# United States Patent

**Babb**

[15] **3,674,288**

[45] **July 4, 1972**


## [54] CLOSET BEND STABILIZER


[72] Inventor: **Billy W. Babb,** Campbell, Calif.

[73] Assignee: **Robert R. Walker, Jr.,** San Jose, Calif.



[22] Filed: **April 20, 1970**

[21] Appl. No.: **29,955**

[52] **U.S. Cl.**.....**285/24,** 285/58, 285/179, 285/423, 285/DIG. 16

[51] **Int. Cl.**.....**F16l 35/00**

[58] **Field of Search**.....285/189, 24, 158, 27, 42, 423, 285/43, 179, 44, 56, 57, 58, 59, 60, 288, DIG. 16; 248/56; 4/146, 252, 192



[56] **References Cited**

UNITED STATES PATENTS

| | | | |
|---|---|---|---|
| 2,602,678 | 7/1952 | Mohoff et al. | 285/27 X |
| 3,419,288 | 12/1968 | Logsdon | 285/58 |
| 3,579,670 | 5/1971 | Frank | 285/56 |
| 3,540,064 | 11/1970 | Studer | 4/252 |
| 1,048,045 | 12/1912 | Cronholm | 285/288 |
| 2,617,672 | 11/1952 | Nichols | 285/DIG. 16 |
| 2,127,167 | 8/1938 | Froters | 285/42 X |
| 3,420,552 | 1/1969 | Mork | 285/42 |



*Primary Examiner*—Dave W. Arola

*Attorney*—Jack M. Wiseman



[57] **ABSTRACT**

A closet bend stabilizer that receives the closet bend and is embedded into a cement slab surrounding the closet bend. The closet bend stabilizer serves to reduce the movement of the closet bend installed in the opening of the cement slab. Toward this end, the closet bend stabilizer comprises a horizontally disposed plate formed with a central opening of suitable dimension to receive the closet bend. In addition, the stabilizer includes a plurality of reduced diameter openings on each side of the central opening to improve its fixed relation within the cement slab. Below the horizontal plate and surrounding the central opening is a tapered flange to facilitate the stabilizer receiving the closet bend. The stabilizer is sealed or caused to adhere to the closet bend by a suitable adhesive.


**4 Claims, 7 Drawing Figures**

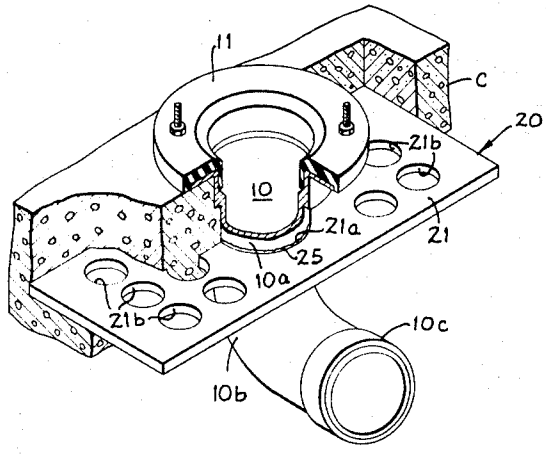
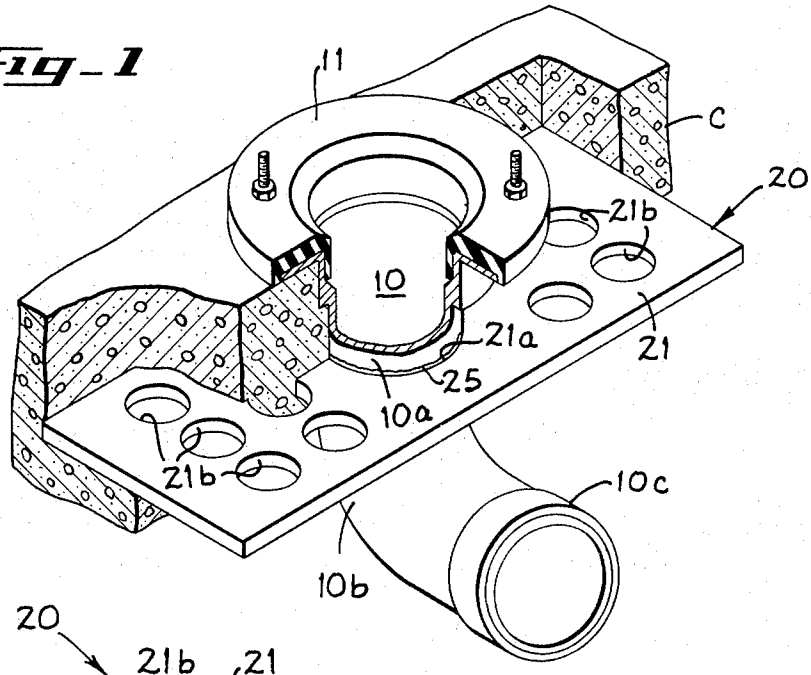


