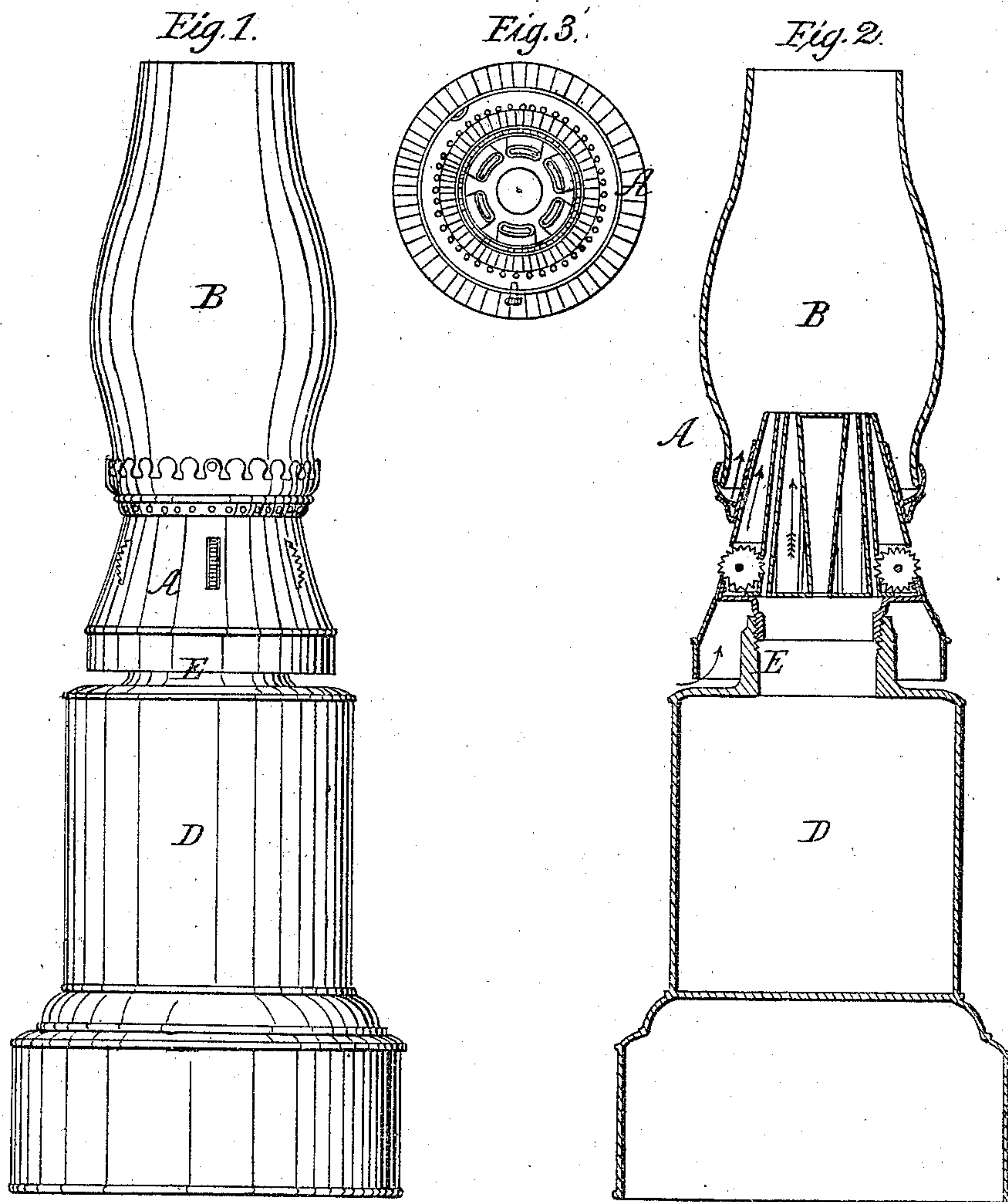


PLATT & ROSECRANS.

Lamp Wick Raiser.

No. 33,402.

Patented Oct. 1, 1861.



