

1,014,467.

3 SHEETS—SHEET 1.

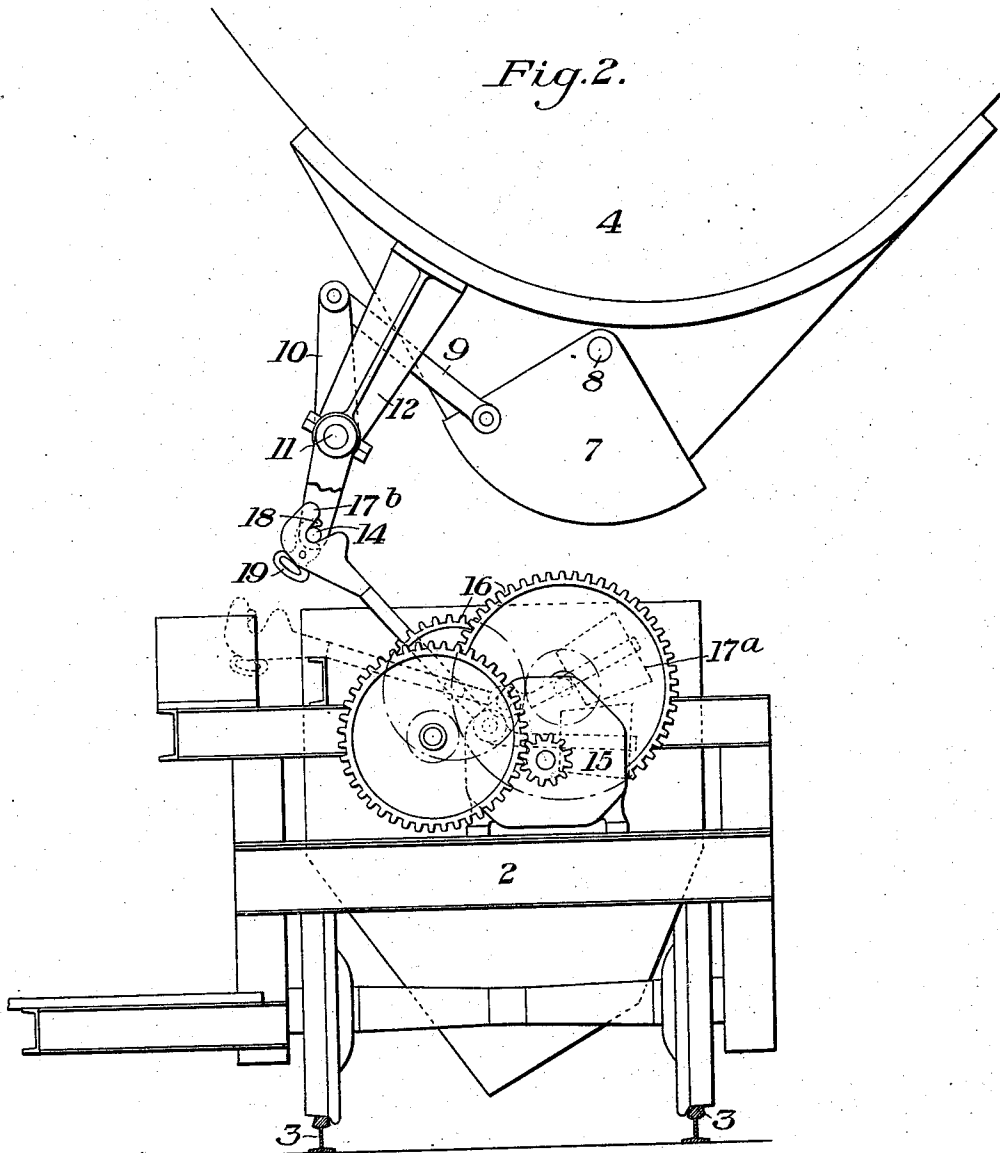


G. K. HAMFELDT.
CHARGING CAR AND OTHER RECEPTACLE.
APPLICATION FILED APR. 6, 1911.

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Patented Jan. 9, 1912.

