

No. 772,183.

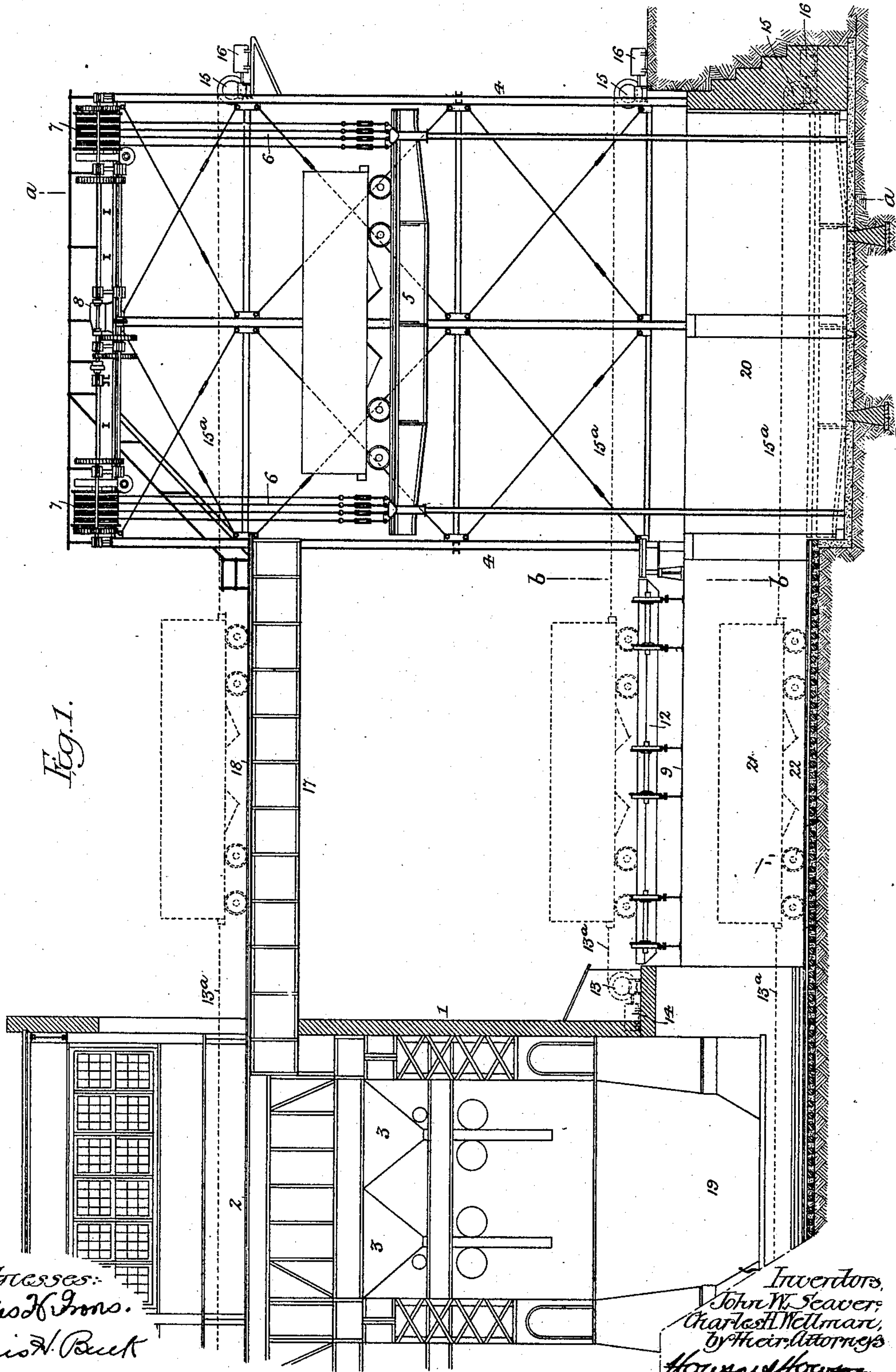
PATENTED OCT. 11, 1904.

