

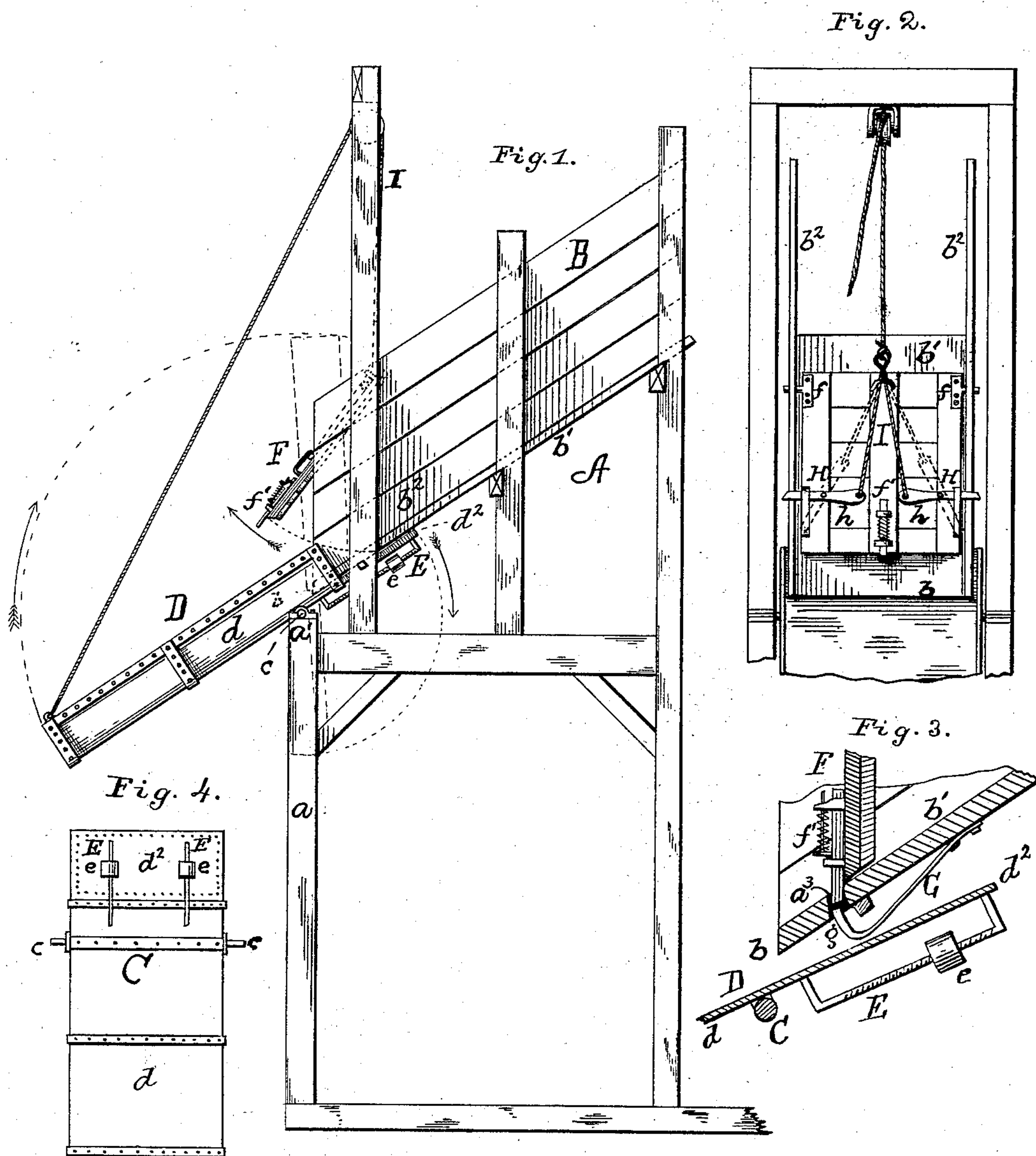
(No Model.)

H. CLAUSSEN & T. STAEBER.

COAL CHUTE.

No. 280,133.

Patented June 26, 1883.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY CLAUSSEN AND THEODOR STAEBER, OF ELLINWOOD, KANSAS.

