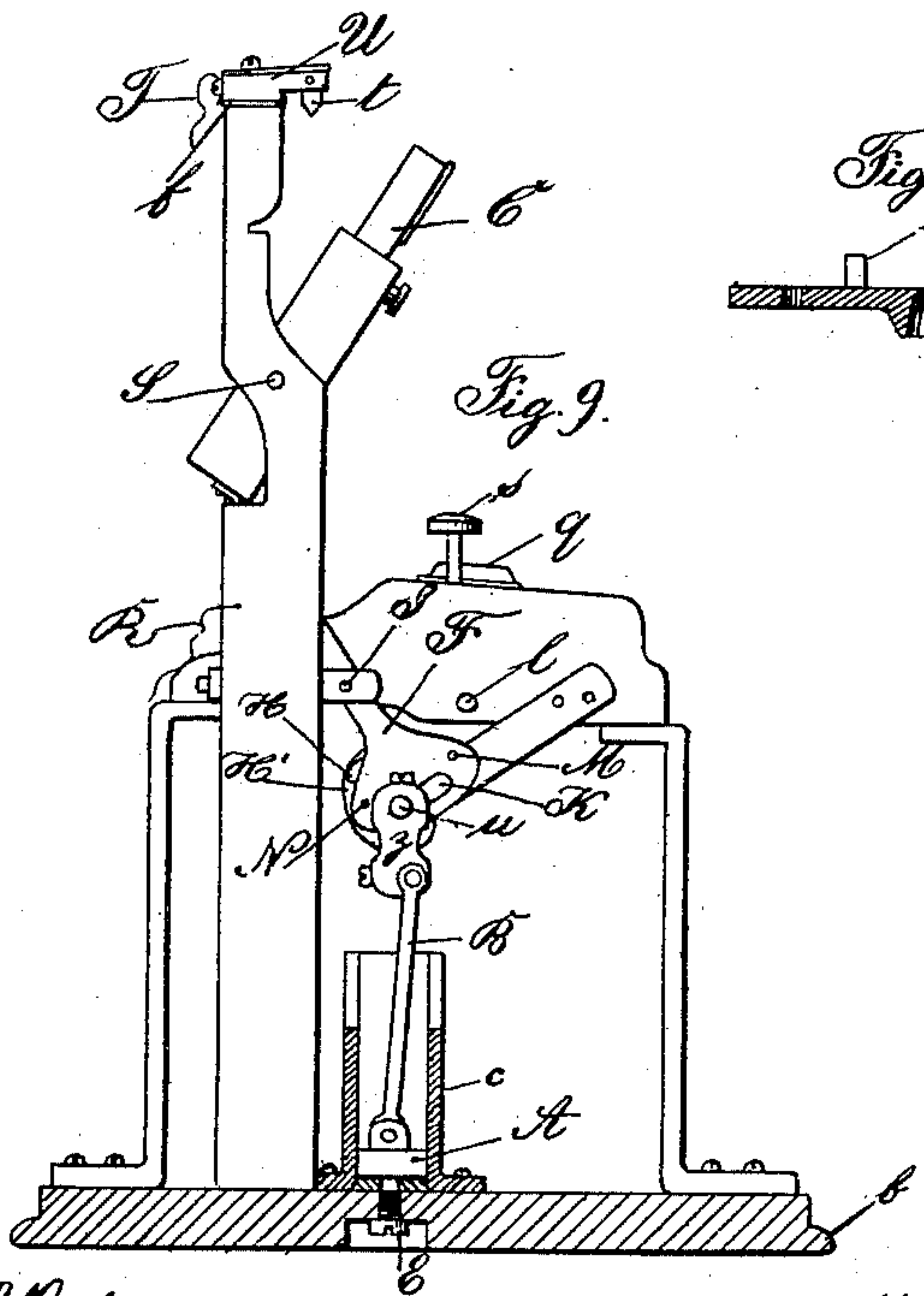
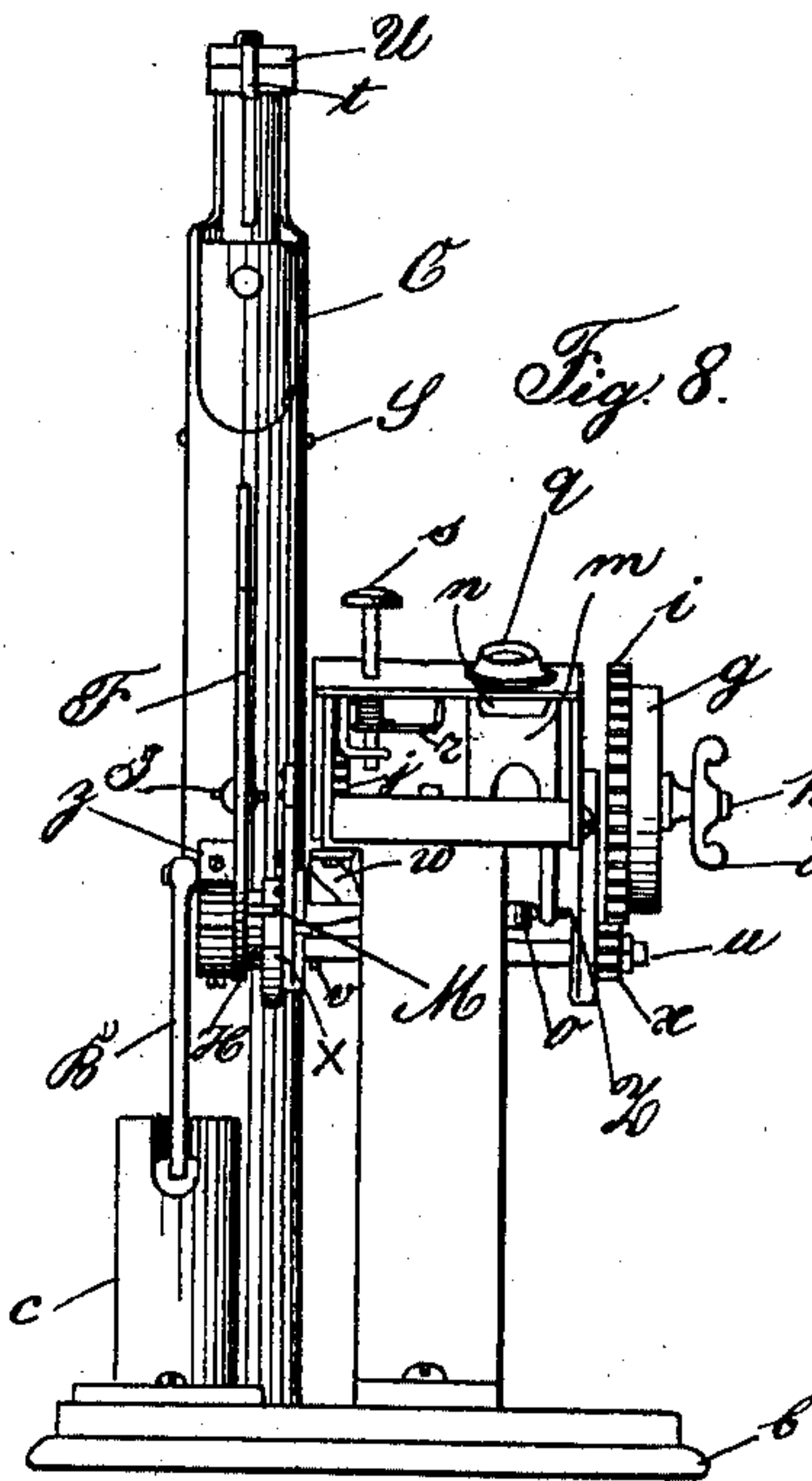
