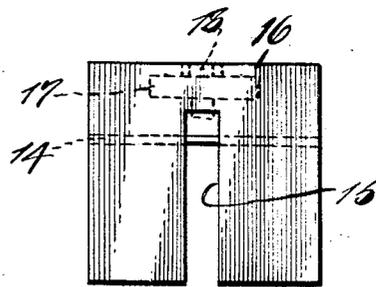
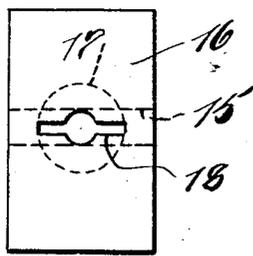
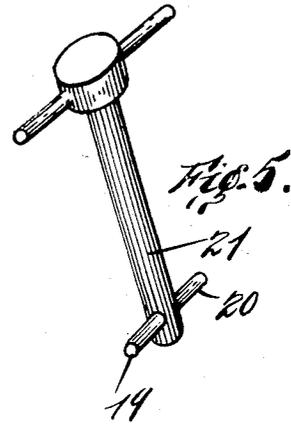
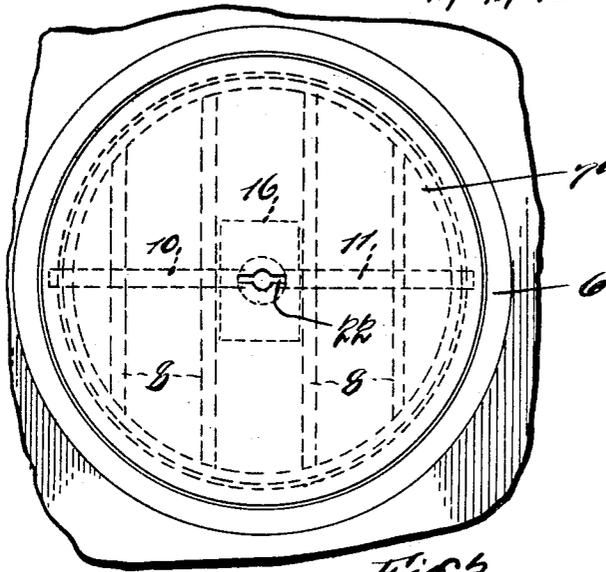
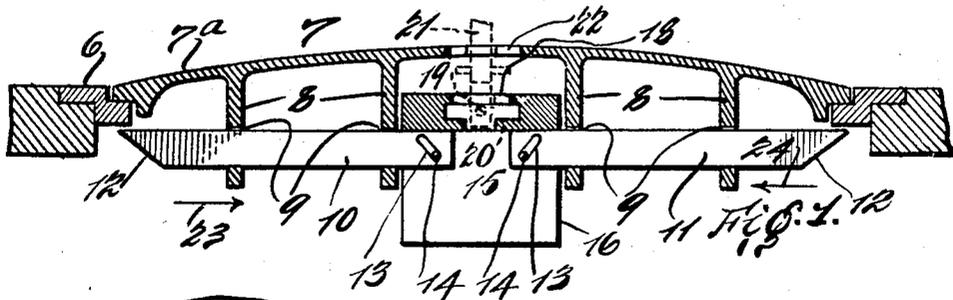


R. GOLDEN.
 MANHOLE COVER.
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MANHOLE-COVER.

1,287,290.

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To all whom it may concern:

Be it known that I, ROBERT GOLDEN, a citizen of the United States of America, residing at Brooklyn, Kings county, State of New York, have invented certain new and useful Improvements in Manhole-Covers, of which the following is a full, clear, and exact description.

This invention relates to improvements in covers for manholes, coal-holes or the like, the object being to provide a cover for man or coal-holes that can quickly and securely be locked in position, the locking mechanism being operable exteriorly of the opening covered, that is to say, the locking mechanism is arranged so that it can be unlocked from above, or locked if necessary. Under ordinary conditions the cover will be self-locking, as will hereinafter appear. One of the advantages arising from my invention is that a man or coal-hole cover will be held against movement after it has been placed in position over an opening, that is to say, it cannot be tipped by being stepped on, nor can it be accidentally pushed away so as to leave an unprotected opening.

I will now proceed to describe my invention in detail, the novel features of which I will point out in the appended claims, reference being had to the accompanying drawing, forming part hereof, wherein:—

Figure 1 is a sectional view of my invention;

Fig. 2 is a plan view thereof on a reduced scale;

Fig. 3 is an enlarged detail plan view of one of the elements of the locking mechanism;

Fig. 4 is a side view thereof; and

Fig. 5 is a perspective view of a form of key which I employ to manipulate the lock.

