

(No Model.)

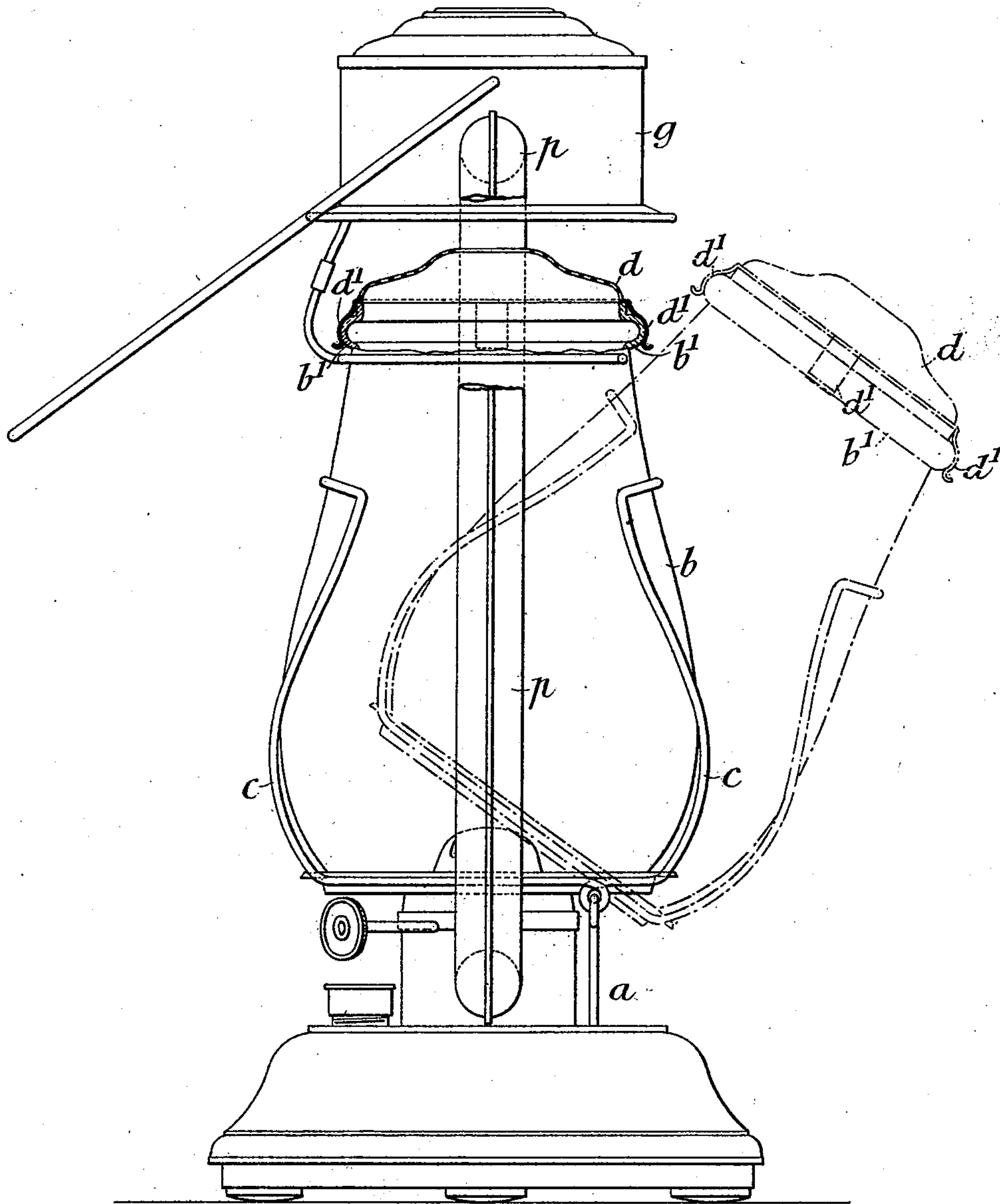
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W. LIGHBODY.
HURRICANE LANTERN.

No. 519,406.

Patented May 8, 1894.

Fig. 1



Witnesses.

G. J. Redfern
John E. Dousfield.

Inventor.

W. Lighbody

(No Model.)

