T. S. CAFFERTY & J. F. MARKLE.

BALLAST DRESSER.

APPLICATION FILED FEB. 20, 1912.

Patented Dec. 3, 1912.

1,046,262.

3 SHEETS—SHEET 1.

Fig. 1.

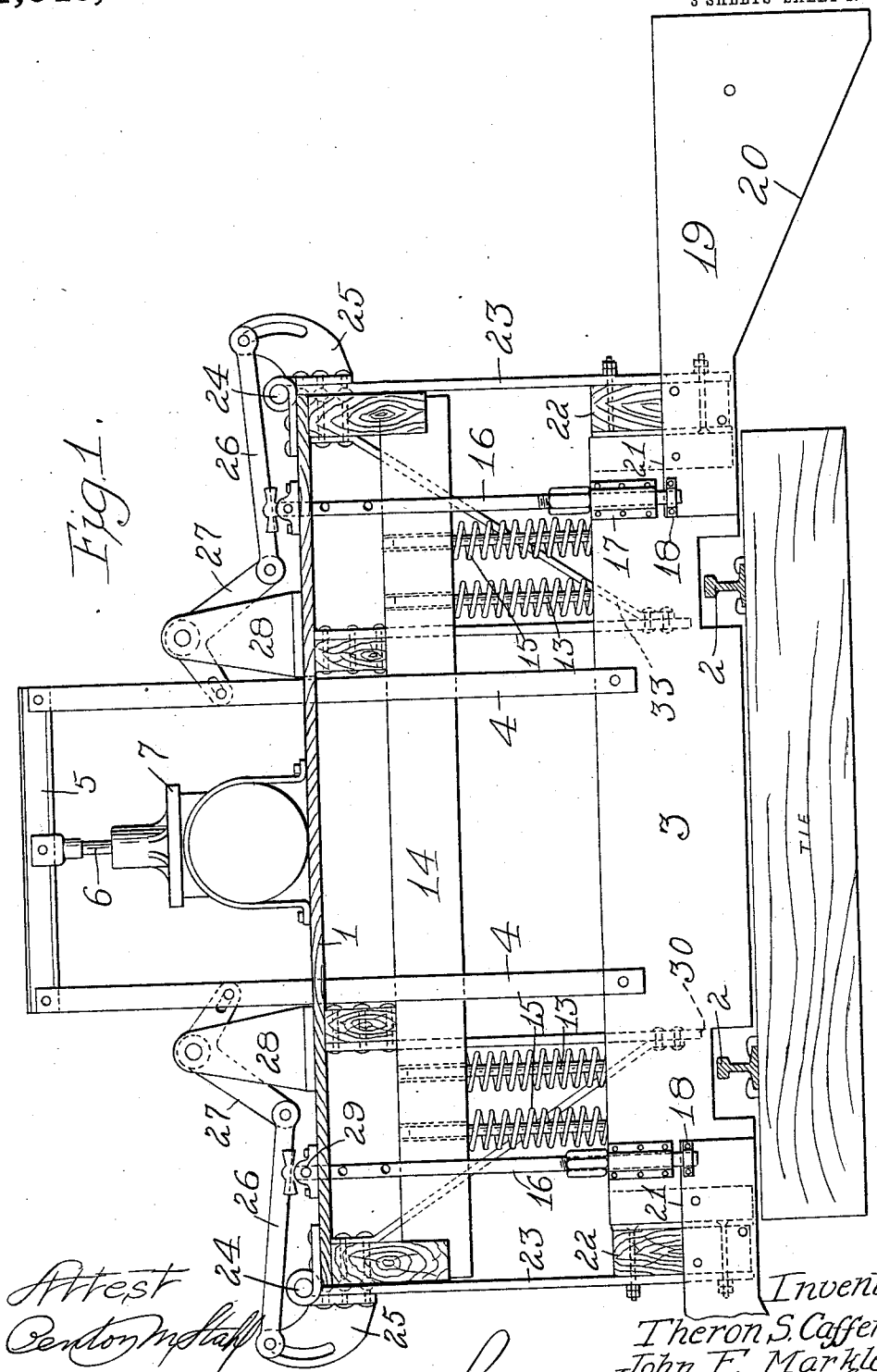


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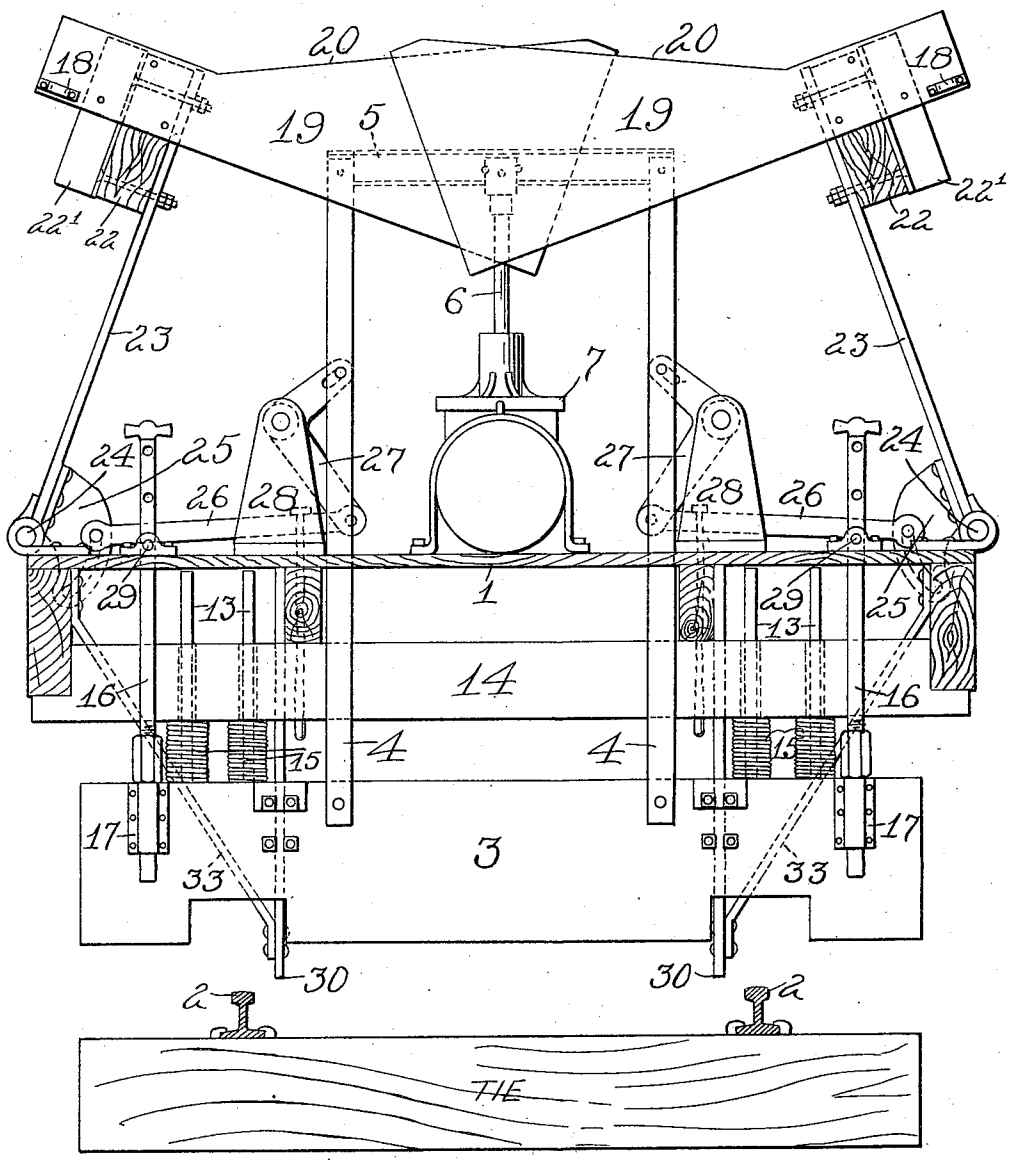
Fig. 2.

