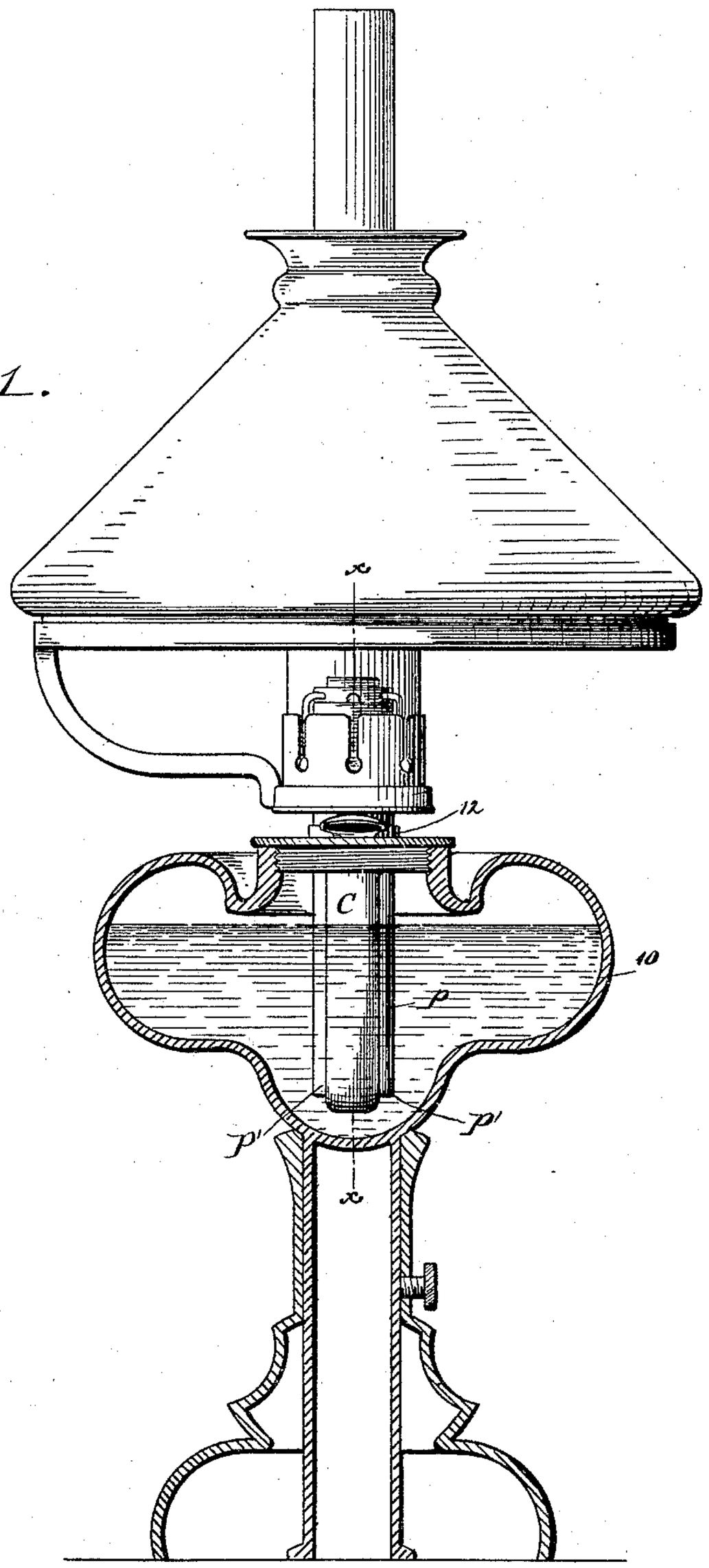
(No Model.) 2 Sheets—Sheet 1.

J. E. BISSELL.

LAMP.

No. 411,212. Patented Sept. 17, 1889.

Fig. 1.



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(No Model.)

2 Sheets—Sheet 2.

J. E. BISSELL.

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Fig. 3.

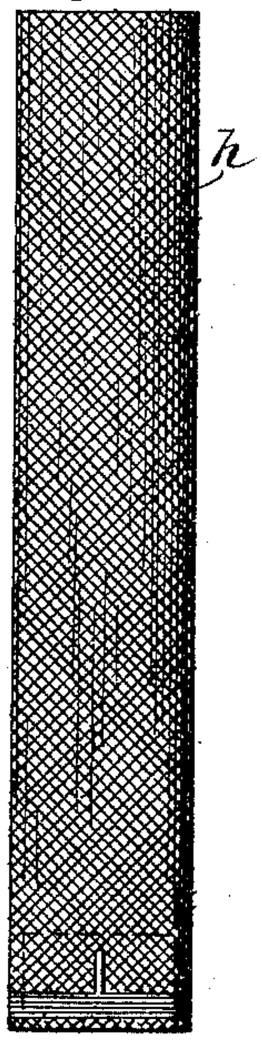


Fig. 2.