Fig_1



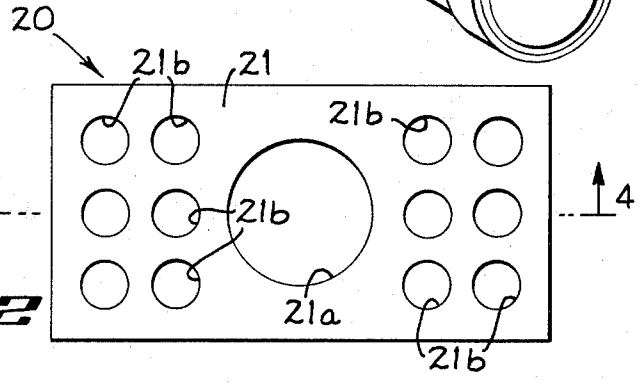




Fig_2

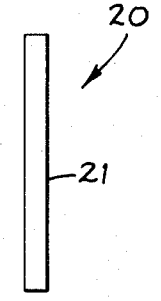



Fig_3

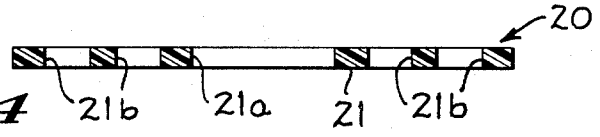
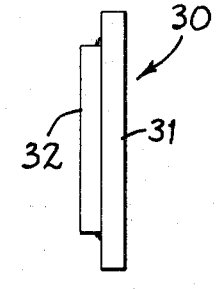



Fig_4

Fig_6



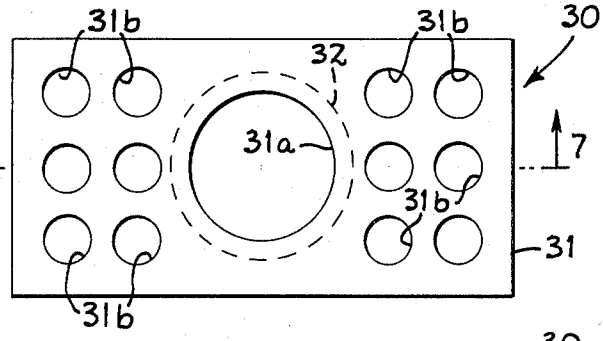




Fig_5

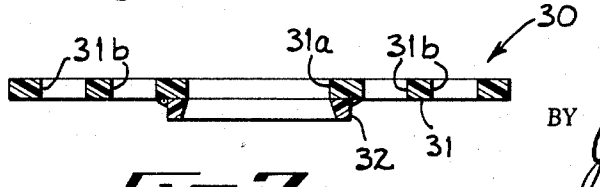



Fig_7

INVENTOR.
BILLY W. BABB

BY Jack M. Wareman

ATTORNEY

# CLOSET BEND STABILIZER

## BACKGROUND OF THE INVENTION

In the installation of a water closet for a toilet, a closet bend serves to interconnect the water closet bowl with a soil pipe. Heretofore, the closet bend was disposed in an opening formed in a cement slab when installed. There is a tendency for the closet bend to shift, rock, or move while disposed in the opening formed in the cement slab. As a consequence thereof, the installation is unsatisfactory and causes the closet bend to lose its seal. This results in leakage and an undesirable plumbing installation.

## SUMMARY OF THE INVENTION

A stabilizer for a pipe bend comprising a horizontally disposed plate with a suitable opening for receiving the pipe bend, which stabilizer is disposed in the cement slab that is employed for the cement flowing and in which an opening is formed in the cement slab to receive the pipe bend. The pipe bend stabilizer serves to hold the pipe bend steady and relatively free of movement while the pipe bend is sealed in an opening formed in the cement slab.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is an isometric view of the closet bend of the present invention shown embedded in cement and receiving a closet bend that interconnects a fixture of the water closet bowl with a soil pipe.

FIG. **2** is a plan view of the closet bend stabilizer of the present invention.

FIG. **3** is an end view of the closet bend stabilizer of the present invention.

FIG. **4** is a vertical section view of the closet bend stabilizer of the present invention taken along line **4—4** of FIG. **2**.

FIG. **5** is a plan view of a modification of the closet bend stabilizer shown in FIGS. **2–4**.

FIG. **6** is an end view of the closet bend stabilizer shown in FIG. **5**.

