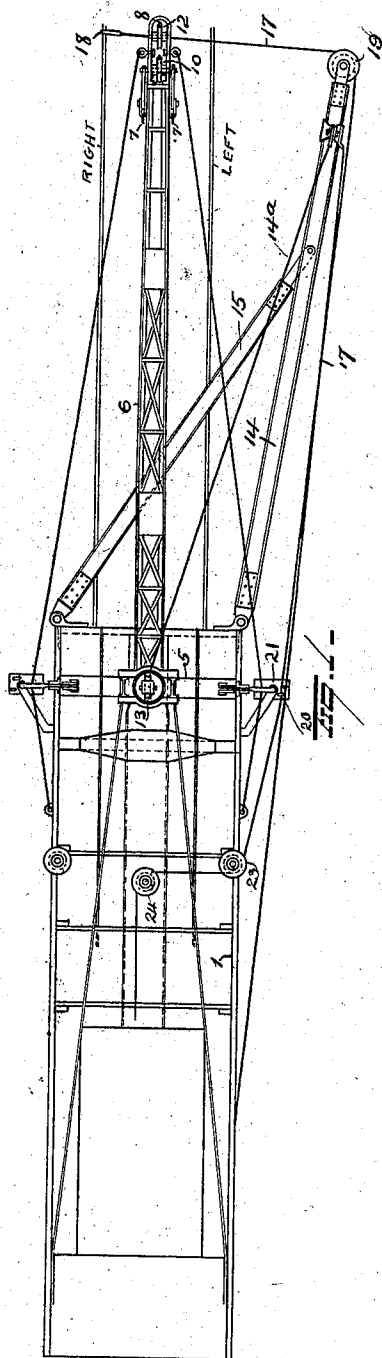


No. 853,948.

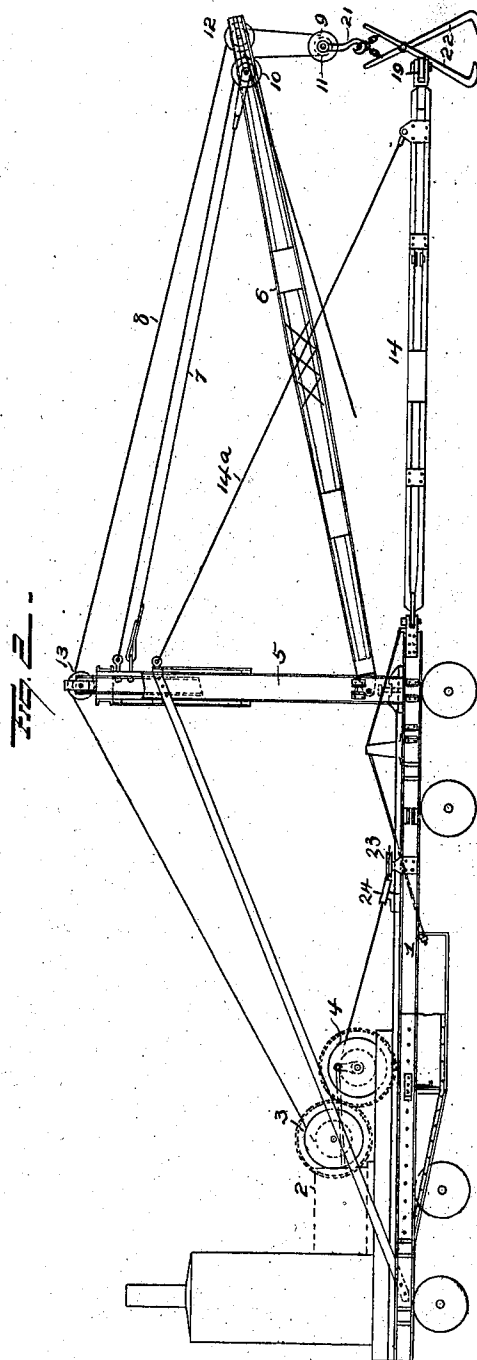
PATENTED MAY 21, 1907.

