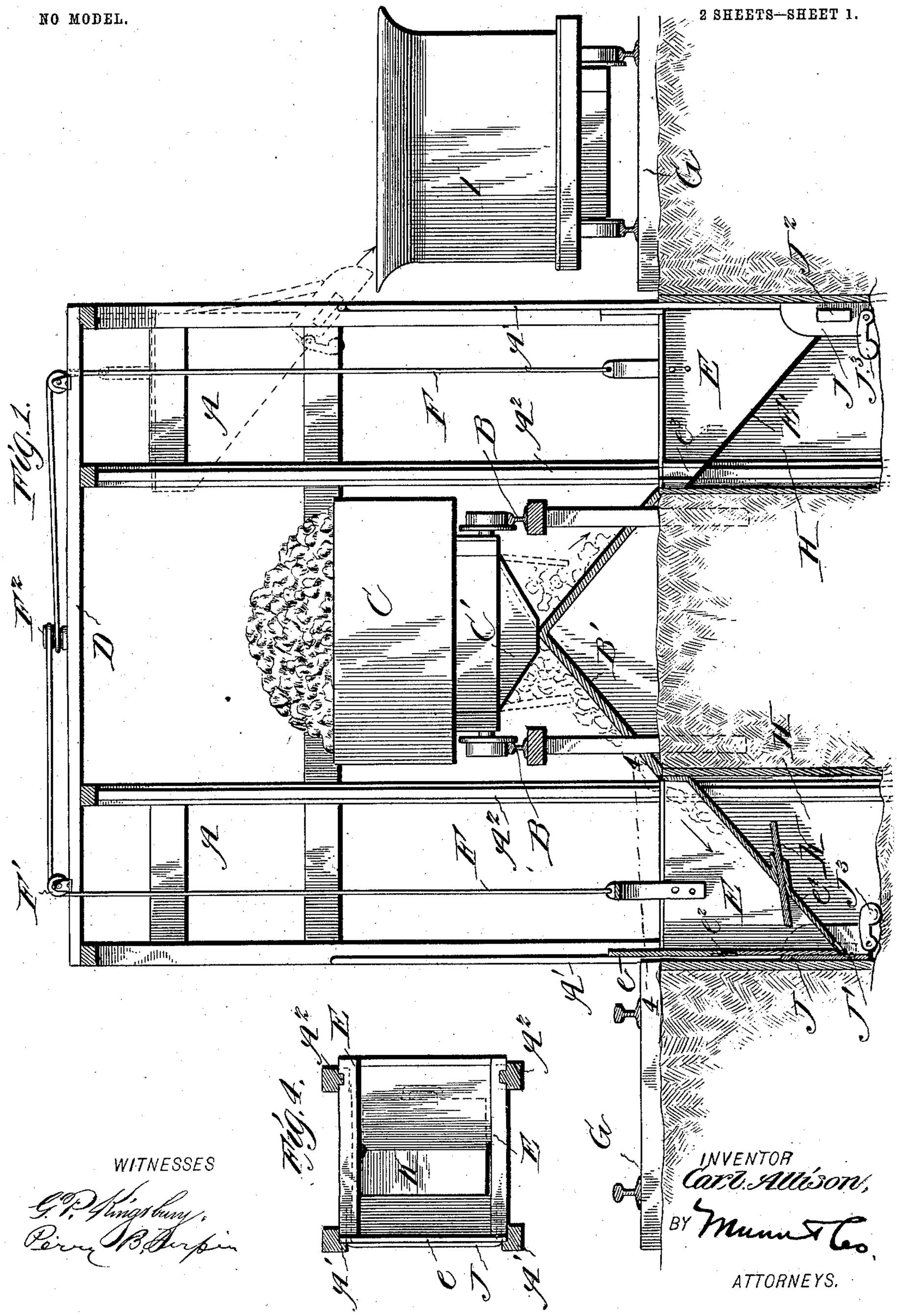
No. 748,331. PATENTED DEC. 29, 1903.

C. ALLISON.

COAL LOADING APPARATUS.

APPLICATION FILED MAR. 31, 1903.

NO MODEL. 2 SHEETS—SHEET 1.



