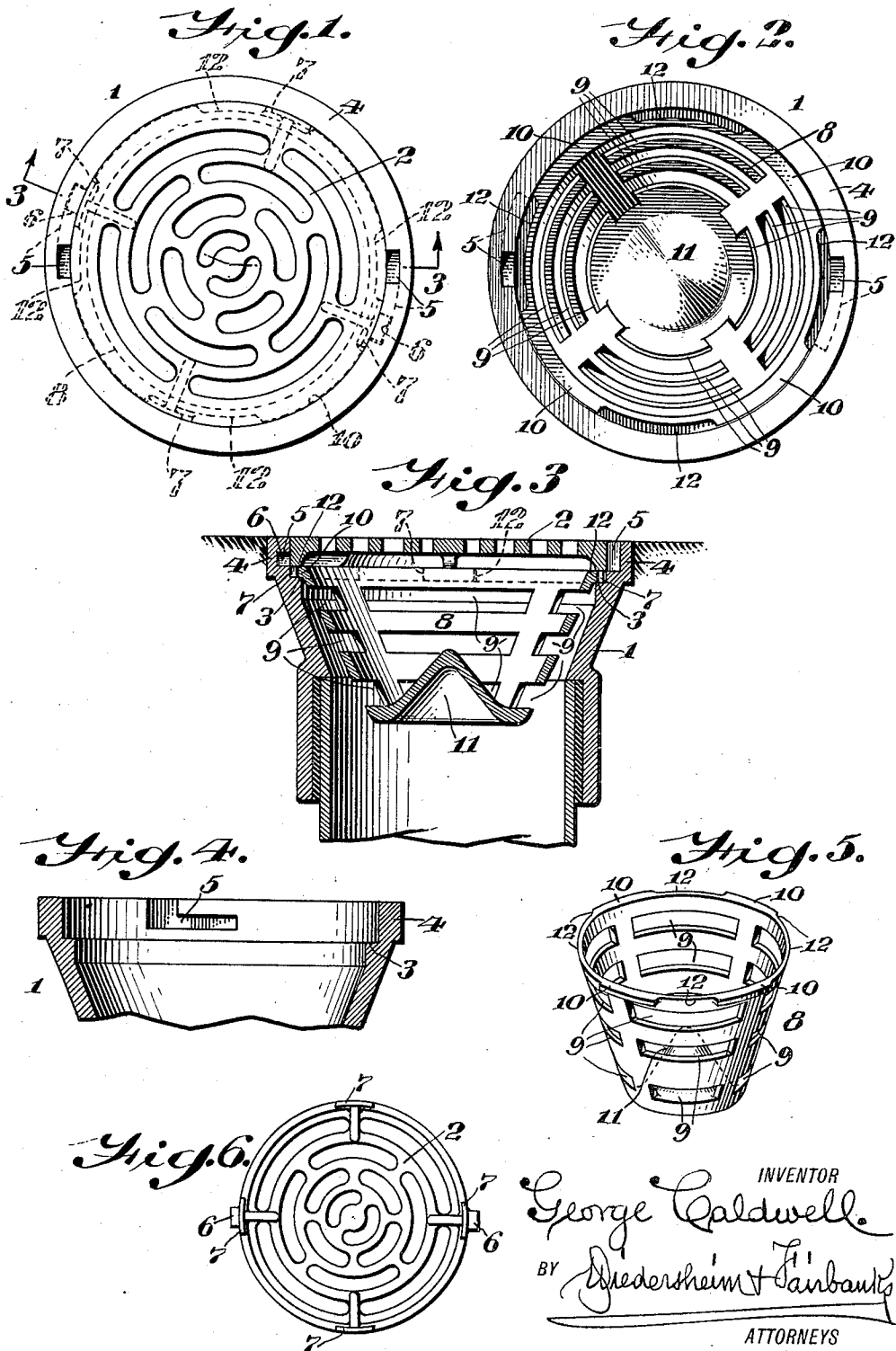


G. CALDWELL.
MANHOLE.
APPLICATION FILED JAN. 18, 1919.

1,310,055.

Patented July 15, 1919.



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GEORGE CALDWELL, OF PHILADELPHIA, PENNSYLVANIA.

MANHOLE.

1,310,055.

Specification of Letters Patent.

Patented July 15, 1919.

Application filed January 18, 1919. Serial No. 271,812.

To all whom it may concern:

Be it known that I, GEORGE CALDWELL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Manhole, of which the following is a specification.

My invention consists in providing a manhole with a strainer which is adapted to cause sticks, leaves, etc., and mud and other deposits of the kind entering the same causing the mass of said deposits to be broken up and so more readily flow out of the strainer through the side thereof without being trapped or forming a seal so as to be directed to a sewer or outlet, thus clearing said strainer and preventing clogging of the same.

The invention is satisfactorily illustrated in the accompanying drawing, but the important instrumentalities thereof may be varied, and so it is to be understood that the invention is not limited to the specific details shown and described, as long as they are within the spirit or scope of the claims.

Figure 1 represents a top or plan view of a manhole embodying my invention.

Fig. 2 represents a top or plan view of the interior of the manhole embodying my invention, the cover of the box or casing thereof having been removed.

Fig. 3 represents a vertical section on the line 3—3 Fig. 1.

Fig. 4 represents a vertical section of a portion of the box or casing of the manhole.

Fig. 5 represents a perspective view of the strainer removed from said box or casing.

