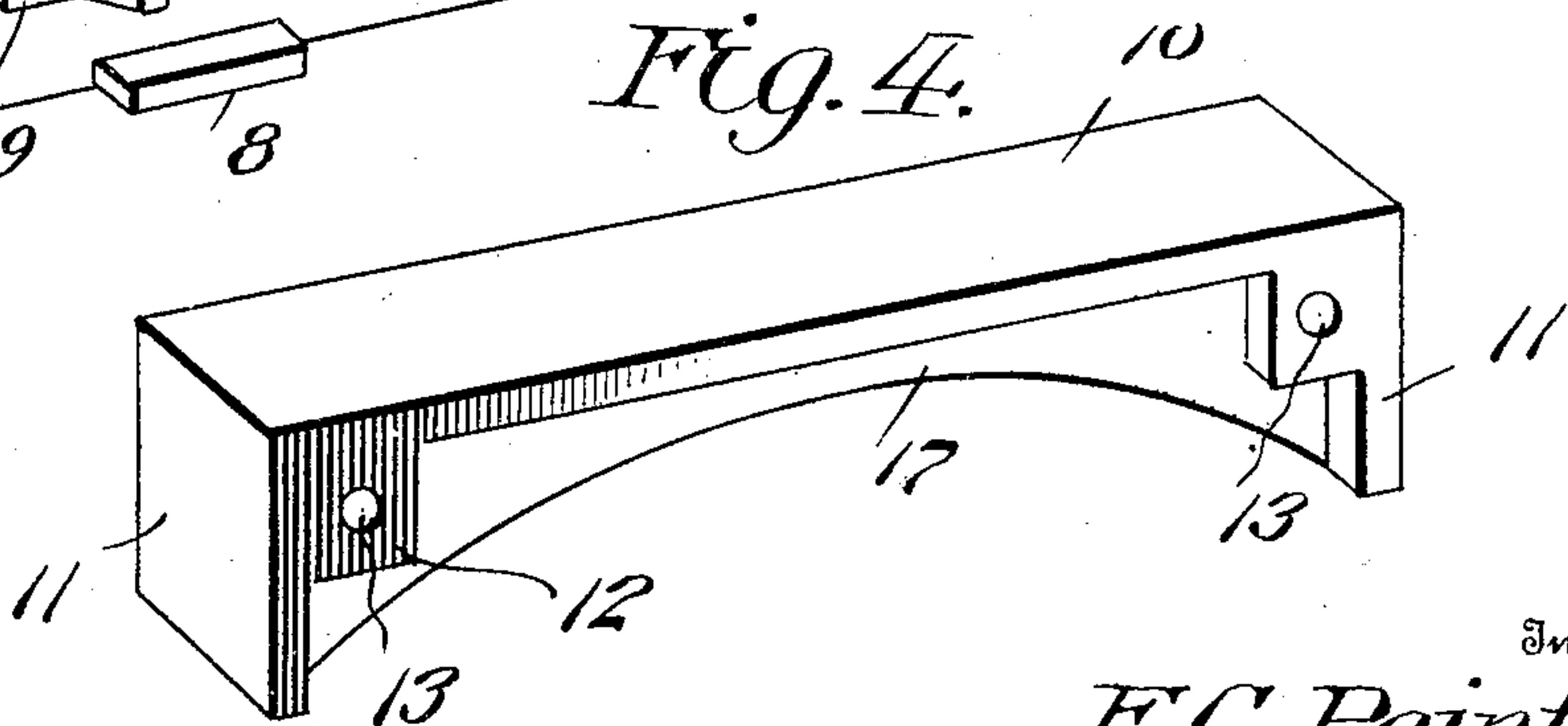
