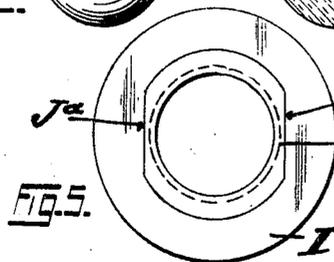
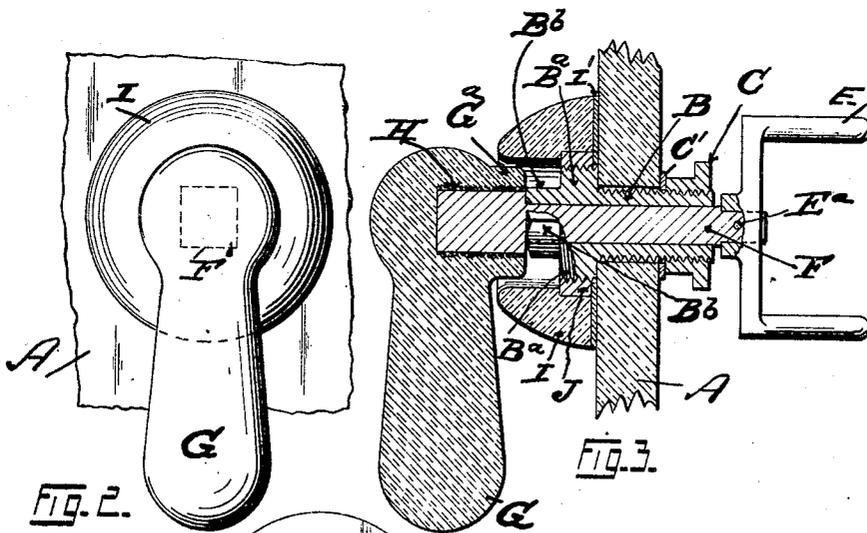
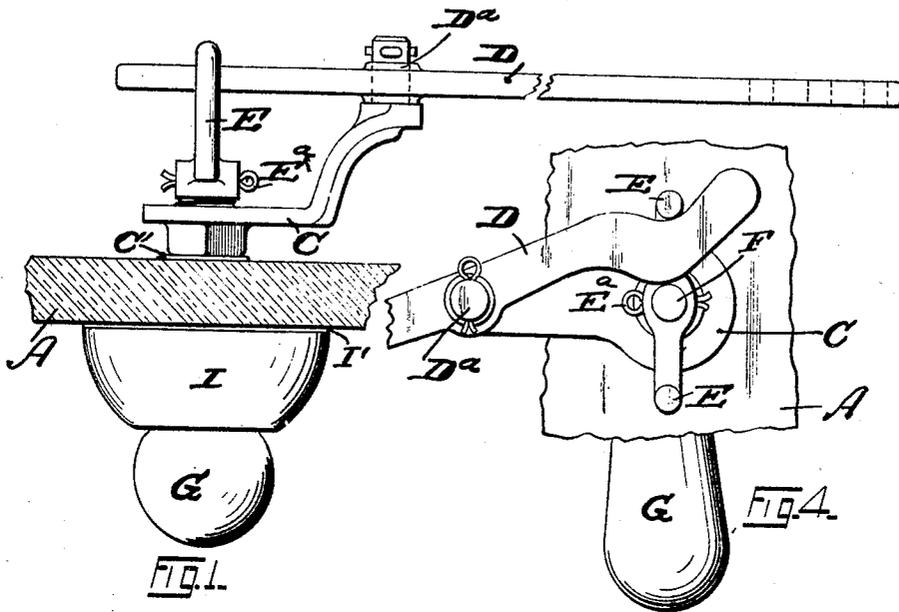


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W. SHERWOOD
VALVE OPERATING HANDLE

Filed March 11, 1925



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VALVE-OPERATING HANDLE.

Application filed March 11, 1925. Serial No. 14,630.