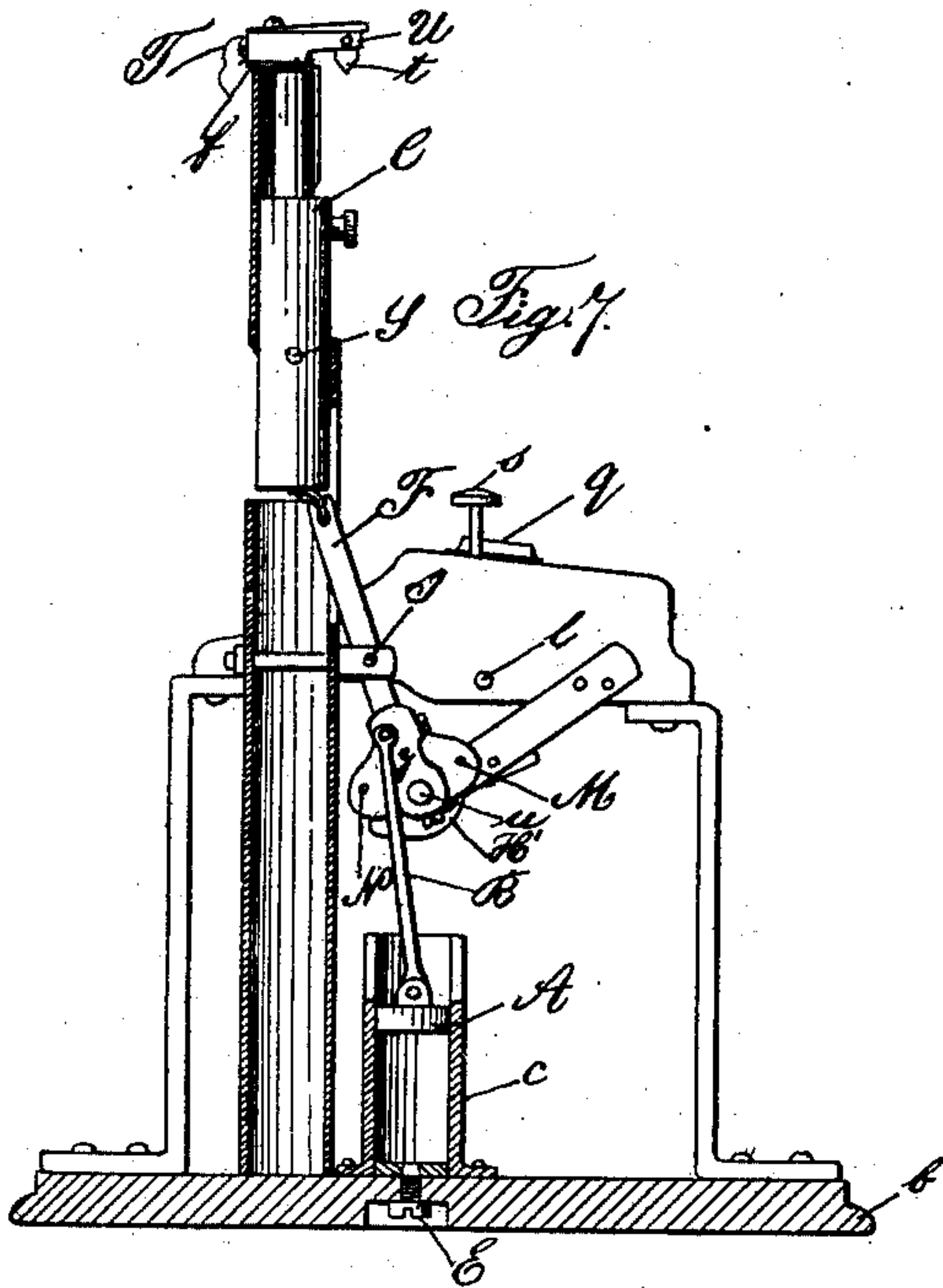
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(No Model.)