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Fig. 2.

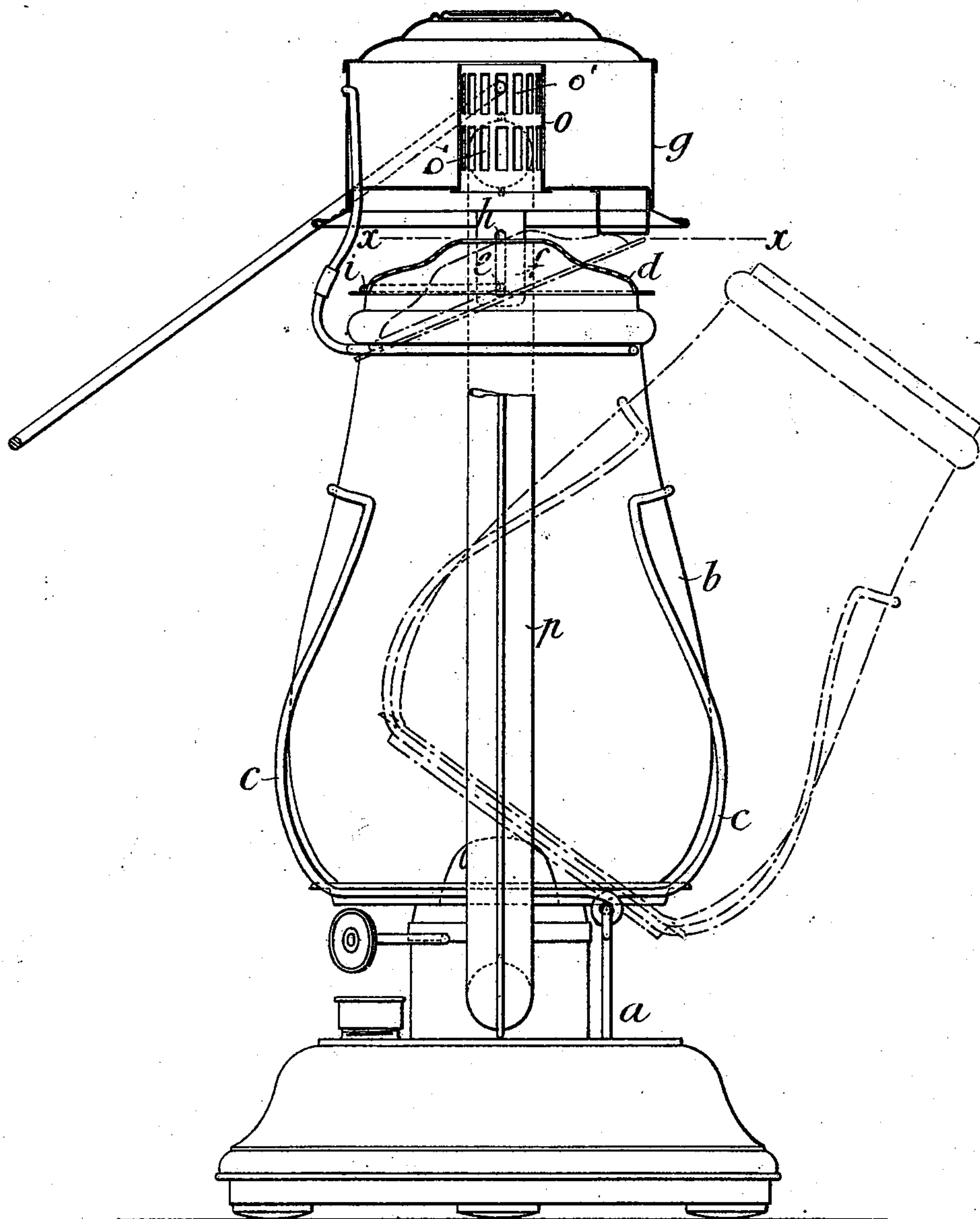
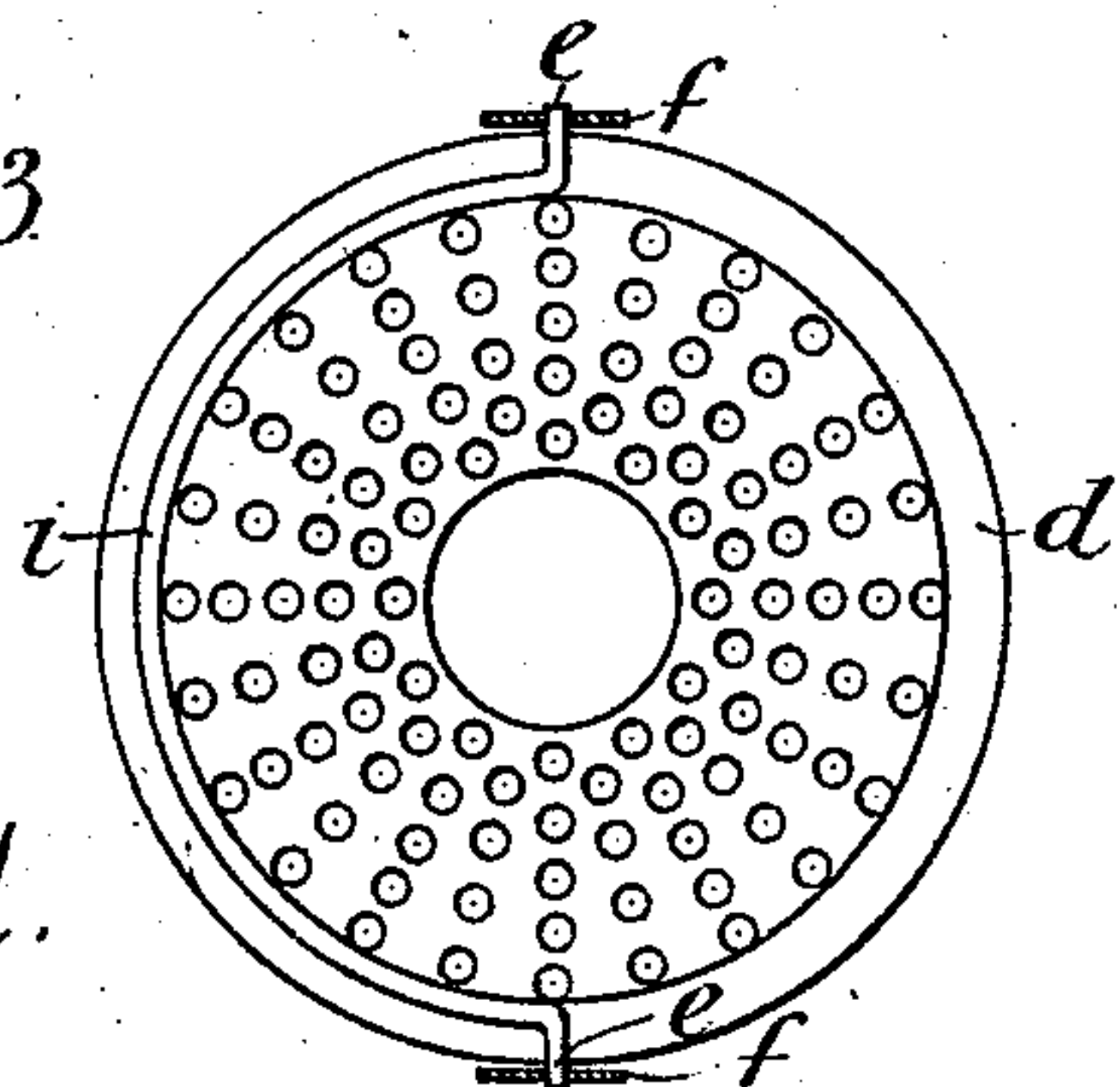


