

(No Model.)

E. S. DRAKE.
OIL BURNER FOR LAMPS OR STOVES.

No. 532,316.

Patented Jan. 8, 1895.

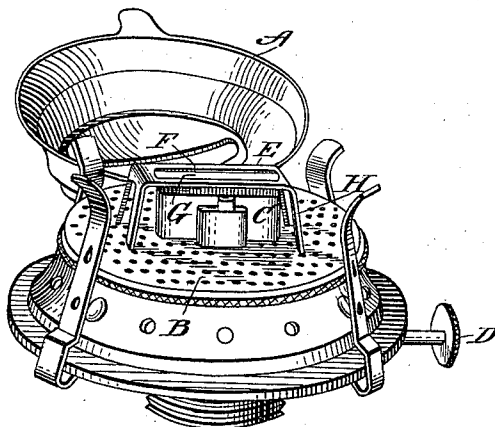


Fig. 1.

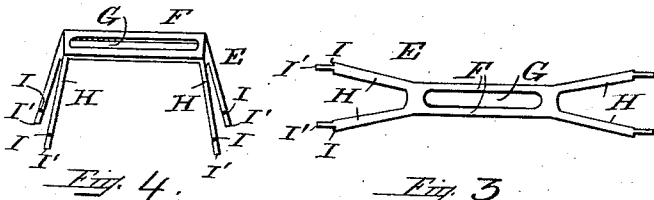


Fig. 3.

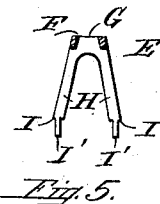


Fig. 5.

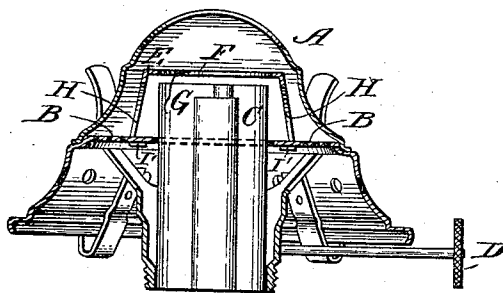


Fig. 2.

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UNITED STATES PATENT OFFICE.

EDWIN S. DRAKE, OF PORTLAND, MAINE, ASSIGNOR TO EUGENE HUMPHREY,
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OIL-BURNER FOR LAMPS OR STOVES.

SPECIFICATION forming part of Letters Patent No. 532,316, dated January 8, 1895.

Application filed May 19, 1894. Serial No. 511,781. (No model.)

To all whom it may concern:

Be it known that I, EDWIN S. DRAKE, of Portland, in the county of Cumberland and State of Maine, have invented a new and useful Improvement in Oil-Burners for Lamps and Stoves, which will, in connection with the accompanying drawings, be hereinafter fully described and specifically defined in the appended claim.

My invention relates to a device for supporting the flame of an oil burner, for lamps or stoves, above the top of the wick tube to remove the heat thereof from the tube, and which device as constructed by me I term a "skeleton flame rest."

It also operates as a convenient and effective extinguisher when the ignited wick is turned down.

I am aware of Letters Patent of the United States No. 418,427, dated December 31, 1889, in which a foraminous plate or platform is inserted in, and attached to the deflector of a lamp burner for the same purpose. By experiment with such attachment, I have found that, besides being expensive to construct, and to attach to the cone or deflector, and inconvenient to get at to clean, and it being impossible to trim the wick above the platform, it also disturbs more or less the "balance," or equilibrium of outer and inner drafts of air, which is established in the original construction of the burner to which it is attached.

Having thus discovered by practical experiment with, and study of, a burner so constructed, that, when a plate is thus inserted in the cone it becomes necessary to perforate it to such an extent as to eliminate all the metal therefrom, which it is practicable to get rid of in that manner, in order to relieve as far as possible the obstruction it offers to the necessary flow of air upward through the cone, and that there will still remain, as a necessary constituent of such plate, an objectionable amount of material, I have invented the following improvements in construction to overcome these objections.

In the drawings: Figure 1 is a perspective view of a common type of burner for lamps having my invention applied thereto. Fig. 2

is a sectional elevation of the same and showing the method of attaching my flame rest. Fig. 3 is a plan of the metal blank from which the flame rest is formed. Fig. 4 is a perspective of the flame rest detached from the burner but in form to be attached thereto. Fig. 5 is a cross section showing a modification by which the outer edges of the flame rest are bent downward so that the sides thereof are oblique to the plane of the wick, for the purpose of stiffening the body of the flame rest, and reducing the obstruction offered by the same to the circulation of the currents of air within the deflector.

Referring to Fig. 1, A represents the hinged cone top or deflector turned back to disclose the parts covered thereby when closed.

B is the usual perforated base of the burner; C, the wick tube projecting upward through the base; D, the device for raising and lowering the wick, and E my skeleton flame rest secured to the base and extending above the top of the wick tube. This device E, which is the principal feature of my invention, consists of a piece of thin sheet metal first cut in the form of the blank shown in Fig. 3, and afterward bent into the shape shown in Figs. 1 and 4, and comprises a horizontal body F; a wick slit G, therein, with narrow margins of metal on the sides of the slit, which may be level as in Fig. 1, or oblique as shown in Fig. 5, or otherwise modified in form for the purpose of stiffening the same, or rendering it less obstructive to air currents; legs or standards H, preferably spread apart both longitudinally and laterally to brace the body F, and having shoulders I thereon to limit their downward projection through the holes in base B, and to adjust the height of body F above said base. The body F is thereby supported on base B at the proper elevation (preferably about three thirty-seconds of an inch) above the top of the wick tube, and arranged so that the wick will be guided by the tube into and through slit G, when turned up by the usual means, so that when ignited the flame will rest on the top of body F, thus cutting the heat thereof off from the top of the wick tube. When the body of rest F is in such position

above the wick tube C, the lower and diminished portions of the legs H will project downward through holes in base B, until the shoulders I bear upon the base, when by clinching the projecting points I' on the under side of the perforated base, as shown in Fig. 2, the flame rest will be securely held in place. The hinged cap or deflector can be freely closed over the same, and the base and rest are easily accessible by turning back or removing the deflector cone, for purposes of cleaning the parts, and for trimming the wick on top of the flame rest, a very desirable convenience.

A great saving in expense of construction is effected by my improvement while increasing the efficiency and desirability of the attachment. The rest being a mere skeleton device intended to support the flame only, presents very little heated metallic surface to the wick, offers a minimum of obstruction to air currents, and little opportunity for the accumulation of dirt, and being secured to the perforated base by attenuated legs and at a considerable distance from the wick tube very little opportunity is afforded for the transmission of heat by conduction through such connections to the wick tube, while a cooling draft of air is constantly pouring

through the perforated base up over the heated rest. 30

I claim—

In a lamp burner, the combination of a hinged or removable cone or deflector, a foraminous base, and a wick tube projecting upward through the base, of a flame rest for preventing conduction of heat from the flame to the wick tube, the same consisting of a narrow imperforate plate located horizontally above and parallel with the top of the wick tube with an intervening space between the end of said tube and the under side of the plate, said plate having a wick slit overlying the end of the wick tube and corresponding in outline with the wick opening therein, the plate being entirely independent of the cone, and being supported by upstanding legs secured to the base so as to leave a free space to permit cleaning and for the circulation of air around the wick tube beneath the plate and up around the edges of the plate between it and the inner wall of the cone; substantially as described. 40 45 50

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Witnesses:

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