(No Model.) 2 Sheets—Sheet 1.

J. WEAVER.

DUMPING MECHANISM FOR CARS.

No. 464,906. Patented Dec. 8, 1891.

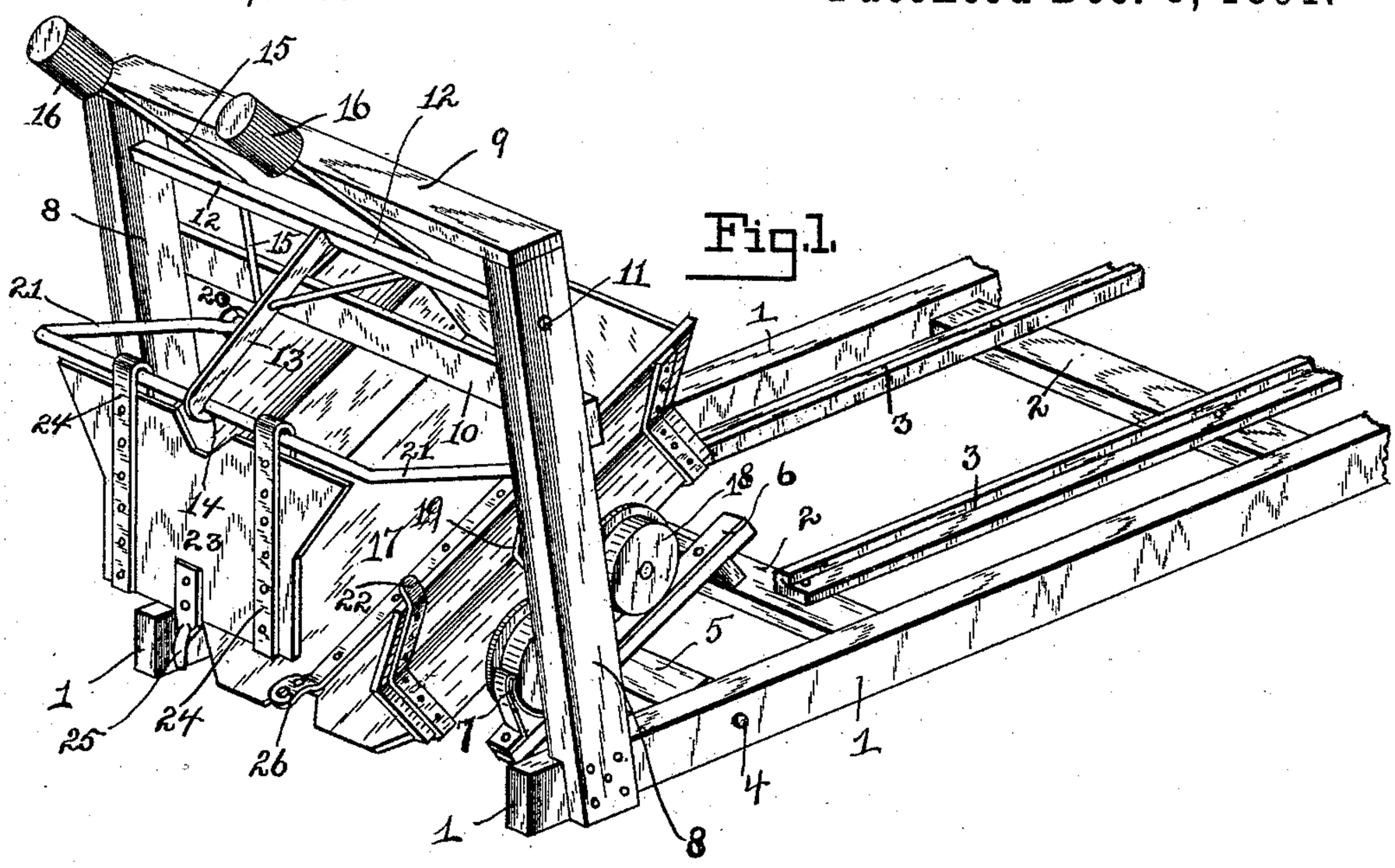

Fig. 1.

