(No Model.) 2 Sheets—Sheet 1.

# T. HIPWELL.

## ARGAND LAMP.

No. 534,103. Patented Feb. 12, 1895.

Fig. 1.

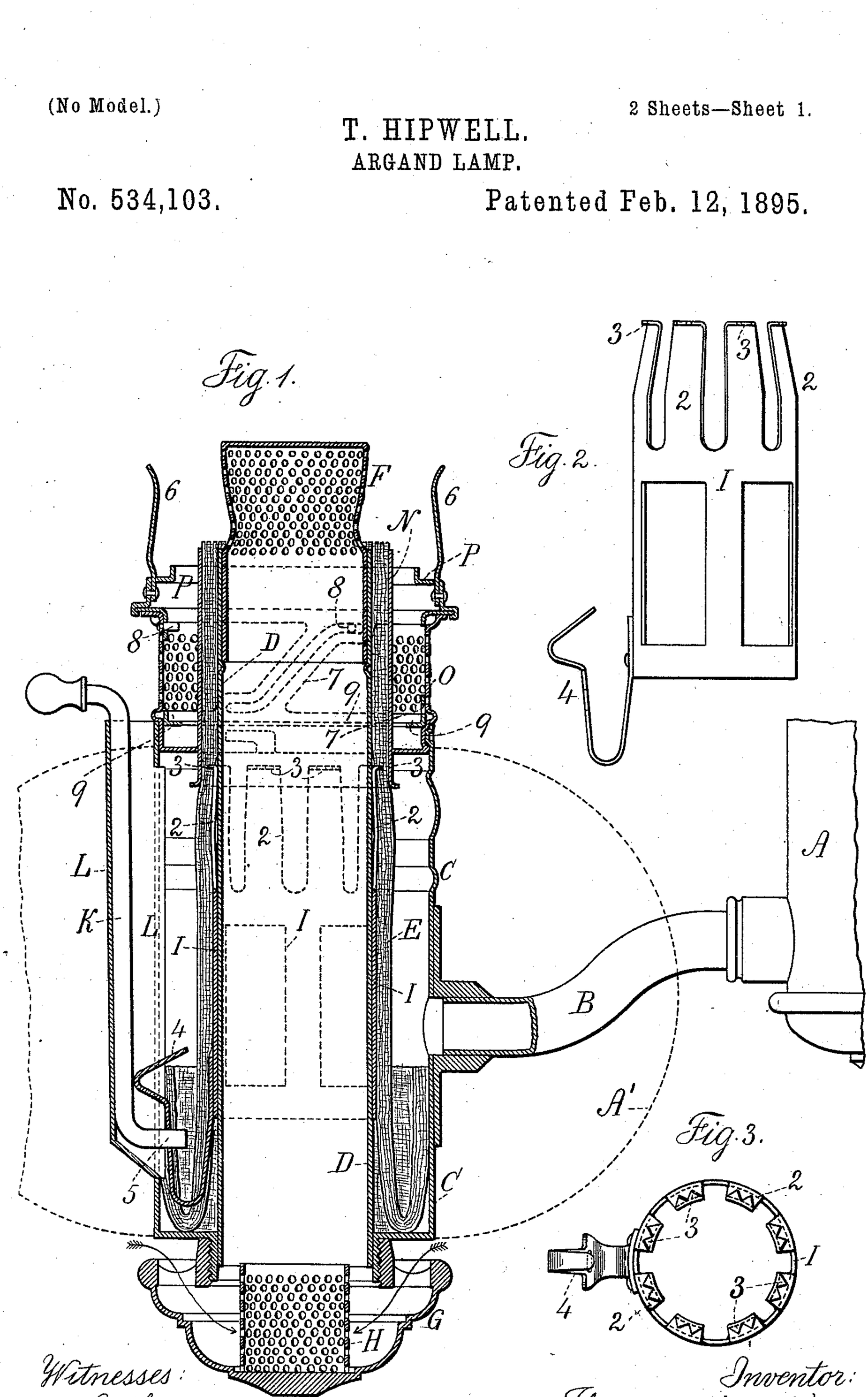


Fig. 2.




Fig. 3.




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Inventor:
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per Lemuel W. Serrell
Atty.

