

W. P. WALKER.
RAIN WATER CUT-OFF.
APPLICATION FILED MAY 18, 1910.

971,578.

Patented Oct. 4, 1910.

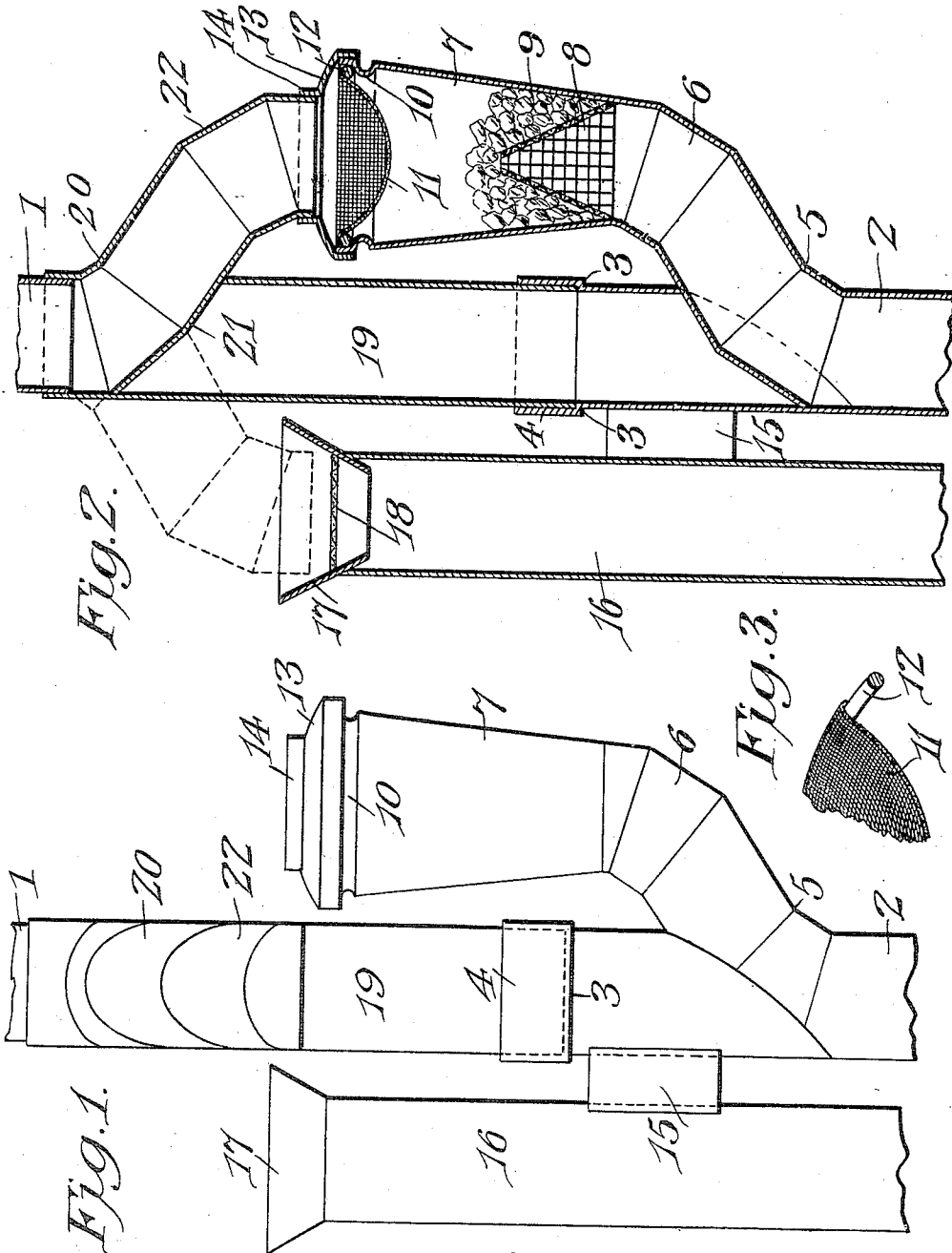


Fig. 1.

Fig. 2.

Fig. 3.

Witnesses

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RAIN-WATER CUT-OFF.

971,578.

Specification of Letters Patent.

Patented Oct. 4, 1910.

Application filed May 18, 1910. Serial No. 562,076.

