

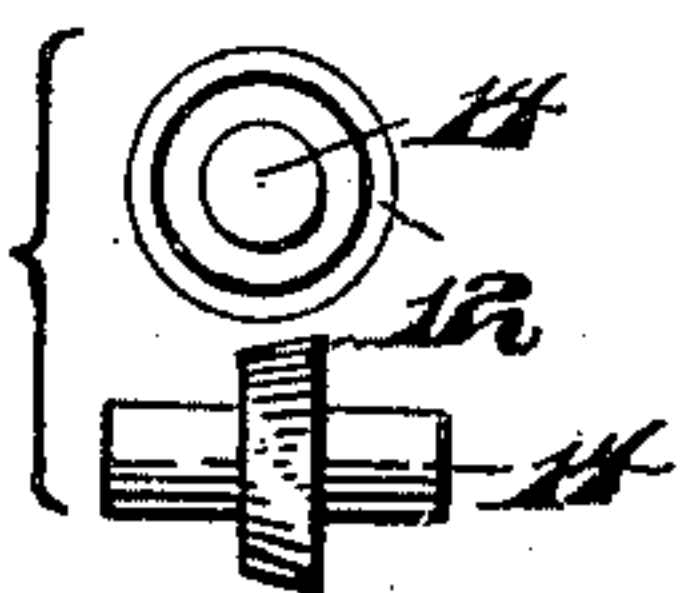
