

No. 674,993.

Patented May 28, 1901.

J. A. YOUNG.

COMBINED CUT-OFF AND STRAINER FOR WATER PIPES.

(Application filed Feb. 25, 1901.)

(No Model.)

Fig. 1.

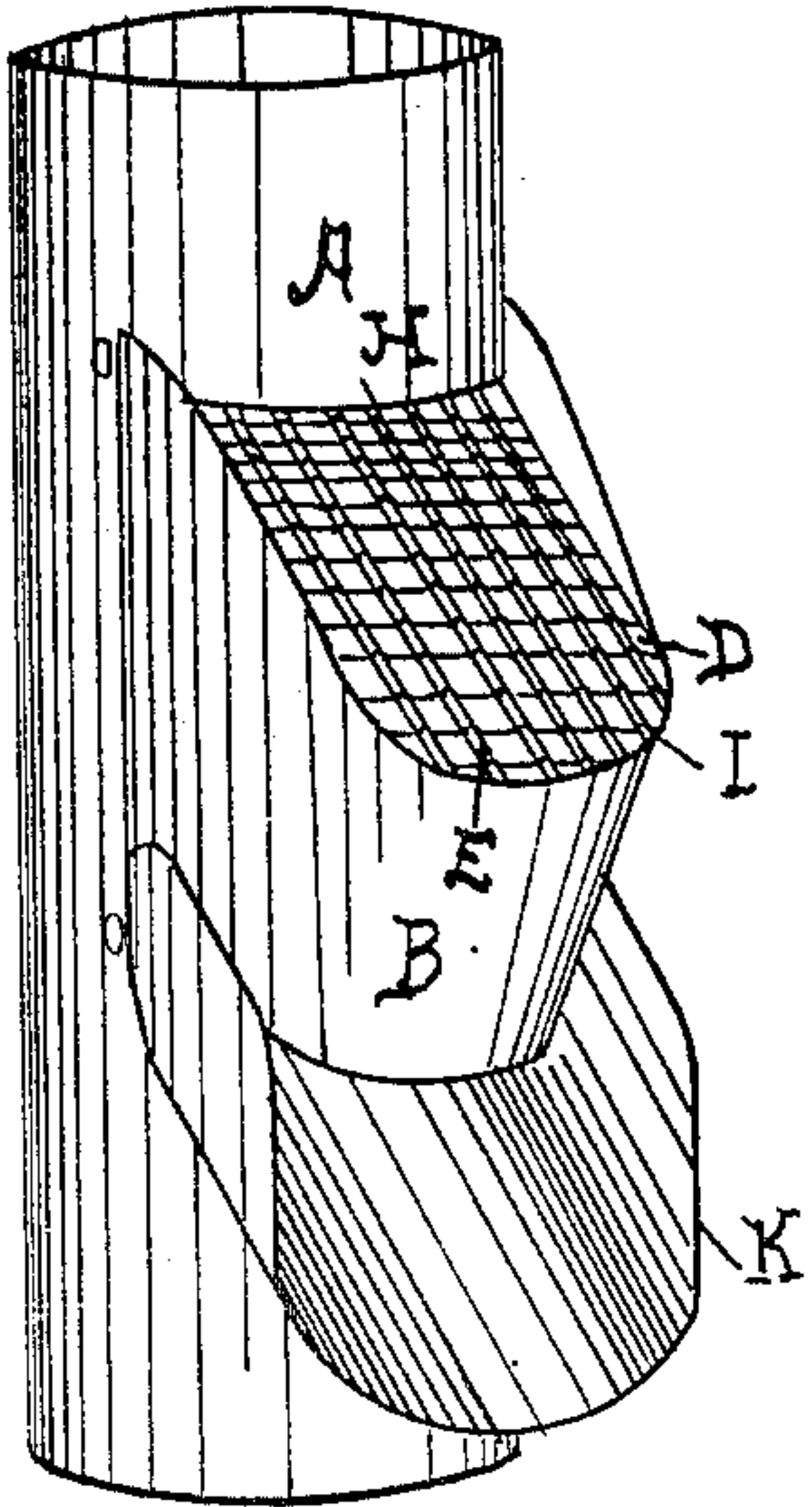


Fig. 2.

