

(No Model.)

W. S. SMITH.
RAILROAD RAIL JOINT.

No. 549,941.

Patented Nov. 19, 1895.

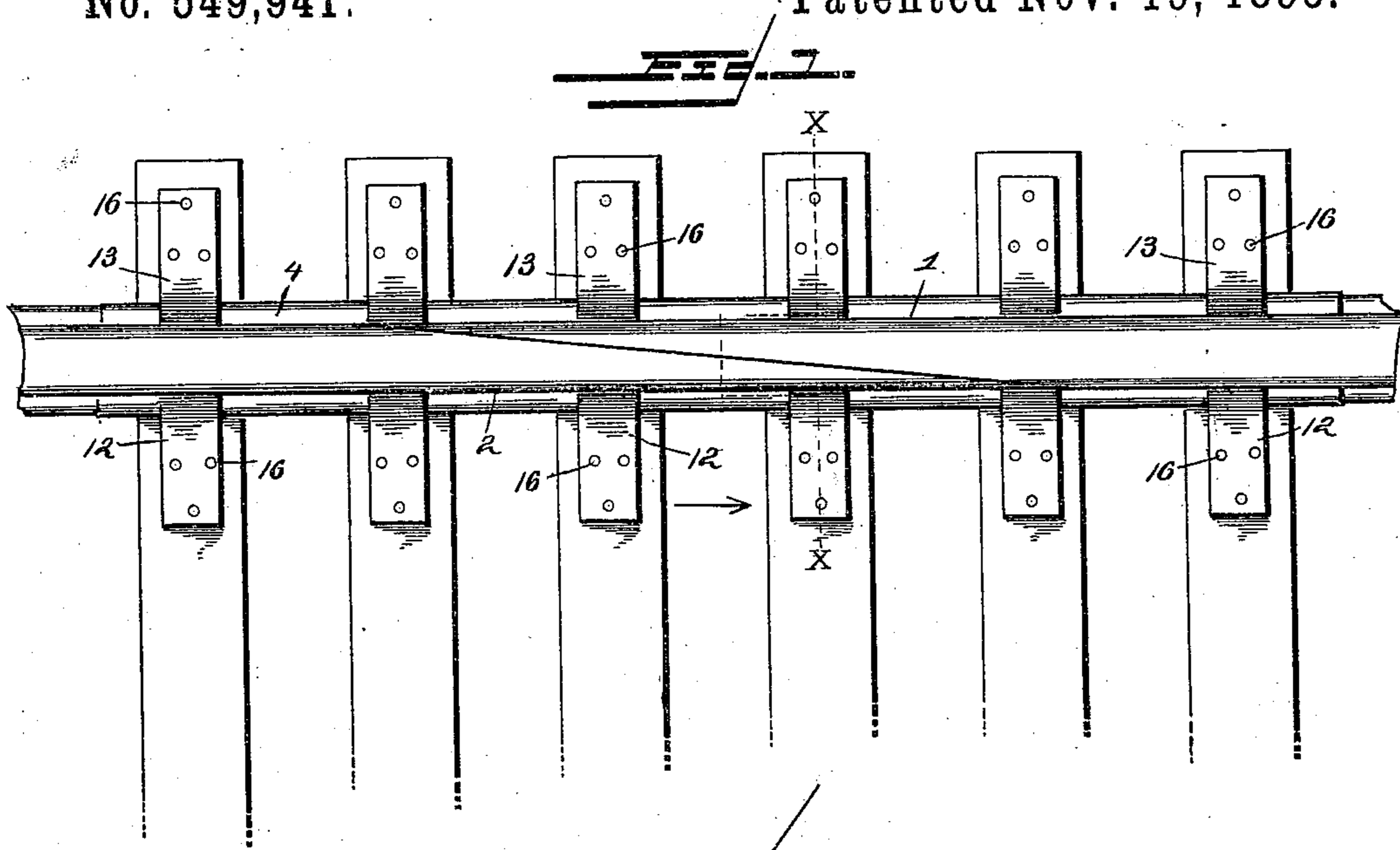


FIG. 1.

