March 12, 1929. J. G. ZOLLEIS 1,704,851

VALVE FIXTURE

Filed April 3, 1928

Fig. 1,

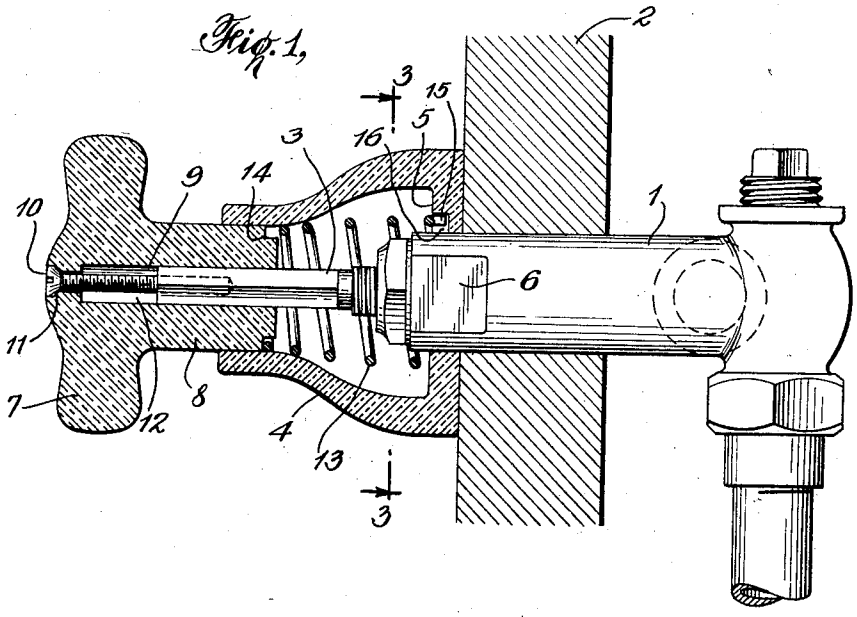


Fig. 2,

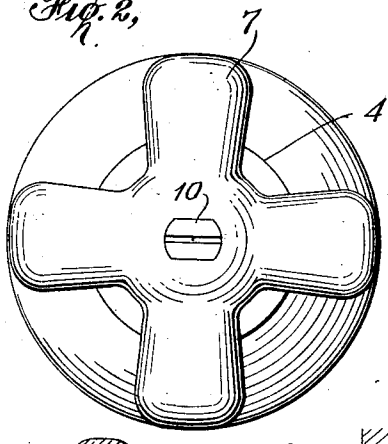


Fig. 3,

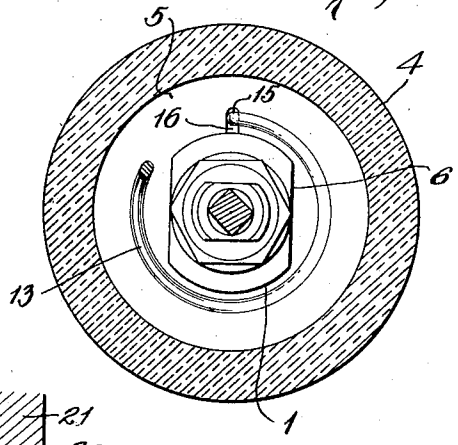
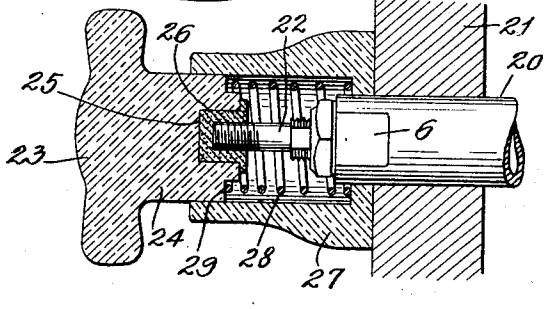


Fig. 4,



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UNITED STATES PATENT OFFICE.

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VALVE FIXTURE.

Application filed April 3, 1928. Serial No. 266,969.

This invention is an improvement in valve fixtures, and more particularly in ceramic fixtures.

Valves designed for use in housing constructions, such for instance as are used in bath rooms, kitchen sinks, and the like, include usually a casing adapted to extend through an opening in a wall, a valve stem, and an escutcheon for providing a finish where the stem and casing extend through the wall.

Heretofore, the valve stem, and that part of the casing which extends beyond the escutcheon, have been of metal, which chips and tarnishes easily, and is difficult to keep clean.

One of the primary objects of the present invention is to provide an all ceramic finish for that part of the valve which is exposed, and wherein all of the metal parts, and connecting parts are concealed.

