

No. 715,035.

Patented Dec. 2, 1902.

E. DOWNEY.
GAS BURNER TIP.

(Application filed Jan. 14, 1902.)

(No Model.)

Fig: 1.

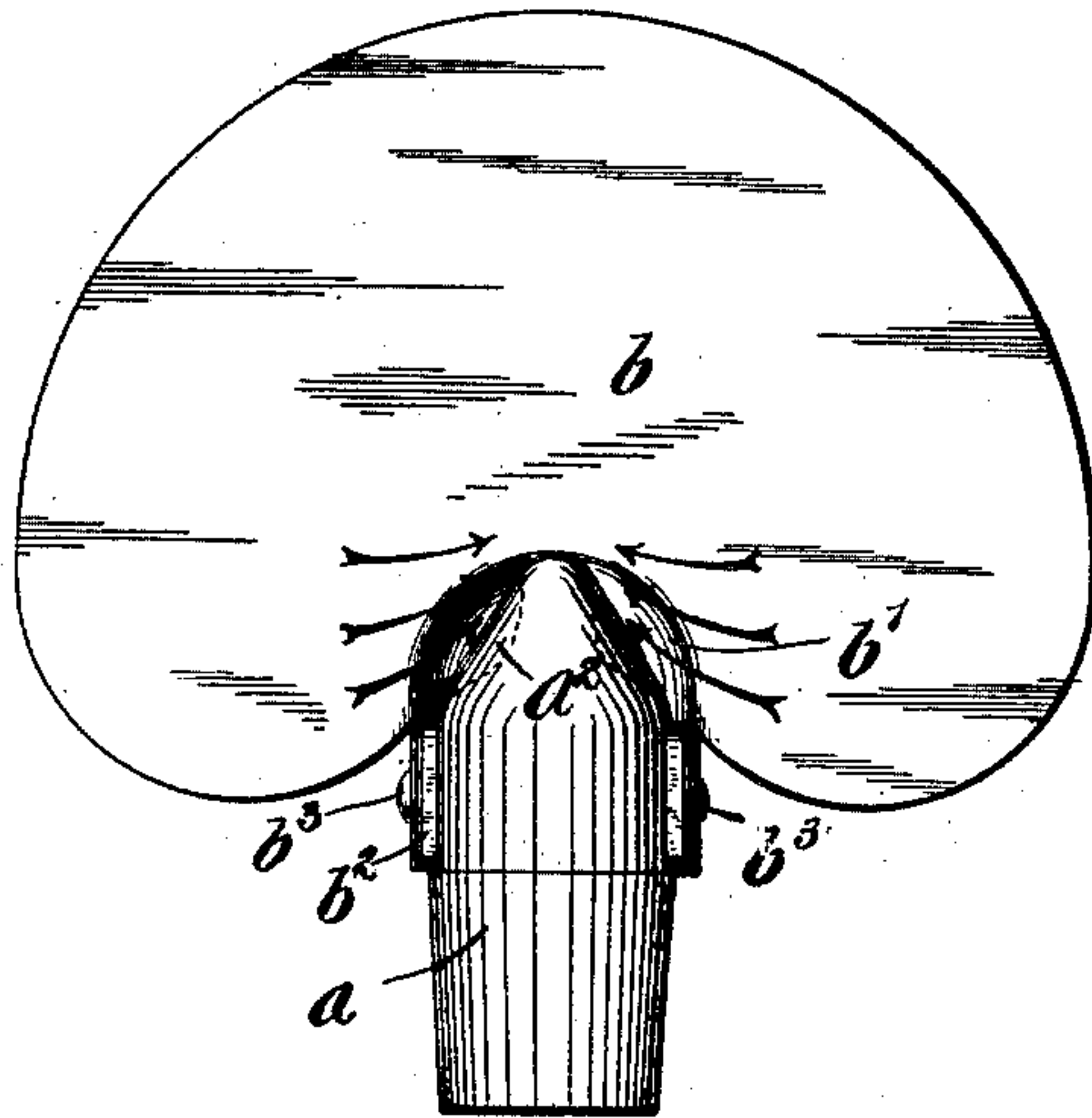


Fig: 2.

