J. B. BARNES.

CAR-REPLACER.

No. 193,211. Patented July 17, 1877.

Fig. 1.

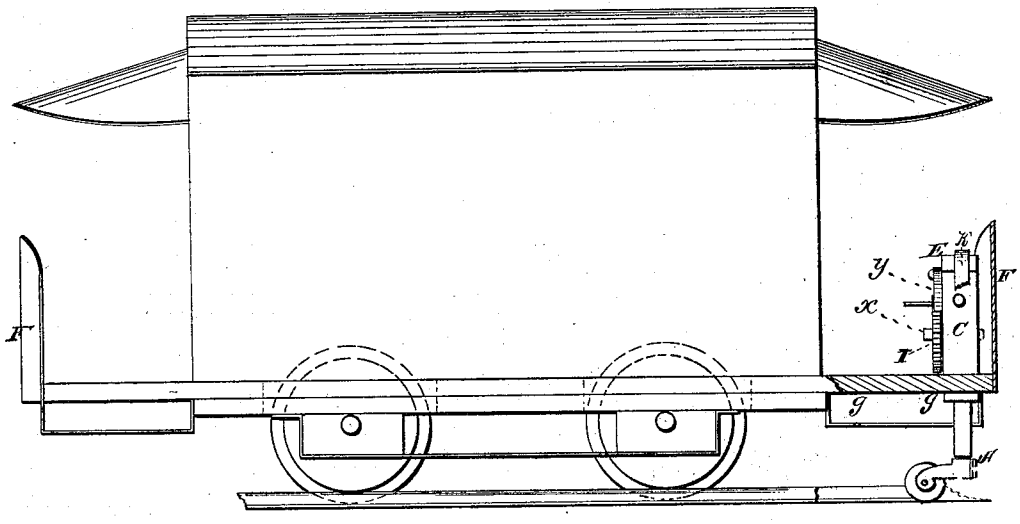


Fig. 2.

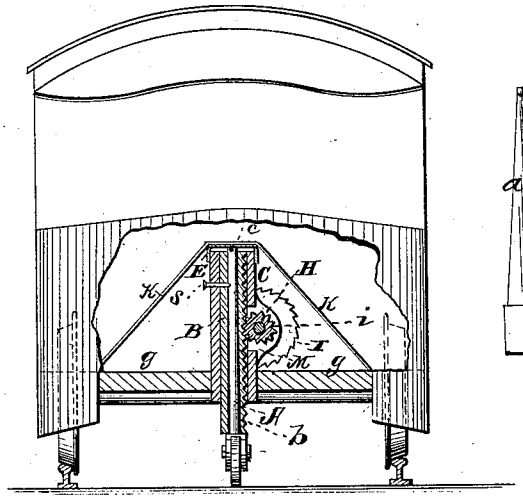
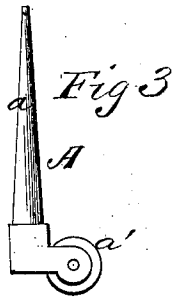


Fig 3



Witnesses

Thomas J Woodling

H. L. Moriarty

Inventor:

Jerome B Barnes

E. W. Anderson

atty

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JEROME B. BARNES, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN CAR-REPLACERS.

Specification forming part of Letters Patent No. **193,211**, dated July 17, 1877; application filed January 31, 1877.

To all whom it may concern:

Be it known that I, JEROME B. BARNES, of Indianapolis, in the county of Marion, in the State of Indiana, have invented a new and valuable Improvement in Car-Replacers; and I do hereby declare that the following is a full, clear, and exact description of the same, both in operation and construction, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of side view of my invention applied to a car. Fig. 2 is a sectional end view of the same; and Fig. 3 is a detail view of the caster.

This invention has relation to improvements in car-replacers for street or steam cars.

The object of my invention is to provide an economical and expeditious means for replacing cars of every description upon the track, after they have "jumped" the same, without requiring the passengers to leave their places; for carrying cars around sharp curves without causing the enormous friction incident to, and inevitable in, the present mode of so doing; and, finally, for transferring a car from one track to another without injury to the car or its occupants.

The nature of my invention consists in combining, with a caster-wheel having its bearings in a ratchet-box, and capable of rotating therein, a tubular casing, adapted to receive said box, provided with a cog-wheel engaging said box, and means for operating said cog-wheel, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates a strong metallic caster, consisting of a tapering shank, *a*, preferably of wrought-iron, and a strong broad-treaded roller, *a'*, journaled in the lower end of said shank or spindle.

The shank or spindle aforesaid extends upward through a metallic box or casing, B, the bore of which is conical, and adapted to receive the said spindle, and the exterior walls of which are at right angles to each other. This box is provided upon one of its faces with a series of teeth, *b*. The spindle of the caster-wheel is confined to the ratchet-box B by means of a pin, *c*, which, while it allows the caster-wheel to rotate freely, will prevent it from dropping out of the said box. C represents a preferably metallic box, having a rectangular hollow or bore adapted to admit the ratchet-box B within it, as shown in Fig. 2. This box is passed up from below through a rectangular opening in the end of the car-platform, and is braced against vertical upward displacement by means of a socket, E, in which the upper end of this box is seated.

The socket aforesaid is suitably connected to the platform by inclined braces K, that are rigidly secured to the platform at each side. H represents a suitable cog-wheel, having its bearings in lugs *i* at one side of casing C. This cog extends inward through a slot, M, in said casing or box, and meshes with the teeth of the ratchet-box aforesaid. Its journal extends outward a sufficient distance to have a ratchet-wheel, I, secured thereon, and to be provided with a wrench-seat, *x*, on its end, outside of said ratchet-wheel, by means of which a suitable crank-arm may be applied thereto.

By rotating the cog-wheel H the end of the car may be raised, and its transporting-wheels lifted clear of the track, when the car is to be transferred from one track to another, or in replacing the car from the ground, and the caster-wheel being inclined in the direction of the track to be occupied, the application of the draft will cause the car to take the desired direction. The ratchet-wheel I aforesaid will be prevented from rotating backward by means of a pawl, *y*.

The spindle of the caster-wheel will, after the roller has been adjusted in the proper direction for replacing the car, be secured against rotation by means of a set-screw, *s*, that passes through the outer casing and the ratchet-box, and bears forcibly against the said spindle. This screw also relieves the ratchet and its pawl of no inconsiderable strain, as, after the end of the car is raised, it may be applied, and thus hold the ratchet-box rigidly in place.

Having thus explained my invention, I claim as new and desire to secure by Letters Patent—

The combination, in a car-replacer, of the spindle A, having roller a', the tubular ratchet-box B, adapted to receive said spindle, the outer socket-box C, receiving said ratchet-box, a pinion, i, engaging the latter, a ratchet and pawl, and a crank-arm, for actuating said pinion, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JEROME B. BARNES.

Witnesses:
THOMAS J. WOODLING,
M. T. MORIARTY.