

June 30, 1953

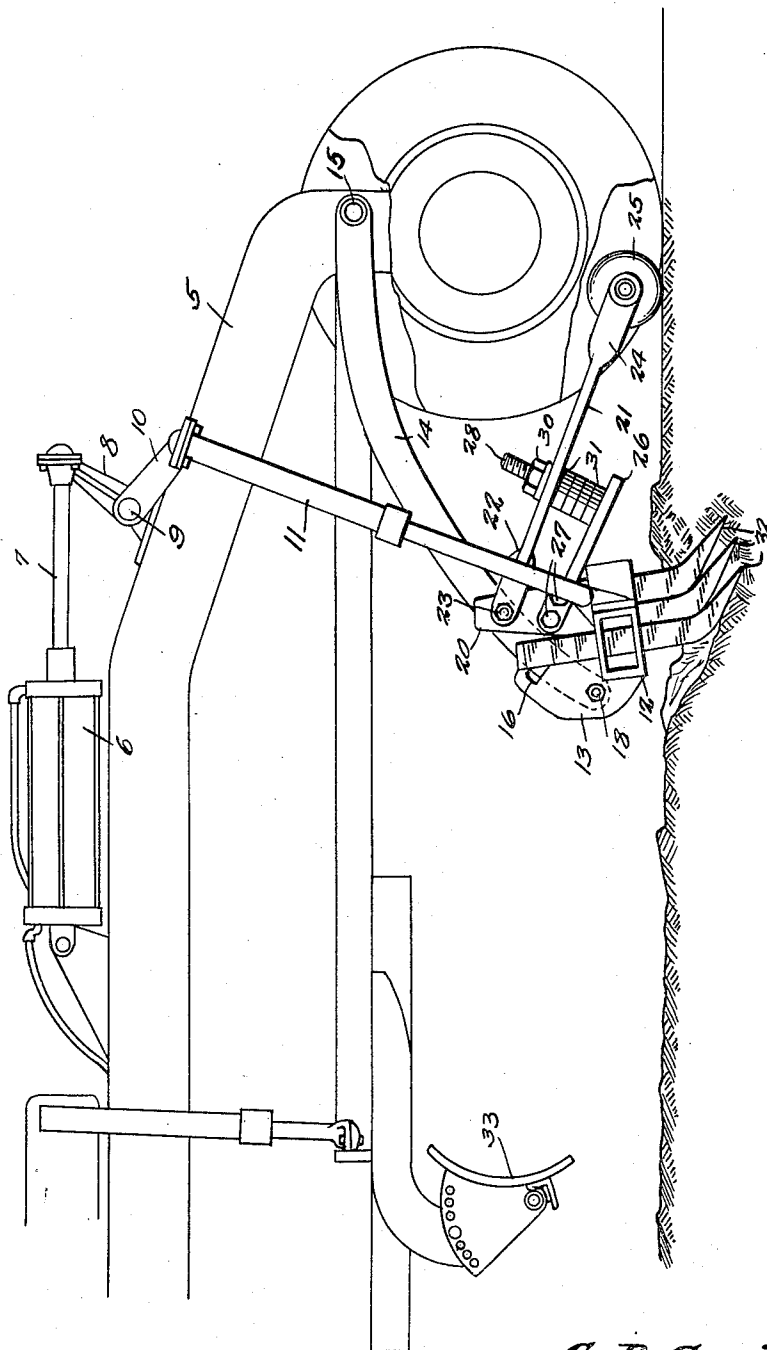
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2,643,868