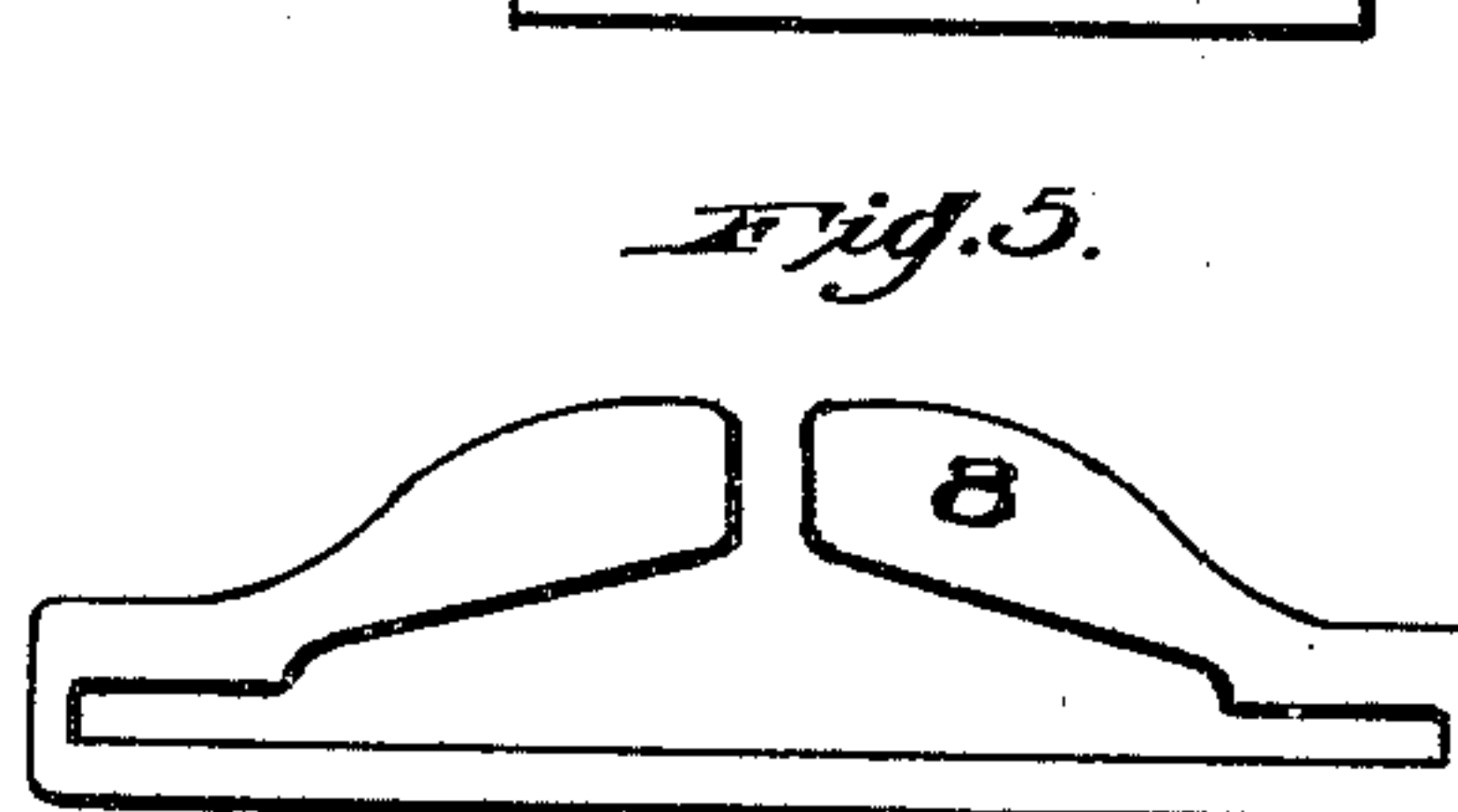
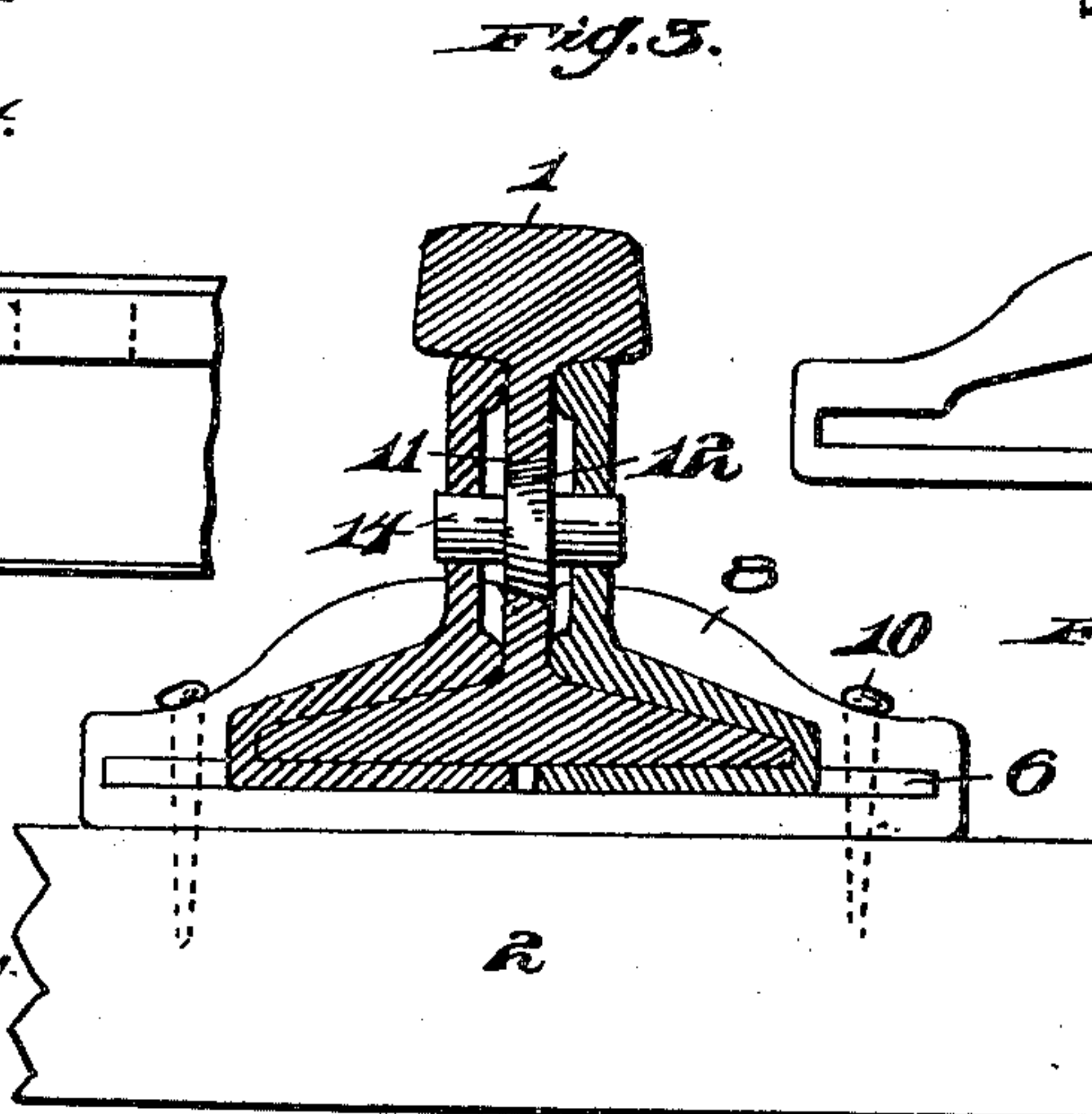
