

No. 775,852.

PATENTED NOV. 22, 1904.

W. E. PALMER.
RAIL JOINT.

APPLICATION FILED FEB. 20, 1904.

NO MODEL.

Fig. 1.

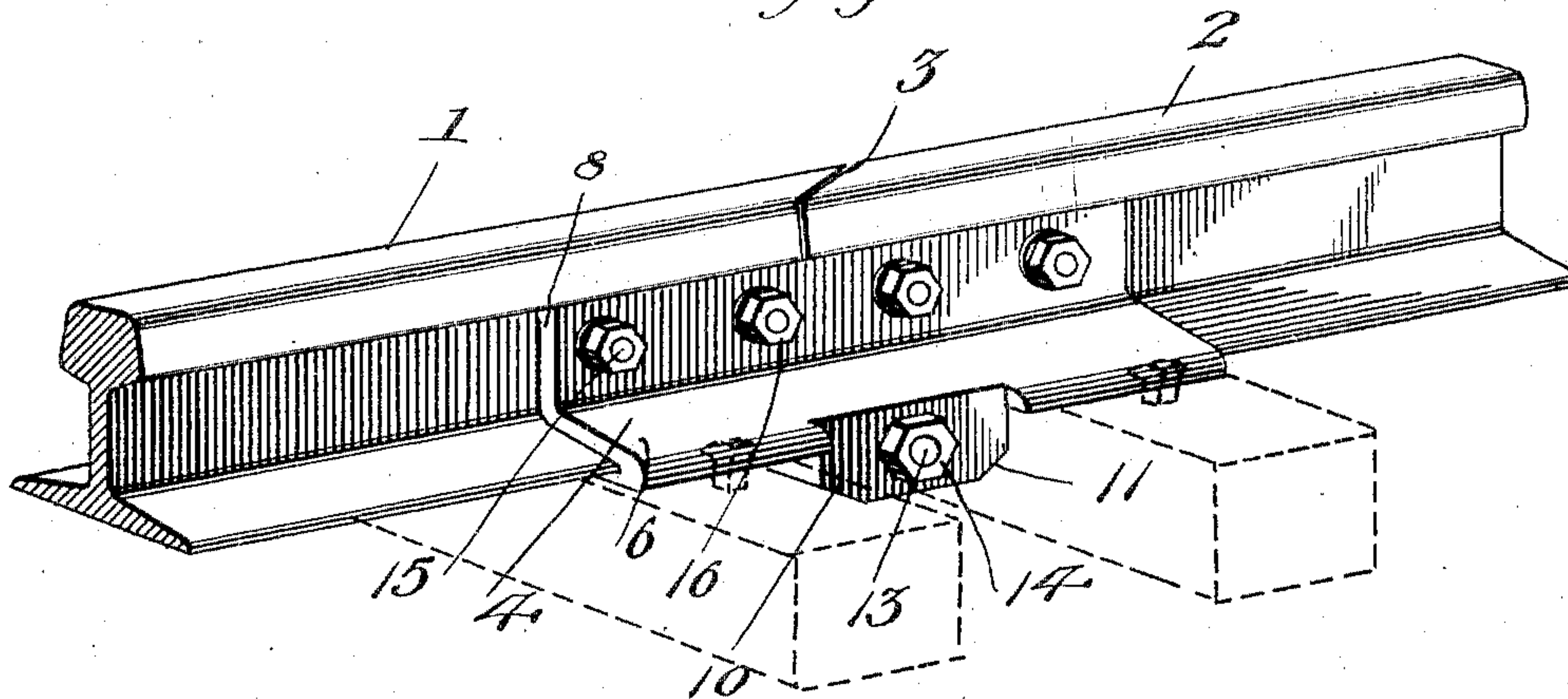


Fig. 2.

