

No. 662,613.

Patented Nov. 27, 1900.

C. WELLS.  
CULTIVATING PLOW.

(Application filed Aug. 30, 1900.)

(No Model.)

Fig. 1.

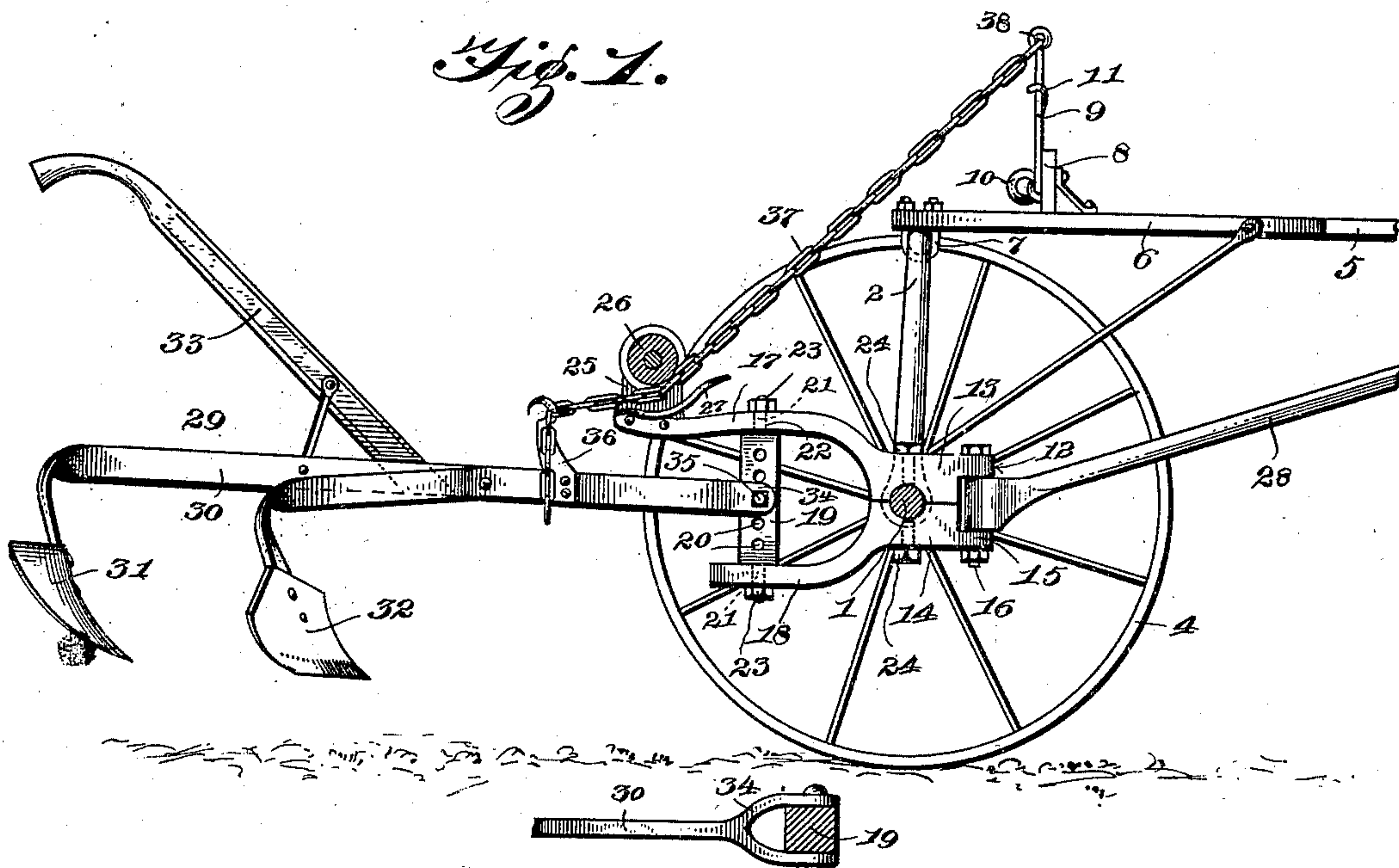


Fig. 3.

