D. H. FOREMAN.

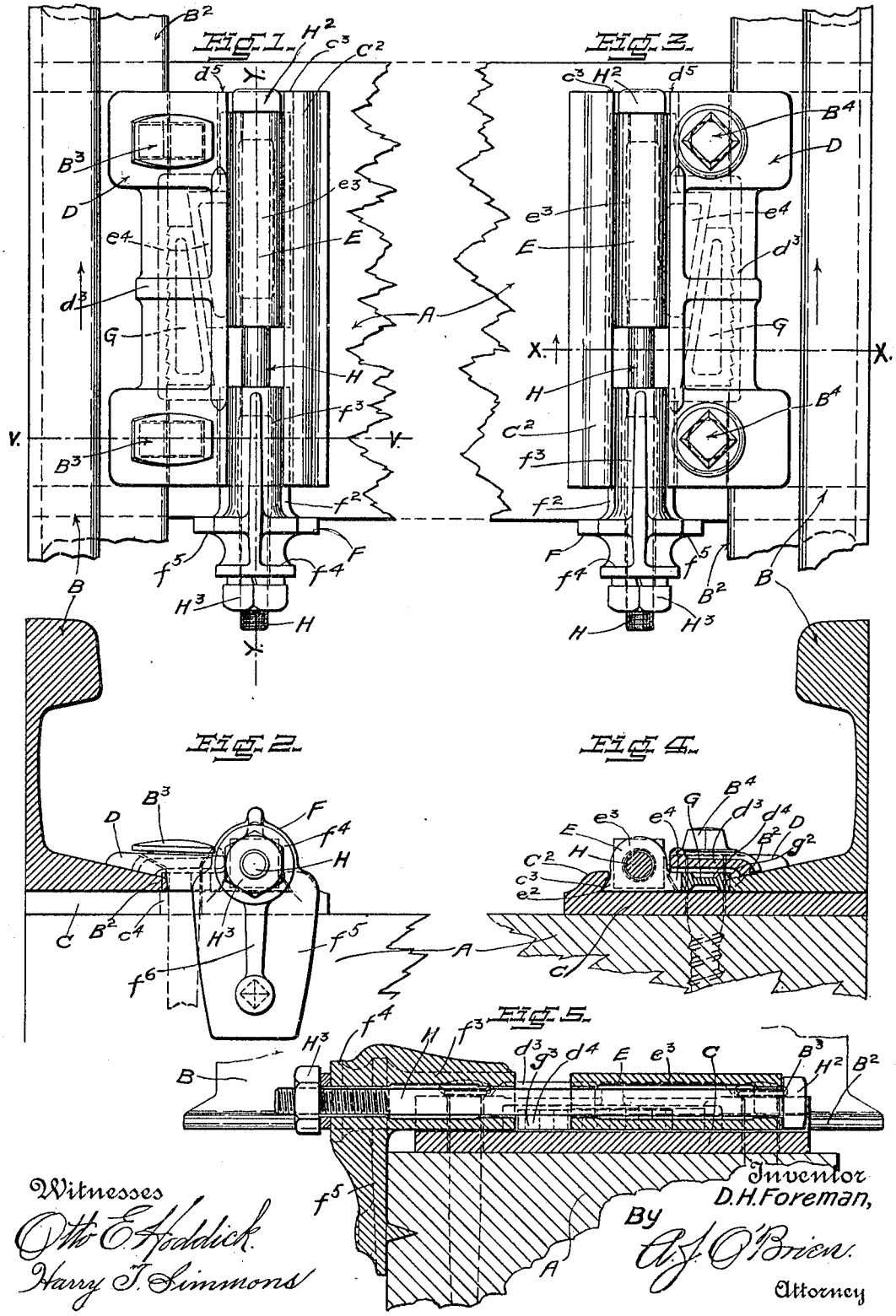
RAILROAD RAIL ANCHOR.

APPLICATION FILED JUNE 18, 1909.

954,409.

Patented Apr. 5, 1910.

4 SHEETS—SHEET 1.



Witnesses

Otto E. Hoddick.

Harry T. Simmons

Inventor

D. H. Foreman,

By

A. J. O'Brien.

Attorney

D. H. FOREMAN.

RAILROAD RAIL ANCHOR.

APPLICATION FILED JUNE 18, 1909.

954,409. Patented Apr. 5, 1910.

4 SHEETS—SHEET 2.

Fig. 6.

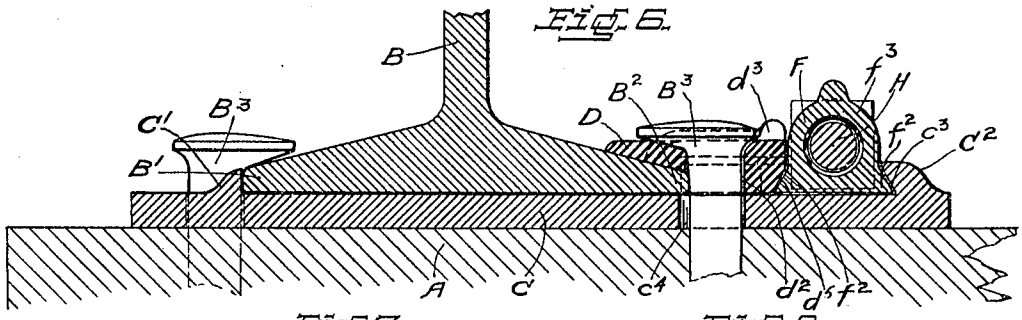


Fig. 7.

