

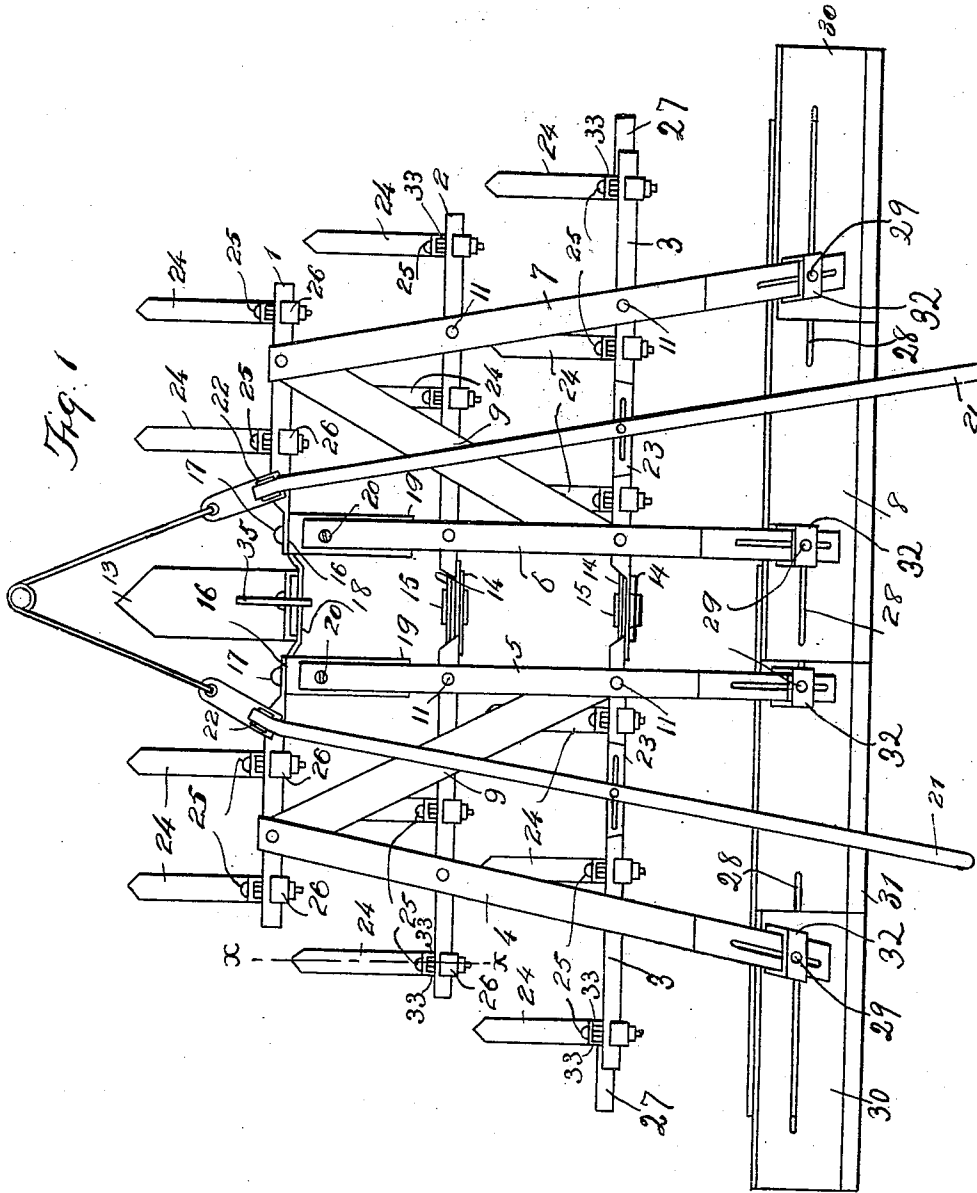
B. F. STOVALL.
CULTIVATOR.

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977,051.

Patented Nov. 29, 1910.

