

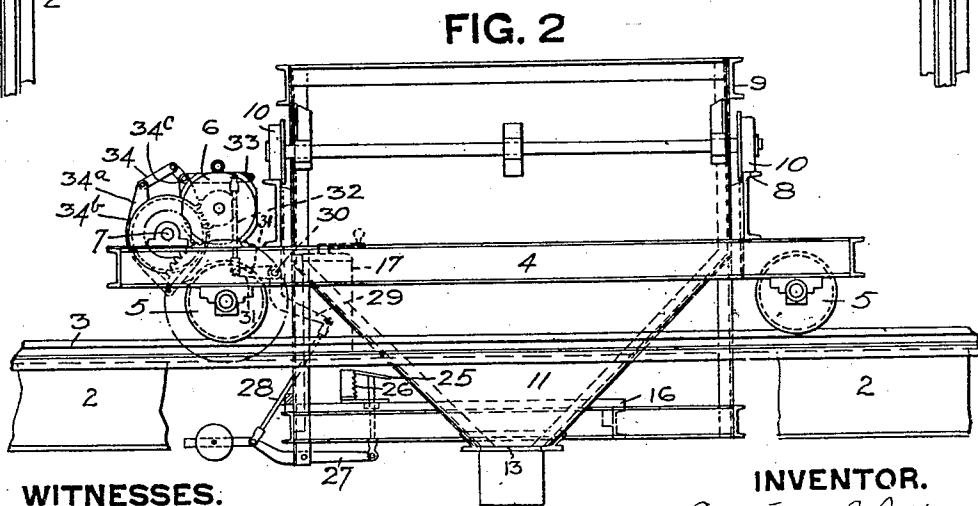
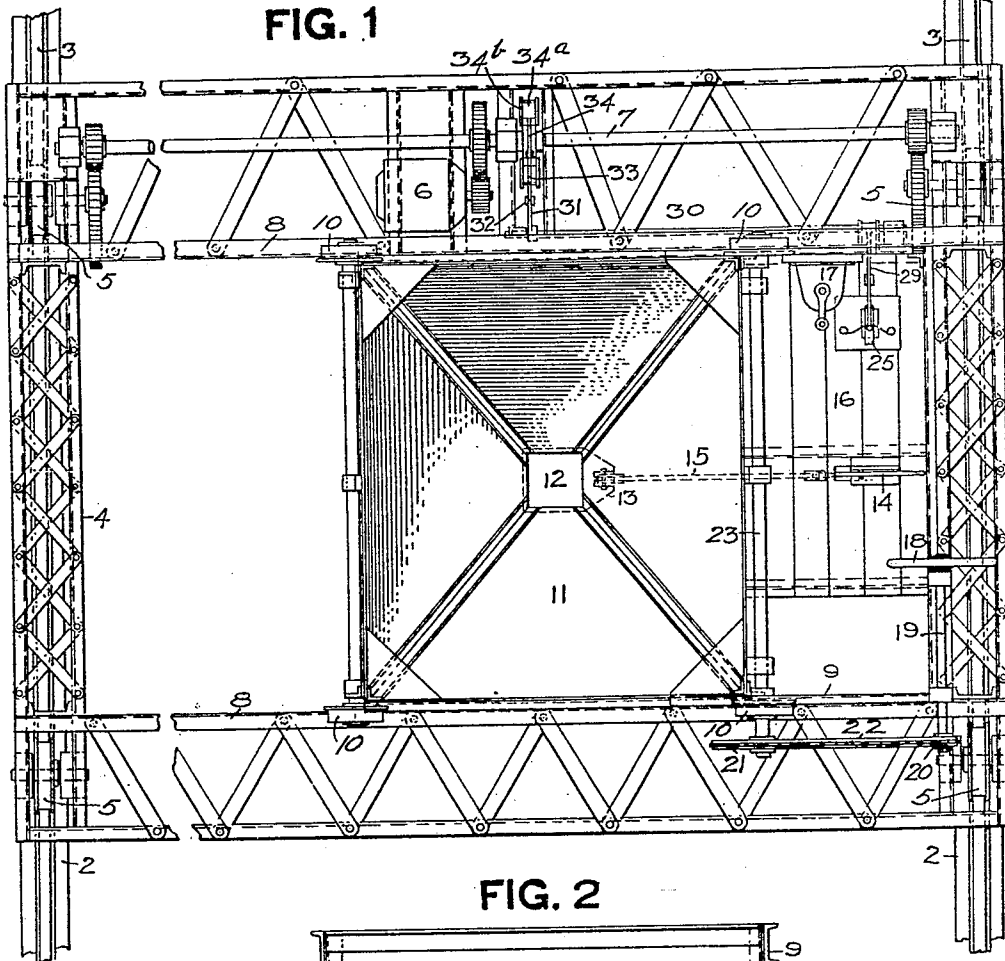
Draftsman

