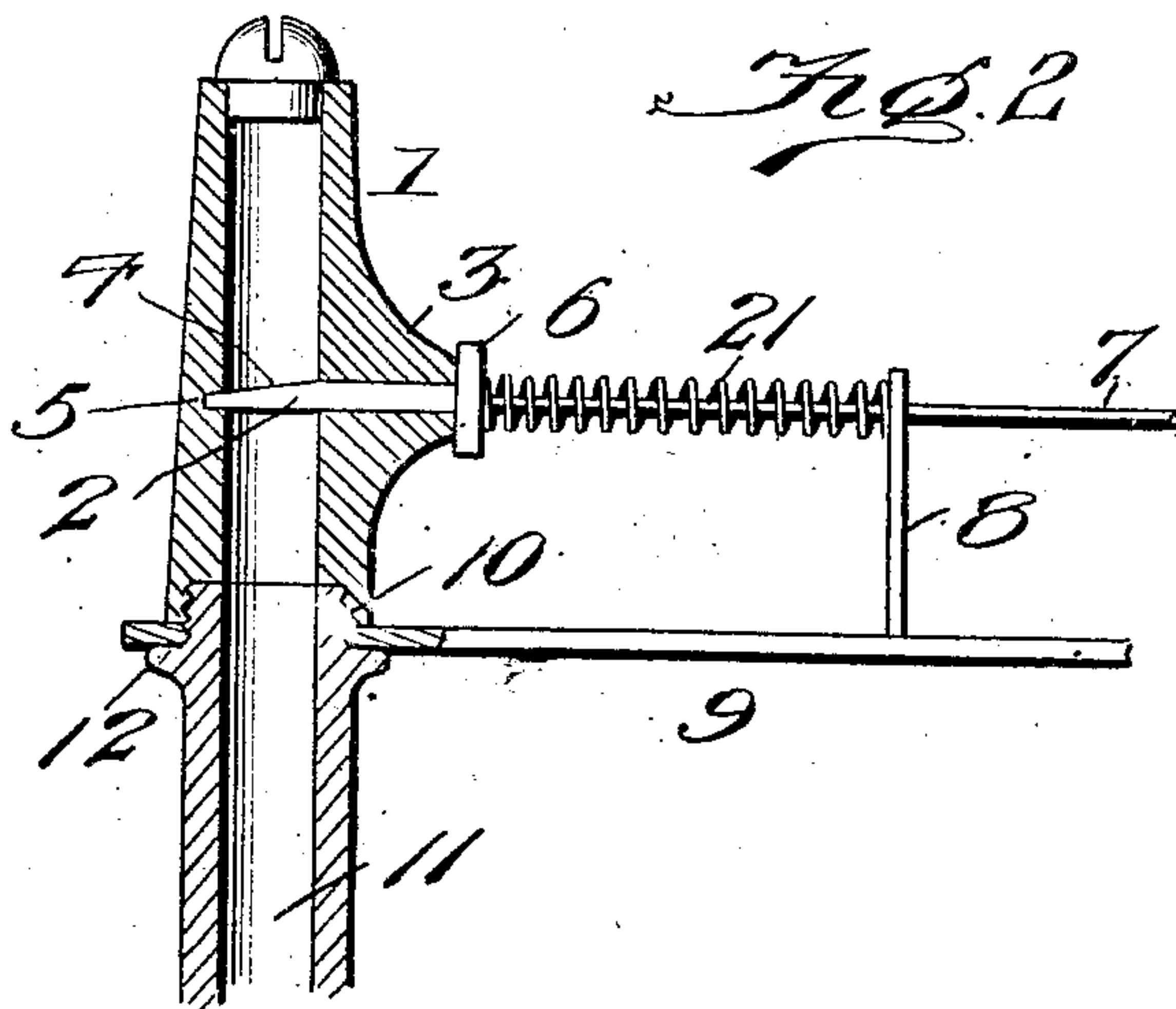