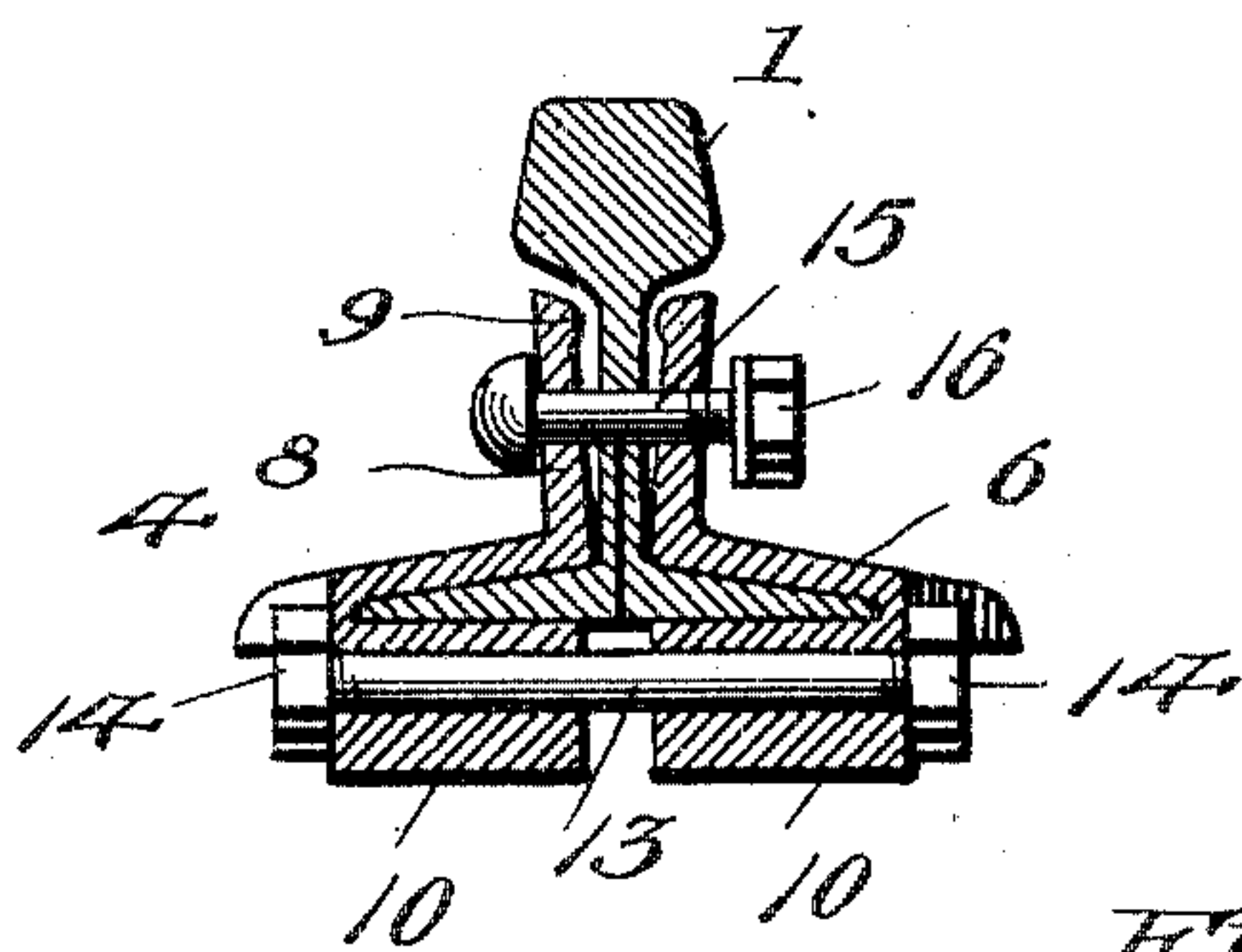


Fig. 3.

