

D. MITTON.
 HOLDER FOR LAMP GLOBES AND THE LIKE.
 APPLICATION FILED SEPT. 11, 1909.

994,181.

Patented June 6, 1911.

2 SHEETS—SHEET 1.

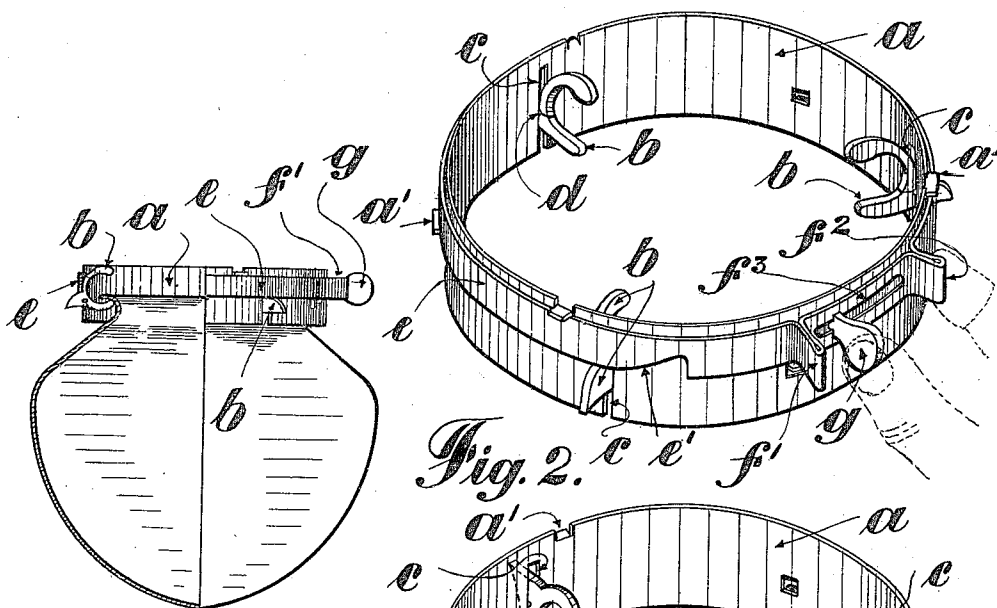


Fig. 1.

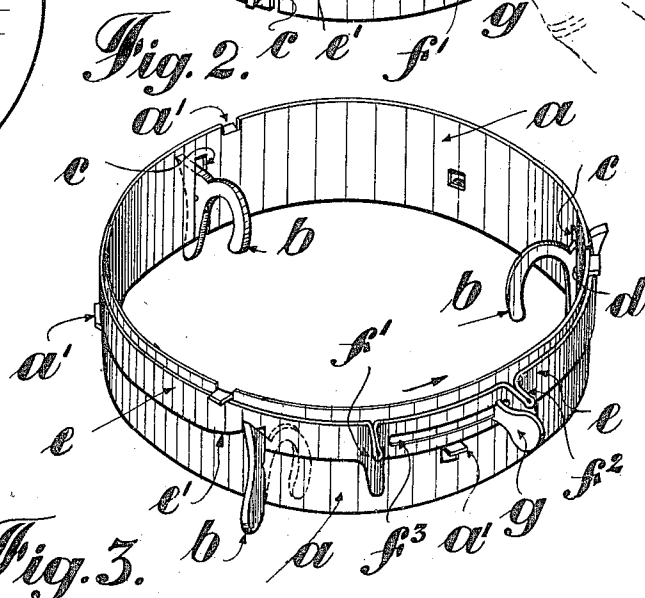


Fig. 3.



Fig. 6.

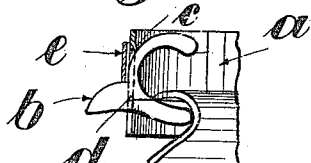


Fig. 4.

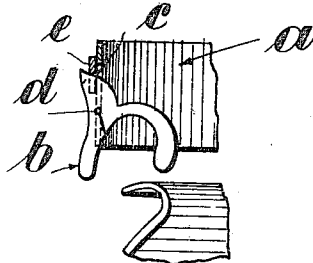


Fig. 5.

