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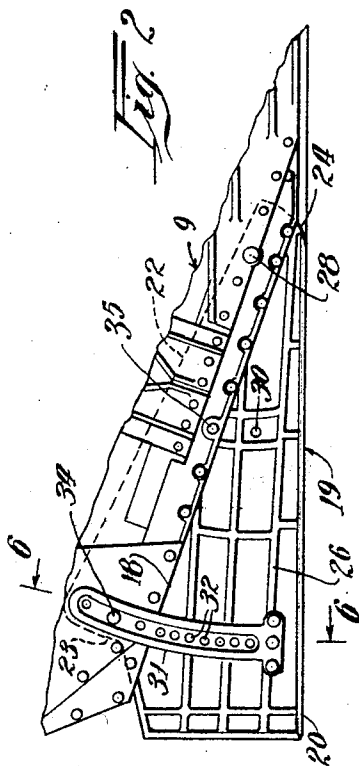
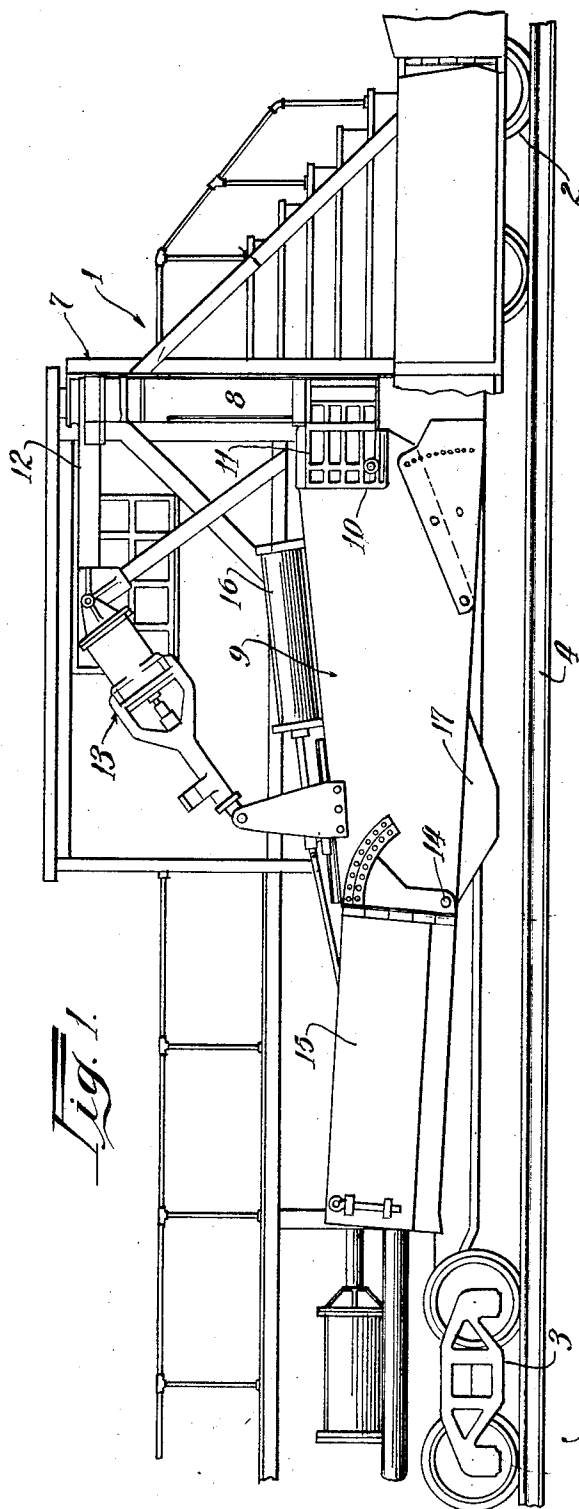
H. W. PROTZELLER

