No. 803,889. PATENTED NOV. 7, 1905.

C. H. FOX.

THROTTLE VALVE.

APPLICATION FILED APR. 29, 1905.

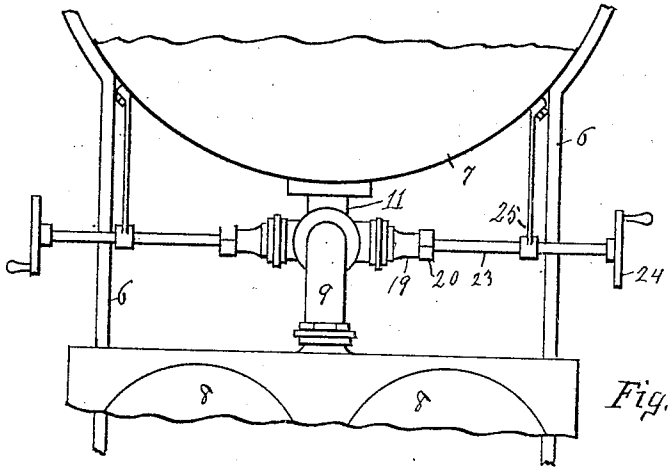


Fig. 1.

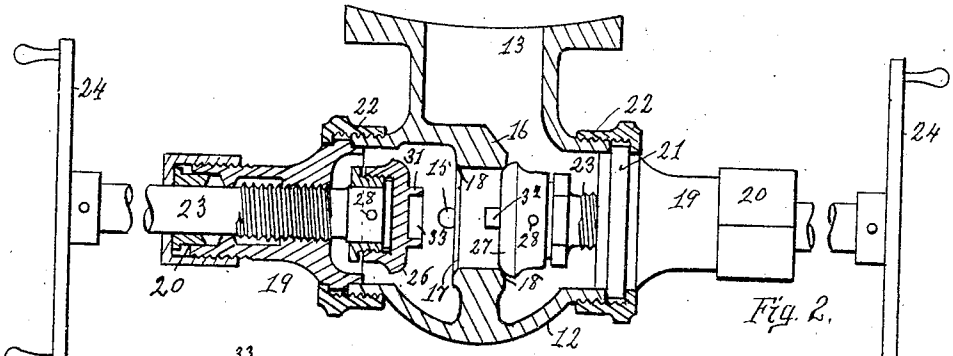


Fig. 2.

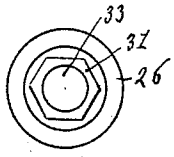


Fig. 4.

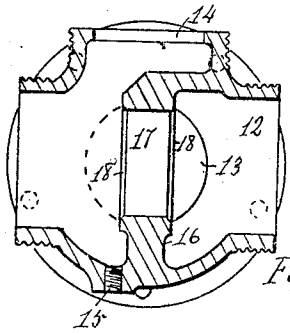


Fig. 3.

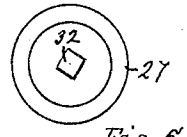


Fig. 5.

WITNESSES,

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UNITED STATES PATENT OFFICE.

CHARLES H. FOX, OF CINCINNATI, OHIO, ASSIGNOR TO THE AHRENS FIRE ENGINE COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

THROTTLE-VALVE.

No. 803,889. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed April 29, 1905. Serial No. 257,969.

To all whom it may concern:

Be it known that I, CHARLES H. FOX, a citizen of the United States, residing at Cincinnati, Ohio, have invented a new and useful Improvement in Throttle-Valves, of which the following is a specification.

