No. 681,442. Patented Aug. 27, 1901.

J. B. COX.

BUMPING POST.

(Application filed Apr. 8, 1901.)

(No Model.) 2 Sheets—Sheet 1.

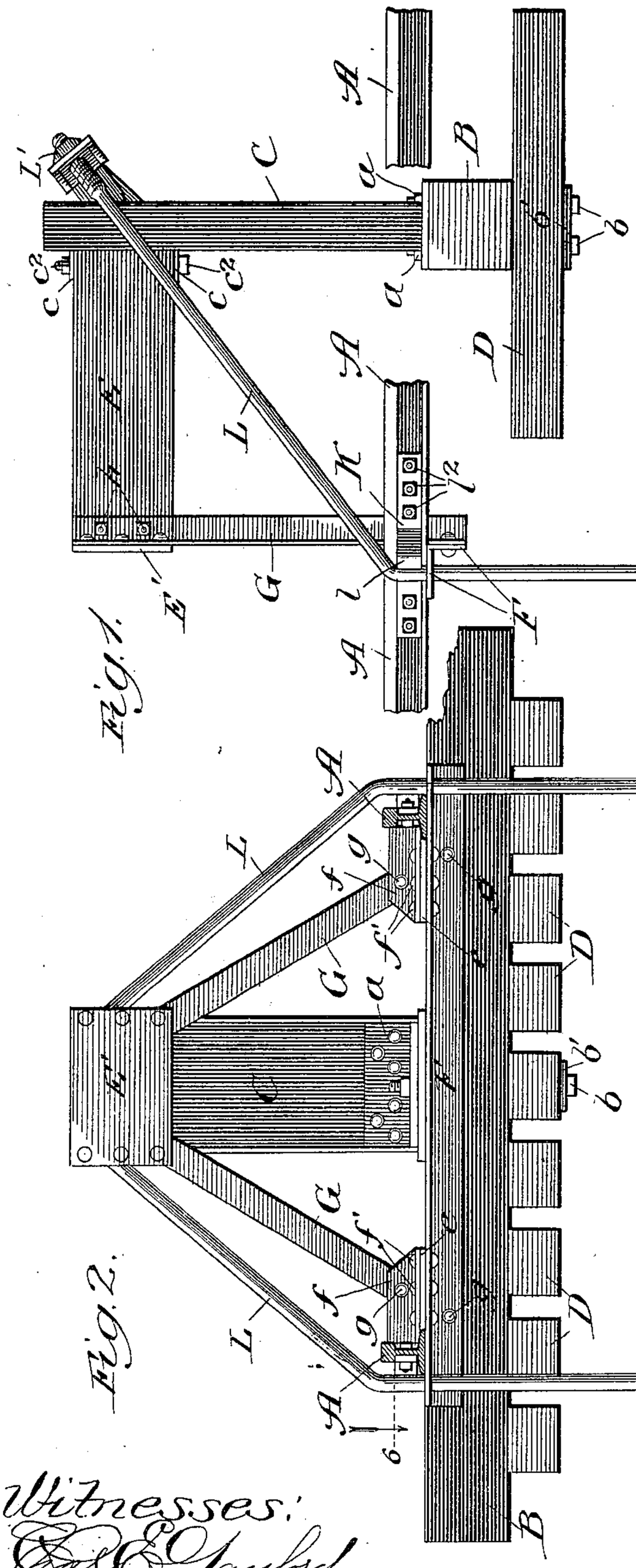

Fig. 1.

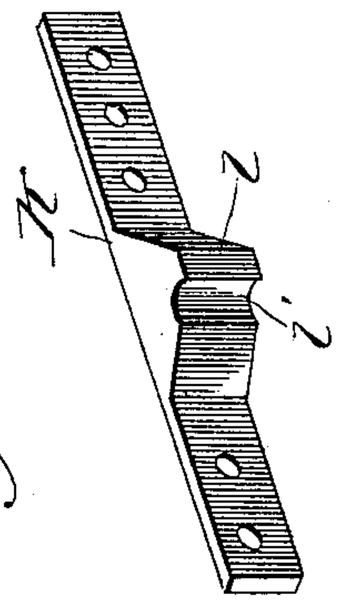

Fig. 3.

