No. 880,468. PATENTED FEB. 25, 1908.

A. J. ROBINSON.

BRACE FOR CONCRETE STRUCTURES.

APPLICATION FILED JUNE 27, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

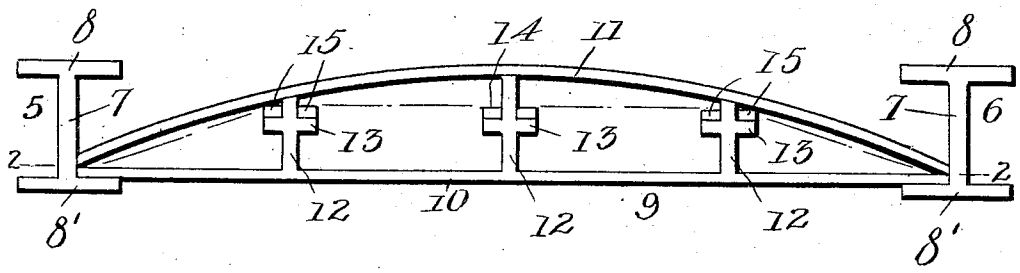


Fig. 3.

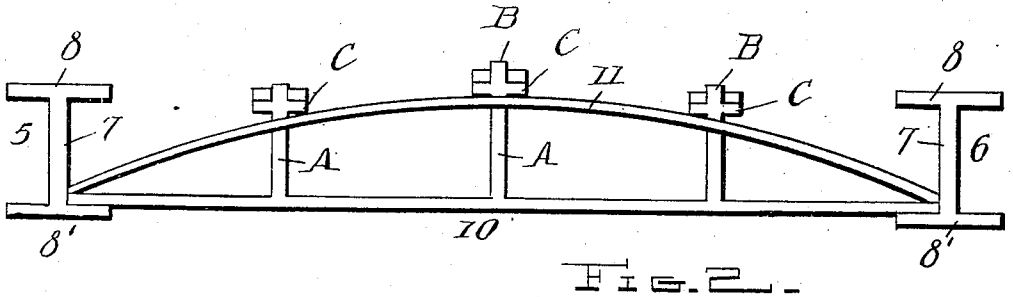
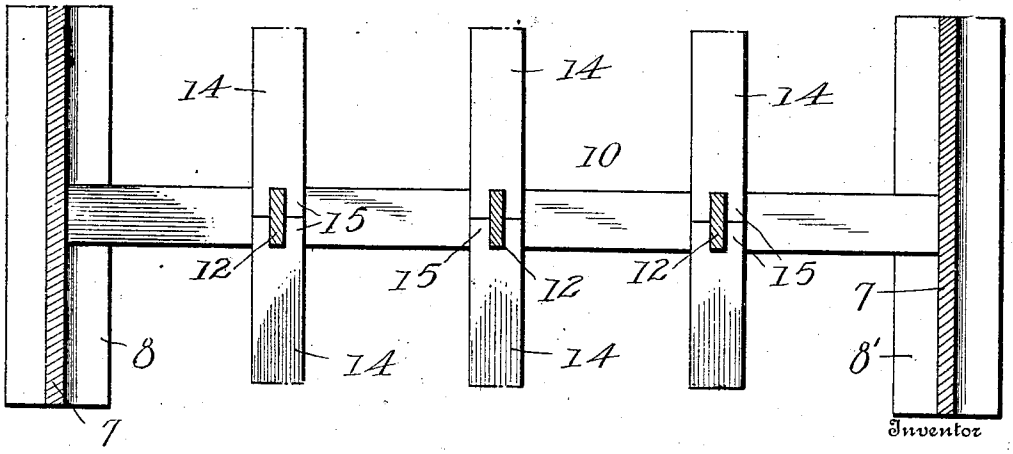


Fig. 2.



