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RUN-OFF EXTENSION FOR DOWNSPOUTS

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Fig 1

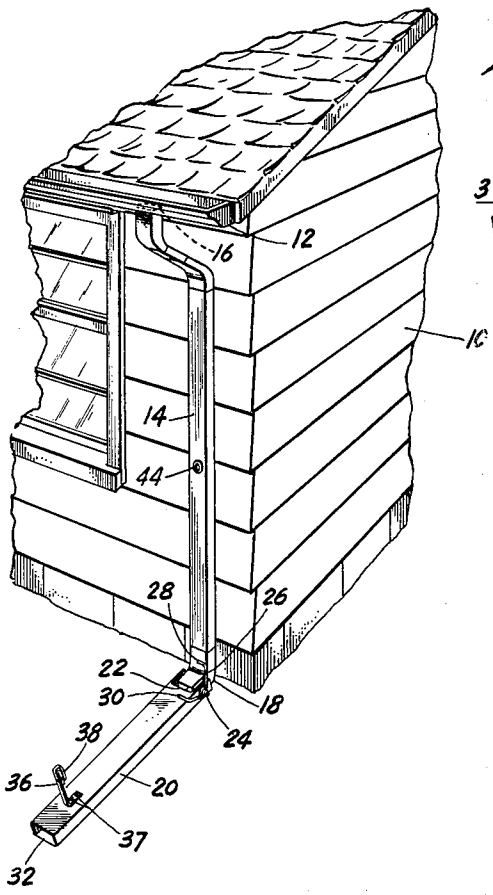


Fig 2

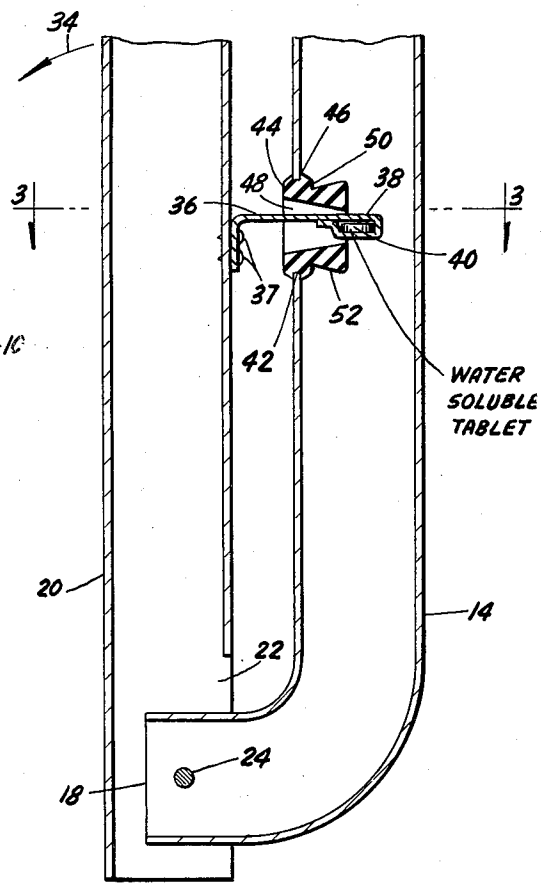
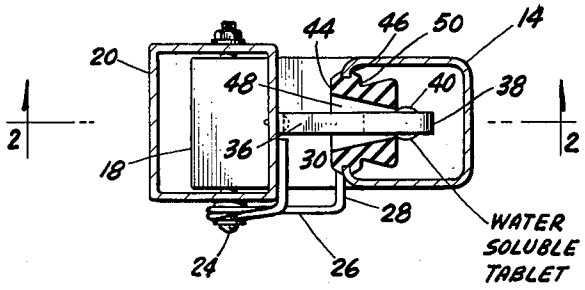


Fig 3



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RUN-OFF EXTENSION FOR DOWNSPOUTS

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This invention relates generally to extensions for downspouts which are employed for carrying away the water that flows downwardly from the gutter above, and pertains more particularly to an extension that is normally maintained in an elevated or out-of-the-way relationship with the ground.

