I. MAJCHEREK.

RAILWAY RAIL JOINT.

APPLICATION FILED NOV. 28, 1914.

1,166,614.

Patented Jan. 4, 1916.

2 SHEETS—SHEET 1.

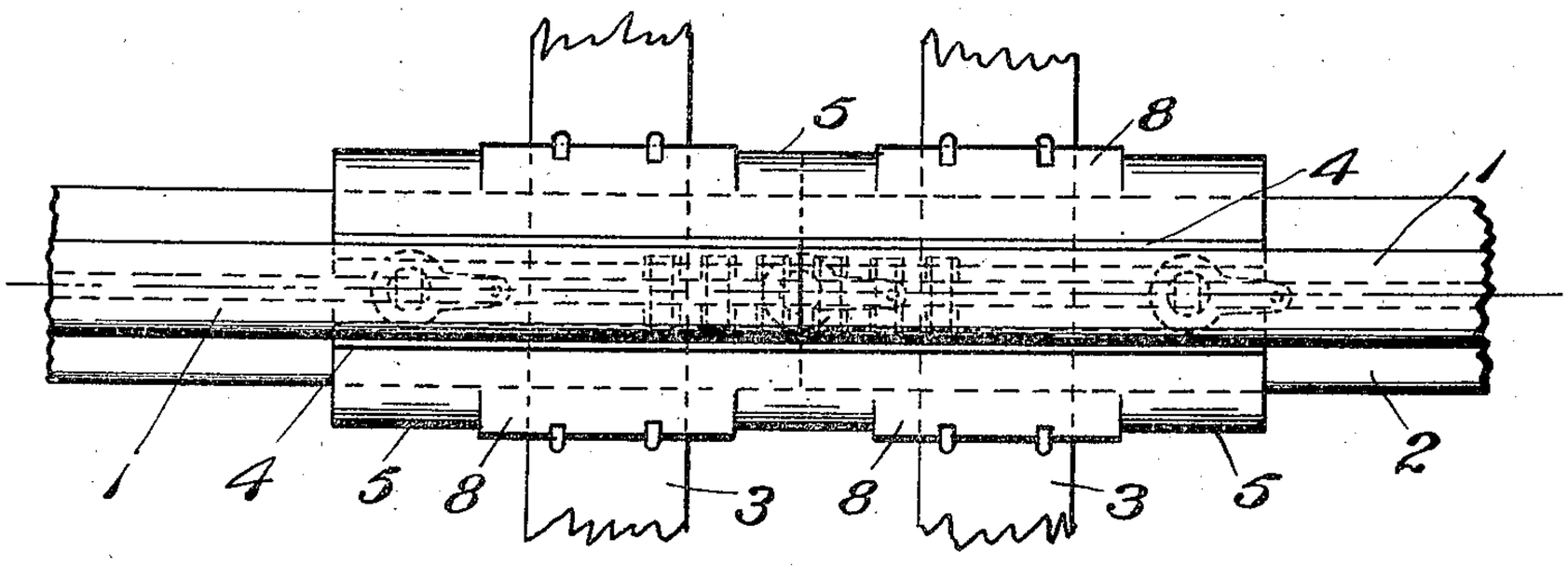

Fig. 1.