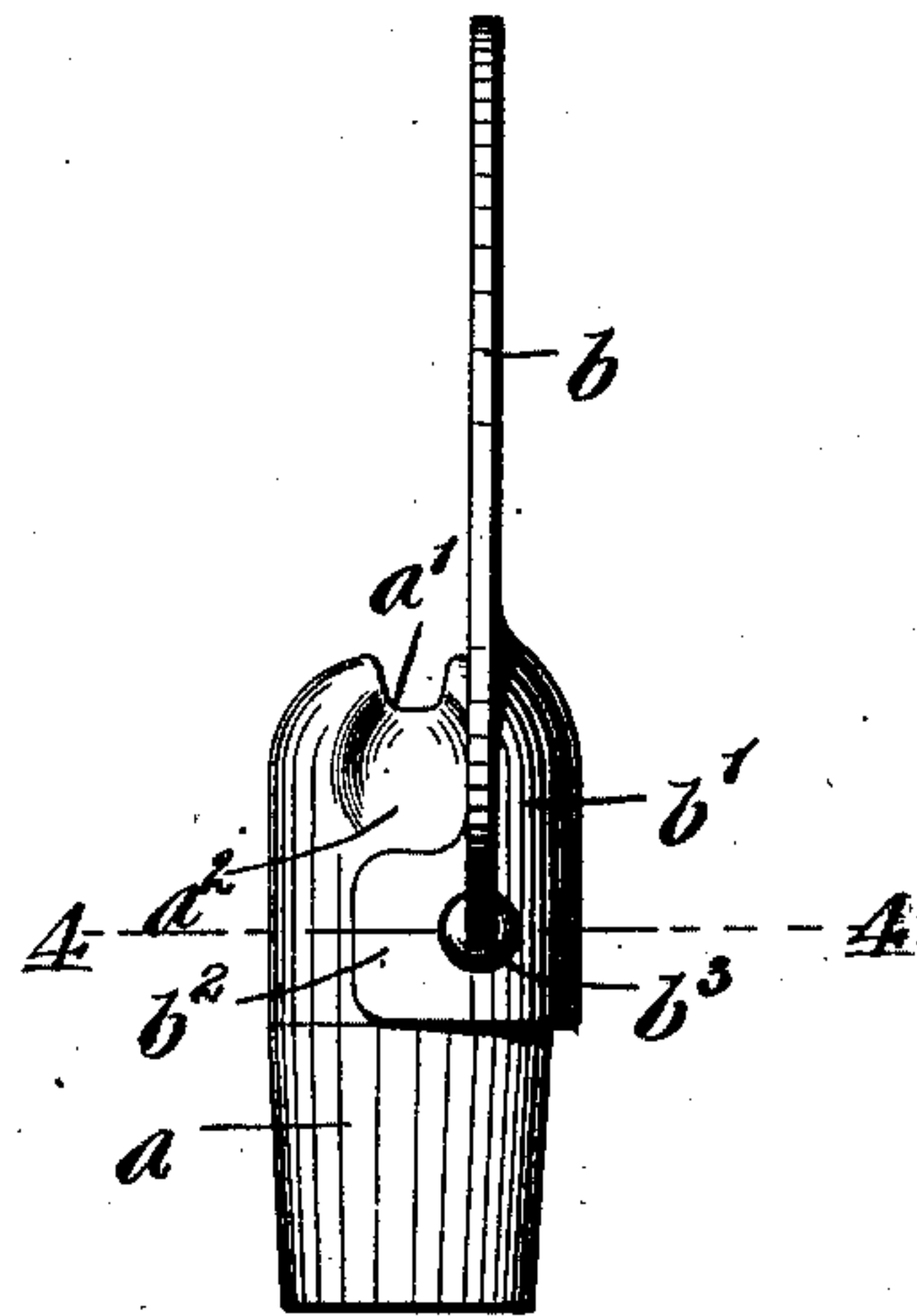


Fig: 3.

