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No. 887,965.

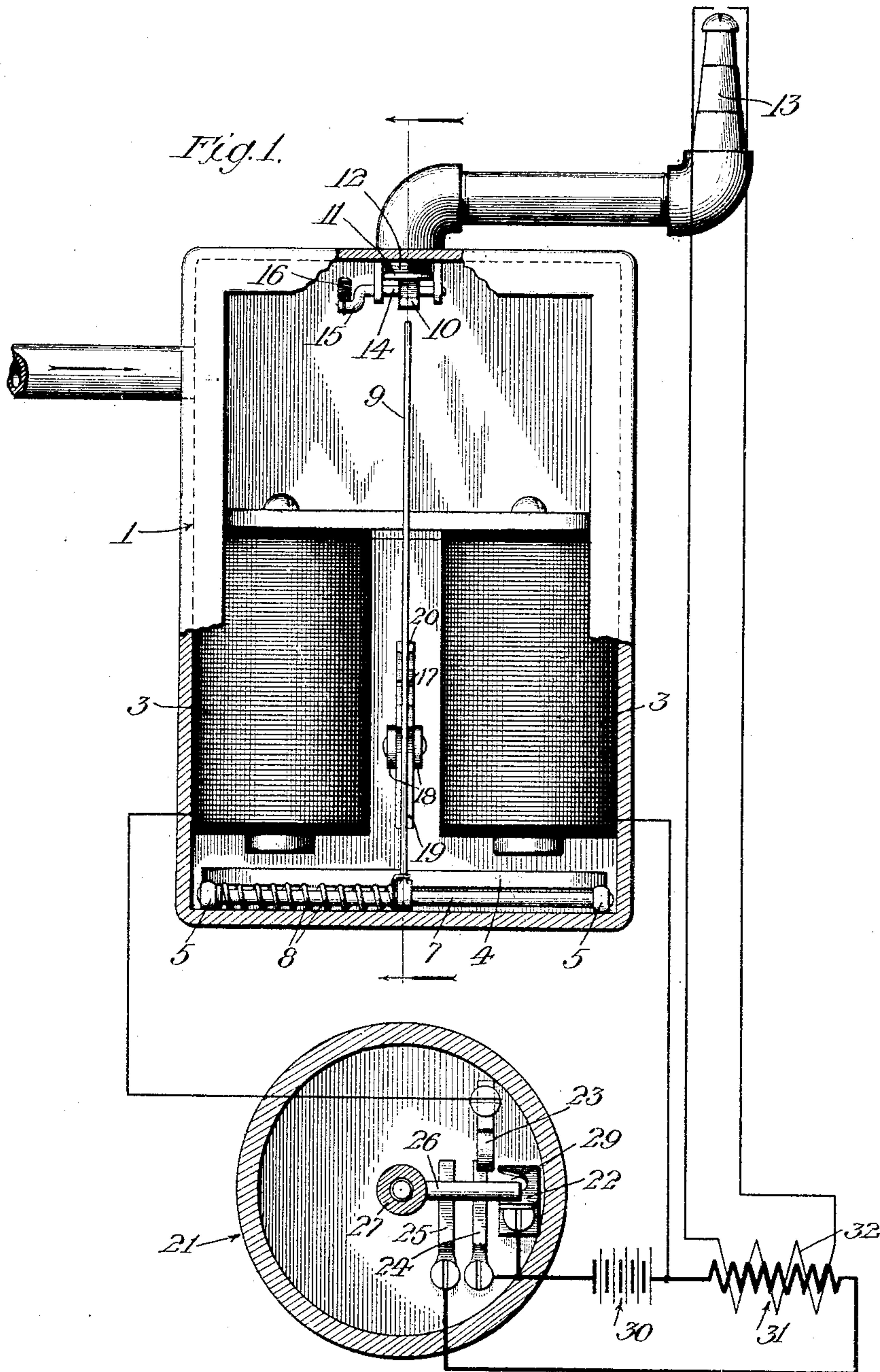
PATENTED MAY 19, 1908.

R. A. ROCKWOOD.

ELECTRIC GAS LIGHTER.

APPLICATION FILED APR. 10, 1907.

2 SHEETS—SHEET 1.



Witnesses:

*Wm. K. Baebell*  
*m. a. jones*

Inventor:

*Raymond A. Rockwood*

By *Hazard & Thayer*  
Attorneys

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2 SHEETS—SHEET 2.

Fig. 2.