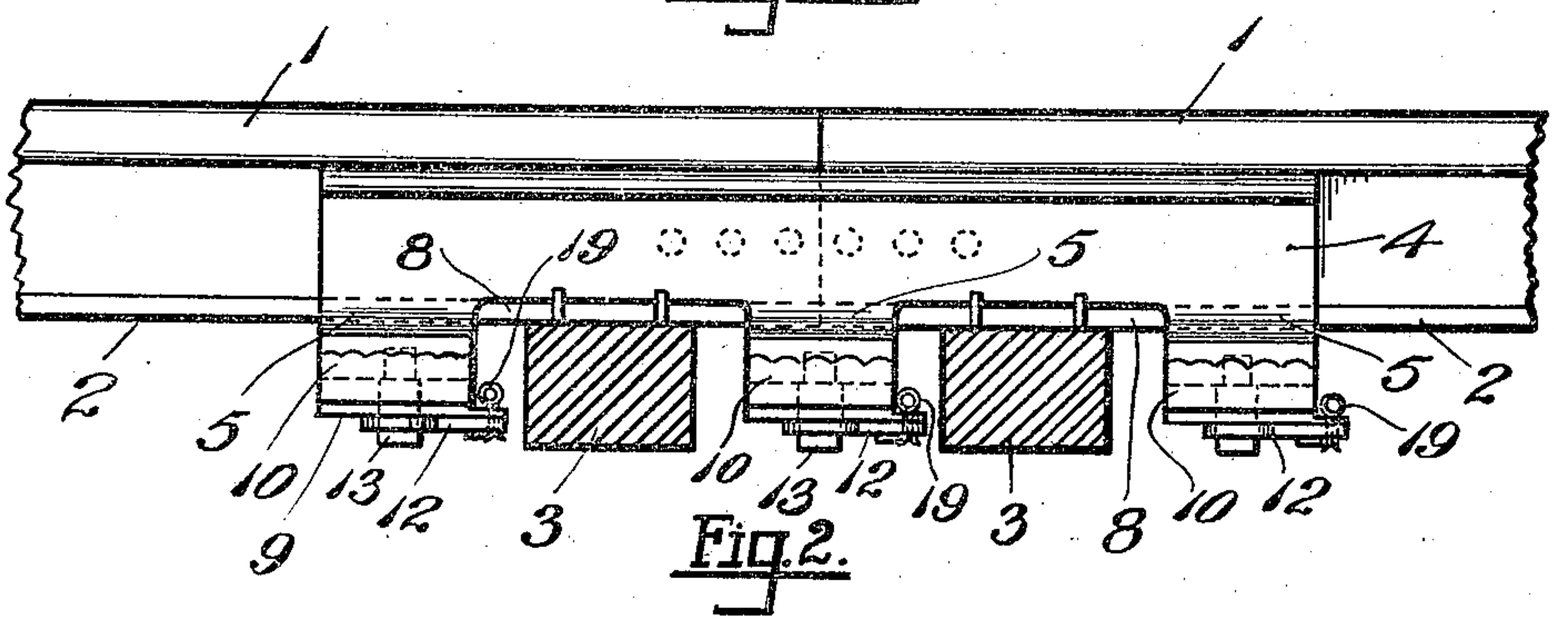

Fig. 2.

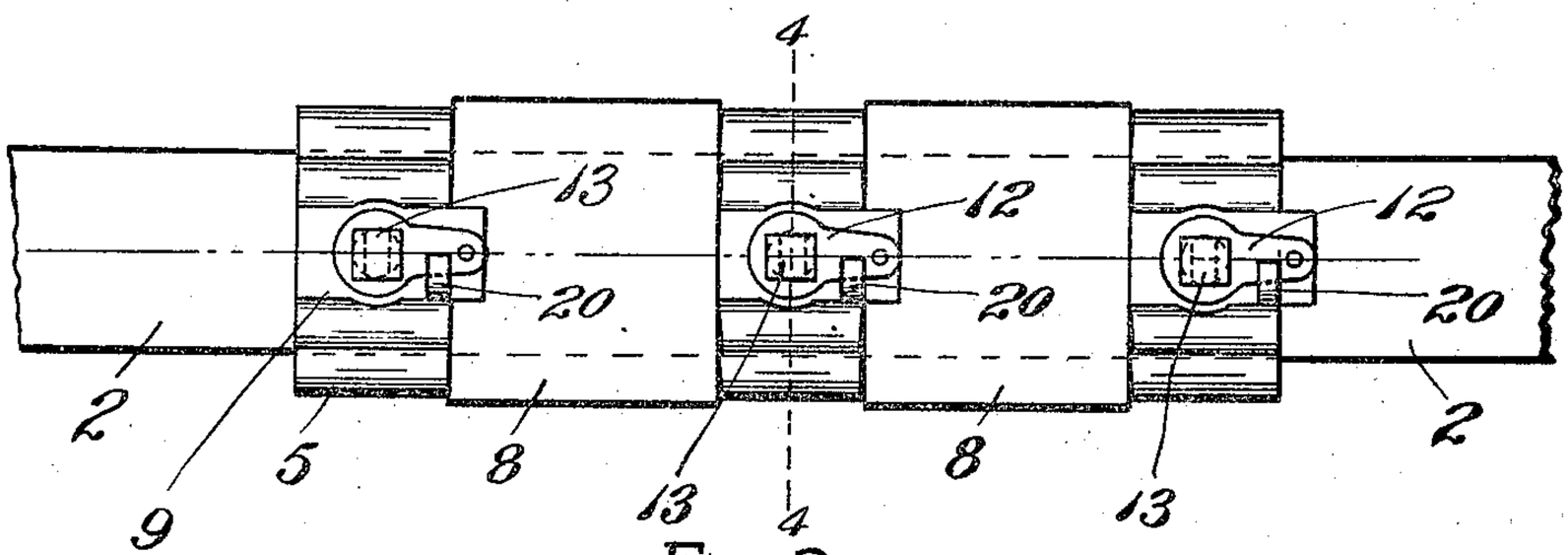

Fig. 3.

