

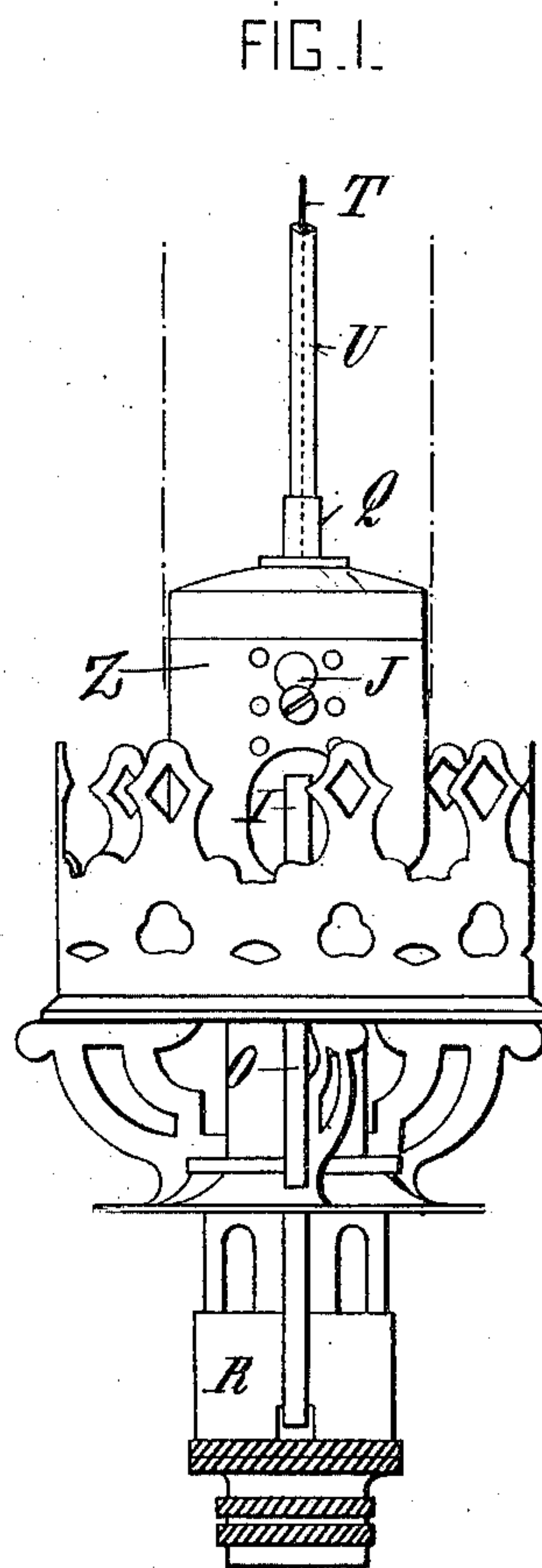
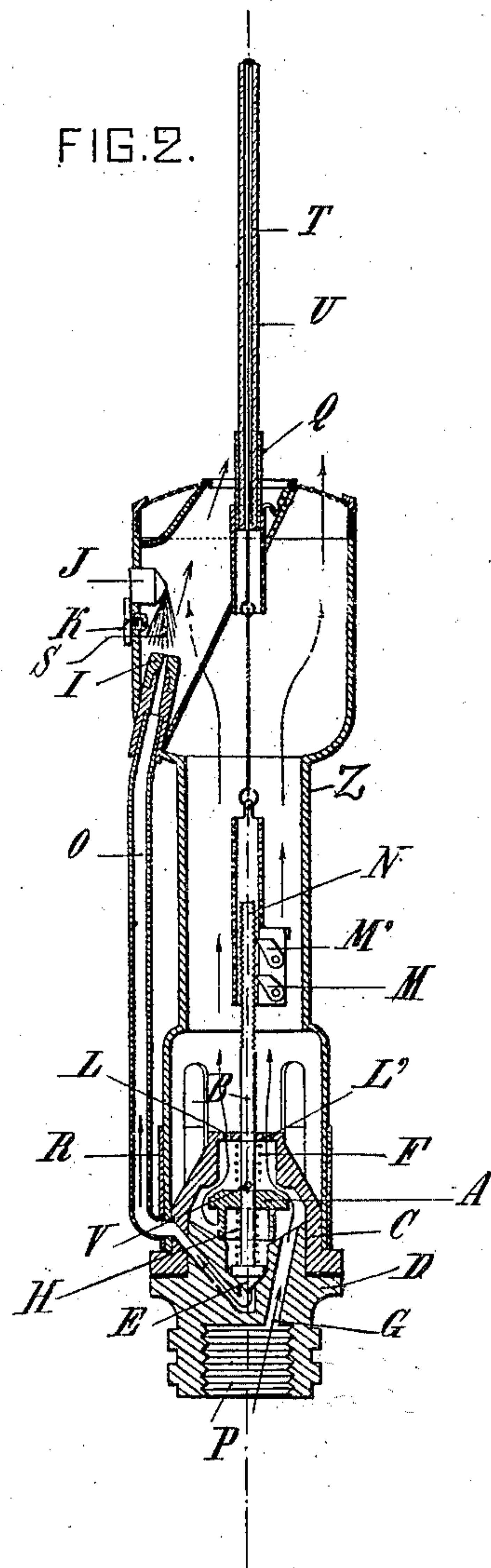
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PATENTED MAR. 22, 1904.

J. CANELLOPOULOS.
SELF IGNITING INCANDESCENT GAS BURNER.

APPLICATION FILED NOV. 4, 1902.

NO MODEL.



WITNESSES:

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JEAN CANELLOPOULOS, OF PARIS, FRANCE.

SELF-IGNITING INCANDESCENT GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 755,448, dated March 22, 1904.