2 Sheets—Sheet 2.



Witnesses:  
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Roy P. Clark

Inventor:  
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# UNITED STATES PATENT OFFICE.

FREDERICK LEONARD MILLER, OF DES MOINES, IOWA.

## COMBINED CIGAR TIP-CUTTER AND LIGHTER.

SPECIFICATION forming part of Letters Patent No. 711,171, dated October 14, 1902.

Application filed January 17, 1902. Serial No. 90,124. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK LEONARD MILLER, of Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Machine for Cutting and Lighting Cigars; and I do hereby declare that the following is a clear, full, and exact description of the same.

My invention relates to improvements in combined cigar cutters and lighters.

The objects of my invention are to provide a machine into which the tip of a cigar may be inserted, the tip cut off, and at the same time a light with which to light the cigar is produced from a wick by means of an electric spark and is extinguished by the action of the machine when the cigar has been lighted, and provide a light for lighting cigars by pressing a button independently of the cigar-tip-cutting part of the machine.

The construction of my machine, together with the mode of operating it, is shown in the drawings hereinafter described.

Referring to the accompanying drawings, Figure 1 is a front view of the machine at rest. Fig. 2 is a left side view of the machine in the position for lighting a cigar. Fig. 3 is a front view of the two cams, lever, crank, and shaft when the machine is in a position for lighting a cigar. Fig. 4 is a side view of the same. Fig. 5 is the same as Fig. 4 with the crank detached. Fig. 6 is a side view of the two cams. Fig. 7 shows a vertical sectional view of the complete machine with cover removed, taken in a line through the torch-support and dash-pot. Fig. 8 is a front view of the machine at rest with the cover removed. Fig. 9 shows a left side view of the machine in a position for lighting a cigar, the cover being removed, and also a vertical section of the dash-pot. Fig. 10 shows a detail front view of cutting-knives and attached parts, illustrating particularly the trip for releasing the lighting mechanism and also the push-button for releasing the said trip. Fig. 11 is a detail top view of the trip which holds or releases the mechanism operating the lighting apparatus. Fig. 12 is a sectional view of the cover through the hole into which a cigar is inserted and also showing the stops for holding the cutting mechanism.

Referring to the accompanying drawings, *a* is the cover of the machine, and *b* the base.

*g* is a spring-box containing a convolute spring, the inner end of which is attached to the shaft *h* and the other end to the inside of the cover of the spring-box. The spring is not shown in the accompanying drawings; but it is of such well-known and common construction that it seems unnecessary. The said spring is wound by turning the crank *d*, and the power stored in the spring turns the shaft *h* to the left and the cog-wheel *i*, attached to the spring-box *g*, to the right.

The cog-wheel *j* is attached to the shaft *h* and works on the cog-wheel *k*, attached to the shaft *l*, turning said shaft *l* to the right. The disk *m*, fitted with the two knives *n*, is attached to the shaft *l*. The two buttons *o*, also attached to the disk *m*, have two lateral arms *p* and *Z*. The arms of the button *o* which happen to be uppermost strike the projections *e* on the under side of the cover and are held by said projections in such a position that the button *o* is directly under the opening *q* in the cover. The disk *m* revolves to the right. When the tip of a cigar is thrust into the opening *q*, it presses down the button *o*, so that the arms *p* and *Z* are free from the projections *e* of the cover and the shaft *l* revolves. One of the knives *n*, passing directly under the opening *q*, into which the cigar is inserted, cuts off the tip, and the arms of the button *o*, striking the cover projections *e*, stop the shaft *l* and hold it from turning till the button *o* is again pressed down. This is a well-known device in common use, and on it I claim no invention.

*U* is a cap or hood into which the top of the torch *C* fits when the machine is at rest. The cap *U* is insulated from the rest of the machine by the insulation *f*. One terminal of an electric circuit is connected at *T* with the cap *U*. The other terminal is connected with the frame at *R*. The electric contact-point *t* is pivotally attached to the cap *U*. The torch *C* oscillates on the pin *S*. When the top of said torch *C* is pulled forward, the electric contact-point *t* touches it and completes an electric circuit which is broken and a spark formed with which the wick in the torch is ignited when the contact



is broken. When the top of the torch C is pushed back, it fits under the cap U and the flame is extinguished. This mechanism is of common construction, and on it I do not claim

5 any invention.

