Feb. 8, 1938. L. A. SWANDER 2,107,720

DIAL COVER FOR WATER METERS

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Fig. 1.

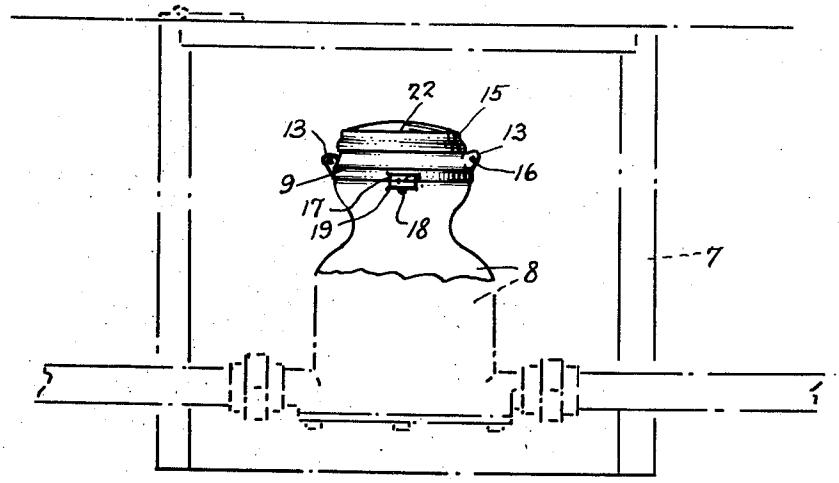


Fig. 2.

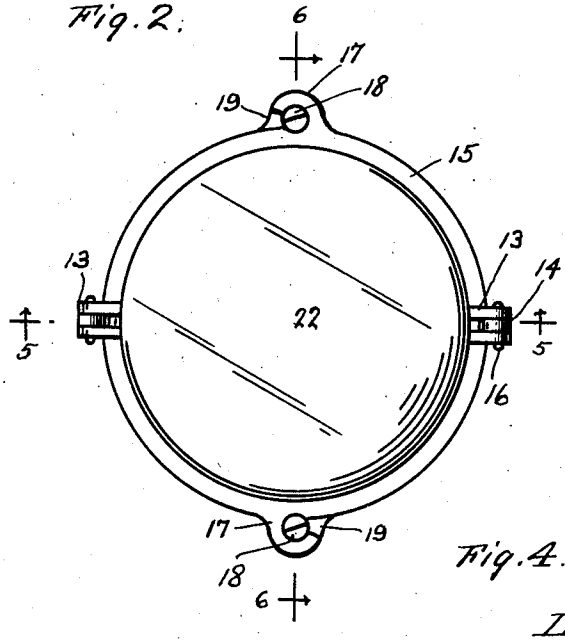
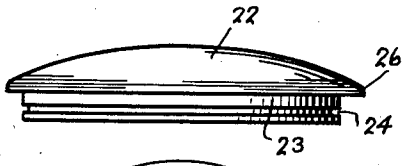


Fig. 3.



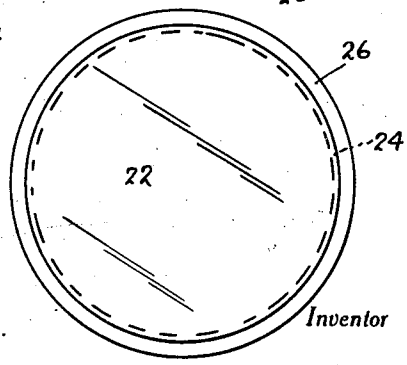


Fig. 4.

Inventor

L. A. Swander

By Clarence A. O'Brien and Hyman Berman Attorneys

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Fig. 5.