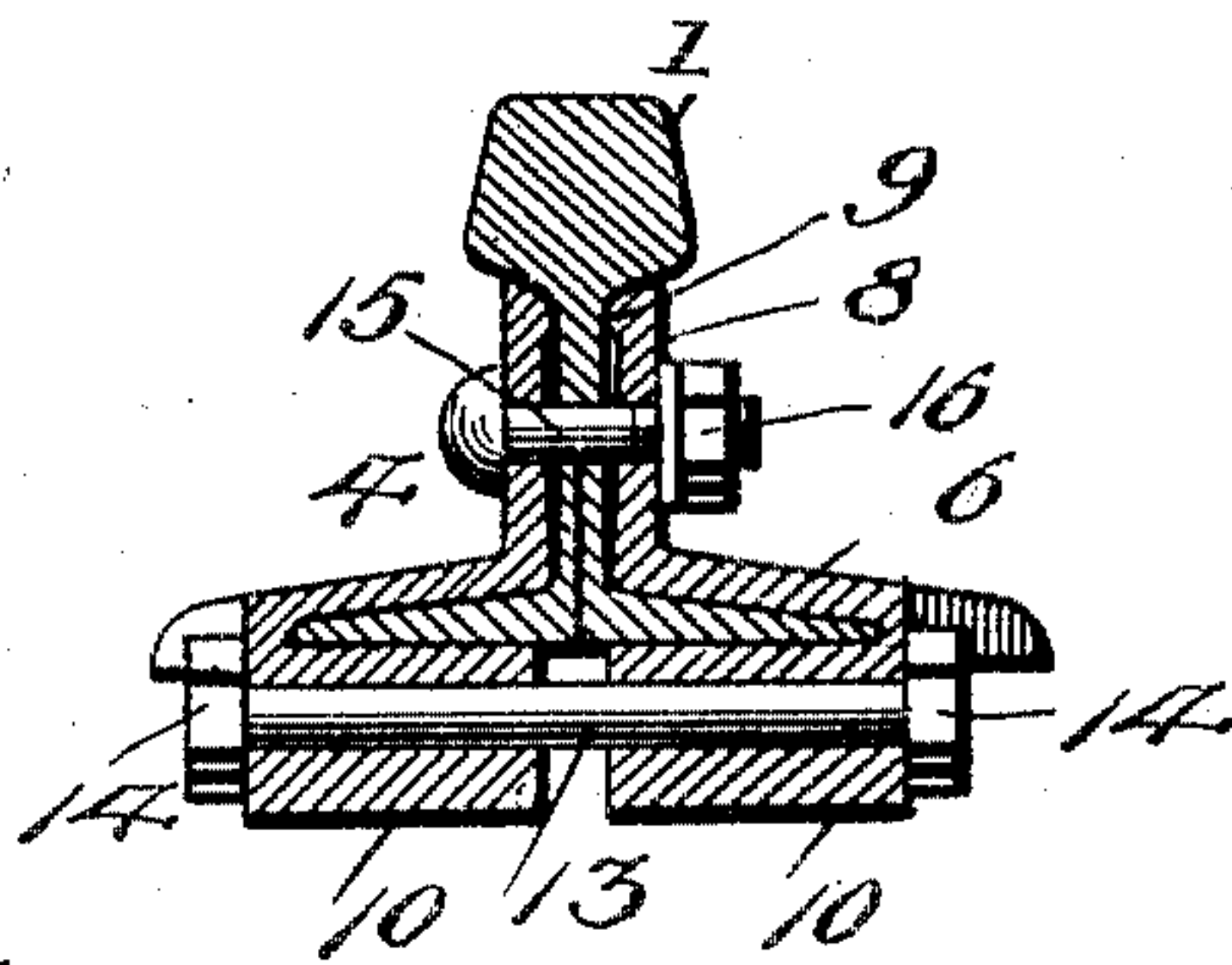
