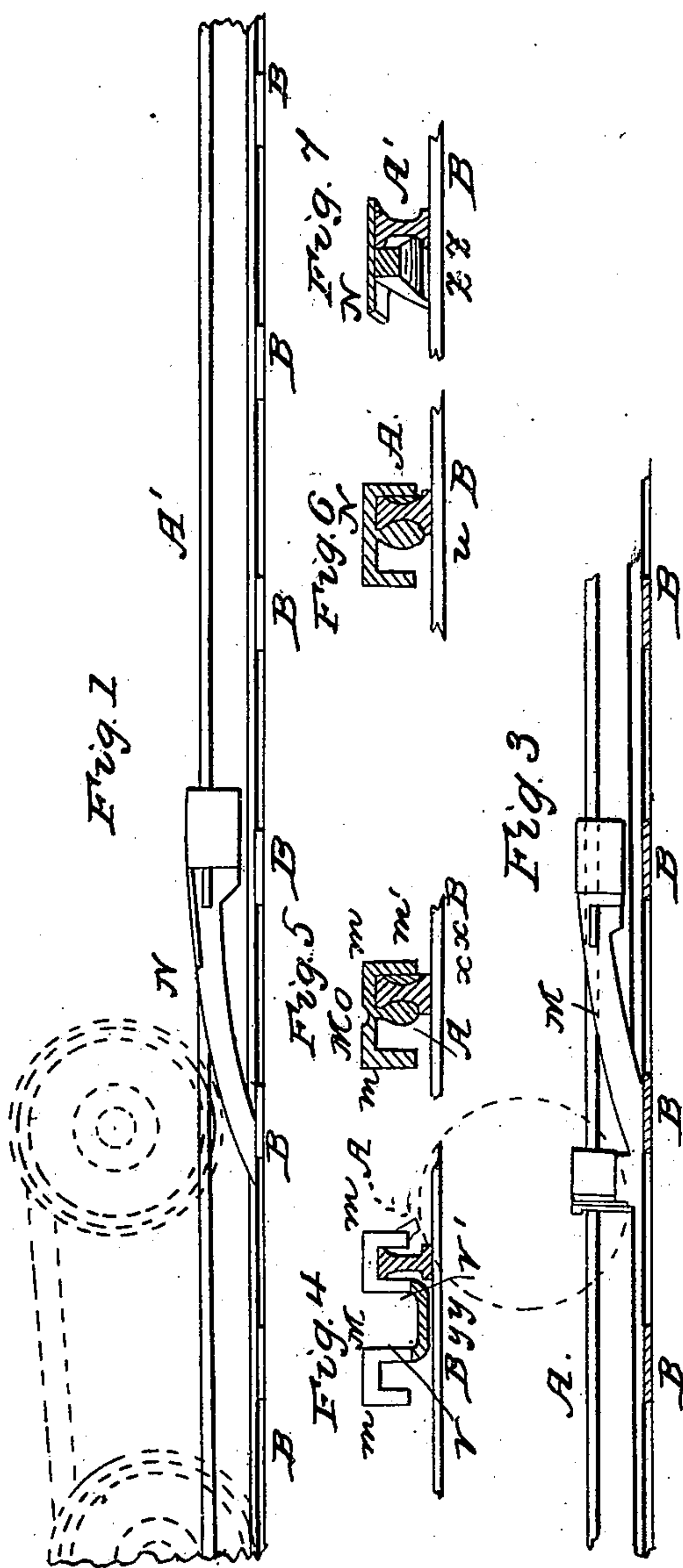


S. S. JAMISON.

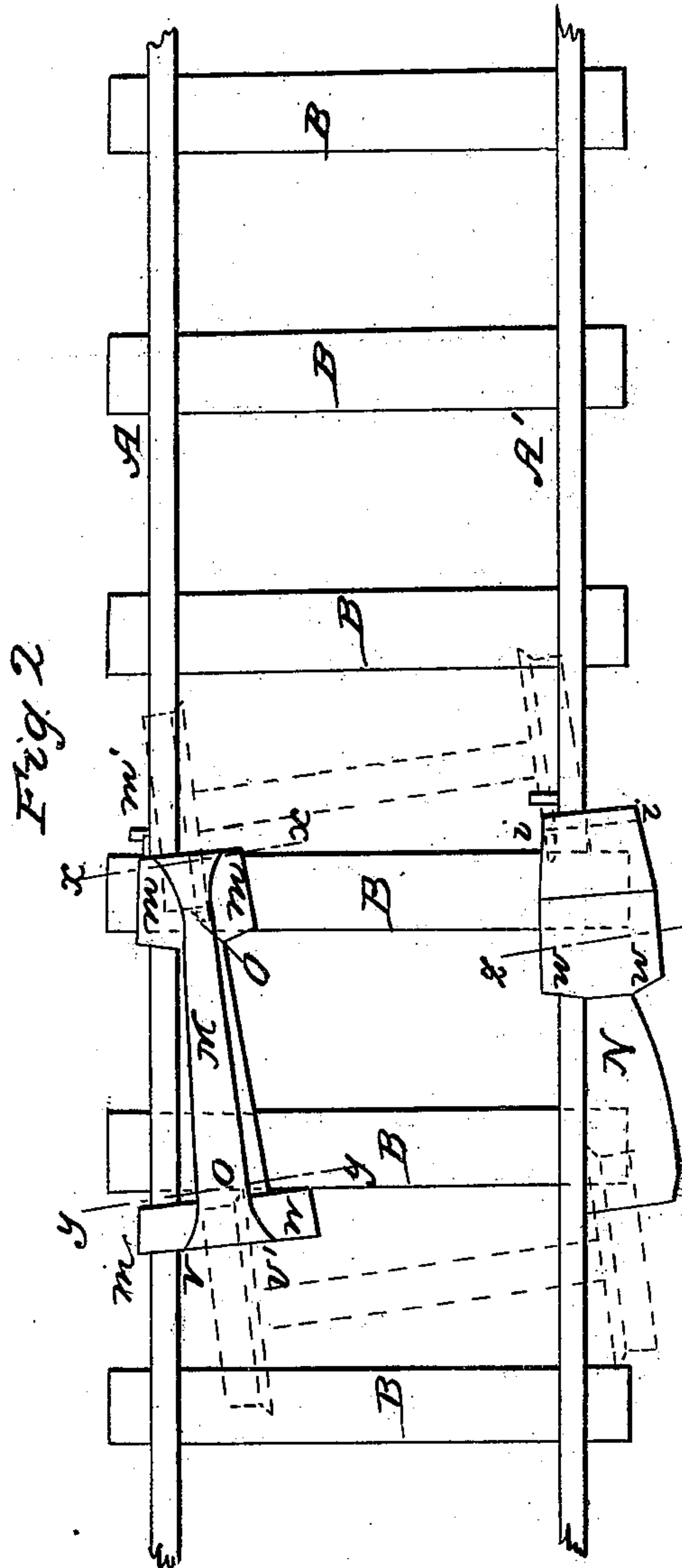
Car Replacer.

No. 76,768.

Patented April 14, 1868.



Witnesses
John E. Kemon
Chas. A. Peat



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SAMUEL S. JAMISON, JR., OF SALTSBURG, PENNSYLVANIA.

Letters Patent No. 76,768, dated April 14, 1868.

IMPROVED CAR-REPLACER.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SAMUEL S. JAMISON, JR., of Saltsburg, in the county of Indiana, and State of Pennsylvania, have invented a new and improved Car-Replacer; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, (making a part of this specification,) in which—

Figure 1 is a side elevation.

Figure 2 is a plan.

Figure 3 is a longitudinal vertical section through the middle of the railroad, showing the inner side of one rail in elevation.

Figures 4, 5, 6, and 7, are cross-sections through the lines, *y y*, *x x*, *z z*, and *Z Z*, respectively of fig. 2.

The object of this invention is to provide a device which can be conveniently carried at all times on the train, and which will enable the engine or cars to be readily replaced on the track when thrown off. It is so constructed that its several parts can be placed in position for use on either side of the rails, and in whatever direction the train may be moving.

In the drawings, *A A'* represent the rails, and *B B* the ties of the road, *C* being a car which has run off the track, and which it is desired to replace. This is easily and readily accomplished, whether the car has run off to the right or the left side of the track, by an apparatus composed of two inclined pieces, *M* and *N*, the form and operation of which I will now proceed to describe.

