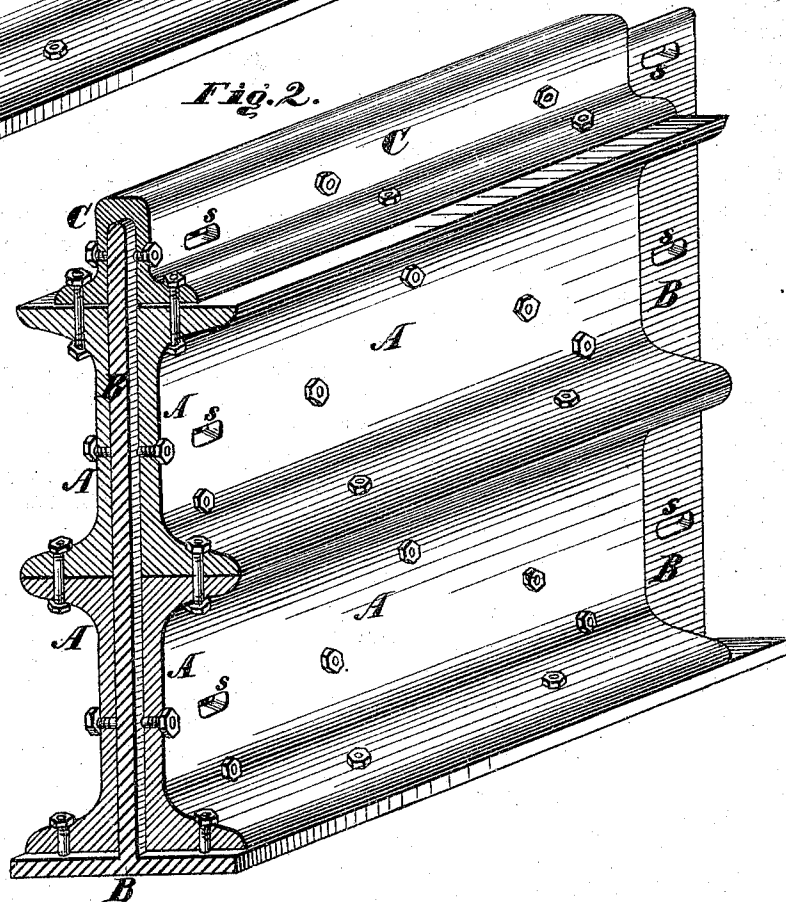
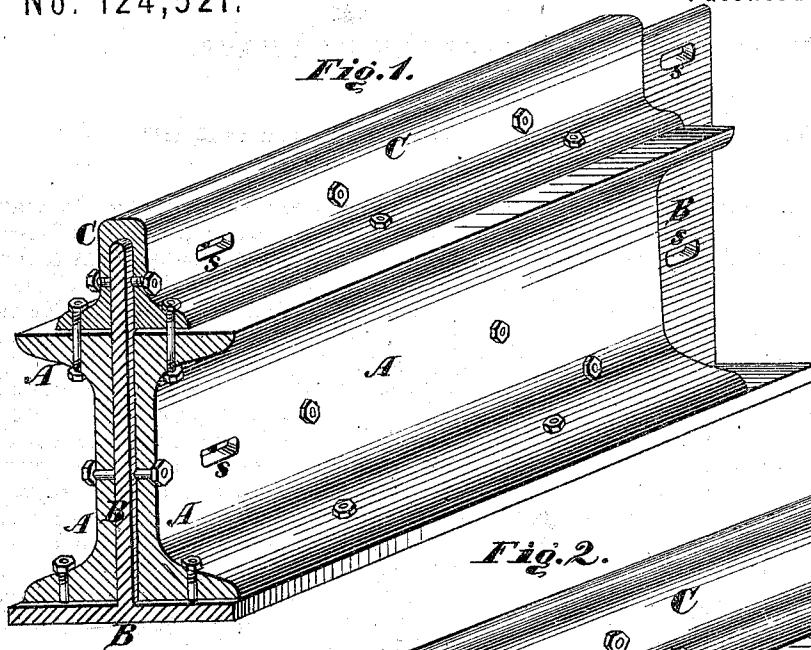


R. M. UPJOHN.

Improvement in Girders for Railways.

No. 124,521.

Patented March 12, 1872.



Witnesses:
Arthur Brooks,
S. S. Raman.

Inventor:
Richard M. Upjohn.

UNITED STATES PATENT OFFICE.

RICHARD M. UPJOHN, OF NEW YORK, N. Y.

IMPROVEMENT IN GIRDERS FOR RAILWAYS.

Specification forming part of Letters Patent No. 124,521, dated March 12, 1872.

Specification describing Combination Girder and Railway Track, invented by RICHARD M. UPJOHN, of the city, county, and State of New York.

This invention relates to a new form of girders and supports for elevated and other railway tracks; and consists in the mode of constructing the same, as hereinafter fully described and as specifically indicated in the claims.

In carrying out my invention, I employ inverted T-beams B and channel-beams A, as shown in the accompanying drawing, and I form them of wrought-iron, steel, or any other suitable metal. The channel-beams may form one or more stories, according to the purpose or use which the girder is to subserve, and are placed on opposite sides of the vertical part of the T-beams, so that the lower flanges of the beams A rest on and are bolted to the base of the said T-beams B, while their upper flanges are bolted to those of the beams resting on them, and so on. The several opposite beams A are bolted together through the vertical part of B, so that all are firmly bound together.

The girder thus formed may be used in all positions, from a vertical to a horizontal, and for any purpose for which girders are employed, the size and weight of parts being varied to suit the conditions of location, &c. The girder is, however, specially adapted to form a support

for the track of an elevated railway. In adapting it to this use the vertical part of the T-beam is extended above the beams A, so as to form a ridge, and an inverted U-shaped rail, C, is laid or fitted on the same, as shown. The rail C is bolted to the beams A and the T-beam in a suitable manner.

The usual provision of slots S is made in each length of girder, to permit the bolts to slide, for the expansion and contraction of the beams. I also propose to employ iron plates or tarred felt, sheet-lead, or any other suitable material, for the purpose of preventing the transmission of sound from the girder when cars are passing over the track.

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

1. The improved combination girder formed of the inverted T-beams B and channel-beams A, arranged substantially in the manner shown and described.

2. The rails C, inverted T-beams B B and channel-beams A A, arranged and secured together, as shown and described, to form an improved elevated railway, as set forth.

RICHARD M. UPJOHN.

Witnesses:

ARTHUR CROOKS,
S. S. BEMAN.