

No. 690,700.

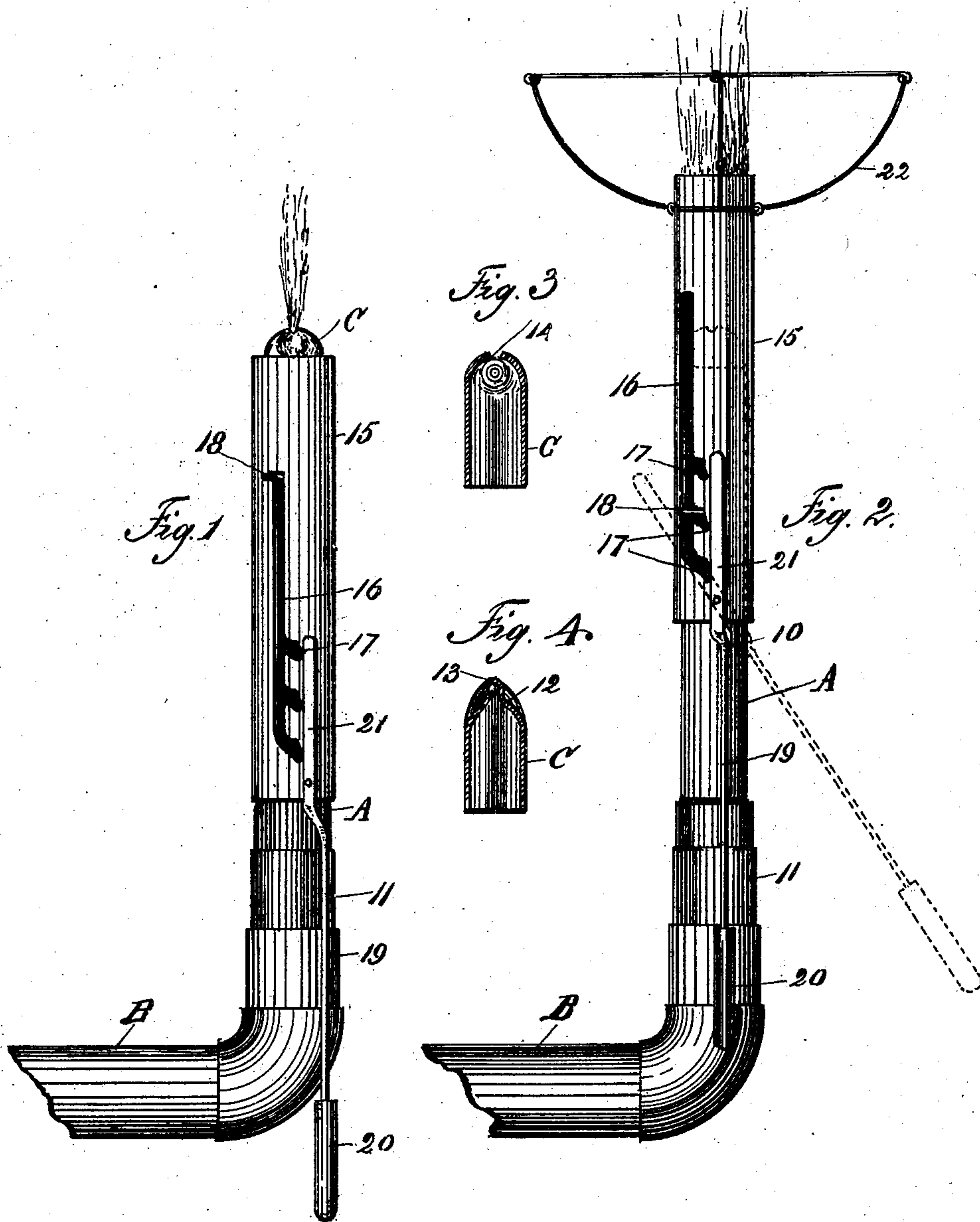
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V. K. COFFILL.

COMBINATION ILLUMINATING AND HEATING BURNER.

(Application filed July 20, 1901.)

(No Model.)



WITNESSES

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COMBINATION ILLUMINATING AND HEATING BURNER.

SPECIFICATION forming part of Letters Patent No. 690,700, dated January 7, 1902.

Application filed July 20, 1901. Serial No. 69,058. (No model.)

To all whom it may concern:

Be it known that I, VOLNEY KING COFFILL, a citizen of Canada, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in a Combination Illuminating and Heating Burner, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide a combination illuminating and heating gas-burner of an extremely simple and cheap form of construction which may be instantaneously adapted for heating or illuminating purposes and in which the amount of air mingled with the gas when the same is used as a Bunsen or heating burner may be varied within wide limits.

