June 8, 1943. L. BLOCH 2,321,176

WASTE AND OVERFLOW FITTING

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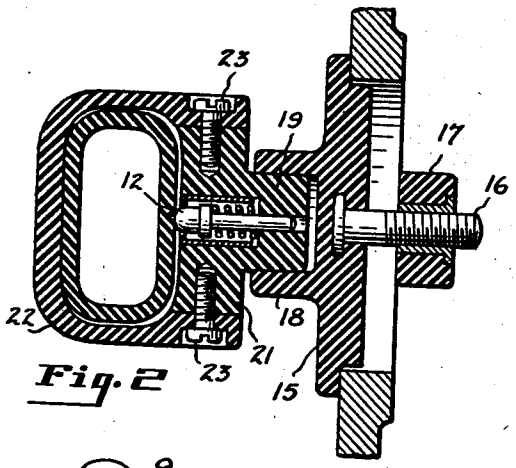
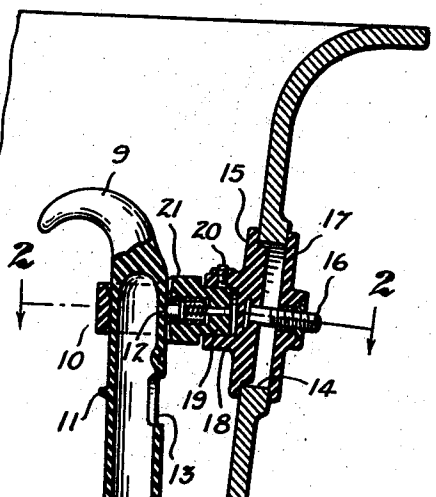


Fig. 2



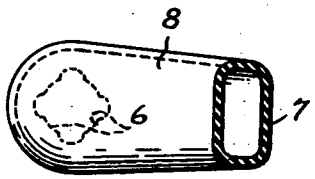


Fig. 3

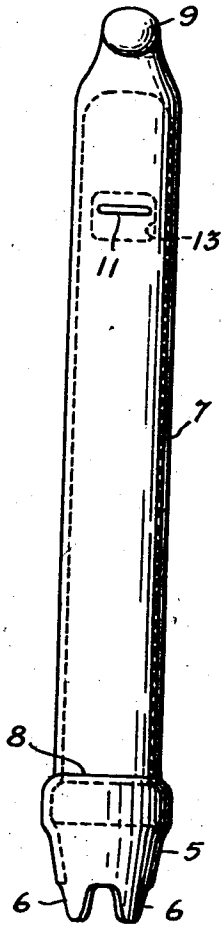


Fig. 4

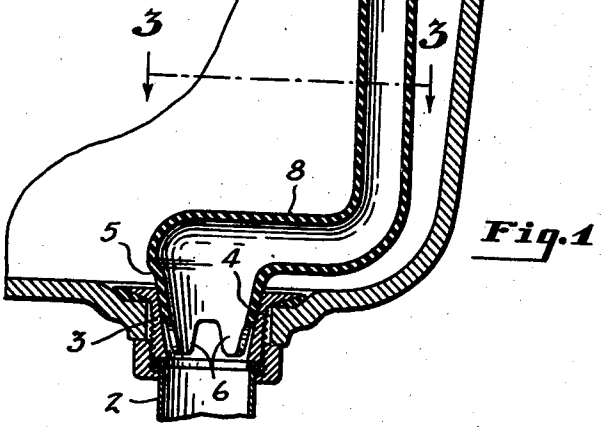


Fig. 1

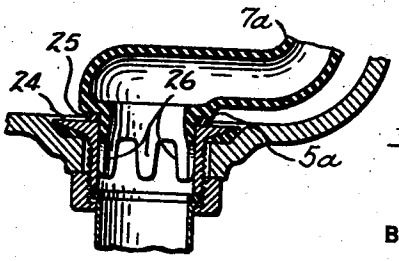


Fig. 5

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WASTE AND OVERFLOW FITTING

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5 Claims. (Cl. 4—206)

This invention relates to waste and overflow controlling devices for liquid receptacles such as bath tubs, laundry tubs, sinks and the like.

The present invention has for an object to provide a simple and inexpensive waste and overflow fitting applicable to any tub, sink or the like provided with a drainage outlet in its bottom.

A further object is to provide a fitting which is sanitary, easily accessible and readily removable and replaceable.

