

No. 897,851.

PATENTED SEPT. 1, 1908.

H. R. ROTH.

RAIL JOINT.

APPLICATION FILED MAR. 21, 1908.

2 SHEETS—SHEET 1.

FIG. 1

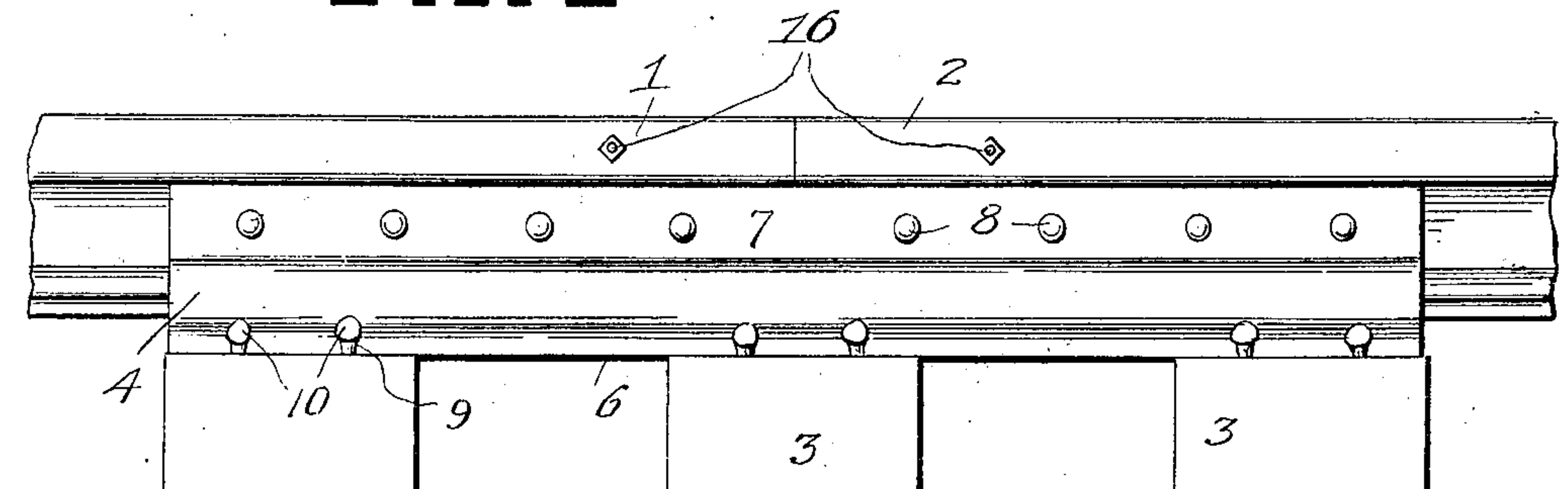


FIG. 2

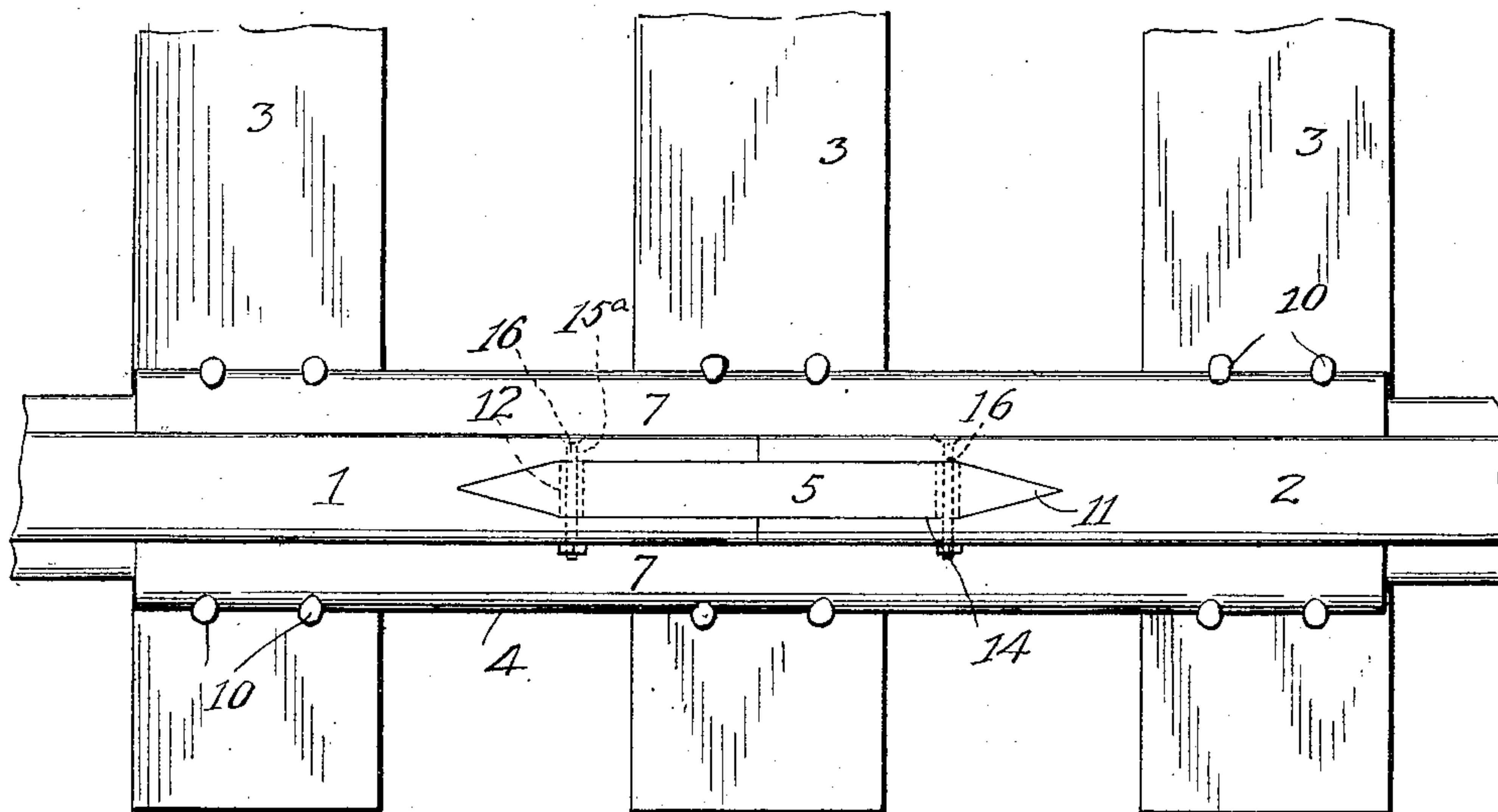
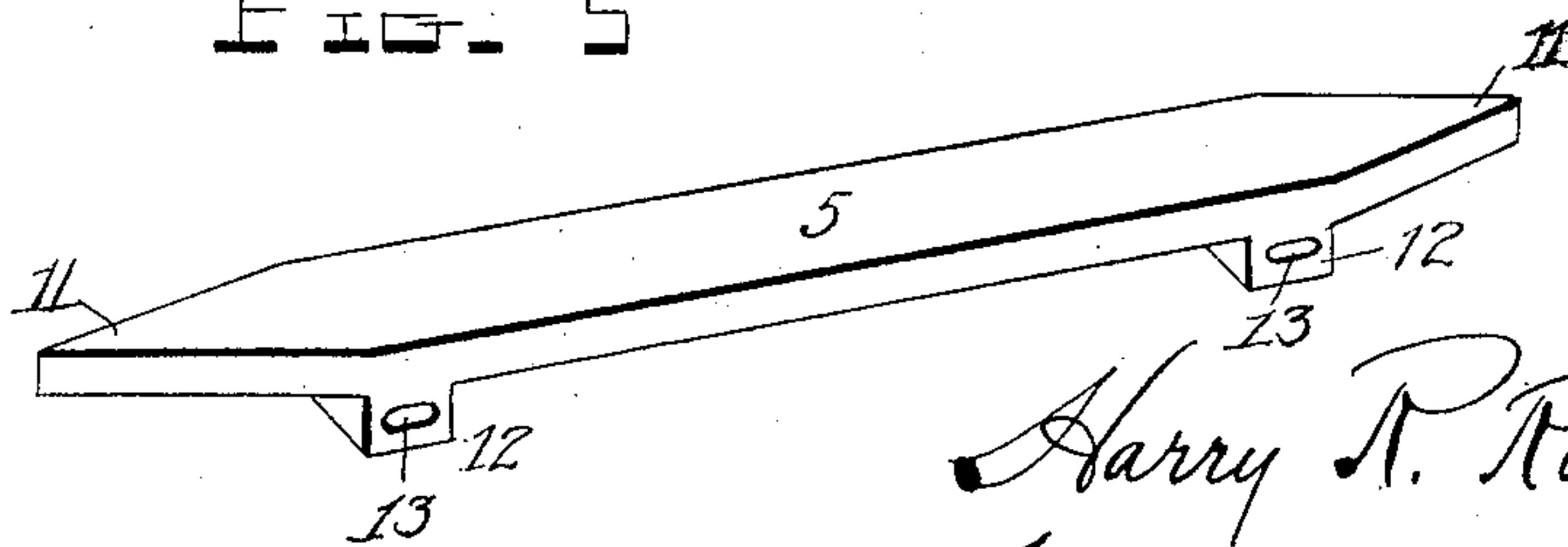


