

W. W. BURDETTE & E. E. DAVIS.
GUARD RAIL.

APPLICATION FILED MAR. 26, 1912.

1,059,708.

Patented Apr. 22, 1913.

2 SHEETS-SHEET 1.

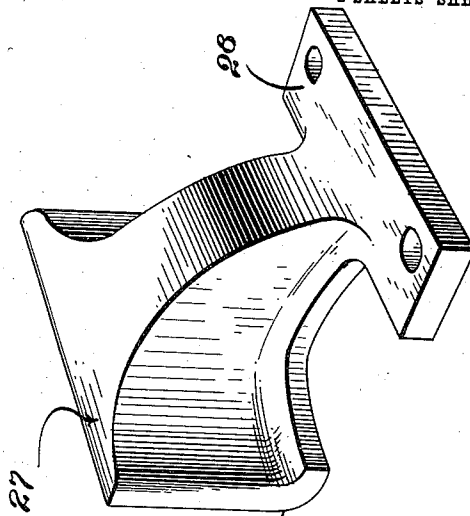
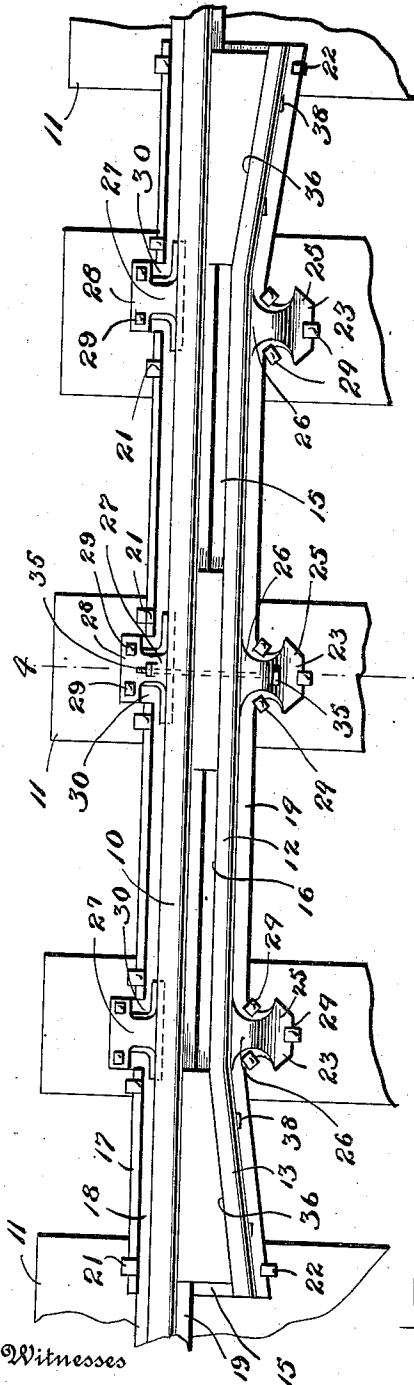


Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

Fig. 9.

Fig. 10.

Fig. 11.

Fig. 12.

Fig. 13.

Fig. 14.

Fig. 15.