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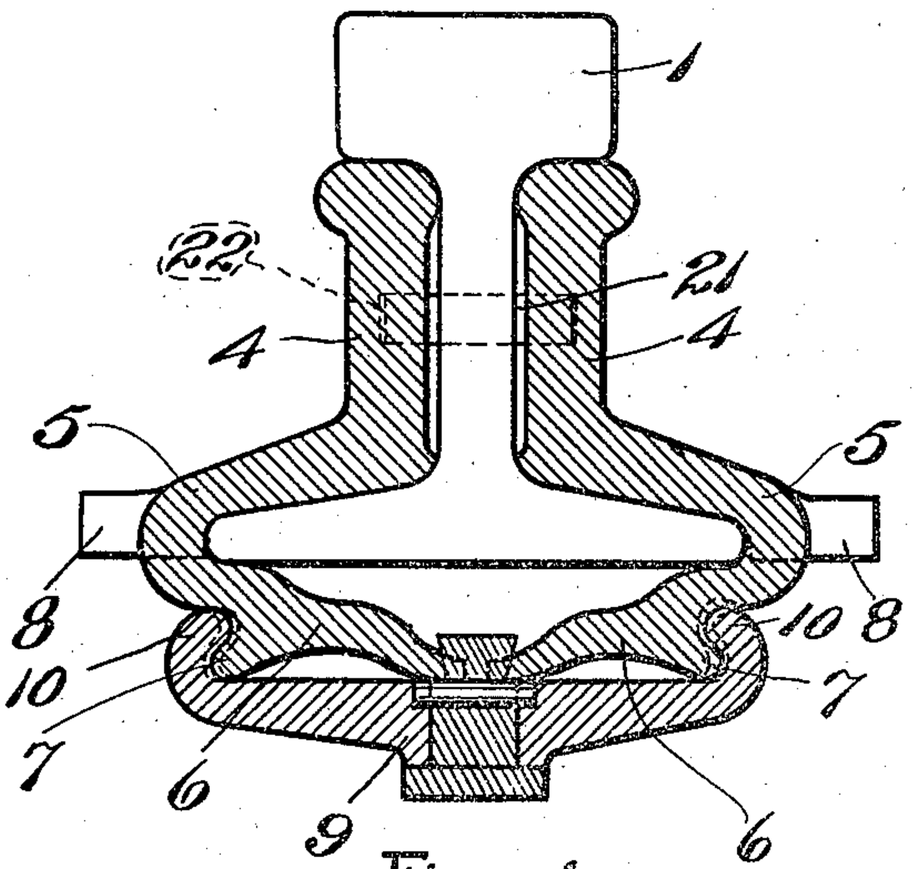

Fig. 4.

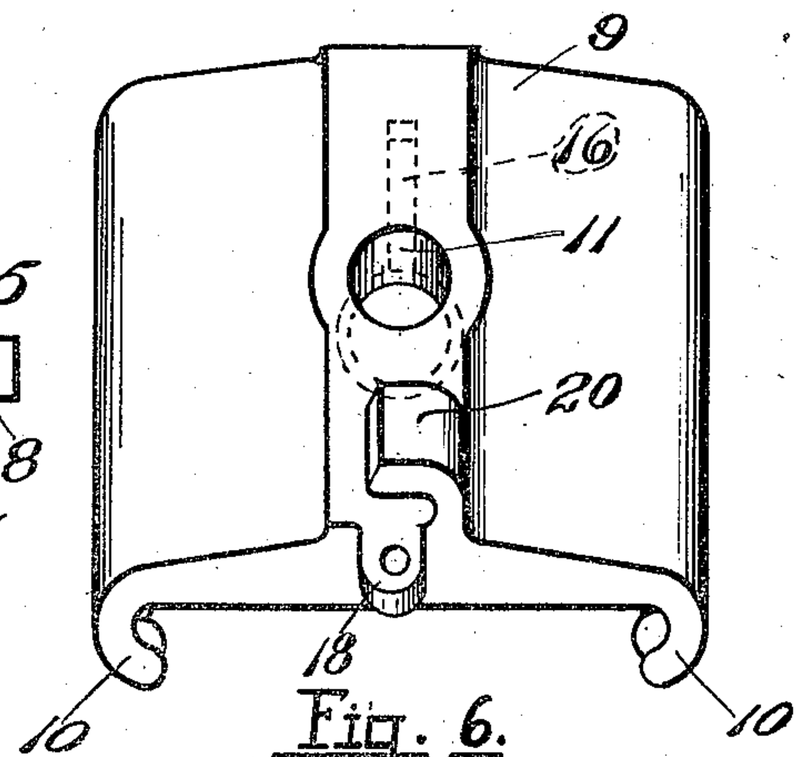

Fig. 6.

