June 29, 1943. F. C. KUHNLE 2,323,224

DRAIN VALVE HOUSING

Filed Dec. 28, 1940

Fig. 1.

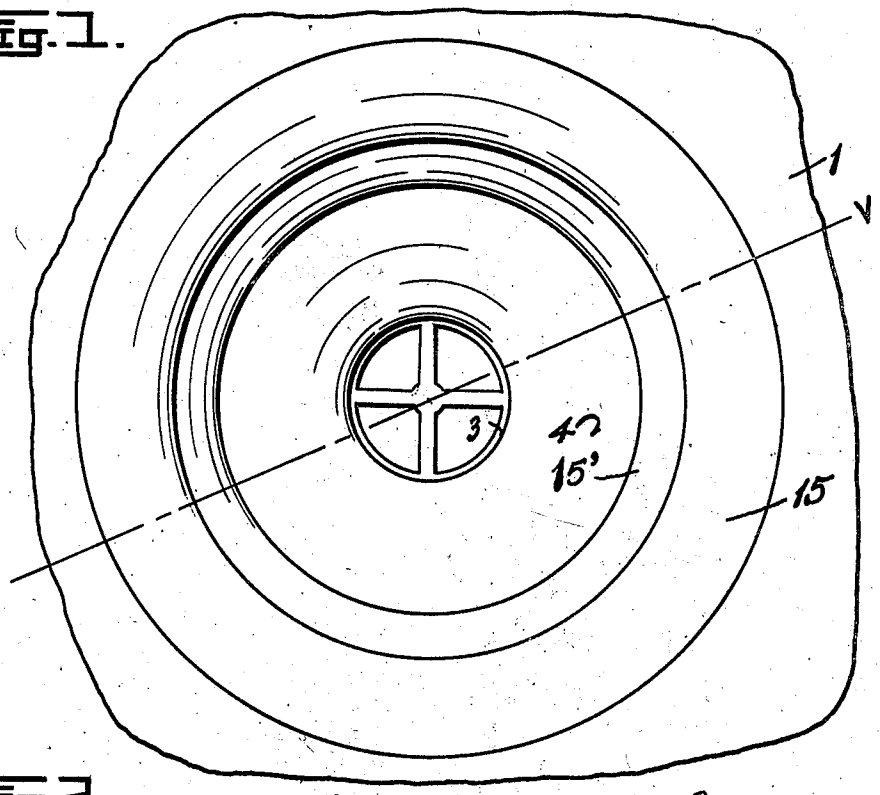
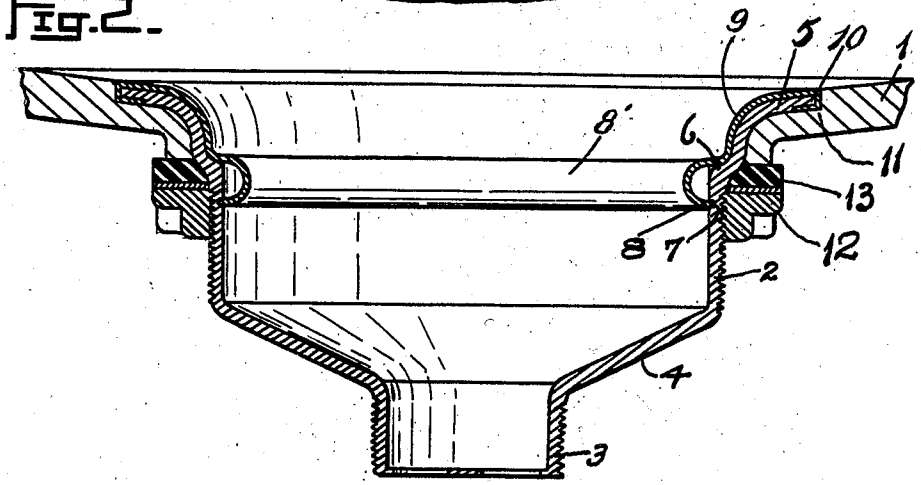



Fig. 2.




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Patented June 29, 1943

2,323,224

# UNITED STATES PATENT OFFICE

2,323,224

## DRAIN VALVE HOUSING

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Application December 28, 1940, Serial No. 372,188

2 Claims. (Cl. 4—286)

My present invention relates to improvements in housings for drain valves, and particularly to housings for combined strainer and drain valves for kitchen sinks and like receptacle; and the objects of improvement are, first, to provide a housing that will have the lasting brightness of stainless steel; second, to provide a drain valve housing that will remain bright and untarnished regardless of acid used to free the drain trap of obstructions; third, to provide a drain valve housing that can be cleaned without dimming the polish thereof; fourth, to provide a drain valve housing that requires nothing more to clean it than a wiping out with a wet cloth; and fifth, to provide a drain valve housing combining the qualities of stainless steel and of plated brass; and further, to provide a drain valve housing whereof the exposed flange at the top of the housing will be stainless steel.

