

(No Model.)

C. A. BEACH & R. DANSINGER.

STREET RAILWAY TRACK.

No. 434,420.

Patented Aug. 19, 1890.

FIG. 1.

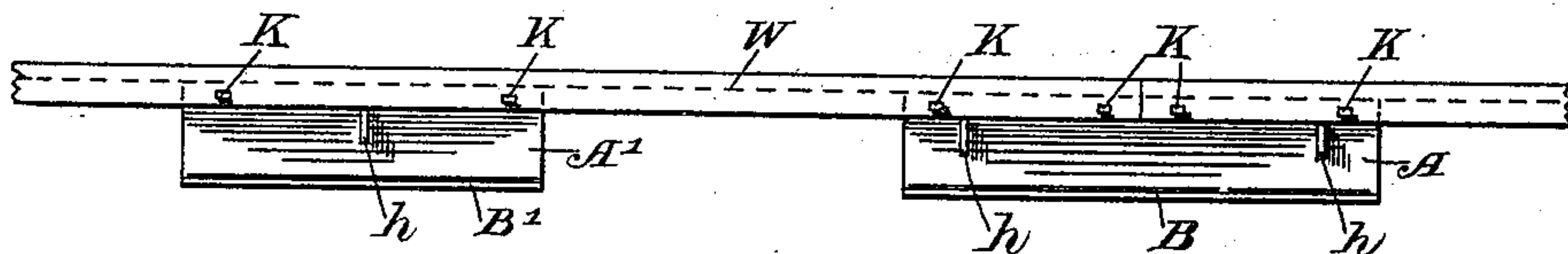


FIG. 2.