To all whom it may concern:

Be it known that I, WILLIAM P. WALKER, citizen of the United States, residing at Macon, in the county of Macon and State of Missouri, have invented a new and useful Rain-Water Cut-Off, of which the following is a specification.

This invention relates to rain water cut-offs, and the object of the invention is to provide a simple device by the use of which rain water from the roof of a building may be directed into a sewer to carry off the dirt and impurities collected on the roof or may be directed into a cistern for household use.

A secondary object of the invention is to provide means whereby the cut-off will be supported firmly in either of its adjusted positions in such manner that dropping of the cut-off from its engagement with the downspout will be prevented without causing severe strain upon the pipes by which the water is conveyed to the sewer or to the cistern.

With the stated objects and other incidental objects in view, the invention consists in certain novel features of the device illustrated in the accompanying drawings which will be hereinafter first fully described and then more particularly pointed out in the appended claims.

In the drawings,—Figure 1 is a front elevation of my improved device showing the cut-off adjusted to deflect the water into a catch barrel or similar receptacle. Fig. 2 is a vertical section of the device showing the cut-off arranged to direct the water into the cistern in full lines and in dotted lines arranged to direct the water into a sewer. Fig. 3 is a detail view of a portion of a screen used in the mouth of the pipe leading to the cistern.

In carrying out my invention, I employ the usual downspout 1 which is secured to the side of the building and leads from the roof of the same in the usual manner. In direct alinement with the said downspout, I secure to the building a pipe 2 which leads to the cistern and has its upper end provided with a shoulder 3 from which rises an off-set portion 4, as clearly shown. Secured to the pipe 2 below the upper end of the same and leading laterally therefrom is an elbow 5 which communicates with the interior of the said pipe and the upper side of which extends across the bore of the pipe so as to form a partition which will effec-

tually prevent flow through the pipe above the partition. The elbow 5, as shown, projects laterally from the pipe 2, and at its outer end is formed an elbow 6 which is turned upwardly to support a hopper or body 7, at the lower end of which is secured a screen 8 which permits the flow of water through the hopper and the elbows into the pipe 2, but will prevent the flow of dirt, and also serves as a support for filtering material 9. Near the mouth or upper end of this hopper or body 7 is formed an internal bead 10 upon which rests a removable screen or guard 11 formed of cloth, or wire netting of a very fine mesh, secured to a ring 12 of proper diameter to fit snugly within the end of the hopper and rest upon the said bead, as clearly shown. The screen or guard is held in position by the bead so that it cannot drop into the hopper and at the same time it may be readily removed from the hopper when it is desired to clean the same or renew the filtering material placed therein, as will be readily understood. The substitution of a new screen for a broken or worn screen is also facilitated by this construction. Over the upper end of the hopper 7 is fitted a cap 13 which projects inward over the mouth of the hopper, as clearly shown in Fig. 2, and is provided with an upstanding central flange or rim 14 providing an inlet opening.

Secured to the pipe 2 by a bracket, or other connection 15, is a pipe 16 which leads to the sewer and is provided with a flared or hopper-like mouth piece 17 at its upper end within which is secured a grating or screen 18 which will prevent stones, sticks or other material passing into the pipe to obstruct the sewer.

Seated upon the shoulder 3, so as to fit snugly within the enlargement 4, is a tubular stem or post 19 which extends upward therefrom and fits upon the lower end of the downspout 1, as indicated. Leading laterally from the said tubular stem 19 is an elbow 20 which communicates with the interior of the stem, near the upper end of the same, and has its lower side extending across the bore of the stem, as shown at 21, in order to prevent the flow of any water through the stem below the elbow. The elbow leads laterally downward from the side of the stem and has its outer end formed into a second elbow 22 which is turned downward and is adapted to fit within the rim 14, as

shown in full lines in Fig. 2. When in this position, the water flowing from the roof through the downspout will be directed into the hopper 7 and will escape therefrom through the elbows 6 and 5 into the pipe 2 by which it will be conducted into the cistern.

