L. SCHAUMBURGER AND H. H. CLARK.

FURNACE DOOR PEDAL.

APPLICATION FILED FEB. 1, 1921.

1,429,108. Patented Sept. 12, 1922.

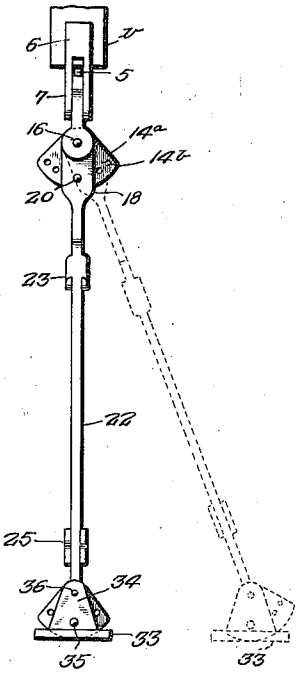


Fig. 1.

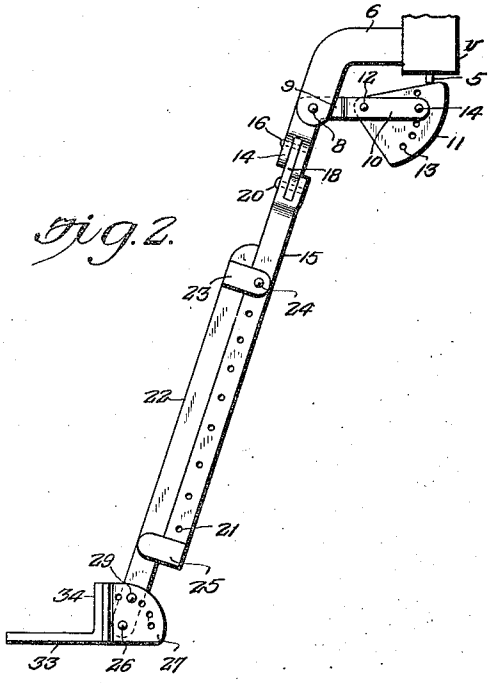


Fig. 2.

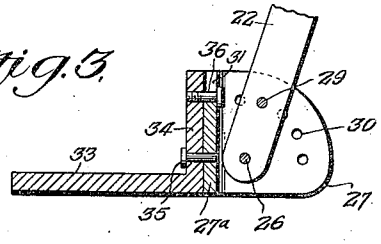


Fig. 3.

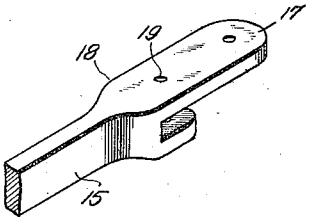


Fig. 5.

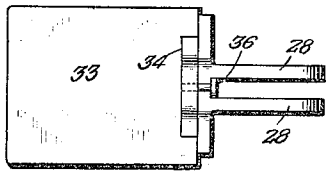


Fig. 4.

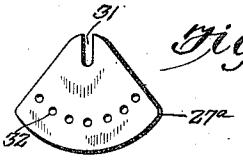


Fig. 6.

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UNITED STATES PATENT OFFICE.

LOUIS SCHAUMBURGER AND HARRY HUGH CLARK, OF TERRE HAUTE, INDIANA.

FURNACE-DOOR PEDAL.

Application filed February 1, 1921. Serial No. 441,614.

To all whom it may concern:

Be it known that we, LOUIS SCHAUMBURGER and HARRY H. CLARK, citizens of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Furnace-Door Pedals, of which the following is a specification.

This invention relates to foot operating devices for controlling the operation of a pneumatically controlled door and more particularly is directed to an attachment especially adapted for use in connection with fire doors of a locomotive boiler, engine boiler, or the like.

The primary object of the invention resides in the construction of a foot operated device capable of attachment to various types of pneumatically operated doors to actuate the controlling valve of an air pressure apparatus for said doors.

Another and very important object of the invention resides in the provision of an improved foot pedal device for controlling the operation of pneumatically operated doors and more particularly fire doors of a locomotive boiler, said pedal device having adjustable members for regulating the heighth of the pedal from the locomotive deck.

A still further object of the invention consists in the construction of a foot operated pedal device capable of use and attachment to various types of fire doors, particularly of locomotive boilers, wherein provision is had for regulating the angular adjustment as well as the heighth of the foot pedal with respect to the locomotive deck.

