

H. DORPMÜLLER.
 DEVICE FOR PREVENTING THE CREEPING OF RAILS.
 APPLICATION FILED JUNE 30, 1908.

923,417.

Patented June 1, 1909.

Fig. 1.

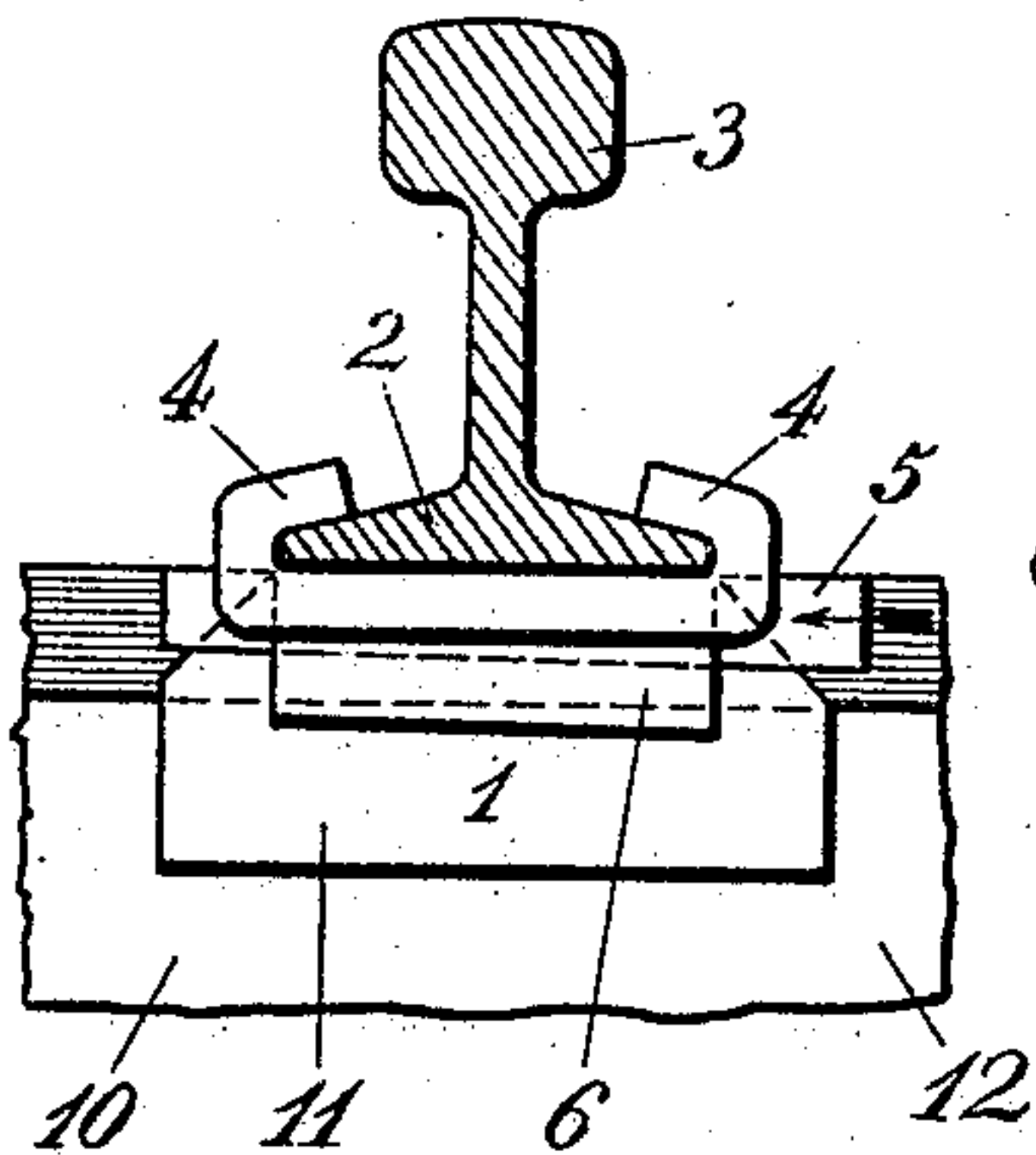


Fig. 2.

