

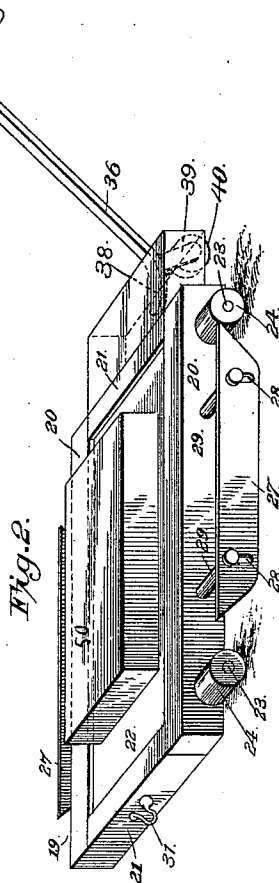
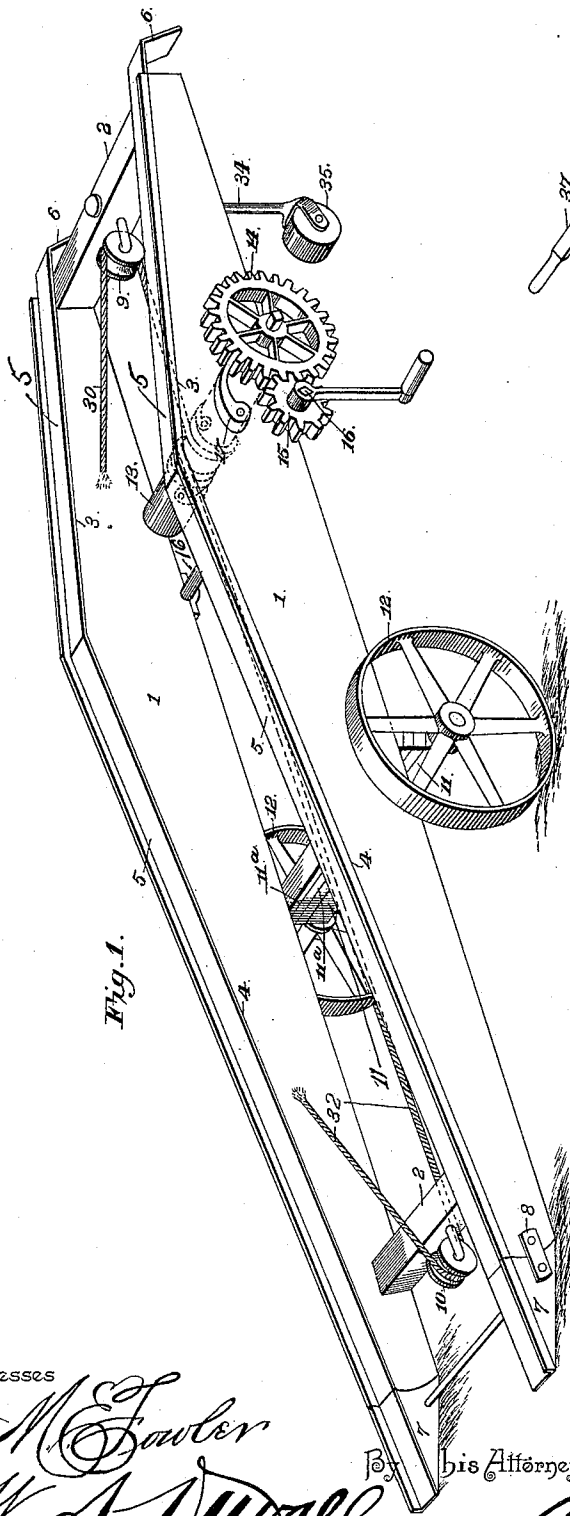
(No Model.)

2 Sheets—Sheet 1.

E. S. COLLINS.
CAR LOADER.

No. 466,003.

Patented Dec. 29, 1891.



Witnesses

M. E. Fowler
W. S. Duval

By his Attorneys,

Chas. Snow & Co.

Inventor

E. S. Collins

(No Model.)