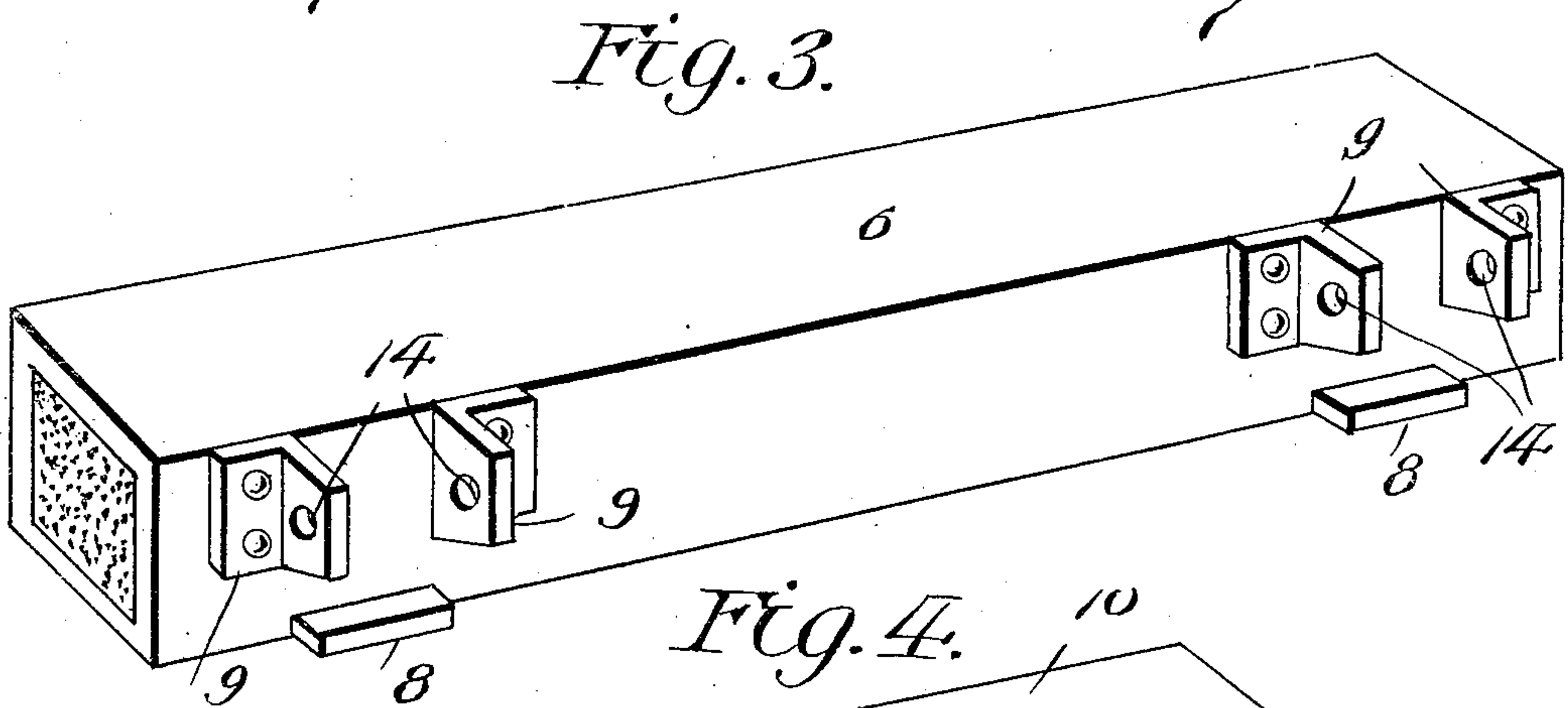
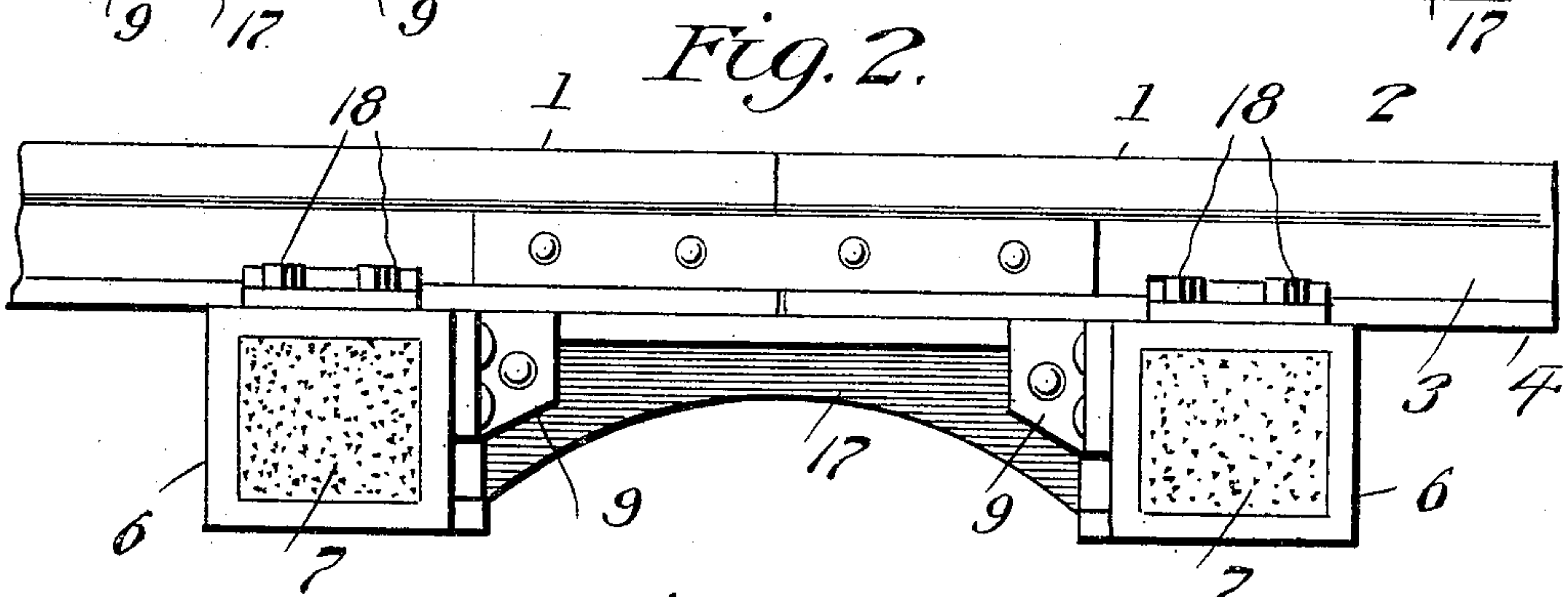