Fig. 3.



Witnesses.

G. H. K. H. K.
John E. Dousfield.

Inventor.

W. Lighbody.

(No Model.)

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Fig.4.

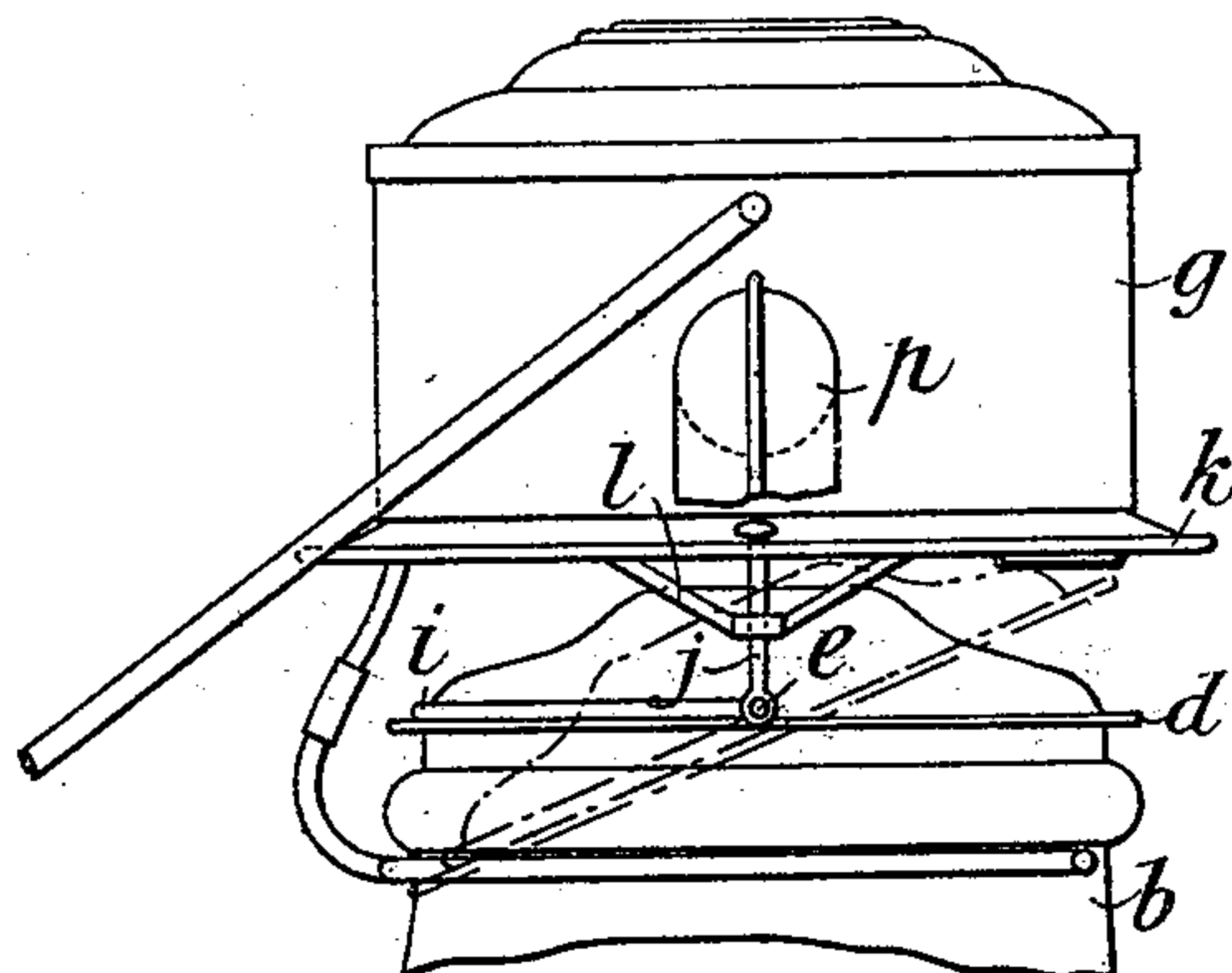


Fig.5.

