

J. M. SCOTT.
RAILWAY RAIL ANCHOR.
APPLICATION FILED MAR. 16, 1907.

938,716.

Patented Nov. 2, 1909.

Fig. 1.

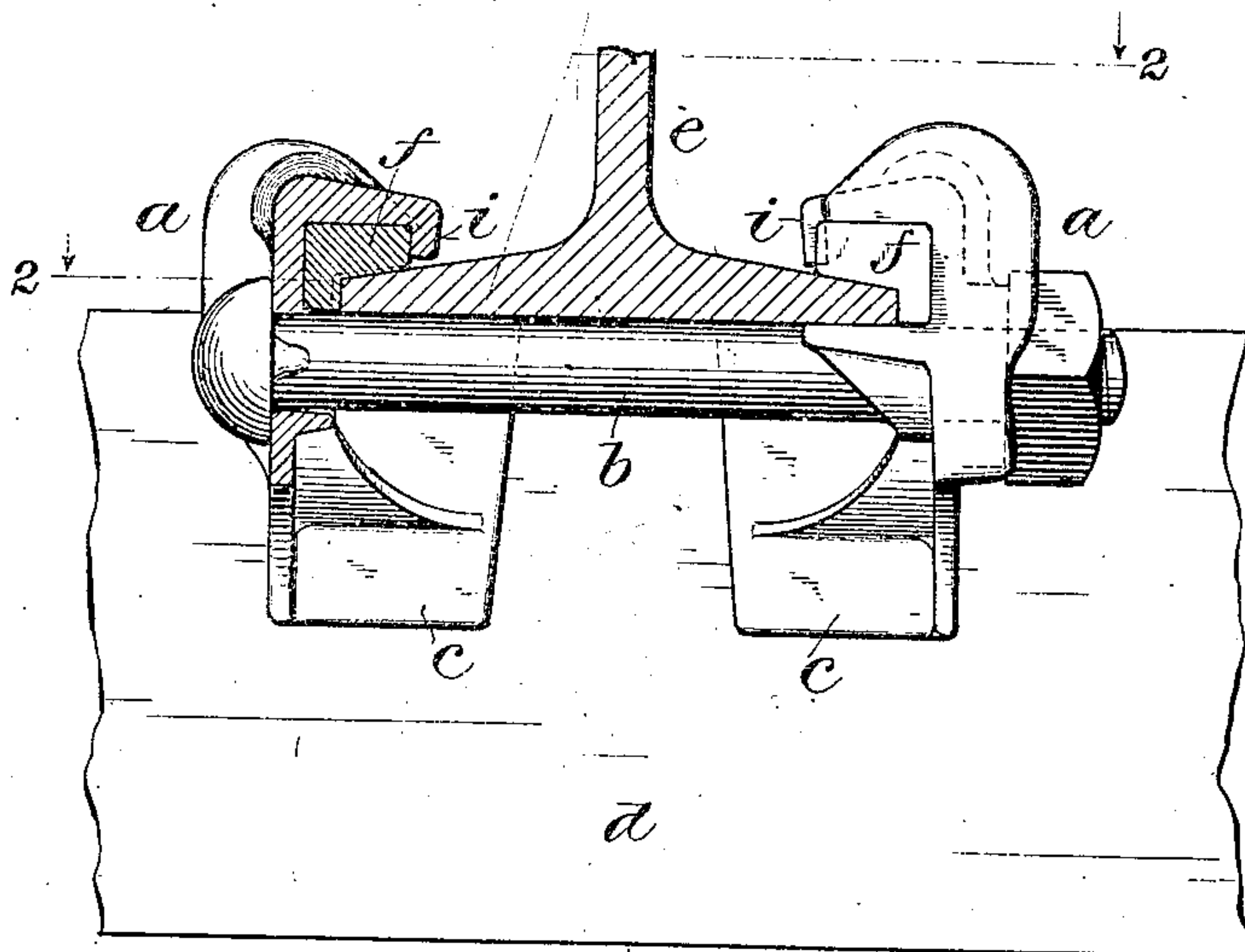


Fig. 2.

