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PATENTED. AUG. 25, 1908.

D. F. VAUGHAN.

ANTICREEPING DEVICE FOR RAILROAD RAILS.

APPLICATION FILED JULY 26, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

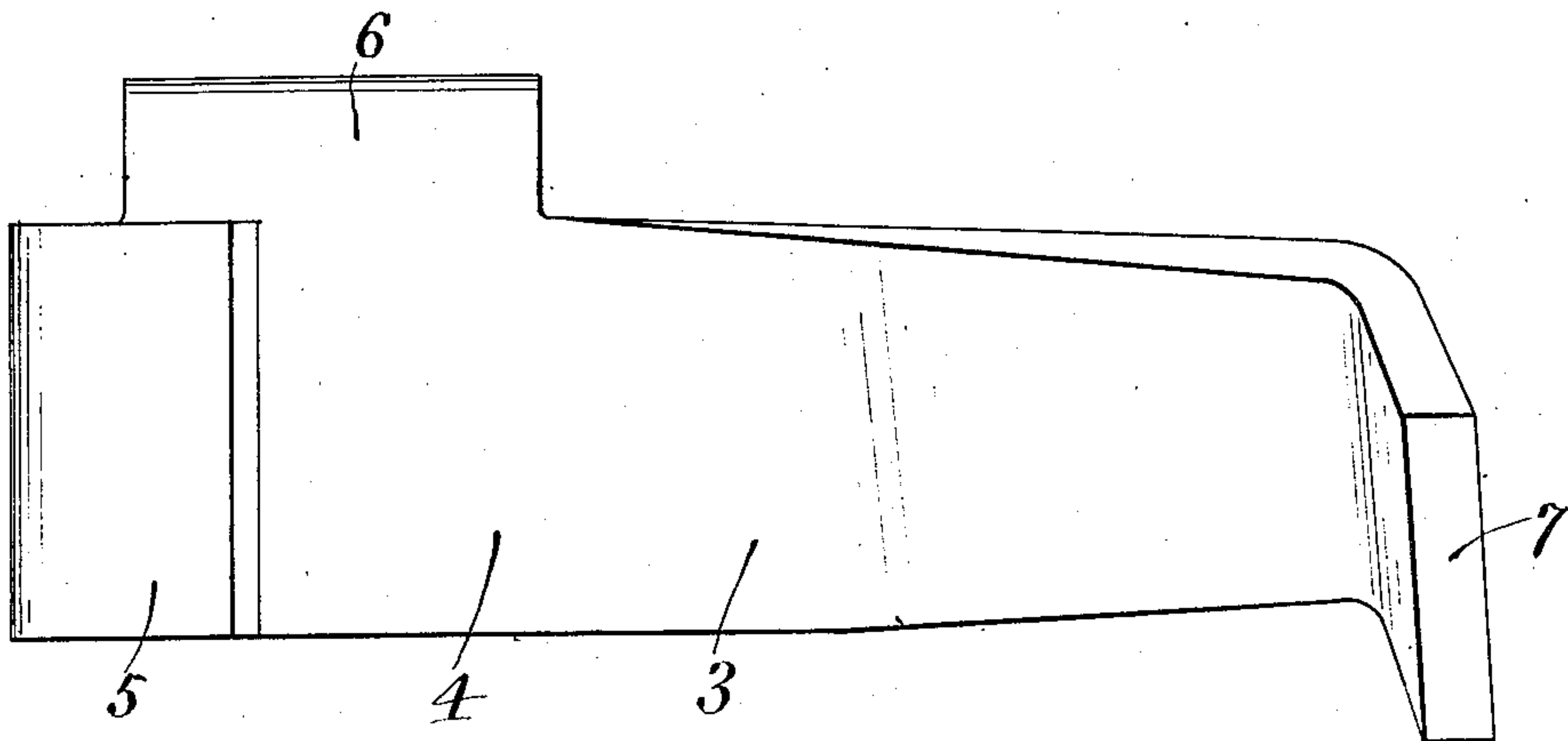


Fig. 2.

