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PATENTED JULY 11, 1905.

H. W. CLARK.
PROTECTING BOX OR CASING.
APPLICATION FILED FEB. 16, 1905.

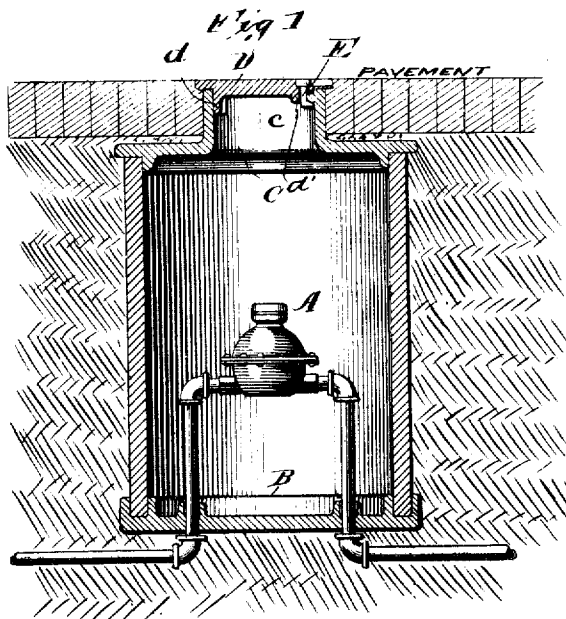


Fig. 2

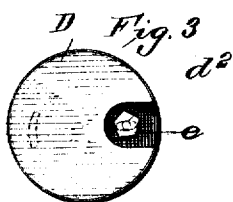
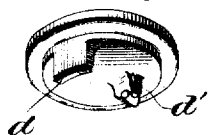


Fig. 3

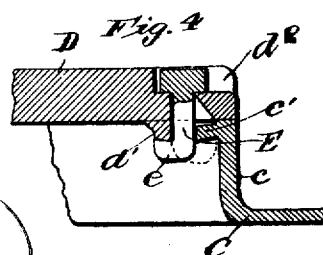


Fig. 4

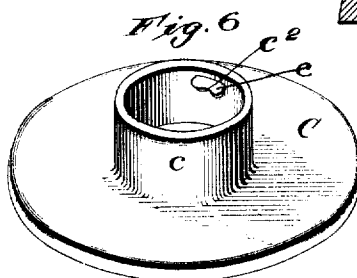


Fig. 6

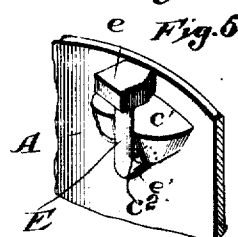
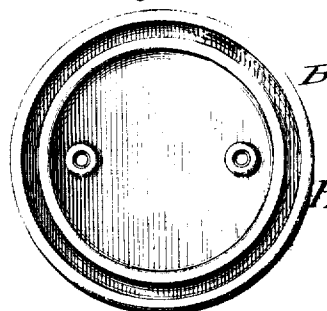


Fig. 5

Fig. 7



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UNITED STATES PATENT OFFICE.

HORACE W. CLARK, OF MATTOON, ILLINOIS.

PROTECTING BOX OR CASING.

SPECIFICATION forming part of Letters Patent No. 794,661, dated July 11, 1905.

Application filed February 15, 1905. Serial No. 245,790.

To all whom it may concern:

Be it known that I, HORACE W. CLARK, a citizen of the United States, residing at Mattoon, in the county of Coles and State of Illinois, have made certain new and useful Improvements in Protecting Boxes or Casings, of which the following is a specification.

My invention is an improvement in boxes or casings for housing water-meters, stop-cocks, valves, and other water appliances and oil and gas distributors and appliances, also telephone and other electric conductors and appliances and protecting them from improper access or injury by contact with other objects and from frost either below the surface of the ground or in open and exposed places. The invention relates particularly to an improvement in the lid applied to the neck of the box-cover or top proper and the means for fastening the same, whereby it is held securely when in use yet adapted for convenient detachment to allow access to the inclosed meter for reading the same or for detection of leaks and facilitating repairs and other purposes.

The details of construction, arrangement, and combination of parts are as hereinafter described, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of my improved meter box or casing set under ground and inclosing a water-meter of any type. Fig. 2 is a perspective view of the under side of my improved lid for the cover or top of the meter box or casing. Fig. 3 is a top plan view of such lid. Fig. 4 is a vertical detail section of a portion of the neck and cover of the box or casing. Fig. 5 is a perspective view further illustrating the engagement of the parts shown in Fig. 4. Fig. 6 is a perspective view of the cover or top of the box. Fig. 7 is a top plan view of the bottom of the box or casing.

