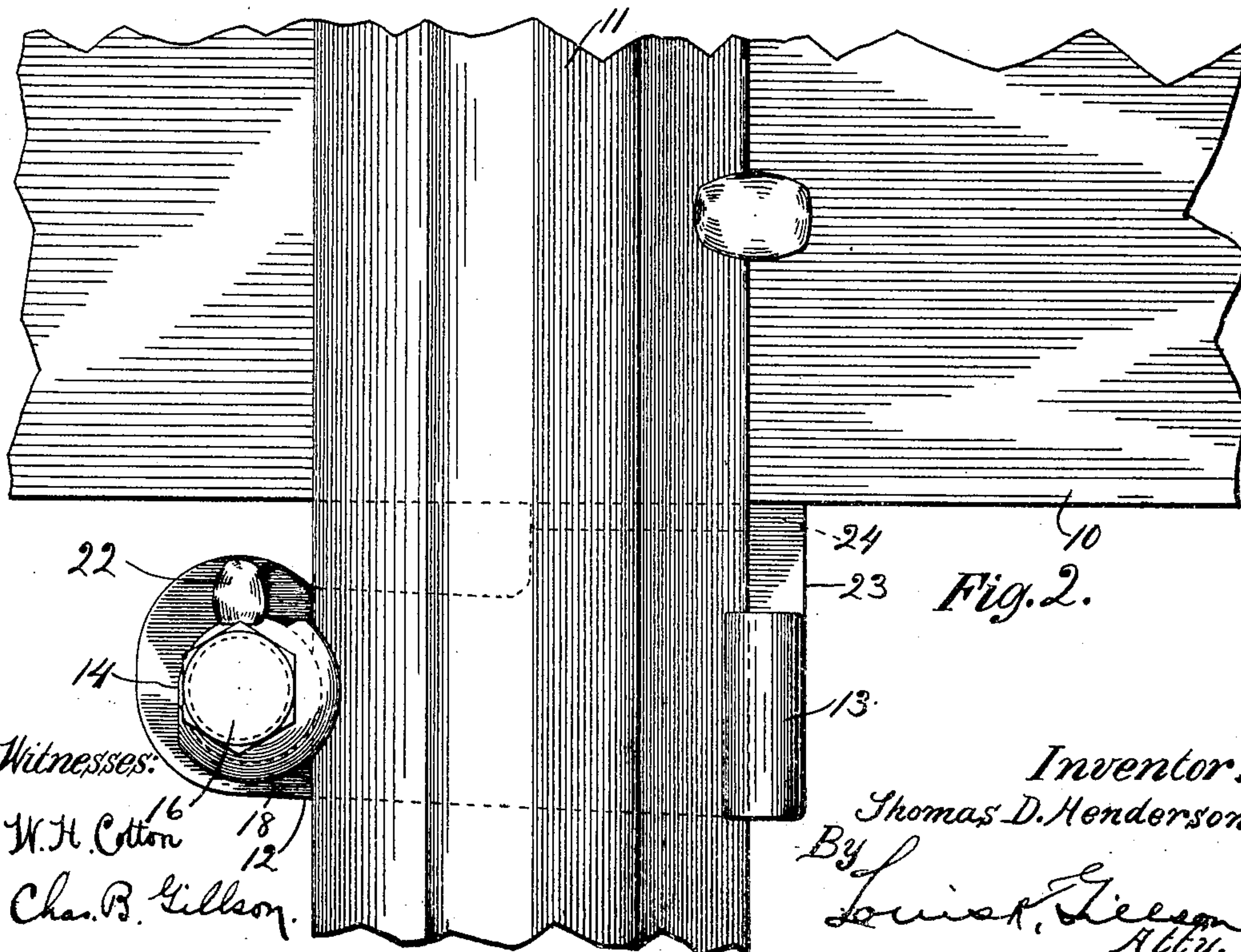