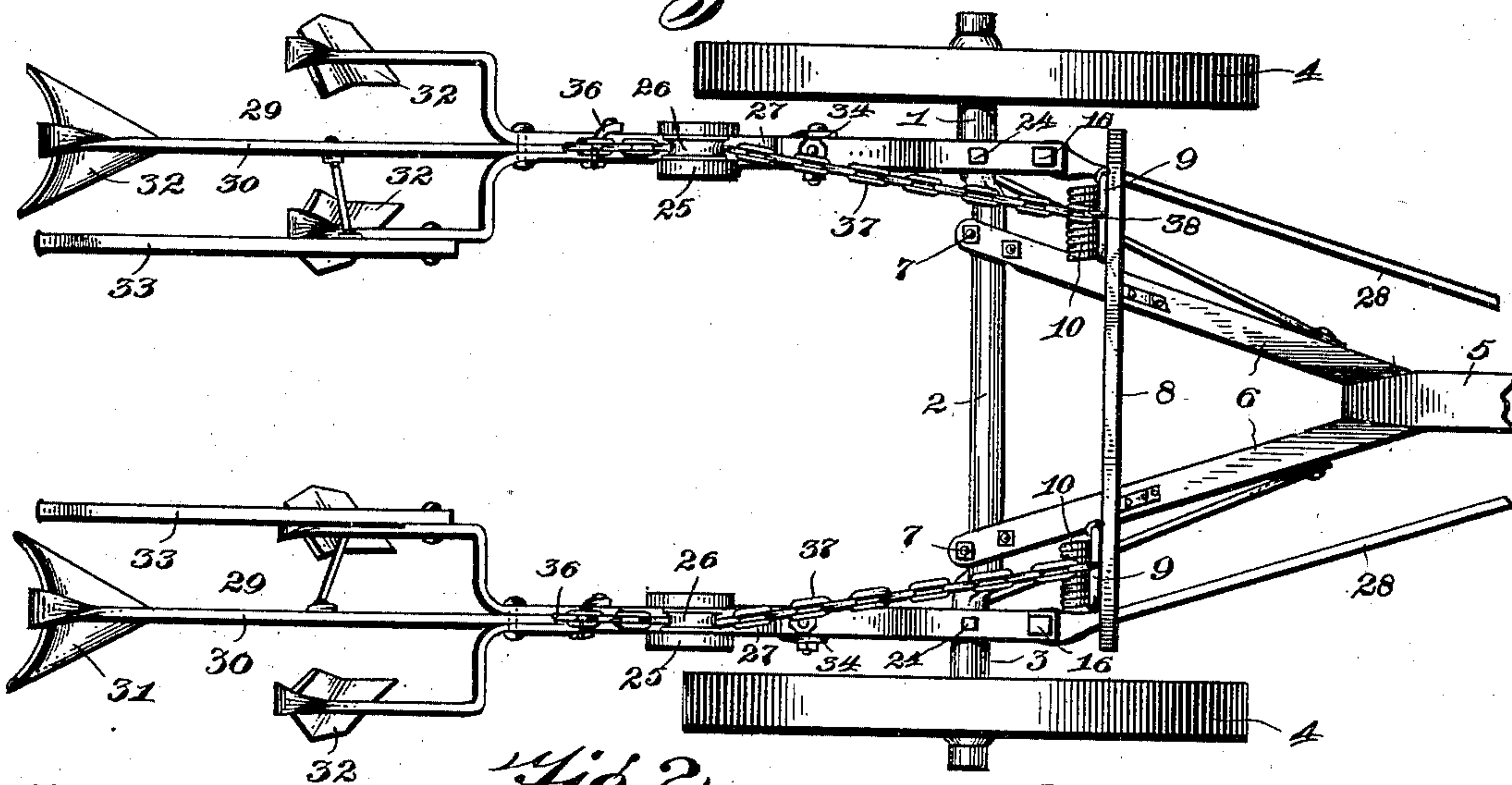


Fig. 2.

