

No. 813,236.

T. C. PURDY.

PATENTED FEB. 20, 1906.

APPARATUS FOR SUPPLYING LIQUID FUEL TO BURNERS OF LAMPS
AND LANTERNS.

APPLICATION FILED JUNE 16, 1905.

Fig. 1.

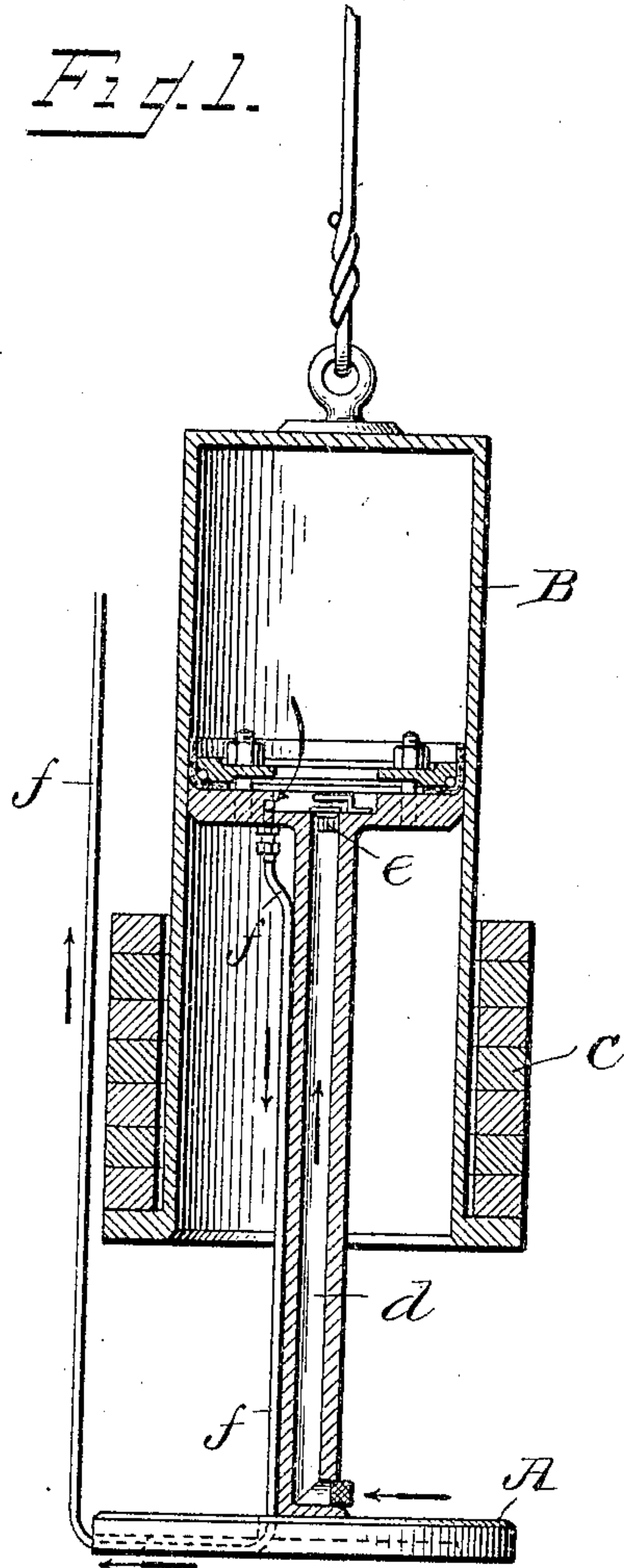
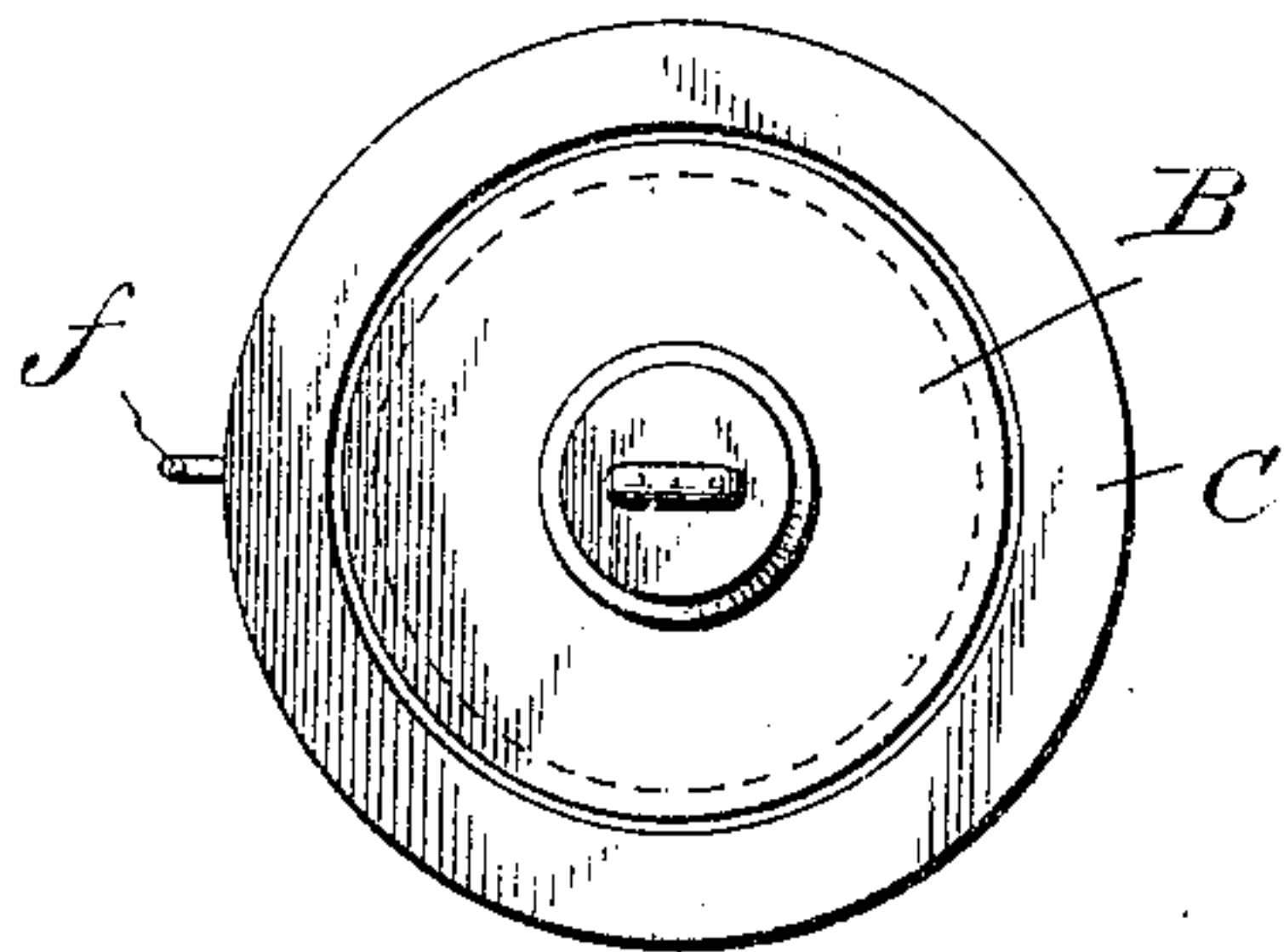