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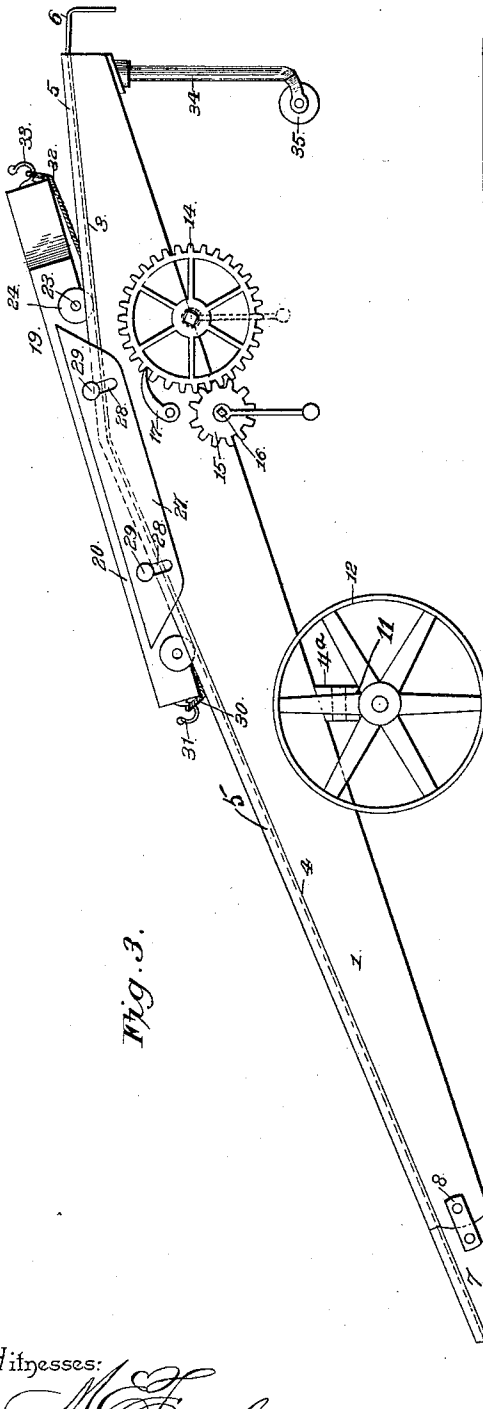


Fig. 3.

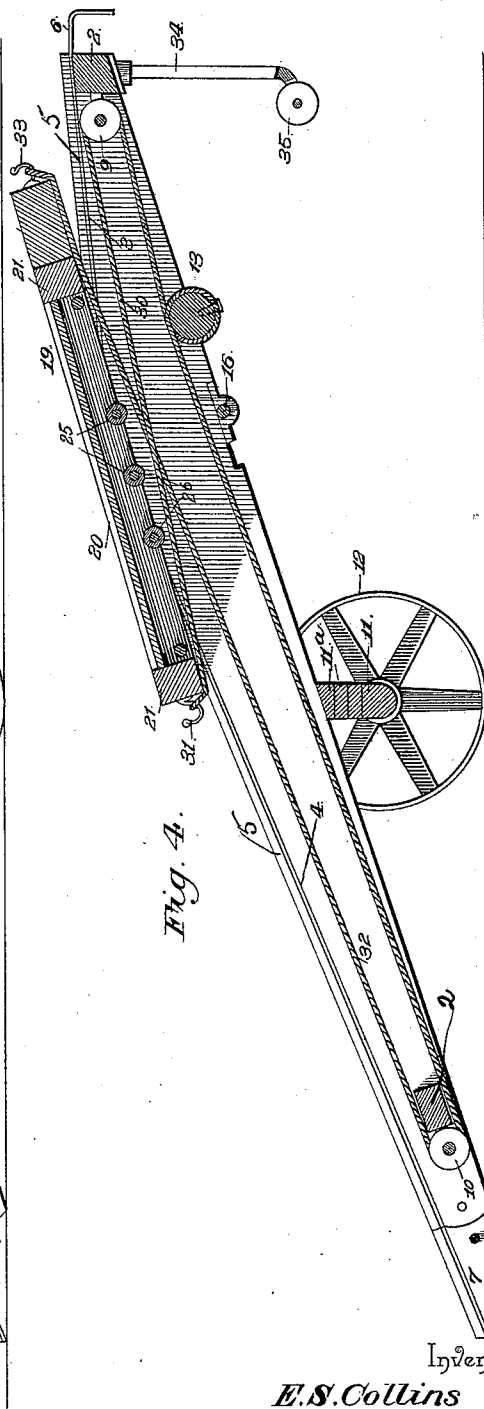


Fig. 4.