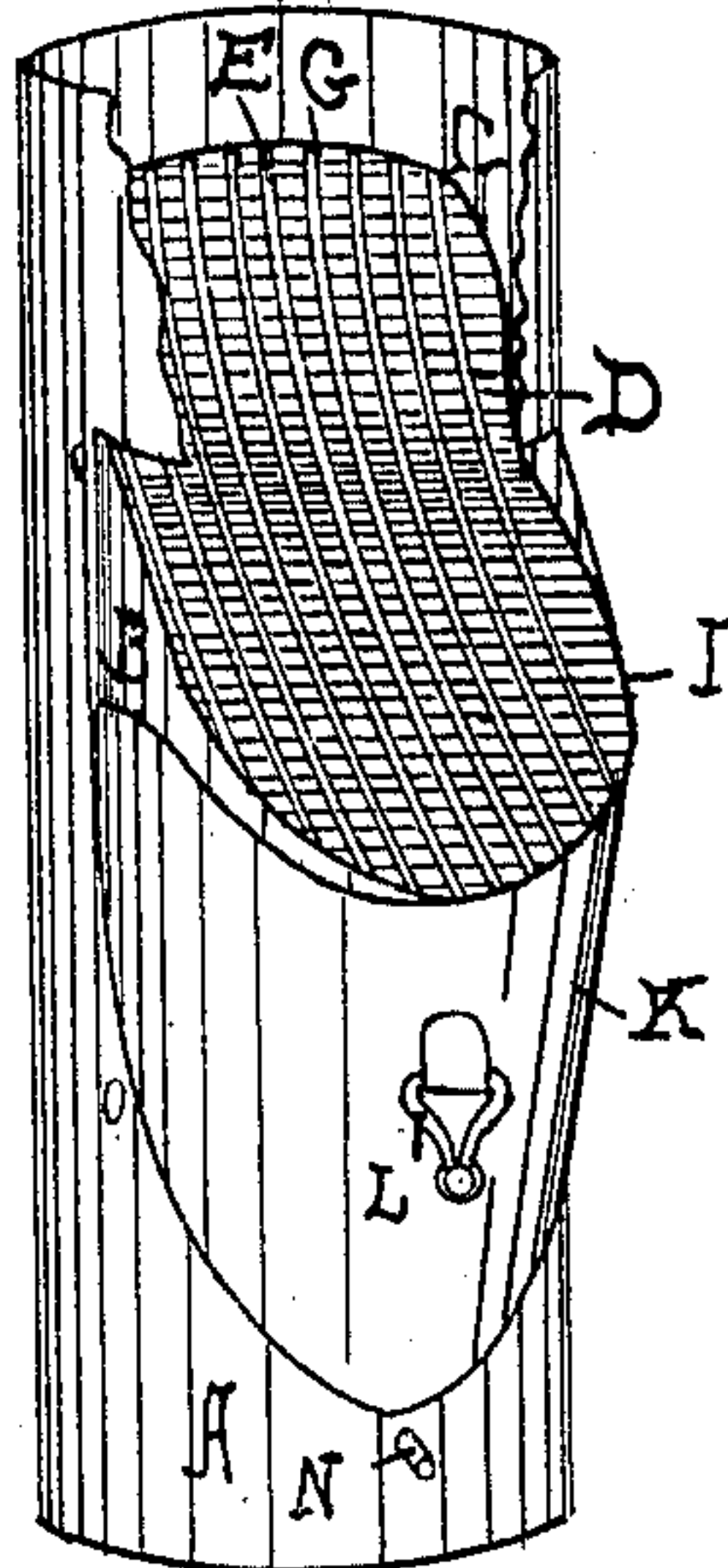


Fig. 4.