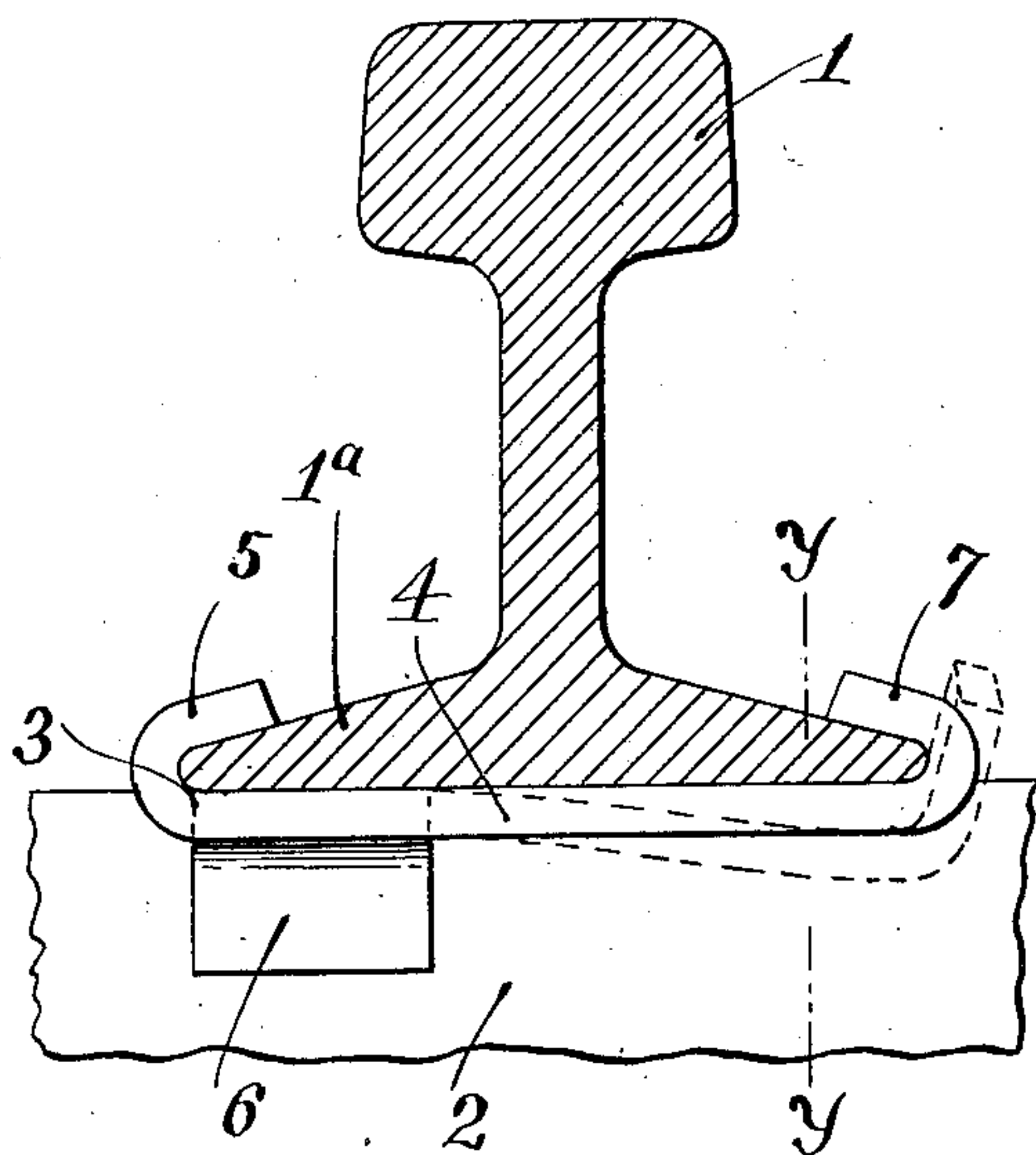


Fig. 3.

