

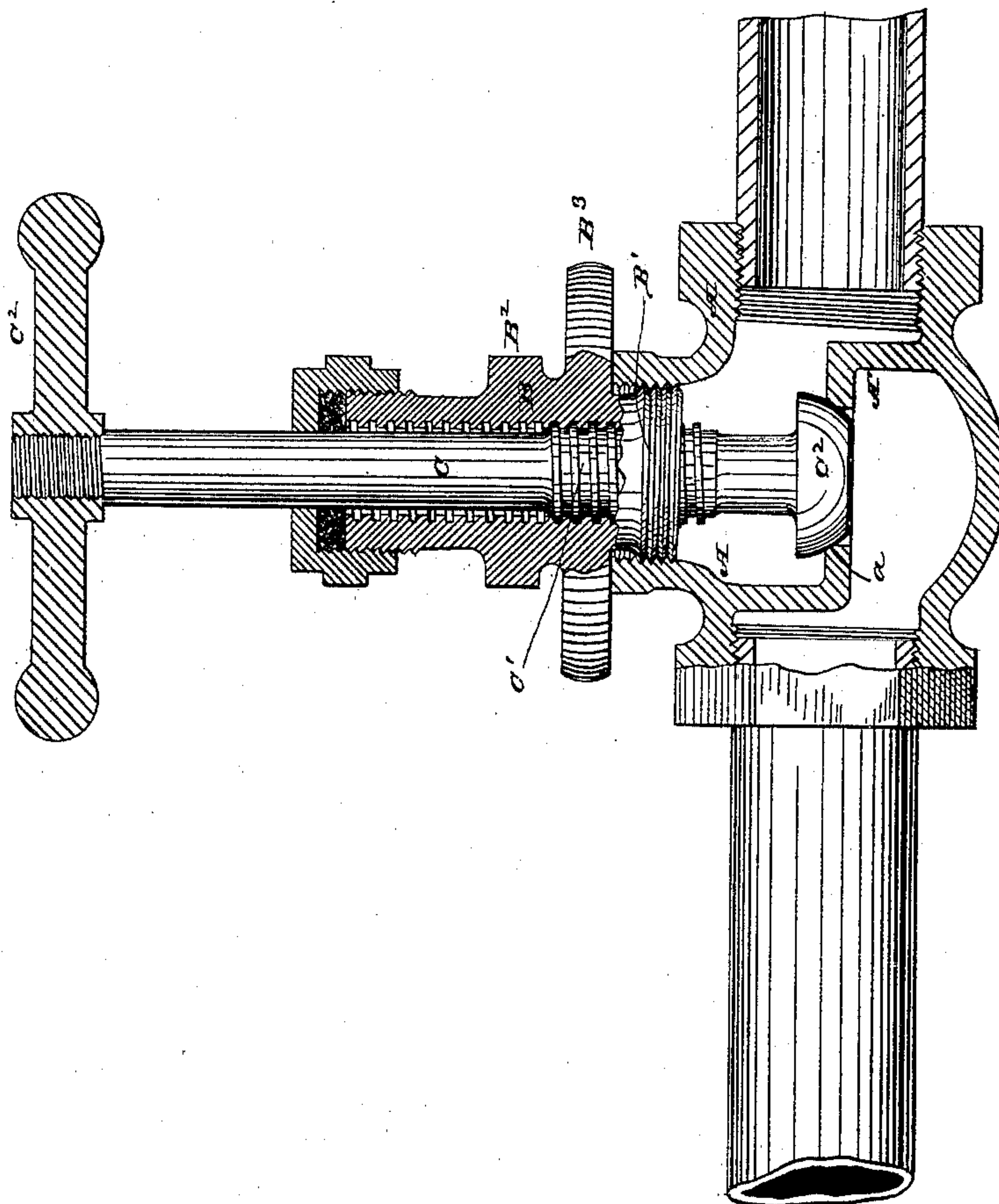
(No Model.)

L. J. KOLAR.

VALVE.

No. 277,492.

Patented May 15, 1883.



