

(No Model.)

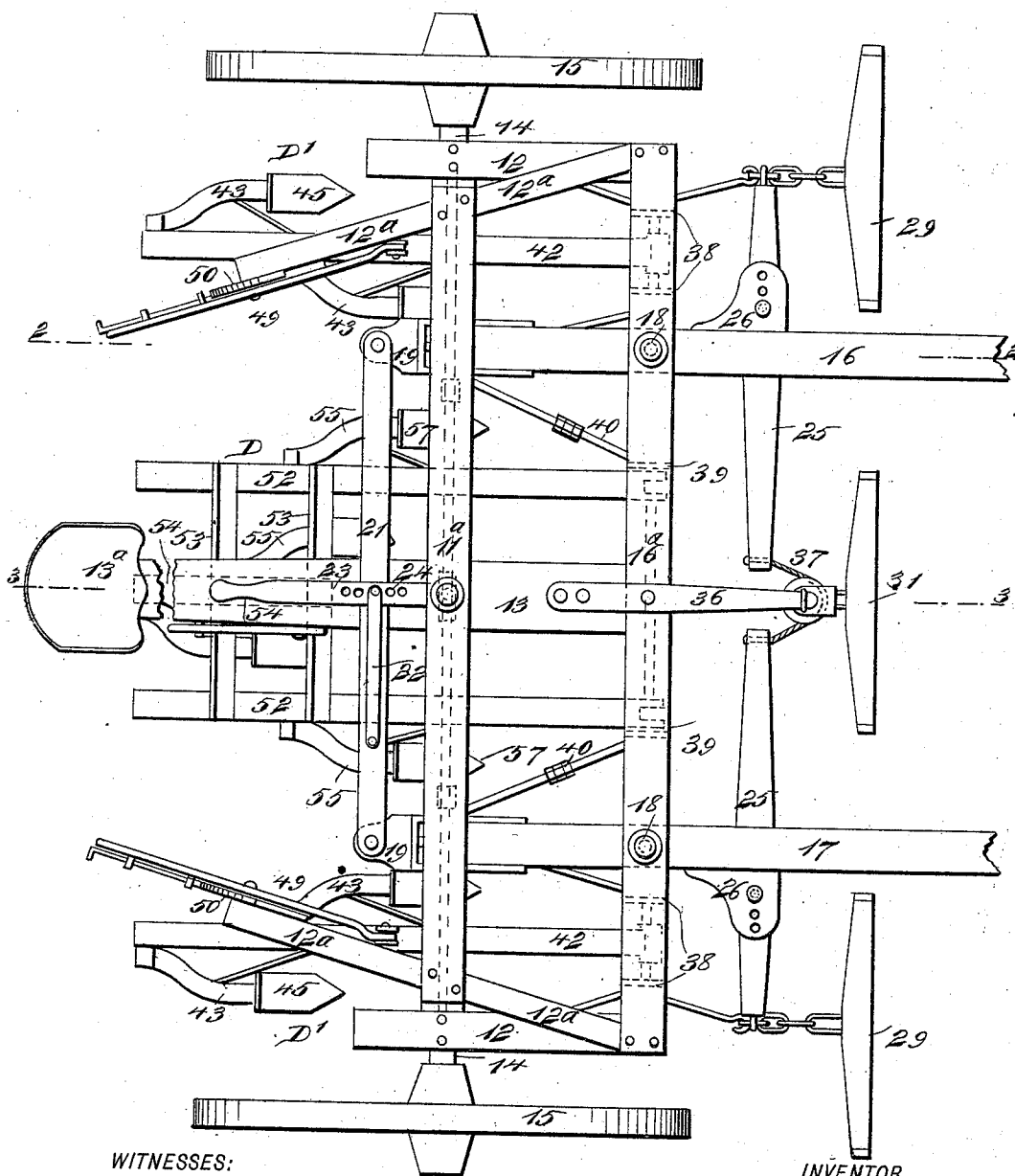
2 Sheets—Sheet 1.

H. S. OVERSTREET.
CULTIVATOR.

No. 534,910.

Patented Feb. 26, 1895.

