W. BOEKEL.

Lamp.

No. 202,693. Patented April 23, 1878.

FIG. 1.

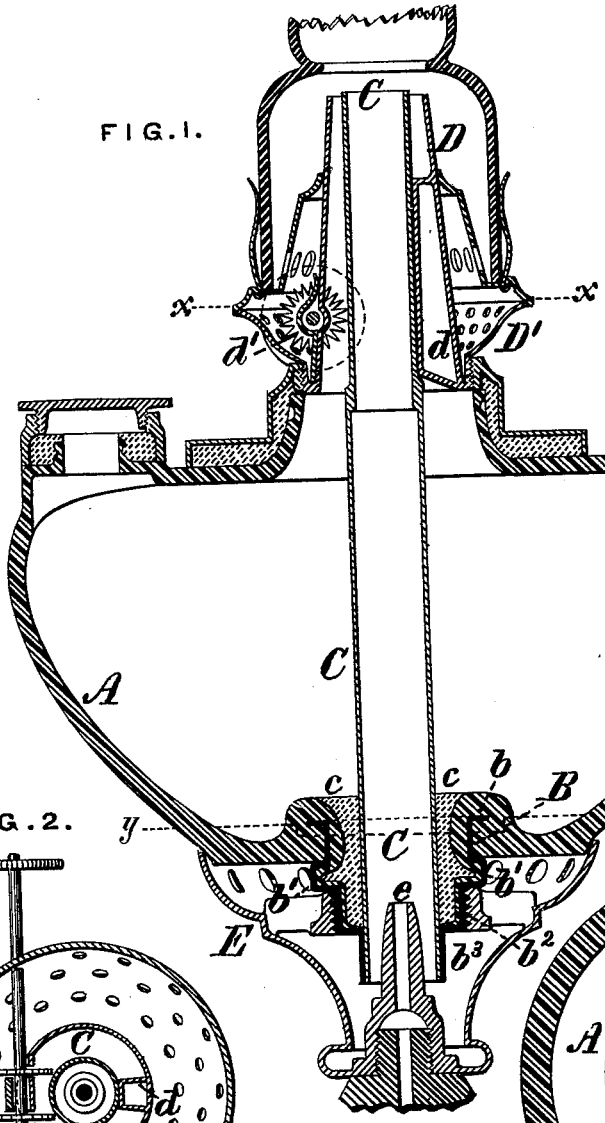


FIG. 2.

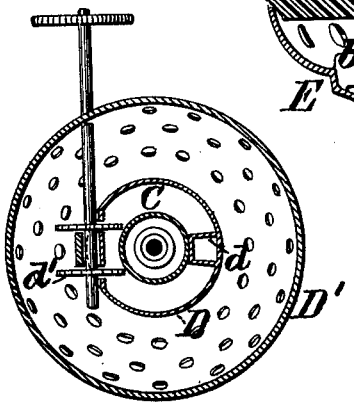
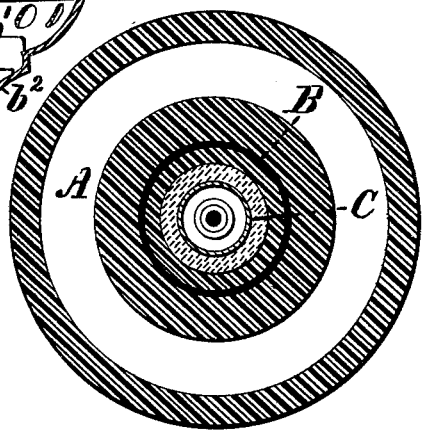


FIG. 3.



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WILLIAM BOEKEL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **202,693**, dated April 23, 1878; application filed April 6, 1878.

To all whom it may concern:

Be it known that I, WILLIAM BOEKEL, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Lamps, of which the following is a specification:

My improvements are specially applicable to self-lighting lamps having a hydrogen-generator and a galvanic battery operating to heat a plantinum wire, which ignites a jet of hydrogen, and thereby lights the lamp; but they are likewise equally applicable to ordinary oil-lamps.