J. W. SEAVER & C. H. WELLMAN.  
TRANSFER CAR AND ELEVATOR FOR POWER PLANTS.

APPLICATION FILED FEB. 29, 1904.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses:  
Titus H. Irons.  
Louis H. Beck

Inventors,  
John W. Seaver,  
Charles H. Wellman,  
by their attorneys  
Howard & Howard

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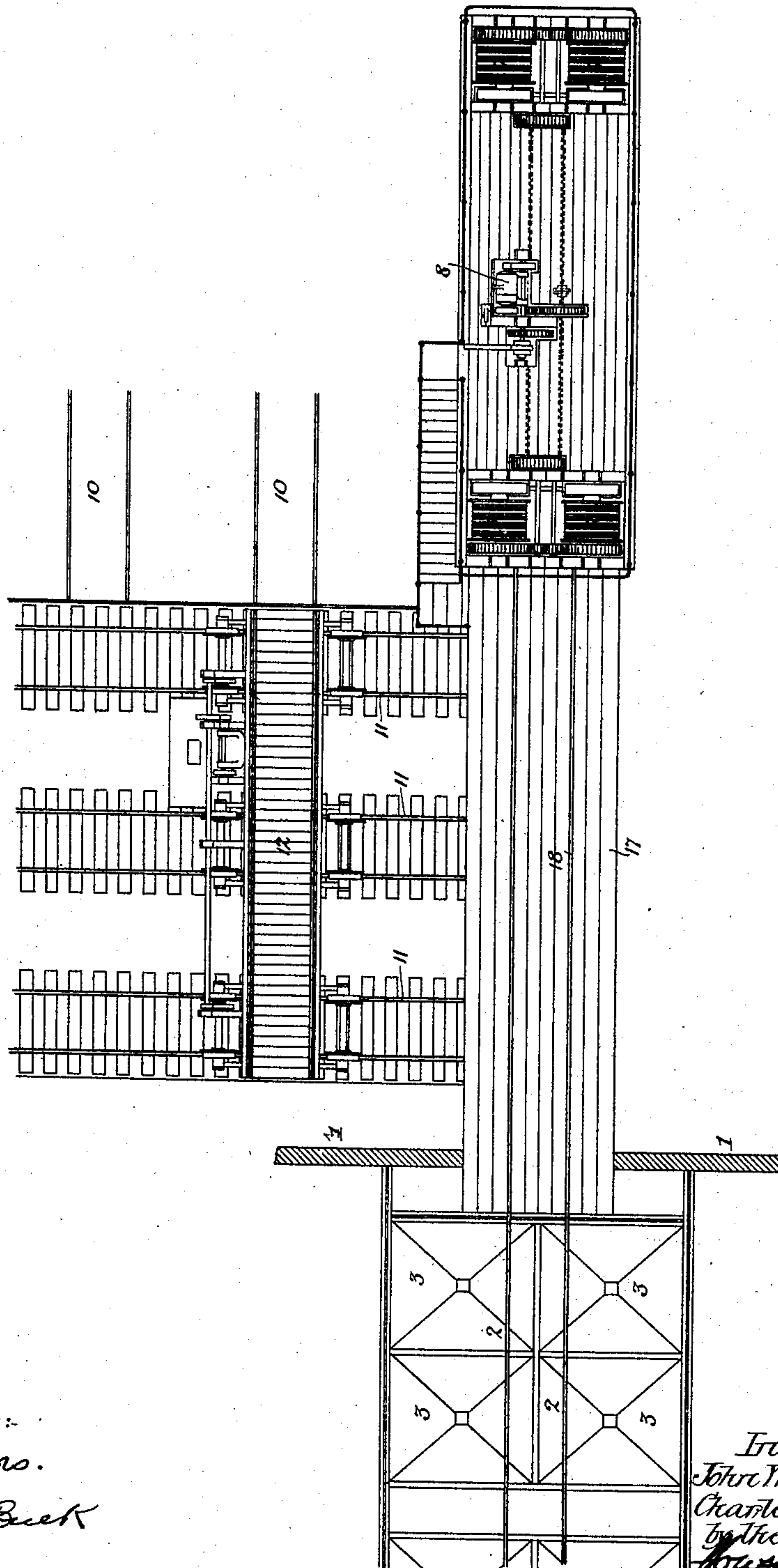
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3 SHEETS—SHEET 2.