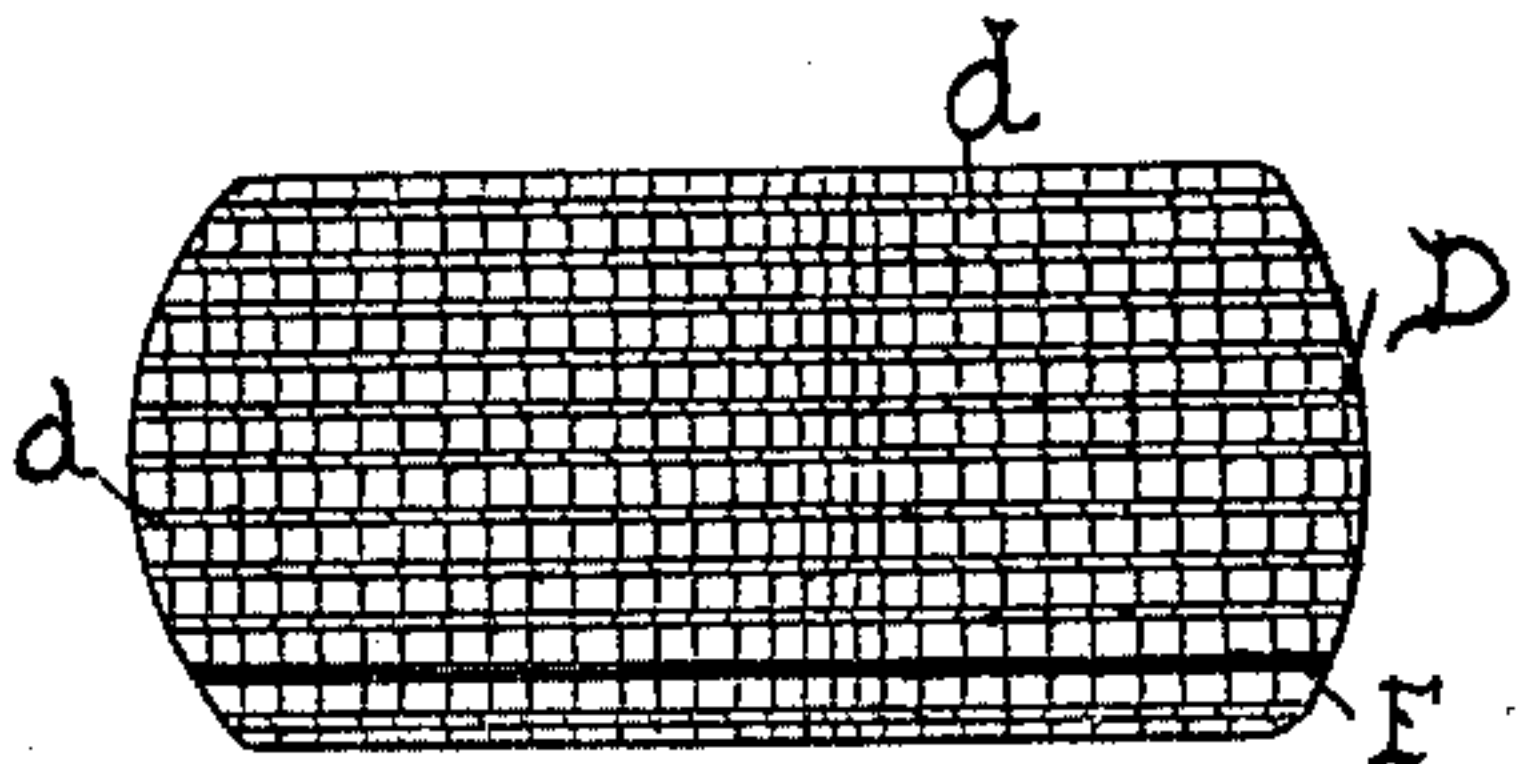


Fig. 6.

