

(No Model.)

E. SAMUEL & V. ANGERER.
RAILWAY TRACK STRUCTURE.

No. 497,554.

Patented May 16, 1893.

FIG. 2.

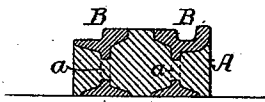


FIG. 1.

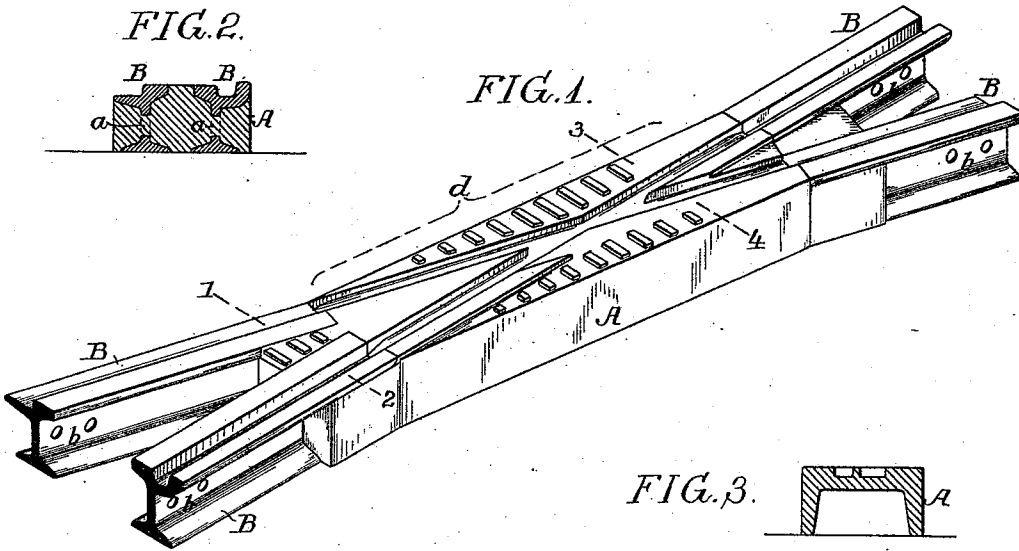


FIG. 3.

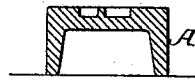


FIG. 4.

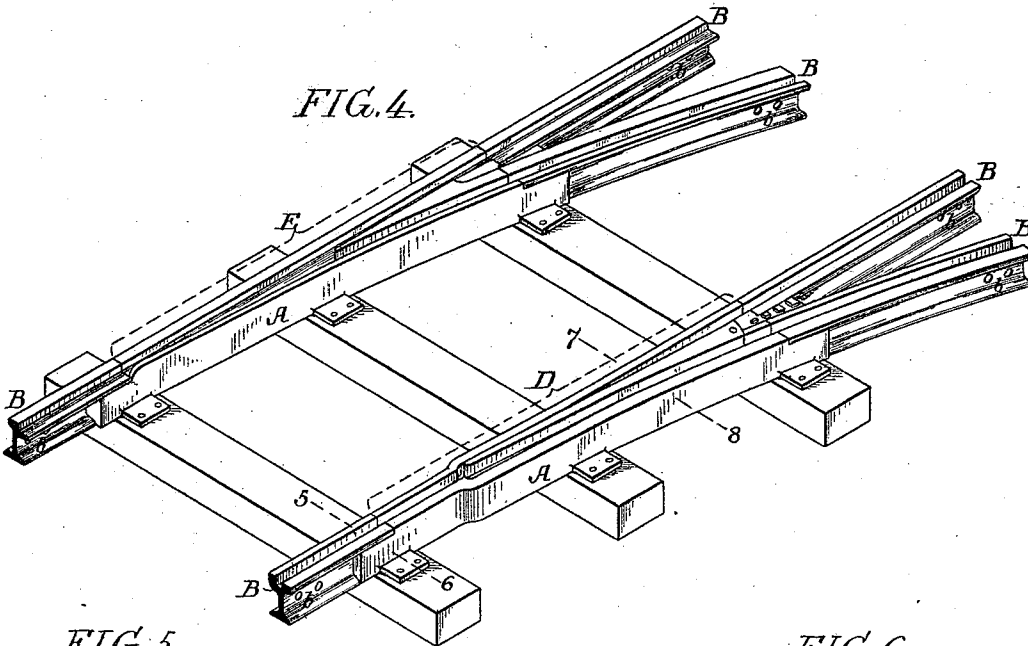


FIG. 5.

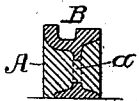


FIG. 7.

