No. 778,716. PATENTED DEC. 27, 1904.

D. P. SPRINGER.

RAIL JOINT.

APPLICATION FILED MAY 24, 1904.

Fig. 1.

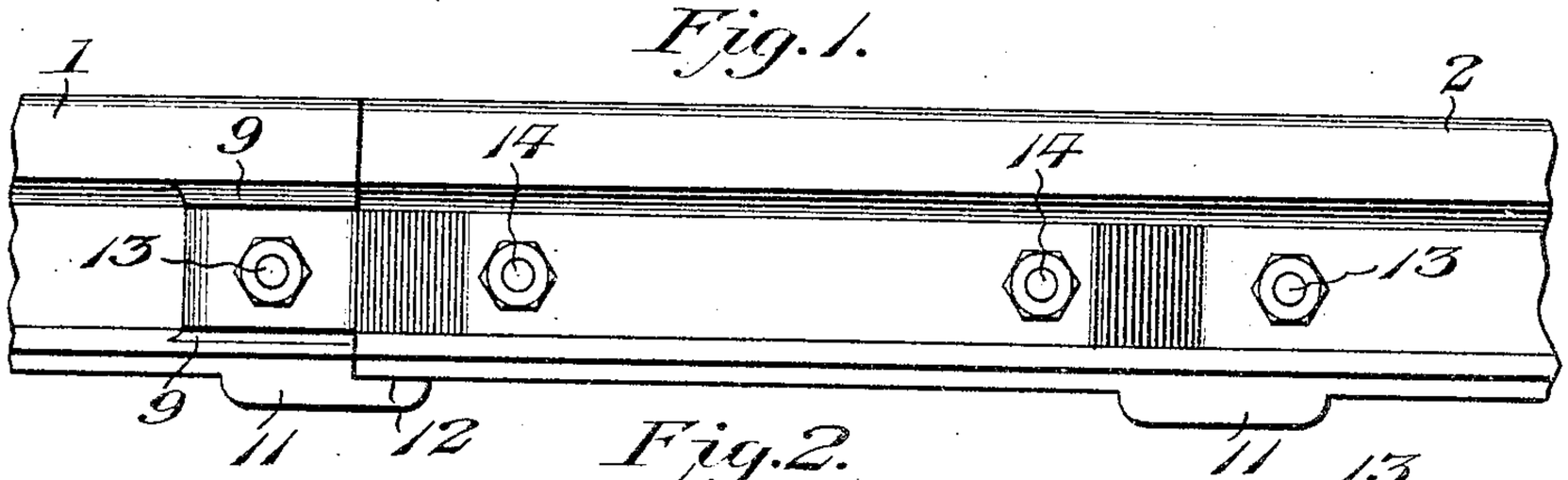


Fig. 2.

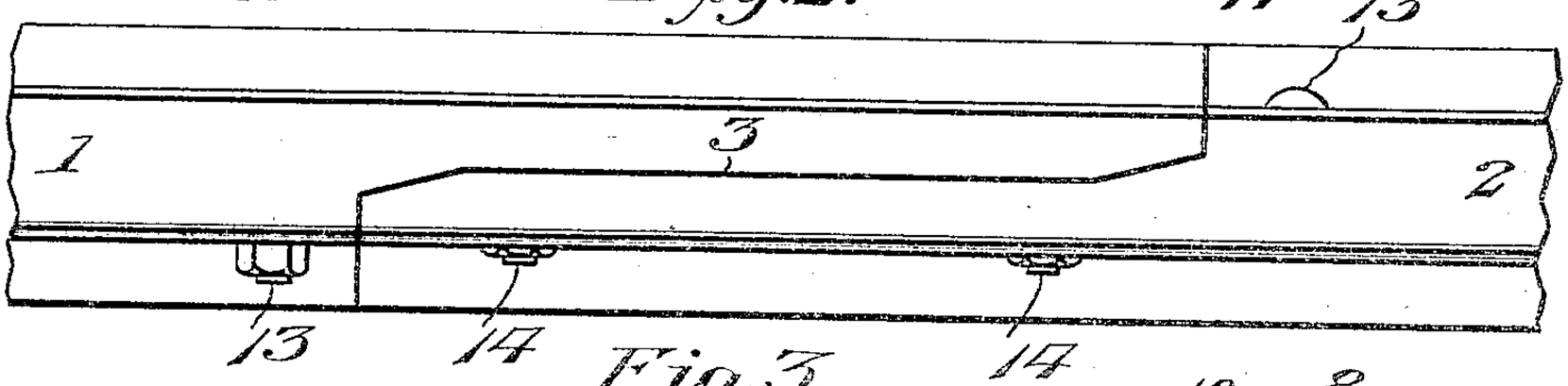


Fig. 3.

