

(No Model.)

2 Sheets—Sheet 1.

V. ANGERER.
TRACK STRUCTURE.

No. 553,771.

Patented Jan. 28, 1896.

FIG. 1.

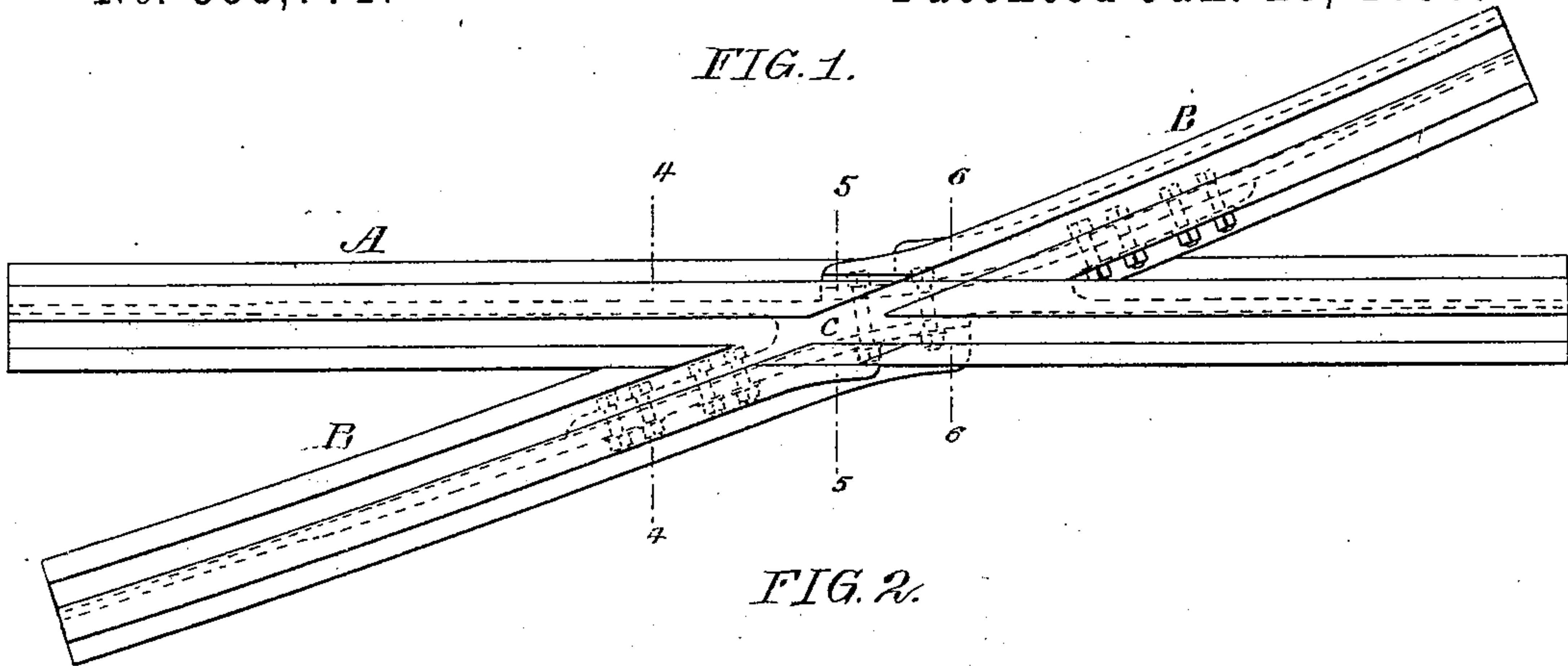


FIG. 2.