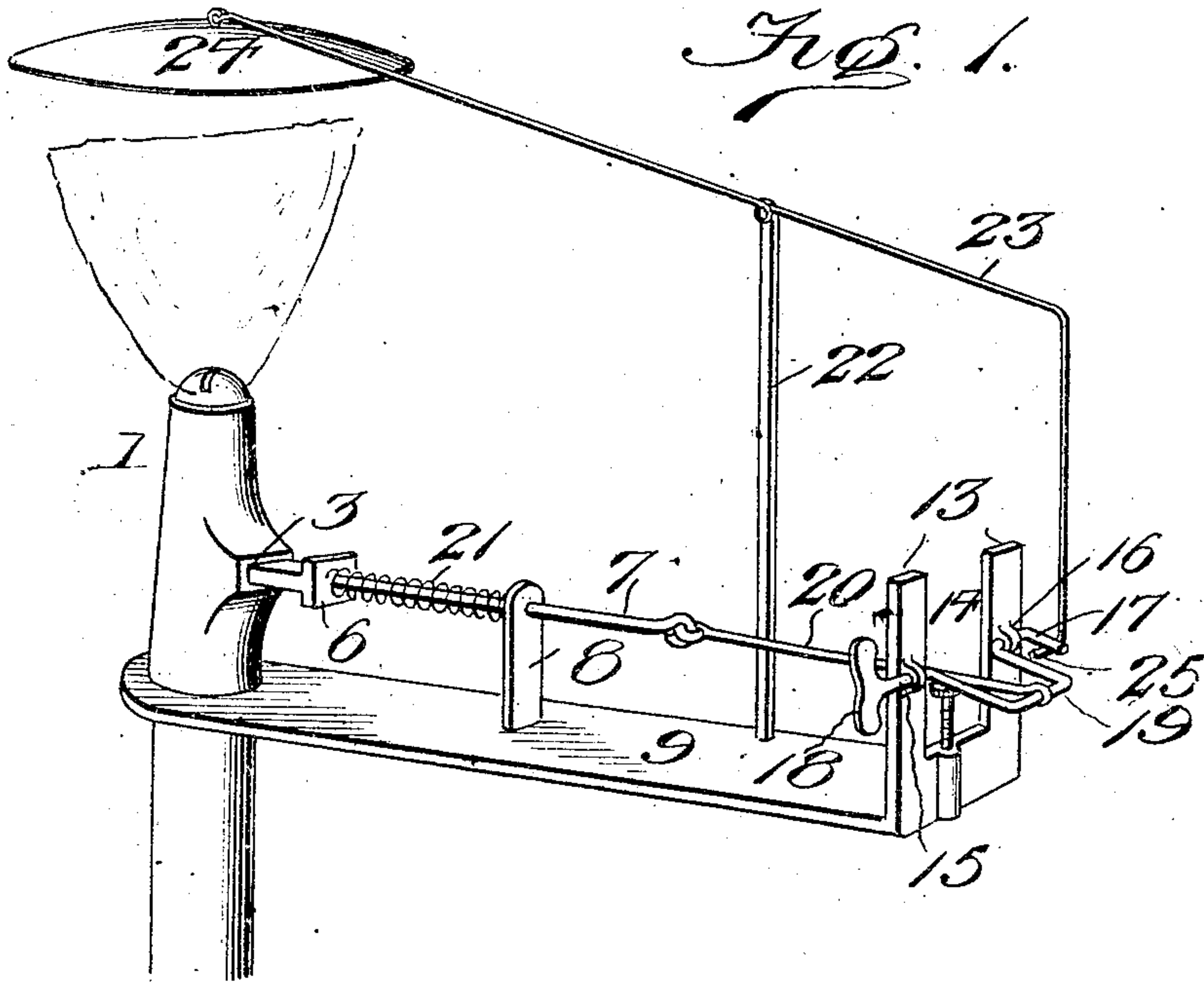