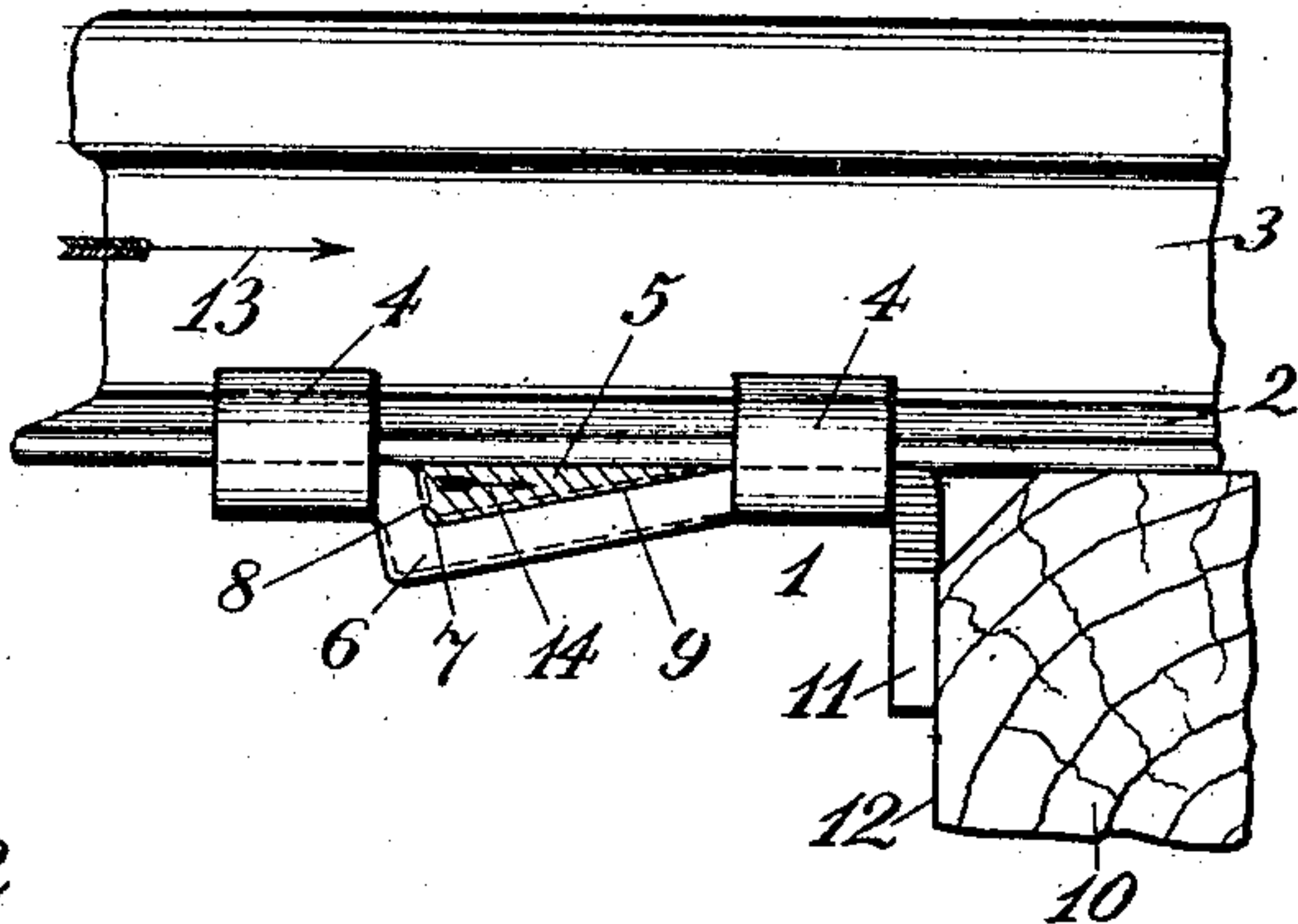


Fig. 4.

