(No Model.)

C. S. LOW.

RAIN WATER CUT-OFF.

No. 516,499. Patented Mar. 13, 1894.

Fig. 1.

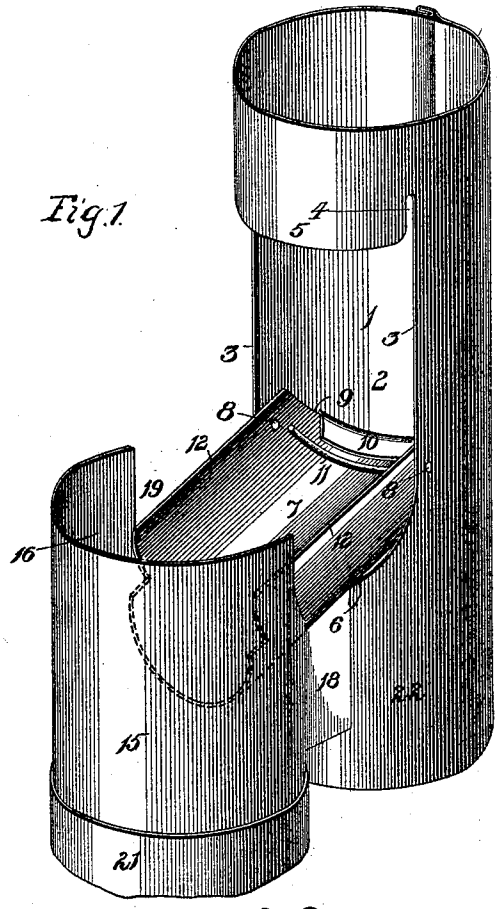
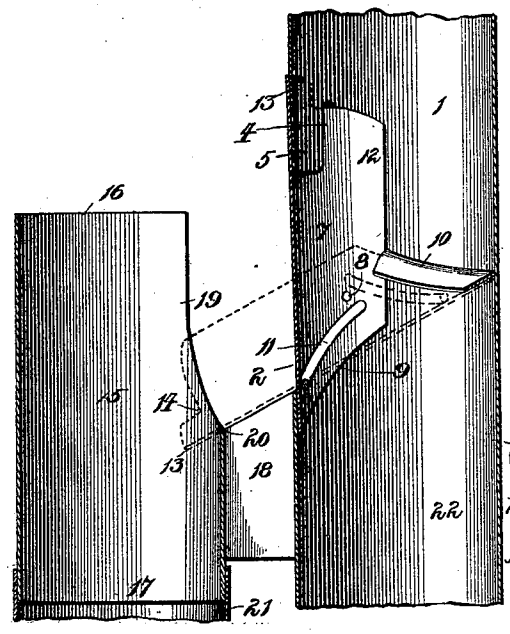


Fig. 2.



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CHARLES S. LOW, OF LITCHFIELD, ILLINOIS, ASSIGNOR OF ONE-HALF TO THEODORE BUMANN, OF SAME PLACE.

RAIN-WATER CUT-OFF.

SPECIFICATION forming part of Letters Patent No. 516,499, dated March 13, 1894.

Application filed July 17, 1893. Serial No. 480,724. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. LOW, of Litchfield, Montgomery county, in the State of Illinois, have invented certain new and useful Improvements in Rain-Water Cut-Offs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improved rain-water cut-off, and consists in the novel construction, combination and arrangement of parts hereinafter specified and designated in the claims.

The object of my invention is to provide a cheap, simple, and efficient device of this class, which shall produce improved effects.

In the drawings, Figure 1 is a perspective view of a cut-off embodying my invention, with the trough in an open position. Fig. 2 is a sectional side-elevation of same, with the trough shown in a closed position in solid lines and open in dotted lines.

1 indicates the cut-off chamber, which is preferably circular in cross-section, and in the walls of which a trough-opening 2 is formed with vertical edges 3 terminating at their upper ends in vertical slots 4, and forming a depending projection 5 having a free lower end and curved to conform to the curve of the wall of said chamber. The trough-opening is provided with a rounded lower end 6 which conforms to the curve of the under side of a trough presently described. The slots 4 have their upper ends rounded, to prevent cracking of the metal thereat during use, which might otherwise occur.

7 indicates a trough, semi-circular in cross-section to rest in contact with the rounded lower end of the trough-opening when said trough is in an open position, and it is pivotally-mounted in said opening, by means of rivets or bolts 8 which are passed through its parallel sides adjacent the upper edges thereof and through the opposite walls of said chamber. This trough has a rounded inner end 9, which comes in contact with and rests beneath a water shed 10 curved to conform to the curved inner face of said chamber-wall and secured to said wall by solder or other similar fastening so that the inner edge of said shed will be free and its body will extend at an angle from said wall above the rounded inner end of said trough, when the trough is in an open position, thereby preventing downward passage of liquid past said end at such time.