To such ends my invention consists, in substance, of a burner-tube, an illuminating-burner tip mounted in the burner-tube, a Bunsen or outer tube provided with a longitudinal air-slot having side lock-slots in communication therewith adjacent to the lower end reciprocating up and down on the burner-tube, a pin or stud passing through the slot of the Bunsen or outer tube secured to the burner-tube adjacent to the top, an actuating-lever pivoted to the outer or Bunsen tube adjacent to the bottom of the slot, and a support for the article to be heated carried by the outer or Bunsen tube.

In the accompanying drawings, forming part of this specification, in which like characters of reference designate corresponding parts in the several views, Figure 1 is a side view of my improved form of burner in the position assumed by the parts when the same is used as an illuminating-burner. Fig. 2 is a like view thereof, showing the same in use as a Bunsen or heating burner. Fig. 3 is a side view, and Fig. 4 is a front view, of the illuminating-burner tip in central vertical section thereof, showing the form of such burner which I prefer to use.

To form my invention, I provide a burner-tube A, provided with a cylindrical upper portion 10 and the lower enlarged base portion 11, which latter is provided in the well-known way common with burner-tubes with a female screw-thread, by which the same may

be affixed in the ordinary manner to the gas-pipe B of a chandelier. Fitting into the top of this burner-tube 10 is an illuminating-burner tip C, which may be of any desired form of construction, but which I prefer to make of that shown, consisting of a thimble of sheet metal, the top of which is provided on opposite sides with the convex repoussé cavities 12, so as to leave an upwardly-extending thin central portion 13, in the center of which is formed the gas-outlet slot 14. While I prefer to use an illuminating-burner tip of this particular form, I do not intend to limit myself thereto, and any other suitable form may be used in place thereof, if desired.

Sliding easily up and down upon the burner-tube 10 is the Bunsen burner-tube 15, which is provided upon one side with a longitudinal slot 16, which is provided upon one side with one or more side slots 17, all of which slots are usually of the comparative length, size, and shape shown. Secured in the burner-tube 10 a short distance below the top thereof and extending outward through the slot 16 of the Bunsen burner-tube 15 is a securing-pin 18 of slightly smaller size than the air-slot 16 and the side slot 17. The comparative lengths are such that when the Bunsen burner-tube 15 is in its extreme lower position, so that the pin 18 rests in the extreme top of the slot 16, the illuminating-burner C will extend slightly above the top of such Bunsen burner-tube, as shown in Fig. 1, in which case the device may be used as an illuminating-burner, and that when the Bunsen tube 16 is lifted upward, so that the pin 18 rests in the top side slot 17, the top of the slot 16 will be a very slight distance above the tip of the burner-tip C, whereby a very small Bunsen or heating flame may be produced by proper manipulation of the gas-cock, (not shown,) so as to admit just sufficient air to mingle with such quantity of gas, and that when such Bunsen tube 16 is lifted farther upward, so that the pin 18 rests in the middle side slot, as shown in Fig. 2, a much larger quantity of air will be admitted into the burner-tube 15 adjacent to the tip C, (shown in dotted lines in Fig. 2,) whereby a larger flame of great heating quality may be provided, which flame may be further increased by further lifting the Bunsen

burner-tube 15 up into such position that the pin 18 will rest in the lower side slot 17.

Pivoted to the lower end of the Bunsen burner 15 upon the side of the air-slot upon which is located the side slot 17 is an actuating-lever 19, provided at the lower end with a handle 20 and at the upper end with a fulcrum-point, which extends upward a short distance beyond the upper side slot 17, and it will be seen that by throwing such actuating-lever 20 over into the position shown in dotted lines in Fig. 2 the pressure of the upper fulcrum-point 21 thereof upon the pin 18 when such pin is located in either of said slots will force the Bunsen burner-tube 10 into such position that the pin 18 will be forced out of the side slot and into the air-slot 16, when the same will, upon the release of the hand-lever from the pressure of the hand, drop by gravity into the position shown in Fig. 1.

Secured upon the top of the Bunsen burner-tube 15 is a suitable frame or support 22, usually of wire, upon which may be supported a vessel of liquid or any other device which it is desired to heat.

It will be seen that by this device I have provided an extremely simple and cheap combined illuminating and Bunsen or heating burner in which the quantity of the air mixed

and mingled with the gas before ignition when the same is used as a Bunsen or heating burner may be quickly and easily regulated.

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

In a Bunsen burner, the combination with a tube provided with a burner-tip, of a slidable and turnable tube mounted on the first-named tube and provided with a longitudinal slot and a plurality of lateral slots communicating therewith, said first-named tube being also provided with a lug or pin adapted to move in said slots and said last-named tube being also provided with a lever pivotally connected with the lower end thereof and one end of which is adapted to bear on said lug or pin when said lug or pin is in one of the lateral slots or in the longitudinal slot opposite said lateral slot, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 18th day of July, 1901.

VOLNEY KING COFFILL.

Witnesses:

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F. F. TELLER.