

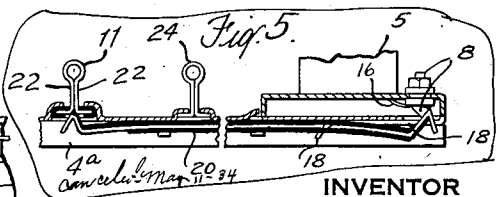
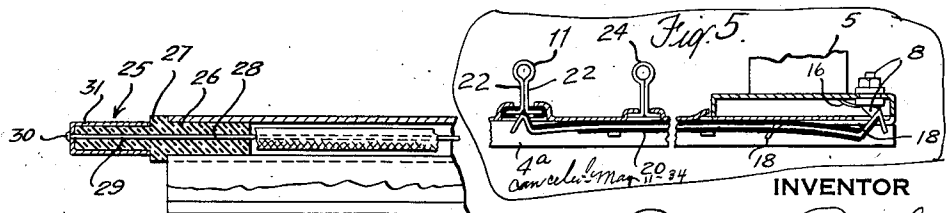
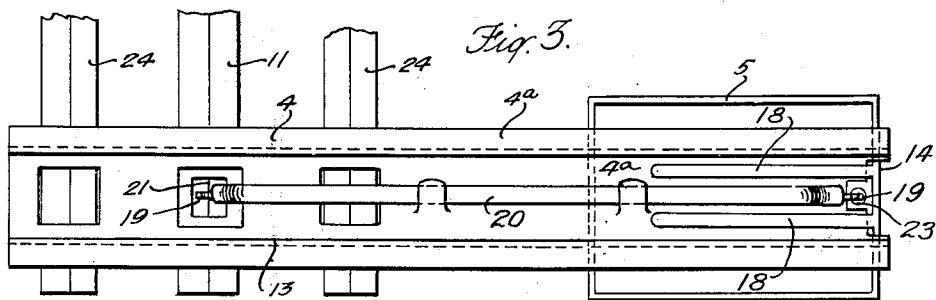
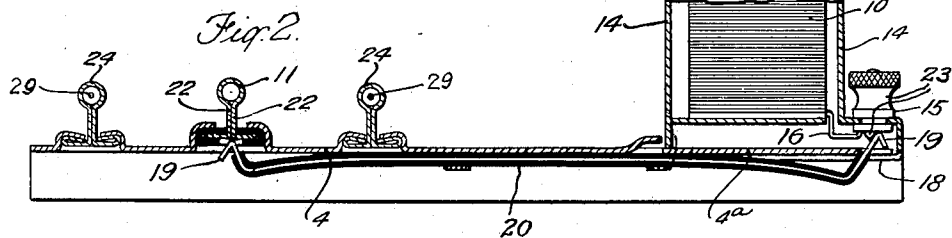
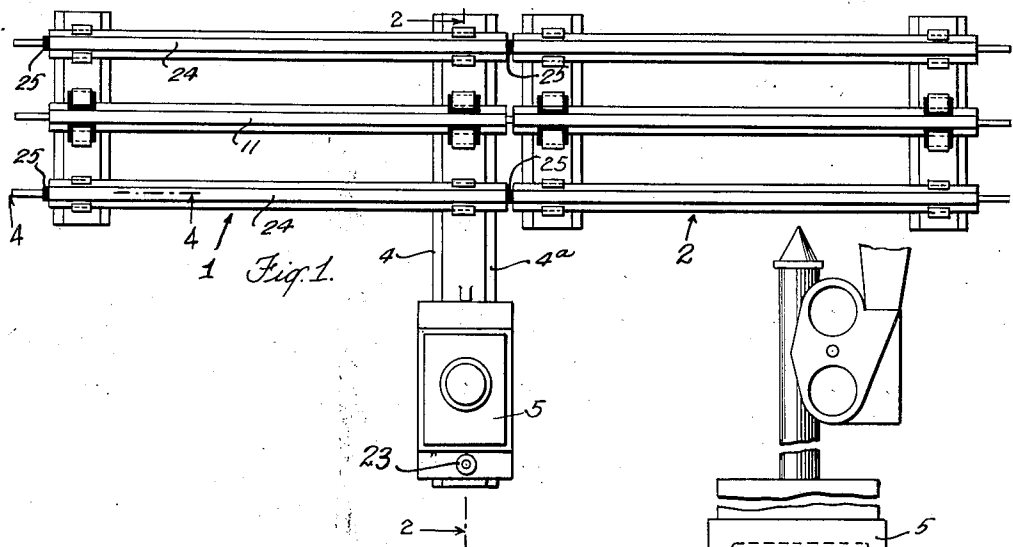
Jan. 8, 1935.

