(No Model.)

J. A. CABOT.

GAS LIGHTER.

No. 325,786. Patented Sept. 8, 1885.

Fig. 1.

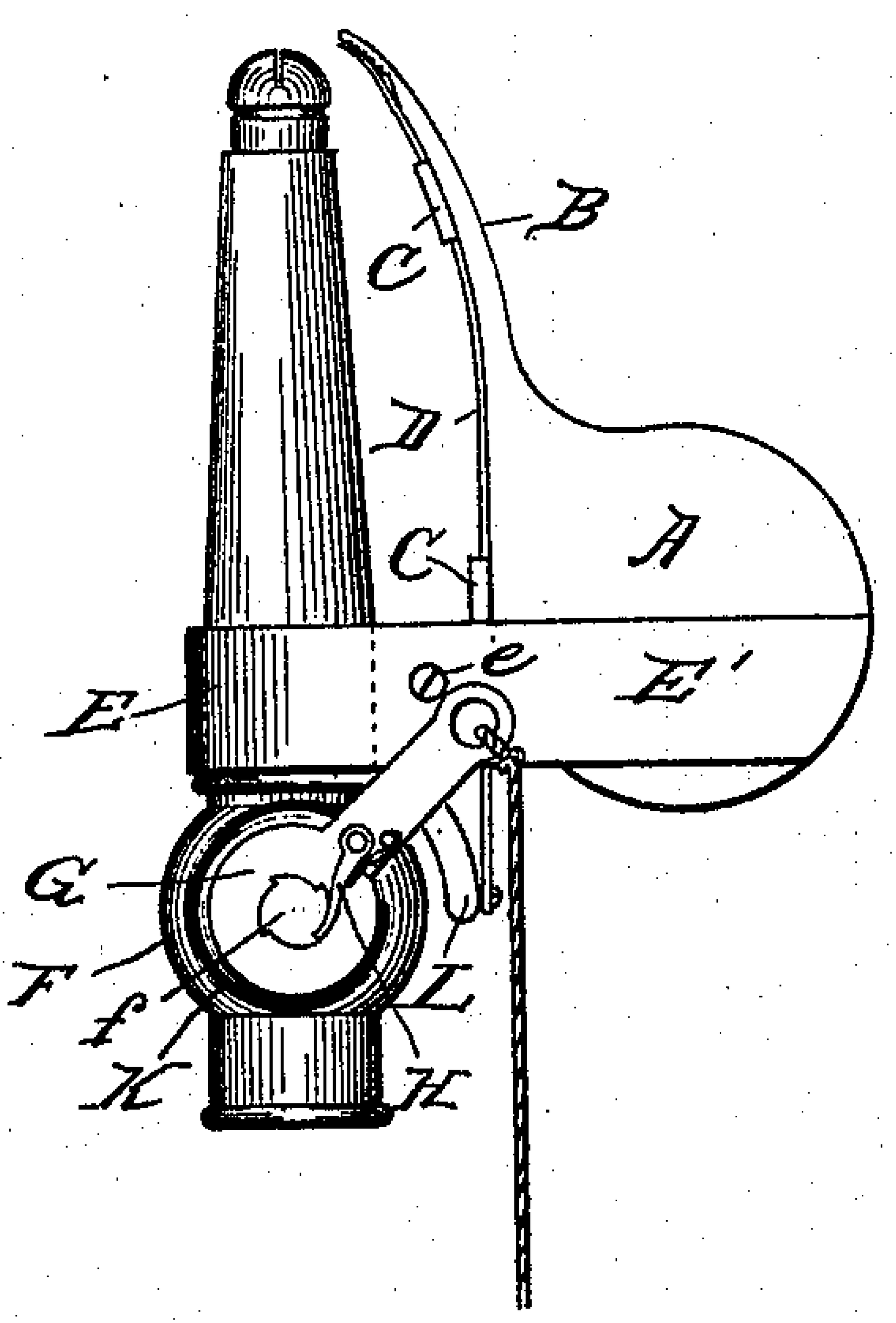


Fig. 2.