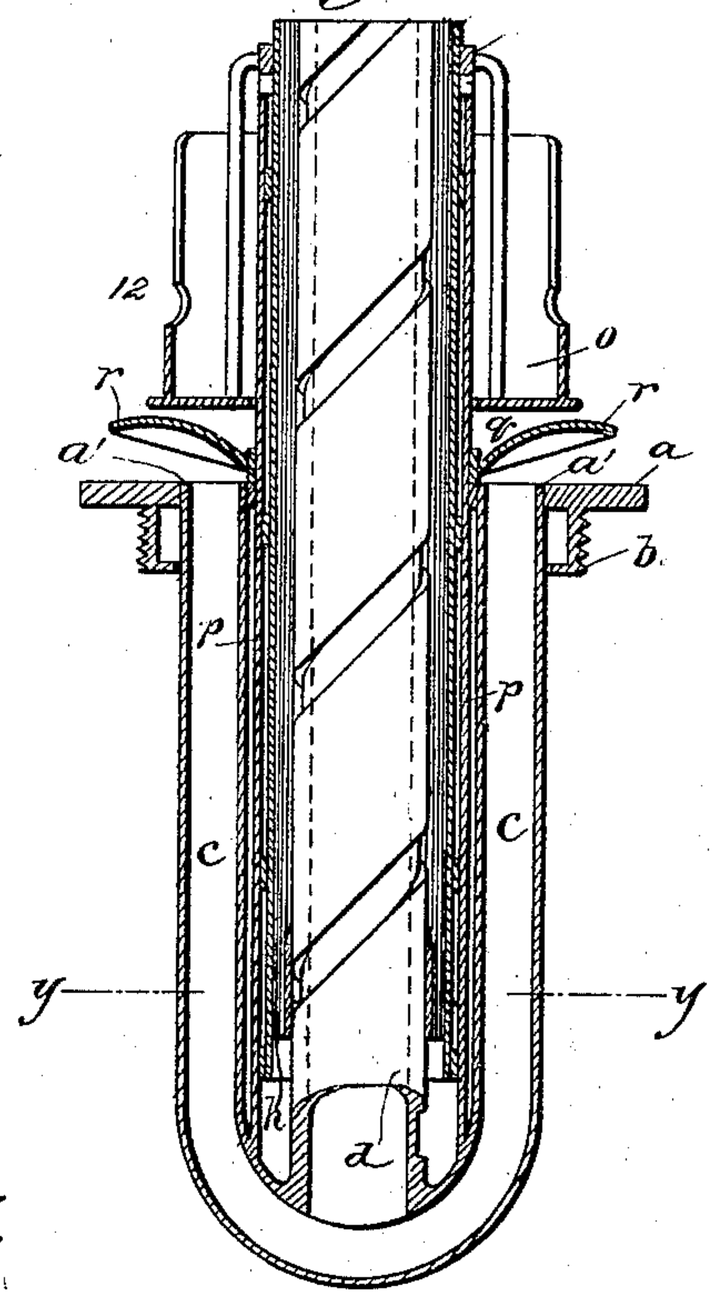


Fig. 4.

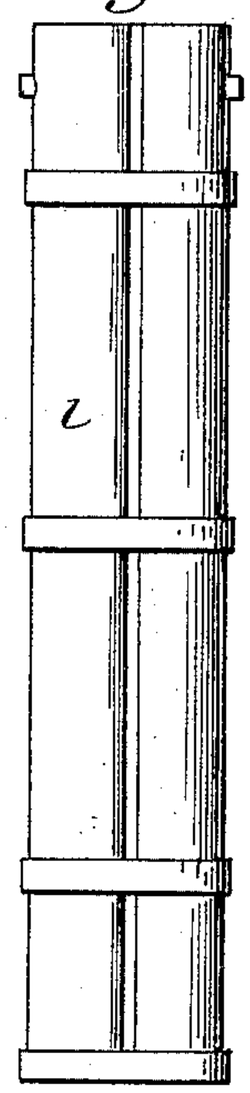


Fig. 5.

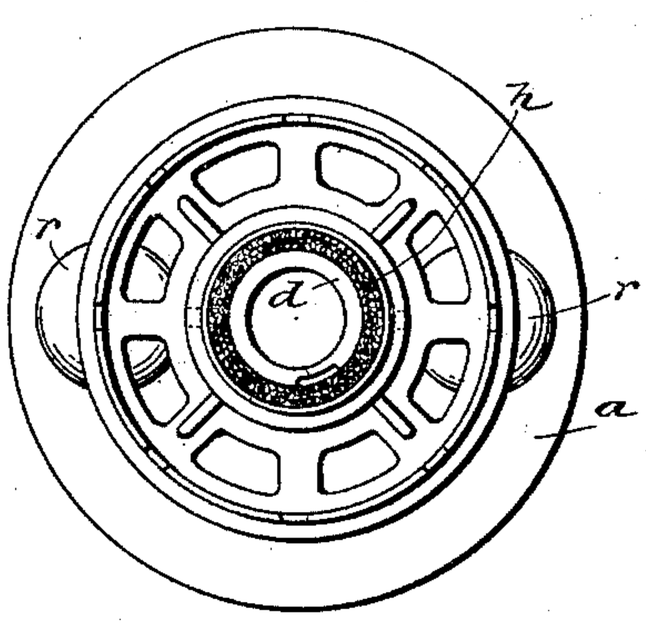


Fig. 6.