FIG. 3



Witnesses

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2 SHEETS—SHEET 2.

FIG. 3

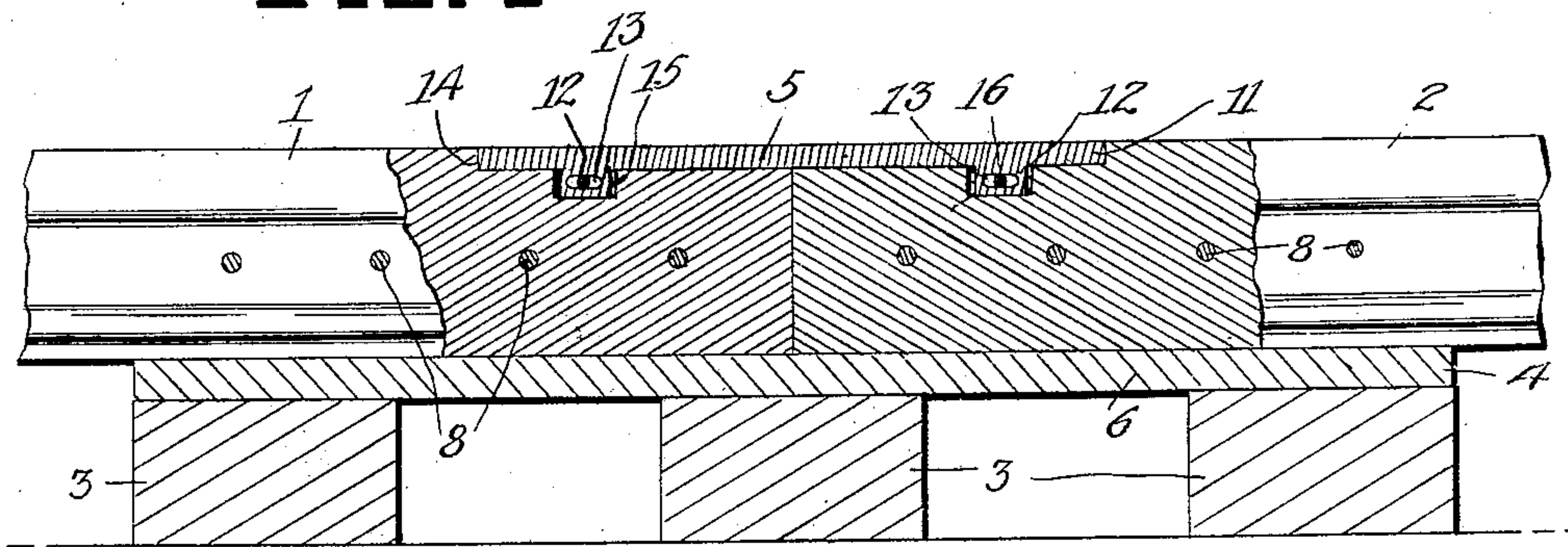


FIG. 4

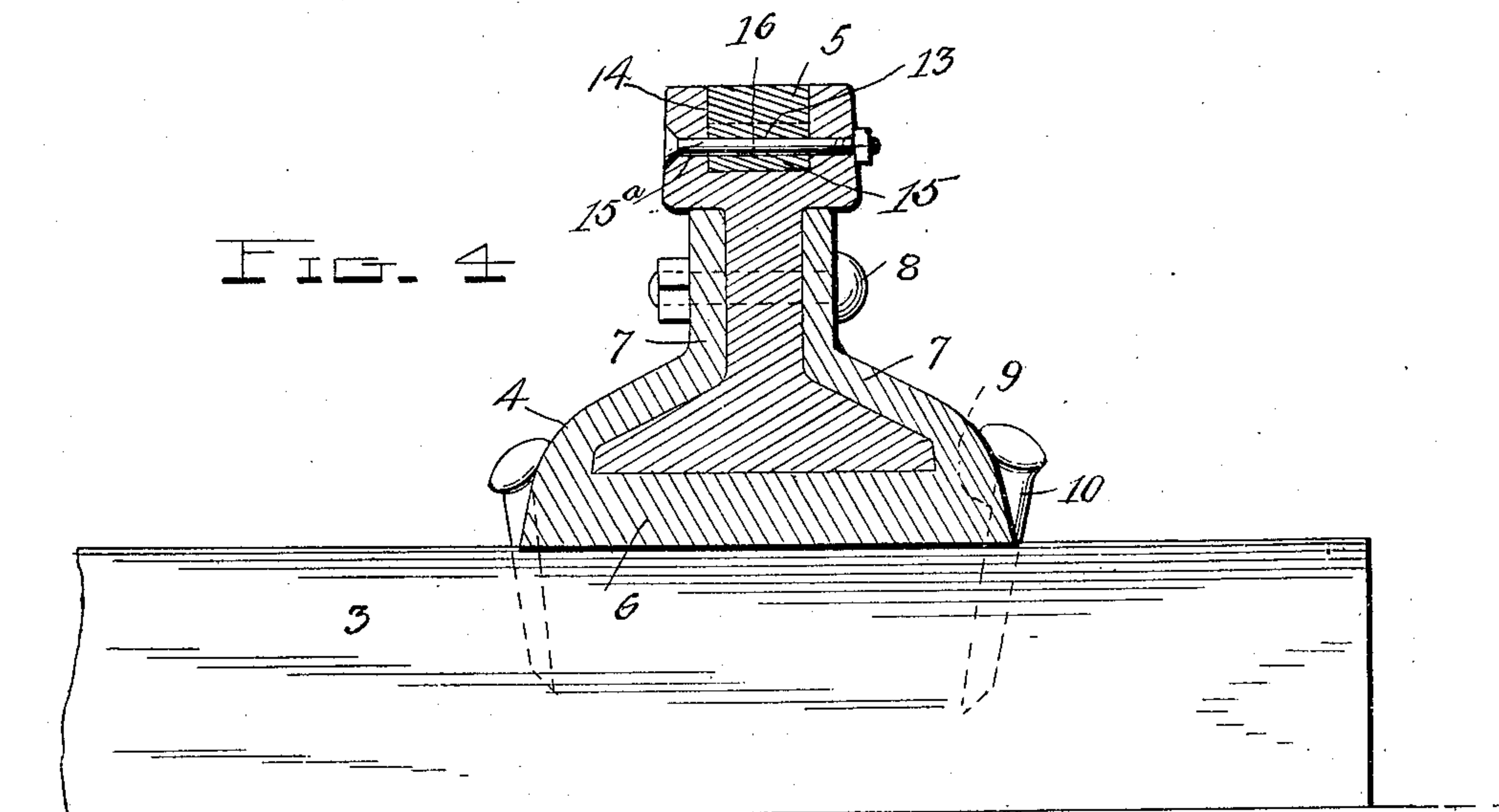
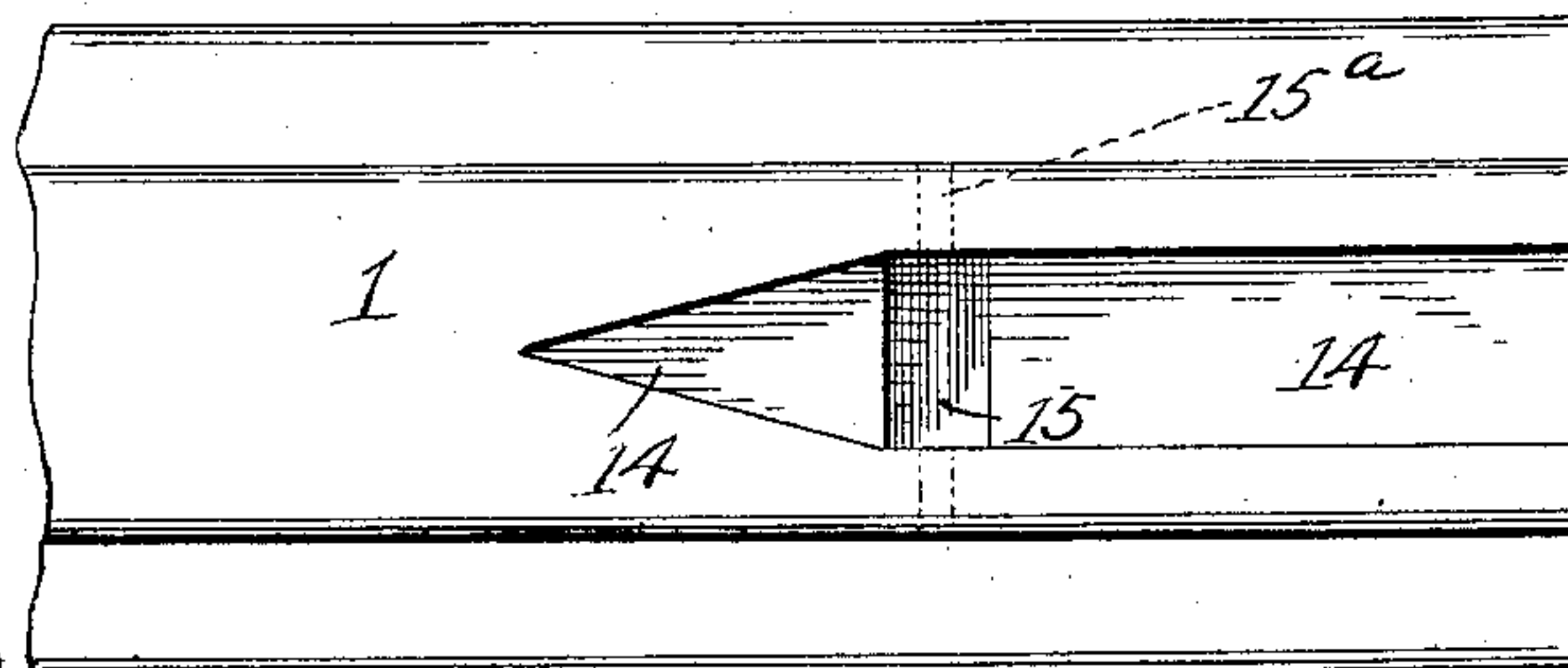


FIG. 5



Witnesses

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UNITED STATES PATENT OFFICE.

