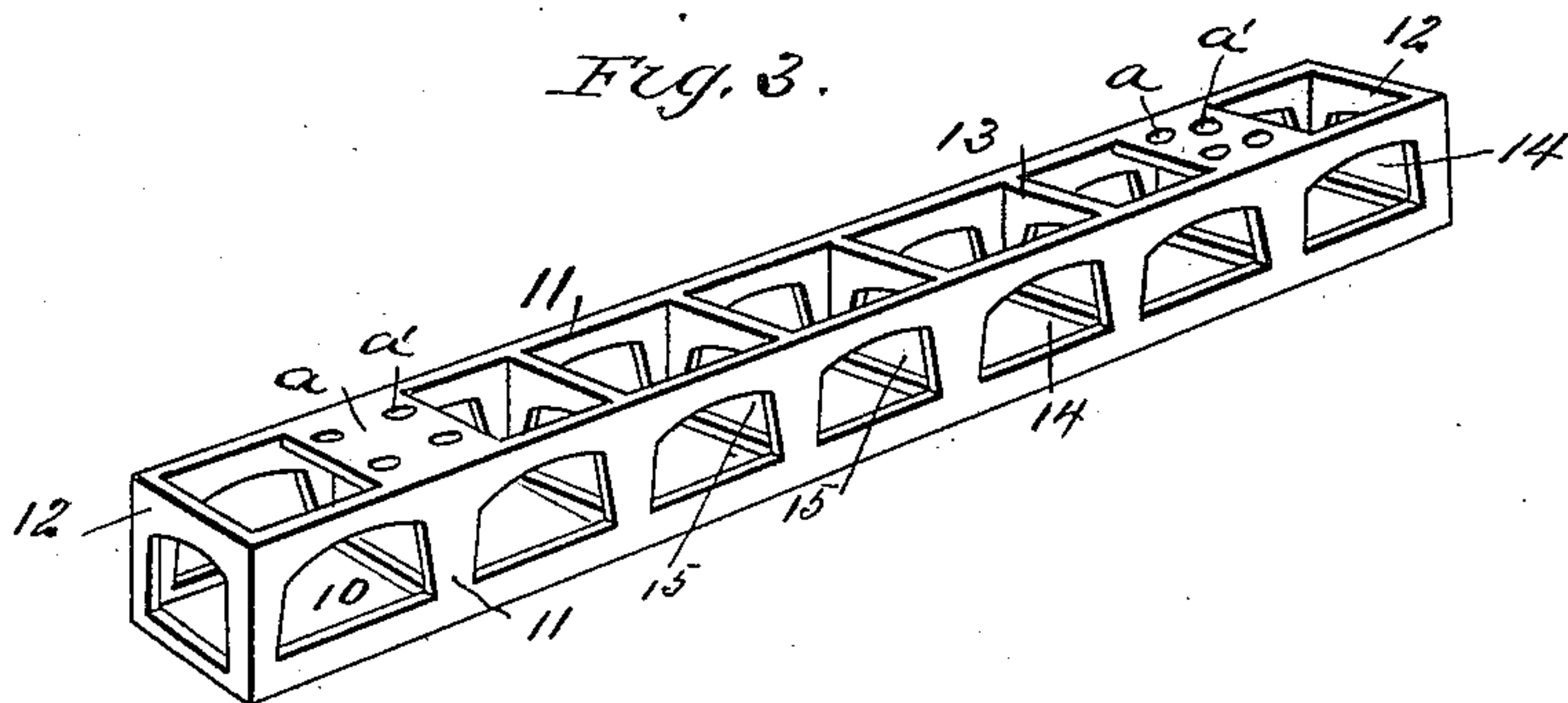
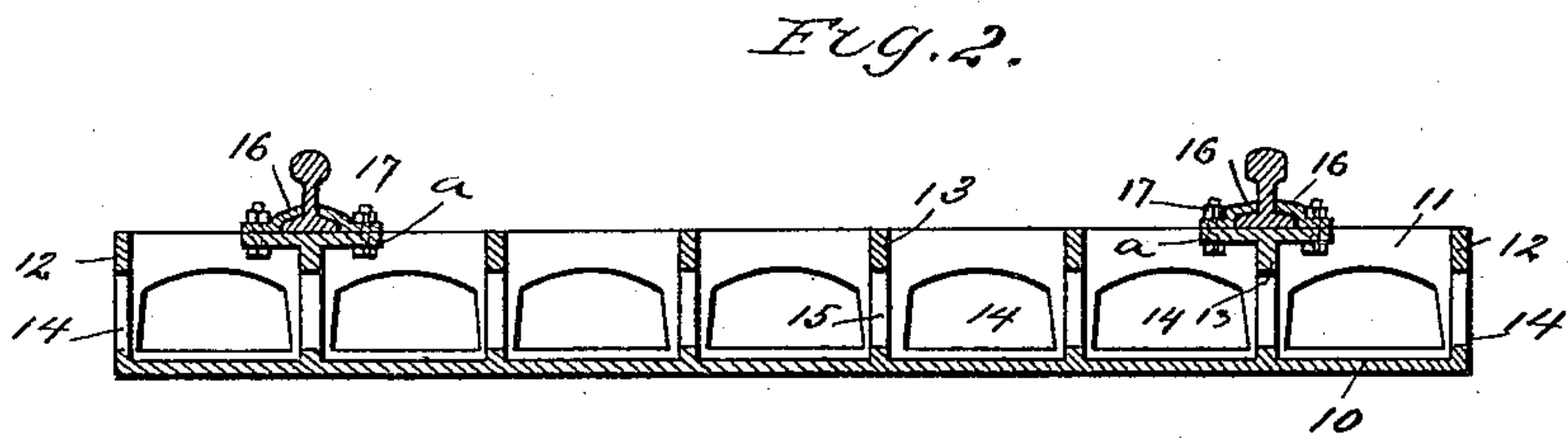
