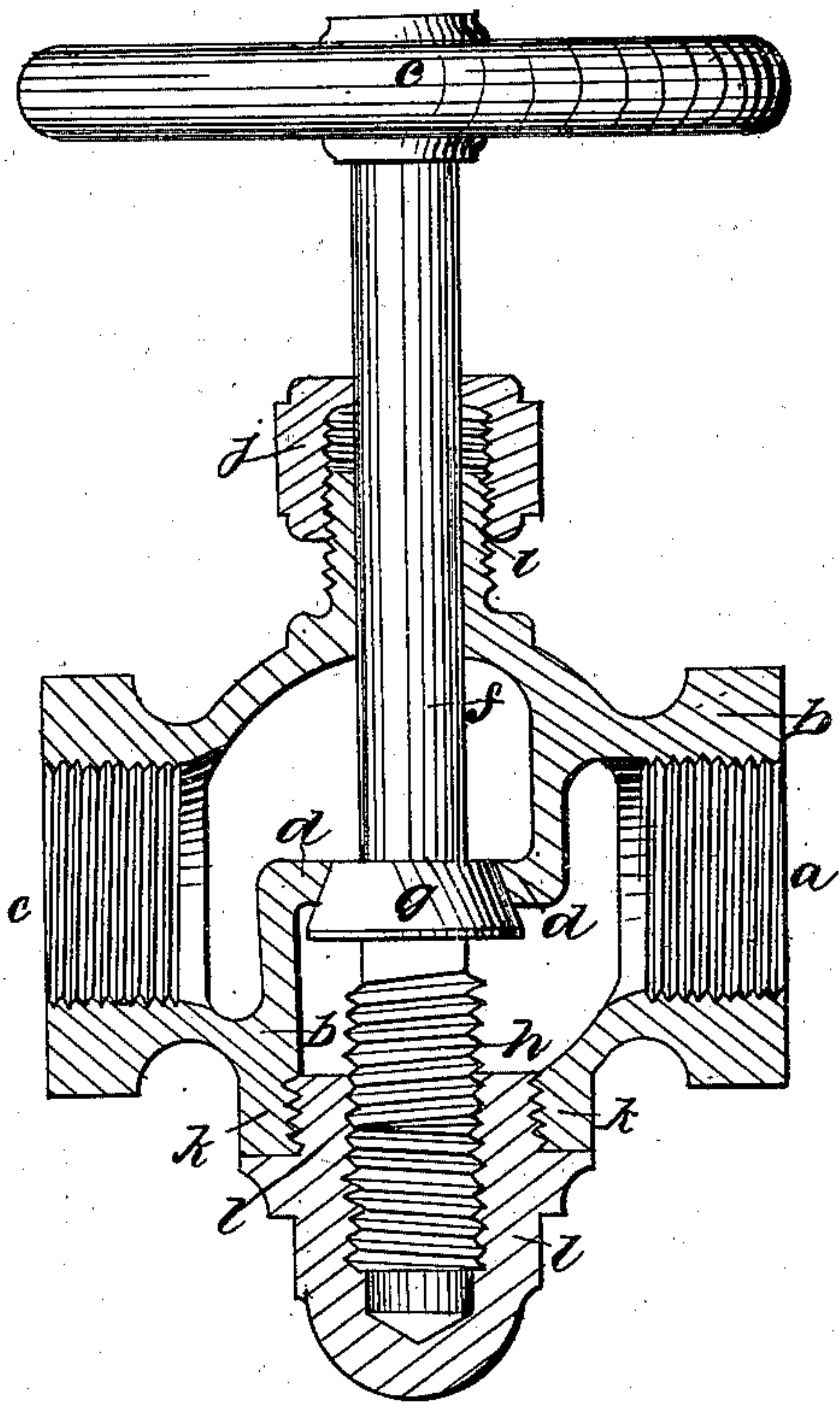


D. Lee,
Globe Valve,
No 66,857. Patented July 16, 1867.



Witnesses:
J. B. Kidder.
W. W. Frothingham.

Inventor:
Daniel Lee.
By his Attys.
Lowry & Howland

United States Patent Office.

DANIEL LEE, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 66,857, dated July 16, 1867.

IMPROVEMENT IN GLOBE-VALVES.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, DANIEL LEE, of Boston, in the county of Suffolk, and State of Massachusetts, have invented an Improved Construction or Arrangement of the parts of Globe-Valves; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

In the ordinary construction of globe-valves it is well known that the screw by which the valve is moved toward and from its seat is formed on the valve-spindle, between the hand-wheel and the valve, so that the threads of the screw in the movements of the valve-spindle are apt to disarrange the packing in the stuffing-box, which clogs the screw-threads. In this common construction, if the steam is admitted so as to enter under the valve in passing through, it is obvious that the tendency is to press the valve off from its seat, so that it is difficult to keep a valve so used tight, and if the valve leaks, it is troublesome under pressure to rearrange the packing in the stuffing-box, or to supply new packing. If in the old construction steam is admitted over the valve, then of course the packing cannot be rearranged or newly supplied while steam pressure is present. The old construction is such that it is difficult to grind the valve in its seat, and if properly made so that the stuffing-box can be packed when the valve is shut, it takes more room in the direction of the length of the valve-spindle than does my improved construction.

This construction, which is the subject of my invention, consists in the location of the screw by which the valve is moved toward and from its seat, and the valve itself on that side of the diaphragm of the globe which is most remote from the stuffing-box or the protruding end of the valve-spindle, this arrangement obviating, in the construction of globe-valves, the defects which I have named as incident to the old construction.

The drawing represents the case of a globe-valve in section, showing the valve and its spindle and hand-wheel, the valve being seen as closed upon its seat.

a is the inlet end of the case casting, which is marked *b*; *c*, the outlet end; *d*, the diaphragm which separates the inlet and outlet, and in which the valve-seat is formed; *e* is the hand-wheel on the valve-spindle *f*; *g*, the valve thereon; and *h* the screw by which the valve is worked. The packing is contained between the end of the neck *i*, through which spindle *f* passes, and screw-cap *j* thereon. Into the neck *k*, opposite the neck *i*, a plug, *l*, is screwed, in which is formed a nut to fit the screw *h*, the threads of both screw and nut being preferably left-handed, so as to have the direction of rotation of the hand-wheel the same to open and close the valve as in the old construction of globe-valves. The size of the opening in the neck *k* is such as freely to admit the valve, and the hand-wheel is fixed to the spindle *f* after it is inserted in its place.

In my construction, when the valve-spindle is to be packed, the valve being closed upon its seat, it will be observed that the hand-wheel is in its position most remote from the valve-case, affording room for withdrawal of the cap *j*. But in the old construction, when the valve is upon the seat, the hand-wheel is in its nearest position to the valve-case, and the spindle of the valve has to be made long enough to allow the withdrawal upon it while in that position of the packing-cap, so that it will be seen that in the old construction the projecting part of the valve-spindle has to be as much longer than in mine as is equal to the amount which it is desired to have the valve traverse.

In grinding my valve it is only necessary to remove the plug *l*, and then the valve can be freely moved longitudinally, and can be rotated on its seat, making the application of the grinding powder, the grinding operation and cleaning, of the parts from the grinding powder extremely easy.

I claim the arrangement of the valve and the screw which moves it with relation to the diaphragm, stuffing-box, and plug *l*, substantially as and for the purpose described.

DANIEL LEE.

Witnesses:

J. B. CROSBY,
F. GOULD.