M is an inclined piece of strong cast or wrought iron, the plan of which is shown in fig. 2, its side elevation being shown in fig. 3, and two cross-sections of it being seen in figs. 4 and 5. It is provided with ears *m m*, one at each corner, two of which fit over the rail, and are keyed to it by wedges *m' m'*, that fix the incline firmly to the side of the rail. The ends of the ears at the upper end of the incline extend downward so far, that the one which is free will rest on the cross-ties when the cars are passing over the incline, thus helping to support the great weight that will bear upon the inclines. A groove, *O*, extends from the lower edge of the incline to the upper, being wide at its lower end, as seen between the points *v v'*, and narrowing towards the upper end of the incline. The sections in figs. 4 and 5, and the top view in fig. 2, represent the shape and comparative dimensions of this groove very accurately. When the incline is in position for use, the upper end of the groove terminates at the inner edge of the tread of the rail, as seen in fig. 2, so that when the car runs up the incline, as shown by the red lines in fig. 2, the tread of the wheels will drop upon the tread of the rail, the flange of the wheels dropping on the inside of the rail in the proper position for the car to run forward without any further difficulty.

In connection with this incline, I use another, *N*, the upper surface of which is smooth, its cross-section being a straight line, as seen in figs. 6 and 7, and its longitudinal section being a slightly convex line, as may be seen by fig. 1. The upper end of this incline is fastened to the rail in the same manner as the upper end of the incline *M*. At that point, the incline is of considerable width, and its inner edge, as far back as the point *w*, rests on the rail. At the point *w*, however, it suddenly contracts in width, and ceases to rest on the surface of the rail, and from that point to its lower end, the inner edge of the incline presses against the side of the rail. The lower end of the incline rests on the ties or the ground, its inner edge, if necessary, pressing upon the flange of the rail. The keys *n' n'*, corresponding to the keys *m' m'* of the incline *M*, fasten this incline firmly to the side of the rail, causing it to lie closely against the rail, whatever may be the weight thrown upon it.

The operation of these inclines is as follows: They are fixed to the side of the rails, as above described, and the car is caused to ascend them, the flange of the wheels on one side entering the groove *O*, and being by it guided towards the proper position for the wheel to drop upon the rail. The wheels on the other side of the car ascend the incline *N*, the smooth surface of which enables them to slide sideways, as the other wheels move towards the track by the operation of the groove *O*, until these wheels also reach the proper position to drop upon the rails, with their flanges resting against the inner edge of the rails. The wheel sliding towards the rail, causes the incline to press firmly against the rail under all circumstances.

I do not claim to be the first to use two inclines, nor the first to use two inclines, one of which is provided with a groove, the other having a smooth upper surface, as I am aware that such a device has been constructed, but, in consequence of its imperfection, never introduced into practical use.

My invention, as applied to such inclines, consists in constructing the inclines with ears *m m*, *n n*, on each side, so that they can be used to guide the cars to their proper position, in whatever direction the train may be advancing; and secondly, in cutting the groove *O* in the incline *M*, in such a position and direction, that, whichever way the incline may be placed upon the rail, the flange of that car-wheel will be dropped at the inner edge of the rail, without having run across the rail. If the rail is to be crossed by either wheel, this should be done by means of the flat incline *N*, the surface of which, above the point *w*, is fitted to allow the wheel to slide laterally across the rail, while the other wheel is ascending the incline *M*. The incline *M* should, of course, be employed to replace that wheel which is not to cross the rail, in whichever direction the cars may be running.

The inclines will be of small size, and their weight will be so inconsiderable that they may be carried always on the locomotive, tender, or some of the cars.

The device has been practically and thoroughly tested on the Pennsylvania Central Railroad, and with it a locomotive has been replaced on the track in five minutes, that the engineer had been working in vain for twelve hours to replace by other means.

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

1. The combination of the two inclines *M N*, when constructed with ears *m m*, *n n*, on each side, so that they can be applied on either side of the rail, substantially as and for the purpose specified.

2. In an apparatus consisting of the grooved incline *M*, and the smooth incline *N*, I claim so constructing the groove *O*, that it receives the flange of the car-wheel at the lower and expanded end of the groove, and guides it gradually towards the rail, finally dropping the wheel upon the rail in the manner described, and without causing the wheel to cross the rail.

S. S. JAMISON, JR.

Witnesses :-

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