W. G. BIERD.
TRACK SHIFTING MACHINE.
APPLICATION FILED FEB. 16, 1907.

2 SHEETS—SHEET 1.



WITNESSES:
B. Nottingham
C. J. Downing



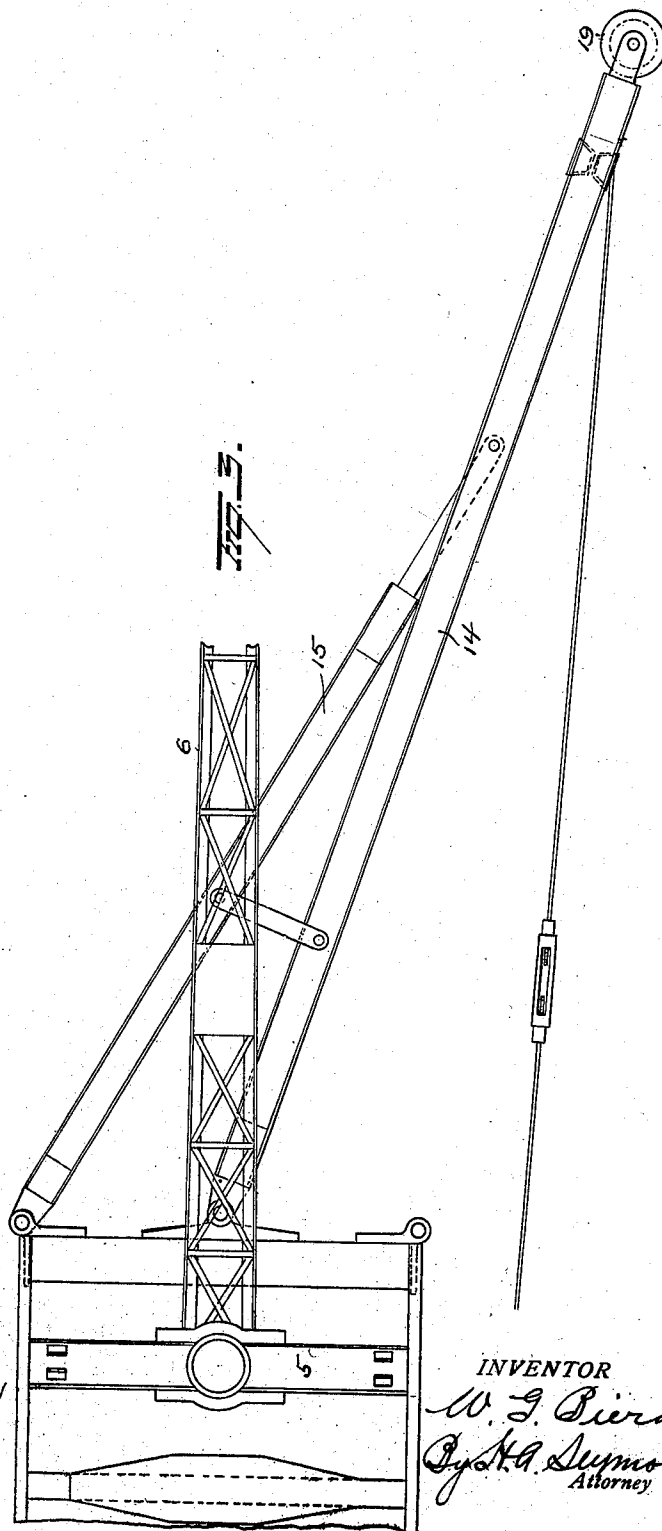
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WITNESSES

E. J. Nottingham
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UNITED STATES PATENT OFFICE.

WILLIAM GRANT BIERD, OF COLON, PANAMA.

TRACK-SHIFTING MACHINE.

No. 853,948.

Specification of Letters Patent.

Patented May 21, 1907.

Application filed February 16, 1907. Serial No. 357,709.

To all whom it may concern:

Be it known that I, WILLIAM GRANT BIERD, a resident of Colon, Panama, have invented certain new and useful Improvements in Track-Shifting Machines; and I 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.

My invention relates to an improved track shifting machine, the object of the invention being to provide improvements of this character adapted to move a track bodily, first lifting it from its old bed, then moving it laterally, and then depositing it on its new bed, all of which being accomplished without disconnecting the rails from the ties or disturbing any of the rail joints.

With this object in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view illustrating my improvements. Fig. 2 is a side view thereof, and Fig. 3 is a plan view illustrating a modification.

1 represents a car or platform supported on wheeled trucks, to run on an ordinary railroad track, and carrying an engine or motor 2 to drive drums 3 and 4, any approved mechanism being provided to throw either of said drums into or out of gear and drive the drums in both directions.

A tower 5 is located at one end of platform 1 and a vertically and laterally swinging beam 6 is connected to the tower near the lower end of the latter, and connected by a cable 7, with the upper portion of the tower to support the beam in normal working position. A cable 8 secured to the upper portion of the tower, passes down and around a sheave 10 on the beam 6, thence down and around a sheave 9 on a hoisting block 11, thence up over another sheave 12 on beam 6, over a pulley 13 on top of tower 5, and thence to drum 3 and is wound on the latter.

14 represents a horizontal beam pivotally connected to one corner of platform 1, supported by a cable 14^a and held against lateral movement by a brace 15 pivotally connected at one end, to the opposite corner of the platform 1, and at its outer end, adjustably connected to beam 14, so that by adjusting the

connection between beam 14 and brace 15, the free end of the beam 14 can be positioned varying distances to the side of the track.

In the modification illustrated in Fig. 3, the beam 14 is pivoted at the center of the end of platform 1 and brace 15 may be connected to either corner of the end of the platform, permitting the free end of beam 15 to be disposed at either side of the track and thus enable the track to be drawn laterally in either direction.