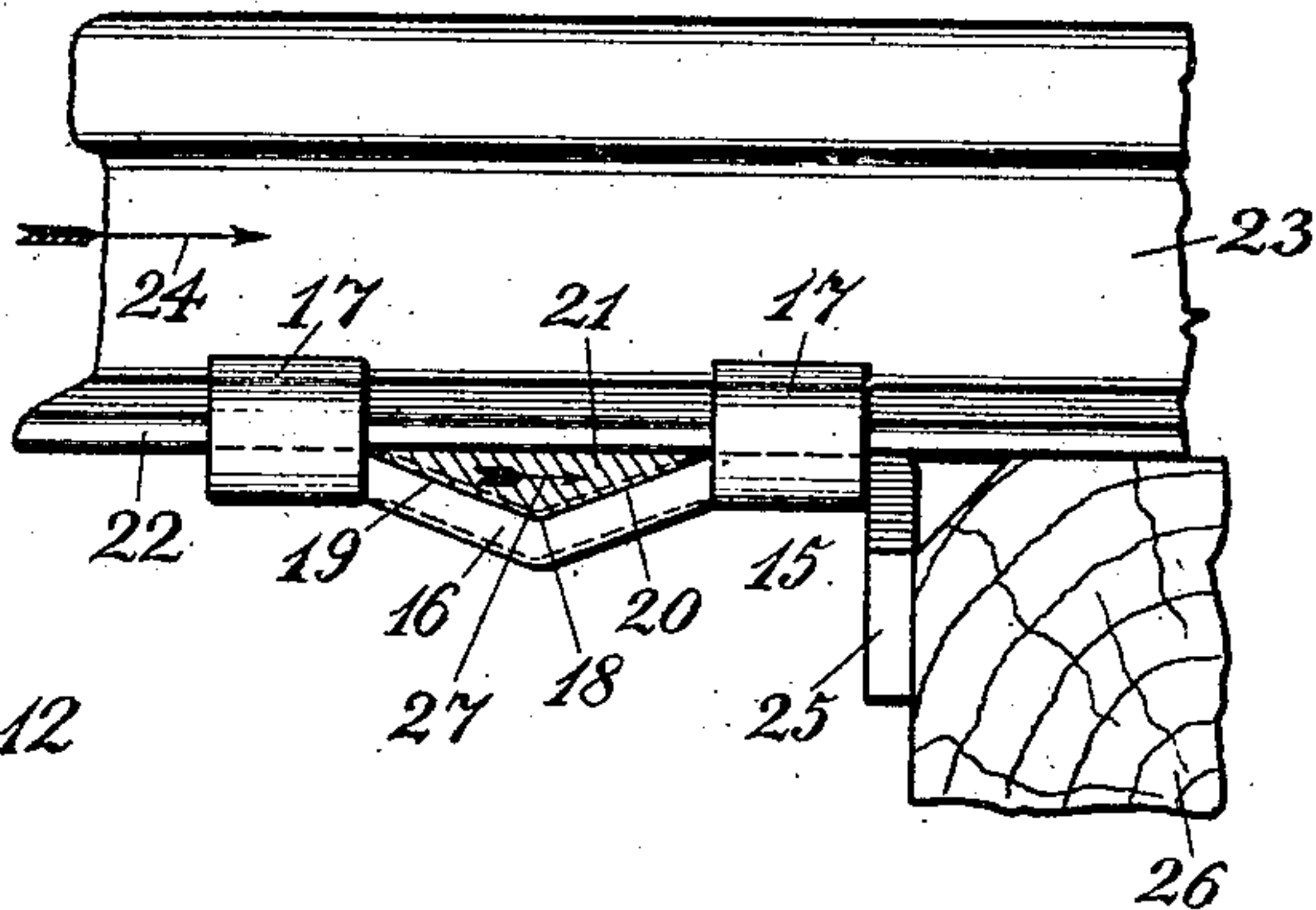


Fig. 3.