Witnesses
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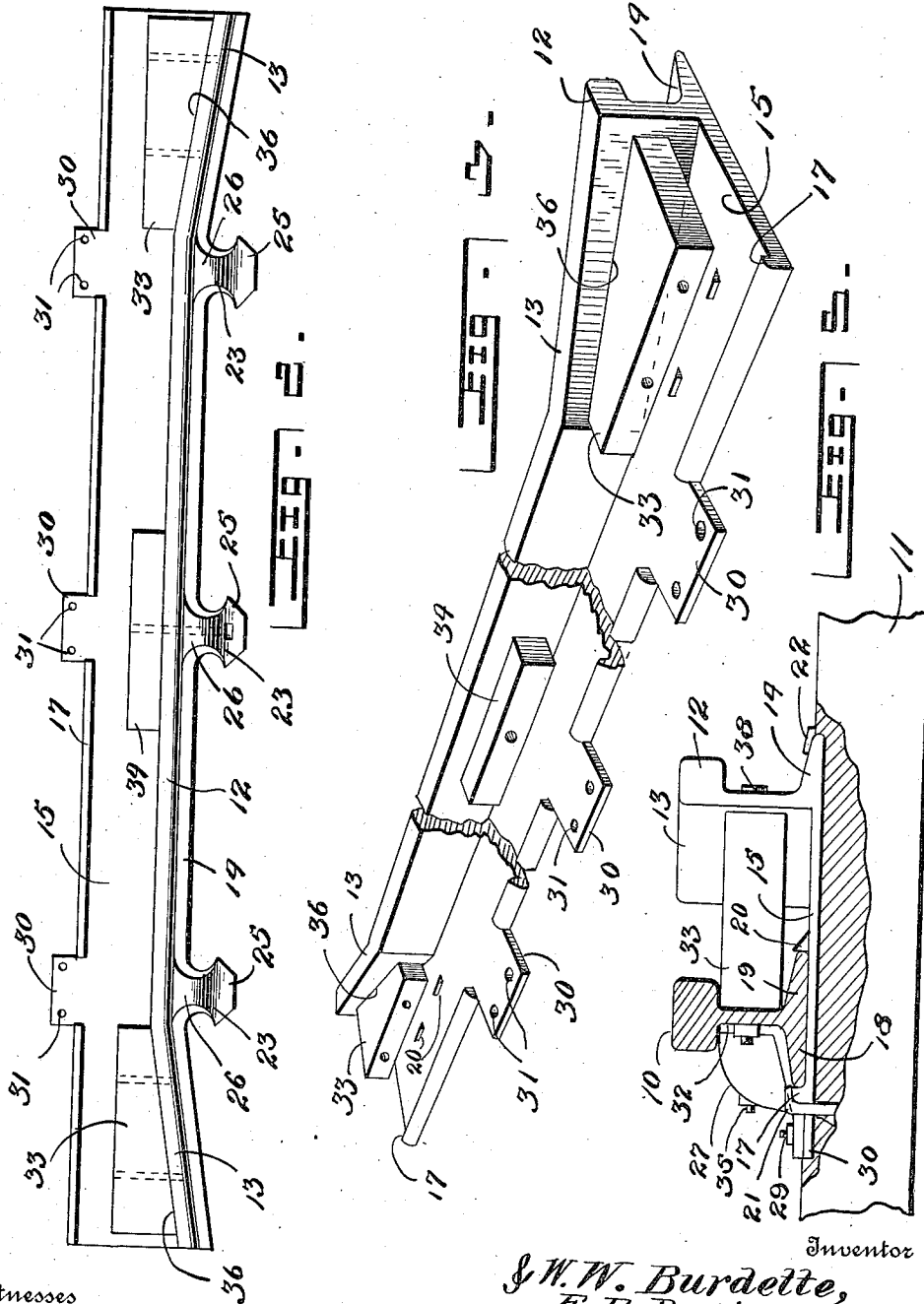
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UNITED STATES PATENT OFFICE.

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GUARD-RAIL.

1,059,708.

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To all whom it may concern:

Be it known that we, WILLIAM W. BURDETTE and ERNEST E. DAVIS, citizens of the United States, residing at Montgomery, in the county of Fayette, State of West Virginia, have invented certain new and useful Improvements in Guard-Rails; and we do hereby 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.

This invention relates to new and useful improvements in railway track structures and more especially to guard rails therefor.

The primary object of the invention is the provision of a novel, strong and durable guard rail structure for bracing a track structure at the usual or desired point where guard rails are generally employed such as at frog joints or curves or other suitable places to prevent the track from spreading and also to avoid the derailments of trains.

With the above and other objects in view, the invention consists of certain other combinations and arrangements of parts as will be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which:

Figure 1 is a top plan view of my improved guard rail connected to the main line track sections as in use. Fig. 2 is a plan view of the guard rail detached. Fig. 3 is an opposite detail perspective view of the guard rail. Fig. 4 is a sectional view taken on the line 4—4 of Fig. 1. Fig. 5 is an end elevation of the device as shown in Fig. 1. Fig. 6 is a detail perspective view of one of the clamping members.

