

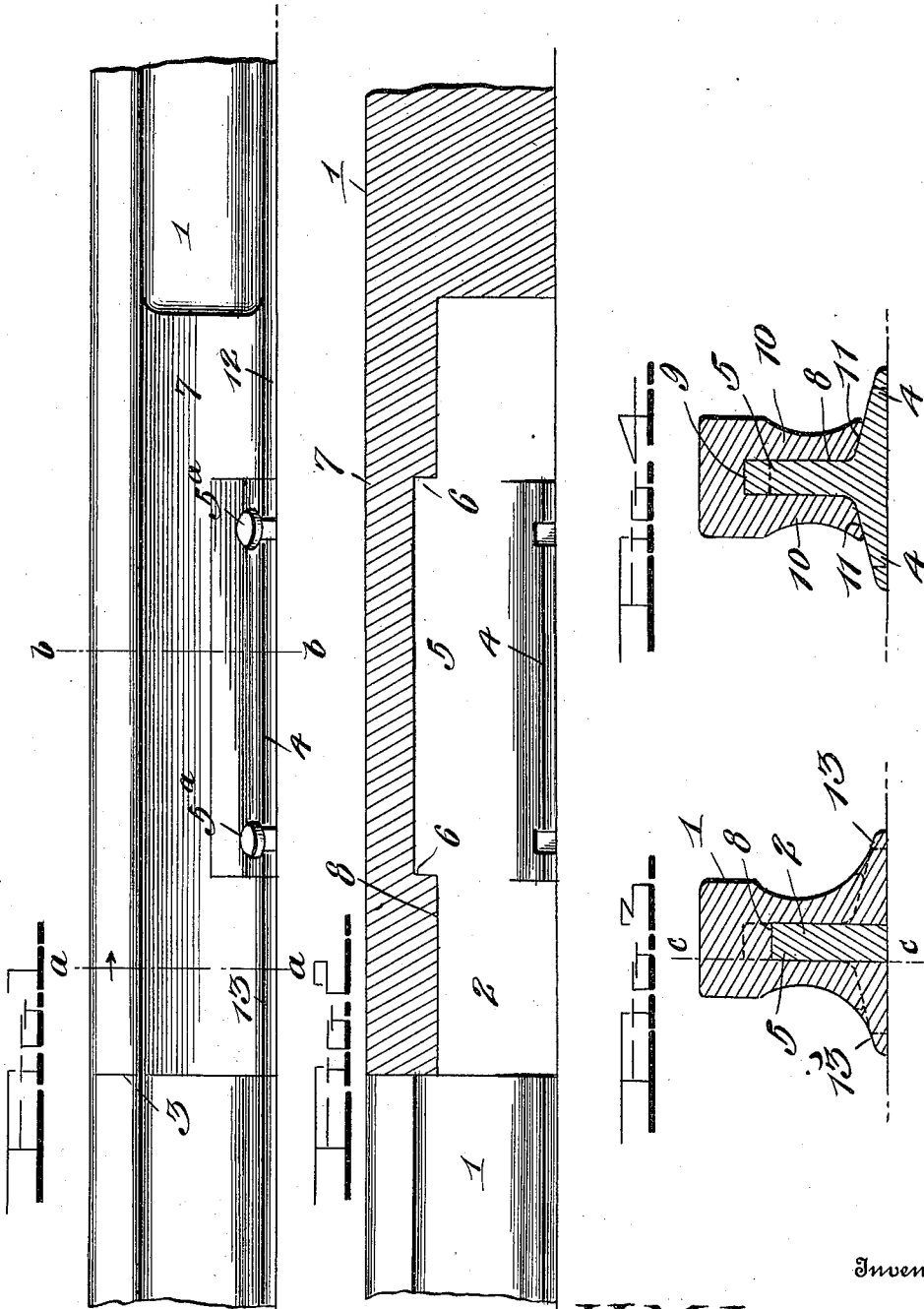
H. M. LINES.