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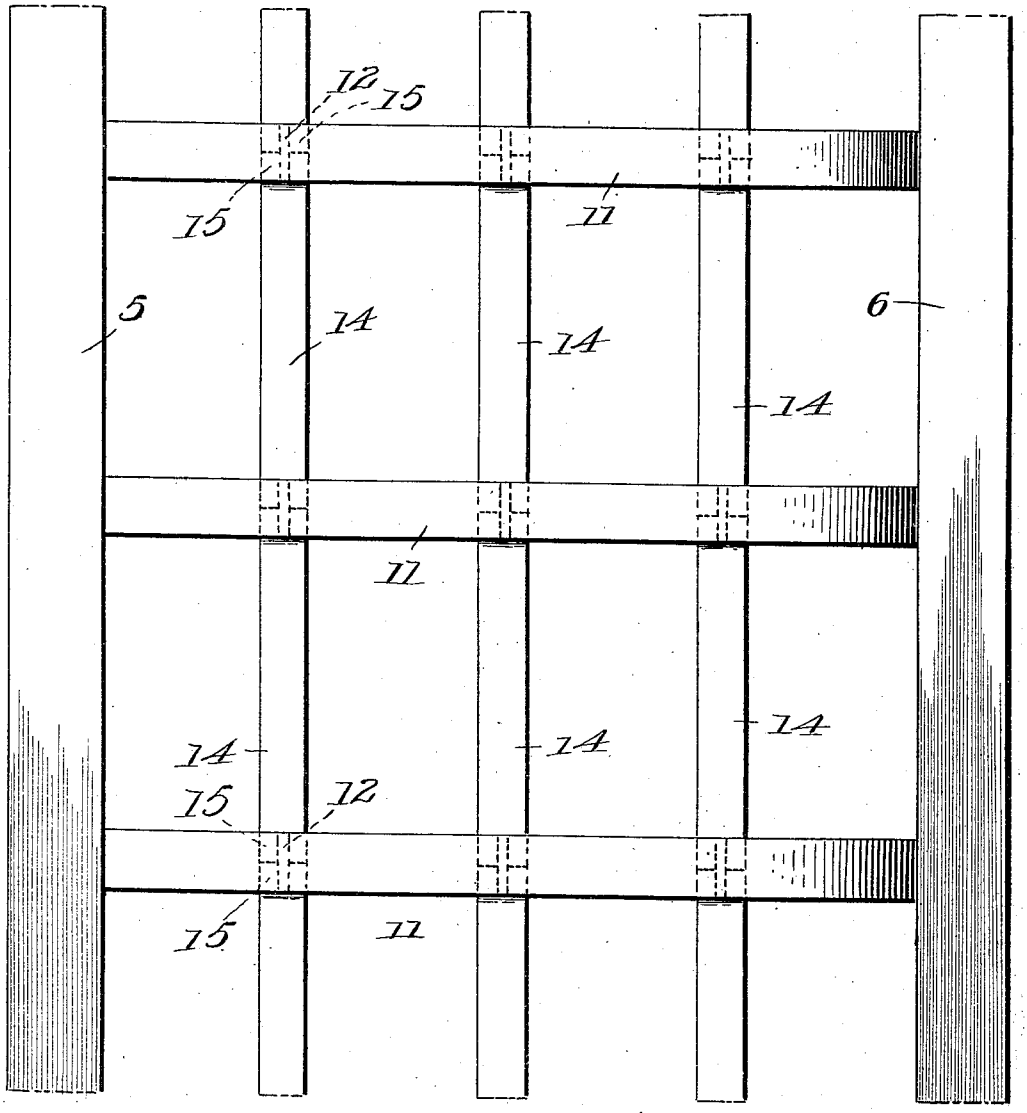
2 SHEETS—SHEET 2.

Fig. 4.



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UNITED STATES PATENT OFFICE.

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BRACE FOR CONCRETE STRUCTURES.

No. 880,468. Specification of Letters Patent. Patented Feb. 25, 1908.

Application filed June 27, 1907. Serial No. 381,097.

To all whom it may concern:

Be it known that I, ALBERT J. ROBINSON, citizen of the United States, residing at 1733 Johnson street, northwest, Washington, District of Columbia, have invented certain new and useful Improvements in Braces for Concrete Structures, of which the following is a specification.

This invention relates to braces, and more particularly to those for use in concrete structures, and has for its object to provide a brace of this kind adapted to be employed with I-beams of the usual type, to support the concrete therebetween, another object being to provide a simple and efficient brace system of the kind which may be readily installed at a relatively low cost.

Other objects and advantages will be apparent from the following description and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a transverse section of a concrete floor, the present brace being shown in elevation, Fig. 2 is a horizontal section on line 2—2 of Fig. 1, showing the bridge members in top plan, Fig. 3 is a detail view showing a modified form of the invention. Fig. 4 is a top plan view of two beams showing the cross braces and their connecting bridge pieces.

Referring now to the drawings, there are shown a pair of I-beams 5 and 6 including the usual webs 7 and top and bottom flanges 8 and 8′ respectively. Cross braces 9 are located between the I-beams, resting upon the base flanges 8′, and at their extremities against the webs 7. These braces each include a straight bottom member 10 and an upper upwardly curved member 11, secured at its ends to the ends of the bottom member and the two members are connected by a plurality of vertically extending rods 12 having oppositely disposed lateral projections 13 between their ends, which extend longitudinally of the brace.

The lateral projections 13 act as supports for the ends of bridge plates 14, which extend between the braces, these bridge plates having bifurcated ends and resultant space portions 15, as shown, which lie at opposite sides of the rods 12 and rest upon the projections 13. The bridge plates thus act to support the weight of concrete between the braces.

From the foregoing it will be seen that the structure is such as to support a relatively great weight of concrete, as there is provided what is in effect a truss structure, the tendency of the braces 9 to sag under such weight being offset by the pressure of the ends of the member 11 against the I-beams.

In Fig. 3 there is shown a brace including a bottom member 10, and upwardly curved member 11 connected by vertical members A. Above each of these vertical members, a projection B extends upwardly beyond the upper member 11, these projections carrying lateral fingers C, corresponding to the projections 13, and these fingers receive a bridge piece thereupon to support the latter. The weight of the bridge piece and concrete supported thereby is thus disposed upon the upper member 11, as will be readily understood.

It will be understood that the present structure may be embodied in braces of different kinds from the specific forms shown in the drawings.

What is claimed is:

1. The combination with spaced beams of braces between the beams, said braces including upper and lower members and connecting uprights, and bridge plates having bifurcated ends disposed with the uprights in their bifurcations, said bridge plates extending between the braces.

2. The combination with spaced beams, of braces located between the beams, said braces including vertical portions having lateral projections, and bridge plates having bifurcated ends and resultant spaced portions disposed between the braces with the vertical portions thereof in their bifurcations and with their spaced portions upon the projections.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT J. ROBINSON.

Witnesses:

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