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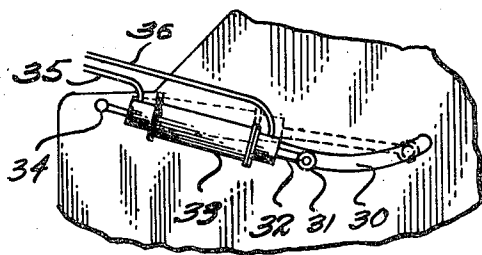
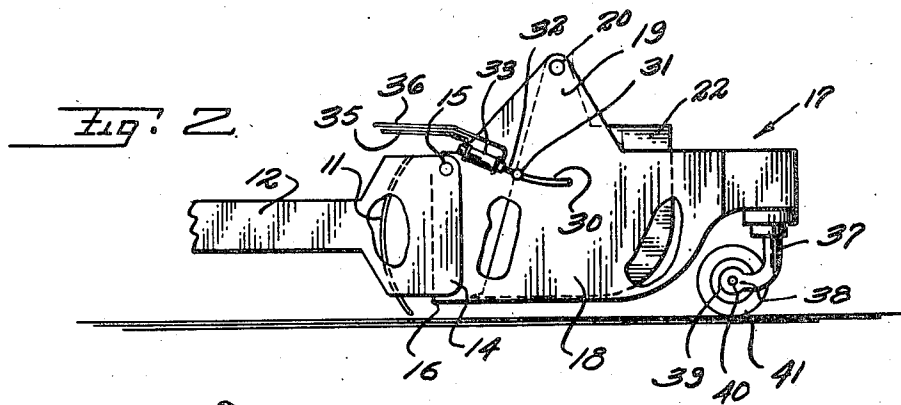
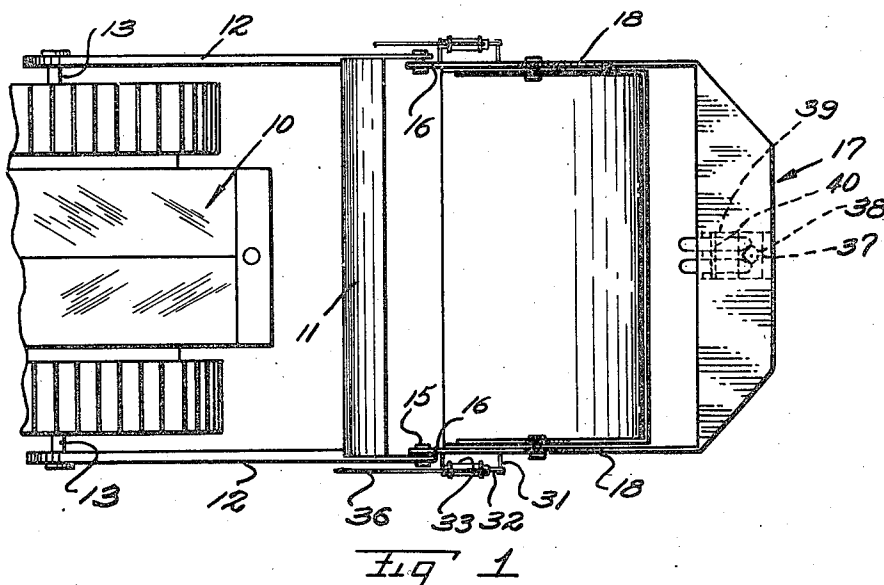
D. BAKER