HARRY R. ROTH, OF SOUTH ALLENTOWN, PENNSYLVANIA.

RAIL-JOINT.

No. 897,851.

Specification of Letters Patent.

Patented Sept. 1, 1908.

Application filed March 21, 1908. Serial No. 422,454.

To all whom it may concern:

Be it known that I, HARRY R. ROTH, a citizen of the United States, residing at South Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in rail joints, and its object is to provide a simple, strong, durable, and comparatively inexpensive one which will hold the meeting ends of two track rails in perfect alinement and prevent them from spreading laterally, shifting longitudinally, and raising vertically.

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

Figure 1 is a side elevation of my improved rail joint; Fig. 2 is a top plan view; Fig. 3 is a vertical longitudinal section; Fig. 4 is a vertical transverse section; Fig. 5 is a detail view of the joint plate; and Fig. 6 is a plan view of the end of one of the rails.

In the drawings 1 and 2 denote the meeting ends of two ordinary rails, 3 denotes the usual wooden cross ties, 4 denotes my improved joint chair, and 5 my improved joint plate. The chair 4 is adapted to extend across three of the ties 3, one being arranged beneath its center and beneath the abutting ends of the two track rails and the other two beneath the end portions of said chair. The latter consists of a flat base plate 6 on which the base flanges of the track rails rest and from the opposite side edges of which rise integral fish-plates 7, the inner faces of which are shaped to engage the outer faces of the web and base flanges of the rail and the bottom faces of the heads of the latter, as clearly shown in Fig. 4. In the fish-plates 7 are formed transverse openings to aline with similar openings in the track rails, which alining openings receive bolts or similar transverse fastenings 8. In the outer side edges of the chair are formed vertical notches or grooves 9 to receive spikes 10 which fasten the chair to the ties 3. The top joint plate 5 is insert-

ed in the tread portions of the heads of the track rails so as to lie flush with the top face of said heads. Said plate 5 has its ends 11 tapered in opposite directions to make them V-shape and upon its bottom are formed transverse ribs 12 provided with elongated openings 13.

In the heads of the rails 1, 2 are formed longitudinally extending recesses 14 of such shape and depth as to receive the ends of said plate and in the bottom of said recesses are formed smaller recesses or cavities 15 to receive the ribs or lugs 12 on said plate. In the walls of the recesses 14 are formed alined openings 15^a which register with the openings 13 in the plate and are adapted to receive the bolts 16 or other transverse fastenings for retaining the plate in position.

From the foregoing it will be seen that my improved joint is exceedingly simple in construction so that it may be produced at a comparatively small cost and that it will be strong and durable; and it will effectively hold the meeting ends of the rails in perfect alinement so that they cannot spread laterally, or shift longitudinally, or lift vertically as the car wheels pass over them.

Having thus described my invention what I claim is:

1. In a rail joint, the combination of meeting ends of two track rails formed in their heads with communicating recesses, the latter having in their bottoms cavities, said cavities having their side walls formed with alined openings, a joint plate adapted to fit into both of the recesses and formed upon its bottom with lugs to enter said cavities and provided with openings to aline with the openings or apertures at the sides of said cavities, transverse fastenings passed through said alined openings or apertures, and means for uniting the web portions of the track rails.

2. In a rail joint, the combination of meeting ends of two track rails formed in their heads with communicating recesses, the latter having in their bottoms cavities, said cavities having their side walls formed with alined openings, a joint plate adapted to fit into both of the recesses and formed upon its bottom with lugs to enter said cavities and provided with openings to aline with the

openings or apertures at the ends of said
cavities, transverse fastenings passed through
said alined openings or apertures, a chair
having a base plate to rest upon the cross
5 ties and receive the base flanges of the rails,
the chair being formed upon its side edges
with integral fish-plates to engage the oppo-
site sides of said rails and transverse fasten-

ings passed through the fish-plates and the
rails substantially as described. 10

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

HARRY R. ROTH.

Witnesses:

CHAS. GRUELE,

HENRY G. SHIFFERT.