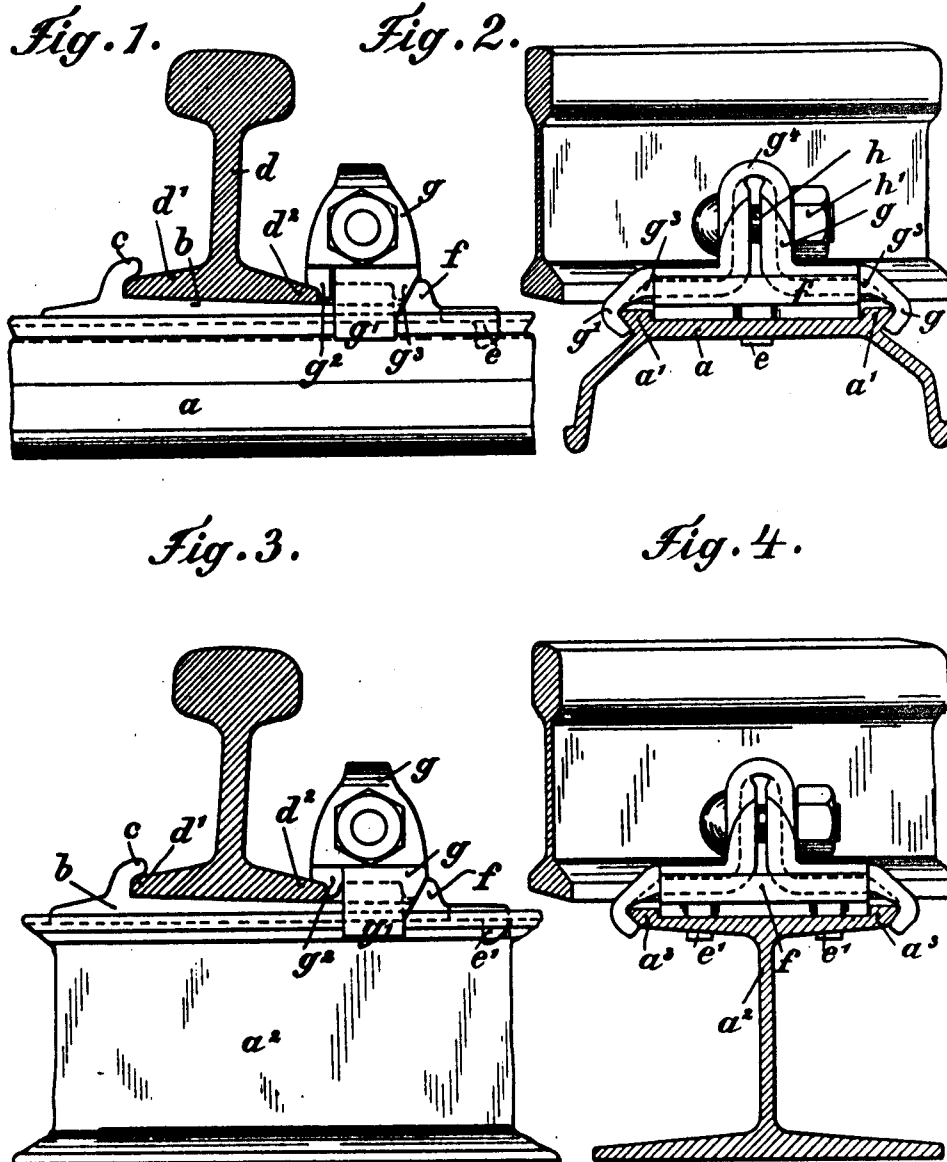


A. HAARMANN.
 MEANS FOR FASTENING THE RAILS TO THE SLEEPERS.
 APPLICATION FILED NOV. 23, 1912.

1,061,538.

Patented May 13, 1913.



Witnesses:

J. Kommer
E. Leckert.

Inventor:

August Haarmann,
By Henry Orth atty

UNITED STATES PATENT OFFICE.

AUGUST HAARMANN, OF OSNABRÜCK, GERMANY.

MEANS FOR FASTENING THE RAILS TO THE SLEEPERS.

1,061,538.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed November 23, 1912. Serial No. 733,072.

To all whom it may concern:

Be it known that I, AUGUST HAARMANN, a subject of the King of Prussia, residing at Osnabrück, Germany, have invented certain
5 new and useful Improvements in Means for Fastening the Rails to the Sleepers; and I do hereby declare the following to be a full, clear, and exact description of the invention.

My invention relates to improved means
10 for fastening the rails to the sleepers, when iron sleepers and iron sole-plates are employed.

A primary object of my invention is to still further avoid the risk of such cracks
15 occurring, and to this end I now dispense also with the hole immediately adjacent to the inner side of the rail, and arrange that the rails and their sole-plate are fastened to the sleepers by clamps having hooked ends
20 which engage below ribs or beads, these being provided on the sleepers also for guiding the sole-plates laterally. Each clamp bears on one side against the inner edge of the base of the rail, and on the other side
25 against a lug on the sole-plate, this lug being parallel to the rail.

Two illustrative embodiments of my invention are diagrammatically represented by way of example in the accompanying
30 drawing, wherein:—

Figure 1 is a side elevation, partly in section, of the fastening device, the sleeper here being of channel-section. Fig. 2 a front elevation of the same, also partly in section.
35 Fig. 3 a side elevation partly in section of a second form of the device as applied to a sleeper of I-section and Fig. 4 a front elevation of the same, also partly in section.