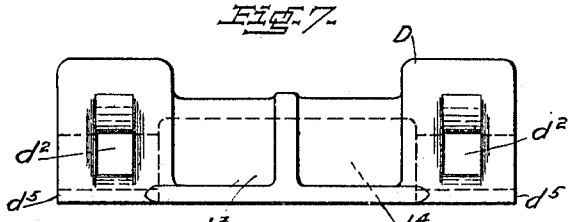


Fig. 8.

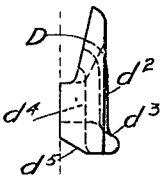


Fig. 17.

Fig. 9.

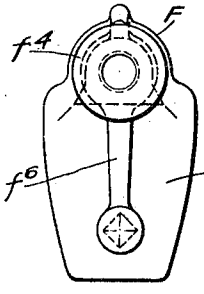


Fig. 10.

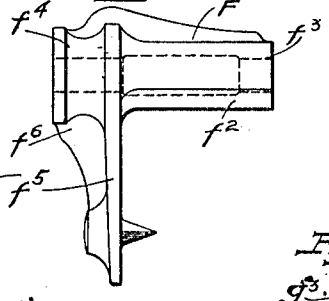


Fig. 14.

Fig. 16.

Fig. 15.

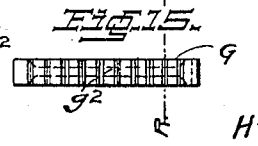


Fig. 11.

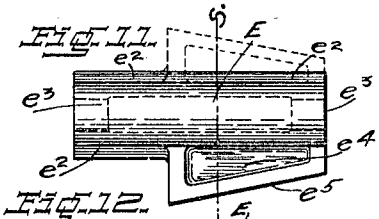


Fig. 12.

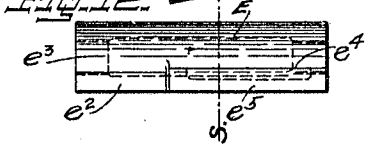


Fig. 13.

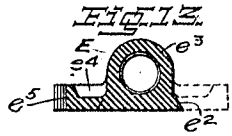
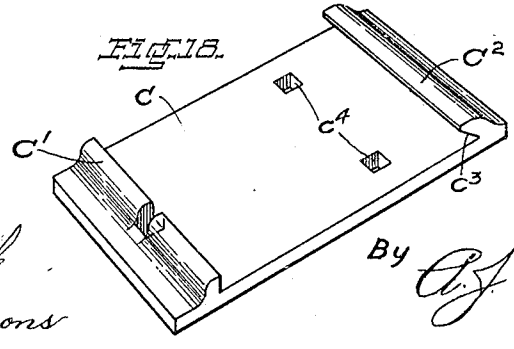


Fig. 18.



Witnesses

Otto E. Hoddick

Harry J. Simmons

Inventor

D. H. Foreman,

By A. J. O'Brien.

Attorney

D. H. FOREMAN.

RAILROAD RAIL ANCHOR.

APPLICATION FILED JUNE 18, 1909.

954,409. **Patented Apr. 5, 1910.**

4 SHEETS—SHEET 3.

Fig. 19.

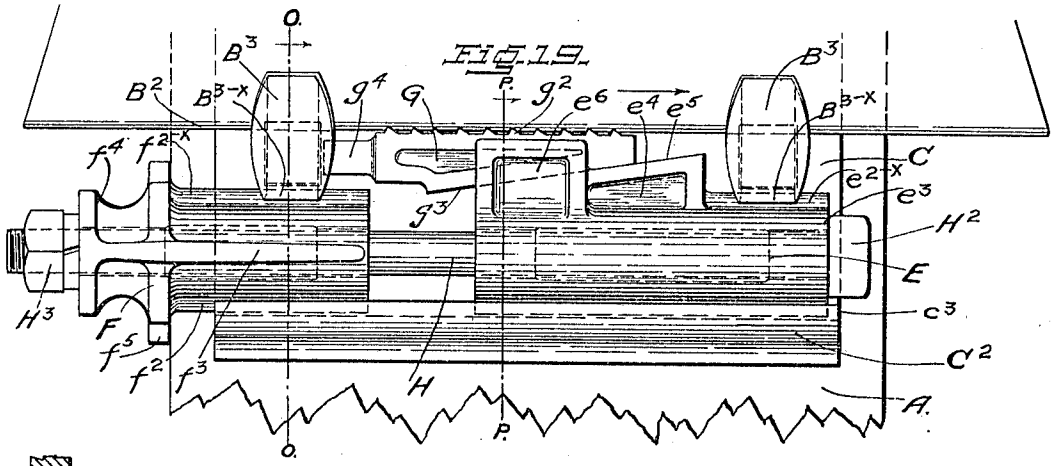


Fig. 20.

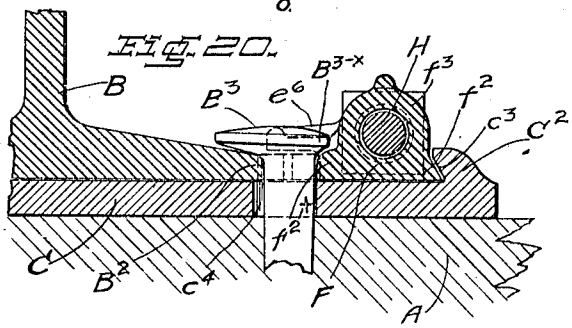


Fig. 21.