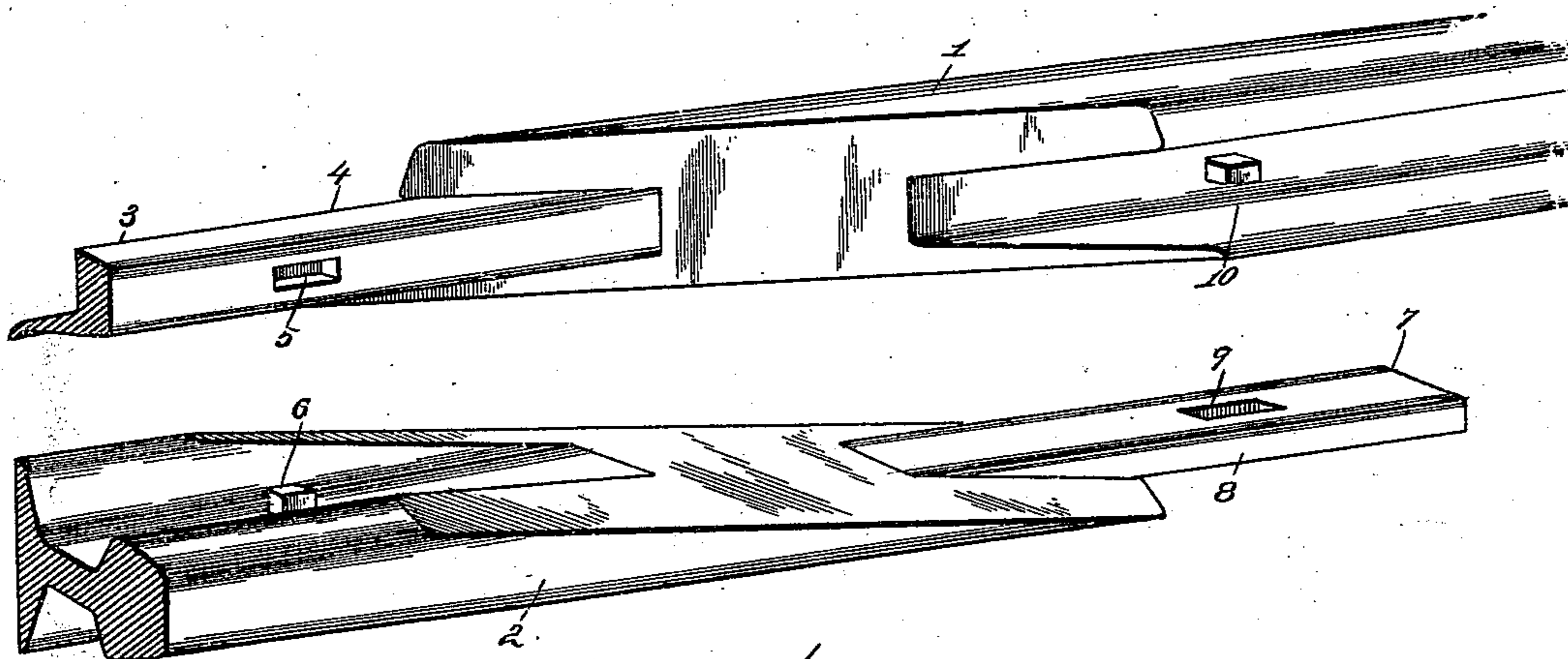
