

J. E. Smith.
Railway Track.

No. 5,558.

Patented May 9, 1848.

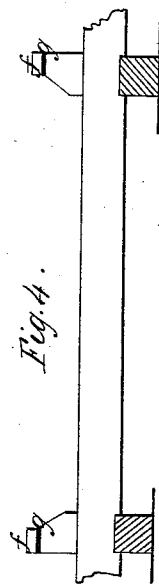


Fig. 3.

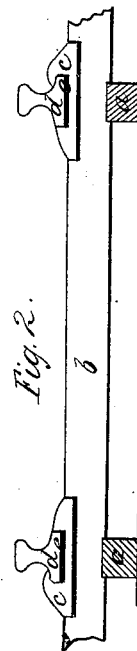
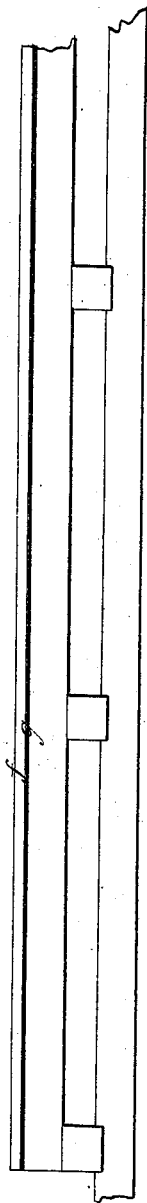
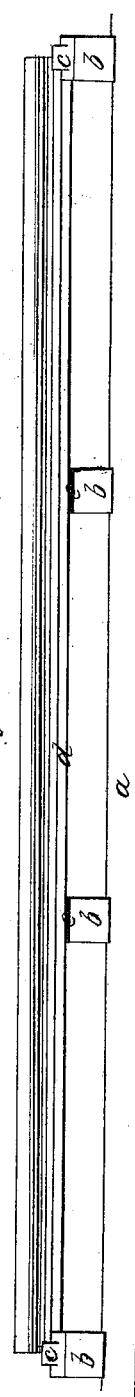


Fig. 1.



UNITED STATES PATENT OFFICE.

J. E. SMITH, OF NEW YORK, N. Y.

RAILROAD.

Specification of Letters Patent No. 5,558, dated May 9, 1848.

To all whom it may concern:

Be it known that I, J. ELNATHAN SMITH, of New York city, in the county of New York and State of New York, have invented
5 new and useful Improvements in Railroad-Tracks, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known, and of the man-
10 ner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figures 1 and 2 represent an elevation
15 and cross section of a rail road track with the T rails and Figs. 3 and 4 an elevation and cross section of a rail road track with the flat rail.

The same letters indicate like parts in all
20 the figures.

The injury sustained by rail roads and locomotives and other carriages that run on them by reason of the want of elasticity to yield to the jars and shocks—resulting from
25 the rapid transits of trains—is known to be the leading source of cost of repairs and of much of the jar and tremor so disagreeable to passengers.

The nature of my invention, to avoid in
30 a great measure this difficulty, consists in interposing india rubber or other elastic substance between the iron rails and the beds on which they rest and to which they are attached, to act as elastic cushions and ease
35 off the sudden shocks or jars of locomotives and other cars when passing over the rails.

In the accompanying drawings (*a, a*) Figs. 1 and 2 represent the string pieces of the road and (*b, b*) the cross ties or sills
40 to which the T rails are secured by means of chairs (*c, c*) but instead of resting the web of the rails (*d, d*) immediately on the chairs, sheets of india rubber (*e, e*) or other

like elastic substance are interposed, the rails being then secured in place in the usual
45 manner. In this way the rails are supported at given distances, that is at their points of connection with the bed of the road, by an elastic medium which will yield to the sudden shocks produced by the pas-
50 sage of trains, and thus ease them off in a great measure to relieve the bed of the road, rails, &c., as well as the locomotive, and prevent much of the wear and tear on rail roads. When the tracks are of a kind to
55 form a continuous bed for the rails (*f, f*), as shown in Figs. 3 and 4, then the india rubber or other elastic substance is to be interposed in continuous strips (*g, g*) between the rails and stringers or bed *h, h*,
60 which are to be fastened in the usual way.

The kind of elastic substance which I prefer for this purpose is the preparation of india rubber known as the "metallic rubber" when prepared to resist the action of
65 heat and moisture without materially changing its elastic properties.

What I claim as my invention and desire to secure by Letters Patent is—

The method substantially as herein de-
70 scribed of giving elasticity to the rails of rail road tracks by interposing between the iron rails and the stringers, cross ties, sills or chairs strips or sheets of india rubber or other like or similar elastic substance or
75 substances, substantially as herein described, whereby much of the injury now sustained by the tracks of rail roads and the locomotive and other cars produced by the shocks and jars consequent on the rapid transits of
80 trains is avoided or modified.

J. ELNATHAN SMITH.

Witnesses:

T. A. HOWE,

MORTIMER MARBLE.