WITNESSES

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

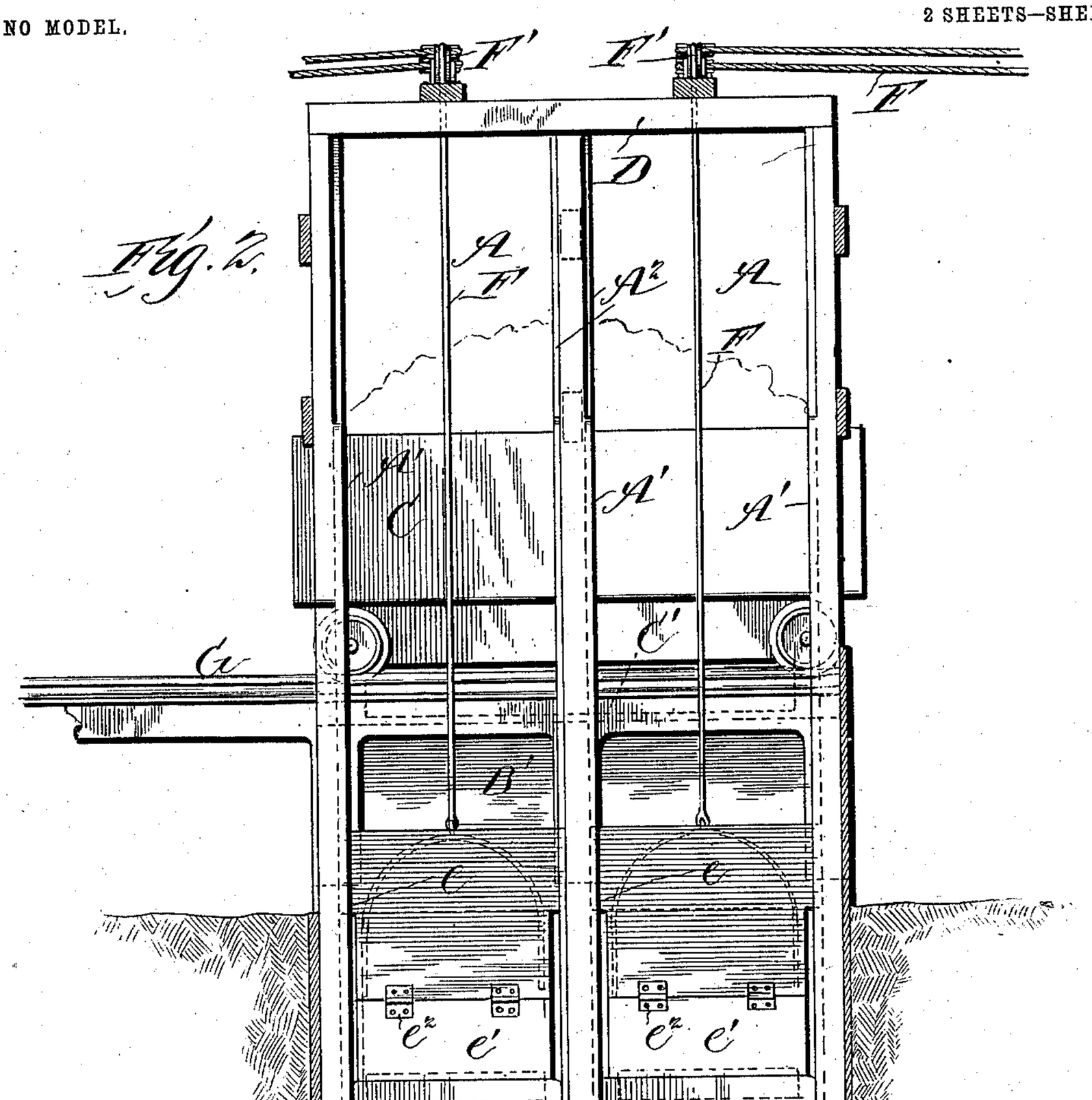
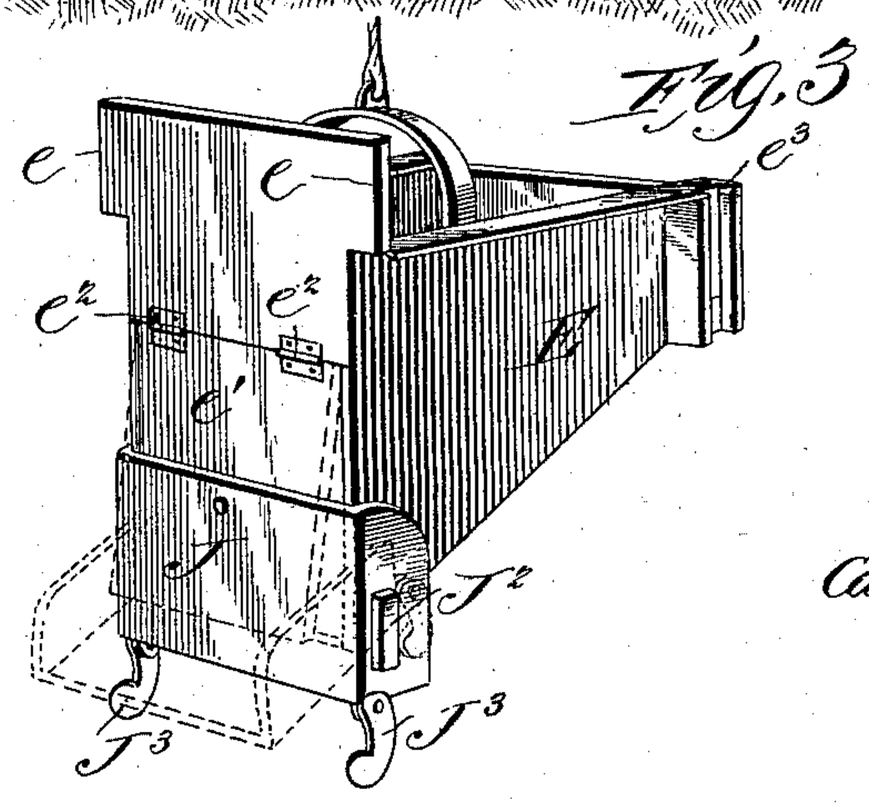