Fig 1



WITNESSES:

H. Walker
J. H. Walker

INVENTOR

H. S. Overstreet
BY *Munn & Co*
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

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Fig 2

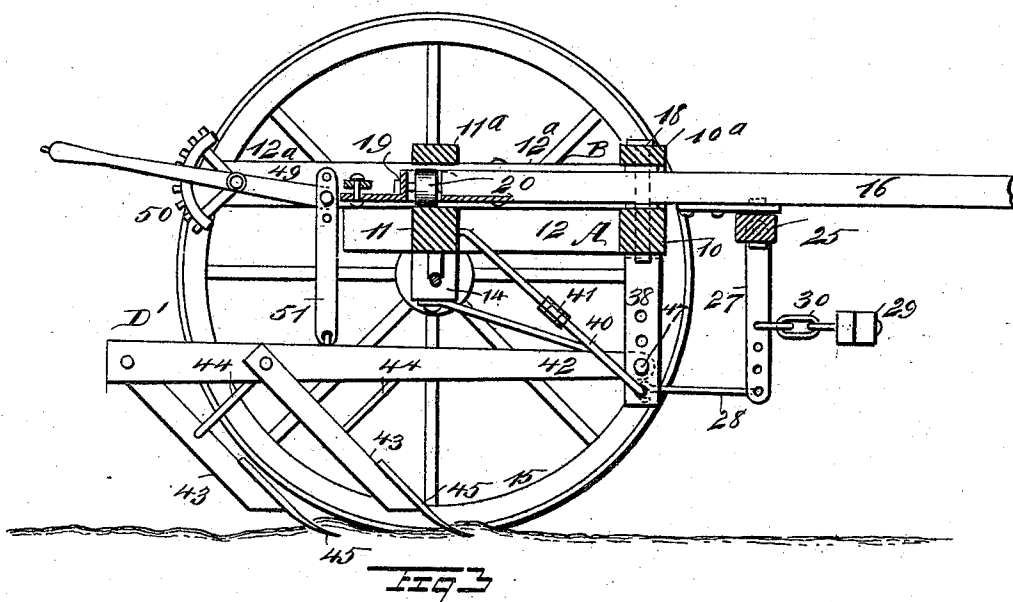
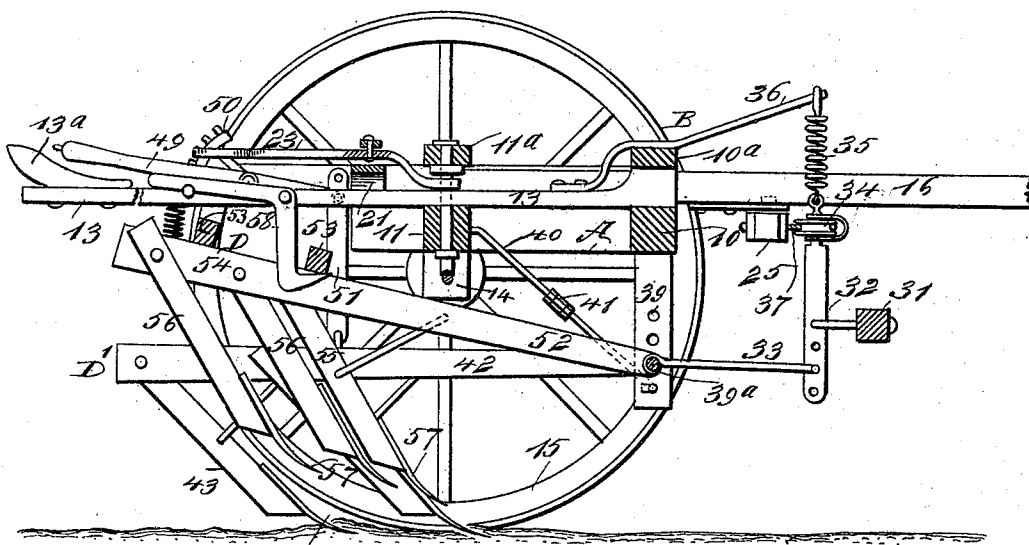


Fig 3



WITNESSES:

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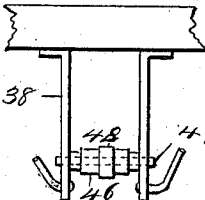


Fig 4

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UNITED STATES PATENT OFFICE

HORACE SMITH OVERSTREET, OF YORK, NEBRASKA.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 534,910, dated February 26, 1895.