COAL-CHUTE.

SPECIFICATION forming part of Letters Patent No. 280,133, dated June 26, 1883.

Application filed February 10, 1883. (No model.)

To all whom it may concern:

Be it known that we, HENRY CLAUSSEN and THEODOR STAEBER, of Ellinwood, in the county of Barton and State of Kansas, have invented certain new and useful Improvements in Coal-Chutes; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a side view of the device, showing the position of the parts when open. Fig. 2 is a front view, showing the gate and its attachments. Fig. 3 is an enlarged detail section, showing the method of holding and releasing the gate. Fig. 4 is a bottom view of the balancing apron.

This invention relates to chutes for discharge of coal, &c.

The invention consists in the construction hereinafter pointed out.

In the annexed drawings, the letter A indicates a chute-frame of ordinary construction, having the incline or way B. The tops of the front posts, a , of the frame are a little below and just in front of the lower edge, b , of the bottom b' of the incline B, and are provided with bearings a' . Working in these bearings a' are the journals c of a bar or shaft, C, which is secured to the bottom of a balancing apron, D, about one-third of its length from one end. The main portion d of this apron is made trough-like, its sides turning up, and these sides extend back of the bar C far enough to inclose the sides b^2 of the chute. Back from this trough d extends the bottom of the apron, forming a lip, d^2 . The portion of the apron back of its axis will ordinarily be made heavier in proportion than that portion in front; but to insure an equipoise two threaded rods, E, are attached to the bottom of the upper portion, and provided with weights e , which can be adjusted to any points on said rods. This apron can be swung on its axis and turned up out of the way, as indicated, when not in use, or swung down when the chute is to be discharged. In this latter position the upper portion turns under the chute, so that the coal or other substance falls surely into the apron. Within the

chute, a little distance back from its mouth, a gate, F, is hung by its pivots $f f$ to the top of the chute, and is held locked in a vertical position by a spring or gravity bolt, f' , which engages a hole, a^3 , in the bottom of the chute. Arranged under the chute is a spring, G, the head g of which is at the hole a^3 , but is held from contact with the bolt f' by the tension of the spring.

Secured to the outer face of the gate F are two catches, H H, the inner ends, $h h$, of which are the heavier, and to which are attached a branched cord, I, which passes over a pulley, and may be attached, for convenience, to the apron D, such cord being so long that the movements of the apron do not give any pull or affect the action of the latches.

For use the chute is filled with coal or other substance, with the gate F in a vertical position, and the apron, previously balanced by adjusting the weights, swung up. When it is designed to use the chute, the apron is swung down, as indicated in Fig. 1, the lip d^2 striking the spring G and forcing the head g against the bolt f' , which drives the latter out of the hole a^3 , and allows the weight of the coal to swing the gate F outward. As the catches H H pass beyond the edge of the chute the weighted inner ends, h , drop, and the outer ends, catching against the edge of the chute, hold the gate, as shown in Figs. 1 and 2, and allow free passage for the coal until all runs out.

To close the device it is only necessary to swing the apron up and pull on the cord I, when the catches are disengaged from the edge of the chute and the gate drops back into place, the bolt f again engaging the hole a^3 . The chute can then be filled and is ready again for use.

This device is useful and valuable in all places where it is desired to quickly dump coal, &c., especially on a railroad. When it is set, it is only necessary to drop the apron, and the discharge is quickly made. This apron, being balanced, requires but a very slight effort to move it, and it is only necessary for the fireman or engineer to reach up and give it a slight push and it will drop.

Having described the invention, what is claimed is—

1. In a discharge-chute, the balanced apron D, consisting of the trough d and lip d^2 , in

combination with spring G, having head *g*, and the swinging gate F, having the bolt *f'*, substantially as set forth.

2. The gate F, having the catches H H, provided with the weighted inner ends, *h h*, in combination with the chute B and the cord I, substantially as set forth.

3. The apron D, having the rods E and their adjustable weights *e*, in combination with the chute B, substantially as set forth.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

HENRY CLAUSSEN.
THEODOR STAEBER.

Witnesses:

DANIEL EARL HOGGIN,
JAMES M. STUART.