(No Model.)

M. F. X. FOLEY.

METALLIC TROUGH FLOOR.

No. 568,436. Patented Sept. 29, 1896.

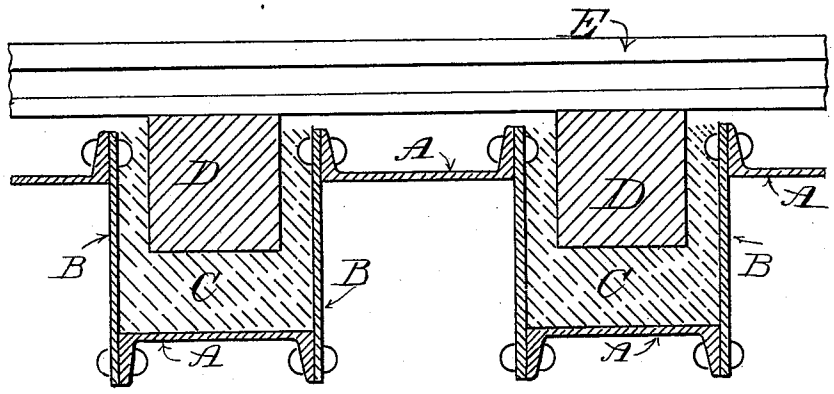

Fig. 1

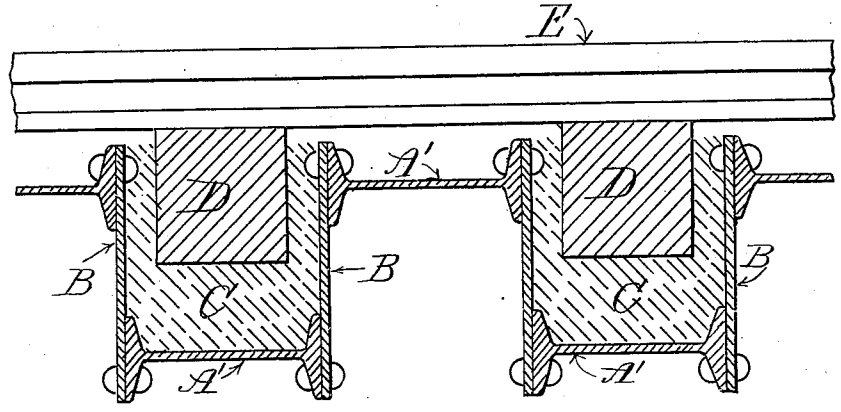

Fig. 2

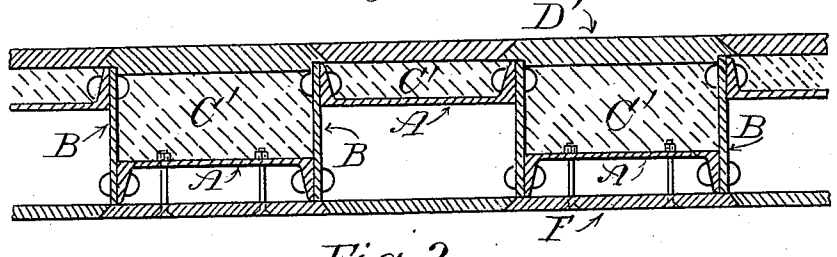

Fig. 3

Witnesses
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UNITED STATES PATENT OFFICE.

MICHAEL F. X. FOLEY, OF PHILADELPHIA, PENNSYLVANIA.

METALLIC TROUGH FLOOR.

SPECIFICATION forming part of Letters Patent No. 568,436, dated September 29, 1896.

Application filed January 7, 1896. Serial No. 574,581. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL F. X. FOLEY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Trough Floors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to metal trough floors for bridges and large buildings; and the objects of my improvement are, first, to economically construct a strong and substantial floor from standard sizes and shapes of iron or steel that are always carried in stock by the manufacturers; second, to make a floor that can be constructed at the shop in sections and riveted by machinery.

To accomplish the desired result, I construct the floor of channel or I beams and flat plates joined together in the manner hereinafter described.

In the accompanying drawings, Figure 1 represents a vertical cross-section of the floor of a railroad-bridge having therein my improved trough flooring made by combining channel-beams and flat plates. Fig. 2 is a section of a railroad-bridge having the trough flooring constructed of I-beams and flat plates. Fig. 3 is a vertical cross-section of a floor in a building.

A A represent iron or steel channel-beams of the ordinary pattern and of any convenient size.

B B are flat iron or steel plates riveted to the channel or I beams at right angles thereto.

C C is the ballast placed in the troughs formed by the union of the plates and beams.

D D are the railroad cross-ties.

E is a section of the railroad-rail.

A′ A′ in Fig. 2 represent the I-beams used in place of the channel-beams shown in Fig. 1.

C′ represents the concrete or other material used to fill in when constructing the floor in a building.

D′ is the ordinary floor in a building.

F is the ceiling secured to the trough floor by bolting or any other convenient means.

When the floors are made by joining together channel or I beams and flat plates in the manner herein described, the sections that are put together at the shop can have all the riveting done by machinery, the only hand-riveting required being that necessary to join the several sections when they are placed in position on the bridge or other structure. The hand-riveting connecting the sections of the floor can be easily and quickly done, as the riveter and his helper are close together, each man being able to see what is required of him and in a position to work advantageously.

If the floors are intended to carry heavy weights, instead of the channel-beams A the I-beams A′ may be used.

Having thus described my invention, what I claim as new, is—

1. In a metallic floor the combination of the trough-shaped beams substantially as described, with plates connecting said beams and secured thereto along both edges thereof to the outwardly-projecting flanges on the beams in such positions as to permit the gripping and riveting of the flange and plate by a riveting-machine, as and for the purpose set forth.

2. A metallic trough floor composed of a series of flanged beams and flat plates joined together, the said beams being fastened to the edges of the plates in such a position that the flanges through which the rivets are driven project outwardly and allow the said flanges and plates to be gripped by a riveting-machine, substantially as shown and for the purpose described.

3. In a metallic trough floor the combination of the I-beams A′, with flat plates B, the flat plates being riveted along both edges thereof to the outer flanges on the I-beams, substantially as shown.

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

MICHAEL F. X. FOLEY.

Witnesses:
THOS. D. MOWLDS,
SAML. A. KIRKPATRICK.