June 11, 1940.

E. GLORFIELD

2,204,487

TWO WAY PLOW

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2 Sheets-Sheet 1

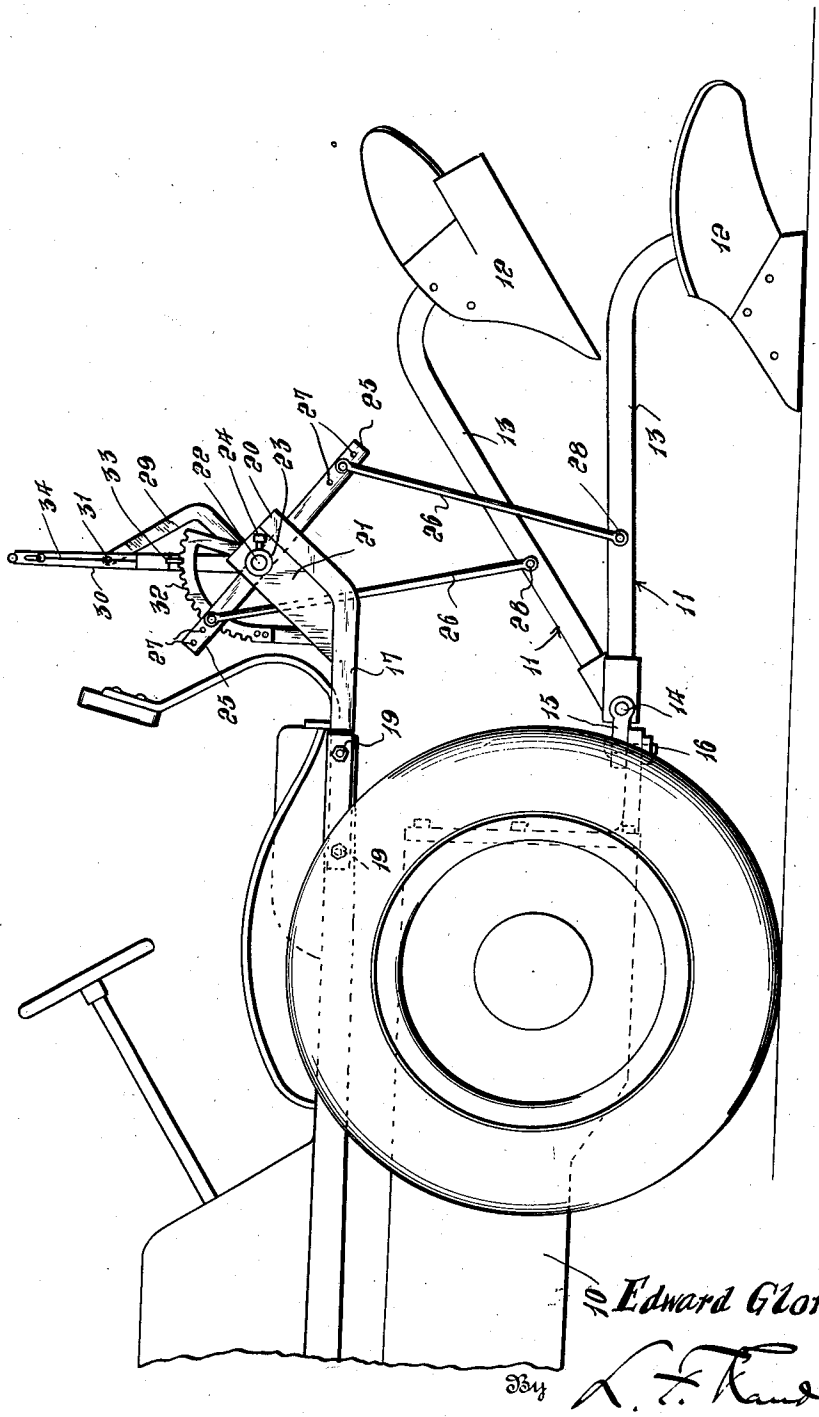


Fig. 1.

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Fig. 2.

