No. 810,515. PATENTED JAN. 23, 1906.

A. W. WEBER.

COMBINED STRAINER AND CUT-OFF.

APPLICATION FILED JUNE 27, 1905.

Fig. 3.

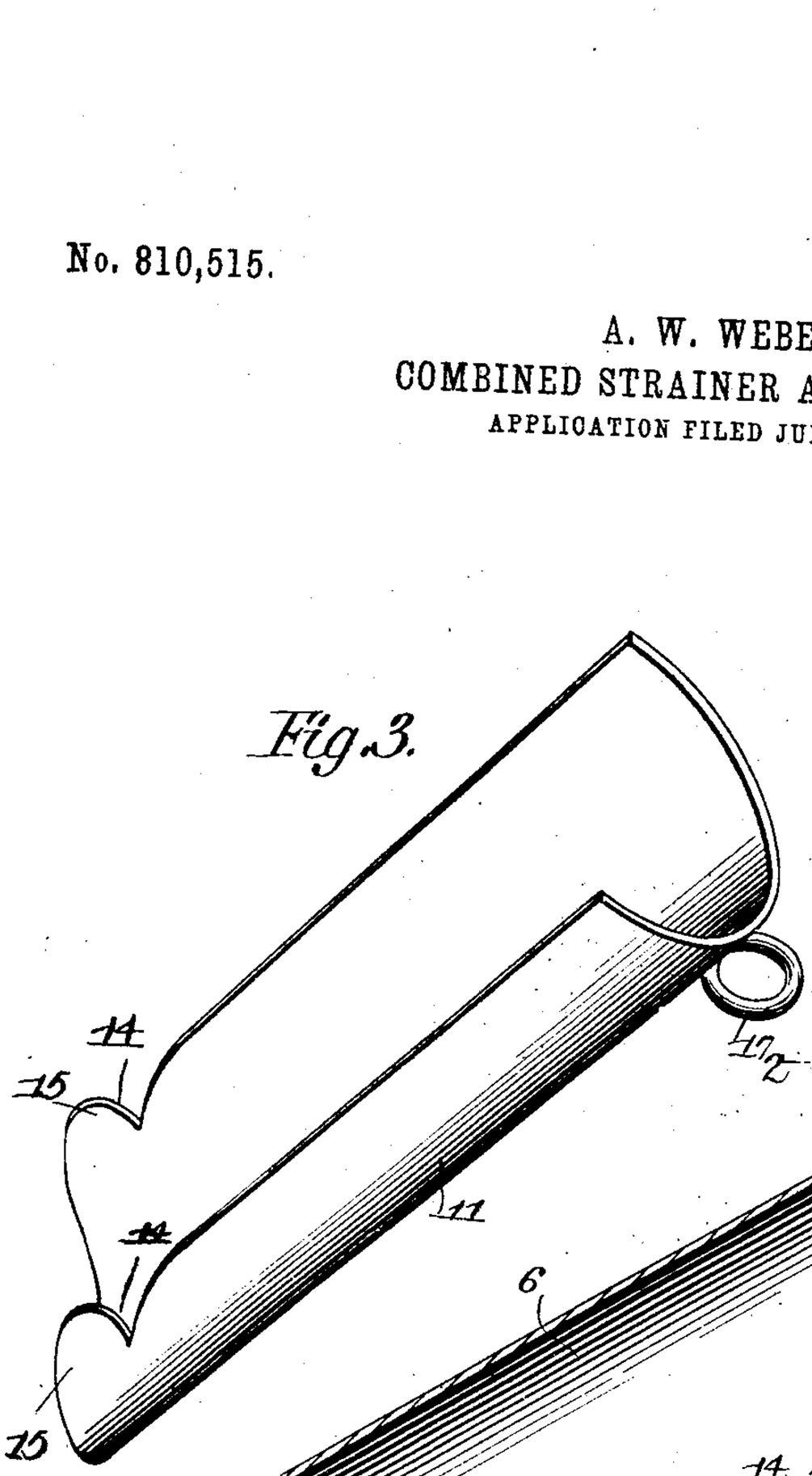

Fig. 1.