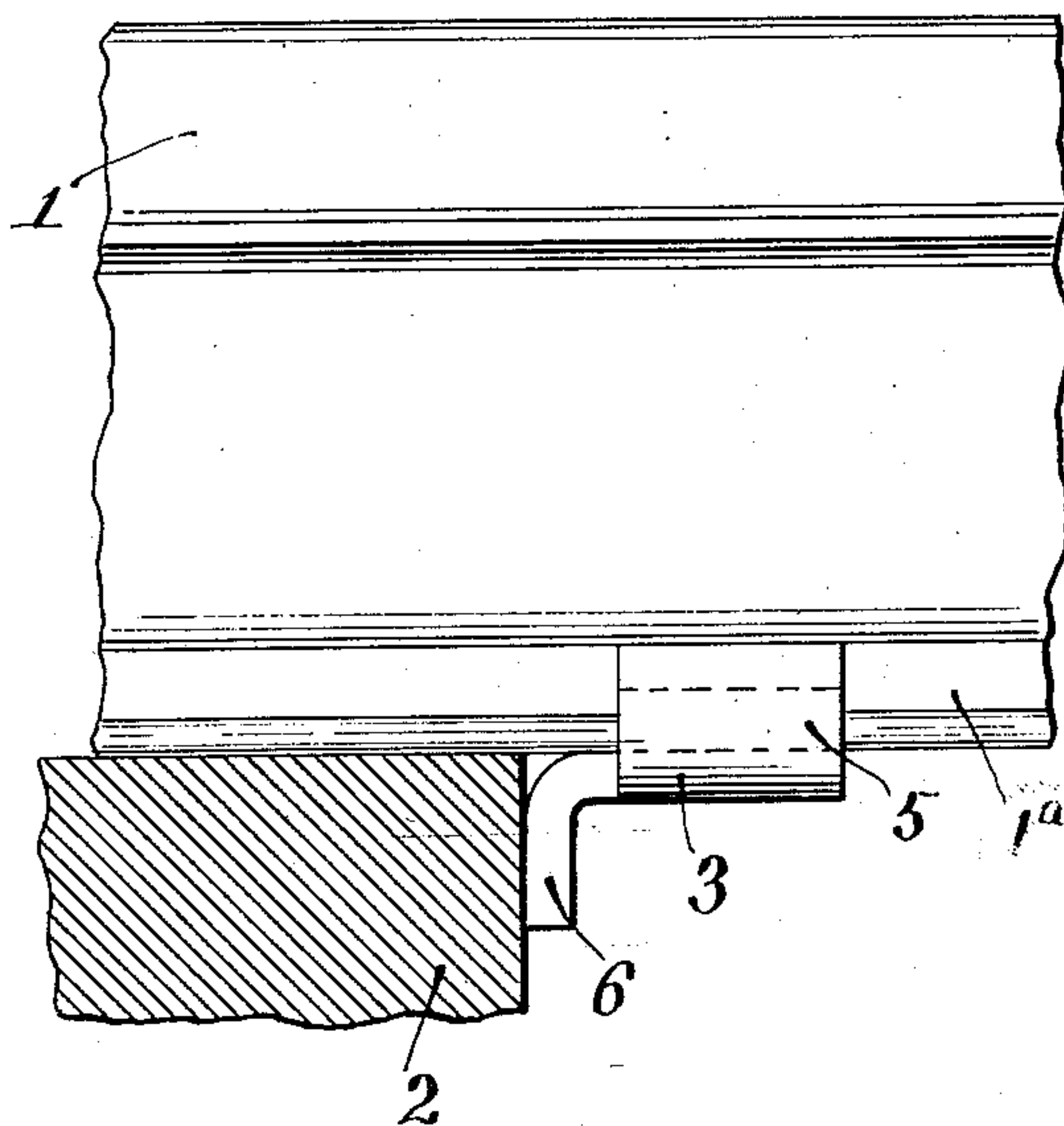
