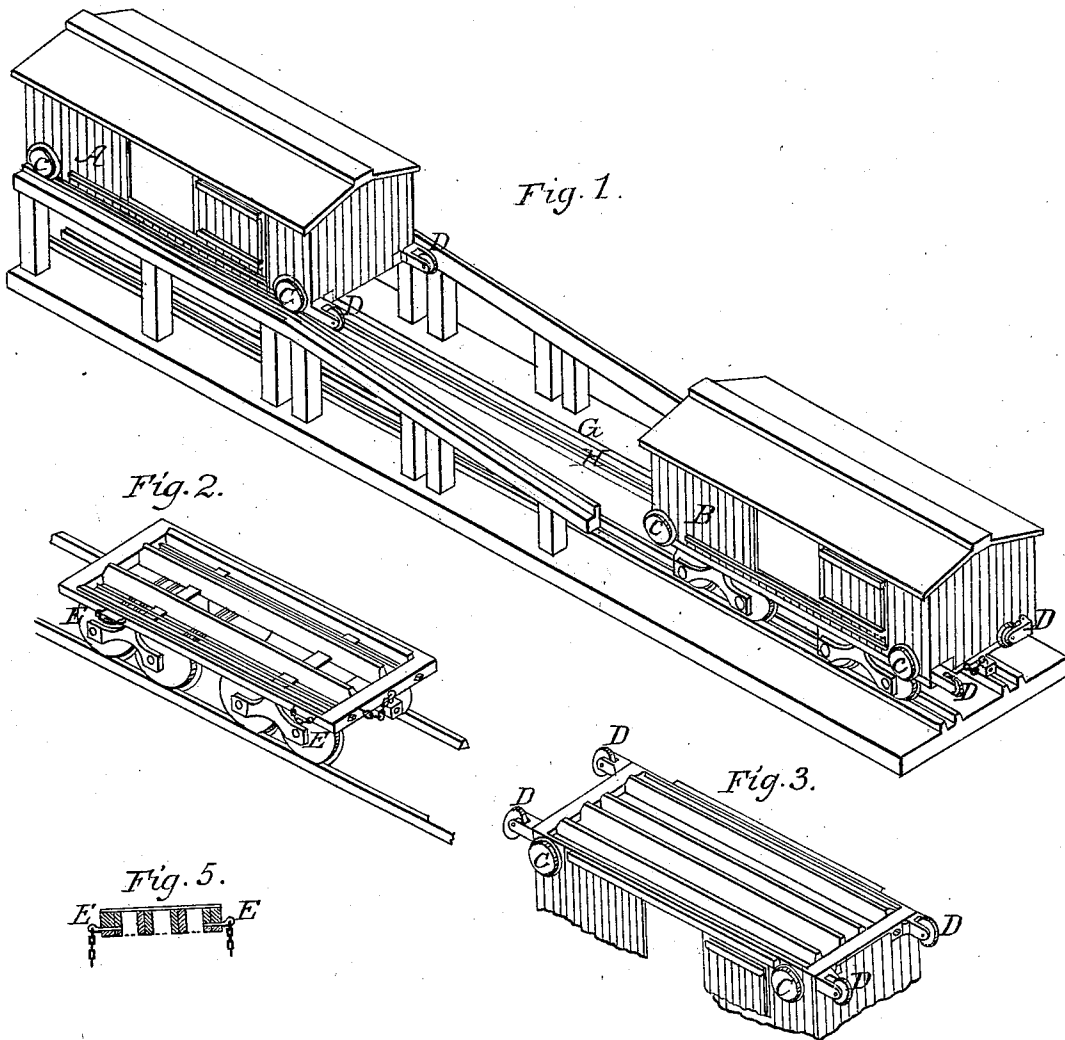


J. H. JAMES, Jr.
Railroad-Car Truck.

No. 85,829.

Patented Jan. 12, 1869.



Witnesses;
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JOHN H. JAMES, JR., OF URBANA, OHIO.

Letters Patent No. 85,829, dated January 12, 1869.

IMPROVED MECHANISM FOR TRANSFERRING FREIGHT.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN H. JAMES, Jr., of Urbana, in the county of Champaign, and State of Ohio, have invented certain new and useful Improved Apparatus for Transferring the Bodies of Cars from Broad to Narrow-Gauge Tracks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a perspective view of my improved apparatus for transferring the bodies of cars from broad to narrow-gauge tracks, and *vice versa*.

Figure 2 is a perspective view of the upper part of the frame, with which the trucks are connected, and upon which the body of the car rests.

Figure 3 is a perspective view of the under side of a car-body adapted to my improved apparatus.

Figure 5 is a horizontal section of the longitudinal pieces on the top of the running gear, and on the bottom of the car-body, when the body is on the running gear.

Similar letters represent like parts in all the figures.

The object of my invention is to transfer freight or passengers from broad to narrow-gauge roads, or *vice versa*, without breaking bulk or changing cars, or, in other words, to transfer the bodies of cars with their contents from trucks adapted to run on a narrow-gauge road to trucks adapted to run on broad-gauge roads, or *vice versa*, thus economizing time and labor, and saving loss and damage to freight.

The car is to be built in two parts—one upper part, consisting of a body proper, and a lower part, consisting of a frame, which is mounted upon the trucks, and which is adapted, by its form and construction, to receive and carry the body of the car.

This frame consists of end-beams, longitudinal floor-beams, bolsters, to connect the frame with the trucks, and bumpers, and is mounted upon four, six, or eight-wheel trucks, in the ordinary way.

