(No Model.)

T. BAGGESEN.

PERMANENT WAY OF RAILWAYS.

No. 342,164. Patented May 18, 1886.

Fig. 1.

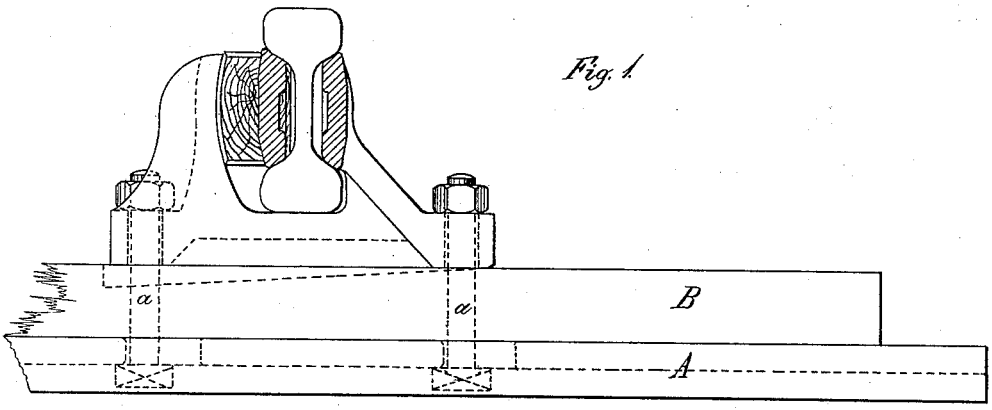


Fig. 2.

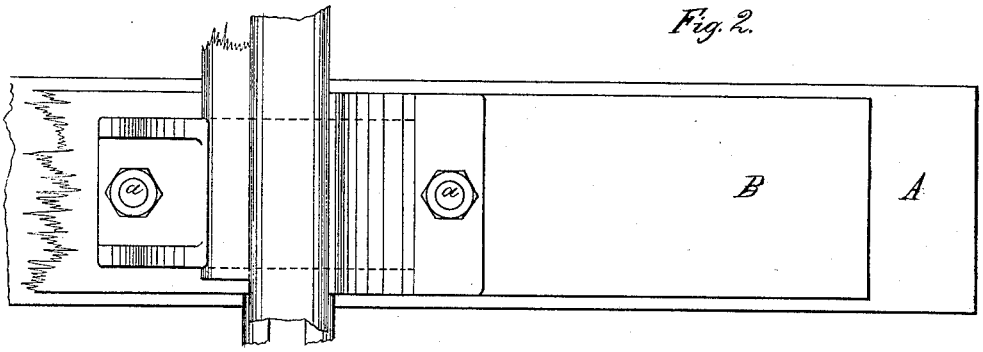
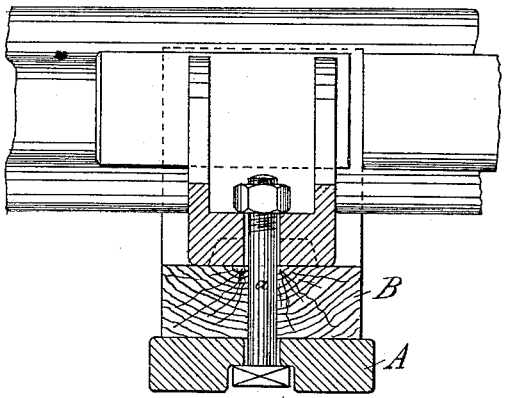


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

THEODOR BAGGESEN, OF STRASBURG, ALSACE, GERMANY.

PERMANENT WAY OF RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 342,164, dated May 18, 1886.

Application filed January 21, 1886. Serial No. 189,321. (No model.) Patented in Luxemburg November 5, 1885, No. 597.

To all whom it may concern:

Be it known that I, THEODOR BAGGESEN, a citizen of the free town of Lubeck, Germany, residing at Strasburg, Alsace, Germany, have invented new and useful Improvements in the Permanent Way of Railways, (for which I have obtained Letters Patent in Luxemburg, No. 597, bearing date November 5, 1885,) of which the following is a specification.

This invention relates to an improved construction of transverse sleepers for the permanent way of railways, composed of wood and cast-iron combined.

Ordinary cast-iron, owing to its want of elasticity, cannot be employed for the construction of transverse railway-sleepers, as it will not stand packing; but by the annealing process now largely adopted for castings a certain elasticity is imparted to the metal, which enables it to be readily employed for the purpose, as the maximum strain to which the metal is subjected can be kept well within the elastic limit, the expense involved in rolling wrought-iron sleepers being available for increasing the mass of the cast-iron sleepers.

My invention consists in the novel construction and combination of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 shows a part side view, Fig. 2 a plan, and Fig. 3 a cross-section of the sleeper and chair combined therewith.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates the cast-iron sleeper, and B the wood sleeper.

In order to allow of an increased width of gage at curves, &c., the bolt-holes in the iron sleeper A are slotted to an extent corresponding to the possible variation in gage, while in the wood sleeper B the exact positions required for the chair-bolts are determined by a templet, and are then bored to the exact size for the reception of the screw-bolts *a*, which then take a corresponding position in the slots of the cast-iron, and serve to tie the wood and iron sleeper and chair firmly together. Thus the wood sleeper serves to fix the gage, and enables one and the same iron sleeper to be used indifferently for a straight line or for curves; at the same time it affords a more or less elastic bed to the rail or chair, rendering the motion of the carriages more pleasant than with sleepers entirely of metal.

Although I have described my invention as applied to double-headed rails, yet it may be equally adapted for use with flanged rails, a metal being in that case introduced between the rail and the wood sleeper, and the fixing-bolts being provided with dogs to clip the rail.

Heretofore railroad-ties and fastenings have been composed of a channeled iron tie, a bed-plate riveted to the bottom thereof and provided with T-shaped slots, clamp-blocks engaging the flanged base of the rail, and bolts having T-heads engaging the slots in the bed-plate and passing inward through the clamp-blocks, the upper ends of the bolts having screw-nuts, by which the rail is clamped to said bed-plate. In another instance a railway has comprised an under-recessed cast-iron tie having longitudinal key-seats provided with notched rail-bearings in their walls, and longitudinal keys arranged in said seats and interlocked with the bases of the rails to secure the latter to the ties; and, again, a railway has comprised a metal tie having end seats, end wooden blocks, on which the bases of the rails rest, and to which they are secured to constitute yielding supports for the rails, and movable blocks engaging the inner flanges of the rails, and secured by spikes passing through said blocks into the base of the tie. Such different constructions do not constitute my invention, and are not claimed by me.

What I claim as new, and desire to secure by Letters Patent, is—

1. A transverse sleeper for the permanent way of railways, composed of a lower annealed cast-iron sleeper having slotted bolt-holes for the purpose of enabling this part to be used indifferently for a straight line or for curves, and an upper wood sleeper having bolt-holes bored to correspond to the required gage, said iron and wood parts being connected by the fixing screw-bolts of the rails, substantially as described.

2. The combination, with a railroad-rail, of a lower cast-iron transverse sleeper, A, hav-

ing slotted bolt-holes, whereby it is adapted indifferently for a straight line or for curves, an upper wood sleeper, B, placed above said iron sleeper and having bolt-holes bored to correspond to the required gage, and the bolts *a a*, passed through the bolt-holes in said sleeper, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THEODOR BAGGESEN.

Witnesses:
O. WICHMANN,
B. ROI.