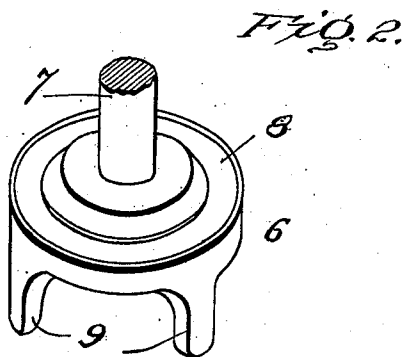
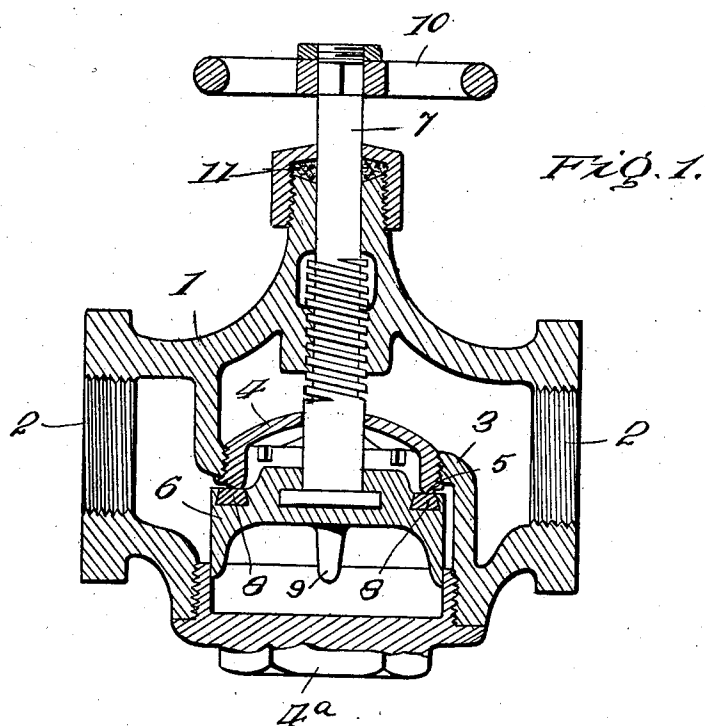


No. 828,216.

PATENTED AUG. 7, 1906.

H. KIEREN.  
GLOBE VALVE.  
APPLICATION FILED MAY 3, 1905.



Witnesses  
Johnnie  
W. K. Woodson

Inventor

Henry Kieren

By

H. A. Lacey, Attorneys

# UNITED STATES PATENT OFFICE.

HENRY KIEREN, OF CRYSTAL FALLS, MICHIGAN, ASSIGNOR OF ONE-HALF TO FRED H. MILLER, OF CRYSTAL FALLS, MICHIGAN.

## GLOBE-VALVE.

No. 828,216.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed May 3, 1905. Serial No. 258,639.

*To all whom it may concern:*

Be it known that I, HENRY KIEREN, a citizen of the United States, residing at Crystal Falls, in the county of Iron and State of Michigan, have invented certain new and useful Improvements in Globe-Valves, of which the following is a specification.

This invention relates to improvements in globe-valves, and has for its object to produce a device of this character which will be simple and durable in construction and in which the various parts can be readily removed and replaced should they become worn, broken, or otherwise rendered unfit for use.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal sectional view. Fig. 2 is a perspective view of the valve detached.

Corresponding and like parts are referred to in the following description and indicated in both views of the drawings by the same reference characters.

The numeral 1 indicates the valve-casing, which is provided with two opposite coupling ends 2 and which has an inner web 3 of the usual construction extending diagonally across the casing and having a horizontal portion with an opening therein. A removable plug 4<sup>a</sup> fits into an opening in the casing immediately below the opening in the inner web and, as will be hereinafter described, is of such a size as to permit of the removal of the valve and valve-seat therethrough. This plug comprises a disk having an inwardly-projecting annular flange which is threaded upon its outer surface so as to be screwed into the before-mentioned opening in the casing. The valve-seat 4 consists of an annular ring of metal screwed into the opening in the inner web and provided with shoulders 5, which prevent its being forced through said opening when the pressure of the valve is brought to bear thereupon. The upper edges of the annular ring are connected by an arched diaphragm which fits snugly against the valve-stem and serves as a guide therefor, said diaphragm being provided with openings through which the water passes. The valve 6 is loosely connected to the valve-stem 7 to allow of the square seating thereof and consists of a disk having an annular groove, shown as dovetail in shape

in the drawings, around the top thereof to receive a washer or packing 8 to fit tightly against the valve-seat 4. Pendent from the lower side of the valve 6 are guide members 9, which are arranged about the periphery of the valve and cooperate with the inner face of the before-mentioned annular flange upon the removable plug 4<sup>a</sup> to insure a square seating of the valve. The valve-stem 7 passes upward through a threaded opening and is provided with the usual handle 10.

The numeral 11 designates the customary packing.

To open and close the valve, it is simply necessary to turn the handle, as usual, and work the valve up and down.

The marked advantage of the foregoing construction resides in the fact that when the plug 4<sup>a</sup> is removed the valve 6 and valve-seat 4 may both be taken out or put in position through the opening thus formed and any of its parts quickly and easily renewed.

It will be obvious that in manufacturing globe-valves of a large size it would be desirable to use a yoke on top and a flange secured to the bottom in order to insure proper strength.

From the foregoing description it will be readily understood that I have invented a globe-valve which will be very durable in use, since the various parts may all be easily and quickly removed and replaced should they get out of working order.

Some of the advantages which I claim for the valve are as follows: The stem can be repacked when the valve is closed without the necessity of cutting off the steam from the pipe. When the valve is closed the pressure from the line of supply exerts its force to keep the valve tight, and jarring or hammering on pipes leading to or from the valve will not cause it to open and allow the escape of steam. There is no necessity to use a wrench or great force in seating the valve and risk stripping the threads and permitting steam to escape and scald the operator. In large valves of the ordinary construction where flanged joints are used on top the pressure necessary to seat the valve tightly tends to force the flange from its bearing and cause leakage, while in my construction the flange is on the bottom of the valve and bears no pressure aside from that of the steam. The valve parts will not be sprung or forced out

of shape to the detriment of the perfect working of the valve by the application of great force in seating the valve.

Having thus described my invention, what I claim as new is—

In a globe-valve the combination of a casing, an inner web provided with a port, said casing having an opening therein directly opposite to the port, a removable valve-seat fitting in the port and adapted to be placed into position through the opening in the casing, said valve-seat comprising a ring closed by a perforated diaphragm and provided with a shoulder which prevents its being forced entirely through the port, a removable plug closing the opening in the casing and provided with an inwardly-projecting annu-

lar flange, a valve cooperating with the valve-seat and located between the valve-seat and the removable plug, a valve-stem connected to the valve-seat and passing through the perforated diaphragm which fits snugly thereabout and serves as a guide, and guide members pendent from the valve and cooperating with the inwardly-projecting flange upon the removable plug to insure a square seating of the valve.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY KIEREN. [L. S.]

Witnesses:

FRANCIS ERNEST MUNNS,  
CHARLES A. SCHURRER.