

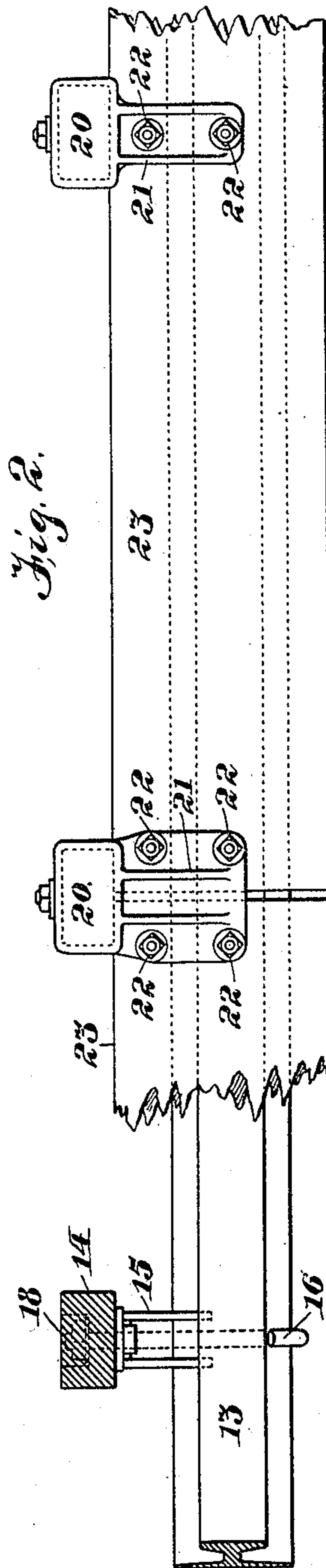
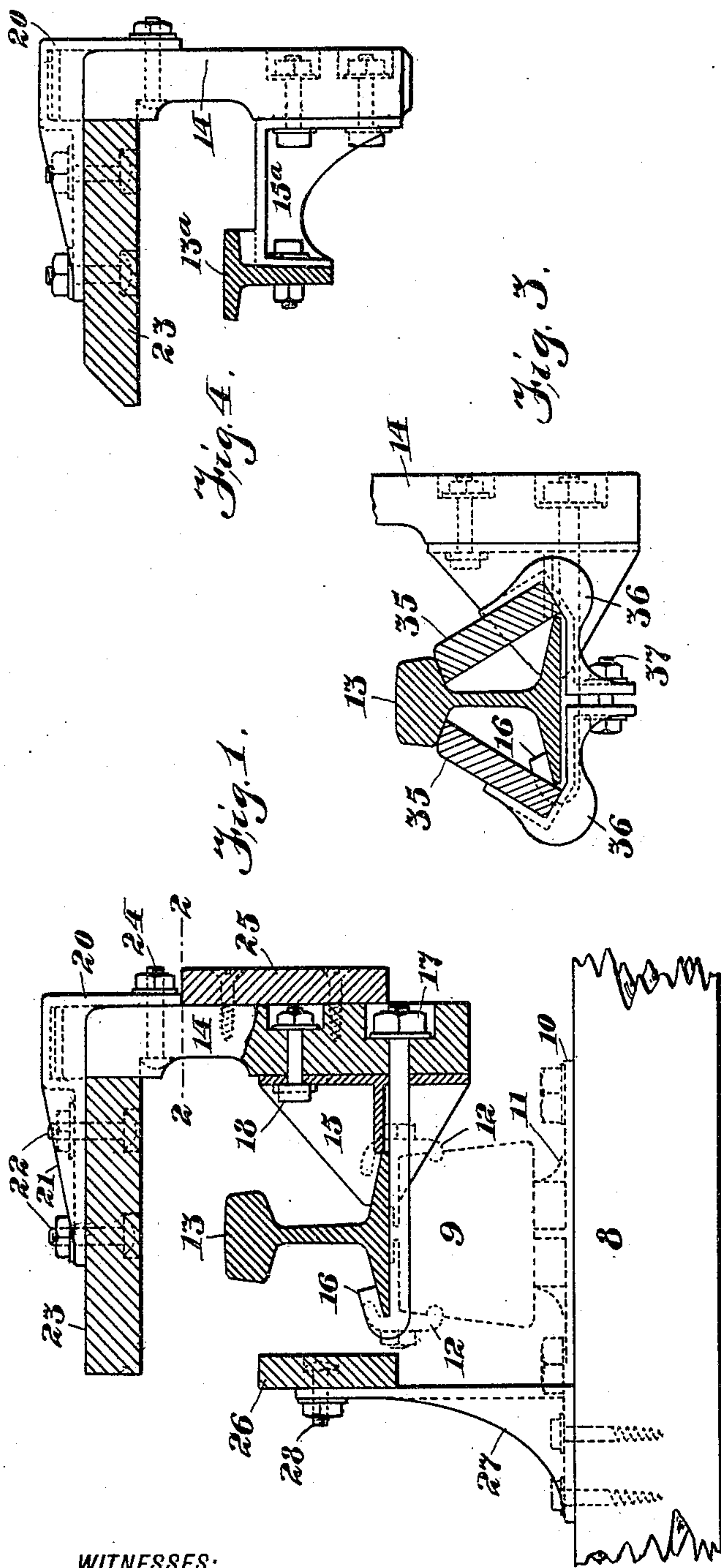
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L. B. STILLWELL & F. R. SLATER.