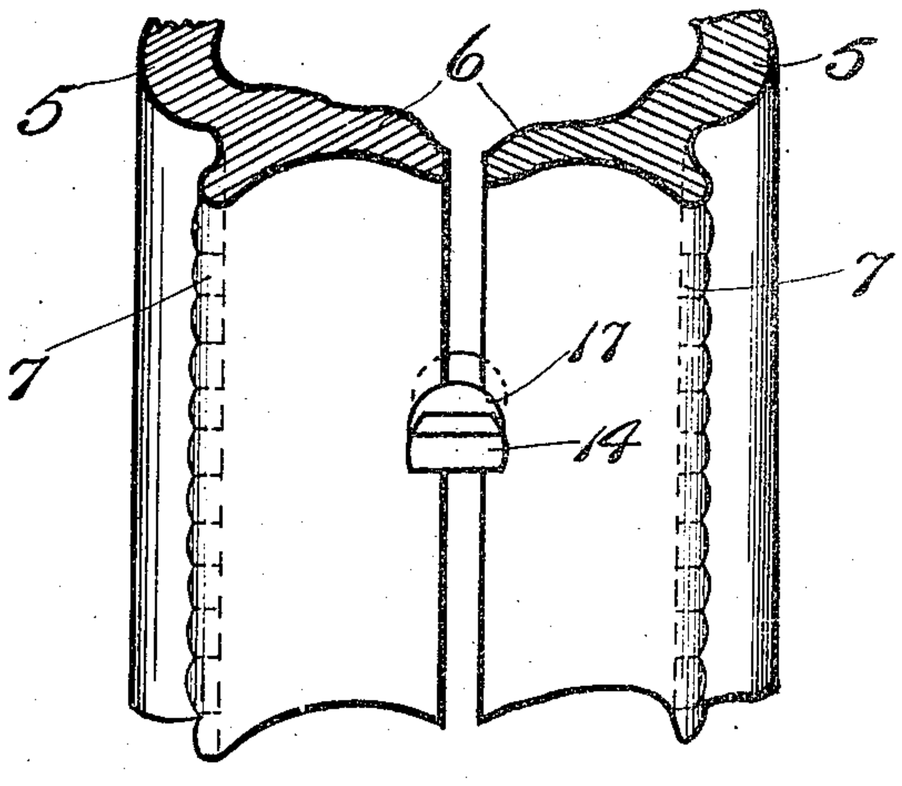

Fig. 5.

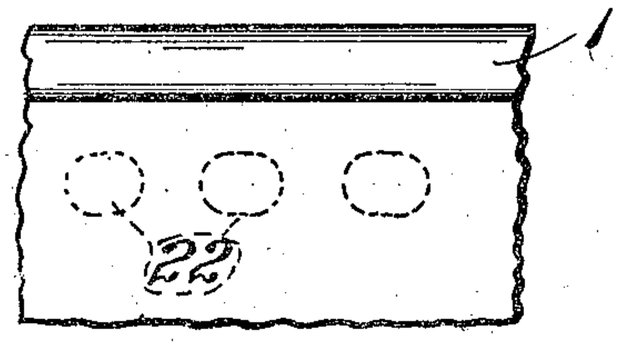

Fig. 7.

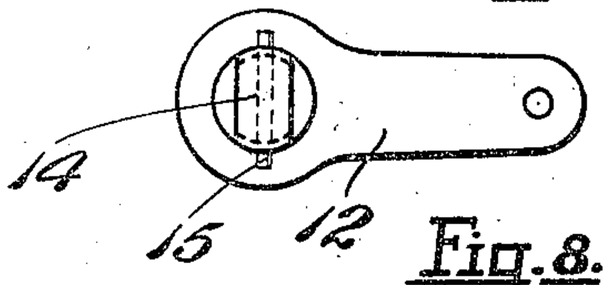

Fig. 8.