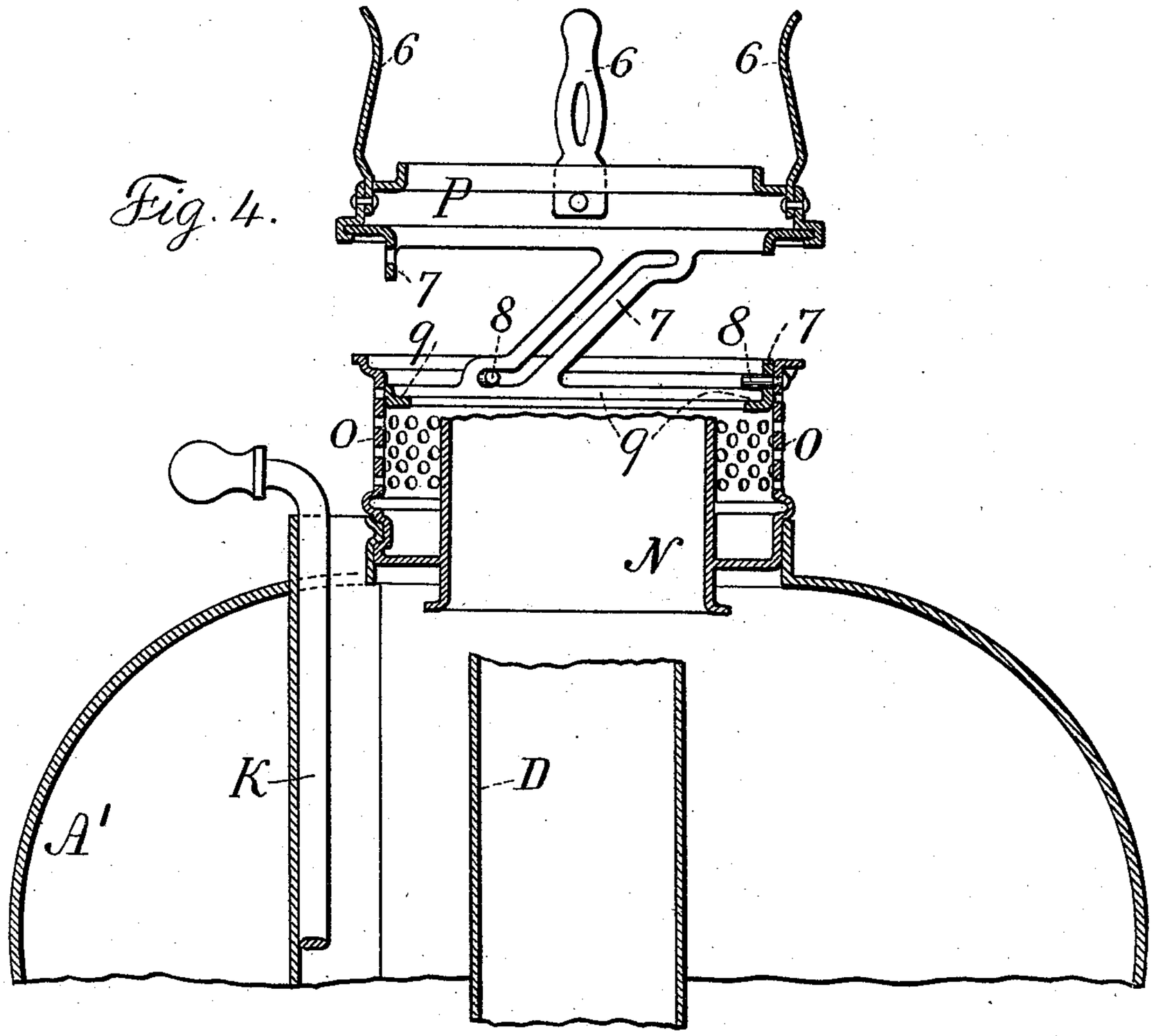
(No Model.) 2 Sheets—Sheet 2.

# T. HIPWELL.

## ARGAND LAMP.

No. 534,103. Patented Feb. 12, 1895.

Fig. 4.




Witnesses:
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Inventor:
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# UNITED STATES PATENT OFFICE.

THOMAS HIPWELL, OF LONG ISLAND CITY, ASSIGNOR TO THE MANHATTAN BRASS COMPANY, OF NEW YORK, N. Y.

## ARGAND LAMP.

SPECIFICATION forming part of Letters Patent No. 534,103, dated February 12, 1895.

Application filed March 12, 1894. Serial No. 503,259. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS HIPWELL, a citizen of the United States, residing at Astoria, (Long Island City,) in the county of Queens and State of New York, have invented an Improvement in Argand Lamps, of which the following is a specification.

This improvement is made for facilitating the insertion or removal of the lamp wick, for either introducing the wick over the wick raising cylinder or for cleaning the parts, so that by this improvement the wick and the wick holding cylinder can be introduced or removed with facility, and the other parts of the lamp can be manufactured without the wick raising devices being permanently connected therewith.

I employ a chimney holder which can be raised by a partial rotation and held either in an elevated or depressed position with reliability, and I construct the draft regulating devices for the air tube of the Argand lamp with reference to preventing the flame being influenced by lateral currents of air acting at the lower end of the air tube.

In the drawings, Figure 1 is a vertical section representing my improvement as applied to an Argand lamp of the type usually known as a German student lamp. Fig. 2 is a detached view of the wick holding device. Fig. 3 is an end view of the wick holder, and Fig. 4 is a section of the burner with the chimney holder elevated and with parts of the wick tube and air tube removed.

The reservoir A is to be of any desired size or character. I have shown the same as connected by the tube B to the wick cylinder C, but in standard or hand lamps the reservoir will usually occupy the position shown by the dotted lines A', Fig. 1, and by full lines in Fig. 4. In either instance the air tube D passes up within the wick E and is open at the bottom of the oil holding vessel, and usually a perforated thimble or deflector F is provided at the upper end of the air tube, and an oil well G at the bottom of the air tube D serves to catch any oil that may pass down the air tube, and this oil well is usually connected by a screw to the projecting lower end of the air tube.

