

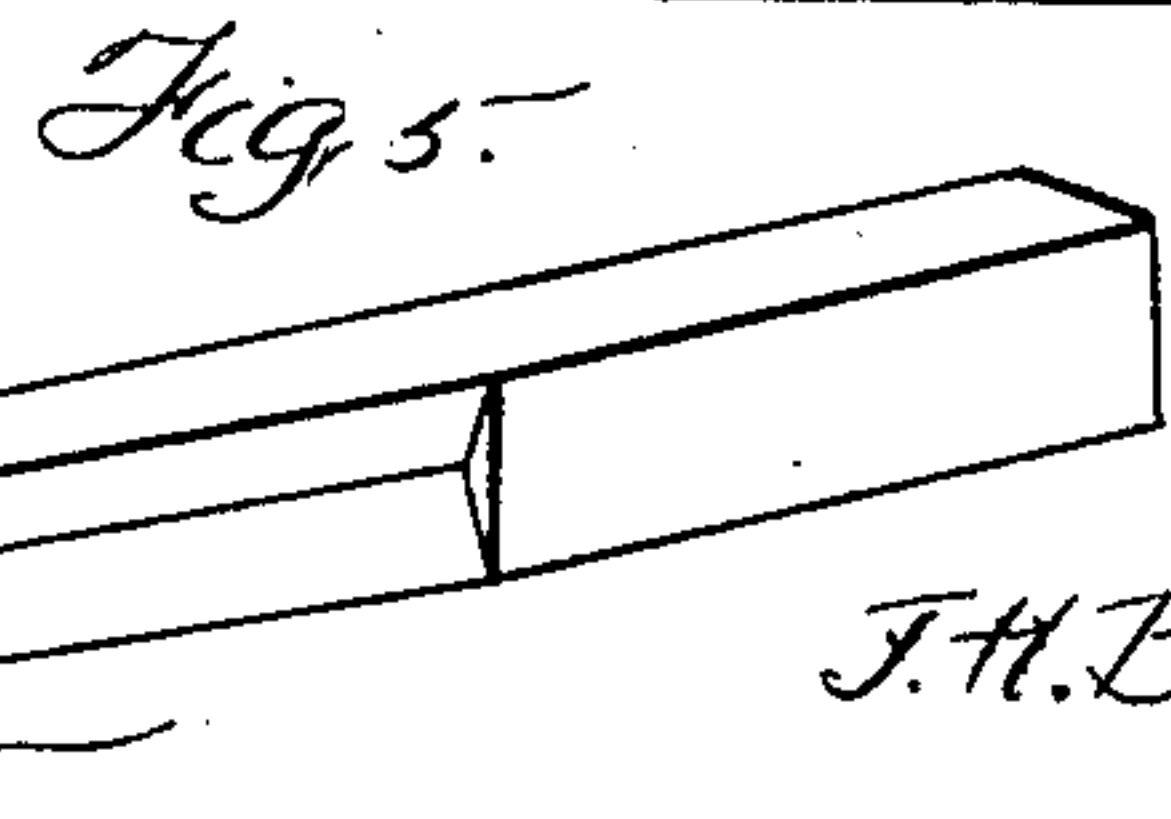
