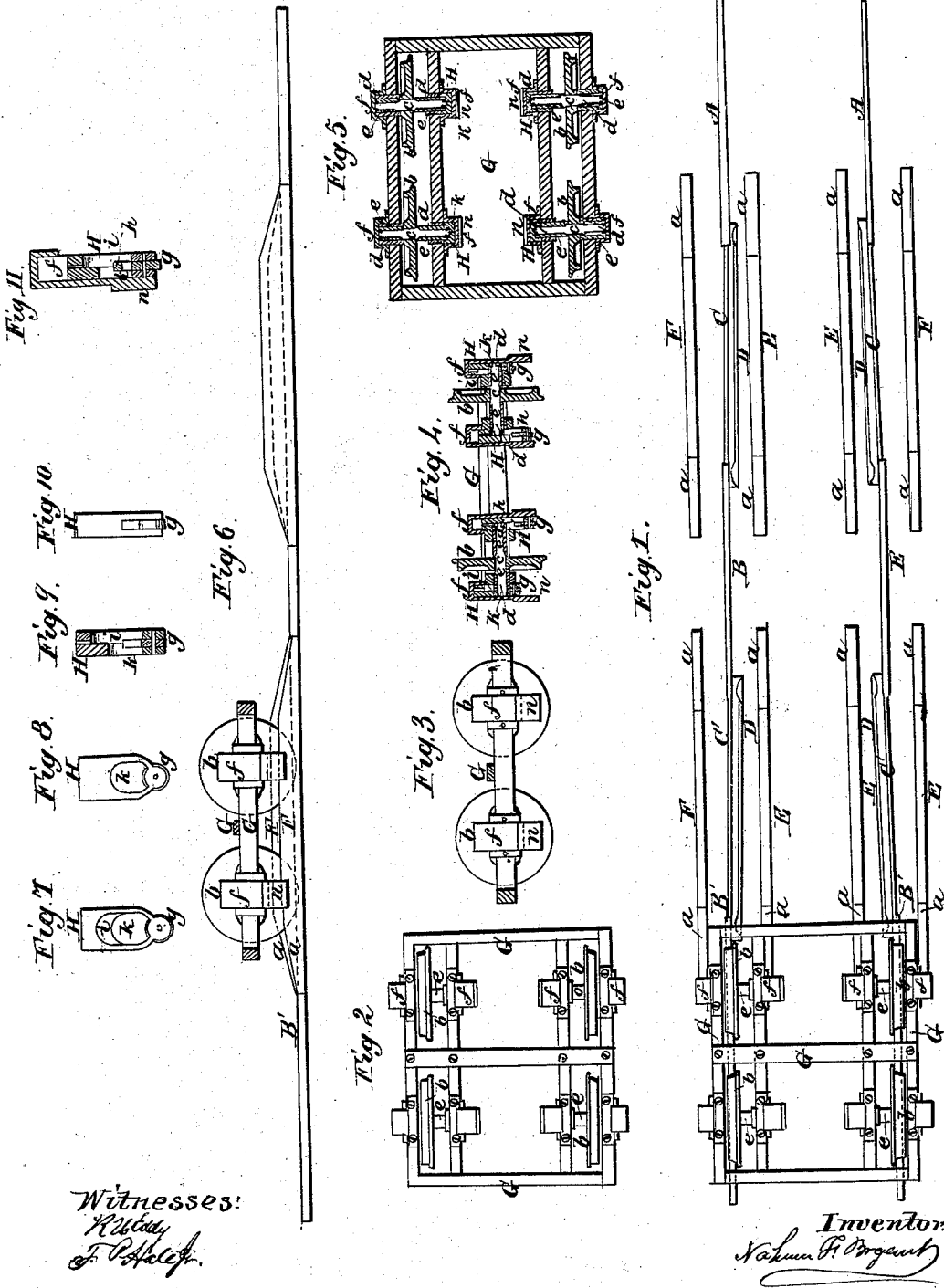


N. F. BRYANT.
Changeable-Gage Truck.

No. 39,545.

Patented Aug. 18, 1863.



UNITED STATES PATENT OFFICE.

NAHUM FRANKLIN BRYANT, OF EAST BOSTON, MASSACHUSETTS.

IMPROVEMENT IN RAILWAY-CARRIAGES.

Specification forming part of Letters Patent No. 37,515, dated August 18, 1863.

To all whom it may concern:

Be it known that I, NAHUM FRANKLIN BRYANT, a resident of East Boston, of the county of Suffolk and State of Massachusetts, have made a new and useful invention, the design or purpose of which is to enable a railway-carriage to be run on either of two or more tracks of different gages, as well as from one to and upon the other as occasion may require; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, making part thereof.