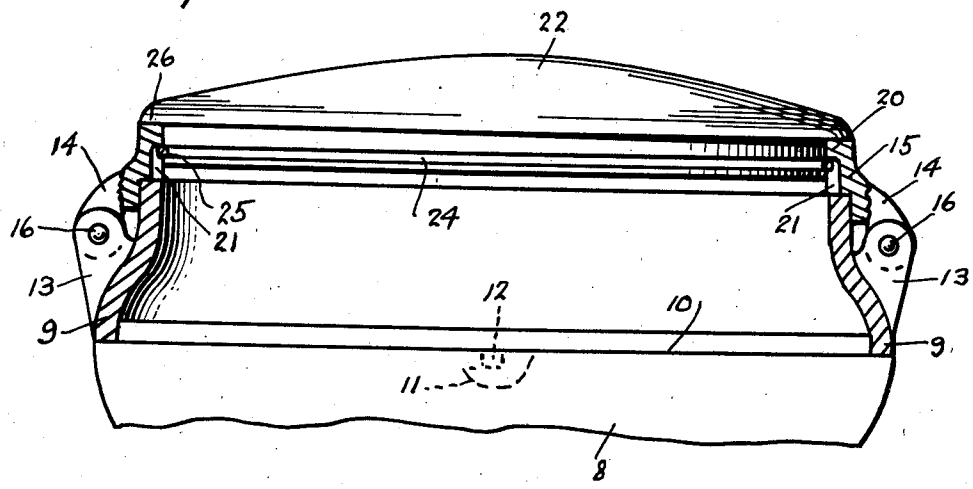
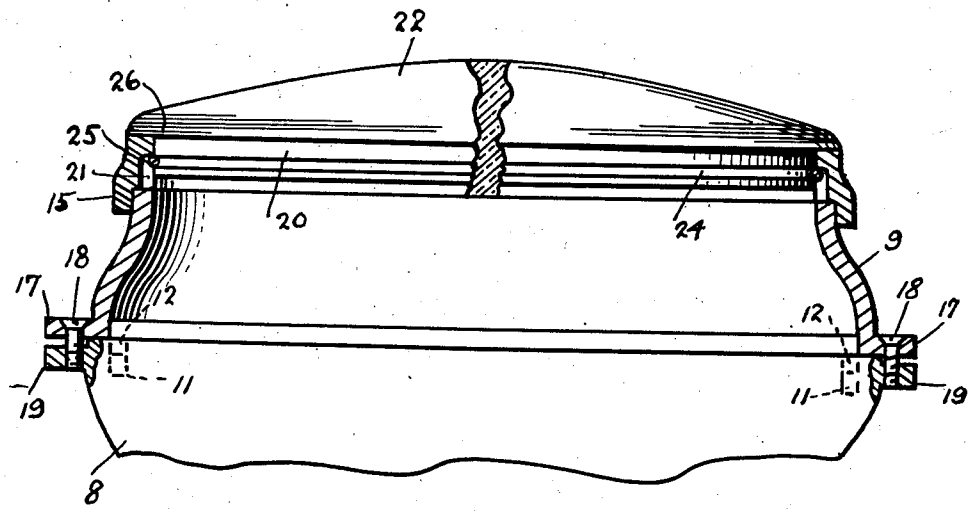


Fig. 6.



Inventor

L. A. Swander

By Clarence O'Brien and Hyman Berman Attorneys

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DIAL COVER FOR WATER METERS

Louis A. Swander, Osborne, Kans.

Application May 8, 1936, Serial No. 78,730

1 Claim. (Cl. 220—82)

This invention relates to a novel closure or cover structure for use as a complemental part of a substantially conventional fluid measuring meter such as, for example, a domestic or household style water meter.

Water meters of the type under consideration generally include a hinged lid to protect and conceal the graduated measuring dial, and the present invention relates to a composite hinged cover characterized primarily by a transparent magnifying glass satisfactorily usable to expedite reading the meter without lifting or opening the cover.

More specifically, novelty resides in the use of a simple and economical cover characterized by a special adapter metal annulus constituting a support or mounting for the glass cover, said cover being relatively thick and substantially indestructible and having requisite external convexity to provide the desired magnifying properties, the cover being removably mounted in the annulus through the instrumentality of readily accessible successively operable retention means.

Other features and advantages may become more readily apparent from the following description and drawings.