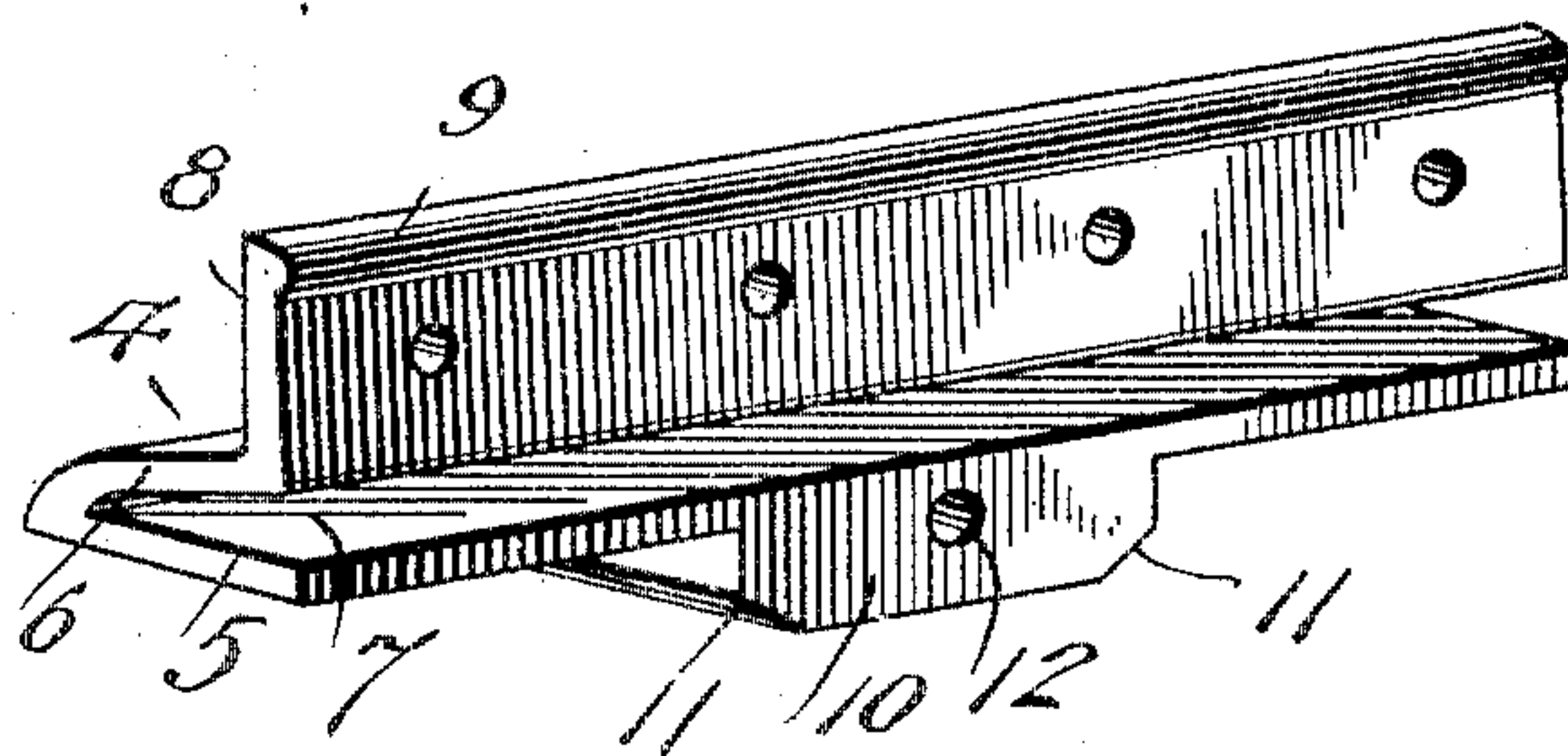


