

(No Model.)

H. P. ADAMS.

CONSTRUCTION OF RAILWAY TRACKS AND THE CONSTITUENT
PARTS THEREOF.

No. 348,877.

Patented Sept. 7, 1886.

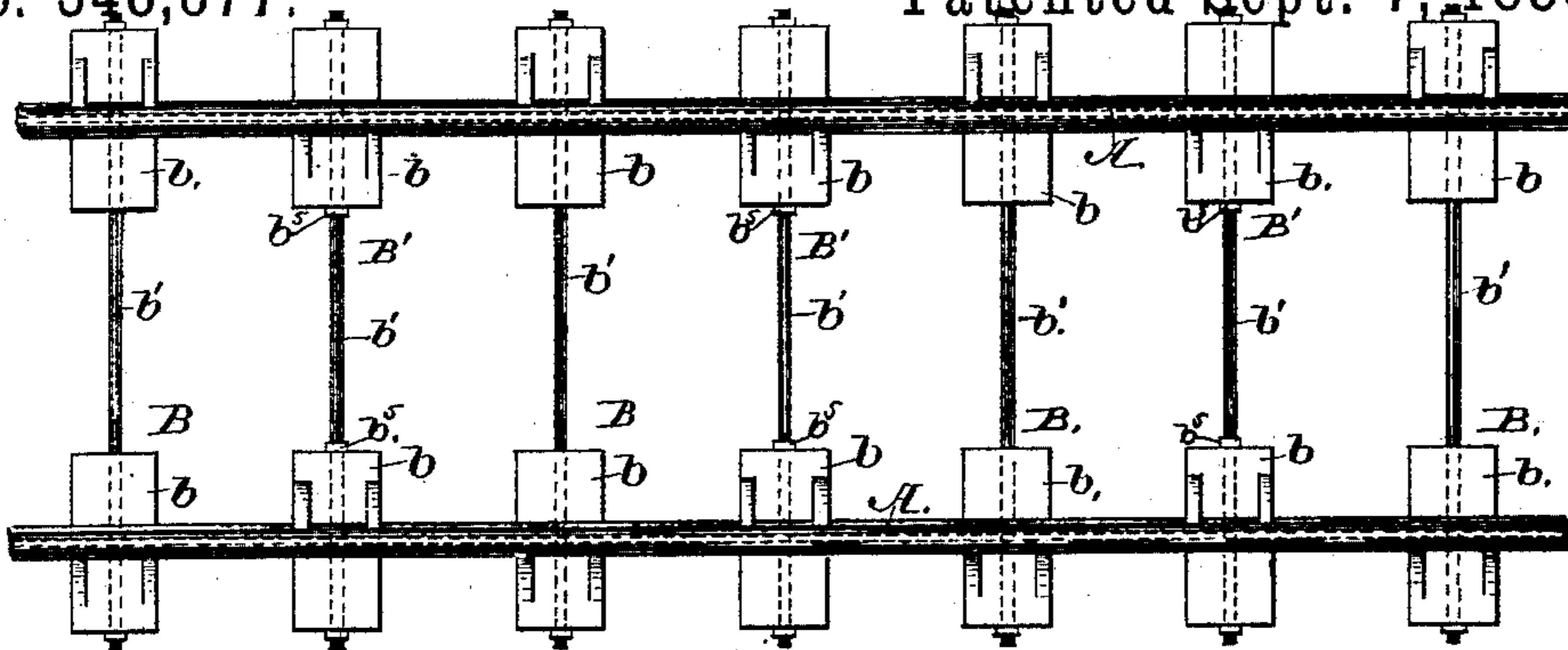


FIG. 1.

