

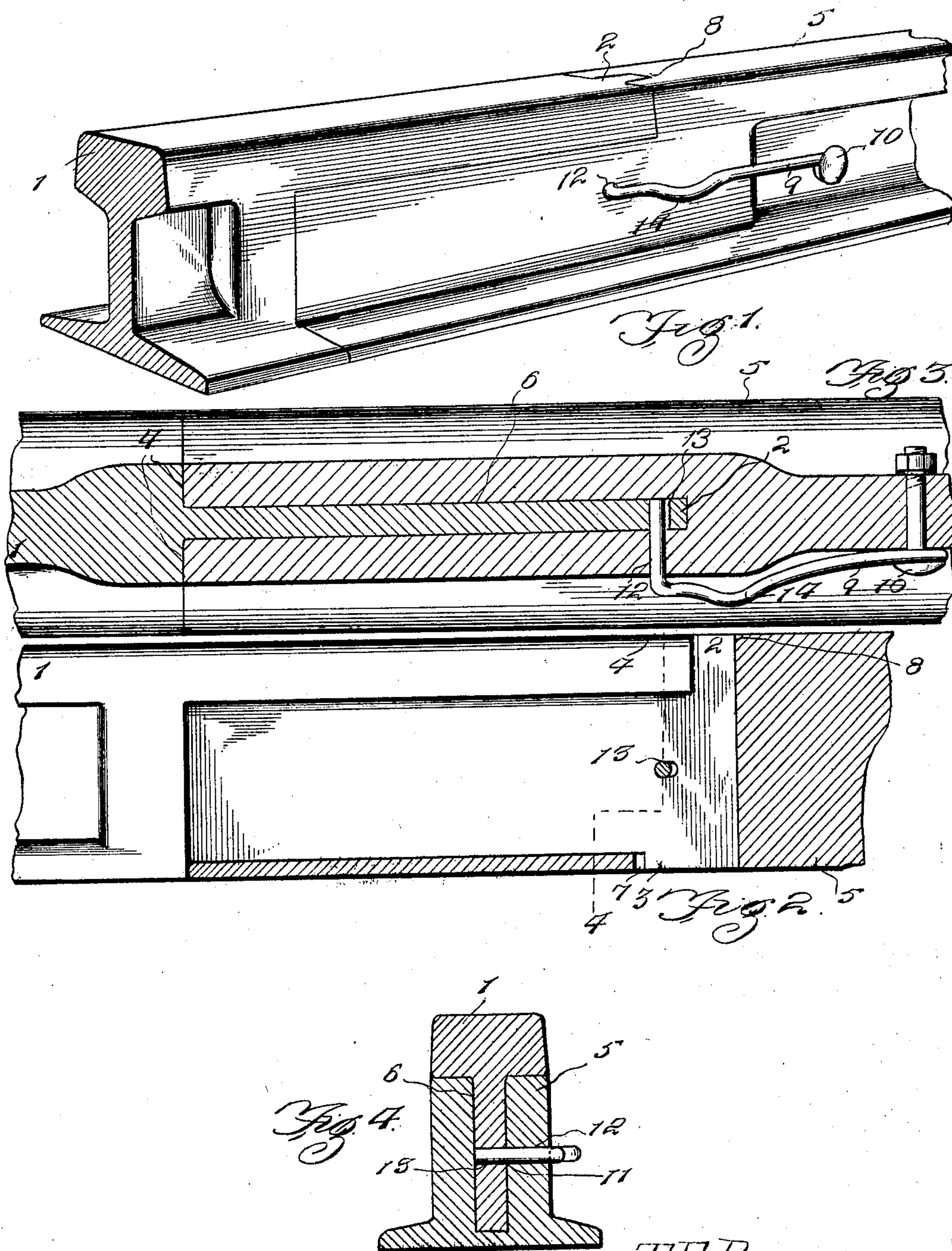
No. 683,018.

Patented Sept. 24, 1901.

T. E. BROWN,
RAIL JOINT.

(Application filed June 13, 1901.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS E. BROWN, OF STAR PRAIRIE, WISCONSIN.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 683,018, dated September 24, 1901.

Application filed June 13, 1901. Serial No. 64,447. (No model.)

To all whom it may concern:

Be it known that I, THOMAS E. BROWN, a citizen of the United States, residing at Star Prairie, in the county of St. Croix and State of Wisconsin, have invented a new and useful Rail-Joint, of which the following is a specification.

This invention relates to rail-joints, and has for its object to provide an improved joint and to dispense with nuts and similar fastenings which become loose and require constant attention.

It is furthermore designed to provide a strong and durable joint which may be conveniently assembled and also taken apart to facilitate the replacing of a rail-section.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a rail-joint embodying the present invention. Fig. 2 is a vertical longitudinal sectional view thereof. Fig. 3 is a horizontal sectional view. Fig. 4 is a transverse sectional view on the line 4-4 of Fig. 2.