WITNESSES—

*W. Adams.*

*C. C. Poole*

INVENTOR—

*Louis J. Kolar*

*per W. E. Dayton*  
*Attorney*

# UNITED STATES PATENT OFFICE.

LOUIS J. KOLAR, OF CHICAGO, ILLINOIS.

## VALVE.

SPECIFICATION forming part of Letters Patent No. 277,492, dated May 15, 1883.

Application filed November 28, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS J. KOLAR, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to an improvement in the construction of globe-valves, whereby the valve may be ground or fitted to its seat without removing the shell or casing of the valve from its connections when the valve or seat has become worn or uneven by use, or, in some cases, in the operation of finishing the valve in its original manufacture. Its object is to provide a construction in which it will be easily practicable to rotate the valve-disk in contact with its seat by turning the hand-wheel which operates the valve, without removing the cap or bonnet through which the valve-stem works or disturbing other connections of the valve.

To this end the invention consists in threading the screw by which the cap in which the valve-stem works is attached to the casing of the valve in a direction opposite to that of the screw-threads on the valve-stem, so that by turning the said cap at the same time that the valve-stem is rotated the valve-disk may be held in bearing upon the seat and rotated in contact therewith.

In the drawing is shown a globe-valve provided with my improvement in central longitudinal section through the cap or bonnet.

A is the outer shell or casing of the valve, and A' the diaphragm therein, which has a circular valve-seat, *a*.

B is the cap or bonnet, which is attached to the casing A by means of a left-handed screw-thread, B', and is provided with a nut-flange, B<sup>2</sup>, for the application of a wrench, and a broad circular flange, B<sup>3</sup>, milled on its outer edge to serve as a hand-wheel, by which the cap may be rotated or controlled in the operation of grinding the valve to its seat, as herein contemplated.

C is the valve-stem, which passes through a central aperture in the cap B, and is provided

with right-hand screw-threads C', which work in the correspondingly-threaded interior of the said cap. Upon the lower end of the valve-stem C is the valve-disk C<sup>2</sup>, consisting, as shown in the drawing, of a zonal segment of a sphere, the outer surface of which fits the valve-seat *a*. The valve is opened and closed in the ordinary manner by the rotation of the valve-stem by means of the hand-wheel C<sup>3</sup> on the end thereof, and the cap B is usually clamped immovably to the valve-casing, which is done by the application of a wrench to the nut-flange B<sup>2</sup>.

When it is desired to grind the valve-seat, the cap B is first loosened, and the cap then be turned or controlled by means of the hand-wheel B<sup>3</sup>. In the operation of grinding, the stem C and cap B are both turned at the same time in the same direction. When so moved the oppositely-threaded screws upon the cap B and stem C tend to move one of said parts up and the other down, so that by moving the cap and stem at the proper relative speeds, which is found to be entirely practicable, the valve-disk C<sup>2</sup> remains in contact with its seat and is rotated thereon.

In grinding the valve the operator rotates the valve-stem with one hand, and either rotates or controls the rotation of the cap with the other, so that the disk C<sup>2</sup> is kept in contact with its seat and the requisite pressure applied. In securing this result the operator is guided by feeling. The operation of the parts is the same when rotated in either direction, and the grinding may be facilitated by rotating them backward and forward through a portion of a turn, or otherwise, as desired. It is found with threads of the usual pitch that the valve-stem must be turned considerably faster than the cap in order to keep the disk upon its seat and to accomplish the result before described.

Emery or other abrasive material may be applied to the surfaces to be ground by removing the cap B previous to the operation.

I claim as my invention—

1. In a globe-valve, the combination of the shell, cap, and valve-stem, as shown, the said cap being attached to the shell by a screw which is threaded in a direction opposite to



that of the screw on the valve-stem, substantially as described, and for the purpose set forth.

2. In a globe or similar valve, the combination, with the shell and valve-stem, of a cap, B, provided with a hand-wheel, B<sup>3</sup>, and attached to the shell by a screw which is threaded in a direction opposite to that of the screw on the valve-stem, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

LOUIS J. KOLAR.

Witnesses:

M. E. DAYTON,  
JESSE COX, Jr.