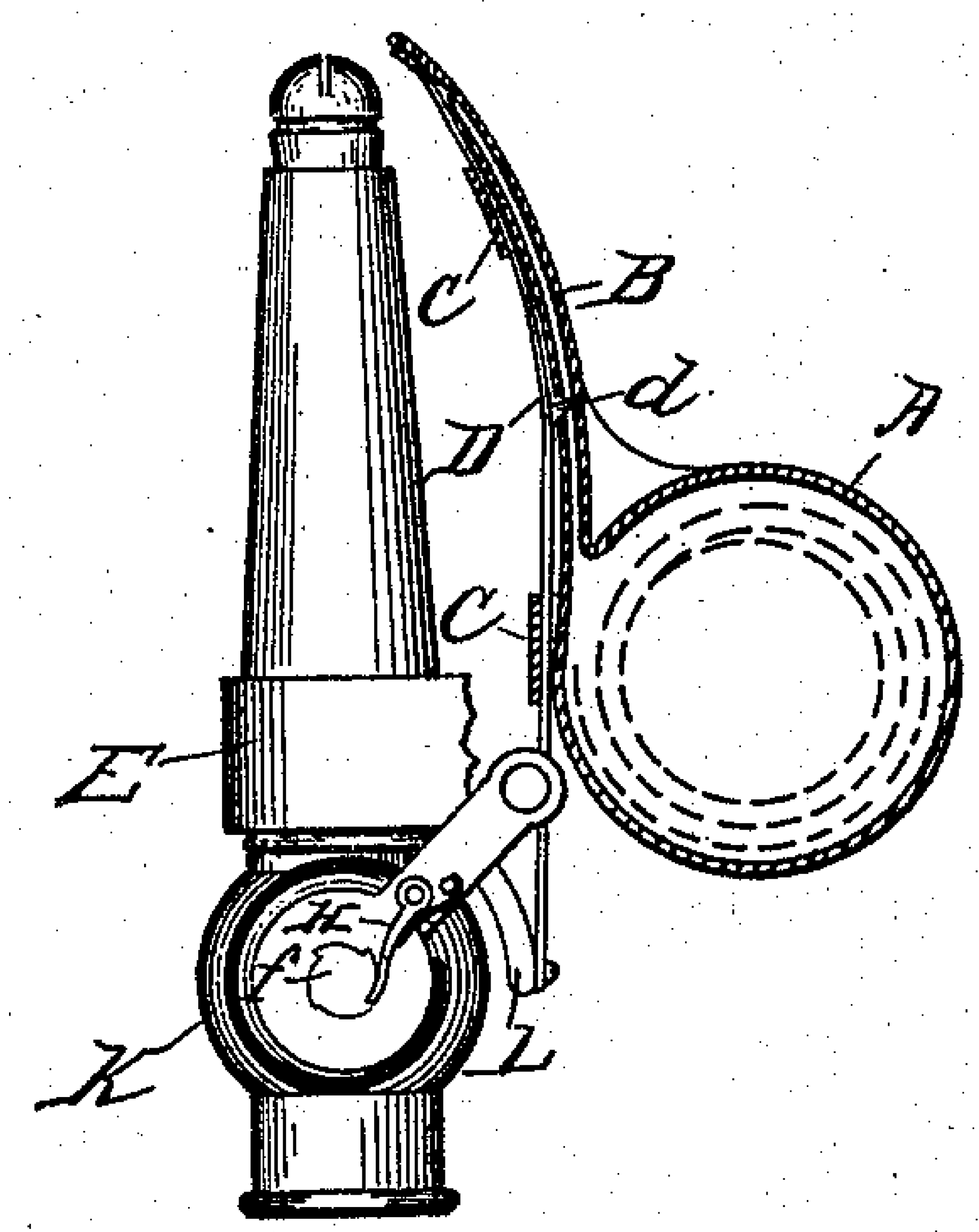


Fig. 5.