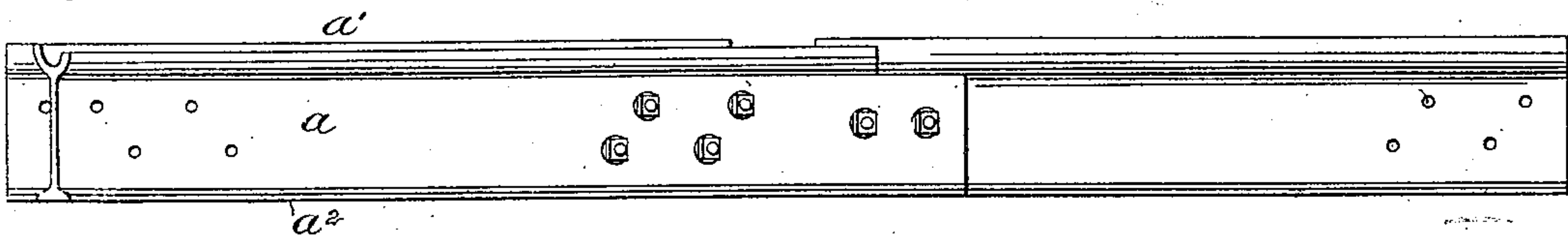


FIG. 3.