No. 840,863.

PATENTED JAN. 8, 1907.

W. J. PATTERSON.
TRAVELING HOPPER.
APPLICATION FILED JULY 13, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

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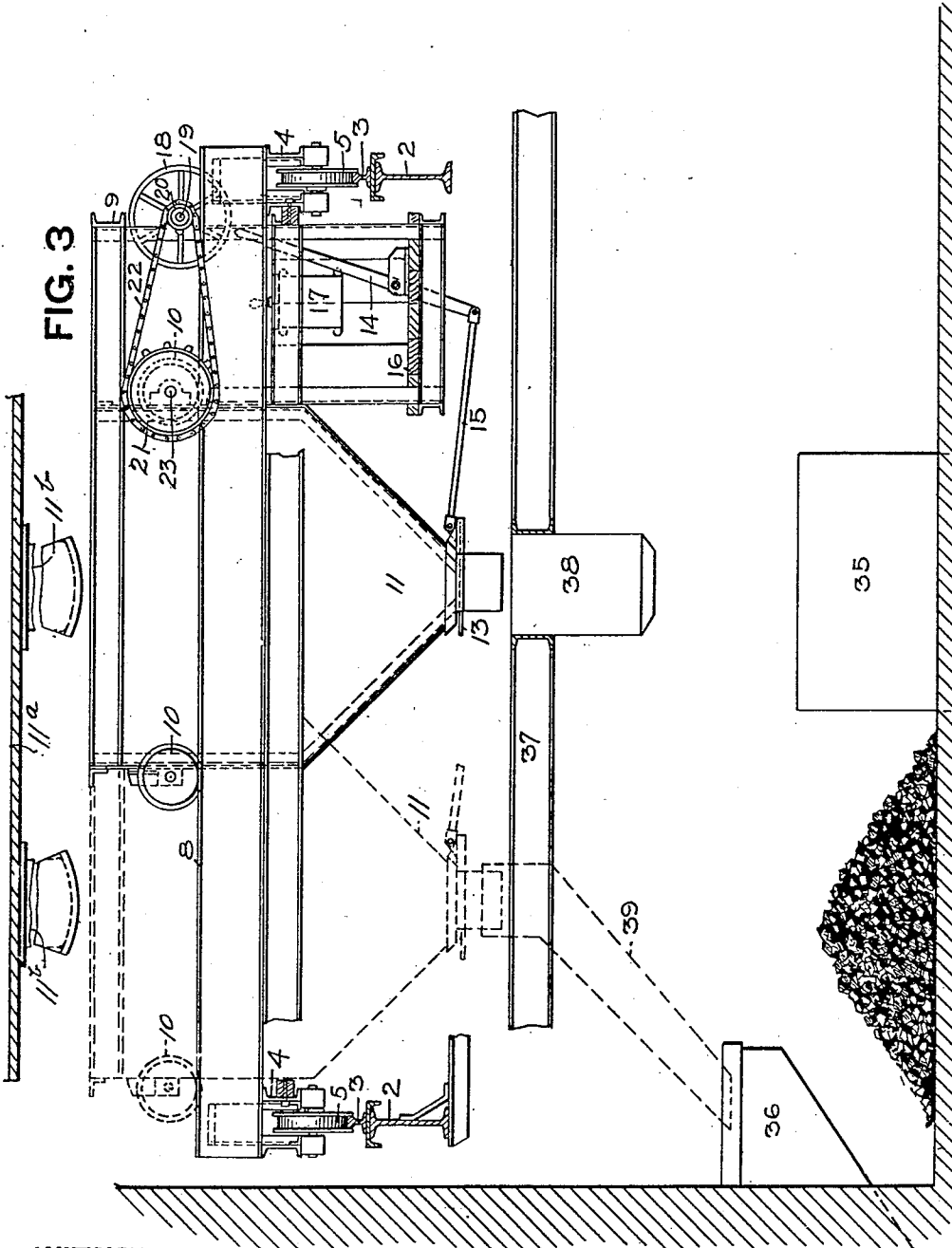
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2 SHEETS—SHEET 2.