1,816,869

RAILROAD SPREADER

Filed Dec. 18, 1929

2 Sheets-Sheet 1



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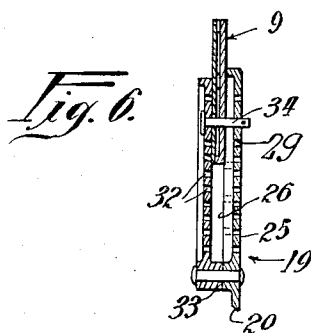
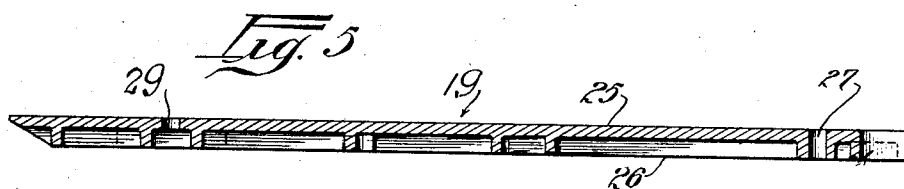
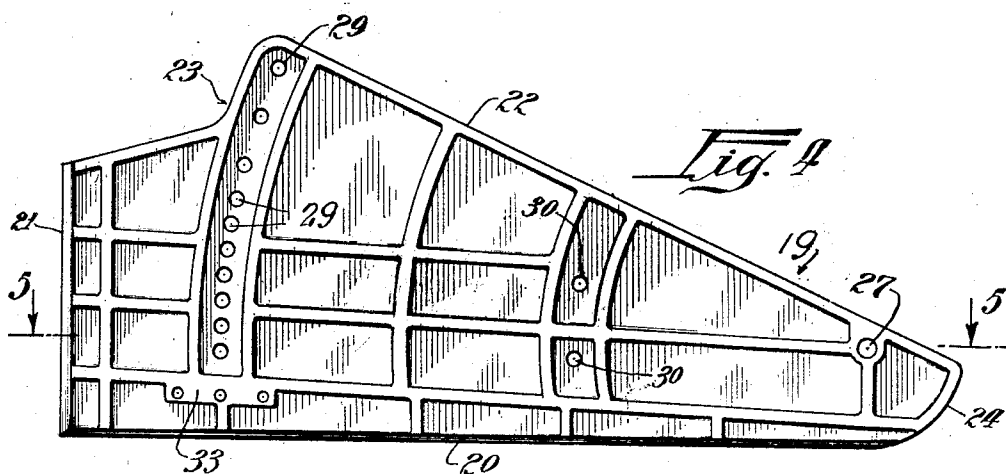
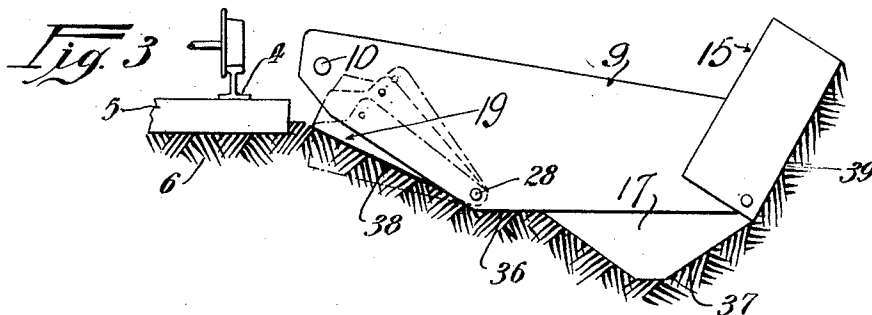
H. W. PROTZELLER

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RAILROAD SPREADER

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

HARRY W. PROTZELLER, OF EAST CHICAGO, INDIANA, ASSIGNOR TO O. F. JORDAN COMPANY, OF EAST CHICAGO, INDIANA, A CORPORATION OF INDIANA

RAILROAD SPREADER

Application filed December 18, 1929. Serial No. 414,892.

This invention relates to improvements in railroad spreaders and it consists of the matters hereinafter described and more particularly pointed out in the appended claims.

6 The primary object of the invention is to provide simple and efficient means, carried by the main spreader wing for forming the breast or ballast slope line between the track and berm of a railroad embankment, which
10 means is so disposed with respect to the wing as to be capable of adjustment to produce the desired angularity or slope to the breast.

The above mentioned object of the invention as well as others, together with the many
15 advantages thereof will more fully appear as I proceed with my specification.

In the drawings:—

Fig. 1 is a view in side elevation of a railroad spreader embodying the preferred form
20 of my invention.

Fig. 2 is a fragmentary view in rear elevation of the bottom inner corner of the main spreader wing with the improved shoulder forming blade operatively connected there-
25 to.

Fig. 3 is a transverse vertical sectional view through a portion of a railroad bed or embankment capable of being produced by my improved structure.

30 Fig. 4 is a view in rear elevation of the shoulder forming blade embodying my invention.

Fig. 5 is a horizontal sectional view through the same as taken on the line 5—5
35 of Fig. 4.

Fig. 6 is a detail vertical sectional view through a portion of the main spreader wing and shoulder former as taken on the line 6—6 of Fig. 2.

40 Referring now in detail to that embodiment of the invention illustrated in the accompanying drawings, 1 indicates as a whole the car of a railroad spreader mounted upon front and rear trucks 2 and 3 respectively,
45 adapted for travel upon the rails 4 of a railroad track. Said track includes the ties 5 disposed in the usual manner upon the ballast 6 of a railroad bed or embankment as best shown in Fig. 3.

50 At each side of the car, to the rear of the

front truck 2 is an upright wing supporting post 7 in which a carriage 8 is capable of a vertical guided, adjustable movement. 9 indicates as a whole the main spreader wing pivotally connected as at 10 to a hinge plate 11, the same being operatively connected
55 with the carriage whereby the wing may be swung away from and in toward the car 1. The carriage includes a boom 12 and between the outer end of said boom and the top edge portion of the wing 9 is located power cylinder means 13 whereby the wing may be
60 swung in a vertical plane about the pivotal connection 10 with the hinge plate 11, into the desired angular position.