11 indicates a stiffening-rib made of stout metal that is preferably circular in cross-section, and this rib is curved longitudinally to conform to the curve of the inner surface of said trough, and fixed thereon by means of solder or other fastening so as to extend transversely of said trough parallel with the adjacent edge of the water-shed. This rib acts to retain the trough in normal shape above described, as such trough is made of thin sheet-metal and is devoid of stiffening at its ends, and if it was not for such rib the same would not retain the desired shape, but would soon flatten out and cause a binding against the opposite edges of the trough-opening in the wall of the chamber 1, which would greatly interfere with, if not entirely prevent, the satisfactory operation of the device. The free edges 12 of the spout project a distance above the rivets which form the pivots thereof, and when said trough is closed (as in Fig. 2) said edges project or engage in the slots 4 at the upper ends of the edges of said opening, and are thereby held securely in position. The upper end 13 of the trough projects above and overlaps the depending projection 5 when said trough is in a closed position, said end being cut away at 14 at opposite points to permit such operation. By this construction, the trough is closed tightly against said projection, and the lower portion of said trough engages with and fits tightly against the inner surface of the cut off chamber at a point just beneath the trough opening thereof, thereby preventing all egress of water through said opening when said spout is in such closed position.

15 indicates an additional chamber, which is also circular in cross section, provided with an open upper end 16 and an open lower end 17, and is secured to the chamber 1 by means of connecting-plates 18, so that both chambers are vertical and parallel. The upper ends of the connecting-plates are inclined downward and outward corresponding to the inclination of the outer surface of the trough

when same is in an open position, and acting as supports therefor when in such position.

19 indicates a trough opening which is formed in the wall of the chamber 15 opposite the trough opening in the chamber 1, and it is provided with a rounded lower end 20 which is engaged by the rounded under side of said trough when same is in an open position. The upper end of the opening 19 merges into the open upper end of the chamber 15. A drain-pipe 21 has its upper end connected to the lower end of the chamber 15.

When it is desired to cut off the water from the discharge end 22 of the chamber 1, all that is necessary is to press with the finger upon the exterior surface of the trough at a point below the pivotal point thereof between the two chambers, and by reason of said pressure the lower end of said trough will be pushed inward, and its upper end a corresponding distance outward, when said upper end may be grasped and thrown downward until the trough rests in contact with the opposite lower end of the opening 19 in the chamber 15, and when in such position said end will project a distance within said chamber 15, and water or other liquid entering the upper end of the chamber 1 will strike the water shed therein and the inner portion of the trough and be thereby deflected outward and flow through said trough to the adjacent chamber 15, and thence to the drain-pipe 21, which may be led to a sewer or other location desired. It will be observed that the trough is pivoted to the chamber 1 at a point nearer one end of said trough than the other end thereof, thereby causing one end of said trough to preponderate in length and weight exterior of said chamber 1 when said trough is in an open position, which causes the same to retain such open position without other fastenings for such purpose.

When it is desired to permit water to be passed directly through the chamber 1, the trough is placed in the position shown in Fig. 2 in solid lines, thereby leaving a substantially clear passage through said chamber. In some cases the chamber 15 and the plates which connect it to the chamber 1, may be dispensed with. This may be done when it is not desired to connect the trough with the drain pipe, and the device will be correspondingly reduced in cost.

What I claim is—

1. The improved water cut-off, having a chamber 1 circular in cross-section and provided with an opening 2 which is formed with vertical edges 3 terminating at their upper ends in vertical slots 4 and forming a depending projection 5 having a free lower end and curved to conform to the curve of the wall of said chamber, said opening having a rounded lower end 6, the upper ends of said slots being rounded, a trough 7 semi circular in cross-section and provided with a rounded end 10 and pivotally secured to the walls of said chamber so that its rounded end will engage with the inner surface of said chamber when said spout is in an open position and so that the edges thereof will engage the said slots 4 when said spout is in a closed position, substantially as herein specified.

2. The improved water cut-off, having two chambers circular in cross-section and secured parallel with oppositely facing openings each having a rounded lower end, vertical slots 4 formed in the walls of one of said chambers adjacent the upper end of the opening therein and forming a depending projection 5, a water-shed 10 curved to conform to the curved inner wall of one of said chambers and secured to said wall by solder or other fastening so that one of its edges is free and its body extends at an angle, a trough 7 semi-circular in cross-section to rest in contact with the rounded lower ends of said openings and pivotally mounted in one of said openings, a rounded end 9 formed on said trough and which engages with and rests beneath said water-shed when said trough is in an open position, a stiffening-rib 11 fixed upon the inner surface of said trough parallel with the adjacent edge of said water-shed, the preponderance of length and weight of said trough being located exterior of the chamber to which the same is pivoted when said trough is in an open position, and the upper end of said trough adapted to overlap said depending projection when the trough is in a closed position, substantially as herein specified.

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

CHARLES S. LOW.

Witnesses:
J. S. WYCKOFF,
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