

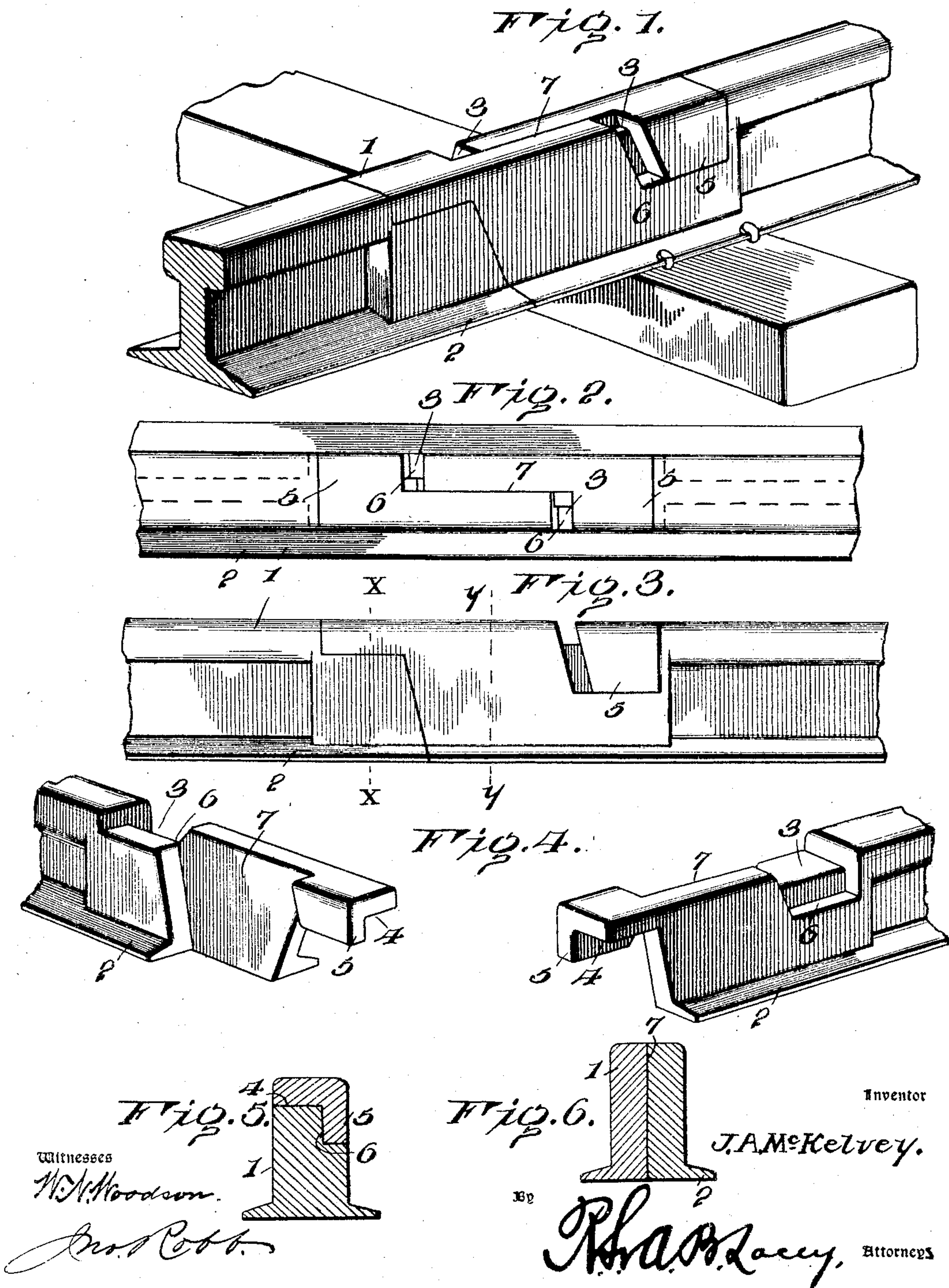
No. 779,491.

PATENTED JAN. 10, 1905.

J. A. McKELVEY.

RAIL JOINT.

APPLICATION FILED JULY 8, 1904.



UNITED STATES PATENT OFFICE.

JOHN A. McKELVEY, OF LILLIAN, TENNESSEE.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 779,491, dated January 10, 1905.

Application filed July 8, 1904. Serial No. 215,770.

