

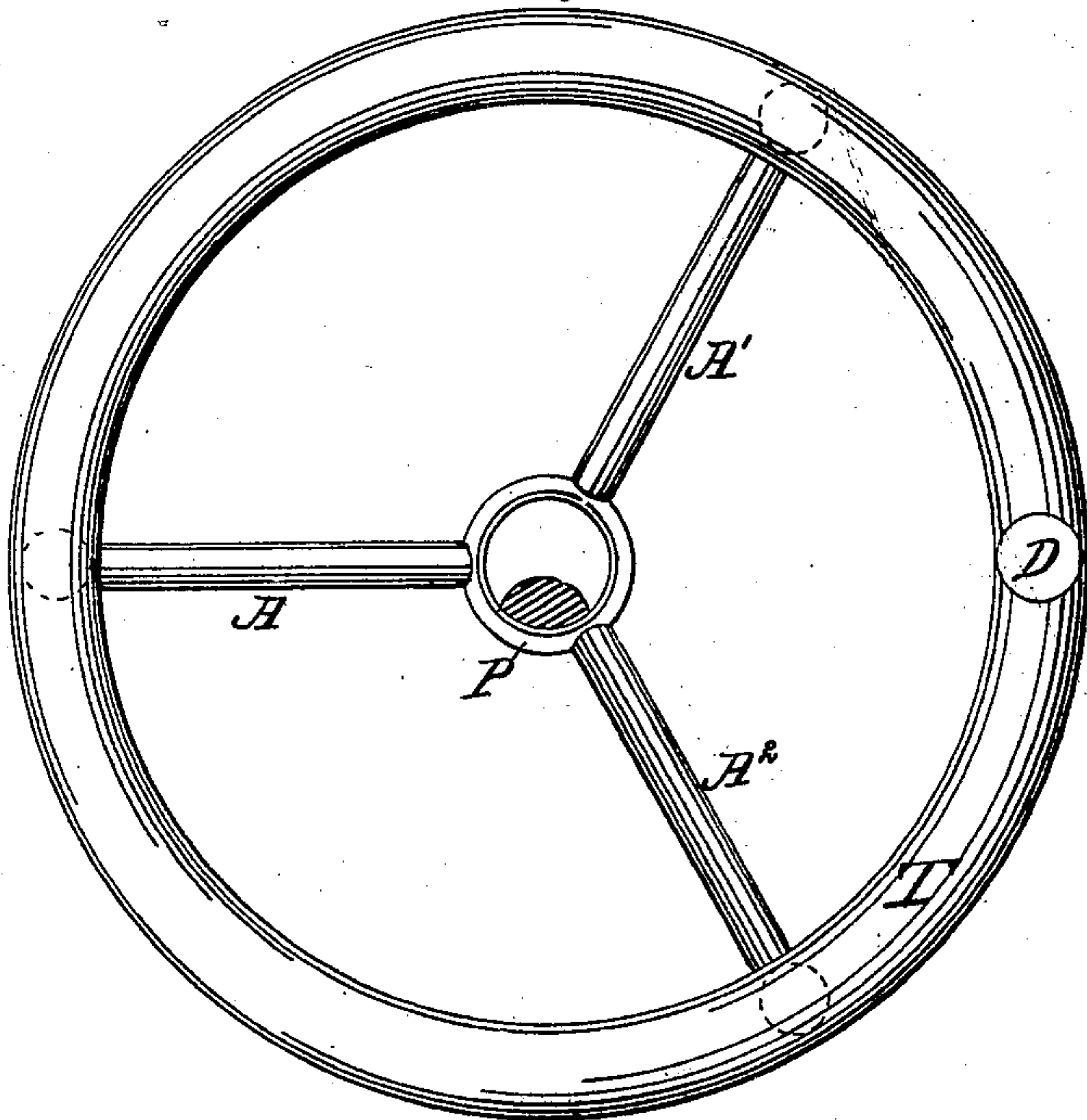
F. McDANIELS.

Lamp.

