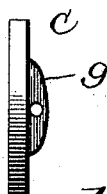
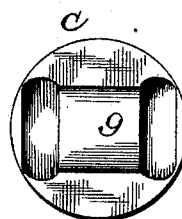
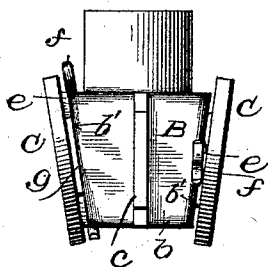
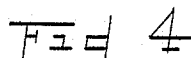
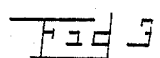
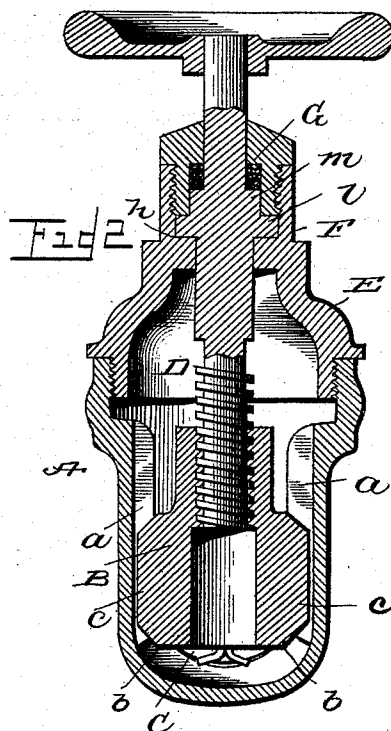
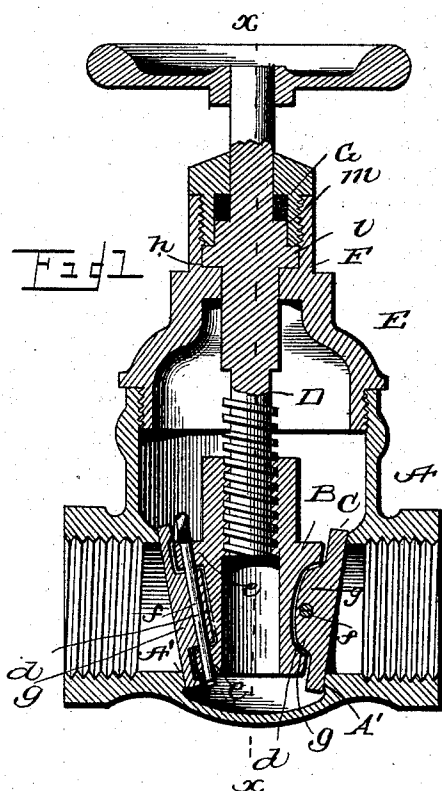


(No Model.)

W. G. NELSON.
VALVE.

No. 499,030.

Patented June 6, 1893.



Witnesses

John D. ...
Thos. J. Rout Jr.

Inventor

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Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM G. NELSON, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF
TO ALFRED A. FISHER, OF SAME PLACE.

VALVE.

SPECIFICATION forming part of Letters Patent No. 499,030, dated June 6, 1893.

Application filed August 24, 1892. Serial No. 444,019. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. NELSON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Valves, as set forth in the accompanying drawings, forming part of this specification, in which—

Figure 1, is a vertical sectional view of a valve embodying my invention. Fig. 2, is a cross sectional view of the same on the line $x-x$ of Fig. 1. Fig. 3 is a side view of the wedge or thrust nut and its disks. Fig. 4, is a view of the rear face of one of the disks. Fig. 5, is a side view of Fig. 4.

My invention relates to valves, and it consists of the constructions and combinations of devices which I shall hereinafter fully describe and claim.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now describe its construction and indicate the manner in which the same is carried out.