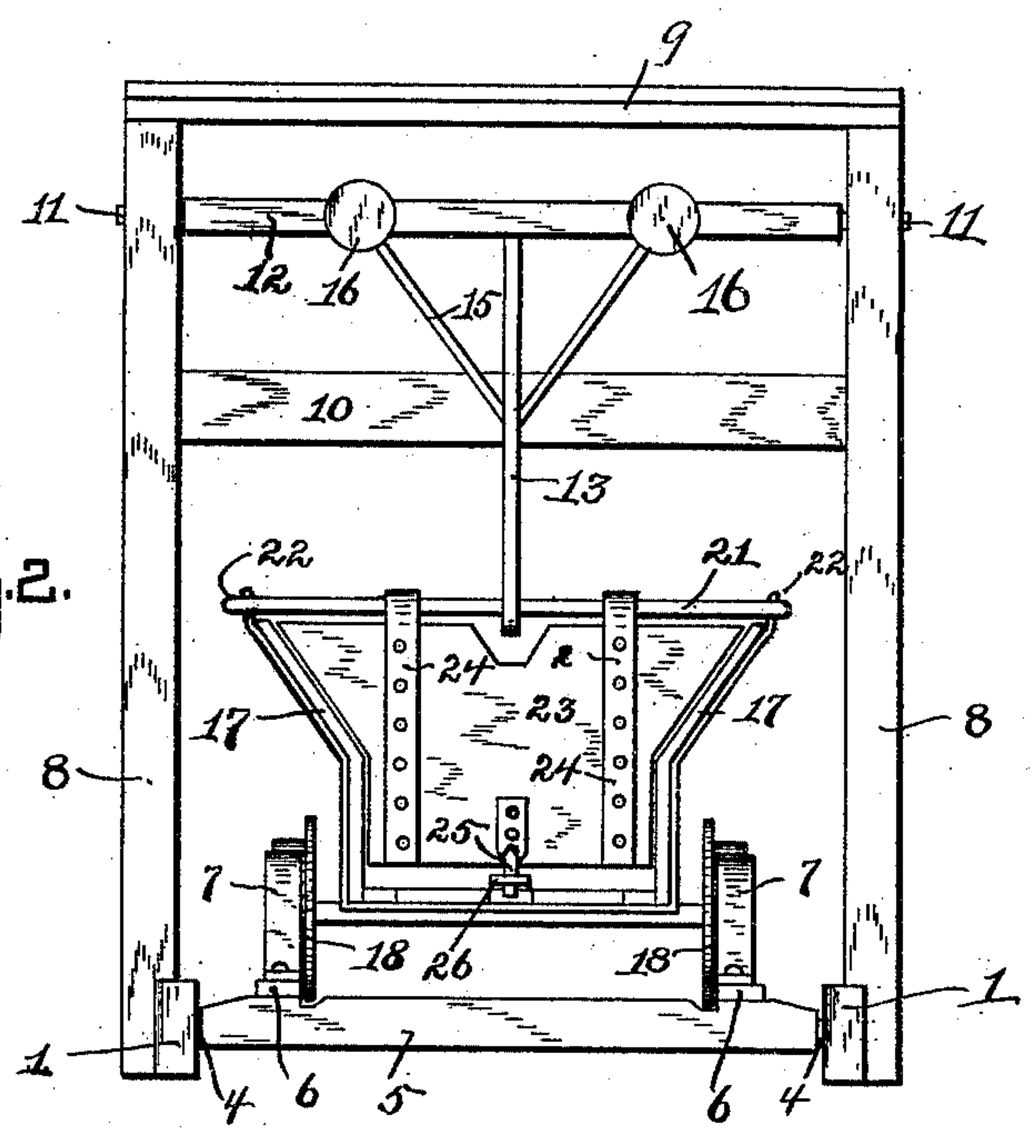

Fig. 2.

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W. S. Duvall.

Inventor
Joseph Weaver.
By his Attorneys,
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(No Model.)

