

(No Model.)

G. W. BROWNE.
SAFETY GAS BURNER.

No. 312,805.

Patented Feb. 24, 1885.

Fig. 1.

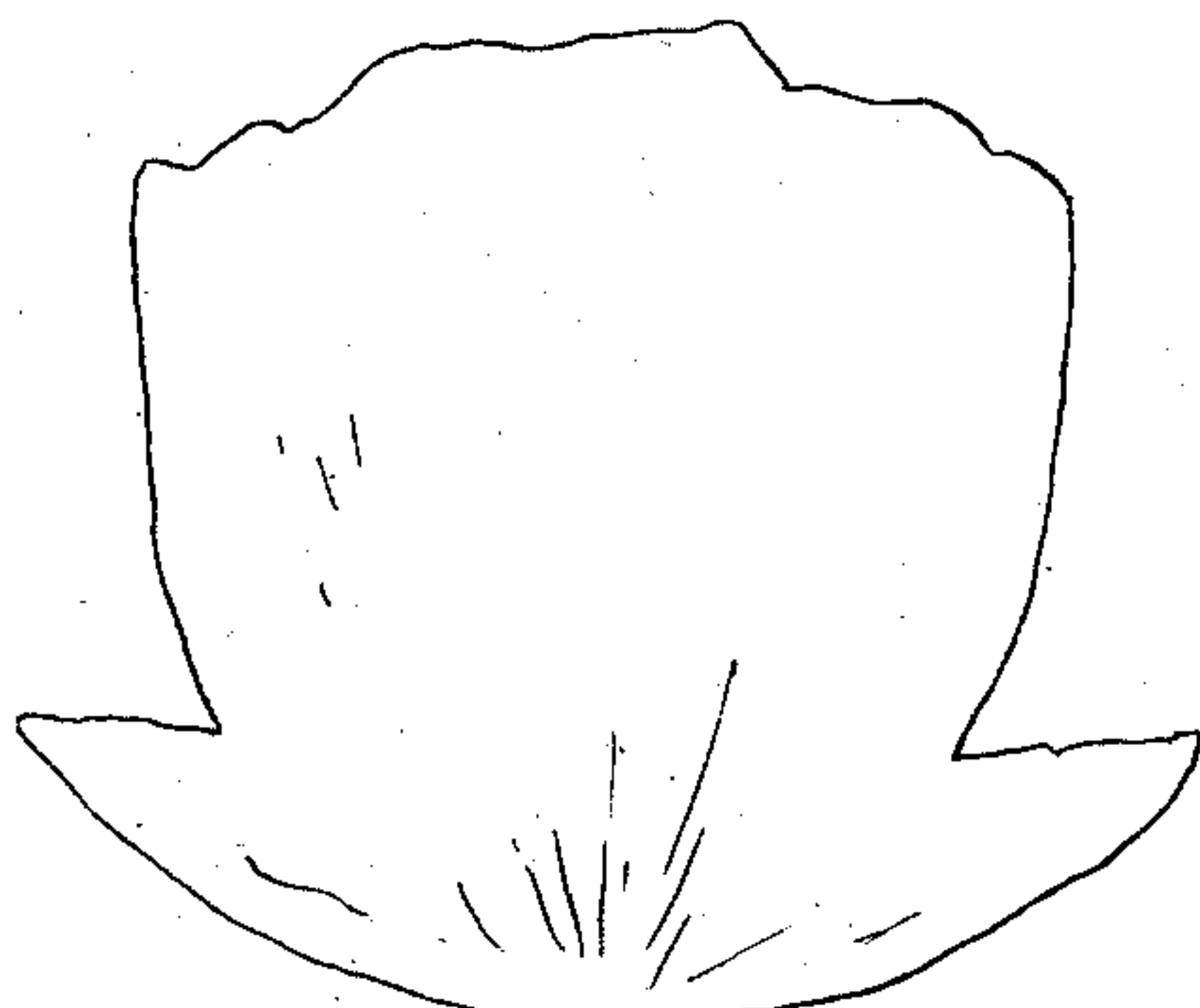
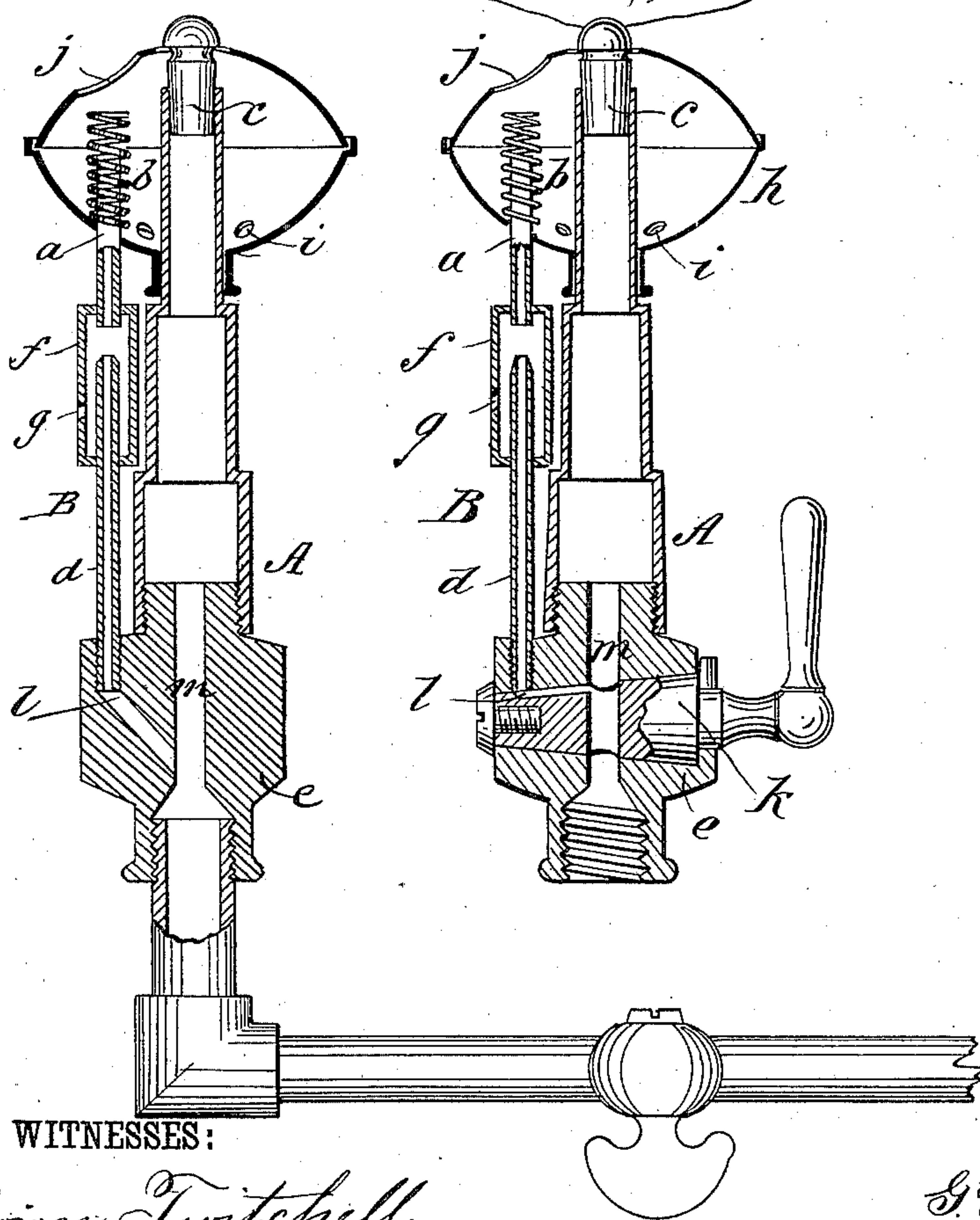