Witnesses:-
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 John A. Percival. By his Attorney:-

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2 SHEETS—SHEET 2.

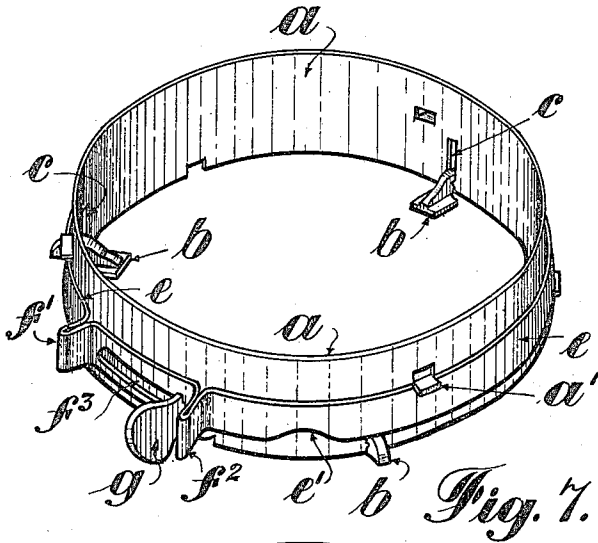


Fig. 7.

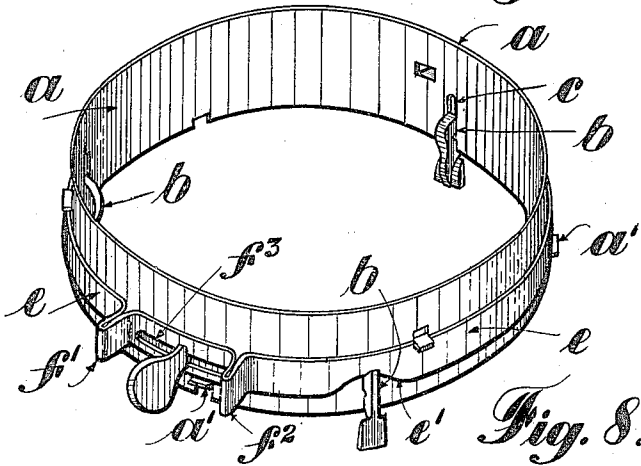


Fig. 8.

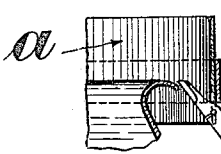


Fig. 9.

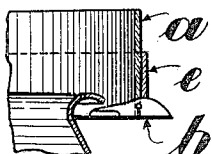


Fig. 10.

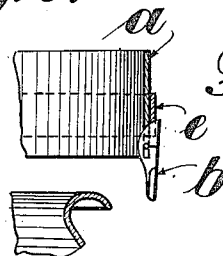


Fig. 11.



Fig. 12.



Fig. 13.

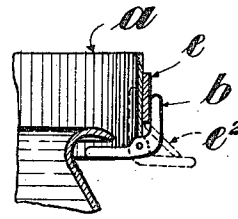


Fig. 14.

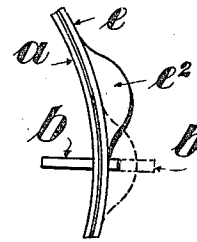


Fig. 15.

Witnesses:-

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UNITED STATES PATENT OFFICE.

DAVID MITTON, OF WITHINGTON, MANCHESTER, ENGLAND.

HOLDER FOR LAMP-GLOBES AND THE LIKE.

994,181.

Specification of Letters Patent. Patented June 6, 1911.

Application filed September 11, 1909. Serial No. 517,268.

To all whom it may concern:

Be it known that I, DAVID MITTON, a subject of the King of Great Britain and Ireland, and resident of Withington, Manchester, England, have invented certain new and useful Improvements in Holders for Lamp-Globes and the Like, of which the following is a specification.

This invention refers to and consists of a new or improved construction of holder chiefly for use with the globes of inverted incandescent gas or electric lamps, and it relates to that type of holder in which small levers or tumblers are used by which the globe is sustained in position or made free.

The novel features of the invention are the manner in which the tumblers are shaped and mounted and the means by which they are operated to simultaneously engage and sustain or free the globe.

