

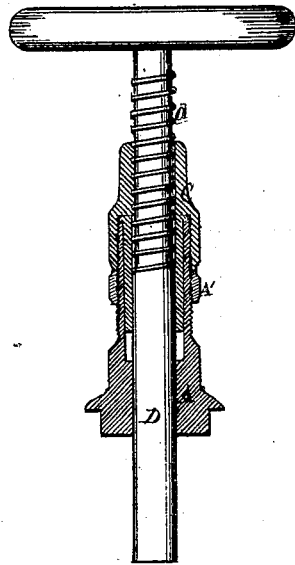
*E. Ransom,*

*Cock.*

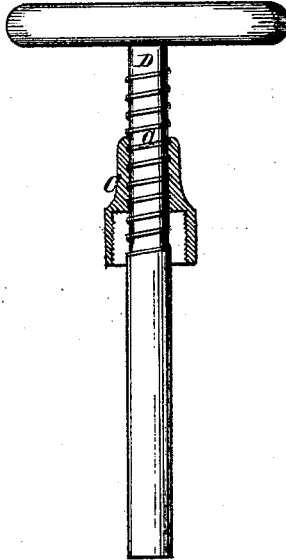
*No. 107,198.*

*Patented Sept. 6. 1870.*

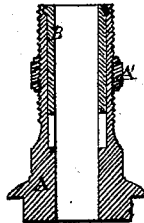
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Attest.  
*Frank Dumb*  
*Sam J. Spray.*

Inventor.  
*E. Ransom*  
*per atty*  
*Thos. L. Sprague.*

# United States Patent Office.

EZRA RANSOM, OF FLINT, MICHIGAN.

Letters Patent No. 107,198, dated September 6, 1870.

## IMPROVEMENT IN PACKED ROTATING VALVE-STEM.

The Schedule referred to in these Letters Patent and making part of the same.

### *To whom it may concern:*

Be it known that I, EZRA RANSOM, of Flint, in the county of Genessee and State of Michigan, have invented a new and useful Improvement in the Construction and Method of Packing Rotating Valve-Stems; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is a vertical section of my improvement;

Figure 2 is a detached vertical section of the packing-nut; and

Figure 3 is the same of the gland and packing-box.

Like letters indicate like parts in each figure.

The nature of this invention relates to an improvement in the construction and method of packing rotating valve-stems, and consists in the peculiar construction and arrangement of the packing-nut with relation to the packing-box and a valve-stem having a thread cut on its outer end, so that the thread is not exposed to the action of steam or water, and consequently is not liable to stick fast after standing closed, from corrosion or deposit of matter held in solution.

In the drawing—

A represents the packing-box of a globe or gate-valve, within whose upper end is sleeved the gland B, the bore of the box being enlarged to receive it.

A' is a jam-nut on the threaded exterior of the packing-box, on which is threaded the screw packing-nut C, threaded internally to receive the valve-stem

D, having a thread, *d*, cut on its outer or upper extremity.

Tow or other suitable packing surrounds the valve-stem in the bore of the packing-box, which is compressed by the gland, which latter is pressed downward by the nut engaging with the exterior thread of the packing-box, leaving the stem to be moved freely up or down in the nut, the nut C being prevented from moving by the jam-nut A' being screwed up against it.

It will be noticed that the screw of the stem does not pass into or through the packing, nor is it submitted to the action of steam or water, as is the case with valves and stems of the usual construction.

It will be further seen that the thread may be lubricated at any time, and that the valve may be ground in its seat by simply unscrewing the packing-nut and rotating the valve-stem, provided the valve is properly secured to the stem, such lubrication and grinding not being possible in the construction of the valves now in use.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination and arrangement of the packing-nut C, the packing-box A, the gland B, the jam-nut A', and the threaded valve-stem D, when the several parts are constructed as described and shown, and as and for the purposes set forth.

EZRA RANSOM.

Witnesses:

WM. STEVENSON,

WM. A. MILLER.