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# UNITED STATES PATENT OFFICE.

CHARLES WELLS, OF WOODVILLE, TEXAS.

## CULTIVATING-PLOW.

SPECIFICATION forming part of Letters Patent No. 662,613, dated November 27, 1900.

Application filed August 30, 1900. Serial No. 28,537. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES WELLS, a citizen of the United States, residing at Woodville, in the county of Tyler and State of Texas, have invented a new and useful Cultivating-Plow, of which the following is a specification.

My invention is an improved cultivating-plow adapted for cultivating a number of rows of growing plants at a single operation, my improvements relating especially to the couplings for connecting the plow-beams to the axle and to the devices for raising the plows from the ground when turning at the ends of the rows and in driving the cultivator from one field to another.

My invention consists in the peculiar construction and combination of devices hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of an improved cultivating-plow constructed in accordance with my invention, the near wheel being removed. Fig. 2 is a top plan view of the same. Fig. 3 is a detail view.

The axle 1 is provided with the arch 2 and with the horizontally-disposed portions 3, near the ends of the axle at the inner ends of the spindles thereof, on which the supporting-wheels 4 have their bearings. The tongue 5 is connected to the arch of the axle by bars 6 and clip-bolts 7. A cross-bar 8 is secured on the bars 6 either by means of clip-bolts or any other suitable devices. Yokes 9 are mounted on the cross-bar 8 and are normally retained in a vertical position by means of coiled springs 10, which are disposed on the lower pivotal sides of said yokes, are secured at one end to the bar 8, and have arms 11 at their free ends, which bear against the rear sides of the yokes.

On the portions 3 of the axle are secured couplings 12. Each coupling comprises an upper jaw 13 and a lower jaw 14, which are provided in their opposing sides with an opening to receive the axle. Said jaws are provided at their front ends with ears or lugs 15 to receive the clamping-bolts 16, which serve to connect the front ends of said jaws together. Said jaws are provided, respectively, at their

rear ends with rearwardly-extending arms 17 18, which are connected together by an adjusting coupling-bolt 19. The same is square in cross-section and is provided with a series of adjusting-openings 20, made transversely therethrough. It will be understood by reference to the drawings that the spindles 21 of the said coupling-bolt at the upper and lower ends thereof pass through and are adapted to turn in openings 22 in the arms 17 18 and that by means of the nuts or taps 23, screwed on the outer threaded extremities of the spindles of the bolt, the latter serves to clamp the rear ends of the jaws 13 14 together. Each coupling 12 is secured on the axle and prevented from turning thereon by means of set-screws 24. The arm 17 of each coupling 12 is provided on its upper side at its rear end with a vertically-disposed bracket 25, in which is mounted a grooved roller 26. Each bracket 25 is formed with a chain-guard 27, disposed below the roller 26. The bolts 16, which clamp the front ends of the jaws of the couplings 12 to the axle, also serve as means for the attachment of the rear ends of the draft-bars 28 to the couplings.

The cultivators 29 each comprise a central beam 30, that carries a shovel 31, and a pair of side beams 32, bolted on opposite sides of said beam 30, said side beams carrying reversely-disposed cultivating-plows 33, which are abreast of each other and are adapted to throw the earth outward in opposite directions. To each of the cultivators is attached a single handle 34 when the machine is equipped as a walking-cultivator; but when the same is to be used as a riding-cultivator the handles 33 may be dispensed with. The front end of each beam 30 is provided with an angular fork 34, the forked sides of the front end of the beam bearing on opposite sides of the coupling-bolts 19 and being secured thereto by means of bolts 35, which are appropriately disposed in the adjusting-openings 20. Thereby the front ends of the plow-beams may be attached to the coupling-bolts at any desired vertical adjustment to dispose the cultivating-plows at any desired pitch or inclination when the same are in operation. It will be understood that as the coupling-bolts 19 are adapted to turn in the couplings



12 the said cultivators may be moved later-  
ally when in operation as may be required,  
and it will be further understood that as the  
said cultivators are pivotally connected to  
5 the coupling-bolts by the bolts 35 the same  
may be swung in vertical planes, and hence  
the cultivators are adapted for universal  
movement, thereby enabling the plowman  
to manipulate the cultivators as may be re-  
10 quired.