To all whom it may concern:

Be it known that I, WILLIAM SHERWOOD, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Valve-Operating Handles, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an operating handle for flushing valves, shown in the accompanying drawings and more particularly described in the following specification and claims.

The object of this invention is to provide a valve operating handle, simple in construction, sanitary in appearance, composed of non-corrosive material especially designed for use where corrosive elements may be present—as for example in bath rooms or toilets where the splashing from bowls and tubs may contain matter which will attack or discolor the nickel plated trimmings usually employed.

A further object of this invention is to provide an annular locking element formed of porcelain—loosely sleeved upon the laterally projecting neck of the handle—fitted with a concealed screw threaded ring embedded in the porcelain adapted to engage a bushing which serves as a bearing for the rock shaft of the operating handle—the annular locking element securing the bushing against release when adjusted into engagement with the wall of the flushing tank, in which the bushing is mounted.

A further object of the invention is to provide the operating handle with a neck or off-set portion extending well within the central opening or socket of the non-corrosive portion of said annular locking element that the parts may present a connected and finished appearance, regardless of any lateral play of the handle which might otherwise serve to separate the neck end of the handle from the annular locking element.

A further object of the invention is the means of securing the screw-threaded ring in the wall of the porcelain locking element.

With the foregoing and other objects in view which will appear as the description

proceeds the invention further resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes may be made in the precise embodiment of the invention herein disclosed without departing from the spirit of the same.

In the drawings accompanying this specification:

Figure 1 is a fragmentary plan view, showing the wall of a flushing tank in section, a fragment of a flushing lever mechanism, a handle for manually operating the latter and the annular locking element sleeved upon the neck of the handle.

Figure 2 is a front elevation of the operating handle and annular locking element supported in a fragment of the wall of a flushing tank.

Figure 3 is a vertical cross-sectional view through the device showing a fragment of a wall of a flushing tank in which the bushing forming the bearing for the operating lever is supported, also the annular locking ring for fixedly securing the bushing in the wall of the flushing tank.

Figure 4 is a fragmentary view of a portion of the flushing lever mechanism as viewed from the inside of a tank—a portion of the wall of the latter being shown.

Figure 5 is an elevation of the annular locking element viewed from the face located adjacent the wall of the flushing tank—disclosing the flattened walls of the screw-threaded ring embedded in the porcelain element.

Referring now to the letters of reference placed upon the drawings:

A denotes the wall of a flushing tank or other support adapted to receive a screw-threaded bushing B, provided at one end with a screw threaded flange B^a, overlapping the outer face of the tank wall.

C indicates a bracket screwed upon the bushing and bearing against the inner face of the wall of the tank.

D designates a tilting lever of usual construction pivoted at D^a, to the bracket, adapted to be actuated by a forked arm E secured to the rock shaft F,—journalled in the bushing B,—by a cotter pin E^a, as shown.

G represents an operating lever or handle having a laterally projecting neck G^a pro-

vided with a socket to receive the outer end of the rock shaft F secured therein by a suitable cement filling H lodged in the socket.

5 I denotes an annular element preferably formed of porcelain in which is embedded a screw-threaded ring J engaging the screw-threaded flange B^a of the bushing and serving as a locking means to rigidly secure
10 the bushing in the wall of the flushing tank, when properly adjusted.

The annular element I is relatively thick to provide a bore or socket sufficiently deep to receive the projecting neck G^a of the
15 operating handle in order that any lateral movement of the rock shaft F will not operate to separate the end of the handle from the socket of the annular locking element into which it extends, thereby insur-
20 ing the parts at all times a neat and finished appearance.

The bushing B at its outer end is provided with a square or octagonal portion B^b to receive the jaw of a wrench, whereby
25 the bushing may be readily screwed into or released from the bracket C. C¹ denotes a gasket located between the wall of the tank and the bracket and I¹ is a similar gasket located between the annular locking element I and the outer wall of the tank. If
30 desired however these gaskets may be dispensed with.