Application filed November 4, 1902. Serial No. 130,040. (No model.)

To all whom it may concern:

Be it known that I, JEAN CANELLOPOULOS, a subject of the King of Greece, residing at No. 45 Rue Ribera, Paris, France, have invented new and useful Improvements in Self-Igniting Incandescent Gas-Burners, which are fully set forth in the following specification.

This invention relates to self-igniting means for incandescent gas-burners.

The object of this invention is to obviate the disadvantages of the burners hitherto in use and to provide a simple and efficient means for automatically lighting incandescent or other gas-burners.

For this purpose the invention consists of a self-igniting burner for incandescent gas-burners comprising certain novel features and combinations of parts, which will be more fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a general view of an incandescent gas-burner fitted with my improved apparatus for igniting the same; and Fig. 2 is a vertical section through the vertical axis of the burner, showing the operation of the various parts constituting my improvement.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, Z represents a burner-tube provided at its lower end with a socket D, screw-threaded at P, by means of which it is attached to the gas-supply pipe. The burner-tube is provided with the usual air-supply openings, closed or opened by the air-regulating ring R, as is usual in the well-known Bunsen burners. The socket D is provided with a channel G for the supply of gas passing from the supply-pipe. The socket is provided at its upper end with a cap C, provided at its upper end with openings L L' and with an opening centrally of said cap for the passage of a valve-spindle. A valve A is arranged between the cap C and the socket D and is adapted to prevent gas from passing from the channel G to the burner-tube. The socket D is provided at its central part with a conical cavity in which a conical valve E fits.

Between the valve E, which governs the supply of gas to the pilot-burner tube O, and

the main-burner valve A is arranged a spring H, and between the valve A and the cap C is arranged a spring F.

Connected with the pilot-burner valve E is a valve-spindle B, passing through the valve A and the central opening in the upper part of the cap C and screw-threaded at its upper end N. The pilot-burner tube I terminates in the upper part of the main-burner tube and in proximity to the main burner on said main-burner tube.

In proximity to the burner-tube I is arranged an igniter J, provided with platinum leaves S and attached to the burner-tube by a screw K. The igniter J consists of any suitable material adapted to be brought to incandescence when impinged by a current of combustible gas.

The burner-tube Z is provided in its central part with a sleeve Q, supporting a porcelain tube U, in which a rod T is arranged. This rod when heated expands and constitutes when connected with the valves thermostatic means controlling the opening and closing of the same. The lower end of the rod T is connected with a sliding pawl M M', which on the elongation of the rod T does not affect the position of the valve-spindle B and valve A.

For the purpose of limiting the action of the spring H the valve-spindle B is provided with a stop V, which at the same time acts as an abutment for the spring H.

The operation of my improved device is as follows: The gas entering the channel G passes upwardly into the interior of the cap C, and as the valve A closes the passage leading to the main-burner tube and as the valve E does not close the passage leading to the pilot-burner the gas passes through the pilot-burner tube O into the pilot-burner tube I and impinges against the igniter J, by means of which it is ignited and as ignited gas forced against the sleeve Q, in which the rod D is arranged. Due to the heat acting on the rod T the same is elongated and the valve A lowered, whereby the valve E is lowered to some extent. Hereby the gas is somewhat prevented from entering the pilot-burner tube O and passes upwardly into the main-burner tube, and emanating therefrom is ignited by the ignited gas

of the pilot-burner I. By the continued heat of the ignited mantle the rod T is still more elongated until the valve E is finally closed. After ignition of the incandescent mantle for
 5 some time the rod T usually becomes still more elongated, which elongation, however, is taken up by the sliding pawl M M', inasmuch as the same can pass downwardly over the screw-threaded end N of the valve-spindle
 10 B without affecting the position of the valve A.

I claim as new and desire to secure by Letters Patent—

1. A self-igniting incandescent gas-burner, comprising a main burner, a valve for the
 15 same, a pilot-burner in said main burner, a valve for the pilot-burner, and thermostatic means centrally of said main burner controlling said main and pilot burner valves, substantially as set forth.

20 2. A self-igniting incandescent gas-burner, comprising a burner-tube provided with a socket at its lower end, a cap in said burner-tube having openings, a main burner on said burner-tube, a pilot-burner in said main
 25 burner, a valve for the same, a rod centrally of said main burner connected with the pilot-burner valve, a valve for said main burner movable on said rod, a spring interposed between said pilot-valve and main valve, and a
 30 spring interposed between said main valve and cap, substantially as set forth.

3. A self-igniting incandescent gas-burner, comprising a burner-tube provided with a socket at its lower end, a cap in said burner-

tube having openings, a main burner on said
 35 burner-tube, a pilot-burner in said main burner, a valve for the same, a rod centrally of said main burner connected with the pilot-burner valve, a valve for said main burner movable on said rod, a spring interposed be-
 40 tween said pilot-valve and main valve, a spring interposed between said main valve and cap, and means adapted to take up the abnormal elongation of the rod without affecting the position of the valves, substantially as set forth. 45

4. A self-igniting incandescent gas-burner, comprising a burner-tube provided with a socket at its lower end, a cap in said burner-tube having openings, a main burner on said
 50 burner-tube, a pilot-burner in said main burner, a valve for the same, a spindle on said pilot-burner valve screw-threaded at its upper end, a rod centrally of said main burner, a valve for said main burner movable on said
 55 spindle, a spring interposed between said pilot and main valve, a spring interposed between said main valve and cap, and a sliding pawl on the rod adapted to engage with the screw-threaded end of the valve-spindle for taking
 60 up the abnormal elongation of the rod, substantially as set forth.

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

JEAN CANELLOPOULOS.

Witnesses:

EDWARD P. MACLEAN,
 EMILE LEDRET.