G. ROSENQVIST.

COAL CABINET.

No. 190,079. Patented April 24, 1877.

Fig 1.

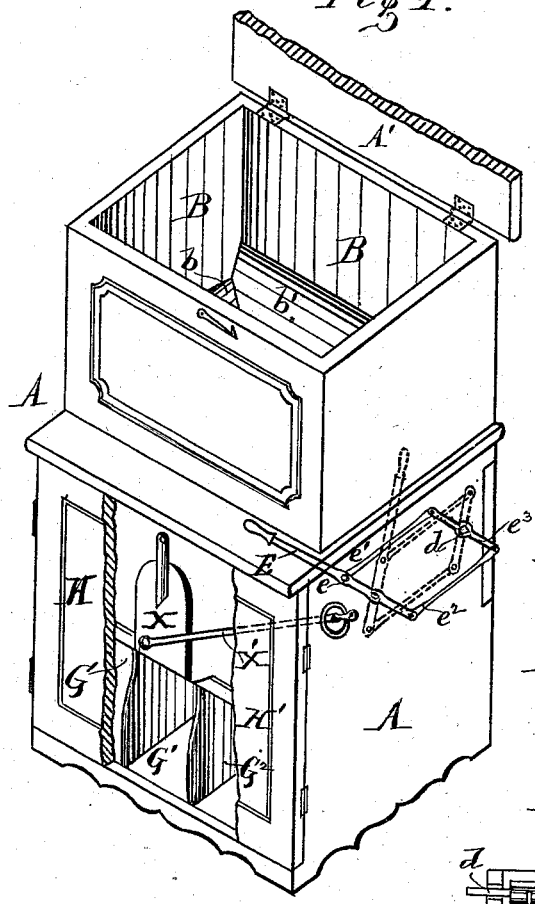
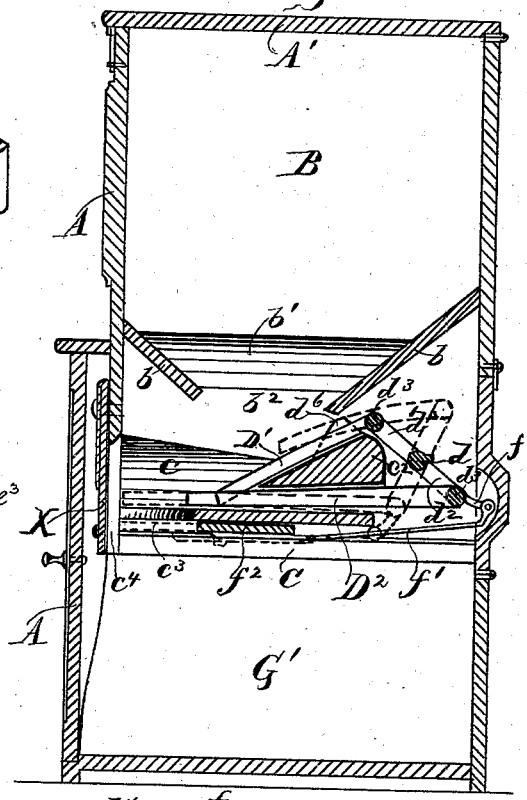


Fig 2.



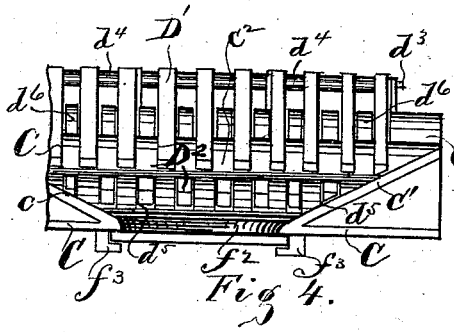


Fig 4.

