No. 825,366. PATENTED JULY 10, 1906.

C. O. WESCOTT.

TRACK LAYING MACHINE.

APPLICATION FILED APR. 9, 1906.

2 SHEETS—SHEET 1.

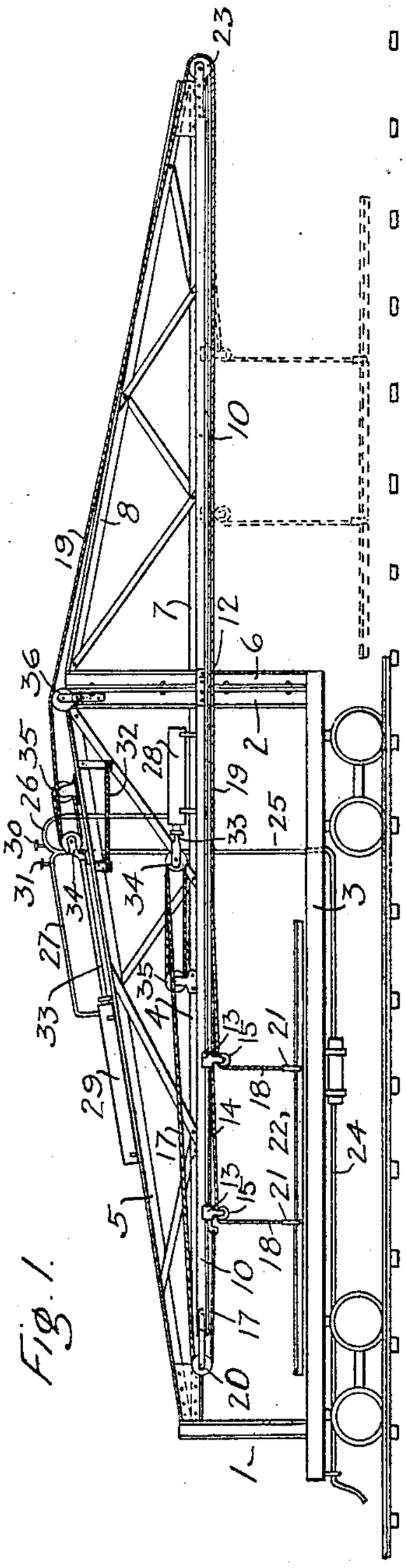

Fig. 1.

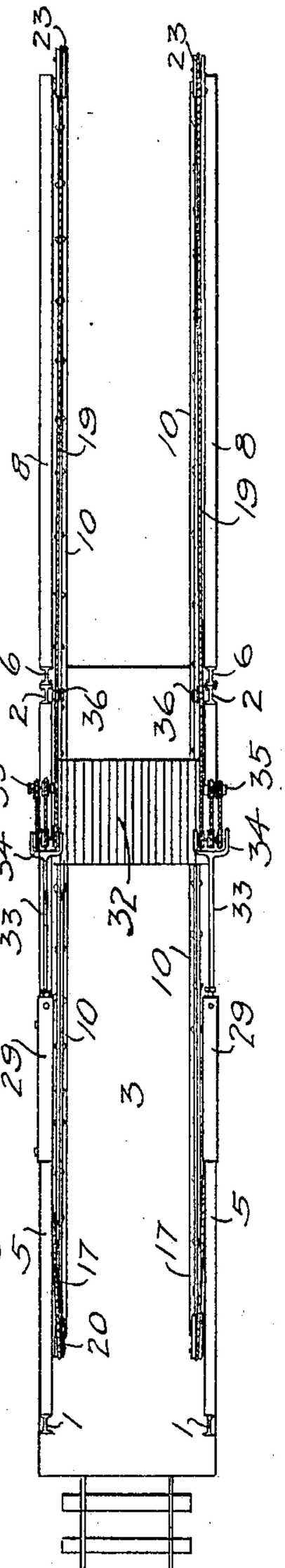

Fig. 2.

