

No. 648,465.

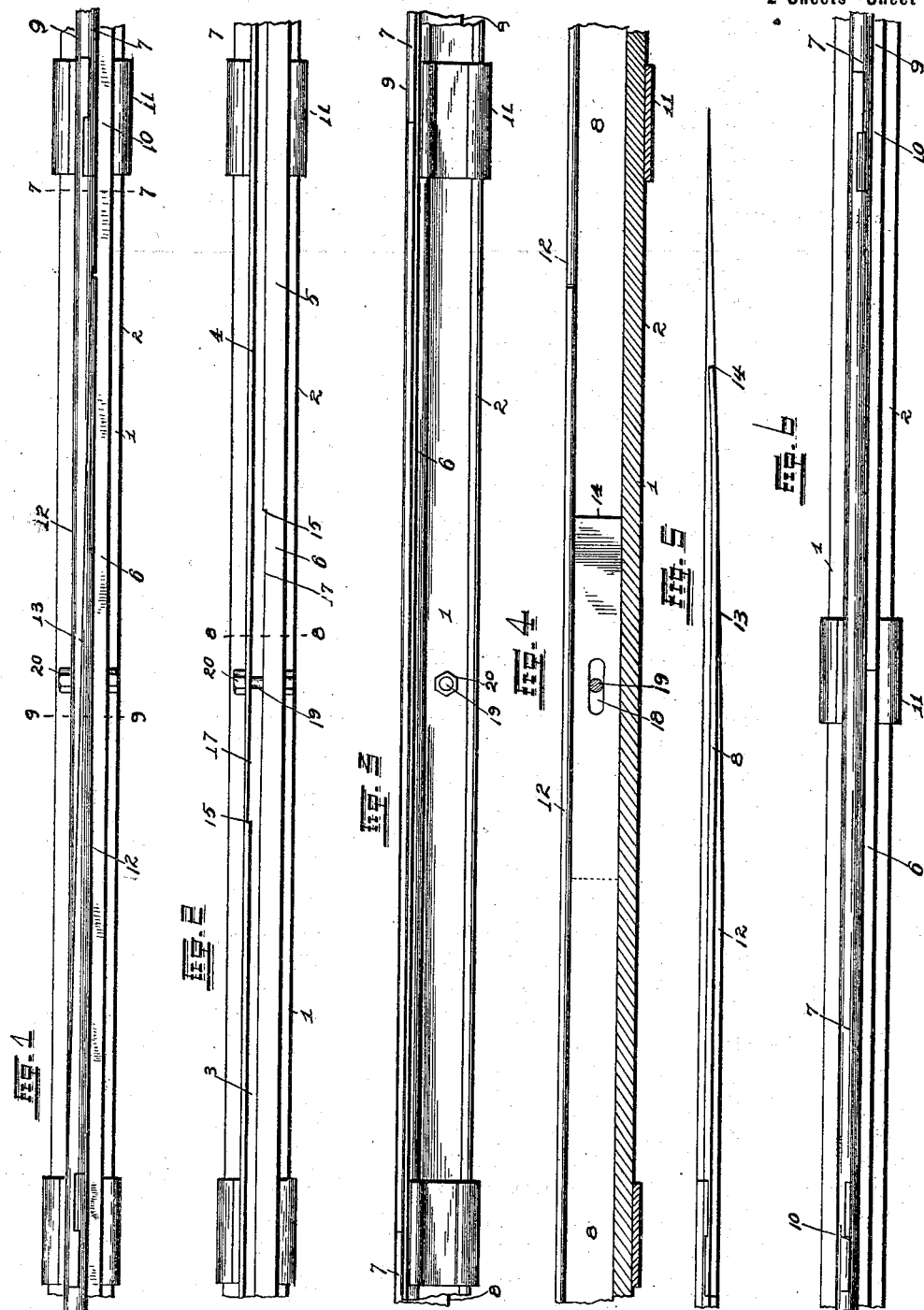
Patented May 1, 1900.

