

S. NICHOLLS.
Railway-Rail.

No. 222,302.

Patented Dec. 2, 1879.

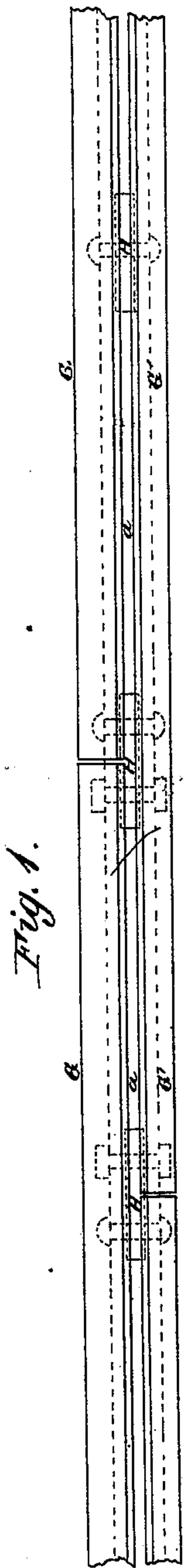


Fig. 1.

Fig. 2.

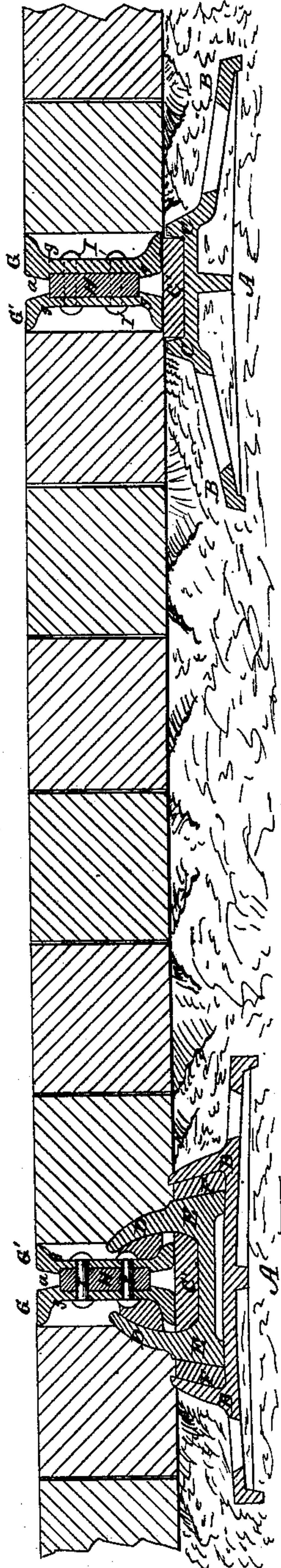
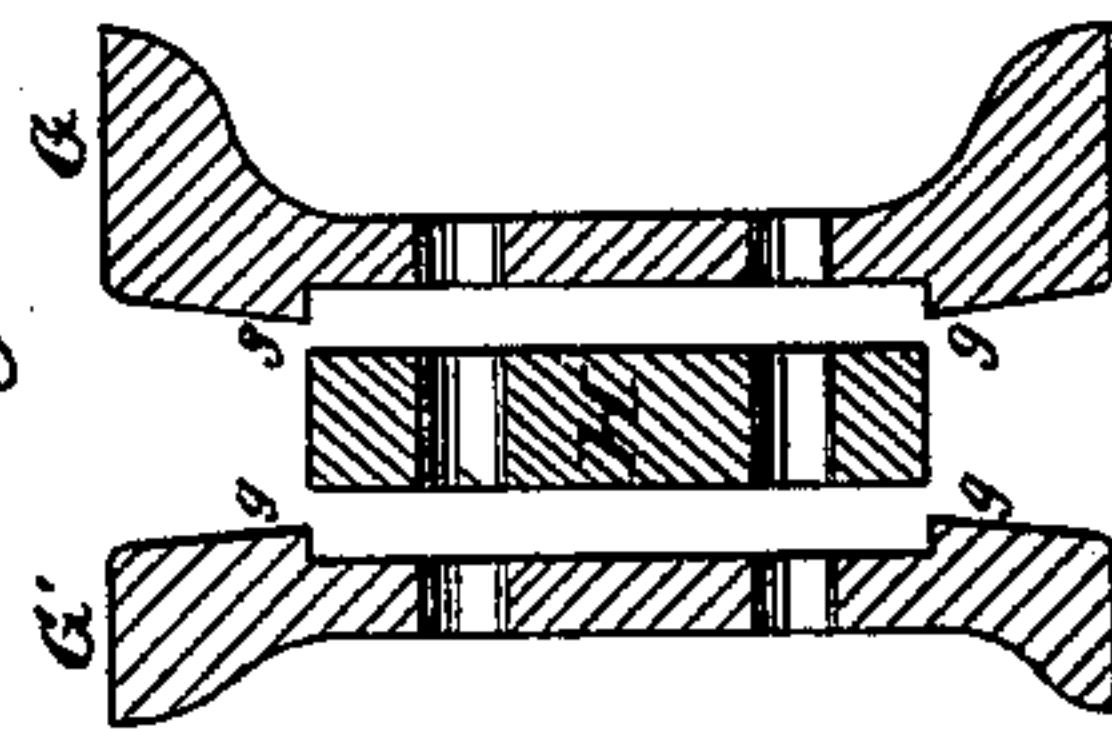