Witnesses

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Fig. 3.

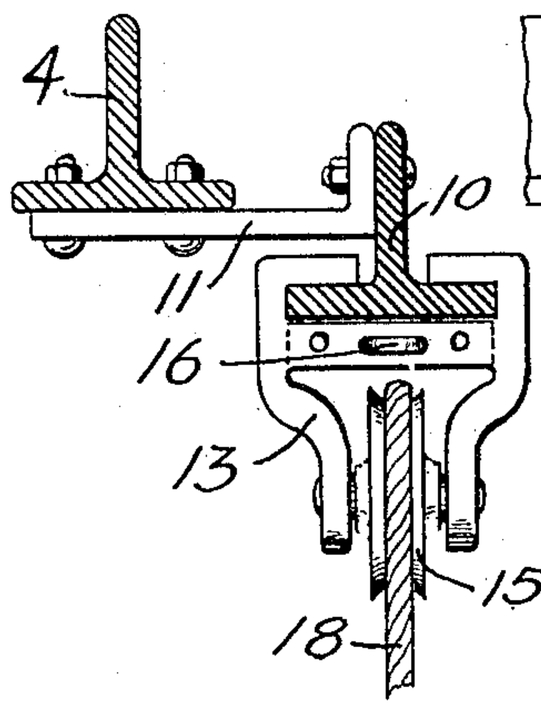


Fig. 4.

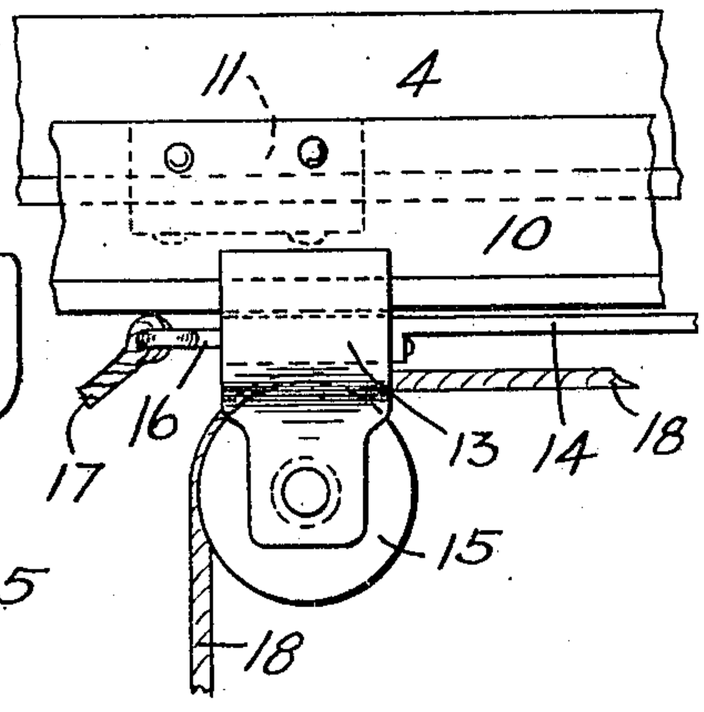
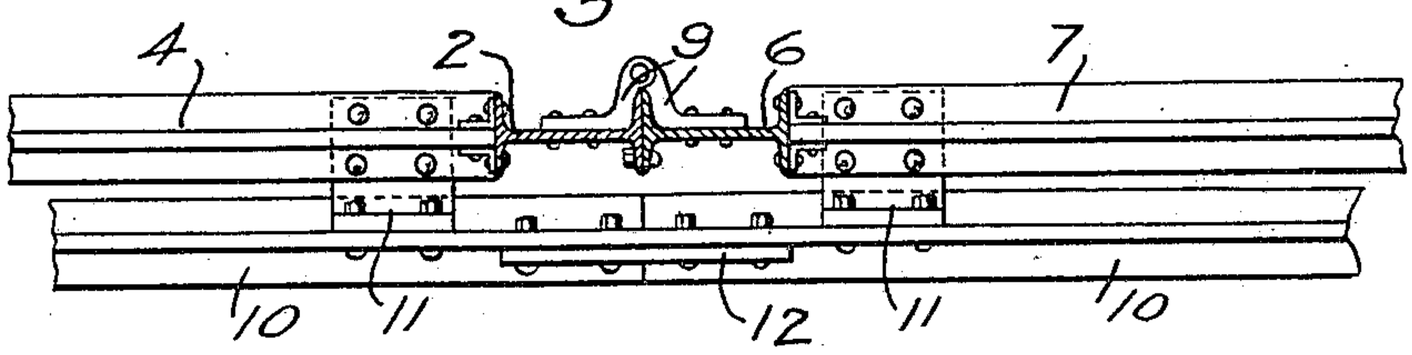