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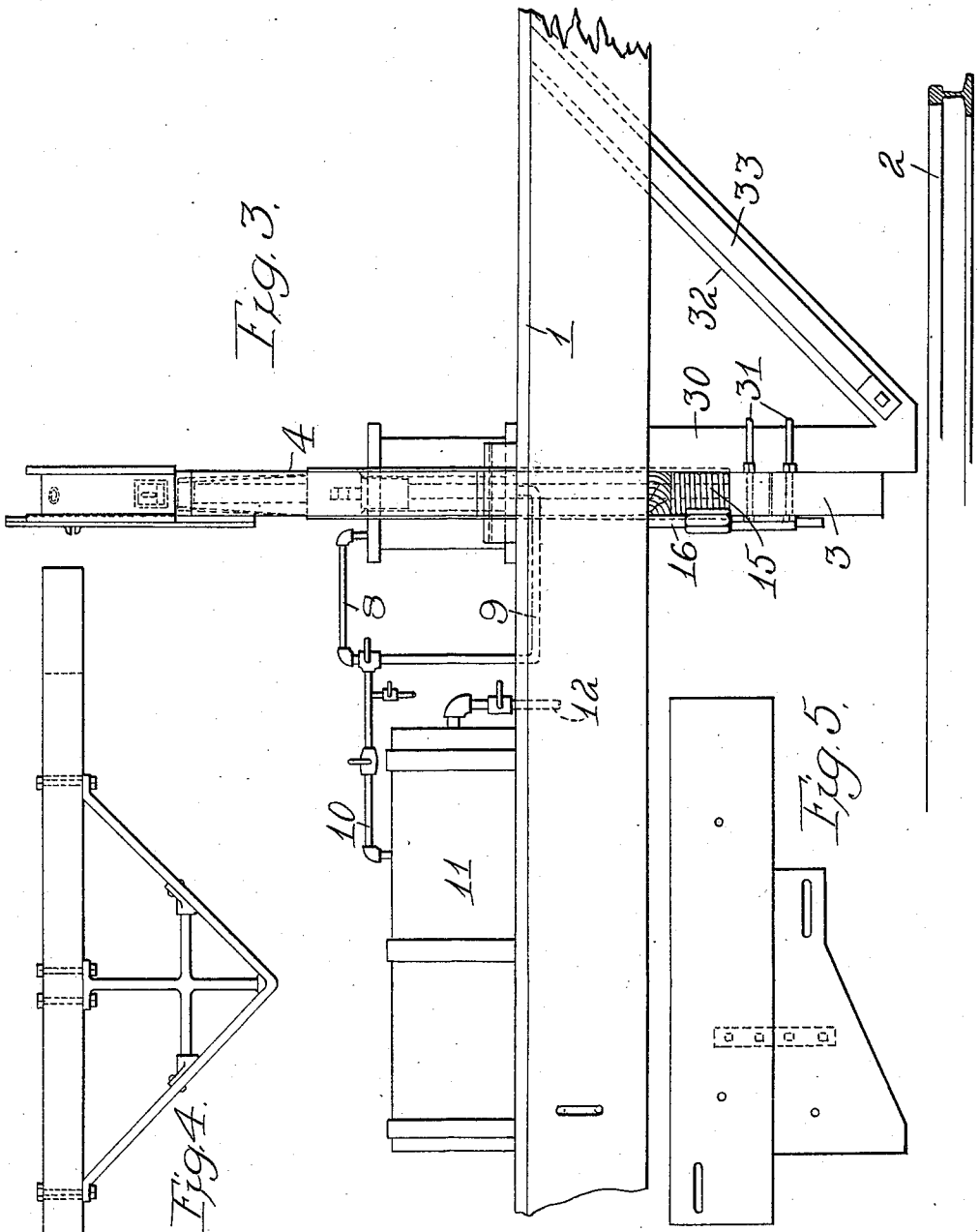








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# UNITED STATES PATENT OFFICE.

