No. 610,263

Patented Sept. 6, 1898.

A. L. DOWELL.

GAS BURNER.

(Application filed Feb. 28, 1898.)

(No Model.)

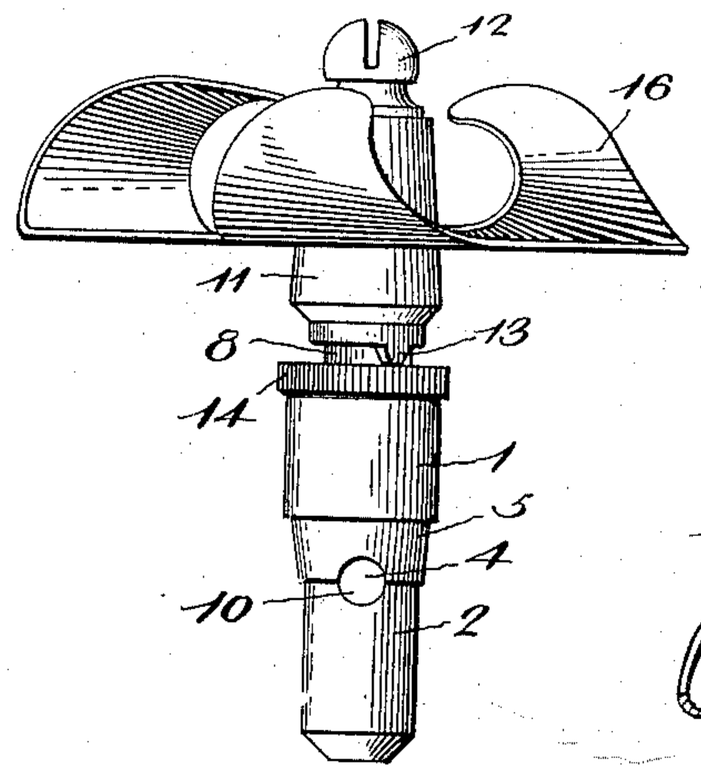

Fig. 1.

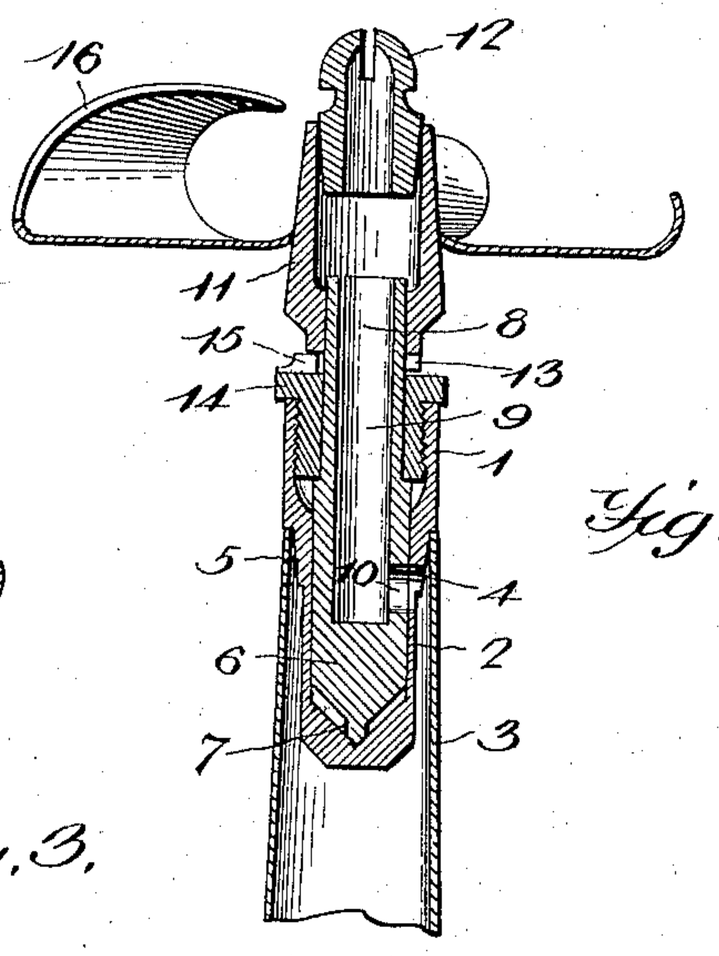

Fig. 2.

