

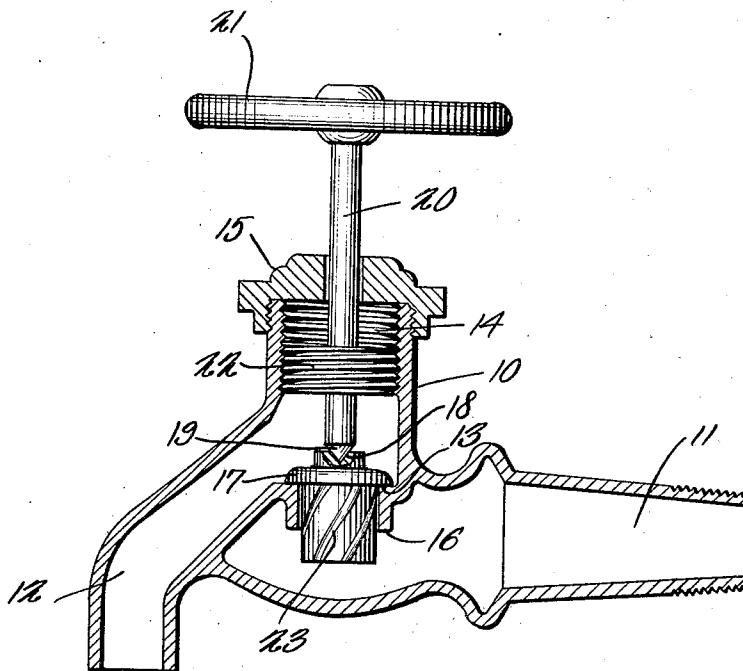
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W. D. GLEASON

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FAUCET

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P. J. Hickey

WITNESS:

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UNITED STATES PATENT OFFICE.

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FAUCET.

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This invention relates to faucets, and contemplates a novel construction of valve and valve stem, whereby the valve is always maintained in a true vertical position, while moving toward and away from its seat, and capable of rotation when seated, whereby the valve and seat are automatically ground to provide a proper fit and a leak proof joint.

Another object of importance of the invention resides in the provision of a valve and stem, which are constructed and associated in a manner to permit the valve to be moved to its closed position against the water pressure without subjecting the valve to jars or vibrations.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawing, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawing forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:

The figure in the drawing is a sectional view through the faucet showing the valve seated.

Referring to the drawing in detail, 10 represents a valve casing of well known construction, the inlet of which is indicated at 11 and the outlet at 12. The valve seat is indicated at 13. The upper end of the casing is interiorly threaded as at 14 and closed by a removable cap 15. The valve forming the subject matter of the present invention is indicated at 16 and includes a flange 17 which is adapted to repose upon the seat 13, when the valve is closed as shown in the drawing. The top of this valve is formed with a central depression 18 which receives a pointed extremity 19 of the valve stem 20, the latter projecting through an opening in the cap 15 and provided with the usual handle 21. The valve stem is formed with an enlarged annular threaded portion 22 which engages the threads 14 of the valve casing so that the stem 20 must be rotated to allow the valve to move either to an opened or closed position. The body 16 of the valve which is received in the openings surrounded by the valve seat is formed with a plurality

of spiral grooves 23, the purpose for which will be presently described. By reason of the construction and arrangement of parts hereinabove described, it is manifest that the valve can be closed against the water pressure without subjecting the valve to jars or vibrations. This is due to the fact that as the valve is forced against the water pressure, it gradually lessens the volume of the stream as the valve approaches its seat, until the valve is finally closed, whereupon the volume is decreased to an extent, that the valve can be properly seated without any jars or noise. The pointed extremity 19 seated in the central depression 18 always maintains the valve in proper alignment, or in other words, in a true vertical position when the valve is opened due to the pressure of water against the valve from beneath, the valve of course being of a sufficient length so that it cannot be raised entirely away from the seat, without removing the cap 15. The valve may be constructed from hard-wear resisting material, and used without any leather or other washers, the flange 17 when engaging the seat effectively cutting off the flow of water. After the valve has been seated as shown in the drawing, and the pressure of the water becomes greater than the pressure exerted upon the valve by the stem 20, the valve by reason of the spiral grooves 23 is caused to rotate thereby maintaining both the valve and the seat properly ground to provide a non-leakable structure. The life of a valve constructed in accordance with the present invention will be materially increased compared with the present day structures, and the valve may be very easily and quickly replaced by a new valve when the occasion may require.

While it is believed that from the foregoing description, the nature and advantages of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown and described, and that such changes may be resorted to when desired as fall within the scope of what is claimed.

Having thus described the invention, I claim:

In combination, a valve casing having a valve receiving opening and seat, a valve slidably received in said opening, and including an annular flange normally reposing

on said seat, an extension rising from the top of said valve and having a central depression therein, a valve stem including a pointed extremity received in said depression to permit the valve to rotate independently of said valve stem, said valve having a plurality of spiral grooves, whereby said

valve is rotated by fluid pressure when seated, and an enlarged threaded portion on the stem threadedly associated with the valve casing, whereby said stem may be raised or lowered. 10

In testimony whereof I affix my signature.
WILLIAM D. GLEASON.