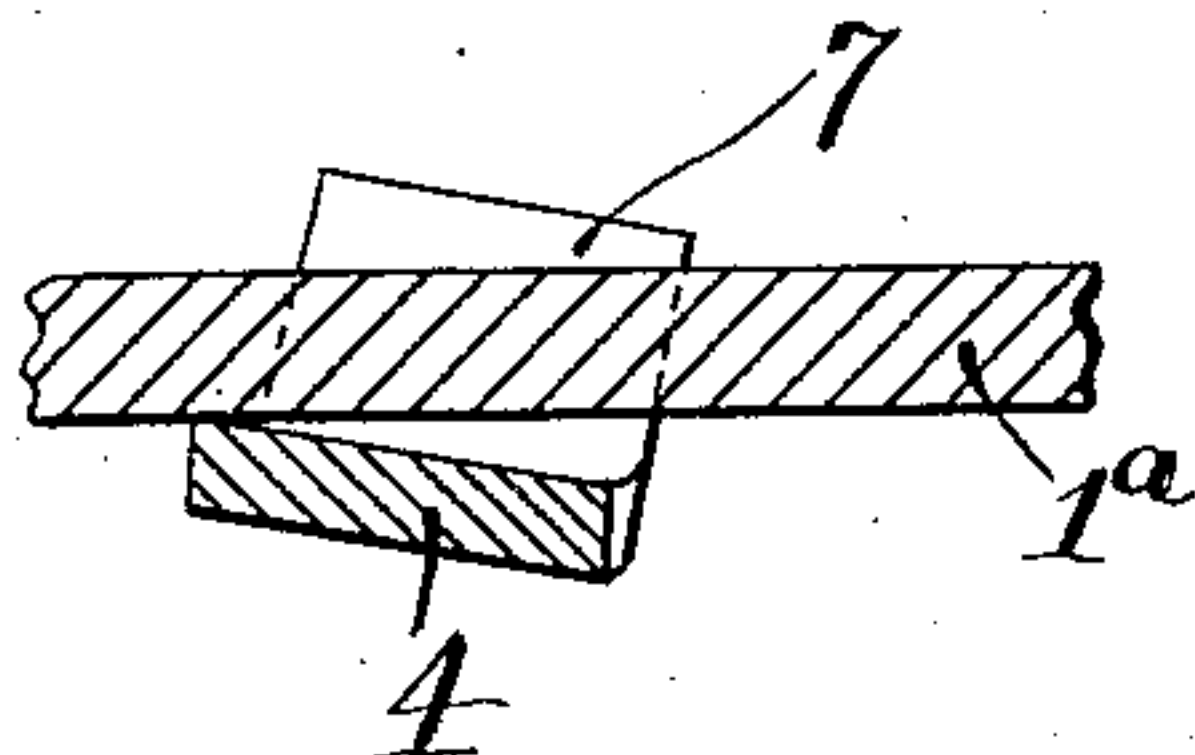


