W. DETTE.

PETROLEUM LAMP.

No. 183,450. Patented Oct. 17, 1876.

Fig. 1.

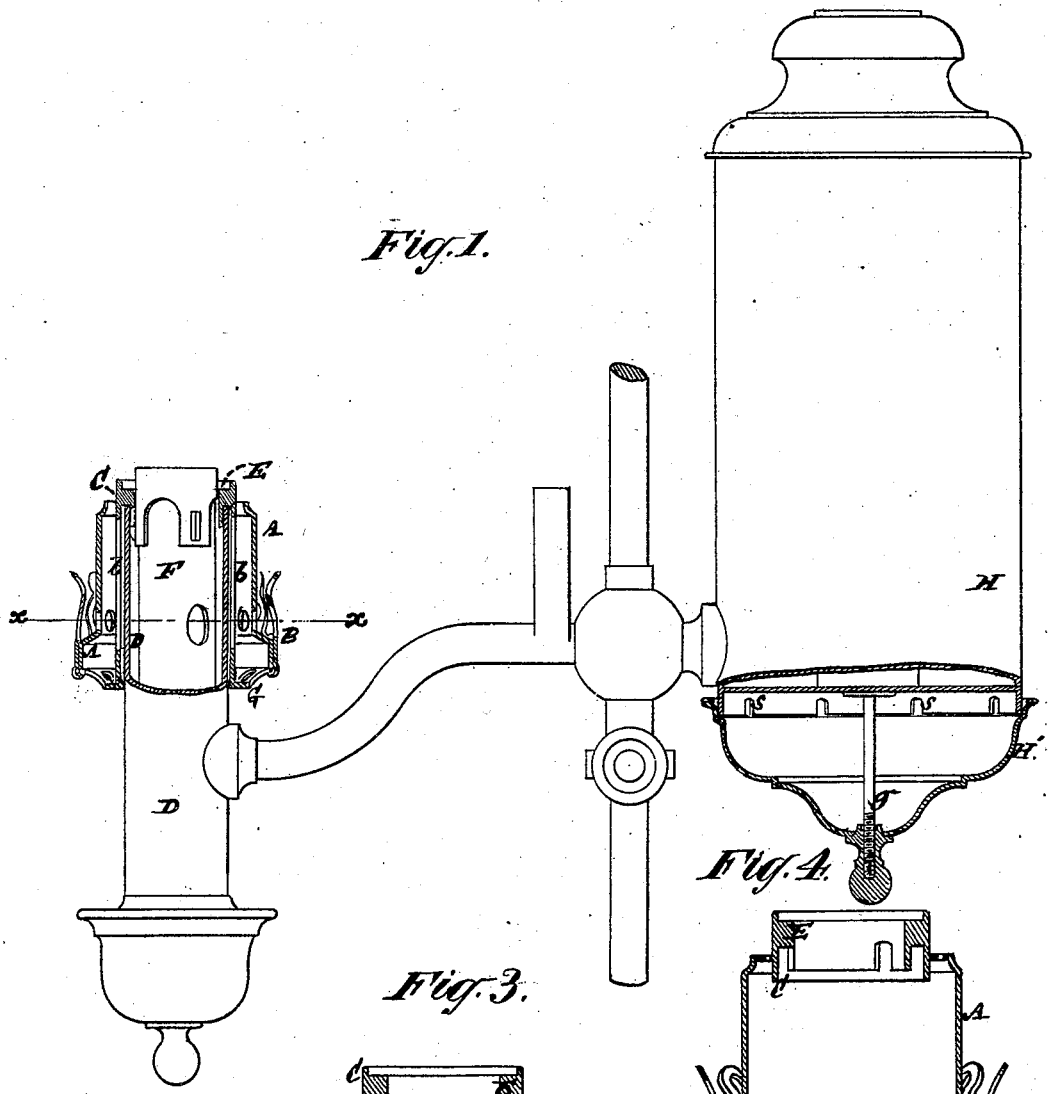


Fig. 4.

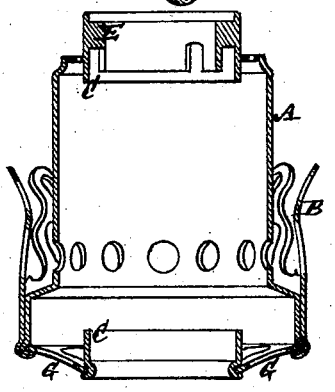


Fig. 3.

