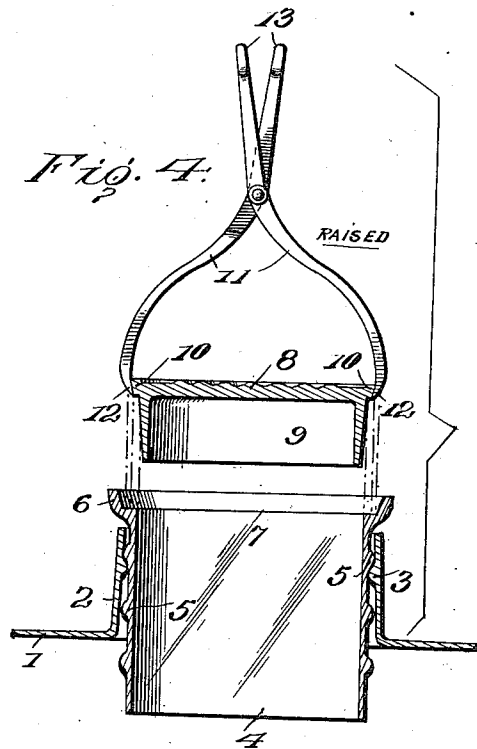
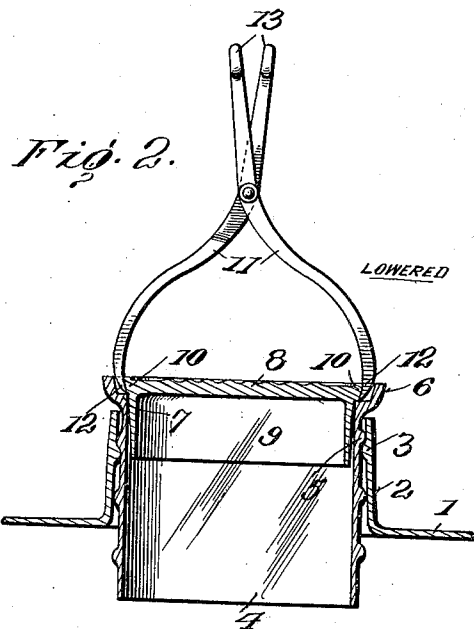
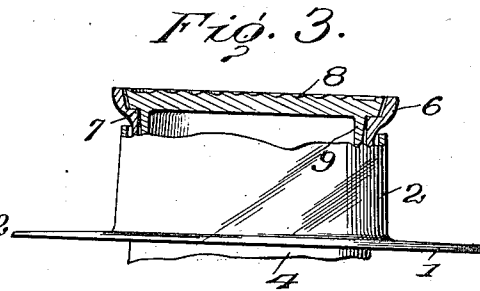
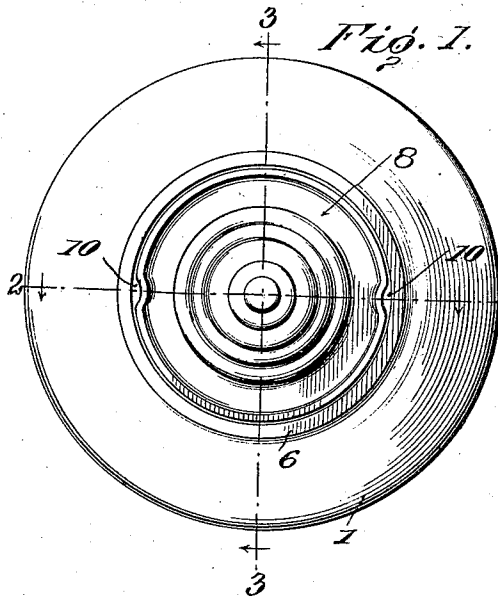


G. SCHUMACHER.
SERVICE OR VALVE BOX.
APPLICATION FILED JAN. 25, 1910.

1,027,911.

Patented May 28, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

GERARD SCHUMACHER, OF ANNISTON, ALABAMA.

SERVICE OR VALVE BOX.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GERARD SCHUMACHER, a citizen of the United States, residing at Anniston, Calhoun county, Alabama, have
5 invented certain new and useful Improvements in Service or Valve Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art
10 to which it appertains to make and use the same.

This invention relates to certain improvements in covers for meter, valve, service, and other boxes; and the objects and nature
15 of my invention will be readily understood by those skilled in the art in the light of the following explanation of the accompanying drawings illustrating what I now consider my preferred embodiment from
20 among other formations and arrangements within the spirit and scope of my invention.

An object of the invention is to provide an exceedingly simple and durable cover of an improved formation for closing the top
25 openings into service, valve, meter or other boxes usually set in roadways, side walks or elsewhere on public highways and whereby the cover can be removed only by continued lifting or upward movement parallel
30 with the axis of the opening or manhole through the medium or instrumentality of a special tool or implement.

The invention consists in certain novel features in construction or arrangement, or
35 in combinations or arrangements of parts or features as more fully and particularly set forth hereinafter.

Referring to the accompanying drawings:—Figure 1, is a top plan view of a
40 meter, valve, service or other box showing in top plan a cover of my construction closing the opening or manhole of said box. Fig. 2, is a vertical section in the plane of the line 2—2, Fig. 1, showing the special
45 lifting tool applied to the cover. Fig. 3, is a partial section in the plane of the line 3—3, Fig. 1. Fig. 4, is a section taken in the same plane as that of Fig. 2, but showing the cover held in elevated or lifted
50 position by the special tool.