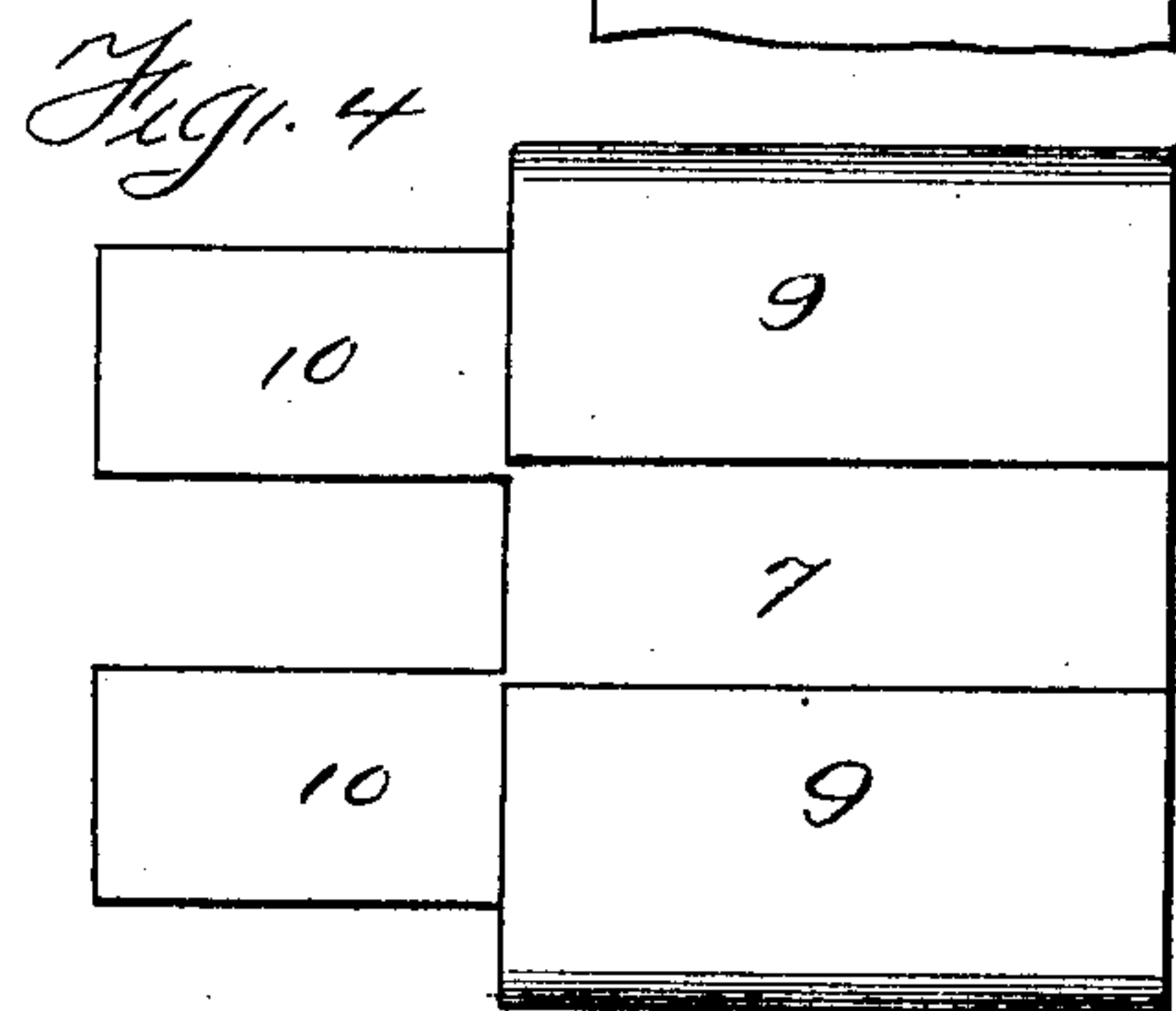
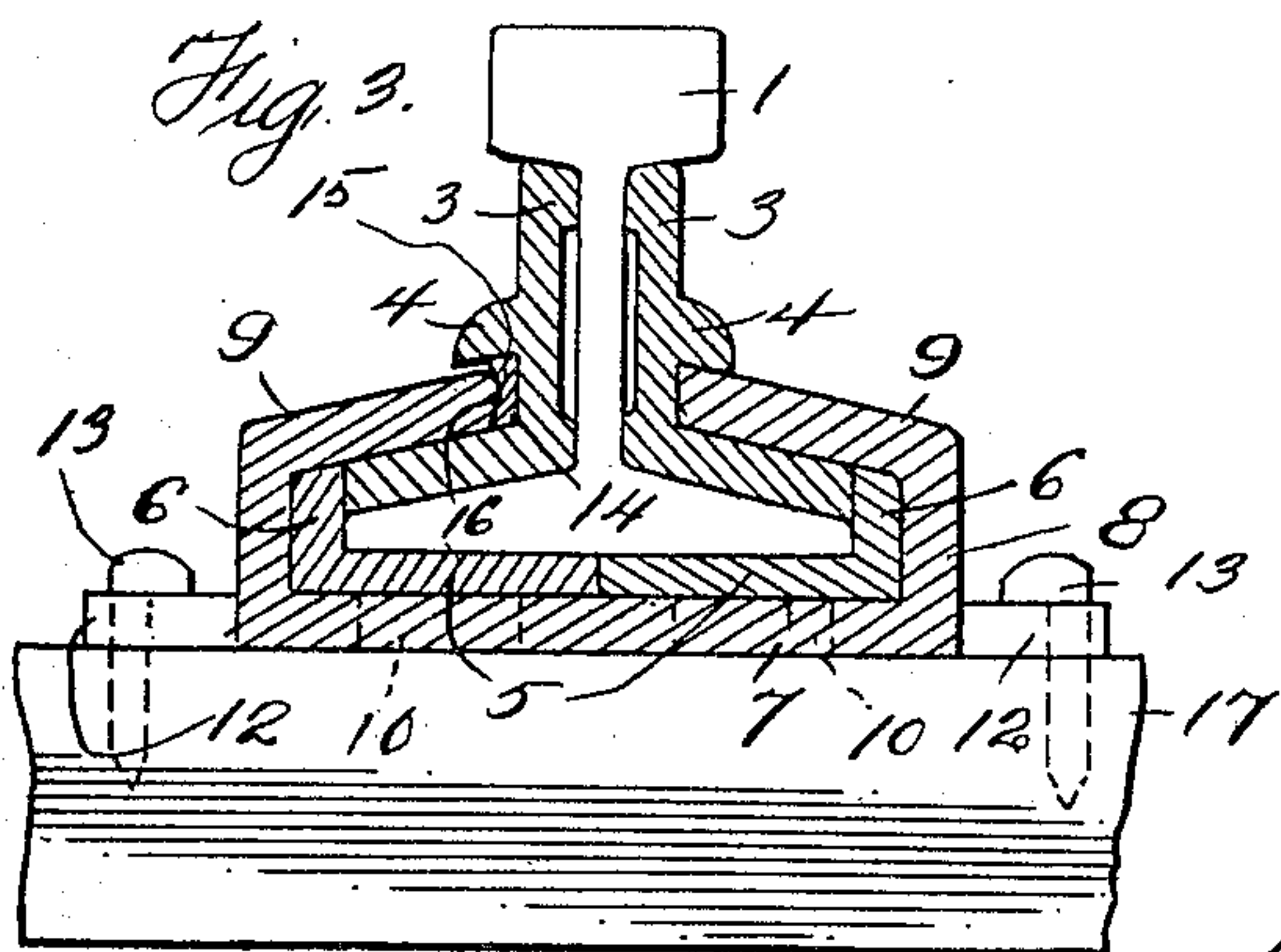
