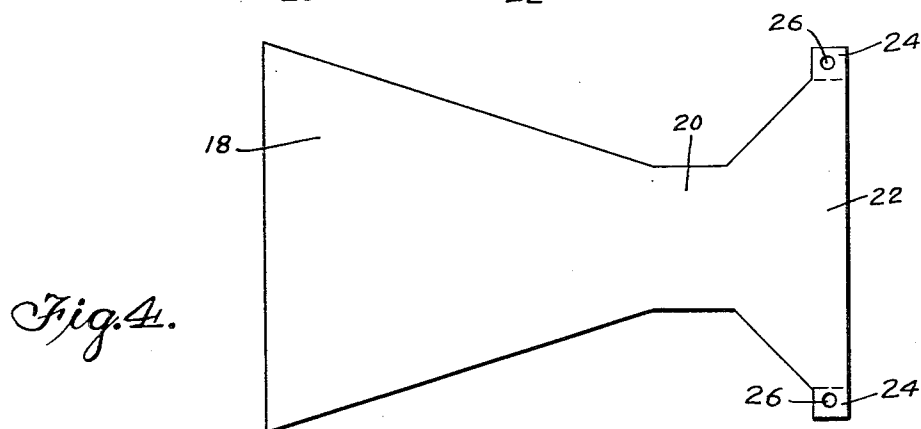
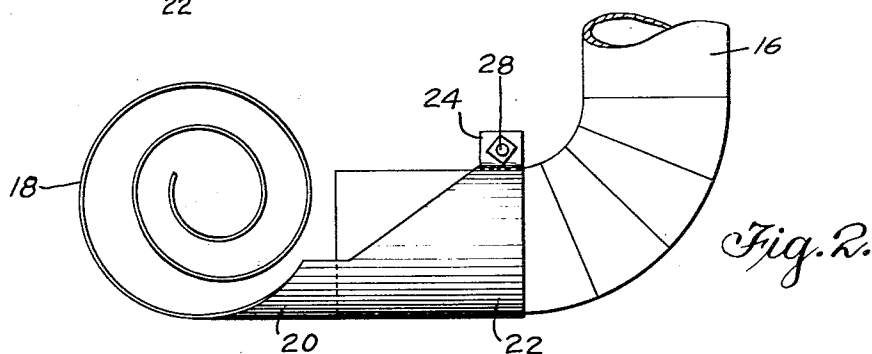
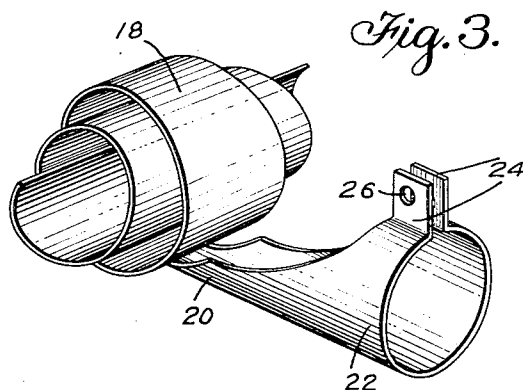
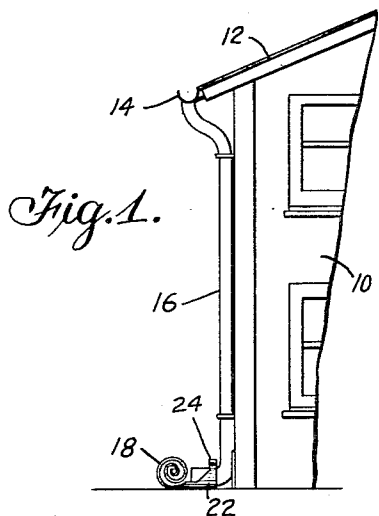


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DOWNSPOUT FLOW DIVERTER

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DOWNSPOUT FLOW DIVERTER

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1 Claim. (Cl. 133—46.5)

This invention relates to an improved downspout flow diverter and has for one of its principal objects the provision of means which can be conveniently and readily attached to a downspout or a drainpipe of a home or other building and which will prevent undesirable erosion of the earth or lawn in the area adjacent the outlet of the downspout. The device can also control other types of liquid flow.

It is well-known that downspouts and other pipes or conduits for carrying rain water or the like from the roofs or other portions of buildings often cause a wearing or cutting away of the earth adjacent the area where the water emerges with resultant poor appearance and actual difficulty in the way of effecting repairs.