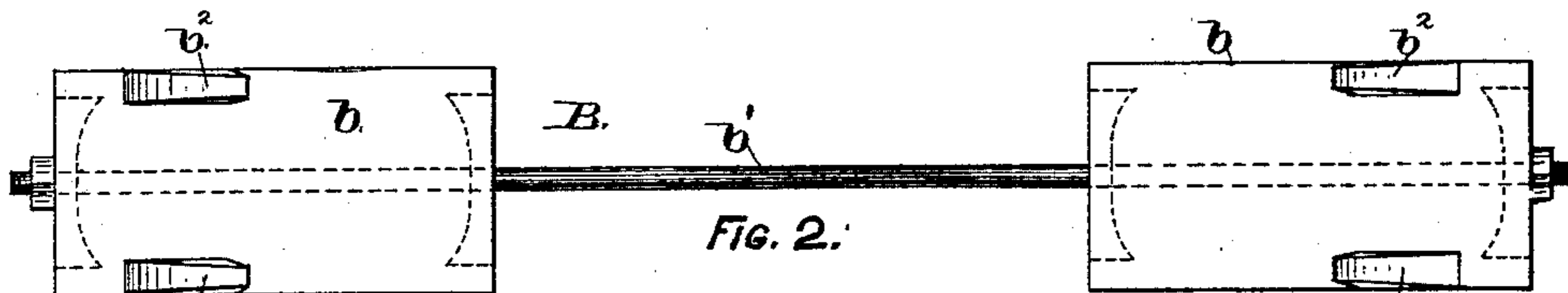


FIG. 2.

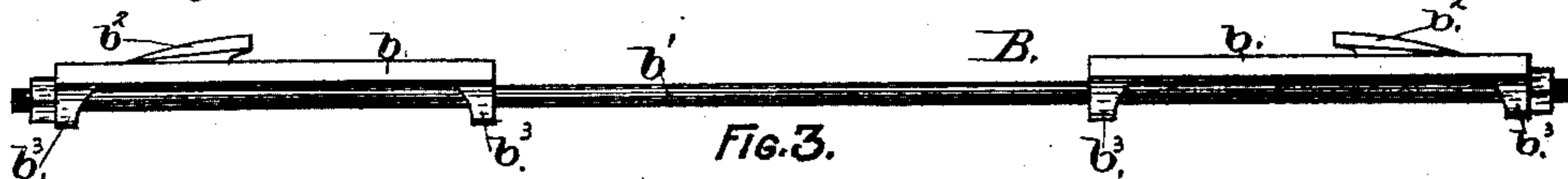


FIG. 3.

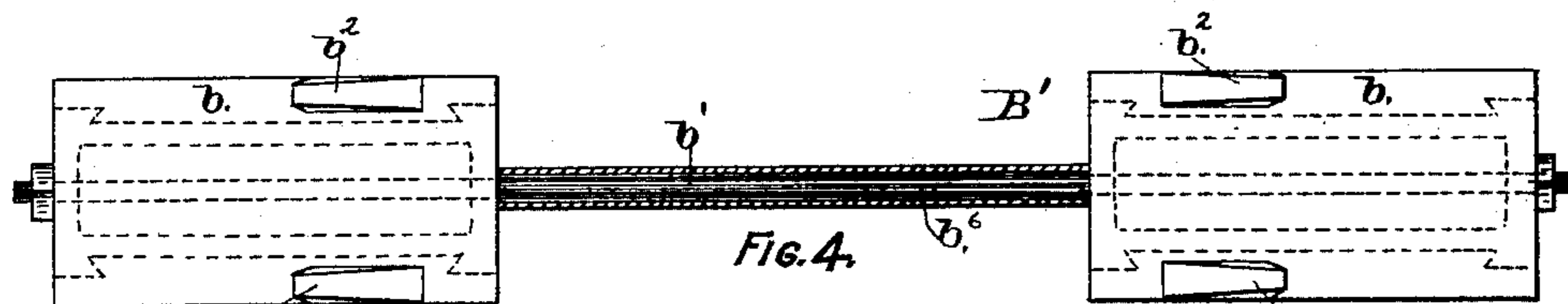


FIG. 4.

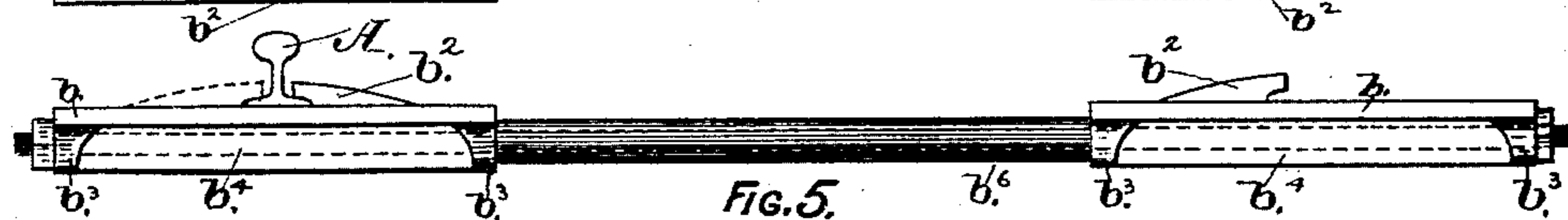


FIG. 5.