Fig. 5.



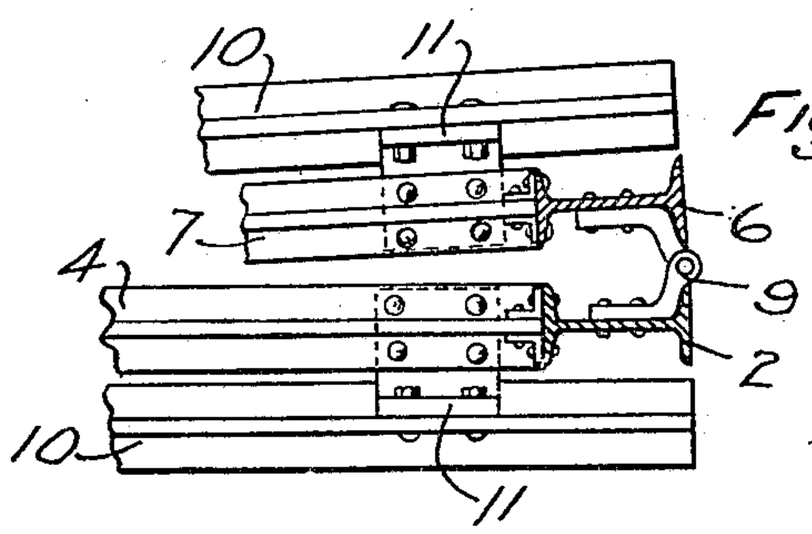
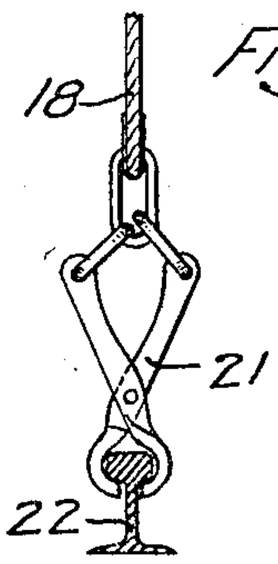


Fig. 6.

Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

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TRACK-LAYING MACHINE.

No. 825,366. Specification of Letters Patent. Patented July 10, 1906.

Application filed April 9, 1906. Serial No. 310,714.

To all whom it may concern:

Be it known that I, CHARLES O. WESCOTT, a citizen of the United States of America, residing at Puyallup, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Track-Laying Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to track-laying machines, and especially to the mechanism for unloading the rails from the forward car of the construction-train and placing them into position on the ground.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the forward car of the construction-train, the near rail-carrier having been removed to show the inner side of the far rail-carrier. Fig. 2 is a plan of the machine. Fig. 3 is a cross-section of the lower chord of the structure and its supported rail, showing the sliding carriage thereon. Fig. 4 is a side view thereof. Fig. 5 is a horizontal cross-section of the end posts, showing the forward extension in position for use. Fig. 6 is a similar view showing the forward extension folded back beside the fixed structure. Fig. 7 is a view of the rail-tongs.