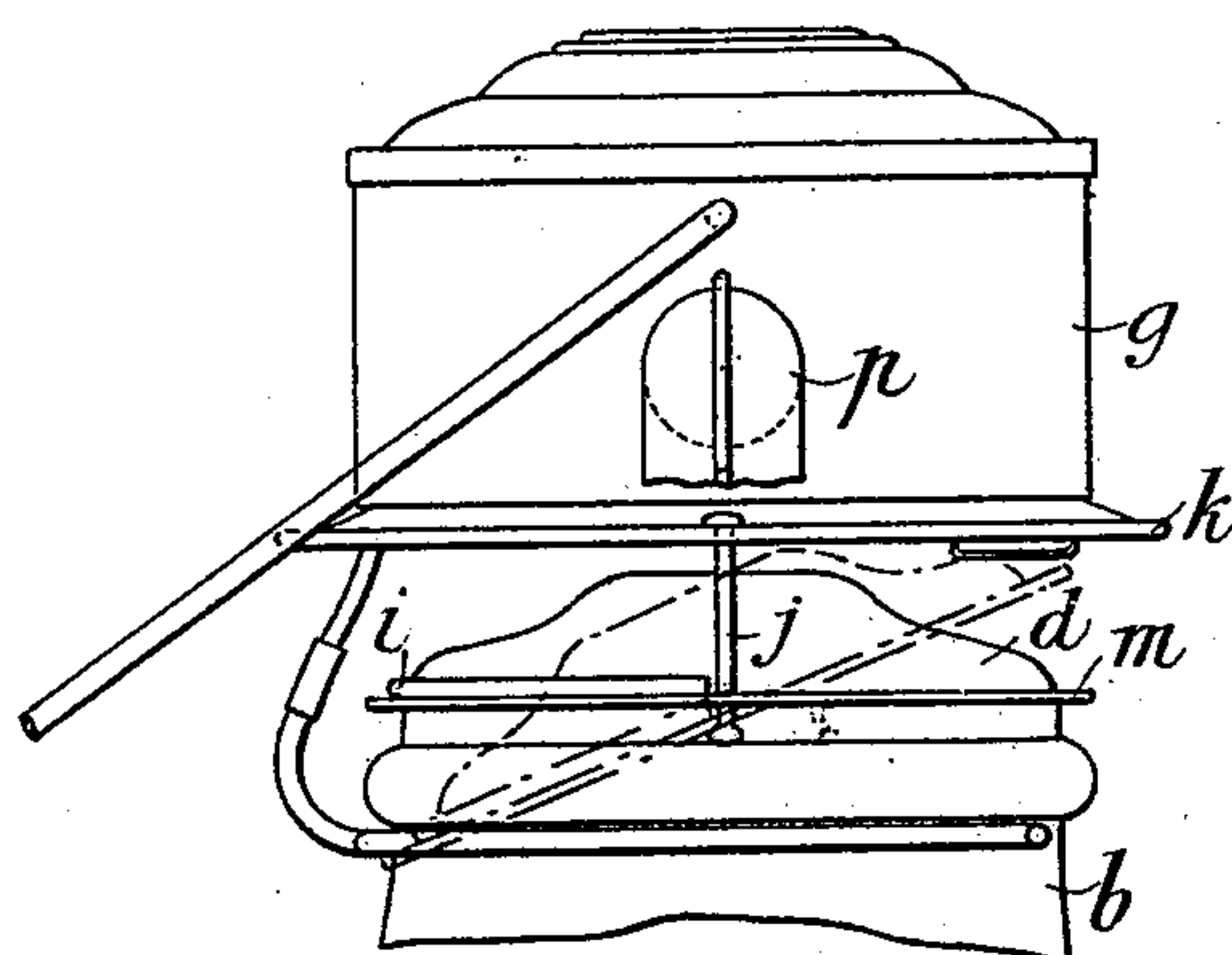