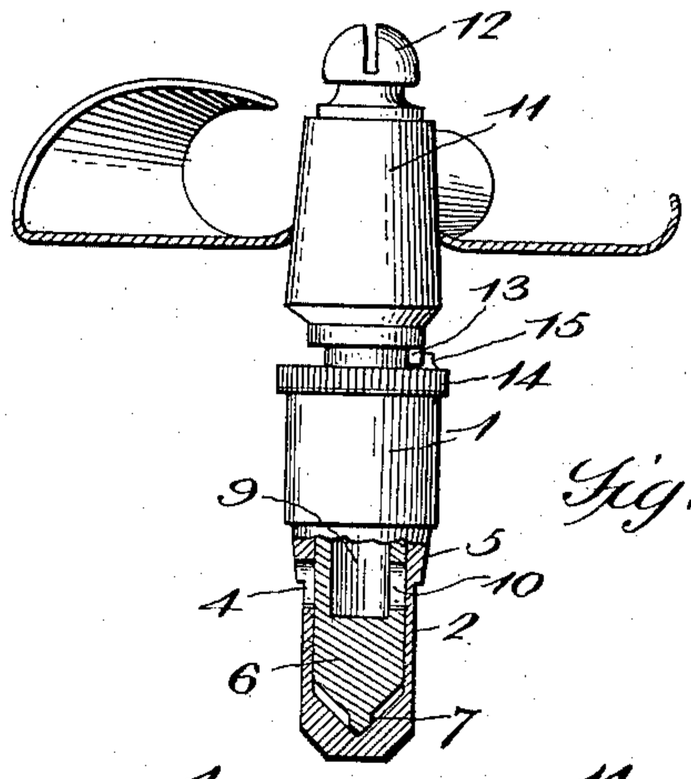

Fig. 3.

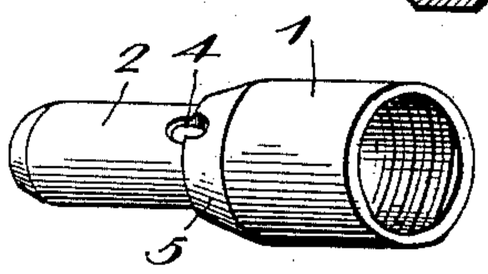

Fig. 4.

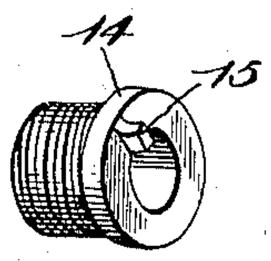

Fig. 5.

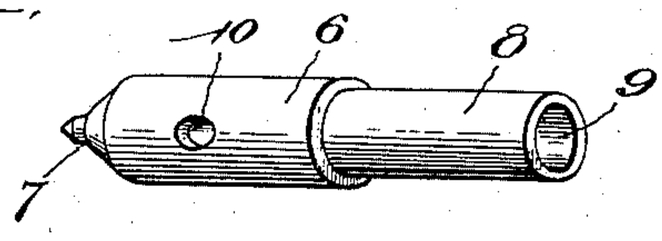

Fig. 6.

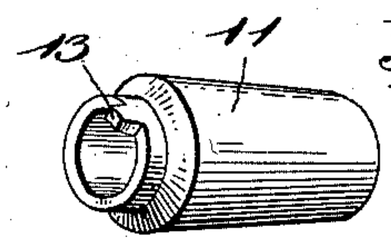

Fig. 7.

Witnesses
J. Faulkenberwell,
V. B. Hillyard.

Albert L. Dowell, Inventor.
By his Attorneys.
Church & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALBERT L. DOWELL, OF PATERSON, NEW JERSEY, ASSIGNOR OF ONE-HALF TO JEW GARLICK, OF SAME PLACE.

GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 610,263, dated September 6, 1898.

Application filed February 28, 1898. Serial No. 672,001. (No model.)

To all whom it may concern:

Be it known that I, ALBERT L. DOWELL, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Gas-Burner, of which the following is a specification.

This invention has for its object to prevent death from asphyxiation and other injurious results attendant upon extinguishing gaslight by a current or blast of air without cutting off the supply or flow of gas. The device forming the subject-matter of the present invention automatically cuts off the supply of gas in the event of the flame being extinguished by a draft of air or a person blowing the light out.

A further purpose of the invention is the provision of a device of the character and for the purpose aforesaid which will be effective for the objects in view, comprise the fewest number of parts, involve a simple construction, and be capable of application to any of the gas-burners in general use by simply substituting it for the ordinary lava tip.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is an elevation of the gas-burner. Fig. 2 is a vertical central section thereof, showing it applied to the body portion of a gas-burner of ordinary construction. Fig. 3 is a side elevation, the fan being in section and the lower portion of the burner broken away, showing the relation of the valve and its casing when the openings therein are out of register. Figs. 4, 5, 6, and 7 are detail views of the component parts of the burner disassociated from one another.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The casing 1 has its lower portion reduced, as shown at 2, so as to fit within the body portion 3 of an ordinary gas-burner and is provided in its side with an opening 4 for the ingress of the gas when the burner is applied to a gas-fixture, chandelier, or the like. The upper or base portion of the reduced part 2 is slightly flared, as shown at 5, so as to secure a close fit between the casing and body 3 to prevent wasting or leaking of the gas. The opening 4 is located about at the juncture of the flaring portion 5 with the part 2, so as not to be closed by the body 3 when the casing 1 is fitted thereto. The upper end of the casing is internally threaded, and the valve, with its adjunctive parts, is removably fitted within the casing.

