

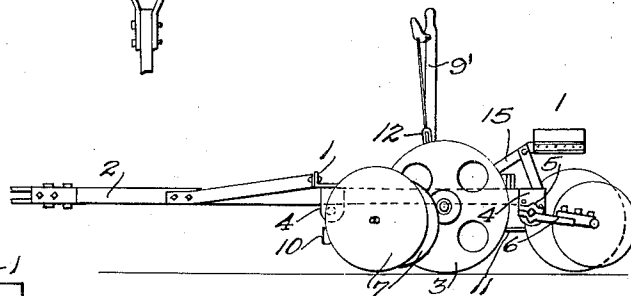
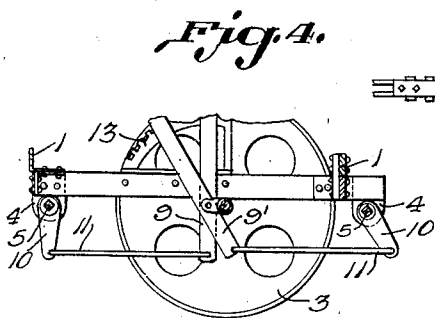
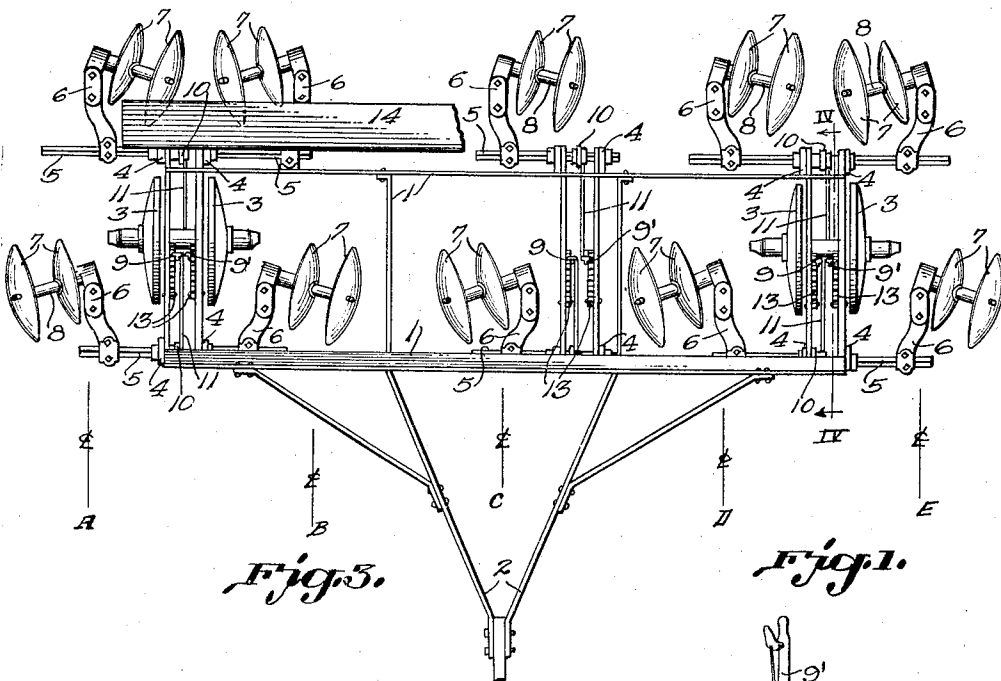
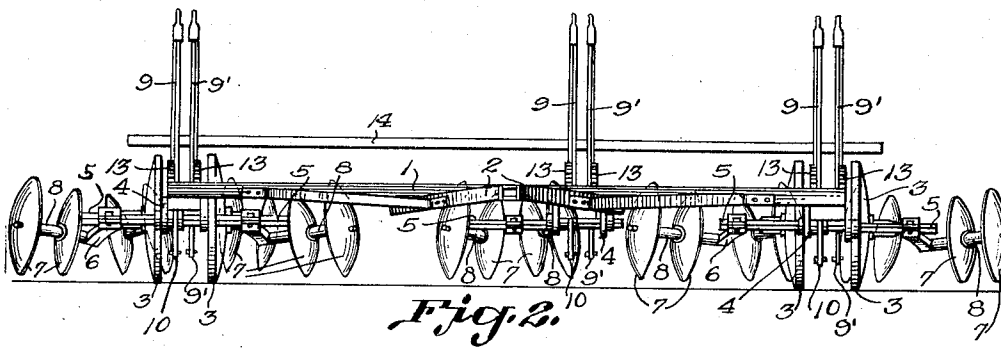
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RIDGE LEVELING MACHINE

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RIDGE-LEVELING MACHINE

Application filed October 1, 1926. Serial No. 138,904.

My invention relates to a ridge leveling machine functioning as an earth leveling device in the interest of agriculture.

The object of my invention is to provide a machine that is inexpensive, simple to operate, and effective in its efficiency by reason of leveling a number of ridges at the same time.

A further object of my invention is to provide wheels carrying the machine that will automatically position the ridge working elements properly to replace the earth in the adjacent trenches made when the ridges were formed.