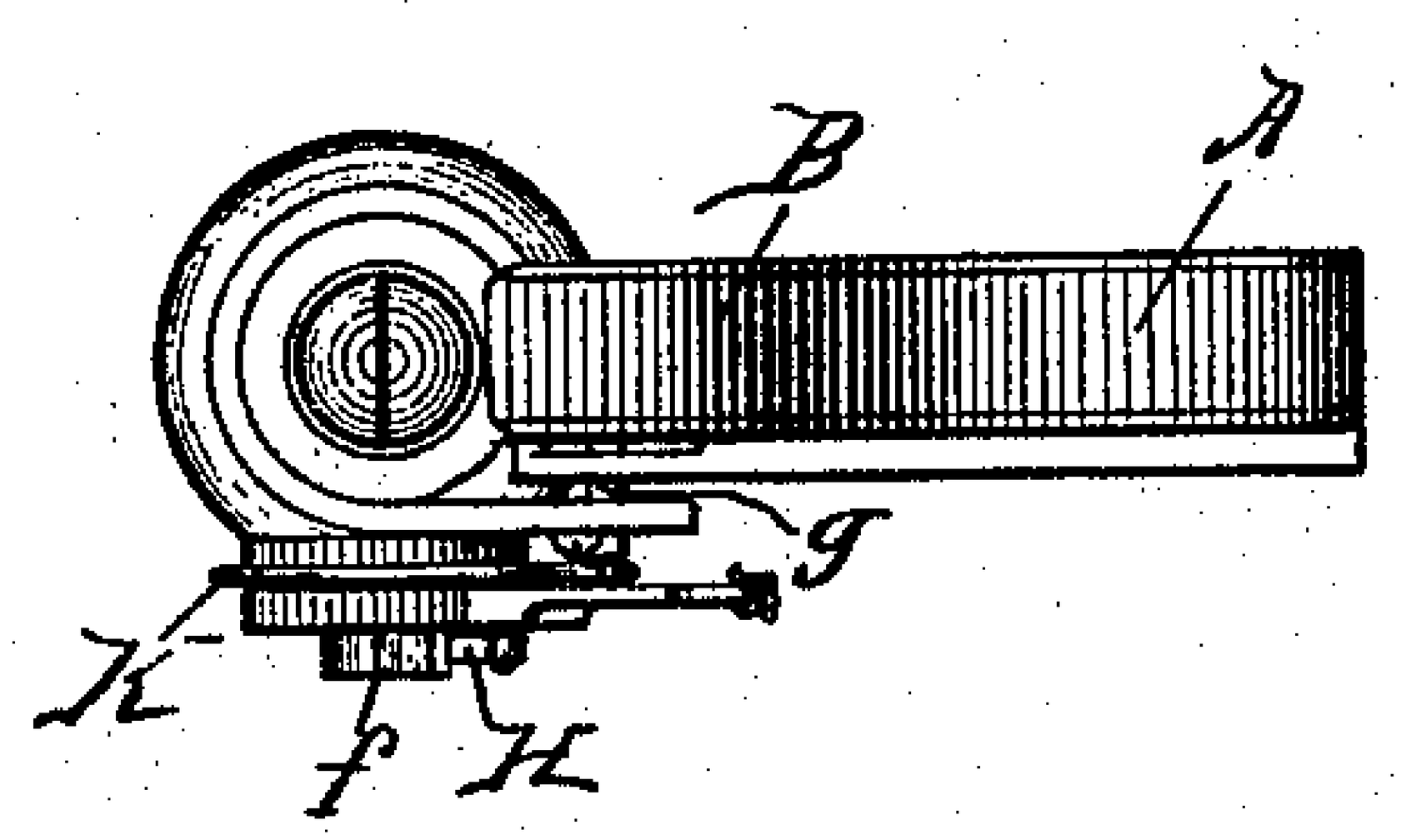
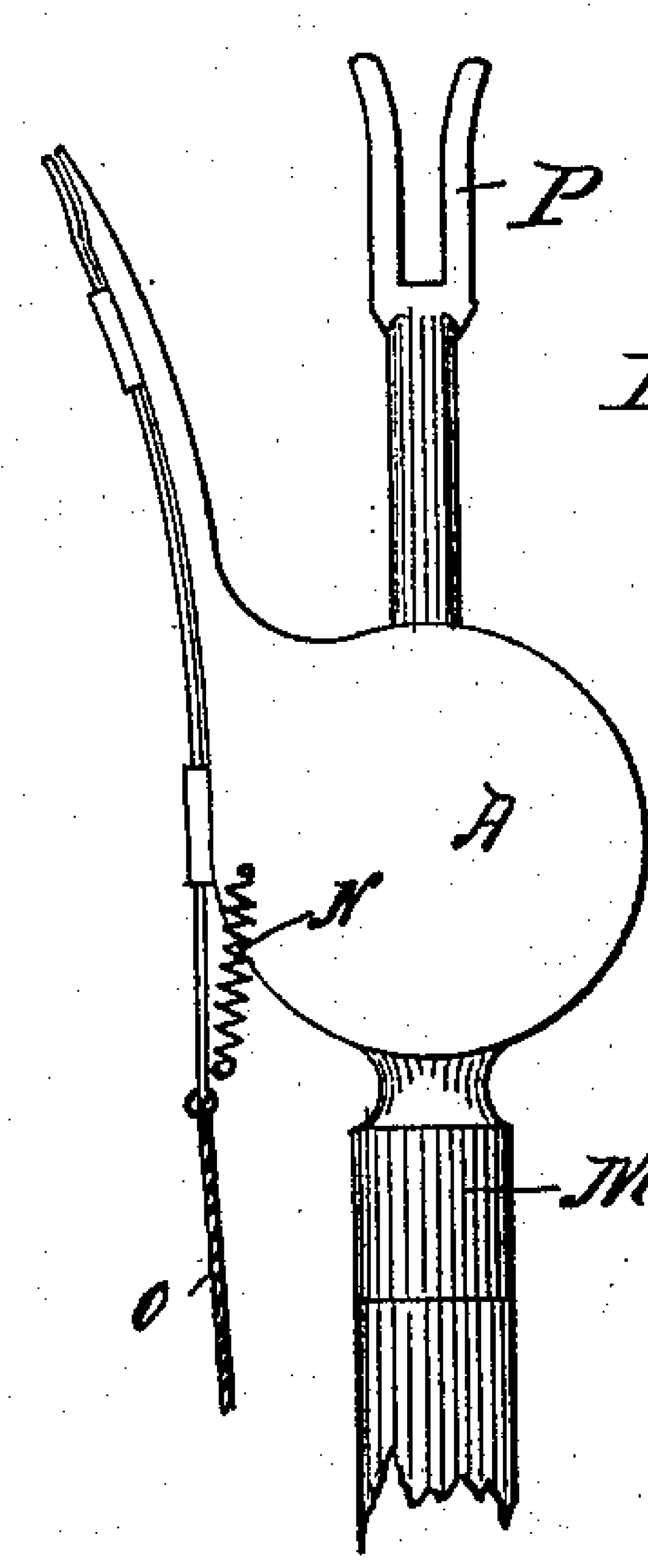


