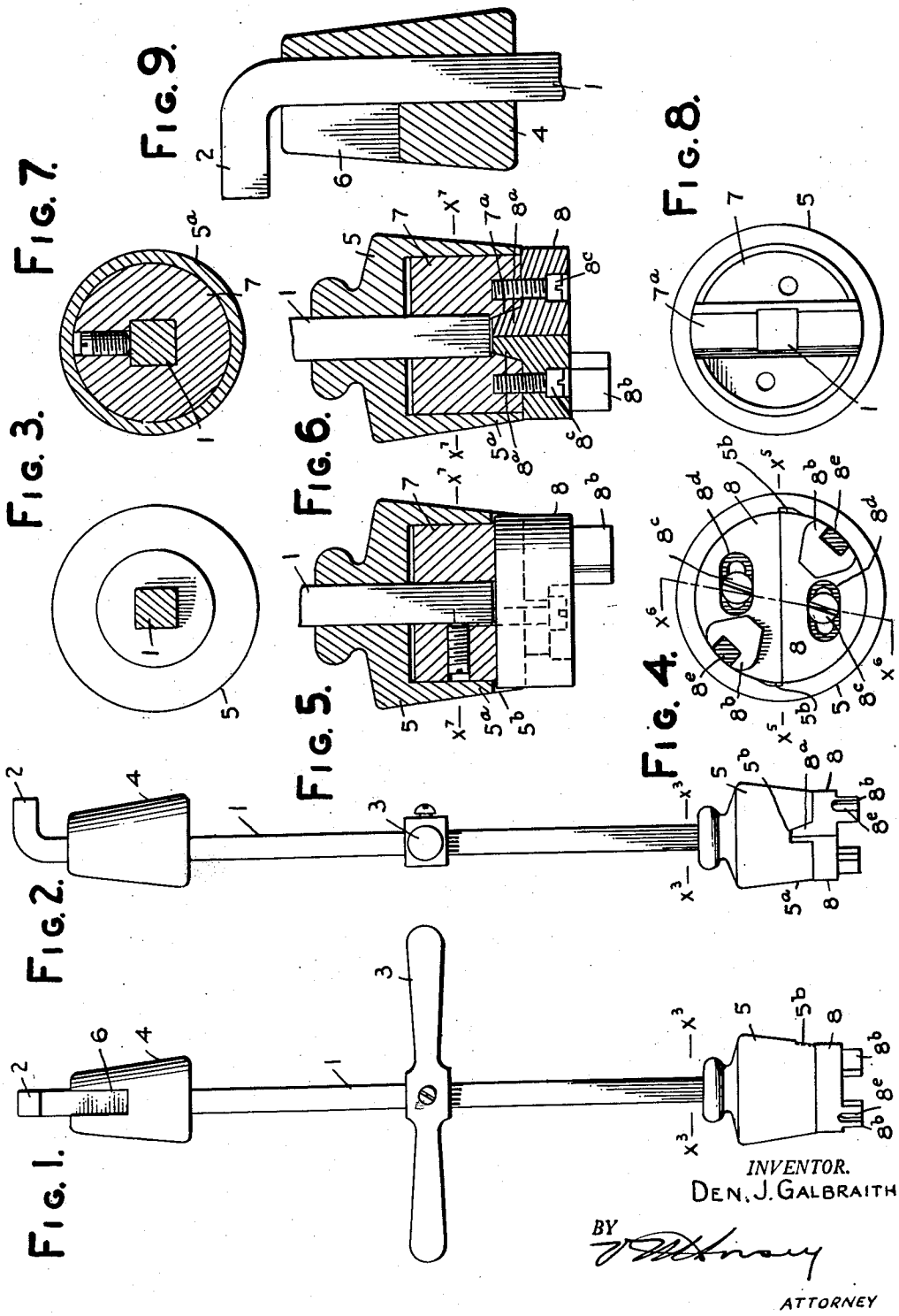
Aug. 5, 1952 D. J. GALBRAITH 2,605,664

TOOL FOR SEATING WASTES

Filed May 24, 1949 2 SHEETS—SHEET 1



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Filed May 24, 1949 2 SHEETS—SHEET 2

FIG. 14.