THERON SAMUEL CAFFERTY, OF UNION, NEW YORK, AND JOHN FLETCHER MARKLE, OF CHANUTE, KANSAS.

## BALLAST-DRESSER.

1,046,262. Specification of Letters Patent. Patented Dec. 3, 1912.

Application filed February 20, 1912. Serial No. 678,915.

*To all whom it may concern:*

Be it known that we, THERON SAMUEL CAFFERTY and JOHN FLETCHER MARKLE, citizens of the United States, residing at Union, New York, and Chanute, Kansas, respectively, have invented certain new and useful Improvements in Ballast-Dressers, of which the following is a specification.

Our invention relates to improvements in ballast dresser apparatus such as shown in Letters Patent of the United States granted to T. S. Cafferty, Reissue 13194, January 10/11, and Letters Patent of the United States granted to T. S. Cafferty and J. T. Markle, 978691, December 13/10.

Our present invention consists in the features, combination and arrangement of parts hereinafter described and particularly pointed out in the claims.

In the drawings—Figure 1 is a cross section of the platform of the car carrying our improvements, the parts being shown in relation to the rail upon which the car or apparatus runs. Fig. 2 is a view similar to Fig. 1 with the parts of the apparatus in a different position, the side wings used for making the shoulder along the track being raised in this view. Fig. 3 is a side view of a portion of the platform of a car with our improvements attached, the apparatus being shown in its proper relation to the rail. Fig. 4 is a plan view of the plow attachment for acting on the ballast. Fig. 5 is a detail view.

In these drawings the platform of the car is shown at 1, and the rails are shown at 2.

3 indicates the spreader board which is designed to act upon the ballast and distribute or spread the same to a proper level between the rails and along the outer side of the rail. This spreader board is connected with hangers 4 which pass up through the body of the car and are connected with a cross piece 5 to which cross piece is connected a piston rod 6, the piston of which works in a cylinder 7 mounted on the platform, which cylinder is supplied with air through the pipe connections 8 and 9 to raise or lower the piston and thus raise or lower the hangers 4 and the attached spreader board 3. The pipes 8 and 9 connect with a pipe 10 leading from an air tank 11 mounted on the car, said tank being supplied in turn with compressed air from the train pipe through a branch connection 12. Suitable valves are provided in these pipe connections for controlling or directing the compressed air. The dresser board 3 is also guided vertically by rods 13 extending up into guideways or openings in the cross beam 14 of the car body, spring 15 being interposed between the dresser board and the beam 14, tending to force the dresser board downwardly. The dresser board has also connected thereto rods 16 passing up through the platform of the car, the lower ends of these rods passing through guide-plates 17 bolted to the face of the dresser board and the lower ends of these rods project downwardly beyond the guide plates. These lower ends engage keepers 18, connected with side wings 19 which are located outside of the rails of the track and are formed with inclined lower edges 20 to form the shoulder of the road bed or ballast at the proper distance from the rails. These wings have their inner portions partly overlying the face of the main dresser board 3 as shown at 21, and they are connected with blocks 22 carried by hangers or arms 23 pivotally mounted at 24 in suitable bearings on the platform. These arms or hangers 23 have brackets 25 bolted or riveted thereto and to these brackets links 26 are connected the inner ends of said links being pivoted to bell crank levers 27 pivoted to supports 28 mounted on the platform of the car, the said bell-crank-lever being also connected with the vertically movable hangers 4 which raise and lower the main dresser board 3 as before described.