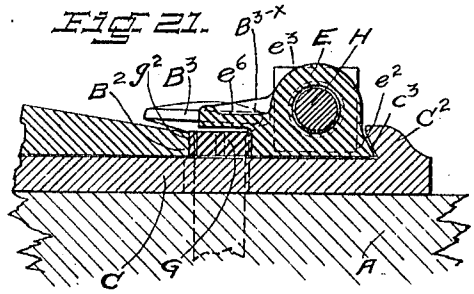


Fig. 25.

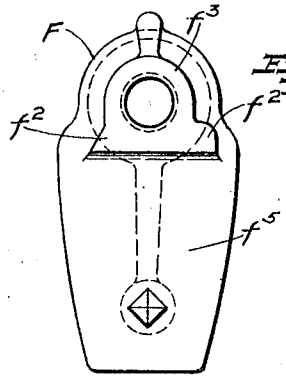


Fig. 22.

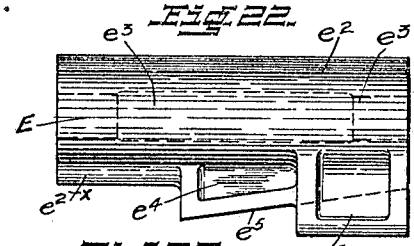


Fig. 24.

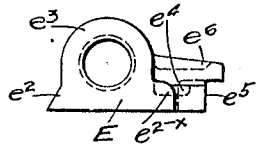
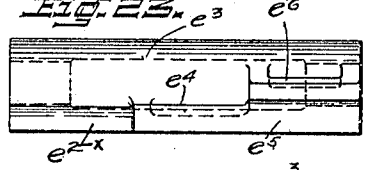


Fig. 23.



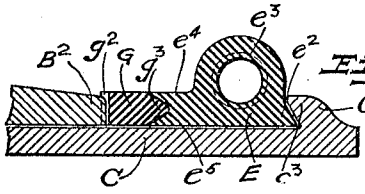


Fig. 26.

Fig. 27.

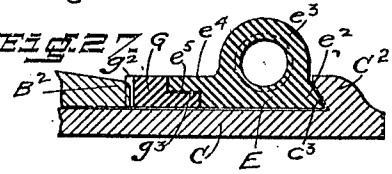
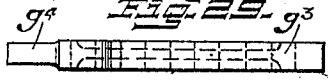


Fig. 28.

Fig. 29.



Witnesses

Otto E. Hoddick.

Harry T. Simmons

Inventor

D. H. Foreman,

By A. J. O'Brien.

Attorney

D. H. FOREMAN.

RAILROAD RAIL ANCHOR.

APPLICATION FILED JUNE 18, 1909.

954,409. Patented Apr. 5, 1910.

4 SHEETS—SHEET 4.

Fig. 30.

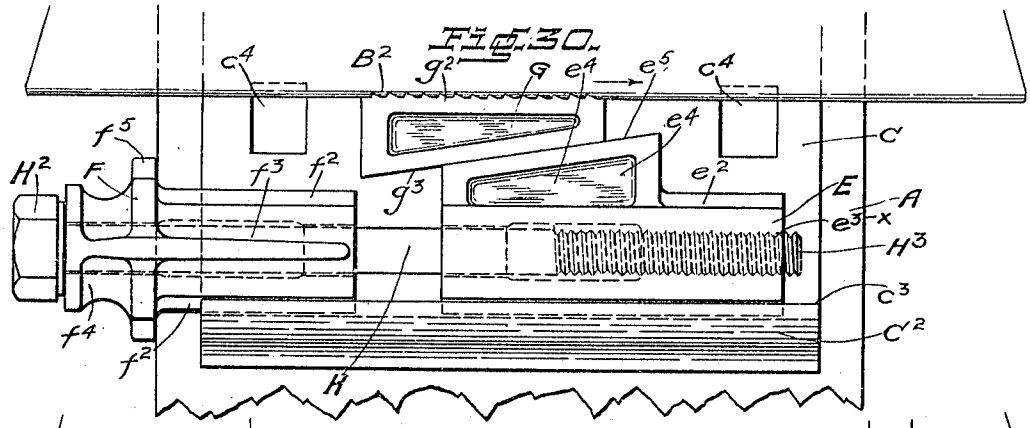


Fig. 31.

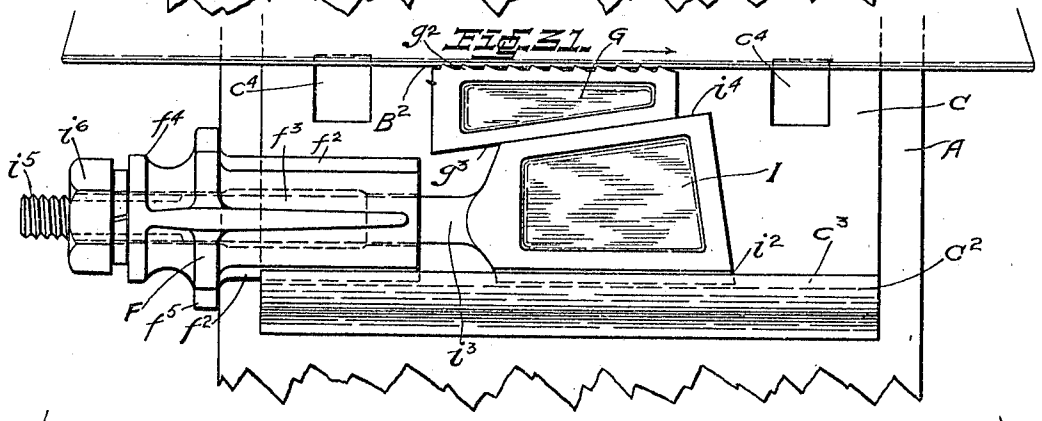


Fig. 32.

