

A. HAARMANN.

BED PLATE FOR IRON RAILWAY SLEEPERS.

APPLICATION FILED MAY 20, 1907.

899,107.

Patented Sept. 22, 1908.

3 SHEETS—SHEET 1

Fig.1.

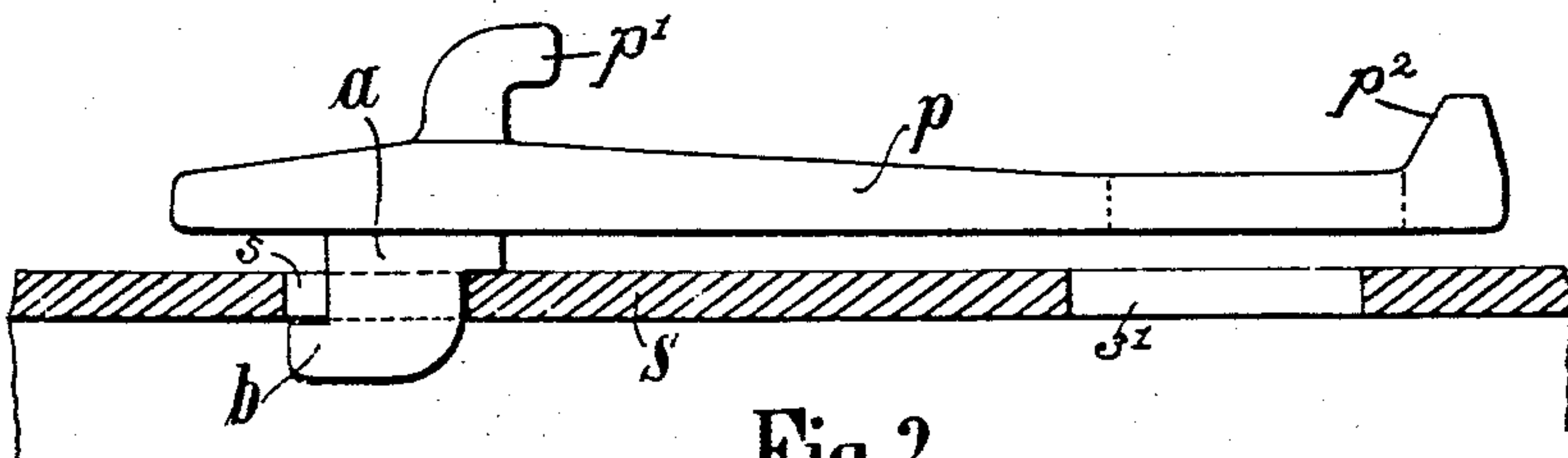
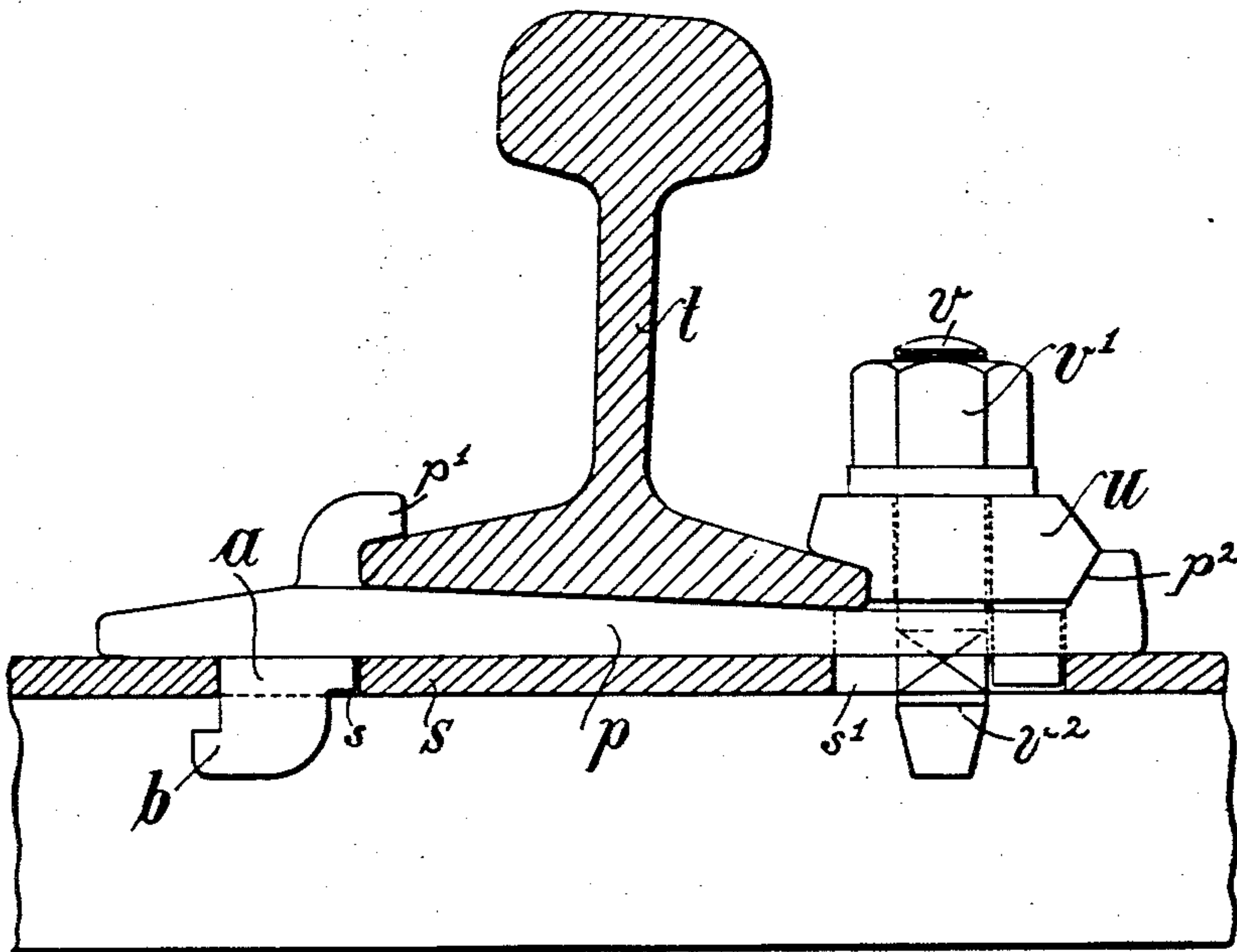