Another object is the provision of an escutcheon of ceramic material having an imperforate display surface, and means within the escutcheon for holding it in close contact with the wall.

Another object is to provide an inexpensive construction offering a minimum of cracks and crevices for the receptacle of foreign matter.

With these and other objects in view the invention consists in the construction and novel combination of parts fully described hereinafter, illustrated in the accompanying drawings, and pointed out in the claims appended hereto, it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims, may be resorted to without departing from the spirit of the invention.

In the drawings forming a part hereof:—

Fig. 1 is a horizontal section of a wall with fixture in place.

Fig. 2 is a front view of the fixture.

Fig. 3 is a section on the line 3—3 of Fig. 1.

Fig. 4 is a sectional view showing an alternate construction.

In the present embodiment of the invention, the fixture includes a valve casing 1, of usual construction, which is adapted to extend through an opening in a wall 2. The fixture includes also a valve not shown, operated by a stem 3, which in the present instance, is polygonal in cross section. An escutcheon 4 is provided of ceramic material, such as porcelain, the said escutcheon being substantially frusto-conical as shown, and with the large end abutting the face of the wall.

The large end of the escutcheon has an inwardly extending ledge or shoulder 5, forming a base to bear against the wall, and this base has an opening through which the valve casing passes. Preferably the arrangement is such as to prevent relative angular movement of the casing and escutcheon. In the present instance the casing is flattened at opposite sides at the end adjacent to the escutcheon, as shown at 6, and the opening in the base of the escutcheon is similarly shaped.

A handle 7 also of ceramic material is provided for operating the valve, and this handle has a stem 8 which extends into the small end of the escutcheon. The handle has also an axial opening 9, which is shaped to fit the stem 3, so that when the stem is in the opening it will turn with the handle, thus to open and close the valve.

The stem is connected to the handle by means of a screw 10, which passes through an opening in the handle, and engages a threaded opening in the end of the stem. The handle has a recess 11 for receiving the head of the screw, and referring to Fig. 2, it will be noticed that this recess is not circular, so that the screw cannot turn with respect to the handle when the head is in the recess.

The opening 12 in the handle for the stem 3 is of a length such that it will receive practically all of the stem when the end of the stem 8 abuts the valve casing. That is, the connection is such that the handle may be shoved in until the portion 7 abuts the small end of the escutcheon, and the connection between the handle and the valve stem is maintained whatever the position of the parts.

A coil spring 13 is arranged within the escutcheon between the base 5 and the stem 8 of the handle, and the spring acts normally to press the escutcheon toward the wall, and to hold it in close contact with the wall. The end of the stem portion of the handle is rabbeted or stepped as shown at 14, and one end of the spring 13 seats in the rabbet. The other end has an angular por-

tion 15 seating in a notch in the bottom of the escutcheon. Thus any angular movement of the spring is prevented.

The improved fixture provides for an all ceramic finish in valves of every character, no metal parts except the head of the screw 10 being visible. If for any reason it is necessary to remove the handle, it may be pressed toward the wall, thus bringing the head of the screw into accessible position for turning. When the screw is released, the handle may be withdrawn and the escutcheon removed. This leaves all of the casing parts accessible.

In the alternate construction shown in Fig. 4, the casing 20 passes through the wall 21, and the stem 22 of the valve is threaded at its free end as shown. The handle 23 for operating the valve is of ceramic material, similar to the handle 7 of Fig. 1, and including the handle proper and a stem 24. The stem has an axial opening 25, in which is secured a cap nut 26 in any suitable manner, and the nut is threaded to engage the end of the stem.

An escutcheon 27 also of ceramic material, and similar to the escutcheon 4, encircles the casing and the stem 24 of the handle. A spring 28 is arranged in the escutcheon, bearing at one end against the bottom thereof, and at the other against the stem 24 of the handle, the said stem being annularly shouldered as shown at 29, to fit within the end of the spiral spring. The relative arrangement of escutcheon and valve casing is the same as that shown in Fig. 1.

The stem 24 of the handle is freely slidable in the escutcheon, and in assembling the parts, the escutcheon is first placed, the spring inserted, after which the nut 26 may be engaged with the threaded end of the stem 22, the spring being compressed for this purpose. The handle may be easily released from the stem when desired, by turning it in the proper direction. However, the engagement is always sufficiently firm to enable turning movement of the valve without releasing the connection.

In both constructions, the springs 13 and 28 hold the escutcheon firmly against the wall, the handle of the valve providing an abutment against which the outer end of the spring bears, and an all ceramic finish is provided for the fitting. Such finishes offer obvious advantages in the way of appearance, ease of cleaning, and elimination of tarnishing, chipping, and the like.

The improved fitting is especially adapted to compensate for different thicknesses of wall. It will be evident that the arrangement enables the fitting to be used with a composition wall, for instance, such as beaverboard, or with a heavy tile wall.

