

O. M. GOSSETT.
FURNACE DOOR OPERATING DEVICE.
APPLICATION FILED JUNE 1, 1909.

947,903.

Patented Feb. 1, 1910.

2 SHEETS—SHEET 1.

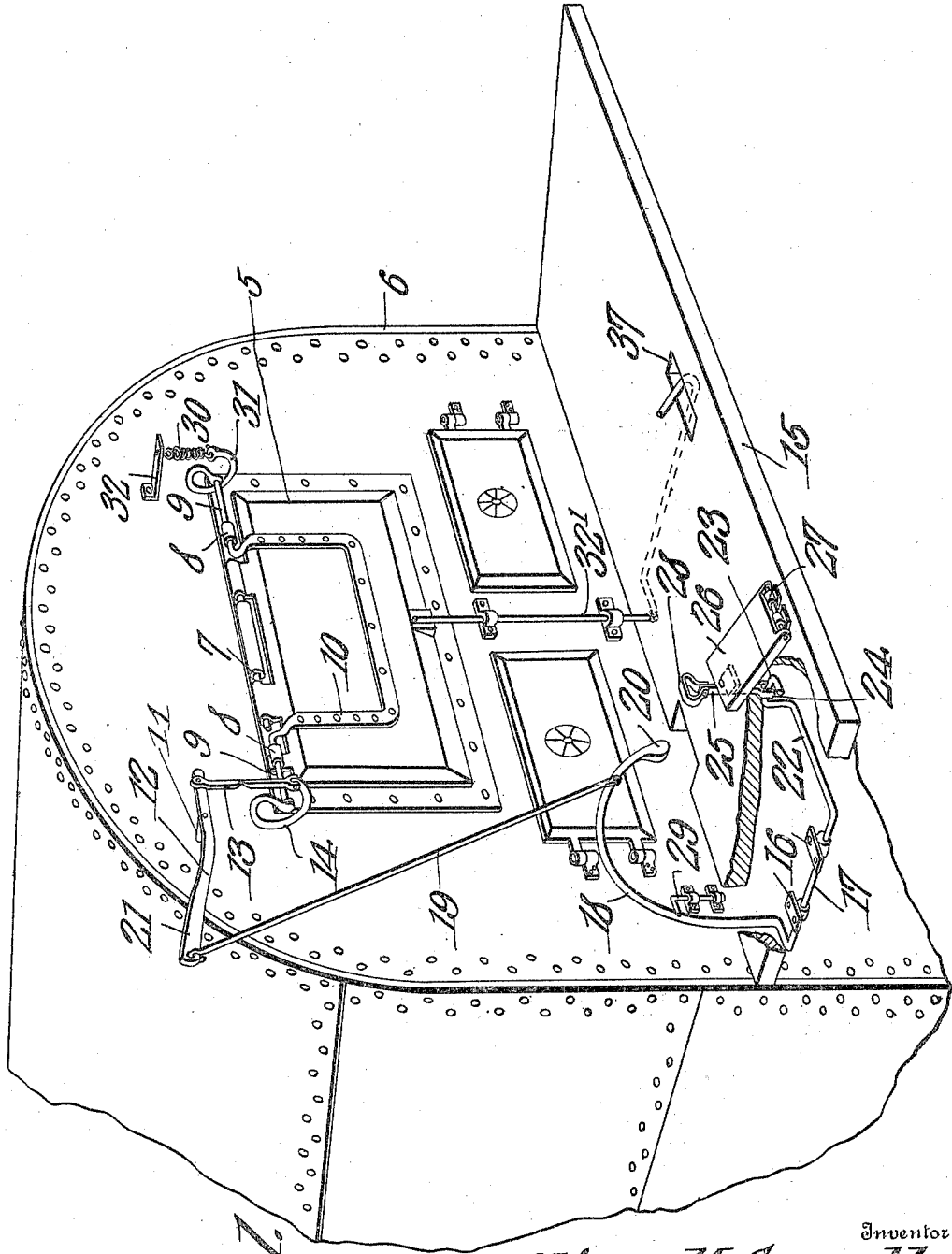


Fig. 1.

