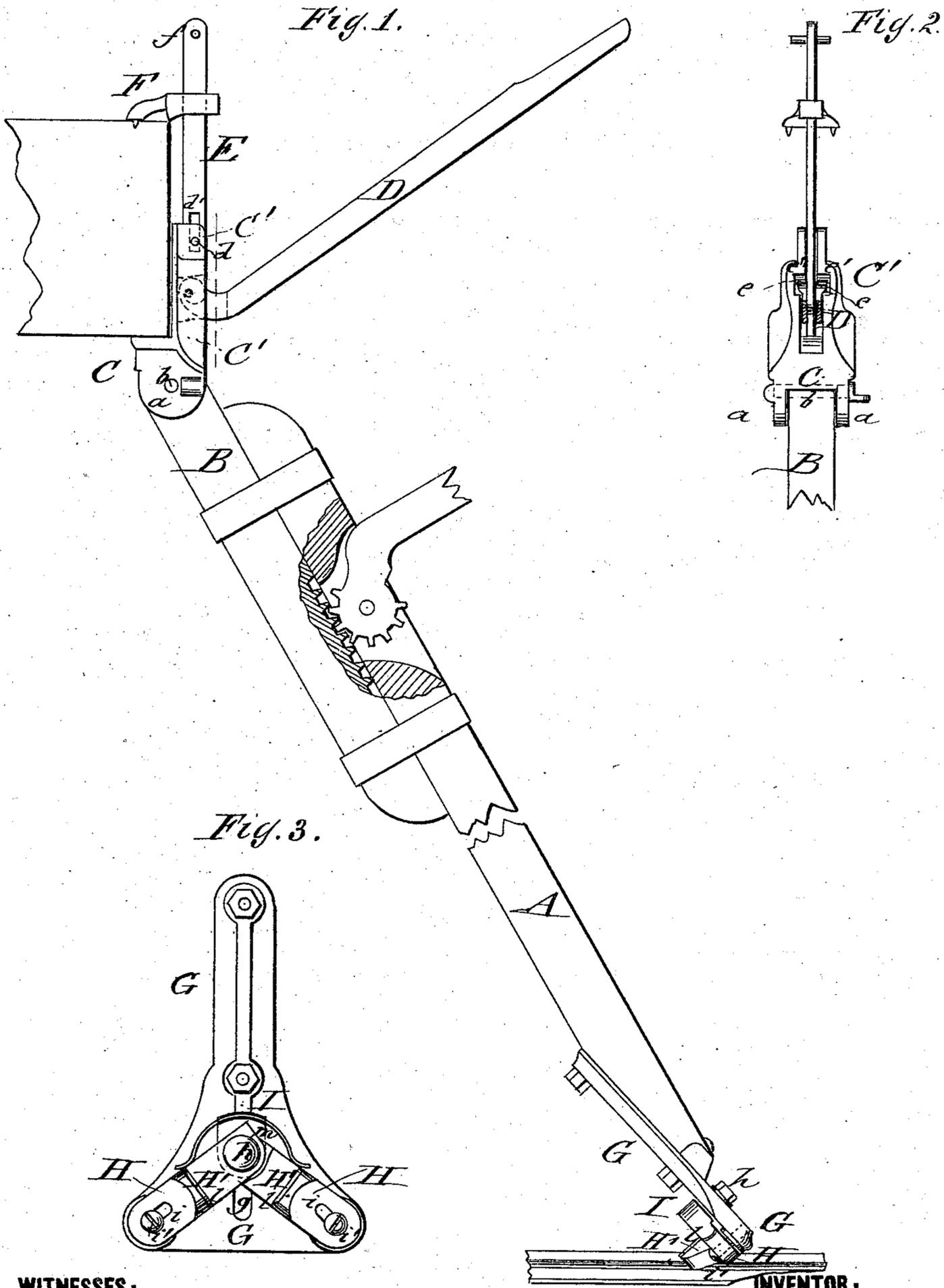


E. LITTLE, A. S. BAILEY & F. L. CLARKE.  
Car-Pushers.

No. 154,691.

Patented Sept. 1, 1874.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

EDWARD LITTLE, ALVA S. BAILEY, AND FREDERIC L. CLARKE, OF PAXTON,  
ILLINOIS, ASSIGNORS TO EDWD. LITTLE AND ALVA S. BAILEY.

## IMPROVEMENT IN CAR-PUSHERS.

Specification forming part of Letters Patent No. 154,691, dated September 1, 1874; application filed July 11, 1874.