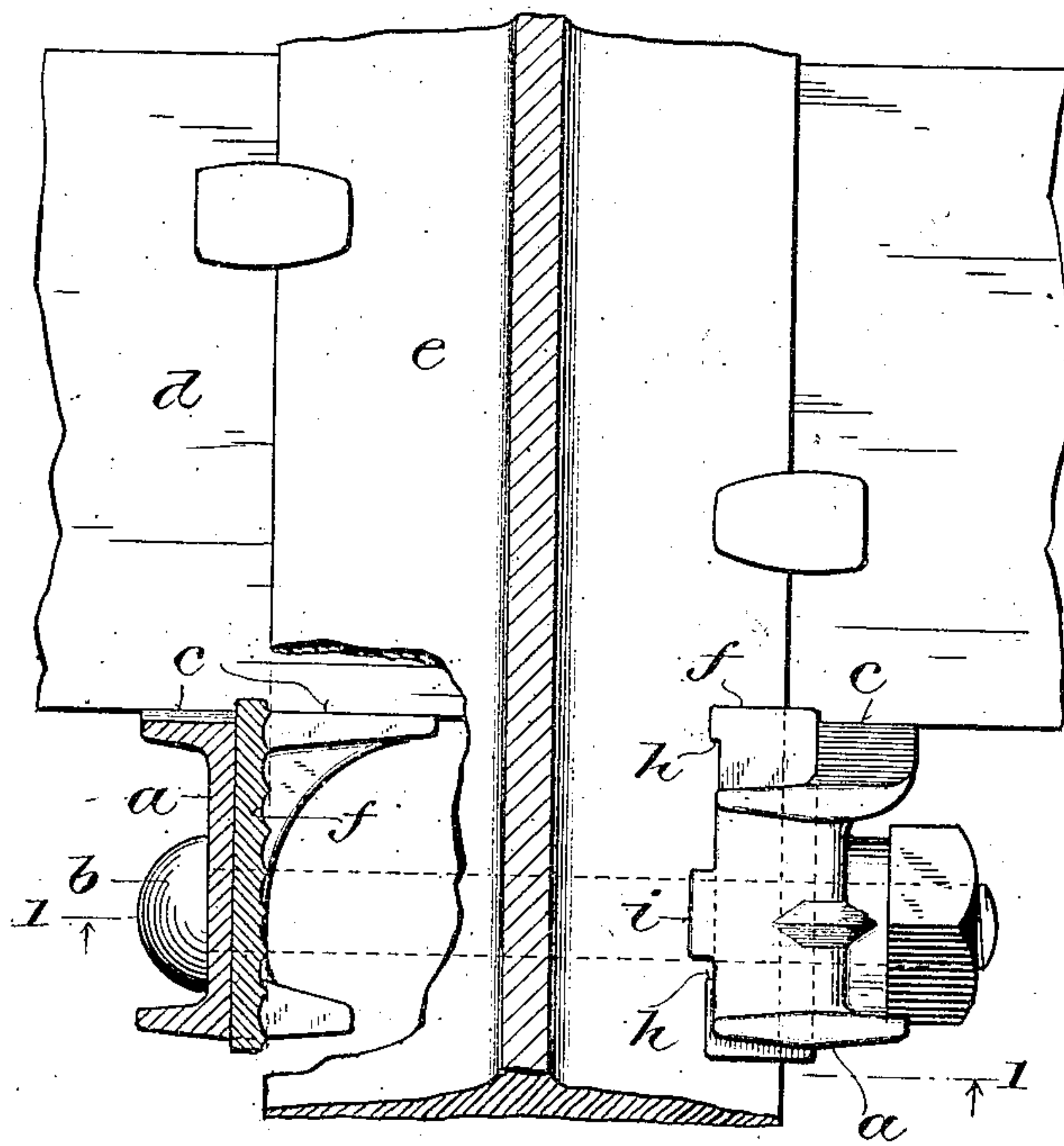


Fig. 3.

