

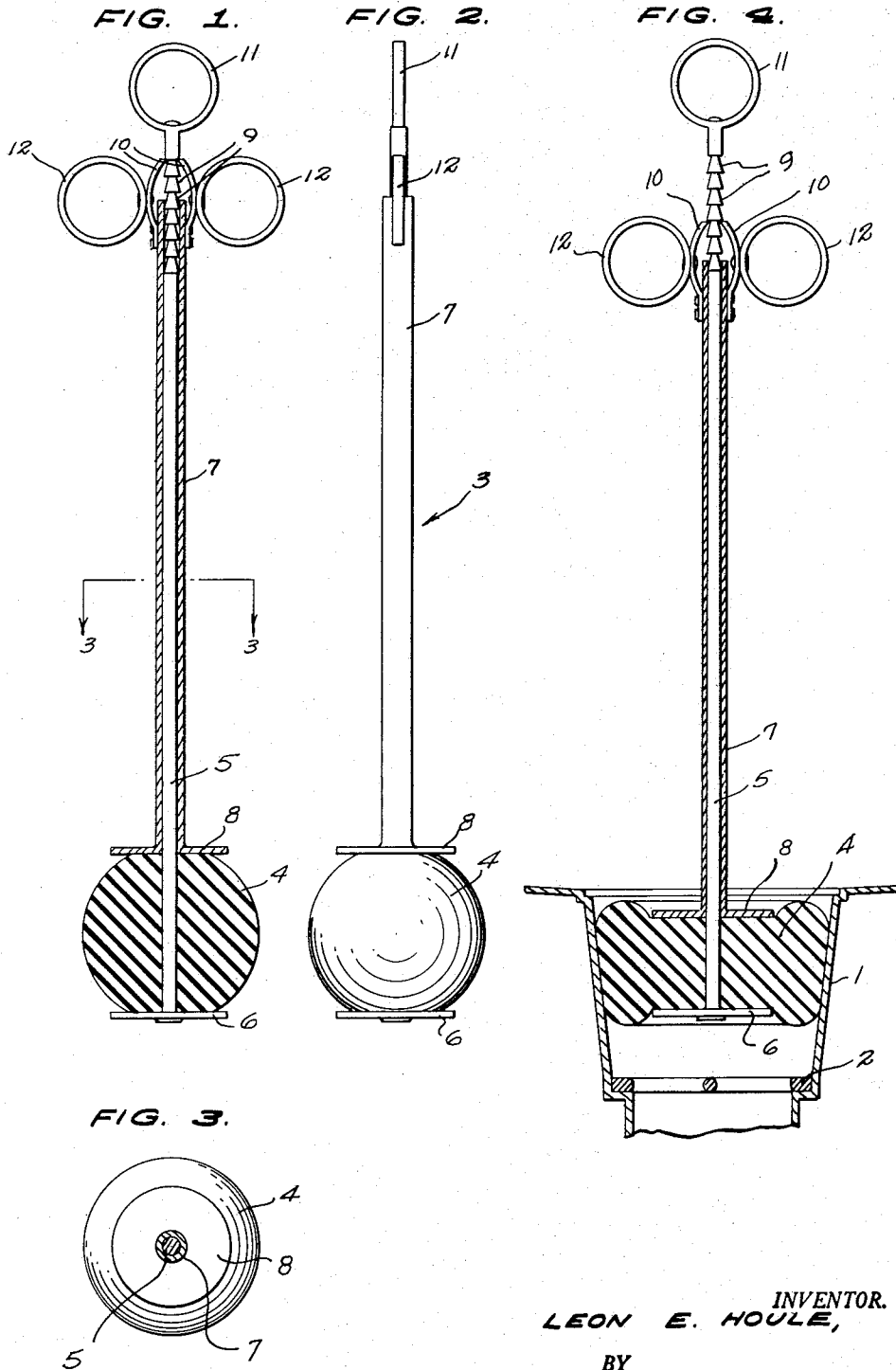
June 19, 1956

L. E. HOULE

2,750,601

LAUNDRY TUB STOPPER

Filed Feb. 26, 1954



INVENTOR.
LEON E. HOULE,

BY

McMorrow, Berman + Davidson
ATTORNEYS.

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2,750,601

LAUNDRY TUB STOPPER

Leon Edward Houle, Willimantic, Conn.

Application February 26, 1954, Serial No. 412,819

1 Claim. (Cl. 4—295)

This invention relates to laundry tub stoppers.

An object of the invention is to provide a positive, water-tight seal for the drain outlet of a laundry tub which is easily connected and disconnected from the drain outlet and which will not be unsealed by the backwash when another drain connected to the same outlet pipe is discharged.

Another object of the invention is to provide a laundry tub stopper which may be connected and disconnected from the drain outlet of a laundry tub without immersing the hands in the contents of the tub.

Other objects and advantages of the invention will appear from the following description considered in conjunction with the attached drawing, in which:

Figure 1 is a side elevational view, partially in section, of a stopper of the present invention.

Figure 2 is an end elevational view of the assembly of Figure 1.