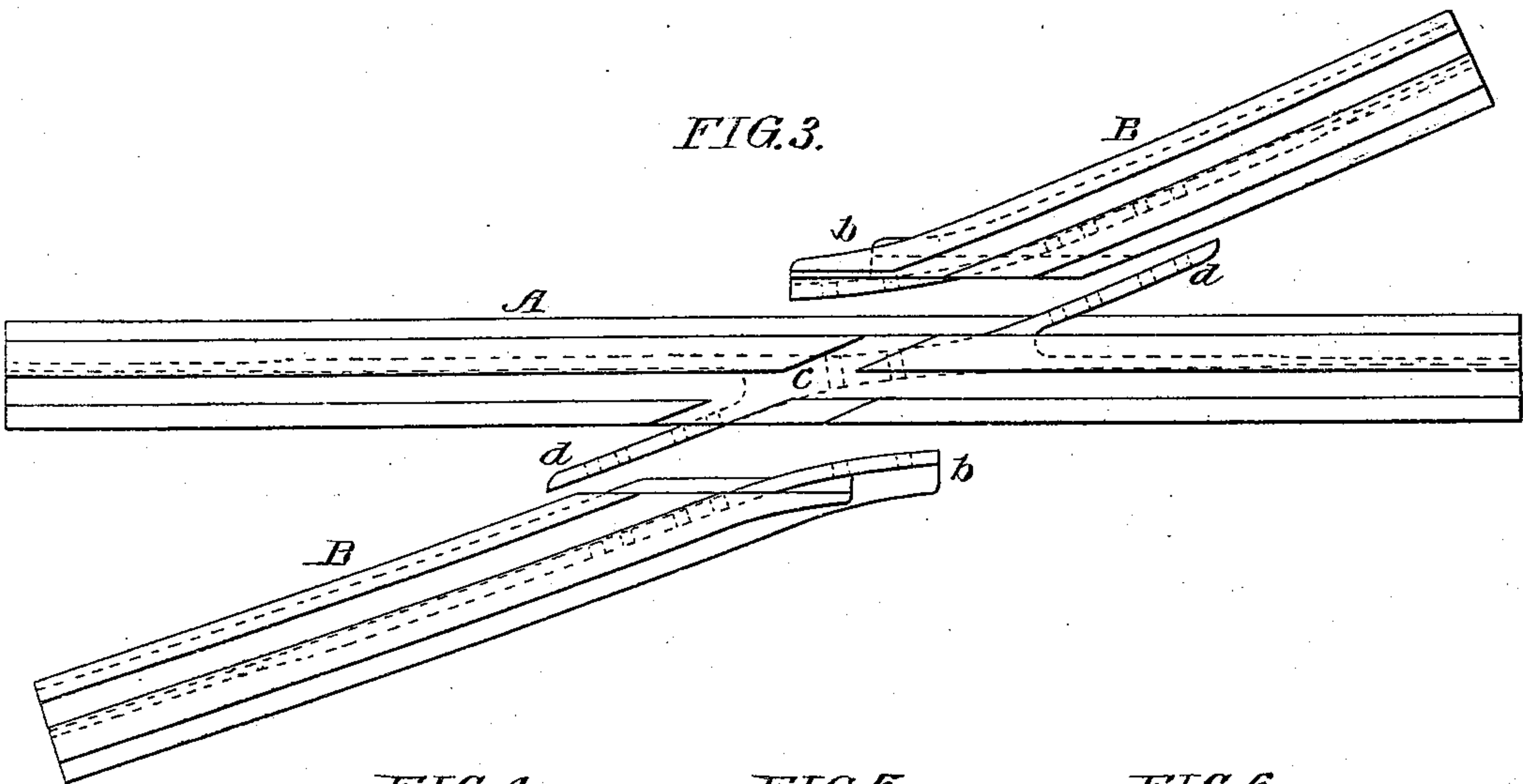


FIG. 4.

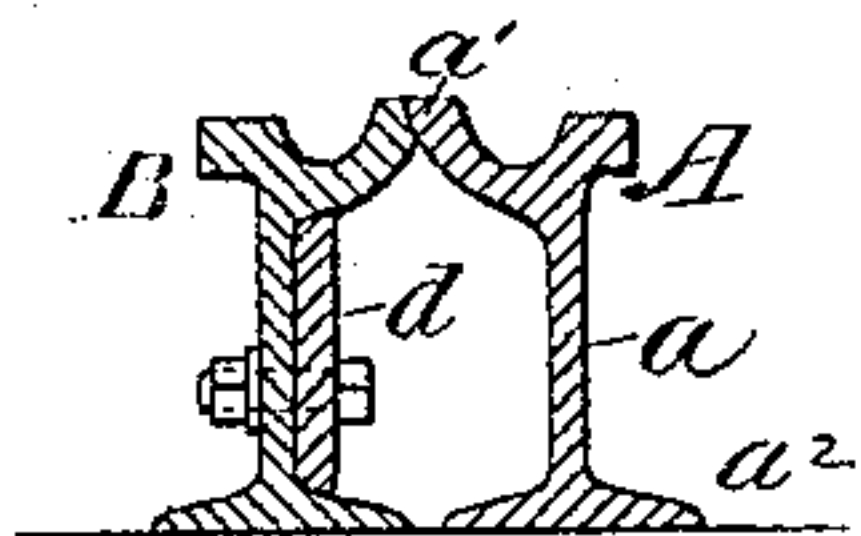