No. 898,260.

PATENTED SEPT. 8, 1908.

E. L. PRESTON.
AUTOMATIC GAS VALVE.
APPLICATION FILED AUG. 21, 1907.



Witnesses

Wm. North
J. Warner

Inventor
Everett L. Preston,

By *Victor J. Evans*

Attorney

UNITED STATES PATENT OFFICE.

EVERETT L. PRESTON, OF DAWN, MISSOURI.

AUTOMATIC GAS-VALVE.

No. 898,260.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed August 21, 1907. Serial No. 389,590.

To all whom it may concern:

Be it known that I, EVERETT L. PRESTON, a citizen of the United States of America, residing at Dawn, in the county of Livingston and State of Missouri, have invented new and useful Improvements in Automatic Gas-Valves, of which the following is a specification.

This invention is an improved automatically acting gas valve for use in connection with a gas burner to cut off the flow of gas in the event that the light should become extinguished and thereby prevent the escape of unconsumed gas from the burner, and the said invention consists in the construction, combination and arrangement of parts hereinafter fully described and claimed.

In the accompanying drawings,—Figure 1 is a perspective view of an automatically acting valve constructed in accordance with my invention, showing the same applied to a gas burner. Fig. 2 is a partial detail sectional view of the same.

In accordance with my invention I provide the burner 1 with a cut-off valve. The said valve may be of any suitable construction. As here shown the valve 2 is a slide valve operating in a guide opening 3 in one side of the burner, and the inner portion of the valve is wedge-shaped, as at 4, and is adapted to fit a correspondingly shaped seat 5. Said valve has a stop device 6 at its outer end, here shown as a head or flange, and is further provided with an outwardly extending stem or rod 7 which operates in an opening in a guide standard 8, which guide standard rises from a bracket arm 9. Said bracket arm is shown as provided at its inner end with an opening to receive the threaded coupling stem 10 of the gas pipe 11, to which the burner is screwed, so that the said inner end of the bracket is clamped between the inner end of the burner and the annular shoulder or flange 12 on and surrounding the gas pipe 11. The outer end of the bracket arm 9 is upturned to form a standard 13 which is provided with an opening 14 of suitable size.

A rock shaft 15 is mounted in bearings 16 on the said standard 13, is provided at one end with a rock arm 17, has a handle or thumb piece 18 at the opposite end, and has a crank 19 in that portion which is opposite the opening 14. A rod 20 is pivotally con-

nected to the wrist portion of said crank 19 and to the outer end of the valve stem or rod 4 so that the valve will be moved in one direction or the other when the said rock shaft is turned, according to the direction in which such rock shaft is turned. A spring 21 is employed to normally close the valve 2. Said spring is here shown as a coiled extensile spring disposed on the valve stem or rod 7 and with its ends bearing against the stop 6 and standard 8.

A standard 22 rises from the bracket arm 9 at a point a suitable distance from the outer end thereof. A balanced arm 23, here shown as a wire, is pivotally mounted at a point intermediate its ends at the upper end of the standard 22. One end of the balanced arm carries a bail 24 which is disposed above and a suitable distance from the burner, and the other end of such balanced arm is downturned and connected to the rock arm 17, as at 25.

The operation of the invention is as follows: Normally the spring 21 serves to close the valve 2 to hold the rock shaft in such position that the bell carried by the balanced arm is lowered to a slight extent above the burner. Before the burner can be ignited the rock shaft must be partly turned by the thumb piece 18 to cause the valve 2 to open, and such movement of the rock shaft, through the connections hereinbefore described, serves to partly turn the balanced arm so that the bell is raised slightly. The gas, being now ignited, at the burner tip, creates an ascending draft which strikes against the underside of the bell and the pressure of which is sufficient to maintain the bell in its elevated position, the weight of the bell being rendered less effective by reason of the pressure created by or the resistance of such draft so that the force of the spring is countervailed by that of the draft, and hence the spring is prevented from closing the valve so long as the light continues to burn. If, however, from any cause, the light should go out, the ascending draft of air would also cease and the leverage of the bell would serve to partly turn the rock shaft to move the crank 19 past the dead center and enable the spring to close the valve and thereby cut off the escape of gas from the burner.

A set screw 26 is provided in the path of the rod 20, to predetermine the extent of the

angular movement of such rod and hence adjust the valve and the automatically-acting controlling means.

Having thus described the invention, what is claimed as new, is:—

1. In combination with a gas valve and a spring tending to close the same, a rock shaft having crank elements, a pitman connecting one of said crank elements to the gas valve, an adjustable stop device to predetermine the extent of movement of said pitman angularly in one direction, and a balanced arm connected to the other crank element and having an element movable by the pressure of the current created by the light.

2. In combination with a longitudinally

movable gas valve for a gas burner and a spring tending to move said valve in one direction and close the same, a crank shaft having crank elements, a pitman connecting one of said crank elements to said valve, an adjustable stop device for the said pitman for the purpose set forth, and a balanced arm connected to the other crank element and having an element movable by the pressure of the current created by the light.

In testimony whereof I affix my signature in presence of two witnesses.

EVERETT L. PRESTON.

Witnesses:

H. B. HOGAN,

J. C. PRESTON.