June 17, 1924.

G. J. STILLMAN

1,497,703

TRAFFIC TRESTLE

Filed July 19, 1922

4 Sheets-Sheet 1

Fig. 1.

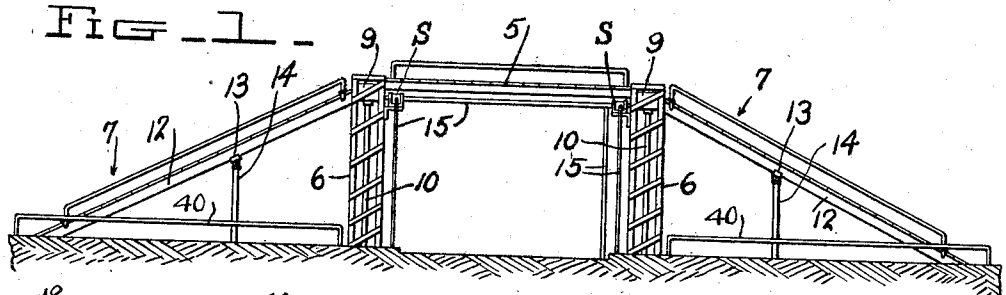


Fig. 2.

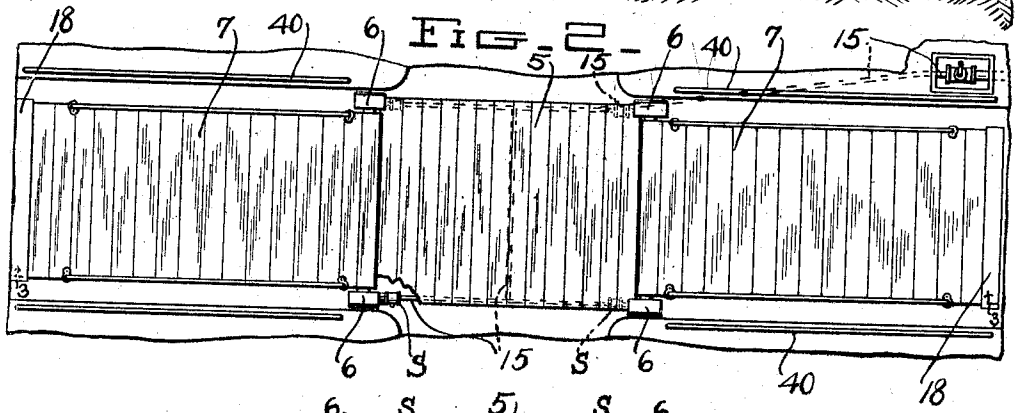


Fig. 3.

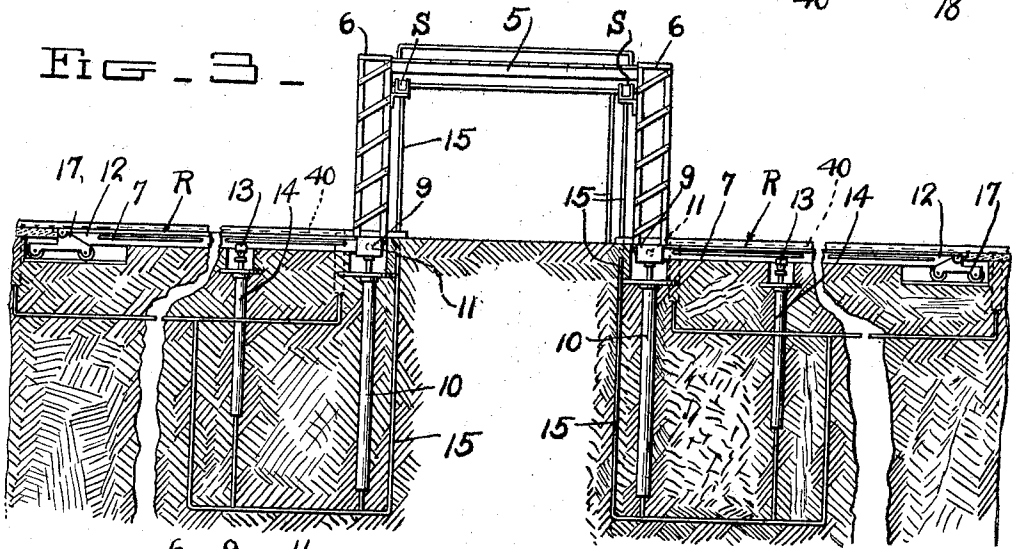
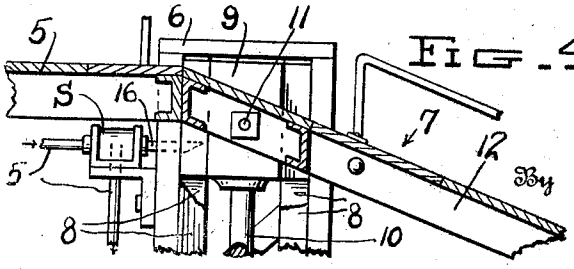


Fig. 4.