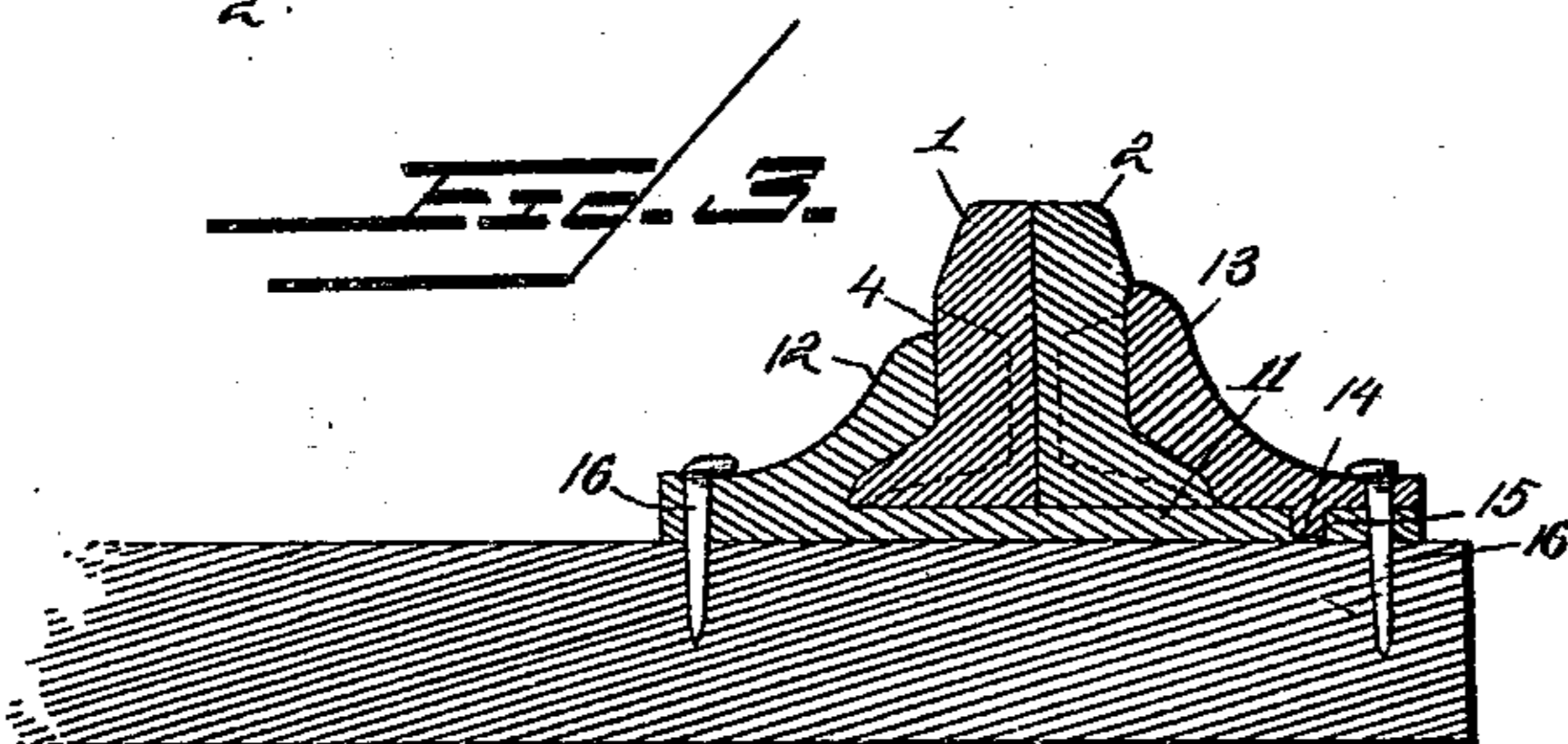