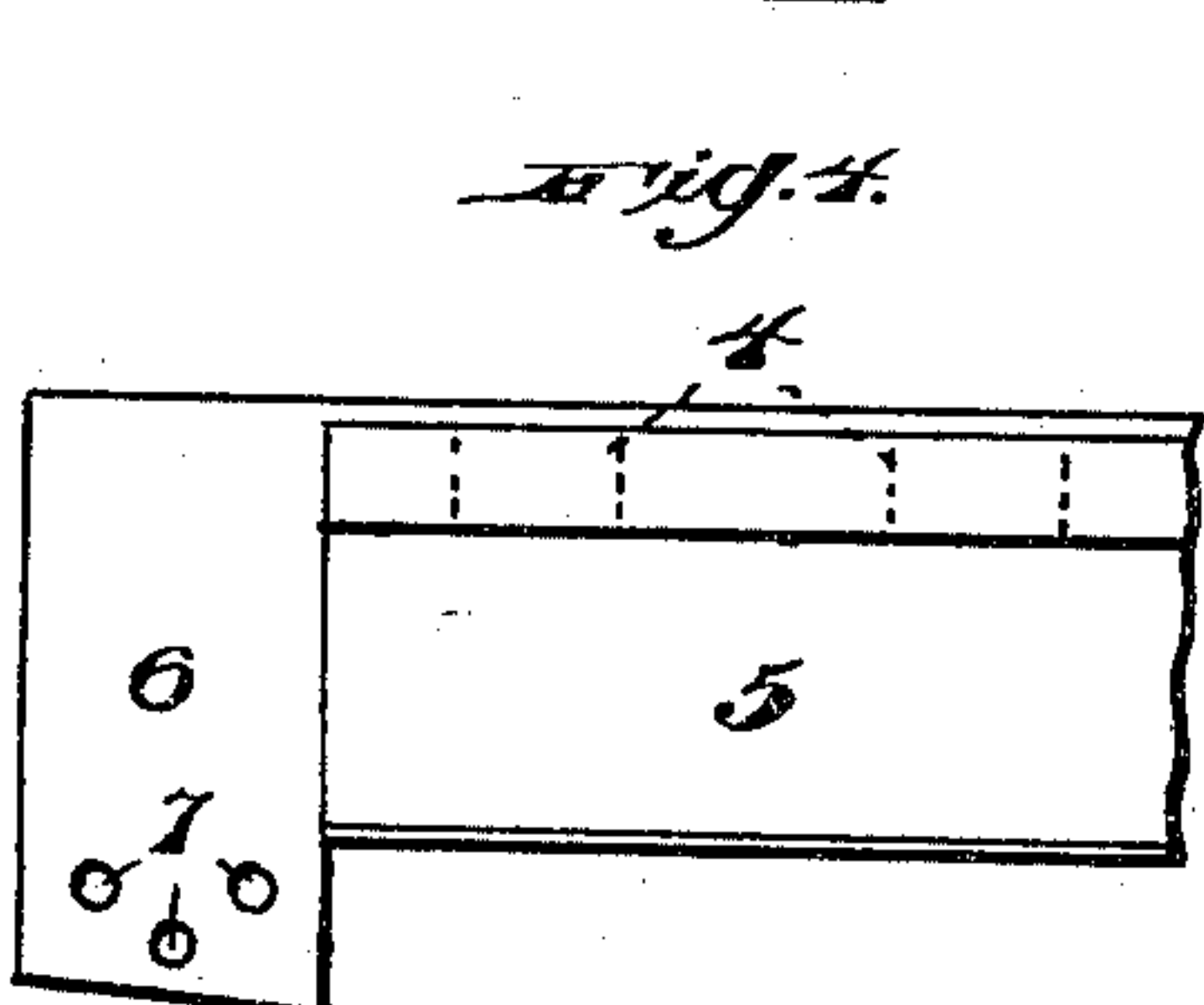