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

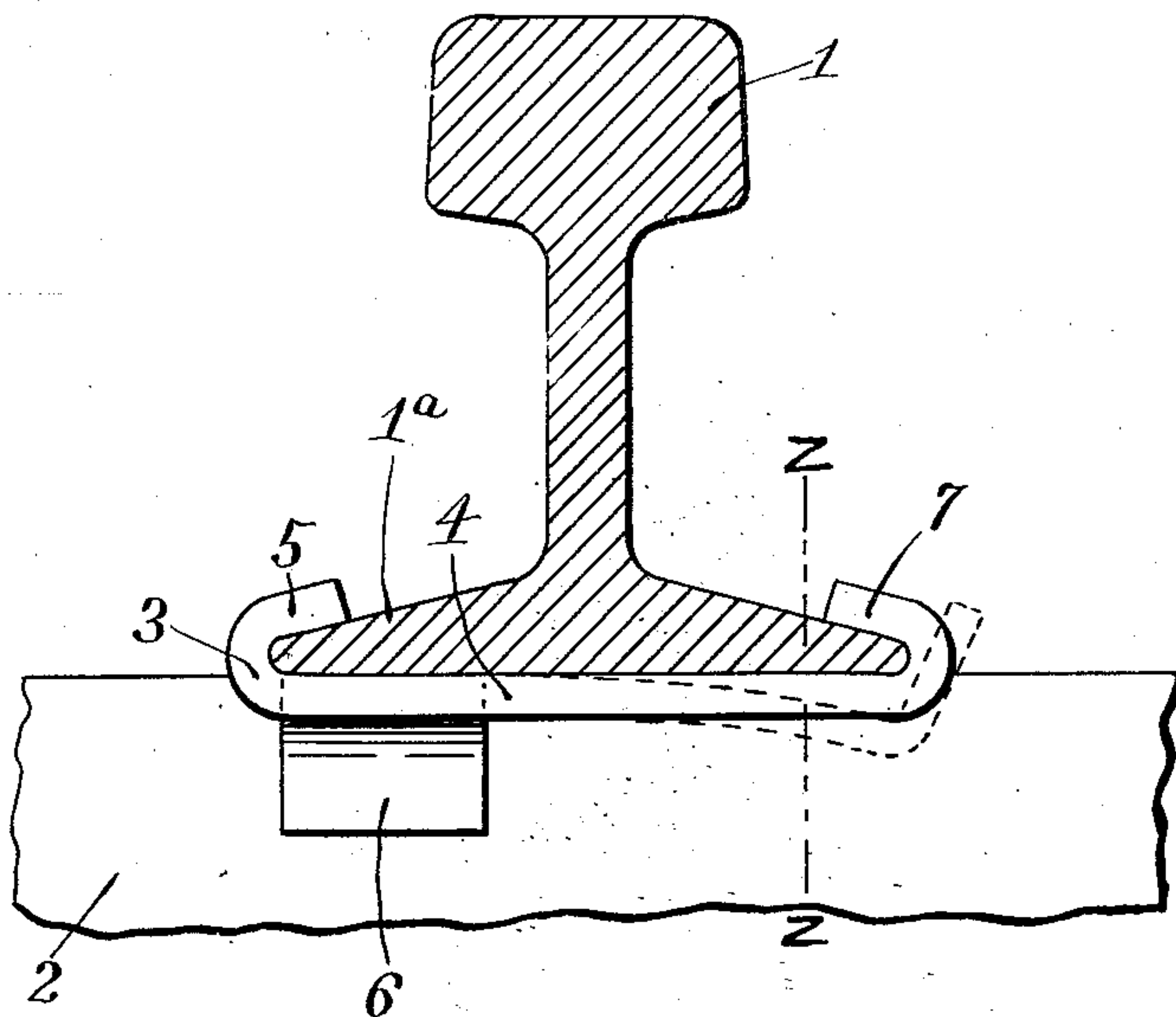


Fig. 6.