Fig. 2.

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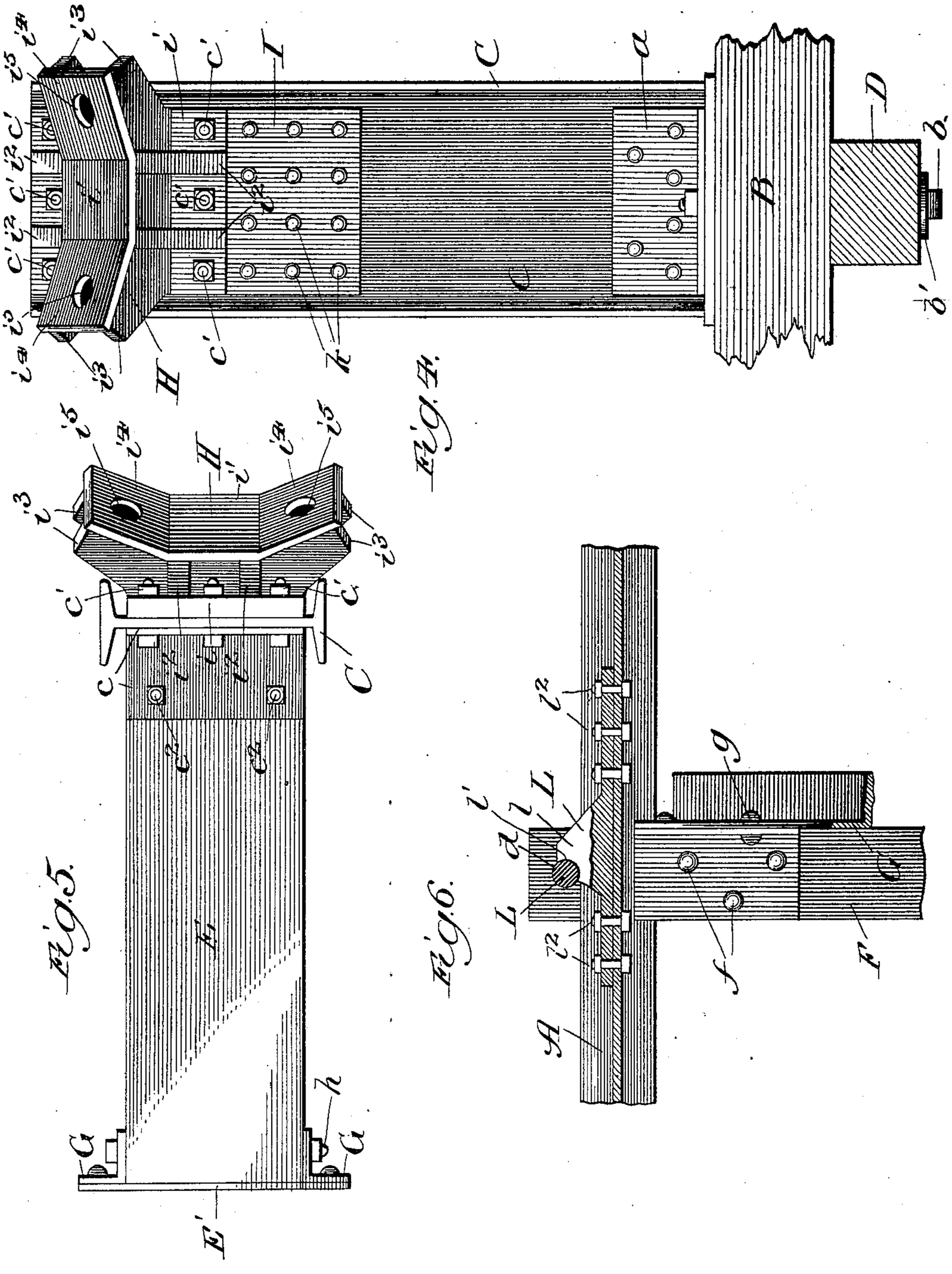

Fig. 4.