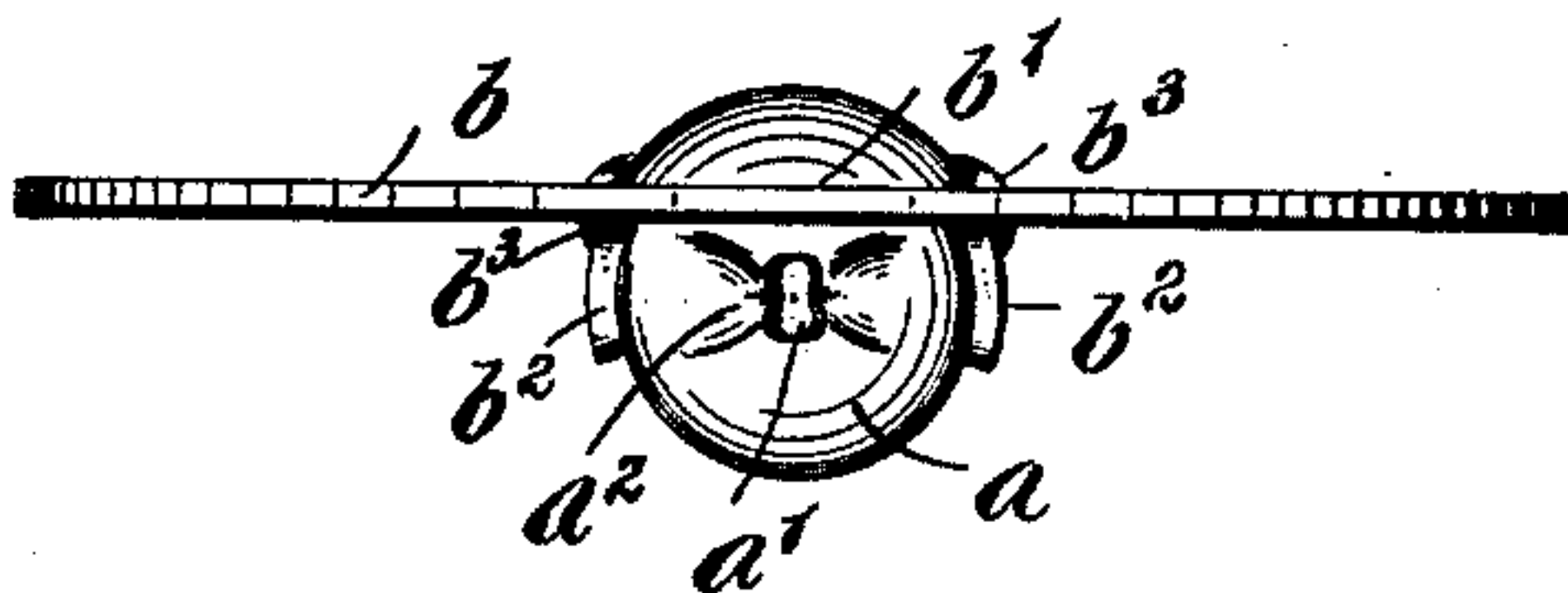


Fig: 4.

