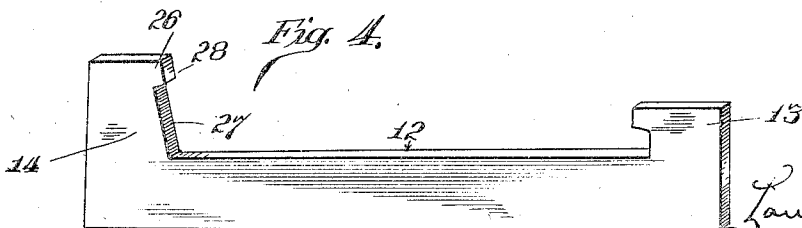
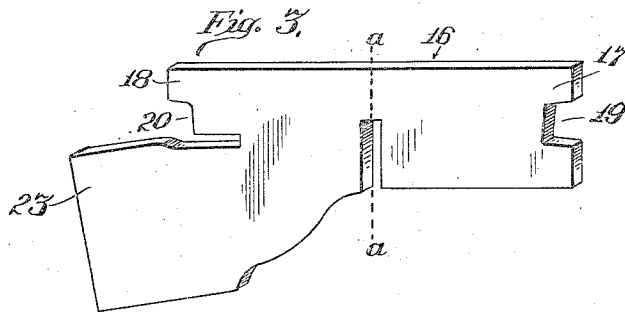
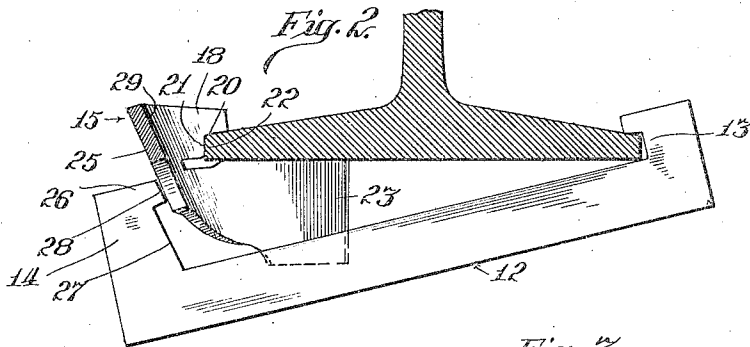
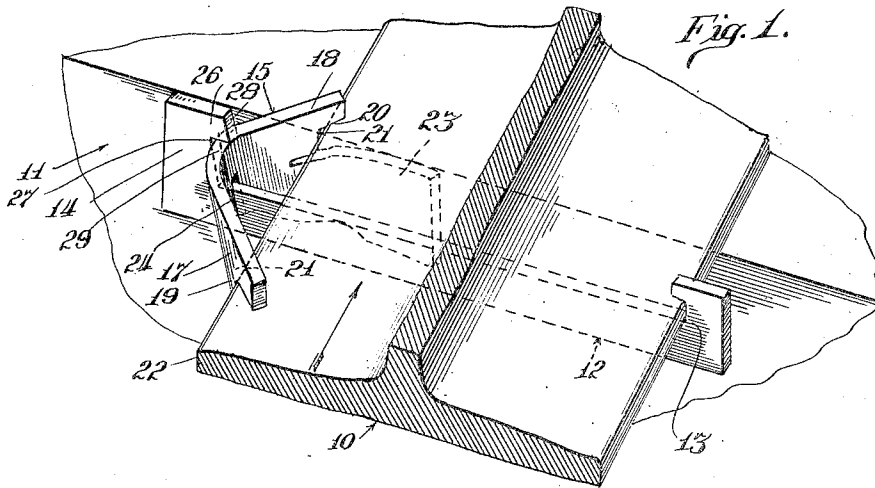


L. J. BERKELEY.
RAIL ANCHOR.
APPLICATION FILED SEPT 14, 1920.

1,379,384.

Patented May 24, 1921.



Inventor
Lawrence J. Berkeley
Bernett & Hanna
Attorneys

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.

1,379,384.

Specification of Letters Patent.

Patented May 24, 1921.

Application filed September 14, 1920. Serial No. 410,288.

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 rail anchors, and has for its object to provide an improved device of this character which may be conveniently applied to the base flange of a rail, which will maintain a firm initial grip, and which will increase its grip transversely of the rail when the rail is subjected to a creeping pressure.

