

Piper & Marshall,

Steam Balanced Valve.

No 68,312.

Patented Aug. 27, 1867.

Fig. 2

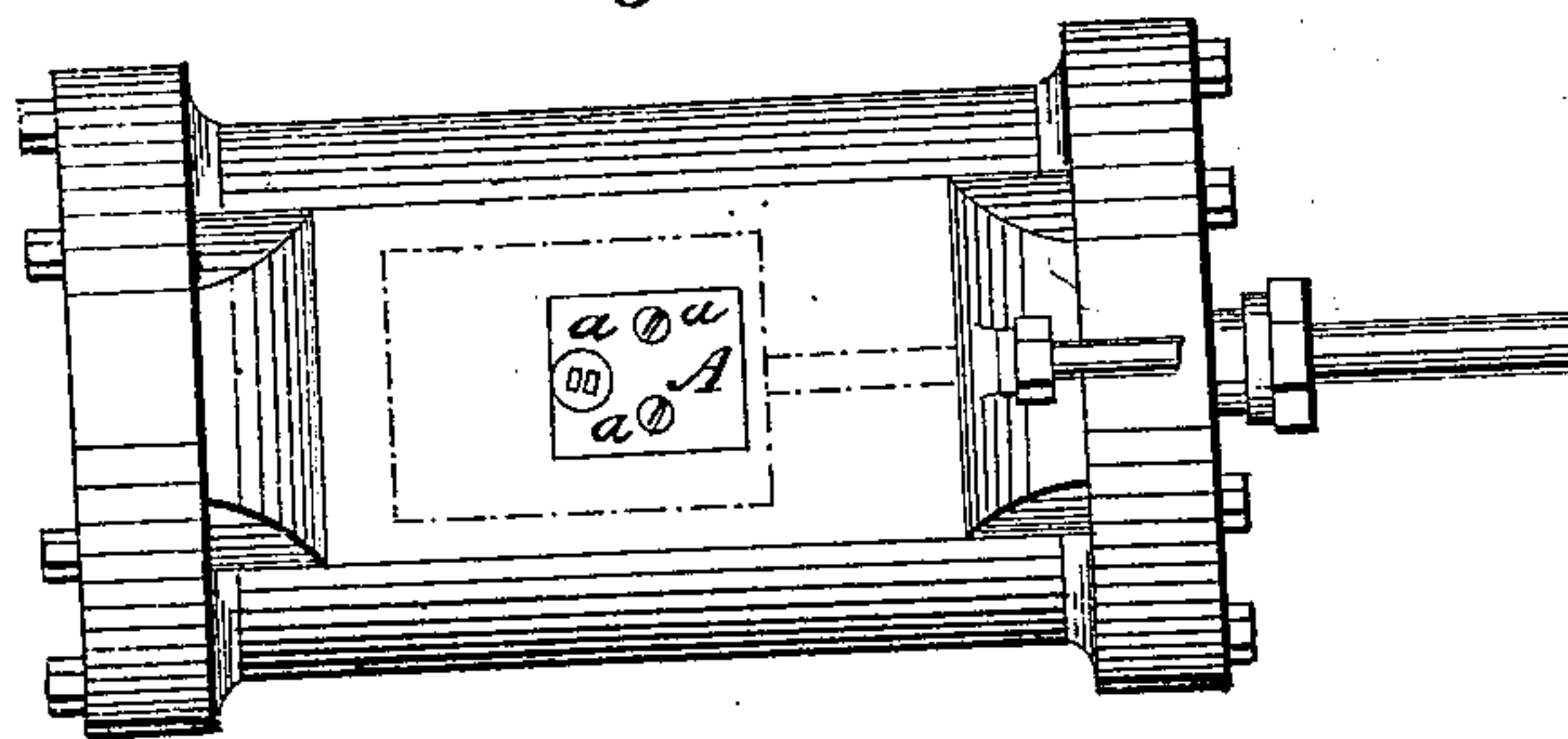
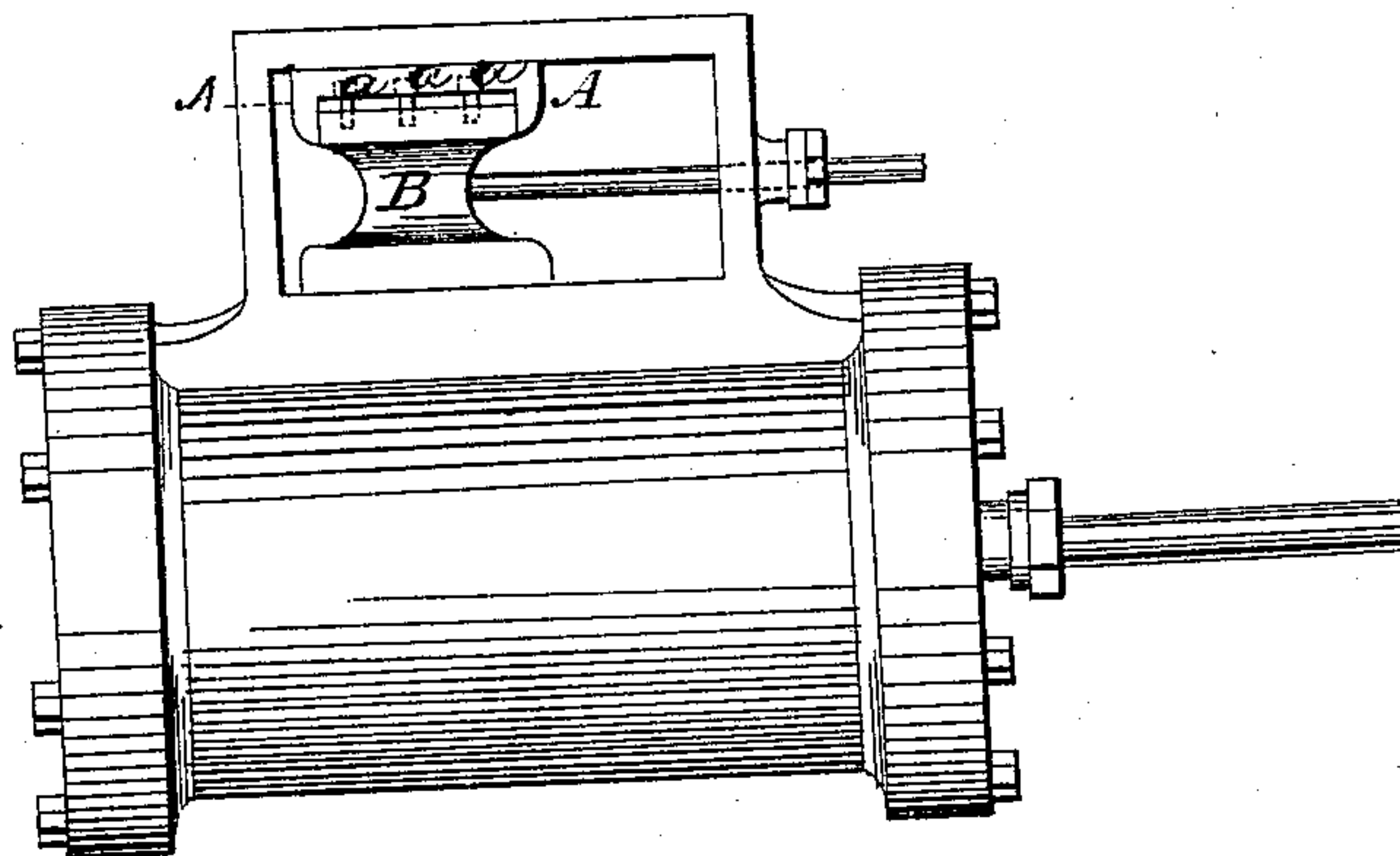


