

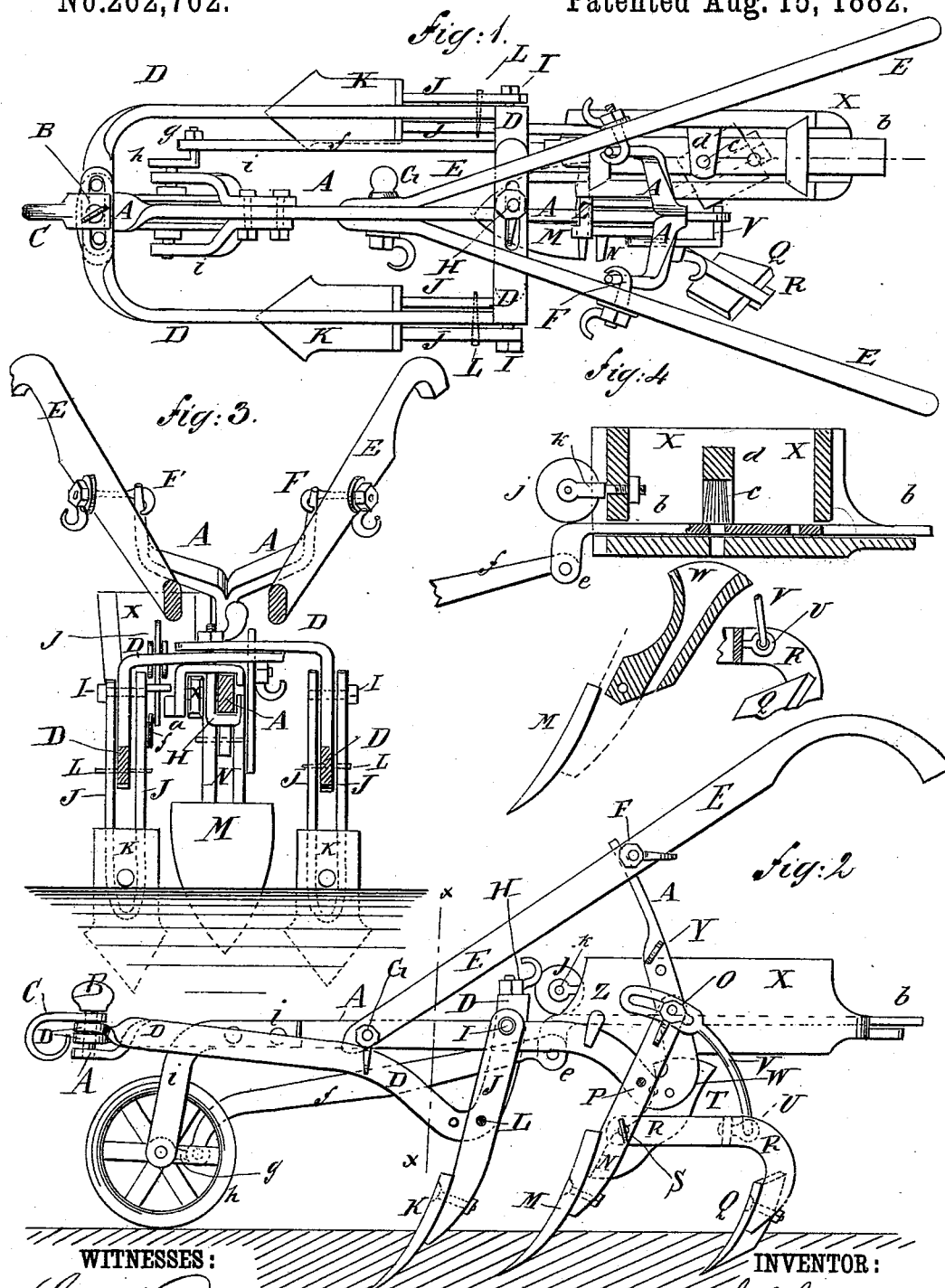
(No Model.)

G. L. GIFFORD.

COMBINED SEED PLANTER AND CULTIVATOR.

No.262,762.

Patented Aug. 15, 1882.