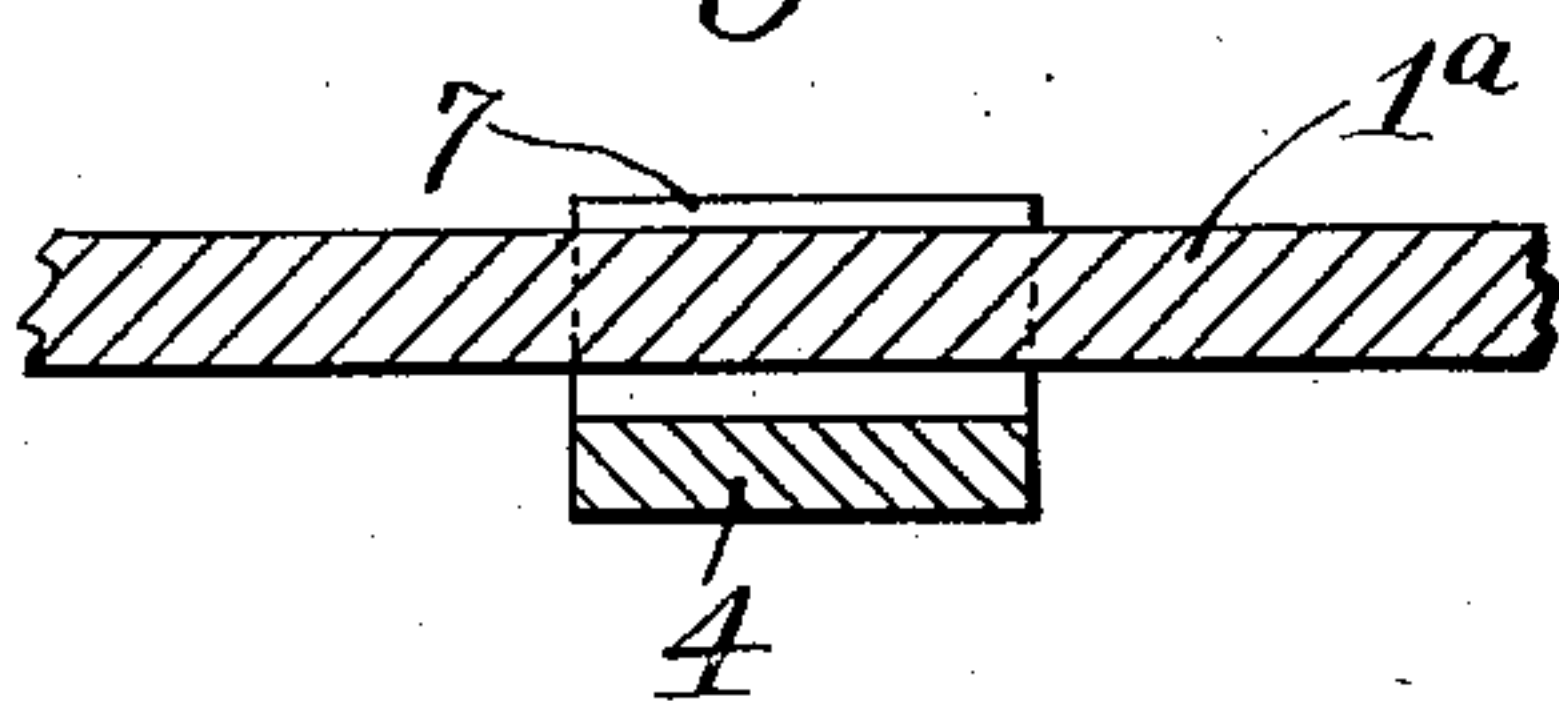


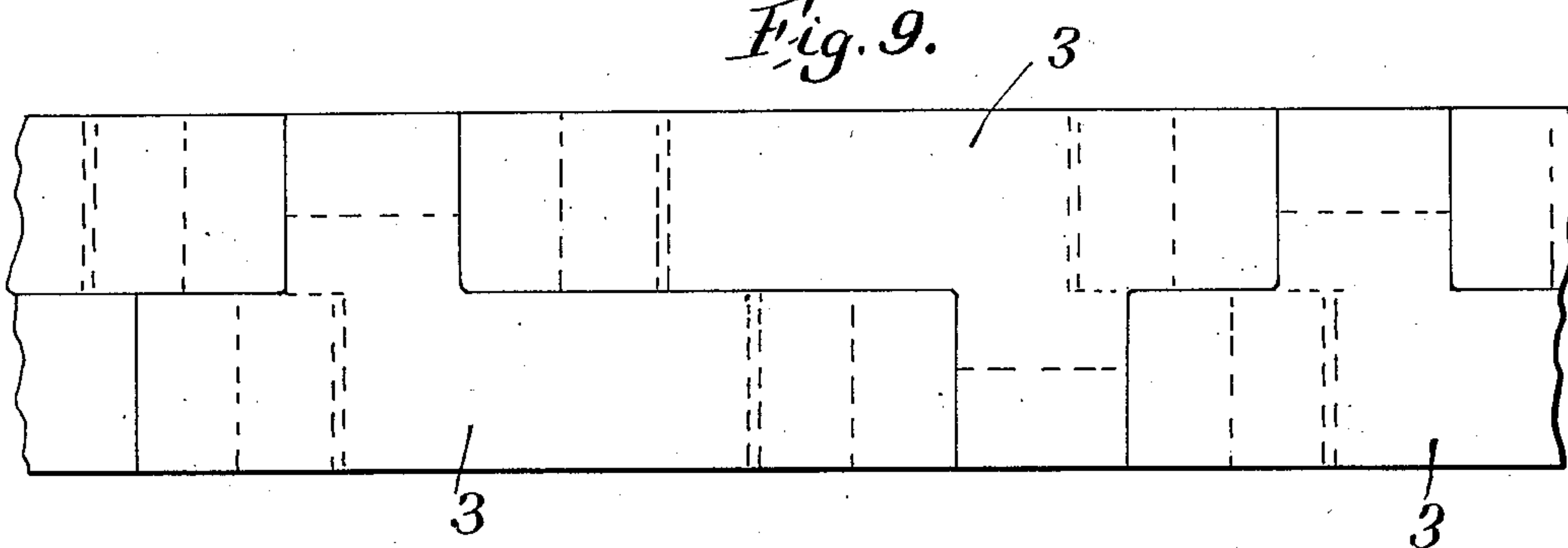
Fig. 7.



