(No Model.)

W. WHILEY.

CAR TRUCK.

No. 304,054. Patented Aug. 26, 1884.

FIG. 1.

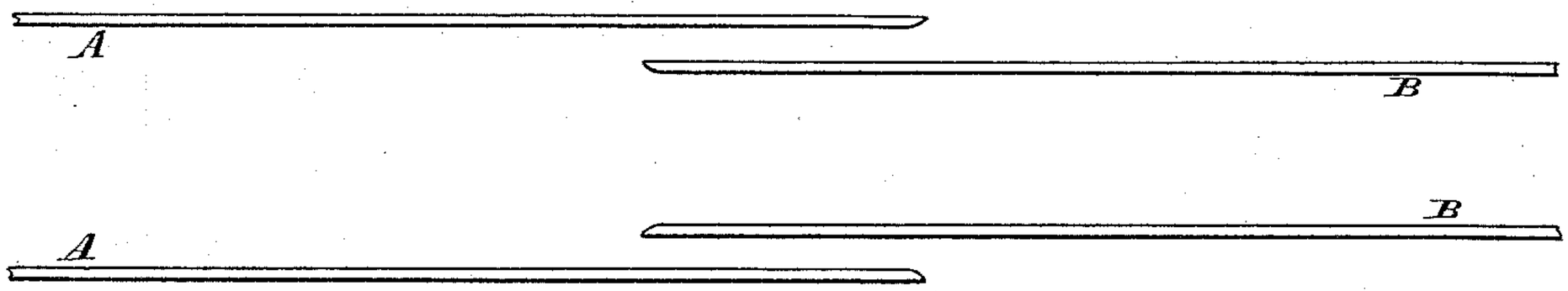


FIG. 2.

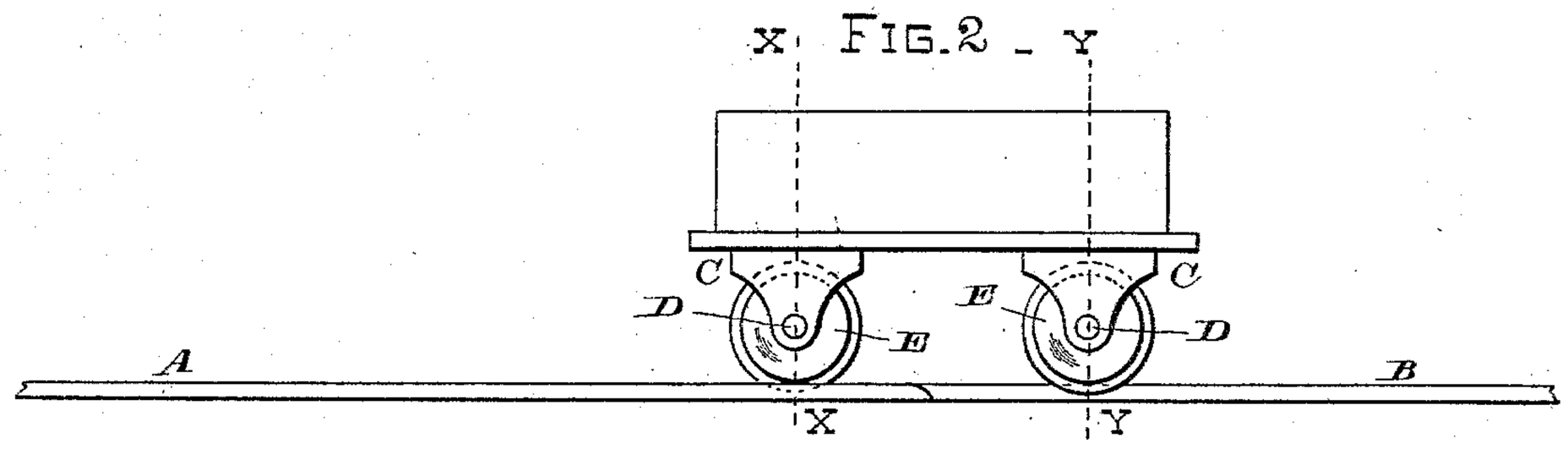


FIG. 3.

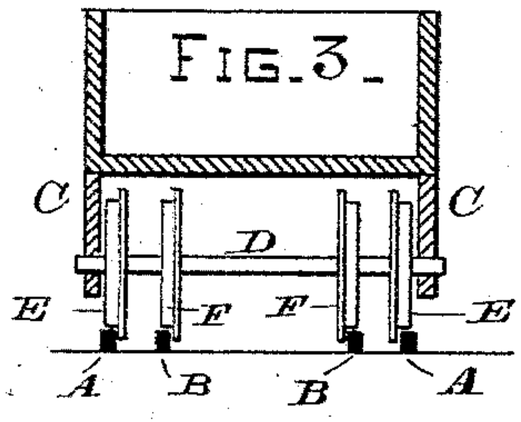


FIG. 4.