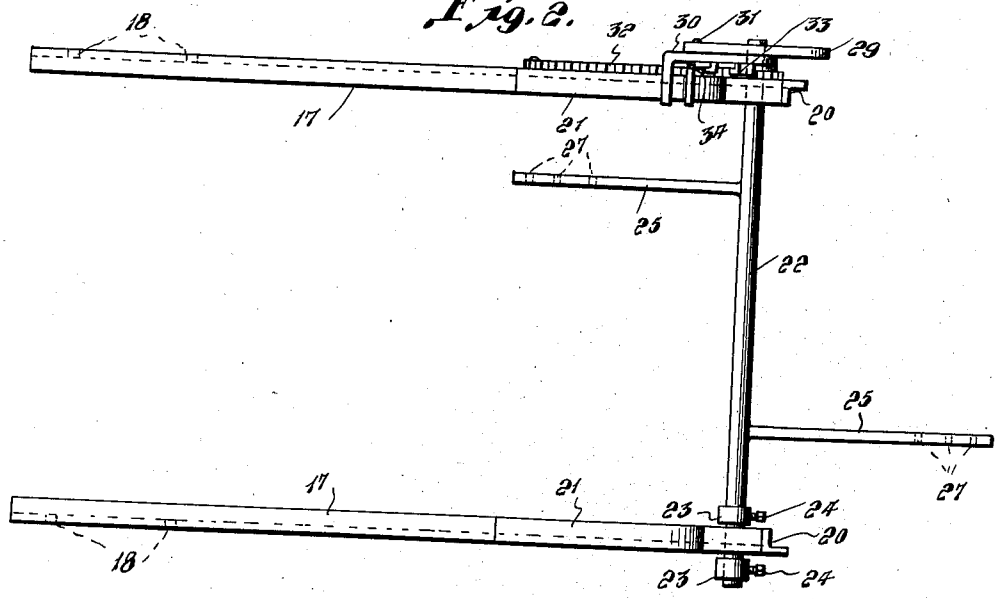
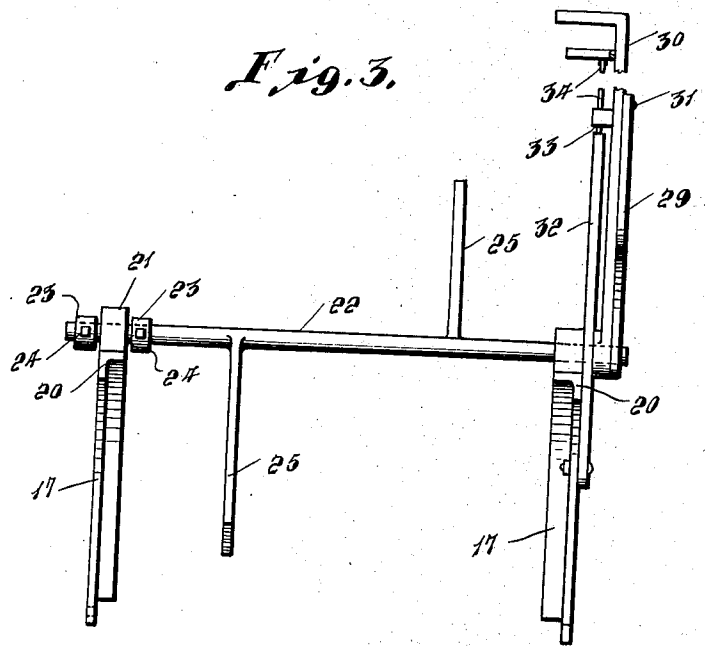


Fig. 3.



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UNITED STATES PATENT OFFICE

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TWO WAY PLOW

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Application November 9, 1939, Serial No. 303,694

3 Claims. (Cl. 97—29)

This invention relates to an operating attachment for two way plows.

At the present time, where two way plows are employed, they are individually adjustable or raised and lowered by a lever mechanism or the equivalent, associated one with each of them. The present invention aims to supplant an operating mechanism by an attachment, which will render the operation more expeditious and efficient and simpler, and especially provides a single lever operated mechanism to raise one of the plows as the other plow is lowered, and vice versa.

The more specific objects and advantages will become apparent from a consideration of the description following taken in connection with accompanying drawings illustrating an operative embodiment.

In said drawings:

Figure 1 is a view in side elevation, showing my improvements employed in connection with a two way plow drawn by a tractor, the latter being shown fragmentarily;

Figure 2 is a plan view of the operating attachment according to the invention, and

Figure 3 is a rear elevation of such operating attachment.

