

L. G. HAASE.
METER BOX.
APPLICATION FILED MAY 1, 1916.

1,213,478.

Patented Jan. 23, 1917.

Fig. 1.

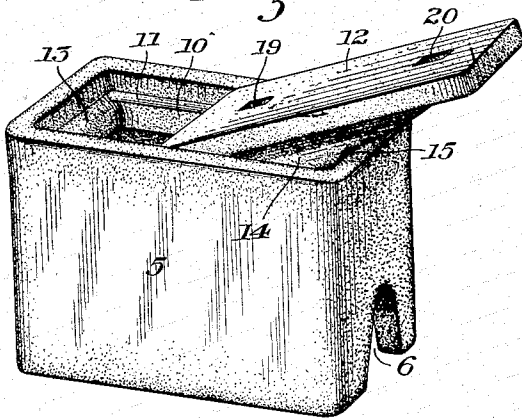


Fig. 2.

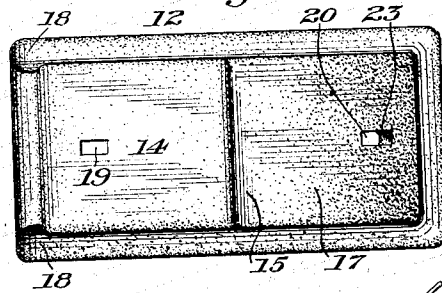


Fig. 3.

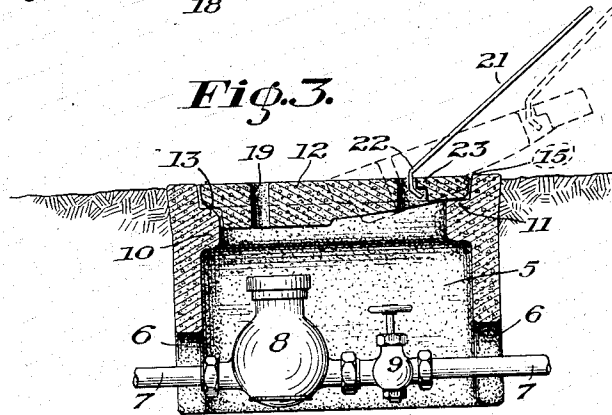
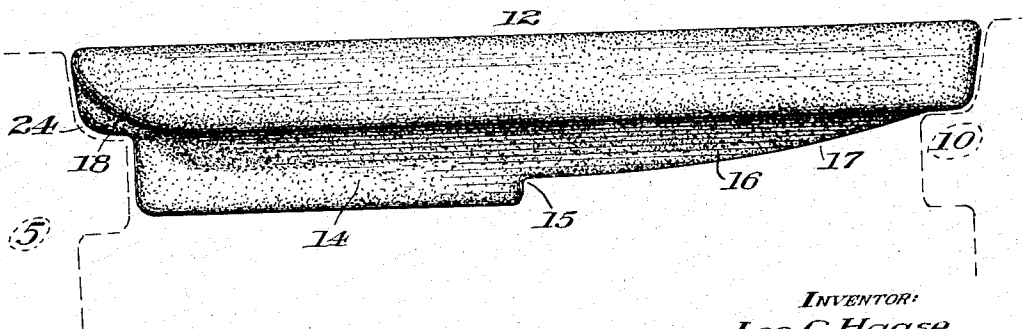


Fig. 4.



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METER-BOX.

1,213,478.

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To all whom it may concern:

Be it known that I, LEO G. HAASE, a citizen of the United States, residing at Pasadena, in the county of Los Angeles and State of California, have invented new and useful Improvements in Meter-Boxes, of which the following is a specification.

This invention relates to a meter box and particularly pertains to the lid construction thereof.

It is the object of this invention to provide a meter box and lid adapted to be formed of a plastic composition such as cement, concrete or similar materials and in which the lid is so formed that it may be readily removed and replaced to facilitate the work of a person in reading a meter contained in the box.

Another object is to provide a lid for the meter box so formed and mounted that it may be partly withdrawn to uncover and expose the meter by a suitable tool, and restored to its closed position by an impulse which may be delivered by the foot.

A further object is to provide a meter box lid adapted to slide from an open to a closed position on an impulse being imparted thereto and which is so shaped that it may be formed of cement and still be shifted in and out of its seat without danger of mutilation or breakage of the bearing edges or other portions of the lid.

Other objects will appear hereinafter.

