

H. JONES.  
 LOCKING MECHANISM FOR MANHOLE COVERS.  
 APPLICATION FILED MAR. 9, 1911.

1,001,041.

Patented Aug. 22, 1911.

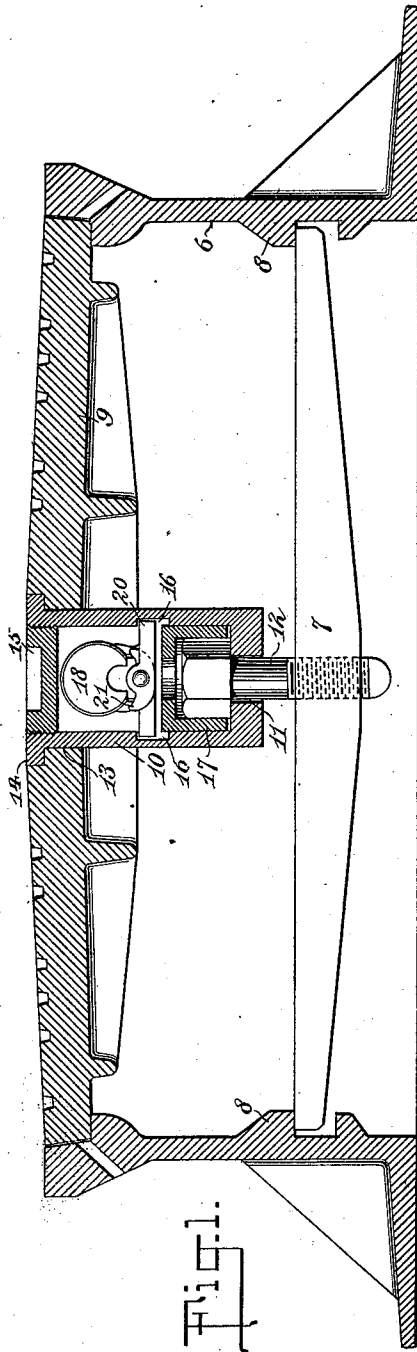


Fig. 1.

WITNESSES:  
*R. N. Hunt*  
*A. V. Walsh*

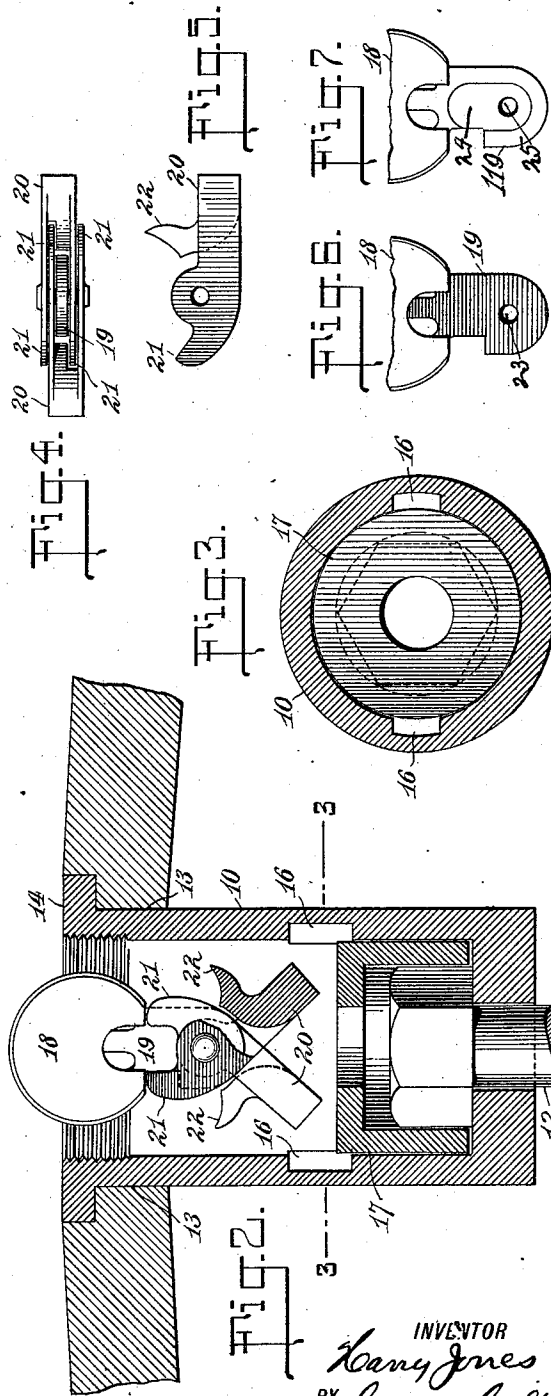


Fig. 2.

