

No. 627,247.

Patented June 20, 1899.

J. WAYLAND.
RAIL JOINT.

(Application filed Oct. 5, 1898.)

(No Model.)

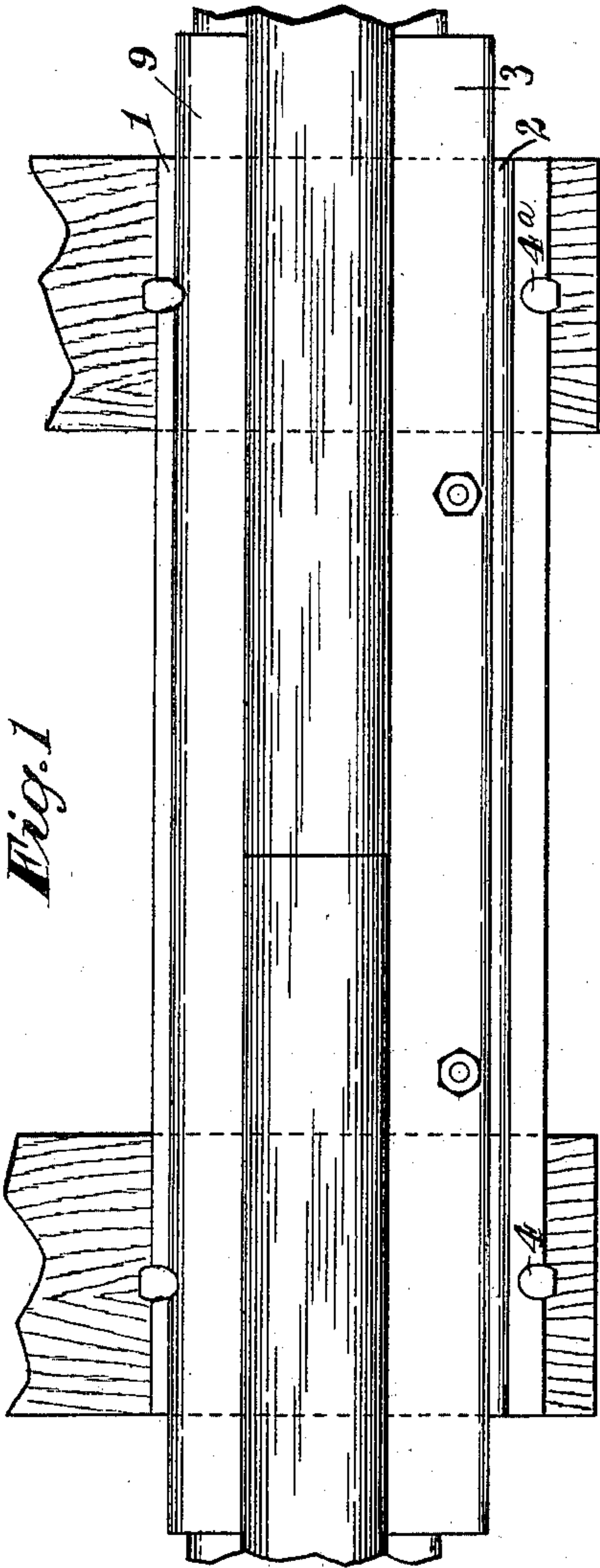


Fig. 1

