Jan. 2, 1923. 1,440,526.

L. J. BERKELEY.

RAIL ANCHOR.

ORIGINAL FILED JAN. 27, 1921.

Fig. 1.

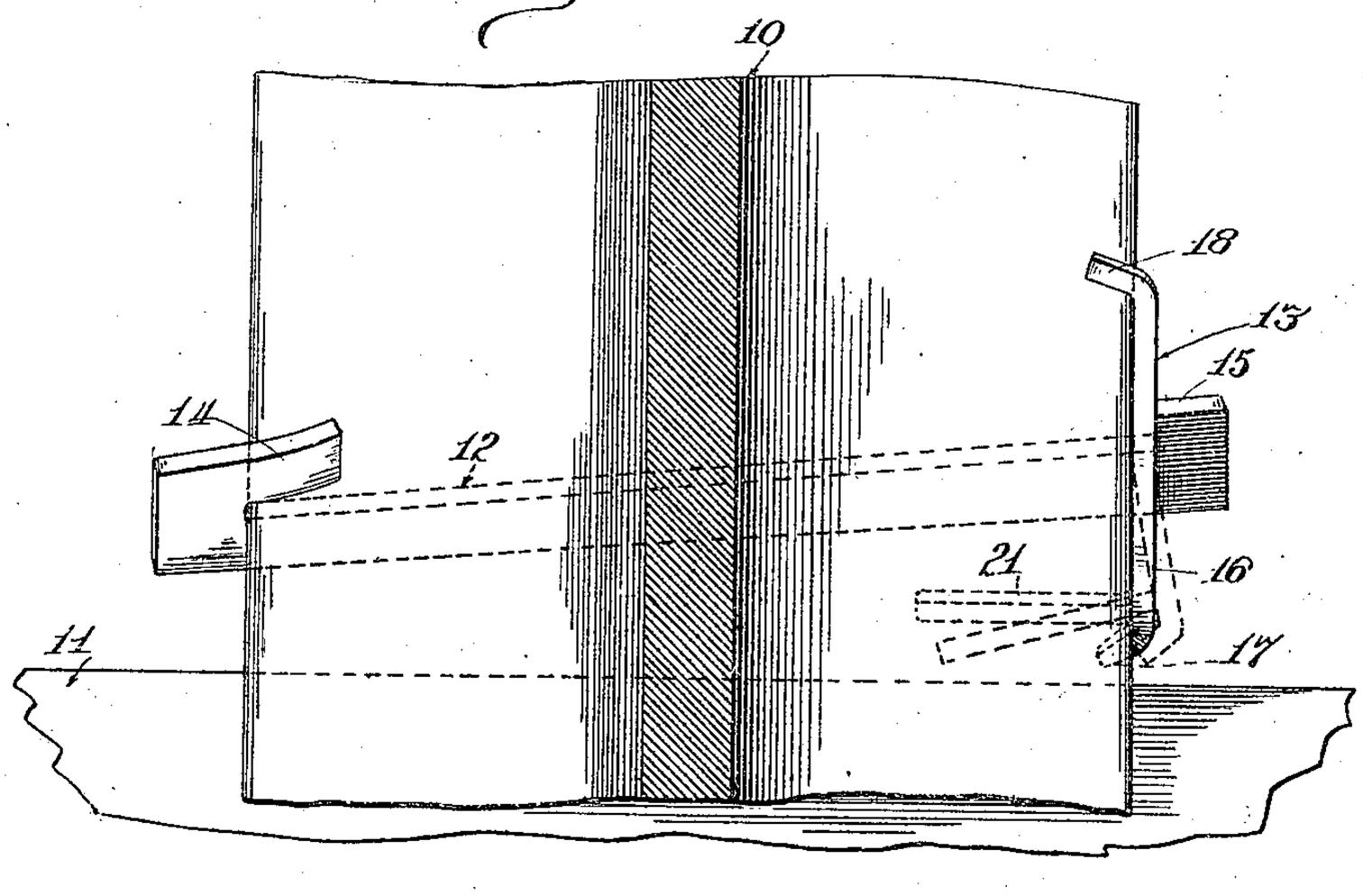


Fig. 2.