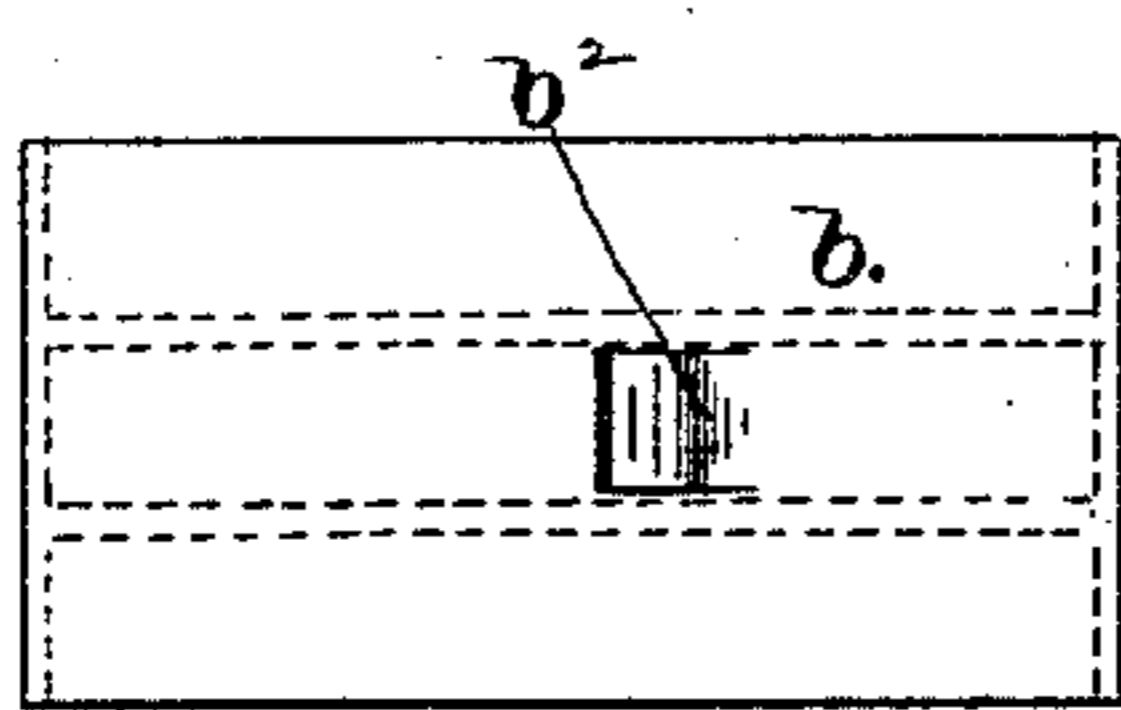


FIG. 6.

