

(No Model.)

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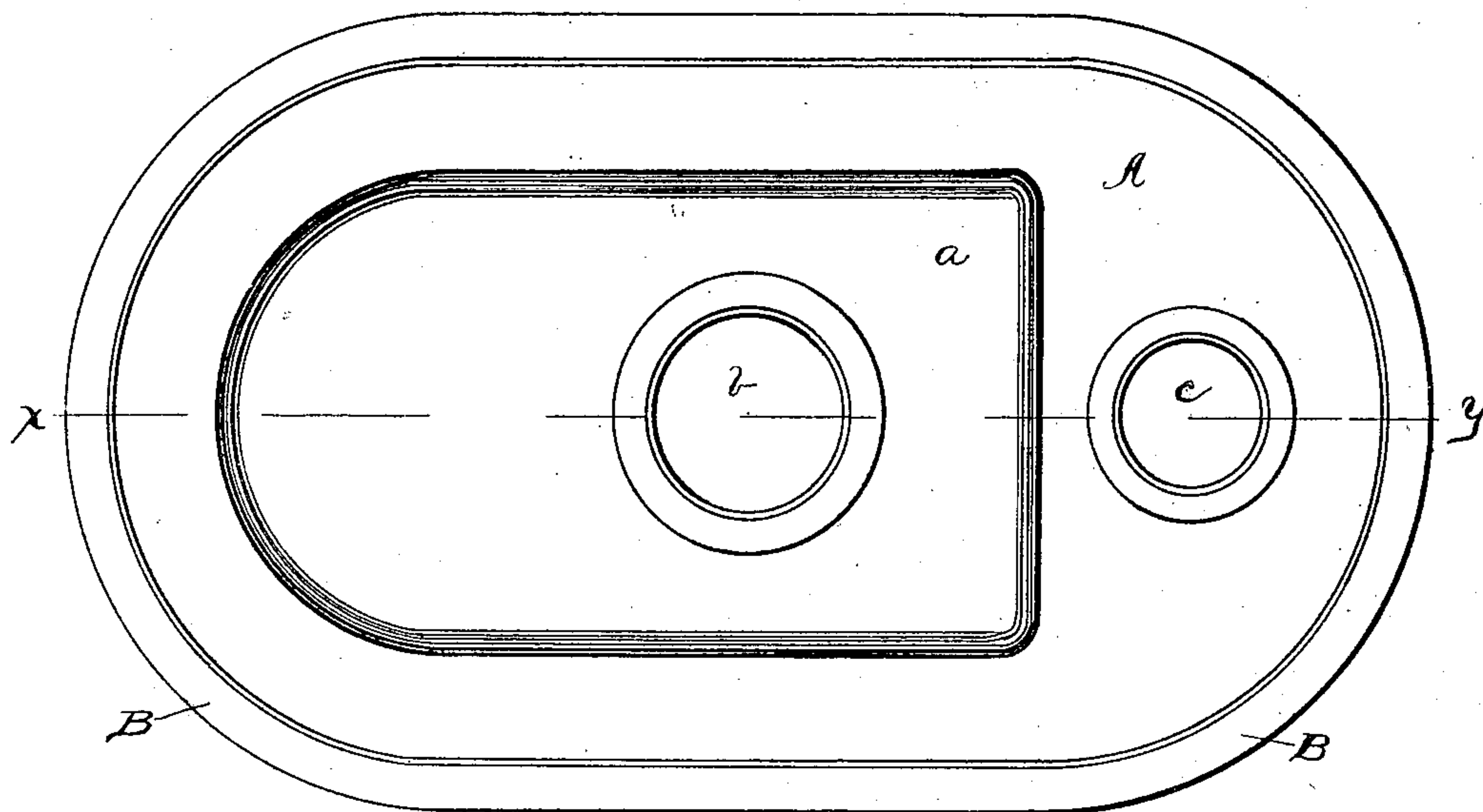
G. M. CLUTE.

LAMP.