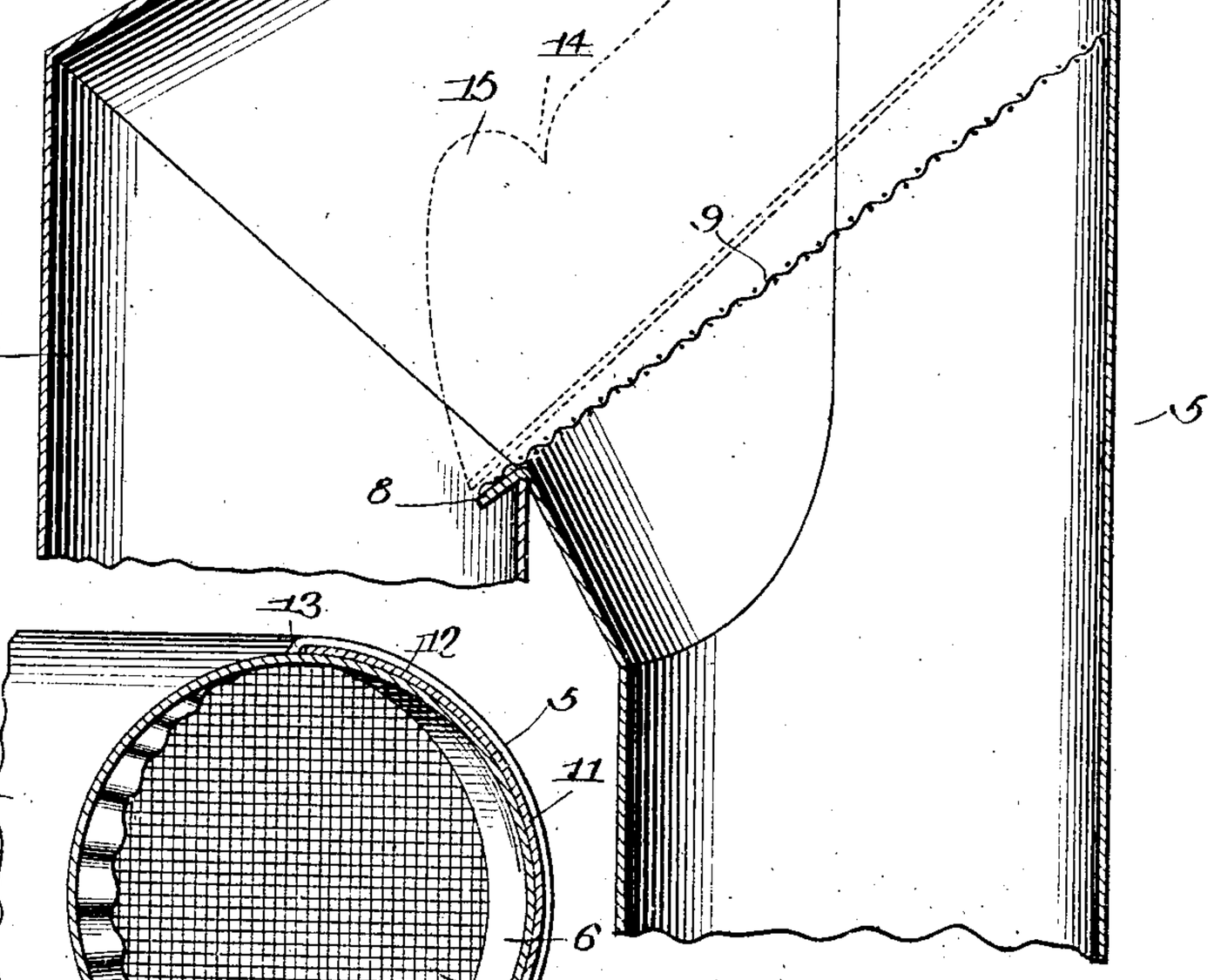

Fig. 2.

Witnesses

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COMBINED STRAINER AND CUT-OFF.

No. 810,515. Specification of Letters Patent. Patented Jan. 23, 1906.

Application filed June 27, 1905. Serial No. 267,277.

To all whom it may concern:

Be it known that I, ARNOLD W. WEBER, a citizen of the United States, residing at Bellevue, in the county of Jackson and State of Iowa, have invented a new and useful Combined Strainer and Cut-Off, of which the following is a specification.

This invention relates to a combined cut-off and strainer, and has for its object to provide a simple, inexpensive, and efficient device of this character by means of which the water falling on the roof of a building during a rainfall may be directed through a screen or other filtering medium into a cistern for future use.

A further object of the invention is to provide a novel form of cut-off valve for directing the water at the beginning of a rainfall into a waste-pipe, said valve being mounted above the filter or screen and serving in its closing movement to remove any deposits of leaves, twigs, and other foreign matter from the surface of the latter.