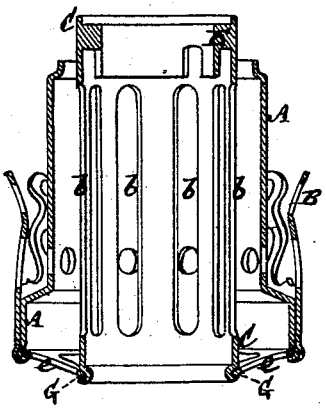
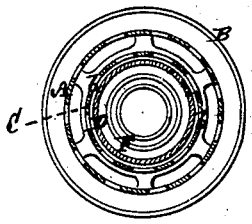


Fig. 2.



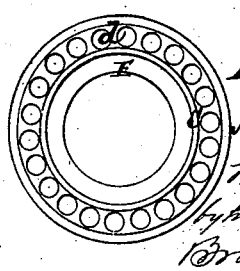


Fig. 5.

Witnesses
John Becker.
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W. Dette
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UNITED STATES PATENT OFFICE.

WILHELM DETTE, OF BERLIN, PRUSSIA, ASSIGNOR TO BENNETT B. SCHNEIDER, OF NEW YORK, N. Y.

IMPROVEMENT IN PETROLEUM-LAMPS.

Specification forming part of Letters Patent No. **183,450**, dated October 17, 1876; application filed August 31, 1876.

To all whom it may concern:

Be it known that I, WILHELM DETTE, of Berlin, in the Kingdom of Prussia and Empire of Germany, have invented certain new and useful Improvements in Lamps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

This invention more particularly relates to fountain-lamps for studies and other places or purposes.

The invention consists in an interrupted construction of the inner tube of the chimney-carrier, to provide for circulation of the air which passes up within said carrier to the burner, around and in contact with the exterior of the burner-tube, whereby the wick-tube of the burner is kept cool, and the wick thereby prevented from charring or having its capillary attraction interfered with by the heating of the wick-tube.

The invention also consists in a chimney-carrier having its bottom formed of a ring with openings in it, and united without solder to the lower edge of the outer tube of said carrier, and the lower edge of the latter also similarly united with the lower edge of the gallery, whereby soldered wire arms, uniting the lower outer portion of the chimney-carrier with an inner tube to the latter, are dispensed with, and the inner edge of said perforated ring, which latter is substituted for said arms, may be made to dispense with a separate inner tube, or be united without solder with an interrupted lower portion of said inner tube, thus doing away with all soldering of said parts together, and liability of the same to loosen by the action of the heat, and generally giving a stronger and neater finish to the chimney-carrier at its bottom.

The invention likewise consists in a removable drip-cup at the bottom of the fountain or reservoir-receiver, constructed to collect any oil not only escaping by leakage within the receiver but which, running down the outside of the receiver, usually collects in drops on the lower outside extremity of the bottom of the latter—the construction and arrangement of which will be hereinafter fully described, and specifically pointed out in the claims.

Figure 1 represents a broken or partly sectional vertical view of a fountain or student's lamp constructed in accordance with my invention. Fig. 2 is a horizontal section, in part, on the line *x x*. Fig. 3 is a vertical section of the chimney-carrier upon a larger scale. Fig. 4 is a vertical section of a modified construction of said chimney-carrier, and Fig. 5 a plan of the same in part.

Referring, in the first instance, to Figs. 1, 2, and 3 of the drawing, A represents the outer tube of the chimney-carrier, and B the gallery of the latter, between which gallery and outer tube A the chimney is arranged. C is the inner tube of the chimney-carrier, arranged to fit snugly over the burner-tube D, and fitted internally at its top with an attached socket, E, constructed to gear with the wick-tube F, so that, on suitably turning the chimney-carrier, the wick-tube F, which is surrounded or inclosed by the burner-tube D, is turned to raise or lower the wick as required, and as in other lamps of various constructions.