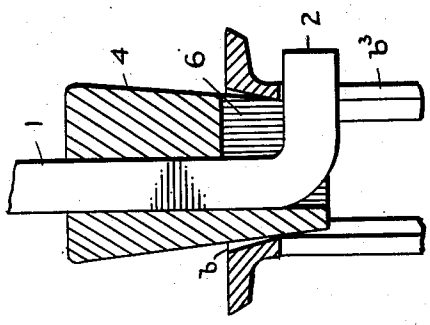


FIG. 15.

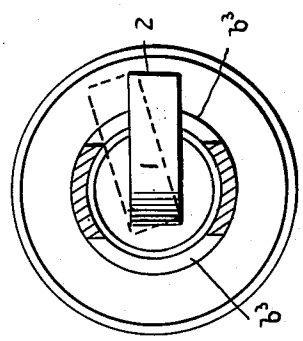


FIG. 12.

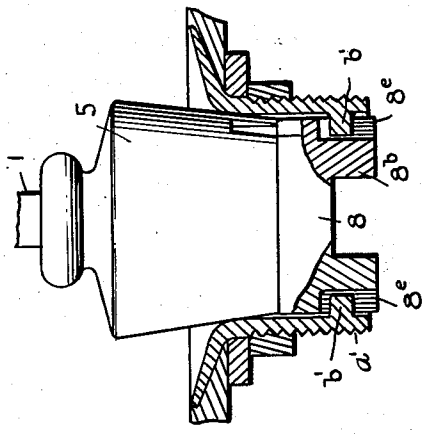


FIG. 13.

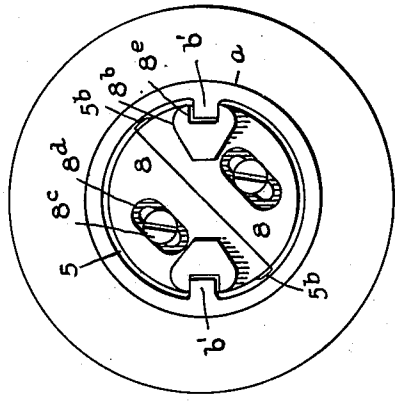


FIG. 10.

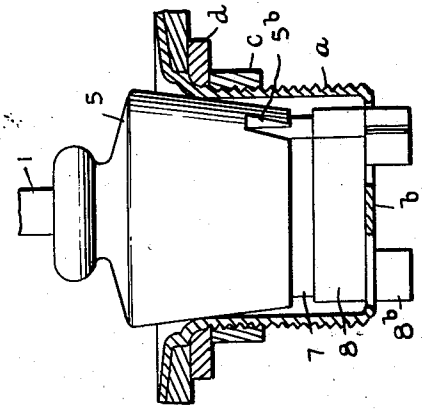
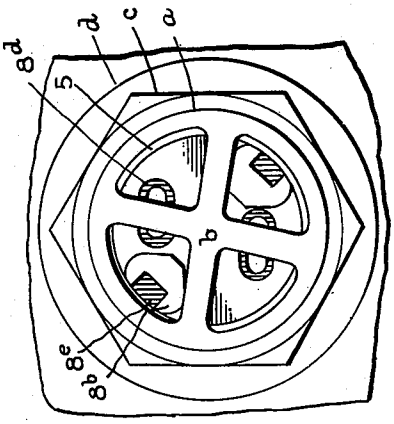


FIG. 11.



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TOOL FOR SEATING WASTES

Den J. Galbraith, Plainfield, N. J.

Application May 24, 1949, Serial No. 95,039

3 Claims. (Cl. 81—90)

1

This invention relates to a new and useful improvement in a tool for assembling or removing certain parts of fittings for pop-up wastes or other type of waste fittings having a male and female threaded assembly, as used in plumbing fixtures, such as bath tubs, drains, service sinks, basins, etc. These wastes are of an assembly of parts and provide a water-tight joint with the fixture having a valve seat to receive a valve generally of the pop-up type.

The assemblies in question are of several designs, but they all involve a tubular member or sleeve passing through an outflow outlet of the fixture and having a flange on its upper end resting against the upper surface of the fixture. The outer surface of the lower end of the sleeve is threaded to receive a nut to be screwed toward the lower side of the bottom of the fixture to compress a washer interposed between it and the fixture. The upper mouth of the sleeve is shaped to form a seat for a stopper or valve.

