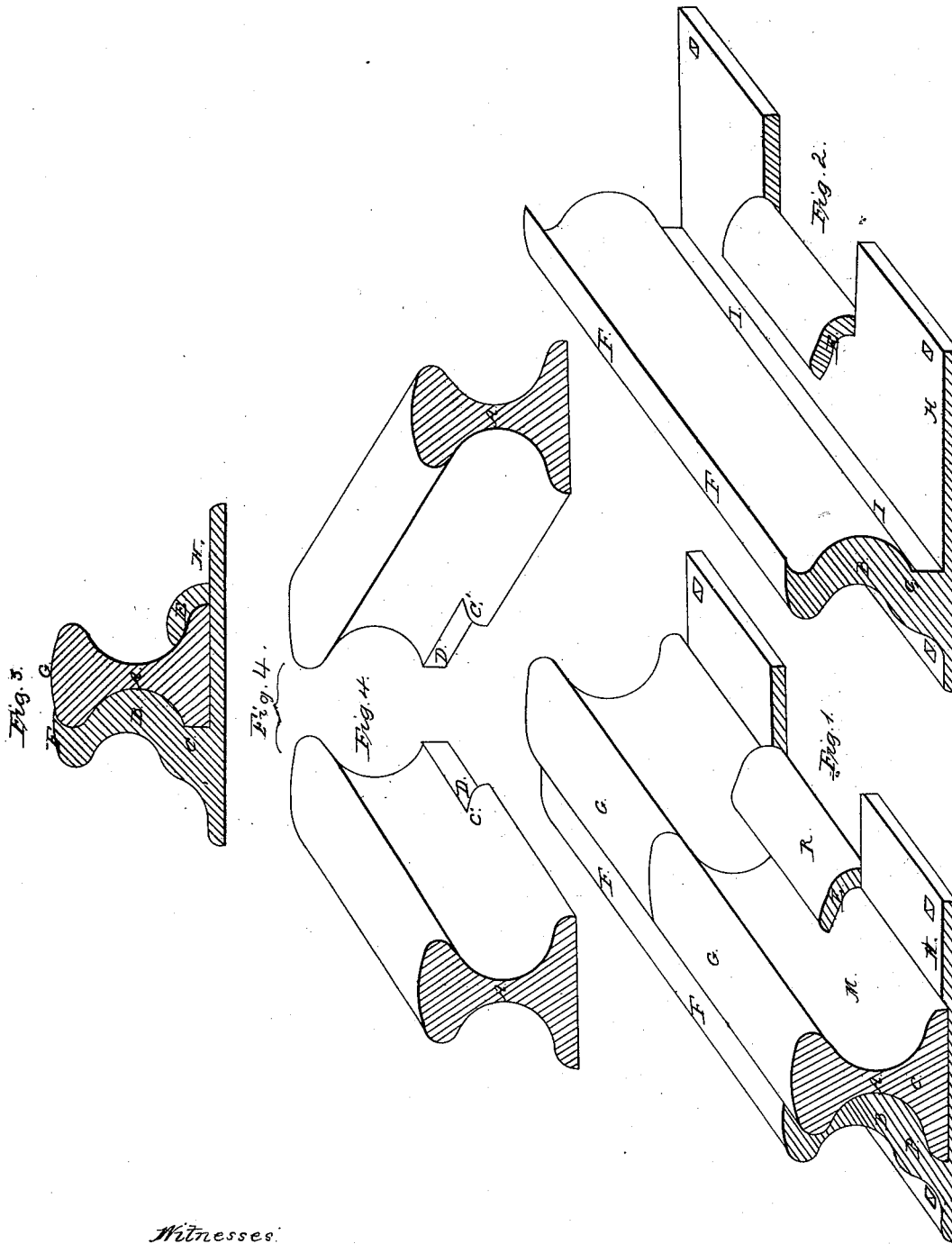


No. 52,005.

PATENTED JAN. 9, 1866.

J. W. SUTHERLAND.  
RAILROAD CHAIR.



Witnesses:  
*Geo. L. Brooks*

Inventor:  
*J. W. Sutherland*

# UNITED STATES PATENT OFFICE.

JAMES W. SUTHERLAND, OF INDIANAPOLIS, IND., ASSIGNOR TO HIMSELF,  
JOHN M. LORD. AND SAMUEL C. FRINK, OF SAME PLACE.

## IMPROVEMENT IN RAILROAD-CHAIRS.

Specification forming part of Letters Patent No. 52,005, dated January 9, 1866.

### *To all whom it may concern:*

Be it known that I, JAMES W. SUTHERLAND, of Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Chairs for Railroads; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, made part of this specification, in which—

Figure 1 is a perspective view showing the rail and chair. Fig. 2 is a view of the chair. Fig. 3 is a vertical cross-section of the rail and chair; and Fig. 4 shows the mode of cutting the base of the rail to adapt it to the chair.

The same letters refer to identical parts.

The chair is intended to be made of wrought-iron. The base H is spiked to the tie. It has upon one side the ordinary chair-clasp E, turned up to hold one side of the hub of the rail. Upon the other side is erected the clasp C B F, which is fitted to the side of the rail, and so as to fit snugly against it. The top F is of the same height as the rail, so that in passing the joint in the rails the wheels will rest upon the part F as well as upon the rail, and the tendency of the rail to crush by the wheels violently striking against the end of the rail avoided. In order to give sufficient strength to this side of the clamp it is necessary to cut away the side of the base of the rail, as shown at D, Fig. 4. By this means sufficient width

is given to the base C of the clamp C B F, to support the weight of the wheels passing over its upper surface without unduly increasing the width of the chair, thus adding to its weight and cost. At the same time, the weight being directly over the base, less strength is required than in other chairs where the standard being carried over the entire width of the base of the rail, a great leverage is brought to bear upon the point of junction of the standard and the base of the chair. This notch D should be carried back from the end of the rail a distance equal to half the length of the chair.

In laying the track sufficient distance should be left between the ends of the rails to allow for the expansion and contraction incident to variations in temperature. The shoulder C', while it will not permit this expansion, will, by resting against the standard at C, permit the slip of the rails in either direction.

Having fully explained the character of my improvements, what I claim as my invention, and seek to secure by Letters Patent, is—

A wrought-iron chair constructed in one piece, substantially as set forth, in combination with a rail notched in the manner and for the purpose set forth.

J. W. SUTHERLAND.

Attest:

E. O. FRINK,  
GEO. C. BROOKS.