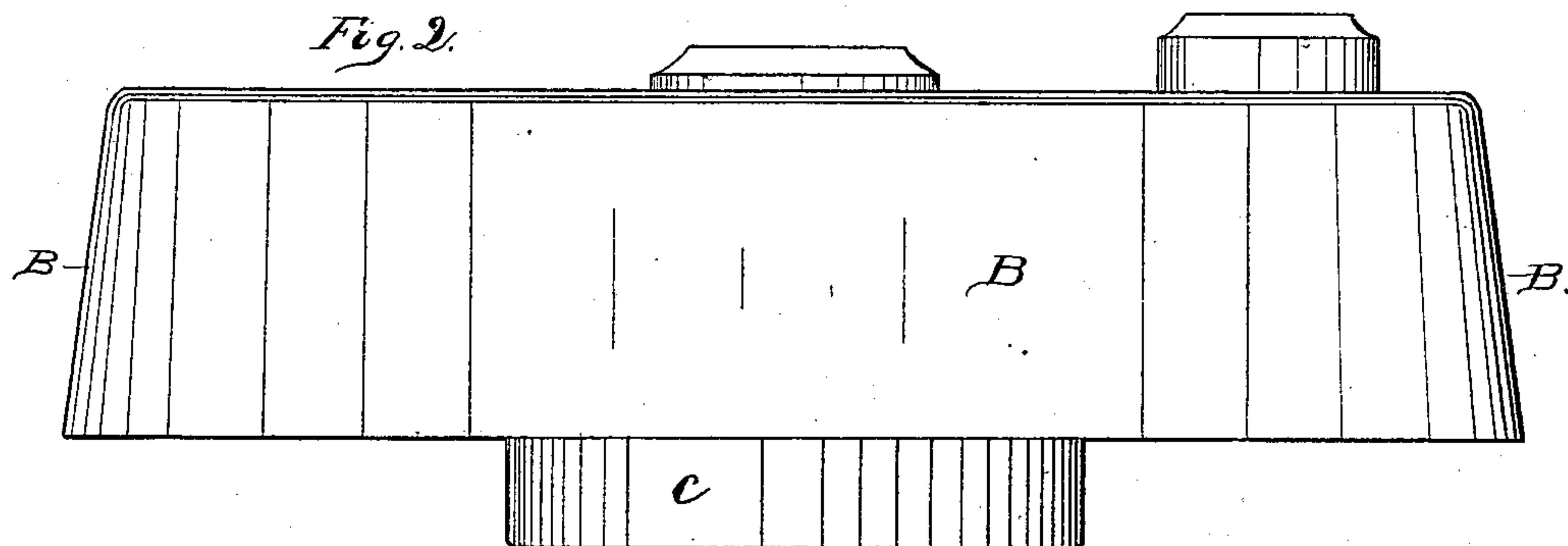
No. 316,117.

Patented Apr. 21, 1885.