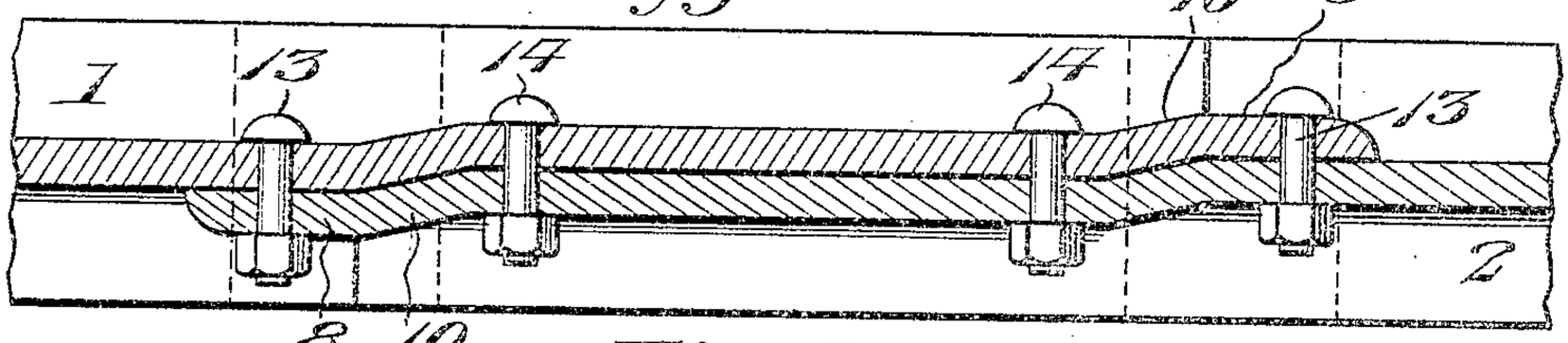


Fig. 4.

