July 16, 1968 A. N. DECARIE 3,392,844

ADJUSTABLE ROOF DRAIN GUARD

Filed Aug. 11, 1965

FIG. 1

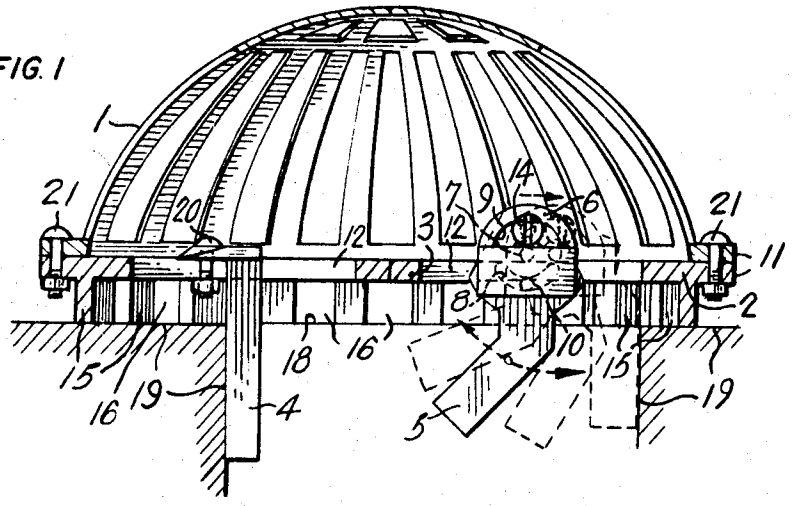
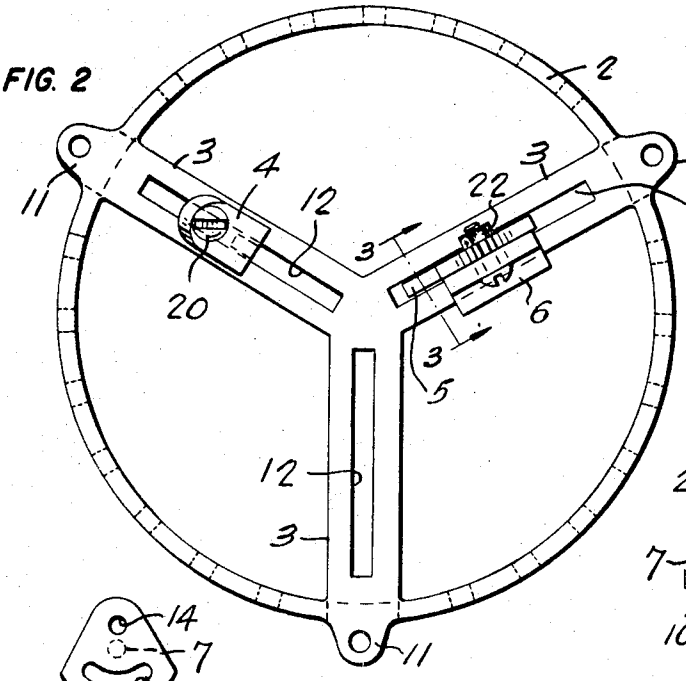


FIG. 2



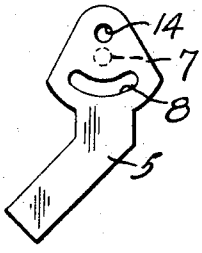


FIG. 4

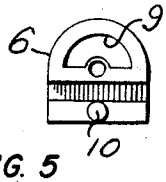


FIG. 5

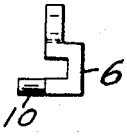


FIG. 6

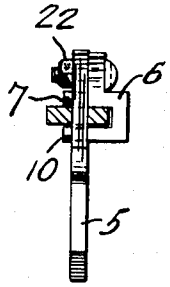


FIG. 3

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ADJUSTABLE ROOF DRAIN GUARD

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ABSTRACT OF THE DISCLOSURE

A drain guard normally used on roof drains to prevent grit from entering the drain. The drain guard has an adjustable attachment means to fit drain openings of various sizes.

The present invention relates to drain guards and particularly to drain guards for use in combination with roof drain pipes and the like.

In common practice conventional drain guards are purchased in predetermined sizes, and, since roof drain pipes are of varying sizes and shapes, it sometimes occurs that a drain pipe guard does not fit properly on a given drain pipe.

An aim of the present invention is to provide a drain guard having means for adjustably engaging roof drain guards of varying dimensions which are likely to be encountered. It is a further object of the present invention to provide a drain guard which is adapted to engage both drain pipes having vertical inner walls and drain pipes having tapered walls.

A drain guard construction in accordance with the present invention suitable for engagement with a drain pipe comprises a porous cover portion and a peripheral base portion; guide means extending between opposed points on the base portion; drain pipe attachment means comprising at least two drain pipe abutting members mounted on the guide means for abutting and securing substantially opposed wall portions of the drain pipe; and at least one of said abutting means being adjustably mounted for sliding movement on said guide means, whereby the abutting member can be adjusted to the dimensions of different drain pipes.