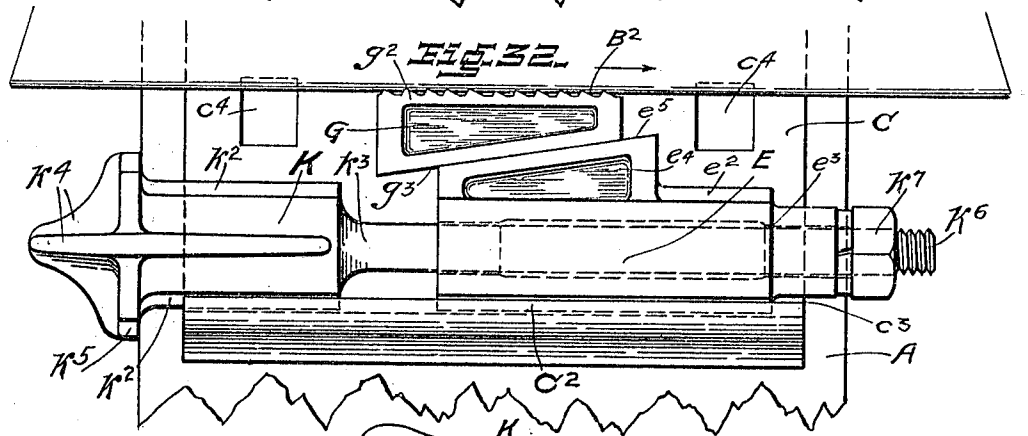
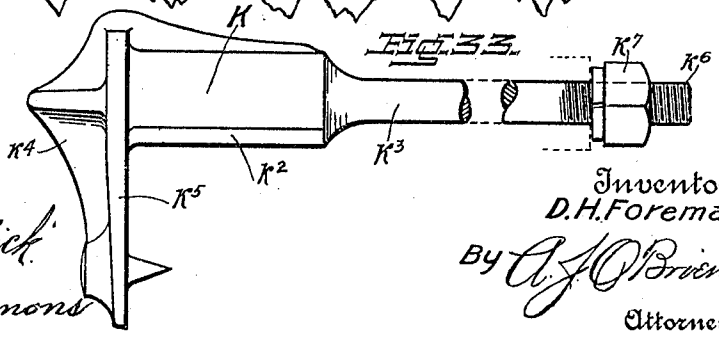


Fig. 33.



Witnesses

Otto E. Hoddick

Harry T. Simmons

Inventor

D. H. Foreman,

By A. J. O'Brien.

Attorney

UNITED STATES PATENT OFFICE.

DAVID H. FOREMAN, OF DENVER, COLORADO, ASSIGNOR OF ONE-THIRD TO F. H. SHEPARD, OF NEW ROCHELLE, NEW YORK, AND TWO-THIRDS TO ARTHUR T. HERR, OF DENVER, COLORADO.

RAILROAD-RAIL ANCHOR.

954,409. Specification of Letters Patent. **Patented Apr. 5, 1910.**

Application filed June 18, 1909. Serial No. 503,020.

To all whom it may concern:

Be it known that I, DAVID H. FOREMAN, a citizen of the United States, residing at the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Railroad-Rail Anchors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to a novel, combined construction of tie-plate and rail anchoring device, so arranged and disposed as to act coöperatively upon the base flange of the rail, and with the initial application of the same to effectually anchor the rail against longitudinal or creeping movement; that is to say: my device when completely applied will not permit the rail to start to creep, and does not require any subsequent slight creeping movement of the rail in order to secure the maximum resisting efficiency of the construction, as, to the best of my knowledge is universally required in order to render thoroughly effective the prevailing types and constructions of rail anchors and anti-creepers. I attain this novel function, which I believe to be entirely new to the art, by the peculiar arrangement and coöperation of the operative parts of my construction, since, when applying my rail anchor, the operative parts are actuated in a plane parallel to the central longitudinal plane of the rail, to a degree of high tension, in direct opposition to the creeping movement of the same, the initiatory force of application being utilized to render the device immediately effective to a maximum degree. I attach considerable importance to this feature of initial functional efficiency to be secured to a maximum degree by the utilization of my novel combination of detail construction. This function cannot be attained in the prevailing types of rail anchors and anti-creepers, having a transversely disposed yoke bolt which is utilized to secure the anchoring attachments to the base flange of the rail, inasmuch as a certain amount of creeping movement of the rail is required to render this class of devices even partially effective regardless of the initial forces expended upon the transverse bolt in order to secure the anchoring parts to the base of the rail.