Referring specifically to the drawings wherein like reference characters designate like or similar parts, 10 designates a conventional tractor having a two way plow construction 11 hitched thereto. Such two way plow structure 11 consists of a plurality of plows or moldboards 12, each of which is carried by a beam 13, and which beams are pivoted as at 14, to a bracket 15, detachably bolted or otherwise fastened at 16 to the frame or a part of the tractor 10. It will be clear that the plowshares 12 and their beams 13 are individually capable of being lifted or raised vertically on a horizontal axis at 14. Normally, such plowshares and beams 13 have individual operating or lifting devices so that each of them may be lifted or raised and lowered independently of each other as desired.

In accordance with the present invention, an attachment or means are provided whereby as one beam and plowshare 12 is lifted, the other beam and plowshare 12 will be lowered or moved in the opposite direction, and vice versa. My invention supplants the devices which lift or raise and lower the beams and plowshares independently. Such device consists of parallel bars 17, having openings at 18, whereby they may be bolted or otherwise secured as at 19, to adjacent parts of the frame of the tractor 10. For the most part, the bars 17 are of angle iron construction. At their rear portions, they extend angularly upward as at 20 and have bearing walls or webs at 21.

Spanning said webs 21 and journaled therein, is a rockshaft 22, held against displacement in any desired manner as by means of collars 23, thereon on opposite sides of one of the bars 17 and removably secured in place by binding screws 24.

Extending rigidly from the rockshaft 22 in longitudinal spaced relation, and preferably at 180° apart, are cranks or arms 25 to which links 26 are pivoted, the adjacent terminals of which may be secured in any of a series of openings 27 in the cranks 25, to afford adjustment. Said links 26 at their lower ends as at 28, are pivoted one to each of the beams 13.

One end of the rockshaft 22 terminates in an integral, generally V-shaped bracket 29. An operating member or lever 30 has an opening at its lower end through which rockshaft 22 passes. Such lever as at 31 is riveted or otherwise rigidly fastened to the bracket 29 so that a very rigid operating member for the rockshaft 22 is provided.

Adjacent said operating member or lever 30, a toothed segment 32 is secured in any suitable way to one of the walls or webs 21. Said lever 30 is equipped with a plunger or latching device 33 engageable with any of the notches in the segment 32 to hold the lever in different adjusted positions. Said plunger or latch 33 is adapted for operation by any conventional means 34, provided on the lever.

As a result of the construction described, movement of the lever 30 when unlatched, in one direction will raise one of the plowshares 12 and beam 13 while the other plowshare 12 and beam 13 will be lowered, because of the rocking of shaft 22, cranks 25 therewith, and movement of the links 26. Both plowshares and beams 13 may be raised out of engagement with the ground, as a result of the invention, but not at the same level and the same may be secured in any adjusted position by the plunger or latch 33 and rack 32. One plowshare 12 and beam 13 is bound to move in the opposite direction to the other plowshare and beam, no matter in which direction the lever 30 is moved.

It is to be understood that but one type of two way plow structure has been illustrated and that it is to be taken as by way of example only.

Various changes may be resorted to provided

they fall within the spirit and scope of the invention.

I claim as my invention:

1. In combination with a plurality of plow devices mounted for movement relatively to each other in a vertical plane, a rockshaft above said plow devices, cranks extending from the rockshaft, an operating means for the rockshaft, suspending links from the cranks to the plow devices to operate the latter so that one will lift as the other is lowered, bearing devices in which said rockshaft is journaled, bracket means below the bearing devices to which the plow devices are pivoted, said bearing devices and bracket means being attachable to the draft means for the plow devices.

2. In combination with a plurality of plow devices mounted for movement relatively to each other in a vertical plane, a rockshaft, cranks extending from the rockshaft, an operating means for the rockshaft, connections from the cranks to the plow devices to operate the latter so that one will lift as the other is lowered, bearing devices in which said rockshaft is journaled, said bearing devices being attachable to the draft means for the plow devices, said operating means for the rockshaft comprising a lever rigid therewith, and a latch connection between said lever and one of said bearing members.

3. In combination with a plurality of plow devices mounted for movement relatively to each other in a vertical plane, a rockshaft, cranks extending from the rockshaft, an operating means for the rockshaft, connections from the cranks to the plow devices to operate the latter so that one will lift as the other is lowered, bearing devices in which said rockshaft is journaled, said bearing devices being attachable to the draft means for the plow devices, said operating means for the rockshaft comprising a lever rigid therewith, a latch connection between said lever and one of said bearing members, a V-shaped bracket extending from the rockshaft, said lever being connected to the rockshaft and to the free end of the latter bracket.

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