

W. B. Summing,

Railway Rail.

No. 98,935.

Patented Jan. 18. 1870.

Fig 1.

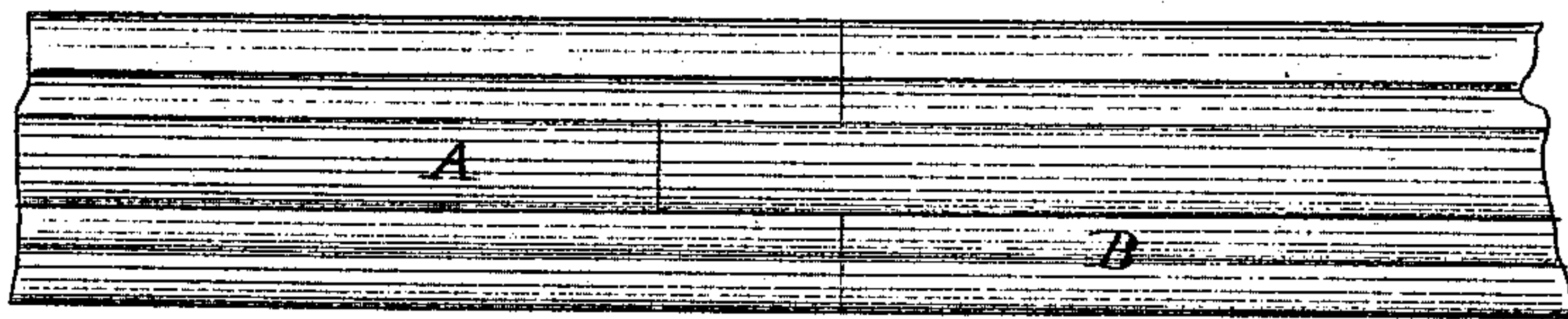


Fig 2.

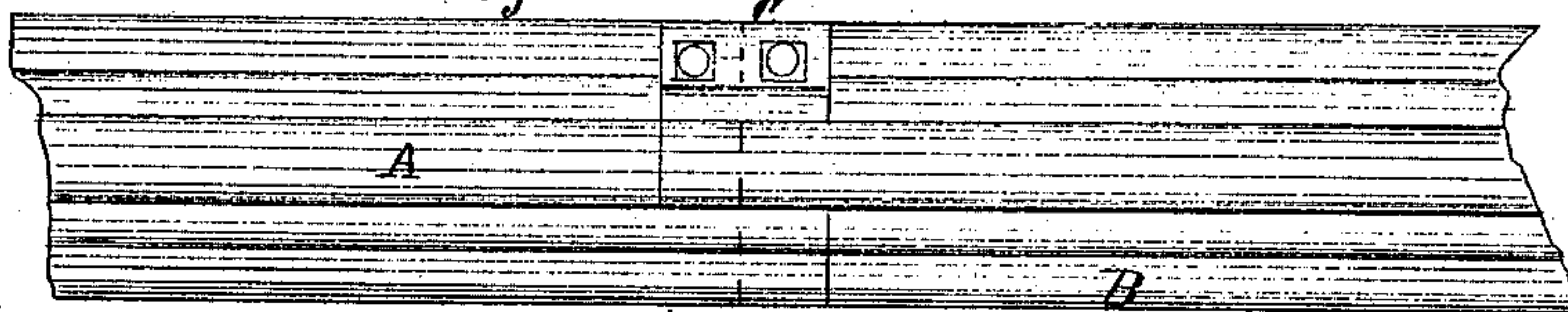


Fig 3.



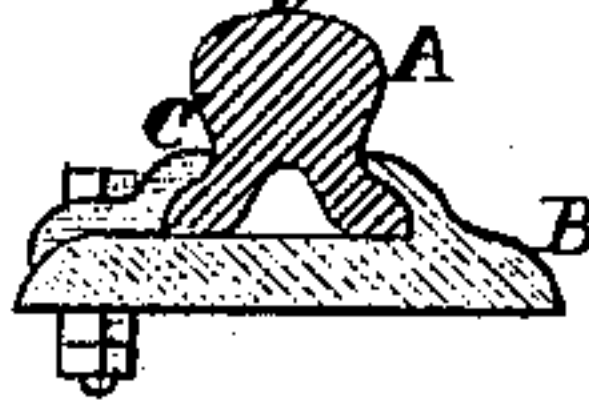
Fig 4.



Fig 5.



Fig 6.



Witnesses:

G. H. Clement
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W. B. Summing
By Wm. Loughborough

United States Patent Office.

WILLIAM B. DUNNING, OF GENEVA, NEW YORK.

Letters Patent No. 98,935, dated January 18, 1870.

IMPROVED COMPOUND RAILWAY-RAIL.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, WILLIAM B. DUNNING, of Geneva, in the county of Ontario, and State of New York, have invented certain new and useful Improvements in Compound Rails; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figures 1 and 2 are plan views of my invention.

Figures 3 and 4 are transverse sections.

Figure 5 is a section of one form of base B.

Figure 6 is a section at the dotted line *z*, fig. 2.

The object and nature of my invention will be understood by reference to the specification and drawings; and

To enable others to make and use my invention, I will describe its construction.

I make my improved rail in two parts, the upper or "tread" portion A being composed of steel, a superior quality of iron, or other suitable metal, or alloy of metals, while the base B is made of a cheaper class of iron or steel, and constitutes the flange, by which the rail is secured to the ties.

The tread-rail A is rolled, with projections *a* at the bottom, over which the flanges on the base close.

The base B is rolled, with flanges *b*, fig. 5, sufficiently apart to receive the lower edge of the tread-rail, and may or may not be provided with the supplementary side flange shown in figs. 1, 2, 3, and 6.

The tread-rail is laid into the groove between the flanges *b*, and the base, previously heated, is passed through suitable rollers, which closes the flanges over the projections *a*. As the base cools, the rail is tightly bound by the contraction of the metal.

The tread-rail A and base B are made of the same

length, but are so placed, preparatory to being rolled together, that the rail projects a suitable distance beyond the base at one end, leaving a recess in the latter, at the opposite end, to receive the projecting end of the succeeding rail, as shown in figs. 1 and 2. The end of each base thus forms a chair for the next rail, as they are laid.

To facilitate repairs, every third, fifth, or tenth rail, as may be desirable, is provided with a detachable section, C, figs. 2 and 6, of the flange *b*, secured to the inside of the rail by bolts, or otherwise. When it is desired to remove a rail, the nearest section C is taken up, and the rail pushed aside far enough to pass the adjacent one, when it can be easily withdrawn, together with the succeeding rails, till the defective one is reached.

By thus overlapping the rail and base, I obtain a very secure joint, obviating the necessity of chairs, fish-bars, or joint-ties. I, in fact, provide the tread-rail with a continuous chair for its entire length.

On account of the location of the sections C on the inside of the rail, the latter cannot be displaced by passing trains.

If it is desired to lighten the tread-rail A, it may be made of a U-section, as shown in full lines in fig. 6, and in dotted lines in fig. 4.

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

Providing the inner flange of the base B, at the lap, with a detachable section, C, as and for the purposes set forth.

WM. B. DUNNING

Witnesses:

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WM. S. LOUGHBOROUGH.