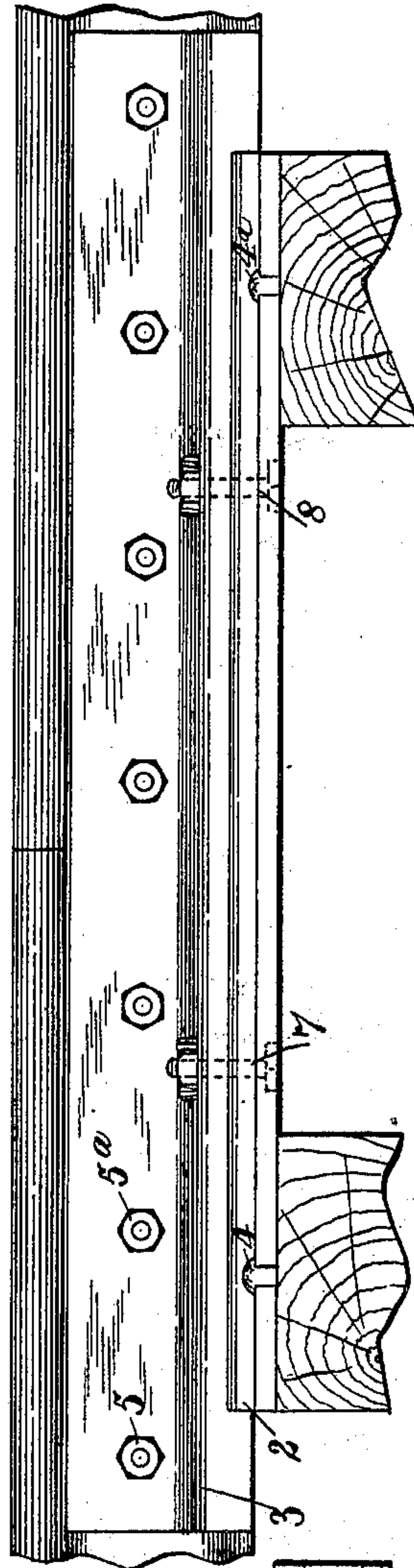


Fig. 2

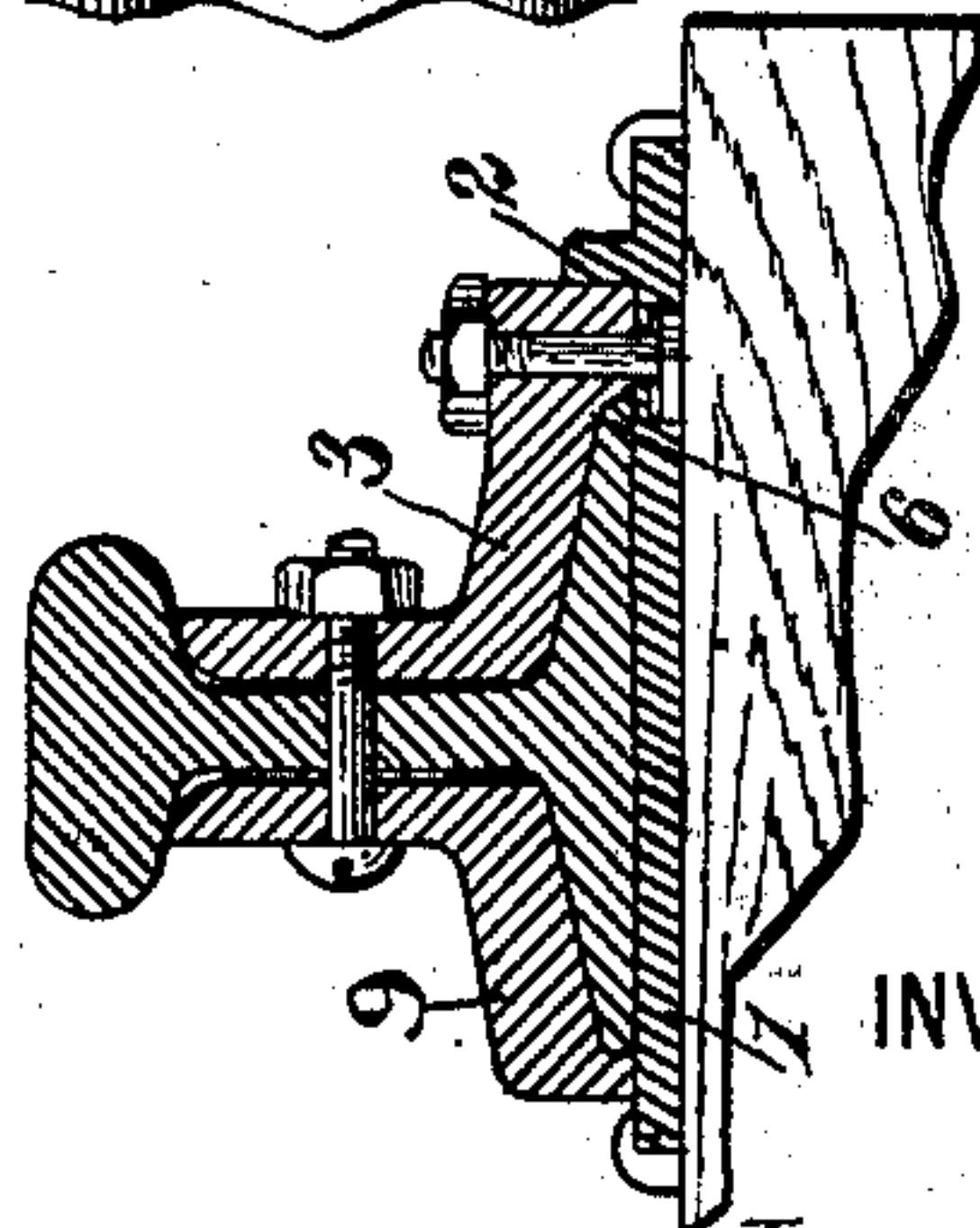


Fig. 3

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UNITED STATES PATENT OFFICE.

