

(No Model.)

L. LENAERTS & H. L'OLIVIER.

GAS ELECTRIC ADVERTISER COCK.

No. 341,926.

Patented May 18, 1886.

Fig. 3.

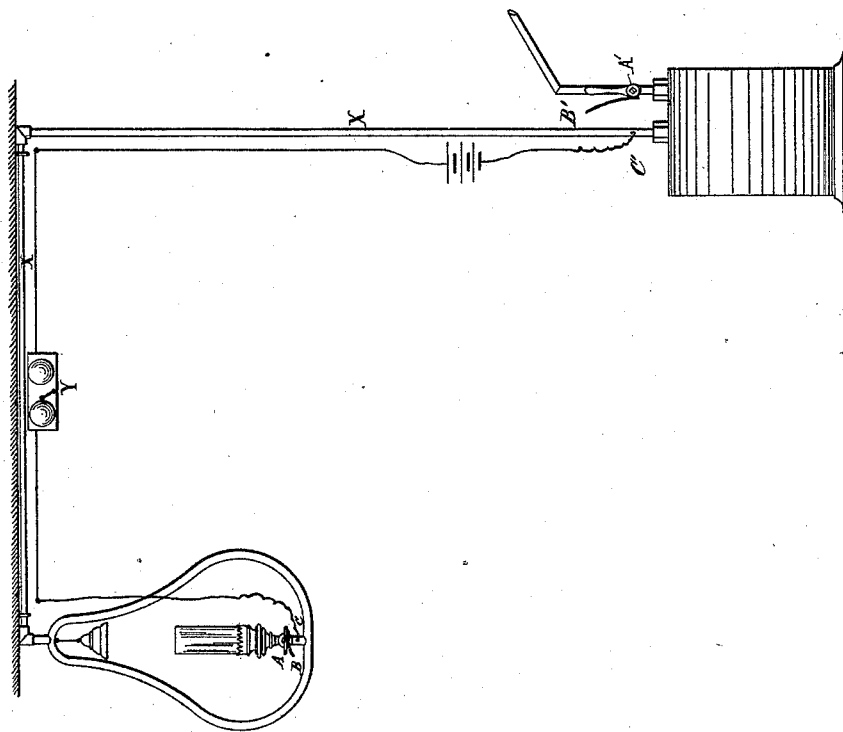


Fig. 2.

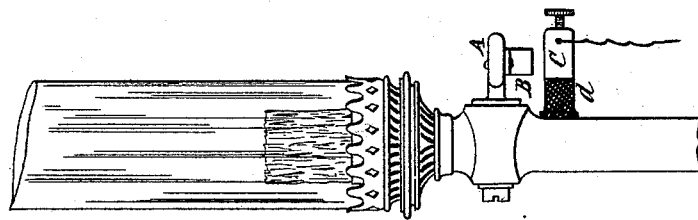
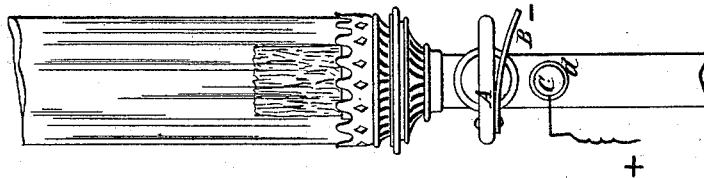


Fig. 1.



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UNITED STATES PATENT OFFICE.

LEON LENAERTS AND HENRI L'OLIVIER, OF BRUSSELS, BELGIUM.

GAS ELECTRIC ADVERTISER-COCK.

SPECIFICATION forming part of Letters Patent No. 341,926, dated May 18, 1886.

Application filed October 5, 1885. Serial No. 179,045. (No model.) Patented in Belgium July 18, 1885, No. 69,637.

To all whom it may concern:

Be it known that we, LEON LENAERTS and HENRI L'OLIVIER, subjects of the King of Belgium, both residing at Brussels, Belgium, have invented certain new and useful Improvements in Annunciators for Gas Burners or Pipes, of which the following is a specification.

The principal objection that has been made to the shutting off of gas at the meter while the gas is not being employed is that if, at the moment of such stoppage of the flow at the meter, one or more burners have remained open, there is produced, when the flow is recommenced, an escape of gas at such burners which may prove very dangerous. The inconvenience exists whether the cock is operated by hand at the meter or from a distance by the aid of intervening mechanism. To remedy this state of things we have devised a novel and very simple apparatus, giving absolute security. Such apparatus consists in a double electric contact operating an annunciator if at the moment when the flow of gas is stopped a gas-burner has remained open. Immediate notice is thus given and the burner at fault easily discovered.

In the accompanying drawings, Figure 1 is a front view of a burner to which our improvements have been applied. Fig. 2 is a side view of the same. Fig. 3 shows in elevation the meter, a lamp, and electric circuit.

A is the key of the burner. B is a contact-spring, which, in the open position of the key, rests against the binding-post C. The negative pole of the electric circuit, including the bell Y, is connected to the gas-pipe X, and thus to key A and spring B, while the positive pole is connected to post C by an insulated wire. The outer end of said post is of course insulated from the gas-pipe conductor by a block, *d*, of ebonite or other insulating material. Not only is it necessary to close the circuit at B C by bringing the spring against the binding-post, but a second interruption of the circuit exists at the meter itself, which must be closed before the bell will be sounded. The contact at the meter is similar to that at the burner—that is to say, the other end of wire conductor terminates at a post, C', insulated from the gas-pipe, and a contact-spring, B', on the cock A' is adapted to rest on said post when the passage to the meter is closed. Thus, should the gas be cut off at the meter, it will

close the circuit at this point, and if the key of any burner has remained open the circuit will also be closed at that point, so that the alarm will be sounded until the open burner is found and its key turned.

For chandeliers or other apparatus carrying several burners, it may be sufficient to simply connect their common keys with the alarm. An indicator can also be arranged, if need be, to show exactly which burner is at fault. In houses possessing already electric alarms this system may be perfectly combined with the circuits already existing.

We have shown a simple cock operated at the meter by hand; but it is obvious that the arrangement of the essentials of the invention would be the same with an apparatus in which the cock at the meter was operated from a distance.

Having thus described our invention and the manner of carrying it out, what we claim as new therein is—

1. An alarm system for giving notice of the position of the key of a gas-burner, consisting in the combination, with such burner, a meter, and the connecting-pipe, of cocks for cutting off the gas at the meter and burner, respectively, an electric circuit, and movable contacts in said circuit at the meter and burner, respectively, for making and breaking said circuit.

2. In combination with a burner, a meter, and a connecting gas-pipe, cocks for closing said pipe at the burner and meter, respectively, an electric circuit, contacts in said circuit carried by both of said cocks, and so arranged that the circuit is closed at one point by one cock when said cock is open, and by the other at another point when said cock is shut, substantially as set forth.

3. In combination with a burner, a meter, and a connecting gas-pipe, an electric circuit, movable contacts in said circuit at the meter and burner, respectively, and an annunciator in said circuit for giving an alarm, substantially as set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

LEON LENAERTS.
HENRI L'OLIVIER.

Witnesses:

EMILE PIRARD,
HUBERT OFE.