A still further object is to provide a deflecting-plate for guiding the cut-off valve in its closing movement and directing the water from the down-spout into the waste-pipe when said valve is closed.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in form, proportions, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

In the accompanying drawings, forming a part of this specification, Figure 1 is a longitudinal sectional view of a combined cut-off and strainer constructed in accordance with my invention. Fig. 2 is a sectional top plan view taken on the line 2 2 of Fig. 1, and Fig. 3 is a detail perspective view of the cut-off valve detached.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The improved device comprises a pipe-section 5, the upper portion of which is designed for attachment to the down-spout of a roof, while the lower portion thereof is adapted to be connected to a cistern or other suitable receptacle for receiving the filtered water. The pipe-section 5 is provided with an elbow 6, to which is secured a waste-pipe 7, the lower portion of the elbow at its juncture with the waste-pipe being extended within the latter to form a flange 8, upon which is seated one end of an inclined screen or strainer 9, the opposite end of which is secured in any suitable manner to the interior walls of said pipe-section, as shown. An inwardly-extending depending corrugated lip 10 is formed on the pipe-section 5 where it unites with the elbow 6, said lip serving to direct the water from the down-spout upon the screen or filter 9 when the cut-off valve 11 is in open position. The cut-off valve is preferably concavo-convex in cross-section to conform to the contour of the pipe-section 5 and is pivotally supported on said section by inserting its lower end through a segmental slot 12, formed in the wall of the pipe-section opposite the elbow 6. The pipe-section 5 at the segmental slot 12 is offset, as indicated at 13, to permit the ready insertion and withdrawal of the valve in operating the same, said valve being provided at its pivoted end with oppositely-disposed notches or recesses 14, defining laterally-extending ears 15, which engage a guide-plate 16 when the valve is in the position shown in full lines in Fig. 1 of the drawings and also serve as pivotal points for said valve when the latter is swung downwardly preparatory to moving the same inwardly to the closed position, (indicated by dotted lines.) The plate 16, which is preferably curved to conform to the pipe-section 5 and is soldered or otherwise rigidly secured to the interior walls of the latter, serves to guide the valve 11 in its closing movement and also to deflect the water from the down-spout into the trough of said valve, from whence it flows into the waste-pipe 7. The free end of the valve 11 is provided with a finger-piece or handle 17 for operating the same, said loop or handle being adapted to engage the outer wall of the pipe-section and limit the closing movement of said valve, as shown. By having the cut-off valve mounted above the inclined screen or filter in the manner described as the valve is moved to closed position the end 18 thereof will effectually remove any deposits of leaves, sticks, and other foreign material on the screen and

scrape the same into the waste-pipe 7. It also protects the screen from ice and the like when said valve is closed.

From the foregoing description the construction of the device will be readily understood, and the operation thereof is as follows: During the beginning of a rainfall the cut-off valve is moved to closed position by grasping the handle 17 and tilting said valve downwardly and then forcing the same inwardly until the loop or handle engages the exterior wall of the pipe-section, as clearly indicated by dotted lines in Fig. 1 of the drawings, and in which position the water from the down-spout will flow into the trough of the valve and thence to the waste-pipe 7. The valve is then moved to open position, thereby causing the water from the down-spout to be deflected by the depending lip 10, through the filter or screen 9 into the lower portion of the pipe-section 5, from whence it flows into the cistern or other receptacle designed to receive the same.

Attention is here directed to the fact that by moving the free end of the valve transversely of the screen either a partial or total cut-off may be obtained, thereby permitting any desired quantity of water to flow into the cistern. It will thus be seen that there is provided an extremely simple and inexpensive device admirably adapted for the attainment of the ends in view and one in which the use of rivets, hinges, springs, and similar auxiliary fastening or operating devices are entirely dispensed with.

Having thus described the invention, what is claimed is—

1. A device of the class described comprising a pipe-section for attachment to a down-spout and having its side walls slotted, a waste-pipe communicating with said pipe-section, a screen extending across the pipe-section, a guide-plate carried by said section and disposed above the screen, and a tiltable cut-off valve having one end thereof extending through the slot in the pipe-section and provided with laterally-projecting ears adapted to engage said guide-plate, said valve being movable in the direction of its length to direct the flow of liquid into the waste-pipe.

2. A device of the class described comprising a pipe-section for attachment to a down-spout, a waste-pipe communicating with said pipe-section, and a tiltable valve movable transversely of the pipe-section for regulating the flow of liquid into the waste-pipe.

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

ARNOLD W. WEBER.

Witnesses:

GEO. J. GURINS,

WILLIAM E. BORN.