Inventor

E. S. Collins

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UNITED STATES PATENT OFFICE.

EDWIN STONE COLLINS, OF ROGERS, ARKANSAS.

CAR-LOADER.

SPECIFICATION forming part of Letters Patent No. 466,003, dated December 29, 1891.

Application filed January 22, 1891. Serial No. 378,695. (No model.)

To all whom it may concern:

Be it known that I, EDWIN STONE COLLINS, a citizen of the United States, residing at Rogers, in the county of Benton and State of Arkansas, have invented a new and useful Car-Loader, of which the following is a specification.

This invention has relation to loading and unloading devices; and among the objects in view are to provide an apparatus adapted to load and unload heavy articles to or from railroad-cars or other places and to provide means for rolling such articles short distances after they have been loaded or unloaded, all as will hereinafter appear, and be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of the unloading-truck constructed in accordance with my invention. Fig. 2 is a similar view of the car. Fig. 3 is an elevation of the two in position as in loading. Fig. 4 is a longitudinal vertical section.

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

1 represents the two opposite side bars or sills of the truck, said bars being maintained in parallelism by means of connecting-bars 2, arranged near the ends of the same. The upper faces of the bars 1 are inclined in opposite directions from a point about one-third from the rear of their forward ends, forming opposite faces 3 and 4, and are provided with flat tracks 5, extending throughout the length of the same, and said bars terminate at their front ends in hooks 6 and at their opposite ends in triangular-shaped sections 7, hinged to the rear ends of the sills 1 by links 8. To the forward transverse bar 2 there is secured a pulley or sheaf 9, and to the rear bar 2 and extending forwardly there is secured a second and similar pulley 10. Slightly in rear of the center of the side bars of the truck there is located an axle 11, at the ends of which are journaled wheels 12, upon which the sills 1 are supported. A drum 13 is journaled between the sills in rear of the pulley 9, which drum is provided at one side with a large gear 14, meshing with and operated by a small pinion 15, mounted upon the crank-shaft 16. A gravity-pawl 17 is pivoted to one of the sills and meshes with the large gear 14, permitting a movement of the gear in one

direction and acting to lock the same against a retrograde movement.

19 represents the car, and the same consists of opposite side bars 20, connected by end bars 21, the two forming a frame and provided with a suitable flooring 22. From the ends of the side bars 20 project axles 23, and upon the same are located rollers 24, adapted to travel upon the flat track 5 of the sills of the truck.

The side bars 20 are at intervals provided with opposite bearing-recesses 25, and in each pair of the same there are mounted loose rollers 26.

The side bars 20 are each provided with a depending guide-flap 27, which flaps are vertically recessed, as at 28, and supported in position by means of laterally-projecting headed studs 29, projecting from the side bars 20.

As before stated, the rollers 24 are adapted for travel upon the tracks 5 of the sills 1, and the rear pair of rollers 1 place near the rear end of the car and the front pair of rollers somewhat in rear of the front. I also reduce the front end of the car, so that it will be apparent that when the car is run down from the track to the ground or floor its rear end, or what will be then its advance end, will not come in contact with the ground or floor; furthermore, that when advancing up the track and its front end is just about entering upon the same said end will take between the sills 1 of the truck and serve to guide the wheels or rollers 24 to their place upon the tracks. After the car has entered upon the track the guide-flaps 27, depending from the sides of the car, serve to guide the same in its movement upon the track.