Fig. 5.

Fig. 6.

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UNITED STATES PATENT OFFICE.

JAMES B. COX, OF CHICAGO, ILLINOIS.

BUMPING-POST.

SPECIFICATION forming part of Letters Patent No. 681,442, dated August 27, 1901.

Application filed April 8, 1901. Serial No. 54,822. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. COX, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Bumping-Posts, of which the following is a specification.

My object is to provide a bumping-post for the ends of railway-tracks of generally improved construction which shall be comparatively simple and inexpensive to manufacture, easy to place in position, and possessing when in position great resisting strength and durability.

Referring to the drawings, Figure 1 is a broken view showing my improved bumping-post with its anchoring means in side elevation; Fig. 2, a front elevation of the same; Fig. 3, a perspective view of a detail of the construction; Fig. 4, an enlarged broken sectional view presenting a rear elevation of the post and showing its anchoring means; Fig. 5, a top plan view of the device; and Fig. 6, a broken plan view, partly in section, the section being taken on line 6 in Fig. 2.

A A are the parallel rails of a railway-track, fastened upon sleepers or ties B, resting in the usual way on or in the ground or ballast.

C is the main sustaining-post of the bumping device. It is a short and heavy I-beam, provided at its lower end at the front and rear sides with flanged attaching-plates *a*, riveted in place. The post C rests at its flanged plates upon one of the ties B, which in turn rests upon a series of wooden beams or dimension-pieces D, embedded in the ground and forming a bed for the said tie. The post C is anchored by means of anchor-bolts *b*, which pass through openings in the flanges *a*, tie B, and central bed-beam D, and a washer or bearing-plate *b'* on the under side of said bed-beam.

E is a buffer-head, consisting of a short wooden beam provided at its end with a striking-plate E'. At its rear end the head E fits between flange-plates *c c*, fastened to the post C by bolts *c'*. Bolts c^2 pass through the said flanged plates and through openings in the rear end portion of the head to fasten the same rigidly to the post.

Extending parallel with the ties B, beneath the rails A, is an angle-iron bar F, projecting at opposite ends slightly beyond the outer sides of the rails. Directly outside the flanges of the rails the bar F is provided with perforations *d*. On the upper horizontal flange of the angle-bar F, resting against the inner flanges of the rails, are short plates *e e* of the thickness of the rail-flanges, and resting upon the plates *e* are short angle-iron plates or braces *f*, which bear against the heads of the rails A. Rivets *f'* pass through openings in the flanges of the braces *f*, plates *e*, and the flange of the bar F to secure them rigidly together. The plates *e* act more especially as fillers between the braces *f* and bar F, and they also operate as stops against which the inner flanges of the rails A bear.

At opposite sides of the forward end of the buffer-head and riveted to the strike-plate E' are angle-iron brace-rods G G, which slant laterally downward and are fastened at their lower ends by means of bolts or rivets *g* to the sides of the braces *f* and bar F. Bolts *h* also pass through the upper ends of the rods G and buffer-head E to secure them and the strike-plate.

H is a cast block formed of a plate portion or attaching-plate *i* and a rear plate *i'*, connected together by vertical ribs i^2 and horizontal ribs i^3. When in place, the attaching-plate portion *i* extends vertically, while the back-plate portion *i'* is backward and downwardly inclined. The opposite end portions i^4 of the back plate are at angles to the plate *i* and to each other, as shown. The block H is fastened at the upper and lower ends of the plate portion *i* to the post C by means of the bolts *c'*, which, as aforesaid, also secure the flanges *c* in place. The block H at the lower edge of its plate portion *i* rests upon the upper edge of a brace-plate I. The plate I is secured to the post C by means of a number of rivets *k*.

