

P. H. SIMS.

Lamp-Boiler.

No. 131,712.

Patented Sep. 24, 1872.

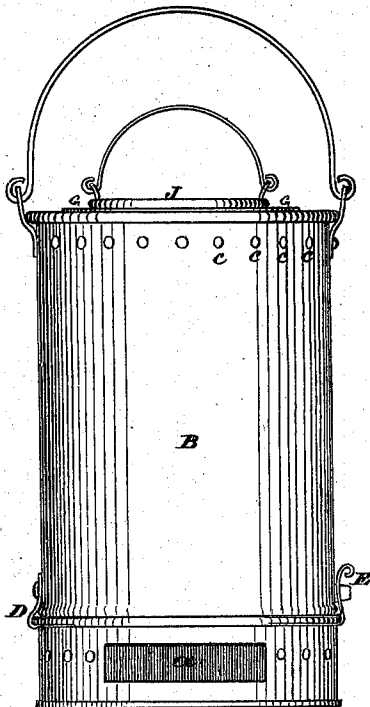


Fig. 1

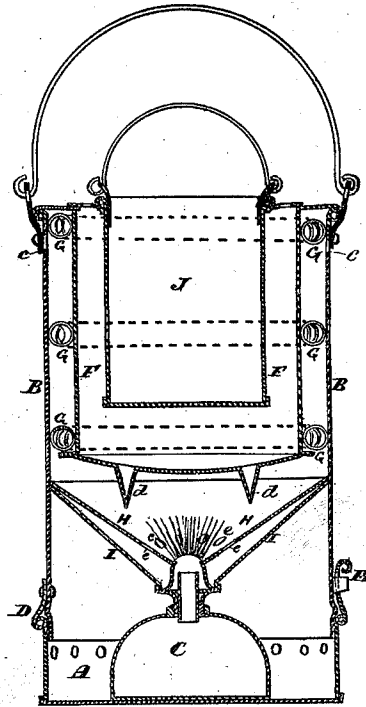


Fig. 2.

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UNITED STATES PATENT OFFICE.

PETER HARVEY SIMS, OF WATERLOO, CANADA, ASSIGNOR TO CYRUS
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IMPROVEMENT IN LAMP-BOILERS.

Specification forming part of Letters Patent No. 131,712, dated September 24, 1872.

To all whom it may concern:

Be it known that I, PETER HARVEY SIMS, of Waterloo, in the county of Waterloo, in the Province of Ontario and Dominion of Canada, have invented certain Improvements in Lamp-Boilers, of which the following is a specification:

My invention relates to the arrangement of a boiler within a metallic lamp-chimney over a lamp, in such a manner as to allow the heat to circulate freely around the bottom and sides of the boiler, and the smoke to escape through perforations near the top of the chimney, inverted cones being applied to the burner to reflect the heat upward to the boiler, and shield the lamp from deflected heat; also, in the use of a series of spiral wire rings surrounding the boiler within the chimney to retard the passage of heat through the draft-apertures.

Figure 1 is a front elevation of a lamp-boiler embodying my invention. Fig. 2 is a transverse vertical section of the same.

A is a cylindrical base, on which the metal chimney B fits for its vertical support, and forms a receptacle in which the lamp C is placed. The base and chimney may be connected by a hinged joint, D, and secured by a catch, E, opposite thereto. *a* is an aperture in the side of the base A, by which access is gained to the shaft of the burner for regulating the flame. The chimney B is provided with a series of draft-apertures, *c*, in the sides near the top, through which the smoke escapes. F is a boiler, provided with a flange which rests upon the top edge of the chimney, and by it the boiler is held suspended within the chimney, so as to admit of the free circulation of heat around the side and bottom of the boiler. The bottom of the boiler is provided with a series of drop-cones or pipes, *d*, to give

increased heating-surface to the boiler, and to bring the liquid in closer proximity to the burner without impairing combustion. G G G are spiral wire-rings surrounding the boiler within the chimney, to retard the heat from passing too quickly through the draft-apertures *c*, and thus more rapidly heat the contents of the boiler. H is an inverted cone-reflector, closely fitting within the chimney, and resting on the top of the burner. It is provided with draft-apertures *e* to admit air for combustion to the flame. I is an inverted cone, arranged below the cone H, and connecting therewith, as shown. The lower part fits on the lower rim of the burner, to shield the lamp from deflected heat. J is a glue-pot or pap-vessel, sitting into the boiler to show the adaptability of the apparatus for such and other like purposes.

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

1. A lamp-boiler, consisting of the metallic chimney B, base A, lamp C, inverted cones H I, boiler F, and spiral rings G G, all constructed, arranged, and operated in the manner and for the purpose set forth.

2. The inverted cone-reflector H, provided with air-apertures *e*, and resting on the upper part of the burner, in combination with the inverted cone I resting on the lower rim of the burner, and metallic chimney B, and boiler F, as and for the purpose set forth.

3. The spiral wire-rings G G, in combination with the metallic chimney B and boiler F, substantially as described.

P. H. SIMS.

Witnesses:

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