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Fig. 6.

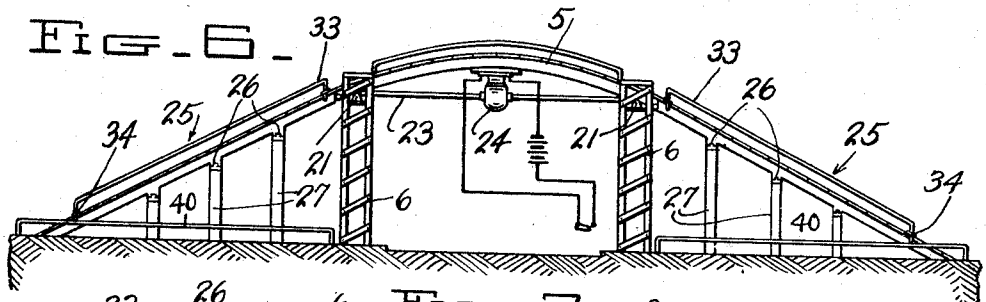


Fig. 7.

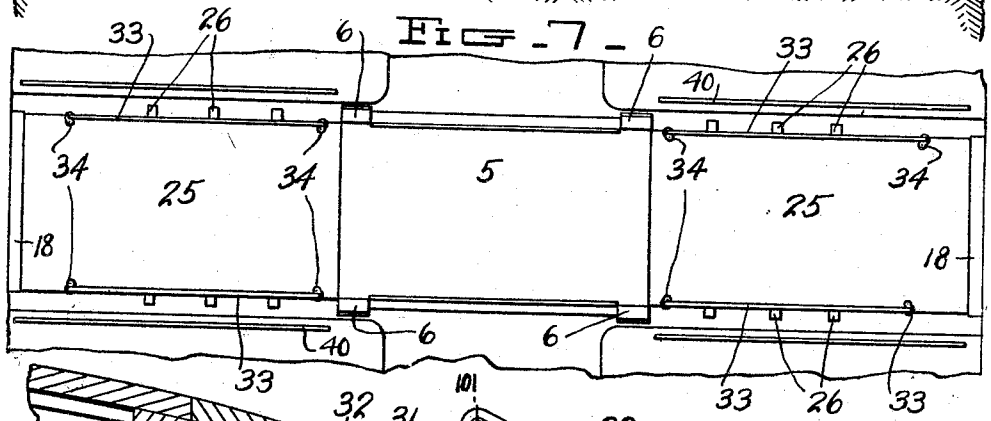


Fig. 8.

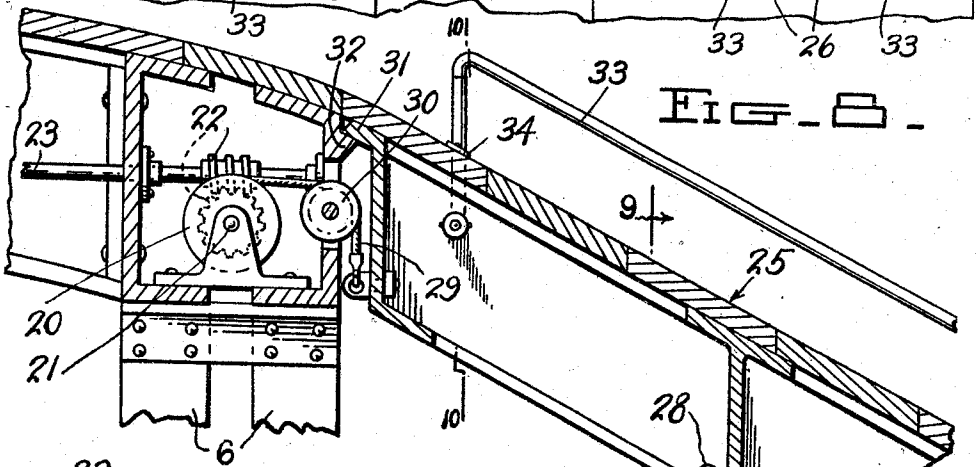


Fig. 10.

