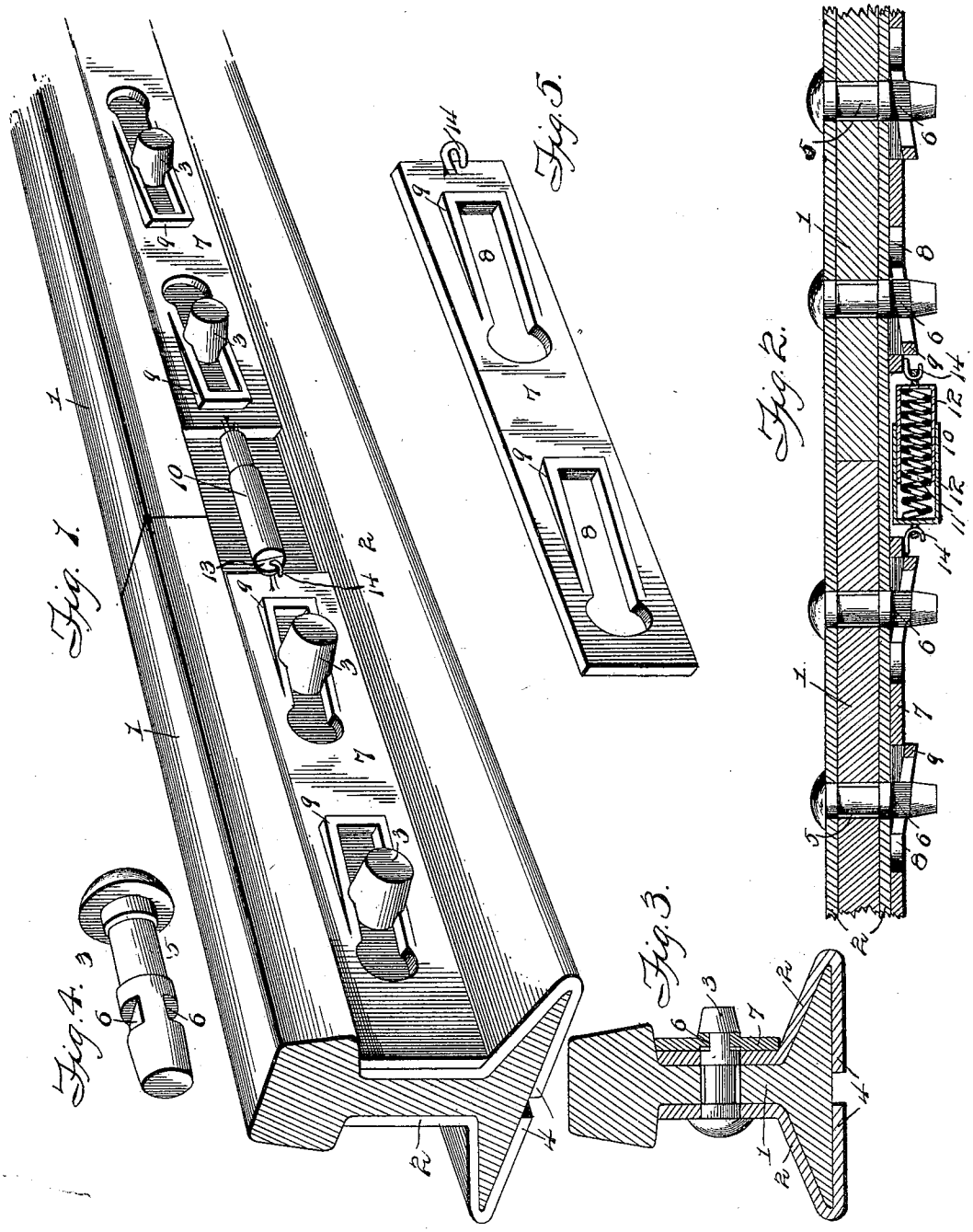
No. 623,508. Patented Apr. 25, 1899.

M. BETKA.

RAIL JOINT FASTENING.

(Application filed Jan. 19, 1899.)

(No Model.)



Witnesses

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MICHAEL BETKA, OF DAYTON, TEXAS.

RAIL-JOINT FASTENING.

SPECIFICATION forming part of Letters Patent No. 623,508, dated April 25, 1899.