Fig. 3.



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UNITED STATES PATENT OFFICE.

CARL ALLISON, OF POCATELLO, IDAHO.

COAL-LOADING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 748,331, dated December 29, 1903.

Application filed March 31, 1903. Serial No. 150,397. (No model.)

To all whom it may concern:

Be it known that I, CARL ALLISON, a citizen of the United States, residing at Pocatello, in the county of Bannock and State of Idaho, have made certain new and useful Improvements in Coal-Loading Apparatus, of which the following is a specification.

My invention is an improvement in apparatus for use in the handling of coal, and has for an object, among others, to provide a simple construction whereby the coal may be dumped from the cars directly into buckets and the latter being elevated to dump into the tender of a locomotive or other receptacle; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a cross-sectional view of an apparatus embodying my invention. Fig. 2 is a side elevation of same. Fig. 3 is a detail perspective view of one of the buckets, and Fig. 4 is a detail cross-sectional view on about line 4 4 of Fig. 1.

In carrying out my invention I provide a suitable framing, including side sections A on opposite sides of the track B for the supply-cars C. These frames A may be alike and may be connected and braced together by means of cross-bars D at the top, as shown in Figs. 1 and 2. The frames A provide guides for the lifting and discharging buckets E, the latter being of a special construction, as presently described, and these buckets E are carried on cables or lines F, which extend up over suitable guides F′ and F² and thence to any suitable form of hoisting engine or power, so the buckets E can be forcibly lifted from the position shown in Fig. 1 to the dotted-line position indicated in the same figure.

The main tracks G extend alongside the main framing and are shown as on the ground-level with pits at H for the buckets, so the latter can be filled from the supply-cars C and without necessitating the undue elevation of the track B for said cars. Inclines B′ lead downwardly and outwardly from the track B toward the pits H, and the car C has a dumping bottom C′, as will be understood by the dotted lines, Fig. 1, so the contents of the car will discharge to the chutes B′ and be directed thereby into the buckets E, located within the pits, as shown in Fig. 1. It may be desirable to construct the dumping bottom of the car C so either side may be dumped independently of the other, as thereby the load may be discharged into one bucket or the other at either side of the track B, as may be desired.