INVENTOR  
*Harry Jones*  
 BY *George Berk*  
 ATTORNEY

# UNITED STATES PATENT OFFICE.

HARRY JONES, OF SUFFERN, NEW YORK, ASSIGNOR TO EDWARD H. FALLOWS, OF  
NEW YORK, N. Y.

## LOCKING MECHANISM FOR MANHOLE-COVERS.

1,001,041.

Specification of Letters Patent. Patented Aug. 22, 1911.

Application filed March 9, 1911. Serial No. 613,217.

*To all whom it may concern:*

Be it known that I, HARRY JONES, a citizen of the United States, and a resident of Suffern, in the county of Rockland and State of New York, have made and invented certain new and useful Improvements in Locking Mechanism for Manhole-Covers, of which the following is a specification.

My invention relates to locking mechanism for securing covers of manhole frames in place so that the cover may not be removed by unauthorized persons, and the object thereof is to provide a locking mechanism by means of which the street cover of the manhole may be locked in place instead of an inner cover lying below the surface of the street, as has commonly been the case; and to provide a locking mechanism for the purpose stated which may be readily applied to manhole covers and frames of standard or common form with a minimum of change in design in said parts, all as hereinafter described and claimed, and as illustrated in the accompanying drawing.

In the accompanying drawing, wherein the preferred embodiment of my invention is illustrated: Figure 1 is a view showing a section of a manhole frame and cover upon a vertical central plane, with my locking mechanism applied thereto; Fig. 2 is a fragmentary view showing my improved locking mechanism enlarged; Fig. 3 is a view showing a section upon a plane indicated by the line 3—3, Fig. 2; Fig. 4 is a view showing certain locking levers which form a part of my device; Fig. 5 is a view showing one of the locking levers above referred to; Fig. 6 is a view showing a portion of a lock used with my improved locking device; and Fig. 7 is a similar view showing the lock with a different form of shackle.

In the drawing, 6 is a manhole frame, and 7 is a cross bar extending across the opening therein, and the ends of which engage lugs 8 formed on the inner surface of the frame.

The manhole cover is shown at 9, and 10 is a pocket depending from the cover 9 and having an opening 11 in its lower end through which a bolt 12 extends, the head of the bolt lying in the lower end of the pocket, as shown, and the lower end thereof

being in threaded engagement with an opening formed in the cross bar 7.

The pocket 10 is preferably formed separate from the cover 9 and fits within an opening 13 formed in the cover, the upper end of the pocket having a projecting flange 14 which fits in a rabbet formed in the cover 9, as shown. This construction permits the pocket 10 to be formed separate from the cover 9 and furnished for use with manhole covers having a central opening only; and permits existing manhole covers or patterns for the same to be easily changed so as to provide for the use therewith of locking mechanism constructed in accordance with my invention. The upper end of the pocket 10 is closed by means of a detachable plug 15 preferably in threaded engagement with the said pocket.

The inner surface of the pocket 10 is provided with two recesses 16—16, and 17 is a cap fitting over the head of the bolt 12 and having an opening in its upper side so that it may be readily engaged by a suitable tool and lifted from the pocket, whereupon the bolt 12 may be removed as by a suitable socket wrench, thus permitting the manhole cover 9 to be removed from the frame. The upper end of the cap 17 lies adjacent the lower ends of the recesses 16, as shown.

