No. 675,322. Patented May 28, 1901.

J. W. BYERS.

CLEANER FOR INCANDESCENT GAS BURNERS.

(Application filed Sept. 20, 1900.)

(No Model.)

Fig. 1.

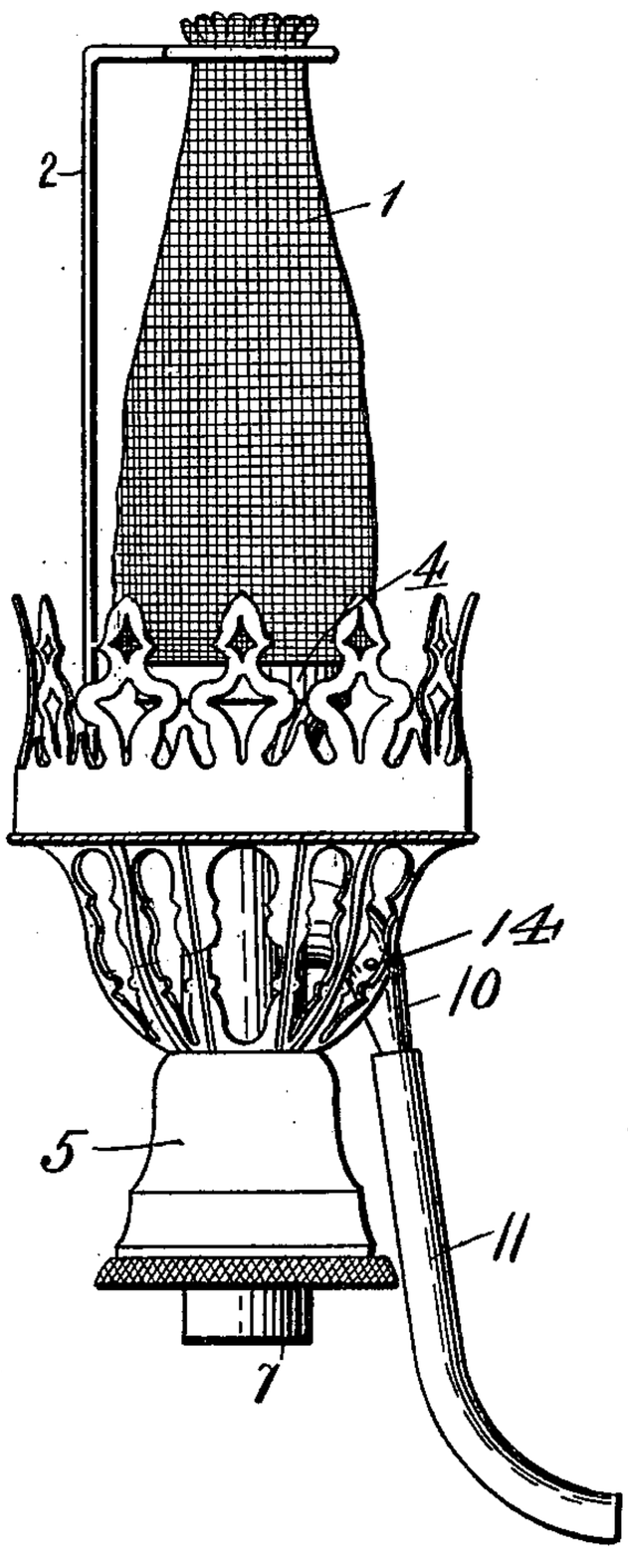
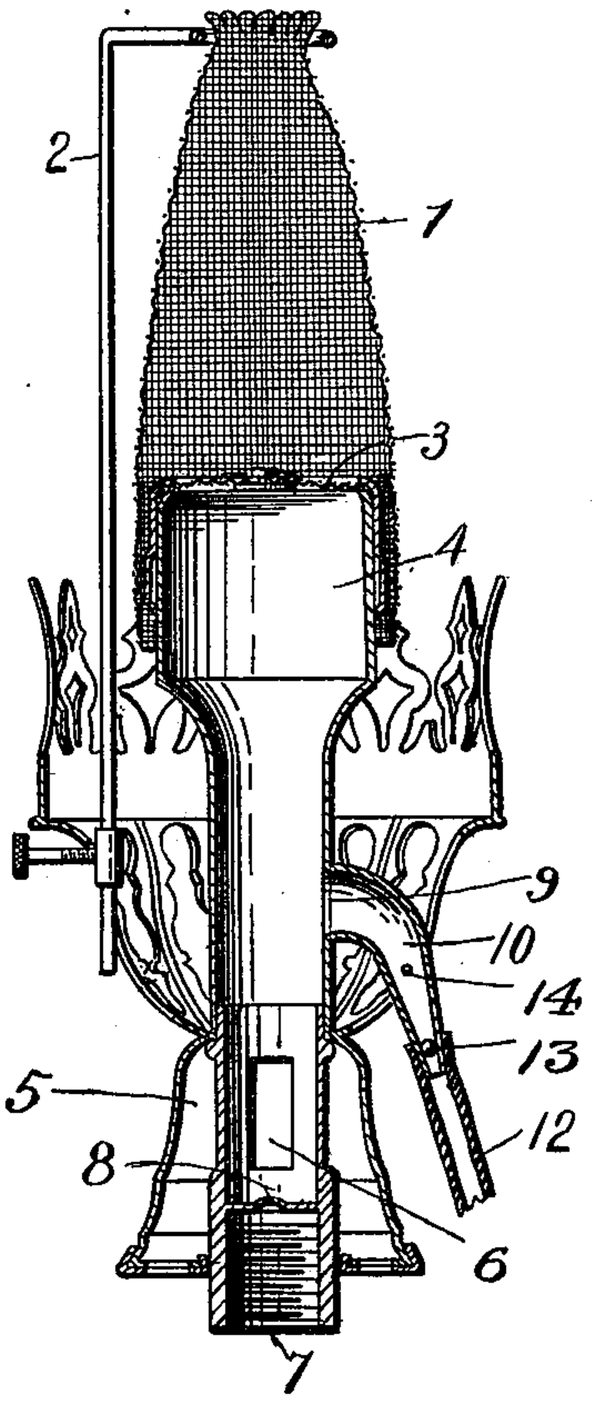