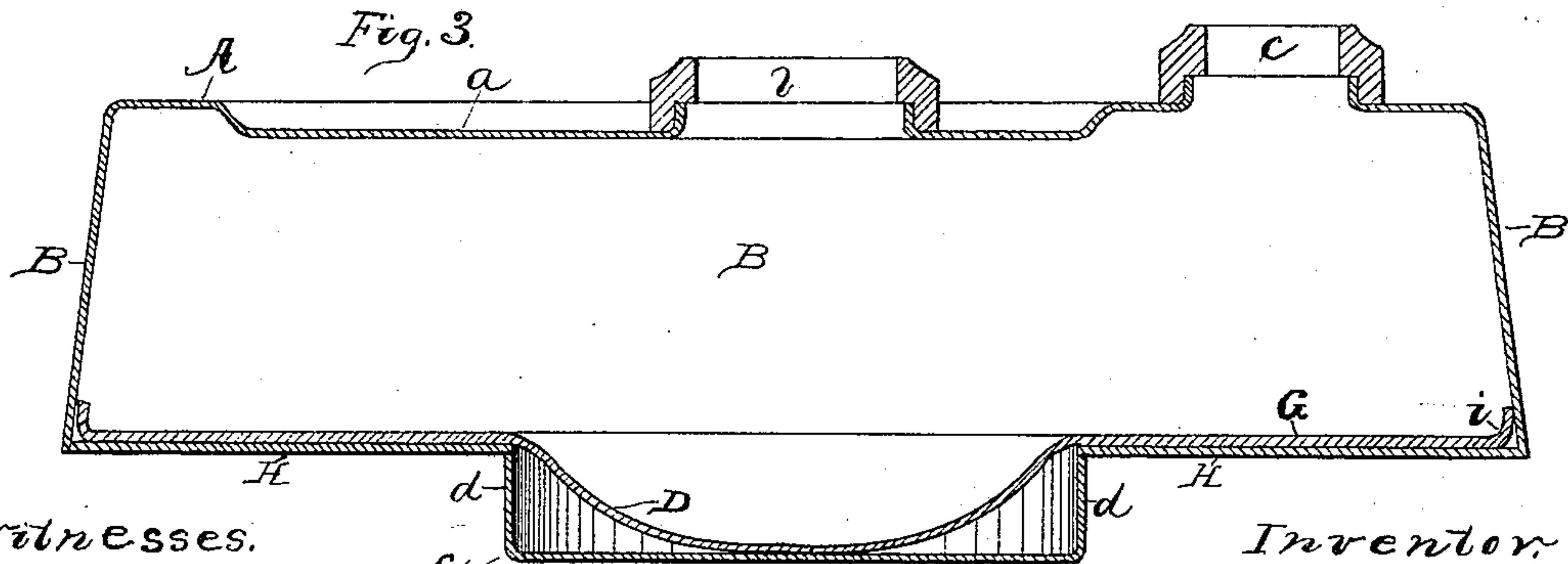
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses.

*Wm. H. Hallister, Jr.*  
*John T. Davis*

Inventor.

*George M. Clute,*  
*by Geo. A. Mosher*  
*Att'y.*

(No Model.)