See revised in Specification



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UNITED STATES PATENT OFFICE.

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TRAVELING HOPPER.

No. 840,863.

Specification of Letters Patent.

Patented Jan. 8, 1907.

Application filed July 13, 1906. Serial No. 325,984.

To all whom it may concern:

Be it known that I, WILLIAM J. PATTERSON, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Traveling Hoppers; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a traveling hopper for feeding coal or other material to different points.

The object of my invention is to provide a traveling hopper which may be brought into position beneath the bottom of a suitable supply-bin and moved from one to the other of the openings in said supply-bin transversely thereof, so as to receive the coal or other material from the different openings, which renders it possible to draw off the material more thoroughly than where the hopper is arranged stationary beneath a single line of openings in the bin extending longitudinally thereof.

Another object of my invention is to provide a traveling hopper so that when used in conjunction with a boiler-house and a gas-producer house the coal may be discharged into the producers beneath or onto the floor beside the producers or into the stoker-hoppers arranged along the side of the boiler-house.

To these ends my invention comprises, generally stated, in connection with a suitable overhead frame, a traveling carriage moving longitudinally of said frame and a traveling hopper on said carriage and mechanism for moving said hopper transversely thereof so as to discharge the material from the hopper at any desired point, either longitudinally of the frame or transversely thereof.

In the accompanying drawings, Figure 1 is a plan view of my improved hopper. Fig. 2 is an end view of the same. Fig. 3 is a side view showing the invention as applied to a boiler and gas-producer house.

Like numerals indicate like parts.

In the drawings the numeral 2 designates a suitable framework, which supports the track 3, upon which is mounted the traveling frame 4, mounted on the wheels 5. This traveling frame 4 is driven by a suitable motor 6, which drives the shaft 7, connected up by suitable gearing to the wheels 5.

Upon the traveling frame 4 is the trans-

verse track 8, upon which is mounted the hopper-carriage 9, supported by the wheels 10. The hopper proper, 11, may be of any suitable construction, having the discharge-opening 12 controlled by the sliding gate 13, which is opened and closed by means of the lever 14, connected up to said gate by the rod 15. Above the hopper is a bin 11^a, with two or more openings 11^b for the discharge of the coal or other material.

Carried by the hopper-carriage 9 is the platform 16, upon which the operator stands to control the movement of the traveling frame 4 and the hopper-carriage 9. Upon said platform 16 is the controller 17, connected up with the motor 6 and by means of which said motor is controlled. The lever 14, by means of which the hopper-gate 13 is operated, is also mounted on the platform 16, so as to be within reach of the operator.

The hopper-carriage 9 is driven to and fro upon the track 8 by means of the hand-wheel 18 on the shaft 19. Mounted at the end of the shaft 19 is the sprocket-wheel 20, which is connected up with the driving-wheel 21 by means of the chain 22. The driving-wheel 21 is mounted on the shaft 23, carrying the rear wheels 10 of the hopper-carriage. In this manner the hopper-carriage is moved along the track 8 transversely of the frame 4.