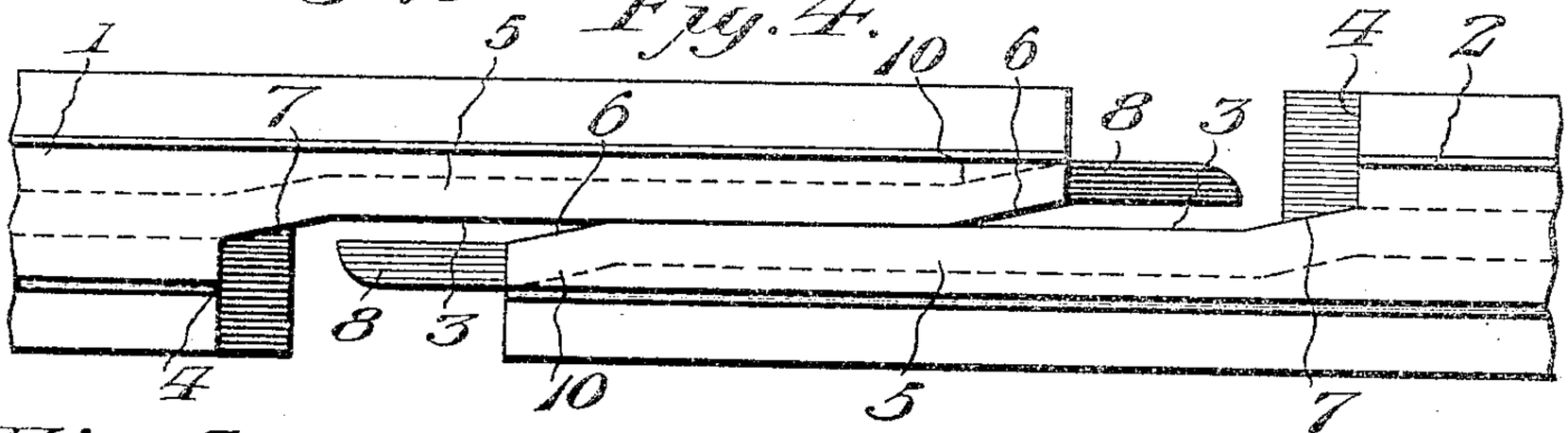
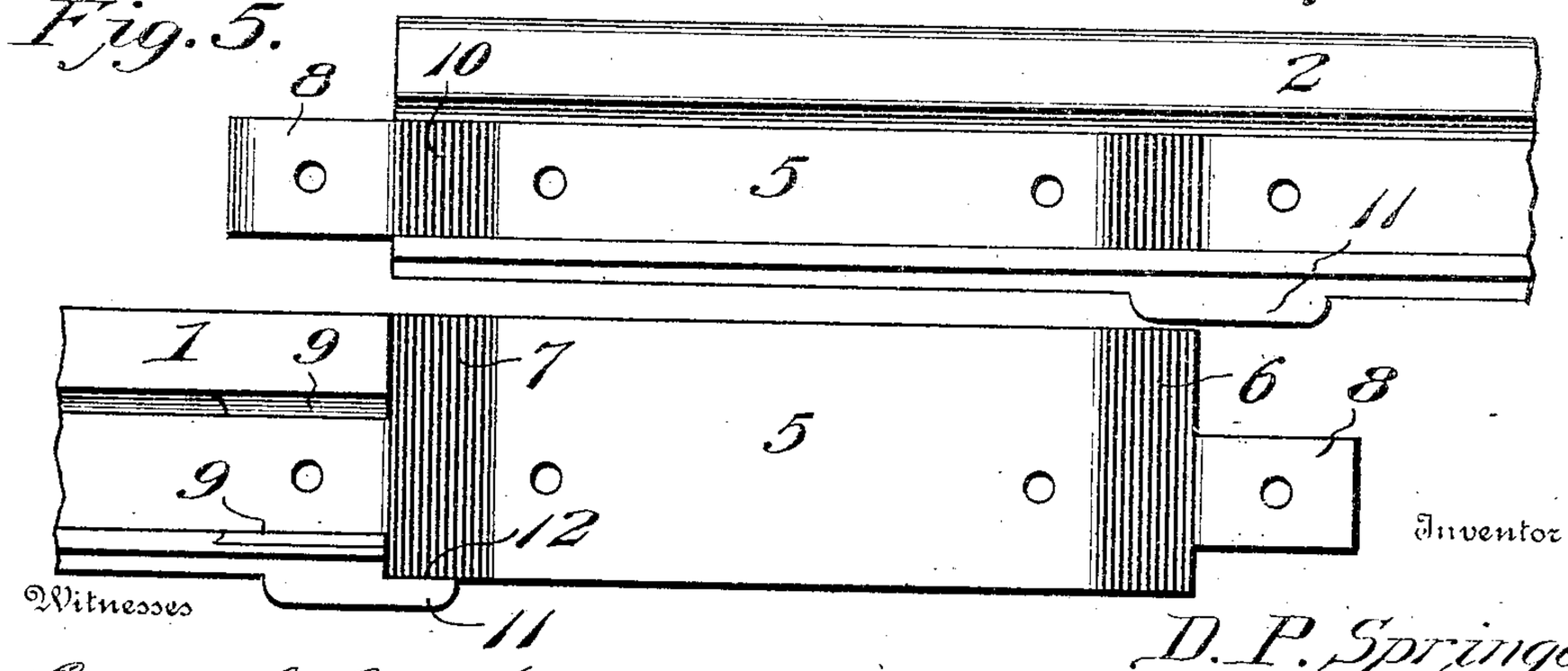


Fig. 5.



Witnesses

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No. 778,716. Patented December 27, 1904.

UNITED STATES PATENT OFFICE.

DELBERT P. SPRINGER, OF WAVERLY, NEW YORK.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 778,716, dated December 27, 1904.

Application filed May 24, 1904. Serial No. 209,497.