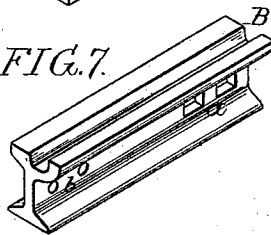
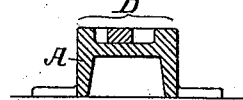


FIG. 6.



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UNITED STATES PATENT OFFICE.

EDWARD SAMUEL AND VICTOR ANGERER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO THE WILLIAM WHARTON, JR., & COMPANY, INCORPORATED, OF SAME PLACE.

RAILWAY-TRACK STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 497,554, dated May 16, 1893.

Application filed February 24, 1892. Serial No. 422,604. (No model.)

To all whom it may concern:

Be it known that we, EDWARD SAMUEL and VICTOR ANGERER, both citizens of the United States, and residents of Philadelphia, Pennsylvania, have invented certain Improvements in Railway-Track Structures, of which the following is a specification.

The object of our invention is to provide cast metal frogs and switches, and other railway castings with wrought metal extensions, to which can be readily fished or bolted the rails or shapes of the track, thus enabling the constructors to use one class of joints throughout the system.

In the accompanying drawings:—Figure 1, is a perspective view of a frog illustrating our invention. Fig. 2, is a section on the line 1—2, Fig. 1. Fig. 3, is a section on the line 3—4, Fig. 1. Fig. 4, is a perspective view of a switch showing a movable point, and a mate, both embodying our invention. Fig. 5, is a section on the line 5—6, Fig. 4. Fig. 6, is a section on the line 7—8, Fig. 4; and Fig. 7, is a perspective view of one of the rail sections, detached.

A track structure composed of sections of cast and rolled or wrought metal, the cast portion of the structure being cast around the molded or wrought portion, is fully described and claimed in the application for patent filed by Edward Samuel, February 24, 1892, Serial No. 422,618, the present invention relating particularly to the combination of wrought or rolled sections with a cast portion, which forms part of the frog or switch, that is, in which the wheels travel in direct contact with the casting.

The rail sections B are preferably cut as shown in Fig. 7, having openings *a* at one end through which the cast metal flows, and openings *b* at the opposite end for the reception of the fish plate bolts, or other fastenings. In some cases, these latter openings are not necessary, as for instance, when the rails are coupled by fastenings that do not penetrate the webs of the rails, but we have shown them in the drawings, so as to illustrate this application of our invention. The frog, (Fig. 1) is cast in a mold, the rails being placed in position in the sand, so that their ends extend for a proper distance into the opening formed in

the mold for the reception of the cast metal which is then poured into the mold around the projecting webs of the rails, and through the openings *a* therein. When the casting is cool, it is removed from the mold, the rail sections B being firmly attached in their respective positions to the casting, the face of which is so shaped that the tread and groove of the rails are continued in the casting; thus a cast frog is provided with rail extensions, which are of the same shape as the running rails of a railway track, and which can be readily coupled to said rails by the ordinary fastenings. This arrangement not only dispenses with the cumbersome fastenings used in uniting cast metal frogs to rails, but also insures the proper alignment of the rails with the cast portion of the frog, as the rail extensions, after the metal has been cast around them, become a part of the frog.

In Figs. 4, 5, and 6, we have shown switch sections made in the same manner, the section D being a movable point switch, and the section E a mate, having a fixed point. These sections are made in substantially the same manner as the frog above described. In Fig. 4, we have shown these sections provided with feet by which the sections are secured to ties, and the frog section may be made in a like manner, when desired.

It will be understood that track structures other than switches and frogs, may be made in the same manner, the invention being, in fact, applicable to all track structures where the cast section forms a part of a track and has to be secured to the rails of said track.

We claim as our invention:—

1. A railway switch, frog, or similar track structure having a body portion forming the tread for the wheels, made wholly of cast metal, with wrought or rolled metal extensions permanently fixed to and projecting from the ends of the casting and in line with the wheel treads of said castings, whereby the rails or shapes of the track can be readily secured to the switch frog or other track structure with the ordinary joints, substantially as described.
2. The combination of the switch, frog, or other track structure, of the cast metal body portion having its upper surface grooved for

the reception of the wheels, and having end
projections with short perforated sections of
wrought or rolled metal rails, the end projec-
tions of the cast metal portion being tied to-
5 gether and to the wrought metal rails by por-
tions of the cast metal passing through the
perforations in the wrought metal rails, sub-
stantially as described.

In testimony whereof we have signed our
names to this specification in the presence of 10
two subscribing witnesses.

EDWARD SAMUEL.
VICTOR ANGERER.

Witnesses:

HENRY HOWSON,
HARRY SMITH.