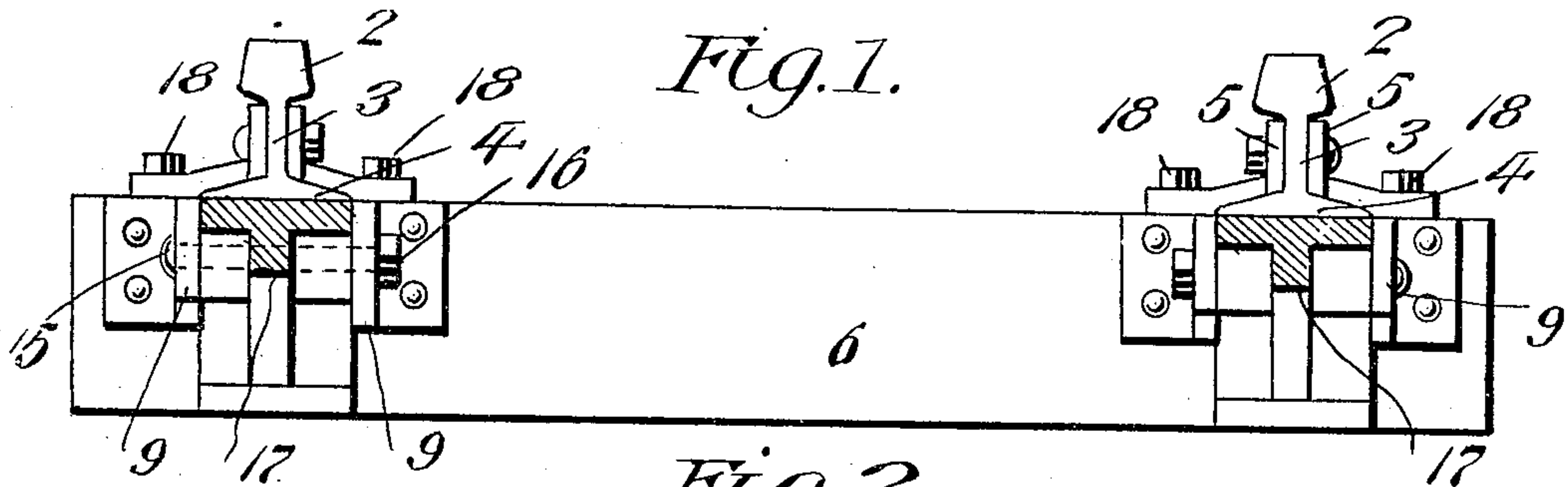


