

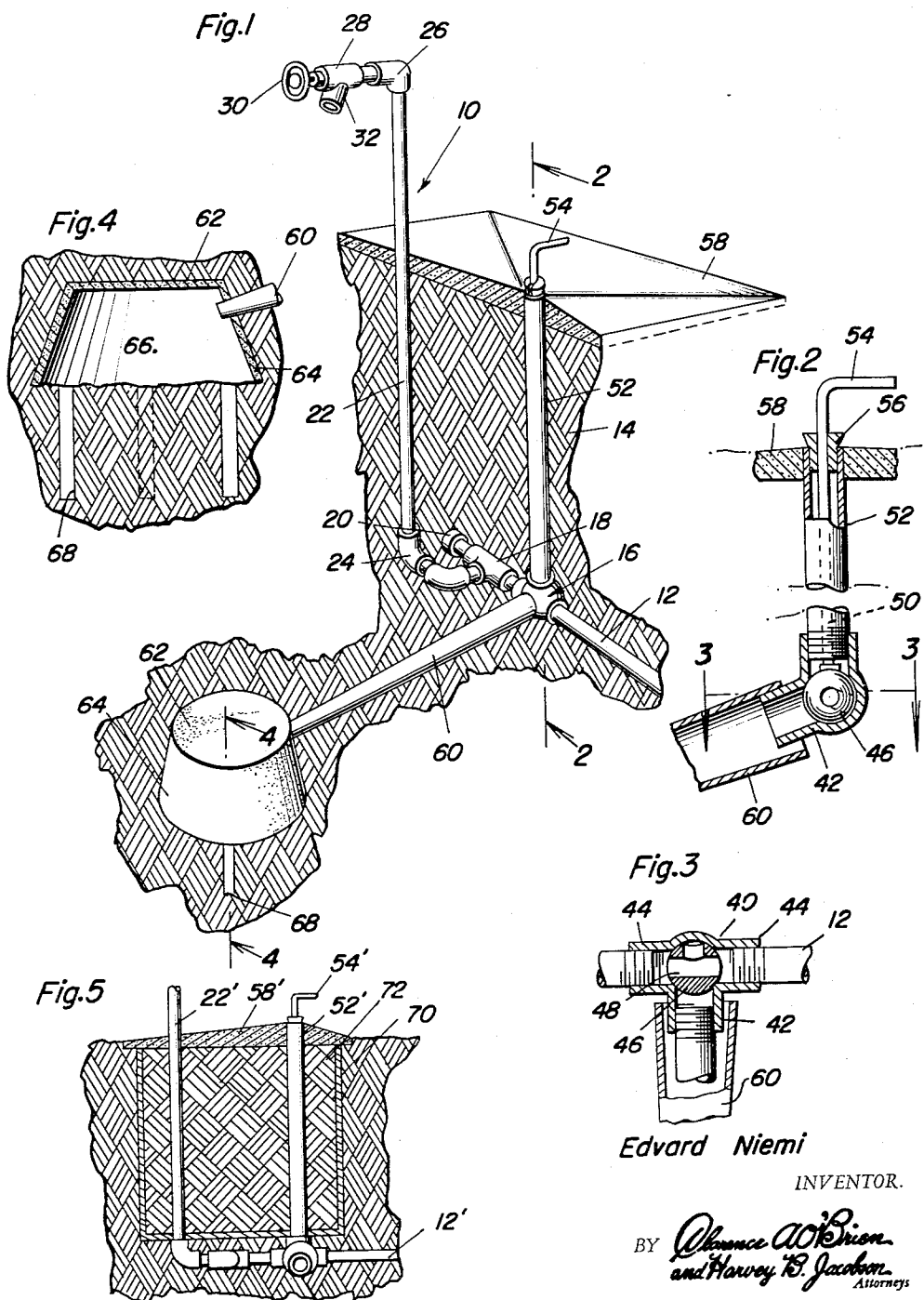
March 6, 1962

E. NIEMI

3,023,768

WATER PIPE DRAIN

Filed Sept. 24, 1958



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3,023,768

WATER PIPE DRAIN

Edvard Niemi, Veterans Hospital, American Lake, Wash.
Filed Sept. 24, 1958, Ser. No. 763,122
3 Claims. (Cl. 137—290)

The present invention generally relates to a drain device and more particularly to a water pipe drain especially adapted for use in conjunction with outdoor faucets so that the water in the vertical riser pipe extending to the faucet as well as the water in the faucet may be drained from a point below the freezing level with the water being discharged into the ground at below freezing level.

An object of the present invention is to provide a water pipe drain incorporating an inverted receptacle forming means for discharging the drained water into the ground surface.

A further object of the present invention is to provide a water pipe drain in accordance with the preceding object in which a control valve for the water pipe drain is operable and at the ground level.

Another important feature of the present invention is to provide a water pipe drain which is easily assembled and constructed of readily obtainable materials thus rendering the device extremely inexpensive to manufacture.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the water pipe drain of the present invention with the soil and being broken away illustrating the details of the water pipe drain;

FIGURE 2 is a vertical sectional view taken substantially upon a plane passing along section line 2—2 of FIGURE 1;

FIGURE 3 is a detailed sectional view taken substantially upon a plane passing along section line 3—3 of FIGURE 2 illustrating the details of construction of the drain valve;

FIGURE 4 is a vertical sectional view taken substantially upon a plane passing along section line 4—4 of FIGURE 1 illustrating the details of construction of the inverted container; and

FIGURE 5 is an elevational view illustrating a modified form of the invention.

