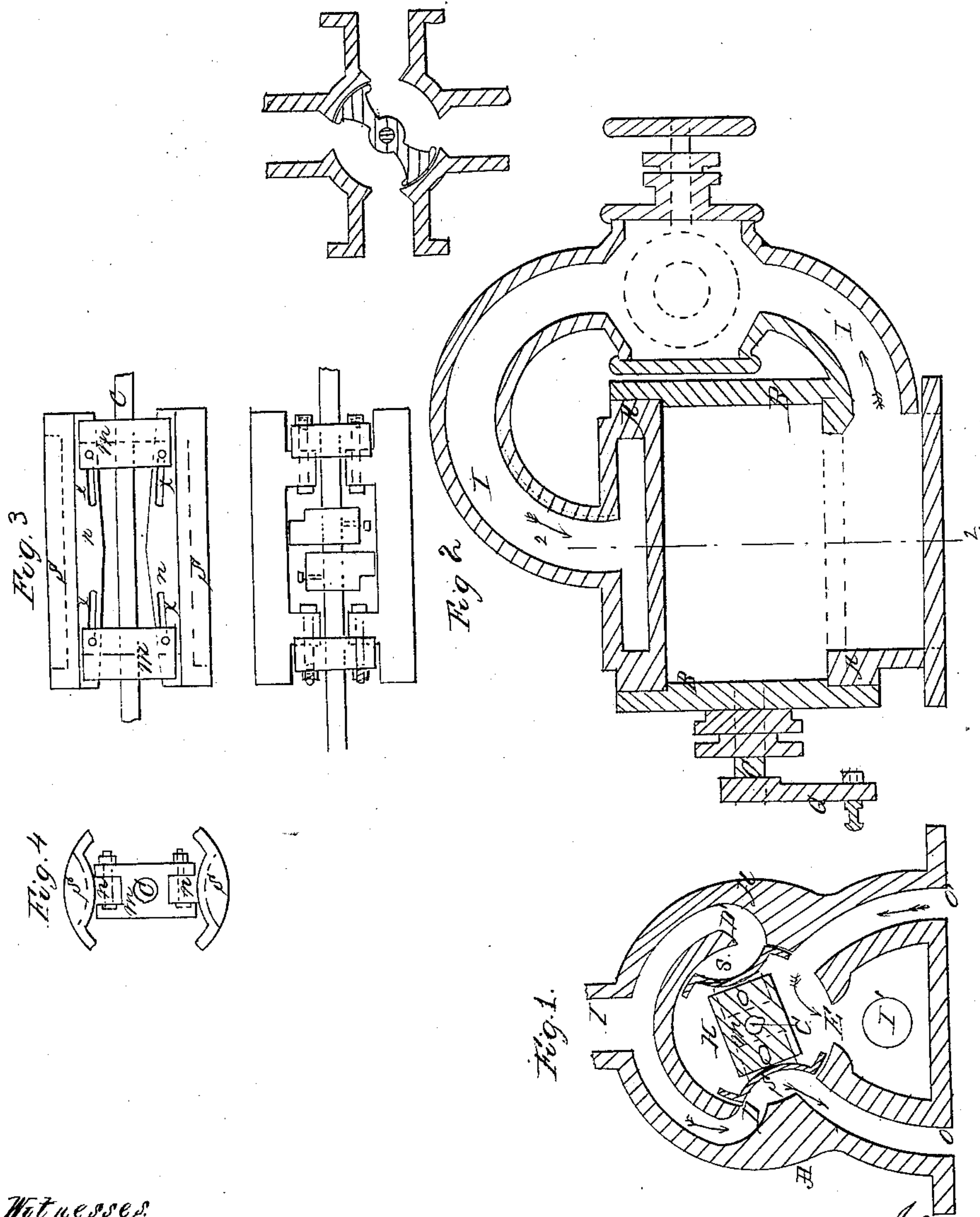


Everitt & Cook,
Rotary Steam Valve.

No 78,656.

Patented June 9, 1868.



Witnesses
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George Lang.

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JOHN S. EVERITT AND OSSIAN COOK, OF OSHKOSH, WISCONSIN.

Letters Patent No. 78,656, dated June 9, 1868.

IMPROVEMENT IN STEAM-ENGINE OSCILLATING-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, JOHN S. EVERITT and OSSIAN COOK, of the city of Oshkosh, county of Winnebago, and State of Wisconsin, have invented a new and improved Balance Oscillating-Valve for Steam-Engines; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical cross-section, cutting through dotted line 2 2 in fig. 2.

Figure 2 is a vertical longitudinal section, cutting through the centre of fig. 1.

Figure 3 is a longitudinal section of valve H, fig. 1.

Figure 4 is a vertical cross-section of valve H.

A A is the valve-case or steam-chest. B B are heads of valve-case. C is the valve-stem. D D', E, are steam-ports. I I' are induction and eduction-pipes. O O' are induction and eduction-passages. H is an oscillating-balance valve, wherein *m m*, fig. 3, are arms, secured to the stem in an adjustable manner by set-screws. S S are the outer shelves and valve-boles of the valve. *n n* are double-inclined planes, with slots *x x*, and are attached to and form the inner connections of the valve, and are adjustably connected with bolts to the arms *m m*, as seen in figs. 3 and 4. G is a crank, where power is applied to oscillate the valve.

Our invention consists in providing a cylindrical valve-case with an oscillating-balance valve, with the arrangement and adaptation of the valve-case, steam-ports, passages, and pipes, and the arrangement and adaptation of the case and accessories thereto.

Our invention further consists in the constructing of the valve, wherein the opposite boles are respectively provided with inclined planes on the inside thereof, slotted to receive adjusting-bolts, and respectively attached to arms that may slide on the valve-stem, thus being adjustable relative to the inclined planes and the valves, and made to compensate for the wear of the valve and the valve-seat.

The valve and valve-case are constructed of metal, with the valve H covering the port D, as seen in fig. 1. The steam will be received from the pipe I, as an induction-pipe, and pass the port D in the direction indicated by the arrows, and delivered to the engine-cylinder through the induction-passage O.

The steam will be exhausted through the passage O' in the direction indicated by the arrow, and through the port E into the pipe I', as an exhaust-pipe, (seen in fig. 2.)

The induction and eduction-pipes I I' may be both connected with the boiler, and with an exhaust-pipe in any manner known to the art, so that by making the proper adjustment the steam can be instantly changed from one pipe to the other, and the engine instantly reversed, thus making I' the induction-pipe, and I the eduction-pipe, the valve working equally well, and thus giving either an internal or external pressure upon the valve, as may be found best, and likewise affording a convenient means of reversing the motion of the engine.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The valve-boles S S of the valve H, constructed with inclines *n n*, slots *x x*, arranged relatively to the arms *m m*, and valve-stem C, as a means of adjustment in compensating for wear.
2. The valve-case A A, when constructed as described, and arranged relatively to the oscillating-balance valve H, as herein set forth.

JOHN S. EVERITT,
OSSIAN COOK.

Witnesses:

W. G. RITCH,
GEORGE GARY.