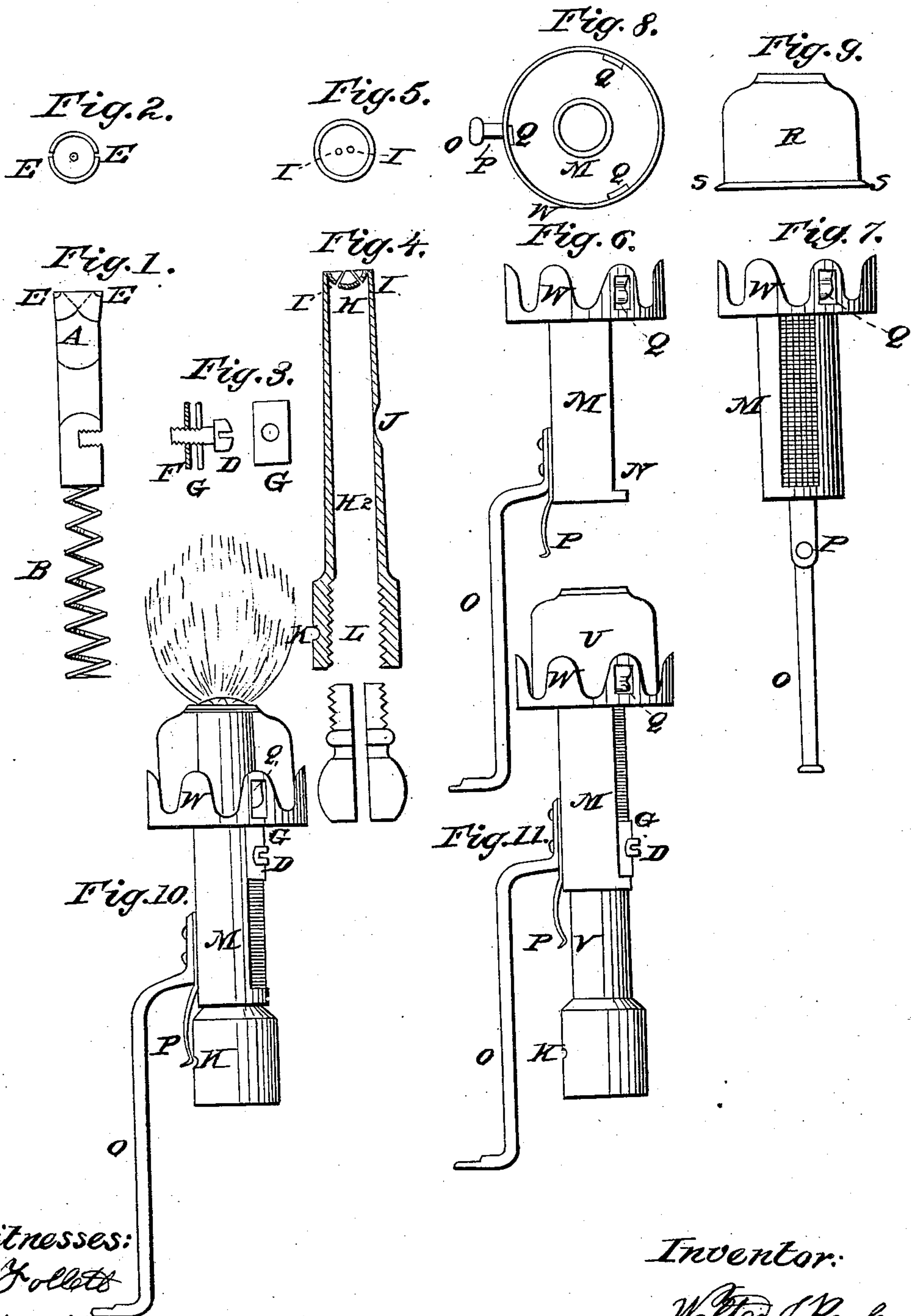


W. J. BRASSINGTON.

Gas Burner.

No. 81,063.

Patented Aug. 18, 1868.



Witnesses:
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WALTER J. BRASSINGTON, OF BROOKLYN, NEW YORK.

Letters Patent No. 81,063, dated August 18, 1868.

IMPROVEMENT IN GAS-BURNERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WALTER J. BRASSINGTON, of the city of Brooklyn, in the county of Kings, and State of New York, have invented a Gas-Burner, to be used as a perpetually-lighted burner or otherwise, and can be applied to any ordinary gas-bracket, burner, or chandelier.

