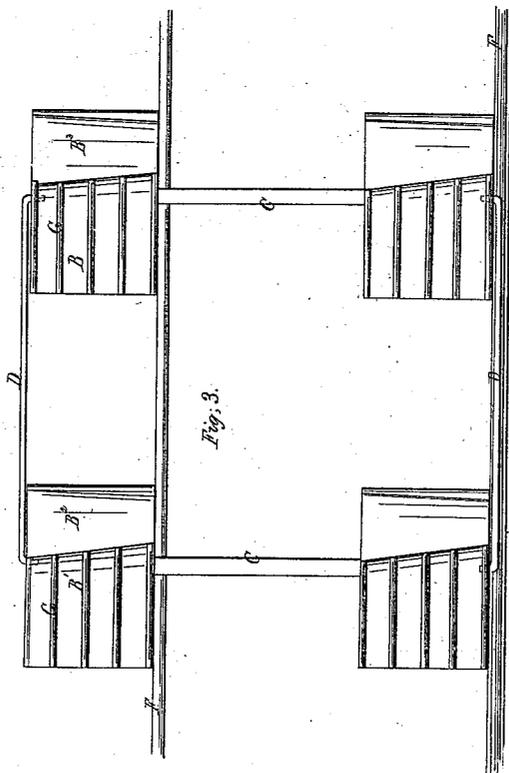
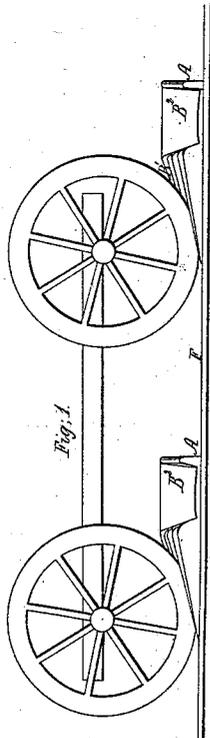
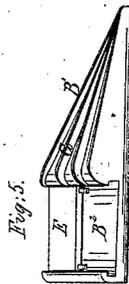
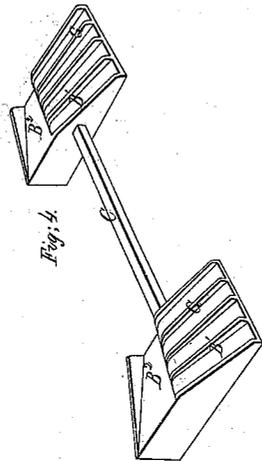
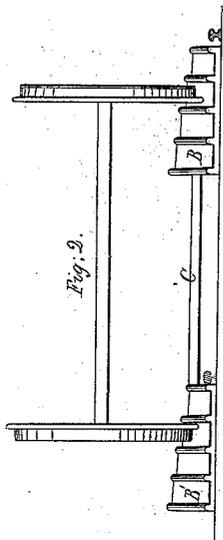


S. H. Bean,
Car Replacer,

N^o 4,232.

Patented Oct. 11, 1845.



UNITED STATES PATENT OFFICE.

SAMUEL H. BEAN, OF PHILADELPHIA, PENNSYLVANIA.

MANNER OF REPLACING RAILROAD-CARS UPON THE TRACK.

Specification of Letters Patent No. 4,232, dated October 11, 1845.

To all whom it may concern:

Be it known that I, SAMUEL H. BEAN, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement, being a Mode of Replacing Cars That have Run Off the Track, called "Bean's Car-Replacer," which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1, is a side elevation of the apparatus, and a section of a car off the track and in the act of being replaced. Fig. 2, is a cross section of ditto. Fig. 3, is a top or bird's eye view of the rail road track, and blocks, showing their positions in relation to each other. Fig. 4, is a perspective view of two of the inclined plane blocks. Fig. 5, is a section of a modification of the apparatus.

The nature of this invention consists in replacing rail road cars that have run off the track, by drawing the wheels of said cars up inclined planes, parallel with the track, formed on the upper surface of oblong blocks, placed in front of the several wheels, which inclined planes extend some distance above the top of the rail, and intersect transverse inclined planes formed on said blocks at right angles to the first mentioned, and drawing said wheels on these transverse inclined planes, down which they slide, transversely, by the gravity of the car, to their proper positions on the track.

The blocks A may be of cast-iron or formed of wood, and covered or sheared on their wearing surfaces with sheet iron, and each have two inclined planes formed on their upper surfaces at right angles to each other. The one marked B¹ extending from one end of said block, about two-thirds its length, having ribs or tongues G, projecting from its surface to guide the wheels of the car in their ascent; and the other plane B² extending from one side of the block to the other, at right angles to, and immediately in front of, the first mentioned one. These blocks are permanently connected together in pairs, by cross bars C, a suitable distance from each other, to correspond with the width of the track; so that when they are placed in their proper positions in relation to the track the lower terminus of the trans-

verse inclined planes will be on a line and flush with the tops of the rails F.

When the car has run off the track, a pair of these blocks are placed in front of each pair of wheels off, in the manner represented in the drawing, being connected together and held in their positions by longitudinal rods D. The wheels of the car are then drawn up the longitudinal inclined planes B¹, and on the transverse inclined planes B² and by the gravity of the car, they slide down said transverse inclined planes, to their proper positions on the track—the inclined planes B² being made convex in their cross section, to present as little surface for contact with the flanges of the wheels as possible to prevent unnecessary friction.

When it is desired to replace an eight wheeled car, the forward set of wheels may be replaced first, and the hind set afterward, or all may be replaced at the same time.

A carriage E, Fig. 5, guided between two grooves, and resting on friction wheels, may be placed on each of the transverse inclined planes B², for conveying the cars down, instead of the wheels sliding over the convex surfaces of the inclined planes; but regarding it as a modification of the same principle, and inferior to the first, I do not deem it necessary to lay any claim to it in this application.

What I claim as my invention and which I desire to secure by Letters Patent is—

Replacing cars that have run off the track by drawing them up longitudinal inclined planes B¹, formed on blocks A of any suitable material connected together, and placed in front of the several wheels, and thence on to transverse inclined planes B², formed on said blocks, immediately in front of said longitudinal planes, and terminating on a level with the rails, down which said wheels are caused to slide, by the gravity of the car, to their proper positions on the track, as set forth.

SAML. H. BEAN.

Witnesses:

EDMUND MAHER,
JOHN E. WARNE.