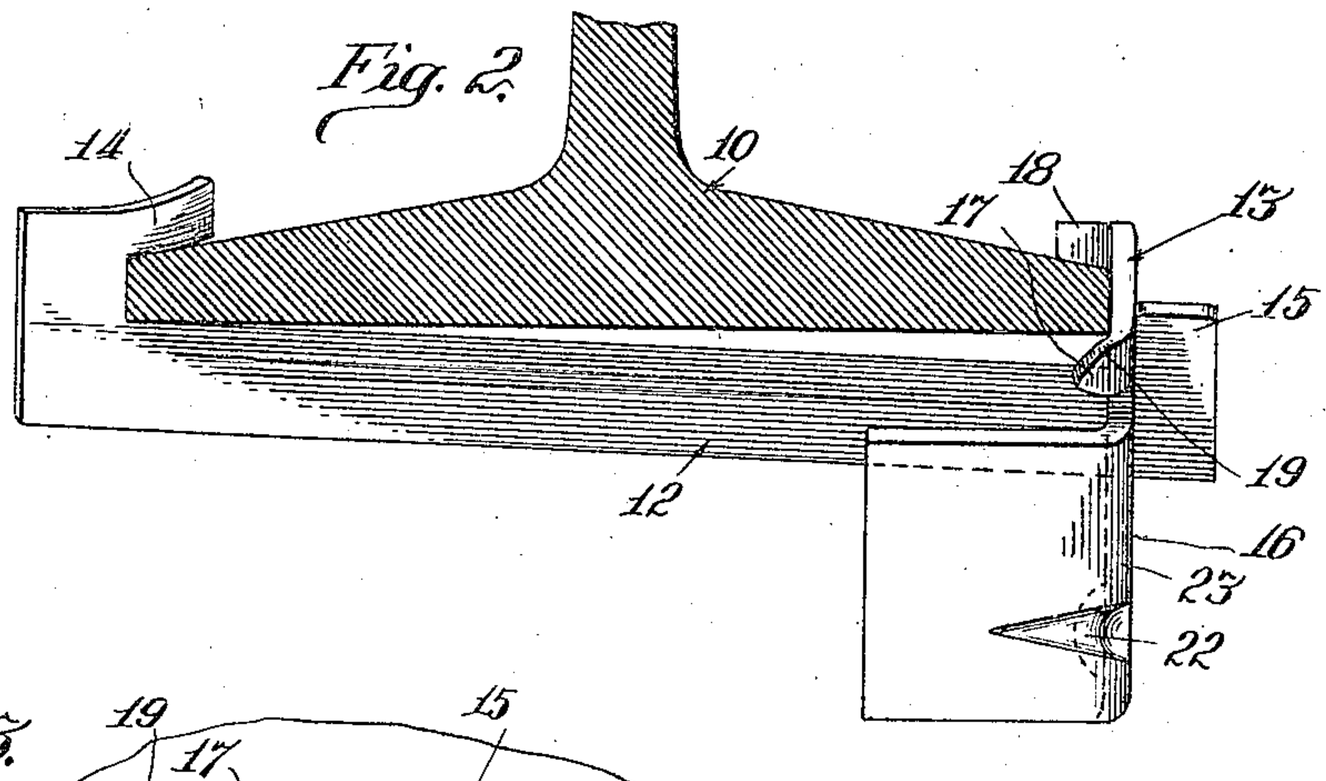
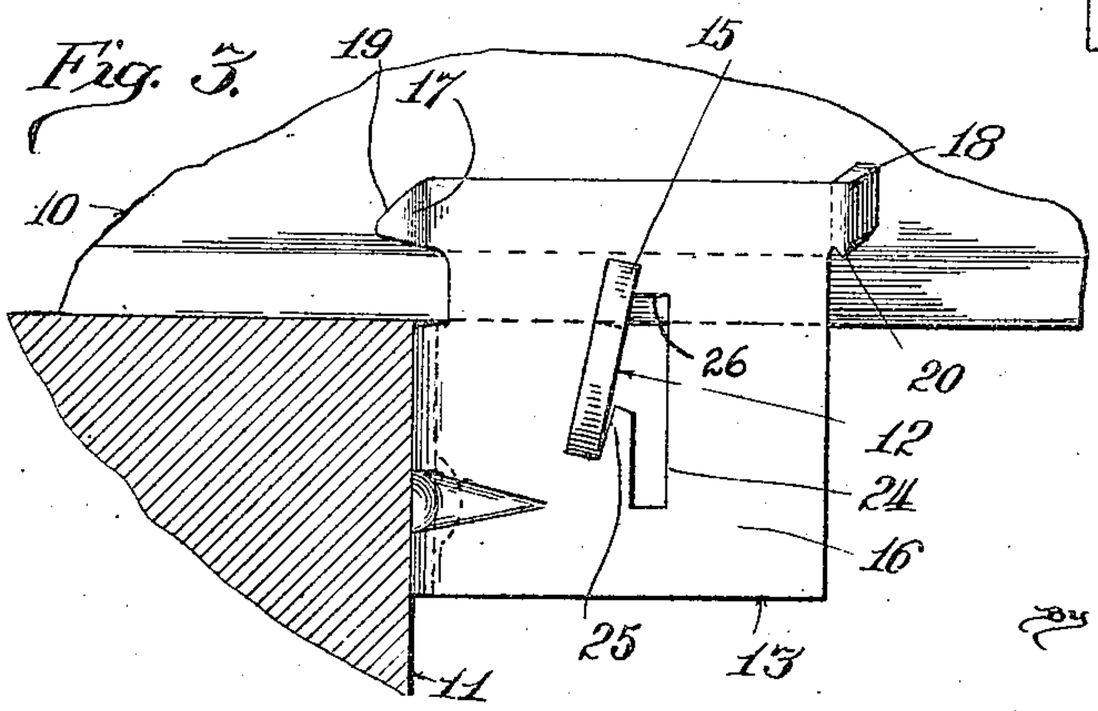