Witnesses
H. V. Hunt
Maschneider

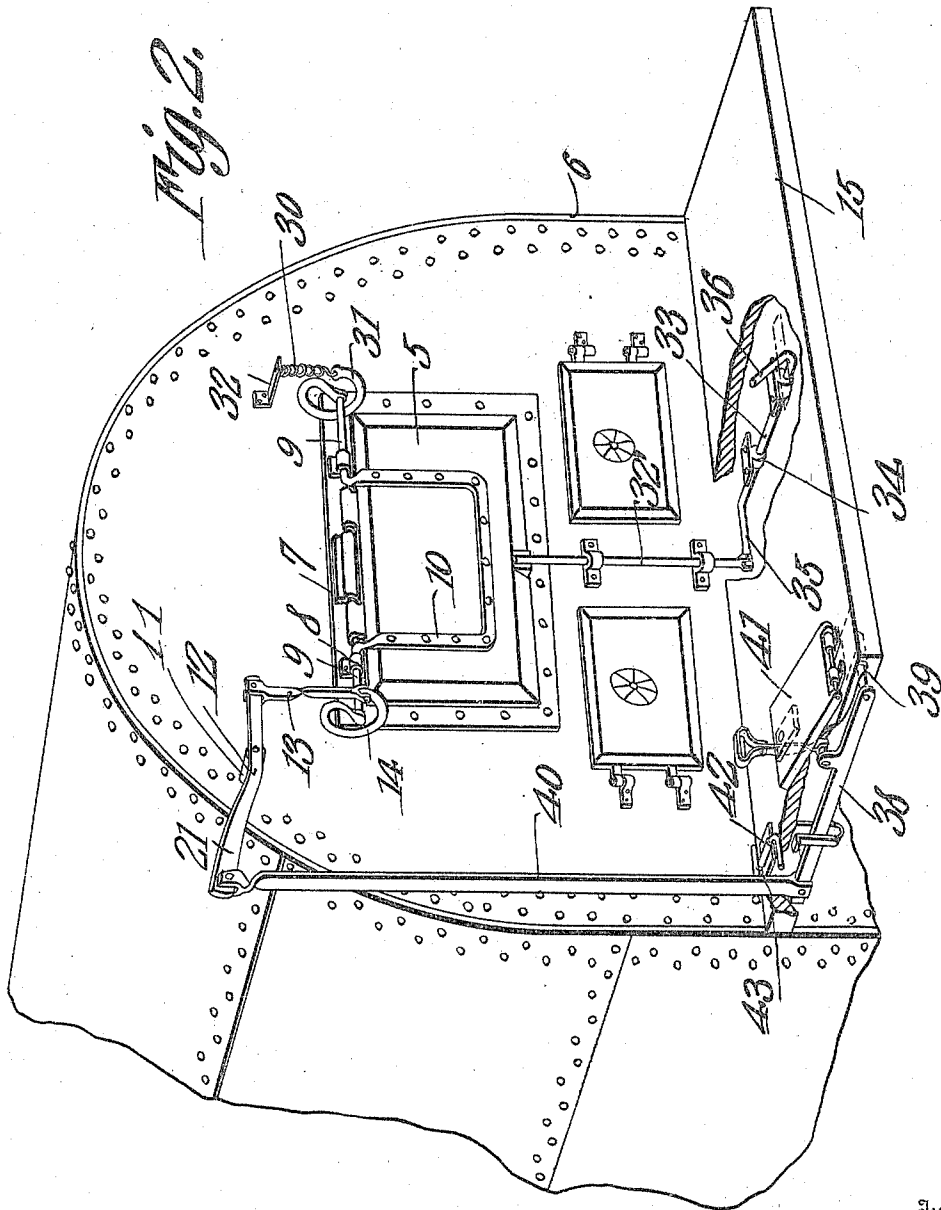
Inventor
Oliver M. Gossett.
By Cashow & Co.
Attorneys

O. M. GOSSETT.
FURNACE DOOR OPERATING DEVICE.
APPLICATION FILED JUNE 1, 1909.

947,903.

Patented Feb. 1, 1910.

2 SHEETS—SHEET 2.



Witnesses

E. H. Smith
W. A. Schmidt

Inventor

Oliver M. Gossett.

By

Cadnow & Co.

Attorneys

UNITED STATES PATENT OFFICE.

OLIVER MARTEEN GOSSETT, OF SEYMOUR, INDIANA.

FURNACE-DOOR-OPERATING DEVICE.

947,903.

Specification of Letters Patent.

Patented Feb. 1, 1910.

Application filed June 1, 1909. Serial No. 499,320.

To all whom it may concern:

Be it known that I, OLIVER M. GOSSETT, a citizen of the United States, residing at Seymour, in the county of Jackson and State of Indiana, have invented a new and useful Furnace-Door-Operating Device, of which the following is a specification.

