

HULL & KAUFMAN'S

Improvement in Lamps

No. 119,518.

Patented Oct. 3, 1871.

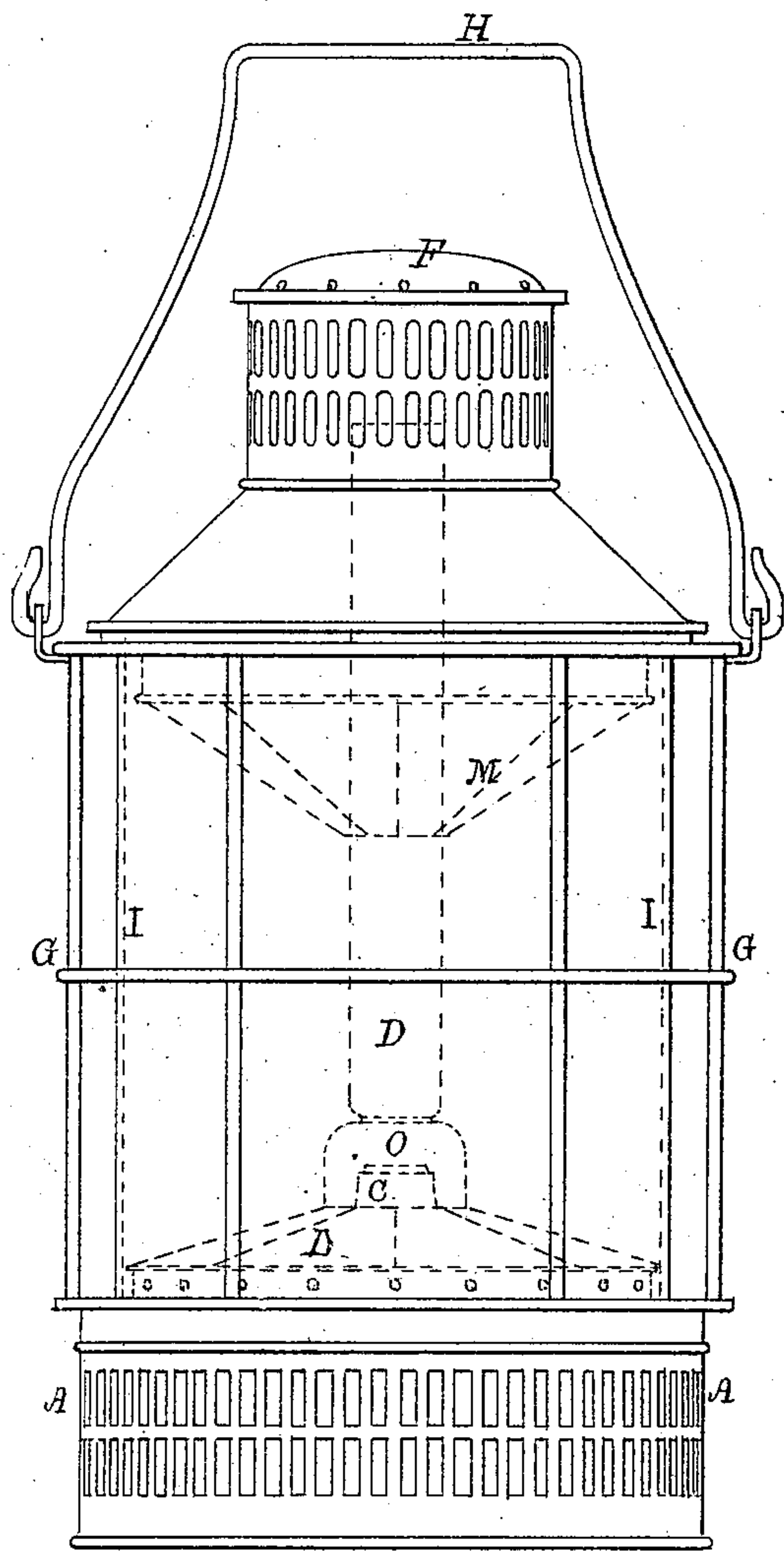


Fig. 1

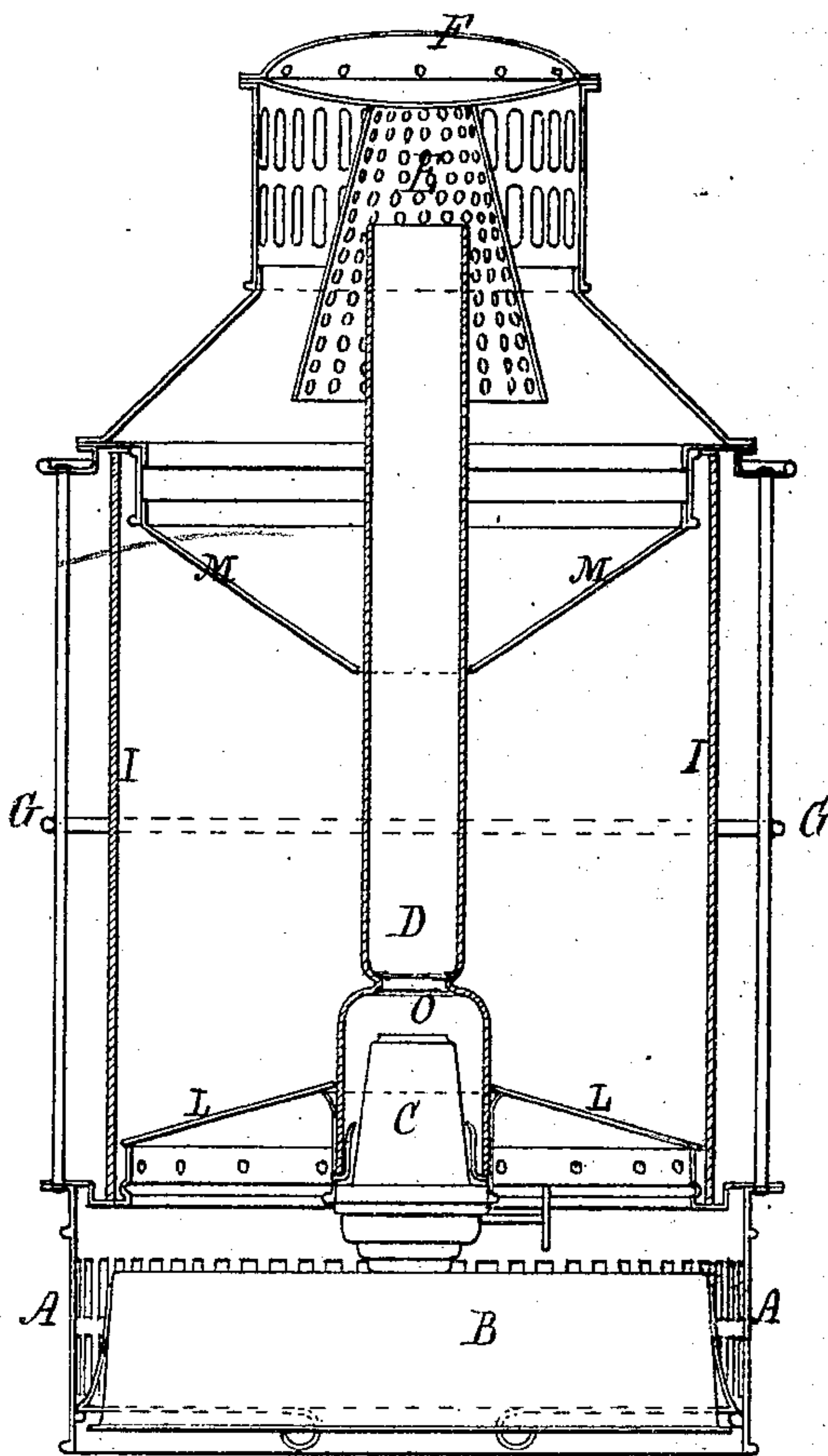


Fig. 2

L. H. Gano
N. Hollard.

Witness.

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UNITED STATES PATENT OFFICE.

JAMES J. HULL AND JOSEPH KAUFMAN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN LANTERNS.

Specification forming part of Letters Patent No. 119,518, dated October 3, 1871.

To all whom it may concern:

Be it known that I, JAMES J. HULL and JOSEPH KAUFMAN, both of the city of Brooklyn, county of Kings, and State of New York, have invented certain Improvements in Portable Lanterns, of which the following is a specification:

This invention relates to that class of lanterns which is used in the hand or for a portable light; and the improvement consists chiefly in the addition to other well-known devices of two reflectors or diffusers of the light, so constructed and arranged relatively to the burners and to each other as that the space around the lantern may be better illuminated than heretofore done.

Figure 1 represents a side elevation of the lantern complete, with the handle elevated, ready for being lifted. Fig. 2 is a vertical section through the center of the lantern.

Like letters refer to like parts.

A A is the base for receiving the burning-fluid in the lamp B, upon the top of which is the burner C, mounted in the usual manner, and provided with a chimney, D, as shown in the drawing. At the upper end of said chimney is a protector, E, of wire-gauze or perforated plate, to prevent the wind from acting against the draught and exterior. To this is a shield, F, to protect the hand or fingers from the heat of the chimney. Said upper parts are held or kept in position by the frame-work of wire or ribs of tin G G, which connects the base with the top, as shown in Figs. 1 and 2. H is the handle by which the lantern is carried, only shown in Fig. 1. At I I is a cylindrical