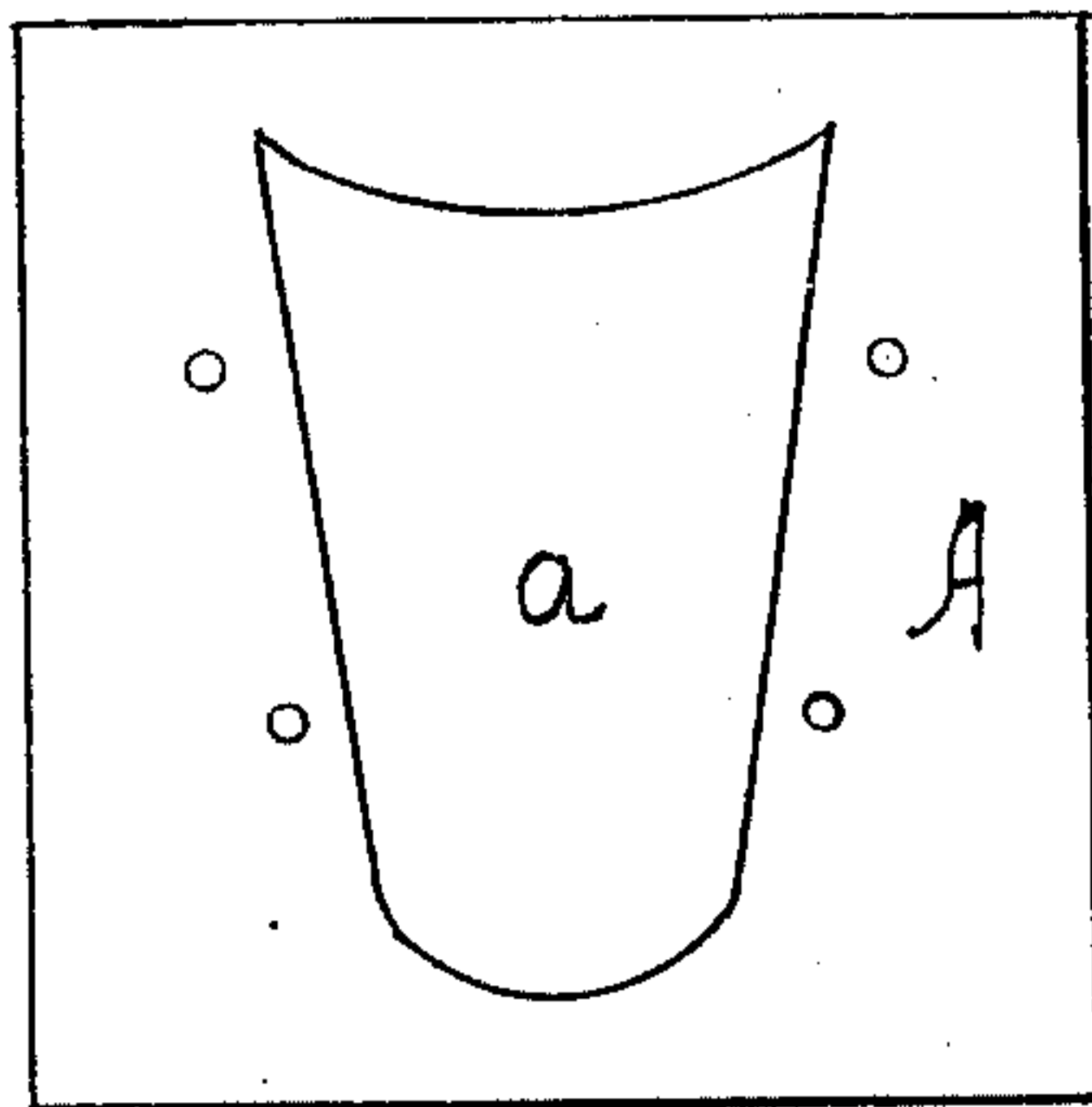


Fig. 3.

