

A. G. ELVIN & J. L. MOHUN.
 FIRE DOOR PEDAL DEVICE.
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1,148,582.

Patented Aug. 3, 1915.

Fig. 1.

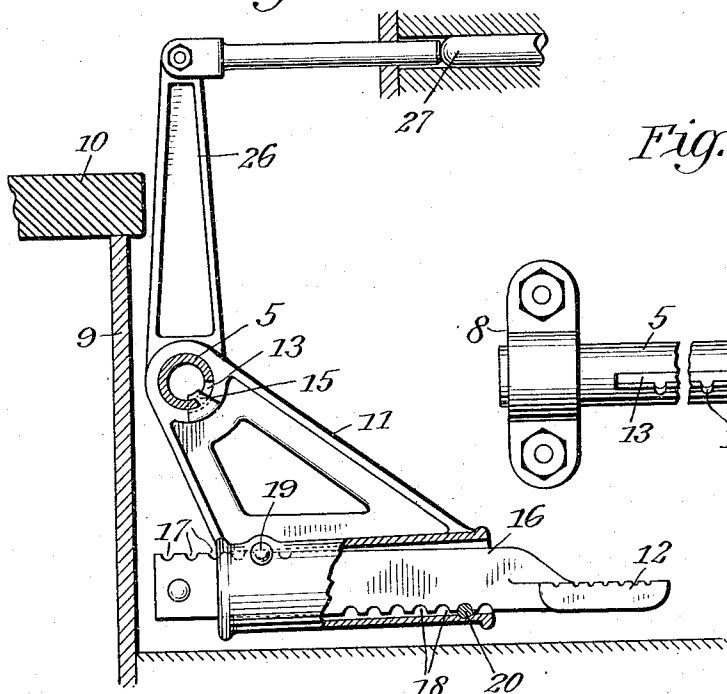


Fig. 2.

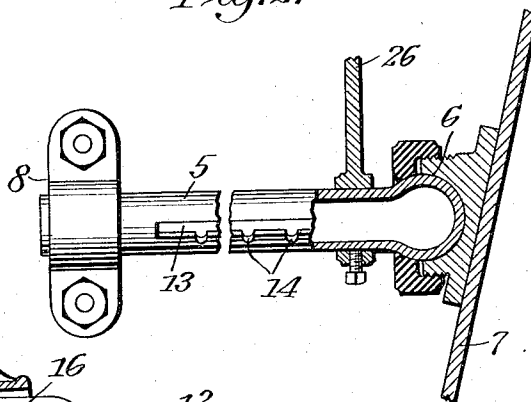


Fig. 3.

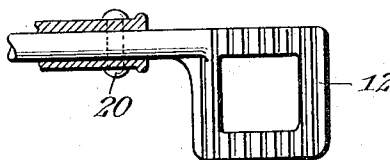
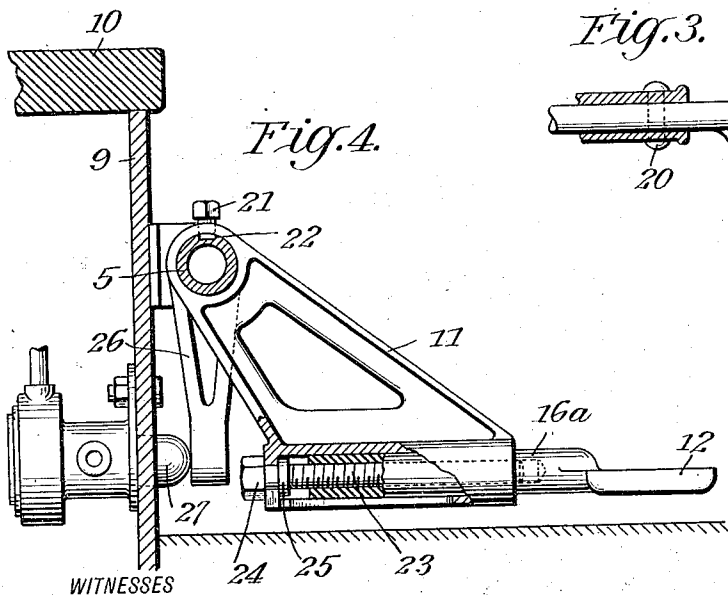


Fig. 4.



WITNESSES

St. Lawrence
St. Lawrence

INVENTORS.

Albert G. Elvin and John L. Mohun.
 BY *Edward Wright.*
 ATTORNEY.

UNITED STATES PATENT OFFICE.

ALBERT G. ELVIN, OF SOMERVILLE, NEW JERSEY, AND JOHN L. MOHUN, OF BROOKLYN,
NEW YORK; SAID MOHUN ASSIGNOR TO SAID ELVIN.

FIRE-DOOR PEDAL DEVICE.

1,148,582.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, ALBERT G. ELVIN and JOHN L. MOHUN, both citizens of the United States, and residents, respectively, of Somerville, in the county of Somerset and State of New Jersey, and the borough of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Fire-Door Pedal Devices, of which improvement the following is a specification.

This invention relates to mechanism adapted to be operated by the foot of the fireman for controlling the operation of furnace doors, and more particularly the fire doors of locomotive boilers, the objects being to provide an improved pedal device of this character which shall be of simple and compact construction, adjustable to suit different conditions and positions, and readily applicable to existing types of locomotives.