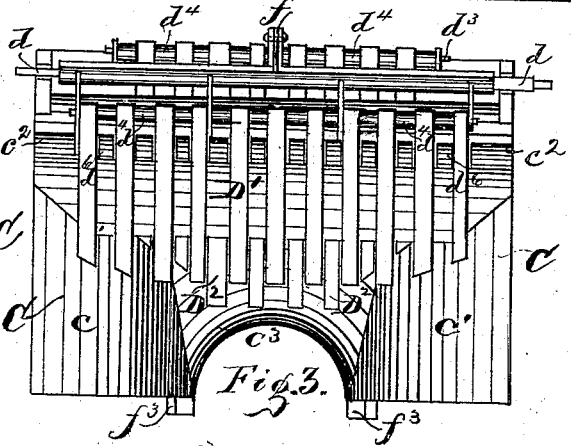


Fig 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

GUSTAV ROSENQVIST, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN COAL-CABINETS.

Specification forming part of Letters Patent No. **190,079**, dated April 24, 1877; application filed March 6, 1877.

To all whom it may concern:

Be it known that I, GUSTAV ROSENQVIST, of St. Louis, Missouri, have invented an Improved Coal-Cabinet, of which the following is a specification:

This invention is designed to overcome many of the inconveniences arising from the ordinary manner of handling and using coal or fuel for household purposes.

My invention is a cabinet, casing, or boxing, fitted, by its construction, to better store the coal or fuel, and also facilitate the handling and use of the same. As such cabinet, &c., it is adapted for household, stores, office, and similar purposes.

The nature of my invention consists in the improved features, their combination and operation, as hereinafter fully described, and pointed out in the claims.

Of the drawing, Figure 1 is a perspective view of my cabinet, the parts broken away being to show interior construction, and the dotted lines seen showing position of operating parts. Fig. 2 is a sectional elevation of the cabinet and its operating parts, the dotted lines showing the grate-bars thrown back. Fig. 3 is a top plan of the bottom that carries the grate-bars. Fig. 4 is a detail front view of Fig. 3, showing the grate-bars thrown back.

A is the outside housing. At top this has a hinged door, A′, for the supplying of the cabinet with coal, &c. B (the upper part of A) constitutes the reservoir or chamber for the entered coal or fuel. (See Figs. 1, 2.) Within the chamber B I secure opposite to each other the inclined sides b b and b^1 b^1, that form a feed-passage, b^2. (See Figs. 1, 2.) Said inclined sides partially support the coal or fuel, and also serve to guide and direct the dropping coal through the passage b^2 on the bottom proper of the chamber B. C is the bottom proper for the chamber B, and which further divides the top portion from the lower portion of the cabinet. The construction of the bottom C is to adapt it to support an operating grate, as well as to cause the fuel to be directed to the outlet, from whence the user takes it for consumption. Hence the bottom C has secured to it inclined side walls c c^1, also a rear inclined wall, c^2. (See Figs. 2, 3, 4.) Said walls c c^1 c^2 direct the fuel, in its action, to the outlet at c^3, formed in the bottom C. (See Figs. 2, 3, 4.)

The grate consists of an upper and lower series of grate-bars, D^1 D^2, attached to the arms of a rock-shaft, which is operated from without the casing. Thus d is the rock-shaft, having upper arms d^1 and lower arms d^2, through the ends of each of which the respective rods d^3 are passed, and as indicated in Figs. 2, 3, 4. It is on the rods that the upper and lower series of grate-bars are loosely hinged, a collar, d^4, only intervening between each bar, and properly spacing same from each other. (See Figs. 3, 4.) The grate-bars are arranged by passing the lower series D^2 through openings d^5, made in the rear wall c^2, (see Fig. 4,) and placing the upper series of grate-bars D^1 in guides d^6. (See Figs. 2, 3, 4.) In this manner each bar is properly guided during its reciprocation. As stated, the grate is operated from without the cabinet, and that by the arrangement of the hand-lever and its arms, as shown in Fig. 1. E is the hand-lever pivoted at e. e^1 e^2 are the parallel connecting-rods, having one end pivoted to the hand-lever, the other end to the ends of the farther arm e^3, that is secured rigidly to the rock-shaft d.

