J. DOWNEY.

Improvement in Railroad Rails.

No. 132,451. Patented Oct. 22, 1872.

Fig. 1.

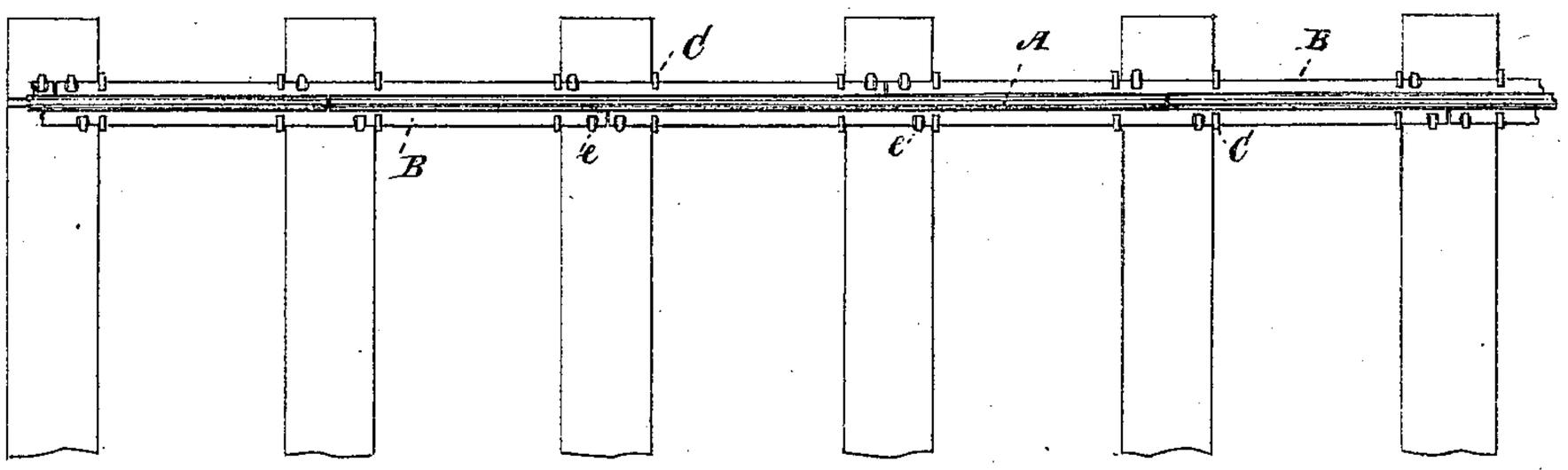


Fig. 2.

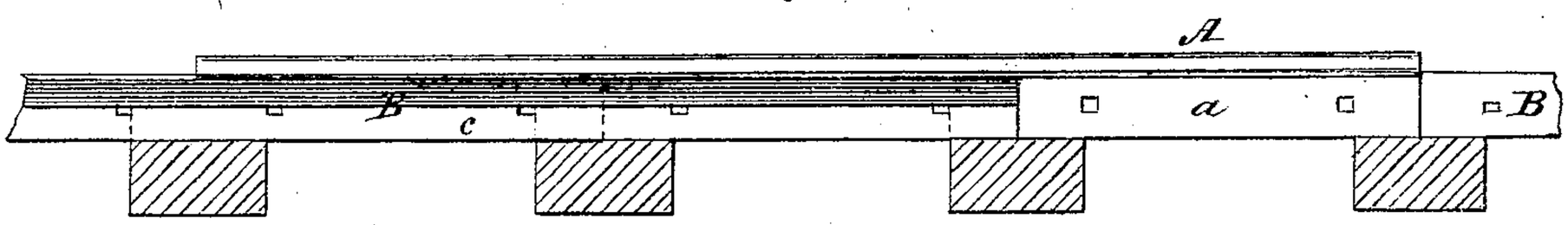


Fig. 3.

