(No Model.)

W. M. HERVEY.

TRACK JOINT FOR RAILROADS.

No. 534,102. Patented Feb. 12, 1895.

Fig. 1

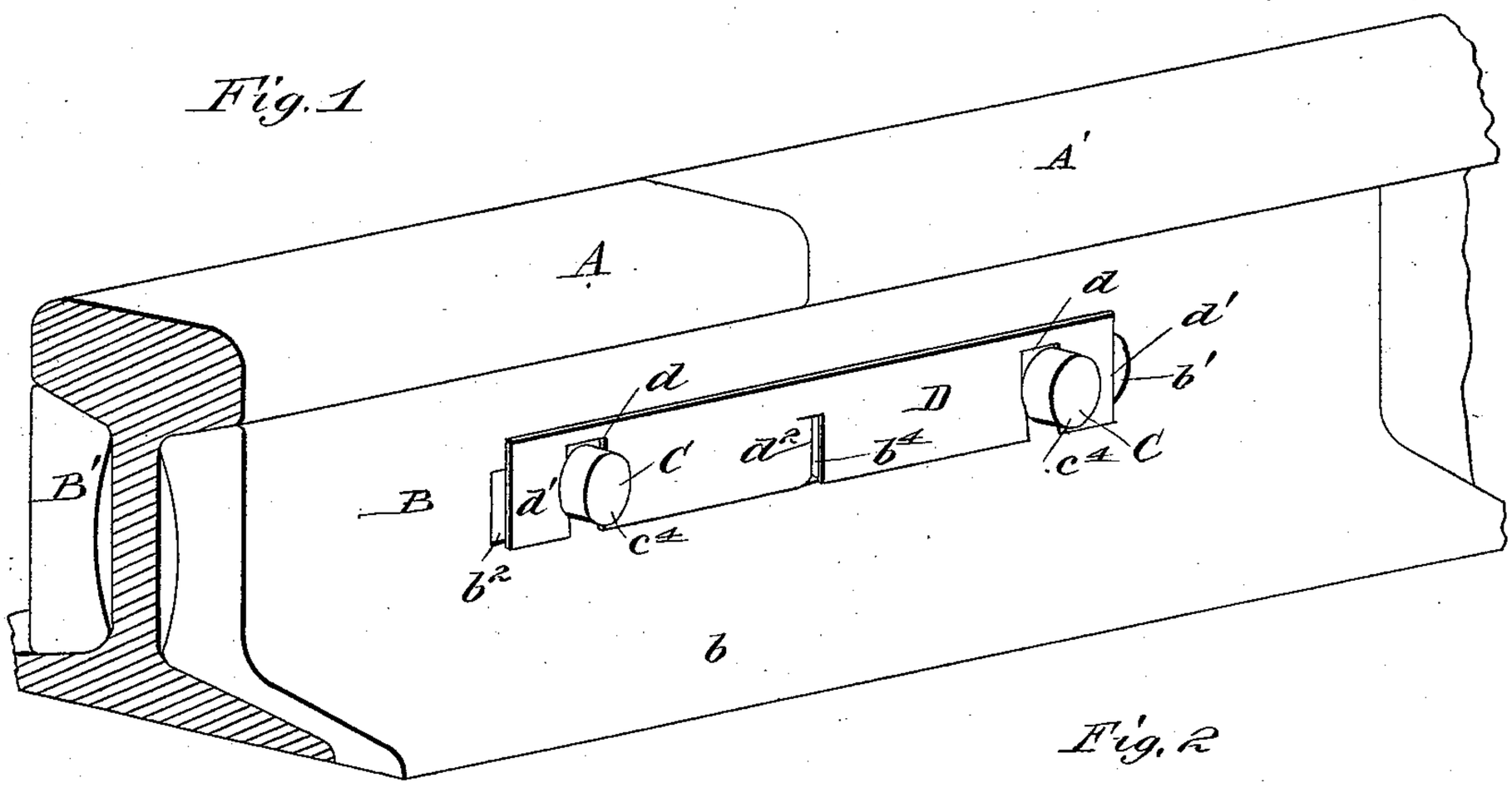


Fig. 2

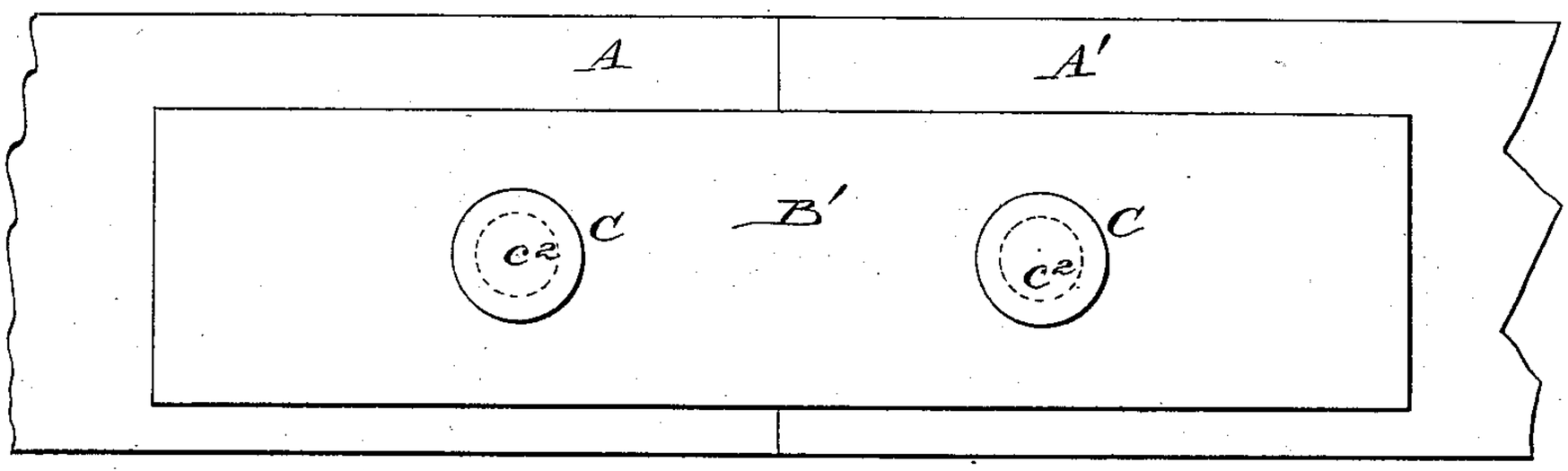


Fig. 3

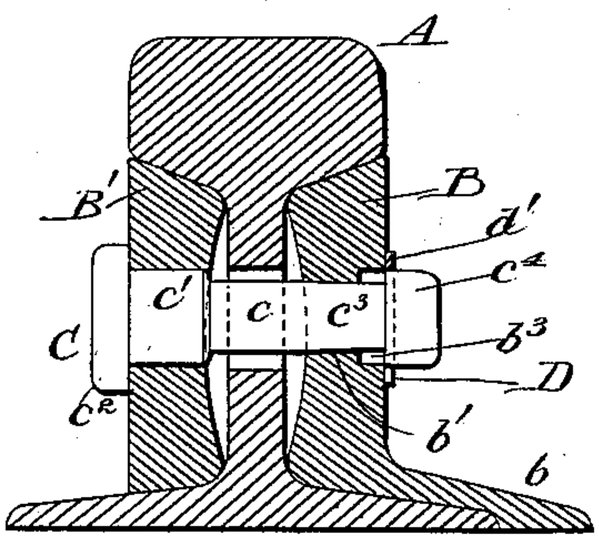


Fig. 4

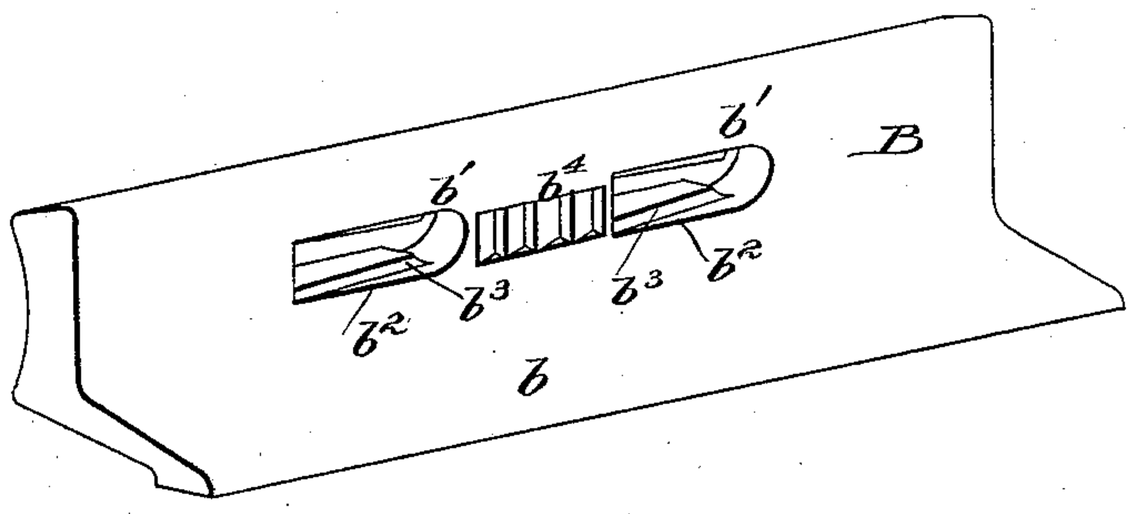
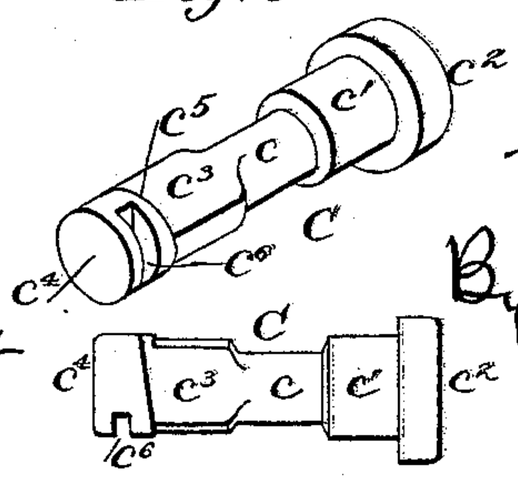


Fig. 5



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM M. HERVEY, OF WELLSBURG, WEST VIRGINIA, ASSIGNOR OF ONE-THIRD TO H. C. HERVEY, OF SAME PLACE.

TRACK-JOINT FOR RAILROADS.

SPECIFICATION forming part of Letters Patent No. 534,102, dated February 12, 1895.

Application filed June 27, 1894. Serial No. 515,855. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. HERVEY, a citizen of the United States, residing at Wellsburg, in the county of Brooke and State of West Virginia, have invented certain new and useful Improvements in Track-Joints for Railroads; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in track joints for railroads.

The invention will first be described in connection with the accompanying drawings, and then particularly pointed out in the claims.

In the drawings—Figure 1 is a perspective view of a rail joint embodying my improvements, showing the outer side. Fig. 2 is an elevation of the inner side of the same. Fig. 3 is a transverse section. Fig. 4 is a detail perspective view of the outer fish plate. Fig. 5 shows two different views of one of the pins.

Referring to the drawings, A, A′ are the rail ends on each side of which are placed the fish plates, B, B′, each concaved on the side toward the rail.

The outer fish plate B is flanged outward, as at *b* whereby it may be spiked down, and is provided with a pair of key hole slots as shown at *b′*, the edges of the plate at each side of the straight portion b^2 of the slot being beveled off to form the inclined plane surfaces b^3. The central portion of the fish plate B is provided with a ratchet or toothed portion b^4 for a purpose hereinafter described.