On each beam 30 is secured an upwardly-  
extending hook 36. Supporting and elevat-  
ing chains 37 are attached to the upper sides  
of the yokes 11, as at 38. Said chains pass  
15 under and engage the lower sides of the roll-  
ers 26 and are attached to the hooks 36, which  
latter will engage any appropriate links of  
the chains.

From the foregoing and by reference to the  
20 drawings it will be understood that the spring-  
pressed yokes 11 and chains 37 support the  
weight of the cultivators and normally raise  
the same from the ground.

In operation the plowman by depressing  
25 the handles 33 causes the cultivating shovels  
and plows to operate as may be required be-  
tween the rows of plants, and when the end  
of a row is reached and it is necessary to turn  
the plowman releases the handles 33, where-  
30 upon the spring-pressed yokes and chains  
elevate the cultivators from the ground and  
permit the machine to be turned. Said spring-  
pressed yokes and elevating-chains also keep  
the cultivators in elevated position out of  
35 contact with the ground when the machine  
is being driven from one field to another.

It will be understood that the couplings 12  
are rigidly attached to the axle and do not  
turn thereon, and when the cultivators are  
40 raised and lowered there is no wear on the  
axle, the bolts 35 forming the pivots for ver-  
tically moving the cultivators.

The cultivator-shovels may be adjustable  
on their standards and adapted to be turned  
45 to any necessary angle and to be sharpened  
without the necessity of removing them from  
their standards. Fenders may also be em-  
ployed in connection with the cultivators to  
shield the plants and prevent them from be-  
50 ing broken or covered by clods or stones.

Harrows of suitable form for cultivating  
between the rows may be substituted for the  
cultivators when desired for cultivating  
young and small corn.

Having thus described my invention, I 55  
claim—

1. In a cultivating-plow, the combination  
of the axle, the coupling comprising the two  
sections bolted together and secured one  
above the other on the axle, the vertical ad- 60  
justing-bolt connecting said sections of the  
coupling and adapted to turn and the culti-  
vator having the beam pivotally connected  
to said adjusting-bolt, the axis of said pivot  
being at right angles to that of said adjust- 65  
ing-bolt, substantially as described.

2. In a cultivating-plow, the combination  
of the axle, the coupling comprising the sepa-  
rable sections having the forwardly-extend- 70  
ing lugs 15 and the rearwardly-extending  
arms, the bolt 16 in said lugs and connecting  
the front ends of said sections together, the  
adjusting-bolt connecting the rearwardly-ex-  
tending arms of said sections together and  
adapted to turn therein, and the plow-beam 75  
pivotally attached to said adjusting-bolt, sub-  
stantially as described.

3. In a cultivating-plow, the combination  
of the axle, the coupling comprising the sec-  
tions bolted together and secured on the axle, 80  
said sections having the rearwardly-extend-  
ing arms, the adjusting-bolt having the spin-  
dles at its upper and lower ends in openings  
in said rearwardly-extending arm, adapted  
to turn therein, said adjusting-bolt having 85  
the series of adjusting-openings, and the cul-  
tivator having its beam connected to said  
adjusting-bolt by a bolt disposed in one of  
said adjusting-openings, substantially as de-  
scribed. 90

4. In a cultivating-plow, the combination  
of the axle, the coupling rigidly secured there-  
on, the coupling-bolt adapted to turn in said  
coupling, the cultivator having the beam piv- 95  
otally connected to said coupling-bolt, the  
spring-pressed yoke mounted on the frame of  
the cultivating-plow, the chain attached there-  
to and engaging a hook on said beam, and the  
roller carried by the coupling and engaged  
by said chain, substantially as described. 100

In testimony that I claim the foregoing as  
my own I have hereto affixed my signature in  
the presence of two witnesses.

CHARLES WELLS.

Witnesses:

STEPHEN P. WEST,  
GORDON BULLITT.