Upon the accompanying drawing, Figure 1 illustrates one form of the improved globe holder (half in section) and a globe, the parts being shown in the position they occupy when supporting the globe. Fig. 2 illustrates a general perspective view (taken from above) of the globe holder alone and to a larger scale, the tumblers being in the same position as in Fig. 1. Fig. 3 illustrates a like view of the same holder, but with the parts in the position they occupy before inserting or after withdrawing the globe. Figs. 4 and 5 illustrate geometric cross-sections of the holder (in part), Fig. 4 being a cross-section of Fig. 2, and Fig. 5 a cross section of Fig. 3, both views also showing part of a globe in order to demonstrate the action of the tumblers. Fig. 6 illustrates one of the tumblers as it appears prior to being applied to the holder. Figs. 7 and 8 illustrate like views to Figs. 2 and 3 of the holder with modified form of the invention applied thereto. Figs. 9, 10 and 11 illustrate cross-sections of the holder shown in Figs. 7 and 8 and also of a globe (in part) and shows how the tumblers act in admitting, supporting and freeing a globe. Figs. 12 and 13 illustrate side and plan views respectively of one of the tumblers used in Figs. 7 and 8. Figs. 14 and 15 illustrate a transverse sec-

tion and part plan respectively of a further modification of the invention.

According to the invention and referring to Figs. 1 to 6, the improved holder comprises a hoop or ring *a* suitable for being connected to and carried by the lamp fitting for attachment to the gas pipe or burner, or to the head wires of an electric installation. In such ring is mounted a series of levers or tumblers *b*, *b*, *b* of substantially U or bifurcated formation, and having a rearwardly projecting spur, see Figs. 1 and 4. Usually the tumblers will be stamped out of sheet metal, and by preference, to the form shown in Fig. 6.

In the ring *a* are vertical slots *c*, one for each tumbler and lying at equal distances apart. In each slot is a cross-pin *d* and on such pin is mounted the tumbler, the small gap *b'*, see Fig. 6, allowing of the tumbler being passed on to the pin and of them being pressed to close the entrance of the gap, see Fig. 4, this forming a cheap and simple way of mounting the tumblers. In practice the pin may be formed by making two short slots one above the other the intermediate portion separating the slots and when rounded constituting the pin.

With the tumblers mounted in the ring they are each free to move (oscillate) about the pin and assume any position between that shown in Fig. 4 and that shown in Fig. 5.

Encircling the ring *a* is a further ring or sleeve *e* which is free to be rotated around the ring *a*. This sleeve is of less depth than the ring *a* and its lower edge lies above the rearwardly projecting spurs of the tumblers when the tumblers are in the globe-supporting position, see Fig. 4. Upon such lower edge the sleeve is cut away at three points, or as many points as there are tumblers, such cut-away portions producing inclined surfaces *e'*, see Fig. 2. The sleeve *e* is held in a set position relatively to the ring *a* by small spurs *a'* struck out of the material of the ring *a* and bent outwardly, the space between the spurs forming a "race" for the sleeve to work in. Forming part of or secured to the sleeve are two small finger pieces *f'*, *f''*

and in that part of the sleeve between the said finger pieces is a slot f^3 . Secured to the ring a and projecting through the slot f^3 is a thumb piece g . The length of the slot f^3 is equal to or slightly greater than that of any one of the inclined surfaces e' .

The action of the improved holder is as follows:—Prior to inserting a globe the sleeve e is moved to the position shown in Fig. 3, thereby causing the inclined surfaces e' to come over the tumbler spurs, the highest parts of the inclined surfaces allowing the tumblers to assume the position shown in Figs. 3 and 5. This rotation of the sleeve is conveniently effected by applying the thumb and finger to the thumb piece g and finger piece f^2 , the end of the slot f^3 acting as a stop when the sleeve has been moved the full distance. The flange of the globe, see Fig. 5, is then placed centrally below the holder, and moved up into the ring a , thereby pressing against and raising the upper arm of the tumbler and causing its lower arm to follow up beneath the globe flange. The sleeve e is then rotated in the direction of the arrow shown in Fig. 3 back to its former position, thereby causing the inclined surfaces e' to press down the projecting tumbler spurs, and lock the lower arms of the tumblers below the globe flange, see Fig. 4, when the globe is fully secured to the holder. In rotating the sleeve to the position shown in Fig. 2 the thumb is applied to the finger piece f' and the finger to the thumb piece g . To remove the globe the operations are reversed, the rotation of the sleeve in the direction of the arrow in Fig. 2 freeing the tumblers and allowing them to tilt back to the position shown in Fig. 5 when the globe is released.