Fig. 6 represents a bottom plan view of the cover of the manhole.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings.

1 designates the box or casing of a manhole and 2 designates the cover thereof, said cover having openings therethrough. On the inner side of the upper portion of said box is the horizontal shoulder 3 on which said cover may be sustained the top rim 4, of said portion having in its inner side the comparatively L-shaped slots 5 which are adapted to receive the tongues 6 which project outwardly from the periphery of said cover and are adapted to enter the vertical portions of said slots whereby when the cover is rotated said tongues may wedgingly

enter the horizontal portions of said slots, thus interlocking the cover with said rim 4 after the manner of bayonet joints and firmly retaining the cover in place on said rim, as most plainly shown in Fig. 1, these features *per se* not being new, they existing in the Letters Patent No. 1,131,327, granted to me on the ninth day of March, 1915.

In the present case the peripheral portion of the cover has thereon the legs 7 which depend therefrom and are adapted to be seated on the shoulder 3 thus sustaining said cover.

8 designates a strainer which consists of a hollow body having in its side wall a series of elongated openings forming outlets or passages 9, the outturned rim 10 at the top, and the closed bottom 11, said strainer being adapted to be located within the box 1 below the top 2 and suspended by the rim 10 which is seated on the shoulder 3 of the box, it being noticed that said rim 10 is cut away at intervals forming the vertical passage or spaces 12 which permit the legs 7 of the cover 2 to descend through the same and to be seated on the shoulder 3 whereby the cover is supported on said shoulder, the same as is the rim 10 of the strainer, and when said cover is interlocked with the rim 4 of the box 1 in the slots 5 thereof the strainer is firmly held in position by said cover.

Attention is drawn to the fact that after the strainer is seated by its rim 10 on the shoulder 3 on the interior of the box, the cover 2 is applied and its legs 7 are passed through the passages 12 in said rim so as to be seated on said shoulder, while the tongues 6 of said cover descend the vertical portions of the L-shaped slots 5. Then the cover is turned whereby said tongues 6 enter the horizontal portions of said slots 5, and so causes the interlocking of the cover with the box. In the rotation of said cover, its legs 7 while resting on the shoulder 3 turn in the passages 12 without disturbing or rotating the strainer 8.

The bottom 11 of the strainer is upturned in the form of a cone, the apex of which is above the lower end of the side wall of the strainer, said cone being without openings therein, but its upper or inner wall tapers from the apex to its base where the latter joins said lower end of the side wall of the body of the strainer, said base being adjacent to the lowermost slots or outlets 9 in said body whereby the solid matters enter-

ing the strainer drop on the tapering wall of said conical bottom and flow downwardly thereon and directly laterally by the somewhat outturned peripheral portion of said base to and through said lowermost slots or outlets 9 into the sewer or outlet, said bottom thus being effectively washed of said matters.

It will be seen that when matters flow through the cover 2 they enter the strainer. Then sticks, leaves, etc., may float out with the water through the passages 9 and so enter the sewer or conduit, while mud, soot and other deposits of semi-fluid nature may strike the conical bottom 11 and descend thereon and so spread as to be disintegrated when the mass in said condition flows out laterally from the box through the adjacent passages 9 whereby it drops into the sewer or conduit, it being seen that there is a separation of the different matters originally entering the strainer, and a distribution of the same from the latter to the sewer or conduit whereby clogging of the matters in the strainer and sewer or conduit is prevented.

When the cover is properly rotated it may be unlocked and lifted from the box when the strainer is accessible and may be removed if so desired.

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

1. In a manhole, a box, a cover therefor, and a strainer in said box below said cover, said strainer consisting of a hollow body having outlets in its side wall, and a closed bottom, whose peripheral portion extends laterally below the adjacent outlet in said side wall, said bottom being of conical form rising into the body above the lower end thereof, the lower outlet being at the outer rim of said conical bottom avoiding a trap or seal at said rim.

2. In a manhole, a box having on its inner wall a shoulder, a cover for said box having depending legs, which are adapted to be seated on said shoulder, and a strainer in

said box formed of a hollow body having outlets in its side wall, a rim at the top, adapted to be seated on said shoulder, and a closed bottom, said rim being cut away at intervals forming passages through which said legs of the cover may enter to be seated on said shoulder permitting said cover to be rotated in its locking and unlocking motions without moving said strainer.

3. In a manhole, a box having on its inner wall a shoulder, a cover for said box adapted to be locked to the latter and having depending legs which are adapted to be seated on said shoulder, and a strainer in said box formed of a hollow body having outlets in its side wall, a rim at the top, the same being adapted to be seated on said shoulder, and a closed bottom, said rim being cut away at intervals forming passages through which said legs of the cover may enter and be seated on said shoulder, said bottom being of conical form projecting upwardly in the body of the strainer above the lower end of the side wall of the latter, said passages permitting said legs to play therein in the rotation of said cover in its locking and unlocking motions.

4. In a manhole, a box, a perforated rotatable cover and an interior strainer, the latter having openings in its sides, and a bottom of conical form which projects upwardly above the lower end of the side of said strainer, said box having on the inner side of its upper portion a shoulder, said cover having on its peripheral portion legs, the rim of said strainer having passages which said legs occupy while resting on said shoulder and in which said legs are adapted to play in the rotation of said cover in the locking and unlocking of the latter, said box and cover having means for interlocking said cover therewith.

GEORGE CALDWELL.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."