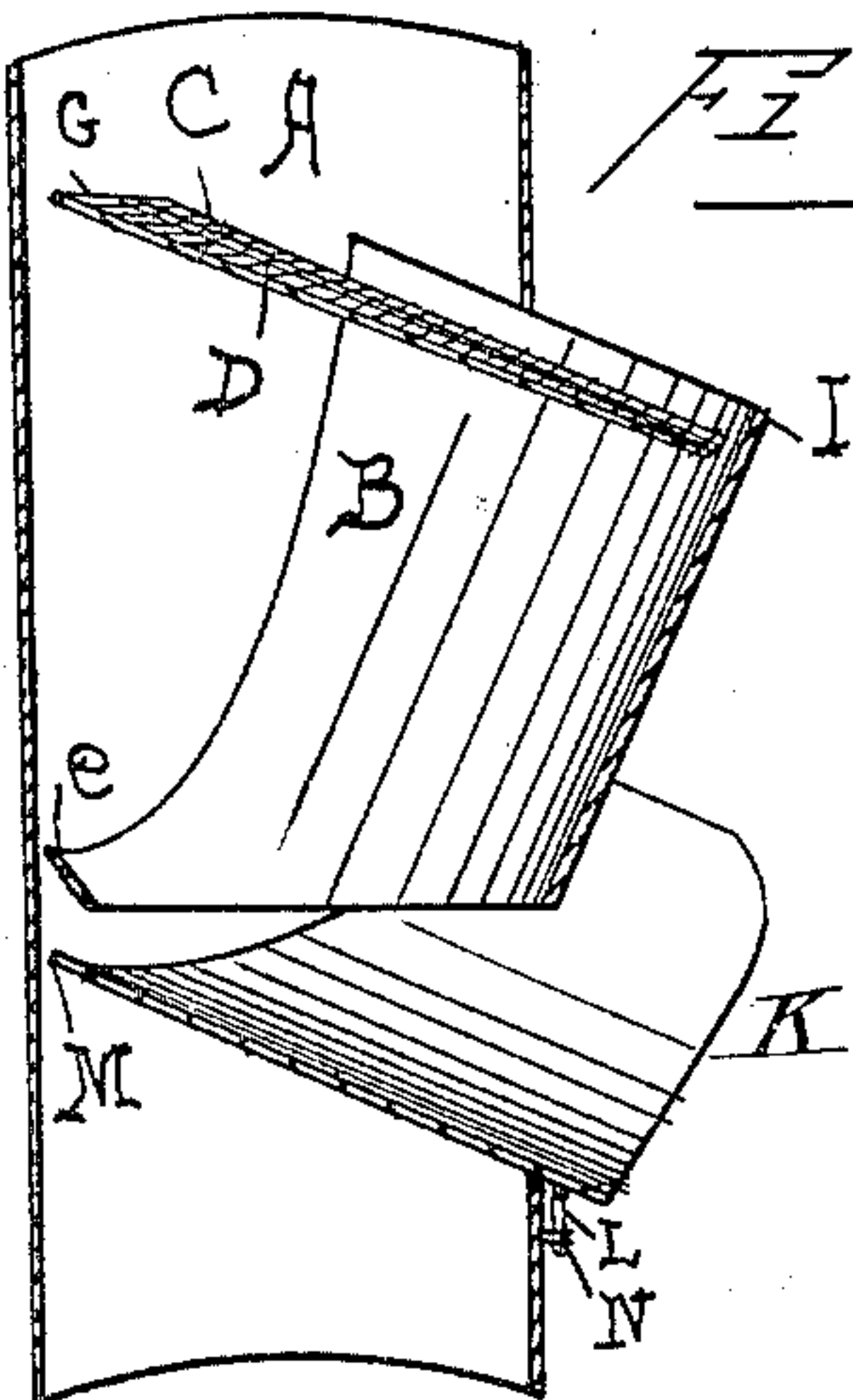
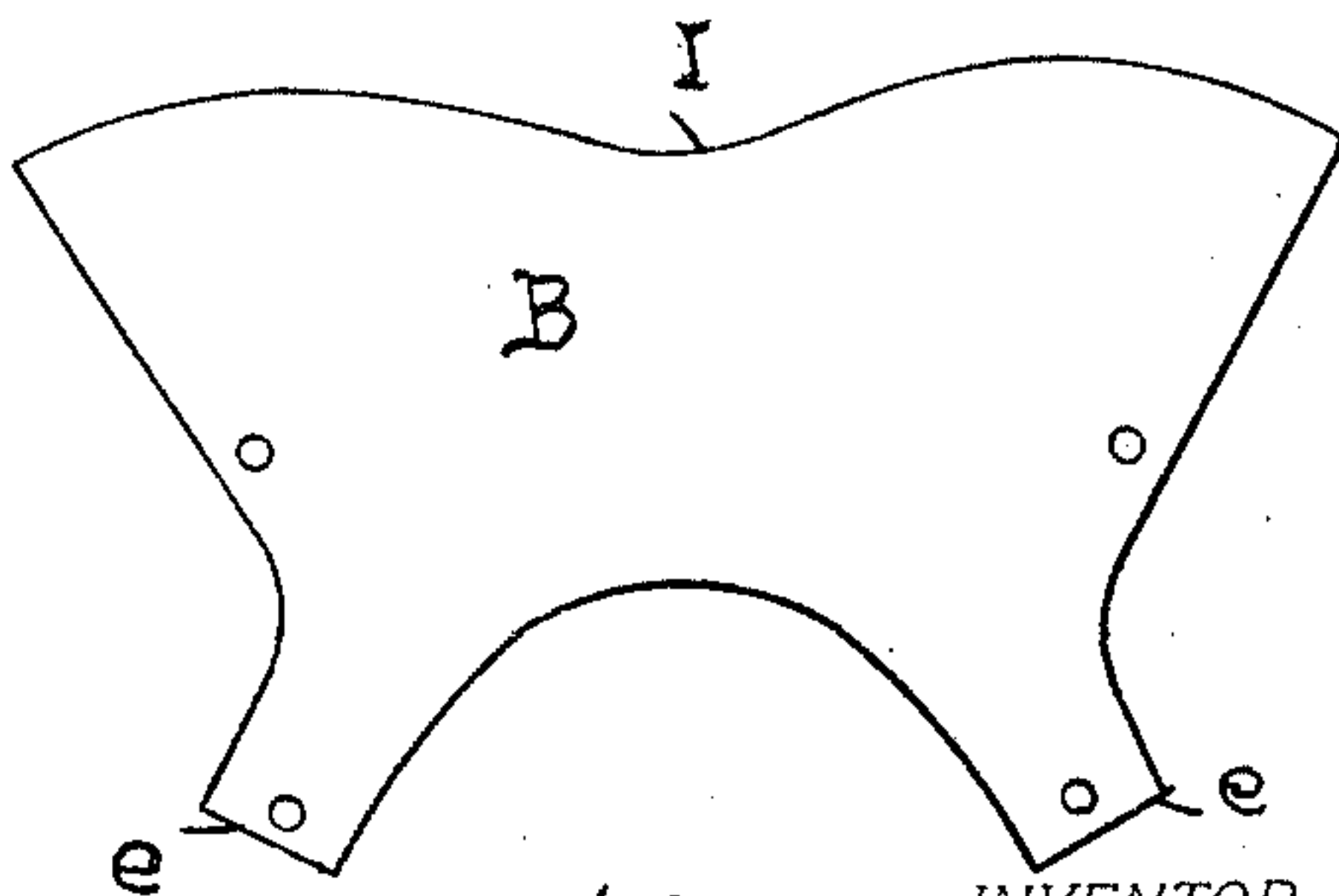


