F. J. CRANE.

AUTOMATIC CUT-OFF AND FILTER.

APPLICATION FILED JULY 12, 1909.

959,315.

Patented May 24, 1910.

Fig. 2.

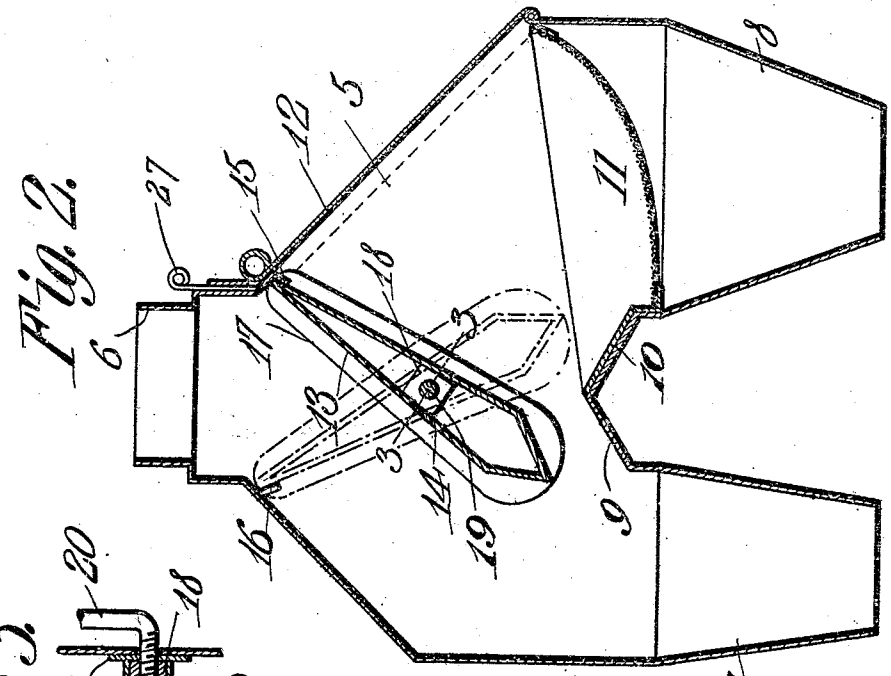


Fig. 3.

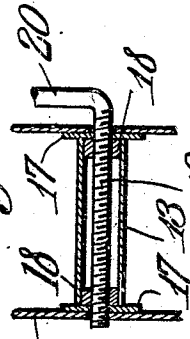
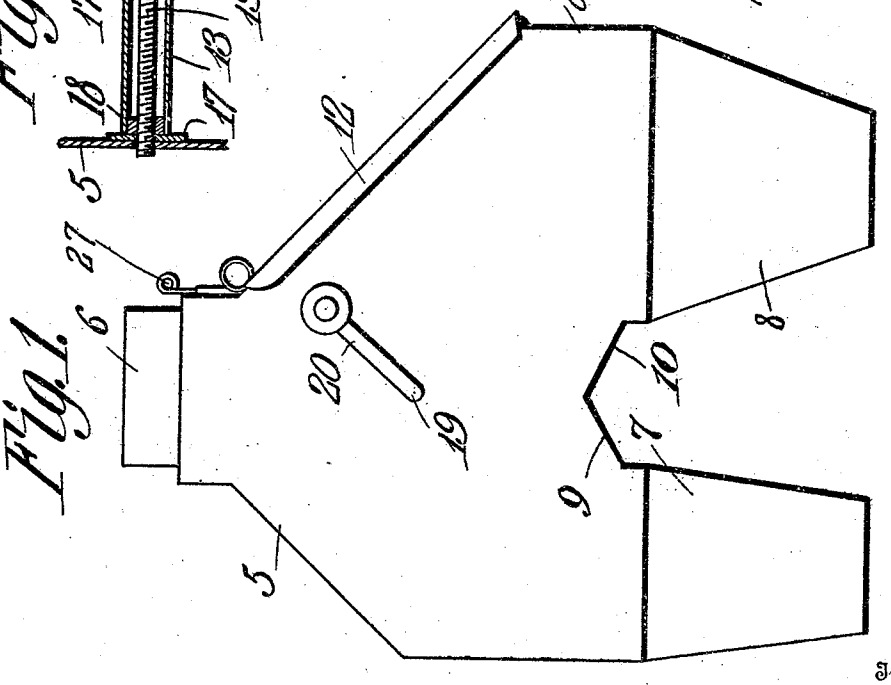


Fig. 1.



Witnesses

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AUTOMATIC CUT-OFF AND FILTER.

959,315. Specification of Letters Patent. Patented May 24, 1910.

Application filed July 12, 1909. Serial No. 507,149.

To all whom it may concern:

Be it known that I, FRED J. CRANE, a citizen of the United States, residing at Wilmington, in the county of Clinton and State of Ohio, have invented a new and useful Automatic Cut-Off and Filter, of which the following is a specification.

This invention relates to a cut-off device for controlling communication between the cistern and the rain spout leading from the roof of a house, and more particularly to that class of devices which first send the water to a waste pipe, and then, after the roof is cleaned, to the cistern.