The cap 17 and bolt 12 are protected from removal by unauthorized persons by means of locking mechanism comprising a lock 18 similar to an ordinary padlock, and having a reciprocating shackle 19 and two levers 20, 20, pivotally connected therewith, to which end the same is provided with a hole 23 as shown in Fig. 6. In case a padlock of ordinary form is used, the shackle 119 thereof will be provided with a filling piece 24 as shown in Fig. 7, the same having a hole 25 corresponding with the hole 23. The levers 20 have each a projection 21 adapted to engage the casing of the lock 18 to thereby prevent the same from being removed unless it be first unlocked, and another projection 22 which supports the lock in an upright position and prevents the ends of the levers from folding upward about the lock 18 as the locking mechanism is placed in position. The ends of the levers 22 lie within the recesses 16 when the locking mechanism is in its locked condition.

When the shackle 19 is in its outer or un-

locked position, the levers 20 carried thereby may be folded into the position shown in Fig. 2. The lock and levers are then forced downward, whereupon the ends of the levers 5 20 engage the top of the cap 17 and are guided into the recesses 16, the lock 18 being by the same operation forced downward over the shackle until the interior mechanism of the lock catches and holds the 10 shackle in its closed or locked position. The stops 22 engage the casing of the lock 18 as the same is forced downward, and, as will be understood from Fig. 1, prevent the levers from being folded upward about 15 the case of the lock should it be desired to use the locking mechanism without the cap 17 or an equivalent element to be engaged by the levers in the act of putting the lock in place. The parts being in locked condition as 20 shown in Fig. 1, upward movement of the lock 18, unless it be first unlocked, will be prevented by the engagement of the projections 21 with the exterior casing of the lock. If, however, the lock be unlocked so that the 25 shackle may move out from the casing, then, upon moving the lock upward, the projections 21 clear the casing thereof and the levers 20 will be collapsed and made to assume the position shown in Fig. 2 as the 30 locking mechanism is withdrawn from the pocket 10.

Having thus described and explained my invention, I claim and desire to secure by Letters Patent:

35 1. In locking mechanism for manhole covers, a cover; a pocket depending from said cover; a bolt extending through the bottom of said pocket and by means of which the cover may be secured in place; locking 40 means located within said pocket for preventing the removal of said bolt therefrom; and means for closing the upper ends of said pocket.

45 2. A manhole frame; a cover at the upper end of said frame and which cover forms a part of the surface of a street when said frame is in place; a pocket depending from said cover; a cross-bar the ends of which are in engagement with said frame; a bolt extend- 50 ing through the bottom of said pocket and engaging said cross-bar; and locking means

located within said pocket for preventing the removal of said bolt therefrom.

3. In locking mechanism for manhole covers, a cover; a pocket depending from said 55 cover and having two oppositely located recesses formed in its inner surface; a bolt extending through the bottom of said pocket and by means of which the cover may be secured in place; locking means located with- 60 in said pocket for preventing the removal of said bolt therefrom; and means for closing the upper end of said pocket.

4. In locking mechanism for manhole covers, a cover; a pocket depending from said 65 cover and having two oppositely located recesses formed in its inner surface; a bolt extending through the bottom of said pocket and by means of which the cover may be secured in place; a lock located within said 70 pocket and having a reciprocating shackle; two levers pivotally secured to said shackle and each of which is provided with a projection adapted to engage the casing of said lock, and the ends of which levers enter the 75 recesses aforesaid when the shackle is in its closed and locked position; and means for closing the upper end of said pocket.

5. In locking mechanism for manhole covers, a cover; a pocket depending from said 80 cover and having two oppositely located recesses formed in its inner surface; a bolt extending through the bottom of said pocket and by means of which the cover may be secured in place; a cap inclosing the head of 85 said bolt; a lock located within said pocket and having a reciprocating shackle; two levers pivotally secured to said shackle and each of which is provided with a projection adapted to engage the casing of said lock, 90 and the ends of which levers enter the recesses aforesaid when the shackle is in its closed and locked position; and means for closing the upper end of said pocket.

Signed at Suffern, in the county of Rock- 95 land and State of New York, this 27th day of February, A. D. 1911.

HARRY JONES.

Witnesses:

EUGENE M. GREEN,  
C. C. MORGAN.