No. 646,209. Patented Mar. 27, 1900.

J. W. GAYNER.

VALVE OPERATING DEVICE.

(Application filed Jan. 23, 1900.)

(No Model.)

Fig. 1.

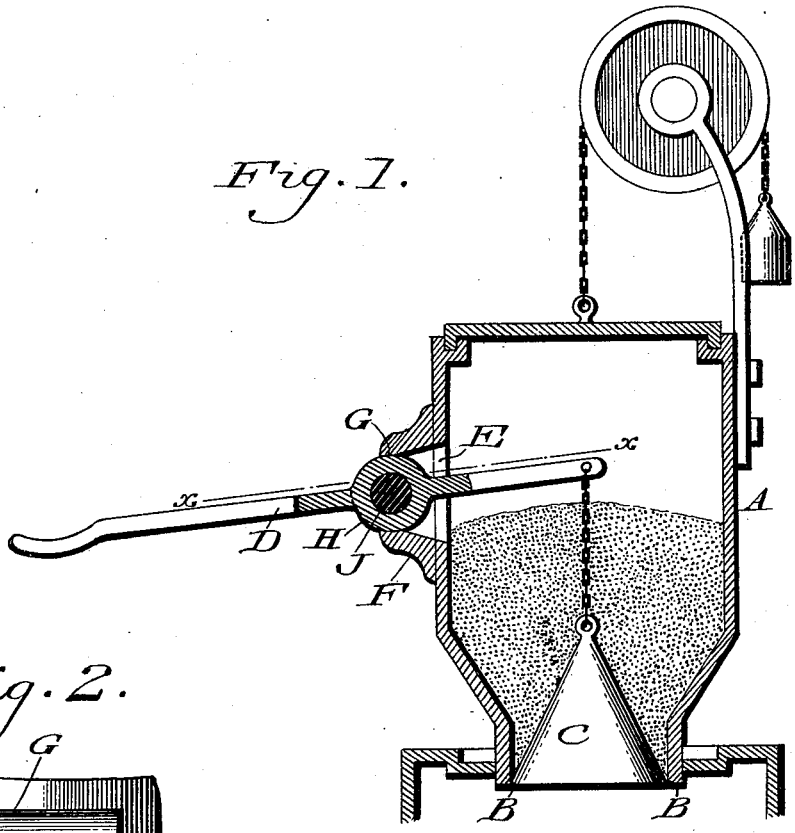


Fig. 2.

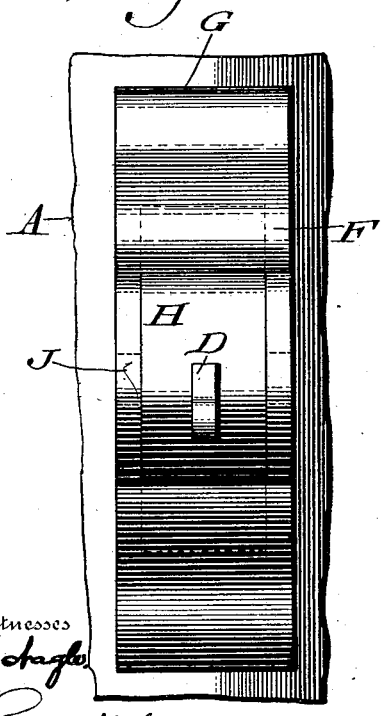
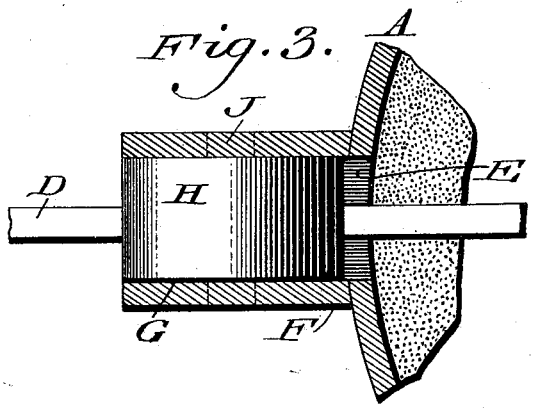


Fig. 3.



