No. 638,691. Patented Dec. 12, 1899.

J. BANWELL.

INLET FOR CATCH BASINS.

(Application filed May 15, 1899.)

(No Model.)

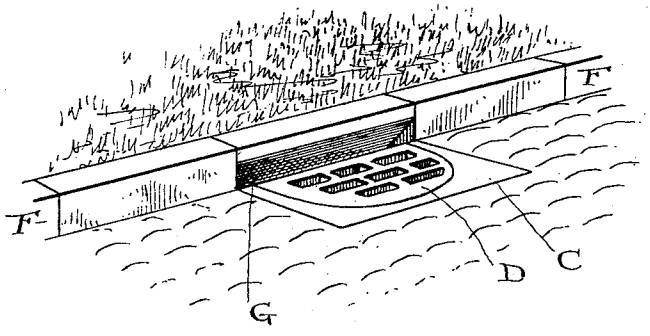


Fig. 1.

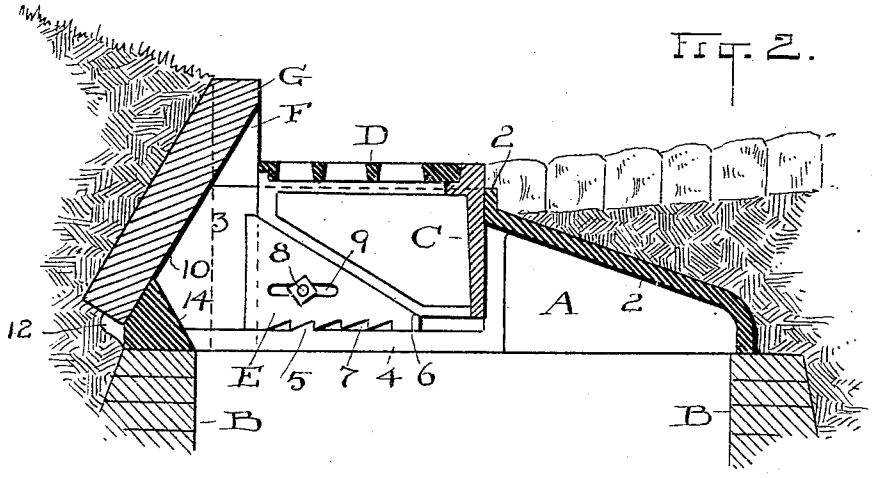


Fig. 2.

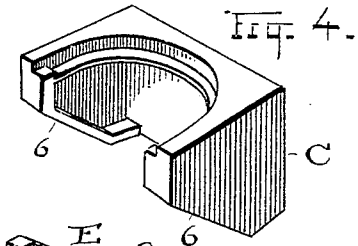


Fig. 4.

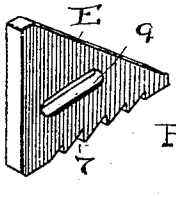


Fig. 5.

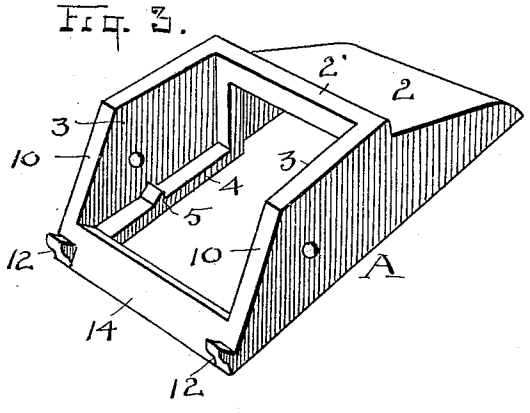


Fig. 3.

ATTEST

T. B. Moore

H. E. Munn

INVENTOR.

JAMES BANWELL

BY W. V. Fisher

ATTY

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES BANWELL, OF CLEVELAND, OHIO, ASSIGNOR OF THREE-FOURTHS TO CHARLES W. NOKES AND WILLIAM H. RISLEY, OF SAME PLACE.