RAIL JOINT.

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1,001,966.

Patented Aug. 29, 1911.



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RAIL-JOINT.

1,001,966.

Specification of Letters Patent. Patented Aug. 29, 1911.

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To all whom it may concern:

Be it known that I, HARVEY MILTON LINES, a citizen of the United States, residing at Dubois, in the county of Clearfield and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in rail joints to enable a pair of rails to be secured together, without the necessity of employing bolts or other like devices, the invention consisting in the construction, combination and arrangement of devices herein-after described and claimed.

In the accompanying drawings—Figure 1 is a side elevation of a rail constructed in accordance with my invention. Fig. 2 is a similar view, one of the rail ends being shown in longitudinal section, on the plane indicated by the line *c-c* of Fig. 3. Fig. 3 is a vertical transverse sectional view on the plane indicated by the line *a-a* of Fig. 1. Fig. 4 is a similar view on the plane indicated by the line *b-b* of Fig. 1.

In the embodiment of my invention, I provide each rail 1, with a bar 2, which projects longitudinally from one end thereof, and is in line with the shank of the rail, the lower side of the said bar being level with the bottom of the rail, and the upper side thereof being spaced from and below the upper edge of the rail. The said bar is provided on opposite sides at a suitable distance from the shoulder 3 formed by the end of the rail, with a pair of oppositely disposed base flanges 4 which correspond with the base flanges of the rail, and afford means for securing the bar 2 on one of the ties by means of headed spikes 5^a, which are driven into the tie, and the heads of which engage the said flanges 4. The said bar 2 is also formed on its upper side and above the base flanges 4 with a flange 5, the ends of which form shoulders 6. The said flange 5 and the base flanges 4, are spaced from the outer end of

the bar 2. The meeting end of the next rail 1, is provided with a thickened shank portion 7, in which is a downwardly opening longitudinal groove 8, to receive the bar 2. In the upper side of the groove 8, at a point between the ends thereof, is a recess 9, to receive the flange 5, of the bar 2. The shoulders 6 which form the ends of the said flange bear against the ends of the said recess 9, and hence coact therewith, to lock the rail ends together, against longitudinal displacement. The side walls 10 of the thickened shank 7 formed by the groove 8, bear on opposite sides of the bar 2, and are provided in their lower edges, with recesses 11, to receive and clear the base flanges 4 of the said bar 2, the said side walls 10, being also provided at opposite ends of the said recesses 11, with base flanges 12, 13. The base flanges 12 correspond with the ordinary base flanges of the rail. The base flanges 13 fit between the base flanges of the meeting rail, and the base flanges 4 of the bar 2 thereof.

It will be understood that by the provision of the bar 2, at one end of a rail, and the provision of the groove 8, in the opposing end of the next rail, to receive the said bar, the rail ends when they are thus interlocked with the bar 2, in the groove 8, are so securely fastened together, that neither can be moved laterally independently of the other, and hence the rails are prevented from spreading at the joints. The length of the recesses 11 and 9, slightly exceed the length of the base flanges 4, and flange 5, so as to permit a slight degree of lost motion between the meeting ends of the rails to compensate for the expansion and contraction of the rails.

I claim:—

The combination of a pair of rails, one provided at one end with an integral longitudinal bar extending therefrom, at the base thereof, and provided on its sides with base flanges, and on its upper side with a locking flange, said base flanges and locking flange being spaced from the ends of said

bar; the other rail being provided with a thickened shank having a longitudinal groove for the reception of the said bar, a recess at the upper side of said groove for the reception of said locking flange of said bar, recesses at the lower sides of the side walls of said groove to clear the said base flanges of said bar, and base flanges disposed

at opposite ends of the base flanges of said bar.

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

HARVEY MILTON LINES.

Witnesses:

ANDREW C. SMYERS,
ARTHUR MYERS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."