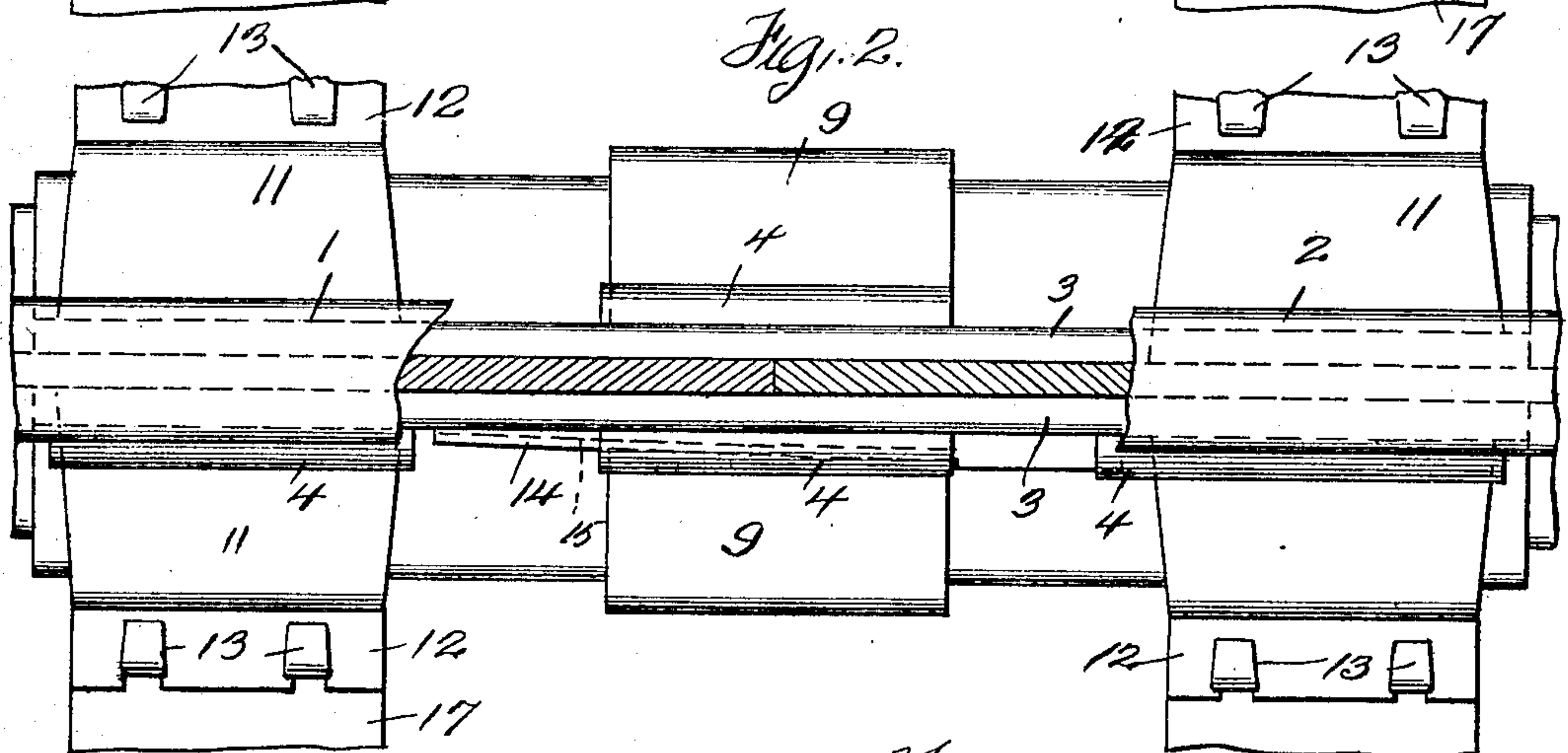
