No. 788,479. PATENTED APR. 25, 1905.

C. E. LABADY.

RAIL JOINT.

APPLICATION FILED AUG. 3, 1904.

2 SHEETS—SHEET 1.

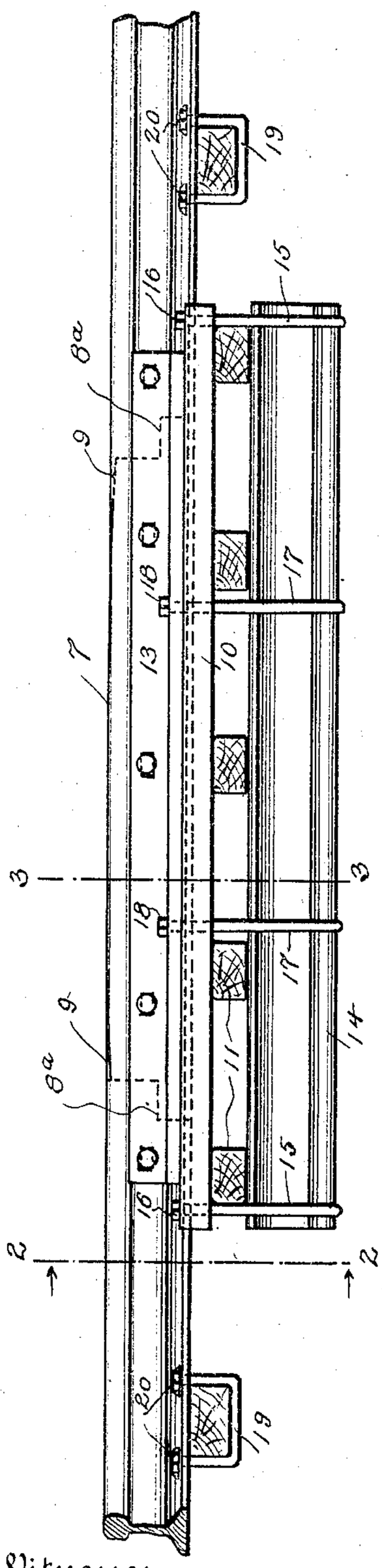


Fig. 1.

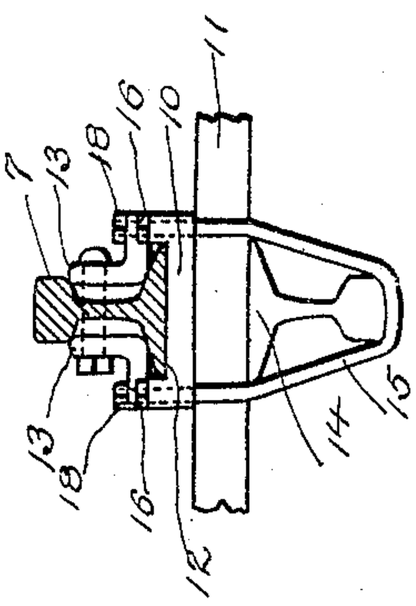


Fig. 2.

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2 SHEETS—SHEET 2.

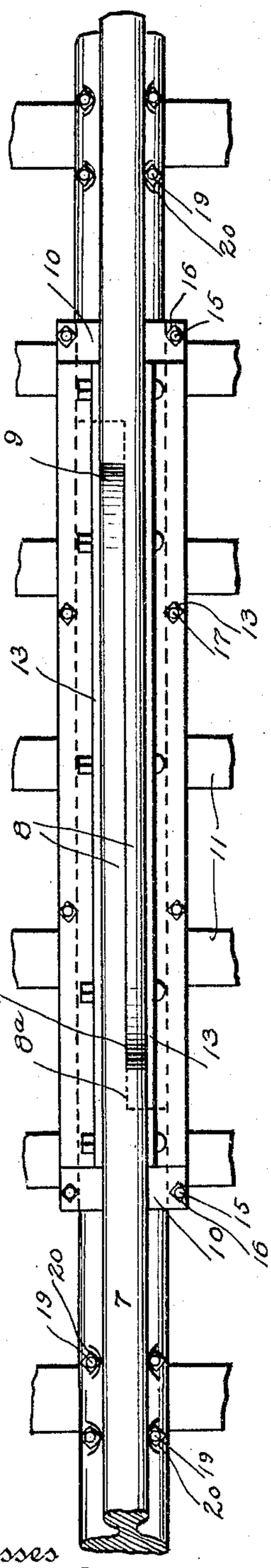


Fig. 4.