The upper part, or car-body proper, is constructed in the ordinary manner, with side, end, and floor-beams, independent of those forming the frame of the lower part, the side and end-beams of the former being so constructed as to rest upon the latter, while the floor-beams of the upper and lower portions fit side by side, as shown in section in fig. 5.

The adjacent edges of these beams are bevelled, so that they may find their places readily when one frame is lowered upon the other, and the whole is stayed by rods, or otherwise, so as to resist all strains, while at the same time the parts will be made as light as they can safely be built.

The parts of the car thus constructed are secured to each other by keys or bolts, as shown at E, fig. 2, or in any equivalent manner, so that they may be readily detached when the parts are to be separated, or so that

they may be firmly fastened together when the car is running.

The transfer of the car-body is effected in the following manner:

At or near each end of the car, and near the floor thereof, or at any other convenient point on the outside of the car, a small flanged wheel, of about one foot in diameter, or less, is hung upon shafts in proper journals, the shafts extending from side to side of the car, or projecting only from the side of the car, as may be preferred.

There may be two of these wheels on each side, or their number may be increased by intermediate wheels. It is, of course, desirable that they should project as little as possible from the side of the car, and both wheels and axles should be made as small and light as is consistent with strength, and the purpose for which they are designed.

At each point on the road, or at intersections or junctions between roads of different gauges, where transfers are to be made, a side-track must be provided, having broad and narrow-gauge tracks on the same cross-ties, the narrow-gauge rails being laid within the broad, and at equal distances from them, as shown in fig. 1, the gauge of both sets of tracks being slightly narrowed, so that the flanges of the wheels of the respective trucks will make a pretty close or accurate fit.

On each side of the side-track so prepared, an elevated track (fig. 1) is laid on a wall, or on piles, or framing.

This track is to be of such a height that when the car-body is suspended upon it by means of the small wheels, it will be raised sufficiently to disengage the two frames, and permit the trucks and lower frame to be readily drawn from beneath it.

This elevated track terminates in an inclined plane, shown at fig. 1, the bottom of which is below the wheels C C C C, when the car is resting upon its trucks, so that as the car is run toward the elevated track, the rails upon the inclined plane will pass below the wheels C C C C, and as the car is pushed forward, the bolts connecting the upper and lower portions having been drawn or removed, the car-body will mount the inclined plane, and pass upon the elevated track, while the trucks and lower frame remain upon the rails below.

The trucks and frame are then withdrawn, and a frame with trucks of a different gauge is run under the car-body.

The two are then drawn backward together, and the car-body, running down the inclined plane, settles on the lower frame and new set of trucks.

It is evident that cars intended to be transferred in this manner should be made of uniform length and width, and the latter may be a compromise between the present width of broad and narrow-gauge car-bodies, so that the running gear and bodies of all such cars may be interchangeable.

The brakes may be constructed in the ordinary manner, except that the vertical iron rod is to be divided near the lower end, one of the parts being provided with a socket, into which the other part is made to fit.

This socket may be made square, or may be made round, the parts being secured by a pin or-key.

For the purpose of transferring a number of cars at the same time, two "pushers" are attached to each end of the car-body, near the lower corner, one pusher being placed on each side.

This pusher is shown at D D, figs. 1 and 3, and consists of a block hinged to the end of the car, so that it may be folded back or inward when not in use. It is of a size corresponding to the beams of the car-body, of which it is a substantial prolongation. Its length should be sufficient to enable the roller upon its outer end to touch the adjacent car-body when the bumpers touch.

When two or more cars are to be transferred at the same time, the rear pushers are folded back, the forward pushers projecting when the cars are brought together, the bumpers touch, and the forward pushers come in contact with the car-body next in front.

As each car ascends the inclined plane, the pushers rise, and the rollers enable them to adapt themselves to all changes of positions.

If the elasticity of the bumpers should cause any difficulty in adjusting the cars, similar pushers might be used upon the lower frame of the car to regulate the distance between adjacent trucks.

In transferring several cars at once, in order to keep them in constant contact, and to preserve the proper relative distances between them, and prevent too rapid descent of the incline, the following mode should be observed:

A car which is not to be transferred should first be pushed on to the side-track, between the elevated rails, and down to a certain point, where it should be stopped by some fixed obstacle, or, what would be preferable at large stations where there was much transferring, a small open car, similar to a lime or coal-car, might be

permanently kept there. The cars to be transferred should then be pushed in, so as to keep them in contact until they are stopped by the above-mentioned car, which may be called, for convenience, the base-car. The lower parts of the cars to be transferred, being then pulled out by the engine, the new running gear of different gauge would then be pushed in, until they came in contact with the base-car, when they would each be under their proper bodies. A rope should then be extended from the base-car, in the rear, to the engine, and the cars being thus held together, and in contact, and the engine preventing too rapid descent of the incline, each car-body, as it descended, would settle upon its own running gear.

Though freight-cars have been specially described, yet the foregoing plan is equally applicable to passenger-cars, or to transfers of cars to other running gear of the same gauge, when the length of the road or run might make it desirable to use more than one set of wheels.

It might also be employed to transfer the bodies of cars to ferry-boats or other vessels.

Having thus described my invention,

What I claim therein as new, and desire to secure by Letters Patent, is—

1. The car-body B, removable from its trucks, and having the caster-wheels C C, as shown, in combination with elevated and exterior rails, substantially as and for the purpose described.
2. The elevated tracks, in combination with the tracks G and H, substantially as and for the purpose described.
3. The adjustable pushing-pieces D D, provided with wheels, as shown, in combination with the removable car-body B, substantially as and for the purpose described.

JOHN H. JAMES, JR.

Witnesses:

JAMES MOORE,
E. G. HALL.