SNOW & LEWIS.

Gas Jet Cigar Lighter.

No. 52,457. Patented Feb. 6, 1866.

FIG. 2.

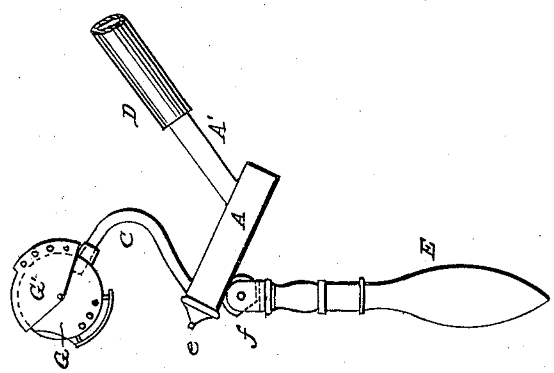


FIG. 3.

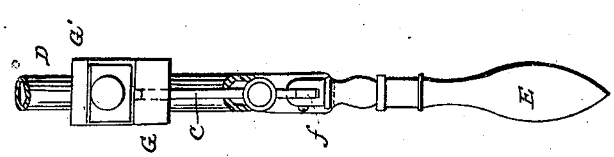
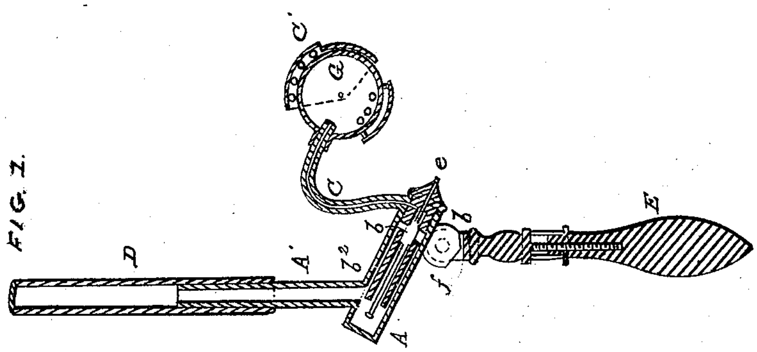


FIG. 1.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE B. SNOW AND THEODORE G. LEWIS, OF BUFFALO, NEW YORK.

GAS-JET CIGAR-LIGHTER.

Specification forming part of Letters Patent No. **52,457**, dated February 6, 1866; antedated January 22, 1866.

To all whom it may concern:

Be it known that we, GEORGE B. SNOW and THEODORE G. LEWIS, of the city of Buffalo, county of Erie, and State of New York, have invented a certain new and Improved Gas-Jet Cigar-Lighter; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

Our invention consists, first, in a freely suspended or hanging burner for lighting cigars, controlling the size of the jet by the action of a gravitating valve in an inclined valve-chamber, operating in such manner that the act of raising the burner shall open the valve and increase the size of the jet sufficient for lighting purposes, and the lowering of same into its suspended state shall close, or nearly close, the valve and decrease the size of the jet, and thereby effect an economical use of the gas; second, in the combination, with the burner, of a closing and opening hood or shield so constructed that the movement of the burner which increases the size of the jet shall open the hood, and the movement which diminishes the jet shall close the hood and protect the jet from sudden currents of air.

In the accompanying drawings, Figure I is a sectional elevation of our improved device in its freely suspended state. Fig. II is a side elevation of same in its position when raised for lighting purposes. Fig. III is a front elevation of same.

Letters of like name and kind refer to like parts in each of the figures.

Our device consists, essentially, of the valve-chamber A, valve *b*, jet pipe or burner C, suspension tube or pipe D, and handle E.

The valve-chamber is cylindrical in form, and is connected with the suspension-tube by a branch, A′, its axis being inclined to that of the suspension-tube or to the perpendicular sufficiently to cause the valve *b* to gravitate toward its seat *b′*, which is screwed into the lower end of the valve-chamber.

The valve *b* has a long shank fitting loosely in a guide-block, b^2, which is square in cross-section, leaving gas-passages between it and the bore of the chamber. This guide-block may or may not be loose in the chamber. When loose it will gravitate and move with the valve and form part thereof. When fixed the valve-shank must be long enough to permit the required movement of the valve through the guide-block.

The valve-seat *b′* consists of a screw-plug inserted into the lower end of the valve-chamber and closing the opening of the jet-pipe C therein. When the valve is open the communication with the jet-pipe is formed through small radial holes opening into an annular chamber formed by a groove turned in the screw-plug, into which the bore of the jet-pipe opens.

The valve is prevented from fully seating itself by an adjusting-screw, *e*, inserted through the screw-plug and bearing against the point of the valve. By this means the jet may be regulated to an economical size, which it will always assume when not directly in use.

The handle E is connected to the lower or front end of the valve-chamber by a hinge or joint, *f*, so arranged as to allow of only the requisite inclination to cause the motion of the valve, and assists by its weight in maintaining the inclined position of the valve-chamber. In using the instrument it is raised by this handle from its suspended state, which movement will reverse the inclination of the valve-chamber, (or change it from the position shown in Fig. I to that shown in Fig. II,) and cause the valve to gravitate from its seat and allow a full free flow of gas to produce a jet sufficiently large for lighting purposes. The instrument being dropped, the valve will again seat itself and shut off the gas and diminish the jet, as before stated, until again used.

To prevent the diminished jet from being put out by sudden currents of air or by the swinging or vibration of the instrument, it is protected by a perforated hood or shield, G G′, applied to the end of the jet-pipe. This shield is made of two parts, one of which, a cylindrical shell, G, is attached to the jet-pipe, and the other, G′, is hinged to the first part, G, on its axis. The shell G has a circular hole cut through it opposite the end of the jet-pipe, through which the increased jet proceeds, which hole the part G′, as it swings on its axis, will cover and open. The part G′ is so balanced on its axis that the same movement of the instrument that increases the size of the jet opens the hole for it to issue through, and

the movement which diminishes the jet closes the hole and protects the same. The hood is perforated with small holes to admit sufficient air to the flame when shut in by the closing of the cover.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The arrangement and combination of the inclined valve-chamber with the gravitating valve, when operating in the manner and for the purposes set forth.

2. The adjusting-screw *e*, arranged and operating in the manner and for the purposes set forth.

3. The opening and closing hood or shield G′, operating in the manner and for the purposes substantially as described.

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Witnesses:
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