The burner is an Argand one, and air to keep up combustion is admitted to the flame on the interior and exterior of the annular wick, in the usual or any suitable manner, air to supply the exterior of the flame being introduced, as usual, by openings in the chimney-carrier, so as to pass the air up within the outer tube A to the flame; but instead of the inner tube C of the chimney-carrier being made a close one and surrounding in a close manner the burner-tube D, it is constructed with one or more openings, *b*, or interrupted in direction of its length, so as to provide for the air which circulates to the exterior of the flame coming in contact with and circulating around the exterior of the burner-tube D. This causes the wick-tube F to be kept cool, and thereby prevents the wick from charring or having its capillary attraction interfered with by the heating of the wick-tube. Fig. 4 shows, substantially, a similar construction of the wick-carrier, and for the same purpose; but instead of the detached openings *b* in the

walls of the inner wick-tube C, said tube is interrupted in direction of its length by being entirely broken away, thereby forming upper and lower independent sections C C, the lower one of which may be united with the outer tube A, as in Fig. 3, and the upper sections of said inner tube be united, for the purpose of carrying it, with the upper end of the outer tube, by arms, or by a perforated plate, *d*, as in Figs. 3 and 4.

The bottom of the chimney-carrier is formed of a ring, G, having one or more openings, *e*, in it for the admission of air, (see more particularly Fig. 3,) and is united without solder to the lower edge of the outer tube A by constructing the latter with a groove, within which the outer edge of the ring G fits. The gallery B is also grooved at its lower edge, to lap over and receive within it the groove portion or swell of the lower edge of the outer tube A. Thus the outer edge of the ring G and the lower edges of the outer tube A and gallery B are all clamped together and effectually secured. This construction dispenses with the usual wire arms for uniting by solder the lower edges of the outer and inner tubes of the chimney-carrier, thus doing away with that liability of the parts to break loose which is incidental to the use of solder exposed to a strong heat. The inner edge of the ring G may be turned over, or constructed so as to entirely dispense with a separate inner tube; or it may be united with the lower edge of the inner interrupted tube C, or with the bottom edge of the lower section of said tube, as shown in Fig. 4, by entering the inner edge of the perforated ring G within a groove or overlapping portion of the lower edge of the inner tube C, substantially in the same manner as the outer edge of the ring G is secured. This ring construction of the bottom of the chimney-carrier gives a neat and substantial finish to the latter. H is the receiver of the oil reservoir or fountain. This receiver has heretofore been made with a permanently-attached close bottom, and any oil getting on to the outside of the receiver has usually collected in a succession of drops on the lower tip end of the bottom of the receiver, which is very objectionable. Neither has there been, in such previous construction, any means for drawing off oil settling within the receiver. To remedy these defects I construct the receiver H with a removable drip-cup, H′, at its bottom, and which may be screwed on and off, a screw-threaded stem or pin, *g*, projecting downward from the bottom of the body of the receiver. This removable drip-cup is constructed at its upper edge to overlap or extend beyond the bottom edge of the body of the receiver, and said bottom edge of the receiver provided with openings or notches *s*, or otherwise made to fit within the cup, so that an opening will be provided between said bottom edge and the interior of the cup for the passage of oil running down the exterior of the receiver to be collected within the cup, which latter will also collect any oil escaping by leakage from the fountain inside the receiver, and may readily be removed and emptied of the oil collecting within it.

I claim—

1. The combination of the laterally open or interrupted tube C of the chimney-carrier with the outer tube A thereof, whereby air to promote combustion passing up between said tube is enabled to circulate in contact with the burner-tube, and thereby operates to keep the wick-tube cool, substantially as and for the purpose herein set forth.

2. A chimney-carrier having its bottom constructed of a perforated ring, G, united by a groove or lap-joint with the lower edge of the outer tube A, and the whole clamped together by a groove and lap-joint with the gallery B of said carrier, essentially as described.

3. In combination with the fountain-receiver H, having notches or openings *s* in its bottom edge, the screw-pin *g*, extending from the bottom of said receiver, and the drip-cup arranged on said pin, and constructed to extend beyond the lower edges of the fountain-body, substantially as and for the object specified.

In testimony whereof I hereunto subscribe my name in the presence of two subscribing witnesses.

WILHELM DETTE.

Witnesses:
HERMANN KREISMANN,
MAX FIEDLER.