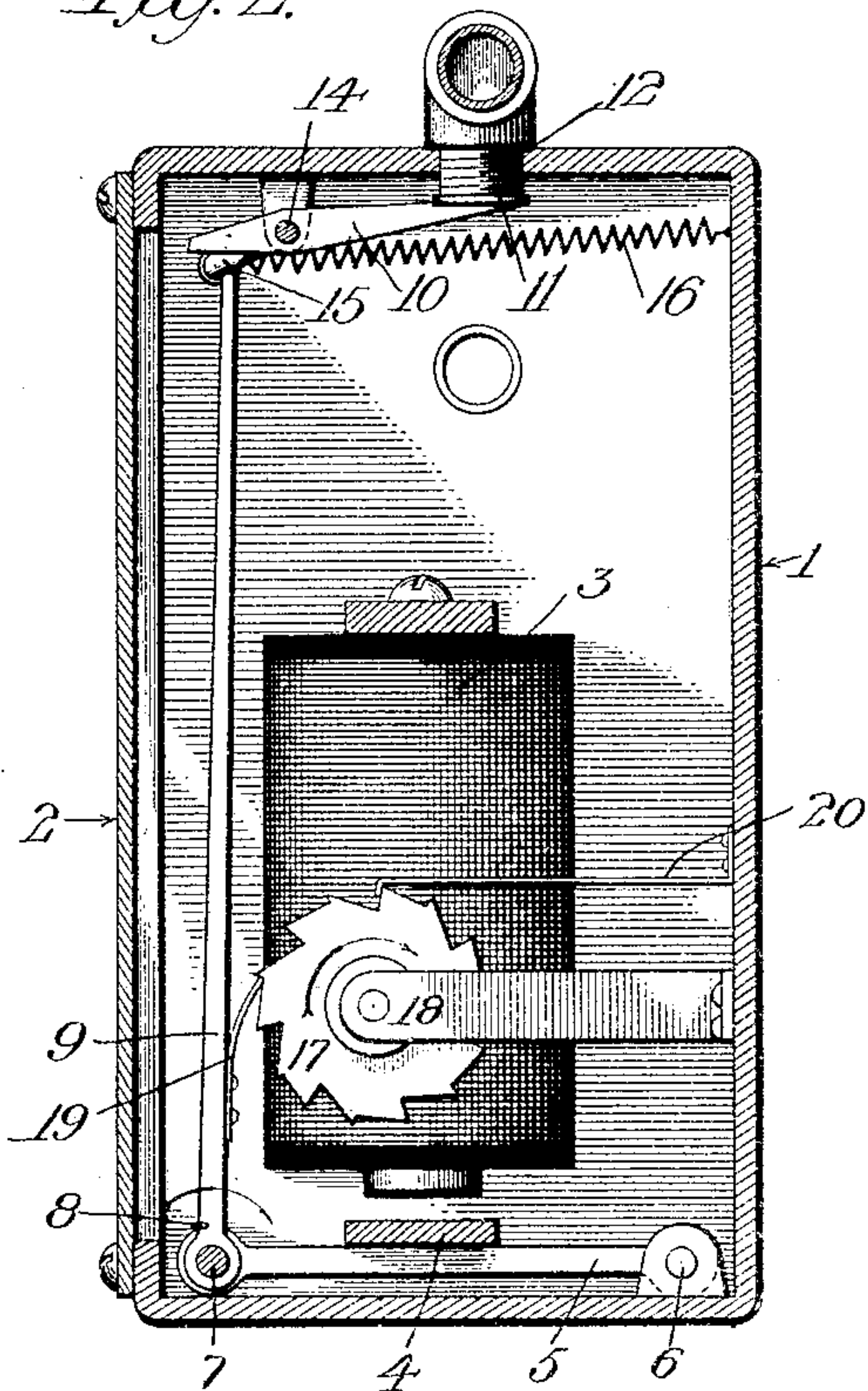


Fig. 3.

