F. M. BROOKS.

GLOBE HOLDER.

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1,036,791.

Patented Aug. 27, 1912.

Fig. 1.

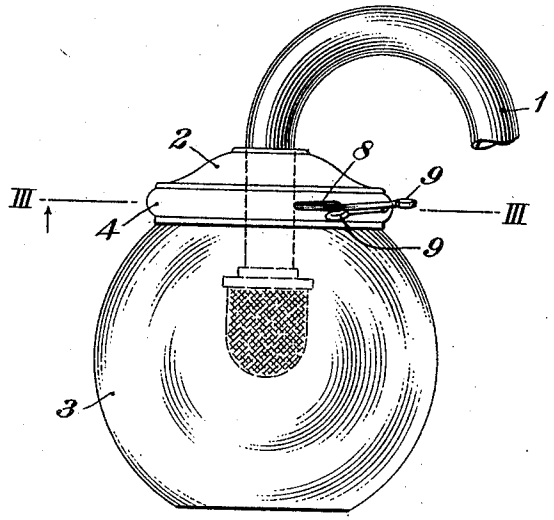


Fig. 2.

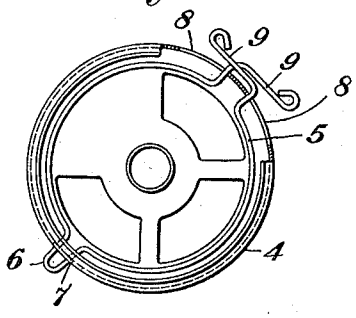


Fig. 4.

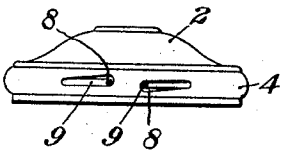


Fig. 3.

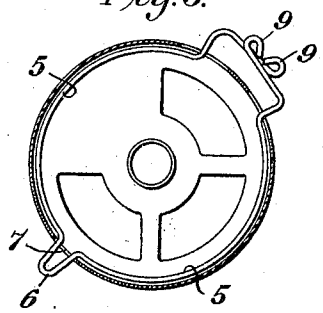
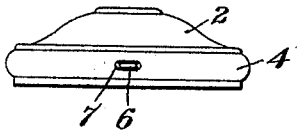


Fig. 5.



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GLOBE-HOLDER.

1,036,791. Specification of Letters Patent. Patented Aug. 27, 1912.

Application filed June 27, 1912. Serial No. 706,134.

To all whom it may concern:

Be it known that I, FRANK M. BROOKS, a citizen of the United States, and a resident of the borough of Brooklyn, county of Kings, city and State of New York, have invented a new and useful Improvement in Globe-Holders, of which the following is a full, clear, and exact description.

This invention relates to globe and shade holders of the class in which springs are located within a hollow and usually conical shell, secured centrally to the gas supply pipe and having a circumferential flange to which the globe or shade holding springs are attached. The best forms of such devices heretofore made have either embodied two springs, or a single spring, the free ends of which cross one another on the inside of the shell and after crossing pass outwardly through a slot or slots made in the flange of the shell, the projecting ends being formed into handle-like terminals, so that being properly manipulated by the thumb and finger of the operator, and the handles drawn toward one another, the spring or springs will be caused to expand within the shell, thus permitting the insertion and removal of the globe or shade and when released the springs will contract again, entering the groove under a flange on the globe or shade, thus securely holding it in position. The holders above described are, however, open to the following serious objection. When the wires are crossed inside the flange of the shell, there is a tendency for them to project inwardly more or less when their outwardly exposed ends are drawn together and this is true although the main body of the spring or springs has been expanded and this interferes with the free passage of the flange of the globe or shade past the springs, so that it frequently happens that a person not familiar or observant in the use of the device will properly draw the ends of the springs together and introduce the globe or shade into the lower end of the shell and press it upwardly until it encounters resistance and will then suppose that this resistance is caused by the globe coming in contact with the upper part of the shell and will then release the spring and let go of the globe, but, as matter of fact, the resistance was occasioned by the flange of the globe coming in contact with the lower side of the spring through which it never had passed. Under the circumstances, the globe having no support, of course dropped to the floor and was broken to pieces.