Referring now specifically to the drawings, the numeral 10 generally designates the water pipe drain assembly of the present invention which includes a water supply pipe 12 having any suitable pressure and of any desired size which is normally used in water supply pipes of this nature. The water supply 12 is buried in the ground 14 in such a manner that it would normally be below the freezing line in the particular locality in which the device is installed.

The water supply pipe 12 is provided with a valve generally designated by the numeral 16 and a T-fitting 18 and an end cap 20 with the T-fitting 18 being connected to a vertical riser or stand pipe 22 by two L-couplings 24 with suitable nipples being provided between these various couplings. The upper end of the stand pipe 22 is provided with an L-shaped coupling 26 having a valve 28 connected thereto which is controlled by a hand wheel 30 for discharging water through a faucet or spigot 32.

The valve 16 includes a housing 40 having two longitudinally opposed ends connected to adjacent sections of the water supply pipe 12. A branch line 42 is provided in perpendicular relation to the end portions designated

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by the numeral 44 which are in longitudinal opposition. Rotatable in the housing 40 is a valve core 46 having a T-shaped passage 48 therein. The valve core 46 is connected with an operating handle 50 extending vertically upwardly through a pipe 52 and terminating in an offset handle portion 54 disposed above ground level. The upper end of the pipe 52 is sealed to the operating rod 50 by a tapered resilient stopper 56, thus sealing the rod 50 in relation to the tubular pipe 52 thus preventing entry of water into this area. The pipe 52 as well as the pipe 22 extends through a slab of concrete 58 which has the greatest thickness at the pipe 52 and then tapers towards the sides of the concrete plate 58 for assuring proper drainage of water away from the pipes 52 and 22.

Extending outwardly from the branch portion 42 of the valve housing 40 is an elongated generally inclined drain pipe 60 extending into an inverted receptacle 62 having downwardly and outwardly flared peripheral wall 64 which defines a cavity within the ground 14 which is disposed below the freezing line. The cavity is designated by the numeral 66 and has a series of downwardly extending sockets or bores 68 therein for receiving the water for more effective discharge of the water into the soil.

Referring specifically to FIGURE 5, there has been provided a cylindrical casing 70 in encircling relation to the pipes 52' and 22' with the area within the cylindrical member 70 and below the concrete platform 58' is hardly packed dry soil 72.

In operation, rotation of the handle 54 for purposes of shutting off flow of water from the supply line 12 will cause the valve plug or core 46 to rotate to supply line 12. When doing this, the T-shaped passageway 48 in the valve core 46 will effectively drain the water from the stand pipe 22 as well as the remainder of the pipe on the discharge side of the valve core 46.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In an outdoor valved faucet including an underground water supply line disposed below the freezing level and a vertically extending stand pipe connecting the supply line with the faucet, a combined cut-off and drain valve disposed in the water supply line and including a valve housing, said valve being operable from the ground surface for simultaneously cutting off the supply line and communicating the faucet and stand pipe with a drain branch line on said housing for draining water from the stand pipe and faucet when the faucet is opened, a lead-off pipe communicated with said fitting, and an inverted receptacle disposed in the ground with the bottom thereof below the supply pipe with the lead-off pipe communicated with the receptacle for discharging the drained water into the soil, said combination cut-off and drain valve being provided with an elongated operating rod having a lateral handle at the upper end above the ground surface, a tubular pipe member enclosing said rod to a point above the ground surface and being sealed in relation to the valve housing, and a resilient seal in the upper end of the rod enclosing pipe with the seal being disposed in encircling relation to the operating rod for preventing entry of water into the rod enclosing pipe for preventing freezing damage to the rod and pipe, and a concrete slab receiving the stand pipe and rod enclosing pipe, said slab having a high portion flush with the upper end

of the rod enclosing pipe and being inclined away from the rod enclosing pipe for drainage of water away from said pipe.

2. The combination of claim 1 together with a cylindrical member enclosing the stand pipe and rod enclosing pipe, said cylindrical member having a bottom for preventing entry of excess water into this area for assuring effective distribution of water from draining of the stand pipe and faucet.

3. The combination of claim 2 wherein said inverted receptacle is provided with an outwardly flared wall and overlies a plurality of downwardly extending passageways formed in the ground for more effectively discharging water into the ground.

References Cited in the file of this patent

UNITED STATES PATENTS

53,736	Frailey -----	Apr. 3, 1866
287,815	Fletter -----	Nov. 6, 1883
302,488	Holt et al. -----	July 22, 1884
536,119	Amsbary -----	Mar. 19, 1895
613,695	Luse -----	Nov. 8, 1898
683,945	Kennedy -----	Oct. 8, 1901
836,400	Peak -----	Nov. 20, 1906
935,857	Palmer -----	Oct. 5, 1909
1,040,621	Clarkson -----	Oct. 8, 1912
1,270,677	Yassukovitch -----	June 25, 1918
2,648,349	McGarry -----	Aug. 11, 1953
2,676,607	Carr et al. -----	Apr. 27, 1954