One of the important objects of this invention is to provide means for effectively breaking up and retarding the stream of water emerging from the end of the downspout or other pipe, it being obvious that a slower rate of flow and a more divergent stream will dissipate itself over the surrounding or adjacent surface, and instead of carrying away part of the surface and other material such as plants and the like, will actually benefit the same by a desirable form of irrigation.

Another object of the invention is the provision in a downspout flow diverter of a substantially one-piece unit which can be easily constructed, readily applied and actually adjusted to conform to varying conditions of water flow.

Other and further important objects of the invention will be apparent from the disclosures in the accompanying drawings and following specification.

The invention, in a preferred form, is illustrated in the drawings and hereinafter more fully described.

In the drawings:

Figure 1 is a view of a representative building having the ordinary gutter and downspout applied thereto and showing the improved flow diverter of this invention connected to the end of the downspout.

Figure 2 is a side elevation considerably enlarged of the downspout and flow diverter shown in Figure 1.

Figure 3 is a perspective view of the downspout flow diverter of the invention illustrating a preferred form.

Figure 4 shows the blank from which the downspout flow diverter of this invention is formed.

As shown in the drawings:

The reference numeral 10 indicates generally a building of some type such as a home or industrial building having a roof 12, rain gutter 14 and downspout or pipe 16.

The downspout flow diverter of this invention is adapted to be applied to the lower end of the pipe 16 and comprises essentially a blank of sheet metal or similar material as best shown in Figure 4.

The blank comprises a main body portion 18, a neck portion 20, a rear portion 22, said rear portion having integral projections or ears 24. The ears 24 have openings 26 therethrough through which a fastening bolt 28 or the like is adapted to be passed for conveniently attaching the same to the end of the downspout 16.

The rear portion 22 of the blank is adapted to be shaped into a quasi-cylinder with the projecting ears 24 bent upwardly and outwardly whereby the same can be conveniently fitted on to the end of the downspout 16. This

fitting can be adjustably shifted with respect to the end of the downspout, depending upon the anticipated volume and rate of flow of the issuing water.

The curving of the portion 22 into cylindrical shape results in a consequent curvature of the neck portion 20, as best illustrated in Figure 3, thereby forming a continuing guide for the outflowing water, and the main portion 18 is reversely curved or bent into a spiral shape as illustrated in Figures 2 and 3. This spiral curvature can be varied from one extreme of rather sharp to another extreme of fairly flat, depending upon conditions.

It will be evident that the device, with little or no change or modification, can be used to control the flow of water and other liquids from conduits, pipes, leaders and the like in various embodiments and in numerous situations. It has been found that when the device is properly adjusted relative to the outlet end of the pipe, downspout or the like, and when the number of convolutions and the spacing of same is correct, the water or other liquid will be directed into the spiral portion, where it is slowed down to such a degree that it issues at the sides in relatively larger volume but relatively very slow speed or rate of flow. This dispersion of the stream and separation of the same into relatively slow moving portions will cause it to scatter evenly over the adjacent ground or other area, eliminating practically all possibilities of undesirable erosion, cutting away of the surface or any other results due to the rapid flow of a coherent stream.

The turns of the spiral are from one to two in most conditions but this can obviously be changed and the length of the semi-circular neck 20 can be increased or reduced by a simple manipulation of the spirally curved portion with respect to the cylinder end. The stream of water or other liquid from the pipe, spout, leader or the like will eventually be deflected along the divergent sides of the element 18 which actually form two separate outlets and the water will accordingly issue in a direction at approximate right angles to its original passage from the end of the downspout, and will be distributed over a radius from the spiral 18, depending upon pressure and flow rate.

We are aware that many changes may be made and numerous details of construction varied throughout a wide range without departing from the principles of this invention, and we therefore do not propose limiting the patent granted hereon otherwise than as necessitated by the prior art.

We claim as our invention:

A downspout flow diverter comprising a unitary structure having one end cylindrically curved for attachment to the corresponding end of a pipe, the other end being spirally curved about an axis at right angles to the axis of curvature of the first named end, a semi-cylindrical portion connecting the cylindrically and spirally curved ends, integral ears at the cylindrically curved end of the diverter for attachment of that end to the outlet end of the pipe, the attachment being adjustable in two directions, the curvature of the spiral at the water diverting end being variable, and the distance between the cylindrically curved end and the spirally curved portion being also variable.

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