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SELF-SHEDDING DOWNSPOUT SHIELD FOR EAVES TROUGHS

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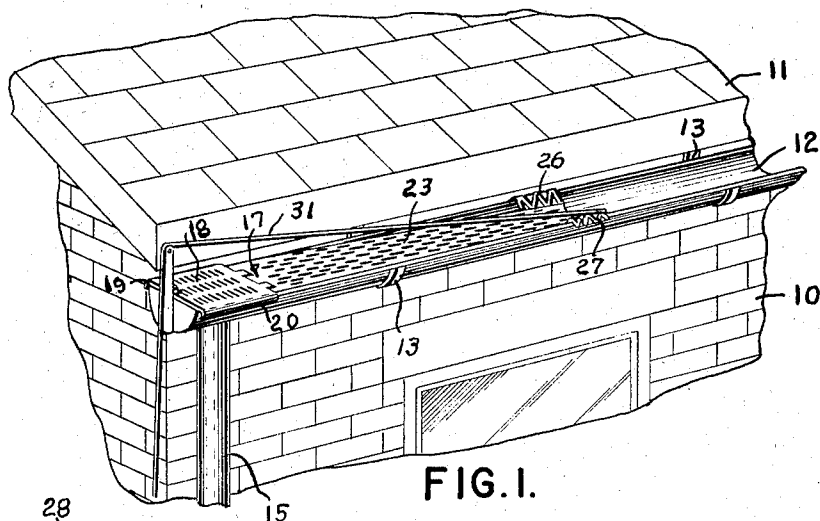


FIG. 1.

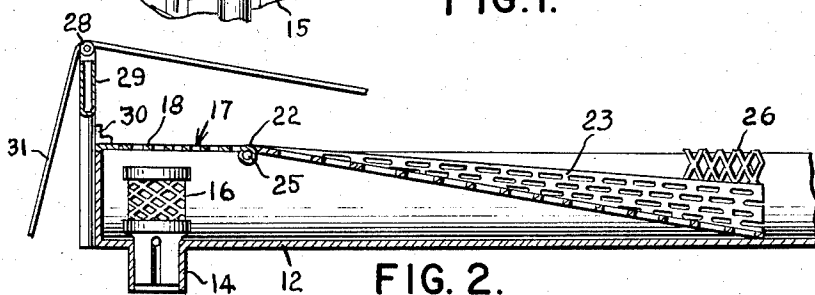


FIG. 2.

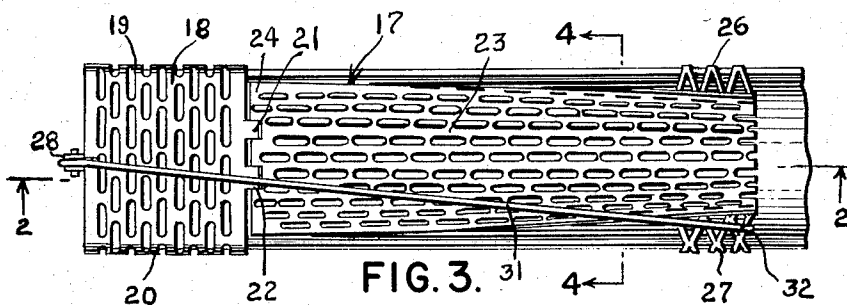


FIG. 3.

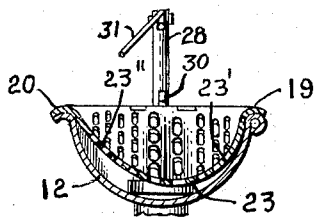


FIG. 4.

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SELF-SHEDDING DOWNSPOUT SHIELD FOR EAVES TROUGHS

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1 Claim. (Cl. 108—30)

This invention relates to a self-shedding downspout shield for eaves troughs.

It is the principal object of the present invention to provide a downspout shield for eaves trough which is self-shedding as a result of the water building up in the trough near the downspout so that the debris, such as twigs, leaves and the like will be elevated by the water as it passes to the downspout and along the shield to a location above the downspout and to the top of the trough so that it may be readily removed over the edge of the trough as it builds up over the shield and upon becoming dry by the wind that may traverse across the trough.

It is another object of the invention to provide a self-shedding downspout for eaves troughs which is adapted not only to shed the leaves and twigs during the storm and the filling of the trough with water but which can be manipulated by a pull cord from below to hinge upwardly a portion of the shield and to cause any remaining debris to be positively lifted over the edge of the trough and discharged therefrom.

It is still another object of the invention to provide a downspout shield for eaves troughs wherein one of the elements of the shield is not only adapted for upward movement to positively discharge the debris but is also so formed and shaped or skewed that the debris is not only worked upwardly over the downspout area but is worked forwardly toward the front edge of the trough so that upon its arrival to the upper edge of the trough it will lie adjacent to the front thereof so that it can be readily and easily discharged or shedded therefrom.

Other objects of the invention are to provide a self-shedding eaves trough which is of simple construction, inexpensive to manufacture, has a minimum number of parts, easy to install upon the trough over the downspout thereof, of pleasing appearance, compact, easy to manipulate, effective and efficient in use.

For a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which

Figure 1 is a perspective view of the downspout shield of the present invention mounted in an eaves trough on the side of a building,

Fig. 2 is a longitudinal sectional view of the trough and of the downspout shield as viewed on line 2—2 of Fig. 3,

Fig. 3 is a top plan view of the downspout shield and of the trough, and

Fig. 4 is a transverse sectional view of the trough and one end of the shield and as viewed on line 4—4 of Fig. 3.

