C. ROESENER.

THROTTLE VALVE.

APPLICATION FILED MAR. 7, 1911.

1,002,085.

Patented Aug. 29, 1911.

2 SHEETS—SHEET 1.

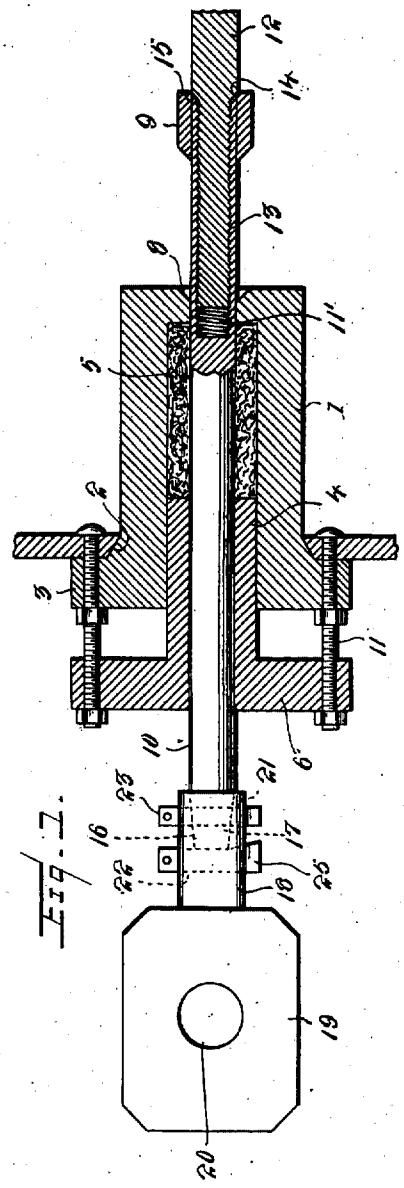

Fig. 1.

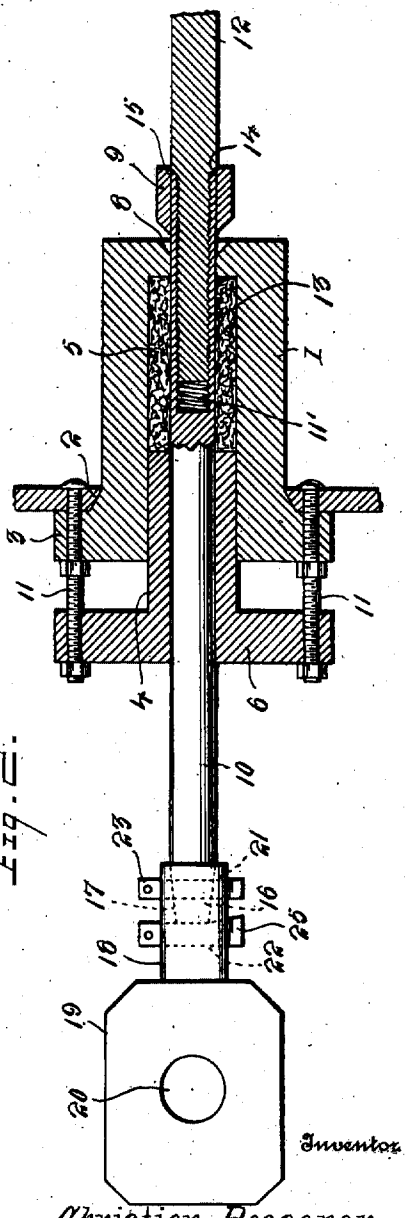

Fig. 2.

Witnesses

E. R. Ruppert.

Wm. Bagger.