Fig. 3.



Inventor
Laurence J. Berkeley
By Barnett & Truman
Attorneys

Patented Jan. 2, 1923. 1,440,526

UNITED STATES PATENT OFFICE.

LAURENCE J. BERKELEY, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO THE P & M COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

RAIL ANCHOR.

Original application filed January 27, 1921, Serial No. 440,396. Divided and this application filed May 17, 1922. Serial No. 561,579.

To all whom it may concern:

Be it known that I, LAURENCE J. BERKELEY, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Rail Anchors, of which the following is a specification.

My invention relates to devices for resisting the tendency of railroad rails to move longitudinally, such devices being known generally as rail anchors, rail stays and anti-creepers.

The object of the invention is to provide an anchor device suitable for resisting longitudinal creeping movement of railroad rails which will be relatively inexpensive to manufacture, conveniently applied to a rail, and which when applied will take a combined spring grip and shackle hold on the rail.

A further and more specific object is to provide a novel anchor of the "two-piece" type consisting of a spring yoke member adapted to be strained during its application to a rail so as to exert a spring grip on the rail, and a jaw member having an interlocking engagement with the spring yoke member and formed of metal having sufficient resiliency, whereby it will yield to permit an angularly disposed portion thereof to be forced over the edge of the rail base and snap into engagement with the upper surface of said base, thereby locking both members of the device on the rail so as to prevent accidental displacement of the parts of the device, or the displacement of the device on the rail.

The invention has for further objects such other new and improved structures and combinations of parts hereinafter described and claimed, for carrying out the above stated objects and such other objects as will appear from the following description of the invention, as illustrated in the accompany drawing.

In the drawing:

Fig. 1 is a plan view of a rail anchor constructed in accordance with my invention illustrating the manner in which the same is applied to the base flanges of a rail.

Fig. 2 is a side view in elevation of the anchor device, illustrating it in the same relative position as shown in Fig. 1, and

Fig. 3 is an end view in elevation of the jaw end of the anchor showing the same in its normal applied position.

Like characters of reference designate corresponding parts in the three figures of the drawing.

Referring to the drawings, the base portion of a railroad rail is indicated by the reference character 10 and one of the cross ties on which the rail is supported is indicated by reference numeral 11.