A more specific object of the invention is to provide a rail anchor of the "two-piece" type, consisting of a yoke member and a tie-abutting member which have an interlocking engagement with each other, and which together embrace the base flange of the rail. One of said members, preferably the tie-abutting member, is made of spring metal and so bent that the anchor device as a whole will normally grip the opposite edges of the rail base with spring pressure, and said member will be flexed during the presence of a creeping pressure on the rail, to produce an increased gripping action transversely of the rail, and also take a firm shackle hold on the rail base.

The invention has for further objects the novel arrangements and construction of the parts and devices, hereinafter described and claimed, for carrying out the above stated objects, and such other objects as will appear from the following description.

A preferred embodiment of the invention is illustrated in the accompanying drawing, wherein—

Figure 1 is a view in perspective of a rail anchor constructed in accordance with my invention, applied in its operative position on a base flange of a rail;

Fig. 2 is a cross sectional view illustrating the position which the parts of the device assume during their application to a rail base;

Fig. 3 is a view, in perspective, of the tie-abutting member before the same is bent to the shape in which it is illustrated in the preceding figures; and

Fig. 4 is a view in perspective of the yoke member.

Like characters of reference designate like parts in the several figures of the drawing.

Referring to the drawing, 10 designates a railroad rail, and 11 one of the cross ties on which the rail is supported. The rail anchor illustrated in the drawing consists, preferably, of a sheet metal yoke 12 formed at one end with a jaw 13 which fits over one edge of the base flange of the rail, and formed at its other end with a hook shaped portion 14 which interlocks with a spring metal jaw member 15 adapted to grip the opposite edge of the rail base when the device is in its applied position. The spring metal jaw member 15 is formed from a blank 16, shown in Fig. 3, by bending the blank on the line *a-a* until the ends 17, 18 stand at an acute angle with relation to the edge of the rail base. The ends 17, 18 of this member are formed with recesses 19, 20 providing jaws which fit over the edge of the base flange of the rail at points on opposite sides of the yoke. The ends 17, 18 have such an angular position with relation to the length of the rail that the inner vertical edges 21, 21 of the jaws 19, 20 take a biting, shackle hold on the vertical edge 22 of the rail base when the rail is subjected to a creeping pressure. The spring jaw member is provided with a flange 23 which is curved inwardly and bears against one of the vertical faces of the tie 11 when the anchor is in its applied position, as shown in Fig. 1. The central portion of the spring jaw member is slotted, as indicated at 24, which slot receives the lower portion of the yoke 12 and holds it in a vertical position. When the spring jaw member is bent to the form shown in Figs. 1 and 2, the apex of the bend inclines downwardly toward the rail base, thus providing a cam surface 25 over which the lip 26 of the hook end of the yoke rides when the yoke is elevated from the position shown in Fig. 2 to its operative position. The inner edges 27, 28 of the hook 14 and lip 26 are preferably formed with tapers corresponding to the said inclination of the spring yoke member.

In operation, the spring yoke member 15 is first applied to one edge of the rail base with its flange 23 abutting against one of the vertical faces of the tie. The jaw end 13 of the yoke 12 is then fitted over the opposite edge of the rail base and the hook end 14 elevated until it enters the slot 24

of the spring jaw member 15. As the hook end 14 of the yoke is further elevated, the ends 17, 18 of the spring jaw member will spread sufficiently to permit the lip 26 of the yoke to snap over the upper edge of the spring jaw member, thereby interlocking these members in their applied position. By forcing the hook end of the yoke over the spring jaw member in this manner, the spring jaw member is tensioned so as to exert an initial spring grip on opposite edges of the rail base, the length and angularity of the ends 17, 18 of the spring jaw member being such as will permit the application of the device to rails having different widths without danger of subjecting the spring jaw to too much tension or impairing its adaptability to take a firm shackle hold on the rail. During the presence of a creeping pressure, tending to move the rail longitudinally in the direction indicated by the arrow in Fig. 1, the jaw 19 will take a biting hold on the rail so as to move with it, while the jaw 20 is held stationary by reason of the flange 23 bearing against the tie. This produces a bending action at the apex of the bend 29 of the spring jaw member (Fig. 1) and thereby moves the yoke in the direction of its length to increase the grip of the device transversely of the rail. In addition to the above mentioned transverse gripping action, it will be noted that the creeping movement of the rail will produce an increased shackle hold of the jaws 19, 20 on the vertical edge 22 of the base flange.

I claim:

1. A rail anchor comprising a yoke member and a tie-abutting member, one being a spring adapted to be strained during the application of the device to a rail, and to be further strained during the presence of a creeping pressure to increase the grip of the device on the rail.