I am aware that rail anchoring devices used in conjunction with a tie-plate, of the usual or a special form of construction, have been devised, but so far as I know, in existing constructions of this class the spiked security of the tie-plate is depended upon to resist the rail creeping movement. It is well known to those experienced in the practical requirements of the art, that, with the rail anchored under these conditions, the creeping forces of the same tends to cause the tie-plate spikes to transversely crush, cut or otherwise destroy the fiber grain of the supporting tie, greatly diminishing the resisting power of the spikes, and the enduring and functional efficiency of the tie-plate proper and of the coöperating rail-anchoring attachments.

By referring to the drawings accompanying this description it will be seen that I overcome this objection to this class of tie-plate-anchors, by incorporating into my construction, and utilizing a sleeved depending lug, having an extended bearing area and designed to abut against the side of the tie, in opposition to the rail creeping movement. I am also aware that various forms and applications of the depending lug are being utilized upon rail anchoring devices, particularly in conjunction with the transverse yoke bolt class of construction. Its use however in conjunction with a longitudinally disposed, tie-plate supported, rail anchor bolt and anchoring attachments, as combined and shown by my construction, I believe to be entirely new and novel to the art.

It will be understood that my rail anchoring construction is also readily applicable to metallic railway ties, or to combined metal and wood ties, being rendered entirely available in such instances by slightly modifying the attaching details in a way to meet the specific requirements of the particular case, affording the maximum functional efficiency, without in any degree departing from the spirit of my invention. This construction being disposed mainly upon the tie, is readily accessible for subsequent adjustment, and offers no obstruction or interference to the operation of tamping the ballast adjacent to the tie upon which it is mounted.

Referring to the accompanying draw-

ings:—Figure 1 is a plan view of my tie-plate rail anchor, showing the same secured to the tie and rail with the ordinary driven tie-spikes. Fig. 2 is an end elevation of Fig. 1. Fig. 3 is a plan view similar to Fig. 1, but showing the construction secured to the tie with screw spikes, and showing also a right-hand anchor when relatively compared with Fig. 1 considered as a left-hand anchor. Fig. 4 is a cross-section taken on line x—x of Fig. 3. Fig. 5 is a longitudinal section taken on line y—y of Fig. 1. Fig. 6 is a transverse section taken throughout the entire length of the double-flanged tie plate, on line v—v of Fig. 1. Fig. 7 is a detail plan of the cap cover casting. Fig. 8 is an end elevation of the same. Figs. 9 and 10 are respectively detail end and side elevations of the sleeved depending lug. Figs. 11 and 12 are respectively a detail plan view and a side elevation of the sleeved tightening wedge. Fig. 13 is a cross-section of the same taken on the line S—S of Figs. 11 and 12. Figs. 14 and 15 are respectively a detail plan view and a side elevation of the locking wedge. Fig. 16 is a cross section of the same, taken on line R—R of Figs. 14 and 15. Fig. 17 is a side elevation of the longitudinally disposed interlocking standard bolt, being fitted with a nut locking washer. Fig. 18 is an isometric projection showing the double flanged yoking tie plate. Fig. 19 is a plan view of an alternative construction of my tie plate rail anchor, in which the tightening and locking wedges are interlocked and the sleeved members disposed in direct engagement with the securing spikes, thereby simplifying the construction by dispensing with the cap cover casting. Fig. 20 is a cross section taken on line O—O of Fig. 19. Fig. 21 is a cross section taken on line P—P of Fig. 19. Figs. 22 and 23 are respectively a detail plan view and a side elevation of the flanged, interlocking, sleeved, tightening wedge. Fig. 24 is an end elevation of the same. Fig. 25 is a detail end elevation of the sleeved depending lug. Figs. 26 and 27 show modified details whereby the tightening and locking wedges may be interlocked, dispensing with the overlapping, interlocking flange shown in Figs. 22, 23 and 24. Figs. 28 and 29 are respectively detail plan and side elevations of the locking wedge adapted to coöperate with the flanged interlocking tightening wedge. Figs. 30, 31 and 32 show modified constructions of the detail operative anchoring parts, each embodying the longitudinally disposed and actuated, tie-plate supported, rail-anchoring attachments. Fig. 33 is a side elevation of the drop-forged depending lug and integrally formed sleeve stem with actuating adjusting nut used in the modified construction shown in plan in Fig. 32.

Referring to the figures, A represents a wood railway tie, suitably mounted upon which, and carrying the T-head rail B, is a tie plate C, which when used in conjunction with my rail-anchoring construction affords in addition to the usual tie-plate rail supporting function, that of a rail anchor supporting and retaining yoke plate. Formed upon the upper side of the plate, transversely disposed thereon, adjacent to the ends are two parallel ribs or flanges C^1 and C^2, against the flange C^1 of which the outer edge B^1 of the rail base abuts, while the other flange C^2 is formed with an angular interlocking face c^3, which in conjunction with other parts of the construction forms a retaining runway or groove within which are mounted the operative parts of the rail anchoring attachment. The tie plate C is designed to be of sufficient length to afford a space between the interlocking flange C^2 and the adjacent inner edge B^2 of the rail base, within and upon which to suitably mount and secure these parts. The entire construction including the tie plate and rail anchor parts is designed to be secured upon the tie, adjacent the base flange of the rail by the use of the usual driven spikes B^3 B^3, as shown in Figs. 1, 2, 5, 6, 19, 20 and 21, or if preferred, by the use of screw spikes B^4, as shown in Figs. 3 and 4.