Fig.2.



Witnesses.

Jesse H. Lutton

C. Mommers

Inventor.

August Haarmann

By

*Heurthge*

Att'y.

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3 SHEETS—SHEET 2.

Fig.3.

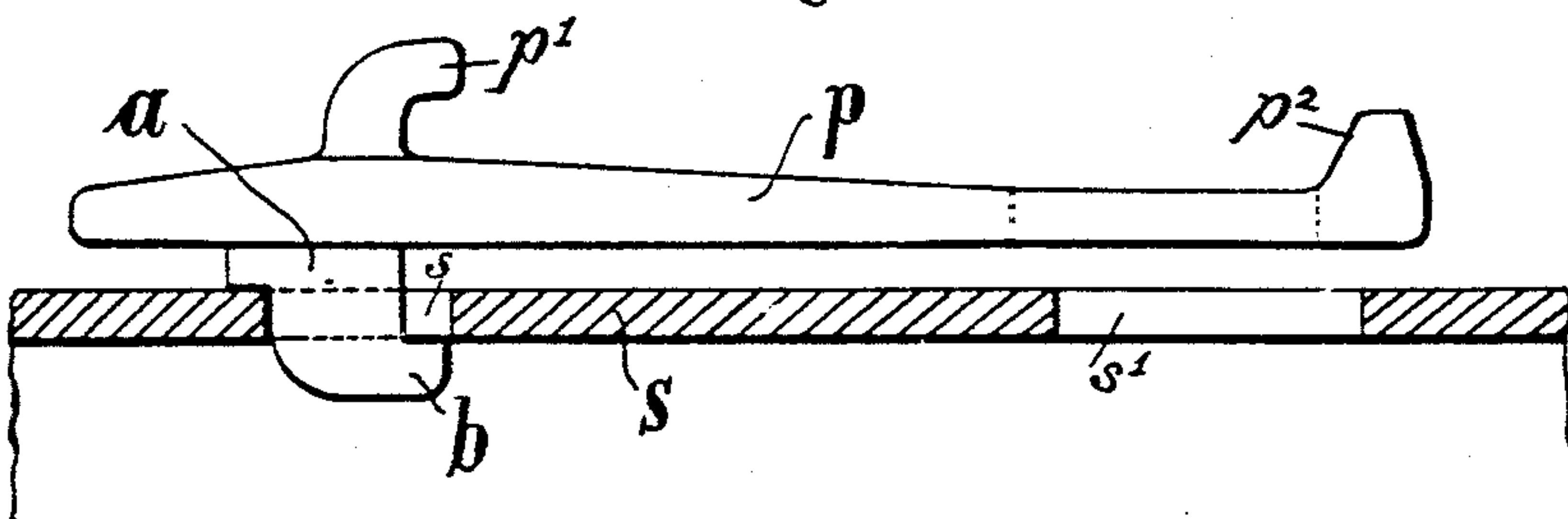
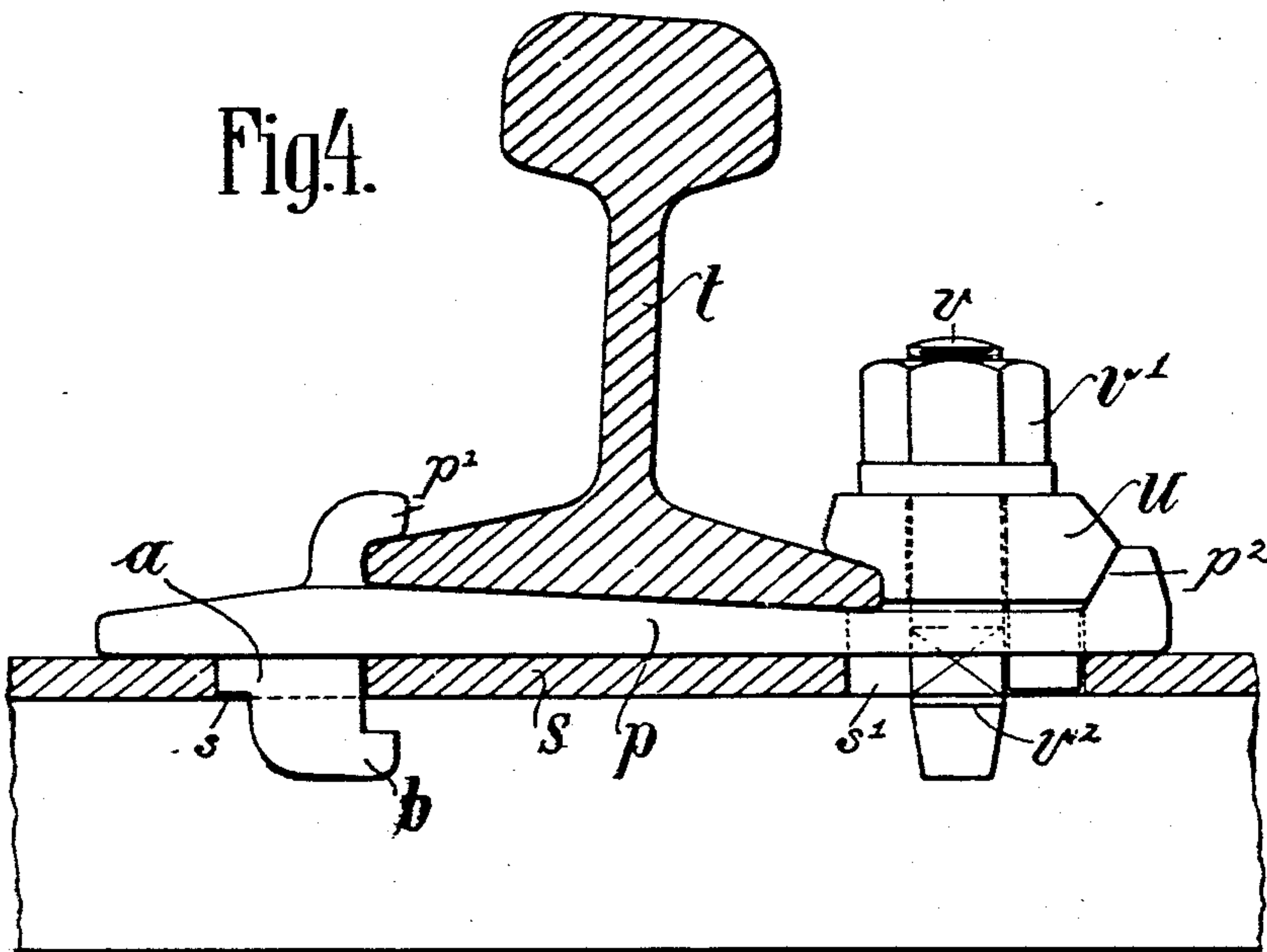


Fig.4.



