

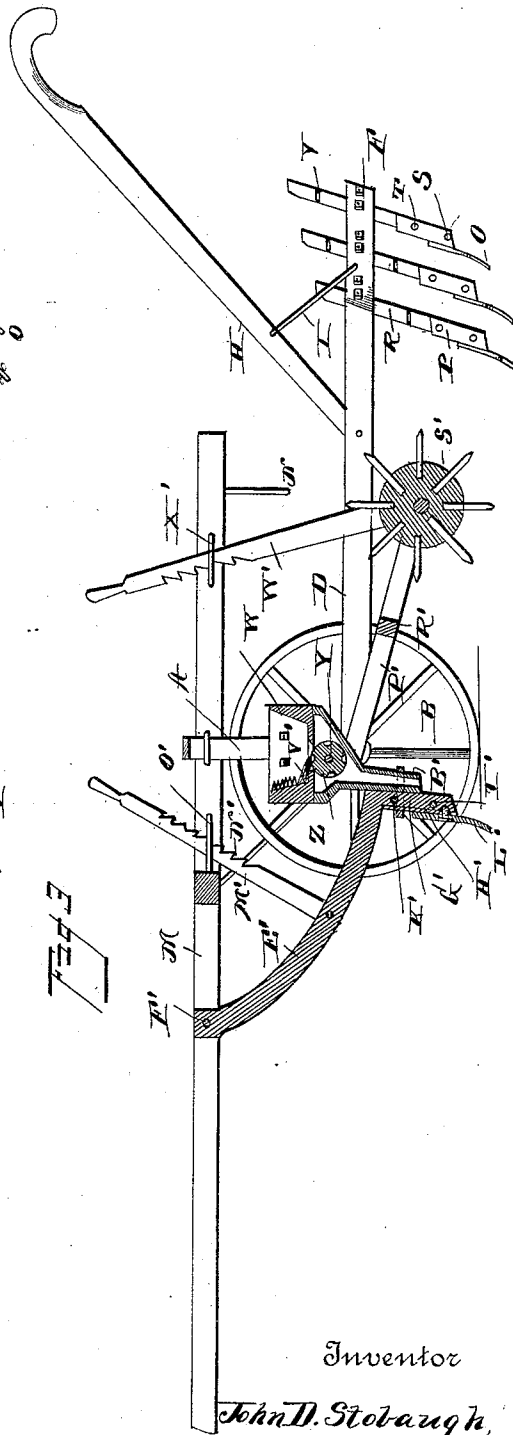
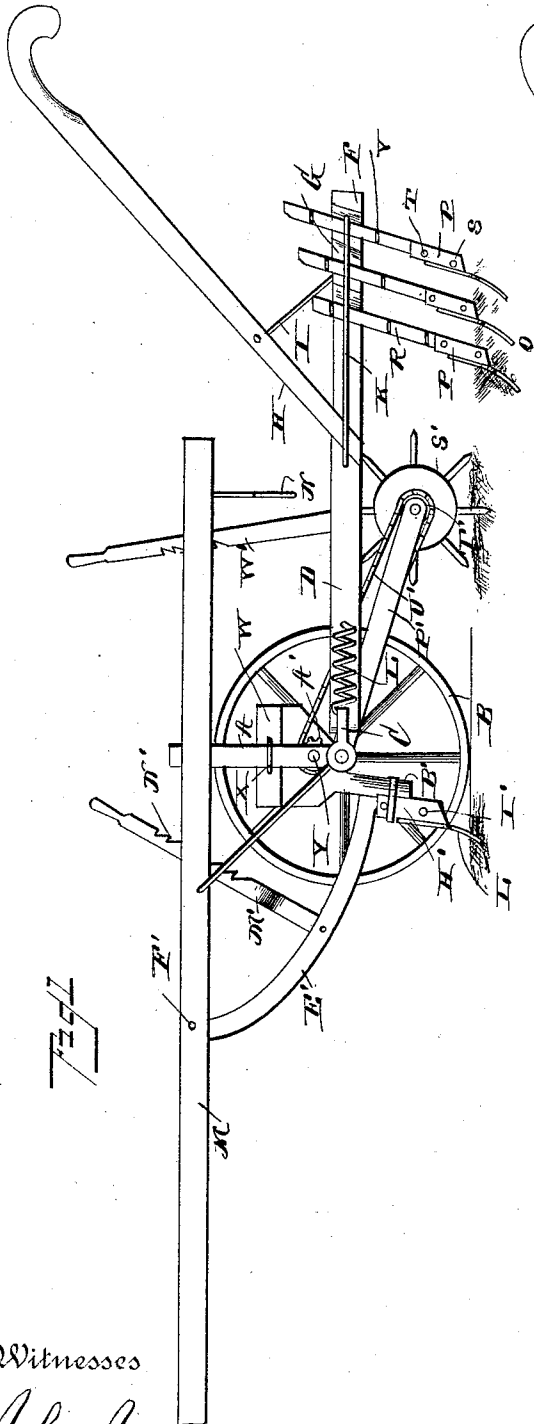
(No Model.)