Suitably secured by the spikes, abutting and overlapping the inner edge B^2 of the rail base is a cap cover casting D, having spike holes d^2 disposed adjacent the ends of the same and designed to register, when placed in position against the rail base with spike holes c^4 c^4 formed in the tie plate C. The connecting arched portion d^3 of this cover casting forms between the end lugs an elongated recess d^4. Longitudinally disposed angular interlocking faces d^5 d^5 are formed upon the sides of the end lugs, which form in conjunction with the angular interlocking face c^3 of the tie plate flange C^2 the runway or groove within which are mounted a flanged, sleeved tightening wedge E and a sleeved, tie-abutting, depending lug F, both of which parts are designed to have therein a limited amount of free longitudinal movement, in a plane parallel to the central longitudinal plan of the rail B. These parts are respectively interlocked within the runway against vertical displacement by engaging flanges e^2 e^2 and f^2 f^2, and secured in relatively predetermined longitudinal positions by an interlocking, adjusting bolt H, which is suitably mounted thereon within integrally formed, longitudinally disposed, sleeved extensions e^3 and f^3 of the tightening wedge E and the depending lug F. Formed integrally upon either the right or left-hand side of the tightening wedge sleeve e^3 is a longitudinally disposed boss or flange e^4 having an angularly disposed

outer edge or bearing face e^5. An elongated locking wedge G has formed upon the one edge thereof a suitable number of teeth or serrations g^2 and upon the opposite edge a bearing face g^3, suitably angularly disposed with relation to the plane of the serrated face g^2, and when the construction is assembled is designed to register when in engagement with the bearing face e^5 of the tightening wedge E. The sleeve portion f^3 of the depending lug F terminates upon the one end in a hubbed nut-bearing extension f^4, formed integrally upon which parts is a depending lug or tie abutting flange f^5, disposed at a right angle to the plane of the sleeve f^3 and transversely reinforced by a central vertical strengthening rib f^6.

In applying my tie plate rail anchor construction, the tie plate C is secured under the rail B in proper position by the central spike B^3 driven adjacent the tie plate flange C^1, securing the outer rail base flange B^1, as shown in Fig. 6.

Referring to Figs. 1 and 3 the longitudinal creep of the rail is supposed to be in the direction indicated by the arrows shown upon the heads thereof. The locking wedge G is placed upon the tie plate C with the serrated edge g^2 adjacent the base flange edge B^2 of the rail B, at any point approximately midway between the tie plate spike holes c^4 c^4. The sleeved tightening wedge E is placed upon the tie plate C in engagement with the flange C^2, the tightening wedge e^4 being disposed adjacent the locking wedge G, and is moved along the flange C^2 bringing its angular face e^5 into engagement with the angular face g^3 of the locking wedge, in which position, as shown in broken lines in the figures, the wedges are disposed within the area of the elongated recess d^4 of the cap cover casting D, which cover is placed over the same in position overlapping the base flange B^2 of the rail B, and with the spike holes d^2 d^2 thereof placed in vertical alinement with the spike holes c^4 c^4 of the tie plate. The sleeved end f^3 of the depending lug F is inserted between the cap cover angular guide face d^5 and the flange C^2. The bolt H is inserted in the tightening wedge sleeve e^3 and in the depending lug sleeve f^3. The nut H^3 is then applied and given a few turns to establish merely slight tension of the parts. The spikes B^3 B^3 are now driven home, securing alike the tie plate C, the rail B and the cap covering D overlapping the base flange B^2 of the rail. Sufficient clearance is given the sleeve members between the tie plate flange C^2 and the cap covering D to avoid extreme clamping or binding of the parts by accidental canting in the driving of the spikes. The sleeved members now being securely mounted within the runway, the depending lug is given a hammer blow to set it firmly against the tie, the nut H^3 is turned up, taking bearing against the hub f^4 of the depending lug, and through the interlocking bolt H carrying the inclined face e^5 of the tightening wedge E into increasing effective engagement with the coöperating inclined face g^3 of the locking wedge G, forcing the teeth of the serrated edge g^2 into engagement with rail flange B^2. This bite of the teeth is facilitated by striking the forward end of the sleeve e^3 repeated hammer blows in unison with the tightening movement of the nut H^3. A maximum degree of initial, tensional application of the locking wedge is thus secured by a few turns of the bolt nut H^3, seated against the depending lug hub f^4 and which takes resisting anchorage or bearing upon and against the side of the tie A through the depending, abutting flange f^5, this tensional force being expended in a plane parallel to the central longitudinal plane of the rail B, and in direct opposition to the creeping movement of the same, and which force can be constantly maintained to a maximum degree by subsequent partial tightening rotation of the nut H^3. Constant active locking efficiency and stability of the coöperative construction is secured and maintained by the transversely disposed yoking efficiency and extended bearing area of the double flanged tie plate. It will be understood that all the detail parts of this construction can be used in either right or left hand application of the rail anchor, as shown in Figs. 1 and 3, excepting the sleeved tightening wedge E which must be constructed with either a right-hand or a left-hand angular flange e^4 as indicated by broken lines in detail Figs. 11 and 13.