Like characters of reference designate corresponding parts in all of the figures of the drawings.

Referring to the accompanying drawings, 1 designates a rail-section which has one end portion of its base removed and the remaining web portion reduced in thickness. Also the tread portion is terminally cut away, so that the outer end of the web forms a tongue 2, and the lower edge of the web is cut away with the exception of the outer end portion thereof, thereby providing a pendent terminal projection 3. At the inner end of the reduced portion of the web of the rail the same is laterally enlarged, as at 4, to form opposite laterally-projected shoulders. The adjacent end of the opposite rail-section 5 has its tread portion cut away for a dis-

tance equal to the tread portion of the reduced web portion of the former rail-section, the web of the section 5 being bifurcated to form a socket 6 for the reception of the reduced web portion, the latter resting upon the bottom of the socket with the pendent terminal projection 3 lying in an opening 7, formed through the bottom of the socket and at the inner end thereof, so as to prevent accidental longitudinal separation of the rail-sections, the opening being slightly larger than the projection, so as to permit of a limited endwise play of the rail-sections to accommodate for contraction and expansion thereof. The terminal tongue portion 2 of the rail-section 1 is snugly received within a notch or bifurcation 8, formed in the tread of the rail-section 5, as plainly shown in Fig. 1, so as to form a smooth joint of the treads, and thereby obviate noise when train-wheels are passing over the joint.

To prevent upward separation of the rail-sections, there is provided a spring fastening device 9, consisting of a spring-shank having one end secured to the web portion of the socketed rail-section, as at 10, in rear of the inner end of the socket, with its opposite free end overlapping the inner end of the socket and provided with a lateral projection 11, that is sprung into a perforation 12, formed through the adjacent side wall of the socketed portion of the web, and also projected into a slot 13, formed in the reduced web portion of the rail-section 1, thereby interlocking the rail-sections against vertical separation, and the slot 13 permitting of endwise movement of the sections to accommodate for contraction and expansion. The intermediate portion of the shank is bent outwardly, so as to form an outwardly-directed handle 14 for convenience in drawing the shank laterally outward to disengage the projection 11 from the rail-section 1. In view of the loop formed by the bent portion 14, a suitable implement may be driven inwardly between the fastening and the side of the rail to force the fastening outwardly, as may be desired.

From the foregoing description it is apparent that all nuts and similar loose fastenings are dispensed with, so that it is impossible

for the joint to work loose, and also the necessity of careful and constant inspection of the joint is obviated.

What is claimed is—

5 1. A rail-joint, comprising opposite rail-sections, one of which has its base-flange removed at one end, and provided with a pendent projection upon the web thereof, and the other section has its tread removed to accom-
10 modate the former section, and is provided with a longitudinal open-ended socket in the web portion which has the tread removed and for the reception of the web of the former section, there being an opening in the bottom
15 of the socket for the reception of the projection.

2. A rail-joint, comprising opposite rail-sections, of which one has its terminal tread portion cut away and is provided with an
20 open-ended socket in the remaining web portion, there being an opening formed through the bottom of the socket and at the inner end thereof, the other section having its base removed to correspond with the removed portion
25 of the tread of the former section, the lower edge of the exposed web portion being reduced outwardly from its inner end, with a terminal pendent projection to fit within the opening in the former section.

30 3. A rail-joint, comprising opposite rail-sections, of which one is bifurcated, and the other is fitted in the bifurcation, there being a spring-fastening carried by one section, and having a lateral projection sprung into corresponding openings in the overlapped portions
35 of the rail-sections.

4. A rail-joint, comprising opposite overlapped rail-sections, and a spring-fastening

carried by one section, and having a lateral projection sprung into corresponding open- 40
ings in the overlapped portions of the rail-sections.

5. A rail-joint, comprising opposite rail-sections, one of which has a terminal portion of its tread removed, and provided in the 45
same terminal portion of its web with a longitudinal socket which opens through the end of the rail and the upper edge of the web thereof, there being an opening formed through the bottom of the socket at the inner 50
end thereof, the other section having its terminal base flange portion removed to correspond with the removed tread portion of the former section, and its web portion formed to snugly fit the socket, there being an outer 55
terminal projection to fit the opening in the bottom of the socket, the overlapped web portions of the two rail-sections having corresponding openings, the opening of the reduced web portion being a longitudinal slot, 60
and a spring-fastening having one end secured to the web of the former rail-section, and its free end provided with a lateral projection to be sprung into the corresponding openings of the web portions, the intermediate portion 65
of the fastening having means to facilitate the removal thereof from the openings of the rail-sections.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 70
the presence of two witnesses.

THOMAS E. BROWN.

Witnesses:

J. W. HANLEY;
S. G. BOWRON.