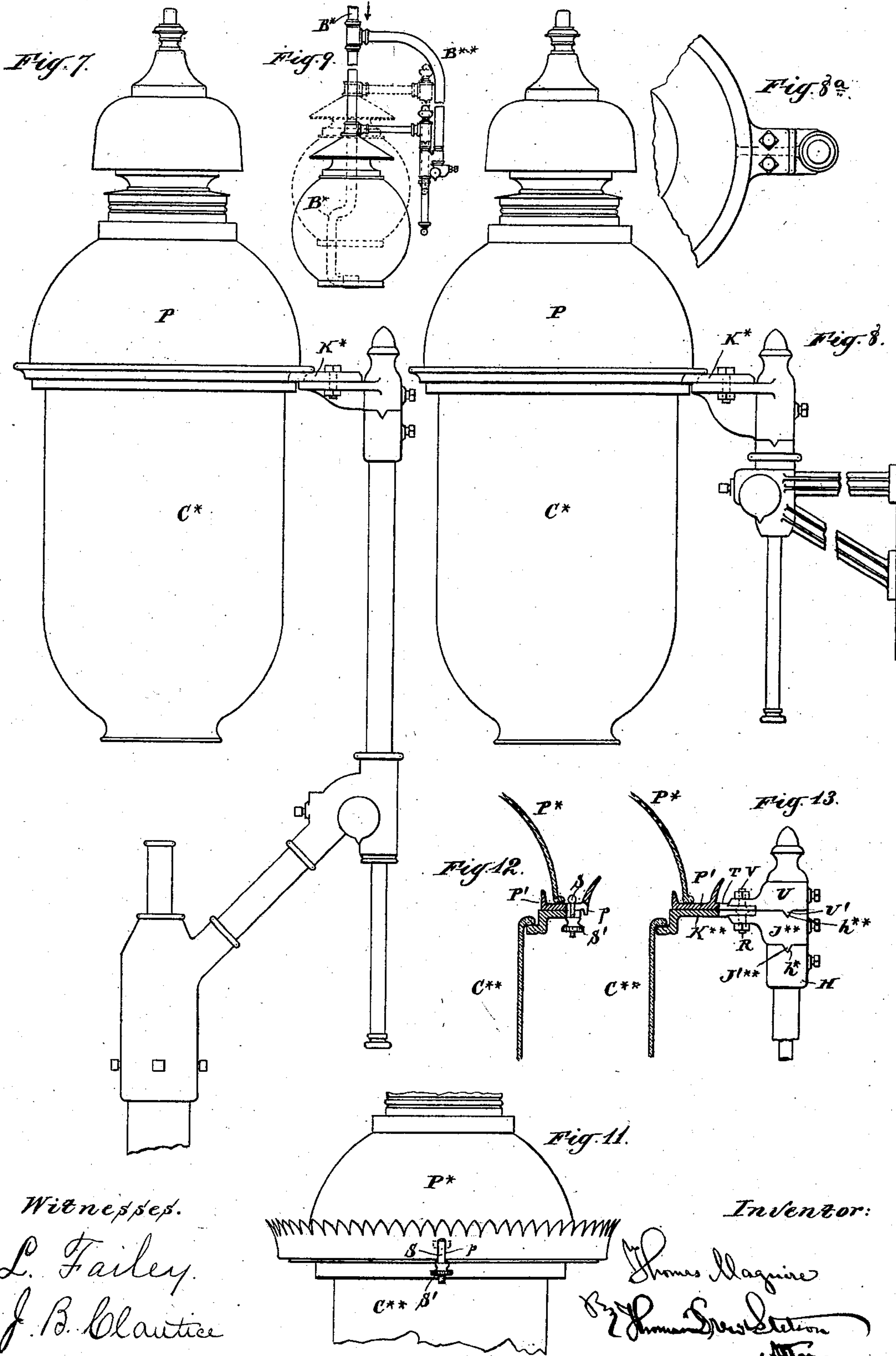


T. MAGUIRE.
GAS LAMP.

(Application filed July 17, 1900.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

THOMAS MAGUIRE, OF HONESDALE, PENNSYLVANIA.