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JOHN WILLIAM GAYNER, OF SALEM, NEW JERSEY.

VALVE-OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 646,209, dated March 27, 1900.

Original application filed January 15, 1898, Serial No. 666,806. Divided and this application filed January 23, 1900. Serial No. 2,421. (No model.)

To all whom it may concern:

Be it known that I, JOHN WILLIAM GAYNER, a citizen of the United States, residing in the city and county of Salem, State of New Jersey, have invented a new and useful Improvement in Devices for Operating Valves, which improvement is fully set forth in the following specification and accompanying drawings.

This invention relates to means for operating a valve within a closed compartment—for instance, the feed-hopper of the fire-chamber of a gas-producer; and it consists of a construction by means of which the escape of gas through the opening where the valve-operating lever passes through the wall of the compartment is prevented.

It further consists in the structural details hereinafter fully described and claimed.

Figure 1 represents a central vertical section of a feed-hopper provided with my improvement. Fig. 2 represents a side elevation of a portion of the same. Fig. 3 represents a horizontal section on the line x x, Figs. 1 and 2.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, in the particular embodiment of my invention which I have selected for the purpose of illustrating the same, A designates a feed-hopper for the fire-chamber of a gas-producer of well-known construction, provided at its lower end with a valve-seat B, that is closed by a valve C. Said valve C is controlled by a lever D, connected therewith and which extends through an opening E in the side wall of the hopper. Surrounding the opening E and projecting from the wall of the hopper is a box F, that is provided with an opening G, situated opposite the opening E of the hopper. Said box F is preferably made separate from the hopper and suitably secured thereto, as shown. The side walls of this opening G of the box F are straight and parallel, while the upper and lower walls are curved. The lever D is provided with an axial boss H, having a central pivot-pin J, that is supported upon the side of the box F. The boss H is cylindrical and fits closely within the opening G of the box, the upper and lower curved walls of the opening G being concentric with the pivot of the boss, so that a close joint is maintained when the lever swings on its pivot.

It will be seen from the foregoing description that the opening E of the hopper allows sufficient play of the inner limb of the lever D as the latter is raised and lowered for operating the valve C and that the boss H of said lever closes the opening in the box constantly when the lever is swung on its pivot and prevents the escape of gas through said opening.

It will be seen from the foregoing that when it is desired to remove the lever D the valve C is disconnected therefrom and the boss H of the valve detached. The lever D may then be withdrawn and afterward restored readily, as will be apparent, which is, however, a matter of considerable difficulty as usually accomplished through the top of the hopper, owing to the length of said lever.

This application is a division of an application filed January 15, 1898, Serial No. 666,806.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A closed chamber having a valve-seat and provided with an opening in the wall thereof, a projecting box surrounding said opening and provided with an opening having concentric end walls and situated opposite the opening in the chamber, a lever provided with an axial boss having concentric faces, said lever being pivoted upon the box with its boss situated within and concentric with the walls of the opening therein, and a valve attached to the inner end of said lever.

2. A closed chamber having a valve-seat, an opening in the wall of said chamber, a box secured to said chamber and surrounding said opening, an opening in said box having concentric walls and situated opposite the opening in the chamber, a lever provided with an axial boss having concentric faces, said lever being pivoted upon the box with its boss situated within and concentric with the walls of the opening therein, and a valve attached to the inner end of said lever.

3. A closed chamber having a valve-seat, an opening in the wall of said chamber, a box secured to said chamber and surrounding said

opening, a rectangular opening in said box situated opposite the opening in the chamber, the end walls of said opening in the box having concentrically-curved faces, a lever provided with a cylindrical axial boss, said lever being pivoted upon the box with its boss situated within and concentric with the opening therein, and a valve attached to the inner end of said lever.

JOHN WILLIAM GAYNER.

Witnesses:
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