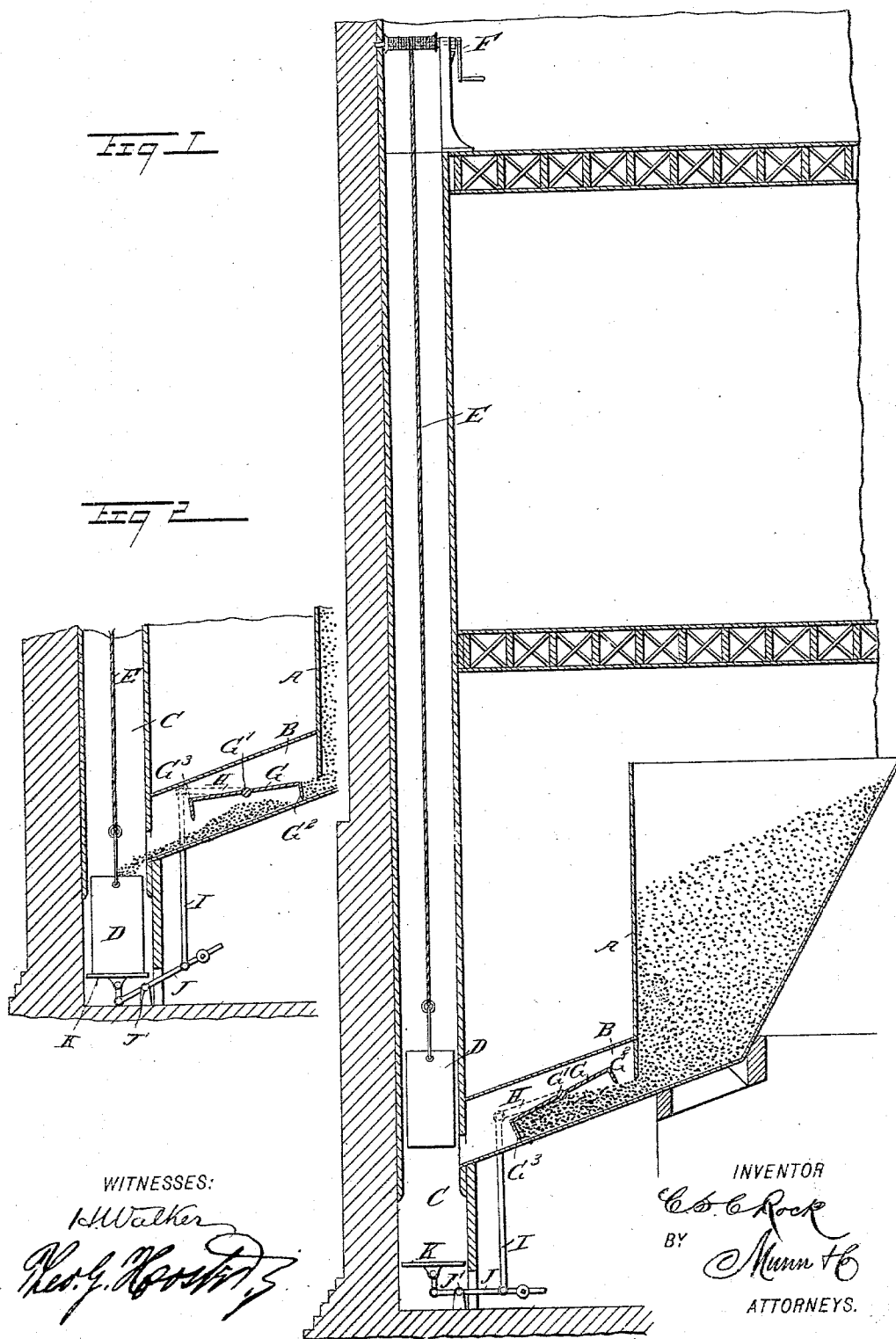


(No Model.)

C. S. C. ROCK.  
AUTOMATIC COAL DELIVERY.

No. 553,075.

Patented Jan. 14, 1896.



# UNITED STATES PATENT OFFICE.

CHARLES SHEPHERD CAMERON ROCK, OF NEW YORK, N. Y.

## AUTOMATIC COAL-DELIVERY.

SPECIFICATION forming part of Letters Patent No. 553,075, dated January 14, 1896.

Application filed February 28, 1895. Serial No. 540,121. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES SHEPHERD CAMERON ROCK, of New York city, in the county and State of New York, have invented a new and Improved Automatic Coal-Delivery, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved coal-delivery, more especially designed for use in dwellings, and arranged to enable a tenant to automatically fill a bucket with coal from a coal-bin located in the cellar and to hoist the bucket to the floor on which it is to be used.