Fig. 3.



WITNESSES:

W. W. Hollingsworth
E. W. W. Byrne.

INVENTOR:

S. Nicholls
BY *[Signature]*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

SILAS NICHOLLS, OF WESTMINSTER, ENGLAND.

IMPROVEMENT IN RAILWAY-RAILS.

Specification forming part of Letters Patent No. **222,302**, dated December 2, 1879; application filed October 4, 1879.

To all whom it may concern:

Be it known that I, SILAS NICHOLLS, of Westminster, England, have invented a new and useful Improvement in Railway-Rails; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to an improvement in tramway-rails specially designed for use with the invention for which I have obtained Letters Patent in the United States, dated August 12, 1879, No. 218,559; and it consists in a rail constructed of parallel lengths, or half-rails, of channeled iron or steel of \sqcap -shaped section, bolted or riveted together, as above mentioned, with their channeled sides outward, and with cast-iron spacing-blocks between.

The accompanying drawings illustrate the invention as applied to the construction of tramway for which the aforesaid patent was granted to me.

Figure 1 is a plan of a portion of the improved tram-rail, and Fig. 2 a cross-section of the rail and bed-plate. Fig. 3 is a section of the rail, drawn to a larger scale, showing the parts separated.

The rail is composed of the two parts G G', of channeled or \sqcap -shaped iron or steel, separated by cast-iron spacing-blocks H, to admit the flanges of the wheels between them. The two parts G G' are united by rivets I passing through holes therein and in the spacing-blocks. Each half-rail is rolled with two shoulders or ribs, *g*, on the inner side, at a distance from the surface of each head of the rail equal to the required depth of the groove *a* for the wheel-flanges. It will be seen that

this groove is of the full width at the upper part, but is gradually contracted or V-shaped downward, the opposite faces of the shoulders *g* being inclined to an angle corresponding to the outline of the wheel-flange, which is slightly coned, as usual; but I do not limit myself to this form, as the said faces might be vertical or parallel to this web of the rail.

Between the two shoulders *g* of each half-rail a channel or groove about one-fourth of an inch deep, (more or less,) and of a breadth equal to the height of the spacing-pieces H, is formed, and the spacing-pieces fit in the grooves in both half-rails and lock the two together, so that they afford one another mutual support, instead of depending on the bolts alone to prevent any vertical displacement or bending of either part of the rail. By this means I am enabled to make the holes in the rails and blocks as much larger than the diameter of the bolts or rivets as is necessary to allow for any slight want of correspondence in the position of the holes in the two half-rails.

What I claim as new is—

A double-headed tram-rail constructed of two parallel lengths of channeled iron or steel of the section shown, bolted or riveted together with cast-iron spacing-blocks between, substantially as and for the purpose set forth.

The above specification of my invention signed by me this 9th day of July, 1879.

SILAS NICHOLLS.

Witnesses:

NEWTON WARBURTON,
ALEXR. HALLIDAY.