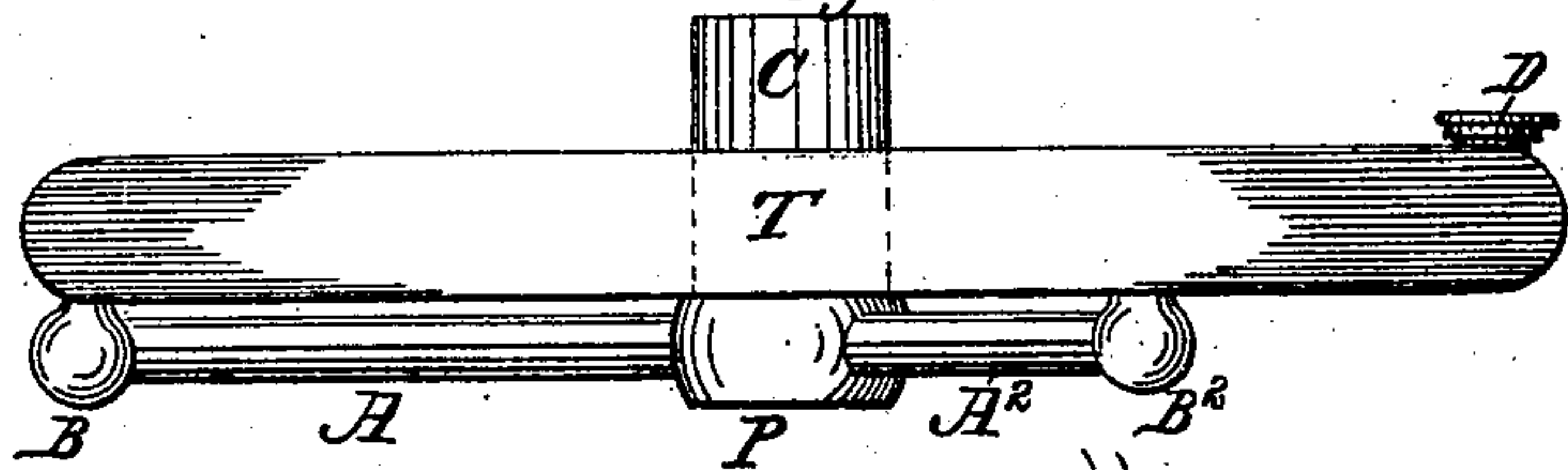
No. 107,276.

Patented Sept. 13, 1870.

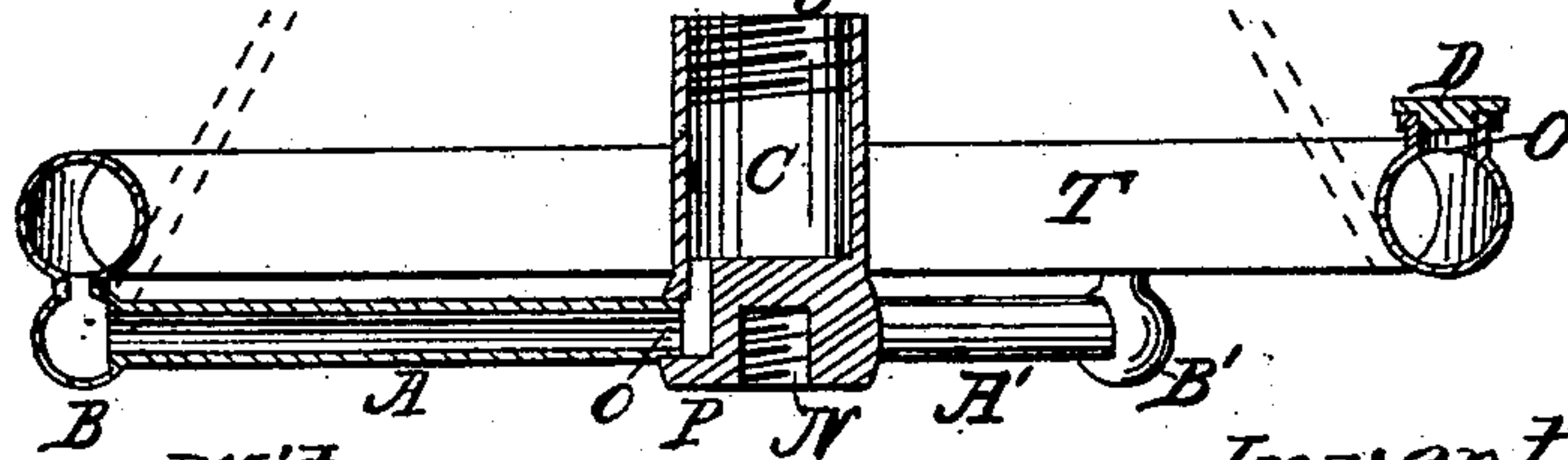
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses.  
Frank Stent  
Geo. D. Nichols