Similar numerals of reference refer to similar parts throughout the several views.

I prefer to construct my machine with two similar mechanisms, one on each side of the car, to handle the two rails of the track, though under some circumstances a single set of mechanisms would be sufficient, the rails being swung by hand into their proper positions on the one side or the other. It will therefore be sufficient for a full understanding of my invention if a single set of mechanisms be described as to its construction and operation. Further, I have shown in the drawings that the mechanism is actuated by compressed air, which can conveniently be supplied by the air-pumps of the engine; but it is evident that if some other source of power is more convenient—such, for instance, as steam, water, or electricity—these may be used, with such proper changes as may be necessitated by the conditions under which they are worked, without departing from the spirit of my invention.

Referring now to the drawings, the supporting structure consists of a rear post 1, a high forward post 2, both secured to the side of the car-deck 3 and supporting a horizontal bottom chord 4, an inclined top chord 5, and suitable bracing therebetween. To this main structure is secured the forward extension, which consists of a vertical post 6, secured to the post 2, a lower chord 7 on the same plane as the chord 5, an upper inclined chord 8, corresponding with the chord 5, and suitable bracing between the chords 7 and 8. The posts 2 and 6 are bolted together when the machine is in its working position, and they are also secured together by the hinges 9, so that when the bolts are removed the extension structure, consisting of the post 6 and chords 7 and 8, can be turned so as to stand beside the main structure (see Figs. 6 and 7) when the machine is not in use or is being transported.

The supported track 10 is preferably made of an inverted-T-shaped iron secured to the lower chords 4 and 7 at intervals by the arms 11, which hold it out therefrom on the inner side of the supporting structure. The track 10 is also divided into two parts at the posts 2 and 6, said parts being firmly strapped together while the machine is in use by the piece 12 bolted to each of them.

The rail-carriage consists of a pair of sliding brackets 13, secured together by the bar 14 under the track 10, and each of these brackets 13 supports a groove-sheave 15. The brackets 13 engage the inverted T-rail 10 and are supported thereby and slid thereon, being held apart by the bar 14, which I prefer to make about ten or fifteen feet long. To the inner end of the carriage is secured, through an eyebolt 16, the end of the hold-back drawback rope or cable 17. The two rail-supporting cables 18 pass over the sheaves 15 on the brackets 13 and hang downward therefrom to engage the rail to be laid and extend forward from the carriage and are spliced together at a suitable point to form the raising and pull-forward cable 19. The cable 17 passes rearward from the carriage and around the rear sheave 20, secured to the inner end of the track 10, and then to its actuating mechanism hereinafter described. The cables 18 are each provided with rail clamps or hooks 21 at their lower ends adapted to engage the track-rail 22 and to be readily removed therefrom when the rail 22 has been laid on the ties. The cable 19 extends from

the splice of the cables 18 and around the sheave 23 at the outer end of the track 10 and thence over the sheave 36, secured to the top of the post 2, and then to its actuating mechanism.

As before mentioned, the cables 17 and 19 may be actuated by any of the known mechanisms which may be best adapted for the conditions and circumstances under which the machine is operated. I have illustrated and prefer to use a mechanism deriving its power from compressed air. The pipe 24 is secured to the lower side of the car-deck 3 and is provided with suitable coupling devices at its end to enable it to be readily connected to a pipe leading from the air-pump on the locomotive. The pipe branches below the car into two parts 25, which pass vertically upward near the supporting structures on each side of the car. The pipes 25 then branch again into pipes 26 and 27, which lead to the two air-cylinders 28 and 29, respectively. The valves 30 and 31 in the pipes 26 and 27 are of any of the well-known forms by which the compressed air may be led to the cylinder and by which the air may be cut off therefrom and by which the air therein may be released. The valves 30 and 31 are operated from the bridge or elevated platform 32, on which the operator stands and which extends over the car from one supporting structure to the other at sufficient height above the car not to impede the workmen thereon. The air-cylinders 28 and 29 are provided with pistons and with piston-rods 33, which are secured to the sliding blocks 34, which acting in conjunction with the fixed blocks 35 reduce the travel of the said pistons. The size of the cylinders will therefore depend on the air-pressure in the pipes 26 and 27 and on the number and arrangement of the sheaves in the sets of blocks 34 and 35. The cable 17 is actuated by the blocks controlled by the cylinder 28 and the valve 30, while the cable 19 is similarly actuated and controlled by the cylinder 29 and the valve 31. In the drawings the cylinder 28 is secured to the lower chord 4, while the cylinder 29 is secured to the upper inclined chord 5.