2 SHEETS—SHEET 1.

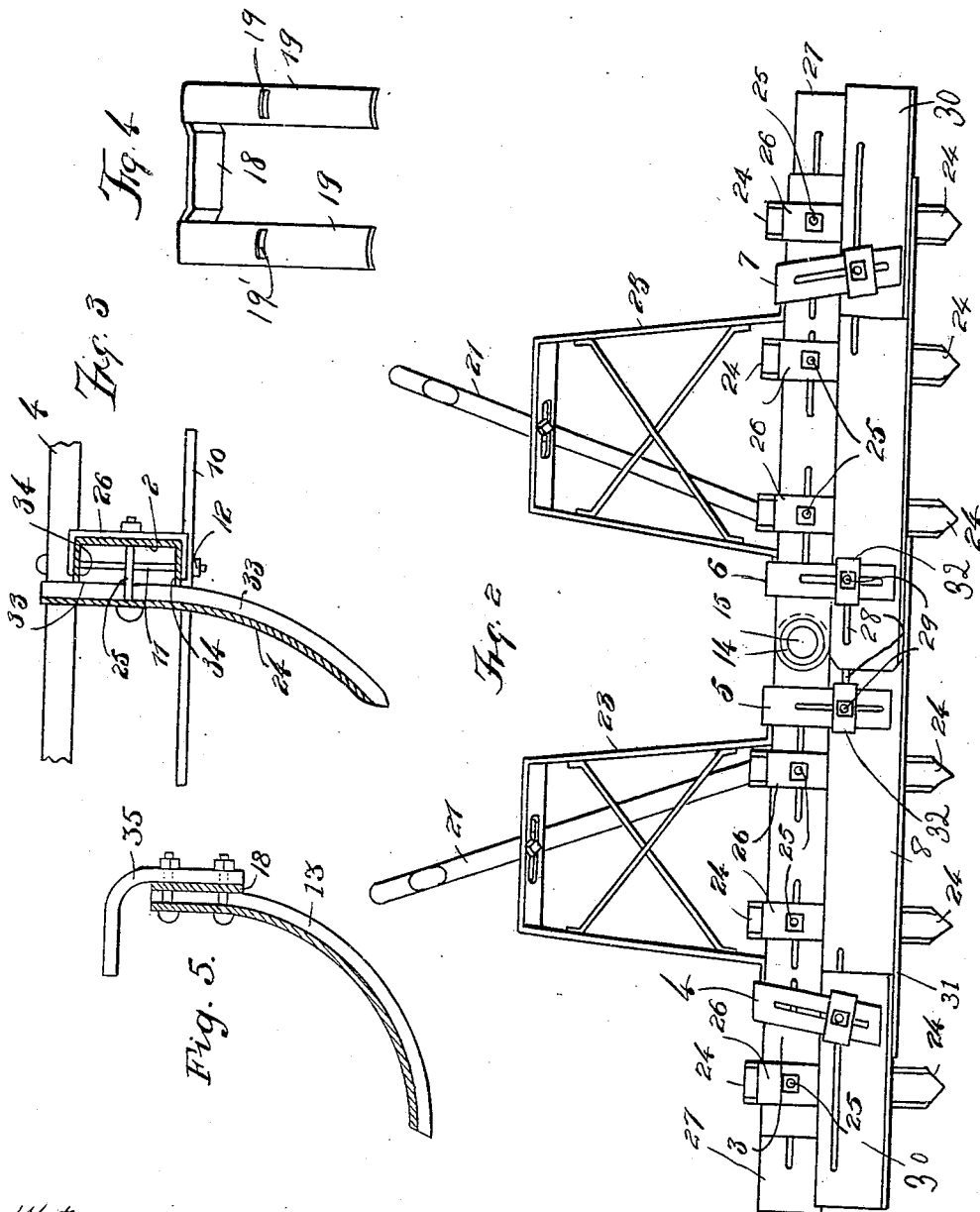


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UNITED STATES PATENT OFFICE.

BENJAMIN F. STOVALL, OF PARADISE, TEXAS.

CULTIVATOR.

977,051.

Specification of Letters Patent.

Patented Nov. 29, 1910.

Application filed October 12, 1908. Serial No. 457,299.

To all whom it may concern:

Be it known that I, BENJAMIN F. STOVALL, a citizen of the United States, residing at Paradise, in the county of Wise and State of Texas, have invented certain new and useful Improvements in Cultivators, of which the following is a specification.

This invention relates to plows and more particularly to a plow stock for carrying a plurality of plows, generally known as cultivators, and the object is to provide an agricultural implement of the kind hereinafter set forth which is adapted for use in several different capacities and which is light and strong and easily assembled.

The implement herein shown is complete in itself, but two or more of the implements herein shown may be attached to a wheeled cultivator now in use.

One distinguishing feature of this invention is that substantially all the parts are constructed of channel iron or steel, and by reason of this construction, the various parts are adapted for unlimited adjustments.

Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application and specification.

Figure 1 is a plan view of the cultivator. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical section taken along the line *a-a* of Fig. 1, illustrating the manner of attaching the plows to the beams and also illustrating the manner of attaching the braces to the plow beams. Fig. 4 is a perspective view of the yoke in the front of the cultivator for forming a flexible connection of the two wings which form the front beam and forming a stock to which the center plow is attached. Fig. 5 is a detail view illustrating the connection of the foot piece 35 to the yoke 18 of the cultivator.

Similar characters of reference are used to indicate the same parts throughout the several views.

The cultivator herein shown has a plurality of beams 1, 2, and 3 to which the plows 24 are attached. These beams are connected by braces 4, 5, 6, and 7 running from front to the rear part and drooping down at the rear part to carry a drag 8.

These braces are made of channel iron or steel so that they will be light and strong. These braces are reinforced by braces 10 under the bottom of the beams, as shown in Fig. 3. The braces are secured to the beams by nuts 12 and bolts 11 which run through both the upper and the lower braces and through the cross beams. Diagonal braces 9 also running from braces 5 and 6 to the front of the machine are used to strengthen the frame. The plows 24 are secured to the cross beams by bolts 25, the flanges 33 of the plows engaging the edges 34 of the beams causing a binding and a bracing of the plows against the beams. The plows being attached by the edges of the flanges of the plow engaging the edges of the flange of the beam and there being no special seats for the plows on the beams, the plows may be set to cut furrows whose walls are perpendicular to the general surface of the ground at whatever angle the beams may be set. Each plow beam is in two parts connected together by a pivot bolt 15 at the central part so that the sides of the cultivator may be elevated when it is desirable to plow down between the ridges on which the plants are growing and the sides of the cultivator may be lowered relative to the central part, when it is desirable to run the cultivator on top of the ridge, so that the outer edges or wings of the beams will let the plows operate on the sides of the ridge. When the cultivator is run on top of the ridge it is necessary to remove the central plow 13.