It is the object of the present invention, to provide a device of the kind stated which is simple in structure and all the parts of which are readily accessible in order that accumulations of trash and dirt may be removed.

A further object is to provide an improved automatic cut-off, and with these objects in view, the invention consists in the novel construction and arrangement of parts to be hereinafter described and claimed, reference being had to the drawing hereto annexed, in which,

Figure 1 is an elevation of the device, Fig. 2 is a vertical section, Fig. 3 is a transverse section taken on the line 3—3 of Fig. 2.

Referring to the drawing, 5 denotes a casing having at its top an inlet 6 for connection with the rain spout leading from the gutter at the roof of the house. The lower end of the casing has two branches 7 and 8, respectively, the former being connected to a waste pipe, and the latter to a pipe leading to the cistern (not shown). The wall between the two branches is oppositely inclined as indicated at 9 and 10, respectively, the incline 9 leading to the branch 7, and the incline 10 to the branch 8. The incline 10 serves to support a screen 11 mounted in the branch 8. The screen fits snugly in the branch, and is shaped at one of its ends to fit the incline 10, whereby it is securely held in place within the branch without any other fastening means, and at the same time it may be readily removed for the purpose of cleaning the same. The wall of the casing 5, above the screen, has an opening which is provided with a suitable hinged closure 12 through which the screen may be removed.

The valve for controlling the flow to the branches 7 and 8 comprises an elongated thin casing 13 gradually increasing in thickness in the direction of its lower end to form a pocket, which is for a purpose to be presently described. The valve is pivotally mounted in the casing 5 directly beneath the inlet 6, and midway between the branches 7 and 8, its lower ends extending close to the apex of the inclines 9 and 10. The valve may therefore be swung on its pivot to let the water into either branch.

Near the lower end of the valve, in that side which faces the inlet when the valve is in a position to let the water into the branch 7, is an opening 14. The swing of the valve to let the water into the branch 7 is limited by the engagement of its upper end with a shoulder 15 on the wall of the casing 5, and its swing in a direction to let the water into the branch 8, is limited by the engagement of its upper end with the pin 16 projecting from the wall of said casing on the interior thereof.

In the longitudinal edges of the valve, on both sides thereof, are outstanding flanges 17 which prevent the water from running over said edges.

To the end walls of the valve 13, on the inside thereof, are soldered or otherwise secured nuts 18 into which a rod 19 is screwed, said rod passing through the openings in said end walls and also through openings made in the walls of the casing 5, whereby a pivotal support of the valve is had. On the outside of the casing 5, one end of the rod has a crank 20 for rotating it, whereby the valve is swung on its pivot and may thus be manually set. By the herein described connection between the rod and the valve, the latter may be reversed according to which branch of the casing leads to the waste pipe.

In operation, the valve 13 is swung so as to close the branch 8, and to establish communication between the inlet 6 and the branch 7 leading to the waste pipe, as shown in Fig. 2. The lower end of the valve discharges on the incline 9 from which the water flows into the branch 7, the incline therefore effectually preventing the water from entering the branch 8. Some of the water running down the valve enters the same through the opening 14, and when sufficient water has collected therein, the weight thereof causes the valve to tilt, and to reverse its position, so as to let the water run into the branch 8 as shown by dotted lines in Fig. 2. The momentum of the valve car-

ries it past the perpendicular. When the valve reverses, the water which has accumulated therein empties into the branch 7. The screen 11 is of fine mesh, and serves to filter the water flowing to the cistern. At the cessation of the rainfall, the valve is reversed so as to again establish communication between the inlet and the branch 7 and it is thus set in operative position for the next rainfall. This resetting of the valve is readily effected by means of the crank 20.

Should it be desired to lock the valve in position to direct the water into the outlet 7 the key 27, slidably mounted on the side of the casing, is pushed downward so as to bear upon the side of the valve and thereby prevent movement of the same.

Having thus described my said invention, what I claim as new and desire to protect by Letters Patent is:—

1. The combination with a casing having an inlet, and a pair of outlets, and a valve pivotally mounted intermediate its ends in the casing beneath the inlet, said valve comprising an elongated casing having an opening below its pivot in one of its sides, and said valve in one position discharging in one of the aforesaid outlets and in another position in the other outlet, the position of the valve being changed by the filling thereof through the opening in its side.

2. The combination with a casing having an inlet, and a pair of outlets, the wall between the outlets being oppositely inclined in the direction of the respective outlets, and a valve pivotally mounted in the casing beneath the inlet, said valve comprising an elongated casing having an opening in one of its sides, and said valve in one position discharging on one of the aforesaid inclines, and in another position on the other incline, the position of the valve being changed by the filling thereof through the opening in its side.

3. The combination with a casing having an inlet, and a pair of outlets, of a valve pivotally mounted in the casing beneath the inlet, said valve comprising an elongated casing having an opening in one of its sides, said valve in one position discharging into one of the outlets, and in another position into the other outlet, the position of the valve being changed by the filling thereof through the opening in its side, nuts secured to the end walls of the valve on the inside thereof, said end walls and the adjacent walls of the casing having openings, a rod passing through said openings and through the nuts, and means for rotating the rod.

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

FRED J. CRANE.

Witnesses:
G. P. THORPE,
E. G. HIATT.