E. A. HAWTHORNE.

DOOR AND GLAZING RETAINER.

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1,215,274. Patented Feb. 6, 1917.

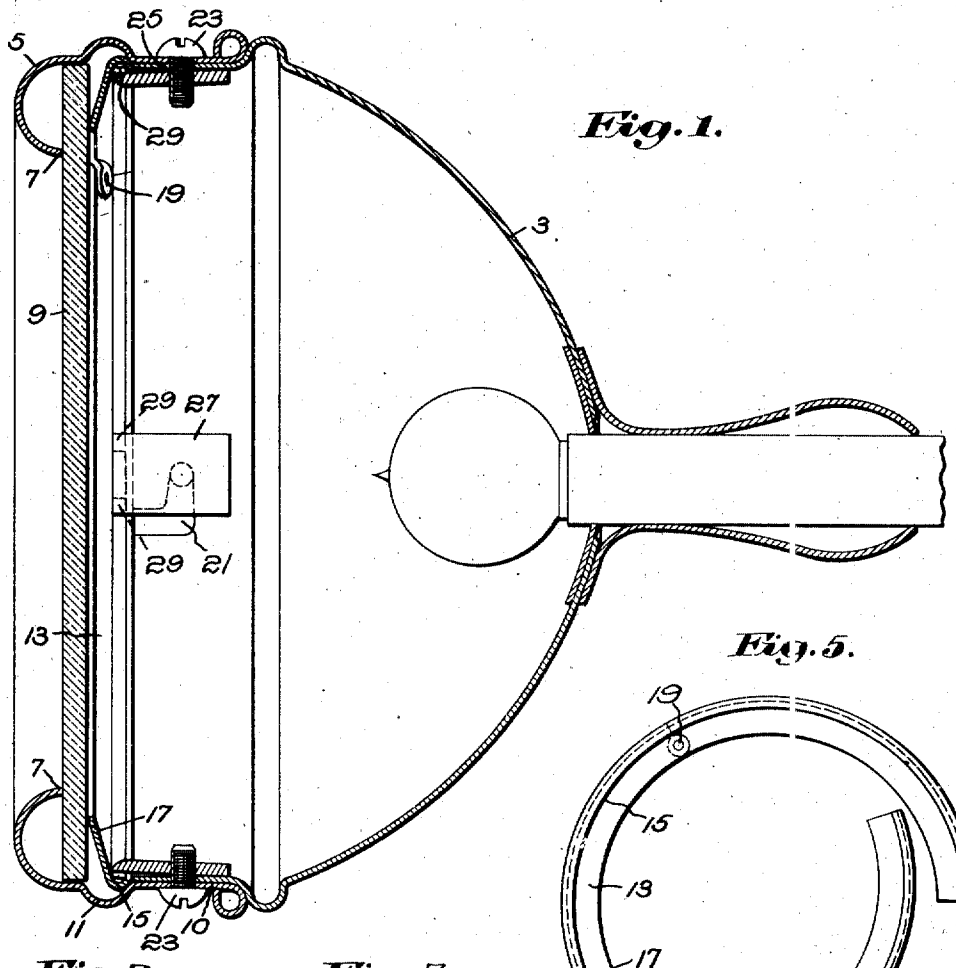


Fig. 1.

Fig. 5.

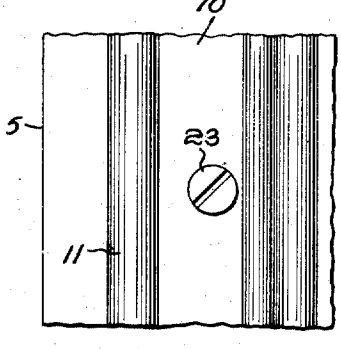


Fig. 2.

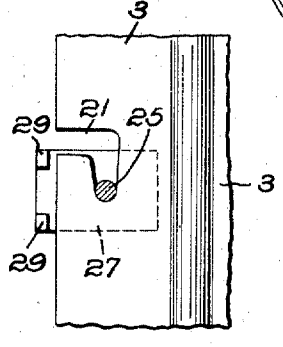


Fig. 3.

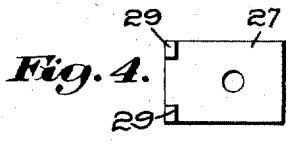


Fig. 4.

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DOOR AND GLAZING RETAINER.

1,215,274. Specification of Letters Patent. Patented Feb. 6, 1917.

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To all whom it may concern:

Be it known that I, ELLSWORTH A. HAWTHORNE, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented an Improvement in Door and Glazing Retainers, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to a glazing retainer for use in lamps and the object thereof is to provide such a device which will firmly and securely lock the glazing in position on the door or bezel of the lamp. In the embodiment of the invention illustrated the device also serves as a means for retaining the door itself in position.