An alternative and somewhat simplified construction of my tie plate rail anchor is shown in Figs. 19 to 29, both inclusive, in which the cap covering D is dispensed with, the spikes $B-^3$ being driven through the tie plate spike holes $c-^4$ $c-^4$, as in ordinary practice into direct engagement with the base flange $B-^2$ of the rail B. The sleeved members E. and F are interlocked in this construction against vertical displacement by engagement of the flanges $e-^2$ and $f-^2$ adjacent to the tie plate flange $C-^2$, as previously shown, and upon the sides of the sleeve members adjacent to the spikes $B-^3$ $B-^3$ by flanges $e-^{2x}$ and $f-^{2x}$, each of a somewhat enlarged cross section and approximately of an interlocking contour duplicated by the rearwardly projecting spike head flange $B-^{3x}$ as is clearly shown in Figs. 19 and 20. The locking wedge G, of slightly modified detail design is interlocked in the engaged position with the tightening wedge $e-^4$ and the rail base flange $B-^2$, against accidental or malicious tampering displacement by a transversely projecting, overlapping flange $e-^6$ formed upon the

wedged side of the forward end of the sleeve *e*—[3], as clearly shown in Figs. 19 and 21. This locking wedge G is further secured against displacement by a longitudinal projection *g*—[4] formed upon the wider end of the wedge and designed to abut against the adjacent spike B—[3]. The operation of installing this construction is materially simplified and facilitated as compared with the cap cover construction, and the parts being more compactly arranged, are fully as efficient and reliable, and also afford a material saving in the shortening of the tie plate.

Alternative means whereby the engaging faces *e*—[5] and *g*—[3] of the tightening and locking wedges E and G may be securely interlocked, and dispense with the overlapping, interlocking flange *e*—[6] as previously shown, is illustrated in Figs. 26 and 27 wherein the V-shaped or the scarf-shaped engaging faces afford the interlock.

Additional modifications in the construction of the detail parts of my tie plate rail anchor, but embodying the same novel functional features and constructive principle are shown in Figs. 30, 31, 32 and 33. In these several constructions as drafted, the cap cover is designed to be used upon each, but the same is removed from all to more clearly show the detail operative parts. It will be understood also that with slightly modified details these several constructions can be used without the cap covering, substantially as shown in the modification and arrangement in Fig. 19. In Fig. 30 the nut is dispensed with, a threaded bolt H only being used, which is inserted first through the depending lug F and then screwed into the threaded sleeve *e*—[3×] of the tightening wedge E. In Fig. 31 the integrally formed tightening wedge I and screw stem *i*—[3] *i*—[5] is preferably a drop forging. This construction affords a reduced number of detail parts. In Figs. 32 and 33 the tie abutting, integrally formed, depending lug K, with angular flange *k*—[5] and screw stem *k*—[3] *k*—[6] is preferably a drop forging. In this construction the extended leverage of the integrally formed screw stem, affords, in the depending lug *k*—[5] maximum stability and transverse sectional strength, with simplicity of construction and a reduced number of detail parts.

In the several modified constructions shown and described herein the sleeved members and cap covering are made preferably of malleable castings, and the locking wedges of hardened iron or steel.

Other modifications in detail construction, embodying the spirit of my invention will readily suggest themselves to those practically skilled in the art, and I wish it to be understood that I do not desire to limit myself in this connection to the specific details and precise constructions herein shown and described.

Having thus described my invention, what I claim is:

1. In a device of the character described, the combination of a tie-plate, forming a support for the rail, adapted to be secured to the tie and having a flange on one end thereof, adapted to engage the base of the rail on one side, and an auxiliary flange upon the opposite end thereof, a locking member interposed between the base of the rail and the auxiliary flange, a tie-abutting depending lug and adjusting means connecting the lug and the said locking member, whereby the initial force expended upon the locking member effectually locks the rail against creeping movement.

2. In a rail anchor, the combination of a tie-plate engaged by the rail and adapted to be secured to the tie, said plate having a flange adapted to engage the rail on one side, and an auxiliary flange, a wedge-shaped locking member interposed between the rail and the auxiliary flange, a tie-abutting depending lug and an adjusting device connecting the said lug with the locking member, whereby the initial force expended upon the locking member of the anchoring device effectually locks the rail against creeping movement without depending upon the subsequent rail creeping movement to effect the locking function.

3. In a rail anchor device, the combination of a tie-plate, forming a support for the rail, and adapted to be secured to the tie, the said plate having a flange upon one end thereof, adapted to engage one side of the rail, and an auxiliary flange upon the opposite end thereof, two coöperating locking members interposed between the flange of the rail and the auxiliary tie-plate flange, a tie-abutting depending lug, and an adjusting bolt connecting the said lug and one of the locking members, the said bolt extending parallel with the rail, whereby the initial force expended upon the locking member effectually locks the rail against creeping movement, without depending upon the subsequent creeping movement to effect the interlocking function.

4. In a rail anchor, the combination of a tie-plate, forming a support for the rail, the said plate being adapted to be secured to the tie and having a flange on one end arranged to engage the base flange of the rail on one side, the said plate also having an auxiliary flange upon its opposite end, two coöperating locking members interposed between the base flange of the rail and the auxiliary flange of the tie-plate, one of the said locking members having a sleeve, a tie-abutting depending lug and an adjusting bolt connecting the said lug and the sleeved

locking member, whereby the initial force expended upon the locking members positively locks the rails against creeping movement, substantially as described.

5. In a device of the class described, the combination of a tie-plate, forming a support for the rail, the said plate being adapted to be made fast to the tie and having a flange upon one end thereof and an auxiliary flange on the opposite end, a locking member interposed between the flange of the rail and the auxiliary tie-plate flange, the said locking member having a sleeve, a tie-abutting depending lug and an adjusting bolt connecting the said lug and the locking member, the said bolt passing through the sleeve of the said member and extending parallel with the rail.