Fig. 1



Witnesses

L. L. Davis
C. L. Holt

Inventor

Piper & S. C. Marshall
by their Atty.
Gardner & Hyde.

United States Patent Office.

E. J. PIPER AND J. C. MARSHALL, OF SPRINGFIELD, MASSACHUSETTS.

Letters Patent No. 68,312, dated August 27, 1867; antedated August 15, 1867.

IMPROVEMENT IN STEAM-ENGINE SLIDE-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 we, E. J. PIPER and J. C. MARSHALL, of Springfield, Hampden county, Commonwealth of Massachusetts, have invented a new and useful Improvement in "Slide-Valves for Steam Engines;" and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon. These drawings are—

Figure 1 a side, and

Figure 2 a plan view of a steam cylinder, with our improved slide-valve attached.

Our invention consists of the arrangement of an adjustable gib upon the top of the valve, in the manner and for the purpose hereafter described.

In ordinary slide-valves, steam is let on in such a manner as to press upon the top of the valve, thus causing a large amount of friction upon the valve and seat, and thus causing both to wear.

Various complicated modes of relieving this pressure, by forming a balance-valve, have heretofore been devised, and it is the object of this invention to accomplish this purpose in an extremely simple and compact manner.

We form the valve in the ordinary manner, as shown, and on the top of it place the gib A, which fits up against the valve-chest and is adjusted by means of the set-screws *a a a*. By this means steam is prevented from getting upon the top of the valve and pressing it down upon its seat, and thus the friction between the valve and seat is relieved. The set-screws *a a a* are so arranged that they can be turned from the outside of the chest, thus adjusting the fit of the valve between the sides without taking the chest apart.

Now, having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In combination with the valve B, the gib A, arranged substantially as described, and adjustable from the outside of the valve-chest, as herein set forth.

E. J. PIPER,
J. C. MARSHALL.

Witnesses:

J. B. GARDINER,
EDWD. H. HYDE.