J. H. Garel.

Railroad Track.

No. 35,909. Patented Jul. 15, 1862.

Fig. 1.

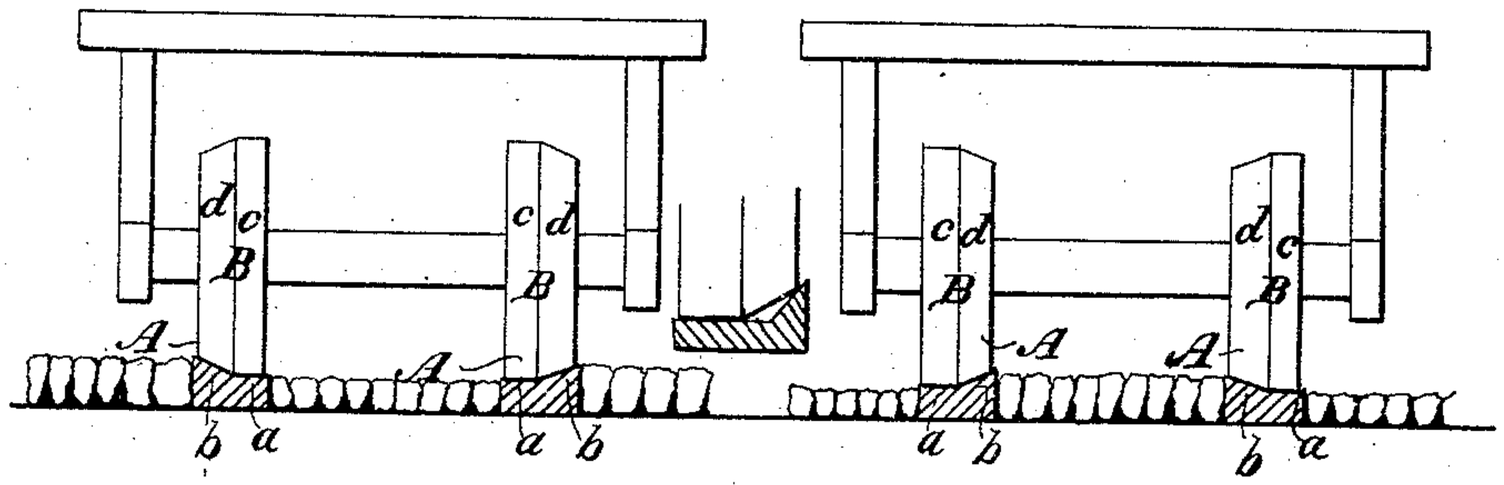
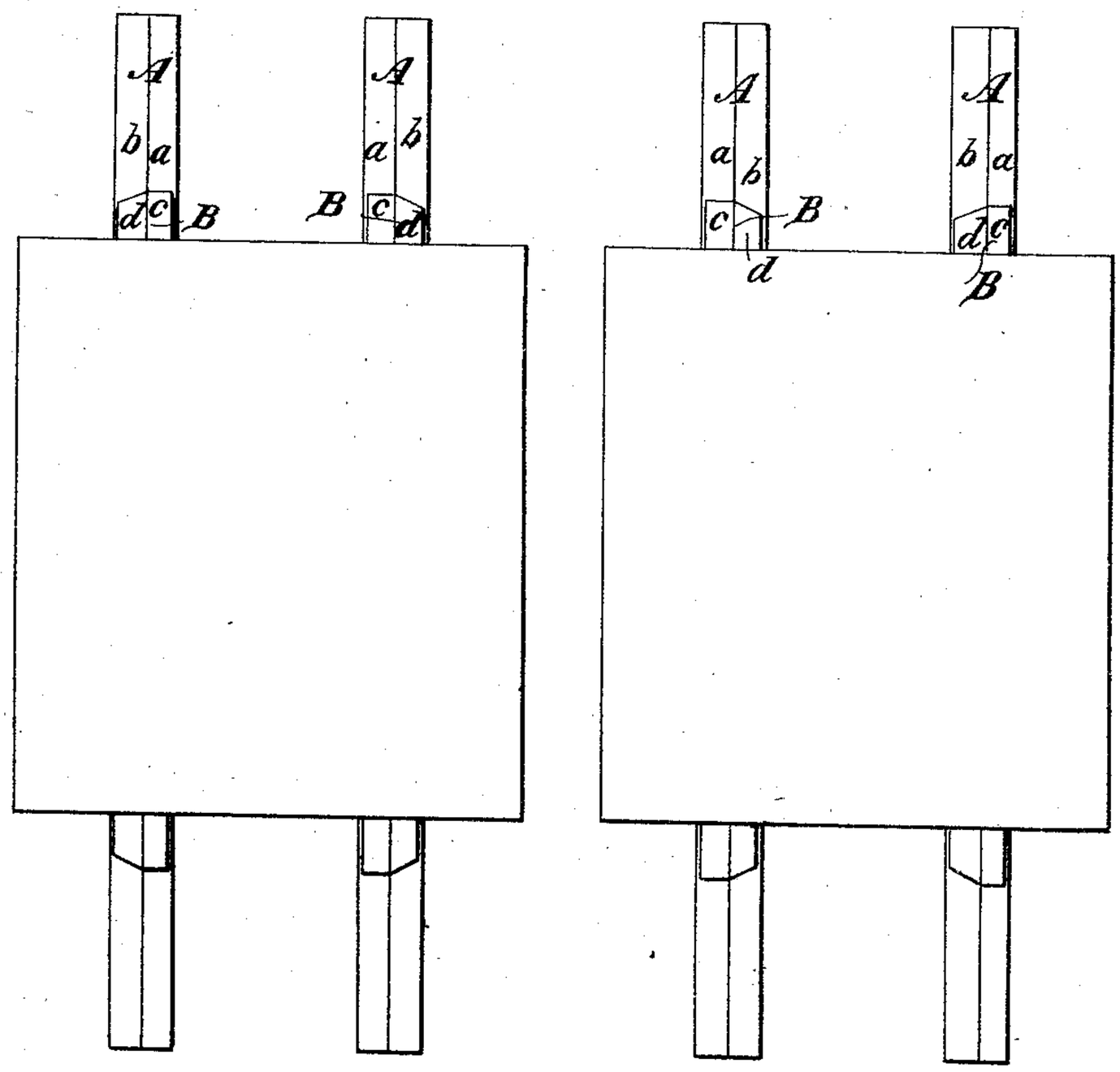


