(No Model.)

A. J. MOXHAM.

EXPANSION RAIL FOR RAILROADS.

No. 477,675. Patented June 28, 1892.

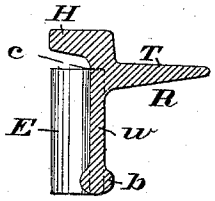

Fig. 1.

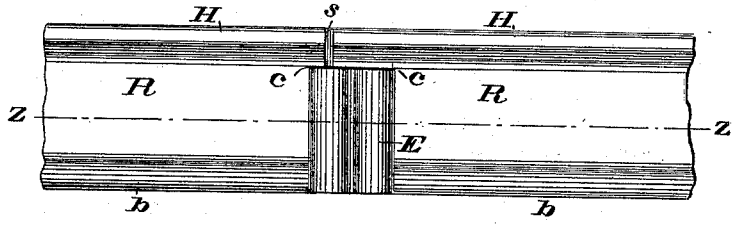

Fig. 2.

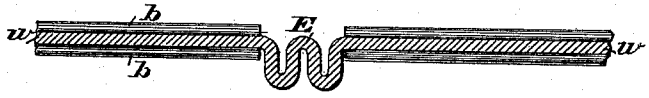

Fig. 3.

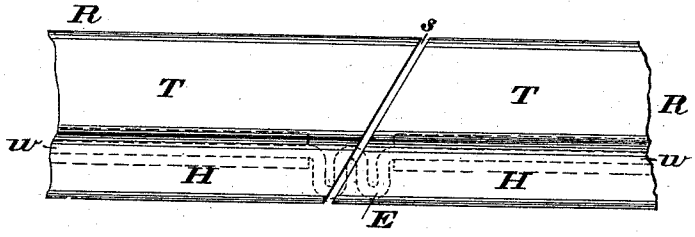

Fig. 4.

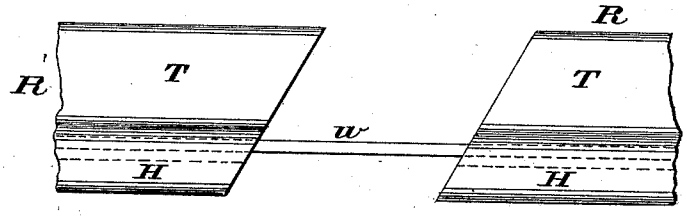

Fig. 5.

WITNESSES:

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ARTHUR J. MOXHAM, OF JOHNSTOWN, PENNSYLVANIA.

EXPANSION-RAIL FOR RAILROADS.

SPECIFICATION forming part of Letters Patent No. 477,675, dated June 28, 1892.

Application filed September 22, 1891. Serial No. 406,491. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR J. MOXHAM, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Expansion-Rail for Railroads, which invention is fully set forth and illustrated in the following specification and accompanying drawings.

The object of this invention is to provide rails which when laid shall form continuous track-rails, having suitable provision at the same time for expanding and contracting under changes of atmospheric temperature.

I will now describe one embodiment of my invention.

In the accompanying drawings, Figure 1 is a view in cross-section of an expansible rail embodying my invention. Fig. 2 is a side elevation of Fig. 1 looking to the right. Fig. 3 is a horizontal section taken through Fig. 2 at the line Z Z. Fig. 4 is a view in plan of Fig. 2. Fig. 5 is a view in plan, showing the appearance of the rail before its web has been bent, as hereinafter described.

In the figures the several parts are respectively indicated by reference-letters, as follows:

The letter R indicates a side-bearing girder-rail; H, its head; T, its side tram; *w*, its web, and *b* a bulb formed at the bottom of said web.

At any desired point in the length of the rail, preferably in the middle, a portion of its head H and tram T is cut away, preferably diagonally, as shown in Fig. 5, down to the points *c*, Figs. 1 and 2. The bulb *b* at the bottom of the web of the rail is also cut away, as indicated by the dotted lines *b'*, Fig. 1, for a length equal to about the width of the diagonal cut shown in Fig. 5. The appearance of the rail after it has been so cut is clearly illustrated in plan in said figure. The rail having been thus cut, its web *w* is then buckled or bent back and forth upon itself, as shown at E, Figs. 1, 2, 3, and 4, when the rail assumes the form shown in the plan in Fig. 4, the letter *s* indicating the nearly-closed space then remaining between the uncut portions of the upper surface of the rail. The ends of each of these rails are preferably welded together, and thus a continuous rail is formed, the bending or corrugating of the web, as shown at E, forming an expansion and contraction portion, which by its opening and closing renders such continuous rail capable of elongating and contracting under changes of atmospheric temperature without distorting the line of track. All joints between the ends of rails may thus be dispensed with, and the expansion portions herein described may be located at such suitable distances apart as the weight and character of the rail used will suggest to those skilled in the rail's construction or use.

I do not confine myself to the form of girder-rail shown, as it is obvious that my invention is applicable to any form of rail having a suitable web.

Having thus fully described my said invention, I claim—

1. A railway-rail having a part of its web recurved or bent upon itself to form an expansion and contraction portion.

2. A railway-rail having a part of its upper surface cut away and its web bent or buckled, so as to form an expansion and contraction portion.

3. An expansion railway-rail having a portion of its head cut away and a portion of its web recurved or corrugated, as set forth.

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Witnesses:

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