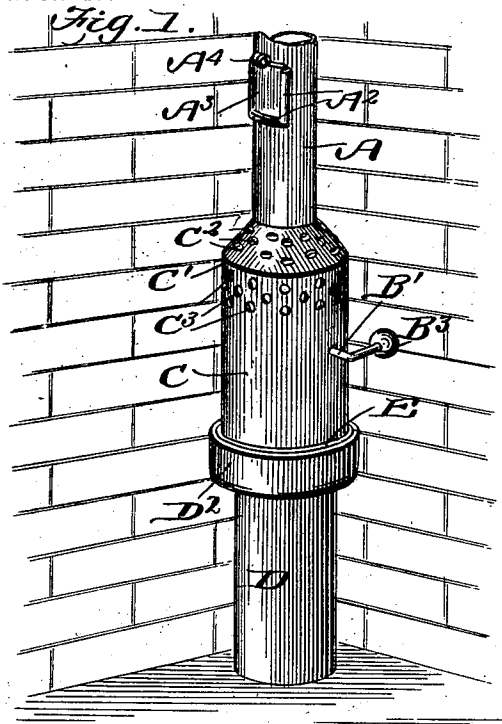
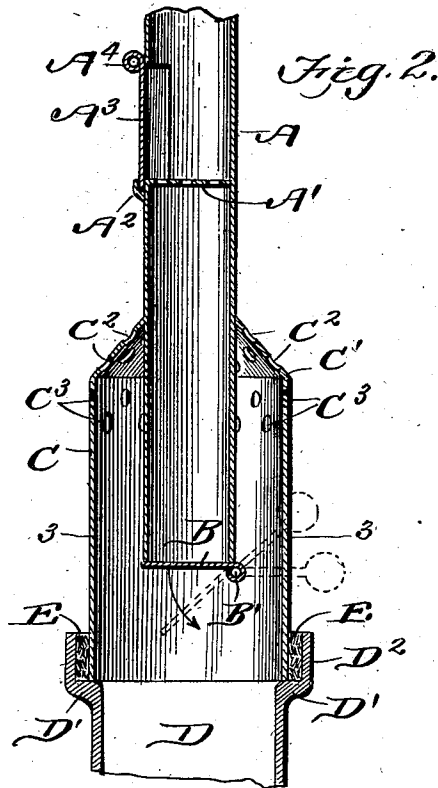
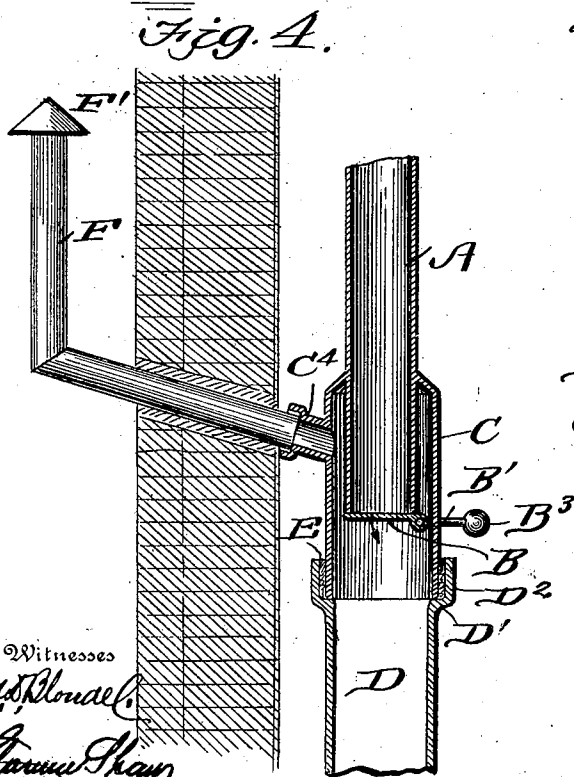
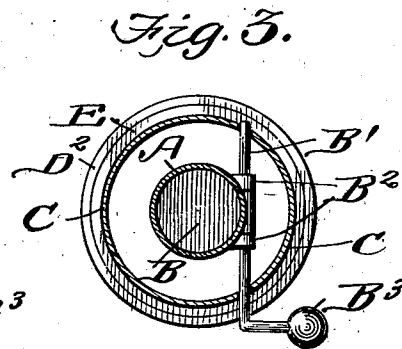


No. 728,734.