The nature of my invention consists in producing a perpetual gas-burner, by placing a movable internal valve in the ordinary gas-burner, and operated so as to cut off the force of the gas to the desired quantity necessary to supply and give a small flame, for the purpose of producing a perpetual light, with little expense, and dispensing with the ordinary supply-cock or faucet.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, in which—

Figure 1 represents a movable internal valve, A, with spiral spring B attached, and screw-hole *c* for screw D.

Figure 2 represents a top view of the movable internal valve A, showing the channels or grooves E E, for the escape of gas, said grooves being cut bevelling, so as always to be kept clean by the constant pressure of gas, thus avoiding all future obstructions.

Figure 3 represents the packing F, made of cork or other elastic material, with the plate G and screw D, for securing the same in its place.

Figure 4 represents the gas-burner H², showing the internal valve-seat H, against which the internal valve A, fig. 1, is pressed in its operation, and the channels or grooves I I, for the escape of gas, and the oblong hole J, for the reception of the screw D, fig. 3, and the notch K, for holding the movable jacket M, fig. 6, in its position, when burning a full gas-light, and the female screw L, for attaching the same to any bracket, chandelier, or pipe, as X, fig. 4.

Figure 5 represents a top view of the above figure, showing the outlets of the gas-channels I I.

Figure 6 represents the movable jacket or casing M, with slot N, into which the cork packing F, plate G, and screw D, fig. 3, is allowed to traverse, showing also the pull O, and the spring-point P, which is caused to slip in the notch K, fig. 4, when in the act of opening a full head of gas; also, the hood-band W, with the spring hood-holders Q Q, for securing the glass hood R, fig. 9, in its place in the hood-band W.

Figure 7 represents another view of fig. 6, showing the position of the slot N, the pull O, and the spring-point P, also the hood-band W.

Figure 8 represents a top view of the movable jacket M, the position of the hood-band W and spring hood-holders Q Q Q, the pull O, and spring-point P.

Figure 9 represents the glass hood R, showing the flange S S, which, being pressed against the hood-holders Q Q Q, fig. 8, causes the glass hood R to be firmly held in its position, at the same time being easily detached.

Figure 10 represents my perpetual gas-burner complete, with full blaze T, by means of the pull O being brought down so that the spring-point P is made to slip in the notch K, thus opening the internal valve A, fig. 1, and allowing a full head of gas to be exposed to the atmosphere.

Figure 11 represents another view of my perpetual gas-burner complete, with a miniature light, U, by means of the pull O being raised, so that the spring-point P is released from the notch K, and brought up to V, thus closing the valve A, fig. 1, against the valve-seat H, fig. 4, and allowing the miniature night-light to be supplied with the smallest quantity of gas, escaping through the channels E E, figs. 1, 2.

Its Construction.

I first construct a gas-burner or shell, as represented at fig. 4, with an internal valve-seat, H, through the top of which the channels I I are made for the escape of gas. At the lower end of this burner, at L, is made the female screw, of the usual size and form, for the purpose of attaching the same to any ordinary bracket, chandelier, or pipe, as X.

On the outside, at K, I make a notch, for receiving the spring-point P, fig. 10, hereafter mentioned.

I next construct a valve, A, fig. 1, to be one-half the length of the gas-burner H², fig. 4, the top of which is turned perfectly true and concave, as seen at the dotted line E E A, fig. 1, and made to conform exactly to the internal convex valve-seat I H I, fig. 4. On the top of this valve A, fig. 1, a small groove or channel, E E, is made, for the escape of a small quantity of gas when the valve A is placed inside of the gas-burner H², fig. 4, and against the valve-seat H. At the lower end of this valve A, fig. 1, I place a spiral spring, B, of sufficient length, so that the valve A and spring B, both together, shall be the same length as the gas-burner H², fig. 4, from H to L, said spring B being intended to act against the valve A, and press the same up against the valve-seat H, fig. 4, when burning a faint night-light; hence, all the gas which will be burnt will pass through the small channels or grooves E E, fig. 2.

I next construct a movable jacket or casing, M, figs. 6, 7, the inside of which shall be of sufficient size to closely fit over the gas-burner H², fig. 4, but still sufficiently loose to slide up and down the same. In this jacket, on one side, I cut a long slot, N, fig. 7, of sufficient width to receive the square washer or plate G, fig. 3, for purposes hereafter mentioned. On the lower end of this jacket M, I place a pull or handle, O, figs. 6, 7, with a spring-point, P, placed in such a position that when the jacket M is brought down over the gas-burner H², fig. 4, causing the valve A E E, fig. 1, to leave the valve-seat H, fig. 4, the said spring-point P will slip in the notch K, figs. 4, 10, thus holding all the movable pieces firmly in their places.