INLET FOR CATCH-BASINS.

SPECIFICATION forming part of Letters Patent No. 638,691, dated December 12, 1899.

Application filed May 15, 1899. Serial No. 716,896. (No model.)

To all whom it may concern:

Be it known that I, JAMES BANWELL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Inlets for Catch-Basins; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to inlets for catch-basins; and the invention relates to the style of basin-inlets in which there is a direct down discharge through open grating and a free side and down discharge through the curbing.

The invention therefore consists in the construction, combination, and arrangement of parts, substantially as shown and described, and particularly pointed out in the claims.

Figure 1 is a perspective view, looking toward the curb, of a section of street and curb in which one of my new inlets is placed in working position. Fig. 2 is a sectional elevation of my new and improved device as it appears when assembled and set up for use and showing also a portion of the street and curbing in section to more clearly disclose the relation and operative connection of the parts. Fig. 3 is a perspective elevation of the body or casing of the inlet, and Fig. 4 is a perspective elevation of the grate-support alone. Fig. 5 is a perspective view of one of the ratchet-plates for the grate-support, all as hereinafter fully described.

Experience has demonstrated that both direct and side discharge are desirable in catch-basin inlets and especially constructions which have a grated bottom and ample side or lateral openings to accommodate the inlet to times of flood and flows of leaves and debris of one kind or another as it gathers on streets and is borne away to the sewers in heavy rains. In all such cases the grates have been found wholly insufficient alone, but they serve sufficiently for light rains and in case of heavy rains help to catch and divert the water rather than let it flow on past down the street.

I am of course aware that both down and lateral discharge are not new in catch-basin inlets and that in some forms they have been long known; but I am not aware that an inlet constructed on the principle of the present invention or which combines the advantages of this invention has ever before been known or used.

To these ends the structure comprises the main casing or body A, fashioned, preferably, about as here shown and adapted to rest directly or indirectly upon the wall B of the basin or well. It might have a flange about its bottom if a broader bearing-surface were desirable or to adapt it to a circular well and is constructed to take its place and remain in position without change or adjustment in itself regardless of the conditions attending the setting of the inlet in particular cases. All such conditions are provided for and accommodated in and by other parts of the device. Hence a given and common size of box is found sufficient for all purposes here and there and more than one size or kind need not be carried in stock. Specifically the casing has an inclined outer portion 2, adapted to have the street earth and paving built in over it and against or upon its outer top edge 2′, which may itself be flush with the top of the pavement or the pavement built over it, as here shown. Hence it is not material that this casing should always be set at a certain elevation to the street, and it may be set higher or lower and work equally well in both cases.

C represents the grate-support and is a separate cast member adapted to fit somewhat snugly in the boxing of case A, within its side walls 3 and over the side flanges 4 at the bottom of sides 3. This part has its top portion constructed to carry the grate D, which may be circular or rectangular in part or in whole and is the adjustable part or member adapting the mechanism to be brought to the required street-level. To this end the said support has inclined side edges 6, which are matched by the flat side-adjusting plates E, one at each side, and adapted to rest on the flanges 4 within the walls of the main casing. Said plates E have notches 7 (one or more) along their bottom, which engage the teeth 5 on the flanges or ledges 4, and are thereby

locked. Of course these teeth and notches might be reversed as to the parts or they might be substituted by equivalent means for locking the plates when adjusted. In this instance when the grate-support is inserted it is raised to the street-level and held there by moving plates E inward as many notches as may be needed. Then the bolts 8, which enter through walls 3 and the slots 9 in said plates, are tightened up, and the plates and grate-support are immovably and securely fixed and cannot possibly yield or escape from their positions. Thus the street elevation is easily obtained for the grate and a reliable, though simple, support therefor is afforded.