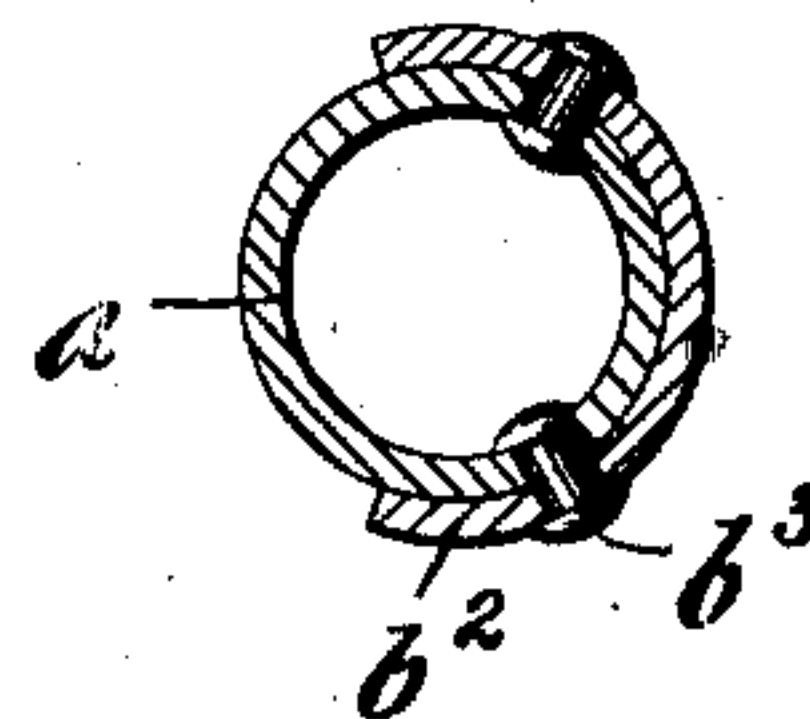
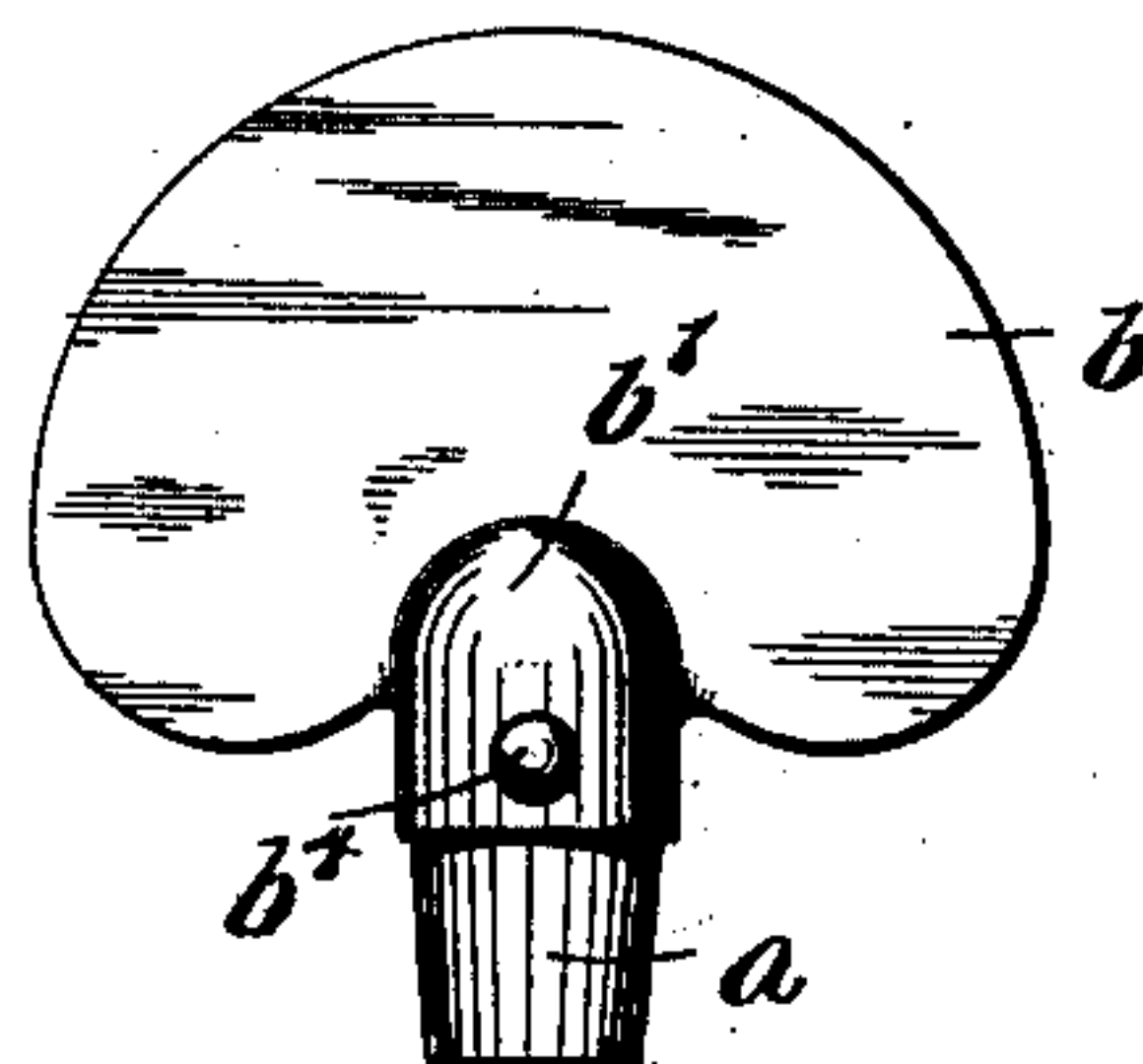


Fig: 5.



