

H. Carpenter,

Railway Track.

No. 99531.

Patented Feb. 2. 1870.

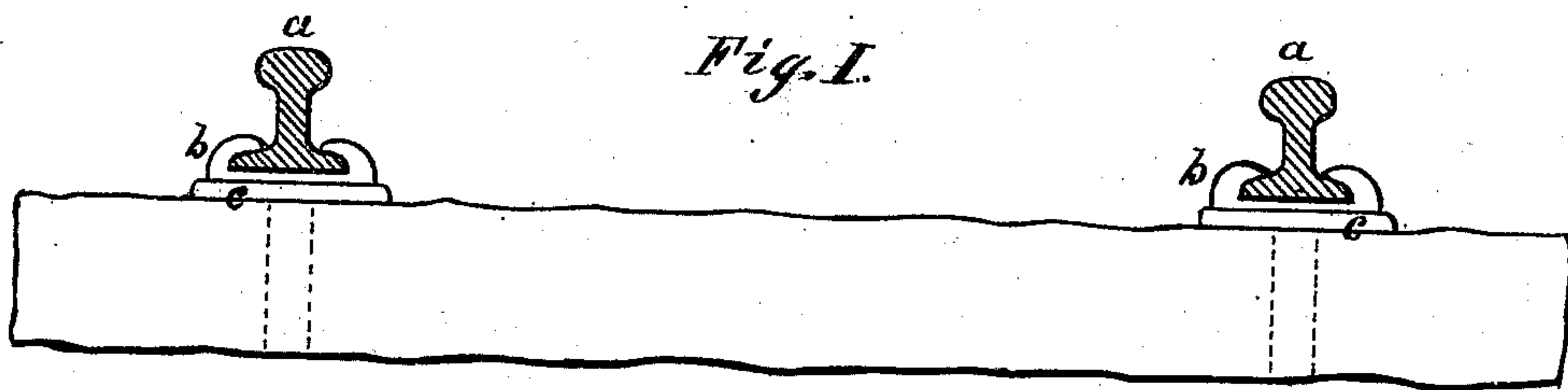
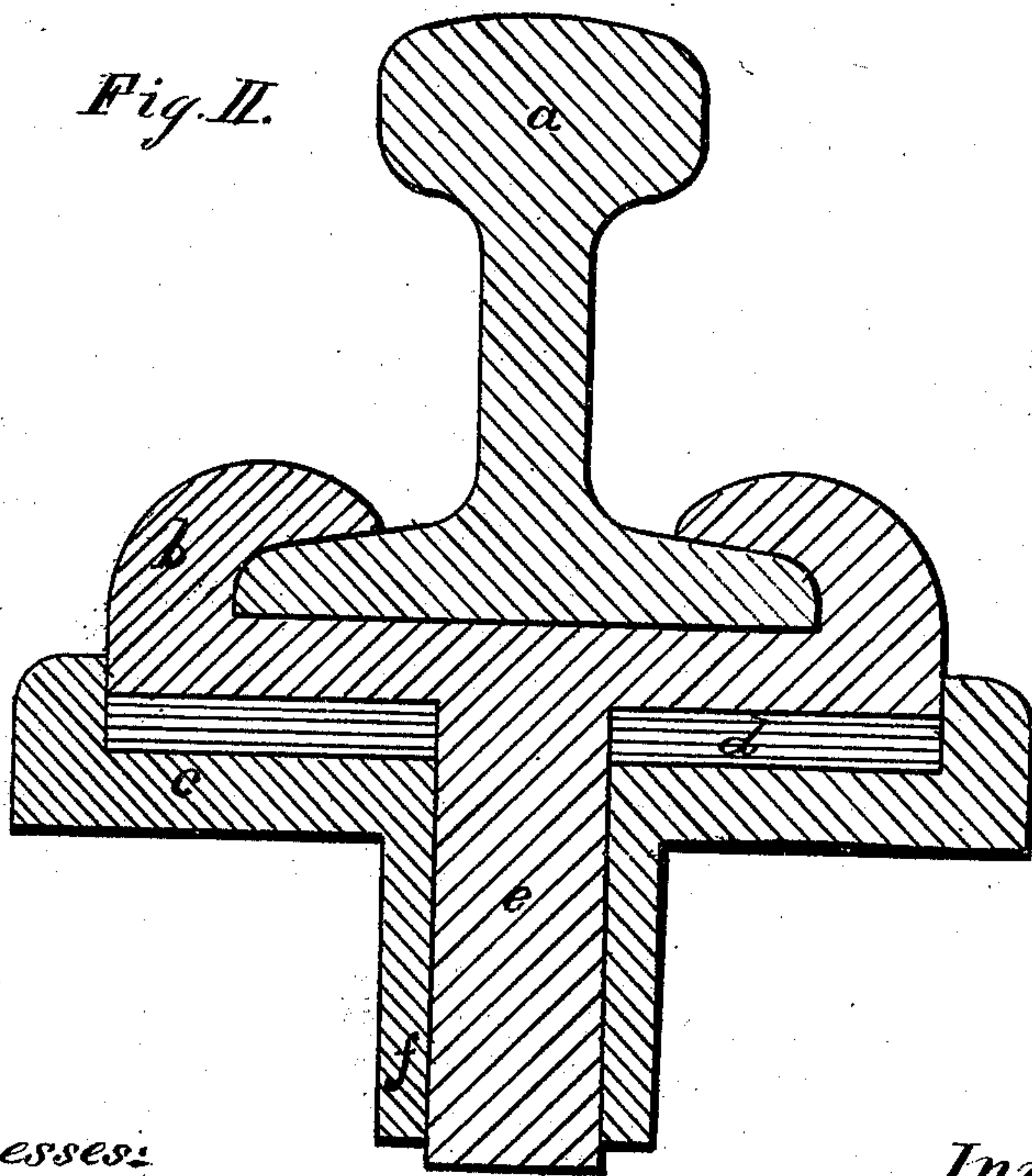