FIG. **7** is a vertical section of the closet bend stabilizer shown in FIGS. **5** and **6** and taken along line **7—7** of FIG. **5**.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

Illustrated in FIG. **1** is a water closet bend or a pipe bend **10**, which includes an upright portion **10***a*, a curved portion **10***b* and a suitable end **10***c* for receiving a soil pipe. At the upright portion **10***a* is a suitable fitting **11** for establishing a connection with a water closet bowl.

It is customary for the closet bend **10** to be installed in an opening formed in a cement slab C. The thickness of the cement slab C is commonly 4 inches. The closet bend **10** when installed in the opening formed in a cement slab tends to move or rock which results in a poor plumbing installation by the breaking of the seal and permitting leakage and seepage.

According to the present invention, a closet bend stabilizer or a pipe bend stabilizer **20** made of suitable material, such as plastic, is provided with a plate **21** formed with an opening **21***a* of suitable dimension to receive the pipe bend **10**. On each side of the opening **21***a* are formed plurality of openings **21***b* of reduced diameter for causing improved adherence between the stabilizer **20** and the cement slab C or the like.

In practice, the closet bend stabilizer **20** is placed over the vertical portion **10***a* of the pipe bend **10** and lowered to a suitable height, which is immediately below the fitting **11** for embedding in the cement slab C or the like when the pipe bend **10** is installed in any opening formed in the cement slab C. During the placement of the closet bend stabilizer **20** over the vertical portion **10***a* of the pipe bend **10**, the fitting **11** is removed. At this time, the pipe bend stabilizer **20** is fixed to



the pipe bend **10** by a suitable adhesive **25** generally 3 inches below the upper surface of the pipe bend **10**.

Now, the pipe bend **10** with the stabilizer **20** affixed thereto is installed in the cement slab C or the like. Generally, the cement C is 4 inches in height and is poured in the present invention after the pipe bend **10** is in its intended location. When installed, the portion **10***a* of the closet bend **10** is upright and the end **10***c* is generally horizontal. The closet bend stabilizer **20** is horizontally disposed and is embedded in the cement slab C. By virtue of the closet bend stabilizer **20**, the closet bend **10** is retained in position with reduced rocking and moving while installed in the opening formed in the cement slab C. A removable spacer, not shown, is placed between the outer wall of the upright portion **10***a* of the pipe bend **10** and the cement to leave an appropriate space for the lower flange or depending wall of the fitting **11**.

A modification of the closet bend stabilizer **20** is shown in FIGS. **5–7** and is designated as closet bend stabilizer **30**. The closet bend stabilizer **30** comprises a plate **31** in which is found a suitable opening **31***a* for receiving a closet bend. On each side of the opening **31***a* are formed openings **31***b* of reduced diameters. On the underside of the plate **31** is fixed or integrally formed an annular tapered flange **32**, which surrounds the opening **31***a* and serves to facilitate the placement of the stabilizer **30** on the closet bend.

I claim:

**1.** In combination:

a. a closet bend adapted to be partially installed in an opening formed in cement;

b. a stabilizer comprising a flat plate with an opening therethrough for receiving said closet bend and adapted to be installed in the cement for reducing movement of said bend while said closet bend is disposed in the opening formed in the cement;

c. said closet bend being formed with an upright portion and said flat plate of said stabilizer being arranged to engage said upright portion while embedded horizontally in the cement;

d. said plate being formed with a plurality of openings, each of said openings of said flat plate being of a diameter less than the diameter of said opening for receiving said closet bend for improving the maintenance of said stabilizer in cement; and

e. an adhesive between and engaging said flat plate of said stabilizer and upright portion of said closet bend adhesively fixedly securing said flat plate of said stabilizer to said upright portion of said closet bend.

**2.** A stabilizer comprising;

a. a flat member with a first opening formed therethrough for receiving the upright portion of a closet bend;

b. said flat member being formed with a plurality of openings, each of said openings being of a diameter less than the diameter of said first opening and being disposed on each side of said first opening;

c. a wall formed in said flat member surrounding said first opening, said wall being of a diameter to engage the upright portion of the closet bend; and

d. an adhesive on said wall formed in said flat member, said adhesive surrounding said first opening fixedly securing said flat member of said stabilizer to said upright portion of the closet bend.

**3.** A stabilizer as claimed in claim **2** and comprising a tapered flange surrounding said first opening below said wall for facilitating the installation of the stabilizer on a closet bend.

**4.** The combination as claimed in claim **1** and comprising a tapered flange surrounding said opening for receiving said closet bend to facilitate the installation of said stabilizer on said closet bend.

* * * * *