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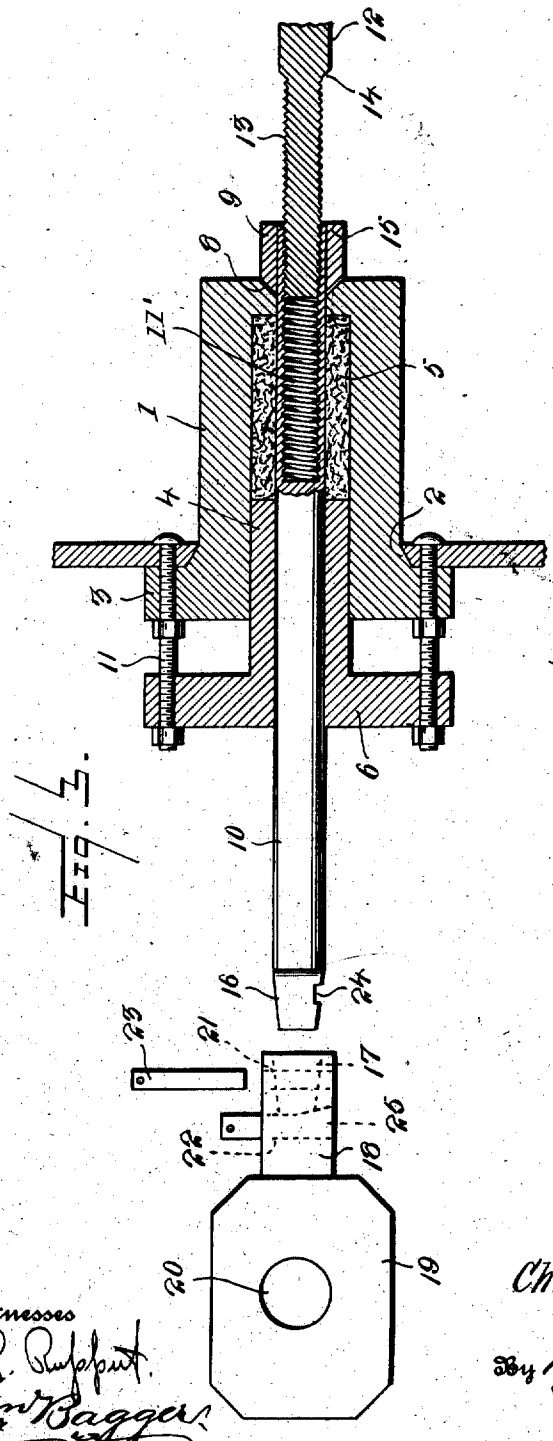

Fig. 4.

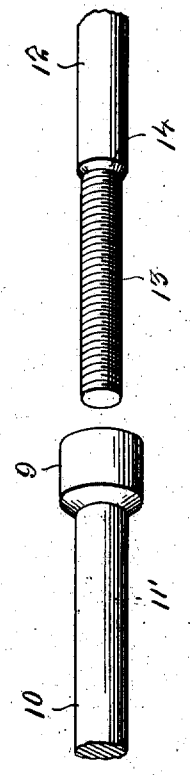

Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

CHRISTIAN ROESENER, OF PITTSBURG, KANSAS.

THROTTLE-VALVE.

1,002,085. Specification of Letters Patent. Patented Aug. 29, 1911.

Application filed March 7, 1911. Serial No. 612,782.

To all whom it may concern:

Be it known that I, CHRISTIAN ROESENER, a citizen of the United States of America, residing at Pittsburg, in the county of Crawford and State of Kansas, have invented new and useful Improvements in Throttle-Valves, of which the following is a specification.

This invention relates to throttle valves for steam engines and particularly for locomotive engines.

The object of the invention is to provide a construction whereby the rod or stem of the valve may be packed, or whereby the packing may be renewed in a convenient manner without necessity for blowing the steam from the boiler or reducing the boiler pressure.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claim.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claim may be resorted to when desired.