In order to rigidly secure the screw-threaded ring J, in the wall of the annular
35 element I in which it is embedded its outer wall is flattened as indicated at J^a in Figure 5 to insure against rotation in the wall in which it is preferably further secured by suitable cement.

40 Having now indicated the several parts of the device by reference letters the construction and assembly of the same will be readily understood.

The bushing B is first inserted through
45 an opening provided in the wall of the tank and the lever supporting bracket B engaged therewith—the flange B^a of the bushing being adjusted to bear against the outer wall of the tank. The annular locking element I is then screwed on the flange of the
50 bushing and against the tank wall, thereby locking the bushing securely to the wall of the tank. The rock shaft carried by the operating handle G is then inserted in the
55 bushing and the forked arm E controlling the lever for operating the valve mechanism is then secured to its inwardly projecting end by the cotter pin E^a—the rocking lever D being mounted upon the bracket C as
60 indicated.

Having thus described my invention what I claim is:

1. A valve operating device consisting of a bushing—adapted to project through a
65 supporting wall—provided with an integral

screw-threaded flange overlapping the outer face of the wall; means screwed onto the end of said bushing, adapted to bear against the inner face of the supporting wall; an
70 annular locking element having a relatively deep central socket with means for engaging the screw-threaded flange of the bushing, whereby when adjusted to bear against
75 said wall the bushing may be locked to the latter; a rock shaft journalled in the bushing provided at its outer end with a handle having a laterally projecting neck extending
80 into the socket of said annular locking element, whereby lateral movement of the rock shaft will not operate to separate the laterally projecting end of the handle from the socket of the annular locking element, and means secured to the inner end of said
85 rock shaft adapted to operate a valve controlling mechanism.

2. In a device of the character described; a bushing provided with an integral screw-threaded flange overlapping the outer face of a supporting wall, and a squared end
90 adapted to receive a wrench; means screwed upon the opposite end of said bushing adapted to impinge against the inner face of the supporting wall; an annular locking element having a relatively deep central socket fitted with a screw-threaded ring embedded
95 therein adapted to be screwed upon the flange of the bushing, whereby it may impinge upon the supporting wall; a rock shaft journalled in said bushing provided at one
100 end with an operating handle having a laterally projecting neck extending into the socket of the locking element and means secured to the opposite end of said rock shaft for actuating a valve controlling mechanism.

3. In a device of the character described; a bushing having a projecting screw-threaded flange adapted to overlap a supporting wall in which the bushing is
110 mounted; a bracket screwed upon the opposite end of said bushing adapted to bear against said supporting wall; a tilting lever pivoted to the bracket for controlling the operation of a valve; an annular element having a relatively deep central
115 socket, fitted with a ring screwed upon the flange of said bushing to bear against the opposite face of the supporting wall, whereby the bushing is secured against accidental release; a rock shaft journalled in said
120 bushing; a handle secured to said rock shaft provided with a laterally extending neck projecting into the socket of the annular element, and means secured to the opposite end of said rock shaft adapted to actuate
125 the lever for operating a valve mechanism.

4. In a device of the character described; a bushing provided with a screw-threaded flange; an annular collar formed of non-corrosive material and provided with a rel-
130

atively deep socket; a screw-threaded ring
lodged in said annular collar adapted to
engage the flange of the bushing, the walls
of said ring being flattened to correspond
5 with coating flattened surfaces formed in
the annular collar, whereby the ring is
locked to the latter; a rock shaft journalled
in said bushing fitted with an operating
handle formed of non-corrosive material
10 having a laterally extending neck project-

ing into the socket of said annular locking
member, and means secured to the rock
shaft adapted to actuate a valve operating
mechanism.

In testimony whereof I sign this speci- 15
fication in the presence of two witnesses.

WILLIAM SHERWOOD.

Witnesses:

S. E. THOMAS,

R. V. COREN.