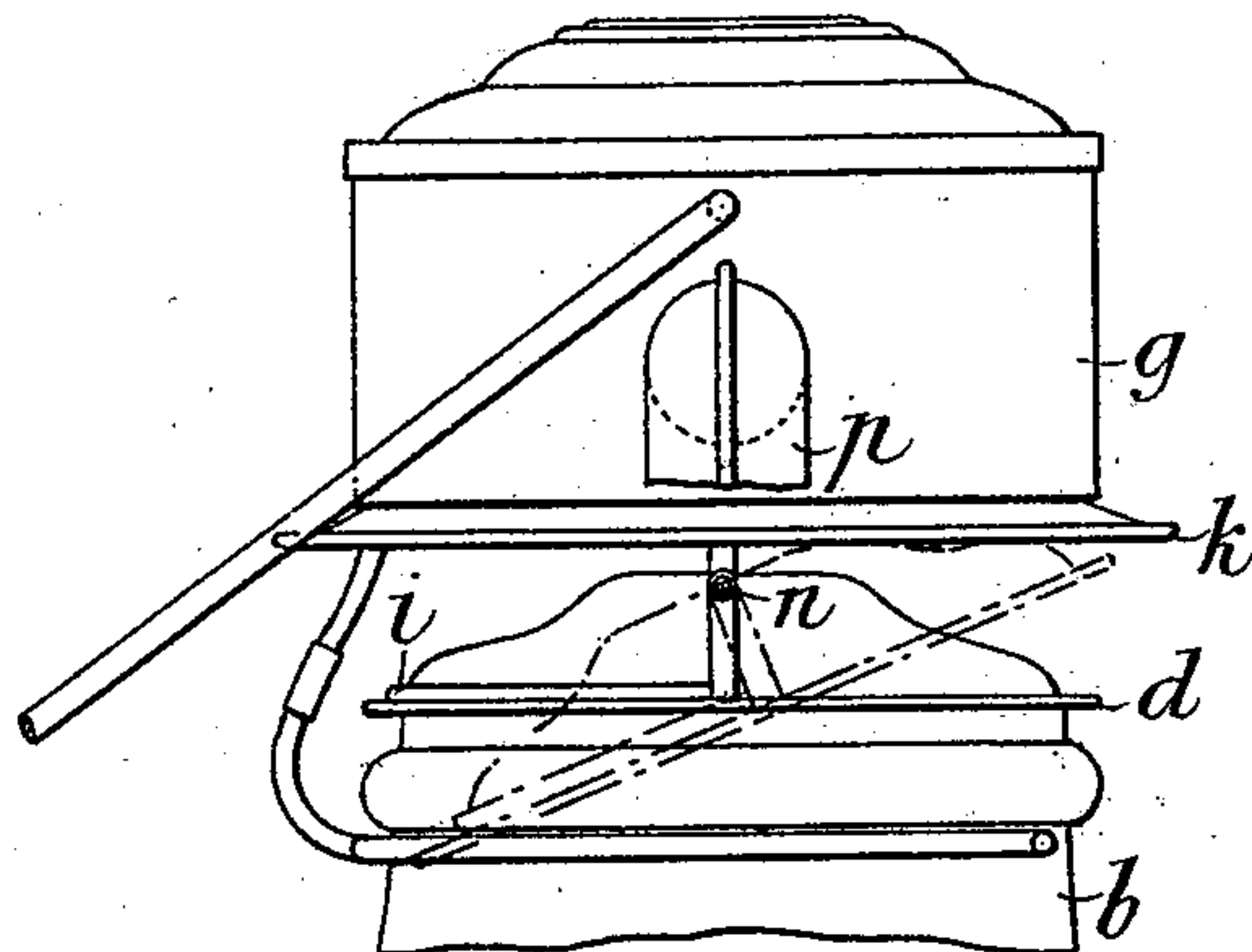


