

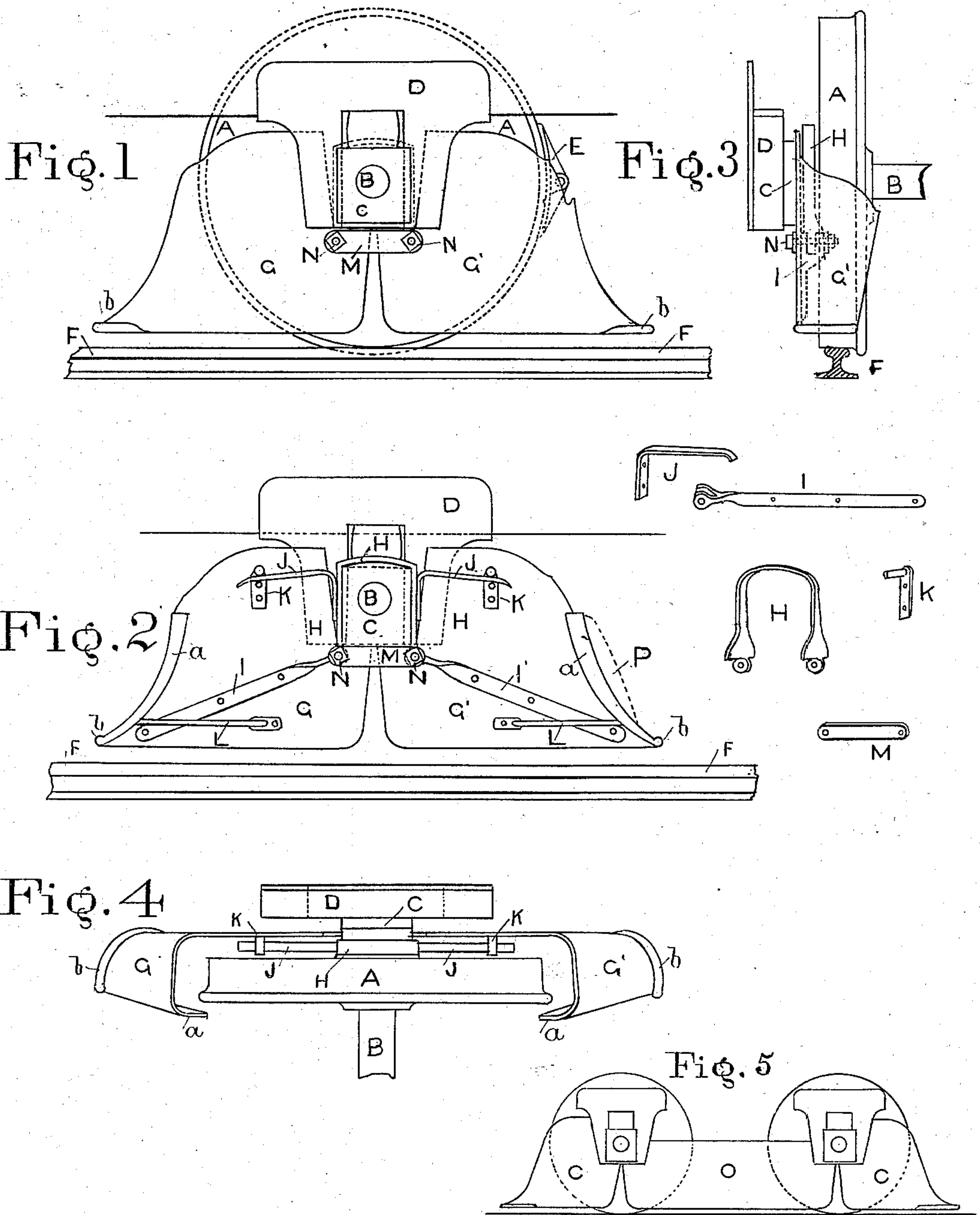
(No Model.)

M. H. LANDERS.

RAILWAY CAR.

No. 258,308.

Patented May 23, 1882.



WITNESSES

Thomas H. Barclay,
Charles Monmonie

INVENTOR

Milton H. Landers
by George Parry
Atty

UNITED STATES PATENT OFFICE.

MILTON H. LANDERS, OF SAN FRANCISCO, CALIFORNIA.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 258,308, dated May 23, 1882.

Application filed December 21, 1881. (No model.)

To all whom it may concern:

Be it known that I, MILTON H. LANDERS, of the city and county of San Francisco, State of California, have invented a new and useful Improvement in Railway-Cars, of which the following is a specification.