2 Sheets—Sheet 1.

J. D. STOBAUGH.  
COMBINED CULTIVATOR AND PLANTER.

No. 410,996.

Patented Sept. 10, 1889.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN DULY STOBAUGH, OF GRAYSON, ASSIGNOR OF ONE-HALF TO G. R. ARNOLD, OF DEARBORN, MISSOURI.

## COMBINED CULTIVATOR AND PLANTER.

SPECIFICATION forming part of Letters Patent No. 410,996, dated September 10, 1889.

Application filed February 20, 1889. Serial No. 300,549. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN DULY STOBAUGH, a citizen of the United States, residing at Grayson, in the county of Clinton and State of Missouri, have invented a new and useful Improvement in Combined Cultivators and Planters, of which the following is a specification.

My invention relates to an improvement in combined cultivators and planters; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved cultivator and planter. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical longitudinal sectional view of the same. Fig. 4 is a rear elevation.

A represents an arched axle, on the spindles of which are journaled supporting-wheels B. C represents hinge-plates, which are loosely mounted on said spindles, and D represents beams, which have their front ends pivotally connected to said hinge-plates by means of bolts E.

From the rear ends of the beams D project outward-extending arms F, which are arranged obliquely with relation to the said beams, as shown, and are provided on their front sides with recesses G.

H represents handles similar to plow-handles, which have their lower ends bolted to the beams D, and are supported at a suitable angle by brace-rods I.

K represents brace-rods, which extend from the beams D to the outer ends of arms F.

A pair of coiled extensile springs L have their front ends attached to the outer rear corners of the hinge-plate C, and have their rear ends attached to the outer sides of the beams. The function of the said springs is to exert side draft on the beam to counteract the side draft of the cultivating plows or shovels, and thereby facilitate the manipulation of said cultivators.

A pair of bars M are secured on opposite sides of the arched axle and have their front ends meeting and secured together, as shown, said bars comprising both the tongue and the

hounds or frame. The rear ends of said bars extend beyond the arched axle, and are provided with depending hooks N, on which the beams D may be supported when said beams are raised so as to elevate the cultivating-shovels from the ground.

The cultivating-shovels O are bolted to the front sides of boxes or shanks P, which are open on their rear sides, and are secured to standards R by means of pivotal bolts S and break-pins T. By this arrangement the cultivating-shovels are supported at the correct inclination when at work, and are adapted to pass over obstructions when the pins T break and the boxes or shanks turn forward on their pivotal bolts.