The invention is illustrated in the accompanying drawings in which:

Figure 1 is a view in perspective showing the meter box with the lid in its partially removed position and arranged to expose a meter within the box. Fig. 2 is a view in plan showing the under side of the cover or lid. Fig. 3 is a detail section of a meter box and lid illustrating the latter in its closed position in full lines and in its partially removed or open position in dotted lines. Fig. 4 is a view of the lid as seen in side elevation.

Referring to the drawings more particularly, 5 indicates the meter box which is here shown as rectangular in plan and open top and bottom with the end walls formed with open-ended slots 6 on their lower edges so that the box may be set astride the service pipe 7 as shown in Fig. 3 and encompass a meter 8 and cut-off valve 9. The box 5 is preferably formed of concrete or other plastic composition so as to render it

durable and especially fit for being embedded in the earth.

Formed on the inner faces of the side walls of the box adjacent the upper edge thereof is an inwardly projecting flange 10 forming a continuous shoulder 11 spaced a distance from the upper edge of the box equal to the thickness of the body portion of a lid or cover 12 adapted to seat on the shoulder 11 preferably with its upper face substantially flush with the upper edge of the box, as shown in Fig. 3. The box is preferably oblong in plan and the portion of the flange 10 extending across one end thereof is beveled or rounded on its upper edge to form a sloping or inclined face 13, the purpose of which will appear hereinafter.

The lid 12 is rectangular in outline with rounded corners and slightly beveled inwardly on its edges to conform with the corresponding bevel on the inner margin of the box above the flange 10. Projecting from the under side of the lid to extend below the shoulder 11 is a body of material forming a weight 14 which extends from a point approximately mid-way of the length of the lid and terminates short of the end of the latter, designed to be disposed adjacent the beveled face 13 of the flange 10, as shown in Fig. 4. The inner end of the weight portion 14 extends transversely of the lid forming a shoulder 15 and connects in continuation of the weight 14 and converging preferably on an arc toward the end of the lid, thus forming an inclined face 17 adapted to slidably engage the upper edge of one end of the meter box, as will be later described.

The corresponding ends of the side portions of the lid at the weighted end of the latter are beveled on the under side to form inclined faces 18 constituting runners adapted to seat on the side members of the flange 10 when the lid is in an inclined position in relation to the box, as shown in Fig. 1; the inclined faces 18 slidably engaging the shoulders 11 and the inclined face 17 slidably engaging the upper edge of one end of the box in supporting the lid in the inclined position. Formed in the lid adjacent each end thereof are openings 19 and 20 through which a tool 21 may be inserted to engage the lid and move it lengthwise of the box or remove it therefrom; the tool 21 having a hooked end 22 for engagement with the

under side of the lid. The opening 20 is formed with a lip 23 on its upper marginal edge projecting away from the end of the lid, which facilitates the engagement of the tool 21.

By this construction the meter box may be quickly opened and closed, thus facilitating the work of a person reading the meter, and permits the construction and use of a heavy one-piece meter box lid as the entire weight of the lid need not be lifted in opening same to read the meter, nor in restoring it to its closed position.

When the meter box is closed, the lid 12 will be disposed in the position shown in Figs. 3 and 4, that is, with the outer edge portions of the lid supported on the shoulders 11. When it is desired to read the meter, the hooked end 22 of the tool 21 is engaged with the lip 23, as shown in Fig. 3, and the lid lifted upwardly and drawn rearwardly, during which operation the lid rocks on the inclined faces 18, which faces slide on the shoulders 11 on rearward movement of the lid. The lid is brought to rest in the position shown in dotted lines in Fig. 3, that is, with the shoulder 15 adjacent the end of the meter box, thus disposing the lid so that it will be supported at its weighted end on the inclined faces 17 and 18. When the lid is thus positioned, approximately one-half the open upper end of the meter box is uncovered so that a view of the meter 8 may be had. The lid will be maintained in its inclined or canted position by the action of the weight 14 which overbalances the outer portion of the lid extending from the shoulder 15. The shoulder 15 serves as a stop to limit the withdrawing movement of the lid so as to bring the latter to rest, when in its canted position, with its heavier end portion seated within the meter box with the side portions of the weight and the side edges of the cover extending adjacent the side walls of the meter box and the inner face of the side flanges 10 so as to direct the lid in its movement toward its closed position. The shoulder 15 thus serves to prevent the lid from being withdrawn to such a point that it would be difficult and inconvenient to slide it to its closed position.