Other objects of the invention will be found to reside in a foot pedal device which is simple in construction, consisting of comparatively few parts and therefore inexpensive to manufacture, rigid in construction, capable of easily being installed and removed when desired, highly efficient and positive in operation and otherwise meeting the requirements of constructions of this character which are subjected to rough and constant use.

With these objects in view and others which will be manifest and suggested as the nature and purpose of our invention are revealed in the following specification and drawing, wherein we have shown a practical, yet preferred embodiment thereof,

Figure 1 is a front view of the device showing one of the adjustable positions in dotted lines,

Fig. 2 is a side view thereof,

Fig. 3 is a view partly in section of the foot pedal,

Fig. 4 is a plan view of the foot pedal,

Fig. 5 is a fragmentary view of the upper terminal of one of the adjusting arms, and

Fig. 6 is a front view of a part of the foot pedal device.

Referring now to the drawings wherein similar numerals designate like and corresponding parts throughout the specification, as shown in Figs. 1 and 2 of the drawing, our invention is applied in connection with an air pressure system (not shown), wherein a valve v is provided with a stem 5, adapted to be operated by the novel and improved foot pedal device now to be described in detail.

A rigid arm 6 is secured in any well known manner to the valve and extends outwardly and downwardly at an angle with respect to the furnace door to which the attachment is applied, said arm 6 terminating in a bifurcated extension 7 which is apertured to receive a pivot pin 8 for pivotally supporting a lever designated by the numeral 9. The lever 9 extends substantially parallel with the rigid arm 6 and is preferably provided with arms 10 adapted to receive and straddle a cam 11, said arms being pivotally secured to the apex of the said cam at 12. As shown the cam is provided with a plurality of equally spaced, arcuately arranged apertures 13 for adjustably receiving a pin 14 therein for connecting the arms 10 of the said lever above referred to. The lower depending portion 14 of the lever 9 is also bifurcated and has an enlarged, arcuate face 14^a provided with a series of apertures 14^b for adjustably receiving the upper terminal of an arm 15, and as shown the said arm and depending portion of the lever being in direct alignment and arranged angularly with respect to the furnace door to which the invention is adapted to be applied. The bifurcated portion 14 of the lever 9 has a transverse pin 16 extending therethrough, pivotally connecting the longer extension 17 of the bifurcated upper terminal 18 of the arm 15, said bifurcated portion 18 having aligned apertures 19 therein to receive a

pin 20 thereby pivotally connecting the lever 9 and arm 15 in such manner as to permit the arm to swing laterally in the manner shown in dotted lines in Fig. 1.

Throughout the length of the arm 15 there is provided a plurality of equally spaced apertures 21 providing means for vertical adjustment with an adjusting arm 22 which normally lies flush with the major portion of said arm and has a guide 23 near its upper terminal, said guide receiving a pin 24 for cooperation in the respective apertures 21 of the arm 15 to regulate the heighth of the foot pedal subsequently to be described. The lower terminal of the arm 15 is also provided with a guide 25 normally straddling the adjusting arm 22 as clearly shown in Fig. 2 of the drawing.

Pivotally connected at 26 to the lower terminal of the adjusting arm 22, we have provided a novel and improved form of foot pedal designated in its entirety by 27 which has an arcuate shaped rib portion 27ª and parallel, extending faces 28 for receiving the lower terminal of said adjusting arm 22 above referred to. An adjusting pin 29 is adapted to pass through an aperture in the lower portion of the adjusting arm 22 and through any one of a series of equally spaced arcuately arranged apertures 30 formed in the respective faces 28 of the said foot pedal. By this arrangement, it will be readily seen that the angular relation of the foot pedal with respect to the adjusting arm 22 may be regulated as so desired and the heighth of the foot pedal may also be regulated with respect to the deck of the locomotive.

Referring now to Fig. 6, it will be seen that the arcuate plate 27ª is provided with a U-shaped slot 31 at its apex and has a plurality of apertures 32 therein permitting attachment of a flat, right angular plate 33, which has a front, vertical wall 34 provided with apertures for receiving the removable pin 35 for engagement with the respective apertures 32, and also a pivot pin 36 passing through the slot 31 and threaded in the said wall 34 to permit the foot plate to lie at all times parallel with the floor of the locomotive deck regardless of the angular position or heighth to which the respective arms may be adjusted.