A further object of the invention is to provide a waste and overflow fitting which does not require an overflow opening in the wall of the tub and which does not require an external overflow pipe.

With the above and other objects in view the invention may be said to comprise the fitting as illustrated in the accompanying drawing hereinafter described and particularly set forth in the appended claims together with such variations and modifications thereof as will be apparent to one skilled in the art to which the invention appertains. Reference should be had to the accompanying drawing forming a part of this specification, in which:

Figure 1 is a vertical section showing the device of the present invention applied to a bath tub;

Fig. 2 is a section taken on the line indicated at 2—2 of Fig. 1;

Fig. 3 is a section taken on the line indicated at 3—3 of Fig. 1; and

Fig. 4 is a front elevation of the combined waste and overflow fitting detached.

Fig. 5 is a sectional view showing a slightly modified form of valve.

In the accompanying drawing the invention is shown applied to the bath tub 1 which has a drain comprising a pipe 2 coupled to a valve seat collar 3 mounted in an opening 4 in the bottom of the tub. The drain opening in the bottom of the tub is controlled by means of a hollow valve member 5 which is of tapering form and adapted to seat in the collar 3 to close the drain outlet. The valve member 5 terminates in spaced projecting fingers 6 which serve as strainers when the valve member 5 is lifted to permit water to drain from the tub. The valve member 5 has an integral hollow stem 7 which extends upwardly from the valve member. The stem is preferably offset laterally with respect to the valve portion 5, being connected to the valve portion 5 by means of a horizontal connecting portion 8 at its lower end. The offsetting of the stem 7 enables the stem 7 to be positioned closely adjacent the wall of the tub. The upper end of the stem is preferably formed to provide a hook 9 adapted to be engaged by a finger to raise or lower the fitting to open or close the drain.

The stem 7 extends through a guide ring 10 which is attached by any suitable means to the wall of a tub and the stem 7 is provided with a stop lug 11 which is engageable with the guide ring 10 to limit the amount of upward movement of the fitting. The range of upward movement of the fitting is sufficient to enable the valve portion 5 to be raised to a position which permits free drainage of water from the tub but not sufficient to permit the valve member 5 to be freed from the drain opening. The guide ring 10 carries a spring detent 12 which has frictional engagement with the tubular stem 7 to yieldably retain the fitting in elevated position to permit drainage of the tub. The stem 7 is preferably of oval cross section and is provided near its upper end with an opening 13 through which water may flow into the stem and through the stem and valve portion 5 into the drain outlet. The opening 13 is positioned at any desired height above the drain valve and below the top of the tub so that an overflow passage is provided through the stem and valve portions of the fitting to prevent the level of liquid in the tub from raising above a predetermined point, thus preventing overflow of the tub when the faucets are left running. The overflow fitting is sanitary for the reason that the overflow passage has no water in it except during the overflow, and deposits of greasy material is prevented by the flow of water through the fitting.

The fitting of the present invention is preferably formed of a plastic which may be molded in sections and joined together to form the complete fitting, as well understood in the art. The guide ring 10 is also preferably formed of plastic material and may be attached to the wall of the tub by any suitable means. As herein illustrated, the tub is shown provided with an opening 14 such as ordinarily provided to receive an overflow fitting. This opening is closed by means of a disk 15 formed of plastic material which carries a bolt 16 which projects through the opening and which receives a clamping nut 17 by means of which the disk 15 is drawn tightly against the wall of the tub. The disk 15 has a socket 18 which receives a projection 19 on the guide ring 10 which is secured in place by means of a suitable screw 20. The ring 10 is preferably formed in two sections 21 and 22, the section 21 being integral with the lug 19 and the sec-

tion 22 being of U-shape and secured to the inner section 21 by means of screws 23. When it is desired to remove the waste and overflow fitting the screws 23 may be detached and the outer section 22 of the guide ring removed to permit the overflow fitting to be lifted out of the tub.

In Fig. 5 of the drawing a slightly modified form of fitting is shown. In this modification the fitting has a valve portion 5a and a stem 7a which provides an overflow conduit as in the modification first described. In the modified structure, the drain opening has a collar 24 which has a substantially cylindrical interior surface. The valve portion 5a of the fitting has a sealing ring 25 of rubber or the like which engages the upper end of the collar 24 and has a depending slotted skirt portion 26 which has a tight fit within the collar 24. The engagement of the resilient skirt portion 26 within the collar 24 serves to provide sufficient frictional resistance to vertical movement of the fitting to retain the fitting in positions to which it is manually adjusted. Any suitable means, such for example as the guide 10 and stop 11, may be provided for limiting the extent of movement of the fitting and preventing the valve member from being lifted clear of the drain opening.

