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S. G. HOWE.

CATCH BASIN.

APPLICATION FILED SEPT. 4, 1906.

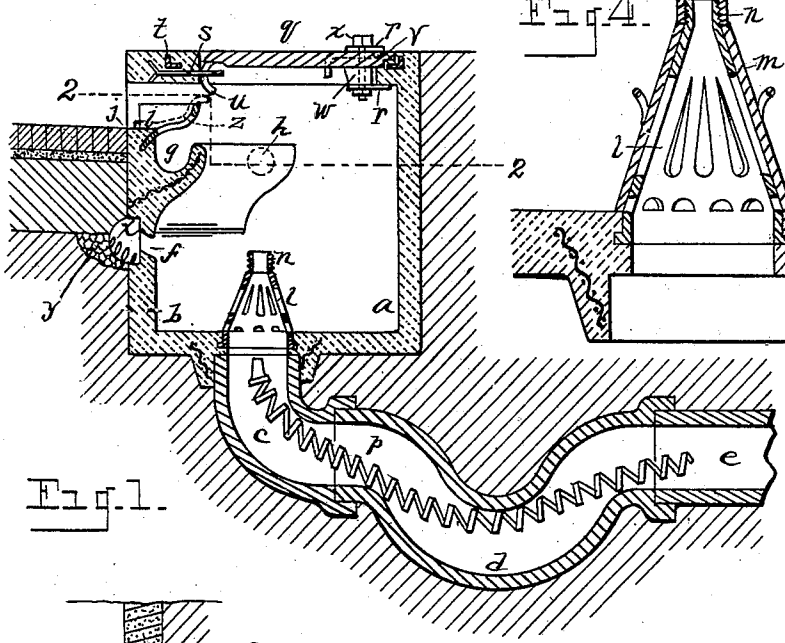

Fig. 1.

Fig. 4.

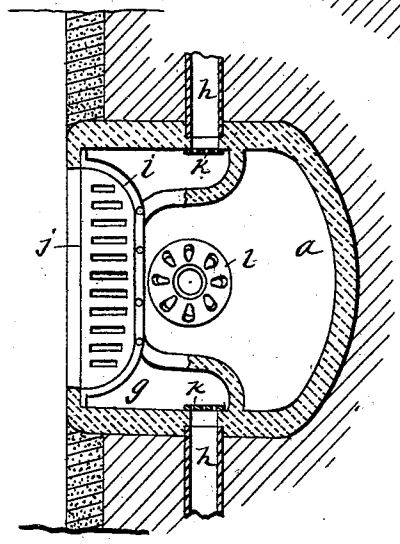

Fig. 2.

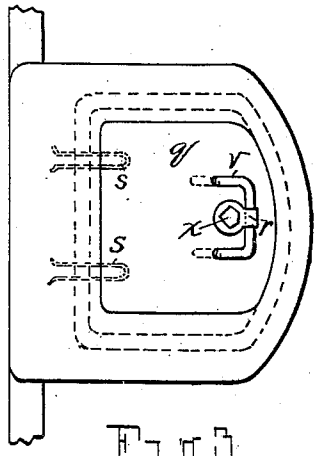

Fig. 3.

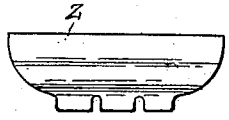

Fig. 5.

WITNESSES.

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CATCH-BASIN.

No. 863,181. Specification of Letters Patent. Patented Aug. 13, 1907.

Application filed September 4, 1906. Serial No. 333,069.

To all whom it may concern:

Be it known that I, SOLON G. HOWE, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Catch-Basins, of which the following is a specification, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object to provide a sanitary catch basin, one which may be readily flushed.

It consists of the construction, combination and arrangement of devices hereinafter described and claimed and illustrated in the accompanying drawings, in which,

Figure 1 is a view in vertical section illustrating features of my invention. Fig. 2 is a horizontal section on the line 2—2, Fig. 1. Fig. 3 is a plan view. Fig. 4 is an enlarged detail view of features of the invention. Fig. 5 is a detail view of the cap *z*.

There is a great need at the present time, in connection with the non-absorbent pavements or roadways, of a receptacle that will take the flow of water from the street, separate it from the debris accumulated therein, making possible a perfect trapping of the gases from the sewer, and at the same time rendering it an easy matter to clean the strained debris from the catch basins, and the flushing or washing out of the basin trap and connection with the sewer whenever deposits accumulate that make such a flushing or washing desirable. To meet this requirement I carry out my invention as follows:

In the drawings *a* represents a side wall forming a catch basin therewithin, *b* being the bottom thereof through which a discharge pipe *c* communicates with the interior of the basin and leads to a trap *d* connecting with the pipe *e* leading to the sewer. I prefer to construct the catch basin as a set piece, preferably shaped or molded from cement, the cement being reinforced, if desired, by which construction the catch basin may be formed in a single piece rather than be made up in parts, as is the common practice. The catch basin is preferably formed with an intake opening indicated at *f*, leading from the surface of the pavement.

It is desirable to exclude from flowing into the catch basin or the sewer, as much of the filth and floatable rubbish accumulating in the street as is possible, and to this end it is often desirable to have something different from an ordinary coarse strainer at the basin opening. It is furthermore desirable in a properly constructed catch basin, and especially of great value to a city with streets wide enough to have shade trees, viz., means for automatically watering the same. To meet this requirement my improved catch basin is provided with a trough indicated at *g* at the front of the catch basin, and therewithin with a proper outlet from the trough to a possible line of tiles leading to the base of adjacent trees, such an outlet being indicated at *h* in Fig. 2.