The pivotal connections of the beams 2 and 3 at the central parts are made with the vertical portions of the beams so that the wings of the beams will move vertically relative to each other and are made by lapping the vertical portions together, placing washers 14 on each side, and then connecting all parts by pivot bolts 15. The pivotal connection of the parts of the front beam 1 is effected by a yoke 18 which extends across a portion of the front of the machine and has portions which lap against the vertical portions 16 of beam 1 and which portions are connected to parts 16 by bolts 17. The yoke 18 thus forms a seat for the central plow 13. The yoke 18 has arms 19 which are bent horizontally backward and form the means for connecting the braces or brace beams 5 and 6

to the front beam 1. The braces 5 and 6 have a rocking engagement with the arms 19, being connected thereto loosely by bolts 20 and the arms 19 having slots 19' for the movement of bolts 20.

The means for causing the plows to operate on the sides and tops and bottoms of furrows between the ridges have been described. It will be understood that the normal condition or setting of plows is for the purpose of plowing level or blank land and the cultivator is particularly adapted for use in planting small grain, alfalfa, turnip seed, and for any seed that requires shallow covering and where the ground needs to be made smooth. The beams 1, 2, and 3 are made rigid by caps 26 at whatever angle the plows be set on the beams. Any suitable number of plows may be attached to the beams 1, 2, and 3, and these beams may be extended laterally by telescopic sections 27 to which other plows may be attached. The sections 27 have slots for the bolts 25. Adding the extensible sections is made feasible and practical by the shape of the beams which fit snugly together. All the parts of the plow have suitable slots by which the various parts may be shifted and adjusted whenever necessary.

The drag 8 is carried by the drooped ends of the braces 4, 5, 6, and 7. The drag 8 has extensible sections 30 and is provided with slots 28 for adjustment purposes. The drag 8 is secured to the braces 4, 5, and 6 by bolts 29 and caps 32 and the drag is also made in sections which are lapped together at the central part and each part will swing on a bolt 29. The lower part of the drag is bent to a substantially horizontal flange 31 for the purpose of smoothing the ground behind the plows so that the ground will hold moisture.

Handles 21 are attached to the front beam by brackets 22 and attached to the rear beam 3 by braces 23 which have slots therein for adjustment. By reason of the pivotal connections in the central parts of the beams, the wings of the plow or cultivator may be elevated or lowered whenever desirable.

The implement thus described is complete in itself and may be drawn by any suitable draft appliance. The implement may also be attached to a wheeled cultivator. A foot piece 35 is provided for convenience in attaching the same to a wheeled cultivator, and such implement as shown may be attached to each side of a wheeled cultivator. The implement may also be attached to a single stock cultivator, generally known as the Georgia stock. But it will be apparent that the implement is entirely practical without either the single or double stock cultivator, as a team can be hitched directly to the de-

vice and worked successfully by one or more mules or horses.

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

1. A cultivator comprising a series of beams, each beam consisting of two swings having vertical portions thereof pivotally connected together at the central part of the cultivator and each wing having lateral extensions, braces holding said beams in operative relation, and plows attached to said beams, said beams being slotted at the connections with said plows for lateral adjustments of said plows.

2. A cultivator comprising a series of beams, each beam being composed of right and left wings pivotally connected together whereby said wings are adapted to swing upward or downward at the outer ends, plows attached to said beams, braces holding said beams in operative relation, said beams being bent down at the rear ends, and a drag composed of wings pivotally connected together and carried by the ends of said beams.

3. A cultivator comprising a series of beams, each beam being composed of right and left wings pivotally connected together, plows attached to said wings, braces holding said wings in operative relation, said braces being drooped downwardly behind the last of said series of beams, and a drag composed of two wings pivotally connected together and carried by the drooped portion of said braces.

4. A cultivator comprising a series of beams, each beam having right and left wings and each beam except the front beam being pivotally connected together, a yoke pivotally connecting the wings of said front beam and constituting a plow stock and having arms extending rearwardly, a series of braces holding said beams in operative relation, the central braces engaging said arms of said yoke, and plows attached to said beams.

5. A cultivator comprising a series of beams, each beam consisting of right and left wings having vertical portions thereof pivotally connected together, braces holding said beams in operative relation, plows attached to said beams, said beams being slotted at the connections with said plows, and handles for holding said wings at different positions.

In testimony whereof, I set my hand in the presence of two witnesses, this 23 day of September, 1908.

BENJAMIN F. STOVALL.

Witnesses:

J. S. CRAWFORD,
FRANK TURNER.