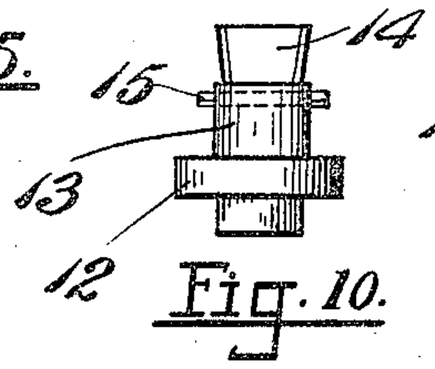

Fig. 10.

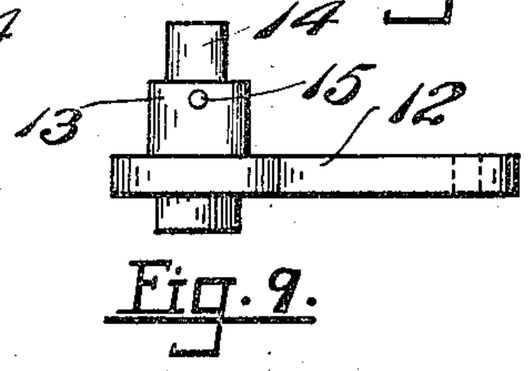

Fig. 9.

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UNITED STATES PATENT OFFICE.

IGNAC MAJCHEREK, OF DETROIT, MICHIGAN.

RAILWAY-RAIL JOINT.

1,166,614. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed November 28, 1914. Serial No. 874,459.

To all whom it may concern:

Be it known that I, IGNAC MAJCHEREK, a subject of the Emperor of Austria-Hungary, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Railway-Rail Joints; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railway rail joints. And it is the object and purpose thereof to provide a joint of this character with certain new and useful features, as will more particularly appear as the description progresses of the embodiment thereof shown in the accompanying drawings in which;

Figure 1 is a plan view of the rail joint. Fig. 2 is a side elevation thereof. Fig. 3 is a view from beneath the rail joint. Fig. 4 is a transverse section taken on the line 4—4 of Fig. 3. Fig. 5 is a fragmentary inverted plan view of the clamping sides forming a part of the joint. Fig. 6 is a similar view of the member joining said clamping sides. Fig. 7 is a fragmentary side elevation of one of the clamping sides indicating the position of the slots on the inner side thereof the purpose of which will later appear. Figs. 8, 9 and 10 are respectively plan, side elevation and end elevation of the clamping lever and stud used in connection with the rail joint.

Like reference characters refer to like parts throughout the several views of the drawing.

In the embodiment of this invention shown by the drawings, the rails 1 having lower flanges 2 which normally rest on ties 3 have their ends abutting and it is to the joining of said abutting ends that my invention is directed. To this end there are provided clamping members 4, one on either side of the rails and having vertical portions bearing against the web of the rails and extending across the abutting ends thereof. Each clamping member 4 is turned at 5 around the outer edge of the flange 2 of the rail and thence carried inwardly and downwardly as indicated at 6, the edges of the adjacent parts 6 normally being spaced a short distance apart as indicated in Figs. 4 and 5. These parts at 5 and 6 which fit around the edges of the flange and pass thereinunder, are located at each end of the clamping plates 4 and at the center thereof, the intermediate spaces being formed into the horizontal extending plates 8 which normally lie on the ties 3 adjacent the ends of the rails. It will also be noted that each part 6 of the clamping members is provided at its underside with a downwardly and outwardly extending ridge 7 which may be corrugated and the use of which will presently appear.

To connect the clamping plates 4, I have provided a plurality of members 9, one of which is applied at each end and at the middle of said clamping plates. Member 9 is formed as a substantially horizontal plate having the ends turned upwardly and inwardly as shown at 10, the edges thereof also being corrugated and adapted to fit immediately above the ridge 7 heretofore noted. Each of said members 9 at its center is bored to form an opening 11 adapted to receive a clamping stud which is operated by means of the lever 12 fitted over the stud 13, the end of the stud being reduced in size and flared outwardly as shown, its ends projecting slightly beyond the surfaces of the stud. In the assembling of this clamping stud, it is passed through the opening 11 and the pin 15 thereafter forced into position, a groove 16 being formed in member 9 to permit this introduction. After the pin is passed through stud 13, its ends seat in a circular depression formed in plate 9 as indicated in Fig. 4 and in dotted lines in Fig. 6. The stud is rotatable in the opening 11 and may be turned to any desired position.