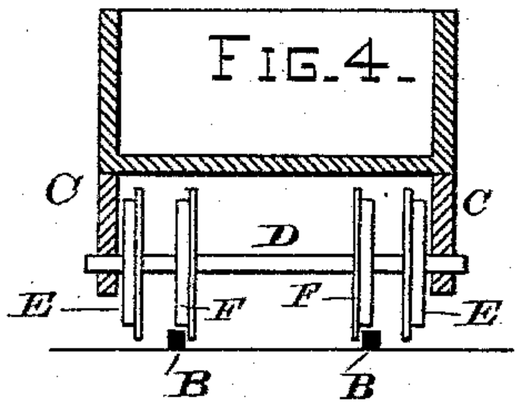


FIG. 5.

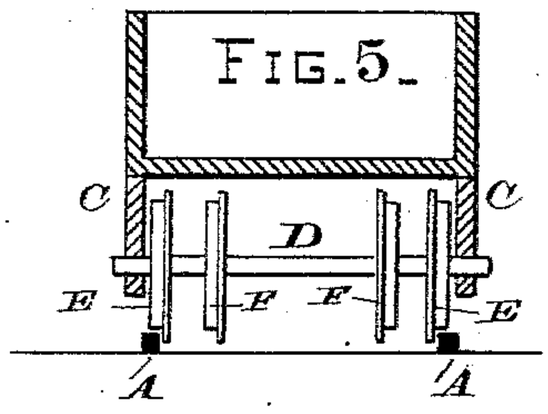
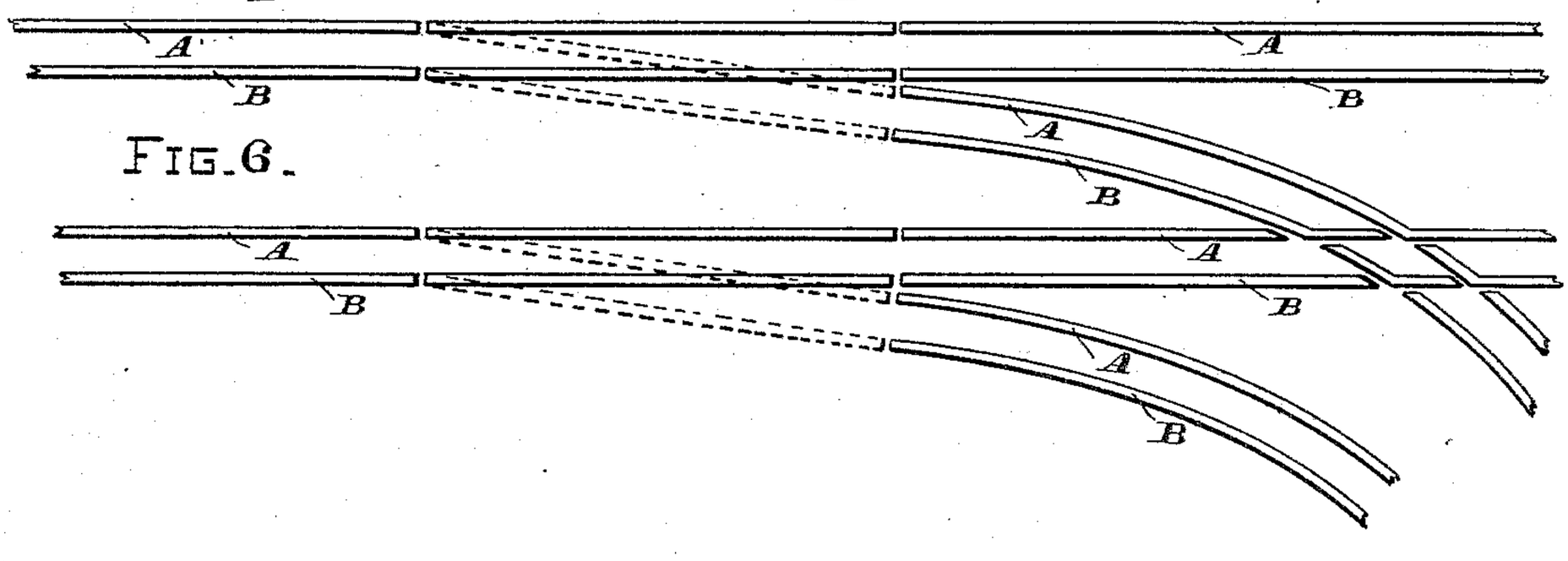


FIG. 6.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM WHILEY, OF OAKLAND, CALIFORNIA.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 304,054, dated August 26, 1884.