A still further object of my invention is to divide the earth working elements by placing one end of them on opposite sides of the axis of the wheel bearing mechanism.

A still further object of my invention is to provide adjusting means for the earth working elements independent of each other, that is to say, the elements in front of the wheel axis are adjustable independent of the elements at the rear of said axis, and the adjustment is for the depth desired for the cutting of the earth working elements.

These and other objects will hereinafter be more fully explained.

Referring to the drawings:

Fig. 1 is a side elevation of the machine.

Fig. 2 is a front elevation.

Fig. 3 is a plan view.

Fig. 4 is an enlarged detailed view of the wheel carrying means, and lever shifting mechanism, the view being in section taken along line IV—IV in Fig. 3.

The machine herein disclosed consists of a frame 1 having a bifurcated hitching means 2 rigidly attached to the front member of the frame by which means the machine is conveyed by a tractor or other motive power, it being understood that the bifurcated hitching means is so arranged that the ends of the bifurcations are distributed longitudinally of the frame to avoid excess springing at any point. The said frame is carried by a pair of wheels 3 at each end thereof. Pivotaly attached to the rear and front sides of the frame in suitable bearings 4 are bars 5, the said bars being square are carrying means for

arms 6, the said arms being adjustable longitudinally thereon. On the outer ends thereof are a pair of discs 7 rotatably carried on a shaft 8, the said shaft being set at an angle so that the discs will throw the earth in the desired direction removing the earth from the ridge into their respective trenches. Note that the discs at the rear of the frame, and the discs on the front side thereof angle in opposite directions, the object of which is to throw the earth in the opposite direction from the ridges into the trenches.

As an adjusting means for the depth desired for the discs entering the earth, I have provided levers 9 for the front discs and 9' for those in the rear, the said levers being pivotaly connected along the longitudinal axis of the frame as shown in Figs. 3 and 4. On the disc bars are placed cranks 10 which are rigidly attached thereto. The outer ends of the cranks and the lower ends of their respective levers are joined by a connecting rod 11 as a medium for rotating the bars when actuated by the levers. When positioned for the desired depth required for the discs the lever pawls 12 will engage in the notches of a sector 13 which is rigidly attached to the cross members of the frame as shown in Figs. 3 and 4. The separate adjustment for the front and the rear discs is occasioned by a possible horizontal incline of the frame when the hitching means is attached to tractors, or other means of conveyance.

In Fig. 3 is shown lines A, B, C, D, and E equally positioned in front of the plan view. The said lines represent approximately the center of the ridges that the discs in alignment rearward therewith are leveling. The wheels 3 being the carrying elements for the machine are so positioned that they will engage or travel in the trench between the ridges, and the weight imposed thereon restricts them to the bottom of the trench rather than to allow them to climb or travel along the side of the ridge. It is now apparent that the wheels function as a guiding means for the proper engagement of the discs along the top of the ridges.

A machine thus made and operated in fields

that have been worked by the listing machines, or fields that by cultivation have formed ridges, the regularity of such ridges may be leveled easily by the machine herein disclosed working five ridges at a time, but

I do not confine the mechanism to work exactly this number as the length may be varied working two or more ridges.

To properly level the earth, the disc carrying means slidably engage on their respective bar so that the area of the ridge will be entirely worked as the machine passes longitudinally therewith.

In the event of solidly compact earth, by reason of time, non-cultivation, or otherwise, additional weight may be required to force the discs to the proper depth. In such case I have provided a plank 14 which is carried by brackets 15 rigidly attached to the rear side of the frame. By placing weights on the said plank the said discs will be made to work the earth at a greater depth. The hitching means being rigid to the frame and firmly attached to a suitable conveying means, the front discs are simultaneously with the rear discs forced into the earth.

Such modifications may be employed as lie within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a ridge leveling machine, a machine of the class described having a rectangular frame and a pair of wheels trunnioned adjacent each end of the frame, the frame having rockably mounted thereon a plurality of ground working elements at the front and rear sides of the frame, the length of the frame being sufficient for the ground leveling elements to properly contact five ridges, leveling the same, two pairs of ground working elements positioned at the rear of their respective wheels and operated by a single lever for raising and lowering the same, and two pairs of ground working elements forwardly positioned to their respective wheels and a single lever to raise and lower the same independent of the said first ground working elements, other similar ground working elements in single pairs intermediately carried by the frame, and a lever to operate each pair independently of the others, all of said ground working elements in parallelism to each other and relative to the sides of the frame.

2. In a ridge leveling machine, a mechanism of the kind described consisting of a rectangular frame of considerable length, a pair of wheels as carrying means for each end of the frame and positioned in close proximity thereto, a bifurcated hitching means arranged so that the ends of the bifurcations are distributed longitudinally of the frame and rigidly connected thereto to prevent springing and vertical rocking of the frame sides, a plurality of ground working ele-

ments carried by the front and rear sides of the frame and in parallelism therewith, and means to raise and lower said elements with relation to the frame, a plank and brackets attaching the plank to the rear side of the frame, the plank functioning as a weight carrying means to cause deep engagement of the ground working elements when said elements have been lowered.

JOSEPH SCHERMULY.