At its inner or rear portion the casing A is designed to project beneath the line of the curbing onto the wall B, substantially as shown, and it is of sufficient length inward in this portion to afford a free open discharge for the water behind the grating D. Then, in order to provide a rear wall for the casing and to support the wall, I construct the side walls 3 with upwardly and outwardly inclined edges 10, which are far enough from the inner edge of grate D to afford the desired room for the overflow of the water and to furnish a rest in part for the rear inclined wall or plate G, the lugs or projections 12 beneath on the casing A holding the same from dropping beneath that level. This so-called "curb" wall or plate may be of metal, but is preferably of stone corresponding to the curbing F, and when set is beveled along its upper edge and brought into line with the line of curbing and forms a part thereof. Making it of stone or like material has the advantage of adaptation to varying elevations, it being easy to cut the edge along the top of the stone down as much as may be needed in any given case, and conditions are seldom alike. This avoids the necessity of making provision in the mechanism itself for adjustment, and thus not only simplifies the structure, but renders it available in any event, whatever the height of the curbing or its relation to the street or other peculiarly local and possibly unusual conditions.

By this construction it is not necessary, as has been heretofore with many constructions of inlets, to cause a depression to be made in the street where the inlet is placed, because the grate catches the flow and prevents its passing the inlet and in heavy rains the larger volume of course pours down through the side inlet back of the grate. Of course the grate and its support are so firm in their positions that there is no possible danger of dislodgment by horse or vehicle.

The bottom of the casing A is open and the rear cross bar or portion 14 is beveled on its inner side to deflect the flow downward. Its outer surface is beveled or inclined also, so that it is substantially ∧ shape in cross-section.

What I claim is—

1. A casing for a catch-basin open across its rear except at its bottom and closed across its front the rear edges of its side walls inclined outwardly and upwardly their full depth and constructed on their inner sides to carry a separate grate-support, substantially as described.

2. A casing for catch-basins having a cross-bar at its rear and bottom with an outwardly-inclined rear surface, and side walls with their rear edges parallel to the outer surface of said cross-bar and lugs on said bar, and a separate wall member adapted to close the rear end of the casing and resting on said lugs, substantially as described.

3. A casing for catch-basins having parallel side walls, a plate on each wall constructed to be adjusted horizontally thereon, a grate-support carried by said plates and a grate on said support, said parts constructed to afford an overflow-inlet for the water through the casing at the rear of said grate, substantially as described.

4. The casing substantially as described, a grate-support therein having inclined edges, and adjusting-pieces for said support having their edges inclined to match the support and constructed to be moved back and forth and locked on the casing to fix the elevation of said support, substantially as described.

5. The casing having ledges on the lower portion of its sides, a grate-support between said sides and adjusting-plates resting on said ledges and constructed to raise or lower said support when moved back or forth on the said ledges and bolts to fasten said plates, substantially as described.

6. The casing having ledges at its bottom inside, adjusting-plates with inclined edges movable on said ledges, and said parts having notches and projections to lock the plates in any given position, and a grate-support with inclined edges matching the inclined edges of said plates and resting thereon, substantially as described.

7. The casing for a catch-basin inlet having its rear end open from side to side and constructed from its bottom upward to support a separate wall in an outwardly-inclined position, in combination with a separate wall extending across said open and inclined end and closing the rear of said casing, and a grate on the casing apart from said wall at its rear to afford an overflow-passage in front of said wall, substantially as described.

8. The main casing having ledges at its bottom, a separate inner member constructed to be raised and lowered and separate substantially triangular pieces resting on said ledges and serving as a support for said separate inner member, and the said triangular pieces and the casing constructed to hold the grate-support in adjusted positions on the ledges, substantially as described.

9. In catch-basins, the main casing constructed with internal horizontal ledges and

an inclined rear portion, in combination with the separate inner member having its bottom edges outwardly inclined, adjustable pieces with like inclined edges to support said separate member and resting on the aforesaid ledges, and an inclined wall across the rear of said casing, substantially as described.

Witness my hand to the foregoing specification this 8th day of May, 1899.

JAMES BANWELL.

Witnesses:
H. T. FISHER,
R. B. MOSER.