GAS-LAMP.

SPECIFICATION forming part of Letters Patent No. 702,143, dated June 10, 1902.

Application filed July 17, 1900. Serial No. 23,890. (No model.)

To all whom it may concern:

Be it known that I, THOMAS MAGUIRE, a citizen of the United States, residing in the town of Honesdale, county of Wayne, and State of Pennsylvania, have invented a certain new and useful Improvement Relating to Gas-Lamps; and I do hereby declare that the following is an exact description thereof.

My improvement applies to the globe-supports for stationary lamps, including street-lamps supported on brackets projecting from a building or other object. It belongs to the class in which the globe can be raised and swung laterally and can be locked to resist swinging. I provide improved means operating a dog to hold the globe elevated to any desired extent and for dividing the globe into upper and lower parts. I provide for keying the parts together and liberating them as required and for raising and partially swinging around the parts to the same or to different extents at will and for tilting the same after it has been swung out of coincidence with the lamp. Special facilities are provided for introducing alcohol to thaw ice in the pipes in cold climates.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is an elevation showing some of the principal features of the invention. The lamp is applied on a lamp-post. The dotted lines illustrate the conditions when the globe has been simply raised so as to turn clear of the burner and again when it has been swung around and lowered. Fig. 2 is a vertical section through certain parts on a larger scale. Fig. 2^a is a corresponding section showing another portion. Fig. 3 is a horizontal section on the line 3 3 in Fig. 2. Fig. 4 is a horizontal section corresponding to Fig. 2, but taken on the line 4 4 in Fig. 1. Fig. 5 is a corresponding section on the line 5 5 in Fig. 2. Fig. 6 shows one of the details detached. Fig. 7 is a view corresponding to Fig. 1, showing a modification of the form. Fig. 8 is a corresponding view showing the lamp mounted on a bracket. Fig. 8^a is a plan view of a portion. Figs. 9 and 10 show on a small scale how the invention may be well applied when the gas

is received from above. Figs. 11, 12, and 13 are views of portions which show the invention more fully carried out, the top and the globe being both capable of swinging laterally, with the additional quality of the top being capable of swinging independently of the body of the globe. Fig. 11 is an elevation of a portion. Fig. 12 is a vertical section of a portion on a radial plane. Fig. 13 is a vertical section along a different radial plane. A portion of this figure is shown in elevation.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

Referring to Figs. 1 to 6, inclusive, A is a lamp-post, and A' a cap set thereon. B is a gas-pipe, which, it will be understood, is properly connected below to a gas-main. (Not shown.) C is a globe adapted to shield the flame from wind. D is a hollow branched casting which performs important functions, certain portions being distinguished by super-numerals. D' is a short inclined branch opening upward of sufficient length to afford convenient access and closed by a tightly-fitting removable plug F, adapted to allow the introduction of alcohol to thaw open the passage when ice is formed in the interior. This is at a higher level than the part of the pipe B through which the gas is received, so that on introducing a very small quantity of alcohol it descends directly to the obstruction and thaws it. D² is an extension which carries the burner, extending upward in the open base of the globe C, performing its usual duty. D³ is a branch inclined in the opposite direction relatively to the branch D' and receiving an arm E, which may be hollow for lightness, as shown; but it serves simply as a rigid support for the parts to be described. G is a hollow casting fitting on the inclined arm E and having a screw-threaded hole g, which receives the arm E. Certain portions are designated by supernumerals. G' is an upright portion receiving in an enlargement g' of the internal chamber a screw-threaded rigidly-held extension-tube G², which incloses a loosely-fitting rod I, extending upward and downward through the whole and projecting below the casting G. The construction allows this rod I and the parts carried thereon to be raised and swung partially around when

required. I have shown this rod as hollow and prefer such construction; but it serves simply as a rod, and I will refer to it as such. The upper end of this rod is tapped into a

5 casting J, which supports a straight arm K, extending horizontally therefrom, and which receives a cap K' and a nut K² for taking firm hold of the thin metal at the farther side of the head of the lamp.

