A. JUDSON.

Lamp Burner.

No. 81,645. Patented Sept. 1, 1868.

Fig. 1

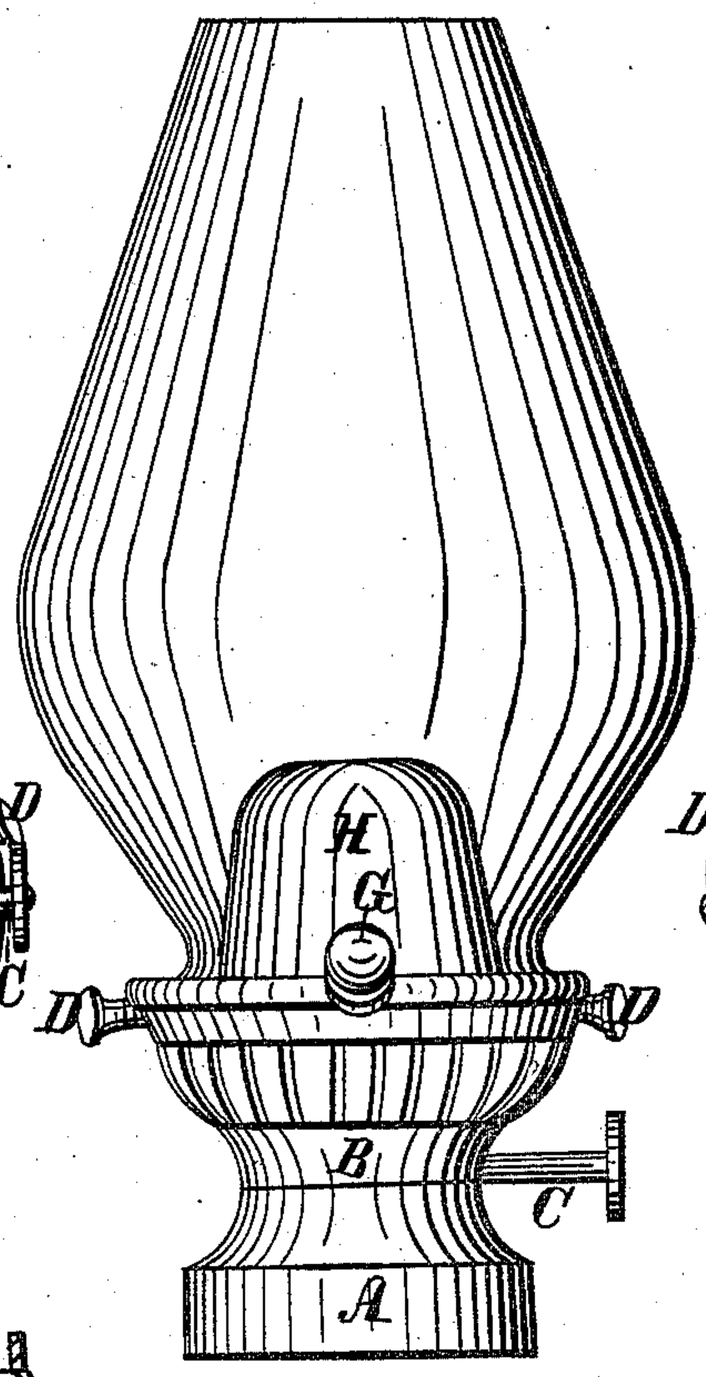


Fig. 2

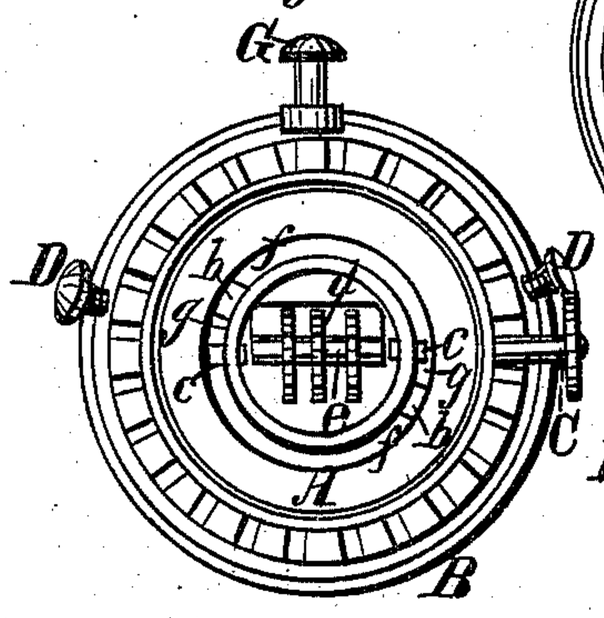


Fig. 5

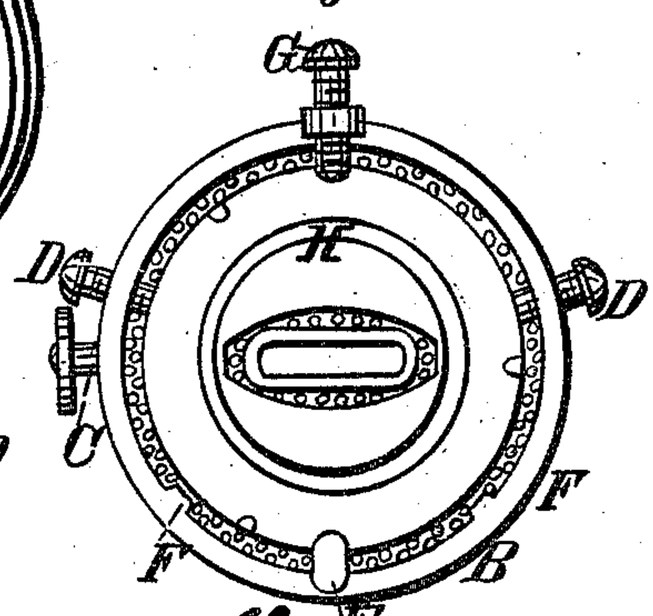


Fig. 3

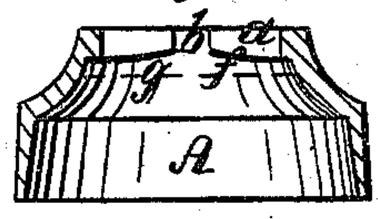
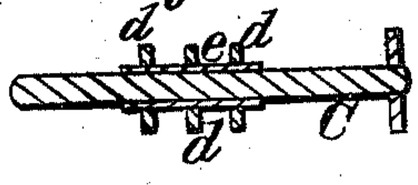


Fig. 4



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ANSON JUDSON, OF BROOKLYN, NEW YORK.

Letters Patent No. 81,645, *dated September* 1, 1868.

IMPROVEMENT IN LAMPS.

The Schedule referred to in these Letters Patent and making part of the same.

Specification of certain Improvements in Kerosene or Coal-Oil Lamps, invented by ANSON JUDSON, of Brooklyn, in the county of Kings, and State of New York.

Nature and Object of the Invention.

This invention consists in—

First, providing the burner with two bearings for the chimney, so projecting inwardly from the shell of the burner, as, with the aid of the screw, or spring, or other device by which the chimney is secured in place, to better centralize the chimney in position upon the burner, as hereinafter more fully set forth.

Second, the construction of the ratchet, in the manner hereinafter described; that is to say, by securing the wheels upon and driving a rod or shaft into a tube, thereby enlarging the tube so as to make these wheels perfectly firm therein, as hereinafter more fully set forth.

Third, providing the burner with two or more adjusting-screws for securing the cone or deflector in position, as hereinafter more fully set forth.

Fourth, the device, hereinafter described, for connecting the burner to the lamp-cap.

Fifth, an enamelled cast-iron cone or deflector.

Sixth, the formation, in one piece, of the lower part of the burner, in such a manner as to receive the ratchet-wheels inside of the wick-tube, and in such a manner as to avoid all communication between the wick-tube and the air-chamber of the burner, except that at the upper end of the wick-tube, as hereinafter more fully set forth.

Description of the Drawings.

Figure 1 is a side elevation of a lamp, embodying my improvements.

Figure 2 is an under side view of the burner and lamp-cap.

Figure 3 is a vertical central section of the lamp-cap.

Figure 4 is a central longitudinal section of the ratchet-shaft, together with the ratchet-wheels, and the ube upon which they are secured.

Figure 5 is a top view of the burner, with the chimney removed.

General Description.

A is the cap of the lamp, which cap may be made of brass, iron, or any other suitable material.