FIG. 5.

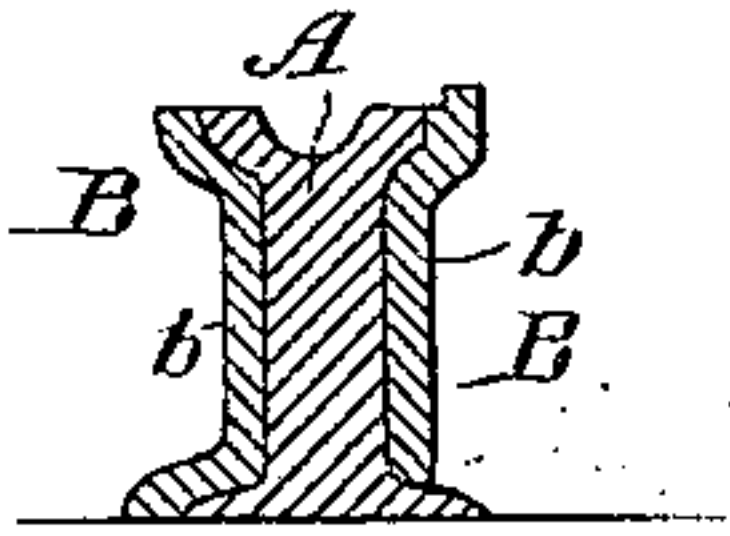
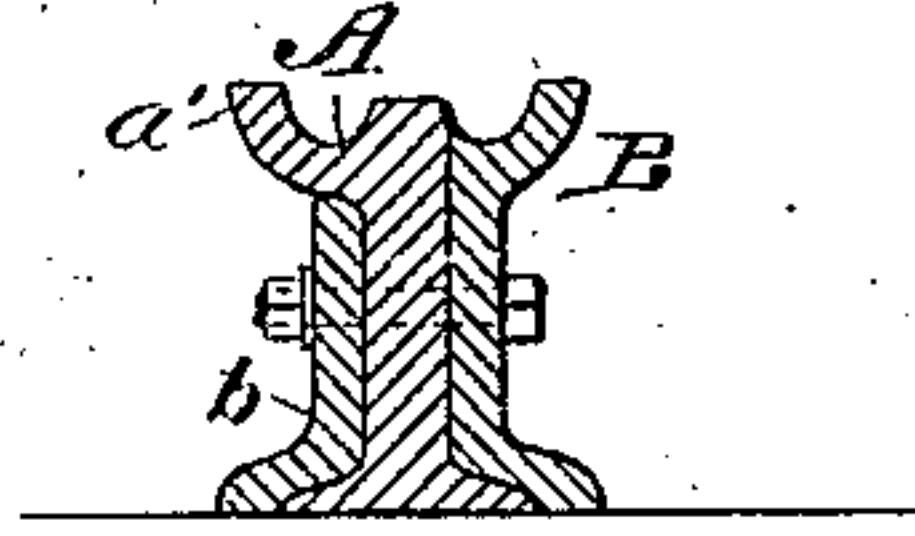


