(No Model.)

# A. NEUTASCHER

## RAILROAD RAIL JOINT.

No. 444,251. Patented Jan. 6, 1891.

Fig. 1.

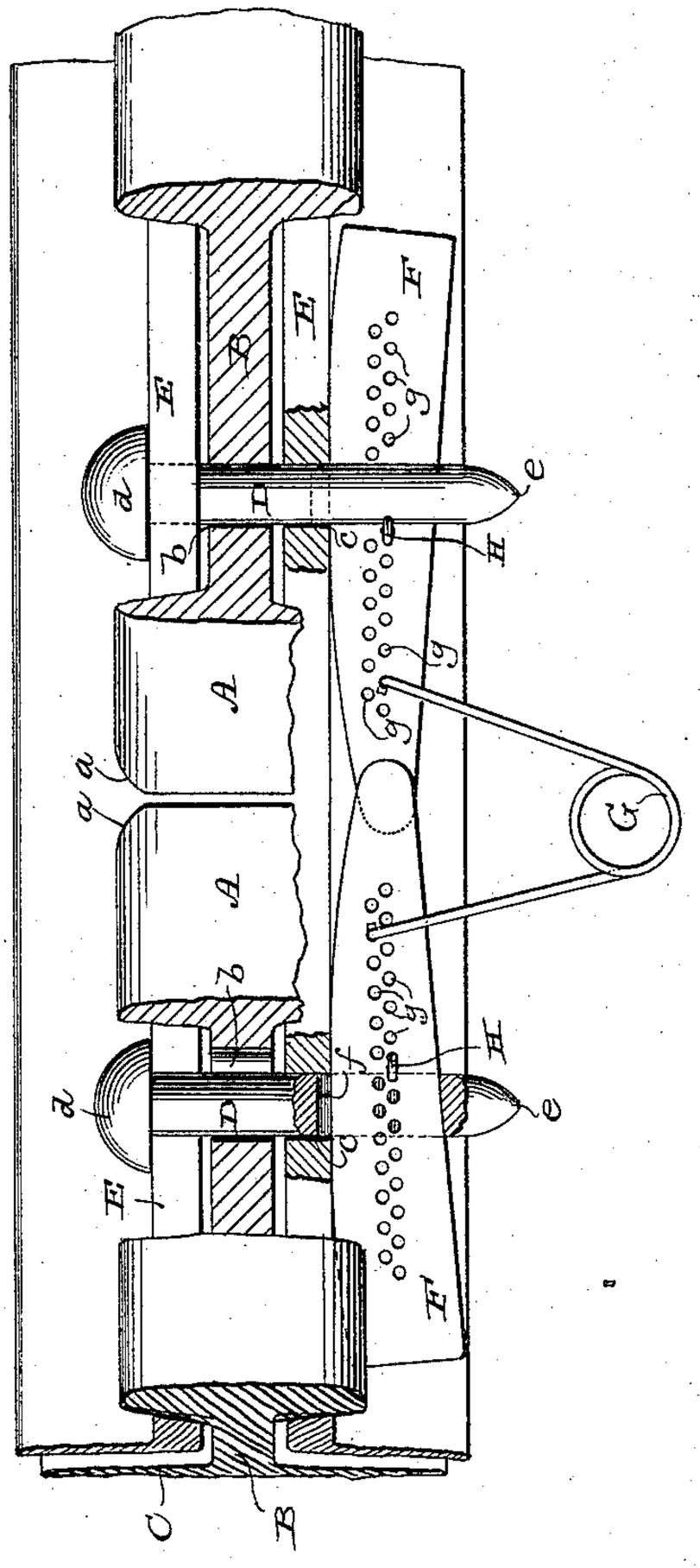
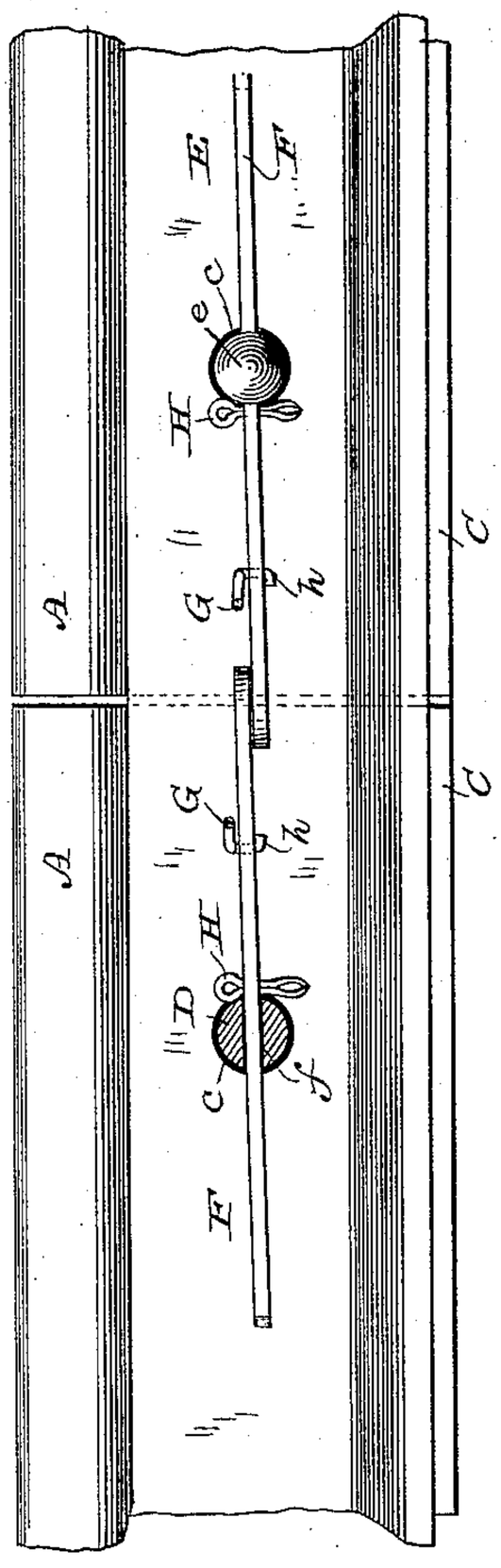



Fig. 2.