2 Sheets—Sheet 2.

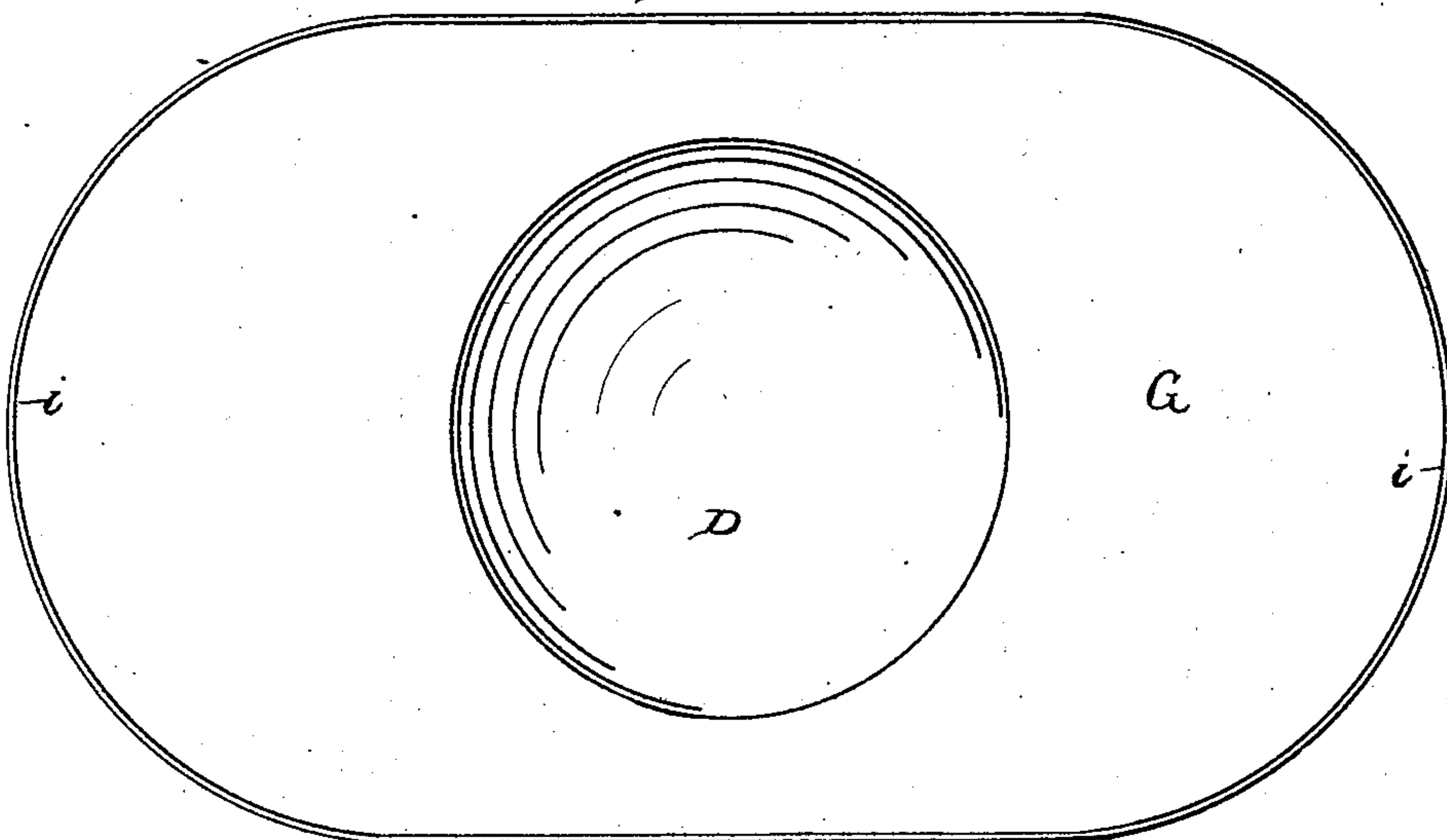
G. M. CLUTE.

LAMP.

