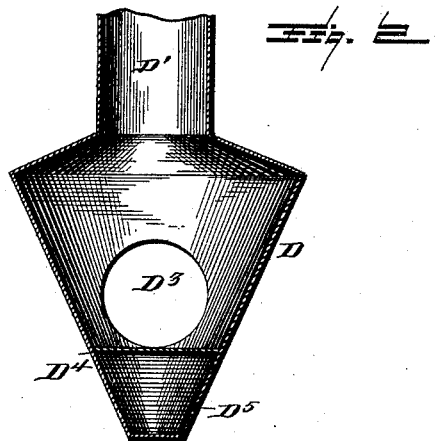
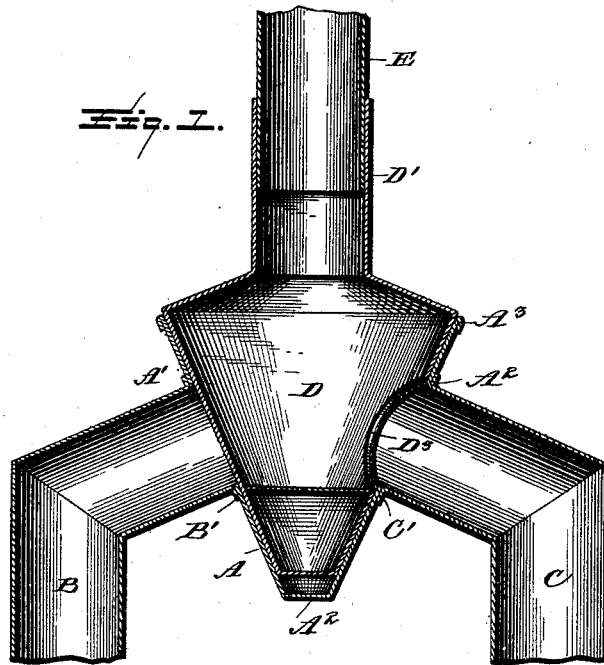


(No Model.)

J. L. GRASSER.
RAIN WATER CUT-OFF.

No. 422,770.

Patented Mar. 4, 1890.



Witnesses
L. C. Hills.
H. Sutherland.

334

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UNITED STATES PATENT OFFICE.

JOHN L. GRASSER, OF NEWARK, OHIO.

RAIN-WATER CUT-OFF.

SPECIFICATION forming part of Letters Patent No. 422,770, dated March 4, 1890.

Application filed July 18, 1889. Serial No. 317,931. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. GRASSER, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Rain-Water Cut-Offs, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has relation to cut-offs for downspouts; and it has for its object to provide simple means of this character by which the course of the water passing through the downspout may be readily and easily changed at will, so as to throw it either into the cistern or into the waste or overflow pipe, as may be desired. I also provide an extended bearing for the movable part to give stability to the same and provide a diaphragm to prevent accumulation of water in the lower part of the same, which would tend to increase the weight and render the said movable part more difficult to turn.

25 To the accomplishment of such ends and to the production of a cut-off at a minimum cost, the invention consists in the peculiarities of construction and the combination, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the appended claims.

30 The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a central vertical section illustrating my improved cut-off applied to a downspout and a cistern and waste-pipe, and Fig. 2 is a like view of the cut-off removed.

40 Referring to details of the drawings by letter, A designates a suitable shell, of any preferred material—tin or galvanized iron—of conical or funnel shape, and provided with apertures A' A², preferably, though not necessarily, upon diametrically-opposite sides thereof.

45 B is the overflow or waste pipe, having a flanged end B', which bears against and is secured to the shell in any suitable manner over the aperture A' therein.

C is a pipe having flanged ends C' bearing against and secured to the shell at the aper-

ture A², the said pipes B C being shown as formed with elbows, although such construction is not essential. The pipe C is designed to connect with the cistern or other reservoir into which it is designed to conduct the water, and the pipe B with the sewer or street or other suitable place to conduct the rain or overflow when the valve is turned, so as to shut off the entrance to the cistern-pipe, as will be hereinafter explained. The upper edge of the shell A is turned over, as shown at A³, to strengthen the same—a common expedient in sheet-metal articles.

65 D represents the movable portion or cut-off. It is formed of any suitable material and of a corresponding shape to that of the shell. It is provided with a vertical extension D' to receive the lower end of the downspout E, as represented in Fig. 1. This movable portion is provided with an aperture D³, as shown more clearly in Fig. 2, designed to register with either of the apertures A' A², as may be desired.

75 D⁴ is a diaphragm within the portion D, secured to the inner wall thereof in close proximity to the bottom of the aperture D³. This provides an air-chamber D⁵ in the bottom of the said movable portion D, while giving the same an extended bearing to steady the same and prevent wobbling thereof when it is turned. This diaphragm also prevents the accumulation of water in the lower part of the movable portion D, which would tend to increase the weight thereof and render it more difficult to manipulate.

80 In practice the parts are assembled as shown in Fig. 1, and normally the movable part is so set in relation to the other parts that its aperture D³ registers with the aperture A², and consequently with the cistern-pipe, so that water entering the downspout finds its way through the apertures into the said cistern-pipe, the entrance of the overflow or waste pipe B being closed by the impermeable wall of the portion D. When the cistern becomes full, or for any other desired reason it is desired to stop the inflow of water to the same, the portion D is turned in the shell so as to bring the aperture D³ thereof coincident with the aperture A', the said action closing the aperture A² and making the communication direct from the downspout out through

the overflow or waste pipe. The taper of the shell and portion D are important, as they serve to present an increased bearing between said parts and yet allow a slight adjustment
5 without affecting the operation.

A knob or any other suitable means may be provided for the easy manipulation of the portion D.

I am aware that conical valves have long
10 been used in relief-cocks and other devices, and make no claim, broadly, to a conical valve.

What I claim as new is—

1. The combination, with the conical shell having apertures in its side walls, of the
15 conical hollow revoluble portion fitted within the shell and adapted to be held therein by frictional contact of the walls, said conical portion being provided with a side aperture and upwardly-extending neck to embrace the
20 downspout, and a closed chamber beneath

the aperture, substantially as and for the purpose specified.

2. The combination, with the conical shell having apertures in its side walls, and pipes, as B C, having flanged ends and secured to
25 said conical shell at said apertures, of a conical hollow revoluble portion fitted within the shell and adapted to be held therein by frictional contact of the walls of the two parts, and provided with an upwardly-extending
30 neck D' to receive the downspout, and with a side aperture in its tapered walls, with a closed chamber beneath said aperture, substantially as and for the purpose specified.

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

JOHN L. GRASSER.

Witnesses:

JOHN C. BRENNAN,
WM. P. YOUNG.