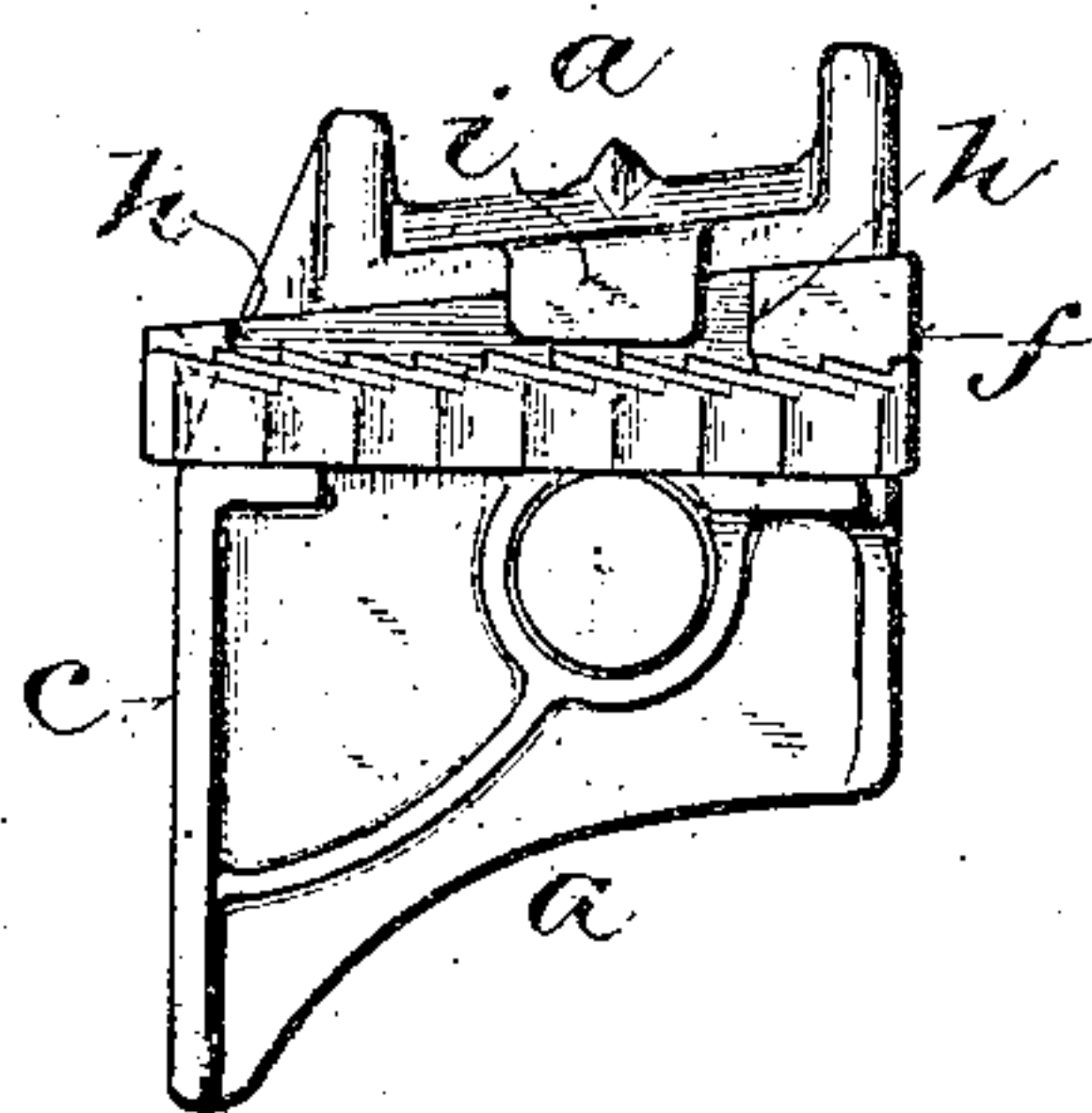
