

UNITED STATES PATENT OFFICE.

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RAILROAD-RAIL.

SPECIFICATION forming part of Letters Patent No. 369,858, dated September 13, 1887.

Application filed March 11, 1887. Serial No. 230,541. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL M. JACOBS, of the city, county, and State of New York, have invented a new and Improved Railroad-Rail, of which the following is a full, clear, and exact description.

My invention relates to railroad-rails designed more particularly for street-railways, the rails of which should be about level with the pavement or roadway to avoid obstructing the wheels of ordinary vehicles, and the invention has for its object to provide a rail of this class which forms an efficient guide to peripherally toothed or flanged car-wheels, and by its construction, in connection with the travel of the wheels on the rails, is practically self-clearing of dirt.

The invention consists in certain novel features of construction of the railroad-rail, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of part of a railroad-rail made in accordance with my invention and a car-wheel on the rail, to show the adaptation of the wheel to the rail. Fig. 2 is a vertical transverse sectional view taken on the line *x x*, Fig. 1, and side view of part of the car-wheel axle. Fig. 3 is a plan view of a part of a straight rail, and Fig. 4 is a plan view of parts of two crossing-rails.

The rail A is formed with a continuous lengthwise groove, B, in its upper face, whereby two side surfaces, *b b*, are provided—one at each side of the groove—for the peripheral faces or treads *c c* of the car-wheel C to run upon, while a series of peripheral teeth or spurs, D, on the car-wheel run in the groove B. These teeth or spurs D lift dirt from the rail-groove and carry the dirt around upward and throw it from the quicker traveling or moving upper part of the wheel and clear of the rail, and the teeth also break up ice or frozen substances lodging in the groove and dispose of them in like manner.

The groove B, preferably, has a downward taper from each side to accommodate the laterally-tapering shape of the wheel-teeth D;

but the inclines of the walls of the slot vary from the angles of the teeth to give the teeth ample clearance room in the slot while allowing the tread of the wheel a fair bearing on the surfaces *c c* of the rail.

At intervals along the rail its under side is cut away to provide openings E, which, when the rail is inclosed at the sides by the pavement, form pockets into which dust and dirt may fall from the rail-groove B, which opens at *e* into each of the pockets, and whereby the travel of the wheel on the rail will force the dirt or trash, or some of it, directly through the throats *e* into the pockets E below, and thereby keep the slot clear, which result is rendered more certain and effective by the operation of the wheel-teeth in picking up the dirt and throwing it from the rail, as above described.

Another feature of construction of the rail is the formation of the upper parts of the side walls of the groove B vertical, or nearly so, for a half-inch or more below the upper faces of the rail to form shoulders *b' b'*, within which straight shoulders or portions *d d*, at opposite lateral faces of the car-wheel teeth D, next the tread of the wheel, may run as lateral guides to the wheel to prevent its derailment.

The rail has holes G, through which spikes will be driven to secure it to sleepers or ties forming the rail-support in the road-bed.

In so far as the construction of the rail is concerned, it is immaterial whether the car-wheel has a series of peripheral teeth running in the rail-groove or a continuous peripheral flange running in the groove, as will readily be understood.

I make no claim herein to the particular construction of the car-wheel, as it forms the subject-matter of another application for patent filed of even date herewith.

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

1. A railroad-rail made with a lengthwise groove and openings at intervals through the rail at the base of the groove, substantially as herein set forth.

2. A railroad-rail made with a lengthwise groove in its upper surface and with lower or

bottom recesses at intervals, and into which the groove opens, substantially as shown and described.

3. A railroad-rail, A, made with a length-
5 wise slot, B, having shoulders *b' b'*, next the head of the rail and tapered from the shoulders to the base of the slot, openings or pock-

ets E at the bottom of the rail, and slots *e*, opening from the rail-groove to the pockets, substantially as shown and described.

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Witnesses:

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