

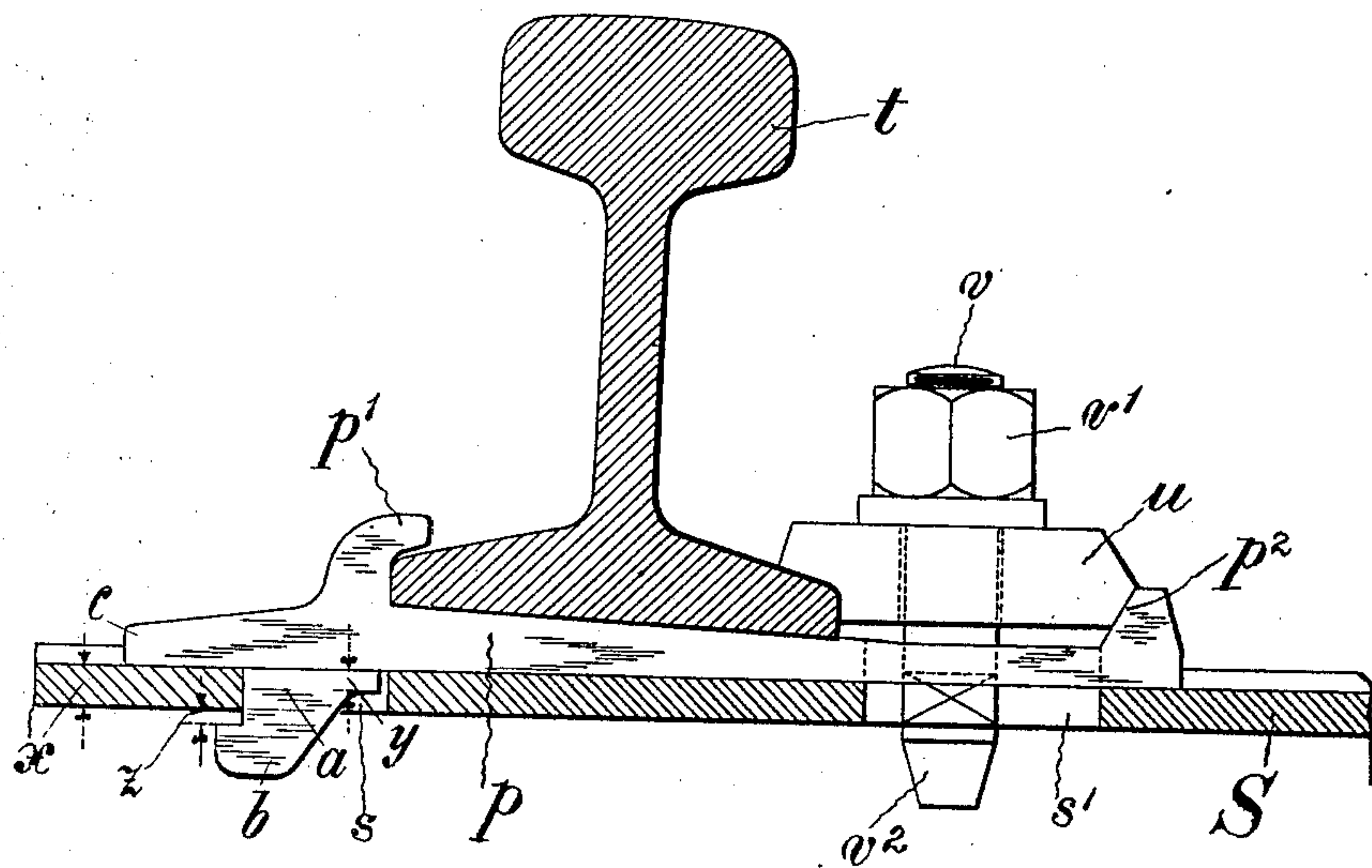
No. 894,322.

PATENTED JULY 28, 1908.

A. HAARMANN.

RAIL CHAIR.

APPLICATION FILED DEC. 23, 1907.



Witnesses

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AUGUST HAARMANN, OF OSNABRÜCK, GERMANY.

RAIL-CHAIR.

No. 894,322.

Specification of Letters Patent.

Patented July 28, 1908.

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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 new and useful Improvements in Rail-Chairs; and I 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to bed plates for rails and has for its object to improve the construction of such plates as shown in my application Serial No. 374,639, filed May 20th, 1907.