*Fig. 2.*



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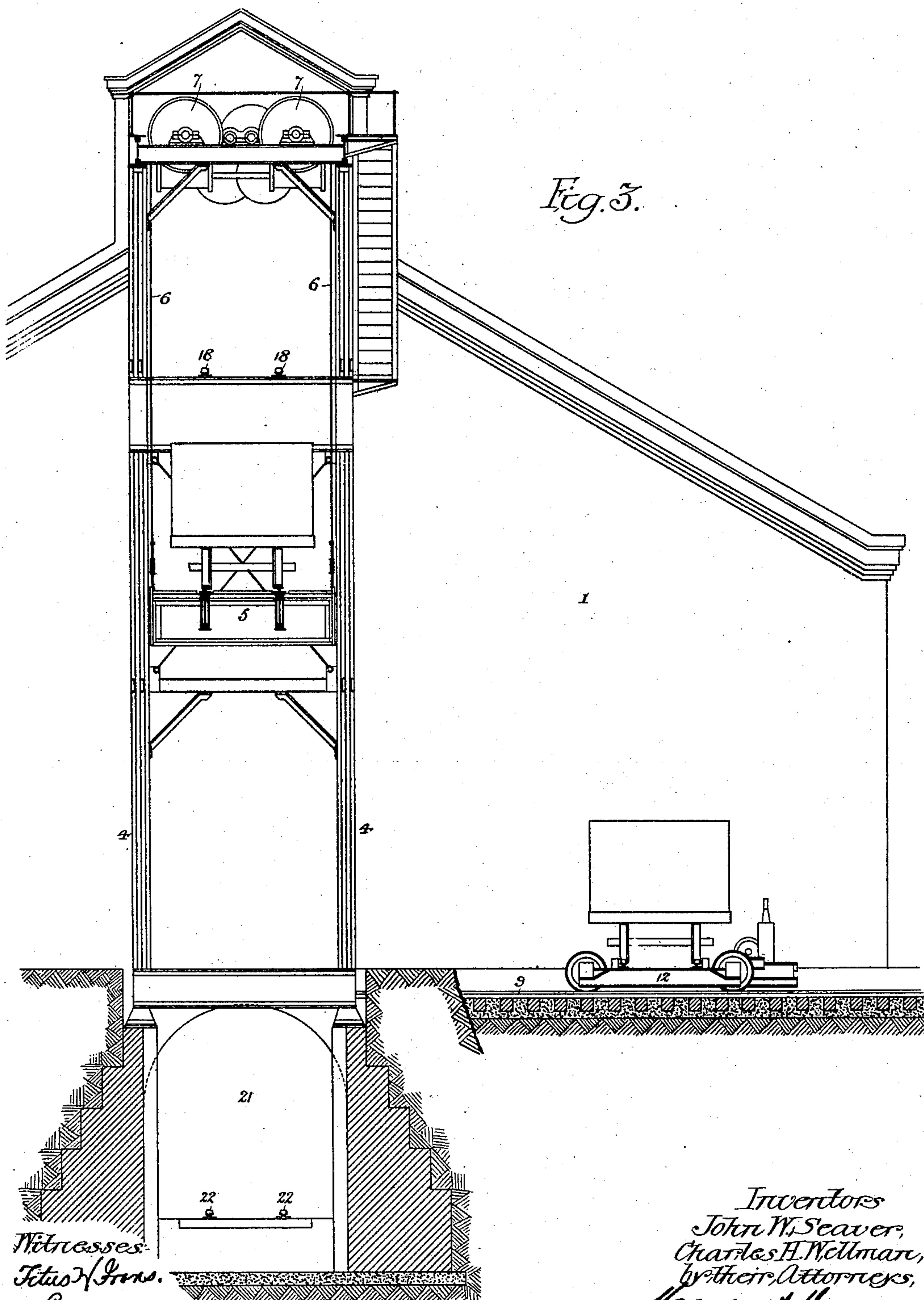
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NO MODEL.