When the handle is slidably connected with the stem as in the Fig. 1 construction, the spring holds the handle at the limit of its outward movement, and it is apparent that the function of the parts above mentioned is independent of the escutcheon. That is, the spring would hold the handle at the limit of its outward movement by engaging the wall instead of the end of the escutcheon. In the Fig. 1 construction, the spring operates to hold the handle at the limit of its outward movement, and to press the escutcheon to the wall.

What is claimed as new is:—

1. An all ceramic fitting for the protruding part of a valve casing and valve stem, including a handle for connection with the stem, and an escutcheon to encircle the protruding part of the casing, the handle being slidable in the outer end of the escutcheon, and resilient means within the escutcheon between it and the handle to hold the escutcheon to the wall.

2. An all ceramic fitting for the protruding part of a valve casing and valve stem, including an escutcheon to seat against the wall through which the stem and casing protrudes, a handle slidable in the escutcheon, means to connect the handle with the stem to constrain the stem to turn with the handle, and a spring housed in the escutcheon between it and handle to hold the escutcheon to the wall.

3. Mechanism of the character specified, comprising in combination with a valve casing adapted to extend through a wall, a ceramic escutcheon adapted to encircle the protruding end of the casing and a ceramic handle having a stem for actuating a valve and fitting and slidable in the outer end of the escutcheon, means for connecting the handle to the stem, and a spring between the handle and the escutcheon for holding the escutcheon in close contact with the wall.

4. An all ceramic fitting for the protruding part of a valve casing and valve stem, including a handle for connection with the stem, and an escutcheon to encircle the protruding part of the casing, the handle being slidable in the outer end of the escutcheon, resilient means within the escutcheon between it and the handle to hold the escutcheon to the wall, and means for connecting the handle to the stem.

5. An all ceramic fitting for the protruding part of a valve casing and valve stem, including a handle for connection with the stem, and an escutcheon to encircle the protruding part of the casing, the handle being slidable in the outer end of the escutcheon, resilient means within the escutcheon between it and the handle to hold the escutcheon to the wall, and means for preventing angular movement of the escutcheon with respect to the casing.

6. An all ceramic fitting for the protruding part of a valve casing and valve stem, in-

cluding a handle for connection with the stem, and an escutcheon to encircle the protruding part of the casing, the handle being slidable in the outer end of the escutcheon, resilient means within the escutcheon between it and the handle to hold the escutcheon to the wall, and means to prevent angular movement of the spring and the escutcheon.

7. An all ceramic fitting for a valve casing and valve stem, including a handle for connection with the stem and an escutcheon to encircle the protruding part of the casing and bear against the wall, said elements slidable with respect to each other, and resilient means between the escutcheon and the handle for holding the escutcheon against the wall, said means housed within the fitting.

8. An all ceramic fitting for a valve casing and valve stem, including a handle for connection with the stem and an escutcheon to encircle the protruding part of the casing and bear against the wall, said elements slidable with respect to each other, and means between the escutcheon and the handle for holding the escutcheon against the wall, said means housed within the fitting.

9. In an all ceramic fitting for a valve casing and valve stem, a handle slidably connected with the stem, means in connection with the handle and stem for limiting outward movement of the handle, an escutcheon to encircle the protruding part of the casing and bear against the wall, the escutcheon and handle slidable with respect to each other, and a common means pressing the escutcheon and the handle in opposite directions for the purpose specified.

10. In an all ceramic fitting for a valve casing and valve stem, an escutcheon to encircle the protruding part of the casing and bear against the wall, and means in connection with the handle and stem for limiting outward movement of the handle, and a spring engaging the handle at one end and adapted to engage the wall at the other to press the handle away from the wall.

11. In combination with a valve casing and valve stem, a handle for connection with the stem, and an escutcheon to encircle the protruding part of the casing, said escutcheon and casing being slidably connected, and means housed within the escutcheon between it and the handle to hold the escutcheon to the wall, the connection between the stem and the handle being housed and concealed by the handle and escutcheon.

12. An all ceramic housing for the exposed part of a valve casing and valve stem, including ceramic elements to house the said parts having a sliding fit one within the other at their adjacent ends, and normally operative means pressing said elements apart.

13. An all ceramic housing for the exposed part of a valve casing and valve stem, including ceramic elements to house the said parts having a sliding fit one within the other at their adjacent ends, and normally operative means pressing said elements apart, the handle slidable on the stem, and means to limit the outward movement thereof.

Signed at Philadelphia, in the county of Philadelphia and State of Pennsylvania, this twenty-ninth day of March, A. D. 1928.

JOHN G. ZOLLEIS.