2,483,033

EARTH MOVING APPARATUS

Filed Dec. 7, 1945

2 Sheets-Sheet 1



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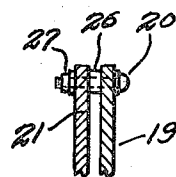
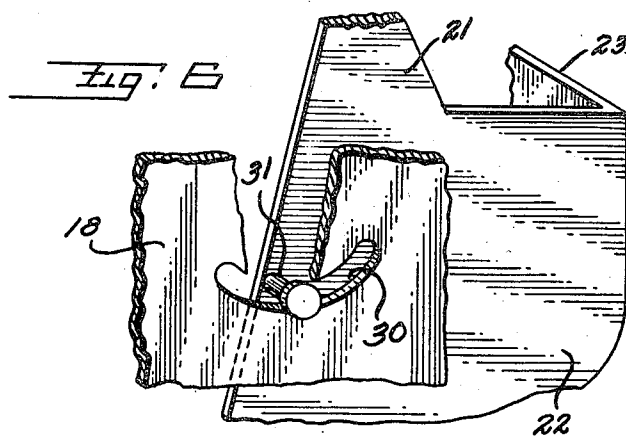
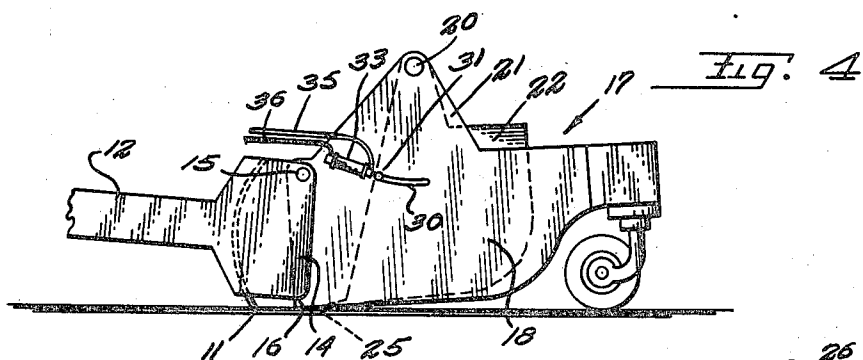
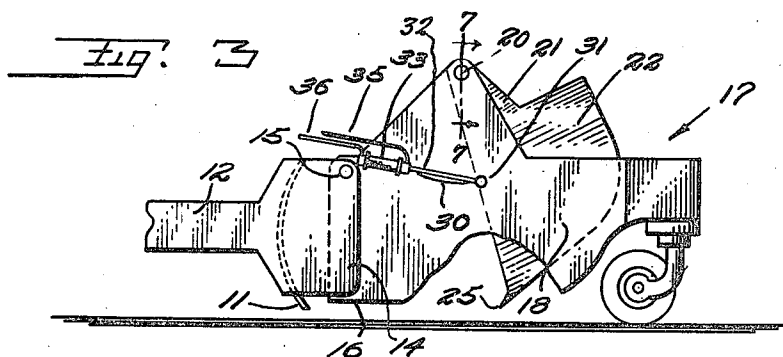
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EARTH MOVING APPARATUS

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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EARTH MOVING APPARATUS

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1 Claim. (Cl. 37-124)

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This invention relates to an earth moving apparatus, and more particularly to a scraper and earth carrying device adapted to be utilized in conjunction with a bulldozer.

A primary object of this invention is the provision of means associated with a conventional bulldozer blade, whereby the earth scraped up by the blade is deposited in a conveniently carried receptacle, positioned in front of the blade, in order that the same may be carried to a desired location for disposal.

An additional object of the invention is the provision of an attachment to be positioned in front of a bulldozer blade providing a receptacle into which earth may be forced by the blade, and having means whereby the receptacle may be readily dumped when desired.

A still further object of the invention is the provision of a receptacle adapted to be pushed in front of the tractor, thus giving the driver the advantage of continuous observation of the work.

A further object of this invention is the provision of such a device provided with castor-type wheels, whereby the same may be moved backwardly or forwardly as desired, without the necessity of shifting the position of the device relative to the tractor.

Other objects reside in the combinations of elements, arrangements of parts and features of construction, all as will be more fully pointed out hereinafter and disclosed in the accompanying drawing wherein there is shown a preferred embodiment of this inventive concept.

In the drawings:

Figure 1 is a top plan view of one form of attachment embodying the features of the instant inventive concept attached to a bulldozer blade carried by a conventional tractor, only a fragment of the latter being shown.

Figure 2 is a side elevational view of the device attached to the bulldozer blade, certain parts thereof being broken away, and certain other parts being indicated in dotted lines, showing one position of adjustment.

Figure 3 is a view similar to Figure 2 but showing a different position of adjustment.

