2 Sheets—Sheet 1.

H. H. DOTY.

LAMP-BURNER.

No. 186,201. Patented Jan. 16, 1877.

Fig. 2.

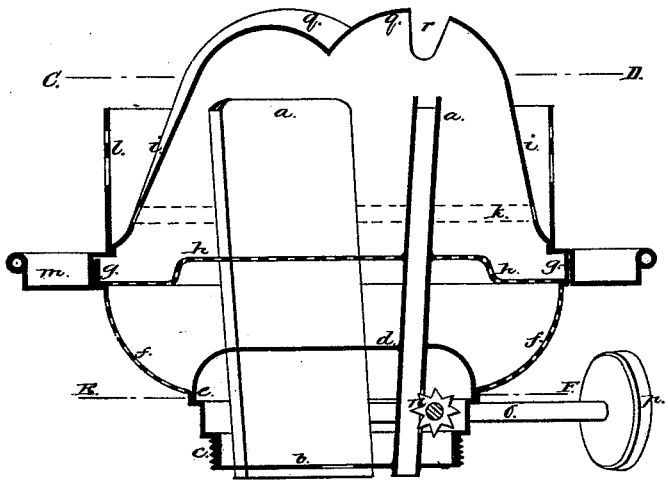
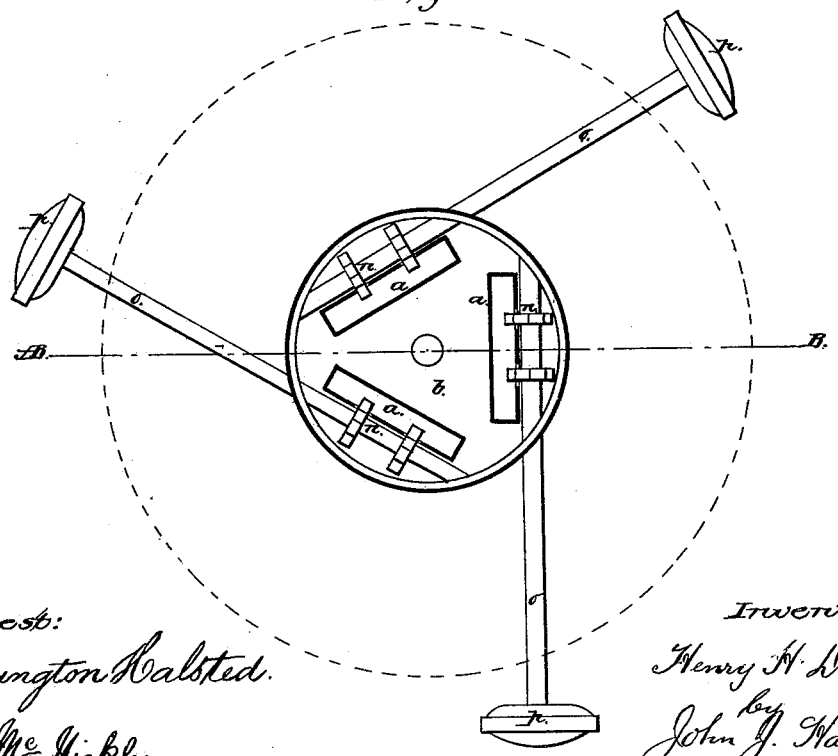


Fig. 1.



Attest:

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by John J. Halsted

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2 Sheets—Sheet 2.

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Fig. 4.

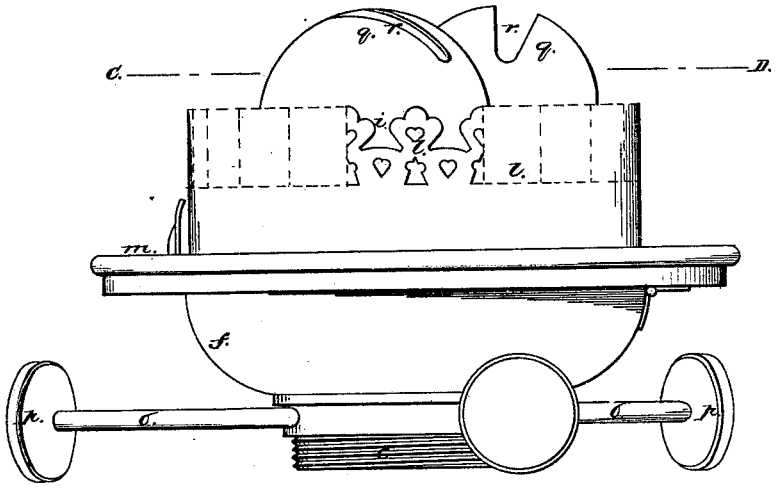
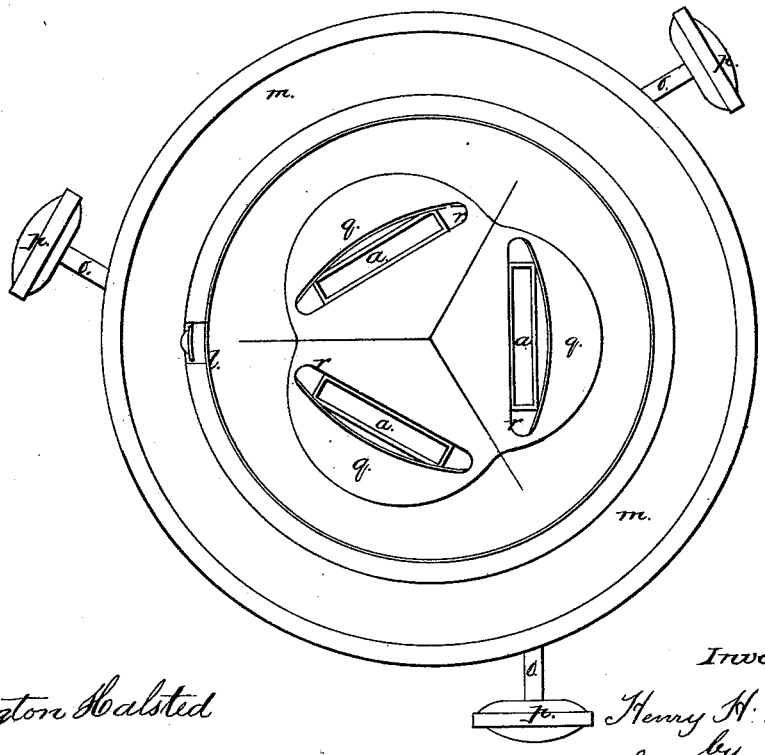


