W. THOMPSON.

Railway Rail-Joints.

No. 145,372. Patented Dec. 9, 1873.

Fig. 1.

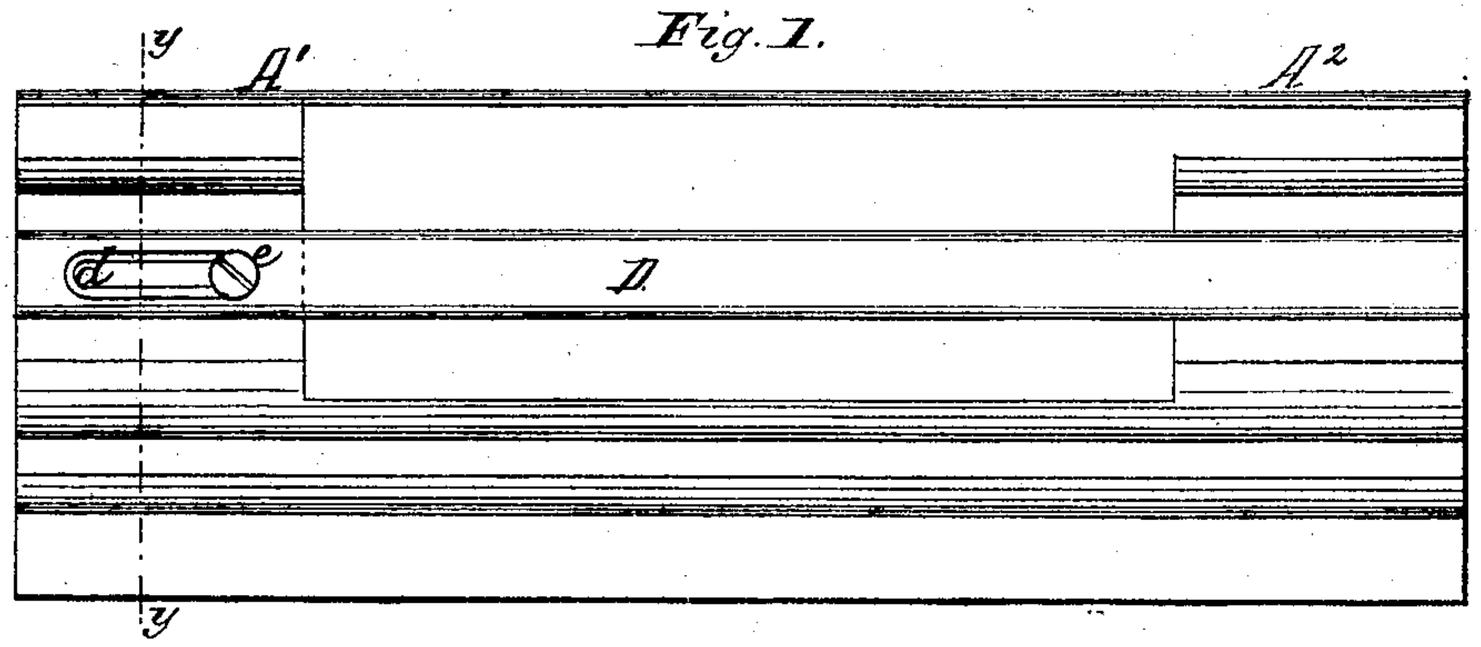


Fig. 2.