The body A of the meter-box is preferably constructed of cast-iron or vitrified material and provided with a bottom B and a cover or top C, having, respectively, a circular groove and a shoulder for receiving and engaging the respective ends of the body A. The box or casing inclosing a meter, as shown in Fig. 1, is located in the ground, so that all but the

hollow cylindrical neck *c* of the cover is inclosed or beneath the surface. The lid D, which is applied to cover the neck *c* of the box or casing cover or top, is rabbeted on its lower side, as shown in Figs. 1 and 2, and provided at opposite points with pendent lugs *d* and *d'*, the former, *d*, being so located that its outer side is cylindrical and flush with the rabbet-shoulder, while the other lug *d'* is located a little farther from said shoulder. When the lid is applied as shown in Fig. 1, the said lug *d* abuts the interior of the cover-neck *c* and is thus of material aid in holding the cover from accidental detachment or misplacement. Between the lug *d'* and the adjacent edge of the rabbet-shoulder there is formed a hole which is round above and enlarged below, the metal being cut away on the under side adjacent to the edge of the cover. Through this hole passes a vertical hook-shaped or right-angular fastening-bolt E, the same having a polygonal head *e* (see Fig. 5) and a prong or engaging portion *e'*. The upper side of the lid D is recessed, as shown at *d''*, Figs. 1, 3, and 4, so that the head *e* of the fastening-bolt E lies below or flush with the top of the lid. The head *e* of the bolt is of a special size, so that a special wrench is required to rotate it, or, in other words, the ordinary service-box key will not fit the head. The prong *e'* of the bolt E engages a notched lug *e'*, formed on the inner side of the cover-neck *c*, as will be understood by reference to Figs. 1 and 5—that is to say, the said lug projects laterally from the interior of the neck *c* and is beveled on its front edge and under side and also provided with a notch *e''* to receive the bolt-prong *e'*. (See Figs. 5 and 6.) The lug *d'*, which is pendent from the under side of the lid D, as before described, is similarly provided with a notch in its lower edge. (See Fig. 2.) It will be seen that when the lid D is applied as shown in Fig. 1 the prong or engaging portion *e'* of the fastening-bolt E is turned so as to engage with the lug *d'*, as indicated in Figs. 2 and 4. In such application of the lid the pendent lug *d* is placed directly opposite the lug *e'* of the cover-neck, so that upon rotating the bolt E half-way round its prong *e'* will be disengaged from the lug *d'* and forced into engagement

with the lug *c'*, as in Figs. 1 and 6, such disengagement and reengagement being permitted in part by the elasticity of the material of which the bolt is made and to some extent by

5 the slight looseness of the bolt in its socket. It will be apparent that when the bolt is thus engaged with the lug *c'*, as in Figs. 1 and 5, the lid D is held from rotation and also from accidental detachment, yet when it is required
10 to obtain access to the meter or appliances for any purpose, as for inspection or repair or for reading the meter or detection of underground leaks, &c., the lid may be readily unfastened by turning the bolt E back to its
15 original position, (indicated in Fig. 2,) or, in other words, disengaging it from the lug *c'* and reengaging it with the lug *d'* of the lid D.

As a material for construction of the locking device E brass is preferably employed;
20 but it is feasible to employ others.

The object of providing the lid with a bolt-hole which is enlarged underneath, as shown, is to enable the bolt to be readily inserted or removed by placing it at an angle to the cover;
25 yet the bolt is adapted to be easily rotated when in normal position. Thus the bolt may be readily replaced in case of breakage without necessity of machine-work or labor for fitting the same.

30 The attachment and detachment or the application and locking of the lid D may be effected very easily and quickly, whereby I overcome a common objection to boxes of this character. It will be seen that the pendent
35 lug *d* of the lid lies in contact with a considerable section of the cover-neck *c* and aids in securing the cover, so that it is impossible for it to rotate or lift up, and thus disengage the locking device. The neck *c* of the cover is
40 made somewhat longer than usual and also of slightly less diameter, so that it is not open to the objection of lids of this class which are exposed to view in pavements, sidewalks, and grass terraces. Inspection of the meter or
45 other device or apparatus inclosed and protected by the box or casing is readily obtained without taking up or removing any

covering of earth, stone, or other material. It will be understood that in the terms "meter-box" or "casing" I include boxes or cas- 50 ings for protection of various forms of apparatus where the same may be applicable under substantially the same conditions.

Having thus described my invention, what I claim as new, and desire to secure by Letters 55 Patent, is—

1. The combination, with the neck of a meter box or casing cover having an interior lug, of a removable lid having a pendent lug on one side, and at an opposite point another 60 pendent lug provided with a notch, and a rotatable fastening-bolt passing through the cover at a point opposite and exterior to the pendent lug, the prong of the bolt being adapted for locking engagement with the lug on the 65 cover-neck and the adjacent notched lug, substantially as described.

2. The combination, with the neck of a protecting box or casing for the purpose specified, the same having interiorly a lug *c'* which is 70 notched on the under side and beveled on opposite sides of the notch, of a lid D having a fastening-bolt which is hook-shaped and passes through a hole in said lid and is adapted for rotation therein and for engagement with and 75 disconnection from the said notched lug when rotated in either direction, as shown and described.

3. A protecting box or casing for the purpose specified, comprising a body, a cover hav- 80 ing a neck provided interiorly with a lug which is beveled and notched on its under side, a lid for said neck having a pendent, segmental lug on one side, and, at an opposite point, a rotatable hook passing down through the lid, the 85 prong of said hook being adapted for detachable engagement with the aforesaid notch and segmental lugs corresponding to the position assumed by the bolt when rotated, as shown and described.

HORACE W. CLARK.

Witnesses:

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FRANK A. MOORE.