I attain these named objects and such other objects as appear from a perusal of the following description when the said description is taken in connection with the accompanying drawing in which is disclosed my improved drain valve housing, and in which:

Figure 1 is a top plan view of my drain valve housing in which is shown the interior of the housing and the outwardly extending annular flange as engaging the top side of the bottom panel of a kitchen sink or like receptacle; and

Figure 2 is a vertical sectional view of my drain valve housing taken an a plane extending through the housing on V, the view showing the specific construction of the housing.

Throughout the drawing, similar numerals refer to similar parts or portions of my drain valve housing, and referring thereto—

Numeral 1 refers to the bottom panel of a kitchen sink having a flanged hole therethrough for receiving the downwardly extending portions of the drain valve housing, and numeral 2 refers to the externally screw-threaded portion of the drain valve housing, which is preferably drawn from sheet brass of suitable thickness. Numeral 3 refers to the downwardly extending and externally screw-threaded nipple by which a drain pipe may be connected to the housing and 4 to the inverted conical portion connecting the nipple 3 with the externally screw-threaded portion 2 and whereby fluids in the drain valve housing structure are trained to the said nipple to be conducted therefrom by a drain pipe connected thereto. Numeral 5 refers to the upwardly and outwardly curved flange terminating at its juncture with the portion 2 in shoulder 6. Numeral 7 refers to an annular groove at the inner periphery of housing portion 2 and in spaced apart relation to the shoulder 6; the purpose of the groove 7 is to receive the edge 8 of the roll-like corrugation 8′ and form a joint that will securely hold the stainless casing 9 in the housing portion 2 and prevent accumulation of dirt under the casing. Numeral 10 refers to the reduced-thickness portion of the upwardly and outwardly curved flange 5 where the said flange 5 together with the casing extending under the flange is drawn into the recess 11 by the ring nut 12 engaging flexible ring gasket 13.

In producing my improved drain valve housing, I first provide a sheet of desired-thickness suitable free-cutting metal, from which I stamp a circular disc of desired diameter; I then place the said disc in suitable drawing dies mounted in a drawing press and draw the disc by the dies to substantially the form shown in the accompanying drawing, which form includes cylindrical portion 2, the externally screw-threaded nipple 3, the inverted conical portion 4, the upwardly and outwardly curved flange 5 and shoulder 6. Having drawn the said disc to substantially the form shown in the drawing, I cut screw threads on the outer periphery of the portion 2 and the nipple 3, and having cut the said screw threads, I cut annular groove 7 in the inner periphery of the portion 2 and reduce the thickness of the flange 5 at 10. Having performed the operations described, I provide a thin sheet of stainless steel or other non-rustable metal, from which I cut a disc of suitable diameter for forming the casing 9, and partly draw and partly spin the said disc to the form shown, including the roll-like corrugation 8′, the reverse curved portion resting on the shoulder 6 and the upwardly and outwardly curved portion embracing the flange 5. Having formed the stainless metal casing 9 as described, I force the casing into the housing portion 2 and its edge 8 into annular groove 7 with its reverse curve resting on the shoulder 6 and its upwardly and outwardly curved portion resting on the upwardly and outwardly curved flange 5, in which position the outer periphery of the casing will extend beyond the outer periphery of the flange 5 at 10, which extended portion of the casing I spin around and under the reduced-thickness portion 10 of the said flange 5. When the drain valve housing has been assembled as described, the exposed portions of the stainless steel casing are buffed to smooth and brighten their exposed surface, after which it is only necessary to wipe the surface to keep it bright.

Having described my present invention, I claim:

1. A drain valve housing comprising a hollow cylindrical body portion having an upward and outward extending flange, a shoulder at the inner periphery of the cylindrical body portion in spaced apart relation to the upward and outward extending flange, an annular groove in the inner periphery of the said cylindrical tubular portion in spaced apart relation to the said shoulder and a casing of thin metal extending over the said upward and outward extending flange and extending under the said flange at the periphery thereof and engaging the said shoulder and extending into the said annular groove substantially as described.

2. In a drain valve housing having a hollow cylindrical body portion provided with an upwardly and outwardly extending curved flange, a shoulder at the inner periphery of the cylindrical body portion in spaced apart relation to the upwardly and outwardly extending flange and a casing of non-rustable metal extending from adjacent the said shoulder over the said upwardly and outwardly extending flange and at the periphery of the flange.

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