ELECTRICAL RAIL GUARD.

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WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## ELECTRICAL-RAIL GUARD.

SPECIFICATION forming part of Letters Patent No. 784,237, dated March 7, 1905.

Application filed September 16, 1904. Serial No. 224,770.

*To all whom it may concern:*

Be it known that we, LEWIS B. STILLWELL, residing at Lakewood, county of Ocean, and State of New Jersey, and FREDERICK R. SLATER, residing in the city of Yonkers, in the county of Westchester and State of New York, citizens of the United States, have invented certain new and useful Improvements in Electrical-Rail Guards, of which the following is a specification.

Our invention relates to guards or protectors for contact or third rails in electric traction systems; and it consists of certain novel parts and combinations of parts particularly pointed out in the claims concluding this specification.

In the accompanying drawings, Figure 1 is a view, partly in section, of a structure involving our present invention. Fig. 2 is a top view of the same, partly in section. Fig. 3 shows a modified form of side guards. Fig. 4 shows a modified form of contact-rail.

Similar reference-numerals indicate the same or corresponding parts in all the figures of the drawings.

In the accompanying drawings we have shown our invention in forms which are at present preferred by us; but it will be understood that various modifications and changes may be made without departing from the spirit of our invention and without exceeding the scope of the concluding claims.

The following is a description of the structures shown in the drawings:

8 is a portion of a railway-tie.

9 is an insulator-block carried by an insulator-base 10, attached to the tie by suitable bolts.

11 is the spindle on which the block 9 rests.

12 12 are supporting rail-clamps by means of which the rail 13 is secured to the insulator-block.

The parts 9, 10, 11, and 12 are shown in Fig. 1 in dotted lines to make more prominent the features of the structure which involve our invention.

14 is a post of insulating material, such as wood, attached to the rail 13 by means of a

wrought-iron clamp 15, hook-bolt 16, and nut 17.

18 is a supplementary bolt connecting the post 14 and the clamp 15.

Bolted to the upper end of the post 14 is a malleable-iron bracket 20, having a horizontally-extending part 21, to which is attached by bolts 22 22 the strip of insulating material, such as a wooden plank 23. Posts and brackets such as described are located at suitable intervals along the track. The plank 23 forms part of a continuous covering over the third rail and is preferably of sufficient width to form a pathway. Being completely insulated from the third rail, it is safe to walk on and for workmen to lay tools on, while at the same time it prevents accidental contact with the third rail and forms a covering protecting it from the elements. Being attached directly to the third rail, this guard or cover is always maintained a uniform distance from the rail, so that the path of the contact-shoe is not obstructed.

Fig. 2 shows the device above described (the side protectors 25 and 26, hereinafter described, being omitted) in two different forms. At the right hand of said figure is shown a top view of Fig. 1. In the center of said figure is shown a modified form of bracket having four bolts 22 and adapted to support the abutting ends of two planks, while on the left-hand side of the figure the plank 23 is broken away and the bracket is shown in section on the line 2 2, Fig. 1.

If it be desired to afford still further protection for the third rail, side guards 25 and 26 may be employed.

25 is a plank extending parallel with the rail throughout its length, attached to posts 14 by suitable means. This forms a protection on one side of the rail. On the opposite side of the rail there may be placed, if desired, a longitudinal plank 26, supported on brackets 27, screwed to the railway-ties, but not extending up far enough to interfere with the travel of the contact device.

28 is a bolt and nut by means of which the plank 26 is attached to the said bracket.

Fig. 4 shows a different form of contact-rail 13<sup>a</sup>, to which the bracket 15<sup>a</sup> is directly bolted. Said bracket carries the post 14, bracket 20, and plank 23, substantially as described in connection with Fig. 1.

Fig. 3 shows a modified form of side guards or protectors applicable to either of the structure shown in the other figures of drawings. 35 35 are planks abutting at their upper ends on the under side of the flange of the rail and supported at their lower ends by the clamps 36 36, held together by the bolt 37. The width of these clamps is such that a space intervenes between them, permitting the clamps to be tightened by screwing up the nut on the bolt 37.

Certain other modified forms of our invention generically claimed herein are shown and specifically claimed in an application filed on even date herewith, Serial No. 224,771.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination with an electric con-

ductor, of a series of insulating-supports to which said conductor is attached, a bracket 25 clamped to said conductor between said supports, an upright part and a horizontal extension of said part to which a longitudinal guard is attached.

2. In a guard for an electric conductor, the 30 combination of a metal support, an insulating-post supported thereby, a horizontal bracket supported by said post and a longitudinal guard attached to said bracket.

3. In a guard for an electric conductor, the 35 combination of a metal support, a clamp for attaching said support to said conductor and an insulated post supported by said support.

In testimony whereof we have signed our names to this specification in the presence of 40 two subscribing witnesses.

LEWIS B. STILLWELL.  
FREDERICK R. SLATER.

Witnesses:

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F. W. NEWSON.