Run-off extensions for downspouts have become quite conventional, but they have proved troublesome owing to the fact that they usually extend away from the dwelling to an appropriate discharge point on the adjacent lawn. Consequently, when one is cutting the grass, an extra amount of trimming is needed due to the presence of the run-off extension. Attempts have been made to obviate such interference but these attempts have resulted in costly or unsightly contrivances.

Accordingly, one object of the invention is to provide a run-off extension for downspouts which is normally retained in a raised, substantially parallel relationship with the downspout, and yet which will automatically be lowered when sufficient water flows downwardly through the downspout to warrant it being carried away. More specifically, an aim of the invention is to provide an extension pipe for downspouts that will be maintained in an elevated, non-interfering position by reason of a water soluble tablet, such as an effervescent, salt or sugar tablet, which readily dissolves when contacted by the rain water as it flows through the downspout to cause an automatic lowering of the extension pipe. Thus, no action is required from the home owner when it rains.

Other objects will be in part obvious and in part pointed out more in detail hereinafter.

The invention accordingly consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereafter set forth and the scope of the application which will be indicated in the appended claims.

In the drawing:

FIGURE 1 is a fragmentary perspective view of one corner of a home equipped with my invention, the extension pipe being in a generally horizontal position which it assumes when actually carrying away water;

FIGURE 2 is a vertical sectional view taken in the direction of line 2—2 of FIGURE 3, and

FIGURE 3 is a horizontal sectional view taken in the direction of line 3—3 of FIGURE 2.

Referring now in detail to the drawing, and first to FIGURE 1, it will be observed that a corner of a house labeled 10 has been pictured. As is conventional, a gutter 12 extends about the eaves of the house. Leading downwardly from the gutter 12 is a downspout 14 having an inlet 16 in communication with the gutter and a discharge end 18 at the bottom. Such downspouts are quite conventional but do have the shortcoming of discharging the water adjacent to the house 10 which can be objectionable due to ensuing seepage into the basement and/or is objectionable because the water is deposited in a concentrated quantity into a garden or the like that might be situated in the immediate vicinity of the discharge end 18.

The extension pipe that is employed in the present instance has been given the reference numeral 20. It will be noted that the upper side of the extension pipe 20, as viewed in FIGURE 1, has been notched at 22. The notch 22, which is also visible in FIGURE 2, permits the end of the extension pipe 20 nearest the discharge end 18 of the downspout 14 to be pivotally connected to said discharge end through the agency of a transverse pin 24. While it is within the contemplation of the invention to have the extension pipe 20 biased into a generally horizontal position by gravity action, nonetheless it is preferred that the biasing action be provided by a spring 26 having an intermediate portion thereof encircling the pin 24. The spring 26 is formed with offset ends 28 and 30, the end 28 engaging the downspout 14 and the end 30 engaging the extension pipe 20. Thus, in FIGURE 1 the spring 26 may be considered responsible for having urged the extension pipe 20 into the position in which it appears in this particular figure. In this way the end of the extension pipe 20 which bears numeral 32 will be employed for discharging the water that comes down the spout 14.

Attention is directed at this time to FIGURE 2 where an arrow 34 points in the direction in which the extension pipe 20 is biased by the spring 26. However, provision is made to maintain the extension pipe 20 in the elevated position in which it appears in FIGURE 2. In other words, normally it will be desired to maintain the pipe 20 in a generally parallel relationship with the vertical downspout 14. By so doing, the extension pipe 20 will offer no interference to the cutting of the grass therebeneath, yet will be available for carrying away the water flowing downwardly through the spout 14 during a rain storm, as will presently be made manifest.

With a view toward releasing the extension pipe 20 when needed, a bracket or arm 36 is affixed to one side of the pipe 20 by a pair of screws 37. The free end of the bracket or arm 36 is formed with a reversely turned integral loop 38. The purpose of the loop 38 is to hold a water soluble tablet 40, such as an effervescent, sugar, or salt tablet.