In the accompanying illustrative drawings, wherein like numerals are employed to designate corresponding mechanical details throughout the views:

Figure 1 is a view partly in elevation and essentially in dotted line illustrating a conventional water meter in its protective box embodying the improved lid or cover structure;

Figure 2 is a top plan view of the improved cover construction per se;

Figure 3 is an edge elevation of the magnifying glass constituting the essential part of the cover assemblage;

Figure 4 is a bottom plan view of the glass member shown in Figure 3;

Figures 5 and 6 are sectional views taken on the planes of the lines 5—5 and 6—6, respectively, of Figure 2.

Referring now to Figure 1, it will be observed that the customary underground protective box or enclosure is denoted by the numeral 7 and the conventional meter 8 is appropriately contained therein. As shown to advantage in Figure 5, the regular ring-like collar 9 is seated on the shoulder or ledge 10 held in place by connecting hooks 11 engageable with retaining lugs 12. At diametrically opposite points this collar is formed with outstanding keeper ears 13 to accommodate the companion depending ears 14 on the special adapter annulus 15. If desired, the respective ears 13 and 14 may be pinned together as indicated at 16. The annulus 15 is made to set down on and partially embrace the upper edge or lip portion of the collar 9. Incidentally, the collar 9 is provided with hooked retaining members 17 attached by screws 18 to the relatively fixed anchoring lugs 19 on the gauge body. This permits the collar 9, when the screws 18 are loosened, to be removed from the meter 8 to permit access to be had for such purposes as are desired. It might be pointed out that if desired, the pins 16 may be removable to allow the annulus 15 to be bodily detached, or one pin may be utilized so as to provide a hinge action. The principal idea, however, is the provision of a suitable collar 9 to accommodate the annulus 15, the collar 9 being detachably connected to the meter 8, and the annulus 15 being hingedly and detachably connected with the collar. The annulus 15 may be described as including a top lip forming a seating ledge, and an internal clearance channel, the lip being denoted by the numeral 20 and the channel by the numeral 21.

Directly cooperable with the adapter annulus 15 is the disk-like, relatively fixed, substantially unbreakable, transparent glass cover 22. This includes a concentric reduced neck 23 which fits telescopically into the annulus and is formed with a keeper groove 24 to accommodate a retaining wire or ring 25. The ring when in the groove projects therebeyond sufficient to underly the retaining lip 20. This enables the marginal flange portion 26 to rest firmly on the ledge. At the same time access can be had to the ring through the instrumentality of the clearance channel 21 to facilitate application and removal of the split ring 25.

The chief novelty, as is indicated, is in the provision of a conventional meter cover characterized primarily by the substantially unbreakable magnifying lens 22. This constitutes means for satisfactorily closing the meter and at the same time can be readily brushed off with a rag or the hand to permit the indications on the dial (not shown) to be easily read by the inspector. The lens being substantially indestructible, will withstand shocks and will therefore prove to be sufficiently durable for the purposes intended. Further novelty is predicated on the telescoping connection between the lens and the metal adapter annulus 15, and the proportionately specific novelty is found in the features constituting the channel 21 for clearance purposes and the re-

taining lip **20** in conjunction with the grooved neck **23** on the lens.

It is thought that the description taken in connection with the drawings will enable a clear understanding of the invention to be had. Therefore, a more lengthy description is thought unnecessary.

While the preferred embodiment of the invention has been shown and described, it is to be understood that minor changes coming within the field of invention claimed may be resorted to if desired.

I claim:

A dial cover for water meters comprising an annulus having its lower end portion constructed to embrace a complemental portion of an adapter and supporting collar, said annulus being formed at its upper end with an inturned ledge and retaining lip, a combined cover and magnifying lens of disk-like design, the diameter of said lens corresponding to the diameter of the adjacent end portion of said annulus, said lens being outwardly convexed in form and the marginal edge of the underside thereof resting removably on said ledge forming lip, the bottom of said lens being formed with a reduced circular neck depending below said lip and formed with an endless groove and the groove being located in the peripheral portion of said neck, disposed on the plane below said lip, the surrounding wall of the annulus being spaced concentrically from said grooved neck a distance to admit insertion of a retaining ring, and a ring removably seated in said groove and engaging beneath said retaining lip.

LOUIS A. SWANDER.