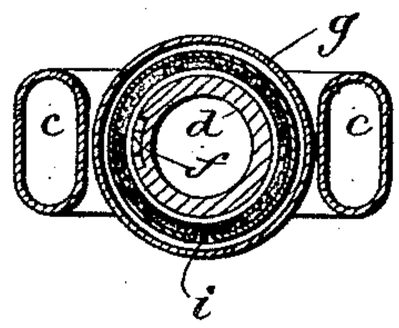
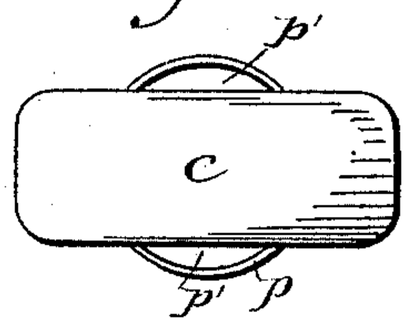


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOSEPH EBENEZER BISSELL, OF BARTOLD, MISSOURI.

LAMP.

SPECIFICATION forming part of Letters Patent No. 411,212, dated September 17, 1889.

Application filed March 7, 1889. Serial No. 302,249. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH EBENEZER BISSELL, of Bartold, in the county of St. Louis and State of Missouri, have invented a new and Improved Lamp, of which the following is a full, clear, and exact description.

To the ends above named the invention consists in the construction and arrangement of parts, all as will be hereinafter more fully explained, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a central sectional elevation of a lamp embodying my invention. Fig. 2 is a central sectional elevation of the lamp-burner, the lower portion only of the central draft-tube being shown in section. Fig. 3 is a plan view of the wick. Fig. 4 is a side view of the longitudinally-slotted wick-protecting cylinder. Fig. 5 is a plan view of the burner. Fig. 6 is a cross-sectional view on line *y y* of Fig. 2, and Fig. 7 is an inverted plan view of the burner.

10 represents a lamp provided with an Argand burner 12, of which *a* is the cap-plate provided with a threaded neck *b*. *d* is the central air-tube; *h*, the wick; *l*, the slotted wick-carrying tube; *p*, the outer tube or shell, and *o* the chimney-holder and wick-tube operator. As these parts are all constructed in the usual manner, no detailed description thereof is necessary.

I will now describe my improvement as applied thereto. The cap-plate *a* is formed with two apertures *a' a'* at opposite sides of the tube *p*, and the upper ends of a U-shaped air-supply tube *c* enter and are secured in said apertures. The tube *c* embraces the lower part of the burner, and is apertured in the upper side of its bend. The lower open end of the tube *d* registers with said opening and is soldered or brazed to the tube *c*, so that air entering the upper ends of the tube *c* will pass downward to its bend and upward through the tube *d* to the flame. The lower end of the outer tube *p* is also secured to the tube *c* at the upper side of the bend, and, as the tube *p* is of greater diameter than tube *c*, it will project at two diametrically-opposite points therebeyond, whereby two oil-supply openings *p' p'* are formed, which will allow the oil to flow freely to the wick. No transverse oil-supply tubes leading into the tube *p* through the lower end of air-tube *c* are necessary, as has been the case in some previous constructions, where, instead of a U-shaped tube, an outer concentric inclosing-tube was provided. The upper ends of the tube *c* are protected and the draft steadied and regulated by overhanging caps *r*, which project from a ring *q* on the tube *p* above the cap-plate.

The U-shaped tube may be applied to the Argand burners in use without changing their main parts at all. The U-shaped tube presents a large surface to the oil, which entirely surrounds it, and therefore the oil will be kept cool.

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

1. The combination, with an Argand burner, of the U-shaped tube embracing the lower portion of the burner, communicating at the upper side of its bend with the lower end of the central air-tube thereof and opening at its upper ends through the cap-plate of the burner, the lower end of the outer burner-tube being open for the entrance of oil, as at *p' p'*, as set forth.

2. The combination, with the burner having the cap-plate, central air-tube *d*, and the outer tube *p*, of the U-shaped tube *c*, communicating at the upper side of its bend with the lower end of the tube *d*, and opening at its upper ends through the cap-plate, the lower end of the tube *p* being open, the ring *q* on the tube *p* above said cap-plate, and the caps projecting therefrom over the ends of tube *c*, substantially as set forth.

3. In a lamp-burner, the combination, with a tube *d*, of a U-shaped tube *c* and caps arranged in connection with such tube, substantially as described.

4. The combination, with the outer burner-tube *p*, the air-tube *d*, and the cap-plate, of a separate and independent tube of less diameter than said tubes and leading from the lower end of the tube *d* under the tube *p* and upward along the outer side thereof and opening through the cap-plate, the lower end of tube *p* being open for the entrance of oil, substantially as set forth.

JOSEPH EBENEZER BISSELL.

Witnesses:

CHARLES E. PILLING,

JAMES P. HESSER.