In the general operation of the apparatus the supply-car C is run on the track B and its contents discharged to one side or both, as may be desired, into the buckets E, adjusted to receive the discharge from the car. The buckets E will then be elevated to the dotted-line position shown in Fig. 1 and will discharge their contents automatically into the tender I of the locomotive or any other receptacle which may be in or be adjusted to the position of the tender, as shown in Fig. 1. The buckets E are alike and are of a special construction, being provided with the inclined bottoms E′ to insure the discharge of all the coal outwardly when the bucket is in the position shown in Fig. 1 and having at their lower discharge ends the dumping-gates J, which are pivoted at J′ to the buckets E and may be turned up to the position shown in Fig. 1 to close the discharge-opening of the bucket E and will be held in such position by the engagement of the shoulders or projections J² on the gates J with the inner sides of the guide-rails A′, provided on the uprights of the frames A and extending from the lower ends of said uprights to a point slightly above the height of the tender I or other receptacle for the coal, so that the coal in the buckets when the buckets are raised to the position indicated in dotted lines, Fig. 1, will open the gates, as indicated in Fig. 1, overbalance the counterbalance-weights J³, so the coal may discharge from the buckets through the gates J and be directed by said gates into the tender I or other receptacle. At its upper end the bucket is provided at its outer side with the lateral wings *e*, which, like the shoulders or projections J², operate against the guide-rails A′ and steady the movements of the bucket until it almost reaches its uppermost position. The lower portion *e′* of the outer side of the bucket is hinged at *e*², so it can swing outwardly from its closed position to an open position, such as indicated in dotted lines, Fig. 1. At their inner sides the buckets E are provided with the upright grooves or channels *e*³, receiving

the inner rails A^2 of the frames A, as shown in Fig. 1.

A cut-off board K is movable through the inclined bottom E′ of the bucket E toward the front side thereof and may be operated when it is desired to partially empty the buckets, and it will be noticed the cut-offs may be adjusted rearwardly entirely clear of the buckets when it is desired to entirely empty the same.

In operation, it will be noticed, the pivoted counterbalance-weights J^3 will turn and lie upon the ground when the buckets are lowered into the pits, as shown in Fig. 1, and will also hang from the gates J when the buckets are elevated, as indicated in dotted lines, Fig. 1, and the gate J is opened. When the contents of the bucket have discharged, the weight of the bucket will tilt the gate J back to an upright position and the bucket and gate will readjust from the elevated position indicated in Fig. 1 to the full-line position shown in the same figure and be in position to receive another load of coal from the supply-car C.

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

1. In an apparatus for handling coal and the like, the combination of the track for the supply-car, the inclined ways on opposite sides of and below the track and leading to pits at the lower ends of said guideways, the frames above said pits and provided with the guide-rails A′, the buckets arranged to be lowered in the pits to receive coal from the guideways, and having at their outer sides hinged doors and at their lower ends pivoted gates provided with pivoted counterweights and having shoulders or projections to engage the guide-rails A′, the cut-off boards operating through the rear sides of said buckets, and the devices for suspending and operating the buckets, substantially as set forth.

2. An apparatus substantially as described comprising the framing having guideways for the movable buckets, and the movable buckets operating in said guideways and provided at their lower end with the pivoted gates and with the pivoted counterweights and with devices for engaging said guideways substantially as set forth.

3. An apparatus substantially as described comprising the main frame, the bucket movable therein and provided with a device for controlling its discharge and with the cut-off gate operating through the rear side of the bucket substantially as set forth.

4. An apparatus substantially as herein described comprising the elevated track, upright frame devices on opposite sides of the track, a cross connection above the track and connecting the upper ends of the upright frame devices, guides in said upright frame devices for the lifting-buckets, the lifting-buckets operating in said guides and movable from a point below the track, and inclined ways leading downwardly in opposite directions from below the track substantially as set forth.

5. In an apparatus for handling coal and the like, the combination of the upright guide-frame, the bucket movable therein, and provided with devices for controlling its discharge, and a cut-off gate movable across the said bucket, substantially as and for the purpose set forth.

CARL ALLISON.

Witnesses:
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