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2,533,402

MEANS FOR PREVENTING CLOGGING OF DRAIN TROUGHS

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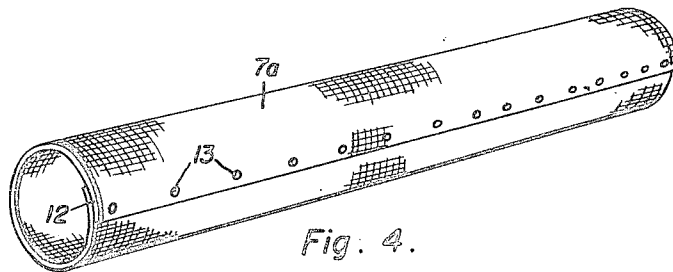


Fig. 4.

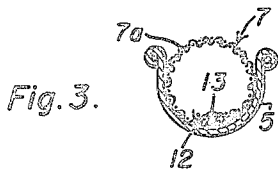


Fig. 3.

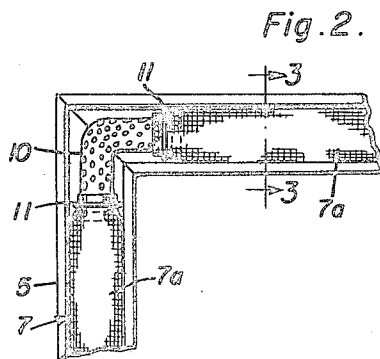


Fig. 2.

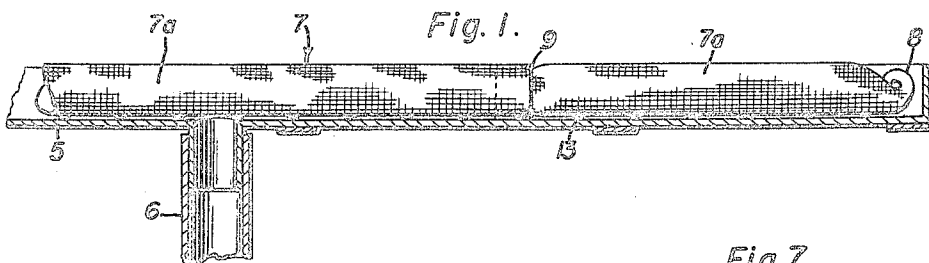


Fig. 1.

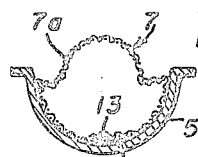


Fig. 6.

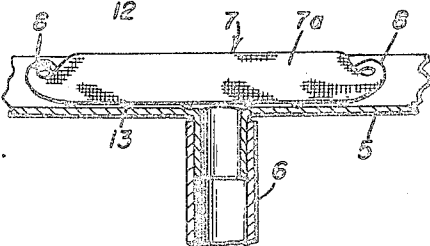


Fig. 5.

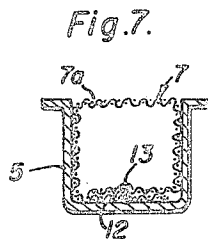


Fig. 7.

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MEANS FOR PREVENTING CLOGGING OF DRAIN TROUGHS

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5 Claims. (Cl. 108—30)

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This invention relates to drain troughs, and has more particular reference to efficient means adapted to be removably placed within a drain trough, such as a conventional eaves trough, for preventing leaves and like materials from entering and clogging the trough, at least at and adjacent the discharge pipe or down-spout thereof, and for permitting water to freely pass to and drain through the discharge pipe or down-spout.

Briefly described, the invention contemplates the placement of a relatively stiff tubular permeable conduit within the drain trough, said conduit preferably having closed ends and preferably being of such cross sectional size and shape as to snugly fit in and conform to the interior of the drain trough. The conduit may extend through a portion or the entire length of the drain trough, and in the latter case it preferably consists of a plurality of suitably joined sections. While the conduit or each section thereof may be made of any suitable foraminous or permeable material, the same preferably consists of a length of wire screen fabric rolled into tubular form with its longitudinal edge portions overlapped and riveted or otherwise secured together. The ends of the conduit may be closed by flattening and folding the free end portions thereof.