Fig. II.



Witnesses:

Jeremiah Day
Wm Kemble Hall

Inventor.

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HIRAM CARPENTER, OF NEW YORK, N. Y.

Letters Patent No. 99,531, dated February 8, 1870.

IMPROVEMENT IN RAILWAYS.

The Schedule referred to in these Letters Patent and making part of the same.

I, HIRAM CARPENTER, of New York, in the county and State of New York, have invented certain Improvements in Railways, of which the following is a specification.

Nature and Objects of the Invention.

In the ordinary system of constructing railways, with wooden ties and iron chairs and fastenings, the ties not only require renewal from time to time, but the perishable nature of the material of the ties so speedily enables the fastenings to work loose, that the constant supervision required involves a very large proportion of the expense of operating a road. The cost of iron pedestals to support the rails has hitherto been the chief objection to their use; and the necessity for connecting them across the track has rendered them much more expensive, as a light wrought-iron cross-tie, that has sufficient tensile strength for the purpose, is deficient in the stiffness required.

The object of my invention is to use stone ties that extend across the track, and support the track on each side, and to construct and arrange them, in combination with the rails and chairs, in such a way that they may be rapidly put together, will require no special supervision to look after fastenings that may become loose, and will possess sufficient elasticity to absorb or correct the concussion incident to the passage of a heavy train over a rigid support; and which may also be used in combination with, or continuation of any of the ordinary systems or methods of construction. To accomplish these objects—

My invention consists in making holes through the ties, under the rails, at the distance required by the gauge of the road. These holes may be easily and cheaply bored, and that portion of the upper surface of the tie, in the immediate vicinity of the holes, may also, at the same time, be truly faced by a machine that can be fitted and adapted for the purpose by a mechanic accustomed to such work. The construction of the ties thus insures the exact gauge determined and required, and no alteration can be effected by the carelessness of the unskilled laborers usually employed as track-layers. The chairs are made to clasp the foot of the rail, and they are provided with a projecting spindle on the lower side, that passes

through a hollow cylinder on the lower side of a plate that is made for its reception, and which also fits into the hole at each end of the cross-tie. Between the chair and the plate, and within the enclosing flange or collar of the latter, is interposed a layer of India rubber, or other elastic material.

Description of the Drawing.

The rails *a* are fitted into chairs *b*, that rest on plates *c*, with India rubber, *d*, interposed.

The spindles *e*, of the chairs, pass through the projections *f* of the plates, which are fitted into the holes of the ties *g*.

The chairs are slipped over the ends of the rails, and are so fitted that they hold them securely, without needing the keys or wedges that are ordinarily employed. They are retained in their proper positions by the spindles passing through the plates; and the collars of the latter, that enclose the India rubber, also resist any lateral or longitudinal displacement of the chairs; and the fitting of the plates into the holes of the ties insures the permanency of the gauge of the road. The parts may thus be fitted together without the intervention of spikes, bolts, keys, or other fastenings, that are costly to procure, and expensive to maintain. The proper gauge is secured by the preparation of the ties. All the parts are of materials that are practically exempt from decay, and the use of the elastic material lessens the liability to fracture, and prevents the excessive wear and tear consequent on the concussion of passing loads.

I do not claim the stone ties, nor any of the parts separately, but my invention consists of the combination of all these parts, when constructed and arranged in the manner described, and illustrated in the drawing.

Claim.

I claim, as my invention—

The combination of the stone tie, plate, India rubber, and chair, constructed and arranged substantially in the manner and for the purpose described.

HIRAM CARPENTER.

Witnesses:

WM. KEMBLE HALL,
JEREMIAH DAY.