This invention relates to improvements in operating devices for the fire door of locomotive boiler furnaces, and more particularly a pedal actuated device of this kind.

The object of the present invention is to provide an operating device of the kind stated which is simple in structure, and which can be easily actuated, and also to provide improved means for holding the door in open position.

With the foregoing objects in view the invention consists in a novel construction and arrangement of parts to be hereinafter described and claimed, reference being had to the drawings hereto annexed forming a part of this specification, in which drawings—

Figure 1 is a perspective view showing the application of one form of the invention. Fig. 2 is a perspective view showing another form.

In the drawing 5 denotes the fire door of a locomotive steam boiler furnace 6. This door is connected to the front wall of the furnace by a suitable hinge structure 7. On the door frame are mounted bearings 8 which support a rocker shaft 9 which is bent intermediate its ends into a strap 10 and securely fastened to the door. The rocker shaft is in axial alinement with the hinge, so that upon rocking said shaft the door may be swung open or closed. Fulcrumed on a stud 11 mounted on the wall of the furnace is a lever 12 one end of which is connected by a link 13 to a crank arm 14 on one end of the rocker shaft 9. This crank arm extends in a curve from the rocker shaft, its outer end to which the link 13 is connected, being suitably offset so that said link may clear the other portion of the crank arm.

Pivottally mounted beneath the floor 15, in front of the furnace, in suitable bearings 16, is a rocker shaft 17 having at one end a curved rocker arm 18 which is connected near its outer end by a link 19 to that end of the lever 12 opposite the end to which the link 13 is connected. That end of the rocker arm to which the link 19 is connected is weighted as indicated at 20, and that end of the lever 12 to which said link 19 is connect-

ed is also weighted by being made larger than said end as indicated at 21. The object of making these parts heavier will be presently described. From the rocker shaft 17 also extends an arm 22 having at its outer end a lateral bend 23 which is engaged by the forked end 24 of a stem 25 carried at the free end of a pedal 26 which is pivoted at 27 to the floor 15. The stem 25 is also provided with a handle 28 in order that the rocker shaft 17 may be operated by hand. Said shaft is adapted to be rocked in its bearings by depressing the pedal 26 or by pushing down on the handle 28. When the rocker shaft is operated as stated, the rocker arm 18 is swung, which movement is communicated to the lever 12 by the link 19, said lever swinging on its fulcrum, and through the link 13 and the crank arm 14 the shaft 9 is rocked, thus swinging the door 5 open. The fork 24 may be disengaged from the part 23 which disconnects the pedal and permits it to be lowered to extend flush with the floor.

At 29 is indicated a hook shaped catch, which upon being engaged over the rocker arm 18, locks the same, and thus holds the door in open position. The parts 20 and 21 serve as counterbalances, and render the opening of the door easier. The opening movement of the door is also assisted by a spring 30 connected at one end to a second crank arm 31 on the rocker shaft 9, and at the other end to a bracket 32 mounted on the wall of the furnace.

The door is held closed by means of a rod 32' which is slidable in front thereof. This rod is operated by means of a rocker shaft 33 supported in suitable bearings 34 beneath the floor 15, and having at one end a lateral bend 35 which is connected to the rod. At the opposite end of the rocker shaft is a lateral bend 36 which extends through an opening 37 in the floor and is adapted to be tripped by the foot, to rock the shaft 33, and thus actuate the rod 32.

In the modified form of device shown in Fig. 2 I employ instead of the rocker shaft 17 a lever 38 which is fulcrumed at one end in a suitable bearing 39 beneath the floor 15, and is connected at its other end by means of a link 40 to the lever 12. Intermediate its ends the lever 38 is connected to a pedal 41. Upon depressing the pedal, the door will be opened as in the first instance.

In the last described form of operating device, the door is held in open position by

means of a sliding bolt 42 adapted to be extended above a pin 43 projecting from the link 40.

Both of the operating devices herein described are simple in structure, and can be easily operated, the arrangement of levers and links being such that but little effort is required to open the door.

What is claimed is:

10 The combination with a furnace door and its hinge, of a rocker shaft journaled on the furnace wall in axial alinement with the hinge of the door, and bent intermediate its ends into an off-set portion which is fas-

tened to the door, crank arms on the ends of the rocker shaft, a bracket mounted on the furnace wall, a spring connected at its ends to the bracket and to one of the crank arms, a pedal actuated lever, and a connection between said lever and the other crank arm.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

OLIVER MARTEEN GOSSETT.

Witnesses:

J. E. BAUGHMAN,
LEWIS BAUGHMAN.