Figure 3 is a view taken along the line 3—3 of Figure 1.

Figure 4 is a side elevational view, partially in section, showing the stopper in seating engagement with a drain outlet of a laundry tub.

Referring now to the drawing in more detail, the reference numeral 1 designates a drain outlet of a laundry tub. A strainer 2 rests within the drain outlet 1, supported upon an annular shoulder therein. The illustrated stopper embodying the present invention, generally designated 3, is adapted to close the drain outlet 1.

The stopper 3 includes a body of compressible and resilient material 4 of globular shape which when compressed will fit the drain opening 1. The body preferably consists of a ball of rubber, solid but soft and resilient, but may be made of other material and of other shapes adapted to fit specially shaped drains.

An upstanding rod 5 has its lower end portion extending through the body 4. A horizontally disposed disc 6 is connected to the lower end of the rod 5 and abuts the lower surface of the body 4. The rod 5 and the disc 6 are fabricated of metal or other suitable rigid material and the end of the rod extends through the disc 6 and is enlarged thereunder and secured thereto by welding or other suitable means. As shown in Figure 3 the disc 6 is circular in shape and of a diameter somewhat less than the greatest diameter of the body 4.

An upstanding tubular member 7 surrounds the rod 5, above the upper surface of the body 4 and a second horizontally disposed, disc 8 is connected to the lower end of the tubular member 7 and abuts the upper surface of the body 4. The members 7 and 8 are fabricated of metal or other suitable rigid material and are connected integrally. The disc 8 is circular and approximately of the size of the disc 6. The disc 8 is provided with a centrally located aperture, in registry with the bore of the tubular member 7 and the rod 5 extends upwardly through the aperture and the bore, as shown in Figure 1. The rod 5 is slidable in the tubular member 7 to move the discs 6 and 8 toward each other to compress the body 4 into closing contact with the sides of the drain 1, as shown

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in Figure 4 and to move the discs 6 and 8 away from each other to release the body 4 from closing contact with the drain 1. When the discs 6 and 8 are moved away from each other, the body 4 resumes the form shown in Figures 1 and 2.

Position holding means are provided upon the upper end portions of the rod 5 and the tubular member 7 for releasably locking the rod 5 to the member 7 in any of a plurality of its sliding movement positions with respect to the member 7. The said means consists of a series of annular ratchet-like teeth 9 cut in the upper end portion of the rod 5 and a pair of spring dogs 10, each having one end fixedly secured upon the upper end portion of the member 7 and the other end projecting above the upper end of the member 7 and engaging one of the teeth 9. An upstanding ring 11 is secured to the upper end of the rod 5 to serve as a handle for sliding the rod 5 within the member 7. Each spring dog 10 has a ring 12 connected thereto intermediate its ends, which ring 12 serves as a means for disengaging a dog 10 from the teeth 9.

In operation, the stopper of the present invention with the body 4 in the uncompressed position, as shown in Figures 1 and 2, is inserted in the drain outlet 1. While the member 7 is then held stationary with one hand, the other hand grasps the ring 11 and raises it to slide the rod 5 upwardly through the member 7 thereby bringing the disc 6 upwardly toward the disc 8 and compressing the body 4, so that its horizontal diameter increases and it comes into closing contact with the sides of the drain outlet 1, as shown in Figure 4. As the rod 5 is raised the spring dogs 10 ride freely over the inclined faces of the teeth 9 and seat against the under face of the adjacent tooth when the raising movement ceases, thereby holding the rod 5 in its raised position and the body 4 in the compressed drain closing position. The drain is thus effectively closed both against the escape of the contents of the tub in which the drain outlet is installed and against any backwash resulting from the discharge of any adjacent tubs. To disconnect the stopper from the drain outlet, the rings 12 are spread apart to disengage the dogs 10 from the teeth 9 and the rod 5 is then slid downwardly until the body 4 resumes its normal shape, coming out of closing contact with the walls of the drain outlet 1 and being readily removable from the drain outlet. The length of the rod 5 and of the tubular member 7 places the rings 11 and 12 at a sufficient elevation above the bottom of the tub to be clear of the contents of the tub when the tub is filled to its normal level and thus permits the operation of the stopper without the wetting of the hands in the contents of the tub.

What is claimed is:

In a device of the character described, an upstanding compressible resilient stopper body, a first disc engaging the lower surface of said body, a second disc engaging the upper surface of said body, an upstanding tube having the lower end fixed to said disc, an upstanding rod extending through said body and slidably through said tube and having the lower end fixed to said first disc, said rod having the portion adjacent the upper end projecting beyond the upper end of said tube, said projecting rod end portion terminating in a handle, series of teeth on opposite sides of said end portion, spring dogs on opposite sides of said tube, each of said dogs having one end fixed to the tube and a free end extending beyond the said end of the tube and engaging a related series of teeth, and finger pieces secured to the dogs at points intermediate the ends of the dogs for swinging the dogs away from opposite sides of the rod so as to disengage the free ends of the dogs from the series of teeth, each of said finger pieces and said handle consisting of a finger ring.

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