FIG. 6.



Witnesses:

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Inventor:

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FIG. 7.

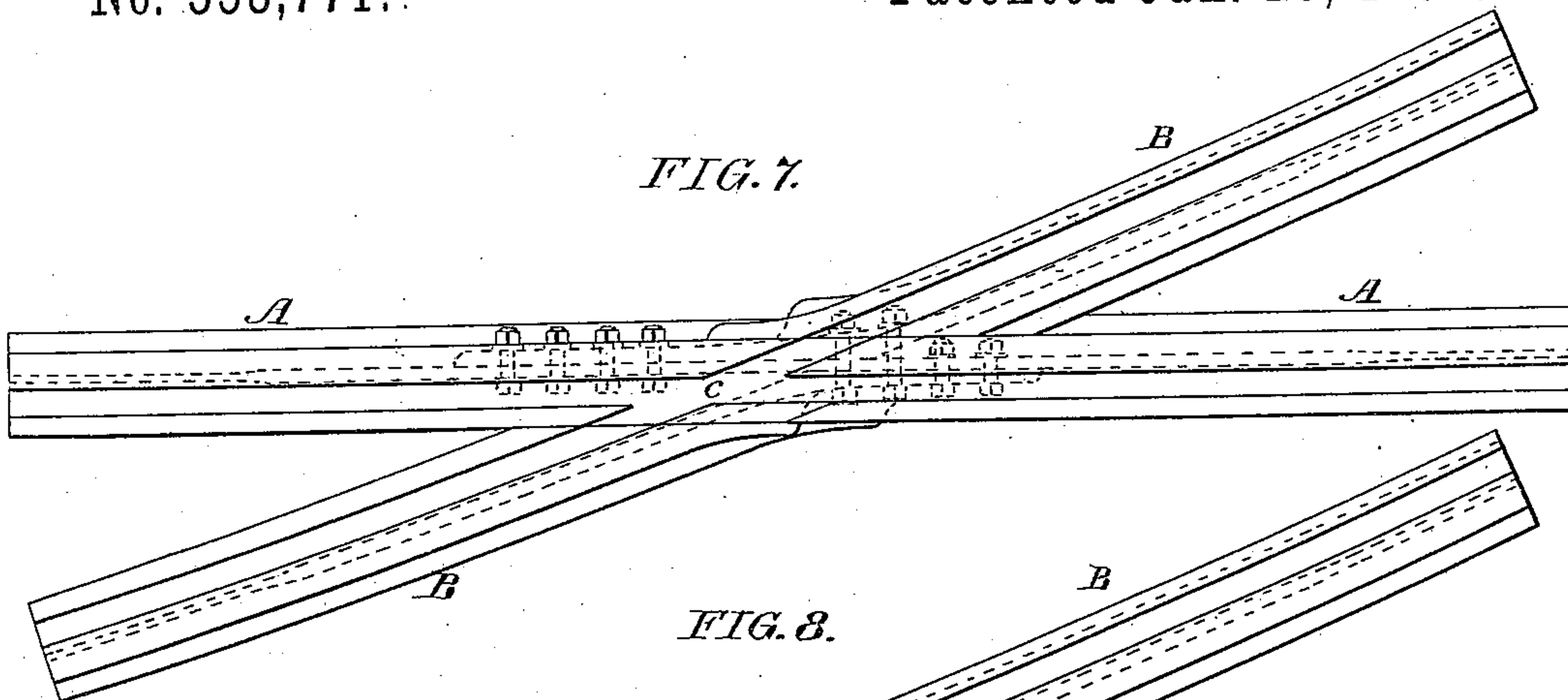


FIG. 8.

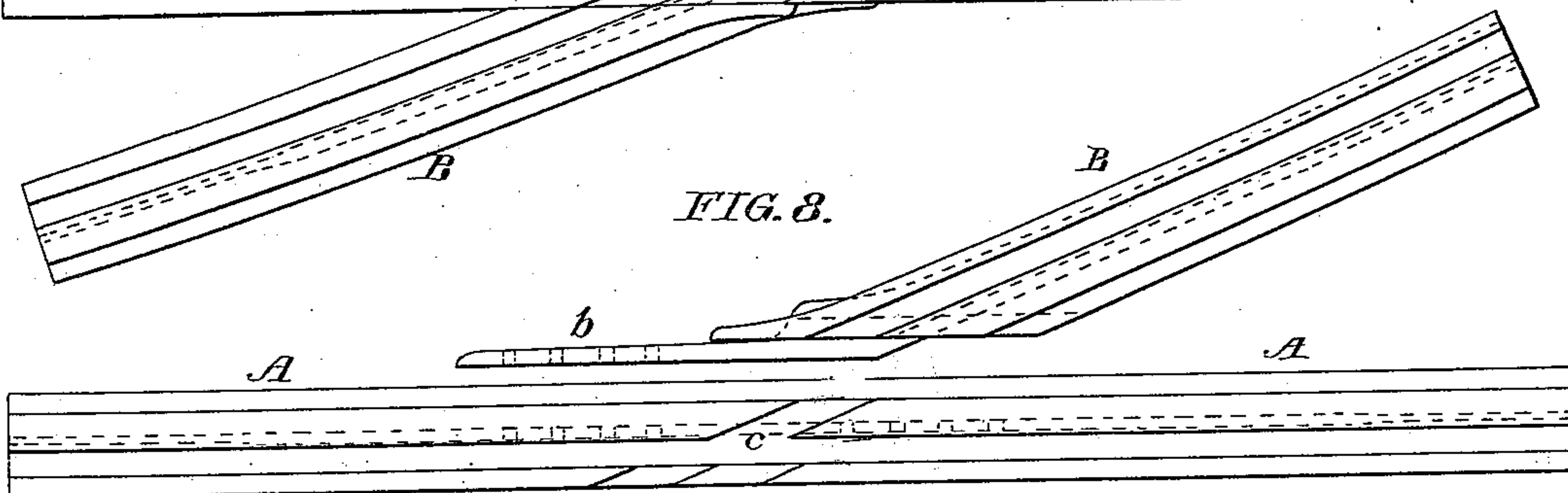


FIG. 9.