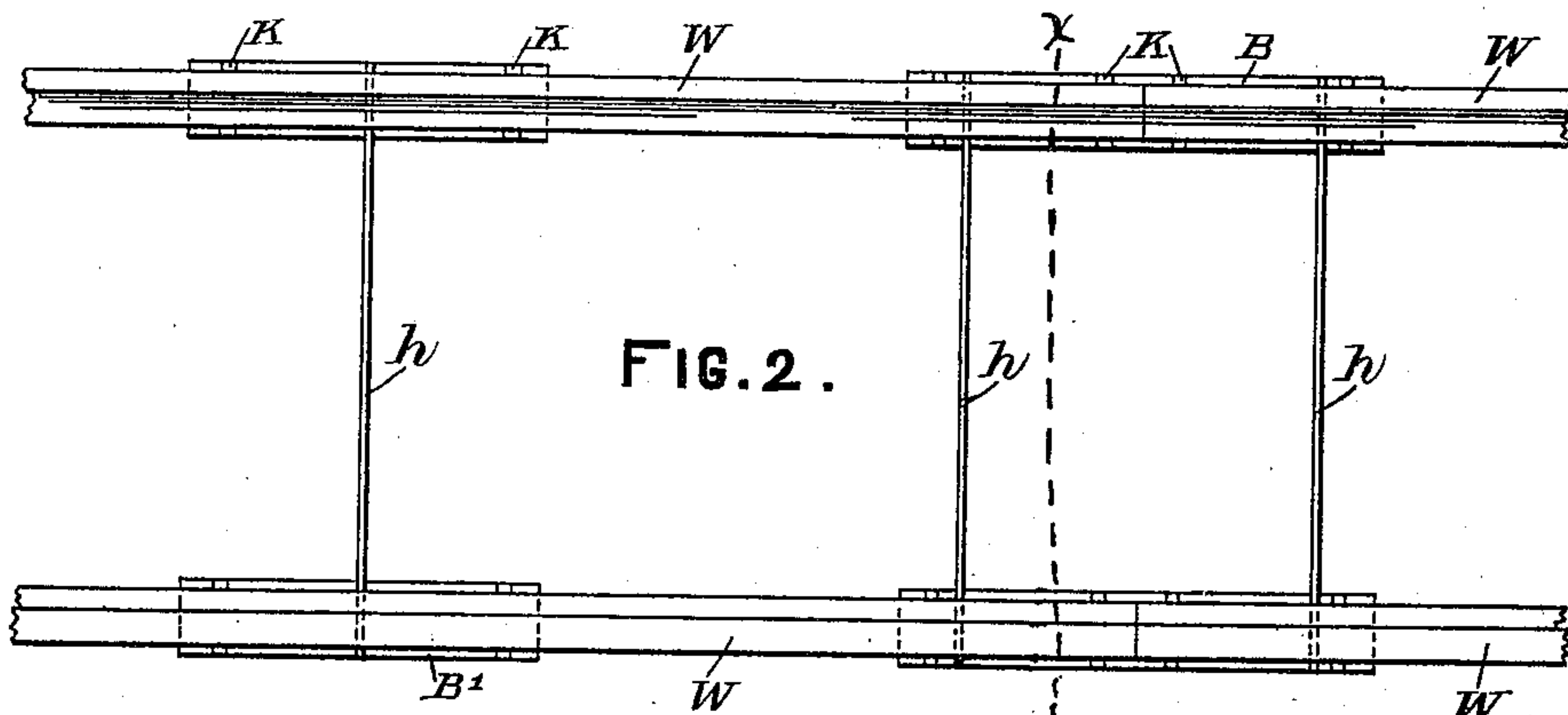


FIG. 3.

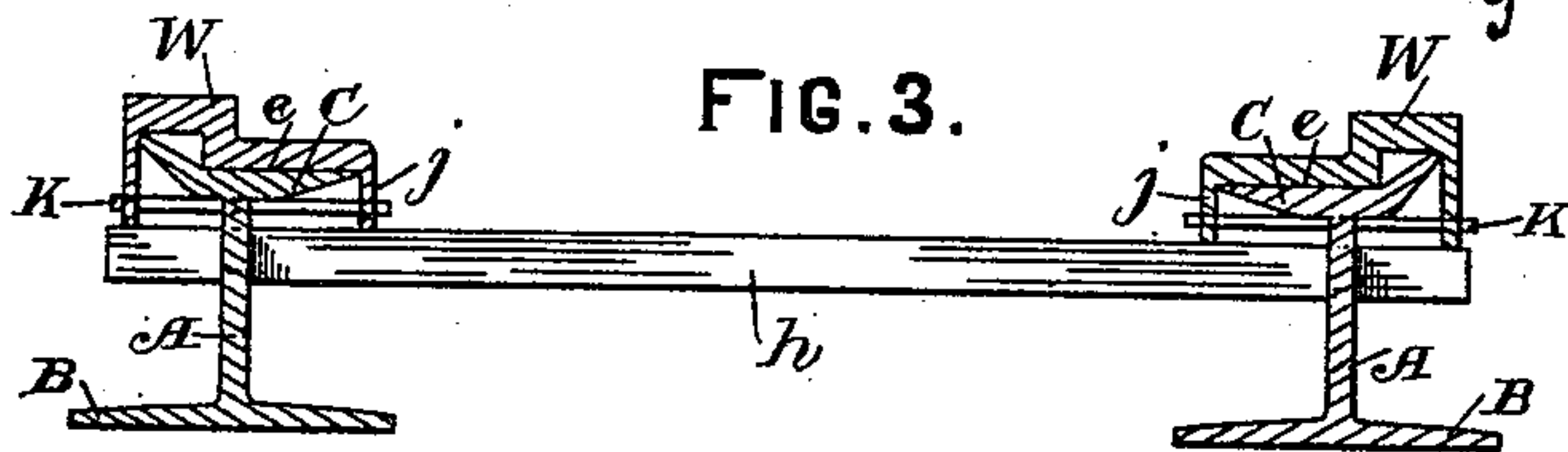


FIG. 5.