My invention relates to throttle-valves of the class adapted to use on steam fire-engines or elsewhere; and the objects of my improvement are to provide independent means to operate the valve from either side of the engine, to provide supporting-brackets for the extended valve-stems, to provide two independent valve-seats in the same body and respective seat-disks therefor, to provide means whereby both valve-disks may be closed at the same time, and to provide a simple, compact, and durable construction and assemblage of parts consistent with utmost efficiency, durability, and facility of operation. These objects are attained in the following described manner, as illustrated in the accompanying drawings, in which—

Figure 1 is a throttle-valve embodying my improvement applied to a boiler and engine; Fig. 2, a plan with parts in diametrical section; Fig. 3, a vertical diametrical section of the valve-body, and Figs. 4 and 5 details of construction.

In the drawings, 6 represents the supporting-frame, 7 the vertical boiler, 8 the vertical duplex-engine, 9 the steam-pipe, and 11 the throttle-valve therein, all assembled in the ordinary manner.

The valve-body 12 is formed with inlet and outlet openings 13 and 14 at right angles to each other, drip-hole 15 and transverse partition 16, which contains steam-passage 17, and is formed with valve-seats 18 on its opposite sides. Bonnets 19, provided with packing-glands 20 and formed with collars 21, are clamped on opposite ends of the valve-body by means of thimbles 22. Valve-stems 23, each provided with a hand wheel or crank 24 and adjustably threaded with right-hand threads in the respective bonnets, are extended in opposite directions from the valve-body in registration with each other and with steam-passage 17 and supported by means of brackets 25, secured to the boiler. Valve-disks 26 and 27, swiveled on the inner ends of the valve-stems in the ordinary manner on opposite sides of partition 16, register with the adjacent seats 18. Each valve disk and stem is formed with a transverse hole 28 for the insertion of a pin to lock them together during the grinding of the seats, which is facilitated by loosening the thimbles 22 sufficiently to permit the bonnets and stems to turn freely therein.

Nuts 31 and 32, formed on adjacent faces of the respective valve-disks, serve to hold them from turning while being secured to or removed from the corresponding valve-stems. Nut 31 is formed with a central recess 33 to admit the smaller nut 32, that the disks may approach each other more closely and be seated at the same time.

In operation engineers are frequently required to perform some duty on the opposite side of the engine from the throttle-valve and are delayed in reaching it to shut off the steam in emergencies. My improvement provides for the independent control of the steam with equal facility from either side of the engine by turning either hand-wheel in the same direction and permits the engineer more freedom of movement in performing his duties and observing the operation of his engine without incurring any danger of delay in shutting down in case of emergency.

Having fully described my improvement, what I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. A throttle-valve formed with a steam-passage and provided with two valve-disks mounted on the respective stems and movable independently thereby in opposite directions to close the passage.

2. A throttle-valve formed with a circular passage and provided with valve-disks swiveled on respective stems in registration with the passage and with each other and on opposite sides of the passage, said disks being movable independently with the respective stems in opposite directions to close the passage.

3. In a throttle-valve, a body formed with a partition having a circular passage therethrough, valve-stems adjustably supported on opposite sides of the partition in the axial line of the passage, and valve-disks swiveled on the respective stems and independently movable thereby in opposite directions to close the passage.

4. In a throttle-valve, independently-adjustable valve-disks arranged to close opposite

ends of a steam-passage formed in an interposed partition, said disks being formed with nuts on their respective opposing faces, one of said nuts being larger than the other and formed with a recess, for the purpose specified.

5. In a throttle-valve, similar valve-disks swiveled on stems and movable thereby toward each other and formed with nuts on their respective opposite faces, the one having a central recess adapted to loosely inclose the other nut.

6. In a throttle-valve, the combination with a body, a partition having a circular passage, a stem adjustable toward one side of the partition and a valve-disk thereon in registration with the passage, of an additional stem independently adjustable toward the opposite side of the partition, and a valve-disk thereon in registration with the passage.

7. A throttle-valve provided with oppositely-extended valve-stems, each being independently adjustable in the same line and provided with a crank on one end and a valve-disk on the other end adapted to close the valve when the crank is turned, and brackets secured at fixed points to support the respective stems.

CHARLES H. FOX.

Witnesses:
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