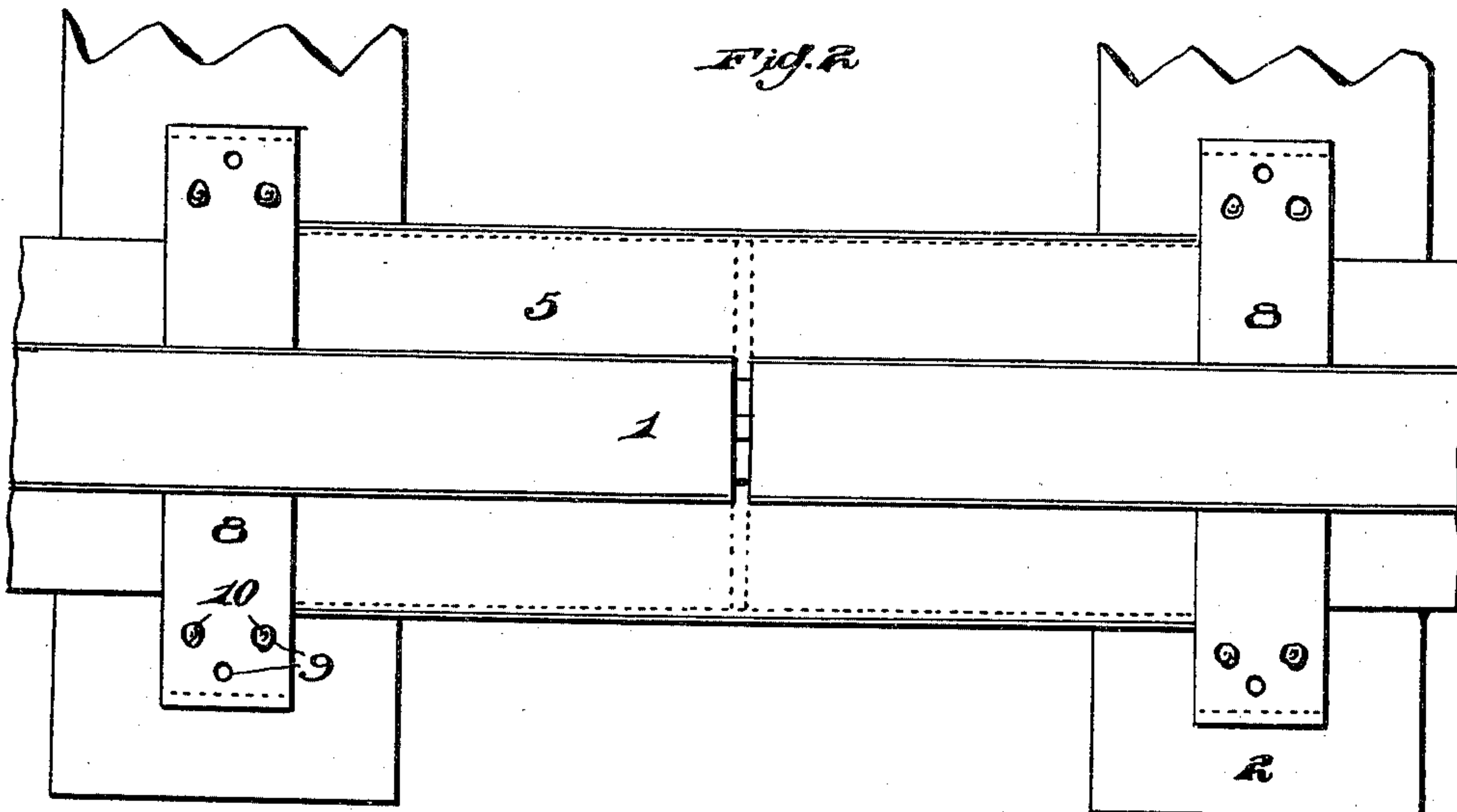