6. In a device of the class described, the combination of a tie-plate, forming a support for the rail and adapted to be made fast to the tie, the said plate having flanges upon opposite ends thereof, one of the said flanges being adapted to engage the flange of the rail on one side, two coöperating locking members interposed between the rail flange and the tie-plate flange on the opposite side of the rail, one of the said locking members having a sleeve, a tie-abutting sleeved depending lug and a connecting bolt passing through the sleeves of the lug and the locking member.

7. In a device of the class described, a tie-plate forming a support for the rail, the said plate being adapted to be made fast to the tie and having flanges upon opposite ends thereof, one of the said flanges being adapted to engage the base flange of the rail on one side, two wedge-shaped coöperating locking members, interposed between the rail flange and the tie-plate flange on the opposite side of the rail, a tie-abutting, depending lug and a bolt connecting the said lug and one of the said locking members, substantially as described.

8. In a rail anchor, the combination of a tie-plate upon which the rail rests, the said plate being adapted to be made fast to the tie and provided with flanges upon opposite ends thereof, one of said flanges being adapted to engage the base flange of the rail on one side, two locking members interposed between the other flange of the tie-plate and the flange of the rail, one of the locking members having a toothed edge adapted to engage the rail flange, a tie-abutting depending lug, and a bolt for connecting one of the locking members with the said lug.

9. In a device of the class described, the combination of a tie-plate, forming a support for the rail, and having spike holes whereby it is adapted to be secured to the tie, the said plate having flanges on opposite ends thereof, one of the said flanges being adapted to engage the base flange of the rail on one side, two coöperating locking members interposed between the rail flange and the tie-plate flange on the opposite side, one of the said locking members having a sleeve and an integral flange overlapping the other locking member, a tie-abutting depending lug, having a sleeve, the sleeve of the lug and the sleeve of the said locking member having flanges adapted to be engaged by the securing spikes passed through the holes in the tie-plate, and a bolt for connecting the tie-abutting lug and the sleeved locking member, the bolt passing through the sleeves of the lug and locking member, substantially as described.

10. In a rail anchor, the combination of a tie-plate upon which the rail is adapted to rest, the said plate being adapted to be made fast to the tie and having flanges upon opposite ends, one of the said flanges being adapted to engage the base flange of the rail, two coöperating locking members interposed between the rail flange and the tie-plate flange on the opposite side, one of the said locking members having a sleeve, a tie-abutting depending sleeved lug and a bolt connecting the said lug and the sleeved locking member, the bolt passing through the sleeves of the connected parts and extending parallel with the rail for the purpose set forth.

11. In a rail anchor, the combination of a tie-plate forming a support for the rail, the said plate being adapted to be made fast to the tie and having flanges upon opposite ends thereof, one of said flanges being adapted to engage the base flange of the rail on one side, two wedge-shaped, coöperating locking members interposed between the rail flange and the tie-plate flange on the opposite side, the said members having interlocking adjacent edges, a tie-abutting, depending lug and adjusting means for connecting the said lug with one of the coöperating locking members.

12. A rail anchor comprising a tie-plate, upon which the rail is adapted to rest, and having spike holes, whereby it is adapted to be secured to the tie, the said plate having flanges on opposite ends thereof, one of the said flanges being adapted to engage the base flange on one side, two wedge-shaped locking members, interposed between the rail flange and the tie-plate flange on the opposite side, one of the said locking members having a sleeve and a laterally projecting member, adapted to overlap the other locking member, the last named locking member having an extension adapted to engage the side of one of the securing spikes, a depending tie-abutting lug, provided with a sleeve, the sleeve of the lug and the sleeve of the locking member having longitudinally disposed flanges adapted to be engaged by the securing spikes when passed through the

holes of the tie-plate, substantially as described.

13. In a device of the character described, the combination of a tie plate forming a support for the rail, adapted to be secured to the tie and having a flange on one end thereof, adapted to engage the base of the rail on one side, a locking member interposed between the base of the rail and the opposite end of the tie plate, a tie abutting, depending lug, adjusting means connecting the lug and the said locking member, whereby the initial force expended upon the locking member effectually locks the rail against creeping movement, and means for securing the locking member in place upon the tie plate and engaging the locking member on the side opposite its engagement with the base of the rail.

14. In a device of the character described, the combination of a tie-plate forming a support for the rail, means for securing the tie-plate to the tie, said means engaging the base of the rail on one side, and a locking member suitably mounted upon the tie-plate and adapted to engage the base of the rail on the opposite side, a tie-abutting lug and adjusting means connecting the lug and the said locking member.

15. In a rail anchor, the combination of a rail, a tie-plate, a rail-anchoring member movably mounted on the tie-plate in engagement with the base of the rail on one side, a tie-abutting lug and adjusting means connecting the lug with the rail-anchoring member.

16. In a tie-plate-rail-anchor, the combination of a tie, a tie-plate secured thereto and adapted to support the rail, a rail-anchoring device, suitably mounted on the tie-plate in engagement with the base flange of the rail, a tie-abutting lug, adjusting devices connecting the rail-anchoring device and said lug, and actuated in a line parallel to the longitudinal plane of the rail, to lock the rail against longitudinal movement.

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

DAVID H. FOREMAN.

Witnesses:

JESSIE HOBART,

A. EBERT O'BRIEN.