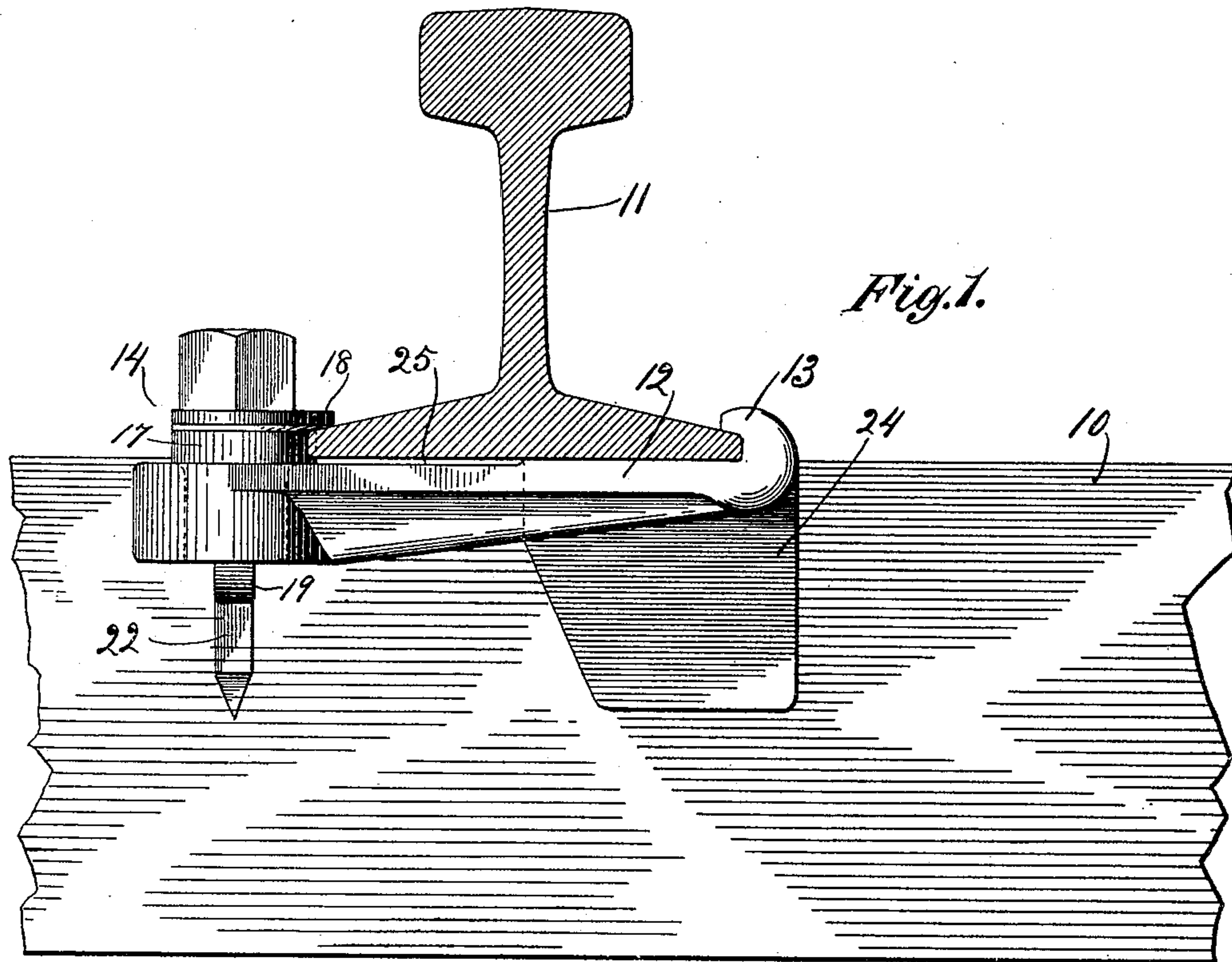


