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PATENTED AUG. 7, 1906.

G. H. MARSHALL & C. L. DUNN.

RAIL JOINT.

APPLICATION FILED APR. 12, 1906.

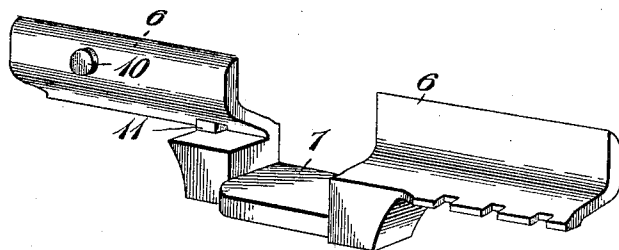
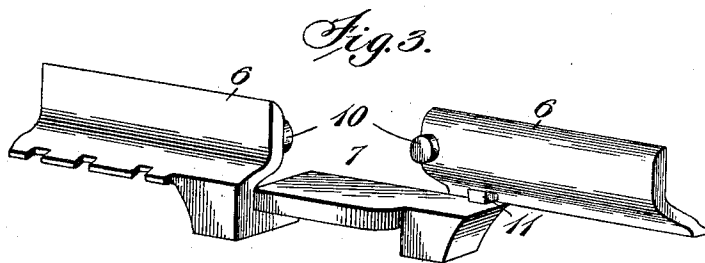
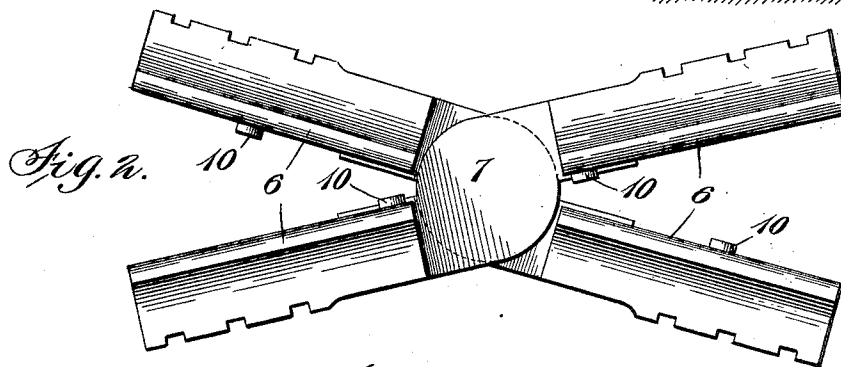
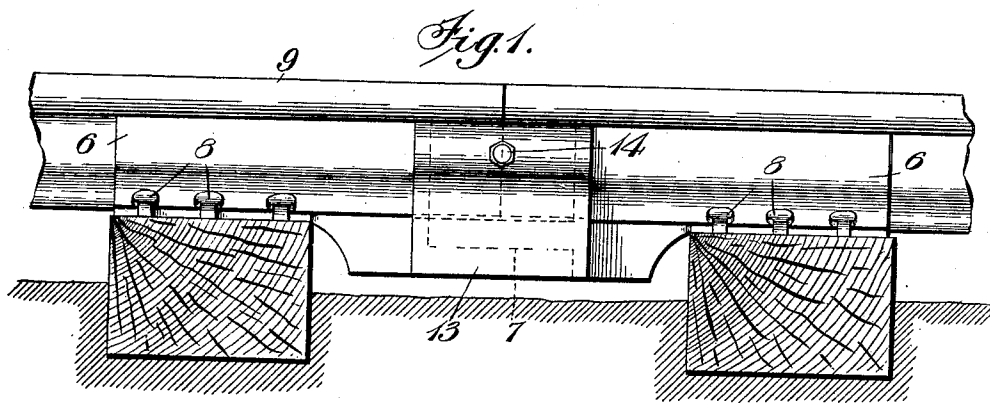
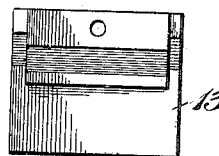


Fig. 5.



Fig. 6.



WITNESSES:

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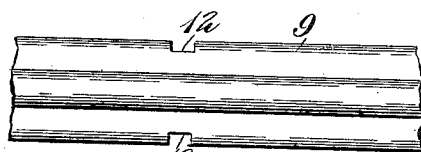


Fig. 4.

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UNITED STATES PATENT OFFICE.

GEORGE H. MARSHALL AND CHARLES L. DUNN, OF ST. JOHNS, MICHIGAN.

RAIL-JOINT.