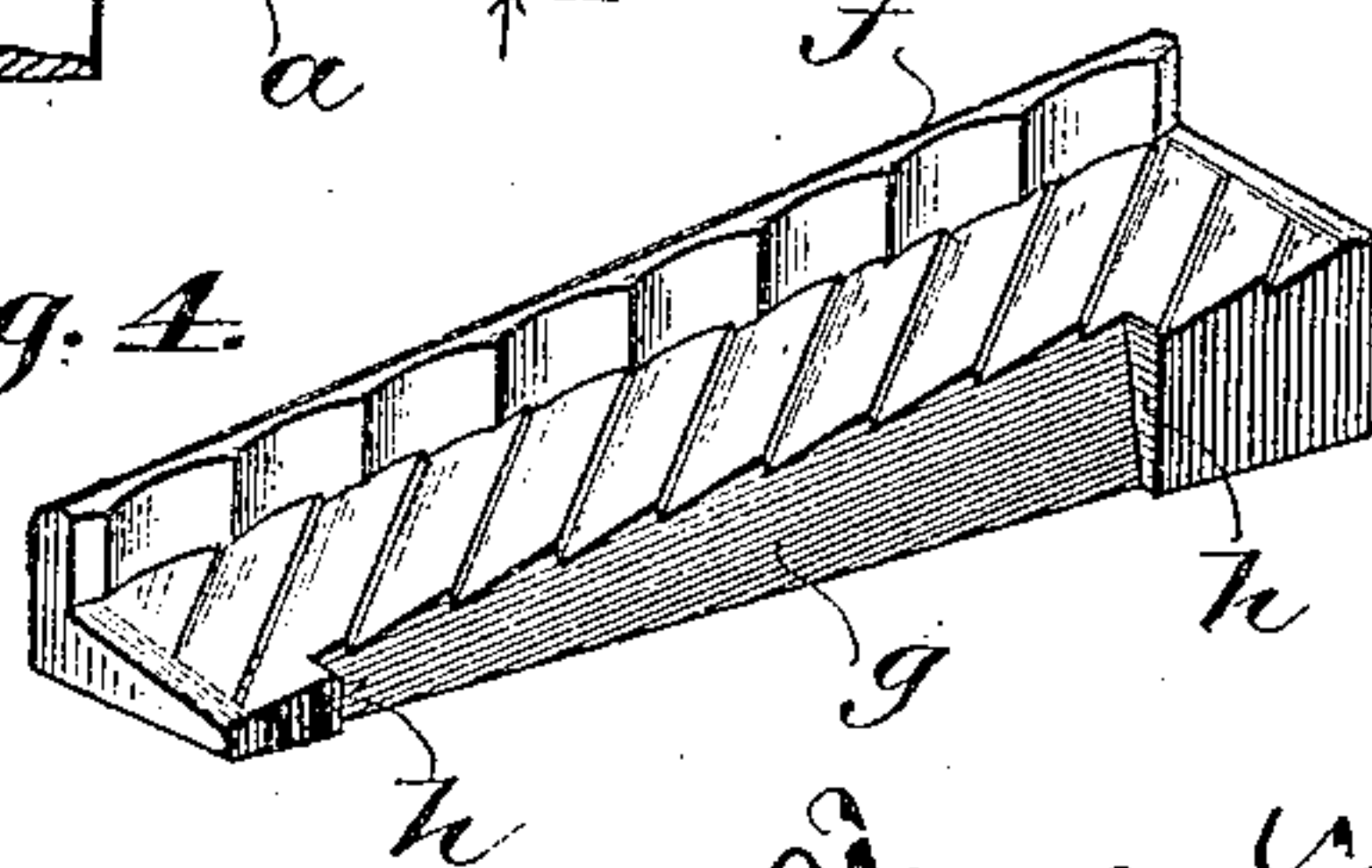


