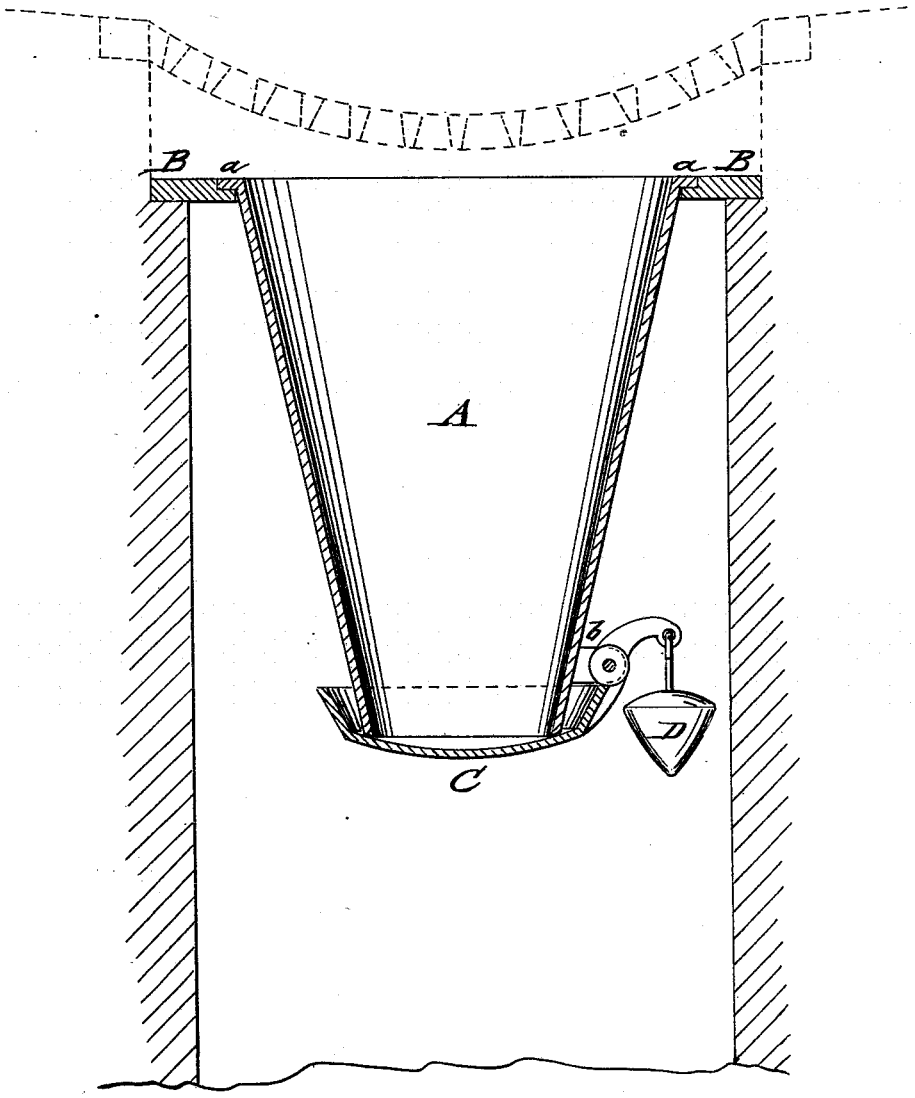
F. B. WELLS.

SEWER-TRAP.

No. 185,994. Patented Jan. 2, 1877.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK B. WELLS, OF MONTREAL, QUEBEC, CANADA.

IMPROVEMENT IN SEWER-TRAPS.

Specification forming part of Letters Patent No. **185,994**, dated January 2, 1877; application filed October 30, 1876.

To all whom it may concern:

Be it known that I, FREDERICK B. WELLS, of Montreal, in the Province of Quebec and Dominion of Canada, have invented a new and Improved Sewer-Trap, of which the following is a specification:

The accompanying drawing represents a vertical central section of my improved sewer-trap.

The object of my invention is to provide a device for preventing the escape of sewer-gas without obstructing the flow of surface-water; and the invention consists of a conical or funnel-shaped tube, that is supported on a top ring, and provided at the lower end with a cup-shaped and weighted trap, that extends by an annular flange around the lower end of the cone, to seal the same until the weight of the collecting water opens the trap.

In the drawing, A represents a tube of inverted conical or funnel shape, and of suitable cast or sheet metal. The tube A is seated by a top flange, *a*, in an annular recess of a ring-shaped top plate, B, which is secured, by bolts, cement, or otherwise, to the ground or rock below the grate of the drain.

The top flange of the tube A forms a smooth surface with top of the ring-plate B, so as to prevent the accumulation of dirt, &c. The conical tube A is, preferably, made from thirty to thirty-six inches in length, with a diameter of eighteen or twenty inches at top, and ten to twelve inches at the bottom.

At the bottom of the tube A is arranged a valve, C, of cup shape, that is fulcrumed to lugs *b* at the side of the tube, and provided with a weight, D, at the end of the lever-arm. The flange of the cup-shaped trap C encircles the lower part of the tube, and holds water enough to form a liquid seal for preventing the escape of gas.

The weight which governs the cup must be large enough to prevent the tipping of the cup-valve until the required height of water is obtained in the tube.

The conical shape of the tube prevents the bursting of the same in case of freezing, as the ice rises readily to the surface. The conical tube admits also of being readily removed from the ring-plate in case it be necessary for a person to enter the sewer. It forms a comparatively cheap, reliable, and useful means for preventing the escape of foul gases from sewers, so as to obviate the poisoning of the atmosphere, and the deleterious influence of the same on the public health.

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

A sewer gas-trap, consisting of tapered tube A, having flange *a*, rabbeted ring plate B, and automatic seal-valve C, all constructed and arranged substantially as shown and described.

FREDERICK B. WELLS.

Witnesses:

M. J. BUCK,

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