Fig. 4.



Attest:

James L. Ely.

J. A. Hurdle

Inventor:

John A Cabot

By Andrew W. Steiger.

Atty:

UNITED STATES PATENT OFFICE.

JOHN A. CABOT, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO C. G. WORDEN, OF SAME PLACE.

GAS-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 325,786, dated September 8, 1885.

Application filed April 25, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. CABOT, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Gas-Lighters, of which the following is a specification.

My invention relates to an improved gas-lighter; and it consists of a case of peculiar construction, as hereinafter fully described, in which may be stored a ribbon of paper or other flexible fabric, upon which is placed material which will ignite by friction, and in connecting with this case a feeding device, whereby the ribbon may be fed out, a small portion at a time, and ignited, to produce a spark or flash of fire, whereby gas may be ignited; and it further consists in a device for mounting the said case upon a gas-burner and operating the same by a pivoted lever connected through a pawl and ratchet with the stop-cock controlling the supply of gas, so that a single movement will turn on the gas and ignite the ribbon to light the same. The lever with its pawl and ratchet is so constructed that the first movement will turn on the gas and the second will turn the gas off.

In the accompanying drawings, Figure 1 is a side elevation of my device complete and attached to a gas-burner. Fig. 2 is a side view, the case being shown in section, and illustrates the feeding device. Fig. 3 is a top view of the device, as shown in Fig. 1; and Fig. 4 shows a modification.