Fig. 2.



WITNESSES:

Doan Twitchell.
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UNITED STATES PATENT OFFICE.

GEORGE W. BROWNE, OF BROOKLYN, NEW YORK.

SAFETY GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 312,805, dated February 24, 1885.

Application filed May 24, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BROWNE, of Brooklyn, E. D., in the county of Kings and State of New York, have invented a new and Improved Safety Gas-Burner, of which the following is a full, clear, and exact description.

This invention pertains to improvements in gas-burners, and has for its object to avoid asphyxiation in case of blowing out, instead of turning off, the gas, as should be done; and the invention therefore consists of the combination, with the main burner, of a supplementary burner, having at its upper end a helix or piece of platinum metal, and comprising two tubes connected to an intermediate apertured chamber, and a plug constructed to effect the simultaneous turning on of the supply of gas and the cutting off of the same from the supplementary and main burners; and it consists, further, of certain details of construction of the aforesaid parts, together with the combination therewith of other parts, substantially as hereinafter more fully set forth and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which Figure 1 is a sectional elevation of a gas-burner made in accordance with my invention or discovery. Fig. 2 is also a sectional view of a modification, showing the cock applied to the gas-pipe.

In carrying my invention into effect, applying it to an ordinary gas-burner, A, I prefer to employ a kind of Bunsen attachment, B, to the upper end of the upper tube, *a*, of which the platinum metal *b*, preferably in the form of a coil, and as soft and spongy as practicable, is applied, which tube *a* holds the metal *b* near the tip *c* of the main burner A. The Bunsen attachment B in this instance is composed of the lower tube, *d*, tapped into the shank or stock *e* of the burner A, the shell *f* held at the upper end of the tube *d* and the said upper tube, *a*, the shell *f* being perforated at *g* to admit the necessary supply of air.

For protecting the platinum metal *b* from accidental displacement, and from currents of air which might deflect the jet of gas issuing from the tube *a*, which would interfere with its proper action, I employ the shell *h*, which

I place upon the burner A, so as to receive and surround the metal *b*; and this shell *h* is perforated at *i* to admit air, and also at *j*, immediately above the platinum metal *b* and tube *a*, to permit the jet of gas from the tube *a* to join the gas that issues from the tip *c* of the main burner A. Where the gas-cock *k* is fitted in the shank *e* of the main gas-burner, as shown in the drawings, the cock will be grooved, as shown at *l*, to admit a supply of gas to the Bunsen attachment B when the gas is turned on; but where the cock is fitted in the gas-fixture or service-pipe simply a communicating opening will be formed from the lower tube, *d*, to the gas-passage *m* of the stock *e* for supplying gas to the Bunsen attachment at the same time that gas passes through the main burner.

The action is as follows: The gas being turned on and lighted, the jet that passes through the Bunsen attachment B will burn at the upper end of the upper tube, *a*, and heat the platinum metal *b*. Should the gas now be blown out, instead of turned off, the jet of gas that issues from the tube *a*, coming in contact with the platinum wire, will act to revive or continue its heat, and the heat of the wire will increase with the continued flow of the gas, and in a short time reignite the jet from the Bunsen attachment, which will instantly reignite the gas from the main burner A, and thus prevent the escape of gas into the apartment.

I am aware of the existence of a secondary burner formed in part by a passage in the main burner-pipe, and a tip applied to said passage alongside of the main burner, wherein a common plug or cock is used to alternately turn on the supply of gas and to cut off the same from the main and secondary burners.

I am also aware of the employment of a platinum relighter in connection with a relighting-jet, and of the employment of a platinum coil for relighting the main burner.

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

1. In a gas-burner, the main burner connected to the stock or shank, having the plug provided with a two-way passage, in combination with the supplementary burner com-

communicating with one arm of said passage, and having at its upper end a helix or piece of platinum metal, said supplementary burner comprising two tubes connected to an intermediate apertured chamber, substantially as
5 and for the purpose set forth.

2. In a gas-burner, the combination of the main burner, the supplementary burner having at its upper end a helix or piece of platinum metal, and comprising two tubes connected to an intermediate apertured chamber, and the plug constructed to effect the simultaneous turning on of the supply of gas and the cutting off of the same from the main and
10 supplementary burners, substantially as and for the purpose set forth.

3. The burner A, combined with the attachment B, consisting of the tube *d*, perforated

shell *f*, and upper tube, *a*, to which the platinum metal *b* is applied, substantially as and
20 for the purposes set forth.

4. In a gas-burner, the main burner connected to the stock or shank, having the plug provided with a two-way passage, in combination with the supplementary burner communicating with one arm of said passage, and
25 having at its upper end a helix or piece of platinum metal surrounded by an apertured case or inclosure, said supplementary burner comprising two tubes connected to an intermediate apertured chamber, substantially as
30 and for the purpose set forth.

GEORGE W. BROWNE.

Witnesses:

H. A. WEST,

EDWD. M. CLARK.