Fig. 8.



Fig. 9.



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ANTICREEPING DEVICE FOR RAILROAD-RAILS.

No. 897,037.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed July 26, 1907. Serial No. 385,728.

To all whom it may concern:

Be it known that I, DAVID F. VAUGHAN, citizen of the United States, resident of Haddonfield, Camden county, State of New Jersey, have invented certain new and useful Improvements in Anticreeeping Devices for Railroad-Rails, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a plan view of the preferred form of my anti-creeper, ready to be applied to the base of a rail. Fig. 2 is a section of a rail showing my anti-creeeping device as applied thereto, the dotted lines showing the position prior to clamping the end thereof over against the rail base. Fig. 3 is a side elevation of Fig. 2. Fig. 4 is a section on the line $y-y$, Fig. 2, but showing the anti-creeper in the position illustrated in dotted lines in said Fig. 2. Fig. 5 is a view similar to Fig. 2, of a modified construction. Fig. 6 is a section on the line $z-z$, Fig. 5. Fig. 7 is a section through a modified form of cross bar of my anti-creeper. Fig. 8 is a section similar to Fig. 7, of a second modification. Fig. 9 shows a bar from which a number of my anti-creepers may be cut out and bent into shape.

This invention relates to anti-creeeping devices for railroad rails; that is, devices for preventing the creeping or forward motion of a railroad rail in the direction of travel of the trains moving thereover.

The object of my invention is to produce a simple and efficient means to this end.

The invention consists in applying to a rail an anti-creeeping device formed of a single piece of metal, having adjacent one end thereof a downwardly extending lug to engage the side of a railroad tie, a floor portion or bar extending beneath the rail base, and provided at one end with an inwardly turned arm closely grasping the base of the rail between it and said cross bar, and having, at its opposite end, a lug or arm which, when the parts are in final position, also grasps, between it and said cross bar, the opposite edge of the base of the rail; the latter arm or lug being held in contact with the said base flange by the spring pressure of the cross bar; the latter having, before being applied to the rail, been so bent that when it is applied to the rail the tendency to return to the original

bent position will cause a frictional bite on the rail-base between the cross bar and said lugs or arms.

1 is an ordinary T-rail supported upon the usual ties, 2. The anti-creeeping device, 3, consists of a cross bar, 4, one end of which is turned upwardly and over to form an arm or lug, 5, between which and the upper surface of said bar, 4, one edge of the base or foot, 1^a, of the rail is adapted to closely fit.

Turned downwardly from the bar, 4, adjacent one end thereof, (in this instance, the end having the lug or arm, 5) is an arm or lug, 6. The opposite end of the cross bar, 4, is provided with an upwardly extending arm or lug, 7, corresponding with the lug or arm, 5, but it is not bent into engagement with the rail flange except when the anti-creeeping device has been secured in place, as hereinafter described. The cross bar, 4, would ordinarily be bent downwardly, as in Fig. 5, or, as illustrated in Fig. 4, slightly twisted downwardly, and in applying the anti-creeeping device to the rail, after having engaged the opposite edge of the foot flange with the lug or arm, 5, the end of the cross bar, 4, carrying the lug or arm, 7, is, by a suitable tool, forced upwardly against the under side of the rail foot flange, and while being held in such position against the tendency to spring back to the twisted or bent position, the lug or arm, 7, is swaged down tightly against the edge of the foot flange, 1^a, of the rail, thus firmly securing the anti-creeeping device to the rail.