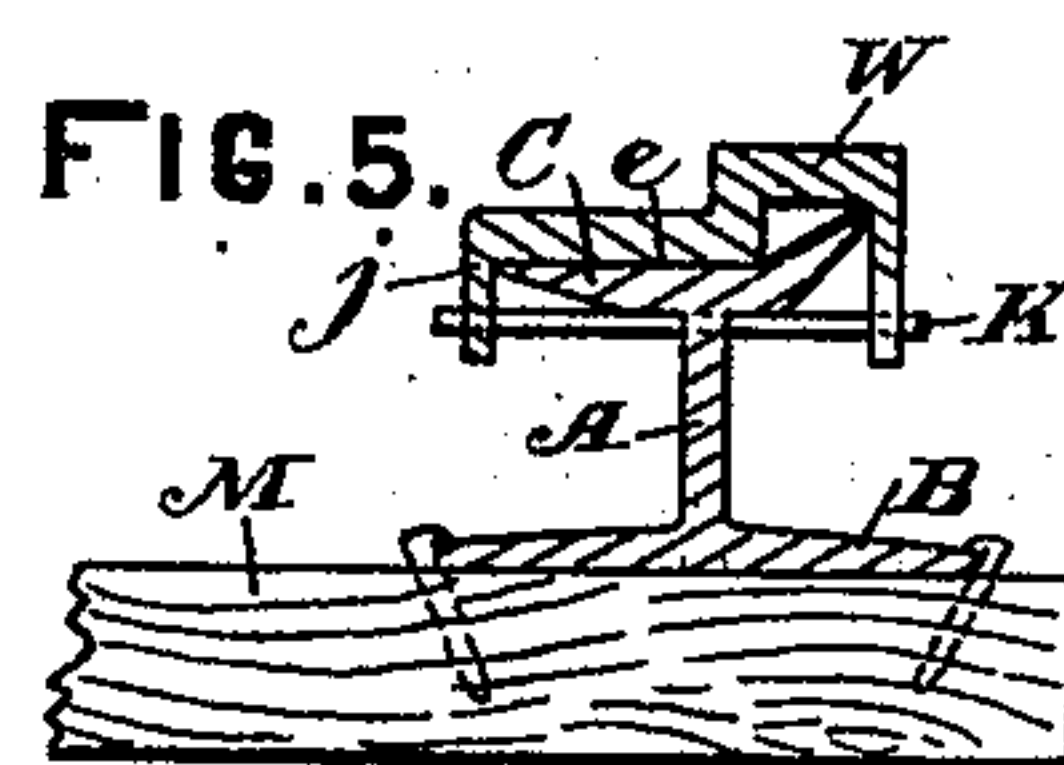


FIG. 6.