2 Sheets—Sheet 2.

J. WEAVER.

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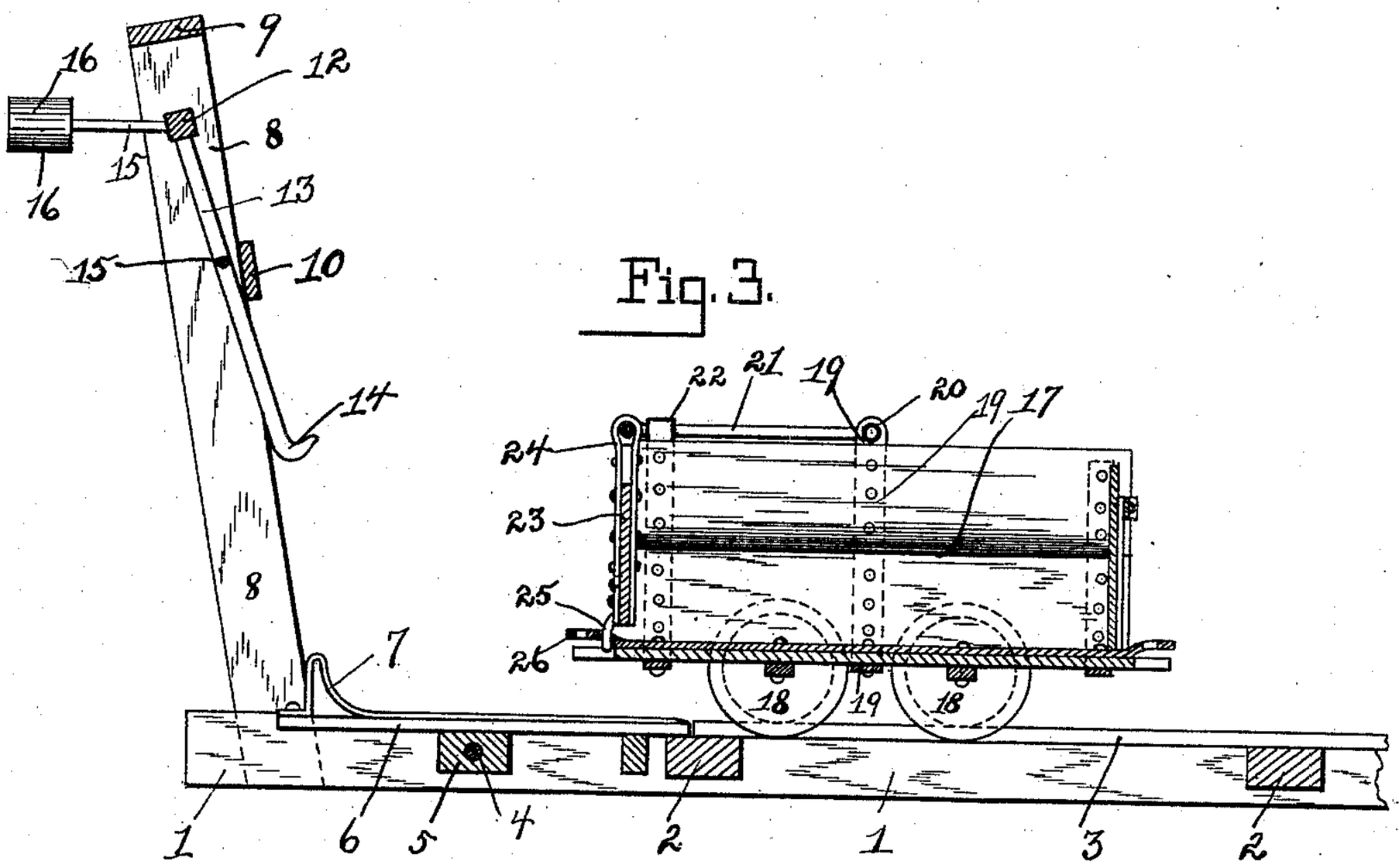

Fig. 3.

