

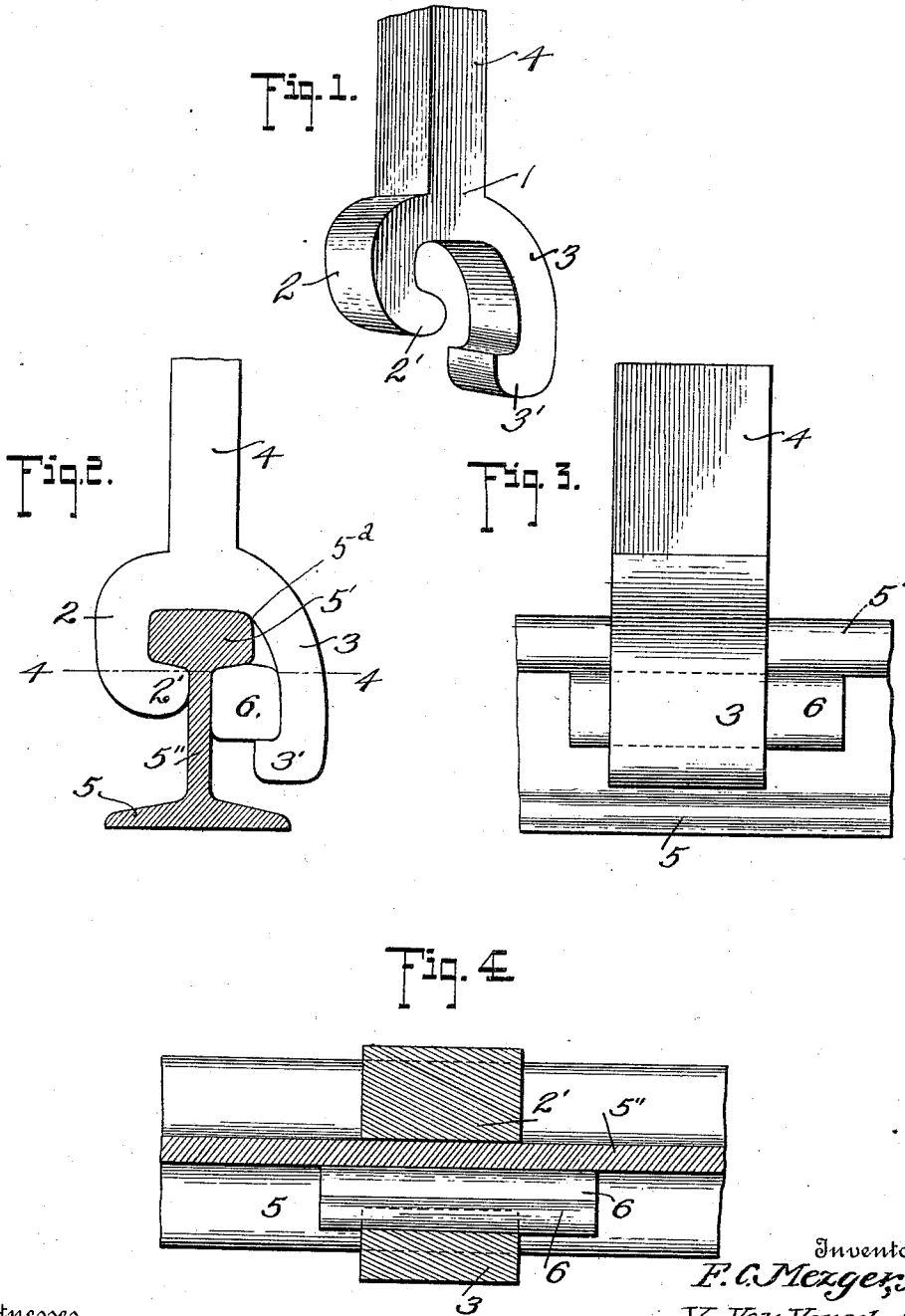
F. C. MEZGER, JR. & V. VAN VENSCHOTEN.

RAIL BUMPER.

APPLICATION FILED MAR. 28, 1912.

1,049,310.

Patented Dec. 31, 1912.



Witnesses

E. H. Wagner
J. W. Kirkley

Inventors

F. C. Mezger, Jr.
V. Van Venschoten

By

Deane Robb
J. M. Robb

Attorneys

UNITED STATES PATENT OFFICE.

FREDERICK C. MEZGER, JR., AND VINCENT VAN VENSCHOTEN, OF GATUN, CANAL ZONE.

RAIL-BUMPER.

1,049,310.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed March 28, 1912. Serial No. 686,751.

To all whom it may concern:

Be it known that we, FREDERICK C. MEZGER, Jr., and VINCENT VAN VENSCHOTEN, citizens of the United States, residing at Gatun, Canal Zone, have invented certain new and useful Improvements in Rail-Bumpers, of which the following is a specification.

This invention relates to improvements in bumpers or rail stops for steam shovels, coal tippers, cranes, railway cars and the like.

The difficulty heretofore experienced in devices of this nature has been to make an effective bumper which could be readily and quickly adjusted over a rail and at the same time withstand the tremendous amount of strain thereagainst without slipping or breaking.

The object, therefore, of our invention has been to provide a simple construction involving only one piece, and a wedge, the particular design of said construction conforming in part to the shape of the rail upon which it is seated and so applied as to best resist the pressure or impact of car wheels against the same without breakage.