PATENTED MAY 19, 1903.

T. LOVELY.
SANITARY PIPE PROTECTOR.
APPLICATION FILED SEPT. 27, 1902.

NO MODEL.



Inventor

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UNITED STATES PATENT OFFICE.

THOMAS LOVELY, OF SOUTH AMBOY, NEW JERSEY.

SANITARY PIPE-PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 728,734, dated May 19, 1903.

Application filed September 27, 1902. Serial No. 125,115. (No model.)

To all whom it may concern:

Be it known that I, THOMAS LOVELY, a citizen of the United States, residing at South Amboy, in the county of Middlesex and State of New Jersey, have invented a new and useful Sanitary Pipe-Protector, of which the following is a specification.

My invention is an improvement in sanitary attachments for drain-pipes, and has for its object the construction of an automatic cut-off, preventing gas from rising into the upper part of the pipe and permitting water to pass downward, and the further object of providing means for insuring the entrance of fresh air into the pipe in the rear of a body of water, thereby ventilating the pipe and filling it with clean fresh air every time it is flushed out.

In the accompanying drawings, Figure 1 is a perspective view showing the exterior of my device as applied to an outside drain-pipe. Fig. 2 is a vertical section showing the valve open in dotted lines. Fig. 3 is a section about on the line 3 3 of Fig. 2. Fig. 4 is a vertical section showing in elevation a fresh-air pipe.

In carrying out my improvements I construct a waste-pipe section A with a strainer A' at some distance above its discharge or lower end, and just above the strainer the side of the pipe is cut out, guiding-flanges A² are formed on three sides of the cut-out portion, and between these flanges and the edges of the opening formed in the side of the pipe slides the door A³. A tongue A⁴ is struck upward from the top of the door and curved over in the form of an eye, thus providing a handle for the door.

At the lower end of the pipe A is hung a flap-valve B. The valve is rigidly secured to a rod B', which, pintle-like, passes through two lugs B². Its inner end is journaled in a drum C, hereinafter described, while its outer end is angled and carries a ball B³. The ball B³ is normally adapted to hold the valve closed, but is also arranged to so balance the valve that the weight of water descending the waste-pipe will readily open the valve.

Surrounding the lower part of the waste-pipe and extending some distance below it is the cylindrical drum C, having a perforated conical top C', the central perforation permitting the pipe A to pass through and the smaller ones C² opening into the outer air.

The drum may also be laterally perforated in its upper part, as shown at C³. 55

The sewage-pipe D is formed with the usual shoulder D' and flange D², on which the drum C rests, and between the drum and the flange is the usual packing E.

The perforations C² C³ admit fresh air, and it is obvious that when the waste-pipe is located in a cellar or passes down the inside wall of a building instead of the outside the perforations C² C³ would be undesirable. In a case of this kind these perforations are omitted and a laterally-extending branch pipe C⁴ projects from the drum, and from this extends the pipe F, open at the top and protected by the usual hood F'. 60

The operation of my device is obvious. The strainer will prevent clogging of the valve, and the door A³ will give access to the strainer in order that same may be cleaned. In the pipe shown in Fig. 4 the strainer and door are omitted. The flap-valve will prevent gas from the sewer rising into the dwelling to which the pipe belongs, and as water passes through the valve and drum fresh air will be drawn in after the water through the perforations of pipe F. 65

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is— 70

1. A device of the kind described comprising a drain-pipe, a cylindrical drum having a conical top encircling the lower portion of the pipe, the drum extending below the lower end of the pipe, lugs formed on the lower end of the pipe, a shaft passing through the drum and through said lugs, one end of said shaft being journaled in the drum and the other end being bent at a right angle without the drum and terminating in a weight, and a sewer-pipe connected to the drum. 85

2. A device of the kind described comprising a drain-pipe, a drum surrounding its lower end, a valve within the drum adapted to close the lower end of the pipe, a perforated plate in the pipe above the valve adapted to prevent waste matter from clogging the valve, and a door in the pipe adjacent the plate. 90 100

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