Fig. 4.



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UNITED STATES PATENT OFFICE.

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RAILWAY-RAIL ANCHOR.

938,716.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN M. SCOTT, a citizen of the United States, residing at Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Railway-Rail Anchors, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof.

This invention relates to that class of rail anchors which have opposing jaws adapted to be clamped upon the base flanges of the rails, and bearings for abutment against the sides of cross ties, to prevent creeping or longitudinal movement of the rails upon the ties.

The main objects of the present invention are to increase the grip or hold of the jaws on the rails so as to prevent any slip or endwise movement of the rails in the jaws and generally to improve the construction and increase the efficiency of devices of this kind.

It consists in certain novel features of construction and in the peculiar arrangement and combination of parts as hereinafter particularly described and pointed out in the claims.

In the accompanying drawing like characters designate the same parts in the several figures.

Figure 1 is a vertical cross section on the broken line 1 1, Fig. 2, of a rail anchor embodying the invention as applied to the base of a rail which is shown in cross section, and to the side of a tie, a portion of which is shown in side elevation; Fig. 2 is a horizontal section and plan view on the broken line 2 2, Fig. 1; Fig. 3 is an inside elevation of one of the jaws of the anchor; and Fig. 4 is an enlarged perspective view of one of the tapering toothed grips inverted.

The anchor comprises two separate opposing jaws *a*, connected by a bolt *b* and formed with vertical bearings *c* for abutment against the side of a tie *d*. The jaws are formed on their inner sides with recesses to receive and project over the base flanges of a railway rail *e*. In these recesses are fitted and movable endwise wedge-shaped or tapering and angular or flanged grips or keys *f*, which are formed to engage with the edges and the upper or adjoining faces of the rail base flanges. The inner faces of the flanges on the grips or keys *f* are formed with sharp teeth or corrugations

to bite into the edges of the rail base flanges, while the inner faces of the tapering portions or bodies of the grips are formed with diagonal or oblique teeth or corrugations to bite into the adjoining faces of the rail base flanges. The forward faces of the oblique teeth preferably slope gradually backward toward the larger ends of the grips, as shown in Figs. 3 and 4, and form sharp angles with their rear faces which are approximately perpendicular to the rail base, so as to permit the grips to be more readily driven forward into tight engagement with the base flanges of the rail and to more effectively resist any forward movement of the rail. These teeth are also inclined forwardly from their outer toward their inner ends to increase their length and hold on the rail flanges and to avoid weakening and fracture of the grips as a result of making the grooves between the teeth run straight across them. This inclination or obliquity of the teeth also tends to draw the toothed flanges of the grips inwardly against the edges of the rail base flanges when the grips are driven forward in the jaws.

To prevent the parts of the anchors from becoming separated and lost or misplaced before they are applied to rails, the grips or keys are formed on their inner sides with beveled faces *g*, terminating in shoulders *h*, as shown in Fig. 4, and the jaws are formed with ears or keepers *i* which overhang the recesses therein and are bent outwardly against the beveled faces of the grips or keys. The shoulders *h* by engagement with the ears or keepers *i*, serve as stops to prevent the removal of the grips endwise from the jaws. The jaws being separate and adjustably connected by bolts, may be applied to rail bases of different widths.

While the anchor as shown is composed of two like or similar jaws each having a tapering toothed grip or key and a bearing for engagement with a tie, a jaw of this kind may be connected with a jaw of some other form without the toothed grip and bearing, and thus produce an effective anchor.

In the application of the anchor to a rail and tie, the grips or keys *f* are drawn out from the jaws *a* against the shoulder or stops *h* next to the smaller ends of the grips, the jaws are then set over the base flanges of the rails with their bearings *c* against the

side of a tie and are connected by a bolt *b*, the nut being turned up lightly against the adjacent jaw. The tapering grips are then driven tightly into the jaws, causing the oblique teeth on their inner faces to bite into the opposing faces of the rail base flanges. The teeth on the inner faces of the flanges of the grips are next imbedded in the edges of the rail flanges by striking the outer faces of the jaws with a sledge or hammer, this operation tending to increase the bite of the oblique teeth on the upper faces of the rail flanges. The nut on the bolt is finally tightened, and if necessary locked, to firmly and permanently grip and hold the jaws in place upon the rail base.