Referring now to the figures, 10 represents a building having an inclined roof 11 under, which an eaves trough 12 is mounted by brackets 13 mounted underneath the lower edge of the roof 11 or eaves thereof. The trough 12 has a downspout projection 14 to which a downspout 15 is connected and runs downwardly on the side of the building to a drain. Mounted in the downspout

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projection 14 and extending upwardly into the trough is an anti-plugging device 16 adapted to impart air from a point within the trough to a low point in the projection 14 so as to break vacuum that may tend to stop the flow of water downwardly through the downspout 15 as a result of any debris which might pile up thereover and to provide a fast action for the flow of water along the trough and through the downspout.

To further prevent the flow of debris, such as leaves and twigs, to the downspout 15 and to prevent the downspout from being clogged, there has been provided a self-shedding downspout shield indicated generally at 17 and adapted to be mounted upon the eaves trough at the end thereof and over the downspout projection 14 thereof.

This downspout shield, according to the present invention has an attaching part 18 that is adapted to overlie the edges of the eaves trough 12. This elevated part 18 has downwardly turned edges 19 and 20 adapted to receive the edges of the trough and to be slid therealong into a position over the anti-clogging device 16. This elevated part 18 has hinge projections 21 and 22 to which a skewed or twisted shape strainer part 23 is hinged by means of the connection of its hinge portions 24 with the projections 21 and 22 and a hinge pin 25. Both of these parts 18 and 20 are formed of galvanized metal and as shown are perforated to permit the passage of water from the upper places thereof to the bottom of the trough. The hinge strainer part 23 is elongated and its free end is supported in the trough so as to engage with the bottom thereof and to pick up the leaves and twigs that may be moved along the trough by the flow of the water moving toward the downspout end thereof. The free end of the inclined strainer part 23 has laterally-extending clips or supporting projections 25 and 26 adapted to overlie the edges of the trough and to fix the free end of the inclined strainer part against upward movement from the trough and to hold the free end of the part firmly and downwardly against the bottom of the trough.

Not only is this hingeable strainer part 23 inclined so that the debris will be worked upwardly therealong as the water flows toward the downspout within the trough but is constructed so that the rear face portion of the part is more vertical or abrupt so that any tendency of the leaves or twigs to accumulate thereon is less greater than front face portion of the strainer part 23. This is well illustrated in Fig. 4 where the rear face portion is indicated at 23' and the leaves that may pile upon the face portion 23' will have a tendency to roll downwardly toward the front face portion 23" so that the leaves or twigs upon arriving at the more elevated location of the strainer part 23 and upon the horizontal or attaching part 18 will be adjacent to the forward edge of the trough so that they will be more readily discharged thereover. The heavier the flow of water along the trough the greater will be the movement of the debris therealong. Once the debris has arrived upon the elevated part the same will be cleared therefrom quite readily upon this part 18 being windswept. This will be particularly so when the leaves or twigs have had an opportunity to dry and after the storm. It will thus be seen that the movement of the debris is upwardly and forwardly toward the edge of the trough 12 wherein it can be readily discharged.

At times when the amount of water has been insufficient to elevate the debris well upwardly onto the attaching part 18 and it still remains upon the part 23, such debris can be positively lifted out of the trough by this part 23 being hinged upwardly on the hinge pin 25. In order that this operation can be effected from a point upon the ground, a pull cord is extended upwardly over a pulley 28 on the upper end of a post 29 secured to the

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end of the horizontal part 18 by bracket 30. This pull cord is indicated at 31 and is connected as indicated at 32 to the free end of the inclined strainer part 23. By pulling the cord 31 the free end of the part 23 is disconnected or separated from the edges of the trough, the clip portions 26 and 27 being disengaged therefrom and the debris or leaves on the strainer part 23 are caused to be suddenly moved along the part 23 in the same manner as being lifted thereover by the water flow and directed toward the forward edge of the trough so that they are spilled or discharged thereover.

It should now be apparent that there has been provided an effective and efficient self-shedding downspout shield for eaves trough wherein the debris is worked along the inclined strainer surface to a horizontal surface elevated over the edges of the trough from which the same can be easily shed and discharged from the eaves trough.

It should be further apparent that not only are the leaves and sticks moved directly upwardly but that they are shifted toward the forward edge of the trough at the same time due to the skewed shape of the hingeable strainer part.

It should be further apparent that means have been provided in connection with the downspout shield wherein the hingeable part can be elevated to positively discharge any debris that may remain thereupon and over the forward edge of the trough.

While various changes may be made in the detail construction it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claim.

What is claimed is:

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A downspout shield for eaves troughs comprising a horizontal perforated part adapted to be secured on the trough above the downspout and providing a horizontal surface thereover and a downwardly curved elongated strainer part hingedly connected at one end to the horizontal part and inclined upwardly from its other end and adapted to lie in the bottom of the trough with its said one end at the elevation of the horizontal surface of the horizontal part, clip projections secured to the other end of the hinged inclined strainer part adapted to engage the respective rear and forward edges of the trough and to hold the said other end of the inclined part extended downwardly into the trough, said inclined strainer part being skewed to have its rear face portion extending more vertically than the front face portion so that the debris will be moved upwardly and toward the front edge of the eaves, a post extending upwardly from said horizontal part, a pulley mounted upon the upper end of said post, and a pull cord extending upwardly over said pulley and connected to the free end of the inclined strainer part and by which said strainer part can be hinged upwardly to positively discharge debris therefrom onto the horizontal part and over the forward edge of the eaves trough.

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