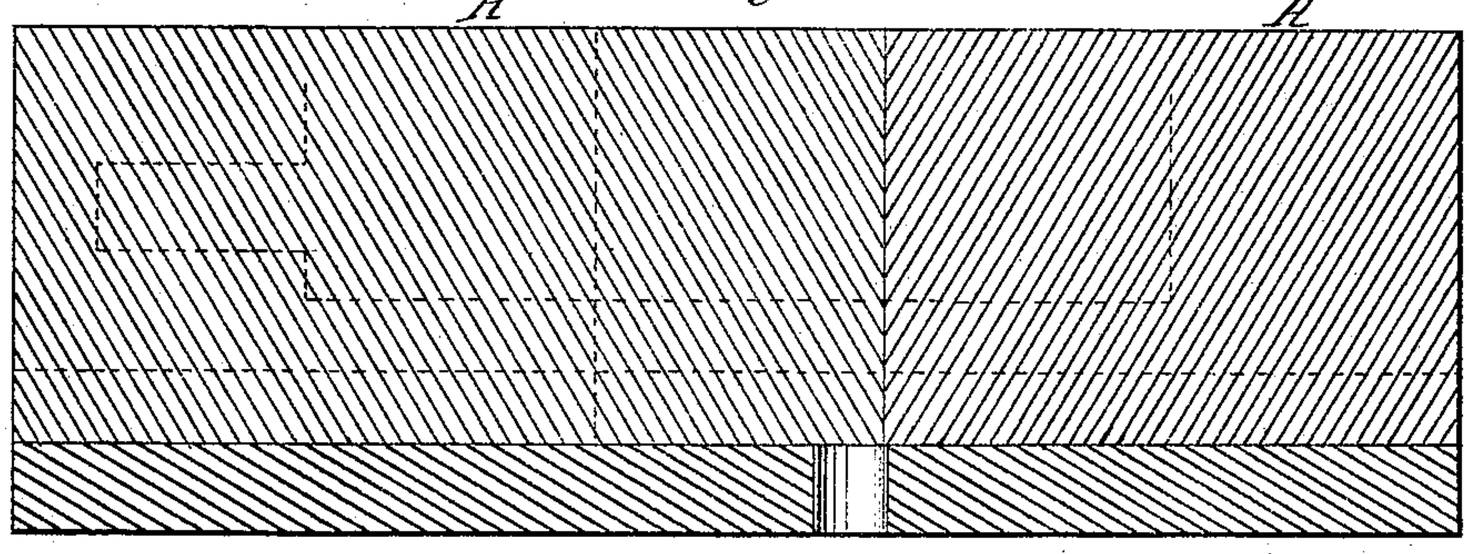


Fig. 3.

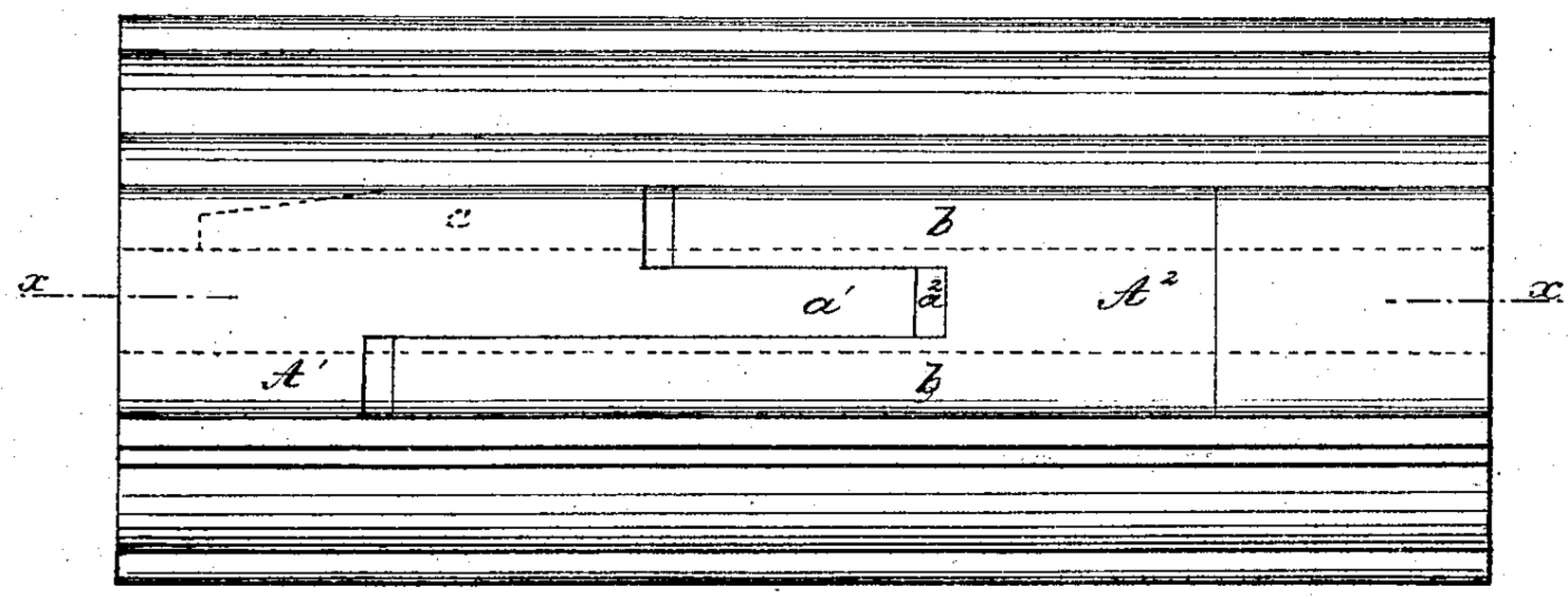
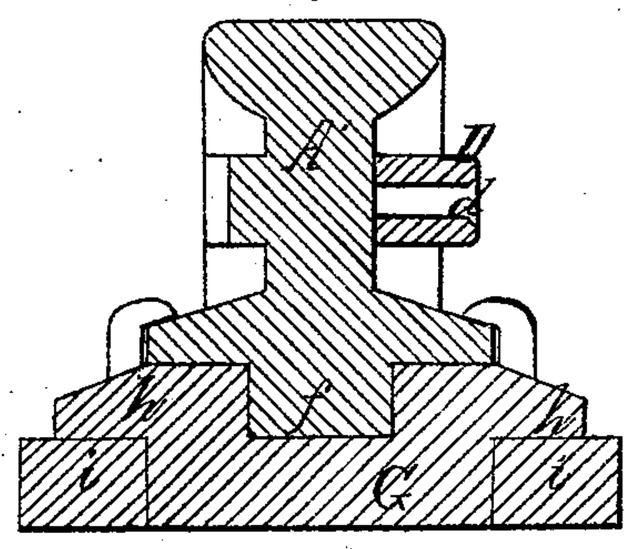


