W. GOEBEL.

SOIL STACK FITTING.

APPLICATION FILED DEC. 17, 1909.

974,875.

Patented Nov. 8, 1910.

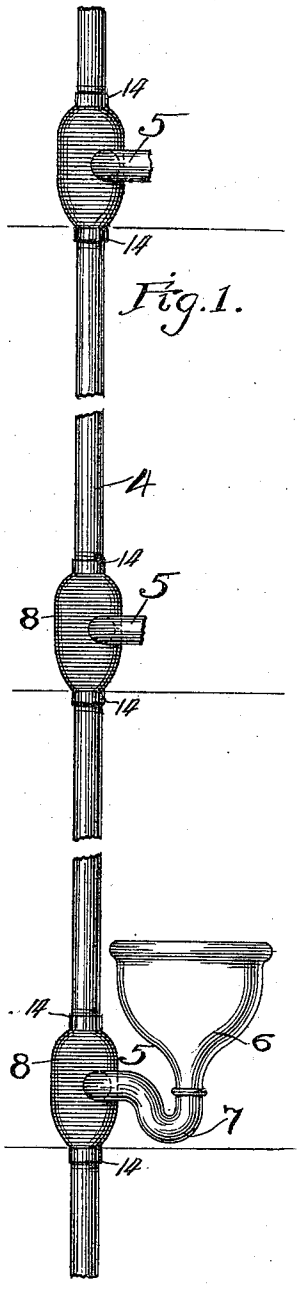

Fig. 1.

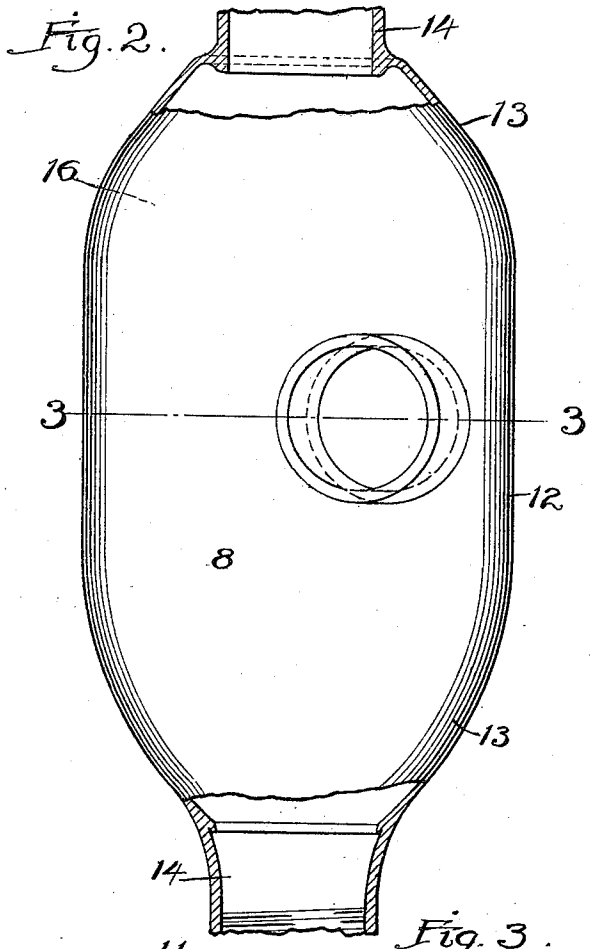

Fig. 2.

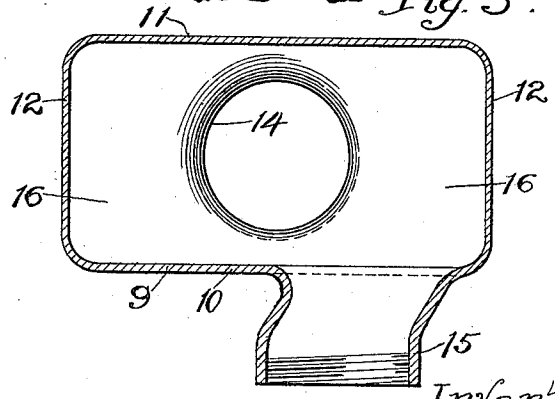

Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM GOEBEL, OF CHICAGO, ILLINOIS, ASSIGNOR OF FORTY-FIVE ONE-HUNDREDTHS TO JOHN M. COLLINS, OF CHICAGO, ILLINOIS.

SOIL-STACK FITTING.

974,875. Specification of Letters Patent. Patented Nov. 8, 1910.

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To all whom it may concern:

Be it known that I, WILLIAM GOEBEL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Soil-Stack Fittings, of which the following is a specification.

This invention relates to a fitting adapted for use with a soil stack, which is the term ordinarily employed for designating the pipe which extends from the roof to the basement of a building, and is used for carrying sewage from the various outlet fixtures in the building to the sewer pipe.