In applying the clamping plates to the rails 1 a clamping plate 4 is placed on each side of the rails in the position indicated in Fig. 4 and a member 9 is then placed at each end and at the middle of the clamping plates and engaged with the ridges 7 thereof, the end 14 of the stud being turned so as to pass between the adjacent edges of the parts 6. Each part 6 is cut away as indicated at 17, permitting the rotation of the end 14 upon which said parts will be forced apart through the wedging action of the end 14 and forced

firmly against the sides 10 of the members 9. The end of the lever 12 i. pierced, and when turned into position, it will register with an opening in the extension 18 formed on the member 9 and may be retained in said position by use of the split pin 19 as indicated. An overhanging lip 20 may also be formed if desired between which and the member 9 the end of handle 12 may be situated. In such case the pin 15 may be dispensed with as the stud and lever 12 cannot become loosened in transportation when said overhanging part 20 is present. A series of pins 21 pass through the web of the rails in substantially the positions usually occupied by the bolts which in rail joints of ordinary type bind the plates to the rails. These pins extend outwardly to either side of the web and are seated in slots 22 which are somewhat elongated to permit expansion and contraction of the rails, said pins serving to locate the plates with reference to the rails.

From the foregoing it will be evident that I have provided a novel rail joint and one which is quickly and easily applied, it being necessary merely to give the lever 12 a quarter turn to clamp the plates 4 to the rails. The construction is comparatively simple and easy to manufacture.

The invention is defined in the appended claims and all modifications in structure falling within their scope are to be considered as comprehended within my invention.

I claim:—

1. In a device of the character described, the combination with railroad rails positioned in alinement and having ends abutting, of clamping plates located one at each side of the abutting rails and lying alongside the ends thereof, each of said plates having a plurality of spaced apart extensions turned around and under the rail flanges, a connecting means joining said extensions, and means to force the said extensions outwardly against the said connecting means to thereby secure the extensions and connecting means together.

2. In a device of the character described, the combination with railroad rails positioned in alinement and having ends abutting, of clamping plates located one at each side of the abutting rails and lying alongside the ends thereof, each of said plates having an extension turned around and under the rail flanges, ridges formed on said extensions, a connecting device lying between and engaging the said ridges to thereby connect the said plates together, and means to force the extensions against the connecting device.

3. In a device of the character described, the combination with railroad rails positioned in alinement and having ends abutting, of clamping plates located one at each side of the abutting rails and lying alongside the ends thereof, each of said plates having an extension turned around and under the rail flanges, downwardly and outwardly projecting ridges formed integral with said extensions on the underside thereof, a connecting device comprising a plate with upturned edges engaging said ridges to thereby join the clamping plates together, and means passing through the connecting device to force the said ribs against the upturned edges of the connecting device.

4. In a device of the character described, the combination with railroad rails positioned in alinement and having ends abutting, of clamping plates located one at each side of the abutting rails and lying alongside the ends thereof, each of said plates having an extension turned around and under the rail flanges, downwardly and outwardly projecting ridges formed integral with said extensions on the underside thereof, a connecting device comprising a plate with upturned edges engaging said ridges to thereby join the clamping plates together, and means located between and bearing against the lower portions of said extensions for forcing said ridges against the upturned edges, substantially as described.

5. In a device of the character described, the combination with railroad rails positioned in alinement and having ends abutting, of clamping plates located one at each side of the abutting rails and lying alongside the ends thereof, each of said plates having an extension turned around and under the rail flanges, downwardly and outwardly projecting ridges formed integral with said extensions on the underside thereof, a connecting device comprising a plate with upturned edges engaging said ridges to thereby join the clamping plates together, and a stud having a wedge-shaped end rotatably mounted in the plate, and said end lying between the said extensions and serving to force them apart on rotation of the stud, substantially as described.

6. In a device of the character described, the combination with railroad rails positioned in alinement and having ends abutting, of clamping plates located one at each side of the abutting rails and lying alongside the ends thereof, each of said plates having an extension turned around and under the rail flanges, downwardly and outwardly projecting ridges formed integral with said extensions on the underside thereof, a connecting device comprising a plate with upturned edges engaging said ridges to thereby join the clamping plates together, a stud having a wedge-shaped end

rotatably mounted in the plate, said end lying between the said extensions and serving to force them apart on rotation of the stud, a handle connected with the stud for rotating it, and means to secure the handle in fixed relation to the plate, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

IGNAC MAJCHEREK.

Witnesses:
DOMINIC SERMAK,
NICHOLAS MAJCHEREK.