

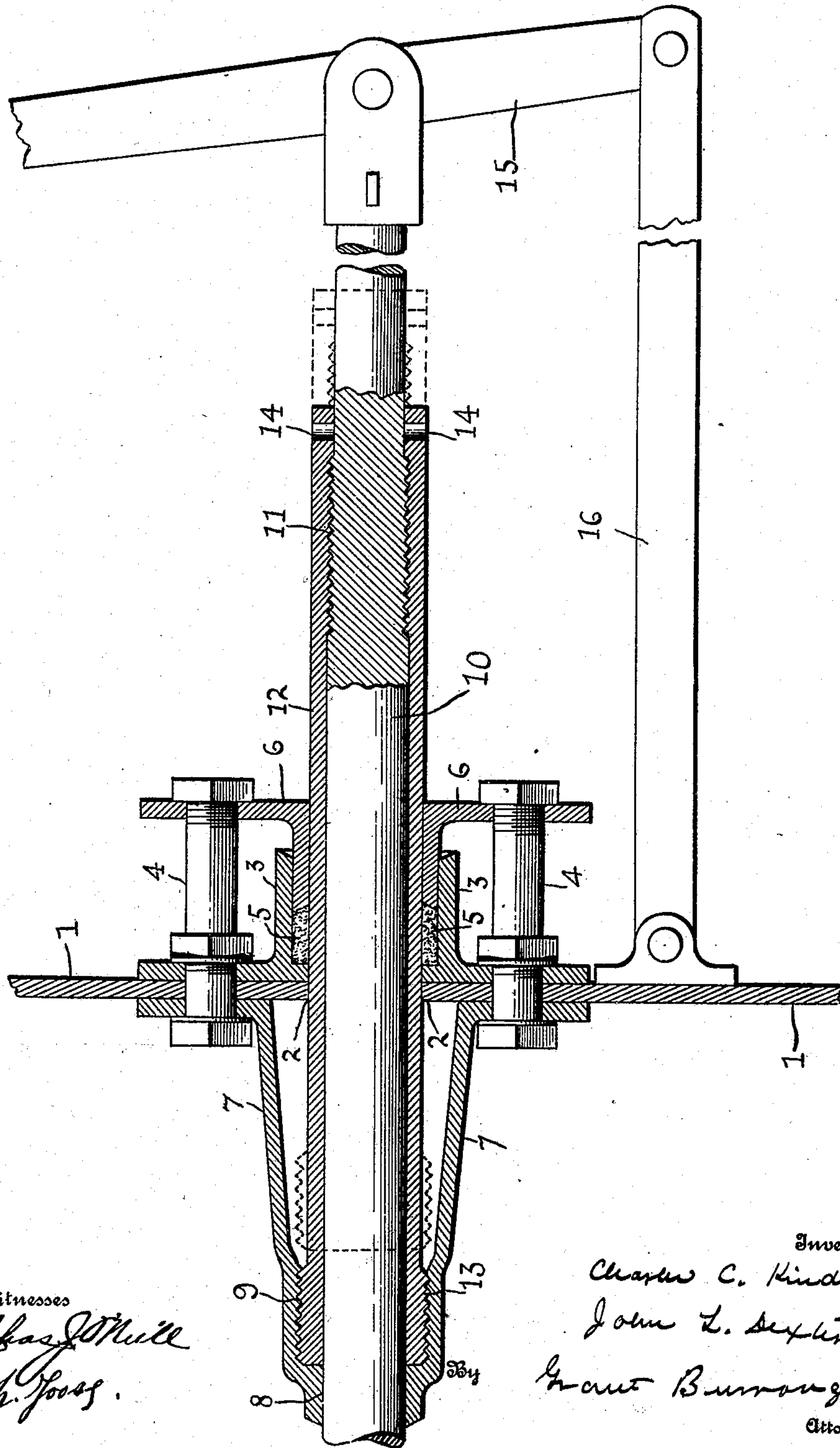
C. C. KINDIG & J. L. DEXTER.

THROTTLE VALVE.

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924.080.

Patented June 8, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES C. KINDIG AND JOHN L. DEXTER, OF WEST BLOCTON, ALABAMA.

THROTTLE-VALVE.

No. 924,080.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed October 2, 1908. Serial No. 455,843.

To all whom it may concern:

Be it known that we, CHARLES C. KINDIG and JOHN L. DEXTER, citizens of the United States, and residents of West Blocton, in the 5 county of Bibb and State of Alabama, have invented certain new and useful Improvements in Throttle-Valves, of which the following is a specification.