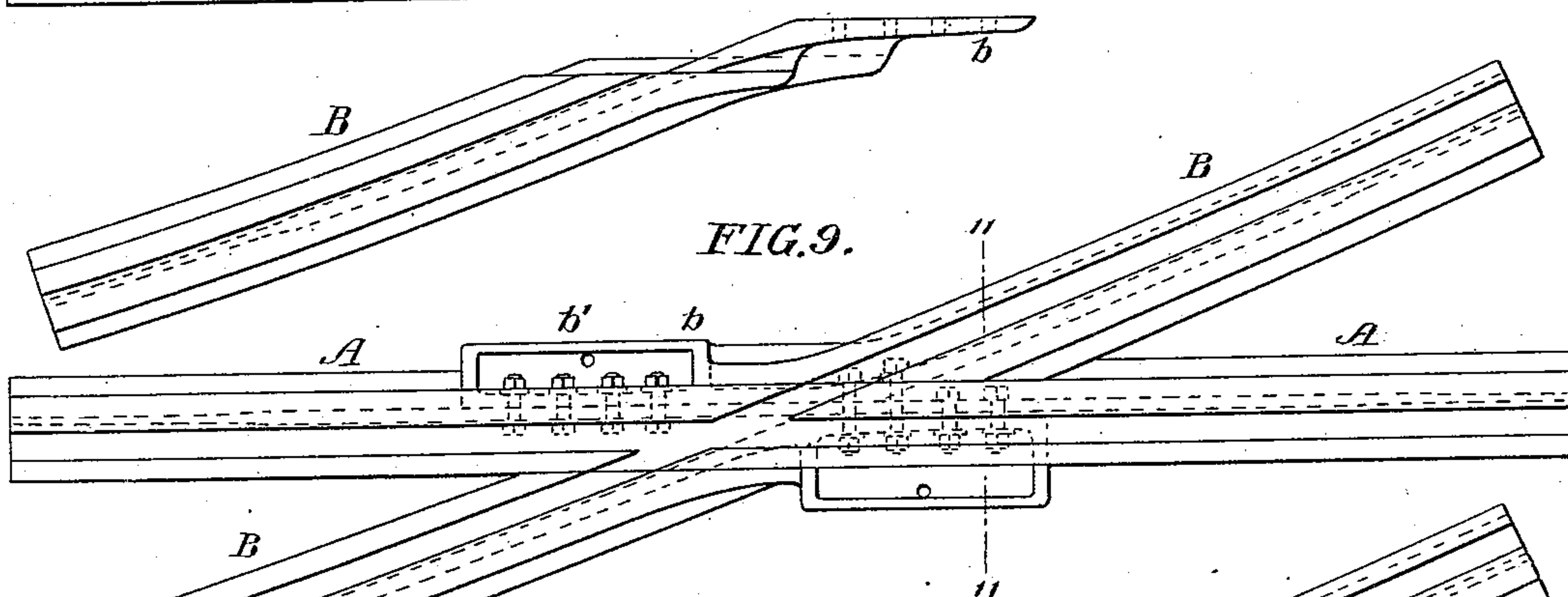


FIG. 10.

