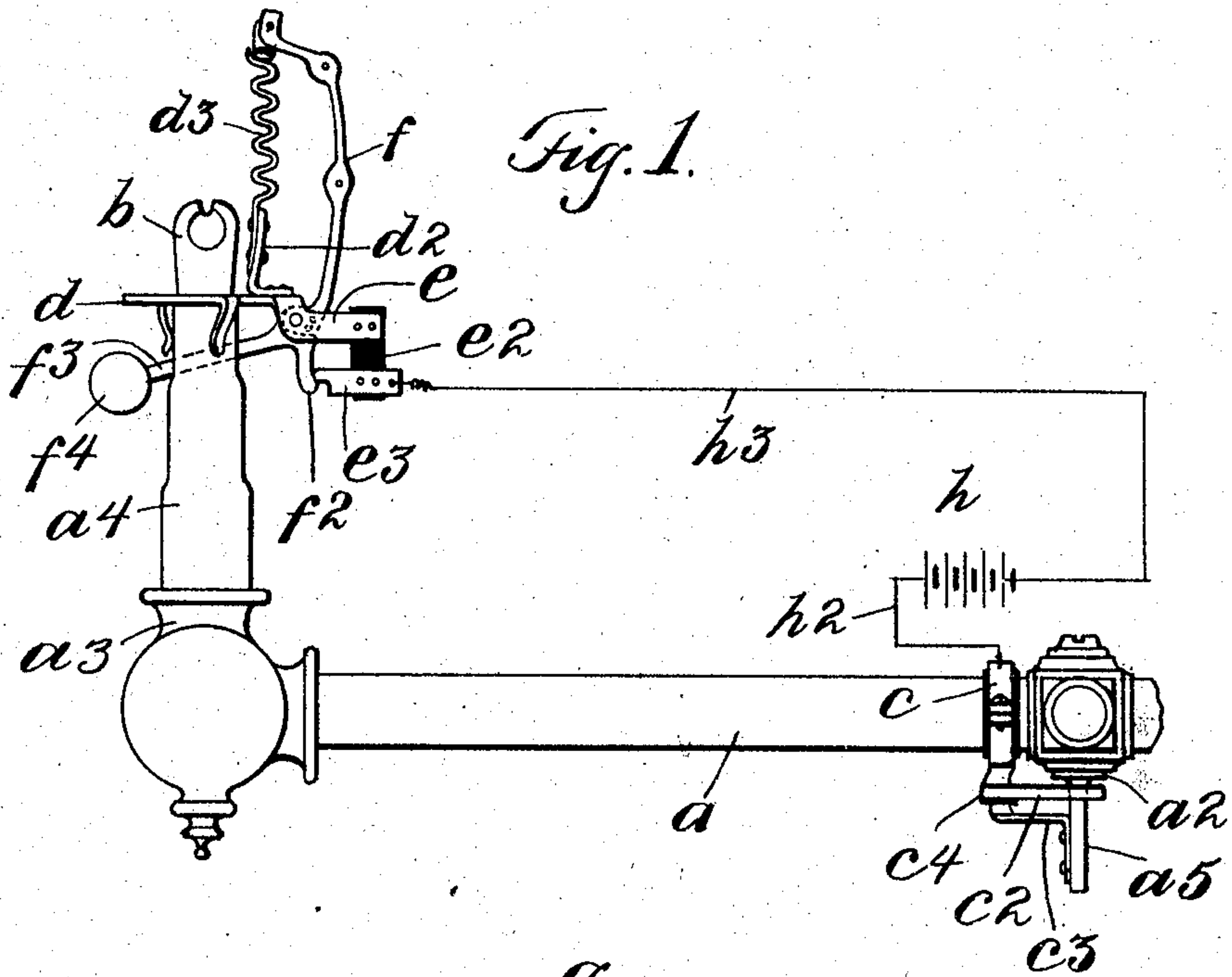


No. 778,252.

PATENTED DEC. 27, 1904.

