

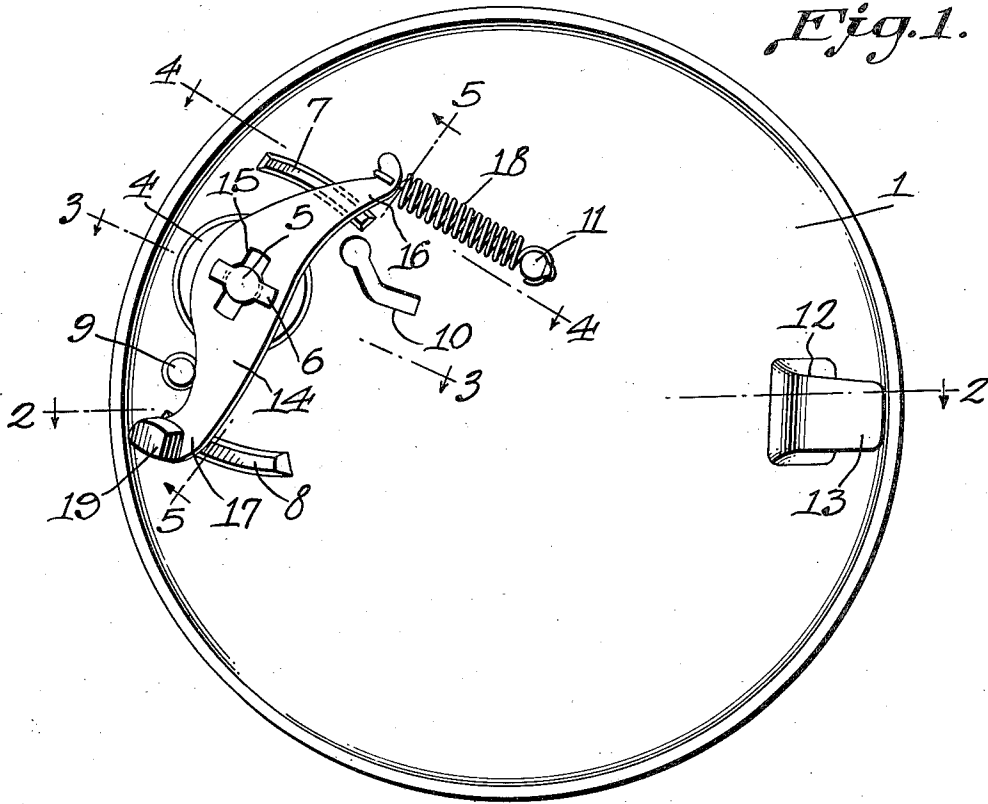
July 9, 1935.

C. THOMAS

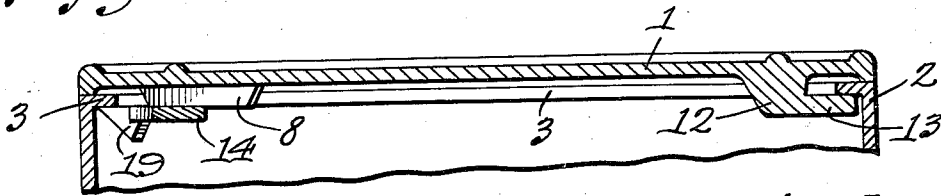
2,007,509

LOCK FOR METER BOX COVER

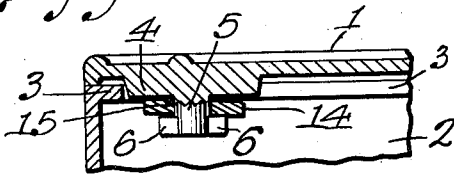
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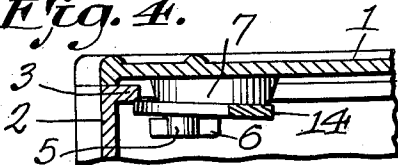
*Fig. 2.*



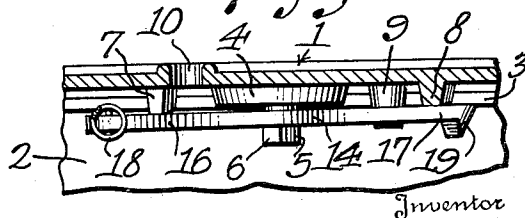
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



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## UNITED STATES PATENT OFFICE

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## LOCK FOR METER BOX COVER

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3 Claims. (Cl. 70-14)

This invention relates to a lock for use in connection with meter box covers.

It is an object of the invention to provide a structure which can be readily formed by casting and which is so constructed as to be easily assembled.

A further object is to provide a lock for meter box covers which will act efficiently to fasten the cover in closed position, it being possible to remove the cover only after a key has been inserted thereinto.

A still further object is to provide a lock with a single movable part mounted in such a manner that friction will be reduced to the minimum and the lock can thus be actuated readily by its key.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawing the preferred form of the invention has been shown.

In said drawing

Figure 1 is a bottom plan view of a meter box cover and the lock carried thereby.

Figure 2 is a section on line 2-2 Figure 1.

Figure 3 is a section on line 3-3 Figure 1.

Figure 4 is a section on line 4-4 Figure 1.

Figure 5 is a section on line 5-5 Figure 1.

Referring to the figures by characters of reference, 1 designates a meter box cover the marginal portion of which is adapted to be seated on the open top of a meter box 2, there being an inwardly extended annular flange 3 adjacent to the top as shown.