Application filed May 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WHILEY, a subject of the Queen of Great Britain, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Car-Trucks, of which the following is a specification.

My invention relates to improvements in car-trucks; and the object of my invention is to provide a car-truck adapted to travel or run upon either broad or narrow gage railroad-tracks. This object I accomplish by the means illustrated in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a plan view representing the junction of a narrow-gage with a broad-gage railroad-track. Fig. 2 is a side elevation of the same, showing a car in position thereupon. Fig. 3 is a cross-section taken on line X X of Fig. 2. Fig. 4 is a cross-section taken on line Y Y of Fig. 2. Fig. 5 is a cross-section taken through a car and rails when the car is standing upon the broad-gage track only. Fig. 6 is a plan view showing a branch track and switch.

Similar letters of reference are used to indicate like parts throughout the several figures.

A A represent the rails of a broad-gage track, and B B the rails of a narrow-gage track. At the point of meeting of the broad and narrow gage tracks the rails of each should be continued past each other for a short distance, which in no case should be less than the length of the truck or car.

The car or trucks are to be of the usual form and construction, and the boxes C are to be attached thereto in the usual manner.

The car-axles D are to be of the length usually made for cars traveling upon broad-gage tracks, and are provided with wheels E E, which travel, run, or roll upon the rails A A of the broad-gage track.

Upon the same shaft or axle which carries the outer car-wheels, E E, and at equal distances therefrom, I place the inner or narrow-gage wheels, F F, which are to be the duplicates of the outer wheels, being of the same diameter, breadth of tread, &c., and, together with the outer wheels, are shrunk upon the axle in the usual manner. It will be observed that the flanges of both the inner and outer wheels are formed on the inner sides thereof, so that whether the car rests on the broad or narrow gage track the relative position of the wheels and track is the same as in ordinary railways and car-trucks.

The operation of my improved car-truck for broad and narrow gage railroad-tracks will be as follows, to wit: For the purpose of illustration, I will suppose that the car or truck be started upon the narrow-gage track. While traveling upon this track the inner wheels, F F, of the truck will engage with the rails, while the outer wheels will revolve with the rotation of the axle, but with perfect freedom, not touching or bearing upon any surface. (See Fig. 4.) As the truck approaches the point of meeting of the broad and narrow gage tracks the outer wheels will pass over and rest upon the track-rails of the broad gage, and the axle will then have four points of support upon the rails, as each of the four wheels will then be resting upon the track-rails—the two outer wheels upon the two outside rails—and the two inner wheels upon the intermediate rails—as shown at Fig. 3. As the car or truck continues on its course it will pass the termination of the narrow gage or intermediate rails, and the whole pressure will be borne by the two outside wheels, which will now roll or travel upon the outer or broad gage rails, while the inner or intermediate wheels will revolve in space and without contact with any rails, as clearly shown in Fig. 5.

At places where the road forks or a branch road enters the main one, the branch may be a continuation of the double tracks, or of either the broad gage or the narrow gage, and the switches will be of the usual construction, care being taken that the length of movement given to the outer or swing end of the switch-rail is a little greater than the difference between the outer and inner track rails on each side.

I am aware that safety car-trucks having four wheels on an axle have heretofore been proposed in connection with a railway provided with four tracks throughout its entire

length, the flanges of the outer wheels being arranged on the inner sides of the wheels, as usual, while the flanges of the inner wheels were to be placed on their outer sides, so as to serve as a safeguard in preventing the displacement of the car. This, however, I do not claim. It has also been proposed to form a car-wheel with two or more independent treads for the purpose of adapting it to pass from one gage of track to another without adjustment of the wheel upon its axle. It is obvious, however, that in order to meet the requirements of any considerable difference in gage a wheel of this construction would necessarily be clumsy, and therefore objectionable in many respects. My invention differs from those above referred to in having four wheels upon each car-axle, all of said wheels being of like construction and having flanges on their inner sides, whereby the car is enabled to pass readily from one gage of track to another without changing the adjustment of the wheels.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

A railway-car truck the axles of which are each provided with a double set of wheels, the outer wheels, E E, and the inner wheels, F F, both having flanges on their inner sides, whereby the car is adapted to be operated upon either broad or narrow gage trackways without changing the adjustment of the wheels, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

WILLIAM WHILEY. [L. S.]

Witnesses:
C. W. M. SMITH,
WILMER BRADFORD.