Practical trials have shown that by changing the construction of the hook on the under side of the bed plate a better fastening at the outer side of the rail can be obtained and the bed plate can be inserted in place on the metal sleeper with greater facility.

Referring to the drawing which illustrates my invention and is partly in elevation and partly in section S designates an iron railway sleeper provided with a hole or slot *s* in its top at the outside of the rail *t*. The bed plate *p* has a lug *a* on its under face, a portion of the cross section of said lug at its root adjacent the plate being of substantially the same length and breadth as the slot *s* so as to practically fill the hole when the bed plate is in place on the sleeper. On the inside the lug at its root has a height *y* less than the thickness *x* of the top of the sleeper and further below and ranging toward the left projects a hook *b* the top face of which forms substantially a right angle to the body of the lug, as shown, and lies parallel to the under face of the top of the sleeper when in place and at a distance *z* therefrom, less than the distance *y*. On the upper part the bed plate has as is usual a hook *p'* for taking over the outer side of the flange of the rail *t*, while the inner side of the flange is engaged by the usual clamping plate *u*. This plate *u* has one edge recessed to conform to the inner flange edge, the other edge of the plate is beveled and rests on and engages the incline *p²*, formed at the inner end of the bed plate *p*. A bolt *v* passes through the clamping plate and through the slot *s'* in the sleeper *S*. This bolt has at its lower end a hook *v²* which takes under the top of the sleeper when

turned into the position shown in the drawing. A nut *v'* on the upper end of the bolt serves to depress the clamping plate *u* against the incline *p²* and thereby forces the rail against the hook *p'* of the bed plate *p*. The distance *z* that the hook *b* lies below the under side of the top of the sleeper may be smaller than the distance *y*, as for inserting the hook *b* into the hole *s* of the sleeper the bed plate *p* can slightly be tilted about its outer edge *c* touching the top face of the sleeper. The bed plate being thus turned the hook *b* of the lug *a* makes a smaller angular movement than the reduced portion *y* of the lug. Corresponding to the difference in these movements the distance of the upper edge of the hook from the under side of the top of the sleeper may be smaller than the height of the reduced lug portion *y*.

In order to insert the bed plate, it is sufficient to place it substantially horizontal between the rail and sleeper so that the hook *b* will lie directly over the hole or slot *s* in the sleeper. The inner end of the bed plate being then lifted to turn about the outer end *c*, then lowered in place and simultaneously giving a slight shove to the left the hook *b* will pass under the top of the sleeper. The chair is then allowed to drop and the lug *a* substantially fills the slot *s*. For the removal of the bed plate the reverse of this operation will be performed.

The improvement offers many advantages in that for instance the bed plate can be inserted and removed with one hand while the other hand remains free for lifting the rail or other manipulation. A further advantage is that the vertical movement of the bed plate at its other end is very small, that is the vertical lift of the bed plate at the other end can only amount to the distance *z*, which is less than the distance *y*, i. e. the height of the reduced portion of the lug *a*. If the bed plate is screwed in place by means of the bolt *v* and nut *v'* on the inside of the rail, the lifting of the plate *p* or its tilting about its outer end is practically impossible and at most only a slight vertical lift at the outer side of the rail will take place, and since the distance *z* is less than the distance *y* this lift cannot be sufficient to cause the reduced portion of the lug *a* to leave the slot *s* and permit an accidental displacement of the bed plate.

It will be seen from the above that the hook of the lug prevents the bed plate from being disconnected from the sleeper in ad-

justing the track which is being laid. The loss of time and the trouble are therefore spared that otherwise occur with bed plate lugs having no hooks. In manipulating the sleepers and rails *i. e.* in sidewise shifting, lifting and lowering of the same, such lugs are often unintentionally lifted out and need to be reinserted in a troublesome manner into the slot of the sleeper, before the further adjustment of the track can be continued.

I claim:

In combination with a slotted railway sleeper of a bed plate having a rail flange engaging hook on its upper face and a sleeper engaging hooked lug on its under face, said hooked lug substantially filling the slot when

the bed plate is in operative position, and having a reduced portion at its inside smaller in height than the thickness of the top of the sleeper but greater in height than the distance of the hook from the under face of the sleeper top and means at the end of the bed plate opposite said hook to secure said end to the sleeper.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

AUGUST HAARMANN.

Witnesses:

WILHELM FLASCHE,
CLEMENS HECKMANN.