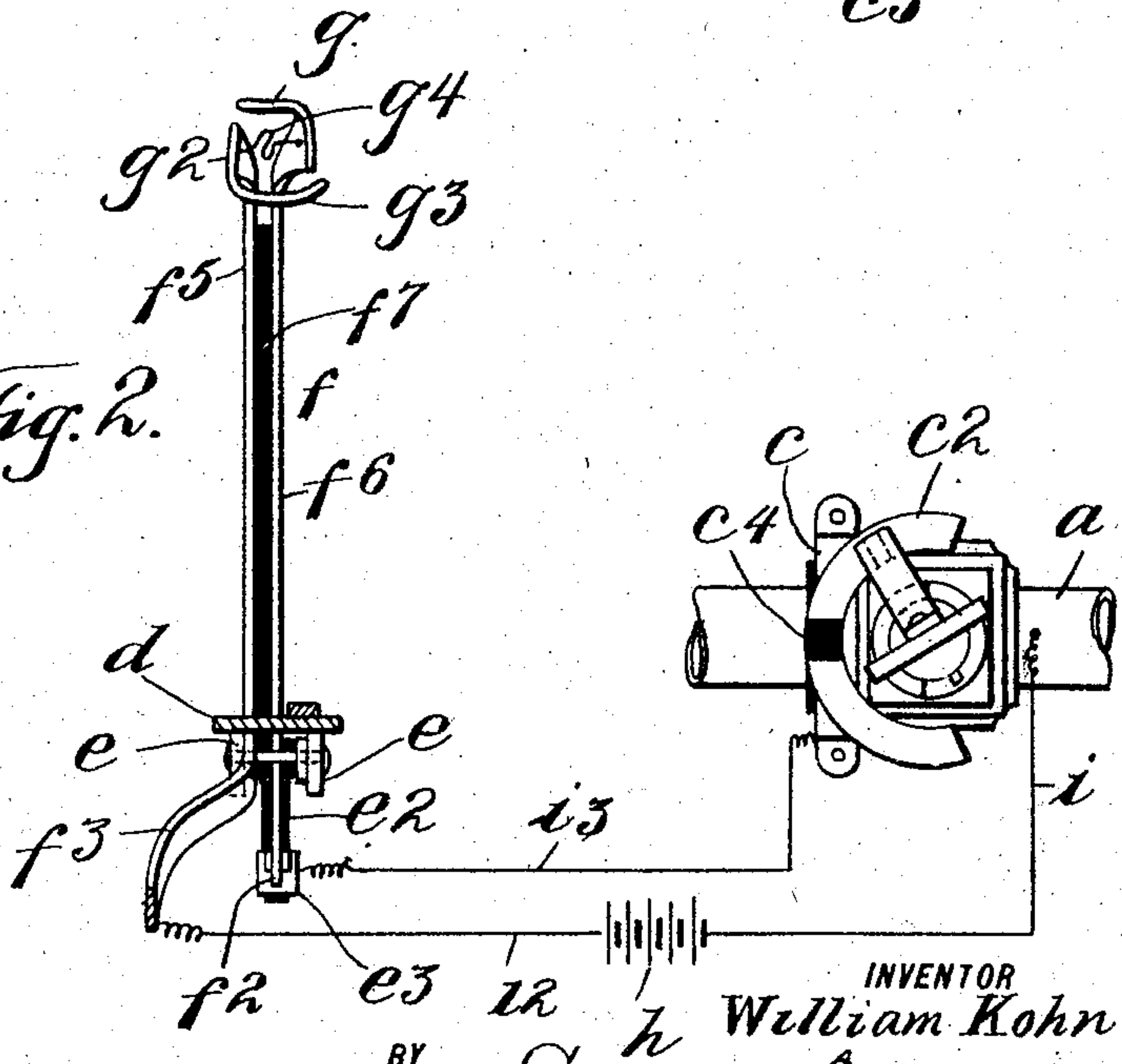
W. KOHN.  
GAS BURNER ATTACHMENT.  
APPLICATION FILED JAN. 19, 1904.



*Fig. 3.*



*Fig. 2.*



WITNESSES

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## UNITED STATES PATENT OFFICE.

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## GAS-BURNER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 778,252, dated December 27, 1904.

Application filed January 19, 1904. Serial No. 189,689.

*To all whom it may concern:*

Be it known that I, WILLIAM KOHN, a subject of the Emperor of Austria-Hungary, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Gas-Burner Attachments, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to gas-burners; and the object thereof is to provide an ordinary gas-burner fixture with electrical attachments which are automatically operated to reignite the gas if the latter be accidentally blown out or extinguished in any other way without being fully turned off; and with this and other objects in view the invention consists in an attachment for gas-burners for the purpose specified constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my invention are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a side view of a gas-burner fixture provided with my improvement; Fig. 2, a diagrammatic view showing the electric circuits and showing a circuit-closer at right angles to the position shown in Fig. 1 and also showing other parts of the construction; Fig. 3, a side view of a detail of the construction on an enlarged scale.