Witnesses.

Jesse H. Sutton

G. H. H. H. H.

Inventor.

August Haarmann  
 by

*Henry H. H.*

Atty.

A. HAARMANN.  
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3 SHEETS—SHEET 3.

Fig. 5.

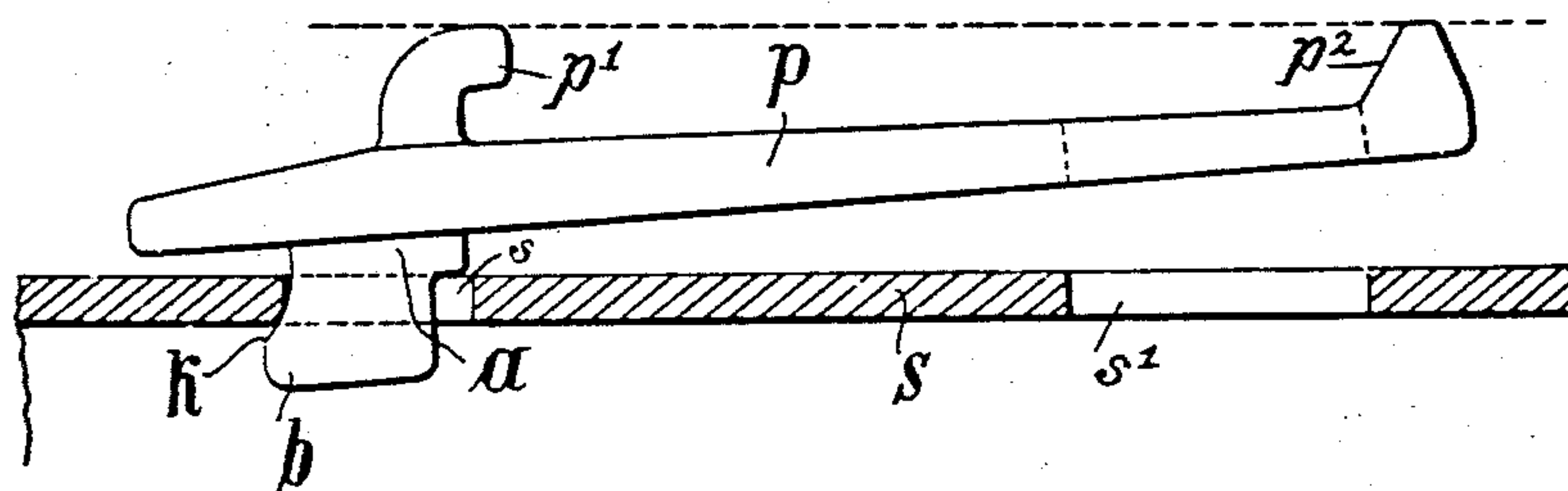
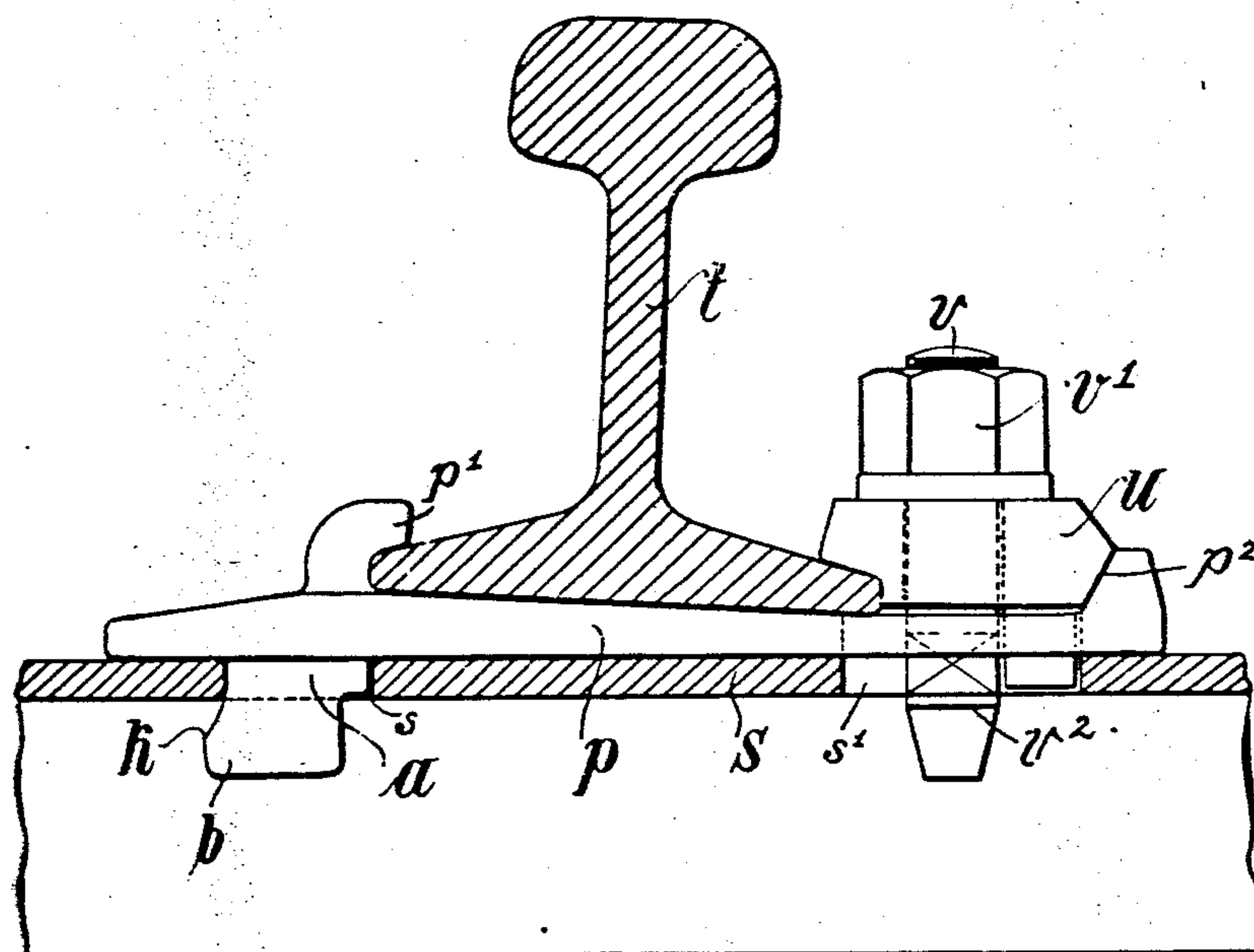