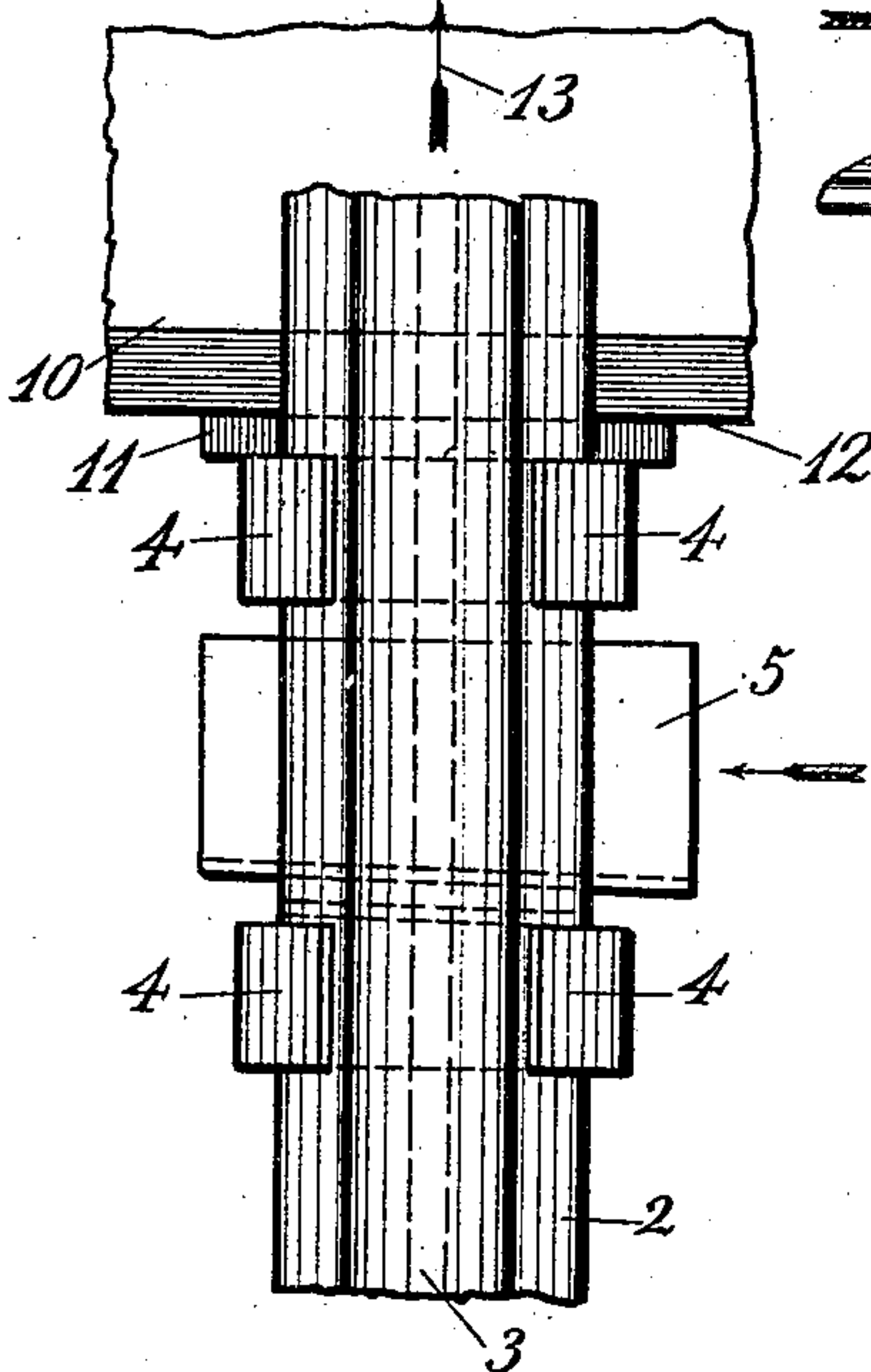