The exact nature of the present invention will become apparent from the following description when considered in connection with the accompanying drawing, in which:

Figure 1 is a fragmentary vertical longitudinal section through an eaves trough and its down-spout, with a foraminous conduit placed within the eaves trough to extend the full length thereof in accordance with one embodiment of the present invention, the conduit being shown in side elevation;

Figure 2 is a fragmentary top plan view showing a suitable way of joining adjacent sections of the conduit at a corner of a roof;

Figure 3 is an enlarged transverse section taken on the line 3—3 of Figure 2;

Figure 4 is an enlarged perspective view of a partially completed conduit or conduit section made of wire screen fabric in accordance with the present invention;

Figure 5 is a view somewhat similar to Figure 1, showing the conduit extending through only a portion of the length of the eaves trough and across the entrance to the down-spout thereof; and

Figures 6 and 7 are views similar to Figure 3, showing conduits of modified cross sectional shape.

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Referring in detail to the drawing, 5 indicates a conventional eaves trough, and 6 indicates the down-spout thereof.

In accordance with the present invention, a relatively stiff tubular permeable conduit 7 is placed within the trough so as to extend across the entrance to the discharge pipe or down-spout thereof as shown in Figures 1 and 5, said conduit preferably being closed at its ends, as at 8, and preferably being of such cross sectional size and shape as to snugly fit in and conform to the interior of the trough as shown in Figures 3, 6 and 7.

In the embodiment of Figures 1 to 3, inclusive, the conduit extends the entire length of the eaves trough and consists of a plurality of suitably joined sections 7a. The adjacent conduit sections in straight portions of the trough may be joined by telescoping the adjacent ends thereof as shown at 9 in Figure 1, an end of one conduit section being contracted or reduced in cross sectional size to frictionally fit within the adjacent end of the other conduit section. At the corners of a roof, adjacent ends of adjacent conduit sections may be joined by means of an elbow fitting 10, as shown in Figure 2, the ends of the fitting being telescoped within the ends of the conduit sections and secured therein by clamping bands 11. If desired, the fitting 10 may be perforated, as shown.

In the embodiments of Figure 5, the conduit consists of a single section which extends only for a portion of the length of the trough to prevent clogging of the latter at and adjacent the entrance to the discharge pipe or down-spout thereof.

As shown, each conduit section 7a may be made by rolling a length of wire screen fabric into tubular form with the longitudinal edge portions thereof overlapped, as at 12, and riveting or otherwise securing said edge portions together, as at 13. When the sections are made in this way, the ends of the conduit may be closed by flattening and folding the end portions thereof, as illustrated.

By means of the present invention, leaves and the like will be prevented from entering and clogging the drain trough either for the entire length thereof or at and adjacent the entrance to the discharge pipe or down-spout. In either case, water may freely pass to and drain through the discharge pipe or down-spout from the trough. Any leaves or like material lodging upon the conduit at the top of the trough will soon dry and blow away, and the conduit may be

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easily removed for renewal thereof or to permit repair of the trough.

As shown in Figures 6 and 7, the cross sectional shape of the conduit may be varied to reduce its major vertical dimension or to suit the cross sectional shape of the trough.

From the foregoing description, it is believed that the nature and advantages of the present invention will be apparent to those skilled in the art.

Having described the invention, what is claimed as new is:

1. In combination with a conventional eaves trough having a down spout, a foraminous tube in said trough, said tube being formed of a plurality of sections, each being of a size to fit in said trough and prevent accumulation of solid objects therein.

2. In combination with a conventional eaves trough having a down spout, a foraminous tube in said trough, said tube being formed of a plurality of sections, the outer end of at least one of the end sections being closed, each being of a size to fit in said trough and prevent accumulation of solid objects therein.

3. A device, according to claim 5, wherein the tubular member is formed of a plurality of tubular sections of wire screen fabric, each having ends of different cross-section so formed that adjacent ends of adjacent sections are adapted to fit together in telescoping relationship to form a continuous elongated tube.

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4. A device, according to claim 1, wherein each section is formed with ends of a different cross-section so formed that adjacent ends of adjacent sections are adapted to fit together in telescoping relationship to form a continuous elongated tube.

5. In a device for screening out and preventing accumulation of solid objects in an eaves trough having a channel for receiving water and delivering it to a place of discharge; the combination of an elongated tubular member fitting in and extending lengthwise of said channel and formed of a mesh fabric to permit entry of water into said member for flow to said place of discharge and prevent passage of solid objects of substantial size into said tubular member.

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