Referring more specifically to the drawings, wherein like reference characters designate similar parts throughout the several views, the numeral 10 indicates a main rail which is supported upon the ties 11 and which is braced by my improved guard rail, the latter comprising a half rail section 12 relative to its cross section and provided with a rectilinear central portion and angularly extended ends 13 and also formed with a base flange 14 having an integral and laterally extending supporting plate or chair 15 receiving the rail 10 longitudinally thereof and spaced from the vertical inner face 16 of the guard rail 12.

As shown, the edge portion of the plate 15 is provided with an upwardly extending

shoulder 17 against which the flange 18 of the rail 10 engages to prevent outward displacement of said main rail when the inner flange 19 of the main rail is secured to the plate 15 adjacent each end of the latter by lugs 20 disposed in pairs and adjacent each end of the plate 15 and secured in the ties 11. The guard rail is further secured to the ties 11 by means of spikes 21 and 22 which are engaged against the shoulder 17 and the flanged portion 14 of the rail 12 as shown, but additional means is provided for bracing the guard rail 12 and the main rail 10, the same consisting of clamping members 23 which are preferably three in number and cast integral with the rectilinear portion of the guard rail 12 and spiked to the ties as shown at 24. These clamps 23 have securing flanges 25 which engage the upper faces of the tie while the upper ends of the braces are enlarged as shown at 26 to secure a more desirable and larger engaging face.

The outer clamps are indicated by the numeral 27 and have attaching portions 28 which are bolted as shown at 29 to extensions 30 formed with the plates 15 adjacent to the shoulder 17 and each having a pair of apertures 31 therethrough for receiving said bolts 29 and the braces are enlarged and shaped to conform to the main rail as indicated by the numeral 32, so as to prevent displacement of said rail. Also bolted or formed with the guard rail section 12 are end bracing blocks 33 and a central block 34, the central block being of rectangular form and being disposed between the web portions of the rails and having a transverse bolt opening therethrough for receiving a fastening bolt 35 which extends through said web portions as clearly shown in the drawings. The end blocks 33 are of substantially wedge shape, being tapered from their outer to their inner ends, one side being beveled as shown at 36 and adapted to engage angular ends 13 of the rail 12 while the opposite sides of the blocks are disposed at right angles to the ends thereof to engage the end portion of the main rail 10 and these blocks 33 are each provided with a pair of transverse bolt openings by which the blocks are similarly bolted to the web portions of the main with the guard rail as shown at 38, thereby absolutely preventing spreading of the two rails or inward displacement thereof and will not become de-

tached from the main rail. In practice, the central portion of the guard rail is spaced from the main rail at approximately one and three fourths inches and the ends thereof are spaced apart five inches, thereby allowing ample room for the insertion of tools in setting up the device.

From the foregoing description in connection with the accompanying drawings, it will be seen that we have provided an improved strong and durable guard rail structure which may be secured to the main track rail at any desired point so as to serve for preventing spreading of the rails and it will be seen that by reason of the employment of the interposed blocks which are formed separate or integral with the guard rails, when the parts are bolted together in the manner specified they will be securely held against separation and the manufacture of the device is thus greatly facilitated.

We claim:

1. The combination with a main rail and supporting ties therefor; of a guard rail having a rectilinear central portion and angular end portions, said guard rail having a cross section of one half of an ordinary rail providing one flat side, the base of the guard rail having a lateral supporting plate provided at its free edge with an upstanding shoulder, said main rail being mounted on said plate and retained against displacement by said shoulder, central and end blocks formed with the guard rail at its web

portion, said end blocks being of wedge form, fastening means engaged through the blocks and web portions of the rails for securing the same in spaced relation, clamps resting on the ties and engaging the rectilinear portions of the guard rail, apertured projections formed with the supporting plate at its shouldered side and clamps secured to said projections and engaging the main rail.

2. The combination with a main rail section suitably supported; of a guard rail having angular end portions, said guard rail having an integral laterally extending plate provided with spaced edge shoulders having intermediate apertured extensions projecting beyond the shoulder, said main rail being mounted on the plate and retained from outward displacement by direct engagement of its flange against the shoulders, clamping members secured to the extensions and conforming to the main rail, a plurality of blocks disposed between the main rail and guard rail, fastening means transversely securing the blocks and guard rail and clamps extending from the guard rail for attachment to the supporting members.

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

WILLIAM W. BURDETTE.
ERNEST E. DAVIS

Witnesses:

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L. D. BURDETTE.