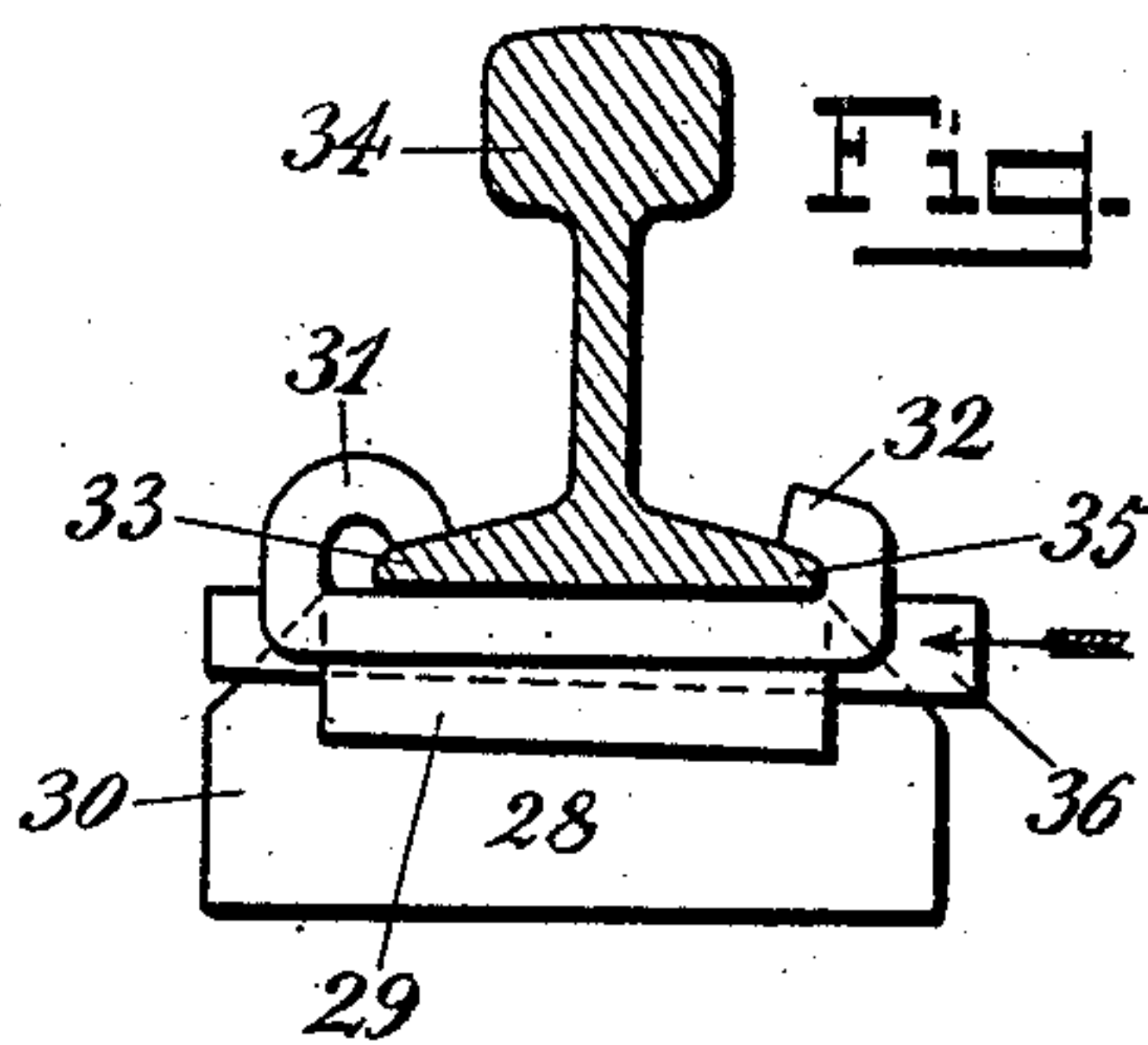