In the drawing, the numeral 6 indicates the usual standard sidewalk man-hole frame to receive a cover 7, of my improved construction. The cover 7 in this instance consists of a circular disk 7^a having ribs 8 provided with slots or openings 9 to slidably retain locking bolts 10 and 11 beveled at the ends, as indicated by 12. The inner end of each bolt 10 and 11 carries an angularly inclined slot 13 through which a pin 14 is passed. The inner end of each of said bolts is located in a slot 15 in a block or weight 16 arranged to be raised and lowered, said block being slidably positioned between the centrally located ribs 8. As can be seen in

Fig. 4, the pins 14 are carried by the block or weight 16 and cross the slot 15. The block 16 is further provided with a recess 17 having in communication therewith a slot 18 for the insertion of the nibs 19 and 20 of a key 21. The key 21 is passed through a slot 22, in the cover 7, when the block 16 is to be engaged thereby. As can be seen in Fig. 1, the bolts 10 and 11 engage the frame 6, or rather the ends of the bolts pass under the frame, when said bolts are in locked position; hence the cover cannot be removed from the frame.

To unlock the cover, the key 21 will be passed through the opening or slot 22 in the cover and pressed downwardly, causing the nibs 19 and 20 to pass through the slot 18, in the top of the block 16, into the recess 17, after which the bolt will be given a quarter turn, causing it to assume the position indicated by dotted lines, Fig. 1. After the key has been thus positioned, it can be used to draw the block or weight 16 upwardly, thereby drawing the bolts in the direction of the arrows 23 and 24, Fig. 1, due to the arrangement and coöperation of the slots 13 and pins 14. After the cover has been removed, the key can be withdrawn by reversing the operation above described.

To apply the cover, it is but necessary to place it in position over the opening and stamp the foot on same. The force resulting from stamping or pressing downwardly on the cover will cause the bolts 10 and 11 to move inwardly in the direction of the arrows 23 and 24 until the ends of the bolts have cleared the frame 6, after which the weight of the block 16 will cause the bolts to move into locking position. The weight of the block 16 will be sufficient to maintain the bolts 10 and 11 in locked position at all times, whether the cover is in position over an opening or removed therefrom. Hence, while a key is necessary to unlock the cover, it will be self-locking, due to the provision of the weight or block 16.

What I claim as my invention is:

1. In combination with a manhole cover having a slot for the passage of a key, a block slidably retained by said cover, said block being provided with a recess, alining with the slot in said cover, to receive a key, and a plurality of locking bolts adapted for operation by said key.

2. In a manhole cover, a disk, ribs carried thereby, a plurality of locking-bolts slid-

ably retained by said ribs, a block slidably mounted centrally of said disk between adjacent ribs, means carried by the block cooperating with said bolts to actuate the latter, and means operable from the exterior of the cover to actuate the block.

3. In a device, as described, in combination, a manhole frame, a cover mounted thereupon, a pair of oppositely-disposed locking bolts, guides on said cover for supporting said bolts for horizontal movement, a block, a guide on said cover in which said block moves vertically, said block engaging said bolts to simultaneously advance and retract them to cause them to move under and away from the manhole frame, and means projectable into the cover and engageable with said block to actuate the latter.

4. In a device as described, in combination, a manhole frame, a cover engaging the same, a series of depending ribs on said cover, a block weight guided vertically between two of said ribs, said ribs being formed with a series of horizontally-alining openings, a pair of locking bolts adapted to slide horizontally in said alining open-

ings, the inner ends of said bolts projecting through the ribs guiding said block, said block resting upon said bolt, and cooperating means on said bolts and block adapted, when said block is lifted, to move said bolts horizontally at the same time.

5. In a device as described, in combination, a manhole, a cover seated thereupon, a pair of horizontally-movable locking bolts guided beneath said cover, a weight block straddling the inner ends of said bolts, and supported thereupon, the inner ends of said bolts being formed with oppositely-inclined slots, pins carried by said block passing through said slots, the free ends of said bolts being under the manhole frame when said pins are at the lower ends of said slots and means for actuating said block to move said pins to the upper ends of said slots so as to retract said bolts.

Signed at New York city, N. Y., this 14 day of March, 1918.

ROBERT GOLDEN.

Witnesses:

EDWARD A. JARVIS,
MAURICE BLOCK.