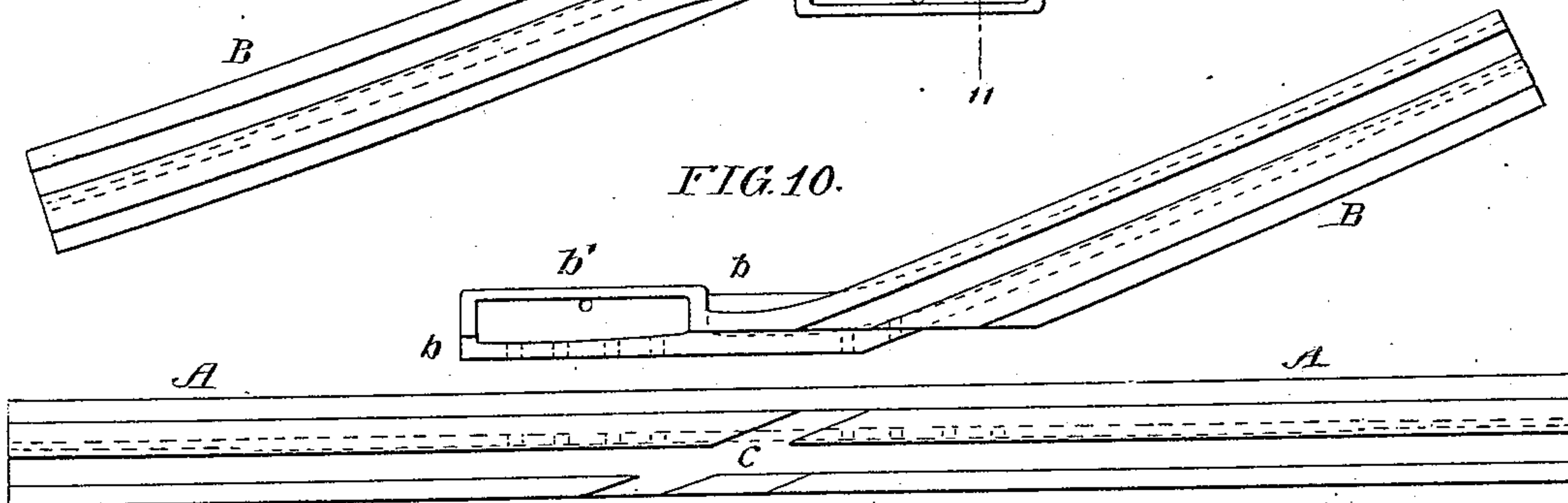
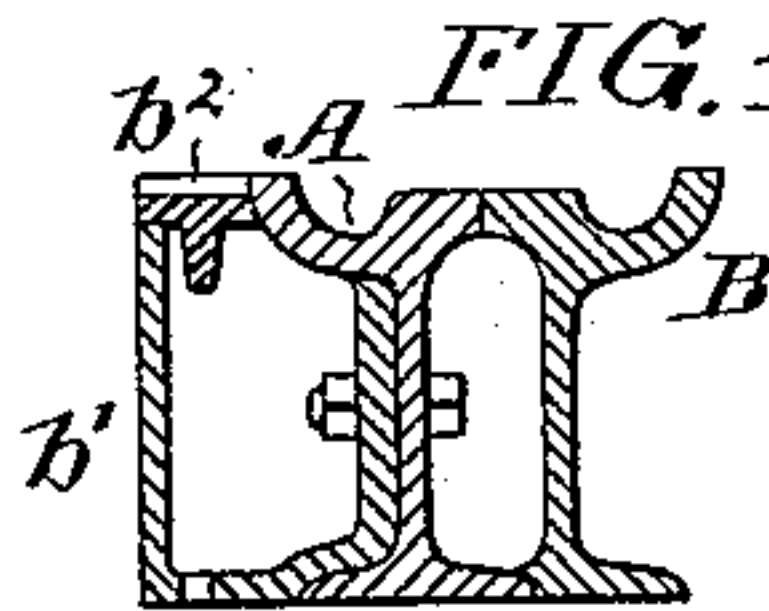


FIG. 11.



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UNITED STATES PATENT OFFICE.

VICTOR ANGERER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
THE WILLIAM WHARTON, JR., & COMPANY, INCORPORATED, OF SAME
PLACE.

TRACK STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 553,771, dated January 28, 1896.

Application filed May 3, 1895. Serial No. 547,991. (No model.)

To all whom it may concern:

Be it known that I, VICTOR ANGERER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain
5 Improvements in Track Structures, of which the following is a specification.

One of the present methods of building track structures—such, for instance, as crossings, frogs, &c.—is by uniting suitably cut
10 rails by means of separate brackets or knees.

One object of my invention is to so construct a crossing or other assembled track structure that one rail may be made of material much more durable than the other, which may be
15 of ordinary steel or iron.