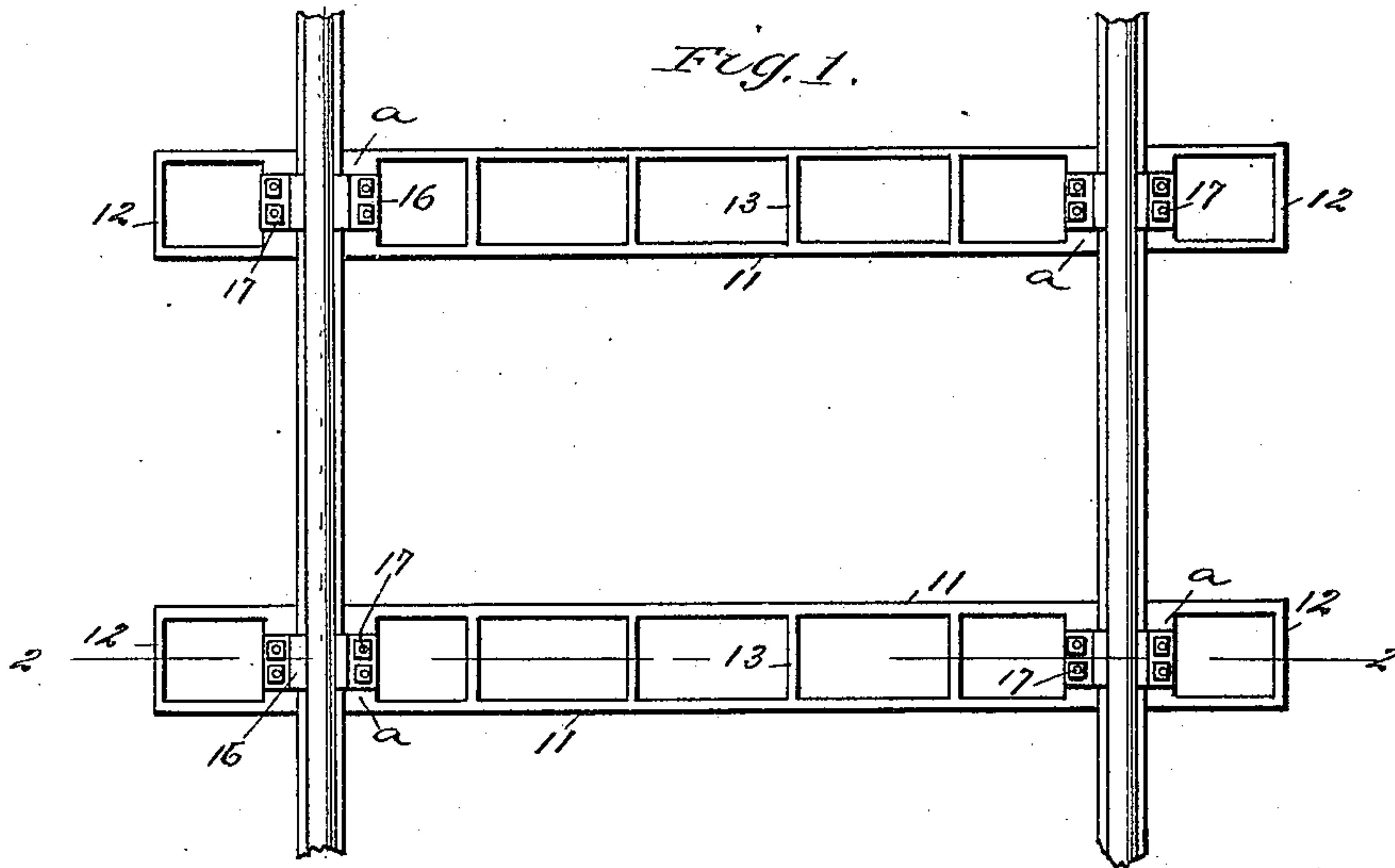