Application filed May 23, 1894. Serial No. 512,147. (No model.)

To all whom it may concern:

Be it known that I, HORACE SMITH OVERSTREET, of York, in the county of York and State of Nebraska, have invented a new and
5 Improved Cultivator, of which the following is a full, clear, and exact description.

My invention relates to an improvement in cultivators and it has for its object to provide a cultivator which may be utilized for
10 cultivating a field unplanted, serving substantially as a harrow, or it may likewise be employed for cultivating two rows of corn at one time.

A further object of the invention is to provide a means whereby all of the gangs of cultivator blades may be independently manipulated, namely, raised or lowered, and whereby the end or outer gangs may be adjusted as to depth, the intermediate gang when released,
20 serving as a drag.

Another object of the invention is to provide a draft mechanism under thorough control of the driver, the said mechanism being so constructed that the poles employed may
25 be directed to the right or to the left, causing the team to properly guide the machine.

Another object of the invention is to provide an equalizer used in connection with the said draft tongues, whereby all undue tension
30 will be removed from the team, and whereby three horses may be employed, each of them drawing an equal amount of weight.

Another object of the invention is to provide a means whereby the gangs of cultivators
35 will not have lateral movement, being firmly held in the position in which they may be placed.

The invention consists in the novel construction and combination of the several
40 parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the
45 views.

Figure 1 is a plan view of the improved cultivator. Fig. 2 is a longitudinal section taken essentially on the line 2—2 of Fig. 1.
50 Fig. 3 is a transverse section taken practically on the line 3—3 of Fig. 1; and Fig. 4 is a front elevation of the beam of an end gang

of cultivator blades, illustrating the manner in which the said beam is pivoted to prevent its moving laterally.

In carrying out the invention the main frame of the machine is made substantially in duplicate, comprising a lower section A and an upper section B, the two sections being placed one directly over the other or practically so. The lower section A of the frame comprises a front beam 10, a rear beam 11 and end beams 12, the end beams being preferably parallel and made to extend a suitable distance rearwardly. The upper section B of the frame consists of a front bar or beam 10^a and a rear bar or beam 11^a, located over corresponding beams of the lower section of the frame, being separated therefrom a predetermined distance through the medium of end bars 12^a, the said end bars or beams of this upper section of the frame extending longitudinally across the lower section, being made to converge at their rear ends; and the said end beams 12^a, project some distance in a rearwardly direction. The two sections of the frame are farther spaced through the medium of a central beam 13, located between and attached to the sections, and made likewise to extend well to the rear, the rear extremity of this central beam being utilized ordinarily as a support for the driver's seat 13^a.

The axle spindles 14, are secured to the ends of the lower section A of the frame, and are adapted to carry ground wheels 15 usually loosely mounted. The draft mechanism comprises two poles 16 and 17, located one at each side of the center of the machine. These poles extend rearward through the space between the two sections of the frame, being pivotally attached to the front beams of said sections, as shown at 18 in Figs. 1 and 2; and the said poles usually project beyond the rear beams of the sections of the frame, and have attached to their rear extremities shoes 19, said shoes being provided with openings in which friction rollers 20, are journaled, as shown in Fig. 2, the rollers being adapted to engage with the rear beams of the frame, and thus facilitate the lateral movement of the poles. The rear ends or shoes of the poles are connected by a bar 21 in a pivotal manner; and a link 22, is pivoted to the connecting bar 21 at one side of its center, the other end of the link

being pivotally attached to a lever 23, fulcrumed usually upon the central beam 13; and the said lever is provided with apertures 24, through the medium of which the link 22 may
 5 be shifted as to position, in order to provide more or less leverage in the operation of the lever 23, as through said lever the poles are directed to the right or to the left, as may be demanded to guide the machine, since the
 10 machine is to be guided by the action of the team.