Fig. 5.



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UNITED STATES PATENT OFFICE.

HEINRICH DORPMÜLLER, OF AIX-LA-CHAPELLE, GERMANY.

DEVICE FOR PREVENTING THE CREEPING OF RAILS.

No. 923,417.

Specification of Letters Patent.

Patented June 1, 1909.

Application filed June 30, 1908. Serial No. 441,139.

To all whom it may concern:

Be it known that I, HEINRICH DORPMÜLLER, a subject of the King of Prussia, residing at Aix-la-Chapelle, No. 71^a Boxgraben, in the Kingdom of Prussia, Empire of Germany, have invented certain new and useful Improvements in Devices for Preventing the Creeping of Rails; 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.

My present invention relates to devices for preventing the creeping of rails, and represents an improvement on my American Patents Nos. 716,207 and 791,139, inasmuch as the wedge which presses the clamp against the foot of the rail is shaped to act as a wedge not only lengthwise of the rail, but also crosswise thereto, so that when the wedge is driven home from the side of the rail the clamp will be wedged lengthwise to the rail in such a manner, that when the rail attempts to creep the clamp will be pressed in a self-acting manner more tightly still against the foot of the rail. This new form of the so called wedge-clamp is particularly adapted to serve as a reversed form of the device shown in my American Patent No. 716,207, since the clamp, which acts as a wedge and abuts against the sleeper, or against the means for securing the rail to the sleeper, offers the advantage that the tightening wedge can be placed crosswise to the rail, so that the head of the wedge lies always outside of the rail and can thus be conveniently tightened and its action at any time controlled, by which means also a higher security is obtained than hitherto it has been possible to obtain. The known wedging-devices do not show these features, since in some of them the wedge lies beneath the rail, among others in my American Patent No. 716,207, for which reason the wedge can be but difficultly driven home and above all cannot be controlled; and in others the tightening-up of the wedges is rendered difficult, because they are arranged close to the edges of the foot of the rail, as for instance in my American Patent No. 791,139. Besides this my present invention offers this advantage, that the lateral gibs for the double-tapered wedge of my American Patent No. 716,207 can be omitted, since the double wedge-shape, lengthwise and cross-

wise, of my new securing wedge fulfils not only the mission of the wedge but also that of the gibs of this last-named patent. The present invention also represents a considerable simplification of the known clamping-devices and yet retains their self-acting wedging-capacity to the fullest extent.

The simplest application of the clamp to the foot of the rail, without turning the latter upside down, can be accomplished by making the clamp sufficiently wide.

In the accompanying drawing:—Figure 1 is an end-view of the device as applied to the foot of the rail. Fig. 2 is a side-view of the device, wherein the wedge is shown in section. Fig. 3 is a plan-view of the device in working position. Fig. 4 is a side-view of a modification of the device, wherein the wedge is shown in section. Fig. 5 is an end-view of another modification of the device.

The clamp 1, made of sufficient width, grasps around the edges of the foot 2 of the rail 3 by means of the four lateral lugs or claws 4 between which the wedge 5 is driven crosswise to the rail. The bridge 6 which connects the four claws 4 is bent so as to form a triangular opening or wedge-seat 7 between itself and the underside of the foot of the rail, as best shown in Fig. 2. The upper face of this wedge-seat 7 is bound by the two planes 8 and 9 which slope in opposite directions upward and lengthwise to the underside of the foot rail, and also upward and crosswise thereto, but in the same direction. The plane 8 is arranged steeper than the plane 9 and is also inclined toward the sleeper 10. The wedge 5 has of course a triangular cross-section to correspond to said triangular opening. The end of the clamp adjacent to the sleeper 10 is provided with a pending flange 11, which engages a large abutting-surface 12 on the sleeper.

Instead of arranging the planes 8 and 9 substantially at right angles to the length of the rail they might be arranged thereto under a considerable angle (not shown). By doing so the one or the other wedging-action of the wedge could be replaced and the wedge need be provided with only one wedging-face, but the form of the wedge shown in Figs. 1, 2 and 3 is preferred to this one.

When the clamp 1 is put into place and the wedge 5 driven home an inclination of the rail 3 to creep in the direction of the arrow 13 will tend to drive the wedge 5 in

the direction of the arrow 14 all the tighter between the underside of the foot of the rail and the plane 9 and thus lock the clamp most effectively to the foot of the rail, as
5 thereby the claws 4 are pressed most forcibly against the topside of the foot of the rail, and thus prevent the creeping of the latter.

In Fig. 4 the clamp 15 corresponds in every respect to the clamp 1 shown in Figs.
10 1, 2 and 3 with the exception that the bridge 16, which connects the lateral lugs or claws 17, is provided with a wedge-seat 18 formed by the two inclined planes 19 and 20 which in this instance are symmetrically arranged
15 to each other. The wedge 21 is of course shaped to suit said seat. When in this instance the clamp 15 is secured to the foot 22 of the rail 23 by the wedge 21 and then the rail shows an inclination to creep in the di-
20 rection of the arrow 24, the pendent flange 25 will first abut against the sleeper 26 whereupon the wedge 21 will force its way in the direction of the arrow 27 more tightly between the underside of the foot of the rail
25 and the plane 20 and thus prevent the rail 23 from creeping.