By means of the tapering grips or keys the anchor is adjusted to rail base flanges of different thicknesses as well as of different widths, and an extended and firm hold of the jaws upon the edges and adjoining faces of the rail flanges is thus insured.

I claim:

1. A railway rail anchor comprising a recessed jaw and a key of angular section fitting in the recess of the jaw and over a rail base flange and having teeth on its inner faces in planes at an angle to each other to engage with the edge and an adjoining face of the rail flange, substantially as described.

2. A railway rail anchor comprising an abutment for the side of the tie a recessed jaw and a flanged key fitting lengthwise of the rail in the recess of the jaw and tapering and movable lengthwise thereof, the body of the key tapering vertically and fitting between the top of the rail flange and the overhanging part of the jaw, while the flange of the key overhangs and engages the edge of the rail flange, substantially as described.

3. A railway rail anchor comprising a jaw recessed to receive and extend over a rail base flange, and a tapering angular key fitting and movable endwise in the recess of the jaw and having teeth on its inner faces to engage with the edge and an adjoining face of the rail flange, substantially as described.

4. A railway rail anchor comprising a recessed jaw and a tapering flanged key fitting and movable endwise in the recess of the jaw and having teeth on the inner face of its flange for engagement with the edge of a rail base flange and oblique teeth on its other inner face for engagement with an adjoining face of the rail flange, substantially as described.

5. A railway rail anchor comprising a recessed jaw, having a keeper overhanging the open side of the recess therein, a wedge shaped key fitting and movable endwise in said recess parallel with the rail and confined in the jaw by said keeper, substantially as described.

6. A railway rail anchor comprising a recessed jaw having a keeper overhanging the open side of the recess therein, a tapering key of angular section fitted and movable endwise in said recess parallel with the rail and having a beveled inner face engaged by said keeper and terminating in stops which prevent the withdrawal of the key endwise from the jaw, substantially as described.

7. A railway rail anchor comprising a pair of adjustably connected jaws adapted to be clamped on the base flanges of the rail and having a bearing for abutment against the side of a tie, and a tapering key of angular section fitting and movable endwise in a recess of one of the jaws parallel with the rail and having teeth formed on its inner faces in planes at an angle to each other, to engage with the top face and the edge of one of the rail base flanges, substantially as described.

8. A railway rail anchor comprising a pair of jaws adjustably connected by a bolt and adapted to be clamped on the base of a rail and having a bearing for abutment against the side of a tie; and a key of angular section fitting in a recess of one of the jaws parallel with the rail and having teeth on the inner faces for engagement with the edge and an adjoining face of the rail base flange, substantially as described.

9. A railway rail anchor comprising a recessed jaw, a key fitted in the jaw and a means on the jaw and on the key whereby the key is permitted to move longitudinally of the rail, but is prevented from becoming detached therefrom.

10. A railway rail anchor comprising a recessed jaw, a key in said jaw, a keeper on the jaw and abutments on the key whereby the key is allowed to move longitudinally of the rail, but is held from detachment from the jaw.

11. A railway rail anchor comprising a jaw a key, fitting and movable lengthwise of the rail within the jaw and diminishing in its vertical dimension longitudinally of the rail, means for forcing said key against the rail flange and an abutment for the side of the tie on said jaw.

12. A railway rail anchor comprising a jaw a key which diminishes both in its vertical and horizontal dimensions longitudinally of the rail, a jaw for forcing said key against the rail and an abutment for the side of the tie on said jaw.

In witness whereof I hereto affix my signature in presence of two witnesses.

JOHN M. SCOTT.

Witnesses:

CHAS. L. GOSS,
MAUDE L. EMERY.