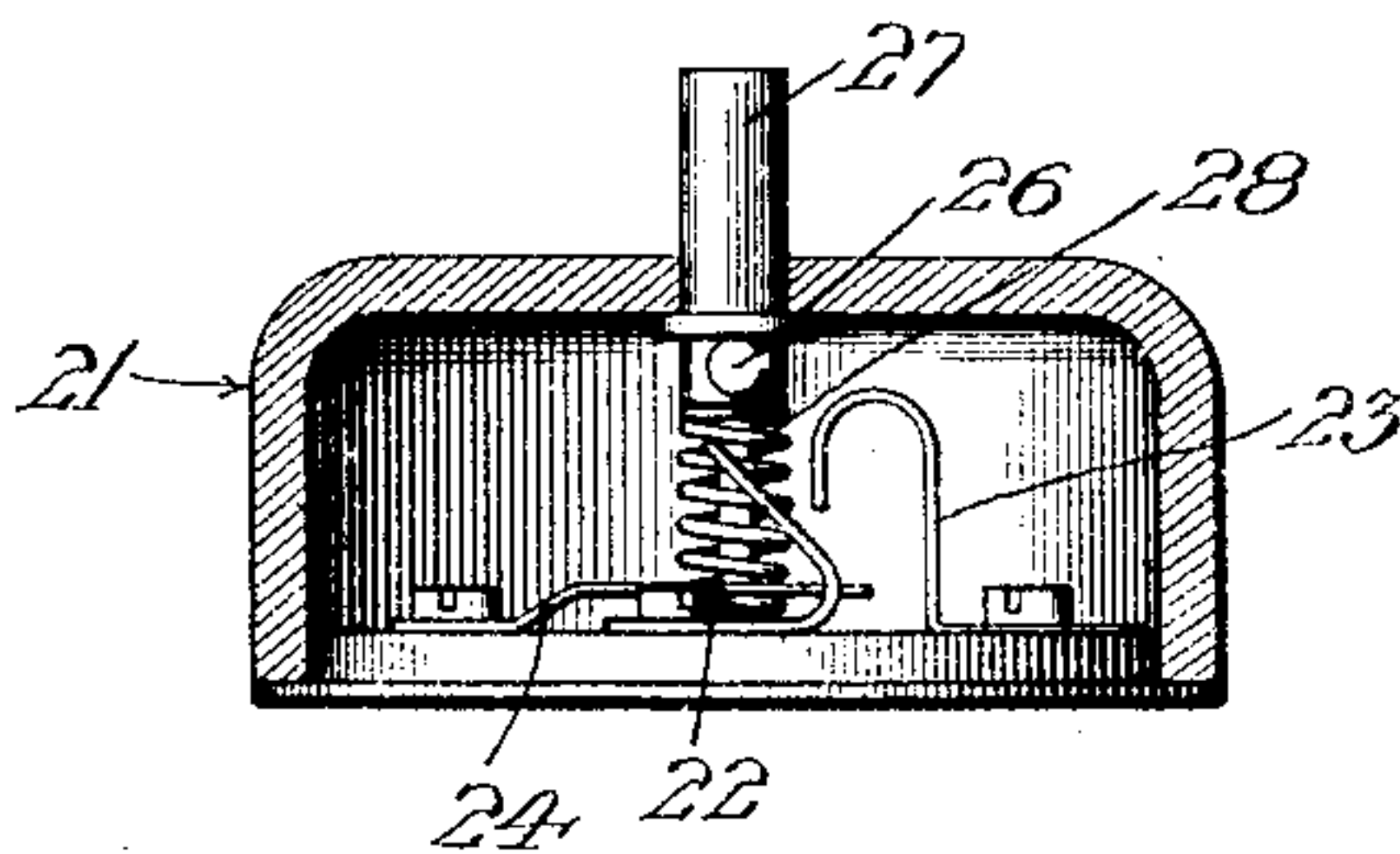