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1,987,271

TOY RAILWAY APPARATUS

Filed March 31, 1931



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UNITED STATES PATENT OFFICE

1,987,271

TOY RAILWAY APPARATUS

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Application March 31, 1931, Serial No. 526,627

9 Claims. (Cl. 246—81)

This invention relates to toy electric railways. The object of this invention, among others, is to provide simplified means for connecting, joining, attaching and/or mounting an electrical track or way device to or on a track, track section or element thereof.

Heretofore it has been the practice to mount the electrical track or way device, such as the semaphore unit, on a metal plate which plate is in turn connected, joined to or attached to one of the track rails and the power rail. According to my invention the said unit or device is mounted on, joined, connected or attached to one of the ties of a track section, preferably of special construction as shall be more fully explained hereafter.

In the accompanying drawing illustrating a preferred embodiment,

Fig. 1 is a plan view; Fig. 2 is an elevation, partly in section, on the line 2—2 of Fig. 1; Fig. 3 is a bottom view of Fig. 2; Fig. 4 is a detail on the line 4—4 of Fig. 1.

Referring more particularly to Fig. 1 there is shown a plurality of connected track sections 1, 2, section 1 being preferably of special construction described more fully later. One of the ties 4 of said section is elongated or has an integral extension 4a upon which is mounted a semaphore unit 5. Said unit is secured to said tie by frictional engagement between the extension 4a and spring leaves 18 formed in conjunction with the casing 14 of the unit, as shown more in detail in Fig. 3. The semaphore unit is actuated by coil 10, which has one end 16 of the winding connected to terminal 23 and the other end connected to the housing 14. A rubber grommet 15 insulates the terminal 23 from the housing. Operating current is taken from the power rail 11 by means of an insulated conductor 19, of a special type as will later be set forth, and which establishes electrical connection with terminal 23.

While I have shown one means in Figs. 1—3 inclusive for mounting said semaphore or other electrical track or way device on said tie, it is to be understood that this is not to be considered as limiting the scope of the invention or as a specific limitation since I may join said unit to said tie in other ways, or mount or otherwise connect, attach or secure said unit thereto. The important point of the invention is that I have eliminated the plate heretofore used in conjunction with and for connecting the electrical track or way unit to the power and track rails and provided means for attaching, etc., said unit to one of the ties, whereby preferably the mere attach-

ment of the unit housing to said tie provides one connection of the actuating circuit, and whereby the other connection may be conveniently made and be out of sight, and whereby as a result numerous intricate parts and connections are eliminated.

I provide the semaphore housing (Fig. 3) with spring leaves 18, 18, preferably stamped integral with the housing 14, and bent to lie close to the bottom of said unit, so that said unit may be slid onto the tie by inserting the tie between the bottom of said unit and said spring leaves and said unit be thereby thus of itself attached or joined to the tie and electrically connected thereto, and I may attach to the underside of the tie another metal spring leaf 19, insulated as shown at 20 along a substantial part of its length, and cause one end of said leaf to contact with the rail 11 adjacent the webs 22 of the power rail, and arrange to have the other end of said lead come in spring contact with a terminal 23 on the housing to which the lower lead of the actuating coil is connected, so that by the mere expedient of sliding the unit onto the tie the necessary electrical connections are automatically made.

