

July 3, 1951

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2,559,210

RING FORM SUPPORT

Filed Nov. 26, 1946

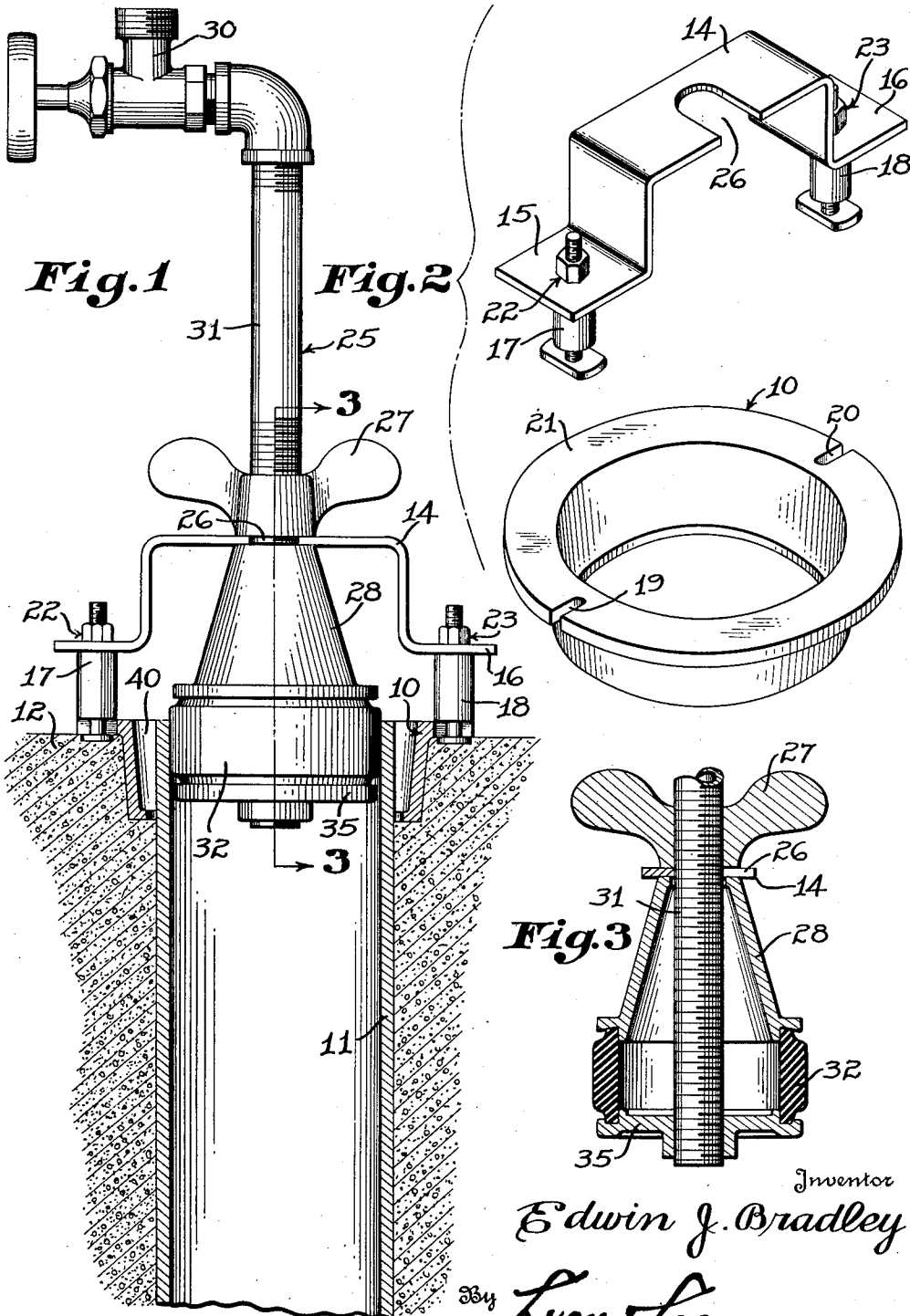


Fig. 3

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UNITED STATES PATENT OFFICE

2,559,210

RING FORM SUPPORT

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Application November 26, 1946, Serial No. 712,429

3 Claims. (Cl. 29—287)

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The present invention relates to a plumbing apparatus and has for one of its objects the provision of apparatus for facilitating greatly the accurate positioning and holding of an anchoring member or ring in relationship to associated soil pipe.