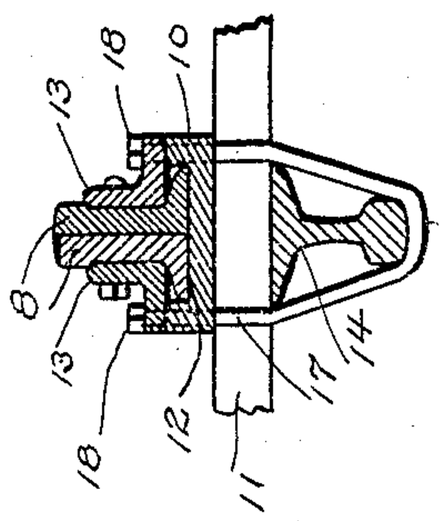


Fig. 3.

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# UNITED STATES PATENT OFFICE.

CHARLES E. LABADY, OF MICHIGAN CITY, INDIANA.

## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 788,479, dated April 25, 1905.

Application filed August 3, 1904. Serial No. 219,298.

*To all whom it may concern:*

Be it known that I, CHARLES E. LABADY, a citizen of the United States, residing at Michigan City, in the county of Laporte and State of Indiana, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

My invention relates to rail-joints, and has for its object simple and efficient means for uniting and supporting the meeting ends of two rail-sections.

A further object is to reduce the pounding and jar caused by the wheels passing over the joint.

With these and other objects in view the invention consists in certain novel features of construction hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a rail-joint constructed in accordance with my invention. Fig. 2 is a vertical section on the line 2 2 of Fig. 1. Fig. 3 is a vertical section on the line 3 3 of Fig. 1. Fig. 4 is a top plan view.

Referring specifically to the drawings, the webs of the rails 7 are reinforced and halved at their ends to form a lap-joint. The tips of the halved portions 8 of the rail are beveled or rounded off, as at 9, which causes the car-wheels to ride smoothly over the joint. The lower part of the end of each member 8 has a projection $8^a$, fitting in a recess in the adjoining rail, thereby preventing springing up of the ends of the rail or the joint becoming uneven. The rails are laid on a joint-chair 10, which is supported on the usual stringers or ties 11. The chair is grooved on top, as at 12, in which groove the bases of the rails fit and which prevents sidewise motion of the two halves of the joint. The usual fish-plates 13 are also provided, which are bolted to the web of the rails, as usual. The bolts are square where they pass through the plates and rail, and the bolt-holes vertically are the same size as the bolts and twice the size lengthwise, thereby preventing the rails during expansion and contraction from turning the bolts and causing the nuts to become loose. The stringers 11 are laid on a girder 14, which, for the sake of convenience, may be a rail, it being inverted, as shown. Worn-out and otherwise useless rails can be used for this purpose, which thus reduces the cost of the joint.

The parts above described are securely fastened together by U-bolts 15, which extend under the girder 14 and through the chair 10, being fastened thereto by nuts 16. One of such bolts is placed at each end of the chair, the girder being substantially the same length as the chair or longer and the fish-plates being somewhat shorter than the chair or the same length of the splice. Between the end bolts 15 similar bolts 17 are also employed, they being extended under the girder and through the chair, as before, and also through the fish-plates near their outer sides, being fastened thereto by nuts 18. These bolts securely bind the parts together, whereby a strong and reliable joint is had, which will effectively prevent spreading of the rail.

Additional fastening means comprise U-bolts 19, which extend under the stringer and through the base of the rail, being secured thereto by nuts 20. These bolts are placed about midway between the ends of the rail-section on both sides thereof and are for the purpose of holding the rails to prevent depression or elevation of the ends thereof from the weight of the train. Said U-shaped bolts are also for the purpose of holding the center of the rails in their original position and prevent creeping of the rails or crowding of the joint.

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

1. The combination with two rail-sections, of a joint therefor, comprising a girder, stringers on the girder, a rail-chair on the stringers, fish-plates, and U-bolts extending around the girder and through the chair and fish-plates for binding the parts together.

2. The combination with two rail-sections, of a joint therefor, comprising a girder, stringers on the girder, a rail-chair on the stringers, fish-plates, U-bolts extending around the girder and through the chair, and similar bolts extending around the girder and through the

chair and fish-plates, for binding the parts together.

3. The combination with a rail and stringer, of a U-bolt on each side of the rail and extending lengthwise thereof, said U-bolt passing around the stringer and extending through the rail-base.

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

CHARLES E. LABADY.

Witnesses:

TITUS L. PECK,

OTTO H. KRENTZ.