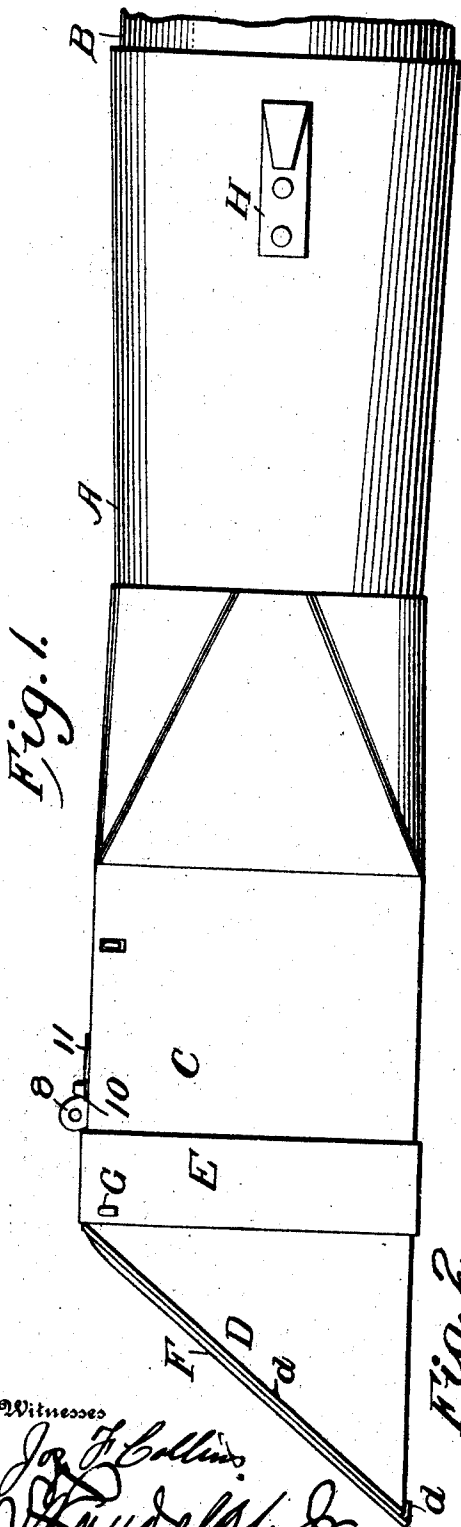
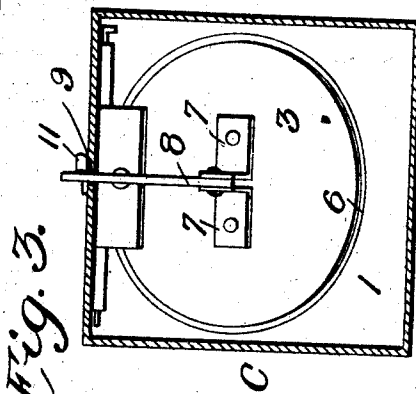
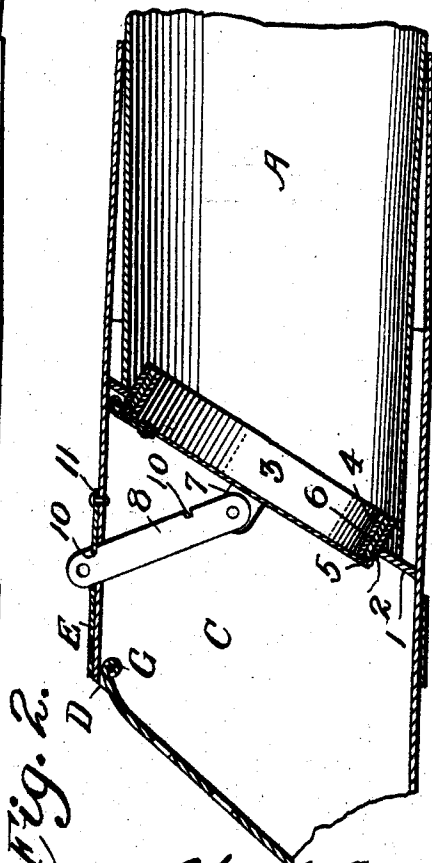


O. A. & J. A. TENOLD.
 DRAIN TILE AND SEWER OUTLET PROTECTOR.
 APPLICATION FILED MAR. 11, 1909.

928,481.