Of such drawings, Figure 1 is a top view of a railway-car truck and three tracks of different gages having my invention applied to them. Fig. 2 is a top view of the carriage. Fig. 3 is a vertical and longitudinal section of it. Fig. 4 is a transverse section taken through two of its wheels and their axles. Fig. 5 is a horizontal section taken through the four wheels and their axles.

In the drawings, A A and B B are two railways or tracks of different gages, one—viz., that marked B B—being of a broader gage or greater distance between its rails than the other, or that marked A A. One track is arranged in advance of the other, and they are connected by two lines of changing-rails, or what may be termed a “changing-track,” such being marked C C in Fig. 1. Each of the rails C leads from one of the rails A to one of the rails B, as shown in the said figure. Other rails, or a track, B' B', of broader gage, are also represented in advance of the rails or track B B, the two tracks B B B' B' being connected by a set of divergent or changing-rails, C' C'. Parallel, or about so, to each of the changing-rails, and at a distance from it a little greater than the thickness of the wheel-flange, is a flange-guide rail, D. There is also between the two flange-guide rails two other or chock-rails, E E, and there are also two more of such chock-rails, F F, which are arranged outside and alongside of each two changing-rails. Each of the chock-rails E F has an inclined plane or slope, *a*, at each end of it. The inside chock-rails, E E, have an elevation different from that of the outside chock-rails, those between one set of the changing-rails being higher than their fellow chock-rails that are outside of such changing-rails, while the inside chock-rails of the other set of changing-

rails are lower than their fellows or those outside of their changing-rails, the same being as shown in Fig. 6, which is a longitudinal section of the tracks and the truck or carriage. This latter, which is shown at G, has four wheels, *b b b b*, each of which has a separate axle, *c*, whose two journals, *d d*, rest respectively in sliding boxes *e e*, so adapted to the carriage frame as to be incapable of revolving therein, but capable of sliding endwise therein, and in directions longitudinally of the axles. At each end of each axle there is a box or housing, *f*, which is bolted or fastened to the carriage-frame, stands vertically, and is open at bottom. Each of the boxes contains what I term a “chock,” it being represented at H in Figs. 4 and 5. This chock is also shown in Figs. 7, 8, 9, and 10 as detached from its box, Fig. 7 being an inside elevation of such chock; Fig. 8, an outside elevation of it; Fig. 9, a vertical section of it, and Fig. 10 an edge view of it. It slides freely in vertical directions within its box, and at its lower part carries a friction roller or wheel, *g*, which is intended to run on one of the lifter or chock rails. A small stud, *h*, (see Fig. 11, which is a vertical section of a box, *f*, and its chock H,) extending from the inner side of the box, serves to prevent the chock from falling out of the box when the said chock may have attained its lowermost position therein. Each chock has two recesses, *i k*, for the axle-box to extend into, one of these recesses opening out of the other. They correspond in width, although one is longer than the other. They open out of opposite sides of the chock.

In Figs. 3 and 4, *n n* are projections which extend down the chock-boxes *f f f f*, and are for the purpose of maintaining the truck in its true position over the rails or prevent it from swaying laterally while passing over the changing-rails. This the projections *n n* accomplish by means of the inner chock-rails, which, with the projections, keep the truck in its proper position.

I am aware of the nature of the invention described in Letters Patent No. 37,839. In this latter invention the wheels have applied to them a locking mechanism to be operated by manual power. In my invention, however, the locking mechanism—viz., the chocks—is operated by the chock-rails, and therefore I have an automatic wheel relieving and locking

mechanism, acting in connection with the wheel-changing rails and their two tracks of different gages. The nature of my said invention is therefore an automatic combination consisting of the chock-rails or their mechanical equivalent, (applied to the roadway,) the chocks (or their mechanical equivalent) applied to the truck-frame and its wheels, the two tracks of different gages and their connection or wheel changing track, or the same and the flange-guide rails thereof, as specified.

The operation of the invention is such that just previous to the passage of the truck upon the changing-rails the chocks will be so elevated or brought into such positions as will free the axle-boxes of the wheels in a manner to enable the wheels to be acted on or moved endwise or laterally by the changing-rails or the flange-rails. In passing off the chock-rails the chocks, by their gravitating power, will be caused to assume such position as will estop the wheels from further lateral

motion and retain them in their proper positions with respect to the rails of the track on which they may be received.

I do not claim as my invention the subject or subjects of the patent hereinbefore mentioned; but

What I do claim is—

The automatic combination consisting not only of the chock-rails (or their mechanical equivalents, applied to the roadway) and the chocks (or their mechanical equivalents) applied to the truck-frame and its wheels, but the two tracks of different gages and their wheel-changing track, or the same and its flange-guide rails, the whole being arranged and so as to operate substantially as specified, and in combination therewith the projections or guides *n n*, for the purpose specified.

NAHUM FRANKLIN BRYANT.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.