No. 825,246. PATENTED JULY 3, 1906.

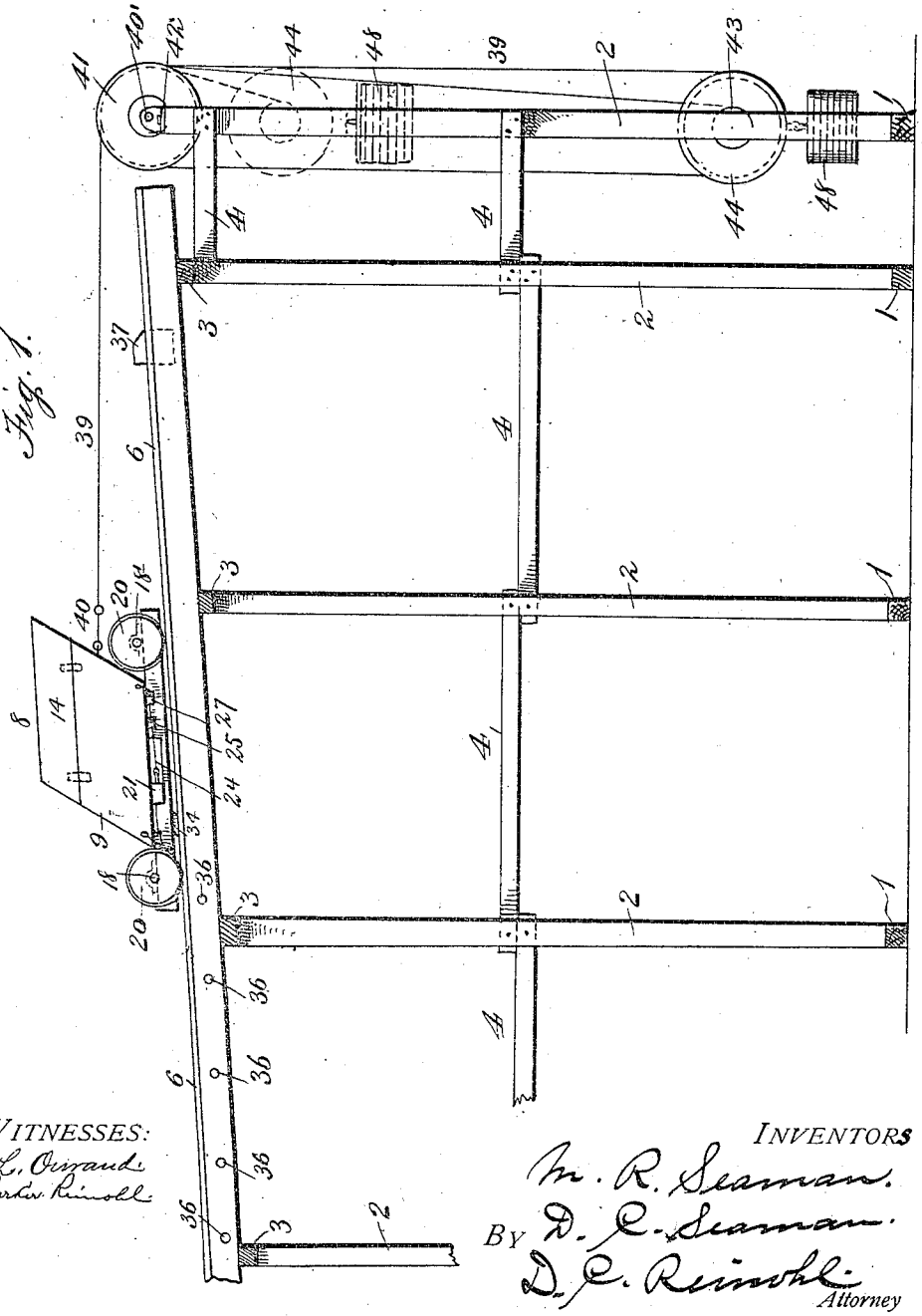
M. R. & D. C. SEAMAN.