Patented July 20, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

OLE A. TENOLD AND JOHN A. TENOLD, OF NORTHWOOD, IOWA.

DRAIN-TILE AND SEWER-OUTLET PROTECTOR.

No. 928,481.

Specification of Letters Patent.

Patented July 20, 1909.

Application filed March 11, 1909. Serial No. 482,798.

To all whom it may concern:

Be it known that we, OLE A. TENOLD and JOHN A. TENOLD, citizens of the United States, residing at Northwood, in the county of Worth and State of Iowa, have invented certain new and useful Improvements in Drain-Tile and Sewer-Outlet Protectors, of which the following is a specification.

Our invention relates to devices for protecting the outlets of sewers and drain tiles having vermin traps secured to them such as shown in United States Letters Patent No. 830,112, issued to John A. Tenold on September 4, 1906, and consists in adding thereto a backwater trap to be used on outlets where submerged, or are liable to be submerged by flood water or tides, to prevent the flood water from backing up in the sewer or tile and also to prevent sand and other substances from getting into the sewer or tile as well as being an additional protection from vermin.

Our invention will be described in detail hereinafter and illustrated in the accompanying drawings in which—

Figure 1 is a side view of our improved device, Fig. 2, a longitudinal sectional view, and Fig. 3, a cross section on the line $x-x$ of Fig. 2.

In the drawings similar reference characters indicate corresponding parts in all of the views.

Our outlet protector as shown in Patent No. 830,112, referred to above, consists of a slightly tapered cylindrical tube A to fit the delivery end of a drain tile or sewer pipe B having its end C formed rectangular in cross section and with its mouth formed with oblique sides D having outwardly extending flanges d .

E indicates a reinforcing band secured around the rectangular end C and engaging the upper ends of flanges d , and F a gate pivotally secured to a rod G extended through the sides of rectangular portion C and band E, said gate being perforated to admit of the egress of a slight flow of water from the sewer or tile B and adapted to swing upwardly under the impulse of an increased amount to permit it to flow unimpeded. The sides of the gate F when in its

lowered position rest on flanges d while the top of the rectangular portion C engages the gate when raised to limit its upward swing.

The hooks H on the sides of the cylindrical portion A are to secure anchors thereto as stated in Patent No. 830,112.

Our improvement consists in providing the rectangular portion C with an oblique wall 1 at an appreciable distance inside of the mouth of the outlet, with a circular opening 2.

3 indicates a circular valve gate pivotally secured above opening 2 and having a circular flange 4 on its under side that fits the edges of opening 2 and leaves a shoulder 5 that seats on partition 1, said flange 4 and shoulder 5 being covered by packing 6 to form a tight joint with the opening 2 when the gate is closed to prevent the passage of water therethrough.

The top of gate 3 is provided with ears 7 to which is secured a rod 8 that extends through a slot 9 in the top of the rectangular portion C, the purpose of said rod being to admit of opening the gate manually if desired and, being provided with notches 10 to receive a pivoted catch 11, to hold the valve open or closed when desired.

Having thus described our invention what we claim is—

1. A valve for sewer and drain tile outlets comprising a suitable casing, a partition in said casing having an opening therein, a gate pivotally secured to the partition and formed to fit the opening, a rod pivotally secured to the gate and extending outside of the casing, said rod having notches therein, and a catch pivotally secured to the casing and positioned to engage the notches in the rod.

2. A valve for sewer and drain tile outlets comprising a suitable casing, an oblique partition in said casing having an opening therein, a gate pivotally secured to the partition and formed to fit the opening, a rod pivotally secured to the gate and extending outside of the casing, said rod having notches therein, and a catch pivotally secured to the casing and positioned to engage the notches in the rod.

3. In combination with a sewer and drain tile outlet protector consisting of a cylin-

drical portion to fit the end of the sewer or
drain tile, and having a rectangular end with
a perforated gate pivotally secured thereto,
an oblique partition in the rectangular por-
5 tion at a distance from its outlet and having
a circular opening therein, a gate pivotally
secured to the partition and formed to fit the
opening, a rod pivotally secured to the gate
and extending outside of the casing, said
10 rod having notches therein, and a catch

pivotally secured to the casing and posi-
tioned to engage the notches in the rod.

In testimony whereof we hereto affix our
signatures in the presence of two witnesses.

OLE A. TENOLD.
JOHN A. TENOLD.

Witnesses:

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