

E. HIPKINS.

Car Truck.

No. 111,933.

Patented Feb. 21, 1871.

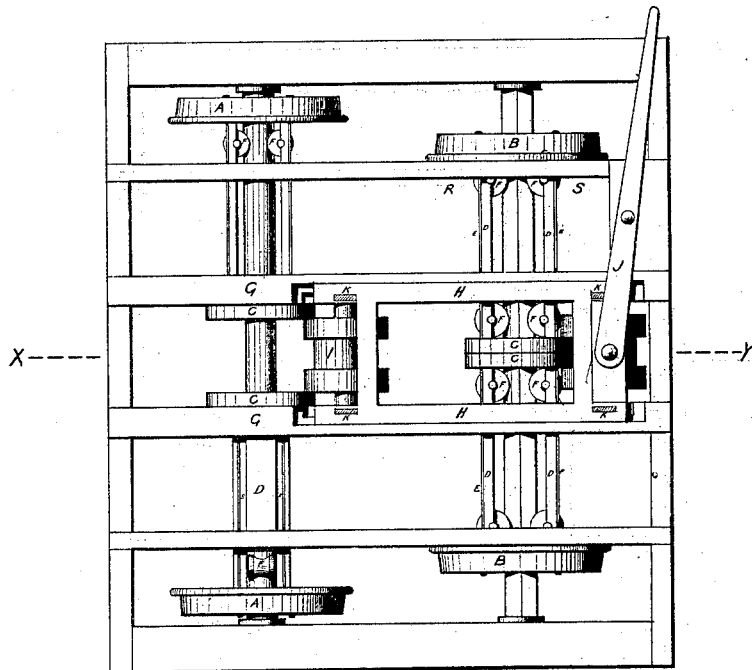


Figure 1.

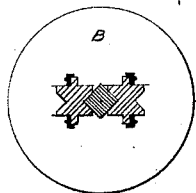


Figure 2.

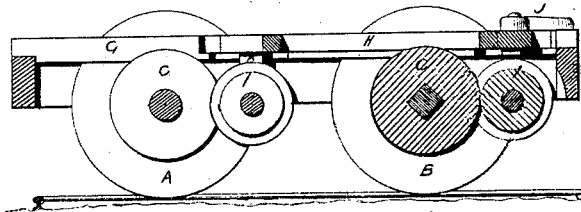


Figure 3.

D. J. Cayley.
Wm. L. Lathrop

Witnesses.

"Inventor."

Edward Hipkins
by his attorneys
Messrs. Ridout & Howard

United States Patent Office.

EDWARD HIPKINS, OF BURFORD TOWNSHIP, CANADA.

Letters Patent No. 111,933, dated February 21, 1871.

IMPROVEMENT IN SELF-ADJUSTING CAR-TRUCKS.

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

I, EDWARD HIPKINS, of the township of Burford, in the county of Brant, in the Province of Ontario and Dominion of Canada, have invented certain Improvements in the Trucks for Carrying Rail-Cars, of which the following is a specification

Nature and Object of the Invention.

The object of my invention is to attach the wheels of car-trucks to their axles in such a manner that the gauge of the wheels can be altered when necessary by simply running the car upon a graduated track, which acts as a switch for connecting the two gauges.

The wheels are sufficiently loose to slide upon their axles, and my invention consists in suitable mechanical contrivances by which they are locked to any gauge upon which the car is about to run, as herein-after more fully described.

Description of the Accompanying Drawing.

Figure 1 is a plan.

Figure 2 is a section through R S.

Figure 3 is a section through X Y.

General Description.

I do not confine myself to any particular design of truck, as the contrivance which I will now describe may be adapted to any form of truck which is in use upon the railroads which may adopt it.

The drawing is sufficiently clear to illustrate the principle and general arrangement of my invention.

The material of the different parts I also leave to the manufacturer.

I have shown one pair of wheels, marked A, set for a broad-gauge; the other pair, marked B, for a narrow-gauge track. Of course, in practice, both pairs will be set at the same gauge. I have merely shown them in this manner in order to illustrate the principle more easily.

As I have before mentioned, the wheels are sufficiently loose upon their axles to slide.

The axles may either be round or square, as found most convenient. If round, there must be a key upon the axle, and a key-way cut in the hub of the wheel in such a manner that, while it is prevented from turning on the axle, it, the wheel, can be moved laterally at pleasure by the contrivance I will describe. If square, the hole through the hub must be a corresponding shape, when of course there will be no necessity for a key.

In the drawing—

The wheels marked A are upon the round axle, and those marked B upon the square.

The mechanism for changing the gauge is the same in both cases, and will readily be understood by any mechanic from the following explanation:

The circular pieces C are made a working fit of that portion of the axle upon which they are intended to move. The wheels are each attached to one of these circular pieces C by straight pieces or bars, D, and are bound together by bolts E.

The friction-pulleys F are intended to make the whole move upon the axles easily. These pulleys are merely precautionary, as I think my contrivance will in most cases work equally as well without them.

The bars D are made such a length that the circular pieces C will meet in the center when the wheels are upon a narrow gauge, and the wheels are prevented from spreading too far by the circular pieces C butting against the longitudinal truck-timbers G, which are guarded by iron for the purpose. Of course these timbers must be placed, and the bars D and clutch-pulleys I made to accommodate the gauges upon which the truck is intended to run.

From this arrangement it will be seen that the weight is distributed over the axle.

The frame H is fitted into and works in recesses cut in the longitudinal pieces G. To this frame are attached, by hangers K, the clutch-pulleys I, which revolve upon their axis and grip the circular pieces C, as shown by the drawing.

The lever J is intended to work or shift the frame H. However, I do not intend to confine myself to the use of this lever, as the frame H might be worked by a screw, chain, or other mechanical contrivance which may be considered most suitable by the manufacturer adopting my invention. It will be better, however, to connect the lever J by another lever or levers in such a manner that it may be worked by the brakeman without descending from the car.

I will now proceed to describe the operation or mode of shifting the gauge.

We will suppose the car has been running upon the broad gauge, and has just arrived at the point where the narrow gauge commences. Here the graduated switch must connect the two tracks graduating from broad to narrow gauge in order to make the connection perfect.

Before running the car upon the switch I move back the frame H, disengaging the clutch-pulleys I, which, as may be seen by the drawing, fit against the piece C in such a manner that the wheels are held at any gauge to which they have been set.

As I have before mentioned, the wheels and circular pieces C are loose upon the axle, consequently upon the clutch-pulleys I, which prevent their lateral motion; being disengaged, the wheels will adapt themselves by sliding upon the axles to the gauge upon which the graduated track conducts them, and upon the frame H being again moved, and the clutch-pulleys I made to grip the circular pieces C, the car

is prepared to continue on its journey. Of course this operation will be the same at each change of gauge.

From this description and the drawing the general construction and operation will be readily understood.

Claim.

I claim—

The combination of the frame H, longitudinal

pieces G, hangers K, clutch-pulleys I, and circular pieces C, substantially as and for the purpose set forth.

EDWARD HIPKINS.

Witnesses:

A. MORTON,

GEORGE WALL, JR.