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

THOMAS C. PURDY, OF PARIS, FRANCE.

APPARATUS FOR SUPPLYING LIQUID FUEL TO BURNERS OF LAMPS AND LANTERNS.

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Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed June 16, 1905. Serial No. 265,610.

To all whom it may concern:

Be it known that I, THOMAS C. PURDY, a citizen of the United States, residing at Paris, France, have invented certain new and useful Improvements in Apparatus for Supplying Liquid Fuel to Burners of Lamps and Lanterns, of which the following is a specification.

My invention relates to apparatus or devices for feeding liquid fuel to the burners of lamps and lanterns in the so-called "incandescent-lighting" systems, and is chiefly designed for automatically supplying the fuel to the burner where it is burned or consumed.

In the present existing systems the liquid fuel is customarily fed to the burners by aid of compressed air or carbonic acid. In using compressed air or carbonic acid rather complicated apparatus are wanted both for storing said agents and controlling their pressure, said apparatus requiring special attention by skilled workmen and sometimes by learned specialists.

The object of my invention is to simplify the devices for supplying liquid fuel, to make them such as not to be easily damaged, and, finally, accessible to any workman. This result I propose to obtain by dispensing with compressed air and carbonic acid as agents exerting a pressure on fuel and by using instead of them weights which will afford the possibility to have for each lantern the pressure wanted if increasing or diminishing them.

In the annexed drawings in Figure 1 is shown a vertical section, and in Fig. 2 a plan, of an apparatus constructed in accordance with the present invention.

Said apparatus is arranged either within the reservoir or vessel designed to receive the liquid fuel or separately from it, whereby in this latter case the apparatus is connected (by the passage *d*) with the reservoir through a pipe.

The apparatus consists of a base-piece A, connected with the piston and provided with a valve *e* and a flexible pipe *f*, leading to the burner of the lamp or lantern. The piston is located in the cylinder B, on the lower border or flange of which are arranged weights C. The base A with the piston are stationary, while the cylinder has an up-and-down motion, being raised by means of a jack secured

on the lamp-post or a special pillar and connected with the cylinder by a cord, chain, or cable, while the downward traveling is effected by its own weight and the action of the aforesaid weights C.

It is obvious that the cylinders B can be made stationary and the piston A can be caused to move. When raising the cylinder B, the space above the piston is rarefied, so that the liquid fuel flows from the reservoir through the passage *d*, overcomes the weight of the valve *e*, and fills the space above the piston. The apparatus is started.

In lowering the cylinder the liquid under pressure of the weights C squeezes the valve *e* to its seat and enters through the main *f* into the burner of the lamp or lantern.

It is to be understood that the supply of liquid to the lamp or lantern is effected by the lowering of the cylinder, and when the cylinder reaches its lowest position the liquid therein will have been exhausted. It is essential, then, to raise the cylinder at certain intervals prior to reaching the lowest point in order to obtain a fresh supply and to maintain the same illuminating power of the lamps.

For extinguishing the lamps and lanterns the cylinder has to be raised and to be left in elevated position, or the cock provided on the main *f* may be closed.

What I claim as my invention is—

1. In an apparatus of the character described, the combination of a cylinder, a piston located therein, a supply-pipe, a valve automatically operated to prevent the return of fluid through said pipe, and a main open to the cylinder.

2. In an apparatus of the character described, the combination of a hollow stationary piston, a supply-pipe communicating therewith, a weighted cylinder working on the piston, a valve in the head of the piston adapted to be automatically closed by the pressure in the cylinder, and a main mounted in the piston-head open to the cylinder.

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

THOS. C. PURDY.

Witnesses:

HANSON C. COXE,
JOHN BAKER.