The standards R are secured against the shoulders of arms F, formed by the recesses G, by means of clamp-bolts U, the latter engaging notches V, with which said standards are provided, and thereby the said standards may be secured in such manner as to support the cultivating teeth or shovels at any desired inclination. The innermost standards R may be adjusted lower than the outer standards, and the teeth or shovels attached thereto are thereby adapted to penetrate the soil to a much greater depth than the remaining shovels or teeth, and thus the machine is adapted to form furrows on opposite sides of the row of plants, which furrows are deeper than the roots of the plants, and said furrows serve thereby to drain the soil at the roots of the plants of superfluous moisture, and hence promote the growth of the plants, and when the cultivator is used in connection with the planting mechanism, as will be presently described, the said drain-furrows prevent the seeds from rotting from excessive moisture, and hence insure the germination of the seeds. By adjusting the standards so that the innermost plows run deeper than the others the machine may be adapted for cultivating listed corn, the innermost plows serving to stir the soil in proximity to the rows of plants, and the outermost plows, which run in the ridges between the rows of plants, serving to stir said ridges and throw the earth from them toward the plants, as will be readily understood.

W represents a hopper, which is adapted

to be inserted between the vertical arms of the arched axle, and is detachably secured thereto by clip-bolts X. Journalled in the said hopper is a shaft Y, to which is attached  
5 a seed-wheel Z, that operates in the discharge-opening of the hopper, and a sprocket-wheel A'. A seed-spout B' depends from the hopper.

A draft-bar E' is pivoted on a bolt F',  
10 that extends through and connects the bars M, and the rear end of said draft-bar is adapted to slide vertically on the seed-spout.

Secured to and depending from the rear end of the draft-bar is an arm or standard  
15 G'. A box or shank H' is pivoted to the said arm or standard by a bolt I', and is also secured thereto by a break-pin K', and to the lower end of said box or shank is secured a furrow-opener L' of suitable construction.

A lever M' is attached to the draft-bar, and is provided on its rear side with a series of teeth or notches N', and the said lever extends through a guide or loop O' on the inner side of one of the bars M, and its notches are  
20 adapted to engage said guide or loop, and thereby the furrow-opener may be adjusted and caused to work in the ground at any desired depth.

P' represents a trail-frame, which has the  
30 front ends of its side bars pivoted on the spindles of the axle, and is provided with a cross-bar R', that connects said side bars. Between the rear ends of said side bars is journalled a walking-wheel S', that is adapted to engage the earth and rotate by contact therewith, and revoluble with and secured to said walking-wheel is a sprocket-wheel T', which is connected to the sprocket-wheel on the shaft of the seed-wheel by means of an  
35 endless sprocket-chain U'.

Mounted in the hopper is a spring-pressed brush or clearer V', that bears on the upper side of the seed-wheel and serves to remove superfluous seeds from the cups thereof as  
40 the same pass in succession under said brush.

The operation of this part of my invention is so obvious as to render description unnecessary.

A planter and cultivator thus constructed is extremely cheap and simple, is very strong 50 and durable, and will be found of great practical utility.

When it is desired that the planting mechanism shall cease to operate when turning the machine at the end of a row or when driving 55 the same to or from work, this may be accomplished by raising a link-lever W', which is attached to the rear end of the trail-frame, and is provided with teeth or notches adapted to engage a guide-loop X', secured 60 to one of the beams M.

Having thus described my invention, I claim—

1. In a planter, the combination, with the seed-spout, of the draft-rod having its rear 65 end movable vertically on the seed-spout, the furrow-opener attached to the draft-bar by means of a pivoting-bolt and a break-pin and guided on the seed-spout, and the lever adapted to raise and lower the draft-bar, substantially as described. 70

2. In a cultivator, the combination, with the arched axle, of the hinge-plate on the spindles thereof, the beams D, pivotally connected to said hinge-plate and having the 75 oblique arms E, the vertically-adjustable standard secured on said arms, and the cultivating teeth or shovels secured to said standards, substantially as described.

3. The combination of the axle, the frame- 80 bars M, having hooks N, the hinge-plates C, mounted loosely upon the spindles of the axle, the cultivator-beams connected pivotally to said hinge-plates by vertical bolts, and the contractile springs connecting the cultivator- 85 beams with the outer rear corners of the hinge-plates, substantially as set forth.

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

JOHN DULY STOBAUGH.

Witnesses:

J. B. BAKER,  
DENNIS O'BRIEN.