Dec. 17, 1957 A. BOTS 2,816,574

DRAIN EXTENSION

Filed July 1, 1955

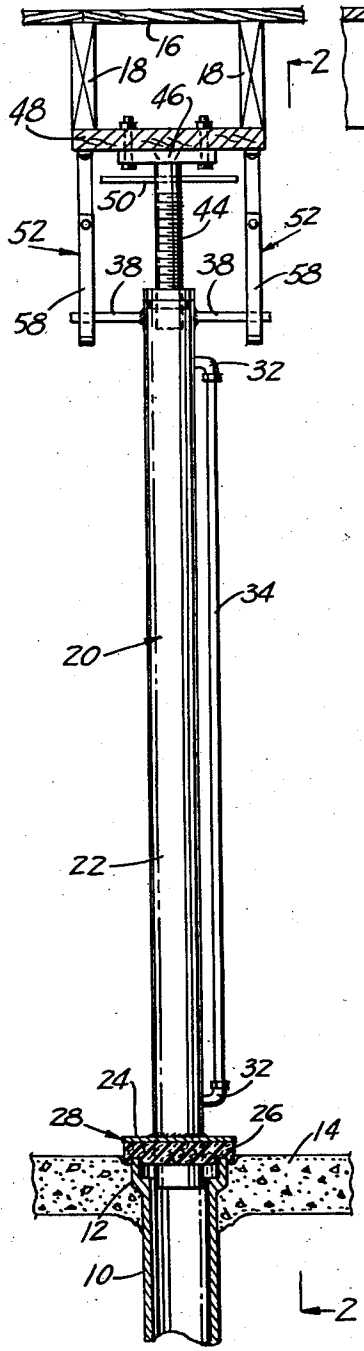


FIG. 1

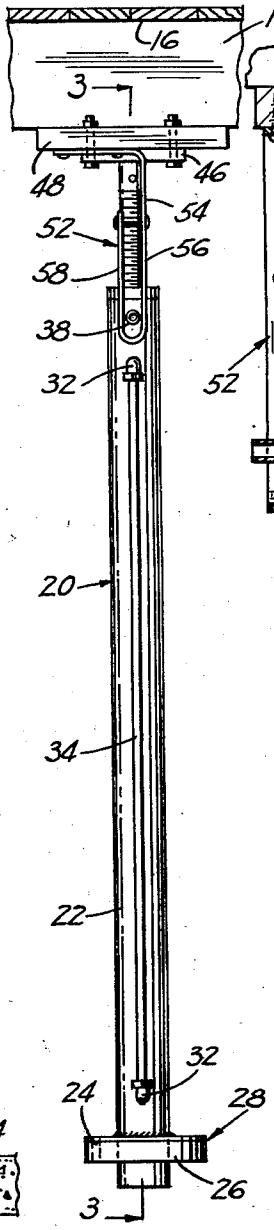


FIG. 2

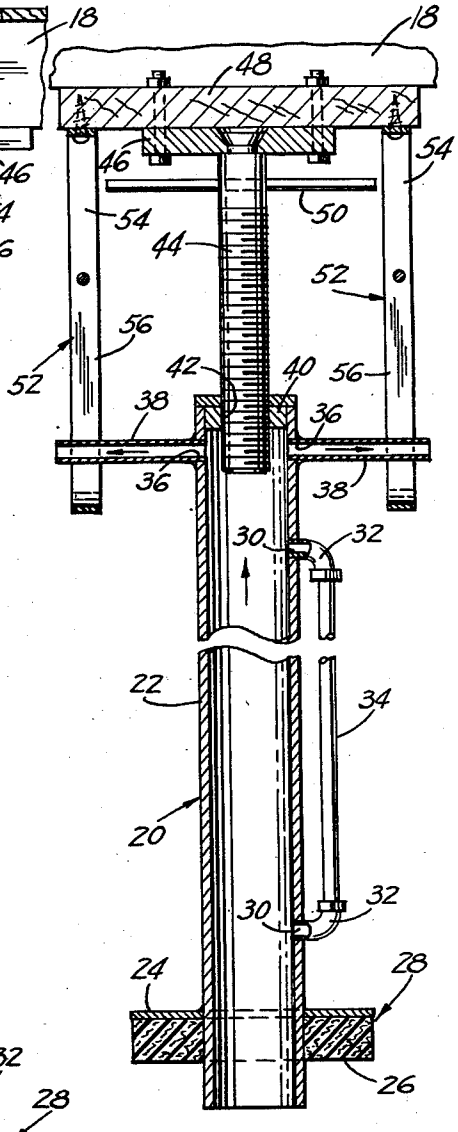


FIG. 3

INVENTOR.
ANDREW BOTS
BY

McMorrow, Berman & Davidson
ATTORNEYS

United States Patent Office 2,816,574 Patented Dec. 17, 1957

2,816,574

DRAIN EXTENSION

Andrew Bots, Harvey, Ill.

Application July 1, 1955, Serial No. 519,422

3 Claims. (Cl. 137—593)

This invention relates to a drain extension and has for its primary object to prevent the flooding of a basement or the like through the backing up of drainage liquid through a drain pipe.

It is well known that in certain areas where floods are frequent that the drainage systems serve as conduits for conveying flood waters into basements, causing damage to articles which may be stored therein, to heating plants and like equipment.

Another object of this invention is to prevent the flood waters from entering a basement through the drainage system while at the same time keeping the drainage system open so that as the waters subside, the drainage may take place in the normal manner.

Another object is to facilitate the instantaneous extension of the drainage system to a level above that of the drain pipe in a basement or the like.

The above and other objects may be attained by employing this invention which embodies among its features a tubular body carrying adjacent one end an outstanding annular seal for seating on an upwardly opening drain pipe and establishing a liquid-tight junction between the tubular body and the drain pipe, said tubular body having vent openings extending therethrough adjacent the end thereof remote from the seal, and means carried by the tubular body and engaging a structure above the drain pipe for exerting pressure on the tubular body and holding the annular seal in liquid-tight engagement with the drain pipe.

Other features include a tubular gage glass carried by the tubular body and communicating therewith adjacent opposite ends thereof to visually indicate the level of liquid within the tubular body, a jack carried by the tubular body and extending upwardly therefrom in axial alignment therewith and engaging a pressure head which bears on the superstructure to hold the annular seal in sealing engagement with the drain pipe.