Application filed January 19, 1899. Serial No. 702,682. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL BETKA, a subject of the Czar of Russia, residing at Dayton, in the county of Liberty and State of Texas, have invented a new and useful Rail-Joint Fastening, of which the following is a specification.

The invention relates to improvements in rail-joint fastenings.

The object of the present invention is to improve the construction of rail-joint fastenings and to provide a simple, inexpensive, and efficient device adapted to dispense with nuts and nut-locks and capable of locking an entire series of transverse fastening devices in engagement with the fish-plates and rails.

A further object of the invention is to provide a locking device of this character adapted to yield readily to the expansion and contraction of the rails and the vibration thereof without sustaining any injury or affecting the security of the fastening devices.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a rail-joint provided with a fastening device constructed in accordance with this invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a transverse sectional view. Fig. 4 is a detail perspective view of one of the bolts. Fig. 5 is a detail perspective view of one of the sections of the locking-plate.

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

1 1 designate a pair of rails having their meeting ends connected by fish-plates 2 and transverse bolts 3, which pass through the fish-plates and the webs of the rails, and the said fish-plates are composed of angle upper portions and horizontal flanges 4, which extend beneath the rails, as clearly illustrated in Fig. 3 of the accompanying drawings. The fish-plates firmly embrace the bottom flanges of the rails, and the latter are as strong at the joints as at any other portion. In order to permit the rails to have a limited longitudinal movement, so that they may expand and contract under the influence of heat and cold, the bolts are provided at points between their ends with recesses 5, which reduce the diameter of the bolts at that point. The bolts are provided at one side of the rails with heads, and their other ends, which project from the opposite side of the rail-joint, are provided with upper and lower notches 6 and are engaged by sections 7 of a locking-plate which extends longitudinally of the rails and fits within the recess formed by the head of the rail and the adjacent fish-plate. Each section 7 of the locking-plate is provided with keyhole-slots 8, having their enlarged portions disposed toward the inner ends of the sections and of a size to permit the passage of the ends of the bolts. The sections of the locking-plate are moved outward longitudinally to carry the narrow portions of the keyhole-slots into engagement with the notches of the bolts, which are firmly clamped by wedge-shaped flanges or ribs 9, formed integral with the sections 7 and located at opposite sides of the keyhole-slots, as clearly illustrated in Fig. 5 of the accompanying drawings.

The sections of the locking-plate are held separated and maintained in engagement with the bolts by a tension device 10, consisting of a coiled spring 11 and a pair of telescoping tubular sections 12 of a cylindrical casing, which forms a housing for the coiled spring to support the same and protect it from the weather and at the same time to prevent it from becoming clogged by sand, cinders, and other accumulation. The outer ends of the tubular sections of the casing are provided with flanges 13, having perforations which are engaged by hooks 14 of the adjacent ends of the sections 7 of the clamping-plate. The hooks of the sections 7 are hooked into the perforated flanges, and the spring, which is firmly supported by the telescoping casing, is contracted or compressed as the sections 7 are applied to the bolts and is adapted to expand and hold the clamping-plate securely in engagement with the bolts.

The invention has the following advantages: The fastening device for rail-joints, while being simple and comparatively inexpensive in construction, is positive and reliable in operation and is capable of securely

locking an entire series of transverse bolts, and the tension device which holds the sections of the locking-plate in engagement with the bolts is adapted to permit the former to expand and contract and to yield to the vibration of the rails without affecting the efficacy of the rail-joint and without sustaining any injury.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. In a device of the class described, the combination with a pair of rails, and fish-plates, of bolts passing through the same, a locking-plate composed of two sections engaging the bolts, and a tension device connected with the inner ends of the sections and holding the same in their engagement with the bolts, said tension device consisting of a coiled spring and a telescoping casing forming a housing for the spring and supporting the same, substantially as described.

2. In a device of the class described, the combination with a pair of rails, and fish-plates, of bolts passing through the same, a locking-plate composed of two sections engaging the bolts and provided at their inner ends with hooks, and a tension device interposed between the sections and consisting of a coiled spring, and a telescoping casing forming a housing for the spring and provided at its ends with perforated flanges linked into the hooks of the sections of the locking-plate, substantially as described.

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

MICHAEL BETKA.

Witnesses:
W. M. BABCOCK,
ROBT. F. BAGLEY.