No. 831,562. PATENTED SEPT. 25, 1906.

A. MORRISON.

INSULATED TRACK SYSTEM.

APPLICATION FILED JUNE 9, 1905.

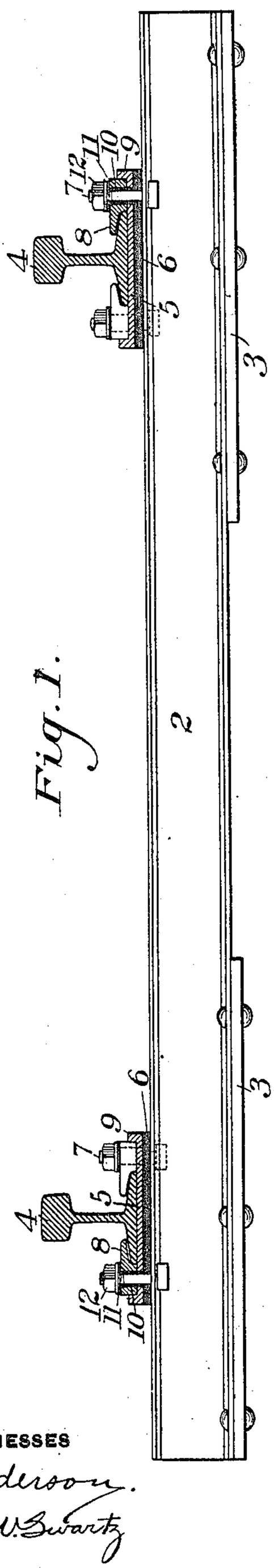

Fig. 1.

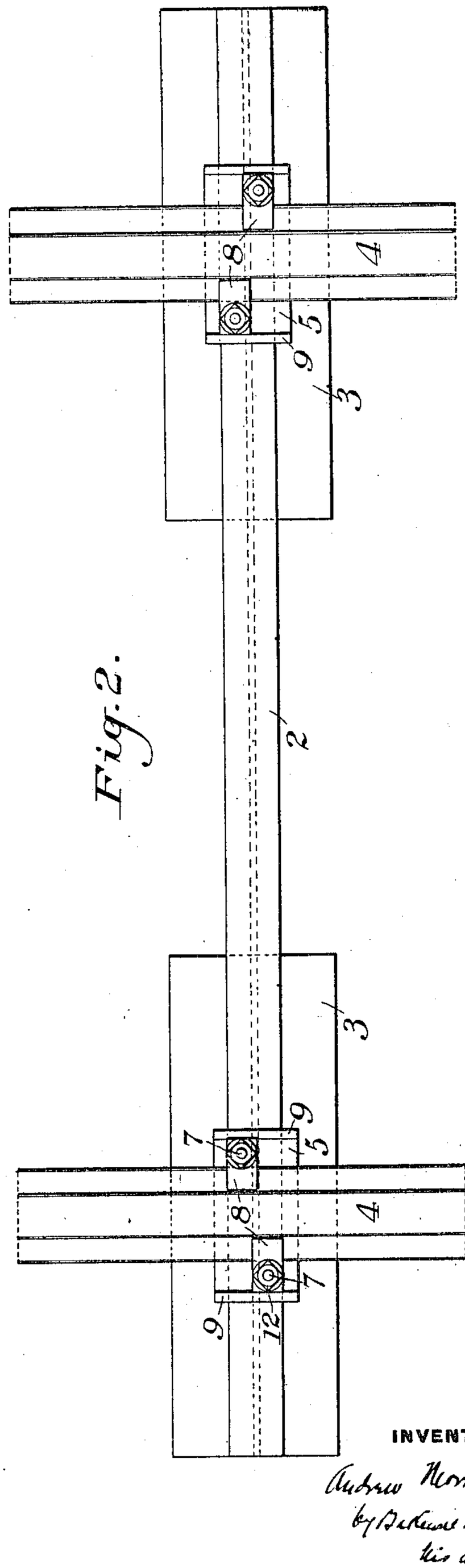

Fig. 2.

WITNESSES

R. A. Balderson.

Warren W. Swartz

INVENTOR

Andrew Morrison

by Dickerson & Brown

his attys

UNITED STATES PATENT OFFICE.

ANDREW MORRISON, OF PITTSBURG, PENNSYLVANIA.

INSULATED-TRACK SYSTEM.

No. 831,562. Specification of Letters Patent. Patented Sept. 25, 1906.

Application filed June 9, 1905. Serial No. 264,432.

To all whom it may concern:

Be it known that I, ANDREW MORRISON, of Pittsburg, Allegheny county, Pennsylvania, have invented a new and useful Insulated-Track System, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a cross-section of track provided with my improved insulated-tie system, and Fig. 2 is a top plan view of the same.

My invention relates to the class of metallic railway-ties having top flanges, and is designed to provide for insulating the rails from each other in a simple and efficient manner, thereby enabling electric block-signals to be used.

In the drawings, 2 represents the tie, which I have shown as consisting of an I-beam with wider plates 3 riveted below its ends. The rails 4 rest upon metallic chafing-plates 5, which are preferably wider than the rail-base and also preferably wider than the top flanges of the I-beam. Between the chafing-plates and the top flanges of the tie I place a flat layer of insulating material 6, this being preferably coextensive with that portion of the I-beam which is covered by the wear-plate. This position of the insulating material avoids its rapid cutting out. The wear-plate is preferably secured by bolts 7, extending through the insulating material, through the wear-plate, and through clips 8, which rest on the wear-plate. I have shown these clips as abutting against shoulders 9, which are integral with the chafing-plate.

In order to complete the insulating of the rail, I preferably employ a thimble or sleeve 10, of fiber or insulating material, which surrounds each bolt and extends upwardly from the flat layer of insulating material on the tie-flanges up to insulating-washer 11 below the nut 12. This thimble extends through the chafing-plate and through the clip.

The advantages of my invention result from the insulating of the rails from each other, which enables metallic ties to be used in insulated sections of the track. The shoulders on the chafing-plate assist the clips in holding the rails in position and reduce the wear on the insulation.

The insulating may be applied to one rail only, since this would insulate one rail from the other, and many other changes may be made in the form and arrangement of the tie, the insulation, &c., without departing from my invention.

I claim—

1. A railway-track having metallic ties, insulating material resting on the top of each of the ties, metallic chafing-plates overlying the insulating material, and rails resting on the chafing-plates, the rails at one side of the track being completely insulated from those at the opposite side; substantially as described.

2. A railway-track having metallic ties, insulating material resting on the tops of each of the ties, metallic chafing-plates resting on the insulating material, rails resting on the chafing-plates, and insulated clips engaging the base-flanges only of the rails and arranged to hold the rails in place, the rails at one side of the track being completely insulated from the other side of the track; substantially as described.

3. A railway-track having metallic ties with top flanges, insulating material resting on the top flanges of each of the ties, metallic chafing-plates resting on the insulating material and having shoulders, and insulated clips securing the rail on the chafing-plates, said clips abutting the said shoulders and engaging the base-flanges only of the rails, the rails being completely insulated from the ties; substantially as described.

In testimony whereof I have hereunto set my hand.

ANDREW MORRISON.

Witnesses:

JOHN MILLER,

H. M. CORWIN.