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GAS-BURNER TIP.

SPECIFICATION forming part of Letters Patent No. 715,035, dated December 2, 1902.

Application filed January 14, 1902. Serial No. 89,671. (No model.)

To all whom it may concern:

Be it known that I, EDWARD DOWNEY, a citizen of the United States, residing in the city of New York, borough of Manhattan, and State of New York, have invented certain new and useful Improvements in Gas-Burner Tips, of which the following is a specification.

This invention relates to a gas-burner tip that can be readily fitted to an ordinary burner-tube and which is provided with a spreading-lip for increasing the efficiency of the gas-flame.

The object of the invention is to provide a metallic burner-tip that can be reliably fitted in the burner-tube with a spreading-lip that is secured in permanent relation with the aperture of the burner-tip. It has the advantage of obviating the necessity of adjusting the spreading-lip on the burner-tube, which adjusting is the objection to the gas-burner attachments of this character, as it is necessary to observe care in adjusting the same in vertical and parallel position relative to the aperture of the burner-tip.

To obviate this necessity, the invention consists of a metallic gas-burner tip that has concavities on two opposite sides of its aperture, a spreading-lip secured to the burner-tip at one side of the aperture and concavities, the spreading-lip having a semicylindrical depression at its lower edge and forwardly-projecting lugs curved inwardly for clasping the burner-tip, as will be more fully described hereinafter and finally pointed out in the claim, reference being had to the accompanying drawings, in which—

Figure 1 is a front view of the burner-tip provided with a spreading-lip. Figs. 2 and 3 are respectively side and top views of the same. Fig. 4 is a transverse section on line 4 4, Fig. 2; and Fig. 5 is a rear view of the invention, showing the spreading-lip secured to the burner-tip by a single rivet.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, *a* represents a metallic burner-tip that is tapering toward its lower end, so as to be readily fitted in the gas-burner tube. The burner-tip is provided

with the aperture *a'* and with the concavities *a²* adjacent the aperture *a'* and on opposite sides of the same. Secured to the burner-tip *a*, arranged at one side of the orifice *a'*, is the spreading-lip *b*, made preferably of sheet metal and which is provided with a semicylindrical depression *b'* at its lower edge. The lugs *b²*, projecting forwardly, are curved inwardly from said semicylindrical depression *b'* and serve as means for clasping the burner-tip, but which are secured thereto by means of the rivets *b³*, passing through registering holes in the lugs and the burner-tip. By this construction of the spreading-lip having the clasping-lugs *b²* the same can be secured firmly to the burner-tip by using a single rivet *b⁴* by providing it in the center line of the depression *b'*, as shown in Fig. 4, by reason of the lugs having the curvature of the burner-tip. The spreading-lip *b* is secured permanently to the burner-tip in proper relation to the aperture, so as to obviate the necessity of repeated trials to adjust the same to the burner-tip, as was necessary in the attachments formerly used. By thus providing the burner-tip with the spreading-lip *b'* a proper supply of air to be mixed with the gas is afforded before the gas reaches the zone of combustion of the flame, or otherwise the air supplied would be curtailed by the spreading-lip, completely excluding air from the flame from one side. The gas issues from the aperture in a somewhat broad column adjacent the tip, and at this point air is drawn to the opposite broad sides of this column in upward direction over the concavities, so that the air concentrates at the aperture of the tip, as shown by the arrows in Fig. 1, so as to be mixed thoroughly with the gas, which as it ascends flares upwardly to form a fan-shaped flame parallel to the spreading-lip and possesses a superior quality of brightness.

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

The combination of a metallic burner-tip having concavities on opposite sides of its aperture, and a spreading-lip secured to said

burner-tip adjacent said aperture and concavities and parallel with the center plane through said aperture and concavities, the lower edge of said spreading-lip being disposed below said concavities, substantially as set forth.

5 In testimony that I claim the foregoing as

my invention I have signed my name in presence of two subscribing witnesses.

EDWARD DOWNEY.

Witnesses:

PAUL GOEPEL,
C. BRADWAY.