To all whom it may concern:

Be it known that I, DELBERT P. SPRINGER, a citizen of the United States, residing at Waverly, in the county of Tioga and State of New York, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail-joints; and the primary object of the same is to provide a joint of this class which will allow for contraction and expansion and wherein the overlapping or meeting ends of rails will be maintained in fixed relative position independently of rail-chairs or other devices usually employed for such purpose.

A further object of the invention is to have a rail-joint of such construction that wear and tear on the rolling-stock, as well as vibration, will be reduced to a minimum, and lateral spreading, as well as sagging, of the contiguous rail ends will be avoided and derailments and other accidents thereby averted.

With these and other objects and advantages in view the invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter set forth.

In the drawings, Figure 1 is a side elevation of a joint embodying the features of the invention. Fig. 2 is a top plan view of the same. Fig. 3 is a horizontal section through the joint. Fig. 4 is a top plan view of the rail ends shown separated. Fig. 5 shows elevations of the rail ends separated and respectively looking toward the outer and inner portions of said ends.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numerals 1 and 2 designate rail-sections having the opposing ends longitudinally slotted, as at 3, each slot terminating at a transversely-extending shoulder 4, opening outwardly through one side of the rail and forming each rail end with an interlocking projection 5, the opposite or coöperating projections being of the same contour and extent and when assembled forming an elongated joint at the meeting ends of the rails which will have very little of the transverse portions thereof exposed through the railheads, and thereby materially reduce the vibration and wear and tear of the wheels of the rolling-stock passing thereover. The inner corners of the projections 5 are cut away at outward bevels 6 to coincide with corresponding angular wall-sections 7 of the slots 3, the purpose of this construction being for convenience in assembling the rail ends and also to reduce the necessity of transversely extending any part of the cut as much as possible. Each projection 5 has a terminal tongue 8 extending therefrom between the head and flange portions and adapted to pass between and be snugly held within horizontally-straight resisting-surfaces 9 on the rail-sections adjacent to the transverse end walls 4 of the slots 3. The tongues 8 extend from outwardly-deflected terminals 10 of the rail-webs so as to accurately aline with and pass between the resisting surfaces or enlargements 9 when the projections 5 have their inner opposing walls in contact with each other, as clearly shown by Fig. 4.

Immediately below the transversely-extending shoulders 4 of the slots 3 the opposing extremities of the rails or rail-sections have depending chair enlargements 11, integrally formed therewith and extending entirely thereacross, the said enlargements being projected beyond the shoulders and reduced, as at 12, to form seats, which receive the respective terminals of the projections 5 and remove all possibility of the rail ends sagging or being depressed at such points. It will be understood that the tongues 8 will obstruct lateral movement of the rails in opposite directions, and after the rail ends have been assembled nutted bolts 13 and 14 are respectively applied through the tongues and adjacent portions of the rails and the parts of the projections 5 between the said tongues.

From the foregoing it will be seen that a rail-joint is produced wherein the parts may be quickly assembled and detached and when connected sagging of the rail ends, as well as lateral movement thereof, will be prevented and accidents averted.

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

1. A rail-joint comprising rail ends each hav-

ing terminal projections with tongues extending therefrom to bear against the opposite sides of the rails in advance of said projections, each tongue extending from an outwardly-deflected portion of the rail-web, and means for connecting the assembled rail ends.

2. A rail-joint consisting of rail ends longitudinally slotted to form projections terminating in tongues, the slots having inner short transverse shoulders and the sides of the opposite rails adjacent to the latter provided with horizontal resisting enlargements to receive the tongues between them, and means for securing the tongues and projections.

3. A rail-joint consisting of rail ends longitudinally slotted to form projections terminating in tongues, the slots having inner short transverse shoulders and the sides of the opposite rails adjacent to the latter provided with horizontal resisting enlargements to receive the tongues between them, each rail adjacent to the transverse shoulder of the slot thereof having a chair enlargement projected beyond said shoulder and reduced to form a seat, the seats receiving the terminals of the projections, and means for fastening the tongues and projections to each other.

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

DELBERT P. SPRINGER.

Witnesses:
EUGENE H. SHIPMAN,
JOHN S. MOORE.