J. J. MURPHY.
EXPANSION RAIL.

(Application filed Dec. 26, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:
Alfred A. Eichen
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Inventor.
John J. Murphy.
By Higdon & Longan, Attys.

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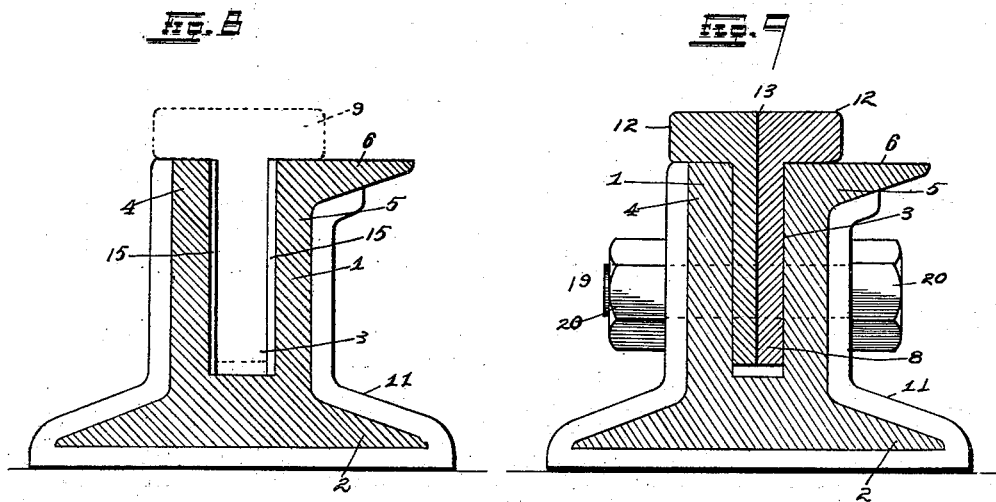
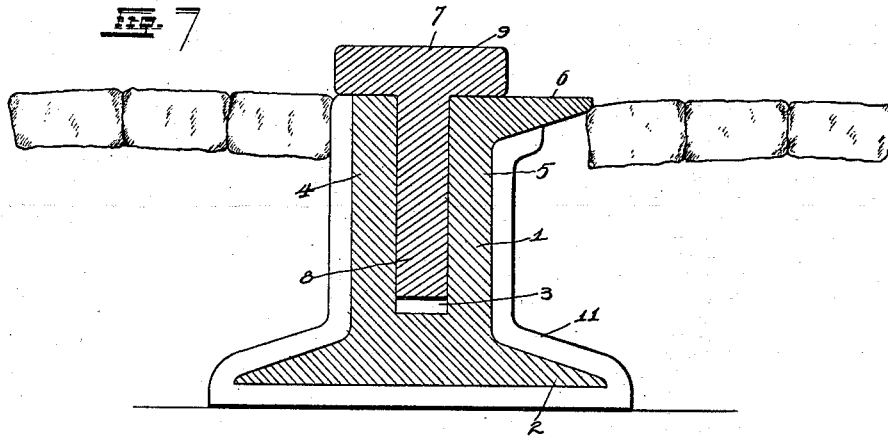
Patented May 1, 1900.

J. J. MURPHY.
EXPANSION RAIL.

(Application filed Dec. 28, 1899.)

(No Model.)

2 Sheets—Sheet 2



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UNITED STATES PATENT OFFICE.

JOHN J. MURPHY, OF ST. LOUIS, MISSOURI.

EXPANSION-RAIL.

SPECIFICATION forming part of Letters Patent No. 648,465, dated May 1, 1900.

Application filed December 26, 1899. Serial No. 741,702. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. MURPHY, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Expansion-Rails, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

The object of this invention is to construct an expansion-rail so constructed that the expansion or contraction through variation of temperature does not disturb the equability of a track formed by means of said rails, but by use of which a smooth and even passage is assured at all times.

