

No. 850,772.

PATENTED APR. 16, 1907.

G. J. MILLER.
RAIL JOINT.

APPLICATION FILED MAY 26, 1906.

Fig. 1.

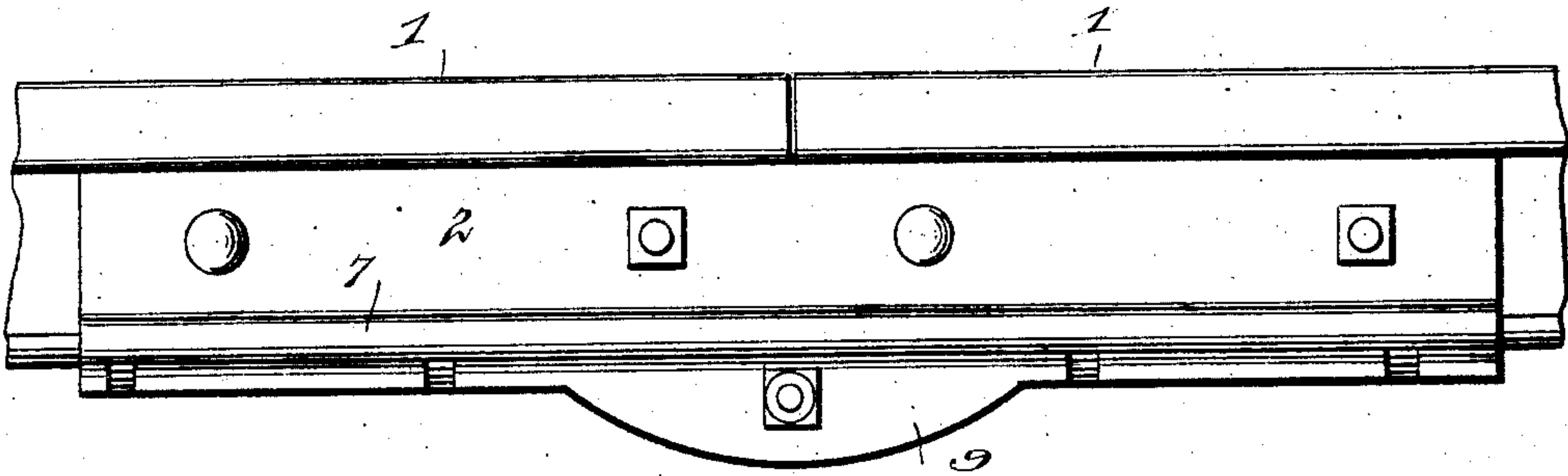


Fig. 2.

