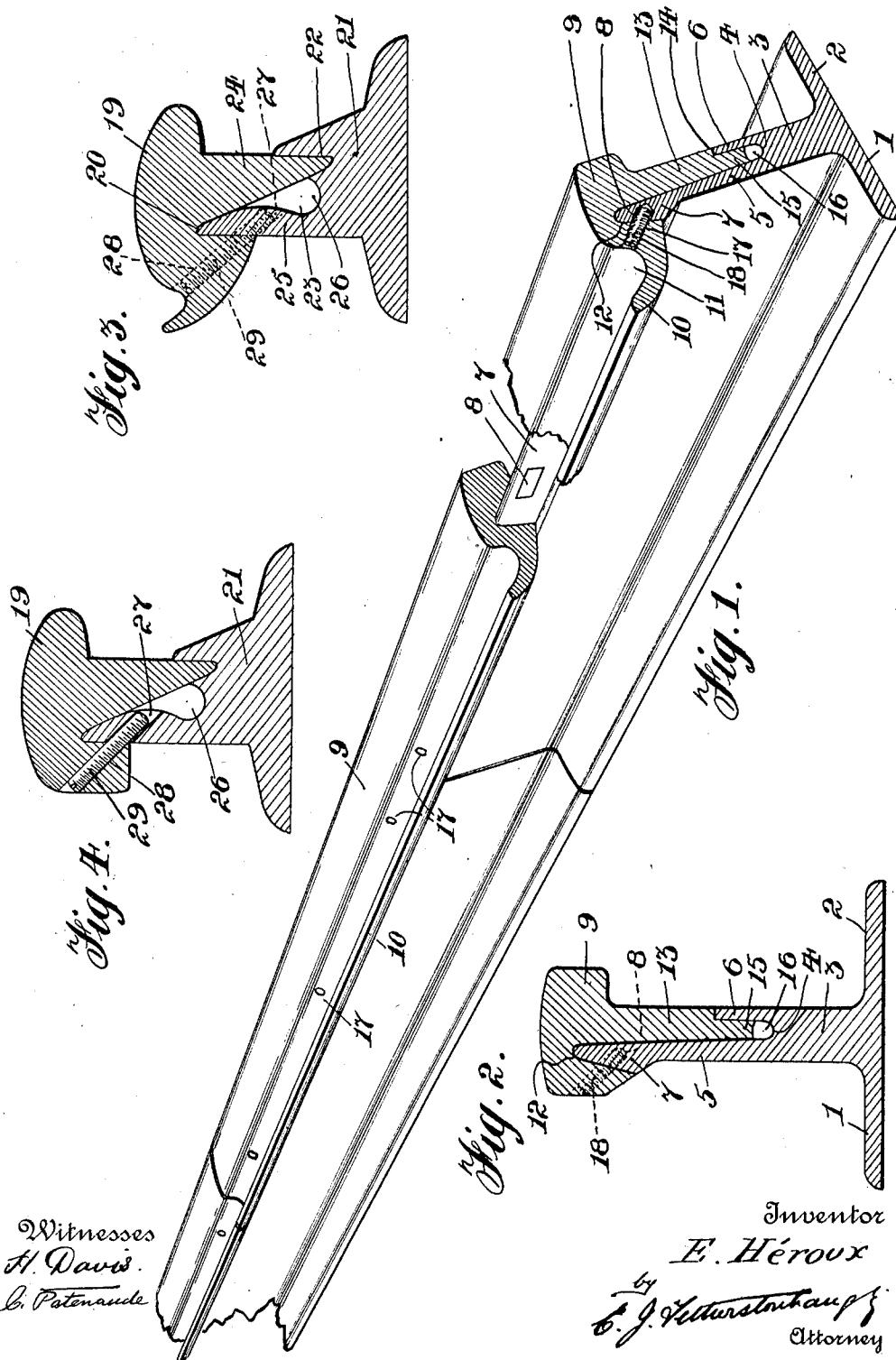


E. HÉROUX.
RAILWAY RAIL.
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1,061,476.

Patented May 13, 1913.



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RAILWAY-RAIL.

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To all whom it may concern:

Be it known that I, EDMOND HÉROUX, a subject of the King of Great Britain, and a resident of 4 St. Julie street, in the city and district of Montreal, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Railway-Rails; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to a railway rail, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel construction, whereby the rail is divided into two parts containing the head and base, the former being applied to the latter vertically and fastened from the top.

The objects of the invention are to cheapen the maintenance of railroad ways to effect a renewal of the rails without materially disturbing the road beds and generally to provide a simple and durable form of readily renewable railway rail, more particularly for use in tramway systems.

In the drawings Figure 1 is a sectional perspective view of the rail showing the overlapping joints. Fig. 2 is a cross sectional view of the same form of rail without the flange. Fig. 3 is a cross sectional view of the rail showing a slightly different form. Fig. 4 is a cross sectional view showing the same form of invention as Fig. 3 without the lateral flange.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings 1 and 2 are the flanges forming the base of the rail extending outwardly from each side of the upwardly standing portion 3 forming part of the web, said web portion 3 having the vertical recess 4 flanged by the walls 5 and 6. The wall 5 extends upwardly for a considerable distance and terminates in the thickened and tapered top portion 7 said thickening being on the outer side.

8 are the slots for the fastening screws being of suitable length in the relation of the

fastening to permit of expansion and contraction of the rails due to changes in temperature. The wall 6 terminates at a level intermediate of the height of the wall 5 and is preferably squared on the upper face thereof.

9 is the head of the rail in Fig. 1 shown with the lateral flange 10 forming the wheel flange recess 11, though it may be made without this flange without departing from the spirit of the invention.