No. 808,921.

PATENTED JAN. 2, 1906.

T. D. HENDERSON.  
RAILWAY RAIL STAY.  
APPLICATION FILED MAY 8, 1905.

2 SHEETS—SHEET 1.



Witnesses:

W. H. Cotton

Chas. B. Gillson.

Inventor:

Thomas D. Henderson

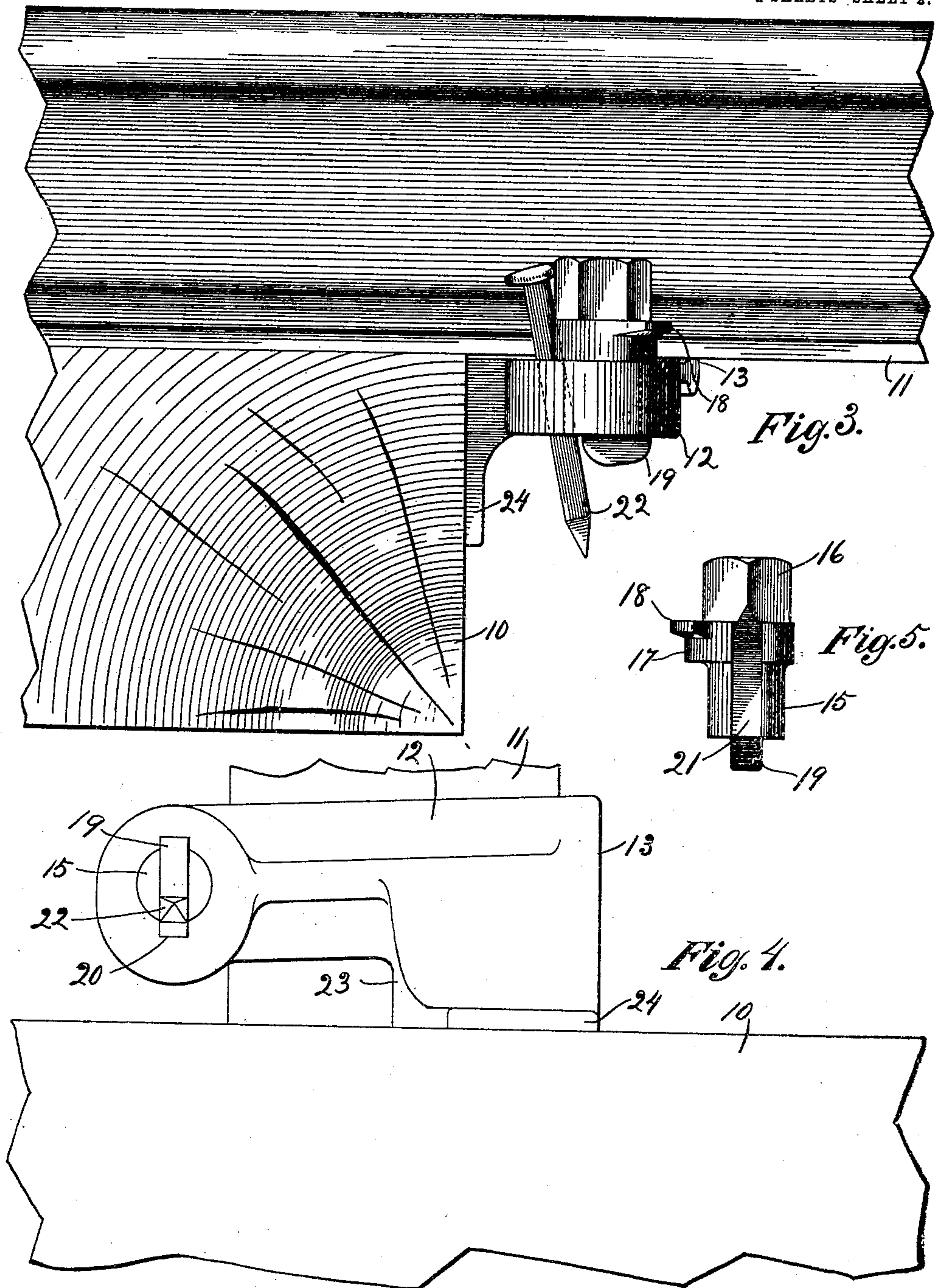
By Louis A. Gillson  
Atty.

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Inventor:  
Thomas D. Henderson.  
By  
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# UNITED STATES PATENT OFFICE.

THOMAS D. HENDERSON, OF CHICAGO, ILLINOIS.

## RAILWAY-RAIL STAY.

No. 808,921.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed May 8, 1905. Serial No. 259,285.

*To all whom it may concern:*

Be it known that I, THOMAS D. HENDERSON, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Railway-Rail Stays, of which the following is a specification and which are illustrated in the accompanying drawings, forming a part thereof.

This invention relates to that class of devices used in connection with railway-rails to prevent them from creeping longitudinally and usually consisting of a bar located below and gripping the foot-flanges of the rail and having a bearing on the side face of the tie.

The object of this invention is to simplify the construction and increase the efficiency of devices of this kind; and it consists of the structure hereinafter described and which is illustrated in connection with a portion of a railway-track in the accompanying drawings, in which—

Figure 1 is a side elevation of the stay and showing in detail a portion of a railway-tie and in cross-section a railway-rail. Fig. 2 is a plan view of the parts shown in Fig. 1. Fig. 3 is an end elevation of the stay as applied to a rail, the tie being shown in cross-section. Fig. 4 is a detail bottom plan view of the stay as applied to the track, and Fig. 5 is a detail of one of the parts of the stay.

