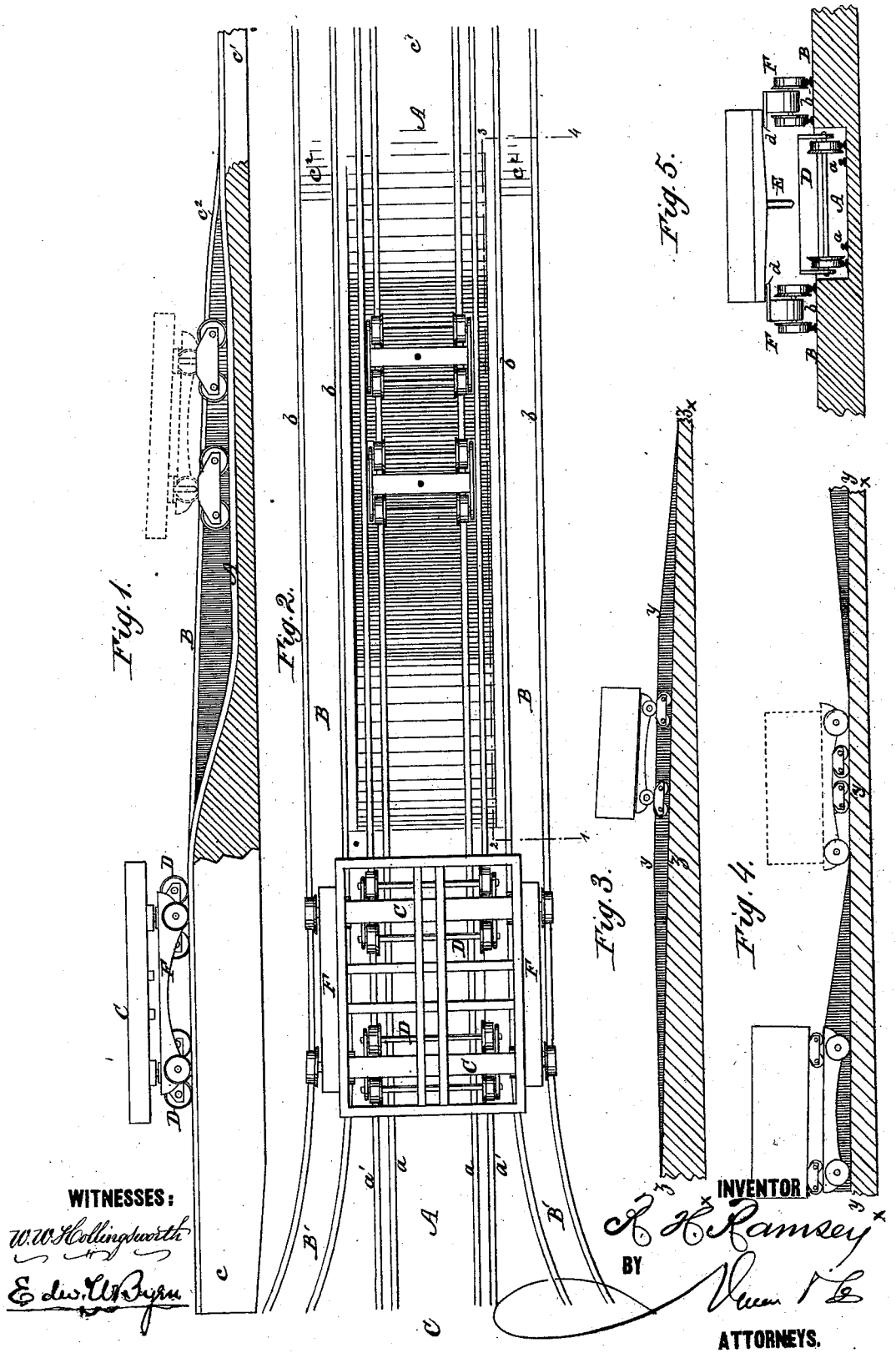
R. H. RAMSEY.

Car-Transfer Apparatus.

No. 204,087. Patented May 21, 1878.



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IMPROVEMENT IN CAR-TRANSFER APPARATUS.

Specification forming part of Letters Patent No. **204,087**, dated May 21, 1878; application filed March 28, 1878.

To all whom it may concern:

Be it known that I, ROBERT H. RAMSEY, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and Improved Car-Transfer Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a side view, with the nearest side track broken away through the line 1 2 3 4 of Fig. 2. Fig. 2 is a plan view. Figs. 3 and 4 are modifications of my invention; and Fig. 5 is a cross-section of the tracks, taken through the depressed portion of the main track.

My invention relates to an improvement in car-transfer apparatus, or apparatus designed to effect the transfer of a car-body and contents without breaking bulk, to trucks of a broader or narrower gage, to adapt them to the change in the gage of the road that is to form a continuation of the journey.

In the car-truck-shifting apparatus described in my patent of May 30, 1876, I employed independent side trucks running on side tracks, and adapted to sustain the car-body by cross-beams when the car is run upon a depressed portion of the main track, so that the trucks of the car dropped from their connection with the king-bolt and allowed other trucks of different gage to be substituted. In the patent referred to, however, both ends of the depression in the main track rose to the same level, which general level was that of a horizontal grade, and with this arrangement the aid of a locomotive was necessary to draw the car-body with its newly-placed trucks up the incline at the ascending grade of the depressed portion.