My invention is operated in the following manner: A number of track-rails 22 having been delivered to the deck 3, the train is moved forward on the last laid rails to a point a few feet short of the end thereof. Then (the carriage having been drawn back until the clamps 21 on the ends of the cables 18 are in about the desired position on the rail 22) the clamps are secured to the rail 22. The valve 30 is closed, so that the cable 17 will not move in either direction. The valve 31 is opened to allow pressure to move the piston of the cylinder 29, so as to separate the blocks 34 and 35 thereof and pull the cable 19. This action pulls the similar cables 18 and since the carriage cannot move raises the rail 22 until it is entirely free from all obstructions. Then the valve 30 is set to release the air from the cylinder 28, thus slackening the cable 17, so that the strain on the cables 18 and 19 from the cylinder 29 will pull the carriage forward on the supported track 10 until the rail 22 hangs suspended in front of the car and in about its proper position. Then the valve 30 is again closed to hold the cable 17 against movement, and the valve 31 is set to release the air from the cylinder 29, and thus to slacken on the cables 19 and 18, and thus lower the rail 22. As the rail is being lowered the workmen quickly seize it and place its inner end against the rail last laid and its outer end in the correct position on the ties. Then the clamps 21 are removed from the rail and it is spiked down on the ties, and at the same time the valve 30 is opened to admit air into the cylinder 28, the valve 31 having been closed. This draws the cable 17 and the carriage, and thus raises the clamps 21. Then the valve 31 is again put into the releasing position and the cable 17 draws the carriage back on the track 10 into position to take another rail.

Having described my invention, what I claim is—

1. In a track-laying machine, the combination of a car-platform, a supporting structure secured thereto and extending forward therefrom, a track secured to one side of said structure, a carriage sliding on said track, a cable secured to the rear end of said carriage, means for pulling said cable rearward, two sheaves mounted at the ends of said carriage, a double-ended cable passing over said sheaves and extending forward along said track, rail-gripping means secured to the ends of said double-ended cable, and means for pulling said double-ended cable forward.

2. In a track-laying machine, the combination of a car-platform, a supporting structure secured thereto, an extension of said supporting structure hinged to the forward end thereof and adapted to extend forward thereof and to be folded back therebeside, and means supported by said structure whereby rails may be raised, transported, or lowered.

3. In a track-laying machine, the combination of a car-platform, a supporting structure secured thereto and extending forward therefrom, a track secured to one side of said structure, a carriage sliding on said track, two sheaves mounted at the ends of said carriage, a cable secured to said carriage, a double-ended cable passing over said sheaves and supporting the rail, means actuating said cables in opposite directions, and means controlling said actuating means whereby their reactions one on the other will raise, transport or lower said rail.

4. In a track-laying machine, the combi-

nation of a supporting structure having a longitudinal track thereon, a carriage sliding on said track, a cable secured to said carriage, a cable engaging said carriage and depending therefrom to support a rail, means actuating said cables in opposite directions, and means controlling said actuating means whereby their reactions one on the other will control the vertical position of the suspended rail and the horizontal position of the sliding carriage.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES O. WESCOTT.

Witnesses:
DIX H. ROWLAND,
M. A. VAN HOUSE.