(No Model.)

R. SMITH.

CATCH BASIN TOP AND TRAP.

No. 440,067. Patented Nov. 4, 1890.

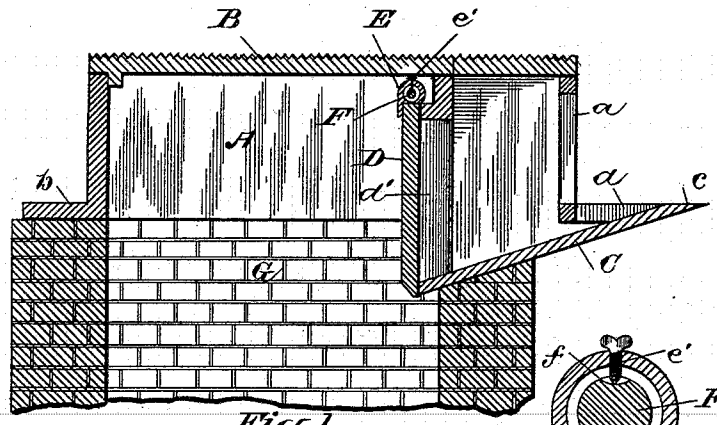

Fig. 1.

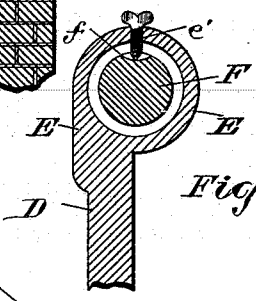

Fig. 3.

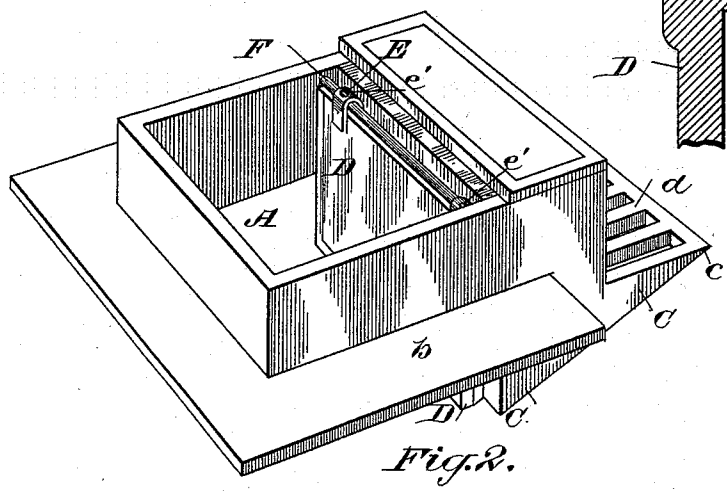

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

ROBERT SMITH, OF TORONTO, CANADA, ASSIGNOR OF ONE-HALF TO GEORGE W. STRANGE, OF SAME PLACE.

CATCH-BASIN TOP AND TRAP.

SPECIFICATION forming part of Letters Patent No. 440,067, dated November 4, 1890.

Application filed July 26, 1890. Serial No. 360,060. (No model.)

To all whom it may concern:

Be it known that I, ROBERT SMITH, inspector, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in a Combined Culvert Top and Trap; and I hereby declare the following to be a full, clear, and exact description of the same.

The object of this invention is to devise a combined culvert top and trap, by means of the use of which the secondary chamber connected with the sewer and the trap leading thereunto may be entirely dispensed with, and which will at the same time prevent any and all effluvia or noxious gases reaching the upper world and poisoning the atmosphere; and it consists in the improved construction and combination of parts, as hereinafter more fully described in the specification, and pointed out in the claims.

In the drawings, Figure 1 is a sectional view of the combined culvert top and trap. Fig. 2 is a perspective view of the same. Fig. 3 is an enlarged detail view of the hinging device.

Like letters of reference refer to like parts throughout the specification and drawings.

The combined culvert top and trap consists, essentially, as shown in the drawings, of a rectangular-shaped bottomless box A, provided with a removable lid B and a water-chute C. It will be noticed by reference to Figs. 1 and 2 that this water-chute C has an outwardly-extending lip *c*, fitted with gratings *d*. The inner face of the chute C is formed into a valve-seat *d'* for the valve D. This valve D is provided with female hinges E, through which extend pivot-points *e'*. These pivot-points *e'* rest on a countersunk bearing-surface *f* in the male hinge or spindle F, which passes through and is made somewhat smaller than the female hinges E. In operating the valve D the only portions of the hinges that touch or upon which there is any friction are the pivot-points *e'* on the bearing-surfaces *f*. Thus the valve D, having little or no friction in its operation, will readily open when the pressure is from the chute C, and will tightly close when the said pressure is removed, thus permitting the water coming down the chute to pass into the culvert-well G, and after it is passed to tightly close and prevent any and all effluvia or noxious gases arising from the decomposing matter in the said well from reaching the upper world and poisoning the atmosphere. Thus it will be readily seen that the combined culvert top and trap, beside entirely dispensing with the secondary chamber and trap leading thereinto, is of great advantage from a sanitary standpoint.

The lip *c*, extending outward from the front of the box A, fitted with gratings *a*, is placed in the gutter slightly below the level of the roadway and effectually prevents any water flowing past the culvert-top and causing a flood. A flange *b* extends partially around the outside of the body of the box A, and is for the purpose of supporting the box in its bed.

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

1. A culvert-top consisting of a suitably-shaped bottomless box having a removable lid B and a chute C, provided with an outwardly-extending lip *c*, fitted with gratings *d*, substantially as and for the purpose set forth.

2. A culvert-top consisting of a suitably-shaped bottomless box A, having gratings *a* in its front side, a removable lid B, and a chute C, having an outwardly-extending lip *c*, fitted with gratings *d*, substantially as and for the purpose set forth.

3. The combination of a culvert-top consisting of a suitably-shaped bottomless box A, having gratings *a* in its front side, and a removable top B, with a chute C, fitted with a valve-seat *d*, and a valve D, provided with female hinges E, through which extend pivots *e*, having points *e'*, which rest upon the countersunk bearing-surfaces *f* of the male hinge F, substantially as and for the purpose set forth.

4. A hinge consisting of a female part E, fitted with a pivot *e*, and a male part F, fitted with a countersunk bearing-surface *f*, substantially as and for the purpose set forth.

5. A combined culvert top and trap con-

sisting of a suitably-shaped bottomless box A, having a removable lid B, and a chute C, provided with an outwardly-extending lip *c*, having gratings *a*, in combination with a valve D, provided with female hinges E, fitted with pivots *e*, male hinges F, having countersunk bearing-surfaces *f*, on which the points *e'* of the pivots work, and the valve-seat *d*, substantially as and for the purpose set forth.

Toronto, July 11, 1890.

ROBERT SMITH.

In presence of—
CHARLES H. RICHES,
JNO. COUSINS, JR.