AUTOMATIC TRANSPORTING APPARATUS.

APPLICATION FILED MAR. 14, 1906.

3 SHEETS—SHEET 1.

Fig. 1.



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3 SHEETS—SHEET 2.

Fig. 3.

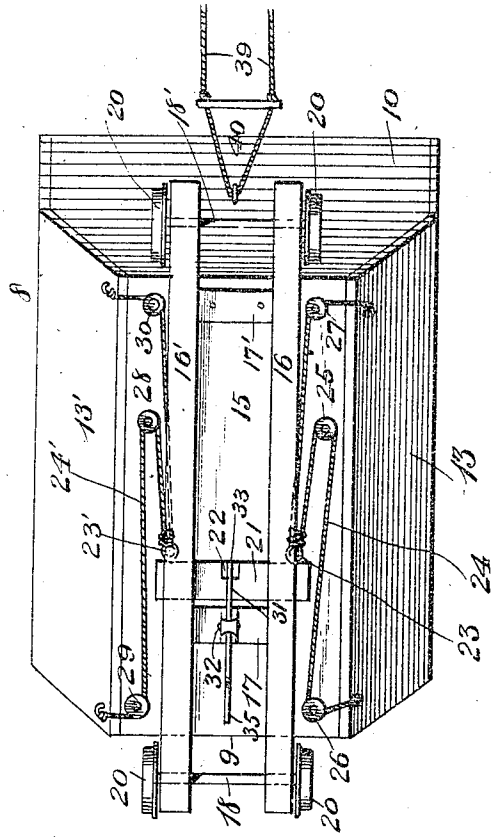
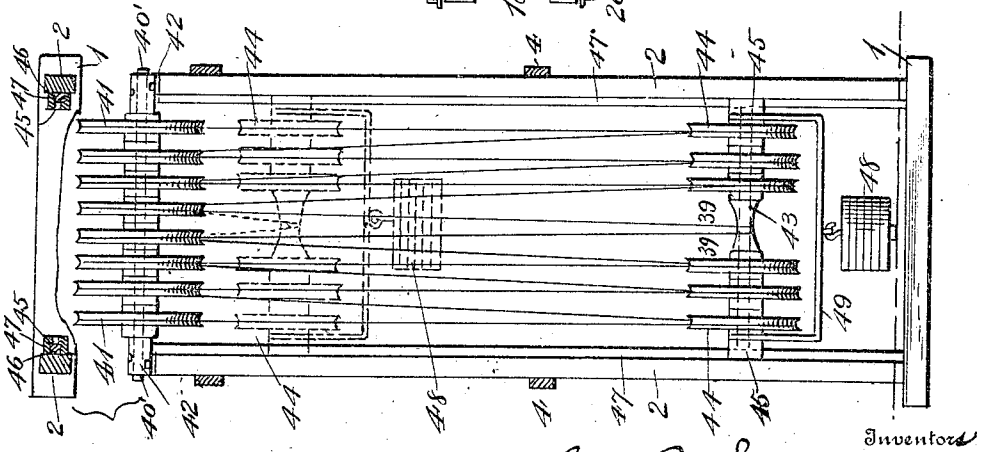


Fig. 2.



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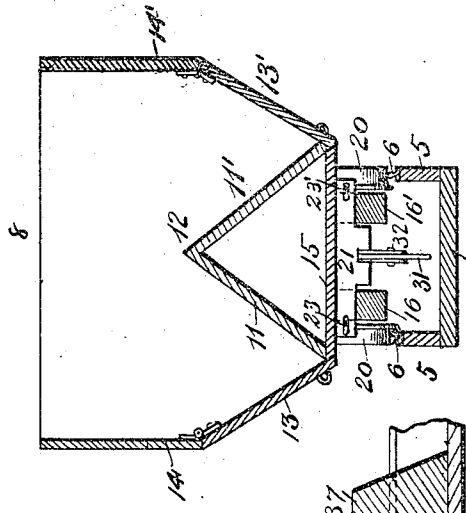


Fig. 5.