shield of glass, like a shade commonly used around gas-burners, for keeping off the wind and rain from the chimney D and from the burner at C. Our improvement consists chiefly, however, in the introduction of two reflectors, as at L and M, which are made of any material that will reflect light readily, as planished tin, silvered glass,

or brass, according to the cost and convenience of the user. These reflectors are placed in such a proximity to the burner, and relatively to each other, as to greatly diffuse the light from the burner and produce in some degree the effect of a head-light used on locomotives, but entirely around the burner. The lower one of said reflectors, as at L, is placed a little below the top of the burner, its crown being sufficiently far below the flame as that the light can fall upon it and be thrown outward and upward at whatever the incident angle may be. The other reflector or diffuser is placed with its reflecting focus downward to catch the light from the flame at the top of the burner; but the sides of said reflector are so inclined as not to catch the reflected rays from the lower reflector, or, at least, to any considerable extent, so that two reflectors act independently of each other, and yet both in combination with the burner, to produce the best results in giving light to a great distance. Of course, whatever rays are reflected from the inner surface of the shade I I will be again reflected by the surface at M M and thrown outward and downward; but the principal object of the two reflectors is to throw the rays from the flame outward and independently of each other, as may be readily seen by drawing the proper incident and reflecting angles from the top of the burner at or about where the center of the greatest light is produced.

Having thus described our invention, we claim—

As an article of manufacture, the lantern as described, for the purposes set forth.

JAMES J. HULL.

JOS. KAUFMAN.

Witnesses:

GEO. W. BENNETT,
BOYD ELIOT.