M. POTENSKI.

RAIL JOINT.

APPLICATION FILED APR. 12, 1919.

**1,316,645.**

Patented Sept. 23, 1919.

*Fig. 1.*

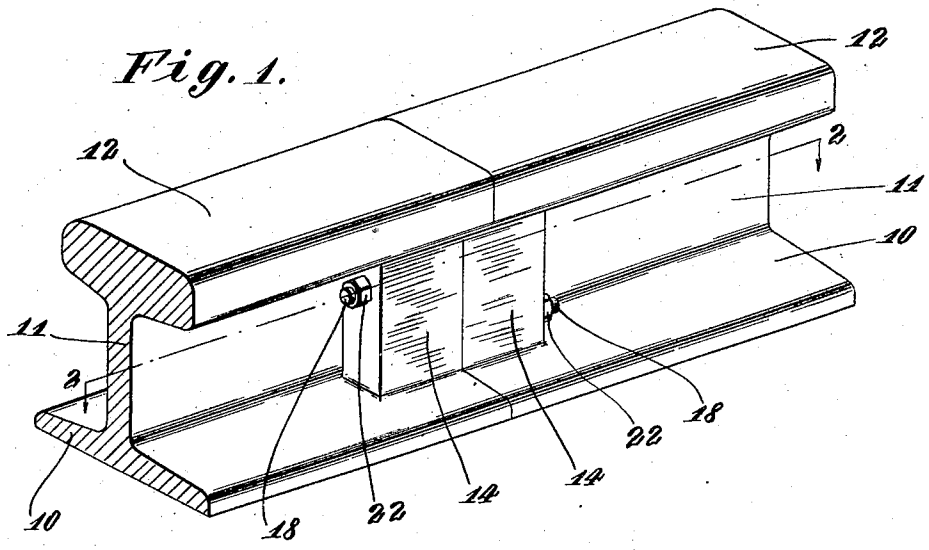



*Fig. 2.*

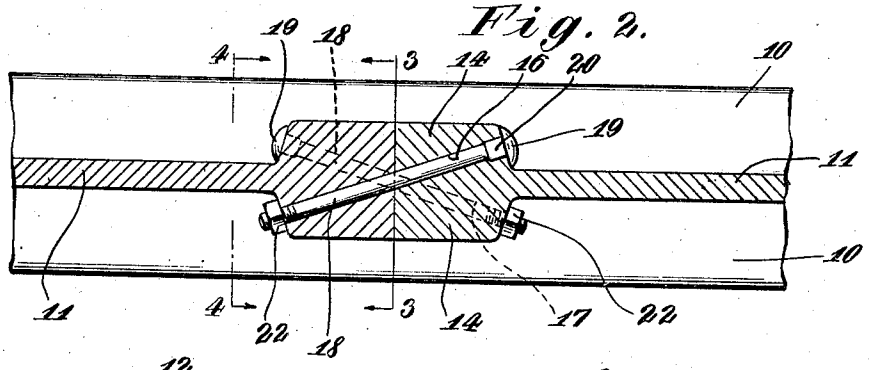



*Fig. 3.*

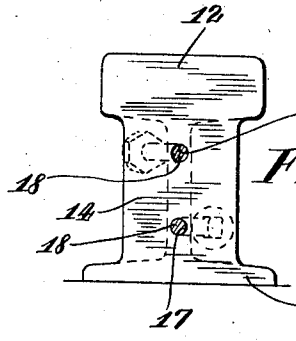
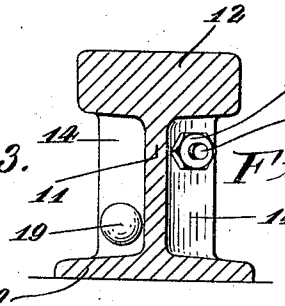



*Fig. 4.*




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# UNITED STATES PATENT OFFICE.

MICHAL POTENSKI, OF CLEVELAND, OHIO.

## RAIL-JOINT.

1,316,645. Specification of Letters Patent. Patented Sept. 23, 1919.

Application filed April 12, 1919, Serial No. 289,736.

*To all whom it may concern:*

Be it known that I, MICHAL POTENSKI, a citizen of Russia, residing at Cleveland, county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to improvements in means for joining the abutting ends of rails, and particularly to those used in railroad construction.

The principal object of the invention is to provide means whereby the abutting ends of rails may be firmly held in intimate relation, without the use of fish plates, rail seats and other means commonly employed.

A further object is to provide such means formed integrally with the rail whereby the joint can be made or broken in an easy and expeditious manner.

These and other like objects are attained by the novel construction and combination of parts hereinafter described and shown in the accompanying drawings, forming a material part of this disclosure, and in which—

Figure 1 is a perspective view, showing the ends of a pair of rails and indicating the applicatiton of the invention.

Fig. 2 is a longitudinal sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is a vertical sectional view taken on line 3—3 of Fig. 2, and

Fig. 4 is a similar vertical sectional view, taken on line 4—4 of Fig. 2.

Referring to the drawings, a conventional type of rail is herein indicated, consisting of the base flanges 10, having a flat bottom, and slightly beveled on its upper side and integrally formed with the stem 11, which terminates in the head 12, as usual.

Formed integrally, adjacent to the abutting ends of the rail or united by welding, casting, or other well known mechanical processes, are laterally protruding blocks 14, the same being symmetrical and extending outward from the stems 11 the end joint surface being level and smooth as usual, on each side between the heads and flanges of the rail.

Passing diagonally through the projections 14, and stems of the rails are openings 16, and 17 arranged at different heights relative to the projection and substantially crossing each other at the abutting surfaces, both openings at that point being substantially in the center of the rail.

Receptive in the openings 16 and 17 are screw bolts 18, having heads 19 and may if preferred have enlargements 20, adjacent to the head entering into corresponding enlargements in the openings 16 and 17, while the outer screw threaded ends of the bolts have engaged with them nuts 22, adapted to draw the abutting ends of the rail into intimate contact, it being understood that the end walls of the projections or blocks 14, are beveled so as to present surfaces substantially at right angles to the openings.

From the foregoing it will be seen that an exceedingly simple device has been disclosed whereby rails may be held in intimate fixed relation, the screw bolts acting as dowel pins in addition to their clamping effect so as to retain the ends permanently in fixed relation, and it will be understood that upon removal of the nuts 22, the bolts may be retracted, permitting the rails to be removed or replaced as in any desired manner.

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

In a rail joint connection, the combination with a pair of running rails having extended base flanges, heads and webs connecting said bases and heads, of opposed pairs of projections extending from said webs between the lower surface of said heads and the upper surface of said flanged bases, the ends of said projections being obliquely formed, openings passing through each pair of said projections, said openings extending at different heights so as to pass each other on the center line of said rails, bolts engageable within said openings, said bolts diagonally crossing from one projection on one side of the web of one rail to the projection on the other side of the web of the other rail, the heads of said bolts being adapted to abut against the oblique ends of said extensions, and nuts engageable with said bolts, said nuts engaging upon opposite sides of said extensions.

In testimony whereof I have affixed my signature.

MICHAL POTENSKI.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."