The preferred embodiment of rail anchors illustrated in the drawing, consists of a yoke member 12 and a jaw member 13 which have an interlocking engagement with each other and together embrace the base flanges of the rail. The yoke member 12 is preferably formed of spring metal and is provided at one end with an angularly disposed hook 14 providing a jaw which fits over one edge of the rail base and at the other end with an upstanding portion 15 which engages a portion of the outer surface of the jaw member 13 and interlocks therewith.

The jaw member 13 is made, preferably of spring metal and consists of a flat, vertically disposed body portion 16 provided on its forward and rear edges with angularly disposed lugs 17 and 18, respectively, which project over and against the upper surface of the rail base. The upper edge of the lug 17 is preferably formed with a cam surface 19 to facilitate the application of the anchor to a rail, as will be hereinafter described. The lower edges of both lugs 17 and 18 are preferably tapered to conform with the inclination of the upper surface of the rail base. The lower edge of the lug 18, in addition to being tapered, is also sharpened, as indicated at 20, or otherwise suitably provided with a sharp edge adapted to take a biting hold on the rail. The forward end of the jaw member 16 is bent inwardly to provide a tie abutment 21, which abutment projects under the rail base and bears against one of the vertical faces of the cross tie 11 when the anchor is in its applied position. If desired, the tie abutting flange 21 may be rigidified by forming the flange and body portion of the jaw member with a cor-

rugation 22 which extends around the corner 23 of said member.

The body portion of the jaw member is formed with a relatively long slot 24 and a shorter slot 25 connected therewith, through which the end 15 of the yoke member extends when the yoke and jaw members have their interlocking position.

In applying the anchor to a rail, the jaw 14 of the yoke is fitted over one edge of the rail base, and the angular lug 18 of the jaw member 13 is fitted over the opposite edge of the rail base, as shown in Figs. 1 and 2. In this position of the yoke and jaw members the end 15 of the yoke member may be passed through the relatively long slot 24 of the jaw member and then moved into the shorter slot 25, in which position the upstanding projection 15 of the yoke will extend above the upper edge 26 of the slots, so as to effect an interlocking engagement between the yoke and jaw members. The jaw member 13 may then be raised to the position shown in Fig. 3, during which movement the cam surface 19 of the lug 17 will bear against the edge of the rail and thereby flex the spring metal jaw member sufficiently to permit the said lug 17 to snap over the upper edge of the rail base. The raising of the jaw member 13 from the position shown in Figs. 1 and 2, to the position shown in Fig. 3 subjects the spring yoke 12 to a torsional strain, whereby the hook portion 14, which preferably extends in a direction away from the cross tie, is forced downwardly against the upper surface of the rail base and the body portion of the yoke at this end exerts a spring pressure against the under surface of the rail base. The tensioning of the spring yoke member 12 in this manner, the spring grip produced thereby against the upper and lower surface of the rail base, provides an effective resistance to the tendency of the vibration of the rail, or other disturbing influences, to loosen the initial grip of the device on the rail. When the device is in its applied position, the yoke 12 preferably assumes a position diagonally across the base of the rail, so that the device as a whole will take a firm shackle hold on the opposite edges of the rail base when the rail is subjected to a creeping pressure.

This application is a division of my copending application, Serial No. 440,396, filed January 27th, 1921.

I claim:

1. A rail anchor comprising a member for engaging one edge of a rail base and a member associated therewith for engaging the other edge of said base; said second mentioned member being provided with means to project over the upper surface of the rail base and adapted to be flexed outwardly from the rail during its application to its operative position.

2. A rail anchor comprising a member for engaging one edge of a rail base and a spring metal member interlocked therewith for engaging the other edge of said rail base; said spring metal member being provided with an angularly disposed lug adapted to project over the upper edge of said rail base and adapted to be flexed outwardly from the rail during its application to its operative position.

3. A rail anchor comprising a spring metal yoke formed with a jaw to engage one edge of the rail base and a spring metal jaw member having interlocking engagement with said yoke and adapted to engage with the other edge of said rail base; said jaw member being provided with an angularly disposed lug to extend over the upper surface of said rail base and adapted to be flexed outwardly from the rail during its application to its operative position, and said yoke member being so connected with said jaw member that it is subjected to a torsional strain when said jaw member is in its applied position on the rail.