Fig. 6.



Witnesses.

Jesse N. Lutton  
O. Hommes

Inventor.

August Haarmann  
by *Henry H. H.*  
Att'y.



# UNITED STATES PATENT OFFICE.

AUGUST HAARMANN, OF OSNABRÜCK, GERMANY.

## BED-PLATE FOR IRON RAILWAY-SLEEPERS.

No. 899,107.

Specification of Letters Patent.

Patented Sept. 22, 1908.

Application filed May 20, 1907. Serial No. 374,639.

*To all whom it may concern:*

Be it known that I, AUGUST HAARMANN, a subject of the King of Prussia, residing at 7 Hamburgerstrasse, Osnabrück, Germany, have invented certain new and useful Improvements in Bed-Plates for Iron Railway-Sleepers; 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 rail chairs adapted to be used on hollow metal sleepers and the invention consists in providing a locking member, such as a lug, formed on the underside of the chair designed to fit into and completely fill a hole formed in the top of the sleeper.

My improved chair differs from those of well known construction in that the lug has a hook which projects in the longitudinal direction of the chair. The distance between the top face of the hook and the bottom of the chair is about twice as great as the thickness of the top of the sleeper and the top face of the hook may be either flat or curved.

In order that the invention may be clearly understood, reference is made to the accompanying drawings in which several embodiments are shown by way of example and in which

Figures 1 and 2 are longitudinal sections through the sleeper showing in elevation one form of the invention with the hook directed outward from the rail. Figs. 3 and 4 are like views showing the hook directed inwardly and Figs. 5 and 6 are similar views showing another modification.

S designates an iron sleeper provided with a hole *s* in its top.

