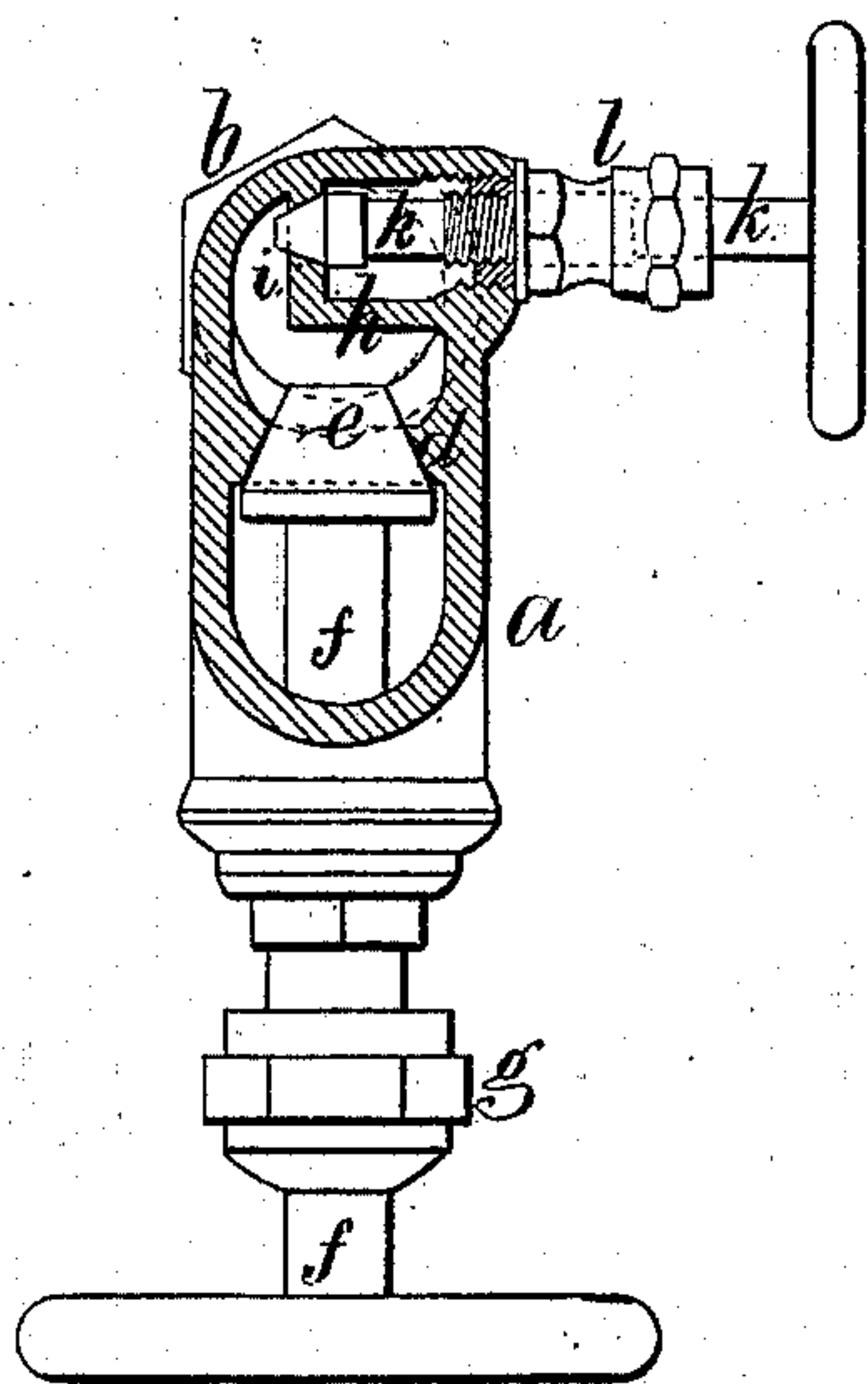


**J. W. HODGES.**  
**Valves for Steam-Pipes.**

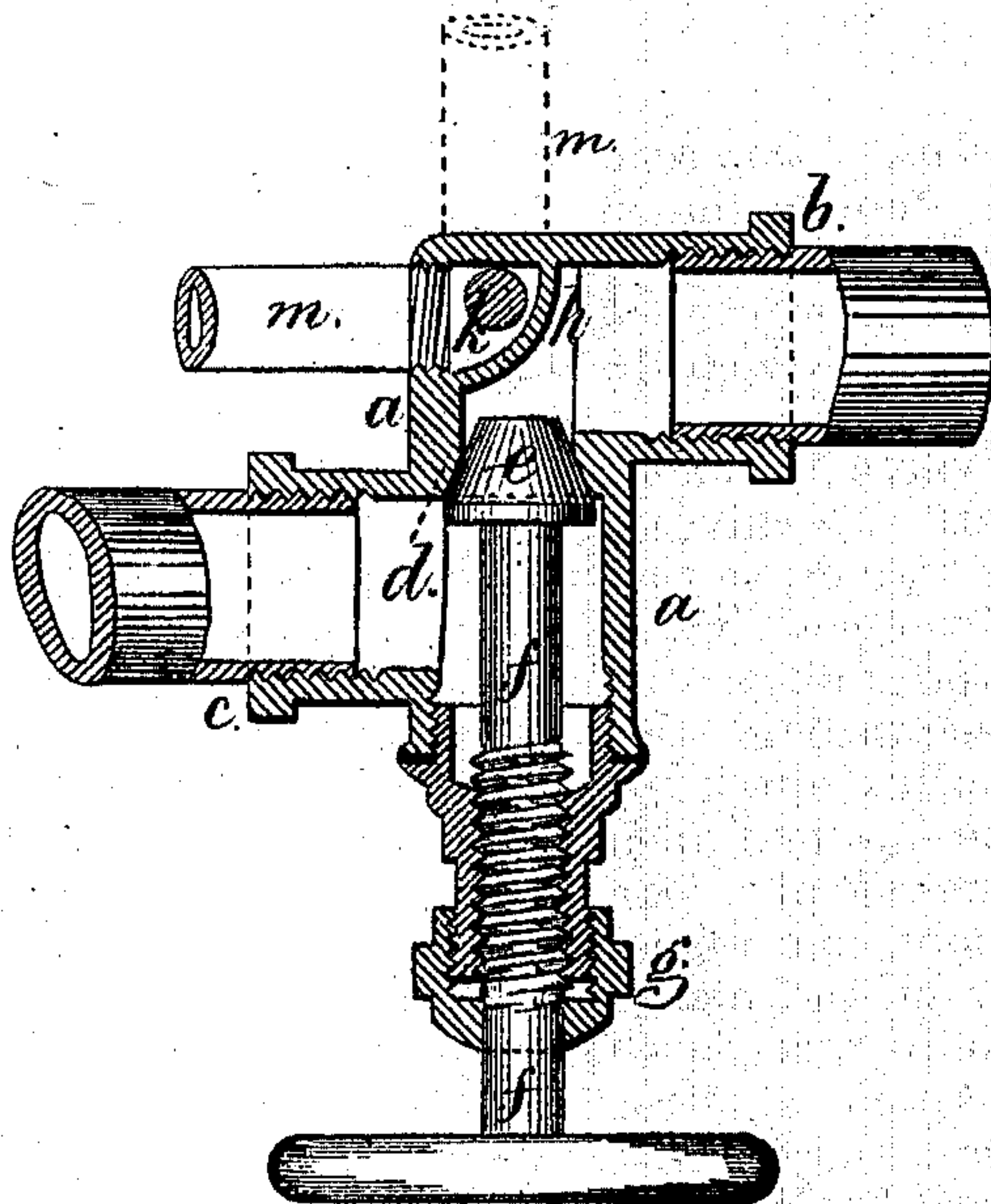
No. 146,073.

Patented Dec. 30, 1873.

*Fig. 2.*



*Fig. 1.*



Witnesses.

Chas. Smith  
 Geo. D. McPherson

Inventor.

James W. Hodges.  
 per Lemuel W. Perrell  
 atty.



# UNITED STATES PATENT OFFICE.

JAMES W. HODGES, OF NEW YORK, ASSIGNOR TO HIMSELF AND JOHN  
W. HARWAY, OF BAY SIDE, N. Y.

## IMPROVEMENT IN VALVES FOR STEAM-PIPES.

Specification forming part of Letters Patent No. **146,073**, dated December 30, 1873; application filed  
June 7, 1873.

*To all whom it may concern:*

Be it known that I, JAMES W. HODGES, of the city and State of New York, have invented an Improvement in Valves for Steam-Pipes, &c., of which the following is a specification:

This valve is made for connecting three pipes with two valves to one barrel containing such valves, so that the passage of steam through the main valve can be regulated and the escape of air or water of condensation can take place through the second cock, and both cocks occupy but little space and can easily be operated, simultaneously or otherwise.

I make use of a barrel and two coupling-connections, one above and the other below the seat of the main valve, which valve is operated by a screw-stem, as usual. A diagonal partition is introduced near the end of the barrel, and there is a second screw-valve introduced at the side to close upon the valve-seat that is made at one side of this partition, and the pipe or opening is at or near the end of the barrel. By means of the small valve the escape of air may be allowed for, or water of condensation may be run away with regularity, the said small valve being more easily adjusted than the larger ones heretofore usually employed, and simplifying the connections and lessening the space usually occupied.