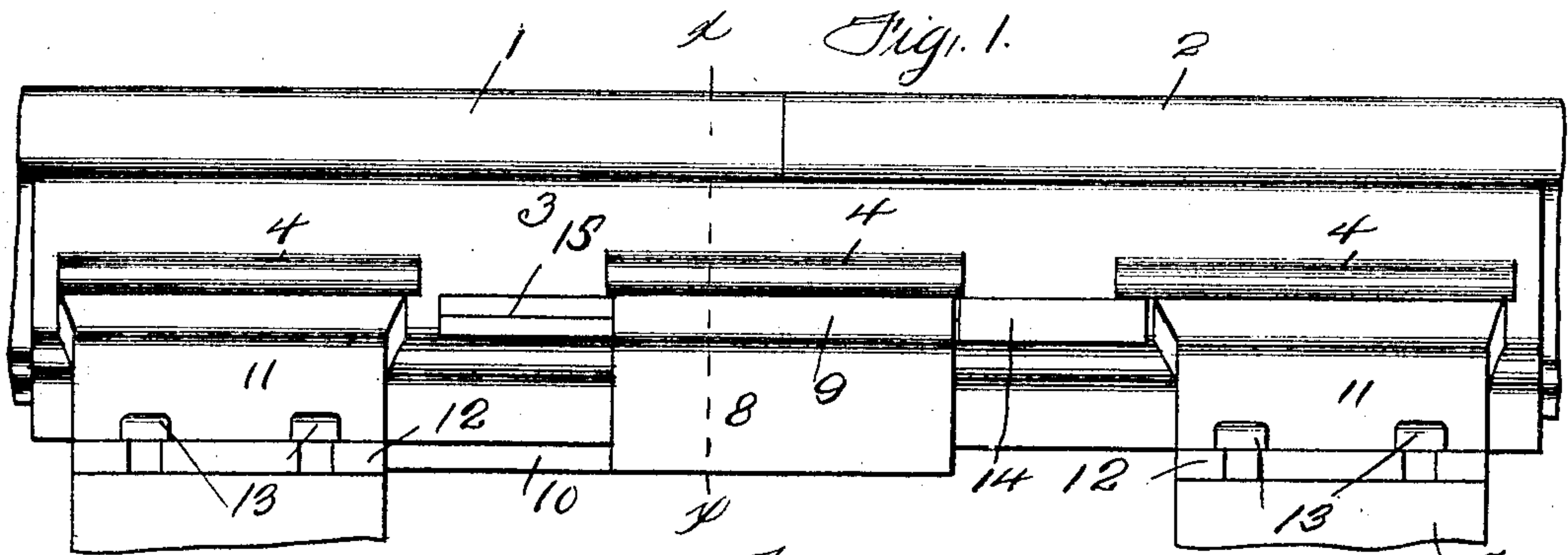
No. 885,423.