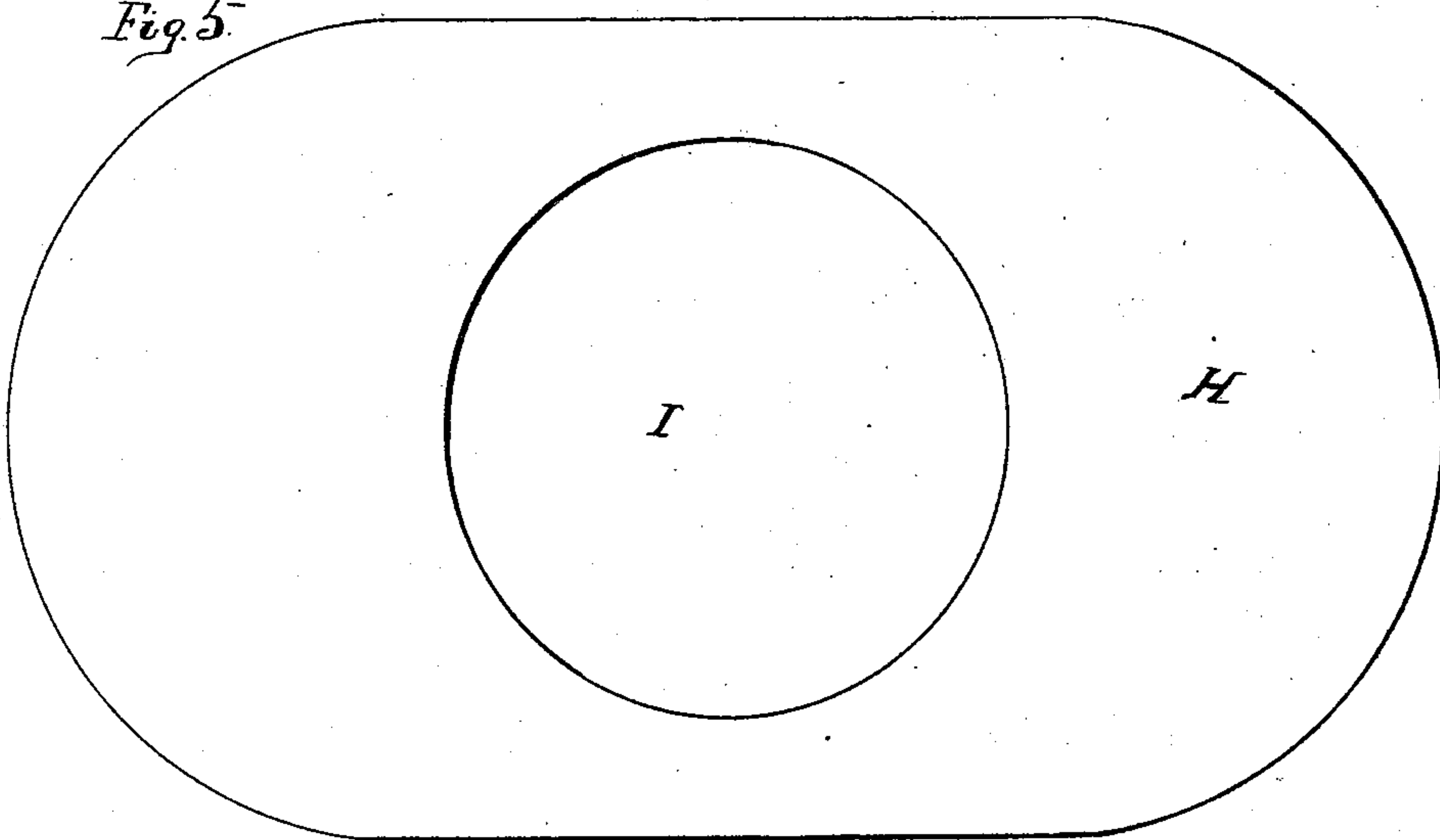
No. 316,117.