(No Model.)

J. C. WOLFE.  
RAILROAD TIE.

No. 464,054.

Patented Dec. 1, 1891.



WITNESSES:  
W. R. Davis.  
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# UNITED STATES PATENT OFFICE.

JACOB C. WOLFE, OF NEW YORK, N. Y., ASSIGNOR TO THE METAL BASE  
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## RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 464,054, dated December 1, 1891.

Application filed February 20, 1891. Serial No. 382,142. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB C. WOLFE, of New York city, in the county and State of New York, have invented a new and useful  
5 Improvement in Railroad-Ties, of which the following is a full, clear, and exact description.

My invention relates to an improved railroad-tie, and has for its object to provide a  
10 metal tie of simple and economic construction capable of being conveniently laid, and which will effectually support the rails and maintain them at their proper level.

The invention consists in the novel construction of the tie, as will be hereinafter fully  
15 set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference  
20 indicate corresponding parts in all the views.

Figure 1 is a plan view of two of the ties illustrating the rails as attached thereto. Fig. 2 is a horizontal section taken through one of  
25 the ties and a transverse section through the rails, the said section being taken upon the line 2 2 of Fig. 1; and Fig. 3 is a perspective view of a tie.

The tie is preferably made of cast metal,  
30 and comprises a bottom 10, sides 11, ends 12, and a series of interior transverse ribs or webs 13 connecting the sides. The top of the tie is not closed, and in the sides and ends a series of openings 14 is produced. The ribs or webs 13  
35 are located between the side openings, and the side openings are so placed that they are in transverse alignment. The ribs or webs 13 extend flush with the upper edges of the sides and ends, and each rib or web is preferably  
40 provided with one or more openings 15, said openings being of like character to the openings 14 in the sides and ends of the structure. The openings 14 in the webs or ribs 13, and  
45 likewise the openings in the sides and ends, are preferably made of less height than the height of the sides and of the webs, as is best shown in Fig. 3, whereby the structure is not

weakened at the connection of the webs, sides, and ends with the bottom. The upper  
faces of the ribs or webs adapted to support 50 the rails are provided with longitudinal heads or tables *a*, the said heads extending beyond the sides of the webs, whereby these particular webs are essentially T-shaped in cross-section, as illustrated in Fig. 2. The over-  
55 hanging portions of the tables *a* are preferably provided with bolt-apertures *a'*, and the rails being placed upon the tables of the supporting-webs are clamped thereto through the medium of fish-plates or bars 16, of any suit-  
60 able or approved construction, engaging with the base of the rail at opposite sides of its web, and maintained in such engagement by bolts 17 or their equivalents passed through the fish-plates or bars and the apertures *a'* in  
65 the supporting-tables, as is best shown in Figs. 1 and 2.

It will be observed that a tie constructed as above described is not only durable, but may  
70 be economically made and quickly adapted to any form of road-bed, and also that the rails will receive adequate support thereon.

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

1. A metal railroad-tie consisting of a solid  
bottom section, side and end sections provided with a series of openings therein, and web-  
sections also provided with openings and  
connecting the side sections, as and for the 80 purpose specified.

2. As an improved article of manufacture, a metal railroad-tie consisting of a bottom section, side and end sections having a series of openings therein, and web-sections connect-  
85 ing the side sections and located between the openings in the latter, sundry of the webs being provided with supporting-tables for the railroad-rails, as and for the purpose specified.

JACOB C. WOLFE.

Witnesses:

J. FRED. ACKER,  
E. M. CLARK.