K K are brace-plates provided on their outer sides with heavy projections or bosses *l*, presenting concave vertical recesses *l'*.

On opposite sides of the post are anchor-rods L L. These rods are threaded at opposite ends. At their upper threaded ends they pass through openings i^5 in the parts or projections i^4 of the block H, where they carry tightening-nuts L', and thence in the forward and laterally-inclined direction to the braces

K, which are secured in place by bolts l^2, passing through the webs of the rails A. At the braces K the anchor-rods are bent to the vertical plane and fit into the concave recesses l'. At the braces K the tie-bars L pass through the opening d in the bar F and thence downward through an anchor-block M, parallel with the bar F and buried in the soil, say six feet below the ties. The lower threaded ends of the tie-rods pass through openings in the block M and through washers m on the under sides thereof, the rods being there provided with nuts m'.

The post C is very strong and held at its base rigidly against lateral play by the bolts b. The angle brace-rods G operate effectively to prevent any lateral movement of the forward end of the buffer-head E. The anchor-rods L are relied upon to take up the main strain upon the bumping-post under the impact of cars striking against them, and any loosening thereof may be taken up by tightening the nuts L'. Owing to the direction of extent of the anchor-rods the strain upon the block H is largely in the downward direction against the shoulder formed by the brace-plate I. The bolts c' and rivets k form a fastening which will effectively overcome the downward strain of the block. The strain upon the anchor-rods at the lower ends of their inclined portions is borne by the bar F and braces K and also by the anchor-block M, which prevents upward strain against the ties and rails. The weight of the car as it strikes the strike-plate would also tend to hold down the rails and ties. The strain of the anchor-rods upon the rails tending to draw the latter toward each other is counteracted by the braces f and e, fastened to the bar F.

Constructed as described my improved bumping-post posseses great strength and durability, and although I prefer to provide it throughout as shown and described it may be changed in the matter of details of construction without departing from the spirit of my invention as defined by the claims.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a bumping-post for railroad-tracks, the combination of a buffer-head, sustaining-post therefor, anchor-rods fastened to said sustaining-post and extending laterally forward and downward therefrom, braces secured to the track-rails across which the anchor-rods extend, a transversely-extending bar secured to the rails to hold them apart at said braces, and an anchor-block beneath the track-ties to which the anchor-rods are secured, substantially as and for the purpose set forth.

2. In a bumping-post for railroad-tracks, the combination of a sustaining-post, anchored centrally between the tracks, a central, horizontal and forward-extending buffer-head fastened to said post, anchor-rods fastened to said sustaining-post and extending laterally forward and downward therefrom, and brace-rods extending laterally downward from the forward end of the buffer-head, the said anchor-rods and brace-rods being secured at their lower ends in fixed relation to the railroad-ties, substantially as and for the purpose set forth.

3. In a bumping-post for railroad-tracks, the combination of a buffer-head, sustaining-post therefor, a block secured to the rear upper end portion of the sustaining-post, a shoulder on the post against which the said block bears in the downward direction, anchor-rods fastened to said block and extending laterally forward and downward therefrom and anchored at their lower ends, substantially as and for the purpose set forth.

4. In a bumping-post for railroad-tracks, the combination with a buffer-head and sustaining-post therefor, of anchor-rods for the post extending laterally forward and downward therefrom, and a block formed with an attaching-plate at which it is secured to the post and with perforated inclined and flaring projections to receive the ends of the anchor-rods, substantially as and for the purpose set forth.

5. In a bumping-post for railroad-tracks, the combination with a buffer-head and sustaining-post therefor, of anchor-rods for the post extending laterally forward and downward therefrom, a block formed with an attaching-plate at which it is secured to the post and with perforated inclined and flaring projections to receive the ends of the anchor-rods, and a plate secured to the post and forming a shoulder on which the said block may bear in the downward direction, substantially as and for the purpose set forth.

JAMES B. COX.

In presence of—
ALBERT D. BACCI,
WM. B. DAVIES.