4. A rail anchor comprising a member adapted to extend across the rail base and to fit over one edge thereof, and a member for engaging the opposite edge of the rail base, having an interlocking engagement with said first mentioned member and adapted to be rocked longitudinally of said rail and flexed outwardly from said rail base during its application to its operative position.

5. A rail anchor comprising a member adapted to extend across a rail base to grip one edge thereof with spring pressure, and a member for engaging the opposite edge of said rail base, having an interlocking engagement with the first mentioned member and provided with an angularly disposed lug adapted to project over the upper surface of said rail base; said second mentioned member being made of spring metal and adapted to be rocked on an axis extending transversely of the rail and flexed outwardly to permit said lug to snap over the edge of the rail into its operative position.

6. A rail anchor comprising a member adapted to extend across a rail base and to grip one edge thereof with spring pressure, and a member for engaging the opposite edge of the rail base, having an interlocking engagement with the first mentioned member and adapted to be rocked, on an axis extending transversely of the rail to its operative position on the rail, both of said members being springs and being strained during the application of the device to a rail.

7. A rail anchor comprising a rail engaging member adapted to fit over one edge of a rail base and a jaw member having an interlocking engagement with said rail engag-

ing member and adapted to be rocked longitudinally of the rail into engagement with the opposite edge of the rail base; said rail engaging member being a spring which is tensioned when the anchor is in its applied position and said jaw member being a spring adapted to be flexed outwardly during the application of the anchor to a rail.

8. A rail anchor comprising a spring metal yoke member adapted to extend around the base of a rail, and a spring metal jaw member having an interlocking engagement with said first mentioned member, formed with an angularly disposed lug adapted to project over the upper surface of the rail; said jaw member being adapted to be rocked into operative engagement with the rail base, whereby said lug rides over the edge of said rail base and snaps into engagement with the upper surface thereof and said yoke member is subjected to a torsional strain.

9. A rail anchor comprising a spring metal yoke member and a jaw member which together embrace the base of a rail, the jaw member being formed with a slot with which said yoke has an interlocking engagement, and with an angularly disposed lug adapted to engage with the upper surface of the rail base; said jaw member being made of spring metal and adapted to be flexed outwardly from the rail to permit said lug to pass over the edge of the said rail base.

10. A rail anchor comprising a spring metal yoke member and a jaw member which together embrace the base of a rail, the jaw member being formed with a slot with which said yoke has an interlocking engagement and is provided with an angularly disposed lug adapted to engage with the upper surface of the rail base; the said slot being so arranged that a rocking movement of said jaw member subjects said yoke to a torsional strain and said jaw member being resilient to permit said lug to pass over the edge of the rail base.

11. A rail anchor comprising a yoke member formed at one end with a jaw to engage one edge of a rail base and formed at the other end with an enlargement, and a spring metal jaw member formed with a slot with which the enlargement of said yoke interlocks, said jaw member being formed with two angularly disposed lugs to engage the upper surface of the rail base, one of the lugs being formed with a cam surface and adapted to snap over the upper edge of the rail base when the jaw member is moved to its applied position.

12. A rail anchor comprising a spring metal yoke member and a spring metal jaw member having an interlocking engagement with each other and which together embrace the base flange of a rail; said jaw member being formed with two angularly disposed lugs to engage the upper surface of the rail base, one of the lugs being formed with a cam surface adapted to snap over the upper edge of the rail base when the jaw member is moved to its applied position, and said spring yoke member being so connected with said jaw member that it is subjected to a torsional strain during the movement of said jaw member to its applied position.

13. A rail anchor comprising a spring yoke member and a spring metal jaw member having an interlocking engagement with the yoke and formed with a tie-abutting foot, said jaw member being formed with two angularly disposed lugs to engage the upper surface of a rail base, one of the lugs being formed with a cam surface and adapted to snap over the upper edge of the rail base when the jaw member is moved to its applied position.

14. A rail anchor comprising a spring metal yoke member adapted to be subjected to a torsional strain during its application to a rail and a spring metal jaw member having an interlocking engagement with the yoke and formed with a tie-abutting foot, said jaw member being formed with two angularly disposed lugs to engage the upper surface of the rail base, one of the lugs being formed with a cam surface and adapted to snap over the upper edge of the rail when the jaw member is moved to its applied position.

LAURENCE J. BERKELEY.