As stated above said electrical track or way device is preferably connected to or mounted on one of the ties of a specially constructed track section, such as section 1. Said section is a relatively short section comprising the usual outer track rails 24—24 and power rail 11. The power rail is insulated from the ties, one of which is preferably of extended length. Both track rails are in electrical contact with said ties, but have disposed in their ends insulated pins 25—25, preferably of my special construction, shown in detail in Fig. 4 hereof and more fully described and claimed in my copending application Serial No. 523,484, filed March 18, 1931. Briefly, said insulator pin comprises a pin 26 of insulating material provided with a thickened medial portion 27. Said pin has a longitudinal bore 28 through which is adapted to be passed a conducting wire 29, the end of which is arranged to come out of an opening 30 in a metal cap 31 fixed on one end of said insulating pin. One end of the pin therefore is insulative while the other end is conductive. The insulative ends of said pins are inserted in the rail heads of said track rails while the metallically capped ends of said insulator pins are arranged to be inserted in the track rails of adjoining track sections. The rail heads of track rails 24, 24 of the special section each contain therein an insulated conductor of which the wire 29 is a part, and the ends of said wire are

respectively connected to the metal caps of said insulator pins in the manner already described.

However, the electrical track or way device may be connected or joined to a tie of a differently specially constructed track section or any standard track section, as desired.

The tie of the track section to which the unit is connected, joined, attached or otherwise secured, may, of course, be of standard length and the unit provided with an extension arranged to engage said tie and make electrical connection therewith.

Having described my invention, what I claim is:

1. In combination, a toy track section including a tie and a track or way device having spring means extending across the bottom of said device to go under the tie and clamp said device on the top of same.

2. In combination, a toy track section including a tie projecting at one end to the side of the track, and a track or way device having spring means extending across the bottom of said device for clampingly engaging the projecting end of said tie.

3. In combination, a toy track section including a tie, and a track or way device including a metal housing and a spring metallic element affixed to said housing and carried thereby clampingly holding said tie between it and the bottom of the housing.

4. In combination, a toy track section including a tie, and a track or way device including a metal housing having integral therewith a spring leaf extending across the bottom of the housing between which and said bottom of the housing said tie is clamped.

5. In combination, a toy electric track section including a tie and a power rail, an electrical track or way device mounted on said tie, and a spring leaf conductor electrically connected at one end to said power rail and extending length-

wise along said tie and in spring contact with a terminal of said device.

6. In combination, a toy electric track section including a tie and a power rail, an electrical track or way device comprising a metal housing and an electrical element therein mounted on said tie and said housing being in electrical contact with said tie, and a spring leaf insulated conductor electrically connected at one end to said power rail and the other end thereof being in spring contact with a terminal of said element on said housing, said terminal being insulated from said housing.

7. A toy electric railway track section comprising power and track rails and ties, and a spring leaf conductor disposed beneath one of said ties, one end of said conductor being electrically connected to said power rail and a housing bearing a signal, said housing containing a circuit for actuating current and an insulated terminal attached to one end of said circuit, the other end of said conductor being arranged for spring contact with said terminal.

8. A toy railway track section comprising power and track rails and ties, and a spring leaf conductor disposed beneath and insulated from one of said ties, one end of said conductor being inserted between the webs of the power rail and the other end of said conductor being arranged for spring contact with a terminal or terminal end of another conductor.

9. In combination, a toy electric railway track section having a power conductor and a tie, and an electrical track or way device having spring means for engaging said tie and holding the device thereon, said device having an insulated terminal, said conductor and spring means being so arranged that said conductor engages said terminal and the other necessary electrical connections to said device are automatically made when said device is slid onto said tie.

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