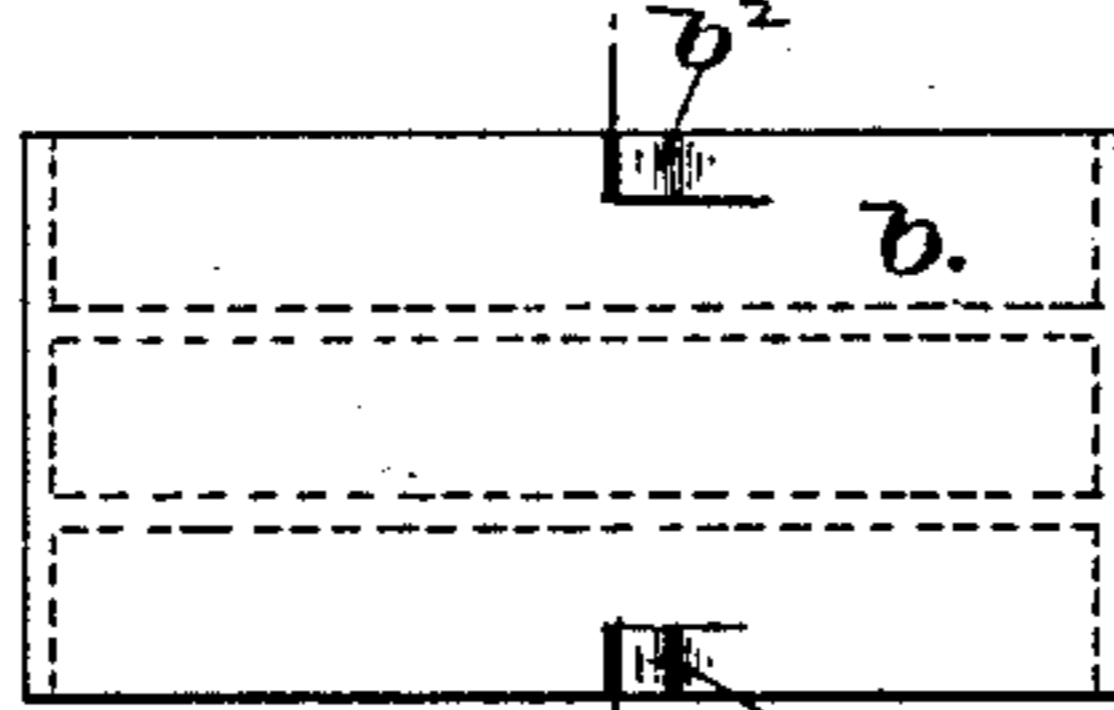


FIG. 8.

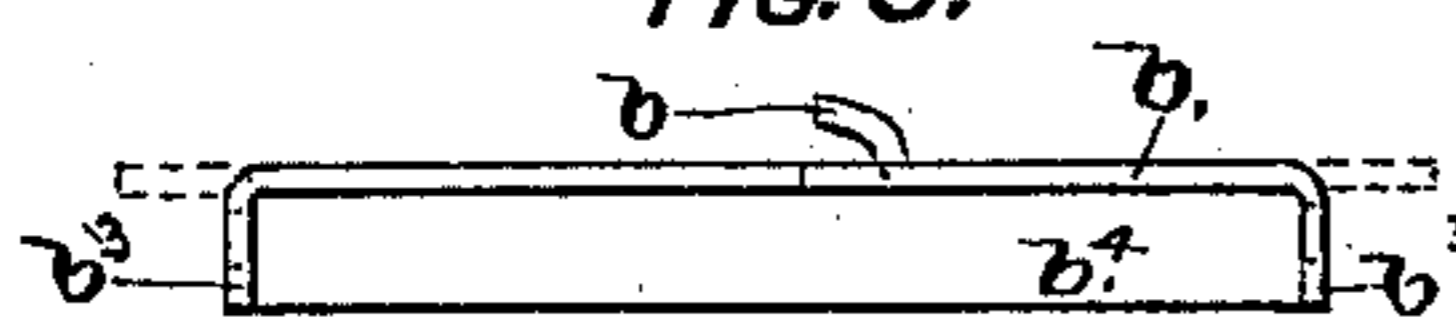


FIG. 7.

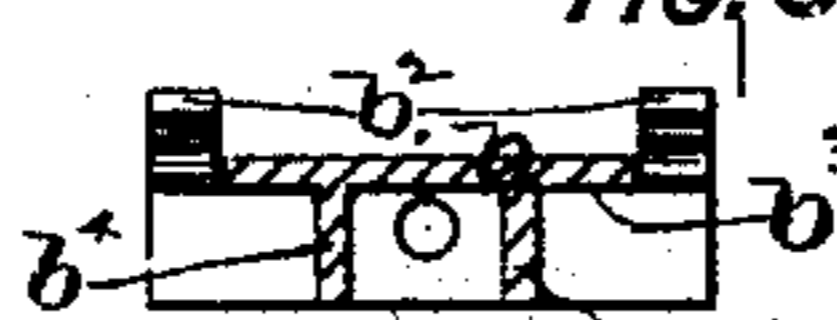


FIG. 9.

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UNITED STATES PATENT OFFICE.

HENRY PARKE ADAMS, OF ALBANY, N. Y., ASSIGNOR OF FIVE-EIGHTHS
TO JAMES N. BRADY AND ROBERT C. BLACKALL, BOTH OF SAME PLACE.

CONSTRUCTION OF RAILWAY-TRACKS AND THE CONSTITUENT PARTS THEREOF.

SPECIFICATION forming part of Letters Patent No. 348,877, dated September 7, 1886.

Application filed February 1, 1886. Serial No. 190,402. (No model.)