My invention relates to all railway-cars, whether for freight or passengers, and whether used on streets in cities or upon lines passing over the country at rapid speed.

It consists in a guard of novel construction, designed to prevent any object upon the track from passing under the wheels.

In the accompanying drawings, Figure 1 is a front view of my device. Fig. 2 is a rear view. Fig. 3 is an edge view. Fig. 4 is a plan. Fig. 5 is a view of my device when applied to two wheels close together.

Detached details of parts are identified by letters.

In all the figures the same letters refer to the same parts.

A is the car-wheel; B, the wheel-axle; C, the axle-box; D, the pedestal for the box. E is the brake-shoe. F is the rail of the track. G G' are the two halves of my double guard, such as I propose for cars moving either end foremost. These guards are formed of stout plates of iron, supported on edge close to the outside face of the wheel, and so far covering the wheel as to nearly hide it from view. They bend around the tread of the wheel, while with a graceful curve they spread therefrom as the plates near the rails, a narrow, nearly right-angle "return," *a*, being formed, lapping the inside face of wheel. At the points *b* a stiffening-bead is provided, which also forms a rounded edge which will mount and ride over such obstructions as the upturned end of a rail, &c.

Upon the box C, where it projects through the pedestal, is hung and properly fastened with tap-bolts a saddle-iron, H, terminating at its pendent ends with the half-joint of a hinge.

I I' are straps secured firmly to the inside of the guards G G', which are attached to the saddle H, so as to form the other members of the hinges. This gives the only firm support the guards receive. There are, however, steel brackets J J' fastened against the sides of the saddle piece and projecting under the pins or spurs K, which are riveted inside the guards

in position about as shown in drawings. These brackets give a yielding springy support.

LL are braces to stiffen the part of the guard where the shock of a concussion will always come.

M M' are strap-washers, which connect the ends of the hinge bolts N N, and thus brace the ends of the saddle-piece apart and prevent them from being bent inward when a shock comes.

The edges of the guards at the side of the axle-box are not so close thereto as to prevent the guard lifting an inch or two, nor are the edges of the guards below the fulcrum of the hinges so close as to prevent the guards being pressed down to the track. The edges will be cut about as shown in drawings. There should be no sharp edges about the guards where they may strike an object—as, for instance, the leg of a man who may have fallen across the track. Rounded edges should be made where the guards bend around the tread of the wheel.

For convenience of construction the front plate of guards may be of a piece separate from the ends, the two pieces being riveted together.

"Bobtail" cars always move the same end foremost. These need but single guards, one side only of the wheel needing protection. Accordingly one guard may be dispensed with in their case. Sometimes the axle-box is placed inside the wheel instead of outside. This leads simply to a modification of the manner of attaching the hinges to the axle-box. All the principles of my device will remain the same in such a case. On one side of the wheel there is the brake-shoe. Upon that side the guard is cut away to accommodate it.

The operation of the device is as follows: Ordinarily the guard remains supported in front of the wheel, with the lower edge about one inch above the rail F. It is perfectly steady and does not vary in height, however much the body of the car may rise and fall upon its supporting-springs. When an accident occurs and any object is thrown across the track the point *b* plows under it, which act depresses this point *b* to the face of the rail. The guard then raises and throws aside the object, which is kept from returning to the rail by the continuation of the guard along the face of the wheel.

If the wheels of a car happen to be too close together to permit each to have a complete double guard, a single guard may be used at the outside of each wheel and a simple stationary plate, O, may be hung from the saddle-piece in front of the wheels between the single guards. If there be three wheels close together (as with sleeping-cars) this plan should be adopted. (See Fig. 5, where the plate O is shown connecting between two wheels moderately close together.)

It may be effective to apply some sort of a cushion, made of rubber or other suitable material, at that part of the guard where the object to be removed from the track will strike. I show the outline of such a cushion by a dotted line on right-hand guard in Fig. 2, (marked by the letter P.)

What I claim as my invention, and desire to secure by Letters Patent, is as follows: 20

1. The combination of the plow-shaped wheel-guard G, extending around the tread and in front of the wheel, with the hinge-supports H and I, connected to axle-box C, and spring-bracket J, as and for the purpose herein described. 25

2. In combination with the guard G, the cushion P, as and for the purpose herein described.

MILTON H. LANDERS.

Witnesses:

GEORGE PARDY,
THOMAS H. BARCLAY.