It will be observed, on reference to the full lines in Fig. 2, that the free end of the elbow 22 engages within the rim 14 so that the water will be directed into the hopper 7 and will not escape over the side of the same. It is desirable that the water which flows from the roof at the commencement of a rain fall be prevented from passing to the cistern, inasmuch as it will be unfit for use owing to the fact that it will wash from the roof the dirt and other impurities which may have been deposited thereon prior to the rain fall. To accomplish this end, the conducting and guiding spout formed by the elbows 20 and 22 is turned to the position shown in dotted lines in Fig. 2 so as to project over the end of the pipe 16 leading to the sewer and direct the water into the same. This adjustment is effected by merely turning the stem 19 upon its connection with the pipe 2 so that the cut-off spout will be carried from over the hopper 7 to a point over the pipe 16. The enlargement 4 is of sufficient length to permit the stem 19 to be raised enough to carry the extremity of the elbow 22 clear of the rim 14 without disengaging the stem from the said enlargement. Should the rain fall be excessive and the water turned from the roof be greater than the capacity of the cistern, the cut-off spout may be turned to a position directly in front of the downspout and the pipe 2, as shown in Fig. 1, so that the water emerging from the elbow 22 may be caught in a barrel or other receptacle. It may sometimes be desirable to adjust the spout to this position, which is shown in Fig. 1, when it is desired to use a quantity of water which need not be sufficiently pure for drinking or similar uses.

It will be readily seen from the foregoing description that I have provided an exceedingly simple device which may be readily turned to direct the water to any desired point and which is supported at its lower end so that there is no strain placed upon the downspout, or upon either of the pipes through which the water is conveyed, by the weight of the cut-off. The construction employed by me also provides a brace against the under side of the cut-off so that it is enabled to more effectually withstand the weight of the down-pouring water than in devices heretofore known to me.

The advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have

described the principle of operation of the invention, together with the apparatus which I now consider to be the best embodiment thereof, I desire to have it understood that the apparatus shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described my invention, what I claim is:—

1. The combination with a downspout, and a conducting pipe arranged in alinement with the downspout, of a hopper supported by and communicating with the conducting pipe, and a cut-off rotatably mounted upon the upper end of the conducting pipe and adapted to form a communication between the down-spout and the hopper.

2. The combination with a downspout, and a conducting pipe in vertical alinement therewith, of a hopper supported by and communicating with the said conducting pipe, a second conducting pipe arranged adjacent the first mentioned conducting pipe, and a stem rotatably mounted in the upper end of the first mentioned conducting pipe and carrying a cut-off spout registering with the downspout and adapted to register with either the second mentioned conducting pipe or with the hopper.

3. The combination with a down-spout, and a conducting pipe in vertical alinement therewith, of a hopper supported by and communicating with said pipe, and a tubular stem rotatably mounted on the upper end of the conducting pipe and engaging the lower end of the downspout and carrying a cut-off spout adapted to be carried by the stem to a point over the hopper or to one side of the same.

4. The combination with a downspout, and a conducting pipe in vertical alinement therewith, of a deflecting elbow secured in the conducting pipe and projecting laterally therefrom, a hopper on the upper outer end of the said elbow, a stem rotatably mounted on the upper end of the conducting pipe and having a tubular upper end engaging the end of the downspout, and a tubular cut-off leading laterally from the upper end of the stem and adapted to register with the upper end of the hopper.

5. The combination of a conducting pipe, a hopper secured to and communicating with the said pipe and provided with an internal bead near its upper end, a ring resting within the mouth of the hopper upon the said bead, a screen carried by the said ring, a stem rotatably mounted on the upper end of the pipe, and a tubular cut-off carried by the said stem and adapted to direct fluid upon the said screen.

6. The combination of a conducting pipe, a hopper supported by and communicating with said pipe, a screen removably fitted in

the upper end of the said hopper, a cap fitted upon the said hopper and having a central upstanding rim, a stem rotatably mounted upon the upper end of the conducting pipe, and a tubular cut-off carried by the said stem and adapted to have its end engaged within the said rim.

7. The combination with a downspout, and a conducting pipe in vertical alinement therewith and provided at its upper end with an internal shoulder and an offset portion above said shoulder, a hopper supported at one side of the pipe and communicating therewith be-

low the internal shoulder, a stem resting on said shoulder and rotatable within the offset portion, the upper end of the stem engaging the downspout, and a tubular cut-off spout leading laterally from the upper end of the stem to project over the hopper.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM PORTER WALKER.

Witnesses:

R. A. GUTHRIE,
H. L. CANNELL.