The parts constituting the grate being thus constructed and arranged, their operation is as follows:

When the position of the hand-lever parts is as shown in Figs. 1 and 2 by the full lines, the upper series of grate-bars will then have been brought forward, while the lower series have been drawn backward, and vice versa. The position of the grates will be as shown in dotted lines, when the hand-lever has been changed to the position shown by the dotted lines in Fig. 1, viz: The upper grate-bars are drawn back, and the lower grate-bars pushed forward. It is this interchange of the positions of the grate-bars, or the reciprocating action they simultaneously perform, that enables me to stir, sift, catch hold and move the coal in a most ready manner to the outlet. This method of handling the coal (notwithstanding its weight) by the leverage here shown is most easy, the lower coal being first acted upon, the upper portions thereof necessarily

following, and thus the delivery of the coal to the outlet or for the scuttle is greatly facilitated.

It is further my object simultaneously with the operation of the grate to be capable of shutting off or opening the outlet for the coal-delivery. For this purpose I attach to an arm, *f*, (see Figs. 2, 4,) belonging to the rock-shaft *d*, a connecting-rod, f^1, to the forward end of which is secured a slide, f^2, (see Figs. 2, 3,) said slides being guided and supported in the grooves f^3 (see Figs. 3, 4) at bottom of B. This slide controls the outlet c^3 in such wise that when the upper grates are shoveling the coal forward to be discharged, the outlet c^3 will be open, as the slide will then have been drawn back; but that on the reverse movement of the grate-bars the outlet is closed, as the slide will then have been drawn forward. In this wise the discharge of the fuel can be intermittent, which enables the user to more readily see when he has shoveled enough, and at all times to close the outlet, so that no coal but that desired for immediate use shall fall in the lower chamber.

In case the coal or the lumps be large, and not passable for the outlet c^3, the front of the cabinet can have the farther outlet at c^4, (see Fig. 2,) and this controlled by the pivoted slide X, operated by hand-lever X′. (See Figs. 1, 2.) When both outlets c^3 c^4 are open, an enlarged exit for the coal is had.

The bottom portion of the cabinet consists of chambers G G^1 G^2, divided by partitions. In said chambers kindling-wood, paper, and the requisites for a fire can be stored. H H′ are the front doors of the cabinet.

The coal or fuel is entered at top, and rests mainly upon the grate-bars. To get the fuel, the operator places the scuttle in the middle chamber G^1, or upon shelves in same, so as to be in line with the outlet c^3, or both c^3 and c^4. Next, the operator, by means of the hand-lever, causes the slide f^2 to be drawn back, while at same time the lower grate-bars are drawn back, and the upper grate-bars are drawn forward. Hence, as the outlet is open, a portion of the coal falls into the scuttle. If required, the coal can be agitated by reciprocating the grate, and when sufficient coal has been delivered the outlet can be closed by restoring the slide to close said outlet.

What I claim is—

1. The rock-shaft *d*, having arms d^1, rod d^3, series of grate-bars D^1, in combination with the hand-lever attachment, to operate in the manner and for the purpose set forth.

2. The rock-shaft *d*, having arms d^2, rod d^3, series of grate-bars D^2, in combination with the hand-lever attachment, as and for the purpose set forth.

3. The combination of rock-shaft *d*, having arms d^1 d^2, rods d^3, carrying the series of grate-bars D^1 D^2, and the operating-lever attachment, as shown and described, to operate as and for the purpose set forth.

4. The rock-shaft *d*, its arm *f*, connecting-rod f^1, and slide f^2, in combination with hand-lever attachment and bottom C′, having outlet c^3, to operate as and for the purpose set forth.

5. The combination of the rock-shaft *d*, its arms d^1 d^2, rods d^3, grate-bars D^1 D^2, arm *f*, rod f^1, slide f^2, bottom C, having outlet c^3, and the hand-lever attachment, to operate in the manner and for the purpose set forth.

6. The slide X, pivoted, and the hand-lever X′, in combination with the outlet c^4 of a coal-cabinet, as and for the purpose set forth.

7. The chambers G G^1 G^2, the bottom C′, the operating grate, as herein shown and described, and coal or fuel chamber B, all said parts being constructed and combined to operate in the manner and for the purpose set forth.

In testimony of said invention I have hereunto set my hand.

GUSTAV ROSENQVIST.

Witnesses:
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