A rail-chair *p* has a lug *a* on its under face, a portion of said lug being of the same length and breadth as the hole *s* so as to completely fill the hole, and when the chair is in place on the sleeper, accidental displacement of the former is impossible.

One end of the lug is of substantially the same thickness as the top of the sleeper while the other end is twice said thickness. Beyond this latter end projects a lip forming a

hook *b*, the top face of which forms a right angle to said latter end, as shown in Figs. 1 to 4, and lies parallel to the underface of the chair at a distance therefrom equal to twice the thickness of the top of the sleeper.

The lug is of the same thickness as the sleeper top for a distance slightly greater than the length of the lip of the hook, so that the combined length of the lip and lower part of the lug is a little less than the length of the hole in the sleeper. The hook may therefore be inserted in the hole without slanting the chair. When the hook has passed below the underface of the top, the short edge of the lug will engage the top face and by displacing the chair towards the outside of the track, as shown in Fig. 1 and towards the inside as shown in Fig. 3, the lug will fall into the hole and the hook be passed beyond the edge of the hole and prevent the chair from being lifted off the sleeper. This hook and lug enter the hole in the sleeper at the outer side of the rail, as shown in Figs. 2, 4 and 6. It is therefore possible on the one hand to push the chair horizontally in between the flange of the rail and the top of the sleeper without the chair being unintentionally lifted off when adjusting the track. On the other hand the gage is effectively prevented from being reduced owing to the fact that the lug fills up the hole and alteration thereof is not required.

The form illustrated in Figs. 5 and 6 differs from those described, in that the hook is not formed at right angles with one end of the lug, but is curved. With this form, the locking of the chair may be commenced when it is held slightly inclined and finished with a single push in the direction of the hook.

The rail indicated by *t* is secured to the rail-chair by means of a hook *p'* formed on the top face of the rail-chair adapted to take over the outer flange of the rail, while the inner flange is engaged by a plate *u*. This plate has one edge recessed to conform to the edge of the flange, the other edge being beveled and resting on an incline *p''* formed on the inner end of the chair. A bolt *v* passes through the plate and through a hole *s'* in the sleeper and has a hook *v''* formed on its lower end which takes under the top of the sleeper when turned into the position shown in Figs. 2, 4 and 6. A nut *v'* on the upper



end of the bolt serves to depress the plate against the incline  $p^2$  which tends to force the rail flange against the hook  $p'$ .

As shown in Figs. 5 and 6, the hole in the sleeper is rounded at the underside which faces the curved portion of the hook. The additional advantage is that the edge  $k$  of said portion lies closer to the underface of the rail chair than in the construction shown in Figs. 1 to 4.

I claim—

1. The combination with a metallic railway sleeper having a hole in its top on each side of the rail flange, of a rail chair extending over both holes having a lug on its underside near one end and of the same length as one of said holes to prevent longitudinal displacement of the chair, and a projecting portion of said lug with a horizontal prolongation distanced from the under face of the chair approximately twice the thickness of the sleeper's top in said hole, and a clamping member engaging the other end of the chair and the rail flange and passing through the other hole.

2. The combination with a metallic railway sleeper, having a hole in its top on each side of the rail flange, of a rail chair extending over both holes provided with a lug on its underside near one end and having a portion the same length as one of said holes and filling said hole when in place to prevent longitudinal displacement of the chair, and a projecting portion of said lug with a horizontal prolongation slightly shorter than the hole

and extending lengthwise of the chair, distanced from the under face of the chair approximately twice the thickness of the sleeper's top, a bolt passing through the other end of the chair and the other hole in the sleeper, and a clamping member engaging the edge of the rail flange held by said bolt.

3. The combination with an iron railway sleeper having a hole in its top, of a rail chair provided with a lug on its under side the same length as said hole and having a projecting portion slightly shorter than the hole with a horizontal projection forming a hook whose upper face is at a distance from the sleeper approximately equal to the thickness of the sleeper's top, whereby the lug may be inserted in the hole.

4. The combination with an iron railway sleeper having a hole in its top, of a rail chair provided with a lug on its under side of the same dimensions as said hole and a hook portion forming an extension of said lug and having a lateral curved face, said hook portion distanced from the under side of the chair to permit insertion of the lug in the hole.

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

AUGUST HAARMANN.

Witnesses:

JOHANNES HEIN,  
HENRY HASPER.