Under my present invention I so construct the spring or springs, that the free ends do not cross each other on the inside of the shell, on the contrary, they pass through the slot or slots made in the flange to the outside thereof before they reach each other and then they are crossed or overlapped. I also produce in the inner surface of the flange of the shell a relatively deep groove which serves as a decoration upon the outside of the flange and I so form the spring or springs that when expanded they coincide quite accurately with the inner circumferential contour of the groove and thus are substantially flush with the inner surface of the flange above and below the groove. Consequently there is nothing against which the flange on the globe or shade can strike during the adjustment of the latter to the holder and the proper engagement of the springs under the flange is thus assured. Again where the ends overlap each other inside the flange they must necessarily at the overlapping portion press against the globe or shade on two planes, one above the other and also there is necessarily present at the section where the ends cross each other twice the amount of metal that there is in other parts of the circle and since the overlap is from one inch to two inches in length the excess of metal at this point is considerable and requires a materially longer time to heat and it has been found that either because of the unevenness of the pressure or because there is at that part more cold metal requiring heating than at other parts, that when the gas is lighted, especially if with full flow, all parts of the apparatus being cold, that then the necessarily uneven heating of the globe and metal of the springs increases the tendency to cracking of the glassware. In my new form in which the crossing of the wires is effected outside of the flange these difficulties are done away with because as shown in the drawings (see Figures 2 and 4) when the ends of the spring or springs are in operative position, as in Fig. 2, they do not come quite together, so that there is substantially the same amount of metal to be heated throughout the circle and also by reference to Fig. 4, owing to the fact that I make my slots through the flange somewhat larger at their adjacent ends than

they are at their remote ends, both the ends of the inside of the flange are in the same horizontal plane.

Referring now to the drawings, Fig. 1 illustrates an elevation of the invention as in operation equipped with gas supply pipe and globe; Fig. 2 illustrates a view of the under side of the holder, portions of the flange of the shell being broken away and the ends of the spring shown in their operative position; Fig. 3 illustrates a view of the holder taken from below the flange of the shell being sectioned on the line III—III of Fig. 1, the ends of the spring having been drawn together, thus effecting its expansion within the groove made in the flange of the shell; Fig. 4 illustrates an edgewise elevation of the shell, showing the slots formed therein through which the free ends of the spring project, the ends being cut off adjacent to the outer surface of the flange; Fig. 5 illustrates an edgewise elevation of the shell, showing the slot in the flange of the shell opposite the free ends of the spring through which a U-shaped loop made in the spring projects.

In the drawings hereof I illustrate the globe holding spring as a continuous single piece of spring wire. I prefer this construction because thereby the U-shaped loop opposite the free end of the spring may be conveniently used as a support for the rear side of the spring holder. Obviously, however, the springs may be made of two separate pieces of wire so arranged as that they substantially encircle the interior of the shell, being suitably fastened thereto at one end, their other ends projecting through the shell as described.

Referring to the drawings 1 is the usual gas supply pipe. 2 is the shell, preferably of metal. Within it the spring holding devices are located.

3 illustrates the device supported by the holder, in this case, a glass globe, but it may be a shade or other equivalent structure.

4 is the rib made in the flange of the shell, which forms a groove on the inside thereof.

5 is the spring holder which in this case is shown as a single piece of spring wire bent as at 6 to form a U-shaped loop which projects through a slot 7 made in the flange of the shell opposite the slots 8, 8, through which the free ends 9, 9, of the spring project.

The construction and operation are obvious. When the globe or shade is in position in the holder the free ends of the spring, whether it be made in the form of a single wire or two wires, are in the position shown in Figs. 1 and 2, and the spring is received within the groove or undercut beneath the flange of the globe or shade; thus all parts are securely held in position. When it is desired to release the holder or shade the free ends of the spring are pressed toward each other into the position shown in Fig. 3, in which the parts of the spring within the shell expand and enter the interior circumferential groove made by throwing out the rib 4. I prefer to make the slots 8, 8, as shown in Fig. 4, that is to say, somewhat larger at one end than at the other so that in operation the ends of the spring may move and remain in the same horizontal plane and more freely and smoothly move during their manipulation because of the increased freedom of movement permitted by the enlargement of the adjacent ends of the slots.

It will be obvious to those who are familiar with such matters that departure may be made from the details of construction illustrated by me without departure from the essentials of the invention. I therefore do not limit myself to such details.

I claim:

1. In a holder a shell, a ring-like spring within the shell, the ends of which project therethrough and which cross each other on the exterior thereof.

2. In a holder a shell having a depending flange and an interior groove within the flange, a ring-like spring within the shell adapted to expansion with the groove, the ends of which spring project through the shell and cross each other on the exterior thereof.

3. In a holder a shell having a depending flange and an interior groove therein, a resilient holding member composed of a single wire, a U-shaped loop in the wire about midway between its ends, which ends project through the flange and cross each other upon the exterior thereof.

4. In a holder a shell having a depending flange provided with a single slot on one side and two slots on the opposite side, the adjacent ends of the latter slots being wider than their remote ends, a ring-like spring within the flange having a U-shaped projection therefrom adapted to pass through the first named slot, the free ends of which spring project respectively through the two last-named slots and which cross each other on the outside of the flange.

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

FRANK M. BROOKS.

Witnesses:
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S. R. MACKENZIE.