The trough may reach around part way on the sides of the catch basin, if desired. To first strain the inflow into this trough, I provide a strainer *i*. The inflow above the pavement being indicated at *j*. The strainer *i* will allow the first flow of water from a shower to flow through the same into the trough *g*. The outlets *h* may also be provided with strainers indicated at *k*.

An overflow of water from the trough *g* will of course flow into the catch basin and run off into the sewer through the pipe *c*, trap *b*, connection *e*, but I prefer to add still another precaution against the passage of debris to the sewers, and accordingly provide a strainer *l* at the bottom of the catch basin. The strainer *l* is preferably made cone shaped, first, to get an opening or strainer space equal to the inner diameter or area of the sewer crock in the sewer connection *e*, and second, to make provision for flushing the trap and sewer connection should the same become clogged with sediment. To this end I provide a cap *m* which may be secured upon the top of the strainer *l*, the upper end of said strainer preferably being threaded as indicated at *n* to permit the engagement therewith of an ordinary fire hose connection. The cap *m* thoroughly incloses the strainer. If sediment has been so solidly settled in the trap that an ordinary flow of water from a nearby hydrant will not readily remove the same, I provide a coil spring with handle indicated at *p* long enough to be run through the trap so as to start an opening before the attachment of the hose. By such a construction I provide an economical and easy means of flushing the catch basins, the trap and branch sewer connections. Any drip that may have accumulated in the sub-grade below the pavement will be discharged into the catch basin through the intake *f*. The intake *f* provides for the perfect drainage of the sub-grade of the street. While my invention aims to secure a perfect water drainage, I also seek to keep out accumulations of debris as much as possible, in addition to which I provide an effectual means for cleaning out the device and its connections, if desired. In dry periods it would be observed that by the opening of adjacent hydrants, water may be allowed to flow into the trough *g* of an adjacent catch basin for automatically watering trees in the manner above described. In place of an ordinary iron cover for the catch basin, I prefer to provide a hinged cover indicated at *q*.

Catch basins so made may be constructed in the factory, crated and shipped, making it possible to supply them at a reduced cost over stone or brick catch basins as commonly constructed, while also, a great saving of time is effected in setting them in place.

To hinge the cover I prefer to set loops indicated at *s*, *s*, into the body of the basin under a reinforcing bar of angle iron indicated at *t*, the cover being provided with lugs indicated at *u* to engage in the loops so that the cover can be lifted off, if desired. I also provide the

cover preferably with a drop handle indicated at *v* countersunk into the cover. Above and beneath the cover are arms indicated at *r*, *r*, actuated by a bolt *w*, the bolt preferably having a five sided head indicated at *x* so that the bolts may not be turned with an ordinary wrench, but may be freely operated by a fireman's wrench. By moving the catches out of normal position, the handle *v* may be raised and the cover lifted or bolted back, as may be desired.

The cap over the inlet *f*, indicated at *x*, is constructed with openings on its under surface so as to exclude dirt or sediment from entering therethrough into the catch basin, a filling of broken stone indicated at *y* being located around the openings in the cap to act as a supplementary strainer, allowing a free seepage of water through the cap into the basin. In flushing the street, when a large quantity of dirt is liable to be carried into the basin, I prefer to locate over the strainer *i* a cap plate *z* shown in Fig. 5 and indicated in dotted lines in Fig. 1 to close the openings in the strainer and whereby the water entering into the basin will flow over the upper edge of said cap and over the upper edge of the strainer *i*, and into the basin without entering the trough *g*. Where there is no need or desirability of watering the shade trees automatically, the trough *g* may be dispensed with, the water flowing directly into the basin.

What I claim as my invention is:

1. A catch basin provided with an inlet and outlet and with a trough therewithin arranged to overflow into the basin, and an additional outlet leading from the trough.

2. A catch basin provided with an inlet and outlet, a trough therewithin, and an outlet leading from the trough through the side wall of the catch basin.

3. A catch basin provided with an inlet and outlet leading from the bottom of the basin, a trough therewithin above the bottom of the basin, and an additional outlet leading laterally from the trough through the side wall of the catch basin.

4. A catch basin provided with an inlet and an outlet, a trough within the basin arranged to overflow into the basin, an additional outlet leading from the trough, and a strainer or screen located between the inlet and the trough.

5. A catch basin provided with an inlet, and with an outlet leading from the bottom thereof, a strainer over said outlet, a trough within the basin arranged to overflow into the basin, an outlet leading from the trough through the side wall of the catch basin, and a strainer located between the inlet and the trough.

6. A catch basin provided with an inlet and an outlet, a conical shaped strainer located over the outlet, and a cap located over the strainer, the strainer constructed for the engagement of a hose with the upper end thereof for flushing the outlet.

7. A catch basin provided with an inlet opening thereinto toward the upper portion thereof, with an additional inlet toward the lower portion thereof, a strainer for the additional inlet, an outlet leading from the base of the basin, a trough within the basin, a strainer between the upper inlet and the trough, an outlet for the trough, and a strainer located over the first mentioned outlet.

8. A catch basin provided with an inlet and with an outlet, a strainer located over the outlet, a trough within the basin arranged to overflow into the basin, an outlet leading from the trough through the side wall of the basin, a supplementary inlet below the trough, and a cap for the additional inlet open on the under side thereof.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

SOLON G. HOWE.

Witnesses:
N. S. WRIGHT,
E. M. SPIELBURG.