A cable 30 has one end secured to the drum 13, is passed forward around the pulley 9 at the front of the sills 1 to the rear, and is connected at its opposite end in a removable manner to an eye 31, projecting from the rear of the car. A second cable 32 is also connected to the drum 13, and, like the cable 30, has a portion of its length wound upon the drum, after which it is passed to the rear over the pulley 10, thence forward and connected in a removable manner to the front end of the car, as shown at 33.

From the cross-bar 2, connecting the front ends of the sills, there depends a supporting-

rod 34, in the lower end of which is journaled a caster 35, the upper end of the rod being journaled in a vertical bearing in the cross-bar.

5 The operation, for instance, of loading a car with heavy articles will be as follows: The truck will be rolled to the side of the car and its front end elevated, so that the hooks 6 will embrace the upper edge of the side 10 wall. The heavy article to be loaded would by suitable levers be elevated onto the car, which would be run down the incline 3 by a few revolutions of the crank 16. After the article, as 50, is in position an opposite move- 15 ment of the crank would draw the car up the track 5 and over to the end of the truck. By reason of the cables being connected to the opposite ends of the car, when the same is drawn up the track it is apparent that it may 20 be entirely run off the same. So, also, may the car be run off at the opposite end of the track, as when in the act of unloading. It is also evident that by removing the ends of the cable from the eyes 31 or 33 the car may 25 be rolled to any convenient point for the reception of a heavy article or to any convenient point with such an article, thereby affording a convenient means of transporting the article to the position it is to occupy. 30 When the car is being thus transported, the guide-flaps 27 rise, and such rising is permitted by reason of the slots 28, formed therein. It is apparent that the truck and car, the latter mounted upon the former, may be trans- 35 ported with facility from place to place in a convenient manner.

In lieu of the regularly-constructed truck 1, the side sills of a heavy dray may serve the purpose in view, and may therefore be substituted for the same. In such instance it will 40 be apparent that the car may be mounted in the usual manner thereupon and the remaining mechanism be substantially the same, such minor changes as are necessary being readily apparent to the skilled mechanic. 45

In Fig. 2 I have illustrated a combined hand-truck and guide-bar for use in connection with the car. This truck consists of a metal bar 36 of suitable length, which terminates 50 at its upper end in a cross-bar or handle 37, designed to be operated by the loader or unloader. The lower end of the bar is bent at an angle, as at 38, to form a pivot-point designed to take under the front end of the truck 55 or any other part thereof. Opposite its bent

portion or angle and upon its under side the bar 36 is provided with a pair of depending bearing-ears 39, and in the same is journaled the axle of a roller or wheel 40. By inserting the bent end 38 of the truck or guide-bar well 60 under the front end of the car and bearing upon the handle 37 said front end is elevated, so that its front wheels are raised from the ground or floor, and the car may be moved along and readily guided to and from the load- 65 ing and unloading point. When it is desired simply to move the car along in a straight line, the weight of the person upon the handles 37 is removed, and the wheel 40 merely acts as a supplemental wheel. 70

The pinion-shaft 16, it will be observed, (see Fig. 4,) is normally supported, so that the pinion 15 may be thrown into and out of gear with the large gear 14; also, that the crank may be shifted to the shaft 13 and the speed 75 of shaft 13 thus increased and the device adapted for raising light loads.

The blocks 11^a may be increased or decreased in number, so as to accordingly elevate or lower the upper end of the track to 80 suit various heights of cars.

Having thus described my invention, what I claim is—

1. The combination, with a truck having opposite side sills, of a removable car mounted 85 upon the truck and provided with laterally-projecting headed studs, and slotted side flaps depending from the studs and embracing the truck, substantially as specified.

2. The combination, with the car provided 90 with an extension or block at one end, of the bar 36, bent at an angle at its lower end at 38 to bear under the block and at its bent end provided with depending bearing-ears and at its upper end having a handle, and the wheel 95 journaled between the ears, substantially as specified.

3. The combination, with the truck and its axle, of the series of removable blocks mounted between the bottom of the truck and axle, the 100 upper block of the series having the inclined face, substantially as specified.

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

EDWIN STONE COLLINS.

Witnesses:

W. W. SIKES,
S. H. DUNAWAY.