My invention will be best understood by reference to the following description of one illustrative embodiment of my invention, taken in connection with the accompanying drawings, wherein:

Figure 1 is a central vertical section through a lamp having my invention applied thereto;

Fig. 2 is a fragmentary top plan view of Fig. 1;

Fig. 3 is a view similar to Fig. 2 with the door or bezel removed;

Fig. 4 is a plan view of one of the parts; and

Fig. 5 is a view of the retaining device on a smaller scale.

Referring to Fig. 1, I have there shown the lamp as embodying a suitable casing 3 closed in front by the bezel or door 5, having a suitable seat 7 to receive a glazing 9 placed interiorly thereof. The flange of the door frame 5 may fit over the front of the casing, as shown.

To retain the glazing in position against its seat 7 I preferably provide the door with a groove 11 adjacent such seat which receives the retaining ring 13 having a bead or channel 15 opening inwardly and adapted to seat in the groove 11 and the inwardly extending or frusto-conical flange 17 adapted to extend over the edge of the glazing and bearing against the same. If desired the flange 17 may be somewhat springy so as to bear resiliently against the glazing 9. The ring 13 may be formed of one or more parts, but I have here shown it (see Fig. 5) as comprising three segments pivoted together at 19 so that the ring may be contracted, as shown, and easily set in the groove 11. However, within the scope of my invention the ring might be a single piece or embody several independent segments or retaining members.

In the embodiment of the invention shown the door 5 is secured to the casing 3 by a slot connection, preferably a bayonet slot connection. For this purpose one of the parts, herein the casing 3 is provided with the bayonet slots 21 and the other part such as the door flange 10 carries the two part clamps 23 hereinafter to be more fully referred to. It is apparent that the door may be placed over the casing 3, the clamps entering the slots 21 and when given a circumferential turn they will enter the circumferential parts of these slots and hold the door on and that when the clamps are tightened the door will be firmly locked in place.

The clamps 23 form retaining devices extending through the casing 3 and the flange 10 susceptible of adjusting manipulation from the exterior of the lamp. In the present invention they are utilized firmly to hold the glazing retainer 13 in position and for this purpose they are so constructed that they firmly seat the bead 15 in the groove 11. These clamps are conveniently formed from screw bolts 25 passing through suitable holes in the flange 10 of the door and coöperating nuts 27 having hook portions 29 adapted to enter and interlock with the bead 15, as clearly shown in Fig. 1. It is apparent that when the door is placed in position over the casing with the shanks of the bolts 25 entering the bayonet slots 21, the bolts may be joined from the exterior by means of a screw driver and not only will the nut firmly clamp together the flange of the casing 3 and the flange 9 of the door but they will firmly retain in position the ring 13 whether it is formed in one piece or is segmental and will lock the peripheral bead thereof in position in the groove 11. By these means the door is locked firmly in position and the glazing held solidly against its seat so that it requires no packing to exclude moisture or dirt and cannot rattle.

Referring to Fig. 1, it is apparent that the nuts 27 are secured to the wall lamp, herein the casing 3, at a fixed distance from the glazing seat. If the retaining ring 13 is designed so as to be put under compression and bear resiliently against the glaz-

ing, it will be apparent that when it is first adjusted the ends of the nuts will bear against the interior surface of the frustum formed by the retaining ring, and as the screws 23 are adjusted and the hook portions 29 drawn down into engagement with the bead 15, not only will the ring be seated firmly against the interior of the door frame, but it will be, as it were, cammed outwardly and put under compression against the glazing 9. The curved surface of the seating groove 11 may also have a certain camming action as will be well understood by inspection of Fig. 1. Thus the structure disclosed provides means for exerting both an axial and a radial thrust against the retaining ring 13 to hold the glazing on its seat and to hold the ring itself firmly in position against the wall of the lamp.

While I have described in considerable detail the embodiment of my invention shown in the accompanying drawing, it is apparent that the mechanical devices utilized therein are merely illustrative of those which might be employed within the scope of my invention. I referred to them specifically in order that the construction shown might be more readily understood. What I do claim and desire to secure by Letters Patent is:—

1. In a lamp a casing, a door having a flange adapted to fit said casing and having a seat for a glazing, a retaining member for holding a glazing against said seat, and adjustable clamping devices for securing together said flange and casing having provision for engaging said member for holding the same in position.

2. In a lamp a casing, a door having a flange adapted to fit said casing and having a seat for a glazing, a retaining member for holding a glazing against said seat, and means for securing together said flange and casing comprising two-part screw clamps carried by one of said elements and having slot connection with the other, one part of said clamps being arranged to engage and hold said member.