In the above-described devices the shape of the clamps makes the latter best adapted for new work, whereas the modification
30 shown in Fig. 5 possesses all the advantages of the two above described devices and in addition thereto this valuable feature, that it can be applied to rails in use. To this end the clamp 28 is provided with a bridge
35 29 and the pendent flange 30 of usual form, but its lugs or claws differ somewhat in shape from the lugs or claws of the above-described devices inasmuch as the lugs or
40 claws 31 are rolled and the lugs or claws 32 made somewhat shorter than usual. The object of this arrangement is to drive the one flange 33 of the foot of the rail 34 under the lugs 31 until the opposite flange 35 of the foot of the rail can be forced beneath
45 the lugs or claws 32, after which the lugs or claws 31 will assume their original position. The wedge 36 is here likewise driven in crosswise to the rail.

The clamps can be profitably manufactured from angle-iron, whose broader leg is
50 pressed to form the seat of the wedge and whose narrow leg serves as an abutment against the sleeper. The lateral lugs or claws can be formed by bending lateral
55 stamped tongues upward and inward, whereby the clamp can be made wide enough to be placed upon the foot of any rails already put down.

Instead of employing a single wedge one
60 composed of two or more parts might be employed if so desired.

I claim:—

1. A device for preventing the creeping
65 the foot of a rail and provided with a seat

inclined both lengthwise and crosswise to the underside of the foot of said rail, and wedging-means filling said seat and adapted to be driven between the latter and the foot of said rail crosswise to the latter.

70

2. A device for preventing the creeping of rails comprising a clamp embracing the foot of a rail and provided with abutting means and an angular seat inclining both
75 lengthwise and crosswise to the underside of the foot of said rail, and a wedge filling said seat and adapted to be driven between the latter and the underside of the foot of said rail crosswise to the latter.

3. A device for preventing the creeping
80 of rails comprising a clamp for embracing the foot of a rail and provided with a pendent abutting-flange and a V-shaped seat adjacent to the underside of the foot of said rail, and a wedge of triangular cross-sectional shape to fill said seat and adapted to
85 be driven between the latter and the underside of the foot of said rail crosswise to the latter.

4. A device for preventing the creeping
90 of rails comprising a clamp for embracing the foot of a rail by means of lateral lugs or claws and provided with a pendent abutting-flange to abut against a stationary part of the railway and having an angular seat
95 whose planes slope upward and lengthwise of said rail in opposite directions and also upward and crosswise to said rail, and a wedge of triangular cross-sectional shape to fill said seat and adapted to be driven be-
100 tween the latter and the underside of the foot of said rail crosswise to the latter.

5. A device for preventing the creeping of rails comprising a clamp for embracing
105 the foot of a rail and consisting of a bridge-piece provided with an angular seat inclined both lengthwise and crosswise to the underside of the foot of said rail and extending crosswise to the latter, of a pendent flange for abutting against a stationary part of the
110 railway, and of a plurality of lateral lugs or claws for embracing the foot of said rail, and a wedge of triangular sectional area and adapted to be driven between said seat and the underside of the foot of said rail
115 crosswise to and sidewise of the latter.

6. In a device for preventing the creeping of rails the combination with a rail and with a stationary part of the railway of a clamp embracing the foot of said rail and con-
120 sisting of a bridge-piece provided with an angular seat extending crosswise to said rail, abutting-means for abutting against said stationary part of the railway, and lugs or claws gripping the foot of said rail; and of
125 triangular wedging means adapted to be driven between said seat and the underside of the foot of said rail crosswise to and side-wise of the latter.

7. In a device for preventing the creeping
130

of rails a clamp for embracing the foot of a
rail and consisting of a bridge provided
with an angular wedge-seat extending cross-
wise to said rail, hooked lateral lugs or
5 claws on one longitudinal edge of said
bridge, and curled lateral lugs or claws on
the opposite longitudinal edge of said
bridge.

In testimony whereof I have signed my
name to this specification in the presence of 10
two subscribing witnesses.

HEINRICH DORPMÜLLER.

Witnesses:

HENRY QUADFLIEG,
ELISE KALBUSCH.