A portion of a railway-tie is represented at 10 and of a railway-rail at 11, the latter being of the usual T form and having foot-flanges which rest upon and are spiked to the tie.

The stay comprises a bar 12, adapted to lie along the lower face of the foot-flange of the rail and having at one end a hook 13 for engaging the edge thereof. At its opposite end the bar is enlarged and vertically apertured to receive a clamping-plug 14. This plug has a circular body portion 15, adapted to turn in the aperture of the bar 12; a polygonal head 16, to which may be applied a wrench; a cam-rib 17 intermediate of its body and head, adapted to engage the edge of the foot-flange of the rail; a lip 18, projecting radially at the top of the swell of the cam for overlapping the foot-flange, and a laterally-projecting lug 19 at its lower end for engaging the lower face of the body of the bar 12.

A groove 20 is cut in one wall of the aperture in the body of the bar 12 to permit the passage of the lug 19. The body 15 of the

plug is longitudinally recessed or flattened, as shown at 21, and this recess or flattened portion is so disposed with reference to the swell of the cam-rib 17 that it registers with the groove 20 when the swell of the cam is in engagement with the rail-flange. An ordinary spike, such as a railroad-spike 22, may be inserted into the groove 20 when the plug has been turned to grip the rail and will securely lock it in position. The swell of the cam-rib 17 is of such size that when turned into engagement with the foot-flange of the rail it will indent or bite into the same.

A shank 23 projects laterally from the hooked end of the bar 12, and a plate 24 depends from the outer end of this shank and is adapted to lie against the side face of the tie 10. The plate 24 lies in a plane oblique to the axis of the bar 12—that is to say, oblique to a line drawn through the center of the aperture of the bar and midway between the ends of its hook 13—the inclination of the plate being toward the apertured end of the bar. Preferably the upper face of the bar 12 is lower adjacent its apertured end than adjacent its hooked end, as indicated at 25, and the lower face of the flange 18 of the plug 14 is preferably beveled, so that as the plug is turned to grip the rail the bar 12 is drawn upwardly at its apertured end, causing the hook 13 to bite into the upper surface of the rail-flange.

The tendency of the railway-rails to creep is particularly noticeable on double-track lines, where the trains all run in one direction, and is especially troublesome on grades. The stay is so located on the rail as to be applied to the rearward face of the tie relatively to the direction in which the rail tends to creep, and the tie therefore receives the pressure through the plate 24 of this creeping action. It has been found in practice exceedingly difficult to prevent the slippage of the stay upon the rail. By the construction herein shown and described it is obvious that as the cam-rib 17 bites into and actually indents the rail it will require greater pressure to slide it upon the rail than will be required to accomplish a similar movement of the hook 13. The disposition of the plate 24 at the hooked end of the rail and its angular relation to the body-bar of the stay tend to turn the stay about the point of contact of the cam-rib with the rail-flange, and hence the flange is held firmly gripped between the engaging portions of the stay and rail, creeping being thereby posi-



tively prevented so long as the tie anchorage is firm.

I claim as my invention—

5 1. A railway-stay comprising in combination, a body having a rail-flange-engaging hook at one end and a flange-gripping device at the opposite end; a shank projecting laterally from the hooked end of the bar; and a flange depending from the outer end of the  
10 shank, the face of the flange being inclined toward the remote end of the body of the stay.

2. In a railway-rail stay, in combination, a body having a rail-flange-engaging hook at  
15 one end and a transverse aperture at the opposite end; and a plug rotatably seated in the aperture and having a cam-rib for engaging the edge of the rail-flange.

3. In a railway-rail stay, in combination,

a body having a rail-flange-engaging hook at 20 one end and a transverse aperture at the opposite end; and a plug rotatably seated in the aperture and having a cam-rib for engaging the edge of the rail-flange, a key-seat being formed in the aperture-wall and the body 25 of the plug.

4. In a railway-rail stay, in combination, a body having a flange-engaging hook at one end and a transverse aperture at the other end; a plug rotatably seated in the aperture 30 and having a lateral foot engaging the under face of the body, and a top flange having its lower face beveled for engaging the top of the flange.

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Witnesses:

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