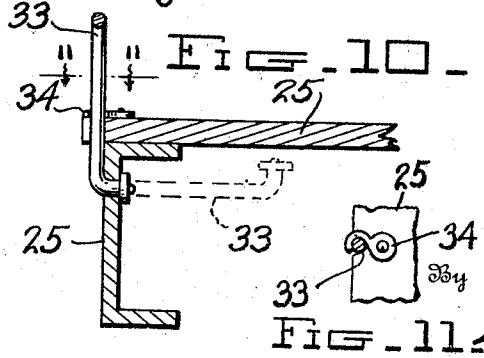


Fig. 11.

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Fig. 9.

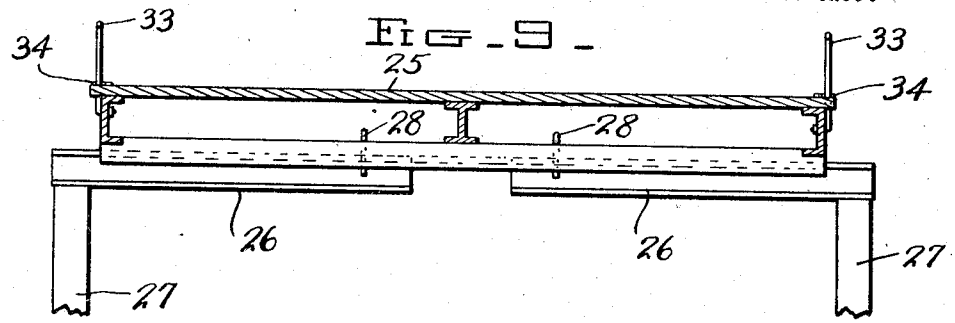


Fig. 12.

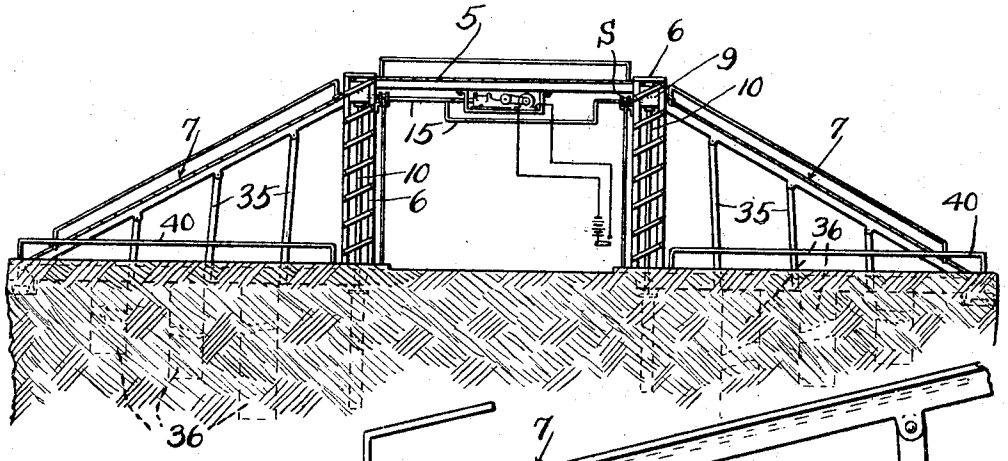


Fig. 13.