A preferred form of the device comprises a rotatable shaft, substantially horizontal, supported in suitable bearings at one side and above the floor of the cab, a pedal arm carrying a tread being mounted on said shaft, and adjustable longitudinally thereof. Means actuated by the movement of the shaft are also provided for controlling the operation of the door, or the valve which controls the admission of fluid under pressure to a motor for opening the door.

In the accompanying drawings: Figure 1 is a view, transversely of the shaft, and showing partly in elevation, one form of pedal device embodying our improvement; Fig. 2, a side elevation, partly in section, showing the supporting shaft and its bearings; Fig. 3, a plan of the tread shown in Fig. 1; and, Fig. 4, a transverse sectional view, similar to Fig. 1, but showing a modification.

According to the construction shown, the pedal device comprises a horizontal rotatable shaft, 5, located longitudinally at one side of the cab, above the deck thereof, and supported in suitable bearings, the front bearing being shown as a ball and socket joint, 6, secured to the back head, 7, of the locomotive boiler, and the rear bearing, 8, supported on the wind shield, 9, at the side of the cab below the running board, 10. The end of the shaft is loosely mounted in the bearing, 8, whereby all relative movement between the boiler head and the wind

shield, during the running of the locomotive, is provided for.

A pedal lever arm, 11, having a tread, 12, is mounted on the shaft, and is adjustable longitudinally thereof. Various means may be provided for this adjustment. As shown in Figs. 1 and 2, the shaft is tubular and formed with a longitudinal slot, 13, having a series of notches, 14, spaced along said slot, and for engaging therewith the pedal arm, 11, is provided with a projecting lug, 15, extending into said slot and adapted to drop down into any one of said notches to which it may be adjusted. The weight of the pedal arm normally holds the lug in its position in one of the notches, but when it is desired to adjust the same longitudinally of the shaft, the pedal is raised sufficiently for the lug to clear the notch and the pedal arm may then slide along the shaft, the lug moving in the slot, 13, to any other notch desired.

The tread may be adjustably mounted in the pedal arm, as shown in Fig. 1, where the tread, 12, is formed with a sliding bar, 16, having notches, 17 and 18, in its top and bottom edges respectively, and engaging the horizontal pins, 19 and 20. In this way the weight of the tread holds the notches in engagement with the pins, and prevents accidental displacement of the tread, while the same may be readily adjusted forward or backward by slightly raising the tread.

Other forms of adjustable means may be provided, as shown for instance in Fig. 4, in which the pedal arm is provided with a set screw, 21, engaging a slot or keyway, 22, in the shaft, 5, whereby the arm is prevented from turning on the shaft, and may be adjusted longitudinally thereof to any desired position. In this view the tread, 12, is also shown as formed with a hollow sleeve, 16^a, slidably mounted in the pedal arm and having an interior thread engaging the screw, 23, which is provided with a head, 24, and a collar, 25, whereby the screw may be rotated to adjust the sleeve and tread either inward or outward from the shaft.

Any suitable or preferred means actuated by the movement of the shaft may be employed for controlling the operation of the door, as for instance the lever arm, 26, mounted on the shaft, and adapted to operate the stem, 27, of a valve for controlling the supply of fluid to a motor for opening

the door. It will now be seen that we have provided a simple and compact pedal construction which may be easily adjusted in any direction to suit the convenience of the fireman, and is adapted to be applied to the different types of locomotives.

Having now described our invention, what we claim as new and desire to secure by Letters Patent is:

1. In a fire door apparatus, the combination with a shaft and means actuated thereby for controlling the operation of the door, of a pedal arm mounted on said shaft and adjustable longitudinally thereof, and a tread carried by said arm.
2. In a fire door apparatus, the combination with a horizontal shaft and means actuated thereby for controlling the operation of the door, of a pedal arm adjustably mounted on said shaft, and an adjustable tread carried by said arm.
3. In a fire door apparatus, the combination with a shaft having a longitudinal slot and a series of notches, and means actuated by the shaft for controlling the operation of the door, of a pedal arm slidably mounted on said shaft and having a lug projecting into said slot, and a tread carried by said arm.
4. In a fire door apparatus, the combination with a shaft and means actuated thereby for controlling the operation of the door, of a pedal arm mounted on said shaft, and a

tread slidably mounted on said arm and having notches on its opposite edges for holding same in position.

5. In a fire door apparatus, the combination with a shaft having a bearing at one end secured to the boiler head, and means actuated by the shaft for controlling the operation of the door, of a pedal arm mounted on said shaft and adjustable longitudinally thereof, and a tread carried by said arm.

6. In a fire door apparatus, the combination with a shaft having a universal bearing at one end secured to the boiler head, and a sliding bearing at the other end supported on the wind shield, and means actuated by the shaft for controlling the operation of the door, of a pedal arm mounted on said shaft, and a tread carried by said arm.

7. In a fire door apparatus, the combination with a horizontal shaft, a control valve, and a lever arm mounted on said shaft for actuating the control valve, of a pedal arm adjustably mounted on said shaft, and a tread carried by said arm.

In testimony whereof we have hereunto set our hands.

ALBERT G. ELVIN.
JOHN L. MOHUN.

Witnesses:

F. W. MARTIN,
W. H. COYLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."