Fig. 5.



WITNESSES:

E. E. Cady
E. C. Astner

INVENTOR.
Joseph A. Young
BY
M. M. Cady
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOSEPH A. YOUNG, OF BELLEVUE, IOWA.

COMBINED CUT-OFF AND STRAINER FOR WATER-PIPES.

SPECIFICATION forming part of Letters Patent No. 674,993, dated May 28, 1901.

Application filed February 25, 1901. Serial No. 48,710. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. YOUNG, a citizen of the United States, residing at the city of Bellevue, county of Jackson, and State of Iowa, have invented certain new and useful Improvements in a Combined Cut-Off and Strainer for Water-Pipes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to a cut-off for rain-water pipes, with more especial reference to those containing a screen for straining the water to prevent impurities from passing into the cistern; and it has for one of its objects to adapt it to be attached to and used with the ordinary water-pipe.

Another object is to so construct the screen or strainer and place it in such position that leaves or other debris will be carried out of the spout and not clog the passage of the water into the cistern.

These objects, with others of somewhat less importance, will be developed in the following specification when taken in connection with the drawings accompanying the same, in which—

Figure 1 is a perspective of the device when the water is shut off from the passage into the cistern. Fig. 2 is a perspective of the screen in position with cut-off closed and part of the pipe cut away. Fig. 3 is a vertical section of the device when the water is shut off from the cistern. Fig. 4 is a modified form of screen. Fig. 5 is a plan view or blank of stay which supports the outer end of the screen; and Fig. 6 is a plan or blank of the casing or tube, showing the part cut out.

Referring to the drawings, A designates the casing or body of the cut-off, which consists of a section of ordinary rain-water pipe or tube made in any size to fit the various-sized pipes with which it is to be used. From one side of the pipe a portion of the casing is removed at *a*, and in this opening is placed the various parts hereinafter to be mentioned. The stay B (shown in blank in Fig. 5) is bent and soldered to the back and sides of the casing on the inside, leaving the lower edge *e* turned up for the purposes presently to appear, and projects out a considerable distance beyond the

perpendicular surface of the tube at I. This stay B is also soldered to the casing at C on both sides. This peculiar construction furnishes a full-size pipe for a convenient mode of ventilating the cistern at all times when the cut-off is turned to admit the water to the cistern. Also it admits of being readily and conveniently thawed out when frozen, and there is little or no danger from clogging, and if it should chance to be clogged can be conveniently cleaned. Against the inner side of the casing, opposite to this opening and somewhat above it, is set a screen D. This screen is composed of fine braided wire, having therein at a short distance apart larger wires E, running longitudinally of the screen. These wires E are secured upon the upper surface of the screen or woven in with the screen when made and form ribs or corrugations *d* upon the upper surface of the screen.