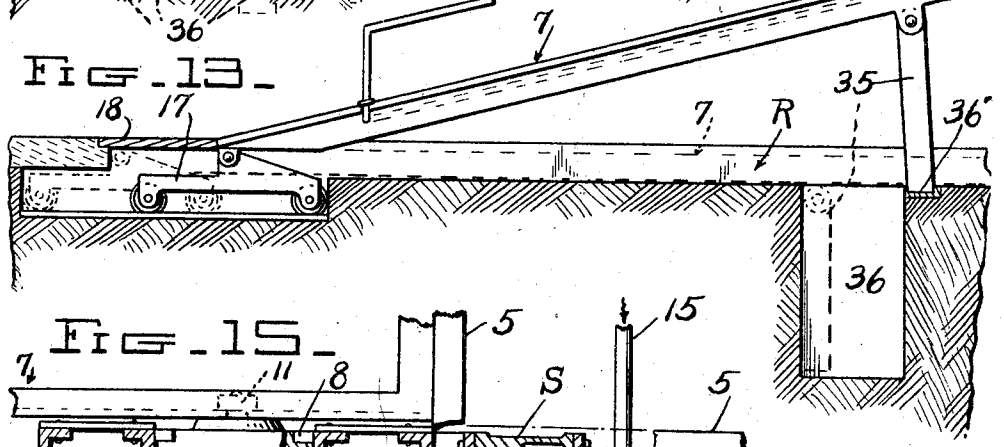
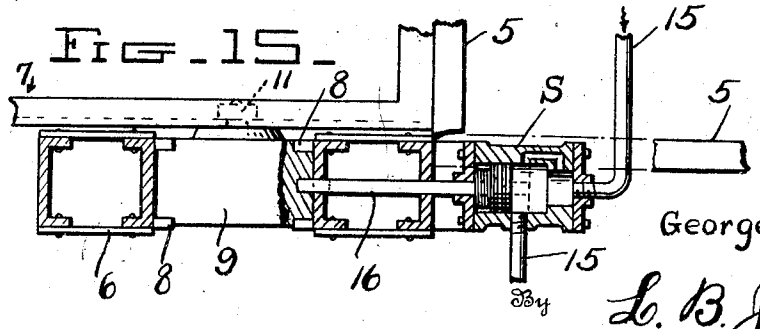


Fig. 15.



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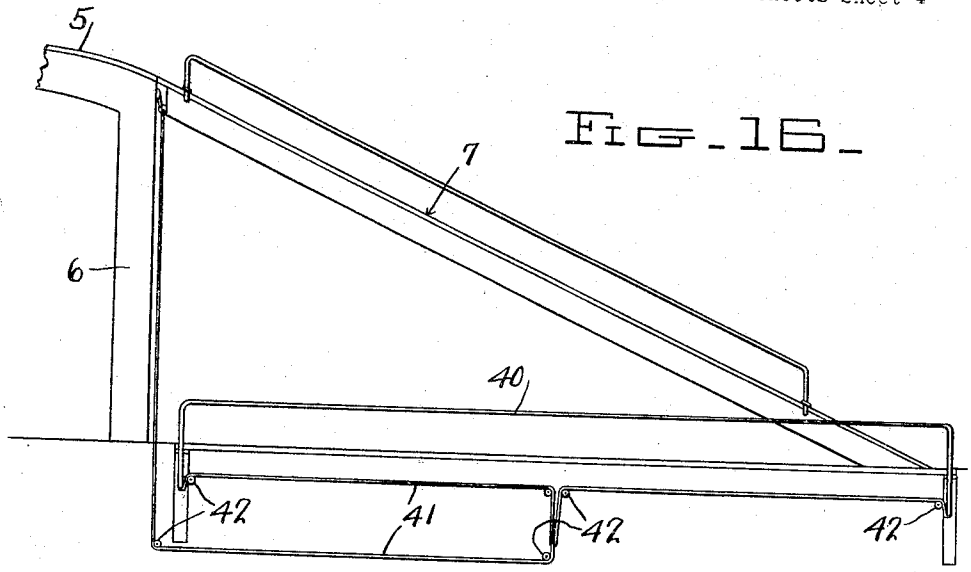


Fig. 16.

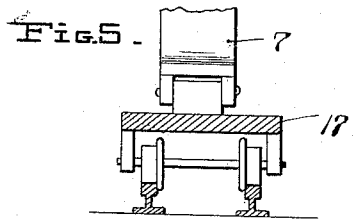
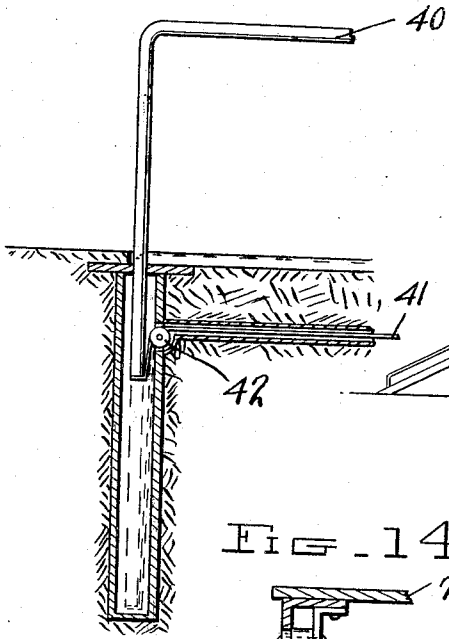


Fig. 5.

Fig. 17.