Instead of being provided with a screw-thread, so as to form a nut for the reception of the burner, as is ordinarily done, it is provided with a flange, *a*, at the top, through which two notches, *b*, are cut, at opposite sides of the cap, for the reception of two pins or projections, *c*, which are attached to the lower part of the body, B, of the burner, to secure it to the lamp-cap, and adjoining these notches *b*, and upon each side thereof, the under side of the flange *a* is formed into two inclined planes, *f g*, each inclining downwardly from the notches, so that after the pins or the projections *c* are inserted through the notches *b*, the turning of the burner B in either direction will draw these pins downward, and secure the burner firmly in place. This construction has the advantage over that with the single inclined plane, that the burner is fastened by turning it in either direction.

The body B of the burner I prefer to make of cast iron. This is cast in one piece together with the wick-tube, and at the bottom the wick-tube is enlarged so as to give a sufficient aperture for the admission of the wheels or ratchets *d d d*, for elevating the wick.

These wheels or ratchets are constructed in the usual manner, and are secured at proper distances from each other upon a tube, *e*, which should be made of sheet brass or sheet metal, bent into a tubular form, the edges of which should not be soldered together, or otherwise united.

The tube having been thus formed, the rod or shaft C, having been first slightly flattened in the middle, where this tube is intended to fit upon it, should be driven into this tube *e*, and should fit tightly enough to prevent said tube and the said wheels from turning upon it or upon each other. This mode of securing the ratchet-wheels upon the shaft by first fitting them upon an open tube, and then driving the shaft into said tube,

and thereby firmly securing both said tube and said wheels upon the shaft, has the advantage of enabling the workman to fit the wheels in proper position upon the tube on which they are to be secured, and in proper relation to each other, before they are placed in the wick-tube, where this operation is much more difficult. It also has the advantage, that it furnishes a shoulder upon the shaft, at each side of the wick-tube, to prevent undue longitudinal motion of the said shaft; and it also has the still further advantage that it secures the wick-elevating wheels much more substantially than the modes heretofore practised. Any number of wheels that it may be desirable to employ in the lamp, may be secured in this way upon the shaft, the construction being such that the wheel or wheels *d* is or are secured upon the tube *e*, and the latter upon the shaft C by driving the said shaft into the said tube, so as to spread the tube and tighten the wheels upon the shaft, as hereinbefore described.

The shaft C extends outward through the sides of the body of the burner, below the point where the tube leaves the shell, consequently it does not form any opening from the oil-reservoir into the burner, and, as the wick-tube is perfectly united at all points to the shell of the burner, there is no connection whatever, except through the length of the wick-tube, between the oil-reservoir and the interior of the burner, and therefore it is impossible that the flame of the lamp should descend into the oil in the reservoir.

The upper part of the shell of the burner is provided with two thumb-screws, D D, which extend inwardly against the edges of the cone, and by which, in connection with the rib E, (which the cone is notched to fit,) the cone may be adjusted to bring the slot in the cone more exactly over the wick, and thus give the proper direction to the flame.

F F are two ribs, which are cast upon the inside of the upper edge of the body B of the burner, to form bearings for the flange of the chimney, thereby removing it slightly from the shell of the burner, and, in connection with the screw G or other fastening, giving to the chimney a better adjustment.

H is the cone or deflector, which is made of cast iron, and a coating of enamel on the outside of the iron. This mode of making the cone furnishes a cheap deflector, which can be easily kept clean, and which has the advantage of conducting heat to the shell of the burner much less rapidly than the ordinary brass cone, while at the same time it is entirely durable.

Claims.

I claim as my invention—

1. The combination of the shell B of the burner, the ribs F F, and the screw G or its equivalent, substantially as and for the purpose hereinbefore set forth.

2. The combination of the ratchet-shaft C, wheels *d*, and tube *e*, substantially as and to the effect hereinbefore set forth.

3. The combination of the cone H, shell B, and adjusting-screws D D, substantially as and to the effect hereinbefore set forth.

4. The combination of the burner B, projections *c c*, flange *a*, notches *b b*, and right and left inclines *f* and *g*, in such a manner that by inserting the projections *c c* through the notches *b b*, and turning the burner in either direction, said burner may be secured to the lamp-cap, substantially as set forth.

5. The cone or deflector, made of cast iron, with an enamelled surface, as hereinbefore set forth.

6. The formation of the burner B in one piece with the wick-tube, and in the manner hereinbefore described, by which the wheels for elevating the wick are received into the lower end of the wick-tube, and all connection between the fountain and the interior of the burner, except through the length of the wick-tube, is cut off, substantially as hereinabove set forth.

ANSON JUDSON.

Witnesses:

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THOS. P. HOW.