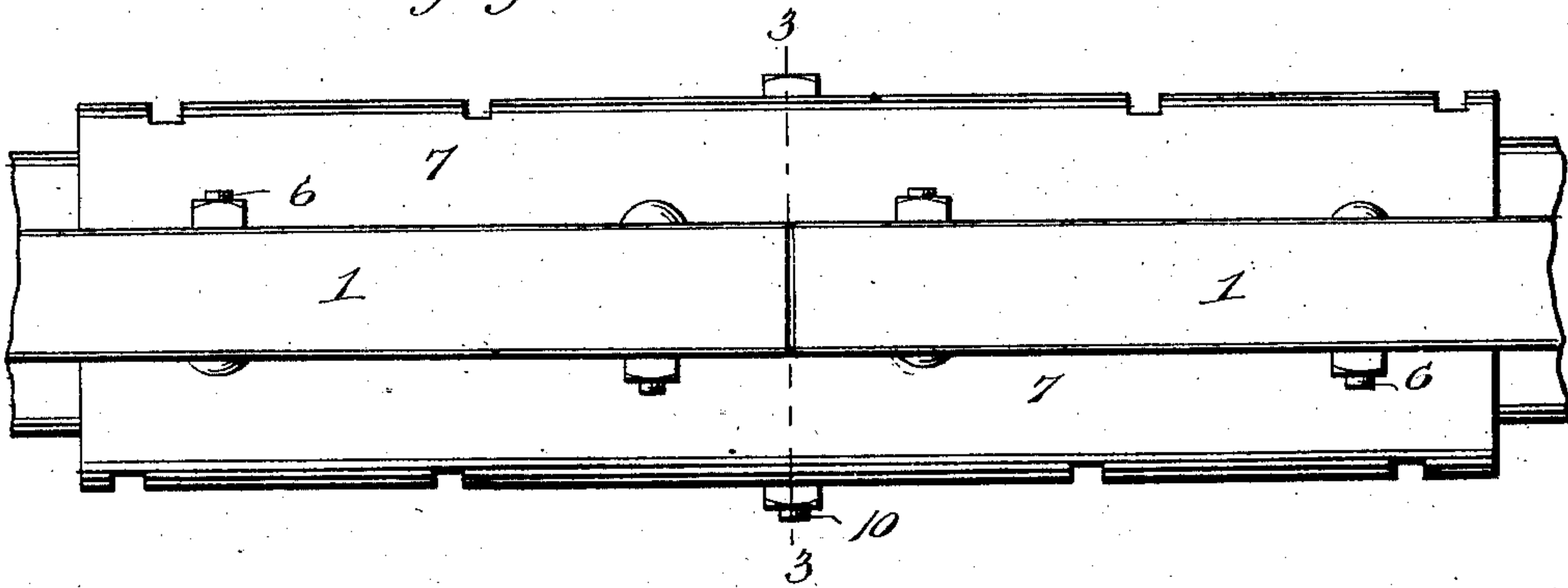
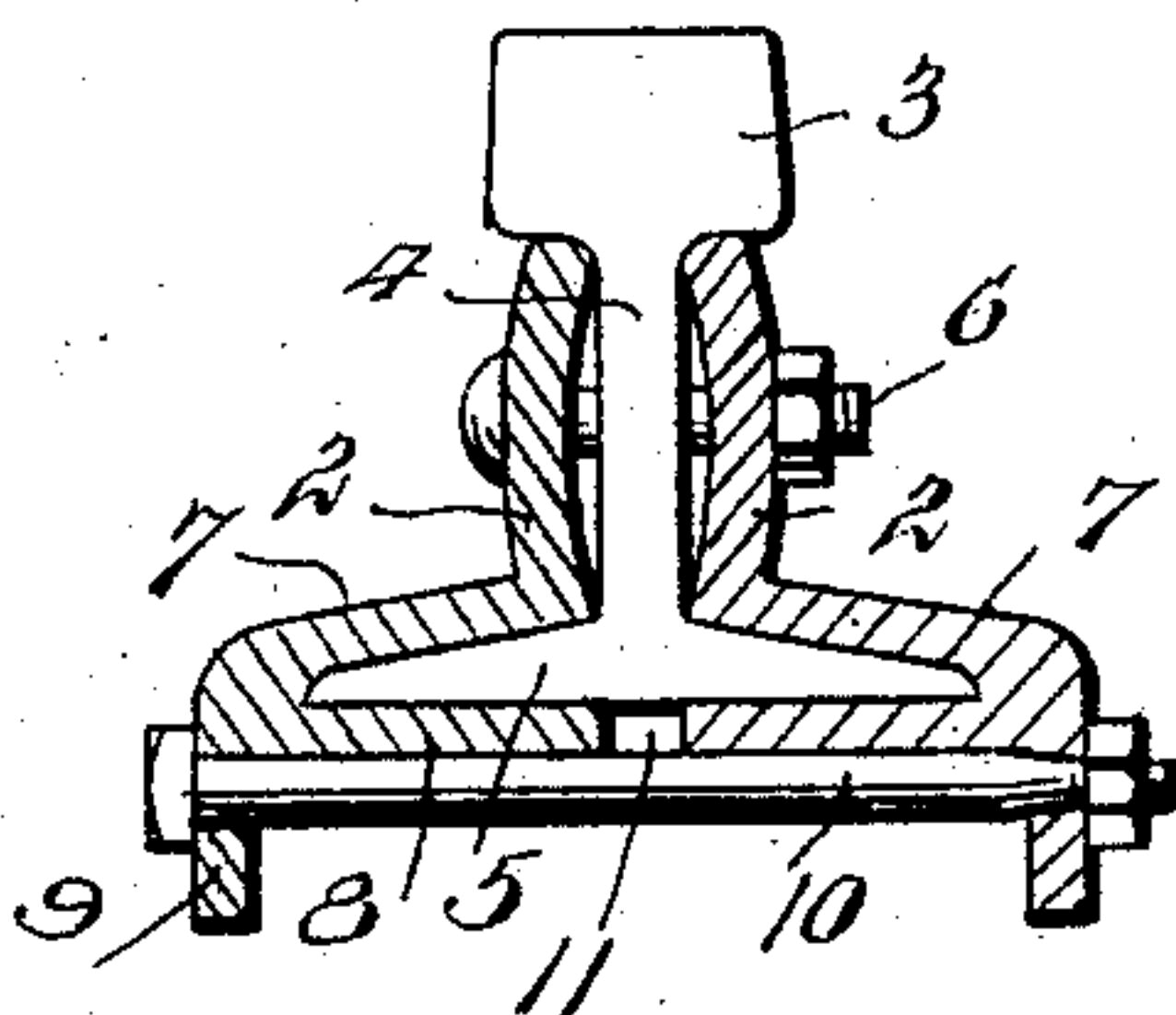


Fig. 3.



Witnesses

Frank Hough

J. S. Elmore

Inventor

G. J. Miller

By

Victor J. Evans.

Attorney

UNITED STATES PATENT OFFICE.