Figure 1 is a top plan view of my invention. Fig. 2 is a top view with parts removed. Fig. 3 is a side view. Fig. 4 is a longitudinal sectional view showing the arrangement of the various parts. Fig. 5 is a view of the under side of one of the parts of which I make use in carrying out my invention. Fig. 6 is a top view showing the means of uniting the rails. Fig. 7 is a cross-sectional view taken on the line 7 7 of Fig. 1. Fig. 8 is a cross-sectional view taken on the line 8 8 of Fig. 2. Fig. 9 is a cross-sectional view taken approximately on the line 9 9 of Fig. 1.

Referring by numerals to the drawings, 1 indicates a retaining-rail having the ordinary base 2, which is adapted to rest upon the ties 35 or other suitable supports. A continuous groove 3 extends longitudinally throughout the length of the rail 1 and forms the two sides 4 5, of which the side 4 is the outer and the side 5 the inner one, and integral with the top inner edge of the side 5 is a flange 6. A plurality of T-rails 7 are provided, and their lower ends 8 are positioned in the groove 3, their upper ends 9 resting on the upper surface of the sides 4 5. The said rails are united or joined together by the scarf-joints 10, as shown in Figs. 1 and 6. At the joints where the retaining-rails 1 are united I provide clips 11, by means of which the ends of the said rails 1 are prevented from lateral movement, thereby insuring a uniform even track. At suitable intervals along the track so formed I place expansion-joints each of which is formed by

two beveled T-rails 12. Each of the rails 12 is provided with a beveled edge 13, which fits against a corresponding edge of the adjoining rail. The lower projection 8 of these beveled rails 12 curves suitably, following the beveled inner surface of said rail, and ends at 14, forming a stop which fits against a shoulder 15, formed in the sides 4 5 for that purpose. As the T-rails 12 draw apart through the contraction of the rails the beveled sides 17 of the walls 4 5 press against the outwardly-curved stops 14, thereby keeping the two adjoining beveled T-rails pressed closely together at all times.

A corresponding elongated aperture 18 is formed in each of the rails 12, and when they have been correctly arranged a bolt 19 is made to pass through the said aperture and is secured by nuts 20. This is to prevent the rails from being raised upwardly out of position without said bolt being removed, but at the same time when the rails are contracted or expanded through a lower or higher temperature the rails are allowed a longitudinal movement, which does not at all interfere with the passage of the cars over them.

In case any of the T-rails should become useless while in position on the track, it can be easily removed and another substituted in its place. The supporting or retaining rails would remain intact an indefinite length of time for the reason that the beating of the wheels does not fall directly upon them. When in use the supporting or retaining rails 1 are imbedded in cement or other suitable material, and are retained a suitable distance apart by means of rods or like devices. When thus arranged, the rail need never be removed until rusted out or otherwise made useless from natural causes. Only the T-rails will wear out through the continual beating of the wheels, and then they can easily be pried out and others substituted.

Rails of my improved construction present many advantages over others used for this purpose, and are especially adapted for use on bridges, &c. They are simple and the cost involved in their construction is not great.

I claim—

1. In an expansion-track, expansion-joints comprising suitable retaining-rails, a plurality of laterally-beveled T-rails, the beveled

portions of each adjacent pair of said rails overlapping each other, a means for allowing said rails to expand from each other, and a means for pressing the said beveled portions closely together during the periods of expansion, substantially as specified.

2. In an expansion-track, comprising a plurality of T-rails held in position by suitable retaining-rails, expansion-joints which consist of laterally-beveled T-rails of which the beveled portions overlap, means for retaining

the said T-rails in position within the retaining-rails, and means whereby the said beveled rails are pressed closely together during the periods of expansion, substantially as specified.

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

JOHN J. MURPHY.

Witnesses:

ALFRED A. EICKS,
J. D. RIPPEY.