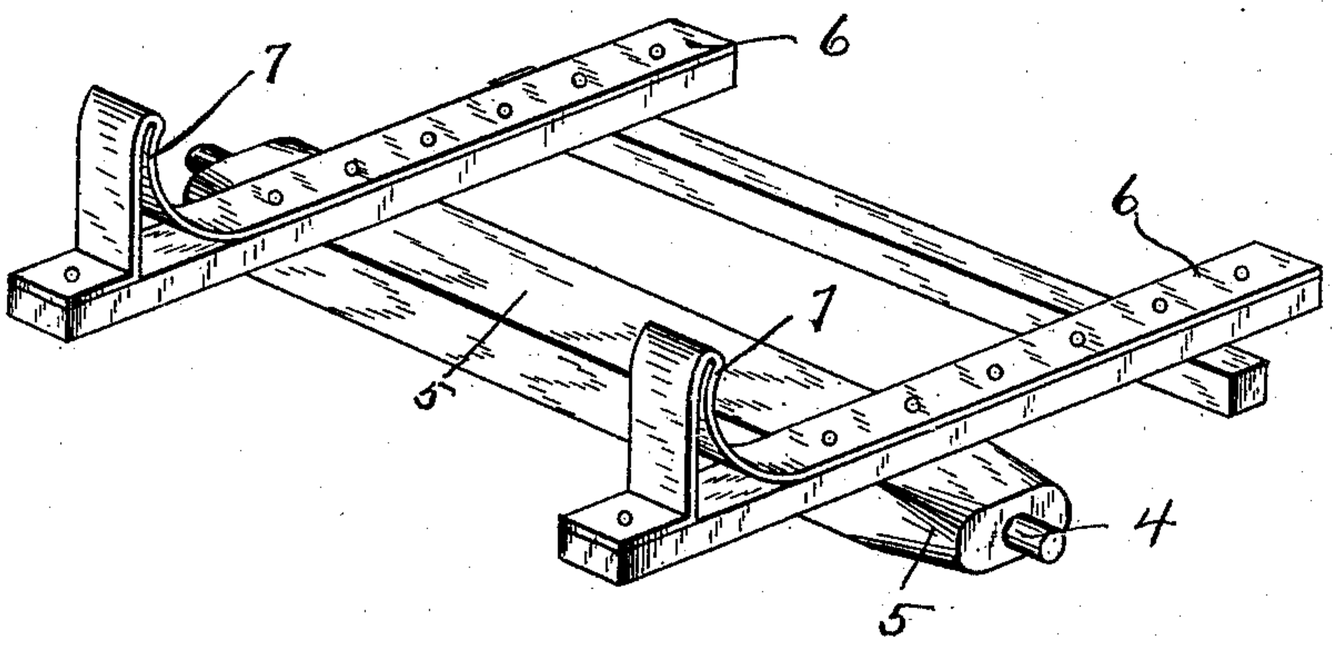

Fig. 4.

Witnesses:

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UNITED STATES PATENT OFFICE.

JOSEPH WEAVER, OF COSHOCTON, OHIO.

DUMPING MECHANISM FOR CARS.

SPECIFICATION forming part of Letters Patent No. 464,906, dated December 8, 1891.

Application filed May 19, 1891. Serial No. 393,325. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WEAVER, a citizen of the United States, residing at Coshocton, in the county of Coshocton and State of Ohio, have invented a new and useful Dumping Mechanism for Coal-Cars, of which the following is a specification.

This invention relates to dumping mechanisms for coal-cars; and the objects in view are to provide a cheap and simple mechanism whereby loaded cars may be automatically dumped and discharge their contents into chutes or other receivers placed thereunder, and, furthermore, to automatically open the end-gate of the car previous to and during the time of dumping, return the end-gate, and re-elevate the car.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a rear perspective of a car-dumping mechanism constructed in accordance with my invention, the same being in the act of dumping. Fig. 2 is a front elevation thereof. Fig. 3 is a vertical longitudinal section. Fig. 4 is a detail in perspective of the tipple-frame.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the opposite sills of the framework, said sills extending parallel to each other and being connected by means of cross-ties 2, which are a portion of the series of ties upon which are mounted the track-rails 3, leading from the point of supply, which may be a mine or other place, to the dumping-point, at which latter place the sills 1 are located. The track-rails 3 terminate short of the ends of the sills, and between said ends and the points of termination of the rails there is journaled in bearings 4, formed in the sills 1, a rock-shaft or tie 5, upon which are mounted track-sections 6, forming a continuation of the rails 3 and provided at their front ends with upwardly-turned rounded portions or hooks 7, the curvatures of which agree with those of the wheels of the car.