Fig. 3.



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UNITED STATES PATENT OFFICE.

HENRY HARRISON DOTY, OF NORFOLK, VIRGINIA.

IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. **186,201**, dated January 16, 1877; application filed June 21, 1876.

To all whom it may concern:

Be it known that I, HENRY HARRISON DOTY, of Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Lamp-Burners; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, rererence being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

These improvements have reference to burners provided with wicks for consuming hydrocarbon or other liquid oils, and consist more especially in forming the same with three separate wicks, arranged together in the form of a triangle, preferably an equilateral triangle, a certain amount of space being left between the upper extremities of the wicks at each of their three angles or places of junction, the three wicks doing duty under one common glass or chimney, and adapted to combine together the light which they emit, each wick having its own separate and distinct means of adjustment, while at the same time all three are fed from one common reservoir or supply of oil, as well as from one common supply of air.

In the accompanying drawings, Figure 1 is a plan of my triangular burner, in section, through the line E F of Fig. 2. Fig. 2 is an elevation of the same in section through the line A B of Fig. 1. Fig. 3 is a plan view complete; and Fig. 4 is an elevation complete.

In these figures, *a a a* are the three tubes for the wicks. They are soldered or otherwise attached in the first place to the lower circular base-plate *b*, which is provided with an external thread, *c*, to screw into the vase or vessel charged with hydrocarbon-oil, into which the lower extremities of the wicks are immersed in the usual manner; and, in the second place, to the upper circular plate *d*, which is turned down and soldered or otherwise attached at *e* to the upper part of the base *b*. At *e* is also attached the usual circular perforated basket *f*, terminating at *g* with an enlarged diameter. Internally this basket receives and supports a perforated metallic diaphragm, *h*, through which the wick-tubes *a a a* pass, and externally it serves as a support to the triple capsule or cap *i*, which is slotted above in three places, *r r r*, for the passage of the flame emitted by each wick, respectively, and laterally by a series of holes, *k*. This triple capsule *i*, which may be simply placed on the top of the basket, as shown in the drawings, or jointed thereto in any well-known manner, also serves to receive the glass chimney inside the vertical gallery *l*, and a globe on the horizontal flange *m*. Toothed wheels or pinions *n n n* are mounted, one on each of the respective stems *o o o*, which are severally provided externally with the buttons *p p p*, for the purpose of regulating individually and separately each wick.

It will be observed that the direction of the three wick-tubes *a a a* is not vertical, as I prefer that they diverge from one another on rising from the base-plate *b*. The object of this divergent deviation is twofold; in the first place, to create between the upper extremities of the burning wicks such a space as I find is necessary for the perfect combustion of the fluid; and, in the second place, so that the three wicks can, at their lower extremities, be brought as closely as possible together, thus reducing to a minimum the diameter of the aperture or neck of the vase or reservoir containing the hydrocarbon liquid.

The cap *i* also forms a special feature of my invention, and, while it is round at its base, its upper part is so shaped as to form or constitute three domes or hemispheres, one for each wick, and yet merging into each other, as shown in elevation at Figs. 2 and 4, and in plan by an imaginary section-line through C D in Fig. 2.

With my triangular arrangement of separate burners each flame presents its broad side for illuminating, and the three combined present their broad sides toward all parts of an apartment or space requiring light, while any open spaces between the edges of two adjacent flames allow the inner broad side of that flame which subtends such space or angle to throw its light in that direction, and thus compensate for the usual diminished light emitted from the thin edge of a flame, so that the full illuminating power is obtained in all direc-

tions. Moreover, the triangular position of the wicks, in connection with the novel construction of dome, affords the completest supply of heated and, consequently, of liberated oxygen for each flame and all around it.

Again, either wick may be used separately when desired, or any two of them, as well as all combined, as circumstances may require.

Having thus explained the nature of my invention, as well as the best means that I am acquainted with for carrying the same into practical operation, I claim as new—

1. A detachable burner, adapted to be screwed or applied as shown to a hand-lamp, and composed of three wicks, arranged at their upper or burning ends in the shape of a triangle, passing through wick-tubes *a a a*, substantially as shown and described.

2. The described construction of the burner with its three wick-tubes *a a a*, triangularly arranged, as shown, and diverging from below upward, substantially as shown and set forth.

3. The cap *i*, constructed as shown and described, with the raised hemispheres *q q q*, converging together to form one cap, and each slotted at *r*, for the passage of the flames, as and for the purposes set forth.

HENRY HARRISON DOTY.

Witnesses:
THS. A. PRATT,
CHAS. SULLIVAN.