Again, on the upper end of the said jacket M, figs. 6, 7, the hood-band W is firmly attached, and made of sufficient size to admit of the glass hood R, fig. 9, being slipped inside, and firmly held in its place by means of the spring hood-holders, Q Q Q, fig. 8, said spring hood-holders being made from, and a part of, the hood-band W itself.

Having described each and every piece, I will now proceed to describe

Its Operation.

I first take the gas-burner H², fig. 4, and place over it the movable jacket M, fig. 6, after which I place the valve A and spring B, fig. 1, inside of the gas-burner H², fig. 4, in such a position that the screw-hole *c* in the valve A, fig. 1, shall be directly opposite the oblong hole J, fig. 4, for the purpose of inserting the screw D, cork packing F, and plate G, fig. 3, in their proper places, the cork packing preventing the escape of gas from the inside of the gas-burner, fig. 4, by coming in contact with the outside of the same, while the square plate G, fig. 3, is allowed to move and play freely in the slot N, in the side of the movable jacket M, fig. 7.

I next place the glass hood R, fig. 9, in position, by pressing the same inside of the spring hood-holders Q Q Q, fig. 8. This being accomplished, the whole assumes the appearance as represented at figs. 10, 11, complete for operation, and ready to be attached to any bracket, chandelier, or pipe, as X, fig. 4.

In operating this gas-burner, it is presumed that the position of the movable jacket M shall be up, as represented at fig. 11, with the spring-point P at V. When in this position, the action of the spiral spring B on the valve A, fig. 1, is to press the valve A against the valve-seat H, fig. 4, which keeps the valve A constantly closed against said valve-seat H, fig. 4, and prevents the escape of gas through the burner at all times, thus obviating the necessity of a separate gas-cock or faucet, as at present used at its connection with a bracket or pipe.

Again, by pressing down on the pull or handle O, fig. 11, the movable jacket M slides down on the gas-burner H² until the spring-point P reaches the notch K, and the plate G touches the under side of the hood-band W, as shown at D G, fig. 10, the valve A, fig. 1, still being closed, by the action of the spiral spring B against the valve-seat H, fig. 4, while the spring-point P will not yet enter the notch K, as shown at fig. 10, it being apparently too short. Now, in order to open the valve A, fig. 1, and allow the spring-point P, fig. 10, to enter the notch K, an additional pressure is required upon the pull or handle O, for the purpose of acting against the spiral spring B, on the valve A, fig. 1, which result is obtained by the pressure of the plate G, fig. 10, against the under side of the hood-band W, which again acts against the screw D, the latter being connected directly with the valve A at *c*, fig. 1, thus forcing the valve A from the valve-seat H, fig. 4, sufficient to allow a full head of gas to supply the burner, also to allow the spring-point P (which was apparently too short) to enter the notch K, fig. 10, thus firmly holding the valve open.

Again, when the movable jacket M is raised, as represented at fig. 11, the action of the spiral spring B, fig. 1, against the valve A, closes it against the valve-seat H, fig. 4, thus preventing the escape of gas, except through the small grooves E E, fig. 2, which are just sufficient to supply a very small light, as shown at U, fig. 11. The glass hood being above the light, effectually protects the same from any draught or current of air, the transparent hood R allowing the light to be seen at all times during the night, offering facilities for finding the same, and instantly obtaining a full blaze, thus constituting a perpetual gas-burner.

In summing up my claims, I wish to say that I do not claim a self-lighting gas-burner, for that is already in use; neither do I claim a hood, for that is already secured in combination with a self-lighting gas-burner; but

What I do claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The valve A, placed inside of the ordinary gas-burner, and operated so as to cut off the force of the gas to the desired quantity necessary to supply a miniature flame, substantially as described.
2. The valve-seat I H I, formed by the under side of the tip in the ordinary gas-burner, against which the valve A seats itself, for the purposes specified.
3. The application of the spiral spring B, in combination with the valve A, for the purposes herein specified.
4. The movable jacket M or casing, with the slot N, in combination with the band W, for the purpose of receiving the movable glass-protector or hood R, substantially as described.
5. The combination of the internal movable valve A, with the elastic packing F and plate G and screw D, or their equivalents, substantially as shown and described, for the purposes set forth.

6. The application and use of the spring-point P, attached to the movable jacket M or casing, and the notch K, to receive the same, for the purpose of securing the aforesaid movable jacket M or casing in its proper position, when it is raised to protect the small flame U, or drawn down to permit a full flame at T, as herein specified.

7. A pull or handle, O, or other suitable device, attached to the movable jacket M or casing, for the purpose of operating the same, either up or down, substantially as described and herein set forth.

All of which is respectfully submitted.

WALTER J. BRASSINGTON.

Witnesses:

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