In the drawings forming part of this specification, I have shown an ordinary gas-fixture which may be connected with a wall, wall-bracket, chandelier, or other similar device, and said fixture comprises a pipe  $a$ , having the usual valve-casing and valve  $a^2$ , and in the form of construction shown said pipe is provided with an elbow member  $a^3$ , with which is connected an ordinary burner-tube  $a^4$ , provided with the usual tip  $b$ .

Connected with the pipe  $a$ , near the casing of the valve  $a^2$ , is a band  $c$ , provided at one side with a horizontally-arranged segmental member  $c^2$ , and the handle part  $a^5$  of the valve  $a^2$  is provided with a spring-arm  $c^3$ , the free end

of which is adapted to bear on the segmental member  $c^2$  of the band  $c$ , and when the valve  $a^2$  is in position to cut off the flow of gas through the pipe  $a$  the spring-arm  $c^3$  is insulated from the member  $c^2$ , as shown at  $c^4$ , said member being provided with insulating material at  $c^4$ .

Mounted on or connected with the upper end of the burner-tube  $a^4$  in any desired manner is a disk or support  $d$ , with one side of which is secured an upwardly-directed finger  $d^2$ , with which is connected a vertically-arranged thermostat  $d^3$ , which projects a predetermined distance above the burner-tip  $b$  and which is bent to form lateral convolutions, as clearly shown in Fig. 1, and which is adapted to expand and contract under the influence of heat and cold and for which purpose the said member  $d^3$  is preferably made of different metals, such as are usually employed for such purposes. On the side of the support  $d$  with which the arm  $d^2$  is connected said support is provided with downwardly and outwardly directed arms  $e$ , with which is connected an insulated block  $e^2$ , to which is secured a contact-piece  $e^3$ , and pivoted to the base portion of the arms  $e$  is an upwardly-directed arm  $f$ , having a downwardly-directed finger  $f^2$  adapted to make contact with the contact device  $e^3$ , and said arm  $f$  or the part  $f^5$  thereof, is provided with a supplemental arm  $f^3$ , which projects transversely of the burner-tube in a direction opposite to that of the arms  $e$  and which is weighted at its end, as shown at  $f^4$ . The upwardly-directed arm  $f$  is composed of two parts,  $f^5$  and  $f^6$ , which are insulated from each other by an intermediate part  $f^7$ , and the finger  $f^2$  is formed on one of the parts,  $f^6$ , and the other part,  $f^5$ , is insulated therefrom. The part  $f^5$  of the arm  $f$  is provided at its upper end with an outwardly-curved and transversely-directed member  $g^2$ , and the part  $f^6$  is provided with an outwardly-curved member, having a curved finger-piece  $g^3$ , which projects transversely of the upper end of said arm and over the member  $d^3$ , and the parts  $g$  and  $g^2$  are connected by a transversely-arranged coil  $g^4$ , of platinum.

The band  $c$  is insulated from the pipe  $a$  and



is also provided with a battery  $h$ , which may be placed at any desired point and which is connected with the band  $c$  by a wire  $h^2$  and with the contact device  $e^3$  by a wire  $h^3$ .

5 It will be understood that the upper end of the thermostat  $d^3$  operates, in connection with the finger  $g^3$  at the upper end of the arm  $f$ , to move said arm  $f$ , as hereinafter described, and the operation of this form of construction  
10 will be readily understood from the foregoing description when taken in connection with the accompanying drawings. Suppose the parts to be in the position shown in Fig. 1, in which position the spring-arm  $c^3$  rests on the insu-  
15 lator at  $c^4$ , with which the segmental member  $c^2$  is provided. If now the gas be turned on, the arm  $c^3$  will rest on the segmental member  $c^2$ , and the circuit will be completed from the battery through the wire  $h$ , through the con-  
20 tact device  $e^3$ , through the part  $f^6$  of the arm  $f$ , through the platinum coil  $g^4$ , and down through the other part  $f^5$  of said arm and through the parts  $d$ ,  $a^4$ ,  $a$  and the valve  $a^5$ , the spring-arm  $a^3$ , the segmental member  $c^2$ ,  
25 the band  $c$ , and the wire  $h^2$  to the battery. This current will heat the coil  $g^4$  and ignite the gas, and if at any time the gas be blown out or accidentally extinguished the thermo-  
30 stat  $d^3$  will contract and the arm  $f$  will assume the position shown in Fig. 1, and the circuit will again be completed and the gas reignited by the coil  $g^4$ , and as the gas continues to burn the thermostat  $d^3$  will expand and the finger  $f^2$  will be separated by the arm  $f$  from  
35 the contact-piece  $e^3$  and the circuit will again be broken, and it will thus be seen that the battery is only in position when it is necessary to light or relight the gas.