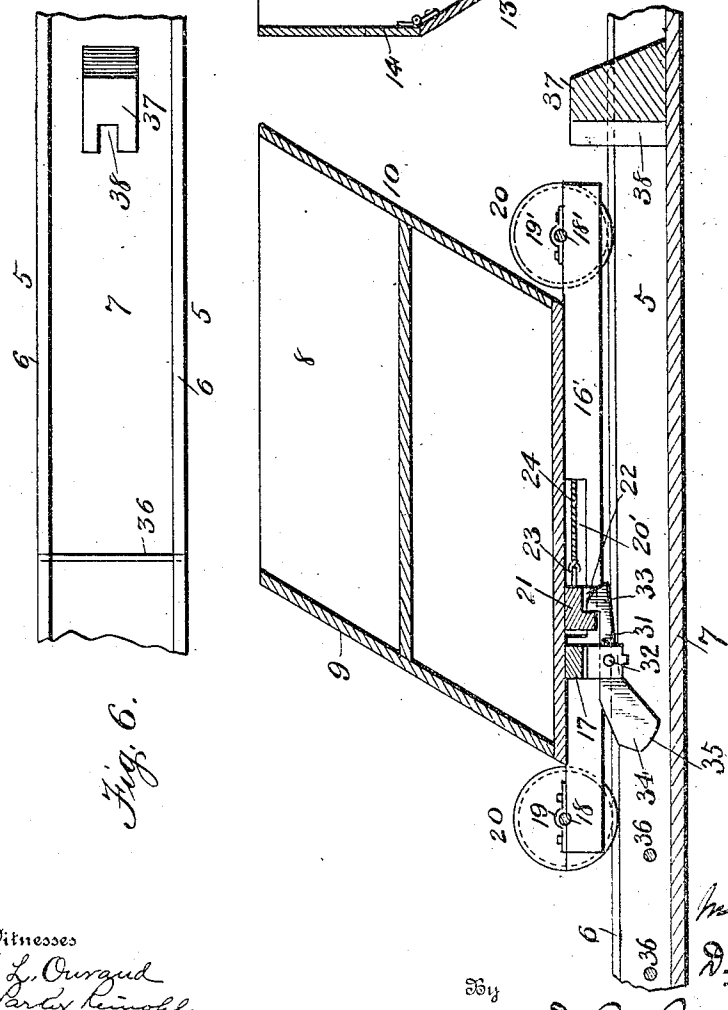


Fig. 4.

Fig. 6.

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UNITED STATES PATENT OFFICE.

MILTON R. SEAMAN AND DANIEL C. SEAMAN, OF PHILADELPHIA, PENNSYLVANIA.

AUTOMATIC TRANSPORTING APPARATUS.

No. 825,246. Specification of Letters Patent. Patented July 3, 1906.

Application filed March 14, 1906. Serial No. 306,041.

To all whom it may concern:

Be it known that we, MILTON R. SEAMAN and DANIEL C. SEAMAN, citizens of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Transporting Apparatus; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to means for unloading boats, cars, and other conveyances used for the transportation of coal, stone, and like substances, has for its object the dispensing with a motor for furnishing power to the car or receptacle used to convey or transport the coal from the conveyance being unloaded to a place of storage, and consists in certain improvements in construction, which will be fully disclosed in the following specification and claim.

In the accompanying drawings, which form part of this specification, Figure 1 represents a side elevation of apparatus embodying our invention; Fig. 2, an end elevation of the same; Fig. 3, an inverted plan view of the car detached; Fig. 4, a vertical longitudinal section of the car and the track; Fig. 5, a vertical transverse section of the same, and Fig. 6 a plan view of a section of the track.

Reference being had to the drawings and the designating characters thereon, the numeral 1 indicates the bottom sills, 2 the posts resting on the sills, 3 the top sills resting on the posts, 4 the beams, the whole constituting the framework of the structure; 5, the tracks resting on the top sills 3; 6, the rails on the tracks; 7, the floor or bottom extending across under the tracks.