In connection with the installation of plumbing fixtures such as toilet bowls in new buildings, it is desirable that the fixture holding member be accurately positioned with respect to its associated soil pipe so that the fixture may be anchored without difficulties. The fixture holding member is usually embedded in concrete, but in the process of pouring the concrete or when the concrete is in the process of hardening, the fixture holding member is oftentimes unintentionally moved from its correct position and consequently, difficulties are later encountered when an attempt is made to mount the plumbing fixture on its holding member.

It is, therefore, an object of the present invention to provide improved apparatus for maintaining a fixture holding member in place while it is being anchored in place.

Another object of the present invention is to provide an improved tool for maintaining a plumbing fixture holder in place while it is being anchored, the tool being characterized by its simplicity and ease of application to existing structures.

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. This invention itself, both as to its organization and manner of operation, together with further objects and advantages thereof, may be best understood by reference to the following description taken in connection with the accompanying drawings in which:

Figure 1 is a view in elevation and partly in section of an assembly of apparatus incorporating the present invention;

Figure 2 is a perspective view of a tool shown in Figure 1 embodying the present invention associated with a plumbing fixture holding member;

Figure 3 is a sectional view taken substantially on line 3—3 of Figure 1.

In accordance with the present invention the plumbing fixture holding member 10 in this particular embodiment of the present invention is accurately maintained in adjusted position with respect to the soil pipe 11 in the process of anchoring such member 10 in concrete 12, the concrete 12 being poured around the member 10 and then allowed to harden.

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During the pouring and hardening periods the ring 10 is firmly held in place on an inverted U-shaped strap 14 having ears 15, 16 integrally formed therewith which in turn have integrally formed therewith respectively downwardly extending cylindrical spacers 17, 18.

Bolt and nut assemblies 22, 23 (which are later used to fasten the plumbing fixture itself) serve to clamp the flange 21 of the ring shaped member 10 against the spacers 17, 18, the bolt portions of these assemblies 22, 23 respectively passing through the elongated slots 19, 20, the spacers 17, 18 and apertures in ears 15, 16. The portion of such bolt and nut assemblies abutting the underside of the flange 21 is ultimately maintained in position by the concrete which is poured.

The strap 14 is releasably fastened at the center thereof to a test plug assembly 25, the elongated slotted portion 26 thereof being clamped between the clamping wing nut 27 and conical shaped bearing member 28 of the assembly 25.

The test plug assembly 25 serves two purposes: mainly, (1) to support strap 14 and ring-shaped member 10 attached thereto; and (2) to provide a fluid tight conduit and connection with the soil pipe 11 so that the soil pipe 11 and its connections with other soil pipe (not shown) may be suitably tested by applying thereto fluid under pressure which enters through the valve 30 and passes downwardly through the central pipe into the soil pipe.

Resilient annular ring 32 abuts the inner surface of pipe 11 and maintains a fluid tight connection therebetween, this connection being maintained by maintaining a mechanical pressure between the opposite edges of member 32. This mechanical pressure is applied by the bearing members 28, 35 which serve as clamping members, member 28 being slidably mounted on pipe 31 and member 35 being screw threaded on pipe 31 such that by turning nut 27 in the proper direction members 28, 35 are drawn together thereby to squeeze the annular resilient ring member 32 into abutment with the inner wall of the soil pipe.

Thus, when the test plug 25 is clamped into position for testing, the strap 14 is simultaneously clamped into position. Further, the nature of the connection between the test plug and the soil pipe allows adjustment of the position of the supported ring shaped member 10. Usually the member 10 is positioned so that the underside of the flange 21 is flush with the proposed floor which is subsequently produced by the concrete.

It is noted that the nature of the structure

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is such that concrete during the pouring operation is precluded from entering the soil pipe.

After the concrete has been poured and hardened the wing nut 27 is loosened thereby to unclamp the strap 14 in which case the strap 14 may be removed after taking off the nuts on the assemblies 22, 23. The test plug 25 is completely removed and the ring 10 and bolts extending therefrom are in readiness for the anchoring of the plumbing fixture.

In the process of fastening the plumbing fixture to the ring 10, material such as oakum and a lead ring is disposed within the annular space 40 in accordance with conventional practice.