Figure 4 is a view similar to Figures 2 and 3 but showing a still further position of adjustment.

Figure 5 is an enlarged fragmentary side elevational view showing a constructional detail, a different position of adjustment being shown in dotted lines.

Figure 6 is an enlarged fragmentary detail view

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showing the connection of certain of the operating elements.

Figure 7 is an enlarged sectional view taken substantially along the line 7-7 of Figure 3.

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

Referring to the drawings, and particularly to Figure 1, there is generally indicated at 10 a tractor of any desired conventional type carrying a scraper blade 11 secured to the tractor as by conventional arms 12 rotatably secured on axles or shafts 13. Any suitable conventional means are provided for rotating the arms to raise and lower the scraper blade 11.

Extending forwardly on either side of the blade 11 are plates 14, to which are pivotally secured as by pivot pins 15 extensions 16 comprising inner extremities of a frame member generally indicated at 17.

The extensions 16 are integral parts of the side walls 18 of frame 17. The side walls 18 are provided with upwardly extending portions 19.

Pivotally secured to the upper extremities of the projection 19 as by pivot pins 20 are upwardly extending portions 21 of the side walls 22 of an earth carrying receptacle including an end wall 23, a bottom 24 and a scraping lip 25. The face of the receptacle adjacent the scraper blade 11 is open. As best shown in Figure 7 a washer 26 is provided between the members 19 and 21 surrounding the pivot bolt 20 in order to permit free pivotal movement of the receptacle within the frame. The parts are secured in related assembly as by a nut 27 engaging the threaded extremity of the pivot bolt 20.

As best shown in Figure 6, an arcuate slot 30 is cut in each side wall 18 of the frame 17, through which slot extends a headed pin or bolt 31 secured to the side wall 22 of the receptacle at a point adjacent the edge thereof positioned toward the scraper blade 11. Secured to each pin 31 is the plunger 32 of a hydraulic cylinder 33, which is pivotally secured as by a pivot 34 to the side wall 18 at a point adjacent the top thereof. Fluid for moving the piston in the cylinders is introduced through lines 35 and 36 at the respective ends of the cylinder 33, the fluid being supplied from any desired source carried by the tractor.

The forward end of the frame 17 is provided on its underside with a vertical axle 37 journaled for rotation in suitable bearings (not shown) and terminating in a bifurcated portion 38, which carries double heavy duty wheels 39 mounted on an

axle 40 and preferably provided with rubber tires 41.

From the foregoing the operation of the device should now be readily understandable. Figure 4 discloses the position of the parts with the scraper blade 11 lowered, and the frame 17 being pivotally rotated with respect to the scraper blade in such manner that the lip 25 rests substantially on the ground to permit dirt or other material pushed forwardly by the blade to enter into the receptacle. After the receptacle is filled, the blade 11 is raised in the conventional manner which moves the parts to the position disclosed in Figure 2, whereupon the entire device may be moved by the tractor to any desired position for disposal of the earth.

When the load has been moved to the desired locality the hydraulic mechanism 33 is actuated to move the pins 31 in the slots 32 to the position shown in Figure 3, whereupon the load may be dumped. While in this position the tractor may be moved either forwardly or backwardly, utilizing the scraper blade 11 or the lip 25, as desired, to smooth out and distribute the earth dumped from the device.

From the foregoing it will now be seen that there is herein provided an improved apparatus for handling and moving earth or similar materials, which accomplishes all the objects of this invention, and others, including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore

shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. An earth moving apparatus including a tractor having a blade attached thereto, a receptacle having its open end adjacent to and facing said blade, the base of said receptacle having at its open end a scraping edge, said blade having a frame pivotably secured thereto at its foremost edge, rolling means supporting the forward end of said frame, said receptacle being pivotably secured within said frame at the uppermost extremity thereof, a headed pin connected to each side wall of the receptacle and extending through an arcuate slot in each side wall of said frame, whereby said receptacle is pivotably secured to said frame at its uppermost end and slidably engaged with said frame below said pivotable connection, and hydraulic means for tilting said receptacle secured to said pins and pivotably secured to said frame sides.

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