The object of my invention is to provide simple and convenient means for supplying air to the interior of the wick, as well as for the application of an extinguishing device, without the necessity of forming a side opening or openings in the wick-tube; to which ends my improvements consist in combining with a glass lamp-bowl or oil-reservoir a metallic socket blown into or united with the bowl at its base in the formation of the same, and a central draft-tube soldered to the socket and extending therefrom to the top of the wick-tube, as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a vertical central section of a lamp embodying my improvements; and Figs. 2 and 3, horizontal sections of the same at the lines *x x* and *y y*, respectively, of Fig. 1.

To carry out my improvements I provide a light metallic socket, B. (Shown in solid black in Figs. 1 and 3.) This socket is of cylindrical form, varying in diameter at different points in its length, and has a horizontal flange, *b*, at top. Extending downward from the inside of this flange, it is first expanded to a diameter about equal to the outer diameter of the flange, forming a swell, b^1, then contracted below said swell to a diameter slightly less than the inner diameter of the flange; and upon this contracted portion a screw-thread, b^2, is formed. Below the screw-thread b^2 it is again contracted for the remainder of its length to a diameter slightly greater than that of the draft-tube presently to be described, and forms a connecting-tube, b^3. A metallic socket thus constructed is properly set in the mold, and a glass lamp-bowl or oil-reservoir, A, is blown around it, the glass surrounding the metal above the flange *b*, and down to the top of the swell b^1, as well as flowing within the socket as far down as the top of the connecting-tube b^3. The socket should be first dipped in a boiling-hot solution of borax, and then heated to prevent oxidation and to act as a flux. By means of the flange and swell it will be seen the socket is firmly anchored in the glass and a secure connection of the two established. A central draft-tube, C, of such diameter as to fit easily within the connecting-tube, is inserted therein, with its lower end flush with the lower end thereof, and firmly soldered thereto. The length of the draft-tube is such as to enable its top to be about on a level with the top of the wick-tube D of the lamp when the latter is placed in position for operation, and in practice I usually make both the draft-tube and connecting-tube slightly longer than is shown in the drawings, and cut off the extra length before the soldering is completed.

To guard against the possibility of leakage, as well as to make a firmer connection, the space between the draft-tube and the glass on the inner surface of the socket B is filled with cement *c*. The screw-thread b^2 serves to connect the bowl with the base E, which is perforated at its upper part to admit air to the draft-tube, and may be of any approved form of construction. In the drawings it is shown as provided with a central tube, *e*, which communicates with an extinguishing device, (not shown or claimed,) consisting of a collapsible rubber ball connected with a rubber tube, by which a sudden blast of air may be driven into the interior of the wick-tube for the purpose of extinguishing the lamp when desired.

The wick-tube D and perforated burner-shell D′ are attached to the top of the bowl A in the ordinary manner, and need not be here specifically described further than as relates to the wick-guide *d*, which I insert between the draft-tube and wick-tube opposite the star-wheels *d′* by which the wick is raised. The wick-guide consists of a plate of metal bent into trough form and placed vertically between the two tubes, in which position it serves as a guide for the edges of the wick, and prevents the latter from being twisted in the operation of the star-wheels.

I am aware that the application of a central draft-tube to a lamp is not new, and do not therefore broadly claim such device.

I claim as my invention and desire to secure by Letters Patent—

1. The combination, with a glass lamp-bowl, of a metallic socket secured to the base of the bowl by being blown in in forming the same, and a central draft-tube passing through the bowl and secured at bottom to the socket, substantially as set forth.

2. A metallic socket having an upper flange, and a projecting portion or swell below said flange for connection with a lamp-bowl, a threaded portion below the swell for attachment to the lamp-base, and a cylindrical connecting-tube below the threaded portion to receive a central draft-tube, substantially as set forth.

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