My present invention, while preserving the same general principle of shifting the trucks, consists in arranging the side tracks and the general level of the depressed portion of the main track upon an incline, with the steepest grade in the side tracks just where the ascending incline of the main track commences, by which arrangement the shifting of the trucks is effected by the gravity of the car and without the aid of a locomotive.

The invention also further consists in curving the side tracks outwardly at the point where the car starts in to be shifted, so that when passenger-cars are being shifted the side trucks may be run in between the projecting steps of the car, which would be in the way of the parallel passage of the trucks, and would prevent the latter from getting close enough under the car to sustain it without the use of cross-beams, all as hereinafter more fully described.

In the drawing, A represents the main track, having the broad and narrow gage rails *a a'*, and B B are the side tracks, having two side rails, *b*. Both these tracks (the main track and side tracks) have at the end *c* all their rails in the same plane, and so also at the other end, c^1, the middle portion of the main track being depressed below the level of the side track, with an incline at each end leading into the level of the side tracks. Now, instead of arranging the general line of the tracks in a horizontal plane, as in my former patent, both the side tracks and the main track have a descending grade from the point *c*, where the cars start in, to c^1, the steepest incline of the side track being at c^2, or just where the ascent from the depressed portion of the main track commences, the object of the increased grade just at this point being to compensate for the lift of the car-body by the newly-placed trucks at the moment when they reach this level and receive the burden of the car from the side trucks.

C represents the floor-frame of the car-body, attached to its trucks D by the king-bolts E, Fig. 5, and F represents the independent side trucks. In arranging the rails *b* of the side tracks one of them is placed sufficiently close to the main-track rails to permit the wheels on that side of the side trucks to be beneath the overhanging edge of the car; and the trucks F themselves are provided with supporting-pieces *d*, which extend over the wheels of the truck, so as to receive the edges of the car and sustain it directly and without the interposition of cross-beams.

In order to allow these side trucks to be thus placed close under the car-body without interfering with the projecting steps of the car, the side tracks at B' B' on the higher end of the grade, where the car starts in, are curved

outwardly on each side to permit the application of the trucks, as hereinafter described.

In operating the apparatus the car is pushed to a position where its rear steps are behind the curved portion B′ of the side trucks, and the side trucks then run in between the steps of the car. The supports *d* of the side trucks being adjusted in proper position beneath the car-body, the car and trucks move from their own gravity down the grade. As the car passes over the depressed portion of the main track, its body portion is received and sustained by the subjacent side trucks, while its own trucks drop down in the depressed portion of the truck free of the king-bolts. The new trucks of a different gage, which are previously placed in the depression, are then quickly adjusted beneath the king-bolt, which seats itself from the descent of the car-body upon the side tracks and the ascent of the trucks from the depression. As the newly-placed trucks have to lift the car-body free of the side trucks, some backward tendency is encountered by the trucks in rising from the depression, and to counteract this the velocity is accelerated by the steeper grade of the side track at this point. It is not necessary, however, for the side tracks to have a steeper grade than the connecting incline, for the car-body, being much heavier than the trucks, will control the motion with a less grade. By having brakes on the side trucks the motion of the car can be controlled while being transferred.

It will be seen that the trucks are thus shifted quickly and easily, and automatically, except in so far as the mere adjustment of the trucks in position is concerned.

In practicing my invention, instead of having a depression, as in Fig. 1, in the main tracks with a comparatively straight side tracks, I may, as in Fig. 3, make the main tracks with a straight grade, as at *z z z*, and have an elevated side track, *y y*, arranged upon a grade to the horizontal base-line *x x;* or, as in Fig. 4, I may have a straight side track, *y y y*, inclined to the horizontal base-line *x x*, and have a depressed portion in the main track, with the depressed portion of said main track in the same plane as the side tracks. With this latter arrangement, however, the side trucks must be as much higher than the regular trucks as is the distance required to unseat said regular trucks. Although these modifications may be employed, I prefer, for all practical purposes, the arrangement first described.

In transferring a heavy Pullman or passenger car I may use two short side trucks on each side of the car, as shown in the car-truck-shifting apparatus patented by me May 30, 1876, instead of one long truck on each side, as shown in Figs. 1 and 2. For Pullman cars short side trucks are necessary, while for freight-cars long trucks are better.

Having thus described my invention, what I claim as new is—

1. The main tracks having two or more gages of rails, and the side tracks arranged in a different plane, and both graded with an incline, as described, and combined with the independent side trucks, to permit the shifting of the trucks to be effected by gravity, as set forth.

2. The inclined graded side rails, combined with the inclined main track, as described, and having a steeper grade at the point where the newly-adjusted trucks receive the burden of the car, substantially as and for the purpose described.

3. The combination, with the main track having two or more gages of rails, of the side tracks, curved outwardly at B′, and graded at this point in the same plane with the main track, and extending closer in to the main track at the point where it is graded in a different plane, substantially as described.

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Witnesses:
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