To all whom it may concern:

Be it known that I, HENRY PARKE ADAMS, of the city and county of Albany, in the State of New York, have invented new and useful
5 Improvements in the Construction of Railway-Tracks and the Constituent Parts Thereof, of which the following is a specification.

Owing to the growing scarcity and expense of wood of suitable quality for the ties used
10 in laying railway-tracks, the propriety of continuing the use of that material has become a most serious question with those having the construction of railways in charge.

The objects of my invention are, first, to
15 afford facilities for constructing railway-tracks entirely of metal; second, to dispense with the use of spikes for securing the rails, and third, to make the metallic ties serve as a gage for spacing the rails and for clamping
20 said rails in place. These objects I attain by means of the constructions shown in the accompanying drawings, which being herein referred to form part of this specification, and in which—

25 Figure 1 is a plan view of a railway-track containing my improvements; Fig. 2, an enlarged plan view of my metallic tie with the chair-plates arranged to clamp the outside edges of the rails; Fig. 3, a side view of the same; Fig. 4, an enlarged plan view of my
30 metallic tie with chair-plates arranged to clamp against the inside edges of the rail; Fig. 5, a side view of the same. Figs. 6 and 7 are respectively a plan view and side ele-
35 vation of a modified form of chair-plate for my metallic tie; and Figs. 8 and 9 are respectively a plan view and transverse section of another modified form of said chair-plates.

As shown in the drawings, the track-rails A
40 are of the ordinary T-rail variety, which my invention does not affect.

B and B' are metallic ties composed of the chair-plates *b* and tie-bolts *b'*.

The chair-plates *b* (shown in Figs. 1 to 5)
45 are of cast metal. Said chair-plates have on their upper surface hooked lugs or lips *b*², which are adapted to hook over the bottom flange of the rail A, as shown in Fig. 5, and on their under sides end flanges, *b*³, through
50 which the tie-bolts *b'* pass. Said end flanges

may be connected by longitudinal ribs *b*⁴, so as to give great strength to the plate *b*.

As shown in Figs. 5 to 9, the chair-plates *b* are made of wrought-iron, rolled or otherwise formed, with the longitudinal ribs *b*⁴, the said
55 ribs being cut off flush with the under side of the top plate to the length required to reach between the two end flanges, *b*³, which are formed by turning down (as indicated by dotted lines in Fig. 7) the projecting ends of the
60 top plate at right angles to the plane of said top plate. The hooked lips *b*² in said modifications are formed by making incisions through the top plate to cut one end and one
65 or both sides of each lip free from the top plate, and then bending the lip in the form required, the said cutting and bending being readily effected at one operation by means of a proper punch. The metallic ties B and B' only differ
70 from each other in having their chair-plates *b* arranged in a different manner on the tie-bolts *b'*, and in having means for keeping the chair-plates apart—that is to say, the ties B have their chair-plates fixed on the tie-
75 bolts *b'*, so that the hooked lips *b*² will be turned toward each other, and with no interposing obstacle between said chair-plates; but in the ties B' the chair-plates *b* have their hooked lips *b*² turned from each other, and
80 said plates are kept apart either by collars *b*⁵, formed on the tie-bolts *b'*, as shown in Fig. 1, or by a sleeve, *b*⁶, of the required length, which fits loosely on the tie-bolt, as shown in Figs. 4 and 5.

In laying the track the ties B and B' are
85 placed alternately, as shown in Fig. 1, the ties B' serving as a gage to space the rails at the required distance apart, and the ties B clamping the rails against the lips *b*² of the ties B. As fast as the track is laid in place
90 earth, gravel, or other suitable material should be tamped underneath the chair-plates until they obtain a solid bearing.

I am aware that tie-bolts have heretofore been used for spacing and securing "pot-
95 sleepers" and other supports for railway-rails, therefore I do not broadly claim the use of said bolts for that purpose; but

I claim as my invention—

In a railway-track, the combination, with 100

the track-rails, of metallic ties each composed
of a chair-plate provided with a hooked lip or
lips adapted to engage with one edge of the
bottom flange of the rail, the said chair-plates
5 being fixed in the reverse position on the al-
ternating ties, so as to bring the hooked lips
at opposite edges of the bottom flange of the

track-rail, and screw tie-bolts whereby said
tracks are spaced and secured, as herein speci-
fied.

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Witnesses:

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