In Fig. 4 is shown another mode of making the screen by corrugating or ribbing the wire itself which forms the screen. There may also be secured on the top of these ribs or corrugations *d* thus formed larger wires E, whereby the size of the corrugations *d* may be increased. One rib of such construction is shown in one side of Fig. 4. The screen thus formed is attached to the outer end of the stay B and along its inner sides and along the inner sides and rear of the casing A at G, as shown in Fig. 2.

It will be seen that by forming this screen in the manner described, with the top of the corrugations *d* or the upper surface of the wires E, which form the corrugations, comparatively smooth, and by placing this screen at a considerable angle in the manner described and shown whenever leaves or other debris come down the pipe with the rain and strike the wires or corrugations on their smooth surfaces the force of the water will carry them down underneath the front part H of the casing and out over the forward edge of the stay B at I; but the water will pass through the screen into the cistern, and the ribs of the screen will prevent all clogging and permit the water to pass into the cistern.

The cut-off K is bent to correspond to the curve of the stay B and pivoted in the sides of the casing in such a manner that when closed up, as shown in Fig. 2, it fits closely

against the outer surface of the stay B and when opened, as in Fig. 3, the rear portion M projects underneath the rear part e of the stay B and prevents any water from passing
5 down into the cistern.

Against the upper portion of the cut-off K is fastened a combined handle and lock L, and to the front of the tube A is fastened a pin N, with which the lock L engages and
10 holds the cut-off from moving while open. When thus locked, the force of the water cannot close the cut-off.

It will be observed that a cut-off constructed in the manner herein described possesses
15 many advantages. It can be easily and cheaply manufactured, since no extra shape of pipe is required for the body of the cut-off, and it may be easily attached to any pipe of its size. It will also be practically automatic
20 in keeping itself free from clogging, and if by chance it should clog it may be readily cleaned. If it should freeze, it can be easily thawed out, and another great advantage is the ventilation which it affords to the cistern when the
25 cut-off is closed.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cut-off a casing, a screen set at an
30 angle and secured to the inner side of the casing, and ribs or corrugations upon the surface of the screen for the purposes shown.

2. In a cut-off a casing, a screen provided with ribs or corrugations and secured at an
35 angle to the sides of the casing, and a cut-off pivoted in the casing below the screen, for the purposes shown.

3. In a cut-off a casing, a stay secured to the casing and projecting beyond the outer
40 surface of the casing, a screen set at an angle

and secured to the casing and stay, and ribs or corrugations upon the surface of the screen, as and for the purpose shown.

4. In a cut-off a casing, a stay secured in the casing and projecting therefrom, a screen
45 set at an angle and secured to the inner side of the casing and the stay, ribs or corrugations upon the screen consisting of wires fastened to the upper surface of the screen, and a cut-off pivoted in the sides of the casing be-
50 neath the stay, as and for the purposes shown.

5. A cut-off consisting of a casing, a stay secured within the casing and projecting out therefrom, a screen provided with ribs or cor-
55 rugations consisting of a wire secured to the top of the ribbed or corrugated screen, said screen set at an angle and secured to the casing and the portion of the stay outside of the casing, and a cut-off pivoted to the casing and adapted to engage the under side of the stay,
60 as and for the purposes shown.

6. A cut-off consisting of a tubular casing, a stay B secured to the inner side of the casing and projecting beyond the outer surface of the casing, a screen D provided with ribs
65 or corrugations E, said screen set at an angle and rigidly secured to the rear of the inside of the tube and to the stay at its outer edge beyond the tube, and a cut-off, pivoted in the
70 sides of the tube and adapted to engage the bottom of the stay, a combined lock and handle L, and pin N, all combined as and for the purposes shown.

In testimony whereof I affix my signature in the presence of two witnesses.

JOSEPH A. YOUNG.

Witnesses:

M. M. CADY,

JOHN C. HANCOCK.