A further object is to give a more integral connection by making the projections or brackets an integral part of one or both of the rails, as clearly illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a frog, illustrating my invention. Fig. 2 is a side view of Fig. 1. Fig. 3 is a view showing the parts detached. Fig. 4 is a transverse section on the line 4 4, Fig. 1. Fig. 5 is a transverse section on the line 5 5, Fig. 1. Fig. 6 is a transverse section on the line 6 6, Fig. 1. Fig. 7 is a plan view illustrating the knee or bracket formed only on the crossing-rails. Fig. 8 is a detached
30 plan view of the frog shown in Fig. 7. Fig. 9 is a plan view illustrating a frog in which the brackets are shaped to form inclosing boxes for the heads of the bolts and nuts. Fig. 10 is a plan view of the frog shown in Fig. 9, with the parts detached. Fig. 11 is a transverse sectional view on the line 11 11, Fig. 9.

Referring in the first instance to Figs. 1, 2 and 3, A is the main rail, which is preferably
40 cast of steel (manganese steel preferred) and has the web *a*, heads *a'* and flange *a''*, which may be shaped in any form desired.

B are the sections of the crossing track-rail, one mounted on one side of the rail A and the
45 other mounted on the opposite side of said rail.

The head of the rail A is preferably grooved at *c* to allow for the free passage of the flange of the wheel traversing the rails B. The abut-

ting ends of each rail B are shaped so as to
fit snugly against the rail A, and each rail B
has a projection or bracket *b*, which preferably forms a continuation of the web of the rail, and this extension fits against the web
of the rail A, so that bolts or other securing
55 devices may pass through the projections and through the web of the rail A to firmly attach the rail-sections B to the rail A. As shown in Figs. 1 and 3, I also form brackets *d d* on each side of the rail A, projecting at the proper
60 angle from the web of the rail, so that when the rails B B are placed in position, as shown in Fig. 1, the brackets *d d* can be readily clamped to the said rails B B. By this method the crossing-rails are rigidly attached to the
65 main rail.

The object of making the structure in this manner and its advantage over ordinary cast structures is that one rail of the track structure may be made of a different or higher grade
70 metal from the other rail or rails. For instance, one rail may be made of manganese steel, while the other rail or rails may be made of ordinary steel or iron. Thus the structure can be so set that the track having the greater
75 traffic can be provided with a rail-section of high-grade metal.

The rails may be either cast, rolled, forged or shaped by any method.

In Figs. 7 and 8 I have shown the simplest
80 form, in which the projection *b* extends from the crossing-rail section only, the projection or bracket on the rail A being dispensed with.

In Figs. 9, 10 and 11 I have shown an inclosing box *b'* formed on the bracket or extension *b*. The inclosing box is provided with a cover *b''*. This construction is especially
85 applicable where the rail-sections are secured together by bolts and where the structure is to be used on paved streets, the box and lid
90 giving ready access to the bolts to tighten them if they should become loose.

It will be understood that the projections or brackets *d* of the main rail (shown in Fig. 1) may also be provided with inclosing boxes
95 without departing from my invention.

While I have shown the wing or crossing rails secured to the main rail A by bolts and

nuts it will be understood that equivalent fastenings may be used—such, for instance, as rivets, bolts with cotters or wedges, and in some cases cast metal may be used to confine one rail to the other.

I claim as my invention—

1. The combination in a track structure, of the main rail A, a projection extending from said main rail, a wing or crossing rail B having an extension, said projection and extension being so shaped that when the rails are mounted in position the extension of the main rail A will extend along the web of the rail B and the bracket of the rail B will extend along the web of the rail A, with securing devices, substantially as described.

2. The combination in a track structure, of the main rail A, the wing or crossing rail or rails B, a bracket formed integral with one of

said rails and an inclosing box formed on the bracket, substantially as described.

3. The combination in a crossing-frog, of the rail A, the rail-sections B B forming the crossing-rail, the ends of each section shaped to conform to the rail A, a bracket forming an integral part of each rail-section B and forming a continuation of the web of the said section, inclosing boxes on each bracket and bolts for securing the rail-sections B B to the rail A, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

VICTOR ANGERER.

Witnesses:

CHAS. M. GRIFFITH,
R. C. McCLOY.