Other features include vent pipes carried by the tubular body in communication with the vent openings, and guides carried by the pressure head and extending downwardly therefrom in guiding relation to the vent pipes to hold the tubular body against rotation during the turning of the jack screw.

In the drawings:

Figure 1 is a side view of a drain extension embodying the features of this invention showing it in operative relation to a drain and a superstructure;

Figure 2 is a view similar to Figure 1, taken at 90° thereto; and

Figure 3 is a fragmentary enlarged vertical sectional view taken substantially on the line 3—3 of Figure 2.

Referring to the drawings in detail, a conventional drain pipe **10** is connected to a drainage system (not shown) and carries at its upper end a conventional bell **12**, the upper edge of which is conventionally substantially level with the top surface of a basement floor **14**. The device is shown as used in connection with a conventional building having the basement floor **14** located below a floor **16** carried by conventional joists **18**. The structure so far described forms no part of this invention except in combination therewith.

My improved drain extension designated generally **20** comprises a tubular body **22** carrying adjacent one end an outstanding annular flange **24** defining a stop for a ring **26** of cushioning and sealing material **26** which defines an annular seal designated generally **28** adjacent one end of the tubular body **22**. Extending through the tubular body adjacent opposite ends thereof are openings **30** into which are threadedly engaged elbows **32** between which is extended a tubular gage glass **34**. Diametrically opposed vent openings **36** extend through the tubular body **22** adjacent the end thereof remote from the annular seal **28** and welded or otherwise secured to the tubular body **22** in communication with the vent openings **36** are vent pipes **38** which extend diametrically outwardly from the tubular body **22**. A closure **40** closes the end of the tubular body **22** remote from the annular seal **28** and is provided with an internally screw threaded opening **42** which extends through said closure **40** in axial alignment with the tubular body **22**.