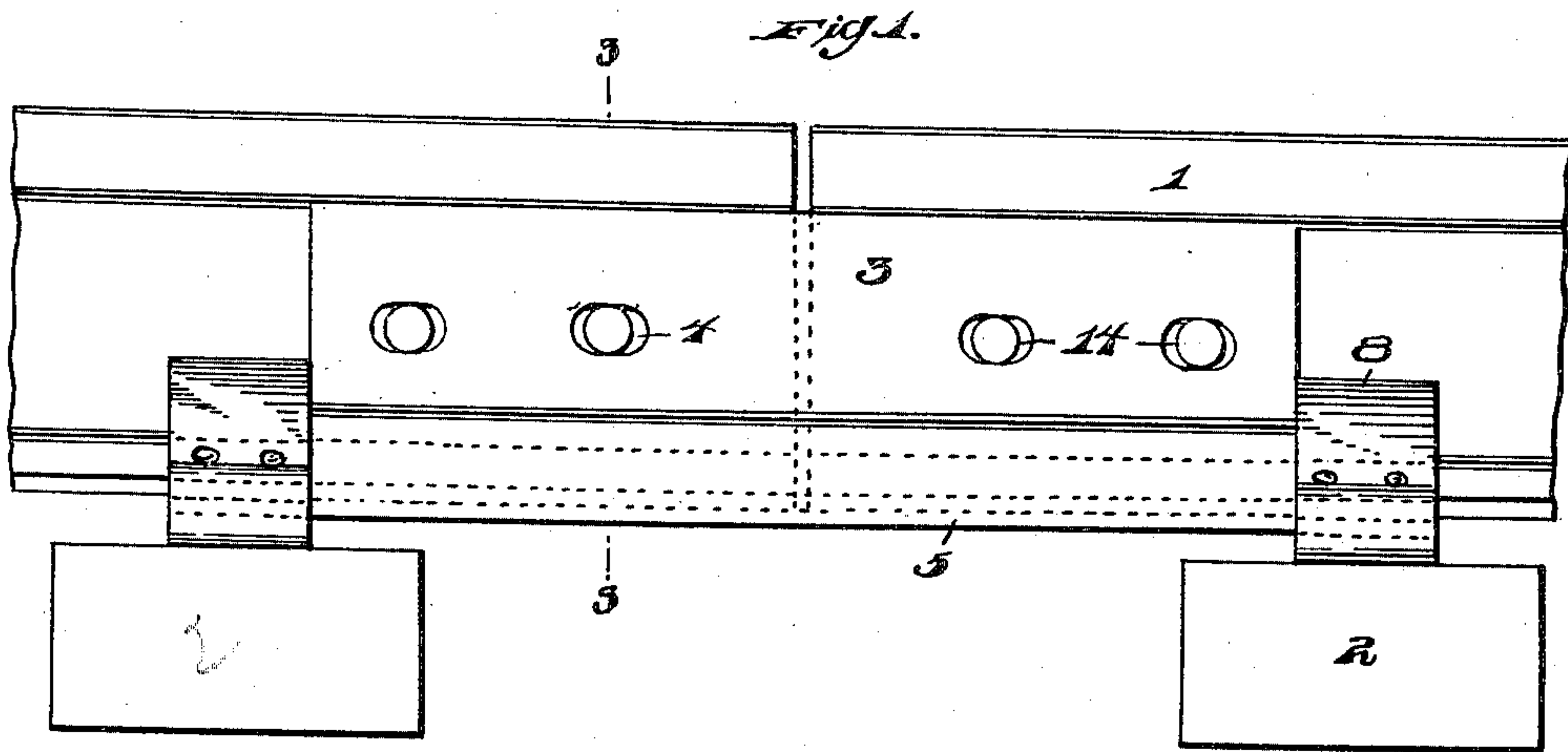
No. 682,468.