Fig. 4.



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UNITED STATES PATENT OFFICE.

WOODARD THOMPSON, OF GARDINER, MAINE.

IMPROVEMENT IN RAILWAY-RAIL JOINTS.

Specification forming part of Letters Patent No. **145,372**, dated December 9, 1873; application filed October 29, 1873.

To all whom it may concern:

Be it known that I, WOODARD THOMPSON, of Gardiner, county of Kennebec and State of Maine, have invented certain new and useful Improvements in Rail-Joint Fastenings, of which the following is a specification:

My invention relates to certain improvements in rail-joints fastenings, whereby a substantial continuous rail is secured; and it consists in a lap-joint protected by a plate on either side, and fastened by a bar secured rigidly to one of the rails, and slotted, to engage with the bolts of the contiguous rail, so as to allow for contraction and expansion.

In the accompanying drawing, Figure 1 represents a side view of my invention. Fig. 2 is a longitudinal vertical section. Fig. 3 is a top view, and Fig. 4 is a transverse vertical section.

A^1 A^2 represent the contiguous ends of two rails, coming together with a lap-joint formed by a projection, a^1, on the rail A^1, fitting into a corresponding recess, a^2, on the rail A^2. This recess is formed by cutting away a portion of the cap of the rail and securing a plate, *b*, on each side, so as to extend beyond the end of the rail, as shown in Fig. 3. One of the plates *b* extends farther than the other, and a short plate, *c*, is secured to the projection a^1, on the same side of the rail with the shorter plate, so that when the ends of the rails are in close contact the plate *c* and the shorter rail *b* are equal to the length of the longer rail *b*; and when the rails are contracted in length by reason of cold the top of the rail presents a continuous tread, the width of which, at the joint, is equal to two-thirds of the entire width of the rail. D is a bar, secured rigidly to the longer plate *b* and to one side of the rail A^2, so that one end projects beyond the plate *b*. This projecting part has a slot, *d*, formed in it, for engagement with a bolt, *e*, passing through the rail A^1, so that, as the rails contract and expand with change of temperature, the bolt works freely in the slot.

What I claim as new, and desire to secure by Letters Patent, is—

1. The plates *b b c*, on the outside of, and in combination with, the lap-joint a^1 a^2, substantially as and for the purpose shown and described.

2. The slotted bar D, in combination with the rails A^1 A^2, plate *b*, and bolt *e*, as herein shown and described.

In testimony that I claim the foregoing as my invention I hereunto affix my signature this 24th day of October, 1873.

WOODARD THOMPSON.

Witnesses:

I. M. TUCKER,

PHILIP WINSLOW.