3. In a lamp a casing, a door adapted to fit said casing having a seat for a glazing and a groove adjacent said seat, one or more glazing-retaining devices each comprising a flange adapted to bear on the glazing and a bead or channel arranged to seat in said groove and clamping members for securing together said door and casing having hook portions adapted to enter said beads or channels and hold them in the groove.

4. In a lamp a casing, a door having a flange adapted to fit said casing having a seat for a glazing and a groove adjacent said seat, one or more glazing retaining devices each having a flange adapted to bear on the glazing and a part to seat in said groove, adjustable members extending from said devices through said casing and flange and having slot connection with one of them, said members being susceptible of adjusting manipulation from the exterior of said casing to draw outwardly said retaining devices.

5. In a lamp a casing, a door adapted to fit said casing and having a seat for a glazing, one or more glazing retaining devices each having a flange adapted to bear on said glazing and an exterior, inwardly opening bead or channel arranged to seat on the door frame, and clamping members for securing together said door and casing having hook portions adapted to enter said beads or channels and hold said devices seated.

6. In a lamp a casing, a door adapted to fit said casing and having a seat for a glazing, one or more glazing retaining devices each having a flange adapted to bear on said glazing and an exterior, inwardly opening bead or channel arranged to seat on the door frame, and means for securing together said door and casing comprising two-part screw clamps carried by one of said elements and having slot connection with the other, one part of said clamps being formed to interlock with said beads or channels and hold said devices seated.

7. A door for a lamp having a peripheral flange and a glazing seat, a glazing retaining ring seated on the door flange having a flange to bear against the glazing and two-part clamps extending through the door flange and arranged for adjusting manipulation from the exterior thereof, said clamps engaging said ring to press it to its seat.

8. A lamp having an opening and presenting a seat for a glazing adjacent said opening, a glazing on said seat, a retaining device for said glazing to hold the same against said seat, and means associated therewith extending through the wall of the lamp for holding said glazing in place.

9. A lamp having an opening and presenting a seat for a glazing adjacent said opening, a glazing on said seat, a retaining device disposed interiorly of the lamp for engaging said glazing to hold it against its seat, and means associated therewith and extending through the wall of the lamp for positioning the retaining device against the interior of the lamp wall.

10. A lamp having an opening and presenting a seat for a glazing adjacent said opening, a glazing on said seat, a retaining device for the glazing having a resilient, substantially frusto-conical portion, one base of which bears on the glazing, and clamping devices at the opposite base of said portion arranged to hold said device seated against the wall of the lamp with said portion under compression.

11. A lamp comprising a casing, a door having a flange adapted to fit said casing

and having a seat for a glazing, a retaining device for said glazing peripherally engaging the same, and means associated therewith engaging said casing and said flange and holding the same together.

12. A lamp having an opening and presenting a seat for a glazing adjacent said opening, a glazing on said seat, one or more glazing retaining devices each having a flange adapted to bear on said glazing, and an exterior inwardly opening bead arranged to seat on the lamp wall, and two part screw clamps extending through the lamp wall, one part of said clamps being formed to interlock with said beads and hold said devices seated.

13. A lamp having an opening presenting a glazing seat, a glazing on said seat, a retaining ring therefor having a frusto-conical, resilient portion adapted to bear on said glazing, members carried by the lamp wall at fixed distance from said seat and extending toward the interior of the frustum, means for moving said members radially outwardly, and means at a base of the frustum for engaging said members whereby manipulation of said moving means will seat said ring and tension said resilient portion.

14. A lamp having an opening and presenting a seat for a glazing adjacent said opening, a glazing, a retaining element for holding the same against its seat, and means apart from the retaining element for urging the latter in one direction against said light transmitting element and in another direction against the lamp wall.

15. A lamp having an opening and presenting a seat for a glazing adjacent said opening, a glazing, a retaining element coaxially disposed with relation to said seat and retaining said glazing thereagainst, and means to exert an axial and a radial thrust against said retaining element to urge the latter against said glazing and against the lamp wall.

16. A lamp comprising a shell or body, a member disposed within said shell and means for positioning the same comprising a retaining ring seated interiorly on the wall of said shell and bearing against said member, and means for holding the ring in place thereagainst comprising devices carried by the wall of the shell and having a part movable to engage the ring.

17. In a lamp a casing a door having a flange adapted to fit the casing, an interior member, and means for positioning the same comprising a retaining ring seated interiorly on the casing wall and bearing against said member, and means for holding the ring in place thereagainst comprising two part clamps extending through the casing and the door flange and having slot connection with one of them, said clamps having a part engaging and positioning the ring.

In testimony whereof, I have signed my name to this specification

ELLSWORTH A. HAWTHORNE.