

No. 771,287.

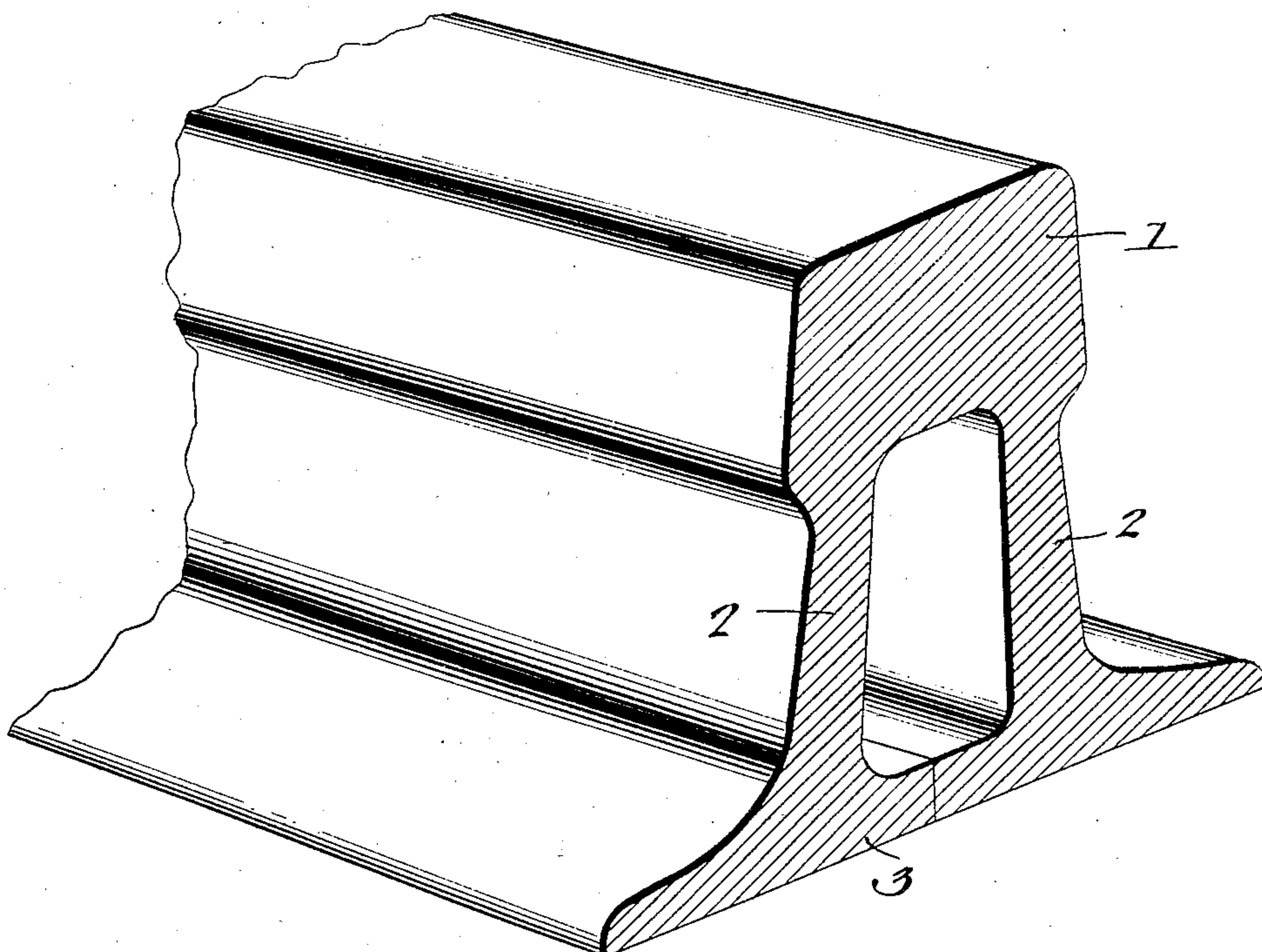
PATENTED OCT. 4, 1904.