Referring to the accompanying drawings for a more complete disclosure of my invention, A represents the shell or case of the valve having the usual water-way through it, and having its ends adapted to be fitted to the service or other pipes in the usual manner; the said shell having projecting from the inner walls of its opposite sides the lugs a , separated from each other to form vertical guiding grooves for the valve stem or its attached wedge or thrust-nut, as I shall hereinafter fully describe. The inner end walls of the shell or case A converge upwardly to form the inclined valve seats A' and these seats are designed to form tight joints with the valve when the latter is closed. This valve consists of a wedge or thrust-nut B and pivotally secured disks C; the wedge or thrust-nut forming the body of the valve and having its outer walls inclined; two of said walls b having projecting tongues c , adapted to fit the grooves formed by the lugs a on the inner sides of the case, whereby the thrust-nut is vertically and loosely guided and prevented from turning, while the remaining opposite sides b' of said nut are formed with recesses d and end lugs

or ears e , and through these lugs or ears the pintles or shafts f are passed and adapted to form the axes upon which the disks C are pivotally hung one at right angles to the other, each of said disks having a lug g on its rear arranged parallel with the face of the disk, and adapted to be seated in said recesses d and to receive the shafts or pintles about which they turn. These disks are arranged so that their hinges or pivotal centers are at right angles to each other, and the connection of the wedge or thrust-nut with the grooved guides on the inside of the shell is a loose one, whereby in forcing the disks to their respective seats one of said disks will compensate for the wear at the top and bottom portions of the seats, while the other disk will compensate for wear at the sides of the seats, a sufficient axial movement being provided in the grooved guides for the wedge or nut, to enable both disks to come squarely against their respective seats. By this means the wear of those portions of the valve seats not compensated for by the one disk is taken up or compensated for by the companion disk, pivoted at right angles to the other disk as shown. Also by providing the rear face of each disk with a lug g arranged parallel with the face of the disk, and fitting said lug in its recessed seats between the end lugs e I provide bearings which are parallel with the axis of the disks and which receive the end thrust of the wedge or nut. The compensating disks are made fast to the wedge or thrust-nut so that they move up and down with the latter, but they are permitted to freely turn upon the pintles or shafts f to insure a close fit against the valve seats at all times. The wedge or thrust-nut has an upwardly extending internally-threaded extension into which the threaded stem D is fitted whereby the valve is opened or closed when the stem is turned in the usual manner, and upon the shell or case is screwed or fitted a cap E having an upward extension F or stuffing box internally threaded and provided with a shoulder h . The valve stem has a collar or flange l entering the stuffing box or extension F, and a second collar m above the first one adapted to enter and form a seat for a screw-gland G which is designed to be

screwed into the extension or stuffing box to form a tight packing about the stem in the usual manner.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a valve and in combination with a body portion, the compensating disks pivotally hung upon said body portion in planes one at right angles to the other whereby one of said disks will compensate for wear at the upper and lower portions of the valve seat while the other disk will compensate for wear upon the side portions of the seat not compensated for by the first named disk, substantially as herein described.

2. In a valve, the shell or case and the wedge or thrust-nut loosely guided therein, in combination with disks pivotally hung upon opposite sides of the wedge or thrust-nut in planes at right angles to each other, whereby the disk at one side compensates for wear upon the upper and lower portions of the valve seat, while the other disk compensates for wear upon the side portions of the seat not compensated for by the first named disk, substantially as herein described.

3. In a valve, the shell or case, and the

loosely guided wedge or thrust-nut having recesses in opposite sides arranged at right angles to each other, in combination with disks having lugs on their rear fitting in said recesses and extending parallel with the faces of the disks, said disks being pivotally hung in planes at right angles to each other to enable one of said disks to compensate for wear on those portions of the valve seat not compensated for by the other disk, substantially as herein described.

4. In a valve, the combination of a shell or case, the cap piece therefor provided with a stuffing-box extension, a valve stem having the collars *l* and *m* and screw gland; a wedge or thrust-nut threaded on the lower end of the stem and loosely and vertically guided in its shell, and the disks pivotally hung upon the wedge or thrust-nut in planes at right angles to each other whereby one disk will compensate for wear on those portions of the valve seat not compensated for by the other disk, substantially as herein described.

WILLIAM G. NELSON.

Witnesses:

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J. W. WALLER.