Fig. 4.



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RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 775,852, dated November 22, 1904.

Application filed February 20, 1904. Serial No. 194,580. (No model.)

To all whom it may concern.

Be it known that I, WHEELER E. PALMER, a citizen of the United States, residing at Rochester, in the county of Monroe 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 or splice means for railroad-rails; and the primary object of the same is to provide a joint having structural features which will overcome the defects of ordinary joints as to the noise and jar incident to car-wheels moving thereover and the loosening of the parts of the joint itself, thereby obviating damage to the rails and injury to the rolling-stock, as well as inconvenience and jar to the traveling public.

A further object of the invention is to embody in a railroad-joint a construction which will so unite the rails as to make them practically continuous and to prevent depression of the joints occurring between ties by the application to the under parts of the contiguous ends of rails of bracing means adapted to be easily disposed between the ties and readily accessible in the operations of applying the parts to the united rail ends, as well as in the disassociation of the rails.

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

In the drawings, Figure 1 is a perspective view of a rail-joint embodying the features of the invention and shown applied to contiguous rail ends. Fig. 2 is a transverse vertical section through the joints, showing the parts in full partially secured. Fig. 3 is a view similar to Fig. 2, showing the parts fully secured. Fig. 4 is a detail perspective view of one of the members of the rail-joint.

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

The numerals 1 and 2 designate rail-sections having their contiguous ends 3 beveled to avoid the jar and vibration incident to car-wheels moving over a transversely-straight

joint. The rail-joint has two splice members 4, precisely similar in construction and clearly shown in detail by Fig. 4. Each member 4 has a base-flange 5, which is horizontally straight, and above the same is a downwardly-inclined covering-flange 6, integrally rising from the outer edge of the flange 5, the space 7 between the two flanges being of such dimensions as to practically embrace one-half of the base-flanges of the rail-sections 1 and 2. Rising from the inner terminal of the flange 6 is a yielding fish or locking plate 8, which normally flares outwardly, as clearly shown by Fig. 2, the upper end of the locking or fish plate 8 having an inwardly-projecting rib 9, which extends the full length thereof. Depending from the center of the base-flange 5 is an integral brace-block or enlargement 10, with opposite inwardly-beveled corners 11 to prevent the same from becoming jammed between the contiguous edges of the ties. Extending centrally through the brace-block or enlargement 10 is an opening 12 to receive a coupling bolt or rod 13, having nuts 14 applied to the opposite ends thereof, or said rod or bolt may have a head on one end and a removable nut on the other.

In applying the members 4 they are moved sidewise toward the contiguous ends of the rail-sections until the base-flanges of the latter are fully seated in the spaces 7. The coupling rod or bolt 13 is then inserted through the aligned brace-blocks or enlargements 10 and secured. The locking or fish plates 8 will stand outwardly away from the opposite sides of the webs of the rail-sections, and through openings therein which are adapted to coincide with the usual bolt-openings in said sections securing-bolts 15 are passed and have nuts and washers 16 applied to the screw-threaded terminals thereof and gradually adjusted inward to force the yielding or resilient locking or fish plates 8 against the opposite sides of the webs of the rail-sections. When the nuts 16 have been fully applied, the spring tension of the locking or fish plates 8 will be exerted thereagainst and materially decrease the tendency of the nuts to loosen. The lock-

ing or fish plates 8 after the ribs 9 at the upper ends thereof contact with the webs of the rail-sections will be spaced apart a short distance from the web of the rail-sections, as 5 clearly shown by Fig. 3, and the nuts 16 can be still further tightened to a limited extent and increase the spring-pressure on the said nuts. Moreover, by the use of the ribs 9 the inner surfaces of the angle or locking plates 10 8 will be prevented from sticking to the opposite sides of the webs of the rail-sections, and when it is desired to separate the rail ends and the bolts 15 are loosened by adjusting the nuts outwardly thereon the locking or fish 15 plates will spring out and facilitate the withdrawal of the members of the joint after the coupling rod or bolt 13 has been detached.

The improved joint will be found exceptionally advantageous in its construction and 20 arrangement, is capable of being quickly applied, and is of a strong and durable nature.

Changes in the proportions, dimensions, and minor details may be resorted to without in the least departing from the spirit of the in- 25 vention.

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

In a rail-joint, the combination with rail-sections, of joint members applied against the opposite sides of said contiguous sections and 30 each having an upwardly-projecting resilient fish-plate rising from an upwardly-inclined covering-flange integrally formed with a base-flange, a space being provided between the base-flange and covering-flange to receive one 35 side of each of the flanges of the rail-sections, the base-flange at the center having a solid brace-block integrally formed therewith with a smooth opening extending therethrough, the brace-block having lower inwardly-beveled 40 corners, a single bolt extending through the brace-blocks of the opposing members and bolts engaging the resilient fish-plates and the wedges of the rail-sections.

In testimony whereof I affix my signature in 45 presence of two witnesses.

WHEELER E. PALMER.

Witnesses:

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