While the particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made without departing from this invention in its broader aspects and, therefore, the aim in the appended claims is to cover all such changes and modifications as fall within the true spirit and scope of this invention.

I claim:

1. In an arrangement for accurately assembling a plumbing fixture fastening member in aligned fixed encircling position with respect to a soil pipe, the combination comprising, a device self-supported solely by its engagement with the interior wall of said soil pipe, said device comprising a threaded open ended pipe extending centrally in said soil pipe, a radially expansible circular gasket encircling said pipe and engaging the interior wall of said soil pipe to secure the device to said interior wall of the soil pipe, a pair of clamping members on opposite sides of said gasket and mounted on said pipe, a nut threaded on said pipe and arranged to move said clamping members towards one another to squeeze said gasket radially outwardly into engagement with the interior wall of said soil pipe, a laterally extending strap member having an intermediate slotted portion encircling said pipe, said slotted portion being clamped between said nut and one of said clamping members, and opposite ends of said strap members carrying means for releasably connecting said fixture fastening member thereto.

2. In an arrangement for accurately assembling a plumbing fixture fastening member in aligned encircling position with respect to a soil pipe, the combination comprising, a device self-supported solely by its engagement with the interior wall of said soil pipe, said device comprising a threaded open ended pipe extending centrally in said soil pipe, a radially expansible annular gasket encircling said pipe and engaging the interior wall of said soil pipe to secure the device to the said internal wall of the soil pipe, a pair of clamping members engaging opposite circular edges of said annular gasket, one of said clamping members being affixed to the lower end of said pipe, the other one of said clamping members being slidably mounted on said pipe, a nut threaded on said threaded pipe adjacent to said other clamping member and arranged to produce relative movement between said clamping members to squeeze said gasket outwardly into engagement with the interior wall of said soil pipe, a laterally extending strap member of generally inverted U-shaped form having an open

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ended elongated slotted portion in the central region, said slotted portion extending generally transversely of the longitudinal axis of said strap member, a pair of ears formed integrally with said strap member and extending longitudinally thereof, each of said ears being apertured, a pair of bolts each having their shanks extending through a corresponding one of said ear apertures, a tubular spacer mounted on each of said bolts between said ears and the corresponding bolt head, and a fastening nut threaded on each bolt in a position to clamp the corresponding spacer between the corresponding ear and corresponding bolt head, each of said bolts being of such diameter to allow their passage through corresponding open ended slots in said fixture member whereby said fixture member may be clamped between said spacers and said bolt heads.

3. The combination in an arrangement for use in accurately assembling a plumbing fixture fastening member in a fixed aligned position around a soil pipe comprising, a strap member of generally inverted U-shaped form having an open ended elongated slotted portion in its central region, said slotted portion extending generally transversely to the longitudinal axis of said strap member, a pair of ears formed integral with said strap member and extending longitudinally thereof, a device arranged to releasably engage the internal wall of said soil pipe to self-support itself on said soil pipe, means incorporated in said device releasably clamping said central slotted portion, and clamping means for releasably clamping said fixture member to said pair of ears to thereby support said fixture member solely by the engagement of said device with said internal wall, said device comprising: a hollow externally screw threaded pipe, a first clamping member slidably mounted on said pipe, a second clamping member affixed to said pipe, an annular resilient gasket encircling said pipe and disposed between said first and second clamping members, a nut mounted on said threaded pipe arranged upon tightening to move said slidable clamping member towards said second clamping member to thereby squeeze said annular gasket against the internal wall of said soil pipe to thereby secure the device to the said internal wall of the soil pipe, said slotted portion being of greater width than the diameter of said threaded pipe and being clamped between said nut and said first clamping member.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
363,956	Havanagh	May 31, 1886
620,520	Welstead	Feb. 28, 1899
725,874	Riley	Apr. 21, 1903
763,298	Lutz	June 21, 1904
914,743	McDonald	Mar. 9, 1909
1,045,314	Moser	Nov. 26, 1912
1,101,434	Hatton	June 23, 1914
1,224,069	Clayton	Apr. 24, 1917
1,676,276	Moore	July 10, 1928
1,901,235	Glowacki	Mar. 14, 1933
2,238,257	Fischer	Apr. 15, 1941