A cable 17, carrying a hook 18 to engage a rail of the track, is passed over a sheave 19 at the free end of beam 14. The cable 17 extends rearwardly from the sheave 19 and through a guide 20 on a bracket 21 projecting laterally from the framework. From the guide 20, the cable 17 extends rearwardly and after passing over pulleys 23—24 on the framework, said cable is wound on the drum 4.

The hoisting block 11 carries a hook 21 to engage the chain of a pair of tongs 22, which latter are adapted to grasp a tie or ties and lift a portion of the track from its bed, when drum 3 is operated to wind its cable 8 thereon, as will more fully hereinafter appear.

The operation of my improvements are as follows:—The cable 8 is slackened, to lower block 11 and permit tongs 21 to grasp a tie or ties in the track. Drum 3 is then operated to wind cable 8 thereon, and elevate the track from its old bed, drawing the ties out of their recesses or pockets. When the track is raised a sufficient distance to free the ends of the ties and the bodies of the ties from the bed, the drum 4 will be operated to wind cable 17 thereon, and the hook 18 on said cable engaging a rail of the track, will draw the track laterally to a position over a new bed. Cable 8 is then again slackened to permit the track to be deposited onto its new bed, after which the tongs 21 disengaged, and when cable 17 slackened to permit the disengagement of hook 18 from the rail. The car or platform can be moved along the track and another portion of the track shifted, as above explained, the platform being moved along the track and the above operation repeated until the entire track is shifted to its new bed.

A great many slight changes might be made in the general form and arrangement of the parts described without departing from my invention, and hence, I do not re-

strict myself to the precise details set forth but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

5 Having fully described my invention, what I claim as new and desire to secure by Letters-Patent is:—

1. In a machine of the character described, the combination of track hoisting mechanism, and means for moving a track laterally.

10 2. In a machine of the character described, the combination of means for raising and lowering a track and means for shifting the track laterally while raised.

15 3. In a machine of the character described, the combination with a traveling support, of track hoisting means thereon, and means also carried by said traveling support for shifting the track laterally while in raised position.

20 4. In a machine of the character described, the combination of track hoisting means and track shifting means, and separate operating mechanism for each of said means.

25 5. In a machine of the character described, the combination with a support, of a two vertically swinging beams, means connected with one of said beams for raising a track, and means cooperating with the other beam for swinging the track laterally.

30 6. In a machine of the character described, the combination with a support, of two vertically swinging beams, means cooperating with one of said beams to raise a track, means cooperating with the other beam to move the track laterally and means permitting said beams to swing laterally as well as vertically.

40 7. In a machine of the character described, the combination with a support, a tower on said support and winding drums, of a swinging beam connected with said tower, a cable wound on one of said drums and passing over the tower and said beam, means connected with said cable to engage a track, a cable passing over the other drum and provided with means to engage a rail of the track, and means for causing said last-mentioned cable to exert a lateral pull on the track to shift the same laterally.

50 8. In a machine of the character described, the combination with a traveling support, of track raising and lowering means, and track shifting means carried by said traveling support, and mechanism for operating each of said means.

60 9. The combination with a support movable on a track, of means carried by said movable support for elevating the track in rear of the direction of travel of said support, and means also carried by said support for shifting the track laterally while elevated.

65 10. The combination with a support movable on a track, of means carried by said movable support for elevating that portion

of the track adjacent to one end of the support, and means also carried by said support for shifting said raised section of the track laterally.

11. In a machine of the character described, the combination with a platform and hoisting mechanism thereon, of an approximately horizontal beam, a drum on the platform, a sheave on the beam, and a cable wound on the drum, passed over said sheave and secured to a track engaging device at its free end.

12. In a machine of the character described, the combination with a platform, of two beams on the platform, a lifting cable on one beam, and a laterally swinging cable on the other beam.

13. In a machine of the character described, the combination with a car platform, of an approximately horizontal beam connected with one end of said platform, a sheave at the end of said beam, means for preventing lateral swinging of said beam, a drum on the platform, a cable wound on the drum and passed over said sheave, a hook at the free end of the cable to engage a rail of the track, and track hoisting mechanism on the platform.

14. In a machine of the character described, the combination with a car platform, of a vertically adjustable beam thereon, hoisting mechanism connected with said beam, a laterally adjustable beam on the platform, a brace securing the laterally adjustable beam at various adjustments, and means on said laterally adjustable beam for moving a track laterally.

15. In a machine of the character described, the combination with a car platform, of a tower on said platform, an engine or motor on the platform, two drums driven by the engine or motor, a beam hinged to the tower, a cable supporting the beam, a hoisting block, tongs operated by the hoisting block and constructed to engage a tie or ties, a cable to elevate and lower the hoisting block, passed over sheaves on the beam and tower and wound on one of said drums, a laterally swinging approximately horizontal beam hinged to one end of the platform, a brace hinged to the end of the platform and adjustably secured to the laterally adjustable beam, a hook engaging a rail of the track, and a cable secured to the hook and passed over sheaves on the last-mentioned beam and tower and wound on the other of said pair of drums.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

WILLIAM GRANT BIERD.

Witnesses:

W. G. TUCKER,
R. YUNG.