3 SHEETS—SHEET 2.



WITNESSES

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W. F. Amariss

INVENTOR

G. K. Hamfeldt
by Robert R. Payne & Pinner,
his Attys.

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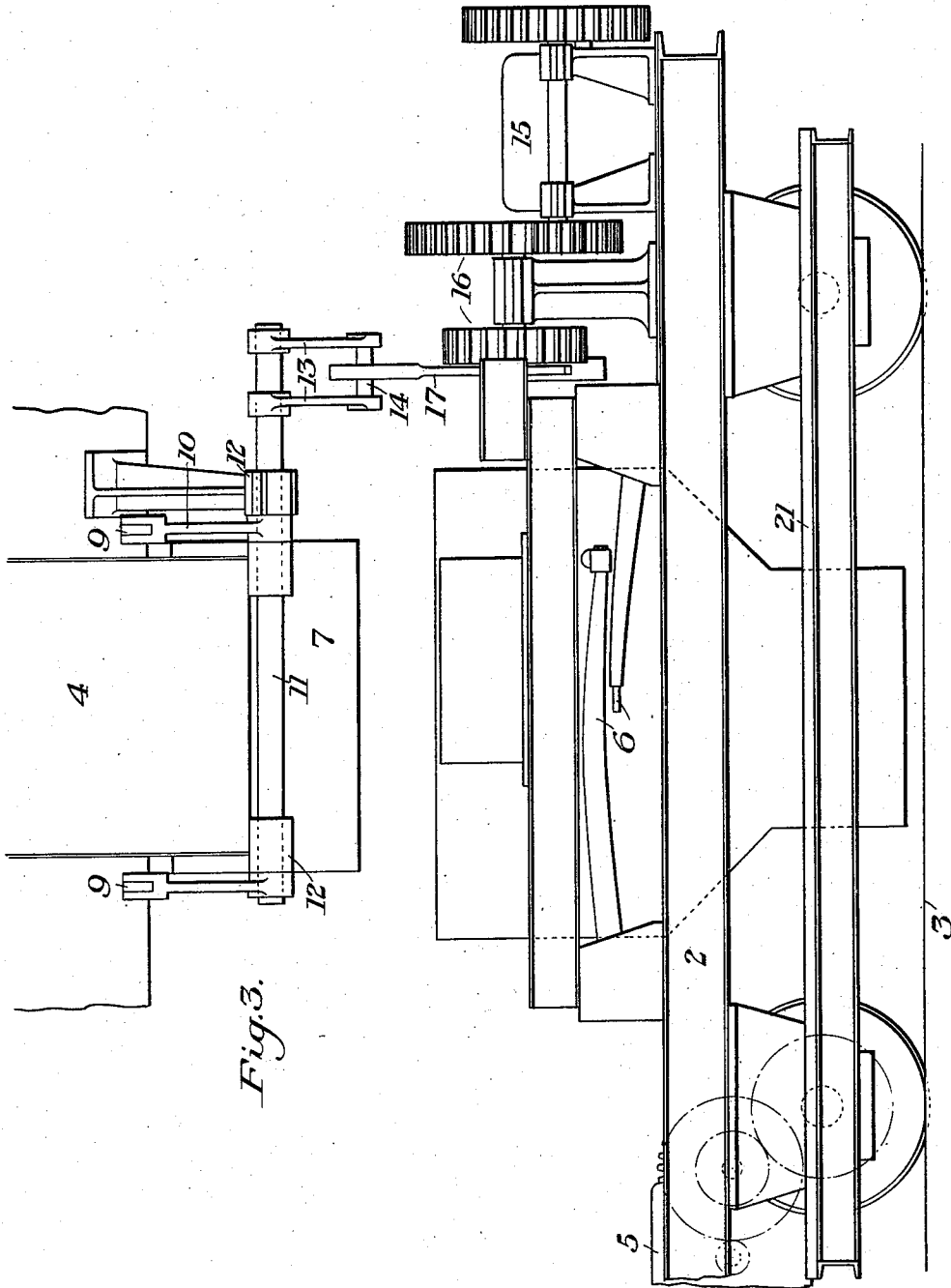


Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE K. HAMFELDT, OF KNEUTTINGEN, GERMANY.

CHARGING-CAR AND OTHER RECEPTACLE.

1,014,467.

Specification of Letters Patent.

Patented Jan. 9, 1912.

Application filed April 6, 1911. Serial No. 619,277.

To all whom it may concern:

Be it known that I, GEORGE K. HAMFELDT, of Kneuttingen, Lothringen, Germany, have invented a new and useful Improvement in
5 Charging-Cars and other Receptacles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

10 Figure 1 is a plan view showing apparatus embodying my invention; Fig. 2 is an end view of the same; and Fig. 3 is a side view, partly broken away.

My invention has relation to means for
15 discharging materials, such as ores, coke, etc., from a bin or receptacle through a gate controlling such discharge, into another receptacle, either stationary or movable; and is designed to provide apparatus of this
20 character having means whereby such discharge can be effectually regulated so that the desired quantities, either large or small, can be taken out of the bin or receptacle from time to time.