Patented Sept. 10, 1901.

J. P. HEUER.
RAIL JOINT.

(Application filed June 18, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN P. HEUER, OF PITTSBURG, PENNSYLVANIA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 682,468, dated September 10, 1901.

Application filed June 13, 1901. Serial No. 64,389. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. HEUER, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in rail-joints, and more particularly to that class wherein the use of nuts and bolts is entirely dispensed with.

15 The invention, briefly described, consists of fish-plates formed in two sections, forming a chair for the rail. Furthermore, the base of the chair carries outwardly-extending lugs to engage the clamp arranged on each side of the rail-joint for the purpose of firmly retaining the same in position.

20 The invention further consists in providing a key extending through the openings in the fish-plate that will allow the contraction and expansion of the rails.

25 The invention finally consists in the novel combination and arrangement of parts, to be hereinafter more fully described, and specifically pointed out in the claim.

30 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate corresponding parts throughout the several views, in which—

35 Figure 1 is a side elevation of two sections of a rail having my improved rail-joint attached thereto in position. Fig. 2 is a top plan view thereof. Fig. 3 is a transverse vertical sectional view taken on the line 3 3 of Fig. 1. Fig. 4 is a top plan view of the fish-plate, showing the extending lug formed integral therewith. Fig. 5 is an enlarged end view of one of the clamps employed on each side of the rail-joint engaging the extending 40 lug. Fig. 6 is a plan and side elevation of the key extending through the web of the rail and through the openings formed in the fish-plate.

In the drawings the reference-numeral 1 indicates the rail. 50

2 indicates the cross-ties, and 3 represents one of the fish-plates, having a series of enlarged openings 4 formed therein.

The reference-numeral 5 indicates a chair portion formed integral with the fish-plate 55 and extends under the base of the rail. The base of said chair portion carries outwardly-extending lugs 6, having apertures 7 formed therein.

The reference-numeral 8 represents a clamp 60 which is adapted to embrace the lower web of the rail and engage the lugs 6, this clamp being provided with openings 9 to register with the openings 7 in the lugs to receive spikes 10 or other suitable fastening means 65 which are driven through the clamps, lugs, and into the cross-ties 2. The web of the rail has formed therein a cone-shaped opening 11 to receive the wedge-shaped key 12, having outwardly-extending pins 14 formed 70 integral therewith, said pins extending through the elongated openings 4 of the fish-plates and retain the latter in position. It will be noted that by this construction the rails may easily expand and contract without any danger or liability of the rails becoming disconnected. 75

The many advantages obtained by the use of my improved device will be readily apparent from the foregoing description, taken in connection with the accompanying drawings. 80

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention. 85

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

In a rail-joint, the combination of rails having cone-shaped openings formed in the webs 90 thereof, of fish-plates formed in two sections and having elongated apertures therein, a chair portion made integral with said fish-plates, outwardly-extending apertured lugs carried by the chair portion, clamps adapted 95 to engage the lower rail-webs, said clamps

having openings formed therein adapted to register with said apertures in the lugs, the said clamps adapted to receive said lugs therein, spikes for engaging in said registering apertures, a wedge-shaped key for engaging in said openings in the rail-webs, and outwardly-extending pins formed integral with said key for engagement with the elongated

openings in the fish-plates, substantially as described.

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

JOHN P. HEUER.

Witnesses:

JOHN NOLAND,
E. E. POTTER.