Fig. 2.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

J. H. GAREL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND J. B. THOMPSON, OF SAME PLACE.

IMPROVEMENT IN CITY-RAILWAY TRACKS, &c.

Specification forming part of Letters Patent No. **35,909**, dated July 15, 1862.

To all whom it may concern:

Be it known that I, J. H. GAREL, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Railroad-Tracks for Cities; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is an end view of my invention; Fig. 2, a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

This invention consists in constructing the rails of such a form that they will, when laid and adjusted in proper position for use, offer no obstruction to ordinary wheel-vehicles in crossing them, and at the same time admit of fire-engine hose being laid across them without the same being liable to be cut and injured by the passage of the wheels over them.

To this end the invention consists in having the upper surfaces of the rails formed of two longitudinal planes, one being about in a horizontal position and the other slightly inclined, so that the two planes will form an obtuse angle with each other in their transverse section, and having the treads of the wheels corresponding inversely in form to the upper surfaces of the rails, the latter being embedded in the street or pavement so that their upper surfaces are flush with the latter.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the rails, the sides of which may be perpendicular and parallel with each other. The upper surfaces, as shown clearly in Fig. 1, are formed of two longitudinal planes, *a b*, *a* being in a horizontal position and *b* being slightly inclined from a horizontal plane, so as to form an obtuse angle with *a*.

In Fig. 1 it will be seen that two tracks or pairs of rails are shown, one pair having their horizontal surfaces inward and the other outward. Either form may be adopted, as desired. The rails when properly laid are filled in between with the paving-stones, the latter being brought up flush with the surfaces of the planes of the rails, as shown in red in Fig. 1.

The wheels B have their treads also formed of two surfaces, *c d*, corresponding inversely with the planes *a b* of the rails *a b*, as shown clearly in Fig. 1, so that the treads of the wheels will rest or bear on the planes of the rails. By this arrangement the wheels will be retained on the rails without any flanges and the rails will not offer any obstruction to the wheels of ordinary vehicles, nor will the car-wheels, like the ordinary flanged ones, cut fire-engine hose, which may be, in case of necessity, laid across the rails. Thus the objections hitherto attending the laying of railroad-tracks in cities are entirely obviated.

I would remark that it would be better to have a slight variation between the planes of the rails and the treads of the wheels in order to admit of a certain degree of lateral play of the latter. This will be understood by referring to Fig. 1, in which it will be seen by the red outline that the inclined surfaces *d* of the wheels are rather more inclined than the planes *b* of the rails. I do not, however, confine myself to any precise angle of inclination of the rails, although a slight variation would prevent the close binding of the wheels on the rails.

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

The combination of the rails A with the wheels B when constructed, respectively, with planes *a b*, and treads formed of two surfaces, *c d*, substantially as and for the purpose herein set forth.

J. H. GAREL.

Witnesses:
R. MCMULLIN,
WILLIAM DARKER, Jr.