DEPTH CONTROL MEANS FOR SCARIFIERS

Filed May 4, 1950

2 Sheets-Sheet 1



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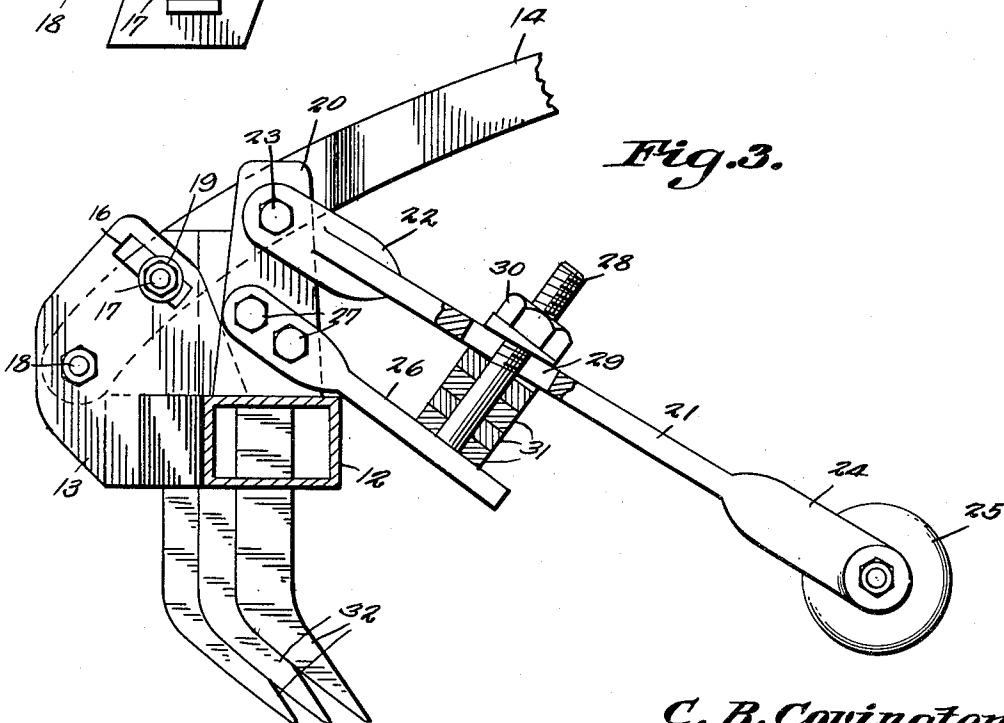
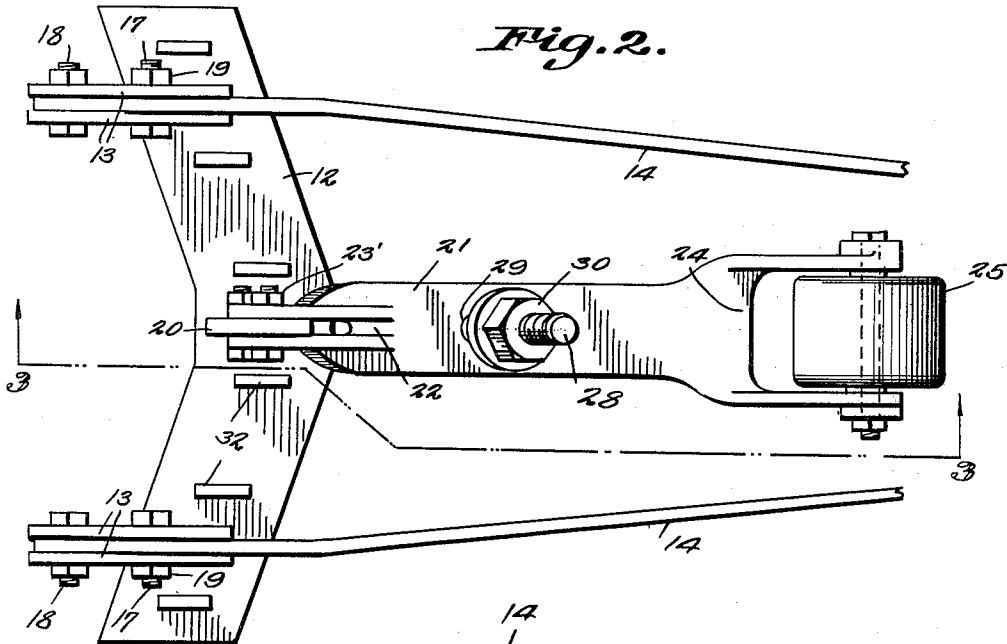
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DEPTH CONTROL MEANS FOR SCARIFIERS

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2,643,868

DEPTH CONTROL MEANS FOR SCARIFIERS

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Application May 4, 1950, Serial No. 160,074

1 Claim. (Cl. 262—10)

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This invention has reference to scarifiers used in conjunction with road machines in conditioning roads, the primary object of the invention being to provide a scarifier attachment mounted in such a way and having means whereby the depth of operation of the scarifier teeth may be regulated to meet various requirements of use.

Another object of the invention is to insure a constant depth of scarifying which is necessary to obtain the desired crown on the finished grade.