Fig. 2.



Witnesses:
Franck L. Ourand.
H. G. Radelfinger.

Inventor:
James W. Byers,
By Lacy Sagger & Co.,
Attorneys.

UNITED STATES PATENT OFFICE.

JAMES W. BYERS, OF MERCER, PENNSYLVANIA.

CLEANER FOR INCANDESCENT GAS-BURNERS.

SPECIFICATION forming part of Letters Patent No. 675,322, dated May 28, 1901.

Application filed September 20, 1900. Serial No. 30,624. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. BYERS, a citizen of the United States, residing at Mercer, in the county of Mercer and State of Pennsylvania, have invented new and useful Improvements in Cleaners for Incandescent Gas-Burners, of which the following is a specification.

My invention relates to cleaners for incandescent or Welsbach burners; and the object of the same is to produce a device of this character which will be simple in construction and efficient in operation.

It is a well-known fact that after a mantle has been in use for some time the light suffers a uniform diminution, although the mantle is still intact. By many persons this is thought to be caused by the deterioration of the mantle; but the true cause is the gradual accumulation of dust and dirt in the gauze tip beneath the mantle and in and around the small aperture through which the gas gains access to the burner. Owing to the fragile nature of the mantle this dirt cannot be removed by taking the burner apart without great risk of destroying it. Therefore it is necessary to resort to other means and methods. It is to supply such means that I have devised the simple and novel construction described in this specification and illustrated in the accompanying drawings, forming a part thereof, in which—

Figure 1 is an elevation of my burner. Fig. 2 is a vertical section of the same.

Like numerals of reference designate like parts in both views of the drawings.

The numeral 1 designates the mantle of my burner, which is supported on a curved arm 2. The mantle 1 is located just over a gauze lid 3, which fits over the top of the burner-tube 4. Secured to the bottom of the tube 4 is an air-chamber 5, and traversing this chamber, communicating therewith by means of openings 6 and extending into the burner-tube 4, is a Bunsen tube 7. This tube is divided into two parts by a transverse partition, which is pierced by a small aperture 8 for admitting gas to the burner. Now it is around this aperture 8 in the air-passages 6 and on the gauze 3 where the dust and dirt gather. With the view of removing all of this dirt at one operation I pierce the side of the tube 4 at 9 and permanently attach thereto a tube 10, the end of which is turned down. To the outer end of this tube 10 I attach either a mouthpiece 11 or a rubber hose 12, depending upon whether the light is a low or an elevated one.

To prevent the ingress of air through the tube 10, I make it conical and insert a ball 13 therein, which closes the passage in the tube, and also put in a cross-bar 14 to limit the movement of said ball. By this arrangement the ball automatically closes the passage under normal conditions and will be unseated by blowing through the mouthpiece, but is prevented by the bar 14 from being forced out.

In operating my device to remove the dirt the light is first extinguished, if it was lighted, and the mouth applied to the mouthpiece or rubber hose and a full blast of the lungs forced through it. The repetition of this action will insure a clean burner, and the light will burn as brightly as when the burner was new.

I do not wish to be limited as to details of construction, as these may be modified in many particulars without departing from the spirit of my invention.

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

1. In an incandescent gas-burner, the combination, substantially as described, with a gas-burner provided with a small inlet for gas and a gauze cover, of a conical tube connected to said burner intermediate the said gas-inlet and gauze cover, a ball seated in said tube, and means for limiting the movement of said ball when displaced by forcing air into the small end of the tube.

2. The combination, substantially as described, with a gas-burner provided with a small gas-inlet and a gauze cover, of a pipe connected to said burner intermediate said gas-inlet and gauze cover, and a valve in said pipe which valve is constructed to remain closed under normal conditions but to be opened by a forcible injection of air.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES W. BYERS.

Witnesses:
J. M. HILLET,
M. G. YEAGER.