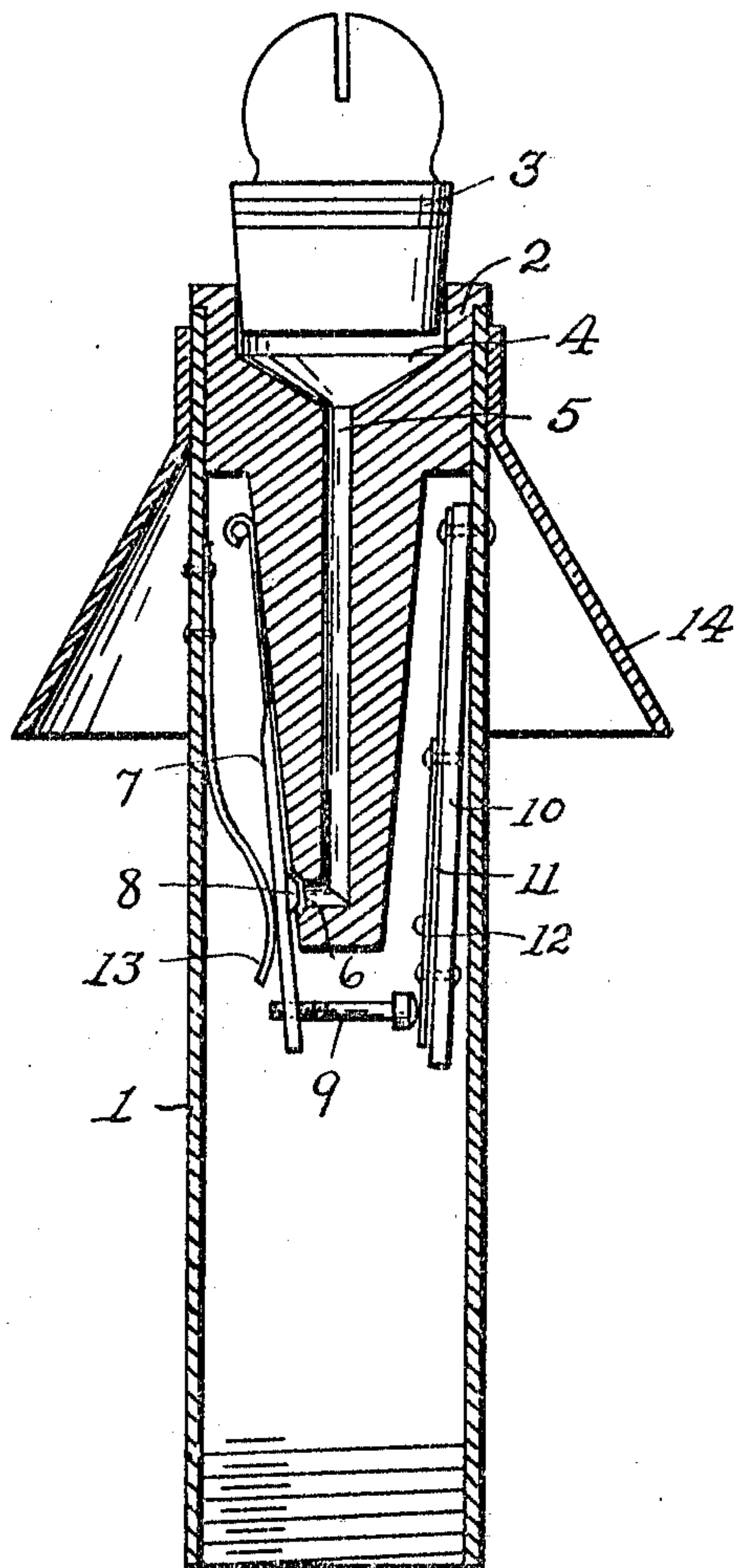


W. B. STOUT.
 AUTOMATIC GAS VALVE.
 APPLICATION FILED JAN. 30, 1911.

993,625.

Patented May 30, 1911.



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AUTOMATIC GAS-VALVE.

993,625.

Specification of Letters Patent. Patented May 30, 1911.

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To all whom it may concern:

Be it known that I, WILLIAM B. STOUT, citizen of the United States, residing at Bernharts, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Gas-Valves, of which the following is a specification.

This invention relates to improvements in automatic gas valves and the object in the present instance is to provide a device in which the flow of gas is automatically closed when the burner is extinguished accidentally.

The invention consists of a tubular burner provided with the usual burner tip, and a valve inside the tubular burner provided with means for opening it when heat is applied to the burner and closing it when the heat is removed, by extinguishing the flame.

The means for operating the valve comprises a plate made up of a plurality of layers of different metals, which plate is sensitive of heat.

The invention is more fully described in the following specification and clearly illustrated in the accompanying drawing, in which I have shown a vertical central sectional view of my burner, enlarged.

The numeral 1 designates the tubular member which is screw-threaded internally at its lower end for connection with the supply pipe.

The numeral 2 designates a plug adapted to fit closely in the upper end of the tube 1 and 3 designates an ordinary gas tip, which is located in a depression 4 in the upper end of the plug. This depression 4 terminates in a central opening 5 which extends to a point near the lower extremity of the plug, where it leads at right angles to an opening 6. This opening 6 is the inlet for the gas and I provide a valve for this opening in the form of a bar 7, pivotally secured to the plug at its top and carrying a plate 8 near its lower end adapted to close the opening 6. This bar 7 is kept in normal closed position by means of a spring 13 secured to the inner wall of the tube 1 and bearing at its free end against the bar 7. The bar 7 carries at its lower extremity a regulating screw 9, by means of which the operation of the valve may be regulated. To the inner wall of the

tube at the point opposite the gas inlet to the plug, I secure a plate made up of a plurality of layers, 10, 11 and 12. The plate is secured at its upper extremity and its lower end is free to move toward the head of the regulating screw 9. The main member 10 of this plate is made of aluminum and this is of a thickness considerably greater than the remaining plates 11 and 12, which latter plates are made of thin sheet steel.

The numeral 14 designates a hood, surrounding the upper end of the burner.

When it is desired to light the gas, a lighted match is held beneath the hood and in close proximity to the tube; this application of heat will affect the sensitive plate 10, causing it to expand. The steel plates, being less sensitive, will not expand proportionately and the effect will be to draw the plate 10 toward the center, which action will, through contact with the screw 9, open the valve 6 and permit the gas to flow to the tip, when it may be ignited. Should the flame become extinguished through any cause, the cooling of the parts will permit the plate 10 to resume its normal position, and the action of the spring 13 will close the bar 7 against the inlet 6, thus cutting off the supply of gas to the burner.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent is:—

In an automatically extinguishable gas burner, the combination of a tubular burner, a plug fitting the upper extremity thereof, said plug having a central gas opening and adapted to receive a gas tip in its upper end, a pivoted bar carrying a valve adapted to close said gas opening, a spring to keep said bar in normally closed position, an adjustable contact screw in the free end of the bar, a plate comprising a plurality of layers of different material and adapted to operate said valve, one of the layers in said plate having a greater co-efficient of expansion than the others.

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

WILLIAM B. STOUT.

Witnesses:

ED. A. KELLY,
CLARA E. YOUNG.