In connection with the poles 16 and 17 an equalizing device is employed, and said equalizing device comprises two equalizing bars 25, located one beneath each pole 16 and 17, and
 15 adjustably and pivotally connected between their centers and outer ends with brackets 26, or their equivalents, attached to the outer faces of the poles, as illustrated best in Fig. 1. A perpendicular pendent link 27, is connected with the outer end of each equalizing bar 25, and at their lower ends the said links are held in a predetermined position by braces 28, connected with them and a fixed support on the
 20 machine.

Each link is adapted to adjustably carry a singletree 29, the said singletrees being usually connected with the links through the medium of chains 30, or their equivalents. A
 25 third singletree 31, is employed, located between the poles 16 and 17. This singletree is adjustably connected with a perpendicular pendent link 32, connected with a fixed support at its lower end by a brace 33. The upper
 30 end of the link has attached to it the casing of a pulley 34, and the said pulley casing is connected by a spring 35 with an arm 36, projected forwardly from the central portion of the machine frame, as shown in Fig. 3, and an
 35 equalizing connection is provided between the inner ends of the two equalizing bars 25, by passing a cord, chain or cable 37, attached to said ends, over the said pulley 34, and shown in Figs. 1 and 3.

In connection with the frame of the machine, preferably three gangs of cultivators are used, a central gang D, and two outer or end gangs D'. The end gangs D', are connected with the forward portion of the frame
 40 through the medium of stirrups 38, projected downward from the forward end portions of the frame, one of which stirrups is shown in detail in Fig. 4, and the central gang is connected with the frame through the medium
 45 of a corresponding yet longer stirrup 39, shown in dotted lines in Fig. 1 and in full lines in Fig. 3. The stirrups are connected with the frame of the machine through the medium of rearwardly-extending braces 40, each of which may be provided with a turn-
 50 buckle 41, in order that the stirrups may be rectified when occasion may demand.

Each end gang of cultivators comprises a beam 42, having attached at opposite sides
 55 forwardly and downwardly extending shanks 43, one located in advance of the other, said shanks being suitably braced by bars 44.

These shanks are preferably curved outwardly from the beam in order that the shovels or blades 45, carried by their lower ends, will enter the ground beyond the sides of the beam; and it will be understood that any form of share blade or shovel may be substituted for the shovels illustrated in the drawings.

The forward end of each beam of the gangs D' is provided with a shoe 46, (see Fig. 4) adapted to be carried around or to turn upon a pivot pin or bar 47, adjustably located in each of the stirrups 38, said shoe being provided with an opening at its pivot point; and
 75 said opening is usually centrally located, and receives a collar 48, located upon the pivot pin. In this manner the beams of the gangs D' are free to move upward or downward, but can not have lateral movement. These gangs
 80 are raised and lowered through the medium of levers 49, preferably fulcrumed upon the rear extensions of the end bars 12^a of the upper section of the frame, the said levers being provided with the usual thumb latch to engage with racks 50, located also upon said end bars; and the levers are adjustably connected with the beams through the medium of links 51. In this manner it is evident that the beams may be readily raised and lowered
 85 and held in predetermined position.

With reference to the intermediate gang D, said gang comprises two beams 52, arranged parallel and connected by cross bars 53, said cross bars being also made to carry a short
 90 beam 54, shown in Fig. 3. Shanks 55, are projected downward and forward from the outer faces of the beams 52, and like shanks 56, are projected in similar manner from opposite sides of the short beam 54, whereby
 95 usually the central gang is made to carry four shanks, and consequently four cultivator blades 57 of any approved construction. The beams 52 of the central gang are provided with shoes in like manner as the beams of the end gangs, but the shoes are not used in connection with a collar, since one of the beams will be in engagement with each member of the stirrup 39, thus preventing the beams from having side movement. The forward ends of the beams are pivoted upon a spindle 39^a, adjustably located in the central stirrup 39.

The central gang is not ordinarily provided with levers for raising and lowering it, being
 100 held in a lower position by springs attached to the frame and the seat beam 13, although a hand lever may be used, but the gang is held in an upper position when not required for use, by means of a lock lever 58, which
 105 will engage with one of the cross bars 53, as shown in Fig. 3.