Threadedly entering the internally screw threaded opening **42** is a jack screw **44**, the end of which remote from the tubular body **22** is swivelly connected as by a swivel plate **46** to a pressure head **48**. A handle **50** extends through the jack screw **44** adjacent the end thereof remote from the end closure **40** of the tubular body **22** to enable the jack screw to be rotated about its longitudinal axis.

Secured to the pressure plate and extending downwardly therefrom on opposite sides of the jack screw are guides **52**, each of which comprises a strap **54** and each of which is bent back upon itself to define spaced legs **56** and **58** between which are received the vent pipes **38**. It will thus be seen that rotation of the tubular body **22** under the influence of the jack screw **44** will be restrained by the vent pipes **38** and guides **52**.

In use, it will be evident that the annular seal **28** is placed over the upper open end of a drain pipe **10** so that the lower end of the tubular body **22** partially enters the drain pipe and the annular seal defines a stop which engages the upper open end of the drain pipe and arrests downward movement of the tubular body into said drain pipe. In order to effect a liquid-tight seal between the drain pipe **10** and extension **20**, the pressure head **48** is engaged with the lower edges of a pair of spaced floor joists **18** so that upon rotating the jack screw **44**, the extension **20** may be moved downwardly to tightly engage the seal **28** with the drain pipe **10** and establish a liquid-tight junction therewith. Obviously, with the parts thus assembled, flood waters backing up through the drainage system and the drain pipe **10** will be confined within the drain extension **20** and the level of the flood waters may be readily determined by observing the tubular gage glass **34**. Obviously, when the flood waters have subsided, as indicated by the observation of the tubular gage glass, the device may be removed by turning the jack screw **44** in a direction to retract it into the tubular body **22** and remove the pressure from the pressure head **48**.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

What is claimed is:

1. A drain extension comprising a tubular body, an annular seal carried by the tubular body and extending outwardly therefrom adjacent one end thereof for seat-

ing on an upwardly opening drain pipe and establishing a liquid-tight junction between the tubular body and the drain pipe, said tubular body having vent openings extending therethrough adjacent the end thereof remote from the seal, and pipes carried by said body and communicating therewith through the vent openings, a cap closing the end of said body remote from said seal, and means movably carried by said cap and engaging a structure above the drain pipe for exerting pressure on the tubular body and holding the annular seal in liquid-tight engagement with the drain pipe.

2. A drain extension comprising a tubular body, an annular seal carried by the tubular body and extending outwardly therefrom adjacent one end thereof for seating on an upwardly opening drain pipe and establishing a liquid-tight junction between the tubular body and the drain pipe, said tubular body having vent openings extending therethrough adjacent the end thereof remote from the seal, vent pipes carried by said body and communicating therewith through the vent openings, a cap closing the end of said body remote from said seal, a jack screw threadedly engaged with said cap and extending longitudinally outwardly therefrom, a pressure head swivelly connected to the jack screw remote from the tubular body and adapted to bear on a structure above the drain pipe and a handle carried by the jack screw for rotating it.

3. A drain extension comprising a tubular body, an

annular seal carried by the tubular body and extending outwardly therefrom adjacent one end thereof for seating on an upwardly opening drain pipe and establishing a liquid-tight junction between the tubular body and the drain pipe, said tubular body having vent openings extending therethrough adjacent the end thereof remote from the seal, a jack screw threadedly engaged with the tubular body and extending longitudinally outwardly therefrom adjacent the end thereof remote from the annular seal, a pressure head swivelly connected to the jack screw remote from the tubular body and adapted to bear on a structure above the drain pipe and a handle carried by the jack screw for rotating it, diametrically opposed vent pipes carried by the tubular body and communicating therewith through the vent openings, said vent pipes extending outwardly from opposite sides of the tubular body, and guides carried by the pressure head and extending downwardly therefrom in guiding relation to the vent pipes to hold the tubular body stationary during the turning of the jack screw.

References Cited in the file of this patent

UNITED STATES PATENTS

840,956	Pride	Jan. 8, 1907
953,050	Moore	Mar. 29, 1910
1,543,637	Woll	June 23, 1925
2,477,663	Sexton	Aug. 2, 1949