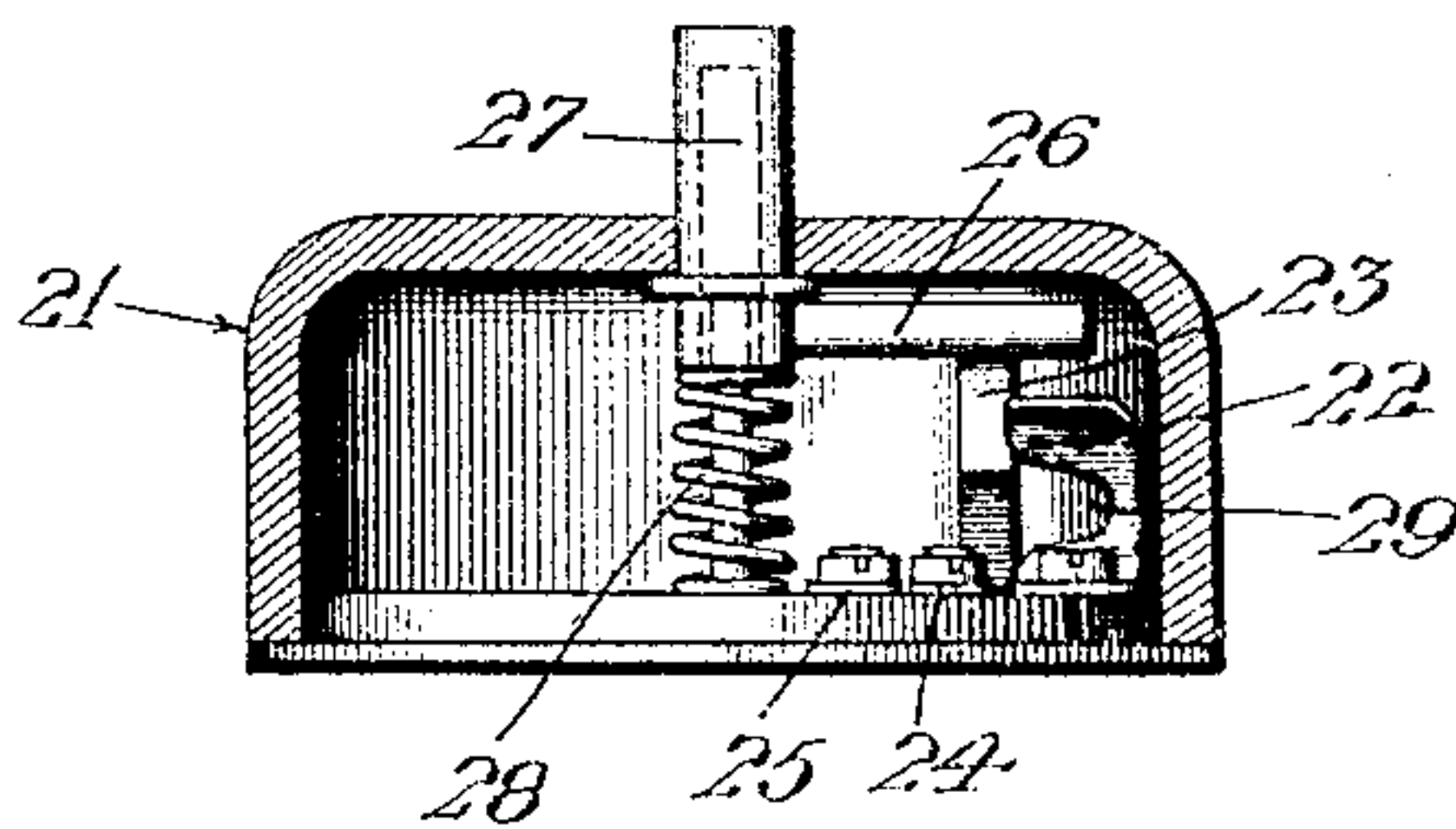