Unlike devices heretofore in use, the action of the wedge cooperating with our bumper is peculiar in that any slack is adapted to be taken up by the pressure of the car wheels against direction of the driven wedge.

A further object of our invention is to provide a bumper capable of application to a rail in only one direction and that at right angles to which the pressure may be exerted, it being furthermore so balanced in construction that in the event of accidental displacement of the wedge normally cooperating therewith, the stop will remain in its proper position upon the rail. In other words, the body is so formed that it maintains a position in stable equilibrium even though the cooperating securing member is displaced.

For a full understanding of the present invention, reference is to be had to the following description and the accompanying drawings, in which—

Figure 1 is a perspective view of our invention; Fig. 2 is an end elevation of the same applied to a rail, which rail is shown in section; Fig. 3 is a side elevation similar to Fig. 2, showing the rail broken away, and

Fig. 4 is a horizontal sectional view taken about on the line 4—4 of Fig. 2.

Throughout the following detail description and on the several figures of the drawings, similar parts are referred to by like reference characters.

Referring now to the drawing and specifically describing our invention, a bumper constructed in accordance therewith consists of a body 1, the lower portion of which comprises spaced downwardly extending jaws 2 and 3, while extending upwardly from said body 1 is the vertical standard 4. The bumper thus described is preferably made of one single piece of solid metal and the opening between the jaws 2 and 3 is of such shape that at its upper portion the body fits across the ball 5' of the rail 5. The jaw 2 fits snugly around the ball 5' and terminates in the lip 2', which bears against the web 5'', while the jaw 3 is elongated and likewise terminates in a lip 3', which for the purpose of this description will be called a seat. The arm 3 is so formed that the space between said arm, the ball 5' and web 5'' of the rail tapers toward one end to receive a wedge 6 which conforms preferably exactly to the shape of this space, said wedge tending to draw the bumper tight to the rail. The lip 3', as before stated, forms a seat for the wedge or securing member 6 and when driven into place the bumper is drawn downwardly against the face of the rail and the lip 2' up to the ball 5'.

There are several characteristic features of the detail construction of the bumper or stop, especially important in order to prevent liability of accidental displacement of the device from a rail during or after removal of the wedge 6. As seen in Fig. 2, the upper end of the space between the jaws 2 and 3 is of practically the same width as the width of the ball 5' of the rail. For this reason, and because the lip 2' of the jaw 2 fits snugly against the underside of the ball 5', no lateral play of the bumper or stop is admitted of while the device is in its normal position and even though the wedge 6 may have been displaced. Furthermore, it will be observed that the inner side wall or surface of the jaw 3 is curved on an arc terminating approximately at the corner 5^a of the ball 5', said arc having for its center, so to speak, the upper inner ex-

tremity of the lip 2', which bears against the rail at the angle formed by the juncture of the ball and web of the latter. Therefore, in order to remove the stop from the rail, it is absolutely necessary that the device be immediately turned or rotated to the left, as shown in Fig. 2, the inner wall of the jaw 3 operating during such rotation in close contact with the head or ball 5'. The displacing action above described is such only as may be performed manually, as will be readily apparent, the liability of the device being removed or displaced by accidental jar or vibration, being practically entirely eliminated.

The standard 4 forms a stop against which the car wheel abuts, as will be apparent, and is made of a suitable length to properly cooperate therewith.

The operation of our device will be readily understood from the foregoing. The bumper is placed in position on the rail by a side rolling motion which is particularly advantageous as it does not interfere with the steam shovel or rigging thereon, with which it may be used. The weight of the elongated jaw 3 tends to cause the bumper to gravitate into upright position on the rail and the wedge is then driven into place from the opposite side to which strain or impact is adapted to be received. As thus adjusted the bumper will not slip, any tendency to do so only resulting in further wedging it more snugly in place upon the rail.

When it is realized that these devices are particularly adapted for use on trestles, the advantages of our construction will be most appreciated since any accidental displacement of the wedge, as before premised, will

not result in loss of the stop. Again, it is often necessary that they be used between a wheel and a fish-plate, and which must be done inside of approximately five inches, so that it will be apparent that our invention is designed particularly to meet just these difficulties.

Having thus described the invention, what is claimed as new is:

In combination, a rail comprising a base, web and ball, and a bumper or stop mounted upon said rail and comprising a body portion having downwardly projecting jaws spaced apart at their uppermost portions a distance substantially equal to the width of the ball of the rail, whereby the latter is snugly received between the jaws at the upper portions of the latter, one of the jaws being formed at its lower end with a lip snugly engaging with the under side of the ball of the rail at the adjacent portion of the latter, the other of the jaws being elongated and having its inner wall or surface curved on an arc with the upper inner terminal of the lip aforesaid as the approximate center, whereby to displace the device from the rail an immediate turning or rotative movement of the stop or bumper is required in a direction opposite the last-mentioned jaw, and a wedge interposed between said last-mentioned jaw and the web of the rail to positively clamp the device in position on the rail.

In testimony whereof we affix our signatures in presence of two witnesses.

FRED. C. MEZGER, Jr.

VINCENT VAN VENSCHOTEN.

Witnesses:

ALBERT A. CLAUNBACH,

DANIEL STAEHLE.