10 The annular lower face of the casting J is formed with teeth J'. Near the upper end of the tube G² is a casting H, held firmly in place by a screw H'. The annular upper end of this casting is formed with notches *h h'*, (see Fig. 4,) adapted to receive the teeth J' in different

15 positions and to hold against the parts being turned by the wind or other slight causes. When it is required to clean the interior of the globe, it is lifted by thrusting upward the

20 rod I, aided, perhaps, by gentle force applied to the globe, until it has been raised to the extent required, and the rod I and its attachments are partially revolved, carrying the arm K and the attached globe. After it

25 has been thus turned a half a circle it may be lowered and the teeth J' will engage in the notches *h* in a position the reverse of that shown by the strong lines, and the lamp will be held against any accidental turning force.

30 The globe may be turned on the horizontal axis formed by the arm K and held in an inclined position to facilitate access for washing and wiping the interior.

The notches *h'* are at right angles to the

35 notches *h*, so that when the rod I has been turned only a quarter of a revolution it may be lowered and held in position by the engagement of the teeth J' with the notches *h'*. It may be required sometimes to hold the

40 globe automatically in an elevated position. This may be effected by the aid of a dog M, which is inclosed loosely within the casting G and is capable of rising and sinking by turning on an adjustable center, which I have

45 shown as formed by the pointed end of a screw L, held firmly adjusted by a jam-nut L'.

N is a shaft capable of being turned in

bearings in the casting G. It is provided with

a notch *n*, which is capable of receiving the

50 dog M. This shaft may be turned by its head N', having an index-arm N², so as to turn the notch *n* down and present the rounded surface of the shaft N upward. Thus adjusted

the dog is of no effect, being held up, and the

55 rod, with the globe, may be raised and turned at will. When, on the contrary, the shaft N is turned to present the notch *n* upward, it receives the dog, as shown by strong lines in

Fig. 2. The screw L should be adjusted so

60 as to cause this dog to take a firm hold to resist the descent of the rod I when the shaft is so adjusted. A considerable opening *g*² in the bottom of the casting G allows the insertion of the dog in assembling the parts. The

65 upper end of the fixed tube G² extends into a corresponding recess in the casting J. A pinching-screw O is tapped into this casting

and adapted to press against this extension of the fixed tube G² after the cleaning operation is completed and the globe is returned to 70 its place. This screw O gives additional security to prevent the globe being displaced by strong gales or other causes when in use.

Figs. 7, 8, and 8^a show a form in which the upper portion of the globe is made separate 75 from the lower portion, and the capacity for turning the globe into inclined positions is dispensed with. In this form of the invention an arm K carries the globe C. The upper portion P may be taken off, and such removal 80 would allow convenient access from above to the lower portion of the globe; but such separation is not usually necessary. The interior may be easily cleaned from below when it is swung around, notwithstanding the absence 85 of capacity for tilting.

Fig. 9 shows one of the many ways in which parts may be arranged when the gas is received from above. The pipe B* brings the gas down from the ceiling or porch. This is 90 bent so as to make a detour within the globe, and thus allow room for the flame. The mechanism for raising the globe is of the same general character as shown in Fig. 1. The presence of the fixed pipe B* prevents the arm and 95 the globe from being swung horizontally. With this form of the invention the lifting must be sufficient to allow proper access without swinging the globe.