8 indicates the car, which is provided with forwardly-inclined ends 9 10 and an angular bottom whose sides or walls 11 11′ extend to the apex 12 and discharge the contents of the car on each side clear of the track.

13 13′ are doors hinged to the sides 14 14′ to open outward under the weight and pressure of the load.

Under the inclined bottom is a supplemental bottom 15, which rests upon longitudinal sills 16 16′ and transverse sills 17 17′, and to the sills 16 16′ are attached axles 18 18′ in suitable bearings 19 19′ and supporting-wheels 20 20, which engage the rails 6 of the track 5. The sills 16 16′ are provided with recesses 20′, in which a transverse bar 21 reciprocates as the doors 13 13′ open and close. The bar 21 is provided with a notch 22, and at each end of the bar is an eyebolt 23 23′, to one of which is attached a wire cable 24, one end of which passes over sheaves 25 26, secured to the supplemental bottom 15, and is secured to the door 13 at one end and near the lower edge of the door, and the opposite end of the cable passes over sheave 27 and is secured to the door 13 in like manner at the opposite end of the door. The cable 24′ passes over sheaves 28, 29, and 30 and is secured in like manner to the opposite door 13′, as shown in Fig. 3.

31 is a lever fulcrumed at 32 on the sill 17, is provided with a latch or head 33, which engages the bar 21 in the notch 22, and is held in engagement therewith by the heavy or weighted end 34 of the lever until it is disengaged therefrom by being tripped by the inclined end 35 of the lever striking a transverse rod 36 between the tracks 5 5, located at such points as to secure the discharge of the car at any desired place along the lower end of the track or structure. The lever being disengaged from the bar 21, the weight of the load in the car instantly forces the doors 13 13′ outward and the load is discharged.

Near the upper end of the structure and between the tracks 5 a setting-block 37 is secured to the bottom 7, and as the car ascends the track the bar 21 strikes the block 37, which pushes the bar 21 toward the front end of the car and closes the doors 13 13′, when the lever 31 automatically engages the bar 21 and secures the doors in closed position until they are again automatically released by the lever striking against one of the transverse rods 36. The block 37 is provided with a vertical groove 38 to afford clearance for the head 33 of the lever 31.

39 indicates the cable by which the car is operated. It is secured at one end to the car 8 at 40 in any preferred manner and extends over sheaves on a shaft supported in fixed bearings and over vertically-movable sheaves on a shaft to which the cables are attached.

40′ is the shaft of the upper sheaves 41, which is revolubly supported in bearings 42, and 43 is the shaft of the lower and vertically-movable sheaves 44. The ends of the shaft 43

are provided with bearings 45, having a vertical slot 46, which engage vertical guides 47 on the inside of the posts 2 2, as shown in Fig. 2, and to the shaft 43 is secured a counterweight 48 by means of a stirrup or metallic strap 49.

The friction produced by the cable passing over the sheaves in conjunction with the counterweight is sufficient to allow the loaded car to travel down the inclined track to the place where it is to be unloaded, during which time the lower shaft and its sheaves rise between the posts nearly to the upper sheaves. When the car has discharged its load or contents, the weight of the lower shaft and its sheaves in conjunction with the counterweight will draw the car up the incline to the position for reloading. In the descent of the car the lever 31 is tripped by contact with one of the rods 36, the doors 13 13′ disengaged, and the load of the car discharged, and in the ascent of the car the doors are closed by the bar 21 engaging the block 37 and locked by the head 33 of the lever engaging the bar, both operations being automatic and requiring no attention from the men engaged in loading the car.

Having thus fully described our invention, what we claim is—

In a transporting apparatus, a track, a car having laterally-swinging doors, longitudinal sills under the car, a transverse bar movable on said sills, connections between said bar and said doors, means for securing the doors in closed position, a tripping device for releasing the doors, a cable attached to the car, fixed sheaves and vertically-movable sheaves engaged by the cable, and a counterweight attached to the latter sheaves.

In testimony whereof we affix our signatures in presence of two witnesses.

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