The invention has for its object to construct a fixture which will prevent the siphoning of the toilet fixtures after the sewage in one of them has been drawn off, thus eliminating a plurality of revent pipes now used for preventing such siphoning; and has for its further objects to construct a fitting which will be of a sanitary construction, having no square shouldered recesses against which dirt can collect; which will be easy of positioning in place; and which will be simple and cheap of construction.

The invention consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a view of a soil stack, having the fittings of the present invention in place thereon and showing their relation to the toilet fixtures; Fig. 2, an enlarged section of a fitting; and Fig. 3, a section on line 3—3 of Fig. 2.

The siphoning of the toilet fixture is the term generally employed in describing an action which breaks the water seal positioned adjacent to the fixture and permits foul air to enter from the soil stack into the fixture and thence to the room; and this siphoning is caused by the vacuum following the rush of sewage down the soil stack. In order to break this vacuum, various methods have been employed, the one most generally adopted being a supplemental pipe known as the revent pipe, which extends parallel with the soil stack and is connected thereto by a plurality of connecting pipes. These pipes serve to supply air which will break the vacuum following the rush of sewage and form a means for venting the foul air in the stack up through the roof, but this system is objectionable because of the complicated mass of piping necessary to perfect the system.

In Fig. 1 of the drawings is shown a soil stack 4 which when positioned extends from the roof of the building to the sewer pipe, and at each floor of the building a connecting pipe 5 extends from the stack to a toilet fixture 6. This pipe is usually bent to form a goose neck 7 in which is formed a water seal, which prevents the foul air present in the stack with the sewage from entering the fixture and thence into the room. The pipe 5 in place of being entered directly into the stack 4 is entered into a fitting 8, the construction of which constitutes the subject matter of the present invention.

The fitting is in the form of a rectangular shell or casing 9, and consists of a vertically extending front wall 10, a rear wall 11, and side walls 12. The upper and lower portions of the side walls are rounded as at 13, and the shell or casing at either end terminates in contracted necks 14 into which are entered the ends of the sections of the soil stack 4. In the front or rear walls, or both of them if so desired, is formed a neck 15 into which is entered the connecting pipe 5.

It will be seen from the above description that the fitting is of sanitary construction, as all squared recesses or shoulders have been eliminated therefrom, thereby affording no means by which dirt or refuse can be collected.

As shown, the fitting is rectangular in cross section, the width being elongated with respect to the depth, and is formed at its end with a reduced neck into which the soil stack is entered. The fitting being wider than the soil stack, there will be portions 16 along the side wall which will not be filled by the down rushing column of sewage passing through the fitting when sewage is being transmitted down the soil stack. This open space will form a chamber to hold air, which will rush in and fill the vacuum formed in the wake of the down rushing sewage, destroying the suction incident to the vacuum and preventing the drawing out of the water from the fixtures on the floors below that containing the fixture from which water has been drawn, leaving the water seal intact and causing the foul air to pass up the stack and through the roof of the building.

By the use of the above described fitting,

the suction incident to the passage of the sewage down the soil stack is dispensed with, and siphoning of the toilet fixtures prevented just as effectually as with the system of reventing pipes. The complicated system of piping used for reventing is dispensed with, which results in a great saving in the installation of a plumbing system into a building, and, furthermore, the reventing pipes are liable to become corroded and stopped up, thus destroying the efficiency of the system and causing great expense and trouble before the clogged point can be located and cleared. This objectionable feature is entirely obviated with the fitting of the present invention.

While I have shown and described my fitting as being applied to a particular kind of toilet fixture, it is understood that the same can be used with any type of fixture from which sewage is drained off.

I claim:

1. In combination with a toilet fixture and soil stack, a fitting comprising an elongated shell, rectangular in cross section, and of a greater width than the diameter of the soil stack, whereby a space is provided within the shell on either side of the stack, a connection between the fixture and fitting, said connection entering the fitting on the elongated side thereof, whereby a space is left within the fitting during the discharge of fluid thereinto, which provides an air chamber to cause breaking of the vacuum incident to the down-rushing of fluid, said shell or casing being open at its upper and lower ends and formed at these points with contracted necks into which the ends of the section of the soil stack are entered, substantially as described.

2. In combination with a toilet fixture and soil stack, a fitting comprising an elongated shell, rectangular in cross section, and of a greater width than the diameter of the soil stack, whereby a space is provided within the shell on either side of the stack, a connection between the fixture and fitting, said connection entering the fitting on the elongated side thereof, and out of vertical alinement with the ends of the soil stack, whereby a space is left within the fitting during the discharge of fluid thereinto, which provides an air chamber to cause breaking of the vacuum incident to the down-rushing of fluid, said shell or casing being open at its upper and lower ends and formed at these points with contracted necks into which the ends of the section of the soil stack are entered, substantially as described.

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Witnesses:
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