Having thus generally described the nature of the invention, it will now be referred to in greater detail by reference to the accompanying drawings illustrating preferred embodiments of the invention, and in which:

FIGURE 1 is a vertical cross section taken diametrically across the drain guard and illustrating two different types of abutting means;

FIGURE 2 is a top plan view of the base portion of the drain guard shown in FIGURE 1;

FIGURE 3 is a vertical cross section taken along line 3—3 in FIGURE 2;

FIGURE 4 is a side view of a detail of FIGURE 3;

FIGURE 5 is a side view of another detail of FIGURE 3; and

FIGURE 6 is an end view of the detail shown in FIGURE 5.

Referring now to the drawings, and specifically to FIGURES 1 and 2, the drain guard is shown including a dome-shaped, slotted cover **1** secured to a base **2**. In FIGURE 1, the drain pipe wall is generally designated by the numeral **19**.

The cover **1** includes lugs **11** extending outwardly from the edge thereof. The base **2** includes similar lugs **11** coincident with the lugs **11** on the cover **1** and are secured together by bolts **21**.

The base **2** includes an annular ring member **16** with

a series of axially extending teeth **15**. Three radially extending guide arms **3** extend from the center of, and in the same plane as, the annular ring **16** and divide the base into three equal sectors. Each arm **3** defines a radially extending slot **12** as seen in FIGURE 2.

A downwardly extending L-shaped leg **4** can be provided in each slot **12** and can be adjusted radially. A securing screw **20** is provided to secure the leg **4** to the arm **3**, once a radial position has been selected.

Another embodiment of the abutting means which can be used is shown in FIGURES 1, 3 and 4. The shank portion of leg **5** is angled as shown in FIGURE 4. The leg **5** also includes a head portion **7** which defines an aperture **14** and an arcuate slot **8** spaced from aperture **14**. The center of curvature of the arcuate slot **8** coincides with the aperture **14**. A clamp **6** is also provided, which cooperates with the leg **5**. The clamp **6** comprises a portion having an angular channel with one wall of the channel extending at right angles to form a flange of semi-circular outline. The flange also defines a concentric slot **9**. A pivot lug **10** extends centrally from the other wall of the channel.

In operation, the channel portion of the clamp **6** fits on one side of the guide arm **3**. The leg **5** extends downwardly through the slot **12** and an adjusting nut and bolt **22** extend through the aperture **14** of leg **5** and the slot **9** of the clamp **6**. The clamp **6** extends through the arcuate slot **8** in the leg **5**. Pivot lug **7** on the leg **5** bears on the guide arm **3**.

Operation

When it is required to use the drain guard on a drain pipe having straight vertical side walls **19**, for instance, the abutting legs **4** can be used. In this case, the cover **1** and base **2** which are secured together are placed over the drain pipe until the teeth **15** bear on the roof **18**.

The three legs **4** in slots **12** are then slid outwardly until they abut the walls **19**. Then the screws **20** are tightened.

In the case of a drain pipe where the walls are bevelled (not shown), the legs **5** are more suitable. These legs **5** are first pivotally adjusted in a vertical plane until the angled shank of the leg **5** is at the same angle as the bevelled wall. Then the nut and bolt **22** are slightly tightened to secure the leg **5** in that angled relation to the clamp **6**. Then the three clamps **6** are slit on the arms **3** to the desired diameter and the nut and bolt **22** are finally tightened so that the members bear securely on the arm **3**.

I claim:

1. An adjustable roof drain guard suitable for connection to a roof drain hopper, the drain guard comprising a porous cover portion and a peripheral base portion extending along the edge of the cover portion; guide means extending between opposed points on the base portion and adapted to sit on the hopper; hopper attachment means comprising at least two hopper abutting members mounted on the guide means for securely engaging substantially opposed wall portions of the hopper, at least one of said abutting means being adjustably mounted for sliding movement on said guide means whereby the abutting member can be adjusted to varying hopper dimensions.

2. An adjustable drain guard as defined in claim **1** wherein the cover portion is dome shaped and the base portion is annular and the guide means include elongated members extending radially inwardly from said annular base member.

3. An adjustable drain guard as defined in claim **2** wherein the guide members define elongated radially extending slots, and the adjustable hopper abutting member

is mounted for adjustable sliding movement in one of the guide slots.

4. An adjustable drain guard as defined in claim 3 wherein the hopper abutting member includes an angled drop leg, a clamp member adapted to slide adjustably on the guide member, the drop leg being adjustably pivoted to the clamp member through said guide slot.

5. An adjustable drain guard as defined in claim 3 wherein there are three radially extending guide members each defining a guide slot, and there is an adjustable hopper abutting member slidingly mounted in each guide slot for abutting the inner wall of the drain hopper, thereby retaining the porous drain guard to the hopper.

References Cited

UNITED STATES PATENTS

864,884	9/1907	Capaldi	210—463
926,704	6/1909	Levy	210—463
1,503,421	7/1924	Innes	210—163 X
1,618,679	2/1927	Schifter	4—292 X
1,653,403	12/1927	McCue	210—463 X
2,732,158	1/1956	Haverbee	210—249 X
2,800,231	7/1957	Hicks	210—463

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