The valve 6 has its lower end conical-shaped, as shown at 7, and its upper end reduced, as shown at 8. The upper portion of the valve is longitudinally bored, as shown at 9, forming a passage for the gas, and this bore or passage at its inner or lower end communicates with an opening 10 in the side of the valve in such relation as to register with the opening 4. This valve fits snugly within the casing 1, and its lower conical end 7 obtains a bearing upon the lower end of the casing by being stepped into a socket of corresponding shape formed therein. By this means the valve is centralized within the casing and the weight thereof is transferred to the point of the conical end 7, thereby reducing the friction to a minimum amount. By mounting the valve in the manner described the draft or blast of air sufficient to extinguish the light will cause the valve to rotate or turn in its casing and bring the openings 10 and 4 out of register and shut off the supply of gas and prevent the same escaping into the room or apartment lighted by means of the burner.

A shell 11 is secured upon the upper portion of the reduced part 8 of the valve 6, and its upper end receives the tip 12, by means of which the gas is spread and burned when lighted. The lower end of the shell has a stop 13 pendent therefrom and extending toward the upper end of the casing 1.

A nut 14 is loosely fitted upon the reduced portion 8 of the valve and is confined between the lower end of the shell 11 and the shoulder

formed between the upper and lower parts of the valve. This nut is exteriorly threaded to make screw-thread connection with the upper end of the casing 1 and serves to secure the valve thereto. This nut has a milled flange or rim to enable a firm grip being secured thereon when turning the nut to secure or release the parts.

A stop 15 projects from the upper end of the nut 14 and is adapted to engage with the stop 13 and limit the turning of the valve in either direction when the light is extinguished by a draft of air.

A fan 16 of suitable design, size, and construction is applied to the shell 11 and a current or blast of air sufficient to extinguish the flame will strike the wings or blades of the fan and effect a turning thereof and the shell and valve connected therewith and cut off the supply of gas.

The burner is in the nature of a safety attachment to be applied to any of the gas-burners in general use and is designed to replace the tip thereof, the casing 1 being fitted into the body 3 of the burner after the tip thereof has been removed. It is contemplated, however, to apply the invention in the construction of gas-burners, and such changes as may be necessary to adapt the improvement to the different makes and styles of gas burners, fixtures, and the like are contemplated within the spirit of the invention and may be resorted to without departing from the nature thereof.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a safety gas-burner, the combination of a casing having a lateral opening, a valve mounted to turn within the said casing and having a passage to be brought in register with the lateral opening of the casing, means for limiting the turning of the valve with reference to the casing, a shell applied to the projecting end of the valve and bearing a tip, and a fan secured to the shell, substantially as set forth.

2. In a safety gas-burner, the combination of a casing having a lateral opening, a valve mounted within the casing and having a passage to register with the opening thereof, and having its inner end made conical and forming a support for the valve and the parts applied thereto, a shell applied to the projecting end of the valve and provided with a tip, means for limiting the turning of the valve within the casing, and a fan applied to the shell, substantially as and for the purpose specified.

3. In a safety gas-burner, the combination of a casing, a valve mounted within the casing and provided with a passage to register with an opening of the casing, a nut mounted upon the valve and having screw-thread connection with the casing and adapted to retain the valve in position, means for limiting the turning of the valve, and a fan having connection with the valve, substantially as described.

4. In a safety gas-burner, the combination of a casing, a valve mounted within the casing and having the end portion projecting beyond the casing reduced, a nut mounted upon the reduced end of the valve and making screw-thread connection with the casing, a shell applied to the outer end of the valve, stops between the shell and nut to limit the turning of the valve, and a fan applied to the said shell, substantially as set forth.

5. In combination, a casing having its lower end reduced and the upper portion of the reduced part made flaring, and having a lateral opening about at the juncture of the flaring portion with the reduced part, a valve mounted to turn within the casing, and having a longitudinal passage and a lateral opening in communication and adapted to register with the opening of the casing, the upper end of the valve being reduced, a nut mounted upon the valve and making screw-thread connection with the casing, a shell applied to the upper end of the valve and adapted to receive the tip, stops between the shell and nut, and a fan applied to the said shell, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALBERT L. DOWELL.

Witnesses:
J. F. DUNPHEY,
GEO. A. SMITH.