PATENTED APR. 21, 1908.

J. H. BARNHART.

RAIL JOINT.

APPLICATION FILED AUG. 31, 1907.



Witnesses

Samuel Payne.  
T. S. Bryant.

Inventor

J. H. Barnhart.

By

H. C. Sweet & Co.

Attorneys.



# UNITED STATES PATENT OFFICE.

JAMES H. BARNHART, OF EMPIRE, OHIO.

## RAIL-JOINT.

No. 885,423.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed August 31, 1907. Serial No. 390,905.

*To all whom it may concern:*

Be it known that I, JAMES HENRY BARNHART, a citizen of the United States of America, residing at Empire, in the county of Jefferson and State of Ohio, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to rail joints, and its object is, to provide novel and effective means for connecting the meeting ends of rail-way rails.

15 The invention consists of a chair embracing the rails at their juncture, and provided with projecting arms and supplemental chairs arranged adjacent to the joint chairs in combination with fish bars of special form, and means for securing the joint chair against 20 displacement.

The combination of the improvement will be fully described hereinafter, in connection with the accompanying drawing which forms a part of this specification, and its novel 25 features will be defined in the appended claims.

In the drawing;—Figure 1 is a side elevation of a rail-joint embodying the invention, Fig. 2 is a top plan view of the same with a 30 portion of the treads of the rails broken away, Fig. 3 is a section on the line  $x-x$  of Fig. 1, Fig. 4 is a top plan view of the central or joint chair detached and, Fig. 5 is a perspective view of the wedge key employed to 35 secure the central chair.

The reference numerals 1 and 2 designate the ends of the rails to opposite sides of which are applied fish-bars 3 formed at their outer sides with longitudinally disposed flanges 4, 40 said flanges being beveled on their under sides.

The rails 1 and 2 are supported upon oppositely disposed angle plates 5 the vertical sides 6 of which embrace the edges of the 45 fish-bars and rail bases as shown in Fig. 3.

The central or joint chair comprises a single casting having a base 7, vertical sides 8 and inwardly extending flanges 9 overlapping the fish bars and fitting below the adjacent flanges 4 of the fish bars. Projecting 50 from the base 7 of the chair are two parallel arms 10 adapted to bear against one of the

supplemental chairs hereinafter described to prevent movement of the joint chair in one direction. On either side of the central 55 chair is a supplemental chair 11 similar to the central chair but provided with lateral extensions 12 formed with openings to receive spikes 13. The contact of the arms 10 with the adjacent supplemental chair 11 prevents longitudinal movement of the joint 60 chair in one direction, and to secure it against movement in the opposite direction I employ a wedge key 14 formed on one side with a V-shaped groove 15 for a part of its 65 length. This key is driven into the space between one flange 9 of the joint chair and the adjacent fish-bar below the flange 4, the edge 16 of said flange being shaped to fit the groove of the key. The two supplemental 70 chairs are securely spiked to the ties 17 and as above stated the central chair is firmly held against movement in either direction thus insuring a firm and reliable connection 75 of the rails.

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

1. The combination with the meeting ends 80 of railway rails, of a chair embracing the rails and provided with projecting arms, fish bars provided with longitudinally-disposed flanges positioned against the webs and base of the rails and having portions thereof embraced by said chair, said fish bars provided 85 with longitudinally-disposed flanges, supplemental chairs adapted to be spiked to the railway ties on opposite sides of the first mentioned chair, and one of said supplemental chairs abutting against the arms of the 90 first mentioned chair, and a wedge-shaped key formed with a longitudinal groove and positioned between one edge of the joint chair and a fish bar below the flange of the latter, the said edge being shaped to receive 95 said groove.

2. The combination with the meeting ends 100 of railway rails, of a chair embracing the rails and provided with projecting arms, fish bars provided with longitudinally-disposed flanges positioned against the webs and base of the rails and having portions thereof embraced by said chair, said fish bars provided with longitudinally-disposed flanges, supple-

5 mental chairs adapted to be spiked to the railway ties on opposite sides of the first mentioned chair, and one of said supplemental chairs abutting against the arms of the first mentioned chair, and a wedge-shaped key formed with a longitudinal V-shaped groove and positioned between one edge of the joint chair and a fish bar below the flange

of the latter, the said edge being shaped to receive said groove. 10

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

JAMES H. BARNHART.

Witnesses:

LILLIAN J. MYERS,  
B. WHITCOMB.