Thousands of service, roadway, meter, valve or other boxes are now in use set or buried in public highways, streets, side
55 walks, etc., and often closed by cast iron covers fastened by brass screws having peculiarly formed heads to fit correspond-

ing keys or the like. These brass screws are often broken, lost or stolen enabling the covers to be readily displaced and wrong-
fully removed or misplaced rendering the
60 boxes useless. I have produced a cover for such boxes and the like, which is without separate or added locking screws, keys or other devices, but which is locked against
65 accidental or unauthorized removal, inasmuch as said cover can be removed only when moved upward or lifted in a certain
line or direction while being maintained in a certain particular position, and which
70 hence requires a special tool or implement for thus lifting and maintaining the position of the cover.

In the specific example shown in the accompanying drawings, 1, is the cast iron (or other suitable material) top wall of any
75 suitable service or other box having the vertical flange 2, surrounding the top opening into said box, and this flange can be formed with the internal stop or supporting ribs or lugs 3, for upholding the box or
80 top extension 4, having vertical series of external ribs or lugs 5, adapted to rest on the lugs 3, for upholding the extension in the box opening in the desired vertical adjustment, as will be readily understood by
85 those skilled in the art. The extension 4, extends vertically through the box opening within the flange 2, and is designed to support the cover at the desired distance from and above the box top wall. The extension
90 is usually internally approximately smooth and approximately cylindrical, and is formed with a bell-shaped or flared upper end 6, internally countersunk or annularly recessed to form the depressed cover seat
95 7, having a vertically disposed usually slightly flaring surrounding or annular wall.

8, is the plain or flat disk-like cover usually cast in one piece with a depending
100 approximately cylindrical skirt, hollow shank or extension 9, of a reduced diameter with respect to the diameter of the cover or disk proper. The cover or disk proper is of
105 a size to fit down snugly in the seat 7, of the upper end of the box extension with the top face of the cover flush or approximately flush with the top edge of said box extension, and with the cover resting on and
110 supported by the floor or shoulder of said seat and with the skirt depending into the box extension below said seat and snugly

fitting within said extension to prevent tilting or rocking of the cover. The peripheral edge of the cover proper or disk can be slightly beveled or flared to correspond with the flare or bevel of the surrounding wall of the cover seat 7. It will hence be observed that the cover cannot be removed by tilting the same, but in order to remove the cover it must be lifted or moved upwardly in a direct vertical line parallel with the axis of the box opening and that while being thus lifted the cover must be maintained in its normal horizontal position until its depending skirt or extension is clear of the vertical wall of the box opening. In order to permit such movement or manipulation of the cover, I form the same with lifting tool or implement receiving sockets or recesses, preferably so arranged as to avoid the possibility of thus lifting the cover by the application of the fingers or hands thereto but so as to require a special tool. For instance, in the specific example illustrated, I show the cover disk formed with diametrically opposite shallow edge depressions, sockets or recesses 10, of sufficient width to admit the points or jaws of a lifting tool into the cover seat or socket of the box wall, and the edge of the cover at said recesses is preferably inclined downwardly and inwardly to form shoulders under which said tool points can catch or engage and to thereby form the recesses under-cut.

Various special lifting tools or implements can be employed and my invention is not limited to any particular structure or formation of cover lifting device, but the cover is so formed that it cannot be lifted except by application of a special key or tool, and as an example of a convenient form of lifting implement, I show lifting tongs consisting of a pair of crossed pivoted handles or levers 11, at their lower free ends having the inwardly and downwardly inclined lifting points or jaws 12, and at their upper ends having the hand holds 13. The manipulation of the lifting tongs in raising the cover will be readily understood by those skilled in the art.

My invention is not limited to application to box openings, the cover receiving wall of which is formed by a box extension, inasmuch as the cover can be applied to opening walls formed integral with the box

top wall, or to the opening wall formed by flange 2. Also my invention is not limited to the particular type or formation of box shown.

Particular attention is directed to the fact that my service or valve box cover is unobstructed at the top and excepting notches 10, is without projections, holes, sockets, or other means whereby the cover can be lifted, except by the special tool or key required, and that the extension 9, is so elongated and snugly fitted in the wall of the box, as to absolutely require application of the special tool to remove the cover, thereby preventing unauthorized dislodgment and removal of the covers by hand or by application of picks, bars or implements other than the special key-constituting tool.

What I claim is:—

1. A service or valve box, or the like, having an opening surrounded by a vertical wall having a cover-receiving seat slightly below the opening, in combination with a cover fitted down in said seat and having elongated means depending within and snugly fitting said wall to confine the cover against removal except by extensive vertical movement parallel with the axis of said opening, said cover formed with diametrically-opposite edge recesses adapted to receive only a special, removable cover-lifting implement, by which implement alone the cover can be lifted.

2. A service or valve box, or the like, having an opening surrounded by a vertical wall having a top-depressed cover-receiving seat slightly below the opening, in combination with a cover fitted down in said seat and having an elongated depending extension within and snugly fitting said wall to confine the cover against removal except by extensive vertical movement parallel with the axis of said opening, said cover formed with diametrically-opposite undercut edge depressions adapted to receive only a special key-constituting cover-lifting implement by which implement alone the cover can be lifted.

In testimony whereof I affix my signature, in presence of two witnesses.

GERARD SCHUMACHER.

Witnesses:

S. F. MORRIS,

HENRY A. TAZER.