*To all whom it may concern:*

Be it known that we, EDWARD LITTLE, ALVA S. BAILEY, and FREDERIC L. CLARKE, of Paxton, in the county of Ford and State of Illinois, have invented a new and Improved Car-Pusher, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation of our car-pusher with improved car-sill clamp and rail-clutch; and Figs. 2 and 3, respectively, end views of the clamp and clutch.

Similar letters of reference indicate corresponding parts.

Our invention relates to improvements on the car-pusher for which a patent has been granted to ALVA S. BAILEY, under date of June 3, 1873, and No. 139,529, so that the car-sill may be held firmly, without possibility of detachment, during the forward motion of the car, while the clutch part gripes firmly the rail and slides readily along the same with the motion of the car.

Our invention consists, first, in providing the upper end of the slide-beam with a pivoted sill-clamp, which is readily adjusted to every thickness of car-sills; and, secondly, in an improved spring-rail clutch applied to the lower end of the main beam.

In the drawing, A represents the main beam of our car-pusher, and B the slide-piece, working in straps along the upper end of beam by means of rack and lever. The upper end of slide B is provided with seat or saddle C, which is pivoted, by strong side lugs or ears *a* and cross-pin *b*, to the same. The seat C has a vertical extension, C', which is recessed at its outer side in such a manner that the eccentric lever D with the slide-bar E may be applied thereto. The lower end of slide-bar E is pivoted to lever D, and slotted at *d'* to slide along cross-pin *d* at end of extension C', pin *d* defining extent of sliding motion of bar E, and retaining also bar and lever in position in the recess of extension C'. Lever D is supplied at the pivoted eccentric end with side projections *e*, which move in corresponding grooves *e'* of the recessed part of extension C'. A jaw, F, slides under right angles on bar E, and has projections or teeth at its lower side. A cross-

pin, *f*, at the upper end of bar E prevents the jaw F from getting detached from the same. The distance of seat C from end of bar E is such that the jaw F may be applied to car-sills of various thicknesses.

The car-sill clamp is attached by applying the seat and its extension to the lower corner of the sill and bringing the jaw down to the upper part of the same. The lever is then carried down from its position along the sliding bar toward the main beam of the pusher, so as to draw, by the eccentricity of the lever end, the jaw firmly onto the top part of the sill, and attach thus the clamp firmly to the same. The pivot-connection of clamp and slide-piece admits the pushing of the car without the detaching of the clamp from the sill.

On completing the pushing operation of the car the clamp may be instantly disconnected from the sill by carrying lever back toward the sliding bar, and releasing thereby the jaw.

The rail-clutch is firmly bolted to the lower end of the main beam A by its triangular base-plate G, having a sharp edge acting on the sides of the rail. A central slot, *g*, of base-plate G guides the connecting-bolt *h*, to which the jaw-plates H are pivoted at their upper ends. Plates H spread then sidewise to the corners of the base-plate, and slide by slots *i* on bolts *i'* of the same. The jaws H' project under right angles from plates H, and are mounted with steel plates *l*, which may be taken off from time to time to be sharpened at the gripping-edges. A circular or elliptic spring, I, of suitable strength, extends above pivot-bolt *h*, and acts on the upper sides of the jaw-plates, being attached to bolt *h* by a connecting-plate, *m*. The spring retains the clutch along the rail when following the motion of the car, and allows the spreading of the jaws for passing readily along the inequalities of the rails, especially on side tracks with worn-out rails, while contracting them instantly at narrower parts.

When the car is pushed the sharp edges of the jaws, together with the edge of the base-plate, gripe firmly the sides of the rail, and offer a sufficient degree of resistance to set the cars, by means of the sill-clamp, in motion, with the great advantages of their instant re-

newed application by means of their attachment to rail and sill.

Instead of the eccentric clamp herein described, an equivalent clamp adjusted by a screw-wheel may be employed, the effect on car-sills of different sizes and the retention thereon being similarly accomplished thereby.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. As an improvement in car-pushers, the combination of slide-piece B with the pivoted seat and extension C C', eccentric lever D, and sliding bar E with jaw F, for the purpose of clamping firmly car-sills of different thicknesses and retaining position thereon during the pushing of the car, substantially as set forth.

2. The combination, with the main beam of the car-pusher, of a rail-clutch attached to its lower end, consisting of triangular base-plate G, pivoted and sliding plates H, having gripping-jaws H', and band-spring I, being arranged to clutch firmly the rail on pushing, and follow the car without entirely releasing the rail, substantially as and for the purpose set forth.

EDWARD LITTLE.

ALVA S. BAILEY.

FREDERIC L. CLARKE.

Witnesses to CLARKE and LITTLE:

E. C. GRAY,

JOHN MCNALL.

Witness to BAILEY:

J. C. PATTON,

E. C. GRAY.