12 is a tapered recess in the under side of the head 9 and in form corresponding precisely to the thickened top part 7 of the wall 5.

13 is the portion of the web depending from the head 9, said web part 13 having a shoulder 14 resting on the top of the wall 6, the reduced edge 15 of the web portion 13 extending downwardly into the vertical recess 4 for a part of the depth of said recess leaving the wire hole 16 between the lower edge of the web portion 13 and the bed of the recess 4.

17 are screw holes extending diagonally through one side of the rail head 9 near the top thereof into the slots 8, the thread for the screws being only in the rail head and not in said slots.

18 are screws inserted in the screw holes 17 and extending into the slots, 8, thereby securely fastening the rail head 9 to the said base from the very top, because of the slant of the screws.

In Figs. 3 and 4 another form of the invention is shown, in which the rail head 19, has the recess 20 in the under side and the base 21 the recess 22 in the upper side and the further recess 23 to one side of the center of the recess 22. The head has a tapered web portion 24 extending into the recess 22, while the base has a tapered web portion 25, narrowing a little toward its root, said web portion 25 extending into the recess 20 thus with the web portion 24 extending in the recess 22 and the web portion 25 extending into the recess 20, there is left a wire hole 26 between the two web portions below the meeting of the web portion 25 and the top

part of the web portion 24. 27 are elongated slots in the upperside of the web portion 25. 28 are screw holes adjacent to the upperside of the head 19. 29 are screws inserted in the screw holes 28 and extending into the slots 27. The rail heads 9 and 19 are as already explained made with or without the lateral flange forming the wheel flange recess, in other words, the rails may be used for either street railway purposes or steam railways, as required, though they are particularly adapted for street railway, as in the case of permanent pavements, the base of the rail need never be removed and the head can be renewed as often as required. This form of rail lends itself readily to breaking joints in the laying of the rails, for in each case the splits between the adjoining ends of the head portion are not in line with the splits between the adjoining ends of the base portion, consequently there is an overlap, which considerably prevents vibration that has been so difficult to overcome in the past.

It is not the purpose in this specification to claim as novel, the separable head and base in railway rails, for it is of course well known that designs for such rails have already been made by many, but this particular form is claimed to be more practical because of the solidity of the structure, when the two parts are combined, and the facility with which the rail head may be removed and replaced without in any way disturbing the pavement or the road bed and it is to be further noted that the heavier the traffic is and the more frequent, the rail is more solid, that is to say, more firmly set in place.

In the construction herein shown and described it will readily be seen that the rail head may be made of different material from the base and it is preferred to make the said head of hardened steel while the base may be of soft steel.

What I claim is:—

1. In a railway rail, a base having a web portion extending upwardly therefrom and a vertical recess in said web portion, and a head having a web portion extending downwardly therefrom into said recess and fastener holes through one side thereof adjacent to the top of the head proper leading to registering slots in an upwardly extending part of the said base portion of the web and fasteners extending through said holes in the head into the slots of the base part.

2. In a railway rail, a base having an upwardly extending part therefrom forming a portion of the web of the rail said web portion having a vertical recess therein, flanged at one side by an upwardly extending wall thickened at the top and on the other side by a wall terminating intermediate of the

height of the aforesaid wall, said thickened end having longitudinal slots at intervals on the outer side, a head having a depending portion therefrom forming the other part of the web and extending into said vertical slot in the base and a recess in the underside corresponding to the aforesaid thickened top and diagonal fastener holes through an edge face of the head and registering with said longitudinal slots and fastening pins inserted in said fastener holes.

3. In a railway rail, a base formed of lateral flanges from an upstanding part, the latter forming part of the web of the rail and having a vertical recess flanged by a short wall and a tall wall, a head having a depending part therefrom forming the other part of the web of the rail, extending into the aforesaid recess and having oblique fastener holes from one side of the head proper extending into the base portion of the web and fastener members inserted in said holes and engaging said base portion.

4. In a railway rail, a base formed by lateral flanges extending from an upstanding part, the latter forming a portion of the web of the rail and having a vertical recess flanged on one side by a short and on the other by a tall wall terminating in a tapered and thickened portion with elongated slots at intervals in the outer side, a head having a depending portion reduced at the lower edge and entering said recess forming a shoulder resting on said short wall and having oblique holes through the head proper from one side thereof registering with said slots and fastener members inserted in said holes and entering said slots.

5. In a railway rail, a base formed with a lateral recess in the upper side thereof and an upward extension terminating in a thick and tapered portion with elongated slots in the outer side thereof, a head having a depending portion entering said recess and a recess for said thickened portion and screw holes extending in a slanting direction downwardly from one side of the head and registering with the aforesaid slots and screws inserted in said screw holes and extending into said slots.

6. In a railway rail, a base formed of lateral flanges from an upstanding portion, the latter forming part of the web and having a vertical slot flanged on one side by a short wall squared on its top edge and on the other side by a tall wall terminating in a tapered portion thickened from the outer side and having elongated slots at intervals, a head having a depending portion forming the other part of the web and reduced at its lower edge and a recess from the under side corresponding to said tapered and thickened portion, said reduced edge entering said recess and terminating above the bottom of

the bed thereof and supported in said position by said walls of the recess forming a wire hole therebelow, said head also having diagonal screw holes from one side thereof
5 adjacent to the top and leading to said slots and screws inserted in said screw holes and entering said slot.

Signed at the city of Montreal, Province of Quebec, Dominion of Canada this twenty-second day of July 1912.

EDMOND HÉROUX.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