Fig.6.



Witnesses.

G. H. K. K. K.
John E. Dousfield.

Inventor.

W. Lighbody

UNITED STATES PATENT OFFICE.

WILLIAM LIGHBODY, OF LONDON, ENGLAND.

HURRICANE-LANTERN.

SPECIFICATION forming part of Letters Patent No. 519,406, dated May 8, 1894.

Application filed June 16, 1892. Serial No. 436,969. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LIGHBODY, a subject of the Queen of Great Britain, residing at London, England, have invented new and useful Improvements in Hurricane-Lanterns, of which the following is a specification.

This invention relates to improvements in hurricane lanterns and has for its object to provide an improved wind protector or means for preventing the free access of wind through the space between the globe and air-chamber into the said globe.

In carrying out my invention I employ a perforated plate or screen placed directly on the top of the globe of the lantern so as to move with it or the plate or screen may be pivotally suspended and so weighted that, when the globe is tilted, the perforated plate is moved to allow the said globe to pass and remains in this position until the globe is returned when the perforated plate will again fall onto the top of the globe. In combination with my plate I advantageously employ a plain or perforated tube inside the air-chamber.

To enable my invention to be fully understood I will describe the same by reference to the accompanying drawings, in which—

Figure 1 is a sectional elevation of a hurricane lantern having my wind protector fixed upon the top of the globe; and Fig. 2 is a sectional elevation of a hurricane lantern in which the wind protector is pivotally suspended above the globe. Fig. 3 is a section on the line *x x*, Fig. 2, showing my perforated plate or screen. Figs. 4, 5 and 6 are elevations showing different arrangements for carrying my perforated plate or screen.

Similar letters of reference indicate corresponding parts in the several figures.

a indicates the burner and reservoir of a hurricane lantern, *b* the globe thereof, and *c* the gallery or holder for the said globe, all of which parts are of ordinary construction.

d indicates my perforated plate or screen. As shown in Fig. 1 this plate or screen which is of a curvilinear or dome-shape is fitted upon the top of the globe and held in place thereon by means of spring-clips *d'*, *d'* which clip upon the rib *b'* of the globe.

In the arrangement shown in Fig. 2 the plate or screen *d* is carried upon pivots *e*, *e* adapted

to yield vertically to allow the necessary up and down movements of the said plate or screen when opening and closing the lantern. The pivots *e*, *e* are supported by hangers *f*, *f* attached to the head *g* of the lantern, slots *h*, *h* being provided in which the pivots *e*, *e* can slide during the up and down movements of the plate *d*.

In order that the plate *d* shall, when the lamp is opened, assume the inclined position shown in Fig. 2 so that, during the closing of the lantern, it shall offer no obstruction to the free movement of the globe, I weight one side of the same. As shown clearly in Fig. 3 this weight consists of a wire *i* secured to the said plate *d*, the ends of the said wire being bent to form the pivots *e*, *e*. With this arrangement it will be understood that when, during the closing of the lamp, the globe *b* is moved from the position shown in dotted lines in Fig. 1 to that shown in full lines, the top of the said globe will impinge against the under side of the perforated plate *d* and lift the same sufficiently to allow the globe to pass freely beneath it, and that, when the lamp is closed, the said plate will drop upon the top of the globe by gravity.

In the modification shown in Fig. 4, the pivots *e*, *e* of the plate *d* are carried by vertical rods *j*, *j* depending from and adapted to slide freely through the flange *k* on the head *g* of the lantern. *l*, *l* are guides, one of which is arranged in conjunction with each of the rods *j* for causing the same to move vertically.

In the modification shown in Fig. 5, I employ rods *j*, *j* fixed to the flange *k* but instead of suspending the perforated plate *d* by means of pivots *e*, *e*, I pass the said rods through holes in the flange *m* of the said plate *d*, the holes being of sufficient size to allow the plate to move freely thereon.

In the modification shown in Fig. 6 the perforated plate *d* is represented as being carried by hinges *n*, one part of each of which is secured to the head *g* of the lantern while the other is secured to the perforated plate itself.

Although I have described and illustrated my perforated plate as being weighted on one side in order that it may assume an inclined position it will be obvious that the weighting may be effected by pivoting it at one side of a diametric line.

5 o, Fig. 2, indicates a slotted or perforated tube within the air-chamber in the head of the lantern; o', indicating the perforations or openings made therein around the tube; which tube serves by means of its imperforate portions to break up any air-currents which enter the said air-chamber and so prevents them from entering the air-tubes p of the lantern.

10 Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

15 1. A hurricane lantern, having in combination with a swinging or hinged globe, a dome shaped perforated plate or screen fitted to and resting on said globe and supported on vertically movable pivots, and weighted at one side, substantially as set forth, and whereby

when the globe is tilted this plate may by its own gravity assume an inclined position and so remain until the globe in returning to its upright position, impinges upon the under side of the plate, lifts it up and allows the globe to pass freely beneath it, the plate then dropping to its place on the globe.

2. In combination with the swing gallery and its globe, and with the perforated screen or plate attached to and swinging with the globe as set forth, the air chamber above the same, and the perforated tube o. o. within said chamber, all substantially as set forth.

WILLIAM LIGHBODY.

Witnesses:

G. F. REDFERN,

JOHN E. BOUSFIELD,

Of the firm of G. F. Redfern & Co., 4 South Street, Finsbury, London, Patent Agents.