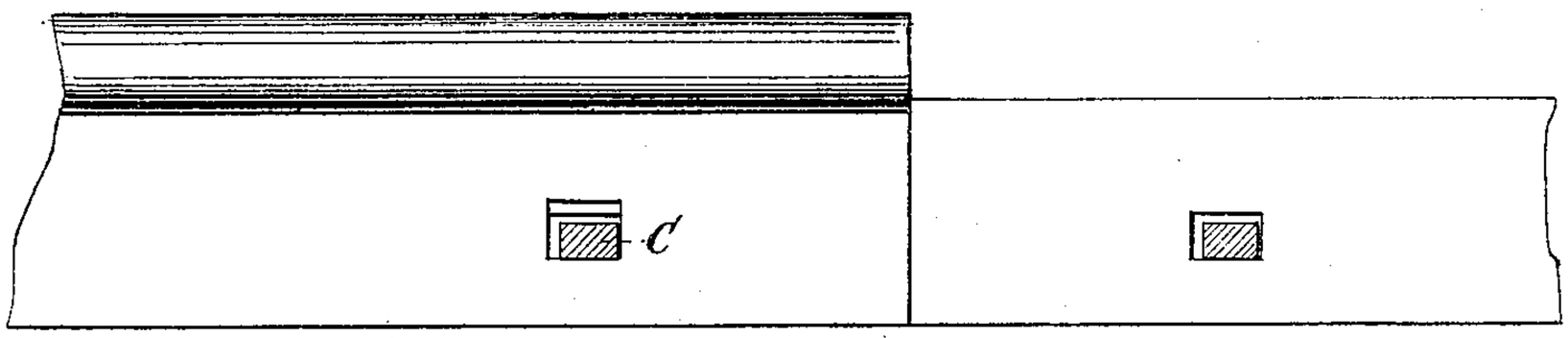
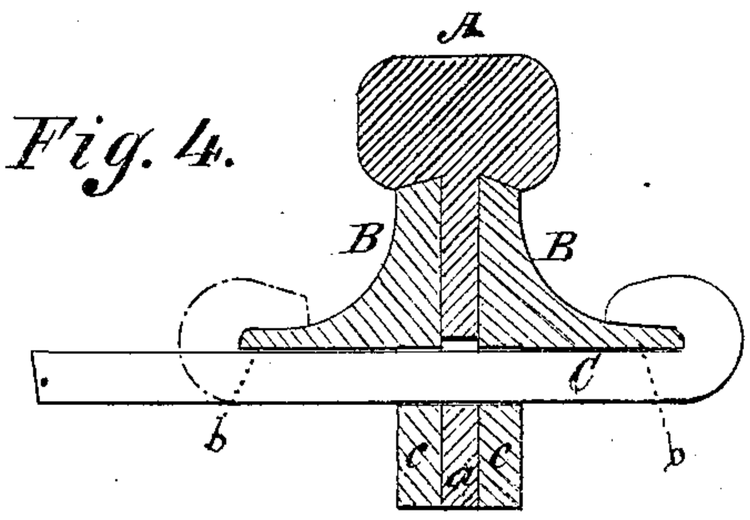


Fig. 4.



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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

JOHN DOWNEY, OF JOHNSTOWN, PENNSYLVANIA.

IMPROVEMENT IN RAILROAD RAILS.

Specification forming part of Letters Patent No. **132,451**, dated October 22, 1872.

To all whom it may concern:

Be it known that I, JOHN DOWNEY, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and Improved Iron and Steel Continuous Rail, as applied to railways, of which the following is a specification:

Figure 1 is a plan view of a track formed of rails constructed and supported between iron sections or flanged bars secured together according to my invention. Fig. 2 is a sectional elevation of the same. Fig. 3 is a side view of the rail and one of its flanged supports. Fig. 4 is a cross-section of a rail and its flanged supports, showing the hook or locking bar.

My invention relates to an improvement in the class of compound railroad rails wherein the rail proper is secured between flanged side-bars; and it consists in applying a clamping-bar to unite the flanged bars and the rail, as hereinafter described.

In the drawing, A indicates a rail having a steel head, provided with a longitudinal tongue, *a*, and B, iron sections or bars, provided each with lateral and vertical flanges or extensions *b c*. These parts are fitted together, as shown in Fig. 4, so that the plane surfaces of the bars B lie flat against the tongue *a* of the rail A, and their upper edges form bevel shoulders on which the head of the rail rests. As a means of locking the parts together, I employ a bar, C, which is formed with a hook at one end. This hook or clamp bar fits over the lateral flange of one of the bars B, and the other end of the same is turned up over the corresponding flange of the opposite bar B. Thus the bar C passes intermediately through slots in the respective parts of the compound rail and locks them together. The slots in the tongue *a* of the rail are made larger than those in the bars B, so that no strain from expansion or contraction of the parts, or from the weight of trains passing over the rails, may be brought upon the bars C.

In practice I design to make the rail and its supports B of equal length, and to lap the supports past the rail for one-third their length, as represented in Fig. 2. Thus arranged they will "break joints" with the rail and form a continuous bearing for it. That part of the compound rail which projects below the lateral flanges fits in transverse slots in the sleepers, and said flanges rest on the upper surface thereof. By this arrangement of the clamp-bar with the parts composing the rail they are locked together in the most secure and durable manner.

I do not claim a clamp-bar in combination with a rail or rails; but,

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The hook or locking bar C, arranged with the bars B B *b c* and tongue *a* of the rail A, in the manner described.

JOHN DOWNEY.

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