In practicing the invention, the downspout 14 is formed with cut-out aperture 42 at a given height. This height will be selected in accordance with the location of the bracket or arm 36 so that the member 36 will be registrable with the aperture 42 when the extension pipe 20 is in the position shown in FIGURE 2. The aperture 42 is purposely made larger than would be normally expected, for it is intended to accommodate a resilient grommet 44 having a groove 46 extending thereabout which receives the edge of the aperture 42. The grommet has a centrally disposed opening 48 extending axially therethrough, the opening 48 being of sufficient cross-section so as to permit the bracket or arm 36 to pass therethrough. However, the inner end of the opening 48 is small enough in diameter so that the tablet 40 will have segments to either side of the loop 38 projecting sufficiently in order that these segmental portions of the tablet will engage the inner end of the grommet 44. In this way, the extension pipe 20 will be maintained in the position shown in FIGURE 2 until the tablet 40 has become dissolved by water flowing downwardly through the downspout 14.

Because it is not desired that a small amount of water dissolve the tablet 40, the grommet 44 has a reduced diameter portion or neck 50 providing a diverging section 52. Hence, any small amount of water, such as that due to condensation or a very light rain, will travel down the interior of the downspout but will not proceed inwardly into contact with the tablet 40. On the other hand, sufficiently large quantities of water falling down through the spout 14 will contact the tablet 40 and will quickly dissolve it.

Having presented the foregoing information, the operation of my invention should be readily appreciated. First, the user will detach the grommet 44. Due to its resilient construction, this is readily achieved. With the grommet 44 removed from the downspout 14, it is placed in an encircling relationship with the bracket or arm 36.

When so related with the arm **36**, the water soluble tablet **40** can be inserted into the loop portion **38** of the arm and the grommet **44** then replaced as illustrated in FIGURE 2. Due to the difference in size between the tablet **40** and the inner end of the opening **48**, sufficient resistance is applied to the tablet **40** so as to maintain the pipe **20** in its raised or elevated position, this being the generally parallel position depicted in FIGURE 2. When it rains enough, the rain water from the gutter **12** will flow downwardly through the spout **14** and will dissolve the tablet **40**. In the illustrated situation, the spring **26** is responsible for pivoting the extension pipe **20** into its substantially horizontal position, this being the position pictured in FIGURE 1. However, it is within the purview of the invention to have the pipe **20** slant outwardly relative to the downspout **14** so that a bias is imparted to the pipe by gravity action. In either event, it is the release effected by the dissolving of the tablet **40** that permits the extension pipe **20** to assume its operative position for the carrying away of water coming down the downspout **14**.

As certain changes could be made in the above construction and many apparently widely different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

What is claimed:

1. In combination with a vertical downspout having a laterally facing opening at a given distance above its discharge end, an extension pipe pivotally connected at one end to said discharge end and biased toward a generally horizontal position with respect to said downspout for carrying away water flowing downwardly through said spout, an elongated member attached to said extension pipe at a location registrable with said opening so as to extend therewithin when said extension pipe is pivoted upwardly into a generally parallel relationship with said downspout, and means carried at the free end of said member for holding a water soluble tablet of sufficient size so as to engage the edge of said opening to normally maintain said extension pipe in said generally parallel relationship with said downspout but to release said extension pipe when said tablet is dissolved by water flowing through said downspout so that said pipe is then permitted to assume its said generally horizontal position.

2. In combination with a vertical downspout having an aperture of one size provided in one side thereof at a given distance above the discharge end of said spout, means detachably engaging said downspout and forming an opening of smaller size than said aperture, an extension pipe pivotally connected at one end to said discharge end and biased toward a generally horizontal position with respect to said downspout for carrying away water flowing downwardly through said spout, and means mounted on said extension pipe for holding a water soluble tablet at its free end of a size such as to engage the inwardly disposed side of said detachable means to overcome the bias of said extension pipe but to release said pipe when said tablet dissolves due to sufficient water flowing downwardly through said downspout.

3. The combination set forth in claim 2 in which said detachable means constitutes a resilient grommet the inner end of which is engaged by said water soluble tablet.

4. The combination set forth in claim 3 in which said grommet has a neck of reduced cross-section intermediate its ends so that lesser amounts of water will be deflected from said tablet.

5. The combination set forth in claim 2 in which said means for holding said water soluble tablet includes a laterally extending arm on said extension pipe for projecting inwardly through said opening, the inwardly projecting end of said arm having means narrower than the width of said water soluble tablet for engaging a central portion of such tablet.

6. The combination set forth in claim 5 in which said engaging means for said tablet constitutes an integral loop on said arm.

7. The combination of claim 2 including spring means for imparting said bias to said extension pipe.

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