In the operation of cultivating corn two rows will be cultivated at one time by the use of this machine, the rows of corn being located between the cultivator blades, or the outer portion of the central gang and inner portions of the end gangs. The side gangs may be brought into use independently of the

central gang, or the central gang may be brought into action when the side gangs have been elevated.

A truss rod provided with a suitable tension device is located upon the under side of the axle, as shown in dotted lines Fig. 1 to prevent the axle from springing.

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

1. In a cultivator, the combination, with a frame, and a bracket projected downward from the frame, provided with a spindle, of a longitudinal beam adapted to carry cultivator blades, the said beam being provided with a shoe at one end, mounted to turn upon the said spindle, the said shoe being provided with an opening, and a collar formed upon the spindle, located in the said opening, so as to abut laterally against the walls of the opening in the shoe as and for the purpose set forth.

2. In a cultivator, the combination, with a frame, stirrups projected downward from the forward end of the frame, one of said stirrups being located near each end and the other at the center, and spindles adjustably located in each of the stirrups, the spindles of the end stirrups being provided with collars, of cultivator gangs, comprising a central and two end gangs connected with the spindles of corresponding stirrups, the end gangs comprising a longitudinal beam, shanks projected therefrom and adapted to carry cultivator blades, a shoe formed at one end of the beam, pivoted upon one of the end spindles and having an opening to receive the collar of the spindle, thereby preventing side movement, and the central gang comprising two parallel longitudinal beams having shoes pivotally mounted upon the central spindle, and cultivator shanks projected from the said beams, and means, substantially as shown and described, for independently raising and lowering the different gangs, as and for the purpose set forth.

3. In a cultivator, the combination, with a frame, of draft poles pivotally connected with the frame at its forward portion, located one at each side of the center, the rear ends of which poles have roller bearings in guides in the frame, a connecting bar uniting the rear ends of the poles, and a lever fulcrumed upon a fixed support and connected with the said connecting bar, whereby by the movement of the lever the poles will be simultaneously moved in the same direction, as and for the purpose set forth.

4. In a cultivator or like machine, the combination, with a frame, of draft poles pivoted

in the forward portion of the frame, extending forwardly therefrom and likewise in a rearwardly direction, rollers located at the rear free ends of the poles, having bearing in guides formed in the frame, a connecting bar uniting the rear ends of the poles, a lever pivoted to a fixed support, and a link adjustably connecting the connecting bar with the said lever, as and for the purpose specified.

5. In a cultivator or like machine, the combination, with a frame, poles projected from the frame, one at each side of its center, an arm projected forwardly from the frame between the poles and provided with a downwardly extending spring, an everner bar adjustably and pivotally attached to each pole, a link projected downward from the outer and shorter end of each everner bar, a singletree adjustably connected with each everner bar, a link carrying a pulley connected with the said spring, a cable passed over the said pulley and attached to the inner ends of both of the everner bars, and a singletree adjustably attached to the central link, as and for the purpose specified.

6. In a cultivator or like device, the combination, with a frame, draft poles pivotally connected with the frame one at each side of its center, extending forwardly and rearwardly from their pivot points, a connecting bar uniting the rear ends of the two poles, and a shifting lever connected with the said connecting bar, of an arm projected forwardly from the front of the frame between the poles, carrying a spring, a pendent link and a pulley, the pulley being connected with the link, an everner bar pivotally connected with each pole, the inner and longer ends of both bars being provided with a cable passed over said pulley, a link pendent from the shorter outer end of each everner bar, and a singletree connected with each of said links, as and for the purpose specified.

7. In a cultivator, the combination of the frame, a central gang of cultivator blades pivotally connected with the frame, means for holding the said gang in an elevated position, additional gangs likewise pivotally connected with the frame and arranged on each side of the central gang, and separate lifting and lowering mechanism constructed to be controlled by the operator, for adjusting the said gangs independently of the central gang and independently of each other, substantially as described.

HORACE SMITH OVERSTREET.

Witnesses:

NORMAN F. TILDEN,

WILLIAM K. ATKISON.