I will now describe the mechanism by which the movement of the disk *m* will automatically actuate the lighter. The cog-wheel *i*, revolving to the right, works on the cog-wheel  
10 X, which latter is attached to the shaft *u*. Hence the shaft revolves to the left. Into the shaft *u* is fitted the pin *v*. The trip *w* is pivotally attached to the frame of the machine, so that it will oscillate on the guide *y*.  
15 When the disk *m* is at rest, the arm *p* is against the trip *w*, holding the latter over, so that the pin *v* will catch on the notch W of the trip *w*. The pin *v*, and consequently the shaft *u*, is held so long as the arm *p* is  
20 against the trip *w*; but when the disk *m* revolves the support of the arm *p* is taken away from the trip *w* and the latter flies back, setting the pin *v* free to revolve. As the disk *m* stops the arm *p* strikes the trip *w* and presses  
25 it over, so that the pin *v* will again catch the notch W.

To the shaft *u* is attached the crank *z*. When the pin *v* is released by the trip *w*, the crank *z* will revolve to the left. The connecting-rod B connects the crank *z* and the  
30 piston A in the dash-pot *c*. The purpose of the piston and dash-pot is to control the speed of the shaft *u*, which control is effected by the screw E in the air-vent in the base of the dash-pot *c*. The lever F is fulcrumed at I  
35 to the frame of the machine. The upper part of the lever F is attached to the base of the torch C. In the lower end of the lever F is the slot K. The shaft *u* passes through  
40 the slot K. The two cams H and H' are attached to the shaft *u*, so that the smaller cam H is next to the lever F. The lever F is fitted with two pins N and M. The smaller cam H works against the pin N and the larger cam  
45 H' works against the pin M. When the machine is at rest, the pin M is at the point J of the cam H'. When the shaft *u* is started, the edge of the cam moves along the pin M from the point J to the point P, throwing  
50 the lower end of the lever F gradually forward. This action throws the top of the lever F backward and the top of the torch forward, giving time enough for a spark to ignite the vapor rising from the torch. When the torch  
55 has been lighted, it is held in a stationary position by means of the edge from point P to point V of the larger cam H', which edge has a constant radius from the shaft *u*, pressing against the pin M as the two cams and shaft *u* revolve.  
60 When the larger cam H' has revolved so that the point J has passed the pin M, the smaller cam H strikes the pin N and throws the lower end of the lever F backward and the pin M is thrown against the point J of the larger cam  
65 H'. The smaller cam H is so placed in respect to the pin N that it throws the lower end of the lever F back quickly. This movement

throws the top of the torch back under the cap, extinguishing the flame. As soon as the lower end of the lever F is thrown back and  
70 the flame is extinguished the pin *v* in the shaft *u* catches the trip *w* and stops the lighting mechanism in the position indicated in Figs. 7 and 8.

The arm *r*, attached to the button *s*, is bent  
75 so that when the machine is at rest one end of it is directly over the arm *p* of the button *o*. Now if it is desired to light a cigar without cutting off a cigar-tip I press down on the button *s*, and the plate *r* pushes the arms  
80 *p* and *Z* of the button *o* free from the projections *e* on the under side of the cover the same as if a cigar had been inserted into the machine. The trip *w* releases the pin *v* and the shaft *u* revolves, throwing out the top of  
85 the torch C, as explained heretofore.

The construction and arrangement of the various elements I use in my device may be varied widely without departing from the spirit of my invention.

Now, having described my device and its mode of operation, what I claim as my invention, and desire to secure by Letters Patent, is—

1. In a combined cigar tip-cutter and  
95 lighter, the combination of a spring-actuated cigar-tip cutter, normally locked, means for releasing the cigar-tip cutter upon the insertion of a cigar, and a lighter, and means actuated by a movement of the cigar-tip cutter  
100 for igniting the lighter and means for automatically extinguishing the lighter after being ignited.