25 In the accompanying drawings, I have shown my invention applied in connection with a movable charging car.

In the drawings, the numeral 2 designates the frame of the car, which may be of
30 any well known or suitable character, which is mounted to travel on ways or rails 3 underneath the discharge of a stationary bin or receptacle 4. The car may be propelled by the driving motor 5, or in any
35 other suitable manner. It may also be provided with scale means, of well known character, such as indicated at 6, whereby the material loaded into the car receptacle can be weighed, and thus enable the amount of
40 the loaded material to be more minutely controlled. Cars having weighing mechanism suitable for the purpose are well known in the art, and need not be specifically described.

45 The discharge of the bin 4 is controlled by a swinging gate 7, which is pivoted to the discharge portion of the bin at 8. Connected to the gate is a link 9, the opposite end of which is connected to an arm 10 of
50 a rock shaft 11, which is journaled in suitable bearings 12 supported from the bin 4, or in any other suitable manner. This shaft is extended at one end, and is provided with lever arms 13 rigidly secured thereto, and
55 which are connected by a connecting pin 14. By engaging this pin to impart a rotary

movement to the shaft 11, the gate 7 can be moved to a greater or less extent, depending on the amount of travel of the said pin. To obtain this motion, the car is shown as
60 provided with an electric motor 15, which drives a train of gears 16.

17 is a connecting arm, which is eccentrically connected either to the last gear train 16, or to a rotary member driven by said
65 gear train. This arm is provided with a counterweight 17^a and has its free end formed with a hook 17^b which is adapted to engage the connecting pin 14 in the manner best shown in Fig. 2. This hook is provided with a latch 18, which is adapted to
70 close over and partially around the connecting pin, and which is actuated by a handle 19. When this handle is pushed, the latch protrudes from the hook, and when it is
75 pulled, the latch recedes within the hook. The purpose of this latch is to hold the hook to the connecting pin so that it cannot slip from said pin when so engaged. When, however, the handle is pulled, the latch is
80 withdrawn, and the hook can then be readily disengaged from the pin. The counterweight 17^a acts to normally hold the connecting arm in a position to rest on a
85 stationary part of the car, as shown in Fig. 2 in dotted lines. By counterbalancing the arm in this manner, the rotation of the gear can be effected with the arm in disengaged position without any injury to the hook. In other words, the device is fool-proof.
90 Should the motor be accidentally started, or should the position of the hook be such that it does not engage the connecting pin, the rotation of the member to which the arm is connected can be started slowly, and the
95 hook moved up to engage the pin. The motor 15 can be controlled from any desired point.

In Fig. 1 I have shown a controller 20
100 mounted on an operator's platform 21. 22 indicates a controller also mounted on this platform for controlling the motor 5. By means of the controller 22 the car can be brought with its receptacle into the proper
105 position to receive the discharge from the bin 4, and by the controller 20, operating through the devices described, the gate 7 may be opened to admit any desired quantity of material to be discharged into the receptacle of the car.
110

It is understood that I do not desire to limit myself to the details of construction

and arrangement of the parts which I have herein shown and described, and that various changes may be made therein without departing from the spirit and scope of my invention as defined in the appended claims. Thus, instead of electric motors for operating the car and the gate, any other suitable form of motors may be employed.

What I claim is:—

10 1. The combination with a bin or receptacle, having a movable member controlling its discharge, of another receptacle to receive material from said discharge, a motor, and a movable arm operated by the motor
15 and adapted to effect a varying movement of the said member; substantially as described.

20 2. The combination with a bin or receptacle having a movable discharge-controlling member, a rock shaft connected to said member and having an arm, another receptacle arranged to receive the material discharged by the first receptacle, a motor, and an oscillating, hooked arm actuated by said
25 motor and arranged to engage the arm of said shaft; substantially as described.

30 3. The combination with a bin or receptacle having a movable member controlling its discharge, a rock shaft connected thereto and having an arm, a motor, and a swinging counterweighted arm actuated by the motor and arranged to engage the first named arm; substantially as described.

4. In apparatus of the character de-

scribed, a bin or receptacle having a discharge controlling gate, a rock shaft connected to said gate and having an arm provided with a pin member, a motor, and an arm actuated by the motor, said arm having a hook portion for engagement with the pin member; substantially as described.

5. In apparatus of the character described, a bin or receptacle having a discharge controlling gate, a rock shaft connected to said gate and having an arm provided with a pin member, a motor, and an arm actuated by the motor, said arm having a hook portion for engagement with the pin member; said hook portion having a latch device; substantially as described.

6. The combination with a bin or receptacle having a movable member controlling its discharge, of another receptacle to receive the material from said discharge, a power-operated motor, connections actuated by the motor to be moved into engagement with the said movable member, and a controller for the motor whereby the extent of movement of the said connections and thereby of the movable member may be varied, substantially as described.

In testimony whereof, I have hereunto set my hand.

GEORGE K. HAMFELDT.

Witnesses:

AUGUST OOSTERMAN,
FERDINAND HATZMANN.