No. 827,743.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed April 12, 1906. Serial No. 311,221.

To all whom it may concern:

Be it known that we, GEORGE H. MARSHALL and CHARLES L. DUNN, citizens of the United States, residing at St. Johns, in the county of Clinton and State of Michigan, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention is an improvement on the rail-joint shown and claimed in our United States Patent No. 816,671.

The object of the present invention is to strengthen the joint by providing lugs on the members of the joint to fit in the bolt-holes in the web of the rails.

A further object of the invention is to strengthen the joint by forming lugs on the members which fit in the usual spike-notches formed in the edges of the base of the rail.

A further object of the invention is to add to the parts shown in the said patent a spacing plate or piece which fits between the adjacent ends of said parts and covers the joint. One of these pieces is used on each side.

In the accompanying drawings, Figure 1 is a side elevation of the joint. Fig. 2 is a top plan view of the joint-pieces detached and removed from the rails. Fig. 3 is a perspective view of the joint-pieces detached from each other. Fig. 4 is a plan view of one of the rail ends. Figs. 5 and 6 are details in end and inside elevation of the spacing-piece which fits between the adjacent ends of the joint-pieces.

The main pieces of the joint are substantially the same as those shown in the above-mentioned patent, comprising two members, each of which has fish-plates or blocks 6 connected by an intermediate portion 7, which is halved and lapped over the corresponding portion of the other member after the manner of a pair of shears, the blocks 6 of each member being offset so that they fit against opposite sides of the meeting ends of the rails. These members are applied to the meeting ends of the rails and swung or closed to bring the fish-plates or blocks against the sides of the rails, where they are held by spikes 8 in the ties 9, the connecting parts 7 forming a bridge under the joint of the rails, so as to support the rail ends.

One of the features forming the present invention consists of lugs 10, formed on the inside of the plates 6 and so located that the lug of one plate will project into one of the ordinary bolt-holes of a rail and the other lug

will project into another of said holes. When the rail-joint is applied and closed upon the meeting ends of the rails, these lugs enter the said bolt-holes and assist in holding the parts together. They prevent any endwise or longitudinal separation of the rails and form stays preventing creeping of the rails.

Another feature of the present invention is the provision of square lugs 11, which project inwardly from the base of the plates 6 in proper position to enter notches 12, made in the base of rails. There is one of these lugs on each plate 6, and they assist in the holding effect referred to above.

A further feature of the present invention is the provision of a spacing plate or piece 13, which is of proper width to fit snugly between the adjacent ends of the pieces 6 when said pieces are closed to lock the joint. There is one of these pieces 13 on each side. They are shaped to fit or rest upon the base of the rail and against the web thereof and are held in place by a single bolt 14, extending therethrough. These plates 13 serve to support and confine the meeting ends of the rails. They also serve to prevent spread or opening of the main pieces 6, and form a substantially continuous fish-plate extending across the joint. In order to open the joint, as shown in Fig. 2, it is necessary that the members 6 be swung outwardly, and obviously this is impossible so long as the plate 13 remains in place. The plate therefore assists the spikes 8 in holding the joint closed or locked.

The particular shape of the fish-plates or members 6 is immaterial, and instead of having the straight inner face, as shown, which contacts against the web of the rail they may be slightly concave or dished, similar to what is known as the "standard spliced bar."

We claim—

1. The combination with rail ends having recesses therein, of two joint members each of which comprises plates having connections which are crossed under the rail ends, to bring the plates on opposite sides of the rails, and said plates also having projections which engage in said recesses.

2. The combination with two abutting rail ends having holes in the webs thereof, of two rail-joint members connecting said ends, each member having a plate on one side of one rail end and another plate on the opposite side of the other rail end, said plates having crossed connections extending under the

rail ends and also having lugs which project into said holes.

3. The combination with rail ends having notches in the edges of the base thereof, of plates on opposite sides of the ends having crossed connections extending under said ends, and lugs which project into said notches.

4. A rail-joint comprising two members which are crossed under the rail, each member having plates on opposite sides of the rail, and spacing-plates secured to the rail between said plates.

5. A rail-joint comprising two members

which are crossed under the rail, each member having plates which fit against the rail-web on opposite sides thereof, and spacing-plates which are secured to the rail between the adjacent ends of the said plates on each side thereof.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

GEORGE H. MARSHALL.
CHARLES L. DUNN.

Witnesses:

THEODORE H. TOWNSEND,
CLARK A. PUTT.