Referring now to Figs. 7 to 12, the same essential parts are used, but the tumblers are differently shaped *i. e.* they are practically in the form of short straight levers. The sleeve e is also formed with double inclined surfaces e' the two surfaces terminating in an apex common to both, see Fig. 7, and being collectively about equal in length to that of the inclined surfaces e' shown in Fig. 2. The advantage of thus providing a double inclined surface inclining in opposite directions, is that the movement of the sleeve to the full extent of the slot f^3 causes the tumblers b to first move from a horizontal position to a vertical position and then move back from the vertical position to the horizontal position, thereby insuring that the tumblers, after each operation of the sleeve, shall always be left in a horizontal position. By forming the tumblers straight *i. e.* with the lower arm only and without the overhanging arm, the tumblers permit of the globe being inserted without working the sleeve, the sleeve only requiring to be worked when desiring to remove the globe.

Fig. 9 shows the action of the tumblers when a globe is being inserted in the holder, the globe tilting the tumblers until they get above it, when they, the tumblers, fall to the position shown in Fig. 10, the globe then being allowed to rest on the tumblers, which are held against downward movement by their outer ends pressing against the sleeve e . To remove the globe the sleeve e is rotated, thereby bringing the inclines e' over the tumblers and first allowing them to tilt to the position shown in Fig. 11 and free the globe, and then rising up and again assuming the horizontal (see Fig. 10), ready to receive the globe when again inserted.

In Figs. 14 and 15 the tumblers are in the form of bell-crank levers and the sleeve e is provided with projecting curved and downwardly inclined lips e^2 . One arm of each tumbler normally bears against the sleeve and the other arm extends inward within the ring. When the sleeve is rotated the lips e^2 press the outer arms of the tumblers outward and raise the inner arms to the vertical. The globe when applied to the holder is pushed up until its flange lies above the inner arms of the tumblers which then fall down again ready to support the globe. To free the globe it is first raised until its flange lies above the tumbler arms. The sleeve e is then rotated until the lips e^2 bear against the outer arms of the tumblers and cause the inner arms to assume a vertical position. The globe is then free. In all cases the inclined surfaces may be also slightly curved, and to afford a more gradual action the said surfaces may be longer than the slot f^3 and while preferring the surfaces to be regular in outline they may be irregular and give the tumblers a gradually accelerating movement as the sleeve rotates.

While chiefly for use with inverted incandescent gas and electric lamps the invention may also be used with other lamps having a globe or shade requiring to be similarly attached and detached.

What I claim is:—

1. A holder for a lamp globe or the like comprising an outer ring or hoop, levers or tumblers for supporting or freeing the globe pivotally fitted to the said hoop and each having an outwardly extending portion, and an annular member revolubly and concentrically fitting outside the ring and having cam surfaces adapted, on the annular member being rotated, to act upon the tumblers to move them from the globe-supporting to the globe-freeing positions or vice-versa, as set forth.

2. A holder for a lamp globe or the like, comprising an outer ring or hoop, levers or tumblers for supporting or freeing the globe pivotally fitted to the said hoop and each having an outwardly extending portion, an annular member revolubly and concentrically fitting outside the ring and having cam surfaces adapted, on the annular member being rotated, to act upon the tumblers to move them from the globe-supporting to the globe-freeing positions or vice-versa, as set forth.

cally fitting the outside of the ring and having cam surfaces adapted, on the sleeve being rotated, to act upon the tumblers to move them from the globe supporting positions to the globe freeing positions or vice versa, and said annular member having a slot parallel with its top edge, thumb pieces on such member at opposite ends of the slot, and a further thumb piece fixed to the holder and passing through the slot, as set forth. 10

In witness whereof I have hereunto set my hand in the presence of two witnesses.

DAVID MITTON.

Witnesses:

JAS. STEWART BROADFOOT,
F. C. PENNINGTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