GEORGE J. MILLER, OF DOON, IOWA.

RAIL-JOINT.

No. 850,772.

Specification of Letters Patent.

Patented April 16, 1907.

Application filed May 26, 1906. Serial No. 318,889.

To all whom it may concern:

Be it known that I, GEORGE J. MILLER, a citizen of the United States, residing at Doon, in the county of Lyon and State of Iowa, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail-joints, being especially directed to the improved form of splice-bar for connecting the meeting ends of the rail-sections, and has for its objects to produce a comparatively simple device of this character which may be inexpensively installed for use, one whereby the rail-sections will be firmly and securely united and held against relative vertical movement, thus to obviate pounding of the rail ends, and one whereby the rail-sections will be effectually held against displacement in the event of the transverse connecting-bolts breaking or otherwise becoming ineffective.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of a portion of a rail-joint, showing the improved splice-bar applied for use. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical transverse section taken on the line 3 3 of Fig. 2.

Referring to the drawings, 1 1 designate the rail-sections assembled, as usual, in end-wise relation and having their meeting ends connected by means of splicing members or bars 2, applied, respectively, on opposite sides of the rail, which is of usual form to present a head portion or tread 3, web 4, and a horizontal base portion or flange 5, there being applied through the web 4 and splicing-bars 2 horizontal connecting-bolts 6, preferably arranged as seen in Figs. 1 and 2.

The plates 2, which form the subject-matter of the present invention, are provided each upon its lower edge with an outwardly-extending substantially horizontal portion or flange 7, adapted to overlies the adjacent portion of the rail-base 5, the flange 7 being in turn provided with an integral inwardly-projecting horizontal base-flange 8, which lies beneath the rail-base, while formed on each of the splicing-bars 2 at a point adjacent its longitudinal center, is a vertically-depending side piece or ear 9, perforated to receive a

horizontal tie-bolt 10, which extends transversely of the rail at a point centrally beneath the meeting ends of the rail-sections.

The plates 2, which are of concavo-convex form in cross-section, as seen more clearly in Fig. 3, bear at their upper edges beneath the rail-head 3 and have their inner faces slightly spaced on a curved line from the web 4, thereby imparting to the plates a suitable amount of elasticity or springiness for frictionally holding the nuts on the bolt 6, while the flanges 7 8 conjointly form recesses in which the base 5 fits, it being noted that the inner edges of the flanges 8 are slightly spaced relatively, as at 11, whereby the members may be drawn together for tightly clamping the rail.

The bolt 10, which is provided at one end with a head 12 and at its other end with a reduced threaded extension 13, adapted to receive a nut 14, is conically tapered in rear of said extension, as at 15, to fit the correspondingly-tapered hole in the adjacent gear and form a stop for limiting the movement of the ears toward each other, thus to prevent movement of the lower ends of the plates to an extent sufficient for subjecting the bolts 6 to undue strain.

In practice the rail-sections are assembled as usual and united by means of the plates 2 and bolts 6, the plates being finally connected by means of the side bolt 10, which, as before explained, extends transversely beneath the rail in line with the meeting ends of the rail-sections. It will be observed that in the use of my improved splice-bar the sections will be securely held against relative vertical movement and that in the event of the bolts 6 breaking or the nuts escaping therefrom the plates will serve to effectually hold the rail-sections in proper position and against accidental displacement. Furthermore, the plates 2 will, owing to their transverse curvature, act through spring-pressure on the nuts for locking them against accidental escape from the bolts, and the bolt 10 will tie the splicing members together to properly hold them in place on the rail in the event of the bolts 6 becoming ineffective. It will be observed that owing to the arrangement of the tie-bolt 10 centrally beneath the meeting ends of the rail-sections said sections will be firmly supported at the joint and, further, that the splicing members will be held in ac-

tive engaging position by the bolt even though the nuts on the transverse bolts 6 should become loosened.

Having thus described my invention, what I claim is—

In a rail-joint, a pair of rail-sections assembled in endwise relation and formed to present a head, a web and a base-flange, splicing members applied to opposite sides of said rail and comprising an outwardly - extending flange arranged to overlie the rail-base and an inwardly-extended flange formed on the first-named flange to lie beneath said base, connecting members extended transversely through the splicing members and rail-web, a pair of opposed depending perforated ears formed respectively on and at the outer edges

of the splicing members, the opening in one of said ears being conically tapered, a transversely-extending tie-bolt centered beneath the meeting ends of the rail-sections and engaged with the ears, said bolt having a head at one end thereof and a reduced threaded extension at its other end and being conically tapered in rear of said extension to fit the tapered opening in the adjacent ear, and a tensioning-nut applied to the threaded extension of the bolt.

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

GEORGE J. MILLER.

Witnesses:

C. R. McDOWELL,
W. C. BENTLEY.