As the downwardly extending lug, 6, is at one end only of the device when it abuts against the tie, there is a tendency to cant in a horizontal plane of the anti-creeper, thereby causing the diagonally opposite corners of the arms 5 and 7 to bite into and grasp the rail under any strain that may be put upon said downwardly extending lug. But if the lug, 6, should move away out of contact with the tie; as for instance, when the rail cools at night, after a hot day, and thereby shrinks; the anti-creeper will not loosen its grip on the rail, but, owing to the spring tension hereinbefore referred to, will always frictionally engage the rail foot flange and hold the anti-creeper in a relatively fixed position with relation to the rail.

In Figs. 5 and 6 of the drawings, the dotted line position of the anti-creeeping device, 3, represents the same as being applied to the

rail prior to the elevation of the cross bar, 4, against the base of the rail, and the swaging over of the arm, 7. In this form of construction, before applying to the base of the rail, the cross bar is simply bent downwardly from a point approximately under the center of the rail, and in the form of construction illustrated Figs. 1, 2, 3, and 4, the bar is twisted downwardly.

I have found it desirable to make the device of tempered steel to give the spring action to the bar, 4; but the end thereof carrying the lug, 7, would preferably be left untempered, or malleable, so that it might be readily swaged over against the base of the rail.

Although I have shown in Figs. 1 to 6 inclusive, my anti-creeper rectangular in cross section, I may use either of the two forms illustrated in Figs. 7 and 8, whose upper surfaces are convex. When this convex surface is brought over against the edges of the base of the rail the points of contact between the arms 5 and 7 and the edges of the base of the rail are substantially opposite each other; whereby, when the lug, 6, is pressed against the tie by the tendency of the rail to creep, the pressure coming entirely at one end of the anti-creeper device, causes the same to secure a better bite upon the base of the rail than if the bar were a perfectly flat bar, as in the other figures of the drawing, in which, when canted in a horizontal plane, the diagonally opposite contacting corners of the arms 5 and 7 afford the bite.

I remark that my anti-creeper can be very economically made, as shown in Fig. 9, being cut from a single bar of steel or iron or a width equal to that of the cross bar and the downwardly extending lug, 6, before this lug, 6, is bent downwardly, and the lengths of the blanks for the anti-creeper would be equal to the cross bar before the arms, 5 and 7, are bent out of horizontal plane.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. An anti-creeper device for railroad rails, comprising a cross bar extending beneath the rail foot flange, means on one end of said bar for engaging one side of said flange, means on the other end of said bar for engaging the other side of said flange, said flange-engaging means being pressed into engagement with the flange by the spring action of said bar in tending to assume a position from which it was sprung, and tie-engag-

ing means projecting from one end of said bar, substantially as set forth.

2. An anti-creeper device for railroad rails comprising a cross bar extending beneath the rail foot flange and provided with means on one of its ends for engaging one side of said flange, the other end of said bar being swaged into engagement with the other side of said flange and pressed into engagement therewith by the spring action of said bar in tending to assume a position from which it was sprung, and tie-engaging means projecting from one end of said bar, substantially as set forth.

3. An anti-creeper device for railroad rails comprising a cross bar extending beneath the rail foot flange, and provided at one end with a downwardly extending lug, and also at said end with the arm between which and said bar the rail foot flange is adapted to be fitted, said bar having the downward spring bend between its end portions, and the upwardly extending arm on the opposite end from the first named arm, said upwardly extending arm being bent around and swaged down upon the foot flange of the rail when the cross bar is sprung upwardly against the under side of said foot flange, thereby retaining the device in place on the rail by the spring action of said bar in tending to assume the position from which it was sprung, substantially as set forth.

4. An anti-creeper device for railroad rails comprising a cross bar extending beneath the rail foot flange, and provided at one end with a downwardly extending lug, and also at said end with the arm between which and said bar the rail foot flange is adapted to be fitted, said bar having the downward spring twist between its end portions, and the upwardly extending arm of malleable metal on the opposite end from the first named arm, said upwardly extending arm being bent around and swaged down upon the foot flange of the rail, the cross bar having been sprung upwardly against the under side of the said foot flange, thus retaining the device in place on the rail by the spring action of said bar in tending to assume the position from which it was sprung, substantially as set forth.

In testimony whereof, I have hereunto affixed my signature.

DAVID F. VAUGHAN.

Witnesses:

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WALTER C. PUSEY.