Mounted on the platform 16 is a foot-lever 25, which engages the ratchet 26. This foot-lever is connected to the weighted arm 27, which in turn is connected to rod 28; said rod connecting the arm 29 on the shaft 30. A crank-arm 31 is connected to the shaft 30 and to the rod 32. The rod 32 is connected to the arm 33 on the pivot 34^c and is connected to the link 34. A brake-band 34^a passes around the brake-wheel 34^b, said band being connected to the link 34 and pivoted at 34^c. I thus provide for the braking of the shaft 7 and controlling the travel of the traveling frame 4.

In Fig. 3 I have shown my improved hopper as used in connection with a boiler-house and a gas-producer house, the producers being arranged along beneath the traveling frame, while the stoker-hoppers 36 of the boilers are arranged along at the side beyond the producers. Below the traveling hopper is the frame 37, which carries the stationary hoppers 38 to feed the coal to the gas-pro-

ducers 35, and the inclined chutes or hoppers 39, which lead over to the stoker-hoppers 36.

When my improved traveling hopper is in use, the operator from his position on the platform 16 by operating the controller 17 brings the traveling frame 4 into the proper position with reference to the gas-producer that is to receive the coal, and then by operating the hand-wheel 18 the hopper-carriage is brought with its discharge-outlet over the stationary hopper 38 and its mouth in line with one of the openings 11^b of the bin 11^a. The operator then by operating the lever 14 opens the slide-gate in the traveling hopper and permits the coal to be discharged into the hopper 38, whence it is directed into the gas-producer 35. If then it is desired to discharge coal into the stoker-hoppers 36, the operator closes the gate 13 of the hopper, moves the frame 4 up in line with the stoker, and then by turning the hand-wheel 18 moves the hopper-carriage over into the position indicated in dotted lines, Fig. 3, where the hopper will be in line with the inclined chute 39. The lever 14 is then thrown to open the gate 13, and the coal is discharged into the inclined chute 39 and thence into the stoker-hopper 36.

In case it is desired to discharge the coal on the boiler-floor to one side of the producers it is only necessary to move the traveling hopper over into such position, whereupon the gate being opened the coal is discharged onto the floor.

When it is desired to unload a bin where my improved hopper is in use, it will be seen that the bin may have a number of openings in its bottom and that the hopper-carriage may be moved over under any of these openings so as to draw the material from different points in the bin, and thus clear it more readily than where a stationary hopper is employed, which merely draws the material from one line of openings in the bin. This is a great point of advantage in drawing off material from bins of large area.

What I claim is—

1. In apparatus for handling coal, or like material, the combination with a suitable structure, of an overhead traveling frame

supported thereby, a motor, connections between said motor and said frame, a transversely-traveling hopper-carriage carried by said frame, a platform on said hopper-carriage, a controller on said platform, connections between said controller and said motor, and means accessible from said platform to drive said hopper-carriage.

2. In apparatus for handling coal, or like material, the combination with a suitable structure, of an overhead traveling frame supported thereby, a motor, connections between said motor and said frame, a transversely-traveling hopper-carriage carried by said frame, a platform on said hopper-carriage, a controller on said platform, connections between said controller and said motor, a hand-wheel mounted on said carriage, and connections between said hand-wheel and said carriage to drive the same.

3. In apparatus for handling coal, or like material, the combination with a suitable structure, of an overhead traveling frame supported thereby, a motor, connections between said motor and said frame, a transversely-traveling hopper carried by said frame, a platform on said hopper, a controller on said platform, connections between said controller and said motor, a hand-wheel mounted on said carriage, connections between said hand-wheel and said carriage to drive the same, a gate controlling the opening in said hopper, and a lever on said platform to operate said gate.

4. In apparatus for handling coal, or like material, the combination with a suitable structure, of an overhead traveling frame supported thereby, a storage-bin above said frame having two or more discharge-openings in the bottom thereof and arranged transversely thereof, and a transversely-traveling hopper carried by said frame beneath said bin.

In testimony whereof I, the said WILLIAM J. PATTERSON, have hereunto set my hand.

WILLIAM J. PATTERSON.

Witnesses:

ROBERT C. TOTTEN,
J. R. KELLER.