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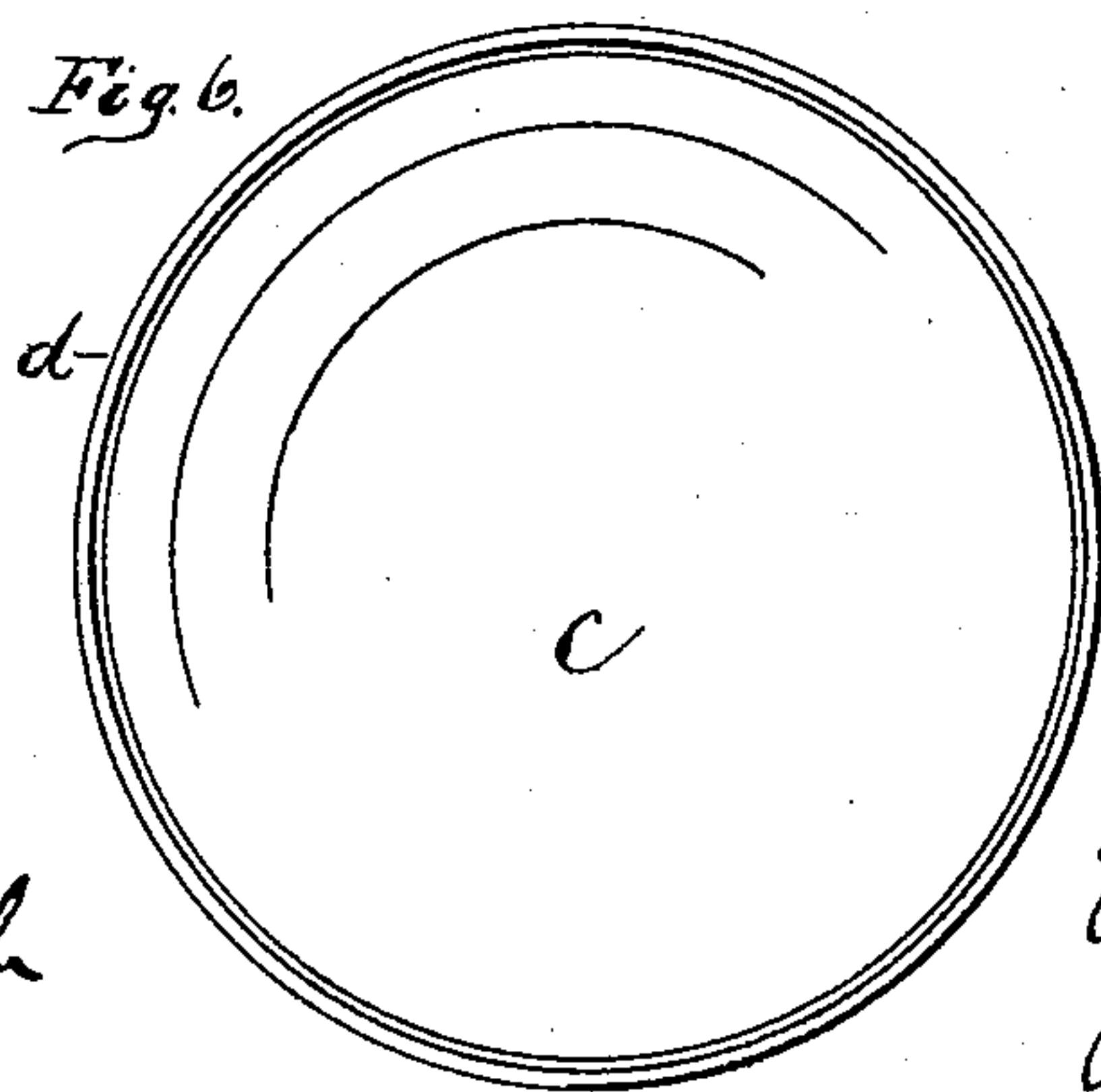
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



Witnesses:

*Wm. Hallister, Jr.*  
*John T. Booth*

Inventor:

*George M. Clute,*  
*by Geo. A. Mosher*  
*att.*



# UNITED STATES PATENT OFFICE.

GEORGE M. CLUTE, OF TROY, NEW YORK.

## LAMP.

SPECIFICATION forming part of Letters Patent No. 316,117, dated April 21, 1885.

Application filed June 24, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE M. CLUTE, a resident of Troy, in the county of Albany and State of New York, 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 invention, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

My invention relates to improvements in lamps, and more particularly to car-lamps.

The objects of my invention are, first, to guard against leakage in a flat-bottomed metallic lamp having a centrally-projecting well by reducing the number of joints or seams; second, to provide a reservoir integral with the top part for top leakage or overflow; third, to strengthen the seam connecting the top and bottom parts of the lamps and protect the inner bottom from wear.

My invention consists, first, in swaging from a single piece of sheet metal a flat lamp-bottom having a centrally-projecting well, and soldering the same to the side walls of the top part, at or near their lower edges, and upon their inner sides; second, in swaging the top part of a metallic lamp from a single piece of sheet metal, and providing the same with a depression in the upper surface to form an overflow-reservoir around the burner-opening; third, in providing a double bottom, the inner bottom having a swaged-out well integral therewith, and the outer bottom having a similar inclosing-well.

I am aware that it is not new to swage from a single piece of sheet metal both tops and bottoms of lamps, but owing to the necessity in car-lamps of having the bottoms flat and the side walls of the well nearly or quite vertical, to fit and rest securely upon the supporting-aperture in the shelf, it has been found impossible to swage out the well.