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UNITED STATES PATENT OFFICE.

ANSON H. PLATT AND WILLIAM S. ROSECRANS, OF CINCINNATI, OHIO.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. 33,402, dated October 1, 1861.

To all whom it may concern:

Be it known that we, ANSON H. PLATT and WILLIAM S. ROSECRANS, of the city of Cincinnati and State of Ohio, have invented a new and Improved Lamp for Burning Lard, Whale, Cotton-Seed, and Coal Oils; and we hereby declare the following to be a correct description of the same, reference being given to the accompanying drawings.

The Argand burner consisted in a round metallic tube extending entirely down through the lamp, open at the lower end, surrounded by a continuous wick with a free access of air upon the outer side, and a current of air passing up through the tube from the bottom of the lamp upon the inner surface, and on this account could only be applied to expensive metallic founts made expressly for the purpose.

Our invention consists in an improvement upon the Argand burner. First, we adapt it to nearly all ordinary lamps now in use, whether glass or metallic, and thus bring it within the reach of all classes; second, with a chimney only about two and a half inches long above the point of combustion we so far increase the current of air upon the flames as to produce as perfect a light, even with coal-oil, as can be produced by the Argand burner with a button and chimney nine inches in length; third, by a slight modification of the tubes and wicks required by the different light-producing substances, this lamp will burn lard, whale, cotton-seed, or coal oil, and to accomplish this we proceed in the following manner:

Into a tube-plate very similar to those now in use in ordinary lamps we insert in a circle from two to twelve (depending upon the size of the lamp) concavo-convex tubes *a a*, Figure 1, from one to one and three-fourths of an inch long above the tube-plate and from three to seven eighths of an inch wide, the lower ends being separated to allow a free influx of air and the upper ends approaching each other. Surrounding these tubes at a distance of about one-eighth of an inch at their upper ends and three-eighths of an inch at their lower ends is a metallic cone *A*, extending up even with the upper ends of the tubes and down within about one-fourth of an inch of the fount, and extending out

from the tube-plate are four small arms, to which it is attached and held in its proper position.

At the lower end, upon the outside of each tube, is attached perpendicularly a small serrated metallic wheel *b*, free upon its axis, passing through the outer wall of the tube and also through the cone *A*, so as to admit of the direct application of the fingers to the serrations in rotating the wheels in raising and lowering the wicks.

Within the space inclosed by the tubes is placed a metallic deflector *d*, resembling an inverted cone, extending upward even with or a little above the ends of the tubes and leaving a space of about one-fourth of an inch all round between it and the inner surface of the tubes, and to the upper portion of the cone *A* is attached in the usual way a short glass chimney *B*, which completes the structure.

When this lamp is intended to be used for lard, whale, or cotton-seed oil, the tubes must be two and one-fourth inches long, extend one and a fourth inch above the tube-plate, have their upper ends brought in contact, and a cavity to receive quite a thick wick; but when coal-oil is to be used the tubes should extend one and a half inch above the tube-plate, extend down only through that plate, have the upper ends separated a trifle and made to receive a very thin wick, and whatever be the sort of oil used the wicks should never be raised so high as to cause a smoke.

When the fixed oils, as lard, whale, &c., are used in this lamp, the chimney may be used or not, at pleasure, its use contributing only to the tranquility of the flame for small lamps; but when it is desired to produce a large light the glass must be used, and for burning coal-oil its use is indispensable.

Advantages: First, this lamp, with slight modifications in the tubes and wicks, will consume all the ordinary light-producing substances in use except "burning-fluid;" second, it dispenses with the long cumbrous chimney, is free from smoke and odor, and completely portable; third, it is simple in structure, easily managed, and not liable to get out of order.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination of the concentric tubes *a a*, converging upward, and the deflector *d*, having the form of an inverted cone, substantially in the manner and for the purpose herein specified.

2. The arrangement of the separate serrated wheels *b b*, extending, respectively, from the tubes *a a* outward just through the cone A,

in combination with said tubes and cone, substantially as described.

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