Formed on the bottom face of the cover is a boss 4 and projecting downwardly from the center of this boss is a stud 5 having oppositely extending lugs 6 forming a T-shaped head extended substantially radially of the cover.

The boss 4 is interposed between arcuate bearing ribs 7 and 8 which are also formed integral with the bottom surface of the cover 1 and a suitable stop lug 9 extends downwardly from the cover for the purpose of limiting the swinging movement of a locking lever, as will be hereinafter explained.

A keyhole 10 extends through the cover near the boss and preferably adjacent to the rib 7, although that location is not essential.

Another lug 11 is extended from the cover at

a point inwardly from the rib 7 while adjacent to the margin of the cover at a point substantially diametrically opposite the rib 8 is an angular ear 12 having a finger portion 13 which extends outwardly toward the edge of the cover but is spaced therefrom a distance substantially equal to the thickness of the flange 3.

The parts thus far described are all cast in one piece and associated with them is a locking lever indicated at 14. This lever has a longitudinal slot 15 at a point between its ends so located that when the lever is moved through approximately 90° from its normal or locking position, the slot will be located to receive the T-shaped head formed by lug 6. Thus after the lever has been placed over this head it can be swung about the stud 5 so that the lug 6 will lock the lever and hold it assembled with boss 4 as shown in the drawing.

The lever has two arms indicated at 16 and 17 respectively. Arm 16 has sliding contact with the rib 7 while arm 17 has sliding contact with rib 8. A spring 18 connects arm 16 to the lug 11 and is constantly under tension. Thus the arm 14 of the lever is held normally pressed against the stop 9 at which time a beveled head 19, which is carried by arm 17 will be positioned close to the margin of the cover 1 but spaced from the cover a distance substantially equal to the thickness of flange 3.

When it is desired to place the cover in position the ear 12 is lowered into the meter box so that finger or extension 13 can be slipped under flange 3. The beveled face of head 19 is then lowered into contact with the flange at a point substantially diametrically opposite ear 12 and if sufficient pressure is exerted thereagainst the lever will be caused to swing against the action of spring 18 until the head has passed below flange 3 at which time said spring will swing said head outwardly to its normal position where it will be located under the flange 3. Consequently the cover will be locked in place and cannot be removed until a proper key is inserted through the hole 10 and turned against arm 16 so as to swing it against the action of spring 18. This will result in the withdrawal of head 19 from under flange 3 so that the cover can then be lifted out of position.

If desired the bearing faces of the ribs 7 and 8 can be slightly inclined so that the lever will be slightly tilted thereby when swinging to locking position, thus to cause the head 19 to point upwardly against flange 3 overlying it.

It will be noted that practically all of the friction

tion resulting from the actuation of lever 14 takes place between said lever and the narrow bearing faces of the ribs 7 and 8. As such friction is slight, the lever can be actuated readily by means 5 of its key.

By locating the keyhole 10 adjacent to boss 4 and rib 7 said boss and rib can be utilized as baffles to prevent actuation of the lever by any key except one which is of the proper shape.

10 What is claimed is:

1. The combination with a meter box cover, of means extending therefrom for detachably engaging a meter box, spaced ribs upon the cover, a boss interposed between the ribs, a stud projecting from the boss and having oppositely extending lugs providing a T-shaped head, said boss, stud, ribs and box engaging portions being all formed in a single piece, a lever fulcrumed on the stud and having a slot for receiving the T-shaped head when the lever is moved to a predetermined point away from locking position, said lever having oppositely extending arms positioned for sliding contact with the respective ribs, a box engaging locking head carried by one arm of the lever, a spring connecting the other arm of the lever to the cover for exerting a constant pull thereupon, and means for limiting the swinging movement of the lever under the action of the spring, there being a keyhole in the cover adjacent to the lever.

2. The combination with a meter box cover, of means extending therefrom for detachably engaging a meter box, spaced ribs upon the cover, a boss interposed between the ribs, a stud projecting from the boss and having oppositely extending lugs providing a T-shaped head, said boss, stud, ribs and box engaging portions being all formed in a single piece, a lever fulcrumed on

the stud and having a slot for receiving the T-shaped head when the lever is moved to a predetermined point away from locking position, said lever having oppositely extending arms positioned for sliding contact with the respective ribs, a box engaging locking head carried by one arm of the lever, a spring connecting the other arm of the lever to the cover for exerting a constant pull thereupon, and means for limiting the swinging movement of the lever under the action of the spring, there being a keyhole in the cover adjacent to the lever, portions of the boss and one of the ribs constituting baffles for preventing actuation of the lever by any but a selected key.

3. The combination with a meter box cover, of means extending therefrom for detachably engaging a meter box, spaced ribs upon the cover, a boss interposed between the ribs, a stud projecting from the boss and having oppositely extending lugs providing a T-shaped head, said boss, stud, ribs and box engaging portions being all formed in a single piece, a lever fulcrumed on the stud and having a slot for receiving the T-shaped head when the lever is moved to a predetermined point away from locking position, said lever having oppositely extending arms positioned for sliding contact with the respective ribs, a box engaging locking head carried by one arm of the lever, a spring connecting the other arm of the lever to the cover for exerting a constant pull thereupon, and means for limiting the swinging movement of the lever under the action of the spring, there being a keyhole in the cover adjacent to the lever, the bearing faces of the ribs being pitched to impart a slight tilt to the lever during its actuation by the spring thereby to guide the head toward the cover during such actuation.

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