Rising from the front ends of the sills 1 is a pair of standards 8, the upper ends of which are connected by a cross-piece 9 and below the same are connected by a cross-bar 10. In bearing-openings 11, formed in the standards 8 near their upper ends, there is journaled a transverse rock-shaft 12, from which depends a central rod 13, terminating at its lower extremity in a rearwardly-disposed hook or bent end 14. A V-shaped bail 15 is rigidly secured to the rock-shaft 12 at opposite sides of the rod 13 and is also connected at its bent end to the rod. The terminals of the bail are bent at right angles to the main portion thereof, extend forwardly, and are provided with weights 16, by which the bent rod is yieldingly pressed toward the rear.

17 designates an ordinary coal car or body, and the same is mounted upon the wheels 18, adapted to move over the track-rails 3. Metal straps 19 pass around the body of the car at the center thereof and are provided above the same with perforations 20.

21 designates a bail of substantial U shape and having its terminals outwardly bent to engage with the perforations of the metal strap at the center of the car, said bail partaking in contour that of one-half of the box-frame of the car in plan and crossing the end of the car. The bail is retained in a locked position by means of a pair of opposite springs 22, curved so that the bail may be sprung thereunder and is yieldingly held in position thereby.

23 designates the end-gate of the car, and the same is suspended loosely from the transverse portion of the bail by means of metal straps 24. The lower end of the end-gate is provided with a depending bolt 25, and the same is designed to ride over a spring-tongue 26 and engage with a perforation in the latter, whereby it is locked against displacement in any direction except vertically.

This being the construction, the operation is as follows: The car being filled passes down the inclined track 3 onto the tipple-track sections 6, where it is brought to a sudden stop by the curved ends 7 thereof, and the momentum of the car causes the sections 6 to tipple or swing downward and thus hold the car in an inclined position. When the car reaches the point where its movement is suddenly arrested, the lower bent end of the rod 13 is in engagement with the bent portion of

the bail of the car, and as the car is lowered at its front end its bail, being thus connected, is swung from the car above the same and elevates the end-gate thereof, so that the cargo of the car is discharged, as will readily be apparent. The car is now returned to position by gravity, the rear end or portion of the tipple-frame being slightly heavier, and as it returns its end-gate is lowered until its bolt is in engagement with the locking perforation of the spring, so that as the car moves away the bail disconnects from the hook-rod and the fixed bolt of the end-gate is locked by the spring-tongue, with which it engages.

From the above it will be apparent I have provided a construction that will automatically dump and return at such dumping coal or other cars, the construction being cheap and simple and requiring no attendant.

Having described my invention, what I claim is—

1. In a dumping mechanism of the class described, the combination, with the rock-shaft, the track-sections mounted thereon and having their ends upwardly curved to form stops, standards located at the sides of the sections, the rock-shaft mounted therein, a hook-shaped rod depending therefrom, a bail V-shaped and having bent terminals secured to the rock-shaft, weights located at the outer ends of the bail, and the transverse bar 10, connecting the standards in front of and serving as a stop for the hook, of the track, the car mounted thereon, the straps perforated to form bearing-eyes and located at opposite sides of the car, the spring-straps located in front of the same, the perforated locking-spring in the bottom of the car, the end-gate having a rigid bolt at its lower end for engaging the perforation of said spring, and the U-shaped bail loosely engaging the perforations of the bearing-straps loosely connected to the end-gate and adapted to be sprung over the spring-straps, substantially as specified.

2. The combination, with the rock-shaft and the track-sections terminating at their ends in the stops and mounted upon the shaft in front of their centers, of the car having the pivoted end-gate, the frame located over the ends of the track-sections, and the weighted gate-engaging hook pivotally suspended from the frame, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOSEPH WEAVER.

Witnesses:
R. H. HAY,
H. C. HERBIG.