To restore the lid to its closed position an impulse may be imparted thereto by the tool 21 but is preferably effected by the foot. A slight longitudinal impulse on the lid will cause it to slide on the inclined faces 17 and 18 thereof into its closed position; the weight 14 tending to pull and direct the lid into its seat. By providing the beveled face 13 on the end portion of the flange 10 and rounding the lower end edge of the lid, as indicated at 24 in Fig. 4, these faces will slidably engage each other so as to retard the cover at the end of its closing movement

and cause it to come to rest without objectionable jar. When it is desired to lift the lid bodily from the box, two tools may be employed, one being inserted in each of the openings 19 and 20. This is only necessary, however, when access is required to the entire interior of the meter box, as in operating the valve 9.

While I have shown and described the meter box and lid as formed of concrete, it is manifest that it may be formed of other materials such as cast iron; the latter being desirable where the meter box is positioned in a road-way where it is subjected to the weight of vehicles.

It will thus be seen that I have provided a one-piece meter box lid which may be moved to open the meter box without lifting it out of its pocket, but which may be readily removed in its entirety if occasion requires, and that by providing the under side of the lid with a slanting or toboggan-shaped surface it may be easily and quickly slid into its closed position.

What I claim is:

1. The combination with a meter box, of a detached lid adapted to seat horizontally on the meter box having an inclined face on its under side sloping from its outer end and terminating adjacent its longitudinal center for canting the lid on sliding it from its seat whereby the lid will be directed to its seated position on an impulse being imparted thereto.
2. The combination with a meter box, of a lid adapted to seat horizontally on the meter box having means for canting the lid on sliding it from its seat whereby the lid will be directed to its seated position on an impulse being imparted thereto, and a weight on said lid for maintaining it in its canted position cooperating with the canting means in restoring the lid to its closed position.
3. The combination with a meter box, of a lid adapted to seat thereon having an inclined lower face engageable with the end of the meter box on sliding the lid to dispose the latter in a canted position, and a weighted portion on the lid operating to maintain it in its canted position and cooperating with the inclined face to restore the lid to its closed position on an impulse being imparted thereto.
4. The combination with a meter box, of a lid adapted to seat thereon having a projection on its under side adjacent one end thereof forming a weight terminating in a transverse shoulder intermediate the ends of the lid, and an inclined face extending from said shoulder toward the unweighted end of the lid.
5. A rectangular meter box lid formed with an inclined face on its under side sloping from its outer end toward its cen-

ter terminating in a downwardly projecting shoulder, and a weight carried by the lid between the shoulder and the end of the lid opposite the inclined face.

5 6. A meter box lid, comprising a rectangular body portion formed with a rectangular projection on its under side spaced from the edges of the body member forming a side and end flange, said projection
10 terminating mid-way of the ends of the body member forming a transverse shoulder, and an inclined face sloping from said shoulder to a point adjacent the end of the body member.

15 7. A meter box lid, comprising a rectangular body portion formed with a rectangular projection on its under side spaced from the edges of the body member forming a side and end flange, said projection
20 terminating mid-way of the ends of the body member forming a transverse shoulder, an inclined face sloping from said shoulder to a point adjacent the end of the body member, and tool engaging means
25 adjacent each end of the lid.

30 8. A meter box lid, comprising a rectangular body portion formed with a rectangular projection on its under side spaced from the edges of the body member forming a side and end flange, said projection
35 terminating mid-way of the ends of the body member forming a transverse shoulder, and an inclined face sloping from said shoulder to a point adjacent the end of the body member, the ends of the side flanges being beveled on their under side with their point of juncture with the end flange.

9. The combination with a meter box having a rectangular open top formed with an inner flange adjacent its upper edge with
40 the flange on one of its end walls beveled on its upper face, of a rectangular lid adapted to seat on the flange having a rounded lower end portion adapted to slidably engage the
45 beveled end flange formed with inclined lower faces at the extremities of the rounded end adapted to seat on the side flanges, and an inclined lower face on the lid engageable with the end of the meter box when
50 the lid is shifted longitudinally to dispose the latter in a canted position.

10. The combination with a meter box having a rectangular open top formed with an inner flange adjacent its upper edge with
55 the flange on one of its end walls beveled on its upper face, of a rectangular lid adapted to seat on the flange having a rounded lower end portion adapted to slidably engage the
60 beveled end flange and formed with inclined lower faces at the extremities of the rounded end adapted to seat on the side flanges, an inclined lower face on the lid engageable
65 with the end of the meter box when the lid is shifted longitudinally to dispose the latter in a canted position, and a weight on
70 the lid for maintaining the latter in its canted position and cooperating with the inclined face in restoring the lid to its closed position, on an impulse being imparted thereto.

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

LEO G. HAASE.

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