Fig. 10 shows two forms. The strong lines 100 show two pipes extending downward from the ceiling, joined by a horizontal member below the burner and globe. In these the gas, although received primarily from above through the pipe B***, enters the globe from 105 below. The mechanism for raising and turning the globe is the same as with Fig. 1. It will be understood that the gas need not descend through both pipes. The gas connection is made to the left pipe B***, and the part B****, 110 which is a hollow arm or pipe of the same size and curvature so as to give symmetrical appearance, serves simply as a mechanical support for the parts. The dotted lines in this Fig. 10 show a nearly similar construction, 115 with the two pipes joined into one, which extends through the ceiling in the line directly above the lamp.

Figs. 11, 12, and 13 show means by which the upper portion P* of the globe may be 120 turned independently of the lower portion C. K** is a rigid arm fixed on the casting J** by a bolt R and carries the lower portion C** of the globe. Above this is an arm T, similarly fixed to a casting U by a bolt V. The casting J** 125 has teeth J'**, which engage in notches *h** in the casting H* below and control the horizontal swinging of the lower part C** of the globe. The casting U has corresponding teeth U', which engage in notches *h** in the casting J. 130 The rod J² extends down from the casting U within the sleeve U², which latter extends down from the casting J**. Both turn within and are firmly supported by the casting

H. The rim which forms the base of the upper part P* of the globe has an aperture p, which receives a peculiar locking-piece S, introduced radially and which insures that the upper portion P* is firmly held down upon the lower portion K**. Figs. 11 and 12 show this locking-piece S in use. It is in brief a bolt with a T-head and a nut. When this locking-piece is turned, so that its head S' lies radial to the lamp, it may be moved outward and taken away. Now the parts P* and C** may be separated. When this locking-piece is again inserted and is turned a quarter of a revolution, its T-head can hold on the rim P', and on turning the nut S' the parts are firmly clamped together. The shaft N, having its notch n and provided with the head N', gives the advantage that the dog M may be very conveniently put into and out of use at will, and by reason of the friction of the shaft will remain reliably in the condition in which it is adjusted. The indicator-arm N² shows to the eye what is the condition in this regard. The screw L, held firmly by the jam-nut L', makes an adjustable pivot for the dog, allowing it to be held so as to grip the rod I with any desired degree of force while the bearing for the opposite face of the rod I may be fixed.

I use the term "globe" to mean either the entire part usually so designated or the upper portion thereof.

The inclined branch D' serves as a passage for introducing alcohol not only to thaw ice, but to dissolve and remove paraffin or naphthalene. It is important that it opens upward to receive the liquid by gravity and that there shall be a free passage downward therefrom to allow the solvent to flow by gravity to the ice or the hard hydrocarbon to be dissolved. The plug is easily accessible.

In all the forms the V shape of the notches h, &c., and of the teeth J', &c., which engage therein is of advantage in aiding to attain

the correct position in rapidly restoring a lamp to place after it has been cleaned. It is also of advantage in allowing the lamp to be turned by any great force, as being struck by a carriage or other passing object, the yielding by the automatic rise due to the V shape saving the construction from fracture.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a gas-lamp, a primary support, a vertical rod carried thereon and free to move up and down, an arm carried on such rod and free to be turned in various directions horizontally and a globe carried on such arm and free to be partially revolved thereon in a vertical plane, thus allowing of three independent motions, all substantially as herein specified.

2. In a gas-lamp, the combination with a primary support, of a casting G having tubular bearing and a rocking dog M, a rod I vertically movable in said bearing and arranged to be held in an elevated position by frictional pressure from the dog, and a turning device N N' arranged transversely under such dog for lifting and holding the latter out of operative position at will, substantially as herein specified.

3. In a gas-lamp, the combination with a primary support, of a casting G having tubular bearing and a rocking dog M, a rod I vertically movable in said bearing and arranged to be held in an elevated position by frictional pressure from the dog, and a screw forming an adjustable pivot for such dog, all substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

THOMAS MAGUIRE.

Witnesses:

WARREN P. SCHENCK,
BUEL DODGE.