From the above construction, it will be readily seen that the lever 9 may be adjusted in various positions with respect to the cam 11 for engagement with the valve stem and due to the novel arrangement of the connecting means between the said lever 9 and the arms 15 the same may be adjusted laterally either to the left or right as desired by the particular location of the fire doors. By reason of the vertical adjustment of the arms 15, 22, the device is capable of use in connection with various types of fire doors for locomotives since the heighth of the foot pedal may be regulated with respect to the floor or deck of the locomotive to meet the desired needs. Furthermore, the foot pedal device lends itself to various adjustments when the adjusting arms are in their lateral, adjustable positions as shown in dotted lines and by reason of the arcuately arranged and positioned plate 27ª, the right angular plate 33 may lie at all times parallel with the floor or deck of the locomotive to permit the operation of the device. Due to the various adjustments above referred to, it will be readily observed that the attachment is particularly adapted for use in connection with various types of structures and due to its extreme simplicity may be readily installed and removed without particular skill or labor without in any way disarranging or reorganizing any part of a structure to which the device is adapted.

In the accompanying drawings, we have illustrated our invention embodied in one form by way of example and which in practice has been found to be highly satisfactory in obtaining the desired results. It will be obvious however that other embodiments may be adopted and that various changes in the details of construction may be resorted to by those skilled in the art without departing from the spirit and scope of the invention. It is furthermore understood that the invention is not necessarily limited or restricted to the precise elements shown except in so far as such limitations are specified in the subject matter being claimed.

Having shown and described our invention, what we now claim as new and desire to secure by Letters Patent of the U. S. is:—

1. In a device of the class described comprising a lever for pivotal connection to a support, means carried by said lever adapted to actuate a valve stem, an arm also carried by said lever extending in close proximity to a floor or deck, a foot pedal carried by said arm, and means for adjusting said foot pedal in planes at right angles to each other and with respect to said arm.

2. In a device of the class described comprising a lever for pivotal connection to a support, separable means carried by said lever adapted to actuate a valve stem, a pivotally connected arm also carried by said lever extending in proximity to a floor or deck, a foot pedal carried by said arm and means for adjusting said foot pedal angularly with respect to said arm and lever.

3. In a device of the class described comprising a lever for pivotal connection to a support, said lever being bifurcated to receive an adjustable member adapted to actuate a valve stem, a vertically and laterally adjustable arm also carried by said lever extending in proximity to a floor or deck, a foot pedal carried by said arm and means

for adjusting said foot pedal in a plurality of angular positions with respect to said arm and lever.

4. In a device of the class described comprising a lever for pivotal connection to a support, said lever being bifurcated at its opposite ends for receiving an adjustable, valve actuating member and an elongated laterally adjustable arm extending in proximity to a floor or deck, a separable foot pedal carried by said arm and means for adjusting said foot pedal in various angular positions with respect to said arm whereby the foot pedal is always maintained in its horizontal position.

5. In a device of the class described comprising a lever for pivotal connection to a support, means carried by said lever adapted to actuate a valve stem, an adjustable arm carried by said lever extending in close proximity to a floor or deck, means for laterally swinging and raising said arm in a plurality of positions, a foot pedal carried by said arm and means for adjusting said foot pedal angularly with respect to said arm to maintain said pedal parallel with respect to the floor or deck when the arm is adjusted.

6. In a device of the class described comprising a lever for pivotal connection to a support, said lever being bifurcated at one end and having a pivotally connected cam member for actuating a valve stem, a vertically and laterally adjustable arm pivotally connected at its opposite end to said lever and extending in proximity to the floor or deck, said lever having an enlarged face having apertures therein permitting lateral adjustment of said arm, a foot pedal pivotally connected to the lower terminal of said arm and means for angularly adjusting said foot pedal in a plurality of positions with respect to the said arm to maintain said pedal at all times in parallelism with the floor or deck.

7. In a device of the class described comprising a lever for pivotal connection to a support, said lever having its end bifurcated and adapted to receive a pivotally connected, adjustable cam member at its upper end to actuate a valve stem, the opposite bifurcated end of the lever having an enlarged, arcuate face with a plurality of apertures therein, an arm pivotally connected to the lower bifurcated end of the lever and laterally adjustable with respect thereto, means for raising or lowering said arm, a foot pedal pivotally connected to the lower terminal of said arm and means for angularly adjusting said foot pedal with respect to said arm in its various lateral or vertical positions.

In testimony whereof, we affix our signatures hereto.

LOUIS SCHAUMBURGER.
HARRY HUGH CLARK.