3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

JOHN W. SEAVER AND CHARLES H. WELLMAN, OF CLEVELAND, OHIO,  
ASSIGNORS TO THE WELLMAN-SEAVER-MORGAN COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

## TRANSFER-CAR AND ELEVATOR FOR POWER PLANTS.

SPECIFICATION forming part of Letters Patent No. 772,183, dated October 11, 1904.

Application filed February 29, 1904. Serial No. 195,879. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN W. SEAVER and CHARLES H. WELLMAN, citizens of the United States, and residents of Cleveland, Ohio, have  
5 invented certain Improvements in Transfer-Cars and Elevators for Power Plants, of which the following is a specification.

The object of our invention is to provide  
10 means for economically and expeditiously delivering coal to or removing ashes from a power plant or other establishment using coal in large quantities and to which the coal is delivered at an elevated point so as to be fed by gravity to the point or points at which it is to  
15 be used. This object we obtain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal section of a structure embodying our invention. Fig. 2 is a  
20 top or plan view of the same; and Fig. 3 is a transverse section on a larger scale, partly on the line *a a*, Fig. 1, and partly on the line *b b*, Fig. 1.

1 represents a power plant or other establishment to be supplied with coal, this plant  
25 having an elevated trackway 2 for the reception of the cars carrying the coal, which is dumped from said cars into bins 3 for supplying automatic stokers or for directing the coal  
30 to other points at which it is to be used. In front of this building is erected an elevator-tower 4, provided with a platform or lift 5, which is suspended by suitable cables 6 at each corner from drums 7, the shafts of these drums  
35 being adapted to bearings on an upper deck of the tower 4 and driven by means of any appropriate system of gearing from an electric or other motor 8, located on said upper deck, whereby the platform 5 can be raised or low-  
40 ered under control of an attendant in charge of the motor 8.

Between the power-house and the elevator-tower 4 is a ditch or gangway 9, sunken in respect to the track or tracks 10, which supply the loaded cars and receive the empty cars

for removal, and upon tracks 11 in this ditch or sunken gangway 9 runs a transfer-car 12, provided with a suitable motor and gearing whereby said transfer-car can be driven, the car having a track for receiving the loaded  
50 cars from or delivering the empty cars to the track or tracks 10.

Adjacent to the front of the power-house 1 and in line with the longitudinal center of the elevator-tower 4 is a hauling-drum 13, operated by an electric or other motor 14, and at  
55 the outer side of the elevator-tower 4 is a similar drum 15, operated by a motor 16, each of these drums having a hauling-rope, that of the drum 13 being represented at 13<sup>a</sup> and  
60 that of the drum 15 being represented at 15<sup>a</sup>.

Running from the upper portion of the elevator-tower 4 to the power-house 1 on a level with the elevated trackway 2 therein is a  
65 bridge 17, provided with a track 18, and the power-house and elevator are provided at this bridge-level with the hauling devices, which are a duplicate of those employed at the ground-level.

Extending beneath the gangway 9 from the  
70 cellar or basement 19 of the power-house to the open foundation 20 of the elevator-tower is a tunnel 21, having a track 22, which terminates at the elevator-tower, but extends into the basement of the power-house, and at this  
75 lower track-level there are also provided hauling devices similar to those at the main level.

A loaded car being run from one of the tracks 10 onto the transfer-car 12, the latter is moved into position in line longitudinally  
80 with the elevator-tower, and the platform 5, being lowered to the main level, the loaded car is connected to the hauling-rope 15<sup>a</sup> at that level and pulled onto the platform 5 and then disconnected prior to the elevation of the plat-  
85 form 5 to the upper level in line with the bridge 17. The upper-level hauling-rope 13<sup>a</sup> is then connected to the car, and the latter is pulled across the bridge 17 and into the power-house, and after the dumping of its contents  
90



it is returned by the upper-level hauling-rope 15<sup>a</sup> to the platform 5, lowered to the main level, pulled by the main-level hauling-rope 13<sup>a</sup> onto the transfer-car again, and by the latter carried back to one of the tracks 10 and run off onto the same.