2. A rail anchor comprising a yoke member and a tie-abutting member, one being a spring adapted to be tensioned during the application of the device to a rail, and to be subjected to a bending strain during the presence of a creeping pressure to increase the grip of the device on the rail.

3. A rail anchor comprising a yoke member and a tie-abutting member, one being a spring adapted to be tensioned during the application of the device to a rail, and to be subjected to a bending strain during the presence of a creeping pressure to increase the grip of the device on the rail transversely of the rail.

4. A rail anchor comprising a jaw member to engage one edge of a rail base and provided with a tie-abutting foot, and a yoke member adapted to engage the opposite edge of said rail base and having an interlocking engagement with said jaw member;

said jaw member being adapted to be subjected to a bending strain to increase the grip of the anchor transversely of the rail.

5. A rail anchor comprising a spring metal jaw member to engage one edge of a rail base, and provided with a tie-abutting foot, and a yoke member adapted to engage the opposite edge of said rail base and having an interlocking engagement with said jaw member; said jaw member being adapted to be subjected to a bending strain to increase the grip of the device transversely of the rail.

6. A rail anchor comprising a spring jaw member to engage one edge of a rail base and provided with a tie-abutting foot, and a yoke member adapted to engage the opposite edge of said rail base and having an interlocking engagement with said jaw member; said jaw member being tensioned during the application of said yoke to its operative position and adapted to be subjected to a bending strain to increase the grip of the anchor transversely of the rail during the presence of a creeping pressure.

7. A rail anchor comprising a jaw member formed with recesses adapted to fit over one edge of a rail base and a yoke member engaging the opposite edge of said rail base and having an interlocking engagement with said jaw member intermediate said recesses; one of said members being made of spring metal and adapted to be strained during the application of the anchor to the rail whereby the anchor exerts a spring grip transversely of the rail.

8. A rail anchor comprising a jaw member formed with recesses adapted to fit over one edge of a rail base at different points, and a yoke member formed at one end with a jaw to engage the opposite edge of said rail base and formed at its other end with a hook which fits over said jaw member intermediate said recesses; one of said members being made of spring metal and adapted to be strained during the application of the anchor to the rail whereby the anchor exerts a spring grip transversely of the rail.

9. A rail anchor comprising a yoke member formed at one end with a jaw adapted to fit over one edge of a rail base and formed at its other end with a hook portion, and a spring jaw member recessed to fit over said hook portion and said base and adapted to be strained in application of the anchor to the rail whereby the initial grip of said anchor on said base is maintained by spring pressure.

10. A rail anchor comprising a yoke member formed at one end with a jaw to fit over one edge of a rail base and formed at the other end with a hook portion, and a spring jaw member interposed between said hook portion and said rail base and adapted to be

strained in application of the anchor to the rail; the ends of said jaw member being disposed at an angle to the edge of said rail base and adapted to take a shackle hold on said base during the presence of a creeping pressure.

11. A rail anchor comprising a yoke member formed at one end with a jaw to fit over one edge of a rail base and formed at the other end with a hook, and a spring jaw member interposed between said hook and said rail base and adapted to engage with a cross-tie and to be strained in application of the anchor to the rail; the ends of said jaw member being disposed at an angle to the edge of said rail base on opposite sides of said yoke and adapted to take a shackle hold on said base during the presence of a creeping pressure.

12. A rail anchor comprising a yoke member formed at one end with a jaw to fit over one edge of the rail base and formed at the other end with a hook portion, and a spring jaw member interposed between said hook portion and said rail base and adapted to be engaged with a cross-tie and to be strained in application of the anchor to the rail; the ends of said jaw member being disposed at an angle to the edge of said rail base on opposite sides of said yoke and adapted to take a shackle hold on said base during the

presence of a creeping pressure, whereby said jaw member is subjected to a bending strain to increase the grip of the anchor transversely of the rail.

13. 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 a hook portion, and a combined jaw and tie-abutting member interposed between said hook portion and rail base, said combined jaw and tie-abutting member being made of spring metal, formed with a bend, so that its ends stand at acute angles to the edge of the rail, and interlocks with said yoke adjacent the apex of said bend.

14. A rail anchor comprising a spring metal jaw member bent so that its ends stand at acute angles to the rail base and engage one of the vertical edges thereof at different points, formed with a slot at the apex of said bend and provided with a tie-abutting portion, and a yoke member formed at one end with a jaw to engage the opposite edge of said rail base and provided at its other end with a hook portion adapted to enter said slot and project over the other edge of said jaw member when it is in its operative position.

LAURENCE J. BERKELEY.