In lamps of this character the flame is sometimes rendered unsteady, because the air passing up through the central air tube moves faster at one side than the other as it may be influenced by external currents of air coming in through the openings at the upper end of the oil well. I find that the perforated cylindrical air guide H connected to the bottom of the oil cup and of a smaller size than the air tube and extending up into the lower end of said air tube, serves the purpose of an equalizer to give a uniform and vertical direction to the currents of air passing up through the air tube and thereby render the flame steady.

The wick holder I is made as an open cylinder or frame having upwardly projecting springs 2 with claws 3 at the upper ends standing outwardly and engaging the wick, and these springs 2 withdraw the claws from the wick when the wick holder is raised so that the springs come above the top end of the air tube D, and when the wick holder is forced downwardly, the air tube spreads the springs 2 and causes the claws 3 to hold firmly into the wick. This part of the wick holder is similar to that represented in Letters Patent No. 488,968, dated December 27, 1892.

It has heretofore been found difficult to connect the wick raising rod K with the wick holder I in a reliable manner and at the same time to allow of these parts being separated with facility when the wick holder is elevated. To accomplish this object I provide a slotted case L for the wick raiser rod K and connect with the wick holder I a spring latch 4 having a double inclined end that passes into the slot of the case L, and also a hole for the reception of the right angled end 5 at the bottom of the wick raising rod K, so that the wick holder I and rod K are reliably connected and the wick can be raised or lowered by acting upon the rod K, and when it is desired to disconnect the rod K and holder I, it is only necessary to draw the holder I to its extreme upper position so that the incline at the end of the latch 4 coming in contact with the metal at the upper end of the slot in the case L, forces the spring latch toward the wick and out of the slotted case, and in so doing the end 5 of the rod K is separated from the hole in the spring latch, and the rod can

be drawn out from the slotted case, and the wick and its holder I can be drawn up and removed from the reservoir and from around the air tube D, so that the wick holder can be cleaned or repaired if necessary and the wick can be inserted over and around said holder before it is returned to its position over the air tube D.

I remark that it is usually advantageous to cut the lower end of the wick longitudinally so that the lower end of the wick may project downwardly below the lower end of the wick holder, so that the oil may be drawn up by the wick until a larger portion of the wick is consumed than is possible when a short wick is made use of.

Around the wick E is the wick tube N and the same is connected with the lower end of the air distributer O, the base of which air distributer sets into the top of the wick cylinder C in the German student lamp, or into the collar at the top of the reservoir in an ordinary hand lamp, and the parts are connected by a pin and bayonet groove.

The chimney holder or rest P is usually provided with springs 6 for holding the chimney, and in lamps that have heretofore been constructed this chimney holder could be raised or lowered, and in some instances inclined or diagonal slotted plates have been attached to the lower side of the chimney holder and passed within the air distributer, there being inwardly projecting pins passing into the slots so that the chimney holder is raised or lowered by its partial rotation.

I make use of the slotted inclined plates 7 through which the stationary pins 8 pass, and I continue the upper and lower ends of the slots in the respective inclined plates horizontally so that the weight of the chimney will be sustained by the pins 8 in the horizontal portions of the slots when the chimney is raised, and when the chimney has been lowered to position the pins in the horizontal portions at the upper ends of the slots hold the chimney down firmly in its position, so that it can not work loose until after the chimney holder has received a partial rotation.

In burners of this character it is important to make use of sheet metal that is comparatively thin, not only for lessening the expense but for lessening the heat which is conducted by the mass of metal down to the reservoir, and the slotted inclined plates are liable to bend and become inoperative. To avoid this difficulty I employ a flanged ring 9 connecting the lower ends of the slotted inclined plates 7, such flanged ring setting closely within the air distributer so as to be supported by the same and form a firm connection between the lower ends of the slotted plate 7, and this flanged ring being closely adjacent to the inner surface of the perforated air distributer, serves to keep such air distributer clean and free from carbonaceous deposits by the ring moving upwardly and downwardly when the chimney holder is elevated for lighting the wick.

I claim as my invention—

1. The combination with the air tube in an Argand burner, of a wick holder sliding on such air tube, a spring connected with the lower end of the wick holder and extending downward and then bent upwardly and forming a latch, a slotted case in which the outer end of the spring latch slides, and a wick raising rod within the slotted case and having a bent end passing into a hole in the spring latch for raising and lowering the wick holder and wick, the spring latch and wick raising rod being separable for allowing the wick holder to be removed from around the air tube, substantially as set forth.

2. The combination with the air tube in an Argand burner, of a wick holder sliding on such air tube, a spring latch connected with the lower end of the wick holder, a slotted case in which the outer end of the spring latch slides, and a wick raising rod within the slotted case having a bent end passing into a hole in the spring latch and the upper end of the spring latch having a double incline by which the latch is separated from the wick raising rod by the contact of the latch with the metal at the end of the slot of the case, substantially as set forth.

THOMAS HIPWELL.

Witnesses:
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