No. 703,876. Patented July 1, 1902.

S. M. WIXCEL.

RAIL JOINT.

(Application filed Feb. 6, 1902.)

(No Model.)

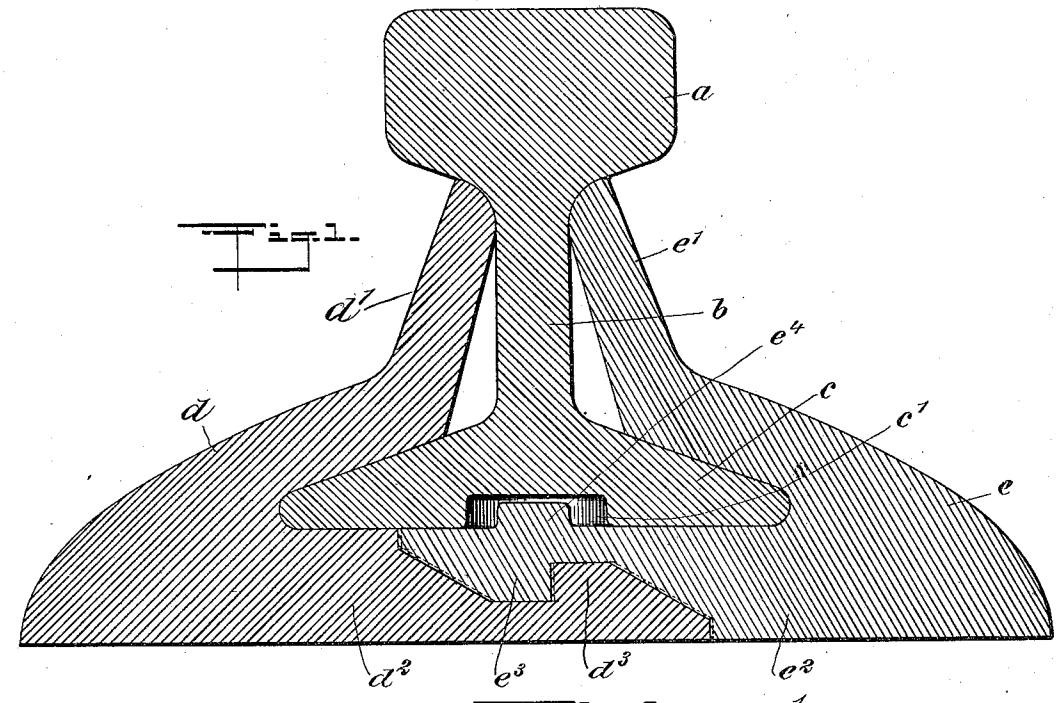

Fig. 1.

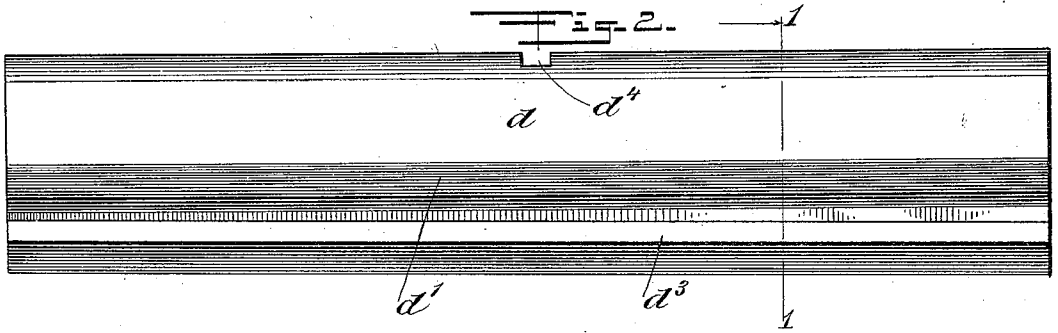

Fig. 2.

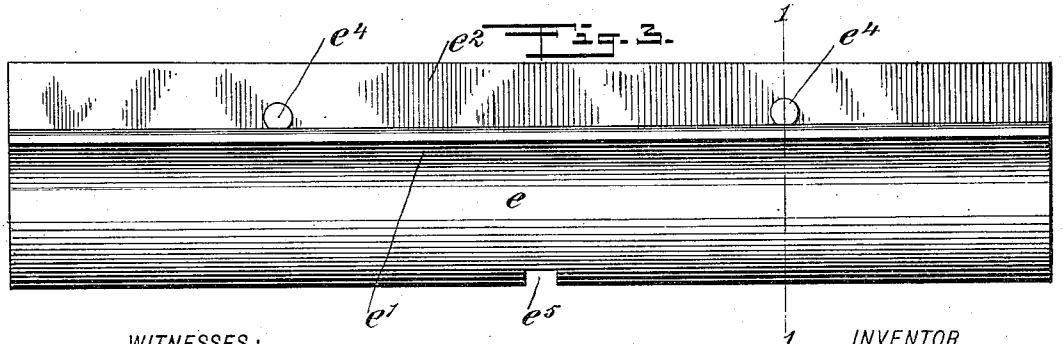

Fig. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

SAMUEL M. WIXCEL, OF MARCUS, IOWA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 703,876, dated July 1, 1902.