The sleeper *a* has lateral ribs or beads *a'*
40 between which the sole-plate *b* rests, said sole-plate being provided at one end with an upwardly turned hook *c* which engages over the outside edge *d'* of the base of the rail. The other end of this sole-plate has a
45 downwardly projecting pin *e* engaging in a corresponding hole in the top of the sleeper, and thus transferring to the sleeper the side-thrust received by the rail. This sole-plate has moreover, on the side remote
50 from the hook *c* and at a certain distance from the inside edge of the base of the rail, a lug *f* running parallel to the rail.

To fasten the rail and sole-plate to the sleeper a clamp *g* is provided which on one
55 side bears against the inside edge *d''* of the rail-base and on the other side on the lug *f*

on the sole-plate *b*, and which has hook-shaped ends *g'* engaging below the outwardly directed beads *a'* on the sleeper. The center portion of the clamp has the
60 form of an inverted loop, through which the bolt *h* passes. The upper portion *g''* of this loop is of smaller section than the remainder in order to facilitate the two side portions of the loop being drawn together. 65 The lower side of the clamp has ribs *g''* and *g'''* which bear against the inside edge *d''* of the rail-base and the lug *g* on the sole-plate respectively. The ribs extend to the inner sides of the inverted loop and so serve to
70 stiffen the clamp. When manufacturing the clamps, the hook-shaped ends *g'* are placed at a distance from one another which is greater than the distance between the extremities of the beads *a'*. When adjusting
75 one of the clamps these hook-shaped ends *g'* will therefore pass over the beads *a'*. Thereupon the nut *h'* on the bolt *h* is tightened down, the two sides of the loop and with them the ends *g'* of the clamp being
80 thus brought together until the said ends are firmly engaged below the beads *a'*. In this manner the rail and its sole-plate become securely fastened to the sleeper.

The second form of clamp as illustrated
85 in Figs. 3 and 4 is specially applicable to a sleeper of I-section. The sleeper or tie has a web *a''* and its head is provided with lateral ribs or beads *a'''* corresponding to the ribs or beads *a'* Fig. 2, and between which
90 the sole-plate or chair rests and by which the chair is prevented from lateral movement. The only essential difference from the first form described is that the sole-plate has two pins *e'* which engage in corresponding
95 holes on both sides of the central web of the sleeper. The arrangement, form and operation of the clamp are in both cases the same.

I claim:—

1. In means for fastening the track-rails to iron sleepers, the combination of a sole-plate having at its outer end a hook engaging over the base of the rail and at its inner end an extension having above it a lug, and
100 below it a pin, an iron sleeper below said sole-plate, having projections thereon and a hole engaged by said pin, and a clamp bearing against the inner edge of the base of the rail and against said lug, and having hook-
110 like ends engaging over said projections.

2. In means for fastening the track-rails

to iron sleepers, the combination of a sole-plate having at its outer end a hook engaging over the base of the rail and at its inner end an extension having above it a lug, and
5 below it a pin, an iron sleeper below said sole-plate, having projections thereon and a hole engaged by said pin, and a clamp bearing against the inner edge of the base of the rail and against said lug, having hook-like
10 ends engaging over said projections and being at its center portion turned up to form a loop, the side portions of said loop being bolted together.

3. In means for fastening the track-rails
15 to iron sleepers, the combination of a sole-plate having at its outer end a hook engaging over the base of the rail and at its inner end an extension having above it a lug, and below it a pin, an iron sleeper below said
20 sole-plate, having projections thereon and a hole engaged by said pin, and a clamp bearing against the inner edge of the base of the rail and against said lug, having hook-like ends engaging over said projections and
25 being at its center portion turned up to form a loop, the side portions of said loop being bolted together and the top of said loop being of a smaller section than said side-
portions.

4. In means for fastening the track-rails
30 to iron sleepers, the combination of a sole-plate having at its outer end a hook engaging over the base of the rail and at its inner end an extension having above it a lug, and below it a pin, an iron sleeper below said
35 sole-plate, having projections thereon and a hole engaged by said pin, and a clamp having ribs at each side, those on one side bearing against the inner edge of the base of the
40 rail and those at the other side against said lug, and having hook-like ends engaging over said projections.

5. In means for fastening the track-rails

to iron sleepers, the combination of a sole-plate having at its outer end a hook engag- 45
ing over the base of the rail and at its inner end an extension having above it a lug, and below it a pin, an iron sleeper below said sole-plate, having projections thereon, said
projections serving to guide the sole-plate, 50
and having a hole engaged by said pin, and a clamp bearing against the inner edge of the base of the rail and against said lug, and having hook-like ends engaging over
55 said projections.

6. In means for fastening the track-rails to iron sleepers, the combination of a sole-plate having at its outer end a hook engaging over the base of the rail and at its inner end an extension having above it a lug, and
60 below it a pin, an iron sleeper below said sole-plate, having longitudinal beads thereon and a hole engaged by said pin, and a clamp bearing against the inner edge of the base of the rail and against said lug, and
65 having hook-like ends engaging over said beads.

7. In means for fastening the track-rails to iron sleepers, the combination of a sole-plate having at its outer end a hook engag- 70
ing over the base of the rail and at its inner end an extension having above it a lug, and below it pins, an iron sleeper below said sole-plate, having projections thereon and
75 holes engaged by said pins, and a clamp bearing against the inner edge of the base of the rail and against said lug, and having hook-like ends engaging over said projec-
tions.

In testimony whereof I have signed my 80
name to this specification, in the presence of two subscribing witnesses.

AUGUST HAARMANN.

Witnesses:

WILHELM STRUSS,
FR. HOYERMANN.