No. 809,214.

PATENTED JAN. 2, 1906.

F. C. PAINTER.
RAIL SUPPORT.

APPLICATION FILED SEPT. 2, 1905.



Witnesses
Geo. Ackmann
John F. Byrne

Inventor
F. C. Painter,
By *Victor J. Evans.*
Attorney

UNITED STATES PATENT OFFICE.

FRANK C. PAINTER, OF OSMAN, ILLINOIS.

RAIL-SUPPORT.

No. 809,214.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed September 2, 1905. Serial No. 276,817.

To all whom it may concern:

Be it known that I, FRANK C. PAINTER, stonemason, a citizen of the United States, residing at Osman, in the county of McLean and State of Illinois, have invented new and useful Improvements in Rail-Supports, of which the following is a specification.

My invention relates to rail-supports; and its primary object is to provide a novel and highly-useful rail-tie and bridge-piece constructed to permit the joints of rails being supported in the same transverse plane and not alternately, as is the common practice, and which results when the joints sag in permitting the rails to be depressed under the weight of a moving train at alternate points, and consequently causing the train to rock from one side to the other.

With the above and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter fully described, claimed, and illustrated in the accompanying drawings, wherein—

Figure 1 is a transverse sectional view through a railway-joint supported in accordance with my invention. Fig. 2 is a side elevational view thereof. Fig. 3 is a detail perspective view of one of the ties, and Fig. 4 is a detail perspective view of one of the bridge-pieces.

Referring to the drawings by reference-numerals, 1 designates the ends of two railway-rails, the same being provided with the usual form of tread 2, web 3, and base 4 and united by fish-plates 5.

The rails are supported by my improved metallic ties 6, which are constructed from any suitable metal and are hollow throughout their entire lengths to receive cores 7 of concrete. The inner opposing faces of two ties adjacent the meeting ends of the rails are provided with supporting-plates 8 and securing-brackets 9, said brackets being spaced apart and arranged above the plates 8. The bridge-piece 10 is supported by the plates 8 and firmly held in position by the brackets 9, the latter serving also through their connection with the bridge-piece 10 to prevent the spreading of the ties 6. The bridge-piece is constructed of some suitable material, and the upper face thereof is of a width equal to that of the bases 4 of the rails, whereby to provide ample bearing-surface therefor. The ends of the bridge-piece 10 are bent downwardly to provide downturned flanges 11, the lower ends of which

rest upon the plates 8 and are of a height sufficient to support the upper face of the base-plate 10 in alinement with the upper faces of the ties 6. The inner opposing faces of the downturned flanges 11 are provided with inwardly-directed projections 12, these projections having openings 13, which aline with openings 14 in the brackets 9 to permit of the passage of bolts therethrough to secure the bridge-piece in applied position and prevent the spreading of the ties 6. Nuts 16 are mounted upon the threaded ends of the bolts 15. As the bridge-piece 10 extends across the space between the ties 6, the horizontal portion thereof needs strengthening, and to strengthen the same to have the desired rigidity I have secured to the under side thereof a strengthening-rib 17, the under side of which is curved on the arc of the circle, whereby to provide the maximum strength from the use of a minimum amount of material. The ends of the strengthening-rib 17 are formed integral with the flanges 11, whereby to add the desired rigidity thereto. The rails 1 1 are secured to the ties 6 by means of bolts passing therethrough and projecting up through the lateral projected portions of the fish-plates of the bolts 5, said projecting portion of the bolts being provided with nuts 18.

It is the purpose of my invention to position the joints of the rails intermediate two ties and in transverse alinement, and it is apparent that the joints may be supported against sagging by means of the construction of the tie and bridge-piece just set forth. In view of the fact that the joints may be supported against sagging the pounding incident to sagging is thus avoided.

It is apparent from the above description, taken in connection with the accompanying drawings, that I provide rail-ties and bridge-pieces wherein the bridge-piece serves the dual function of supporting the joints against sagging and of retaining the ties against lateral spreading and that they may be manufactured and sold at a comparatively low cost.

Changes in the form, proportions, and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

Having fully described and illustrated my invention, what I claim is—

1. The combination of the meeting ends of

two railway-rails, ties for supporting the same, said ties being provided with supporting-plates and securing-brackets, and a bridge-piece adapted to be supported by said plates and secured in position by means of said brackets.

2. The combination of the meeting ends of two railway-rails, ties for supporting the same, said ties being provided with supporting-plates and angular securing-brackets, and a bridge-piece adapted to be supported by said plates and secured in position by said brackets.

3. The combination of the meeting ends of two railway-rails, ties for supporting the same, said ties being provided with supporting-plates and securing-brackets, a bridge-piece provided with downturned flanges adapted to rest upon said plate, and means for engaging the bridge-piece and said brackets.

4. The combination of the meeting ends of two railway-rails, ties for supporting the same, said ties being provided with supporting-plates and securing-brackets, a bridge-piece provided with downturned flanges adapted to rest upon said plates and with arcuate strengthening-ribs, and means passing

through the bridge-piece and said brackets to secure the bridge-piece in position.

5. The combination of the meeting ends of two railway-rails, ties for supporting the same, said ties being provided with plates and securing-brackets, a bridge-piece having downturned flanges to rest upon said brackets, and projections, means passing through said projections and brackets to secure the bridge-piece in position, and an arcuate-shaped strengthening-rib secured to the bridge-piece and said downturned flanges.

6. The combination of the meeting ends of two railway-rails, metallic ties for supporting the same, said ties having formed integral supporting-plates and attached thereto supporting-brackets, cores of concrete for the ties, and a bridge-piece supported by said plates and secured in applied position by said brackets.

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

FRANK C. PAINTER.

Witnesses:

VIRGIL E. JAYNE,
H. F. HELMICH.