In the drawing, Figure 1 is a vertical section of the cock complete, and Fig. 2 is a partial transverse section.

The barrel *a* is made with the couplings or connections *b* and *c* for steam or other pipes, and between these pipes is the seat *d* for the valve *e*, that is upon the end of the screw-spindle *f*, that passes through the cap *g* and packing, which are of usual character. The partition *h* is near the end of the barrel *a*, and is formed with a seat, *i*, at one side of the partition, and *k* is the valve and screw-stem, the latter passing through the cap *l*. These parts are much smaller than those of the valve *e*, so as to be proportioned to the pipe *m*, that passes away either from the side or end of the barrel *a*, and is adapted to convey water of condensation or air from the steam heating apparatus or coil, or to allow a small amount of steam to blow off with the water of condensation. By this construction the second valve is introduced into the barrel of the main valve, and but little increased space is required, and the separate valves heretofore employed are dispensed with.

I claim as my invention—

The partition *h* and valve-seat *i*, introduced near one end of the barrel *a*, to regulate by the valve *k* the opening to the pipe *m*, in combination with the main valve *e* and connections *b* and *c* for the pipes, substantially as and for the purposes set forth.

Signed by me this 31st day of May, A. D. 1873.

Witnesses:

J. W. HODGES.

GEO. T. PINCKNEY,  
CHAS. H. SMITH.