The inner fish plate B′ just fills the space between the head and base of the rail and is provided with two holes through which a pair of pins C are passed, these pins also passing through the rail ends, one hole in each end. The pins C have a central reduced portion *c* which passes loosely through the holes in the rail end, a shoulder portion *c′* arranged to fit snugly in the pin hole in the inner fish plate B′, an inner head c^2 which bears against the inner fish plate B′, a flattened portion c^3 which is arranged to enter the straight slotted portion b^2 of the key hole slot, and an outer head c^4 of such size as to pass freely through the holes in the inner fish plate and the rail. This head c^4 is adapted also to pass through the circular portion of the key hole slot, but will not pass through the straight slotted portion b^2, and is beveled on its inner face at c^5 to correspond to the slope of the inclined plane surfaces b^3. The outer pin head c^4 is slotted on one side at right angles to the straight faces of the flattened portion c^3, as shown at c^6 in the drawings.

In assembling the parts, the rails are laid end to end in the usual manner, sufficient space being left to permit the extension due to rise in temperature. The inner fish plate B′ is put in place with its pin holes in register with those of the rail ends. The pins are then pushed through the inner fish plate B′ and through the rail ends and through the outer fish plate B, brought with the circular portions of its key hole slots in register with the pin holes in the rail ends, the pins being forced through the said circular portions of the key hole slots in the said outer fish plate, the straight surfaces of the flattened portions c^3 being horizontal. The outer fish plate is now driven lengthwise so as to enter the said flattened portions c^3 into the straight slots, the beveled portions c^5 of the outer heads being thereby engaged by the inclined plane surfaces b^3 whereby the pins are drawn up tight. By now striking down the outer fish plate by means of its flange *b* the said plate is prevented from slipping back to release the pins. To prevent the pins from rotating in the pin holes, a strip or clamp D, preferably of band iron or similar material is employed. This clamp has a notch *d* at each end arranged to go over the outer pin head c^4 the ends, *d′*, resting in the slots c^6 in the said pin heads. The central portion of the clamp D is provided with a tongue d^2 arranged to be bent down into engagement with the ratchet b^4 to preclude all possibility of the outer fish plate B, being shifted with relation to the pins C, either while spiking down the said fish plate, or by slipping of the said outer fish plate beneath the spikes.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a rail joint, the combination with the perforated rail ends and a pair of perforated

fish plates, of a pair of pins passing through the said fish plates and rail ends and provided with slotted ends, and a clamp having notches at each end, the notches passing over the ends of the pins and the ends of the clamp entering the slots in said pins, substantially as and for the purpose described.

2. In a rail joint, the combination with the perforated rail ends and a pair of perforated fish plates, one of which is provided with a ratchet portion, of a pair of pins passing through said fish plates and rail ends and provided with slotted ends, and a clamp arranged to enter said slots and provided with a tongue for engagement with the ratchet portion, substantially as and for the purpose set forth.

3. In a rail-joint, the combination, with the perforated rail ends and a pair of fish plates, one of which is provided with perforations and the other with key-hole slots at each side of the straight portions of which slots are inclined surfaces, of a pair of pins passing through said fish plates and rail ends, and each provided with a central reduced portion and a head beveled on its inner end, for the purpose of engaging the inclined surfaces of the key-hole slots, the head also provided with a slot, and a locking plate or clamp adapted to enter the slots in the heads of the pins thereby locking the same, all substantially as described and shown.

4. In a rail-joint, the combination, with the perforated rail ends and a pair of fish plates, one of which is provided with perforations and the other with key-hole slots, at each side of the straight portions of which slots are inclined surfaces, and with a ratchet portion, located between the slots, of a pair of pins passing through said fish-plates and rail ends, and each provided with a central reduced portion and a head beveled on its inner end, for the purpose of engaging the inclined surfaces of the key-hole slots, the heads also provided with slots, and a locking plate having a notch at each end, for the purpose of permitting the plate to pass over the ends of the pins and engage the slots in the heads, and a tongue on the plate adapted to engage the ratchet portion, all substantially as described and shown.

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

WILLIAM M. HERVEY.

Witnesses:
GEO. W. MCCLEARY,
T. A. RUSSELL.