The invention relates to improvements in 10 throttle-valve mechanism for steam-engines, more particularly to the mechanism employed in locomotives. When it is desired to pack the throttle-rod of the valve in ordinary use it is necessary to withdraw or bank the 15 fire and allow all the steam to escape from the boiler.

The object of the present invention is to provide means whereby the throttle-rod can be packed without withdrawing or banking 20 the fire and while there is a full pressure of steam in the boiler.

The invention consists in the novel construction, combination and arrangement of parts such as will be hereinafter fully de- 25 scribed, pointed out in the appended claims and illustrated in the accompanying drawing.

The figure of the drawing is a sectional view, broken away in parts, of mechanism 30 embodying the invention.

In the boiler-head 1, which is of the usual construction, is the opening 2, in line with which is the stuffing-box 3 secured to the outer face of the boiler-head by the bolts 4. 35 In the stuffing-box is the packing 5 compressed therein by the gland 6. To the inner face of the boiler-head is secured the conical casing 7 by the bolts 3 over the opening 2. In the inner end of the casing is the bearing 8 40 in line with the opening 2 and the stuffing-box. Adjacent to this bearing the interior of the casing is screw-threaded, as at 9. Passing through the stuffing-box, the opening 2, and the bearing 8 is the throttle-rod 45 10, on which is screw-threaded, as at 11, the sleeve 12 also passing through the stuffing-box and opening 2. The inner end of the sleeve is screw-threaded, as at 13, to engage the screw-threaded part 9 of the conical cas- 50 ing. In the outer end of the sleeve are the holes 14 to receive the lugs of a turning wrench. Pivoted to the outer end of the throttle-rod 10 is the usual operating lever 15 hinged by the link 16 to the boiler-head. 55 The sleeve 12 practically forms part of the

throttle-rod 10, having a limited longitudinal movement thereon. When the mechanism is in its normal condition so that the throttle-rod can be operated to move its valve, the sleeve 12 is disengaged from the conical cas- 60 ing 7 as indicated by dotted lines in the drawing. The packing 5 compressed in the stuffing-box by the gland around the sleeve prevents the escape through the opening 2 of any steam entering the conical casing through 65 the bearing 8. The screw-threaded engagement 11 of the sleeve and throttle-rod prevents the escape of any steam that may enter between these two members from the casing.

When it is desired to repack the stuffing- 70 box when there is a full head of steam in the boiler, first the throttle-rod is moved inwardly to close its valve. This moves the sleeve 12 so that its inner screw-threaded end 13 is in a position to engage the screw- 75 threaded part 9 of the casing. By means of a wrench inserted in the holes 14 in the sleeve the latter is turned on the throttle-rod and through the screw-threaded en- 80 gagement 11 between the two the sleeve is moved inwardly on the rod. The inward turning movement of the sleeve causes its screw-threaded inner end 13 to be turned into the screw-threaded part 9 of the casing as shown by full lines in the drawings. When 85 this is done the throttle-rod is not only held against movement, but the bearing 8 is closed so that the steam cannot enter the conical casing from the boiler, neither can it pass through the opening 2 in the boiler- 90 head. After this adjustment has been made the gland can be removed from the stuffing-box and the packing renewed. After the gland has been replaced the mechanism is adjusted to its normal position by turning 95 the sleeve on the throttle-rod to the position shown by dotted lines in the drawing.

Having thus described our invention, what we claim and desire to secure by Let- 100 ters Patent is,

1. In a throttle-valve mechanism, a boiler-head provided with an opening, a casing se- 105 cured to the inner side of said boiler-head over said opening having at its inner end a bearing in line with said opening screw-threaded adjacent to said bearing, a throttle-rod longitudinally movable in said opening and bearing, and a sleeve screw-threaded on said throttle-rod extending through said opening and screw-threaded on its inner end 110

to engage the screw-threaded part of the casing adjacent to the bearing to close the latter around the throttle-rod.

2. In a throttle-valve mechanism, a boiler-
5 head provided with an opening, a stuffing-
box secured to the outer side of said boiler-
head over said opening, a casing secured to
the inner side of said boiler-head over said
opening having at its inner end a bearing in
10 line with said opening and stuffing-box and
screw-threaded adjacent to said bearing, a
throttle-rod longitudinally movable in said
opening, stuffing-box and bearing, and a
sleeve screw-threaded on said throttle-rod

extending through said opening and stuffing- 15
box and screw-threaded at its inner end to
engage the screw-threaded part of the casing
adjacent to the bearing to close the latter
around the throttle-rod.

In testimony whereof we hereunto affix 20
our signatures in the presence of two wit-
nesses.

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JOHN L. DEXTER.

Witnesses:

W. H. WRIGHT,
JESSE WRIGHT.