L. J. WAGNER.

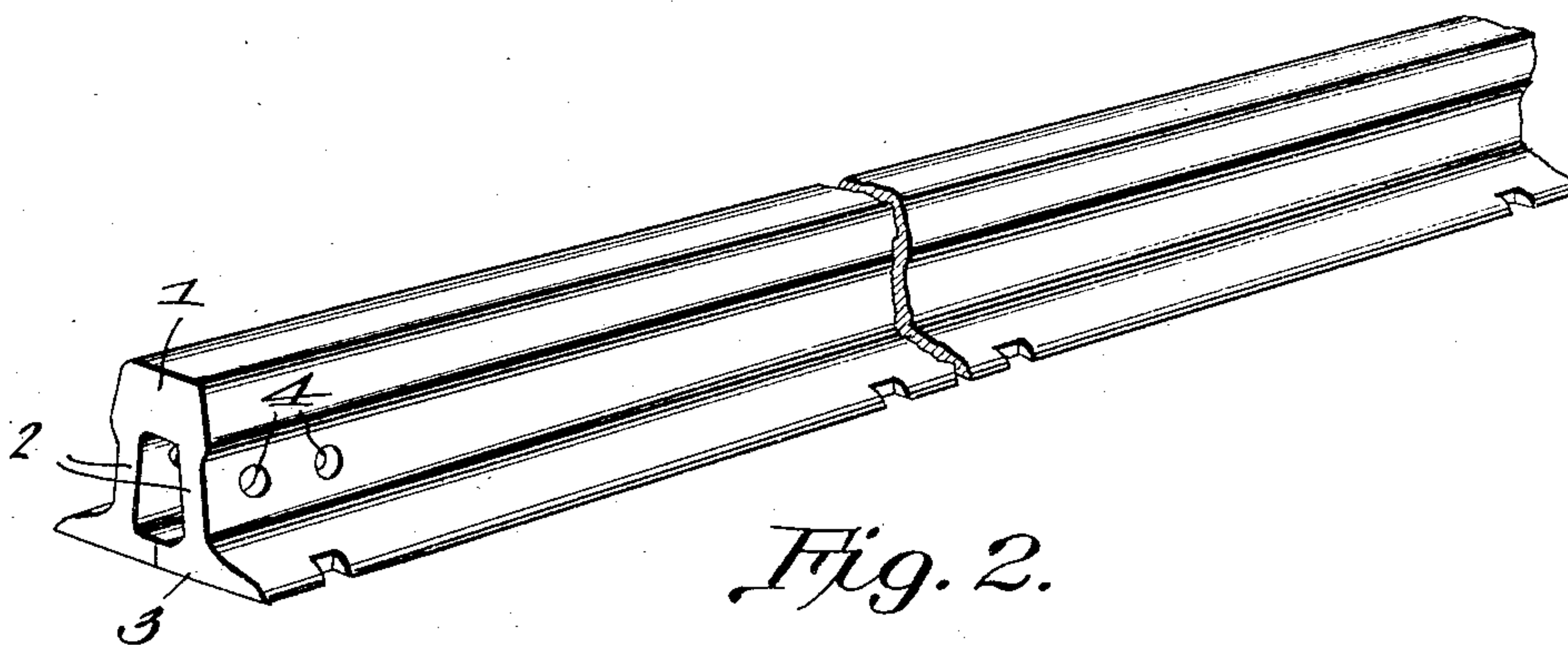
RAIL.

APPLICATION FILED JUNE 7, 1904.

NO MODEL.



*Fig. 1.*



*Fig. 2.*

Witnesses

*E. H. Stewart*  
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# UNITED STATES PATENT OFFICE.

LEO J. WAGNER, OF SHARPSBURG, PENNSYLVANIA.

## RAIL.

SPECIFICATION forming part of Letters Patent No. 771,287, dated October 4, 1904.

Application filed June 7, 1904. Serial No. 211,516. (No model.)

*To all whom it may concern:*

Be it known that I, LEO J. WAGNER, a citizen of the United States, residing at Sharpsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Rail, of which the following is a specification.

This invention relates to rails for use in connection with steam and street railways, and has for its principal object to provide a novel form of rolled metal rail which will be much stronger, weight for weight, than the rails in ordinary use and which may be laid at less expense and in much less time than is now required in the building of railway-lines.

A further object of the invention is to provide a rail which after being laid may be maintained at a very small expense.

A still further object of the invention is to provide a hollow rolled metal rail which may, if necessary, be employed as a conduit for current-conducting wires or for other purposes and, further, is of such character as to facilitate the joining of rail-sections.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in the novel construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a sectional perspective view of a rail constructed in accordance with the invention. Fig. 2 is a detail perspective view of one end of a rail, illustrating the arrangement of the rivet-openings and spike-receiving notches.

Similar numerals of reference are employed to indicate corresponding parts throughout both figures of the drawings.

In carrying out the present invention all of the advantages of the standard rails are retained, while the metal is so distributed that the rail is much stronger and more rigid than the usual solid rail. This is accomplished by making the rail hollow, the area of the opening being sufficient to form, if necessary, a conduit for current-conducting wires or for the passage of fluids.

The rail includes a head 1, a pair of parallel vertical web members 2, and a foot 3. At the foot the edges are brought closely together in the median vertical plane of the rail in such manner as to form a perfect closure and prevent the entrance of air or water and the resultant injury to the rail from oxidation.

The structure of the hollow rail is such as to facilitate the joining of the sections, one end of each section being provided with one or more openings 4 for the passage of screws, bolts, or rivets, which may be passed through a suitable rail-connecting tongue, while the opposite end of the rail forms a socket for the reception of such tongue, as fully disclosed and described in an application for Letters Patent filed by me on June 7, 1904, under Serial No. 211,517, it being unnecessary to rivet, bolt, or otherwise secure the tongue within such socket, the members being retained in proper relation by the ordinary spikes, which are driven through the notches 5 into the supporting-ties. In a railway formed of rails of this character the sections are free to expand and contract when exposed to varying climatic conditions and, owing to their structure and the securing means, may be laid more rapidly and at less expense than the ordinary rail, while the distribution of the metal is such as to materially strengthen the rail without a corresponding increase in its weight and cost of manufacture. A further advantage in the use of this rail is that owing to the absence of fish plates and bolts the subsequent cost of manufacture is materially reduced.

Having thus described the invention, what is claimed is—

A hollow rail having a head, a pair of spaced approximately vertical webs, and a foot formed by flanges projecting from each side of the lower edge of each web, the inner flanges having vertical walls in close contact and forming in connection with the outer flanges a continuous and extensive base for the rail.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LEO J. WAGNER.

Witnesses:

J. H. JOCHUM, Jr.,  
J. ROSS COLHOUN.