JAMES WAYLAND, OF NEWARK, NEW JERSEY.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 627,247, dated June 20, 1899.

Application filed October 5, 1898. Serial No. 692,692. (No model.)

To all whom it may concern:

Be it known that I, JAMES WAYLAND, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

The object of this invention is to provide a joint for the abutting rails of a railway-track which will have greater stiffness than those in common use, will effectually prevent spreading of the rails under heavy traffic, and will preserve the abutting rail ends on the same plane or level, so as to provide a continuously smooth tread for the wheels at all times.

In carrying out the invention I provide a stiff steel bed-plate provided along or near one edge with a web integral with the body of the bed-plate, having on its inner face a plane surface to constitute an abutment for an angle-bar of peculiar construction used to unite the rail ends. The angle-bar is of a shape to permit it to rest in the side of the rail and fit snugly under the head thereof and is provided with a flange which overlaps the base of the rail, through which pass bolts for firmly clamping the joint, including the angle-bar and the rail, to the bed-plate. The angle-bar has also a shoulder to fit snugly against the base of the rail, thereby effectually precluding the possibility of the latter shifting when the parts are assembled.

The several features of novelty of the invention will be more particularly hereinafter described, and will be definitely indicated in the claim appended to this specification.

In the accompanying drawings, which illustrate the invention, Figure 1 is a plan view of a rail-joint embodying my improvements. Fig. 2 is a side elevation of such a joint, and Fig. 3 is a vertical section through the joint.

1 represents a bed-plate which is preferably made of heavy steel-plate, provided by being passed through suitable rolls or by any other suitable process with a longitudinal rib 2 near one edge. This rib serves a double function in increasing the stiffness of the plate against vertical flexure and in providing an abutment for an angle-piece 3, forming part of the rail-joint. The bed-plate is placed upon adjacent cross-ties of the track, to which it may be spiked in the usual manner by driving spikes

through notches formed at suitable points in the plate, as indicated at 4 4^a, &c. The angle-bar 3 is adapted to fit snugly against the head of the rail bearing at its upper end hard against the head of the rail. It is firmly tied to the web of the rail by a plurality of horizontal bolts 5 5^a, &c. Its lower arm extends over the base of the rail and is provided with a shoulder 6, against which fits the rail-base. In the overlapping edge are a plurality of bolt-holes to accommodate bolts 7 8, the heads of which are buried in squared sockets or recesses on the under side of the bed-plate. I preferably provide also on the opposite side of the rail an angle-bar 9, similar in construction to the angle-bar 3, except that the overlapping edge may be shorter, as no vertical bolts through the bed-plate are used or are necessary for this angle-bar, and it is desirable in order to permit easy removal of the parts of the joint for repairs to have one side capable of quick and easy removal. The angle-bar 3 is set on the outside of the track, so that any lateral thrust under traffic is opposed by the rib 2, and the hammer-like blows delivered by the wheels in passing over the joint are absorbed by the steel bed-plate without damage to the cross-ties. It is important that the angle-bars should fit snugly in the faces of the rail, as I have described them, thus relieving the horizontal bolts of any lateral strain and thus insuring greater life to the joint. In taking a joint apart for repairs the horizontal bolts are loosened and the inside angle-bar removed, thus permitting the ends of the rail to be shifted laterally and the angle-bar 3 to be removed. It will be seen that the horizontal rib 2 adds great stiffness to the joint and effectually prevents any sinking or bending down of the rail at that point.

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

A rail-joint comprising abutting rails, a bed-plate supporting the rail ends and resting upon adjacent cross-ties, said bed-plate being free from projections on its under side and provided on its upper face at one side only with a longitudinal rib integral with its bed and rising upwardly from its floor, the remaining portion of the upper face being flat,

an angle-bar on the outer side of the rail-joint fitting snugly into the face of the rail so as to bear against the head and base thereof and provided at its bottom with a shoulder to
5 bear upon the bed-plate between the foot of the rail and the rib of the bed-plate, a series of vertical bolts passing through the shoulder of the angle-bar and the floor of the bed-plate, a companion angle-bar on the inner side of

the joint, and a series of horizontal bolts securing the two angle-bars to the rails.

In testimony whereof I have hereunto subscribed my name this 4th day of October, A. D. 1898.

JAMES WAYLAND.

Witnesses:

ROBT. H. READ,
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