The fitting of the present invention is considerably less expensive than the external drain pipes and control valves heretofore employed and has the additional advantage of being more readily accessible for replacement or repair.

Furthermore, it is to be understood that the particular form of product shown and described, and the particular procedure set forth, are presented for purposes of explanation and illustration and that various modifications of said product and procedure can be made without departing from my invention as defined in the appended claims.

What I claim is:

1. The combination with a receptacle having a drain outlet in the bottom thereof adjacent a side wall, of a fitting having a valve portion adapted to close said drain outlet, a strainer portion below the valve portion and a stem portion laterally offset with respect to the valve portion and extending upwardly therefrom, said fitting having an overflow passage therein which discharges through the valve portion into the drain outlet, the upper end of the overflow passage being in said stem portion above the valve portion and below the top of the receptacle, a stationary guide member through which said stem extends, a stop on the stem engageable with said guide member to limit the upward movement of the fitting and prevent disengagement of the strainer portion from the drain outlet.

2. The combination with a receptacle having a drain outlet in the bottom thereof and a valve seat surrounding the outlet, of a fitting having an enlarged tubular valve portion open at its lower end which extends into the drain outlet and has a circumferentially continuous seating portion above its open lower end which fits said valve seat to close the drain outlet, said fitting having a stem which has a portion extending laterally from said valve portion and a vertical portion offset laterally from said drain outlet, said fitting being movable vertically to open the drain outlet and having an overflow passage therein which discharges through the valve portion into the drain and which has an inlet in the vertical portion of the stem below the top of the receptacle, and a fixed guide for the vertical portion of said stem which coacts with the tubular portion of the fitting in the drain outlet to hold said fitting against turning movements on said seat.

3. The combination with a receptacle having a drain outlet in the bottom thereof and a valve seat surrounding the outlet, of a fitting having an enlarged tubular valve portion open at its lower end which extends into the drain outlet and has a circumferentially continuous shoulder above its open lower end which engages said valve seat to close the drain outlet, said valve portion having a tubular strainer skirt below said seating portion, said fitting having a stem which has a portion extending laterally from said valve portion and a vertical portion offset laterally from said drain outlet, said fitting being movable vertically to open the drain outlet and having an overflow passage therein which discharges through the valve portion into the drain and which has an inlet in the vertical portion of the stem below the top of the receptacle, and means for holding said fitting against turning movements, and means for limiting the upward movement of said fitting to prevent disengagement of the strainer skirt from the drain outlet.

4. The combination with a receptacle having a drain outlet in the bottom thereof and a valve seat surrounding the outlet, of a fitting having an enlarged tubular valve portion open at its lower end which extends into the drain outlet and has a circumferentially continuous seating portion above its open lower end which fits said valve seat to close the drain outlet, said fitting having a stem which has a portion extending laterally from said valve portion and a vertical portion offset laterally from said drain outlet, said vertical portion of the stem being non-circular in cross section, said fitting being movable vertically to open the drain outlet and having an overflow passage therein which discharges through the valve portion into the drain and which has an inlet in the vertical portion of the stem below the top of the receptacle, and a stationary guide member embracing the vertical non-circular portion of the stem and holding the fitting against turning movements.

5. The combination with a receptacle having a drain outlet in the bottom thereof and a valve seat surrounding the outlet, of a fitting having an enlarged tubular valve portion open at its lower end which extends into the drain outlet and has a circumferentially continuous seating portion above its open lower end which fits said valve seat to close the drain outlet, said fitting having a stem which has a portion extending laterally from said valve portion and a vertical portion offset laterally from said drain outlet, said vertical portion of the stem being non-circular in cross section, said fitting being movable vertically to open the drain outlet and having an overflow passage therein which discharges through the valve portion into the drain and which has an inlet in the vertical portion of the stem below the top of the receptacle, a stationary guide member embracing the vertical non-circular portion of the stem and holding the fitting against turning movements, and a spring pressed member carried by said guide member and engageable with said stem to hold the fitting in drain closing position or in an elevated position.

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