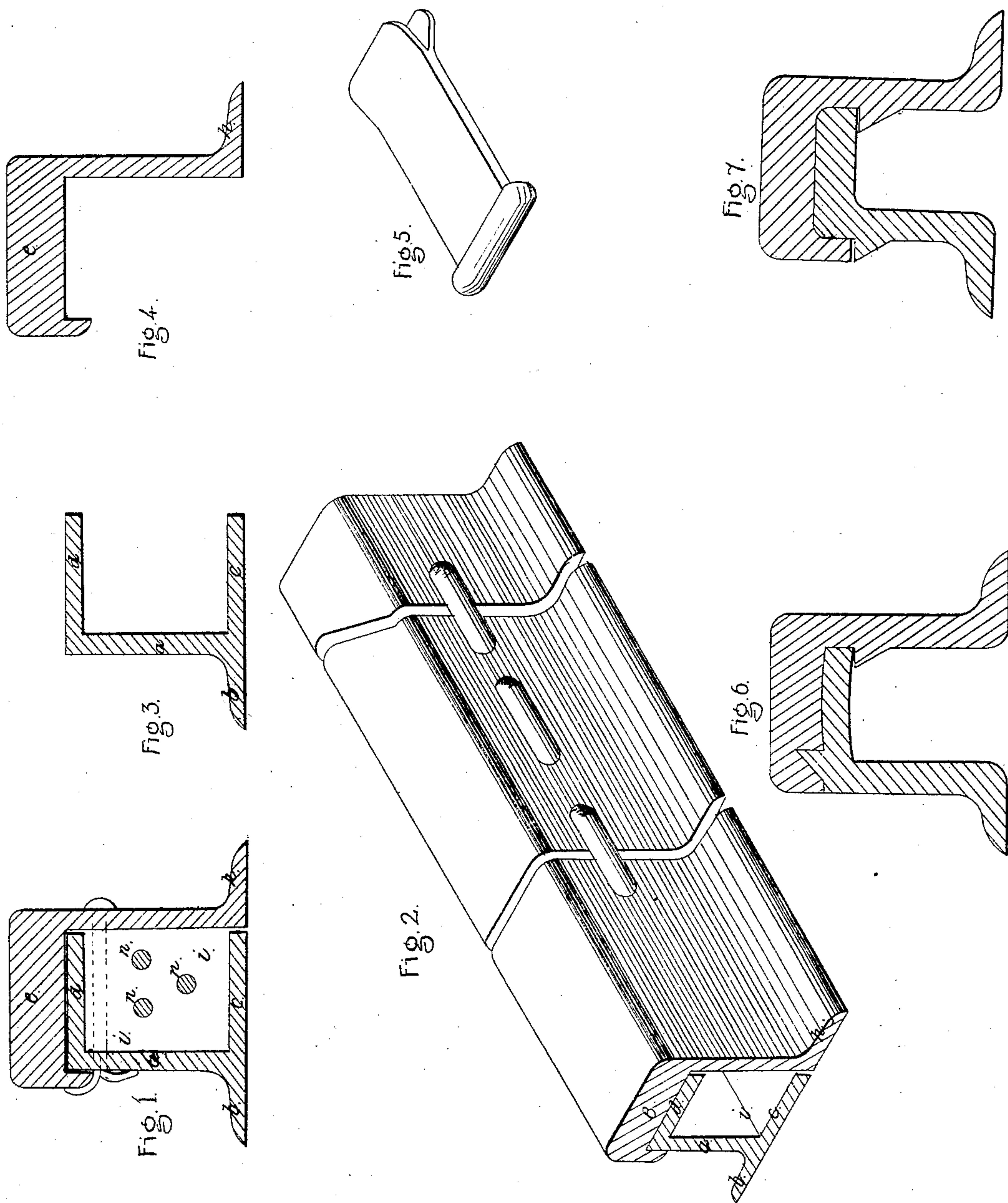


*Lewis, Dunning & Wheat.*

*Railroad Rail.*

*N<sup>o</sup> 21,007.*

*Patented Jul. 27, 1858.*



Inventors:  
*E Lewis*  
*W B Dunning*  
*C Wheat*



# UNITED STATES PATENT OFFICE.

E. E. LEWIS, WILLIAM B. DUNNING, AND CORYDON WHEAT, OF GENEVA,  
NEW YORK.

## IMPROVEMENT IN COMPOUND RAILS FOR RAILROADS.

Specification forming part of Letters Patent No. 21,007, dated July 27, 1858.

*To all whom it may concern:*

Be it known that we, E. E. LEWIS, WILLIAM B. DUNNING, and CORYDON WHEAT, of Geneva, in the county of Ontario and State of New York, have invented a certain new and Improved Compound Rail for Railroads; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a cross-section of our rail. Fig. 2 is a perspective view; Figs. 2 and 3, detached parts; Fig. 4, the fastening-key. Modifications are shown in Figs. 5 and 6.

Our improved compound rail consists of a foundation-rail, which we propose shall be of the form shown in Fig. 1, in its cross-section composed of an upright web *a*, with an ordinary flange *b* projecting outward and an inner one extending inward, as at *c*, at the base. At the top there is a broad flange *d*, the width of flange *c* and directly above it, forming the base of the tread. This foundation-rail may be of wrought or cast iron, according to circumstances, and the bottom flange *c* may be omitted in some instances, as in Fig. 5. Over this I form a cap-rail of wrought-iron, as delineated at *e*. This cap-rail fits over the top flange *d*, above named, like a saddle and forms the surface upon which the wheels of the train roll. The web of this saddle or top rail on the side opposite the web *a* extends down to a level with the bottom flange *b*, where it has a similar outward-projecting flange *h*. It will be seen that the cap portion of this rail has a lip extending down over the web *a* a sufficient distance to lock securely onto the base portion of the rail. These two portions of rail break joint so as to form a continuous rail. When laid

down, they may be keyed together by means of the split key, (shown detached in Fig. 4,) which, when inserted, has its ends bent outward, so as to clinch it and hold it in place. The slots through which these keys are fastened are somewhat longer than the shank of the key is broad, so that the rails can expand and contract without cramping. These keys are inserted at every joint in the compound rail, or at intervals along the rails, as is found necessary, and the joints of the cap-rails may be at right angles to their length, or oblique, as clearly represented in Fig. 2. We propose to fill the interior space of our rail with wood at *i*. This will give steadiness to the parts and will tend to deaden the noise of travel on the rails. This may be saturated with any resinous or chemical material, and the space, with a good non-conductor, will form a secure insulated place to insert the wires of a telegraph which we propose to place therein, as at *n n n*, Fig. 1. The rails formed as above set forth are spiked down to the cross-ties or stringers when used like the ordinary **U** rails, and they form a durable, cheap, and perfect continuous railway.

Having thus fully described our improved compound rail, what we claim therein is—

The cap and base rail constructed as herein described, and keyed together as above specified, and for the purposes set forth.

In testimony whereof we have hereunto set our hands this 25th day of March, 1858.

E. E. LEWIS.  
WM. B. DUNNING.  
CORYDON WHEAT.

In presence of—  
E. D. GAGE,  
J. B. ROBERTSON.