In the drawings,—Figure 1 is a sectional elevation of the parts constituting the invention, showing the relative position occupied by the parts when the throttle is in a closed position. Fig. 2 is a similar view showing the parts in the position assumed when the throttle is in a wide open position. Fig. 3 is a similar view showing the parts in the position assumed when the gland is to be removed for the purpose of renewing the packing. Fig. 4 is a perspective view showing the parts constituting the throttle stem separated.

Corresponding parts in the several figures are denoted by like characters of reference.

The stuffing box 1, in which the throttle stem operates, is formed with its seat 2 adjacent to the flange 3 which engages the boiler, said seat being cone-shaped, as shown, so that a perfectly tight joint will be provided between the boiler and the stuffing box when the latter is secured in position. The gland 4 which operates in the stuffing box for the purpose of compressing the packing 5 in the latter is provided in the usual manner with a flange 6 which is connected with the flange of the stuffing box by means of tightening bolts 11.

The inner end of the stuffing box is provided with a seat 8 adapted to receive a cone-shaped collar 9 which is firmly secured upon the inner end of the front member 10 of the throttle stem which operates through the stuffing box and gland. Said member is provided at its rear or inner end with a longitudinal recess 11′ forming a socket which is internally threaded for the reception of the rear member 12 of the throttle stem, said rear member being externally threaded for a portion of its length to engage the socket. Said member 12 is also provided adjacent to its threaded portion 13 with an annular shoulder 14 which is ground to engage a conical seat 15 at the extreme end of the socketed portion of the member 10 which is reinforced, as previously described, by the collar 9. The front or outer end of the front member 10 of the throttle stem is tapered, as shown at 16, to engage a socket 17 formed in a member 18 which includes a plate 19 having an aperture 20 for the passage of a pivot pin or bolt whereby it may be connected with one end of a link, the other end of which is to be connected in the usual manner with the throttle lever, which, however, is not shown. The socket member 18 is provided with transverse apertures 21 and 22 intersecting the socket 17 for the passage, respectively, of the connecting pin 23 which engages a transverse aperture 24 in the member 10 of the throttle stem and a wedge member 25 whereby, after the withdrawal of the pin 23, the stem member 10 may be forcibly driven from the socket.

When the parts of the device are assembled for normal operation, the stem member 10 is seated and firmly secured in the socket 17, and the threaded end of the member 12 of the throttle stem is engaged with the threaded recess 11′ of the member 10 until the shoulder 14 is seated upon the seat 15. The throttle stem composed of the two members 10 and 11′, thus firmly connected, is freely slidable through the stuffing

box and gland for the purpose of operating the throttle, the various positions when the throttle is closed and open being shown in Figs. 1 and 2 of the drawings. If it shall be desired to renew the packing in the stuffing box, the throttle is first moved to the closed position shown in Fig. 1. The pin or key 23 is now removed, and the tapered end of the member 10 is disengaged from the socket 17, after which said member 10 is rotated about its axis, either manually or by means of a suitable wrench until the conical collar 9 is seated firmly upon the seat 8, forming a perfectly tight joint. The gland may now be removed from the stuffing box and the packing renewed in the latter, after which the parts may be reassembled and restored to initial position, when the device is again ready for operation. It will be seen that the packing may thus be renewed quickly and conveniently without the necessity for blowing the steam from the boiler, and the operation may be so quickly performed that the boiler pressure will not be reduced.

Having thus described the invention, what is claimed as new, is:—

The combination with a boiler, of a stuffing box having a boiler engaging seat and provided with a seat at its inner end, a throttle stem operating through said box and comprising a front member having a threaded socket and a conical collar at its inner end and a rear member having threaded engagement with the socket and provided with a conical shoulder seating upon the inner end of the front member, said front member being tapered at its front end, a socket member engaging the front end of the front member of the throttle stem, and means for connecting the front member of the stem detachably with the socket member.

In testimony whereof I affix my signature in presence of two witnesses.

CHRISTIAN ROESENER.

Witnesses:
L. C. RENSING,
FRED. REES.