Fig. 4.



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# UNITED STATES PATENT OFFICE.

RAYMOND A. ROCKWOOD, OF MONROVIA, CALIFORNIA, ASSIGNOR OF ONE-HALF TO CHARLES T. STEWART, OF MONROVIA, CALIFORNIA.

## ELECTRIC GAS-LIGHTER.

No. 887,965.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed April 10, 1907. Serial No. 367,324.

*To all whom it may concern:*

Be it known that I, RAYMOND A. ROCKWOOD, a citizen of the United States, residing at Monrovia, in the county of Los Angeles and State of California, have invented new and useful Improvements in Electric Gas-Lighters, of which the following is a specification.

My invention relates to that class of electric gas lighters which are adapted to be operated by a push button; and it is the prime object of my invention to provide a device with which a single button may be used both to light and extinguish the gas.

A further object is to provide a mechanical movement which renders it possible to use one push button to both light and extinguish the gas.

I accomplish these objects by means of the device described herein and illustrated in the accompanying drawings, in which:—

Figure 1.—is a diagrammatic view of my improved gas lighter, the push button and the electric connections. Fig. 2.—is a central vertical section taken on line 2—2 of Fig. 1. Figs. 3 and 4.—are vertical sections of the push button taken at right angles to each other.

Referrings to the drawings, 1 designates a case preferably rectangular in form and tightly closed by a cover 2, shown in Fig. 2. Within this case are mounted a pair of electro-magnets 3 with their pole ends projecting downwardly. Immediately below their poles is an armature 4 which is supported on arms 5 pivoted to the bottom of the case at 6. These arms extend forwardly of the armature 4 and a shaft 7 is journaled in their front ends. Shaft 7 is encircled by spiral spring 8 which forces it in the direction shown by the arrow in Fig. 2. On shaft 7 is rigidly mounted a long arm 9 which extends upwardly and ends near the top of the case. Directly above the top end of arm 9 is a pivoted valve arm 10 carrying on one end valve stopper 11 which is adapted to close the end of outlet pipe 12. Outlet pipe 12 has burner 13 mounted on its outer end. Valve arm 10 is pivoted on a shaft 14 which is provided with a crank 15 on one end. A spiral spring 16 is attached to this crank and to the rear of the case in such a position as to hold the valve arm in either the open or closed position.

In the rear of arm 9 is a ratchet wheel 17 mounted in bearings 18 secured to the rear of the case. This ratchet wheel is provided with alternate high and low depressions so that spring dog 19 affixed to the arm 9 will alternately engage high and low depressions. A spring catch 20 is secured to the rear of the case and engages with the ratchet wheel to prevent any motion except that in the direction indicated by the arrow. By this device it will be seen that, upon successive closures of the circuit around the electro-magnets, the end of long arm 9 will alternately be pushed up in front of and behind pivot shaft 14 of valve arm 10, and will alternately open and close the outlet pipe. Spring dog 19 is pressed against ratchet wheel 17 by spiral spring 16.

In order to turn on the gas and light it by one operation I have provided a push button 21 with four contacts 22, 23, 24 and 25. A horizontal contact rod 26 is secured to push button 27 held in its normal position by spiral spring 28. When push button 27 is depressed, contact rod 26 first touches sloping contact 22 and is forced to one side towards spring contact 23, which it touches and thereby forms an electrical connection between contacts 22 and 23. Upon further depression of the push button rod 26 passes through a notch 29 in contact 22 and contacts with flat spring contacts 24 and 25. Upon the release of the button, rod 26 passes upwardly on the under side of the inclined contact so that it does not touch contact 22 again.

Contacts 22 and 23 are connected in series with electro-magnets 3 and battery 30. Contacts 24 and 25 are connected in series with the primary of induction coil 31 and battery 29. The secondary 32 of the induction coil is connected to spark gap 33 on the gas burner so that when rod 25 touches contacts 24 and 25 a spark will be produced to light the gas which has already been turned on by the action of the electro magnets.

It will be observed that I have produced an electric gas lighter which will operate to both turn on and light the gas and to turn off the gas on a single operation with a single push button. I am enabled by means of the mechanical device hereinbefore described to accomplish diametrically opposite results with similar manual operations, that is, I am en-



abled to turn on the gas and to turn off the gas by exactly the same operation on the part of the person wishing to do those things.

It will be seen that the elimination of one of the two push buttons heretofore employed for the same purpose for which I employ one has a distinct advantage in that it requires less work to install a system, and when installed a person who wishes to light or extinguish the gas has no chance to make a mistake and use the wrong push button.

It will be observed that my device is extremely simple in construction and operation, and that in its operation it is absolutely certain to alternately turn on and turn off the gas upon successive operations of the push button connected with it.

My invention consists broadly of means to accomplish this operation, and I do not restrict myself to any particular form of device for such.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In an electric gas lighter, a pivoted oscillating valve stopper adapted to control the flow of gas to a burner; an electro magnet; a pivoted arm adapted to be moved longitudinally by said electro magnet to operate said valve stopper; and mechanical means to move said arm transversely so as to cause said arm to alternately operate said valve

stopper from one side of its pivot and from the other.

2. In an electric gas lighter a pivoted oscillating valve stopper adapted to control the flow of gas to a burner; means to hold said stopper in either its open or closed position; means adapted to alternately actuate said stopper from one side of its pivot and from the other side of its pivot.

3. In an electric gas lighter, a case; a pivoted oscillating valve stopper mounted in said case and adapted to control the flow of gas from said case to a burner; means to hold said stopper either in its open or closed position; an electro magnet mounted in said case; a pivoted armature for said electro magnet; a stopper actuating arm pivotally mounted on said armature and adapted to be moved longitudinally by the action of said electromagnet to actuate said stopper; and ratchet means to direct said stopper actuating arm so as to actuate said stopper first from one side of its pivot and then from the other side of its pivot.

In witness that I claim the foregoing I have hereunto subscribed my name this 3rd day of April, 1907.

RAYMOND A. ROCKWOOD.

Witnesses:

TRIMBLE C. BARKELEW,  
EDMUND A. STRAUSE.