In order to successfully swage out a well from a flat piece of metal, the side walls must be considerably inclined or the bottom of the

well concaved. For this reason the wells have heretofore been made of pieces of metal separate from the lamp-bottom proper, and afterward attached to the bottom at the edges of a corresponding aperture made therein, thus forming a seam or joint very likely to be injured and broken, as more fully hereinafter explained, and also the manner in which I overcome the difficulty by inclosing the swaged-out well by an attached well having the requisite vertical sides.

Figure 1 of the drawings is a top plan view of my improved lamp. Fig. 2 is a side elevation of same. Fig. 3 is a vertical central section taken at broken line  $xy$  in Fig. 1. Fig. 4 is a top plan view of the inner bottom detached. Fig. 5 is a plan view of one of the two parts of the outer bottom. Fig. 6 is a plan view of the other part of the outer bottom.

It is well known to railroad men that the continual motion of cars, and particularly of horse-cars, subjects the car-lamps to great strain, and frequently causes the seam-joints to separate in places, resulting in great damage to the clothing of passengers from leaking oil. By reducing the number of seam-joints and strengthening those employed I am able to cheaply produce a lamp absolutely safe from leakage.

A represents the top of the lamp provided with a central opening,  $b$ , adapted to receive a common burner and wick; also with a supply-opening,  $c$ . A portion of the top A around the opening  $b$  is slightly depressed, as at  $a$ , to afford a reservoir for any possible leaking from the wick-tube or overflow by capillary attraction. The top A extends downward to form the side walls, B, integral therewith, said top A and walls B being formed from a single piece of sheet metal by stamping with suitable dies. The bottom is formed of two plates, G and H, soldered around their edges to the bottom of the walls B, forming the only seam required in joining the parts of the lamp together. The inner bottom is first inserted within the walls B, as shown in Fig. 3, and soldered securely thereto. Its edges may be turned up, as shown at  $i$ , thereby affording a more extended surface for contact with walls B and the solder, and to stiffen the soldered seam. The outer cover, H, is then inserted and sol-



dered in a similar manner. It is apparent, therefore, that the only seam employed is a double one, and so re-enforced that a very considerable concussion would be required to dis-  
5 place it or crack the solder and produce a leak. The unsteady movements of the car render it necessary that the lamps, which rest in a box, one at each end of the car, should have a considerable bottom surface in proportion to their  
10 height to prevent their being overturned. It has been found necessary, therefore, to construct the bottoms with a central projecting well, D, of a much smaller bottom surface, in which the end of the lamp-wick rests and the  
15 remaining oil collects when nearly consumed. In this way it is possible to utilize the full oil-containing capacity of the lamp and maintain a considerable depth of oil upon the wick. Heretofore this well has been constructed by  
20 cutting a circular piece from the bottom of the lamp and soldering a cup, C, which was a trifle larger in diameter than the aperture in the bottom, to the bottom of the lamp, thereby producing another seam-joint especially exposed  
25 to wear and breakage from the concussions of the car, for most, if not all, horse-cars are so constructed that the well in the bottom of the lamp fits into a corresponding aperture in the shelf on which the lamp rests, and is thereby  
30 held in position.

In my improved lamp the well D is swaged out from and is integral with the bottom of the lamp, thus doing away entirely with a seam-joint. The outside bottom is provided with a surrounding well, C, made in the usual man- 35 ner of the cup C, soldered at the ends of its walls *d* to bottom H, provided with opening I. The outside cup or well, C, is made of a size to fit the shelf-opening which holds the lamp in place and guards the inner well, D, 40 from wear, no leakage resulting if the seam-joint of the outer well should happen to crack.

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

A metallic lamp provided with a double 45 bottom of sheet metal, the inner bottom having a swaged-out well integral therewith, and the outer bottom having a well attached thereto and inclosing the well of the inner bottom, substantially as described, and for the pur- 50 poses set forth.

In testimony whereof I have hereunto set my hand this 23d day of June, 1884.

GEORGE M. CLUTE.

Witnesses:

GEO. A. MOSHER,

W. H. HOLLISTER, Jr.