Still another object of the invention is to provide a roller supported guide arm extending forwardly from the scarifier frame, whereby said scarifier frame and teeth are raised and lowered as the roller moves over an uneven road surface, during the scarifying operation.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawings:

Figure 1 is a side elevational view of one end of a road machine, illustrating a scarifying attachment constructed in accordance with the invention, as mounted thereon.

Fig. 2 is an enlarged plan view illustrating the scarifier frame and guide arm forming a part thereof.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2.

Referring to the drawings in detail, the forward end of the conventional road machine is indicated generally by the reference character 5, which machine supports the cylinder 6 in which the piston rod 7 operates, the piston rod 7 being connected with the arm 8, secured to shaft 9, to which the arm 10 is also secured, the arm 10 having connection with the connecting rod 11 that also has connection with the scarifier frame 12. Rising from the scarifier frame 12 at points adjacent to the ends thereof, are spaced supporting plates 13, between which the arms 14 are secured, the arms 14 extending forwardly where they have pivotal connection with the frame 5, at 15. The plates 13 are formed with elongated openings 16 through which the bolts 17 extend, which openings and bolts permit of adjustment of the frame 12 with respect to the arms 14, to vary the angle of operation of the scarifier. The pivot point between the arms 14 and plates 13, is indicated at 18, and when the nuts 19 of the bolts 17

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are tightened the scarifier frame will be secured in its positions of adjustment. The reference character 20 indicates a vertical plate that rises from the central portion of the scarifier frame and provides a means to which the arm 21 is pivotally connected, the arm 21 having a bifurcated end 22 fitted over the plate 20 and connected thereto by the bolt 23. The nut 23' is provided on the bolt 23 to secure the arm 21 in its positions of adjustment with respect to the plate 20. This arm 21 is provided with a forked end 24, in which the roller 25 is mounted, the roller 25 being constructed to move over the road surface in advance of the scarifier frame.

Associated with the arm 21, is the arm 26 which is bolted to the vertical plate 20 by the bolts 27, the arm 26 being disposed in substantially parallel relation with the arm 21. Secured to the arm 26, is the bolt 28, which has its threaded end extended through the elongated opening 29 formed in the arm 21, there being provided a nut 30 on the threaded bolt 28 for adjusting the arm 21 with respect to the stationary arm 26. Spacing members 31 are positioned on the bolt 28 and are held between the arm 26 and arm 21 to properly space the arms 21 and 26. Should it be desired to change the angle of operation of the arm 21 to cause the scarifier to operate at a greater depth, the desired spacing members 31 will be positioned between the arms 21 and 26, to change the angle of the arm 21.

In order to elevate the scarifier it is only necessary to remove the desired number of spacing members 31 and allow the arm 21 to move downwardly. The bolt 28 with the nut 30, are now secured, holding the arm 21 in its adjusted position.

The reference character 32 indicates scarifying teeth which are arranged in spaced relation along the frame 12 and are so pitched that they dig into the road surface to accomplish the scarifying result.

From the foregoing it will be seen that due to the construction shown and described, the scarifier when lowered to its operative or digging position, may move vertically due to the action of the arm 21 and roller 25. The roller 25 as it moves over irregularities in the road surface raises and lowers the arm 21 which movement is transmitted to the arms 14, thereby insuring the operation of the scarifier teeth, at a predetermined depth.

It will, of course, be understood that the piston rod 7 is operated in the usual manner by directing air into the cylinder 6 at either end, to raise or lower the scarifier.

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From the foregoing it is believed that a further detailed description as to the operation of the scarifier is unnecessary.

However, it might be stated that the reference character 33 indicated the grading blade of the usual road machine, which may be moved into and out of operation in the usual and well known manner, at the will of the operator.

Having thus described the invention, what is claimed is:

A scarifier attachment for road machines, comprising a horizontal frame having openings in which scarifying teeth are mounted, pairs of spaced supporting plates rising from said frame, said plates having elongated openings, supporting arms having their forward ends connected with the road machine, means for pivotally connecting the rear ends of the supporting arms between said supporting plates, bolts extending through said arms and elongated openings of said supporting plates, securing said frame in various angular positions with respect to the supporting

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arms, a gauge arm connected to said frame at a point intermediate the ends of the frame and between said supporting arms, said gauge arm extending forwardly from the scarifier frame, a roller mounted on the forward end of the gauge arm, and said roller being movable over the road surface in advance of the scarifier, raising and lowering the scarifier as the roller moves vertically.

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