In assembling the waste in the fixture and tightening up the nut against the washer, difficulty is encountered in avoiding injury to and distortion of the valve seat, the sleeve being of fragile construction.

My invention has for its object to provide a tool for safely holding the sleeve while turning the nut and is applicable to different sizes and types of assembly.

Referring to the accompanying drawings in which corresponding parts are designated by corresponding marks of reference,

Figures 1 and 2 are elevations, taken at right angles to each other of a tool embodying my invention.

Figure 3 is a horizontal cross section on X—3—X—3 of Figures 1 and 2.

Figure 4 is an inverted plan view of the tool shown in Figures 1 and 2.

Figures 5 and 6 are fragmental vertical sections on lines X—5—X—5 and X—6—X—6 respectively of Figure 4.

Figure 7 is a horizontal section on line X—7—X—7 of Figures 5 and 6.

Figure 8 is an inverted plan view of the tool with the sliding jaws removed.

Figure 9 is a vertical section through the bent upper end of the handle of the tool and its attendant mandrel.

Figure 10 is a vertical section illustrating the manner of using my tool with a sleeve having cross bars across its lower end.

Figure 11 is a bottom plan view of the structure shown in Figure 10.

2

Figures 12 and 13 represent the manner of my using a tool with a sleeve having lugs instead of cross bars.

Figures 14 and 15 represent the manner of using my tool with a sleeve having apertured sides.

The tool as shown comprises a stem in the form of a rod 1, rectangular in cross section having at its one end (here for convenience called the upper end) bent to form a hook 2 and carrying a lever 3 by which it may be rotated. On the stem slides the upper tapered mandrel 4 and the lower tapered mandrel 5, the upper mandrel having a slot into which the hook may enter.

Fast on the lower end of the stem is a cylindrical metallic block 7 adapted to be received within the depending flanges 5*a* of the lower mandrel and having a diametrical slot 7*a* in its lower surface to receive the tongues 8*a* of the two jaws 8, each jaw having a dependent finger 8*b* at one end. The jaws are held in place against the bottom of the block by screws 8*c* passing through elongated slot 8*d* therein and threading into the bottom of the block. By this construction the jaws are enabled to run in and out and to be clamped in the desired adjusted position. The flange 5*a* of the lower mandrel is notched at 5*b* to permit this. The fingers have their outer ends channeled vertically as at 8*e*.

The use of the tool thus described is shown in Figures 10 to 15.

Figures 10 and 11 show its use with the waste in which the sleeve *a* is provided with cross bars *b* across its lower end. Here the lower mandrel rests and fits within the sleeve forming a guide for the rotation of the tool. The fingers 8*b* project downwardly from the bottom of the jaws and enter the spaces between the bars *b*. On turning the handle the sleeve *a* will be thus rotated in respect to the nut *c* to compress the washer *d* between the latter and the bottom of the fixture.

Figures 12 and 13 show the use of my tool with the sleeve *a'* which does not have the cross bars, but which have internal lugs *b'*. Here the vertical channels 8*e* in the outer ends of the fingers receive and drive the lugs.

Figures 14 and 15 show the use of my tool with a sleeve having neither bars nor lugs, but having openings b^3 in its walls. In this case the tool is inverted and the hook 2 passed into the sleeve and through the aperture opening *b* and the upper mandrel 4 lowered into the sleeve to fix the axis of rotation of the handle.

In some cases it may be found desirable to

mount the upper mandrel eccentrically on the stem as is shown in these Figures 14 and 15 so that the tool by properly orienting the mandrel may be used when the outlet is close to a vertical wall of the fixture.

What I claim is:

1. The combination of a stem, a block carried at one end thereof provided with a transverse slot, a plurality of jaws provided with tongues movable in said slot, fingers projecting downwardly from the outer ends of said jaws, means permitting adjustment of the jaws relatively and means for locking the jaws to the block in their adjusted position.

2. In a tool for seating waste assemblage, the combination with a stem, of jaws independently movable in and out on the lower end thereof, fingers projecting downwardly from the lower ends of the jaws and a tapered mandrel movable lengthwise of the stem.

3. In a tool for seating waste assemblage, the combination with a stem, of jaws independently movable in and out on the lower end thereof, fingers projecting downwardly from the lower ends of the jaws, the fingers having channeled outer ends and a tapered mandrel movable lengthwise of the stem.

DEN J. GALBRAITH.

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