Witnesses
Geo. W. Young.
Wm Klug

Inventor
Alice Neutascher
By Stuart & Underwood
Attorneys

# UNITED STATES PATENT OFFICE.

ALLISE NEUTASCHER, OF MENDOTA, ILLINOIS.

## RAILROAD-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 444,251, dated January 6, 1891.

Application filed January 2, 1890. Serial No. 335,568. (No model.)

*To all whom it may concern:*

Be it known that I, ALLISE NEUTASCHER, of Mendota, in the county of La Salle, and in the State of Illinois, have invented certain new and useful Improvements in Railroad-Rail Joints and Means for Uniting the Same; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to railroad-rail joints and means for uniting the same; and it consists in certain peculiarities of construction, as will be fully set forth hereinafter, and subsequently claimed.

In the drawings, Figure 1 is a plan view of my present invention, partly broken away to better illustrate details of construction; and Fig. 2 is a side elevation thereof, with the end of one of the holding-bolts in section.

A A represent the adjacent ends of the flanges or treads of two ordinary railroad-rails, B the web of the rails, and C the base.

The only peculiarity in the rails themselves consists in the fact that a corner of each adjacent rail-tread is cut off, as shown at *a a*, for reasons hereinafter set forth.

Through the web B of the rails near the adjacent ends of each two rails to be joined together I cut or bore transverse perforations *b b*, preferably of greater length than the diameter of the bolt D to be inserted therein, as shown at the left in Fig. 1, though one of the said perforations may, if desired, be of only sufficient size to admit the passage therethrough of said bolt, as shown at the right in said figure. I make similar perforations *c c* (of simply sufficient size for the reception of said bolts) in the fish-plates E E, which are to be applied to the rail-joints in the usual manner, and which may be angle-plates, as shown, or simply straight plates, as preferred. The bolts D are simply straight bolts with heads *d* on one end and pointed, as shown at *e*, at the other end, and provided with longitudinal slots *f* for the insertion of wedge-shaped locking-plates F, provided with any desired number of series of holes *g g g*, the latter for the reception of the ends *h h* of the double spring locking-pin G, which ends are bent downward and preferably inward, as shown.

H H are split pins adapted to be dropped into the holes *g g* next the bolts D D to aid in holding the locking-plates firmly in place.

The adjacent ends of the rail-treads A are cut or beveled off oppositely to each other at their corners, as shown at *a*, each cut extending obliquely backward and outward, and the object of cutting off the corners of the adjacent ends of the rail-treads, as shown at *a a*, is to prevent car-wheels from leaving the track, as has sometimes happened, at rail-joints, when from any cause the edge of one rail end projected even slightly beyond the edge of the adjacent rail end.

The object of making the perforations *b* in the rail-web of greater length than the diameter of the holding-bolts D is to permit of the expansion and contraction of the rails under varying conditions of temperature without disturbing the described locking arrangement, though this result is also obtained by the use of the spring locking-pin G, which can yield as required in either direction. By reason of having the locking-plates wedge-shaped the same can be forced through the slots *f* in the bolts D to any required distance, adjusting themselves thereby to any width of fish-plate which happens to be used, and the object of having the holes *g g* in irregular series, as shown, is to enable the pins H H to be placed snugly against the bolts D D, no matter to what distance the wedge-shaped locking-plates have been adjusted. These bolts can be made very economically from old disused railroad and other bolts whose screw-threads have become worn out by simply pointing and slotting them, and thus what is at present chiefly an item of waste with railroad companies—namely, worn-out screw-bolts—would thus become valuable at slight cost. While the bolts would hold the rail-joint as securely without their ends being pointed, it is much easier to drive a pointed bolt through the holes in the rail-web and fish-plates than a blunt bolt, as the point enables the bolt to be readily forced through without the need of as careful adjustment of all the parts as would be necessary with a blunt-ended bolt.

While especially designed for use in connection with a railroad-rail joint, it is obvious that my bolts and locking-plates may be used with any articles or class of machinery

now requiring jam-nuts or nut-locks to hold bolts securely in place.

My joint is not only as strong as would be one where nut-locks are employed, but at the same time its flexibility is a great advantage, (in allowing for the expansion and contraction of the rails, as stated,) and any possible danger of the edge of one rail-tread end projecting laterally beyond the edge of the adjacent rail-tread end by reason of such flexibility is obviated by the described cutting away of the corners of the adjacent treads.

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

The combination of two adjacent rail ends having elongated perforations through the webs of one thereof, with fish-plates provided with registering perforations, pointed and headed bolts passed through said perforations and provided with longitudinal slots, wedge-shaped locking-plates passed through said slots with their small ends overlapping and provided with longitudinal rows of perforations, split spring locking-pins passed through said perforations adjacent to said bolts, and a double spring locking-pin having downward-turned ends passed through other of said perforations and thence bent inwardly against the under sides of the said locking-plates, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Mendota, in the county of La Salle and State of Illinois, in the presence of two witnesses.

ALLISE NEUTASCHER.

Witnesses:
R. C. McINTIRE,
J. A. LAMBERTON.