A is a shallow cylindrical case, with a narrow passage, B, projecting tangentially therefrom and slightly curved outwardly or away from the case. The wall of this channel B, on the side away from the case A, is cut away for a portion of its length at the end, and the inner side of the other wall is ribbed or roughened to form a friction-producing surface for a short distance. Upon the outer side of this channel are fixed two guideways, C C, through which is made to pass a strip of spring-steel, D, of such a length as that its upper end will bear upon the roughened surface of the inner wall of the channel B, and its lower end will project beyond the case A. A slot is cut in the wall of the channel B, and a sharp pin, *d*, is secured to the spring D, so as to project into the channel B.

If a ribbon of paper having a layer of igniting material similar to that used on friction-matches upon one side is coiled with the percussion side inward and placed in the case with its end projecting up through the channel B, and the spring D drawn downward and then pushed up, the pin *d* will push the said ribbon up and over the roughened surface at the end of the channel, and the spring D, bearing upon it at this point, will cause it to ignite, and if it is held over or near a gas-burner with the gas turned on while this movement is made, it will light the gas.

To render this device more serviceable I have adapted it to be secured to the burner in position for use as shown in the drawings, wherein E is a clamp-ring adapted to encircle the burner and be clamped thereon by a screw, *e*. A tangential arm, E′, is made to project from this ring, and to it is secured the case A.

To further facilitate the operation and to make it possible to turn on the gas and light it at the same time, I make a burner with a stop-cock, F, placed in its lower end with the stem *f* projecting laterally therefrom, and upon this stem I mount a lever, G, swinging in a plane parallel with the case A.

The end of the stem *f* of the stop-cock is made to project a short distance beyond the face of the lever G, and it is cut to form four ratchet-teeth. A spring-actuated pawl, H, is secured upon the face of the lever G, so that a partial rotation of the said lever will cause a like movement of the stem *f* in one direction only. A spiral spring, K, is mounted upon the burner, so as to encircle the stem *f*, and its free end is secured to the lever G, so as to return the same to its upward position after it has been pulled down and released. The lever G is so proportioned and mounted as to allow a one-quarter rotation of the same, and no more.

Upon a laterally-projecting arm, *g*, from the lever, and immediately below the spring D, is mounted a sector, L, to which is secured the lower end of the said spring D. Suppose, now, the device to be as shown in Fig. 1, with the gas cut off by the stop-cock F, a downward

movement of the lever G through one-quarter of a revolution will, by reason of the pawl H, turn the stem F and open the gas-passage. This same downward movement of the lever G will draw down the spring D and cause the pin *d* to take a new hold in the ribbon within the channel B; and if, now, the lever G is allowed to return to its first position by the force of the spring K, it will force upward the spring D and carry with it the ribbon, which latter will be rubbed against the roughened surface at the extremity of the channel B, be ignited, and light the gas which is escaping from the burner. A second downward movement of the lever G will turn off the gas.

The lever G may be operated directly by the fingers, or it may have attached to its extremity a piece of cord or wire, as shown.

As a modification of this device, and for use where it is desired to light a number of burners with one lighter, I mount the case A, as shown in Fig. 4, by means of a socket, M, secured to said case upon a staff or pole. In this arrangement the retracting-spring K is replaced by a spiral spring, N, one end of which is secured to the case A and the other end to the spring-slide D.

An operating-cord, O, of any desired length, may be attached to the spring-slide D.

When this modification is used, I form a pair of jaws, P, upon an upwardly-projecting arm, Q, on the case A, to enable the operator to turn on the gas at otherwise inaccessible burners.

Having described my invention, what I claim is—

The combination, with a gas-burner, and with the supply-cock thereof, of a case, A, a tangential channel, B, thereon, a feeding and igniting spring, D, all supported and secured to the burner by a clamp-ring, E, a spring-actuated lever, G, pivoted upon the stem of the supply-cock and connected with the feeding spring, a ratchet-stem, *f*, and a spring-actuated pawl, H, all substantially as and for the purpose set forth.

Signed at Trenton, in the county of Mercer and State of New Jersey, this 14th day of April, A. D. 1885.

JOHN A. CABOT.

Witnesses:
D. COOPER ALLINSON,
T. E. BAKER.