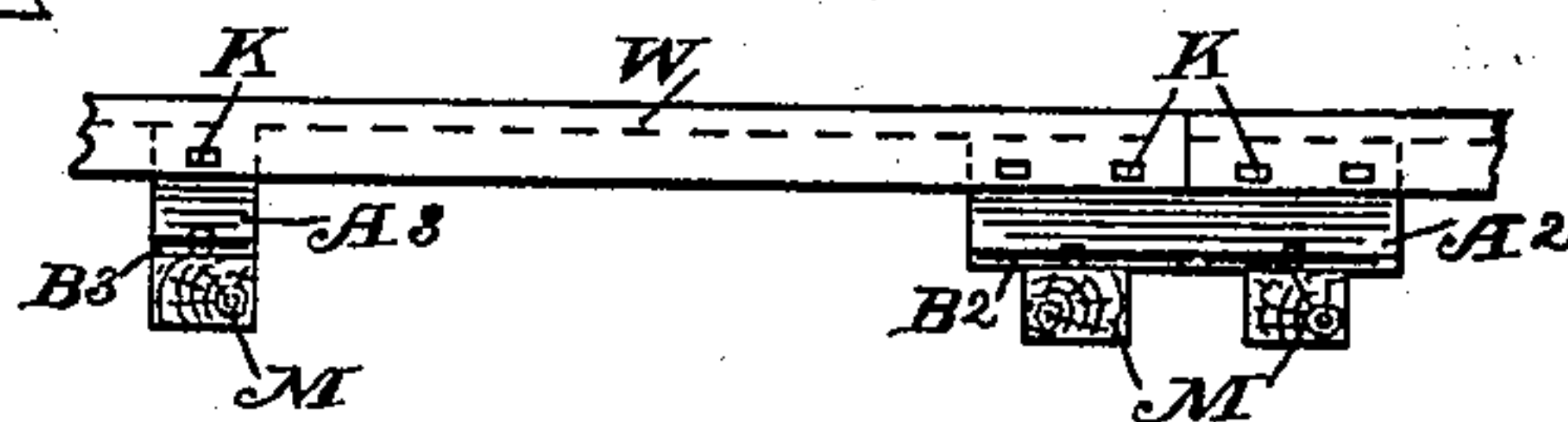


FIG. 7.

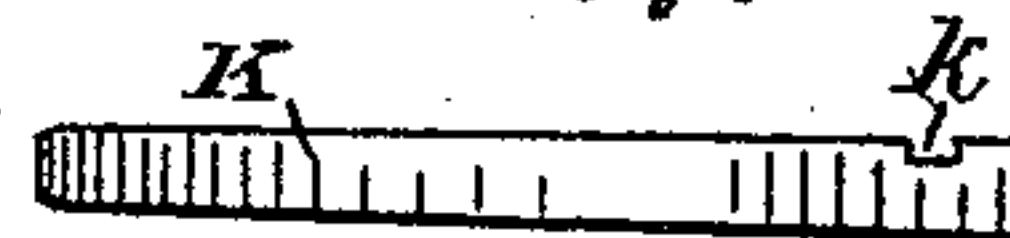
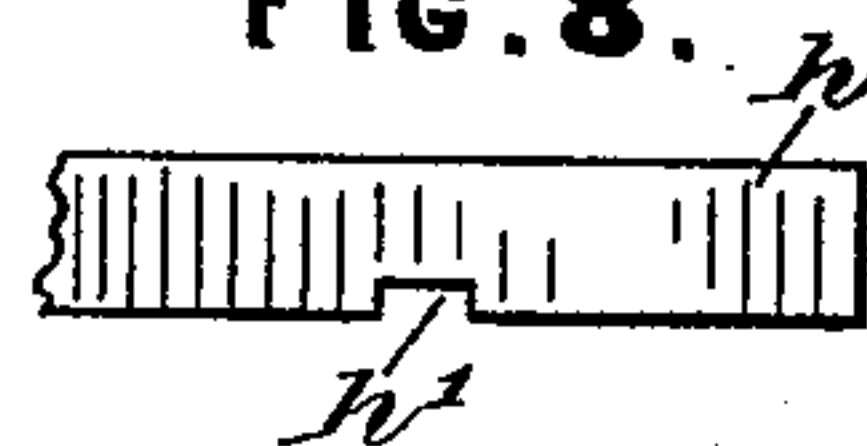


FIG. 8.



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CHARLES A. BEACH AND ROBERT DANSINGER, OF ALBANY, NEW YORK;
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STREET-RAILWAY TRACK.

SPECIFICATION forming part of Letters Patent No. 434,420, dated August 19, 1890.

Application filed April 19, 1890. Serial No. 348,741. (No model.)

To all whom it may concern:

Be it known that we, CHARLES A. BEACH and ROBERT DANSINGER, citizens of the United States, residing at Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Street-Railway Tracks; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention consists in the novel construction of metallic sleepers and connecting tie-bars for street-railways, and also of track-rails, and has for its object to provide an improved sleeper and tie-bar to take the place of the ordinary wood cross-ties and stringers, and an improved track-rail having the rigidity of the ordinary girder-rail and adapted to be secured to the sleepers without the use of objectionable rail-spikes, as hereinafter set forth.