FIG. 2.



Inventor

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Witnesses

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By *his* Attorneys.

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UNITED STATES PATENT OFFICE.

WINFIELD S. SMITH, OF KINGMAN, MAINE.

RAILROAD-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 549,941, dated November 19, 1895.

Application filed June 11, 1895. Serial No. 552,452. (No model.)

To all whom it may concern:

Be it known that I, WINFIELD S. SMITH, a citizen of the United States, residing at Kingman, in the county of Penobscot and State of Maine, have invented a new and useful Railroad-Rail Joint, of which the following is a specification.

This invention relates to that class of railroad-rail joints in which the opposing ends of the rails overlap and have their opposing faces beveled, whereby the tread-surface of the rail at the joint corresponds to and is of uniform breadth with the main portion of the rail; and the primary object of the improvement is the provision of a rail-joint of the character aforesaid which will allow for contraction and expansion and in which the overlapping or meeting ends of the rails will maintain a fixed relative position independently of the rail-chairs or other fastenings usually employed for securing the rail to the ties.

Other objects and advantages of the invention will become apparent, as the nature of the improvement is understood, from the following description and the drawings hereto attached, in which—

Figure 1 is a top plan view of a rail-joint embodying the essence of the present invention. Fig. 2 is a detail view showing the parts of the joint separated. Fig. 3 is a cross-section on the line X X of Fig. 1, looking in the direction of the arrow.

1 and 2 indicate the similar ends of two rails forming the joint, and which have their opposing ends overlapping and their meeting faces beveled in the usual manner. The rail 1 has the end portion 3 of its side plate 4 extending beyond its beveled extremity so as to fit snugly within the space provided between the head and foot of the rail 2, and which is formed on its inner side, in proximate relation to its extremity, with a longitudinal slot or recess 5 to receive a lug 6, projecting laterally from the web portion of the rail 2. The rail 2 has the projecting end portion 7 of its side plate 8 projecting and formed on its inner side with a longitudinal slot or depression 9 for the reception of a corresponding lug 10, extending laterally from the web portion of the rail 1. When the rails 1 and 2 are properly assembled, the lugs 6 and 10 enter the corresponding longitudinal recesses 5 and 9, thereby main-

taining the tread-surfaces of the parts 1 and 2 in the same plane and allowing for contraction and expansion of the rails without any material displacement of the joint. The side plates 4 and 8 form an integral part of the respective rails 1 and 2, thereby making provision for a stiff or rigid joint when the parts are placed together. By having the projecting end portions 3 and 7 of the side plates snugly fitting against the web portions and between the foot and head of the rails the component parts of the joint are prevented from vertical displacement and the strain upon the lugs 6 and 10 is materially decreased.

The rail-chairs comprise a base portion 11, having a vertical extension 12 at one end, and brackets 13, detachably connected with the opposite end of the base portion, between which and the part 12 the rails are clamped. The bracket 13 has a pendent lug 14, adapted to enter a corresponding depression 15 in the upper side of the base portion 11, by means of which the said bracket is firmly held in place against outward displacement. The bracket 13 is of similar construction to the vertical extension 12 and is higher, so as to brace the rail against outward displacement, the rail-chair being disposed so that the bracket 13 occurs exterior to the rail, thereby the better bracing the same. The bracket 13 is secured to the base portion 11 by the same spikes 16 which serve to secure the rail-chair upon the tie. Any number of spikes may be provided for firmly securing the rail-chair in position, and as shown six are employed, three for each end of the chair.

The rail-joint is formed in the usual manner commonly practiced in railroad construction, and the joint is secured by having the overlapping ends of the rails clamped between the vertical extensions 12 and the brackets 13 of the rail-chairs, and the latter are fastened upon the ties in the usual manner, as will be readily understood.

A railroad-rail joint formed in the manner herein set forth is substantial, and the tread-surface of the rails is not liable to displacement and will at all times preserve its continuity, thereby preventing concussion or the jar incident to the passage of a car over the ordinary and common rail-joint.

While the precise structure herein disclosed attains the best results, it is to be understood that various changes in the form, proportion, and the minor details of construction may be
5 resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

10 In a railroad rail joint, the combination of two rails having their opposing ends overlapping and beveled on their meeting faces, each rail having a side plate extending beyond its

beveled extremity and formed on its inner side with a longitudinal recess to receive an
15 interlocking projection on the web portion of the adjacent rail, and means for securing the two rails together, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in
20 the presence of two witnesses.

WINFIELD S. SMITH.

Witnesses:

GEORGE A. LARRABEE,
V. M. SMITH.