In the construction shown in Fig. 2 the  
40 parts are exactly the same as hereinbefore described, except that the battery  $h$  is connected with the pipe  $a$  by a wire  $i$  and with the supplemental arm  $f^3$  by another wire,  $i^2$ , and the band  $c$  is connected with the contact-piece  $e^3$   
45 by a wire  $i^3$ . With this form of construction the current when the gas is turned on, as shown in Fig. 2, passes through the battery, through the wire  $i^2$ , the part  $f^5$  of the arm  $f$ , through the platinum coil  $g^4$ , the part  $f^6$  of  
50 the arm  $f$ , and through the finger  $f^2$ , the contact device  $e^3$ , the wire  $i^3$ , the band  $c$ , the segmental member  $c^2$ , the spring-arm  $c^3$ , and the valve  $a^2$  to the pipe  $a$ , and through said pipe to the battery through the wire  $i$ . In this op-  
55 eration the current heats the coil  $g^4$  and the gas is ignited thereby, and when the thermostat  $d^3$  becomes heated the arm  $f$  operates, as hereinbefore described, to break the circuit, and if at any time the gas is accidentally blown  
60 out or accidentally extinguished without turning off the flow thereof the thermostat  $d^3$  will contract, and the arm  $f$  will operate to complete the circuit, and the coil  $g^4$  will be again heated and the gas reignited.

65 This device is simple in construction and

operation and perfectly adapted to accomplish the results for which it is intended, and changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing  
70 its advantages.

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

1. In an apparatus of the class described, 75 a support adapted to be connected with the burner-tube of a gas-fixture, a vertically-arranged thermostat connected with said support, a vertically-arranged arm pivoted to said support and composed of two parts insulated  
80 from each other and connected at their upper ends by a platinum coil, said thermostat being also adapted when expanded to force the upper end of said arm outwardly and the lower end of said arm being provided with a sup-  
85 plemental weighted arm, and a contact device supported adjacent to the lower end of said arm and insulated therefrom and with which one part of said arm is adapted to make contact, substantially as shown and described. 90

2. In a device of the class described, a gas-fixture provided with a burner-tube, a support connected therewith adjacent to the burner-tube, a vertically-arranged thermostat connected with said support, two arms con-  
95 nected with said support, a vertically-arranged arm pivoted between the first-named arms and composed of two parts insulated from each other and connected at their upper ends by a platinum coil, the upper end of said thermo-  
100 stat being adapted to operate in connection with the upper end of said vertically-arranged arm so as to force it outwardly, a supplemental weighted arm connected with the lower end of the first vertically-arranged arm, an insu-  
105 lated block secured between the arms between which the first-named arm is pivoted, a contact device secured to said insulated block, and a finger connected with one part of the first-named arm and adapted to operate in  
110 connection with said contact device, substantially as shown and described.

3. In a device of the class described, a support adapted to be connected with the burner-tube of a gas-burner, said support being pro-  
115 vided with an upright thermostat, an arm connected with said support and adapted to be moved laterally by said thermostat, said arm being composed of two parts insulated from each other and being also provided in  
120 the top thereof with a platinum coil, and means whereby the operation of the thermostat on said arm will make and break an electric circuit, substantially as shown and de-  
125 scribed.

4. In a device of the class described, a support adapted to be connected with a burner-tube of a gas-burner, a vertically-arranged thermostat connected with said support, a ver-  
130 tically-arranged member connected with said



support adjacent to said thermostat and in connection with which said thermostat is adapted to operate, said member being composed of two parts insulated from each other and connected at the top by a platinum coil and means whereby the operation of the thermostat in connection with said member will make and break an electric circuit, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 18th day of January, 1904.

WILLIAM KOHN.

Witnesses:

F. A. STEWART,  
C. J. KLEIN.