Application filed February 6, 1902. Serial No. 92,763. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL M. WIXCEL, a citizen of the United States, and a resident of Marcus, in the county of Cherokee and State of Iowa, have invented a new and Improved Rail-Joint, of which the following is a full, clear, and exact description.

This invention relates to a means for fastening together the sections of railway-rails without involving the necessity of fish-plates and bolts extending transversely through the rails.

The invention comprises two peculiarly-shaped clamping-sections adapted to be wedged together with the rail-section between them and having angle-bars bearing under the ball of the rail not only to hold the sections of the rail in proper position, but also securely to brace the various parts.

The invention further involves certain novel constructions for preventing the creeping of the rails.

This specification is an exact description of one example of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional view of the invention on the lines 1 1 of Figs. 2 and 3. Fig. 2 is a plan view of one section of the fastening, and Fig. 3 is a plan view of the other section.

a indicates the ball of the rail, *b* the web, and *c* the base-flange, all of which parts are of the usual construction, excepting that the base-flange *c* has produced in its bottom a cavity *c'*. A cavity *c'* is produced in each end portion of the rail, and the purpose of the cavities will be fully described hereinafter.

d and *e* indicate the two sections of the joint or fastener. These sections are each formed with the upwardly and inwardly inclined angle-flanges *d'* and *e'*, the upper edges of which bear under the ball of the rail, as shown in Fig. 1, and are carried on parts of the joint-sections, which parts lie over the top of the base-flange *c* of the rail. The sections *d* and *e* of the joint have bottom portions d^2 and e^2, which project under the base-flange and are formed with interlocking beads e^3 and d^3. These beads are set diagonally, as indicated by the dotted lines in Fig. 1 and by full lines in Figs. 2 and 3, so that as the joint-sections are moved together by sliding the one longitudinally on the other the diagonal beads will draw the sections together, clamping them firmly in place. The joint-sections are so shaped that the beads d^3 and e^3 interlock in the peculiar manner shown in Fig. 1, thus forming a secure connection between the two sections of the joint and also a solid bearing underneath the flange of the rail. The base portion e^2 of the sections *e* is formed with two upwardly-projecting studs e^4, which are adapted to set into the cavities *c'* and prevent the creeping of the rails. This may be effected by placing the section on the rail with a rocking movement, the cavities *c'* being larger than the studs e^4 to allow the operation.

In placing the parts in position the section *e* is first moved on the rail-sections with the rocking movement described and the studs e^4 engaged into the cavities *c'*. The section *d* is then slid longitudinally on the section *e*, with the beads e^3 and d^3 interlocked together. The diagonal or tapered arrangement of these beads causes the sections to be drawn forcibly toward each other, and thus the rail-sections are clamped firmly between the joint-sections. The section *d* should be driven home by a hammer or other tool, if necessary, and then the whole of the parts secured by spikes driven through the notches d^4 and e^5.

It will be observed that this joint holds the rail-sections firmly and immovably together without allowing any loose movement of the parts and without the necessity of fastening-bolts extending through the rails. The peculiar form of the bracing angle-bars *d'* and *e'* prevents independent movement of the rail-sections and also braces the rails, while the studs e^4 and their arrangement with the base-flange of the rail prevent creeping.

Various changes in the form and details of my invention may be resorted to at will without departing from the spirit of my invention. Hence I consider myself entitled to all forms of the invention as may lie within the intent of my claims.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. The combination with a rail having a cavity in its bottom, of two joint-sections lying one on each side of the rail and having longitudinally-extending interlocking parts to fasten them together, and an upwardly-projected stud on one joint-section and adapted to enter the cavity, the cavity being larger than the stud, for the purpose specified.

2. A rail-joint, comprising two joint-sections with means for fastening them together, said sections lying on opposite sides of the rails and having portions lying under the base-flanges of the rails and also having upwardly and inwardly inclined flanges which engage the rails, for the purpose specified, and two studs carried on one fastener-section at opposite points thereon, said studs being located under the base-flanges of the rail-sections and being projected upward into cavities formed in the under faces of the base-flanges of the rail-sections.

3. The combination with rail-sections, each having a cavity in its bottom, of two joint-sections lying one on each side of the rail-sections and having means for fastening them together, and two upwardly-projected studs on one joint-section, said studs being adapted respectively to enter the cavities in the said rail-sections, and said cavities being larger than the studs, for the purpose specified.

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

SAMUEL M. WIXCEL.

Witnesses:
LOUIS GUND,
JAMES GOLEY.