In order to discharge the ashes from the basement of the power-house, the ash-truck is drawn by the low-level hauling-rope 15<sup>a</sup> onto the platform 5 after the latter has been lowered to the bottom of the tower, and after the platform has been raised to the main level the car is drawn by the main-level hauling-rope 13<sup>a</sup> onto the transfer-car 12 and thence conveyed to one of the tracks 10, the empty car being returned by a reversal of these operations.

By means of a structure such as described the coal and ashes can be handled with great expedition and economy without any exhausting physical labor—in fact, without any attendance other than that required to connect the various ropes to the cars and operate the different motors.

Of course it will be evident that in carrying out our invention the elevator-tower could be erected directly against the front of the power-house and the gangway for the transfer-car could be placed outside of the tower, the bridge 17 being dispensed with; but the construction shown is preferred because it does not obstruct access to any part of the building.

Various types of elevator can also be employed without departing from the essential characteristics of our invention; but we prefer the use of the platform 5, with hoisting ropes or cables at the four corners leading to drums at the top of the tower, as such construction does not interfere in any way with the free movement of the cars onto and from the platform 5.

Having thus described our invention, we claim and desire to secure by Letters Patent—

1. The combination of a power-house or other structure into which a car is to be run at a high level, with an elevator-tower having a vertically-movable platform, a transverse gangway, and a transfer-car running in said gangway and serving to receive cars from or deliver them to either the platform of the elevator or service-tracks beyond the same, substantially as specified.

2. The combination of a power-house or other structure into which a car is to be run at a high level, with an elevator-tower having a vertically-movable platform, a transverse gangway, and a transfer-car running in said gangway and serving to receive cars from or deliver them to either the platform of the elevator or service-tracks beyond the same, said transverse gangway being sunken in respect to the latter tracks and to the elevator-plat-

form when the latter is at its normal level, substantially as specified.

3. The combination of a power-house or other structure into which a car is to be run at a high level, an elevator-tower located in front of said structure but at a distance therefrom, a transverse gangway between the power-house and the elevator-tower, a bridge connecting the elevator-tower with the high-level track in the power-house, a vertically-movable elevator-platform, and a transfer-car running in the gangway, and serving to receive cars from or deliver them to either the platform of the elevator or service-tracks beyond the same, substantially as specified.

4. The combination of a power-house or other structure into which a car is to be run at a high level, an elevator-tower located in front of said structure but at a distance therefrom, a transverse gangway between the power-house and the elevator-tower, a bridge connecting the elevator-tower with the high-level track in the power-house, a vertically-movable elevator-platform, and a transfer-car running in the gangway, and serving to receive cars from or deliver them to either the platform of the elevator or service-tracks beyond the same, said transverse gangway being sunken in respect to the latter tracks and to the elevator-platform when the latter is at its normal level, substantially as specified.

5. The combination of a power-house or other structure into which a car is to be run at a high level, an elevator-tower having a vertically-movable platform, a transverse gangway, a transfer-car running in said gangway, and two independent sets of hauling devices in line longitudinally with the elevator-tower, one serving to haul cars onto the platform of the elevator, and the other to effect a reverse movement of said cars, substantially as specified.

6. The combination of a power plant or other structure into which a car is to be run at a high level, a transverse gangway, a transfer-car running therein, an elevator-tower extending below the gangway-level, and a vertically-movable elevator-platform, substantially as specified.

7. The combination of a power plant or other structure into which a car is to be run at a high level, an elevator-tower located in front of but at some distance from said power-house, a vertically-movable elevator-platform, a transverse gangway between the power-house and the elevator-tower, a transfer-car running in said gangway, a bridge connecting the upper portion of the elevator-tower and the high-level track in the power-house and a tunnel extending under the gangway from the basement of the power-house to the base of the elevator-tower, substantially as specified.

8. The combination of a power plant or  
other structure into which a car is to be run  
at a high level, an elevator-tower, drums at  
the four corners of said tower for operating  
5 hoisting-cables, a platform connected to said  
cables, and means for running cars onto and  
from said platform at different levels, sub-  
stantially as specified.

In testimony whereof we have signed our  
names to this specification in the presence of 10  
two subscribing witnesses.

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CHARLES H. WELLMAN.

Witnesses:

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G. W. ALDEN.