To all whom it may concern:

Be it known that I, JOHN A. McKELVEY, a citizen of the United States, residing at Lillian, in the county of Monroe and State of Tennessee, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention embodies a peculiar form of rail or rails, and has for the object thereof to increase the general rigidity and firmness of the adjacent rails at the meeting ends thereof.

The invention involves a special construction of the rail ends, whereby the same are adapted to be interlocked with each other in such a manner as to obviate the necessity of use of transverse bolts or similar fastenings such as are now employed, and the form of the rail ends is such as to reinforce the same against vertical and lateral stress, expansive and contractive movements, however, being admitted of.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a rail-joint embodying the invention. Fig. 2 is a plan view. Fig. 3 is a side elevation. Fig. 4 is a perspective view bringing out more clearly the formation of each rail end. Fig. 5 is a vertical sectional view on the line X X of Fig. 3. Fig. 6 is a vertical sectional view on the line Y Y of Fig. 3.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The rails 1 may be of an outline in sectional view similar to those at present in use. However, it is desirable that the body of the rail be formed heavier in order to strengthen the ends thereof and because of the peculiar formation of such ends. Longitudinal flanges

2 at the lower portions of the rails 1 may be provided, so that the said rails may be firmly spiked to the cross-ties of the road-bed. The ends of each rail are of similar formation, and one only will be described. Adjacent the end of the rail a recess 3 is provided, and this recess is formed by cutting away the upper side of the head portion of the rail, as clearly shown in Fig. 4. The extremity of the rail is cut away below the head thereof, the cut-away portion being indicated by the numeral 4. Projected downwardly from the extremity of the rail is an extension or flange 5, longitudinally disposed, and this extension is received by a depression 6 of an adjacent rail end, said depression being formed in the side of the rail and extending downwardly from the recess 3 therein. The recess 3 of one rail receives the cut-away extremity of the opposite rail, said extremity consisting of the ball or head portion of the rail only and resting flush when in the recess 3 above mentioned. In order that the rails may be compact and approximately in line at the end thereof, the sides of the rail are cut away, as at 7, and the cut-away portion 7 extends between the recess 3 and the cut-away portion 4 at the extremity of said rail. The sides of the rail ends which are cut away, as shown at 7, rest snug against each other when the ends of the corresponding rails rest in the recesses 3 aforesaid. The recesses 3 are somewhat longer than the extremity of the rail, which is cut away, as at 4, in order to admit of a slight longitudinal movement of the rails for purposes of contraction and expansion, this provision being necessary for reasons which are obvious to those versed in the art to which my invention relates. The rails are limited in their longitudinal movement relative to each other by extension of the end of one rail in the recess 3 of the other, and such movement is also limited by the provision of the flange or extension 5, which is also received in a depression 6 above mentioned. The flange 5 not only coöperates as above set forth, but prevents any lateral play or movement of the rail ends and reinforces the rails against lateral stress.

The rail ends are interlocked by inclining

the same and moving the flanges or extensions 5 downwardly into proper position in the depressions 6. The above having been done the rails are properly spiked to the cross-ties.

Having thus described the invention, what is claimed as new is—

1. In a rail-joint, the combination of rails having the upper side of the head portions thereof recessed near the ends, the portions of each of the rails below the head portion at the extremity being cut away, the head at the extremity of one rail being received by the recessed portion of the opposite rail.

2. In a rail-joint, the combination of rails having the upper side of the head portions thereof recessed near the ends, the portions of each of the rails below the head portion at the extremity being cut away, the head at the extremity of one rail being received by the recessed portion of the opposite rail, and an extension projected from the extremity of each rail and bearing against the side of the other rail.

3. In a rail-joint, the combination of rails having the upper side of the head portions thereof recessed near the ends, the portions of each of the rails below the head portion at the extremity being cut away, the head at the

extremity of one rail being received by the recessed portion of the opposite rail, the rails being provided with depressions in the sides thereof which extend downwardly from the recessed portions aforesaid, and an extension projected downwardly from the extremity of each rail and received by the depression of the other rail.

4. In a rail-joint, the combination of rails provided with recesses in the heads thereof at points near the ends, the extremities of said rails below the head portions being cut away, the head portion of one rail at the extremity being received by the recess of the other rail, each rail being provided with a depression extending downwardly from the recess above mentioned, the side of each rail being cut away at a point between the recess and the cut-away portion of the extremity thereof, and a flange projected downwardly from the cut-away head at the end of each rail and adapted to be received by the depression in the end portion of the other rail.

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

JOHN A. McKELVEY. [L. s.]

Witnesses:

DAN. RASAR,
J. F. BIRENS.