2. A combined cigar tip-cutter and lighter, comprising a spring-actuated cigar-tip cutter,  
105 normally locked, means for releasing the cigar-tip cutter upon the insertion of a cigar, a lighter comprising a pivoted torch, means for producing an electric spark for igniting the torch when the torch swings in one di-  
110 rection and means for extinguishing the light when the torch is returned and means actuated by the cutter for swinging the torch outwardly and returning it to its starting position.

3. A combined cigar tip-cutter and lighter  
115 comprising a spring-actuated cigar-tip cutter normally locked, means for releasing the cigar-tip cutter upon the insertion of a cigar, a lighter comprising a pivoted torch, means for producing an electric spark for igniting  
120 the torch when the torch swings in one direction, means for extinguishing the light when the torch is returned, means actuated by the cutter for swinging the torch outwardly and returning it to its starting-point,  
125 and means for retarding the igniting movement of the torch and for holding the torch in an outward position while a cigar is being lighted.

4. A combined cigar tip-cutter and lighter  
130 comprising a spring-actuated cigar-tip cutter normally locked, means for releasing the cigar-tip cutter upon the insertion of a cigar, a lighter comprising a pivoted torch, means



for producing an electric spark for igniting the torch when the torch swings in one direction, means for extinguishing the torch when it is returned, means actuated by the  
 5 cutter for swinging the torch outwardly and returning it to its starting position, means for retarding the igniting movement of the torch and means for regulating the time for holding the torch in an outward position before returning it to its starting position.  
 10

5. The combination of a spring-actuated cigar-tip cutter normally locked, means for releasing the cigar-tip cutter upon the insertion of a cigar and a pivoted torch, means  
 15 for automatically lighting the torch when swung outwardly and means for automatically extinguishing the torch when it is returned, of a shaft rotated by a movement of the cigar-tip cutter a trip released by a move-  
 20 ment of the cigar-tip cutter and arranged to permit the rotation of said shaft one complete revolution, and to stop the shaft at the end of its revolution, a lever connected at one end with the torch, cams on said shaft to  
 25 move the lever as required to swing the torch outwardly and then inwardly upon each revolution of the shaft, a dash-pot, a piston in the dash-pot, and a crank on the shaft connected with the piston.

30 6. The combination, with a spring-actuated cigar-tip cutter normally locked, means for releasing the cigar-tip cutter upon the insertion of a cigar, a pivoted torch, means for igniting the torch upon its outward move-  
 35 ment and for extinguishing the torch upon its inward movement, a shaft rotated by the

cigar-tip cutter, a trip released upon the movement of the cigar-tip cutter, a pin on the shaft to engage the trip to stop the shaft upon a completion of a revolution, cams on the  
 40 shaft, a crank on the shaft, a rod connecting the crank and a piston, a dash-pot for the piston and a lever connected at one end with the torch and pins at the other end of the lever to be engaged by the cams substan-  
 45 tially as and for the purposes stated.

7. The combination, with a spring-actuated cigar-tip cutter normally locked, means for releasing the cigar-tip cutter upon the insertion of a cigar, a pivoted torch means  
 50 for igniting the torch upon its outward movement, a shaft rotated by the cigar-tip cutter, a trip released upon the movement of the cigar-tip cutter, a pin on the shaft to engage the trip to stop the shaft upon the comple-  
 55 tion of a revolution, cams on the shaft, a crank on the shaft, a rod connecting the crank with a piston, a dash-pot for the piston and a lever connected at one end with the torch, and pins at the other end of the lever  
 60 to be engaged by the cams, and a spring-retained button connected with the said trip whereby the said trip may be released without an action of the cigar-tip cutter.

In testimony whereof I have signed my  
 65 name to this specification in the presence of two subscribing witnesses.

FREDERICK LEONARD MILLER.

Witnesses:

GEO. W. SHAEFER,  
 ROY P. CLARK.