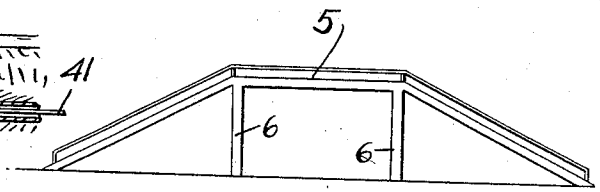
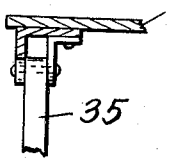


Fig. 18.

Fig. 14.



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Patented June 17, 1924. 1,497,703

UNITED STATES PATENT OFFICE.

GEORGE J. STILLMAN, OF JERSEY CITY, NEW JERSEY.

TRAFFIC TRESTLE.

Application filed July 19, 1922. Serial No. 576,115.

To all whom it may concern:

Be it known that I, GEORGE J. STILLMAN, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented new and useful Improvements in Traffic Trestles, of which the following is a specification.

This invention relates to traffic trestles.

The primary object of this invention resides in the provision of a traffic trestle consisting of a stationary platform and inclined platforms adapted to be elevated at one end to permit the passage of traffic on one thoroughfare to pass over that of an intersecting thoroughfare.

Another object of this invention resides in the provision of a traffic trestle consisting of a stationary platform having inclined platforms which are manipulated from a substantially horizontal position, level with the thoroughfare, to an inclined position, connecting the thoroughfare with the stationary platform.

A still further object of this invention resides in the provision of a traffic trestle consisting of an elevated stationary platform, inclined movable platforms and means whereby one end of each movable inclined platform can be elevated in operative alignment with the stationary platform.

A further object of this invention resides in the provision of a traffic trestle consisting of a stationary platform, and movable inclined platforms, the latter of which embodying co-operative elements whereby they can be elevated and locked in operative alignment with the stationary platform.

Aside from the foregoing objects, this invention consists of a stationary platform having inclined platforms adapted to be elevated at their inner ends in co-operative relation with the stationary platforms and connected with means for controlling railings beside the surface pits from which the inclined platforms are elevated.

In addition to the foregoing objects, this invention resides in the provision of a stationary platform having movable platforms at opposite ends thereof adapted to elevate guard-rails on the sides of the pits for the movable platforms during the elevation of the movable platforms.

With these and other objects in view, this invention resides in certain novel features of construction and arrangement of elements to be hereinafter more specifically set forth in the specification, illustrated in the accompanying drawings and pointed out in the appended claims.

In the accompanying drawings—

Figure 1 is a side view of a traffic trestle as constructed in accordance with this invention.

Fig. 2 is a plan view thereof.

Fig. 3 is a longitudinal sectional view on line 3—3 of Fig. 2 showing the inclined platforms in lowered position.

Fig. 4 is an enlarged sectional view of the connecting ends of the stationary and inclined platforms.

Fig. 5 is a similar view of the lower end of one of the inclined platforms.

Fig. 6 is a side view of a traffic trestle showing a modified form of elevating means for the inclined platforms.

Fig. 7 is a plan view thereof.

Fig. 8 is an enlarged longitudinal sectional view of a portion thereof.

Fig. 9 is a sectional view on line 9—9 of Fig. 8.

Fig. 10 is a sectional view on line 10—10 of Fig. 8.

Fig. 11 is a sectional view on line 11—11 of Fig. 10.

Fig. 12 is a side view of a traffic trestle showing other means for elevating and supporting the inclined platforms thereof.

Fig. 13 is an enlarged detail view showing one movable supporting standard of the inclined platforms as illustrated in Fig. 12.

Fig. 14 is a detail view of the connection provided for the auxiliary standards illustrated in Fig. 12.

Fig. 15 is a detail view showing the latches for the hydraulic hoists;

Fig. 16 is a diagrammatic view illustrating the guard rail manipulating means as operated by the movable platforms;

Fig. 17 is a detail sectional view of one end of one of the guard-rails;

Fig. 18 shows a trestle wherein the incline platforms are stationary.

In the present embodiment of this invention the numeral 5 designates a stationary platform which is preferably elevated above intersecting thoroughfares or roadways, and supported by suitable standards 6 located out of the path of traffic when passing on the surface beneath the stationary platform.

Adjacent each end of the stationary plat-

form and in the thoroughfare are aligning elongated pits (R) in which are normally disposed the inclined platforms 7 which when elevated at their inner ends form means whereby the traffic, of that thoroughfare aligning therewith, is directed over the intersecting throughfare over which the stationary platform extends. These inclined platforms when in their normal lowered positions entirely close their respective pits and form unobstructed continuations between the disconnected edges of the thoroughfare, necessarily produced in excavating the pits.