The invention consists principally of a double-acting gate arranged in the chute of the coal-bin, a lever connection for actuating the said gate, and a bucket or other receptacle serving to actuate the said lever mechanism and adapted to receive a quantity of coal measured by the said gate.

The invention also consists of certain parts and details, and combinations of the same, as will be hereinafter fully described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both views.

Figure 1 is a sectional side elevation of the improvement as applied, and Fig. 2 is a like view of the same with the parts in a different position.

From the coal-bin A, usually located in the cellar of a dwelling, leads a chute B, opening into a shaft C built in the wall of the house, and extending to the floor or floors to which the coal is to be delivered. The chute B is adapted to discharge at its lower end into a bucket or other receptacle D, adapted to be raised and lowered in the shaft C by means of a suitable rope E and hoisting device F of any approved construction. In the chute B is arranged a double gate G, pivoted at or near its middle at G' on a shaft journaled in the sides of the chute B, the said gate being provided at its upper end with a cut-off flange G<sup>2</sup>, and at its lower end with a stop-flange G<sup>3</sup>, as plainly shown in the drawings. The outer end of the shaft forming the fulcrum G' of the gate G is provided with an arm H, connected by a link I with a lever J fulcrumed

at J' and extending into the lower end of the shaft C, the inner end of the said lever supporting a platform K adapted to receive the bucket D, to support the latter while the coal is passing from the chute B into the bucket, as illustrated in Fig. 2.

Now it will be seen by reference to Fig. 1, that the gate G normally is in such a position that its cut-off flange G<sup>2</sup> is raised above the floor or bottom of the chute B, while the other flange G<sup>3</sup> is down in contact with the bottom of the chute B, to stop the flow of coal from the bin A down the chute B under the gate G. The platform K is now in an uppermost position, and when a tenant desires a bucketful of coal he lowers the bucket from his floor by the rope E and hoisting device F, so that the bucket D finally rests on the platform K, and by its weight causes a downward movement of the platform K and a consequent upward swinging of the outer end of the lever J, whereby the link I moves the arm H upward to turn the shaft G' so as to impart a swinging motion to the gate G, the latter then passing into the position shown in Fig. 2. In doing so the cut-off flange G<sup>2</sup> cuts off the coal at or near the mouth of the bin A at the chute B, and permits the quantity of coal contained between the flanges G<sup>2</sup> and G<sup>3</sup> to slide down the chute into the bucket D, located with its open end at or below the bottom of the lower end of the chute B. When this measured quantity of coal has passed into the bucket D, the operator by actuating the hoisting device F, raises the filled bucket D to his floor for use. As soon as the filled bucket D moves away from the platform K, then the weight of the lever J causes a downward swinging of the outer end of the lever, whereby the link I pulls the arm H downward, so that the gate G swings back to its normal position, (shown in Fig. 1,) whereby the flange G<sup>3</sup> is brought down in contact with the bottom of the chute-wall and the upper flange G<sup>2</sup> again opens the mouth of the bin to permit coal from the bin to pass under the gate G. The above-described operation is again repeated as soon as the bucket is loaded in the manner above described.

It is understood that a single coal-bin may be provided with two or more chutes B, each leading to a shaft containing a bucket for the

different floors in the building, or separate bins, each provided with a chute leading to a shaft, may be provided, so that each tenant can get his own supply of coal from his bin.

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

1. An apparatus for discharging coal and consisting of a coal-containing hopper, a dis-  
10 charge chute connected thereto and extending outwardly therefrom, a valve or gate commanding the flow in the chute, a vertically extending link connected to the valve or gate and projecting downwardly therefrom, a lever  
15 to one arm of which the link is connected, a weight fixed to the end of the lever to which the link is connected, a table mounted on the remaining arm of the lever, and a vertically movable bucket capable of descending upon  
20 the table and of depressing the lever to operate the valve or gate, the chute being so arranged that its contents will be emptied into the bucket, substantially as described.

2. In an apparatus for discharging coal, the combination of a coal-containing hopper, a  
25 chute communicating with the same, a shaft extending transversely through the chute, a plate located within the chute and fixed to the said transverse shaft, the said plate being  
30 of a width equal to that of the chute and having at each of its extremities a downwardly-extending wing or projection, a crank arm fixed to the transverse shaft, a link pivoted to the crank arm, a lever to one arm of which  
35 the link is connected, a weight connected to that arm of the lever having the link, and a bucket capable of descending upon the remaining arm of the lever, the chute being adapted to deliver the coal directly into the  
40 bucket when so descended, substantially as described.

CHARLES SHEPHERD CAMERON ROCK.

Witnesses:

THEO. G. HOSTER,  
C. SEDGWICK.