Inventor.  
Francis M. Daniels  
By his attorney  
Charles H. Evans

# United States Patent Office.

FRANCIS McDANIELS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
CHARLES D. MACQUEEN.

*Letters Patent No. 107,276, dated September 13, 1870.*

## IMPROVEMENT IN LAMPS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, FRANCIS McDANIELS, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful "Improvement in Lamps;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The object of my invention consists in constructing a lamp for burning petroleum and other oils, the oil-reservoir of which is made of such a form, and placed in such a position, that the shadow of it will occasion little or no inconvenience, while the distance between the burning part of the wick and the surface of the oil varies as little as possible, in order that as much oil may be drawn up at last as at first, and thus prevent the diminution of the flame.

The peculiar construction of the lamp also enables it to be supplied with oil, with perfect safety, while the wick is burning.

Figure 1 is a plan view of my improvement in lamps.

Figure 2 is an edge view of same.

Figure 3 is a vertical section through the center of same.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

The annular oil-vessel T, which forms the body of the lamp, is made of any suitable metal, and is provided on the lower side with knobs, B B<sup>1</sup> and B<sup>2</sup>, into which are screwed three radial arms, A A<sup>1</sup> and A<sup>2</sup>.

The said arms are made of tubing, and their inner ends are secured to a circular center-piece, P, the upper portion of which is made in the form of a hollow cylinder, C, and into which the burner and its wick are inserted.

A free communication, O, for the passage of the oil from the vessel T to the interior of the cylinder C is made through one or all of the arms.

The lamp can be used as a hanging lamp, or it can be elevated on a suitable stand, by means of an opening, N, made in the lower part of the center-piece P, and provided with a female screw-thread, into which is screwed the upper end of the stand.

The oil-vessel T is provided on its upper surface

with a supply-opening, O', which is opened and closed by means of a screw-cap, D.

The vessel T is made in the form of a tube, in order that the area of its cross-section may be as small as possible, and the shadow of it be imperceptible, and, at the same time, the large quantity of oil in it will occupy a very insignificant height.

The shade rests upon the radial arms, as shown in fig. 3, and surrounds the chimney, so that the light, passing upward, is collected by it, and, from every point of its inner surface, is reflected directly downward and through the open space between the inner sides of the oil-vessel, thus thoroughly illuminating the surface beneath it. The arms A A<sup>1</sup> and A<sup>2</sup>, in this case, are also made as small as possible, in order that the shadow produced by them will be small and unimportant.

The lower part of the burner (in the cylinder C) is constantly immersed in the oil, and, owing to the small height that it (the oil) occupies, the distance between it and the burning part of the wick will be as unchangeable as possible, in order that the wick may receive a regular supply of oil, and thus produce a bright and steady light.

The opening O', by which the lamp is supplied, is so far removed from the flame that it (the lamp) can be filled at any time with perfect safety.

I am aware that there have been lamps arranged somewhat similar to this, that is, with an annular oil-vessel, and with tubes radiating toward the central portion of the lamp, for supplying oil to the wick. I, therefore, do not wish to broadly claim the use of these parts; but

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

The combination of the annular oil-vessel T, knobs B B<sup>1</sup> and B<sup>2</sup>, tubes A A<sup>1</sup> and A<sup>2</sup>, center-piece P, cylinder C, openings O, O', and N, and screw-cap D, as herein specified, the said parts being constructed substantially as set forth.

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

FRANCIS McDANIELS.

Witnesses:

FRANK STOUT,  
GEO. E. NICHOLS.