Suitably secured to the standards 6 are guide-rails 8 upon which are slidably secured guide-blocks 9 for directing the main hydraulic hoists 10 in vertical planes and thus guide the inner ends of the inclined platforms 7.

Pivotally secured to the guide-blocks 9, as at 11, are the side beams 12 of the inclined platforms 7, while suitably secured throughout the lengths of the side beams 12 are the pivotally secured heads 13 of auxiliary hydraulic hoists 14.

Supported by the stationary structure forming the trestle is a suitable pump (S) which is connected with the main and auxiliary hydraulic hoists by pipes 15, and when suitable controlling means are disposed to cause the pump to operate, the inclined platforms will be manipulated through the instrumentality of the hydraulic hoists.

In order to support the inclined platforms in elevated positions, suitable latches 16 engage the guide-blocks 9 and release the same through the instrumentality of means controlled by the pump.

On the lower ends of the inclined platforms are suitable trucks 17 adapted to permit said platforms to have a slight sliding movement, and to close any existing spaces between the thoroughfare and lower edge of the platforms, plates 18 may be used.

In the forms shown in Figs. 6 to 11, the stationary platform is slightly arched and is provided with windlasses 20 carried by shafts 21 which are manipulated by gears 22 and shafts 23 through the medium of a motor 24.

The inclined platforms 25, in this instance, carry beams 26 which must be extended after the platform is raised so that they will be in proper positions to rest on suitable standards 27 provided for supporting the inclined platforms in elevated position. The aforesaid beams are held in extended positions by suitable means, which in this instance are pins 28.

Secured to the aforesaid windlasses 20 are cables or chains 29 which pass over pulleys 30 and connect with the adjacent ends of the inclined platforms, to be moved, and upon the same reaching the desired elevated positions, a tongue 31 carried by each inclined platform engages a companion tongue 32 carried by the stationary platform, thus providing means whereby the platforms are locked together.

Hingedly secured to the inclined platforms 25 are hand-rails 33 which when folded are disposed beneath the platforms so as to be directed within the pit provided for the platform when in lowered position. These rails are held in elevated or operative position by any suitable means such as indicated at 34.

In the forms shown in Figs. 12 to 13, in addition to the main hydraulic hoists and the latches operable thereby, the inclined platforms are provided with pivoted standards 35 which project within guide-holes 36 when the platforms are lowered and manipulated to rest upon suitable retaining supports 36 while the platforms are elevated.

In order to prevent pedestrians from accidentally stepping into the pits R while the inclined platforms are elevated, guard-rails 40 are disposed adjacent the opposite sides of the pits, the same preferably being capable of disappearing when the inclined platforms are lowered within the pits. Aside from the hydraulic means shown in Fig. 3 to manipulate the guard-rails, the simplest and most accurately controlled mechanism consists of cables 41 and guide pulleys 42, the former of which being connected to the inclined platforms, so that, as it rises, the cables will eject the guard-rails from their housings beneath the surface of the ground.

In the form shown in Fig. 18, a trestle is illustrated as having immovable inclined platforms, this particular structure being adapted for permanently spanning intersecting thoroughfares.

With this invention fully set forth, it is manifest a trestle of great utility is provided, and through the provision of its simplicity, the operating expense thereof will be reduced to the minimum.

Having thus described my invention what I claim and desire to protect by Letters Patent is:

1. The combination with a stationary platform, standards supporting the said platform, pits adjacent the opposite ends thereof, other platforms located in the pits and slidably connected to the standards, elevating means connected to the inner ends of the second mentioned platforms, hand-rails adjacent the sides of the pits and connections between the latter mentioned platforms and hand-rails, whereby the rails will be raised simultaneously with the latter mentioned platforms.

2. The combination with a stationary platform, standards supporting said plat-

form, other platforms disposed on opposite sides of the stationary platform over areas equal to their dimensions, hand rails adjacent the sides of the areas occupied by the second mentioned platforms, and means for simultaneously elevating and lowering the hand rails and second mentioned platforms.

3. The combination with a stationary platform supported above the ground, other platforms disposed in pits on opposite sides of the stationary platform with their inner ends in slidable relation with the adjacent ends of the stationary platform, and elevating means connected to the second mentioned platforms.

In testimony whereof I affix my signature.

GEORGE J. STILLMAN.