Figure 1 is a side view of the metallic sleeper and track-rail. Fig. 2 is a plan view showing the metallic sleeper, the tie-bars, and track-rails in position. Fig. 3 is a vertical cross-section, taken on line *x y* of Fig. 2, illustrating the manner of connecting the cross-tie bars and track-rails with the sleepers. Fig. 4 is a plan view of the metallic sleepers secured on wooden cross-ties. Fig. 5 is a side view of the track-rail and metallic sleeper supported on wooden cross-ties. Fig. 6 is a cross-section of a rail and sleeper, showing the manner of connecting the rail to the sleeper and the sleeper to a wooden cross-tie. Fig. 7 is a side view of a wedge-key. Fig. 8 is a side view of the end of cross-tie.

As represented in the drawings, the rail-supporting sleepers are constructed with a wide supporting flange or base B, and a top flange C connected with the bottom flange by means of the central vertical web A. The sleepers which support the central portion of the rail are similar in the construction of their parts to those which support the meeting ends of the rail, but made shorter in length, as indicated by the base B' and web A' in Fig. 1. The surface of the top flange C consists of a plane *e* and an oblique offset rising from the

latter and engaging with a channel formed on the under side of the rail. The bearing-surface of the top flange C may consist, however, of a continuous plane surface without the oblique offset.

The web A of sleeper is slotted vertically to receive the ends of the iron cross-tie bars *h*, and it is also provided with horizontal slots to receive the wedge-key K, which also passes through corresponding slots formed in the flanges of the rail, so as to secure the rail on the sleeper. The iron ties *h* are straight flat bars provided with notches *h'* on their ends adapted to fit into the vertical slots formed in the web of the sleeper. The top edge of the tie-bar *h* when placed in the slots comes in contact with the lower edge of the flange *j* of the track-rail, and when the wedge-keys K are driven into the slots formed in the web of the sleeper and the flanges of the rail the flanges are drawn firmly down into the tie-bars *h*, thereby holding the track-rail solid and firm in place. The track-rails W are of the ordinary shape on the upper side, and are provided with parallel longitudinal flanges *j'* extending downward from the under side, thereby giving strength and firmness to the rail.

When a street-railway is to be constructed on soft or yielding earth the sleepers may be made much shorter in length, as shown in Fig. 5, used in pairs, and secured on wooden cross-ties M. When wooden cross-ties are used, the iron cross-ties may be dispensed with. The wedge-keys K are made a little thinner at one end than at the other, and are provided with a notch *k* in one edge to fit into the flange *j* and keep it in place. The keys are preferably made of spring-steel, so that they will hold the rail and sleeper together by spring-tension, and thereby prevent any rattling of the parts when in use.

What we claim is—

1. The combination, with a street-railway rail having parallel depending flanges formed on its edges, of a metallic sleeper consisting of a top and bottom flange connected together by a central vertical web, and a fastening-key secured in oppositely-disposed perforations formed in the web of the sleeper and flanges

of the track-rail, substantially as shown and described.

2. The combination, with street-railway rails provided with parallel depending flanges 5 formed on its edges, of metallic sleepers having a top and bottom flange connected together by means of a central vertical web, a fastening-key secured in oppositely-disposed perforations formed in the web of the sleeper 10 and in the flanges of the track-rail, and a metallic cross-tie having notched ends secured in perforations formed in the web of the sleepers, substantially as shown and described.

3. The combination, with a street-railway 15 rail having depending longitudinal flanges formed on its edges and a channel formed in the under side of the rail, of a metallic sleeper consisting of a top and bottom flange connected together by means of a central vertical 20 web, one side of said top flange extending upward obliquely from the web to engage with

the groove of the rail, and a fastening-key secured in perforations formed in the web of the sleeper and the flanges of the track-rail, substantially as shown and described. 25

4. The combination, with street-railway rails provided with depending longitudinal flanges formed on their edges, of metallic sleepers having a top flange, a bottom flange, and a central vertical web connecting said flanges together, a fastening-key secured in oppositely-disposed perforations formed in the web of 30 the sleeper and in the flanges of the track-rail, and wooden cross-ties supporting said sleepers, substantially as shown and described. 35

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES A. BEACH.
ROBERT DANSINGER.

Witnesses:

ROBERT W. HARDIE,
CHAS. H. MILLS.