When the parts are in the position shown in Fig. 1, that is with the dresser board 3 in its lowermost position to act against the ballast and level it up in relation to the rails, the side wings 19 for forming the lateral shoulders of the road bed are in the position shown, forming therefore extensions of the dresser board 3 laterally and inclining downwardly. When in this position the blocks 22 to which the wings 19 are attached bear on the end faces of the main dresser board 3 and the tail portions or inner parts of the side wings overlie the face of the dresser board 3, being held by the latch rods 16 engaging the keepers 18, and furthermore, extensions 22′ of the blocks 22 overlie the other face of the dresser board and thus the wings 19 will be held securely to the ends of the dresser board 3, deriving substantial support

therefrom. When the compressed air is directed to the underside of the piston in the cylinder 7 and the frame or hangers 4—4 rise, the dresser board 3 will be lifted from the position shown in Fig. 1 to the position shown in Fig. 2 so as to be out of service, being considerably above the rails 2, in this latter position. This same pneumatic mechanism for elevating the dresser board is also used for elevating the side wings entirely out of service, these wings being then in the position shown in Fig. 2 above the platform of the car, this action being due to the hangers 4 operating the bell-cranks 27, which through the links 26 acting through the slotted brackets 25 will turn the hangers or supports 23 outwardly and upwardly to thus lift the side wings as shown in Fig. 2, it being understoood, however, that the latch rods 16 are first detached from the wings by raising them. These latch rods may be held up by a pin thrust through a bracket 29 on the platform of the car, said pin engaging any one of a series of holes in the latch rod.

The spreader board may be braced by braces 30 depending from the platform of the car, these braces having a vertical portion along which the spreader board slides, being in connection therewith, however, by bolts 31 which will allow this sliding movement. The braces also have inclined portions 32 extending from the lower ends of the vertical portions to the car body, and also laterally inclined brace rods 33.

We may use in some cases a plow attachment shown in Fig. 4, this having converging walls or members for forcing the ballast from the top of the ties out over the top of the rails.

When working on a double track we take one of the side wings off and connect a long spreading blade which spreads the ballast level between the two tracks. In Fig. 5 we show a wing plate to be used between double tracks, this plate is to be bolted to the block 22 after removal of the wing plate 19.

We claim as our invention:—

1. In combination with a car platform, a dresser board, side wings supported against the thrust of the ballast by the said dresser board, and means for moving the side wings to and from working position including a vertically moving frame and lever connections to the side wings, substantially as described.

2. In combination in apparatus of the class described, a car platform, a dresser board with means for raising and lowering the same, side wings engaging the dresser board, latch means for holding the side wings in place on the dresser board, movable supports for the side wings and means for operating said supports through the raising of the dresser board, substantially as described.

3. In combination in apparatus of the class described, a car frame or platform, a dresser board, a side wing separable from the dresser board and movable from a position at the end of said dresser board below the platform to a position above the same, and operating connections for the dresser board and wing, substantially as described.

4. In combination in apparatus of the class described, a car platform, a vertically adjustable dresser board, a vertically adjustable side wing separable from the dresser board and movable toward and from the same, and connections for elevating the side wing from or lowering the same to a position at the end of the dresser board, said side wing when lowered engaging the dresser board, substantially as described.

5. In combination in apparatus of the class described, a car platform, a dresser board adjustable vertically in relation to the platform, a side wing separable from the dresser board and vertically movable from its lower position extending laterally from the car to a position substantially within the limits of the car platform and connections for simultaneously adjusting the dresser board and side wing, substantially as described.

6. In combination in an apparatus of the class described, a car platform, a dresser board, a side wing, a vertically movable frame connected with the dresser board, a support for the side wing pivotally connected with the platform and a connection from the vertically movable frame to the support of the side wing for elevating or lowering the same simultaneously with like movements of the dresser board, substantially as described.

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