At the outer end of the wing and pivoted thereto as at 14 is a bank shaper and extension wing 15. Said wing may be swung into the desired angular position about the pivot 14 by means of a power cylinder 16 and associated parts, carried upon the top edge portion of the main spreader wing. Said main
70 spreader wing also carries near its outer bottom end, a ditching blade 17 adjustable in a manner to form the desired depth of ditch.

The inner bottom corner of the main spreader wing is cut away or bevelled off as at 18 and associated therewith is a shoulder forming blade 19. Said blade which is preferably made as an integral casting, is in form
75 of a plate having a straight bottom edge 20, an inner end edge 21 disposed at approximately a right angle thereto, and a top edge 22 which tapers from a cut away inner corner 23, downwardly toward the outer end corner
80 24 of the blade which is rounded to meet the bottom edge of the blade. Such a blade which is best shown in Figs. 4 and 5, has a flat front face 25 and a heavily ribbed rear face 26, the latter face being engaged with the front face of the main spreader wing when assembled in place with respect thereto.

Adjacent the outer rounded corner 24 of the blade, near the tapered top edge 22 is located a hole 27 through which a pin 28
85 extends to pivotally connect said blade to the wing 9 at a point adjacent the junction of the bottom edge thereof and the rounded outer end corner 24 thereof. The blade is provided with two sets of holes 29 and 30 respec-
90 100

tively disposed on arcs concentric with the opening 27. Fixed to the rear ribbed face of the blade in line with the holes 29 is an arcuate guide plate 31 having holes 32 therein disposed to register with the holes 29 in the blade. Said guide is bolted at its bottom end to a seat 33 provided therefor on the rear face of the blade and the main portion of said guide above its bottom end is spaced from the rear face of the plate a distance substantially equal to the thickness of the main spreader wing. A pin 34 is adapted to be inserted through the desired registering openings 29 and 32 and through an opening in the spreader wing arranged to be brought into line therewith.

A second pin 35 is employed in connection with the openings 30 and an opening in the wing, to assist the pin 34 in locking the blade in two different positions. The second mentioned pin is precautionary and is adapted to assist in holding the blade in its uppermost adjusted position as when the spreader is in transport from one place of use to another.

Referring now to Fig. 3, it is apparent that the bottom edge of the main spreader wing, between the ditching blade 17 and cut away corner 18 of the spreader wing, forms the berm 36 of the road bed, while said blade 17 forms the ditch 37 and said blade 19 forms the breast or ballast slope 38. The angularity of this breast or slope, of course, is determined by the position of the blade 19. Thus as different railroads specify different slopes or breast angularities, any slope or breast angularity within reason may be produced with the aid of my improved spreader construction. Again the extension or bank shaper 15 may be adjusted to form the desired bank 39 to the outside of the ditch.

To change the angularity of the breast or slope it is only necessary to remove the locking pin associated with the shoulder forming blade and then swing the same up or down to give the desired angularity and then said blade is relocked. The shoulder forming blade is strong and rigid and with it, the desired breast angularity is readily attained.

While in describing my invention, I have referred in detail to the form and arrangement of the parts thereof, the same is to be considered merely as illustrative so that I do not wish to be limited thereto except as may be specifically pointed out in the appended claims.

I claim as my invention:

1. A railroad spreader embodying therein a car, a spreader wing operatively connected thereto and having a cut away portion at its inner bottom corner, and a member pivoted to said wing adjacent said cut away corner and swingably adjustable in the plane of the wing to define the ballast breast forming edge for said wing at said corner.

2. A railroad spreader embodying therein a car, a spreader wing operatively connected thereto and having a cutaway portion at its inner bottom corner, a ballast breast forming blade pivoted at one end to said wing adjacent said cutaway portion and means providing a pin and hole adjustment for the other end of said blade with respect to said wing to hold the blade in the desired angular position.

3. A railroad spreader embodying therein a car, a spreader wing operatively connected thereto and a ballast breast forming blade pivoted at one end to the front side of the wing, a guide carried by said blade to engage the rear side of the wing and means providing a pin and hole adjustment for the other end of said blade with respect to said wing to hold the blade in the desired angular position.

4. A railroad spreader embodying therein a car, a spreader wing operatively connected thereto and having a cut away portion at its inner bottom corner, a member associated with said cut away portion and pivoted at one end to the front side of the wing, a guide fixed to said blade and engaging the rear side of the wing, there being registering holes in said blade and guide respectively disposed on an arc concentric with the pivotal axis of said blade and a pin adapted to be inserted through desired registering openings in said blade and guide respectively and through said wing to lock the blade in the desired angular position.

5. A shoulder forming blade for a railroad spreader comprising a flat substantially segmental plate like member relatively wide at one end and tapering along its top edge toward the other end and having an opening in said other end and a plurality of openings in said wide end disposed in an arc concentric with respect to said opening in said other end there also being a second plurality of openings disposed in an arc smaller than the first mentioned one and also concentric with respect to said opening in said other end, the active front face of said member being flat and the other face of said member having ribs, certain ones of which are arcuate and are arranged in pairs with a pair of such ribs for each set of said pluralities of openings.

In testimony whereof, I have hereunto set my hand, this 12th day of December, 1929.

HARRY W. PROTZELLER.