WITNESSES:

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GEORGE L. GIFFORD, OF SAN ANTONIO, TEXAS.

COMBINED SEED-PLANTER AND CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 262,762, dated August 15, 1882.

Application filed February 17, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. GIFFORD, of San Antonio, in the county of Bexar and State of Texas, have invented a new and useful Improvement in a Combined Seed-Planter and Cultivator, of which the following is a full, clear, and exact description.

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

Figure 1 is a plan view of my improvement. Fig. 2 is a side elevation of the same. Fig. 3 is a sectional front elevation of the same, taken through the line *xx*, Fig. 2. Fig. 4 is a sectional side elevation of the seed-box and conducting-spout.

The object of this invention is to provide combined seed-planters and cultivators constructed in such a manner that the seed-planting mechanism can be readily detached when not required for use, and also in such a manner that each plow can be adjusted independently of the others when desired.

A represents the main plow-beam, the forward end of which is widened and has three holes (more or less) formed in it to receive the bolt B, that secures the draft-hook C and the forward ends of the side bars, D, to the said plow-beam A, so that the point of draft attachment can be adjusted as may be desired. The rear part of the plow-beam A is bent downward, rearward, and upward, and its end is forked, as shown in Fig. 1. The ends of the branches of the plow-beam A are rounded and are secured to the handles E by hook-bolts F, so that the height of the said handles can be adjusted as may be required. The forward ends of the handles E are secured to the opposite sides of the middle part of the plow-beam A by a bolt, G. The bolts F G are provided with hand-nuts, so that the said bolts can be readily loosened when desired.

The forward ends of the side bars, D, are bent inward to overlap each other above the forward end of the plow-beam A, and are slotted to receive the fastening-bolt B, so that the said bolt B can be adjusted without interfering with the side bars, D, and so that the side bars, D, can be adjusted nearer to or far-

ther from the beam A, as may be required. The rear parts of the side bars, D, are bent downward, rearward, and upward, and are then bent inward at right angles to overlap each other above the plow-beam A. The overlapped rear ends of the side bars, D, are slotted to receive the hook-bolt H, which hooks upon the beam A, passes through the slots of the side bars, D, and is provided with a hand-nut, so that the said bolt can be readily loosened to allow the side bars, D, to be adjusted nearer to or farther from the beam A, as may be required.

To the rear parts of the side bars, D, a little below their angles, are hinged, by bolts I, the upper ends of the plow-standards J, to the lower ends of which are bolted the plows K.

In the standards J and in the bends of the side bars, D, are formed holes to receive wooden pins L, which are made of sufficient strength to support the draft-strain under ordinary circumstances, but which, should the plows K strike an obstruction, will break and allow the plow-standards J and the plows K to swing back to prevent the said standards and plows from being broken. The standards J are made double, or are slotted longitudinally, to receive the side bars, D, so that the draft will come squarely upon the said side bars. Several holes are formed in the side bars, D, to receive the hinging-bolts I and the wooden pins L, so that the standards J can be adjusted at any desired height and pitch to cause the plows K to work at any desired depth in the ground.

M is the furrow-opening plow, which is attached to the lower end of the standard N. The standard N is made double, or is slotted longitudinally, to receive the rear part of the beam A. The upper end of the standard N is hinged to the upper rear part of the beam A by a bolt, O, and the middle part of the said standard is connected with the bend of the beam A by a wooden pin, P, to break and allow the standard N and its attachments to swing back should the plow M strike an obstruction.

Q are the covering-plows, which are attached to the downwardly-curved lower ends of the beams R, the forward parts of which incline inward and are welded or otherwise secured

to each other at their forward ends, forming a double beam. The forward ends of the beams R are hinged to the double standard N by a bolt, S. The beams R at a little distance from
 5 their forward ends are connected by a cross-bar, T, the ends of which are welded or otherwise secured to the said beams R.

To the middle part of the cross-bar T is attached a short stud, U, to which is hinged
 10 the lower end of a curved brace-bar, V. The upper end of the brace V is slotted to receive the bolt O, so that the covering-plows and the opening-plow can swing back together should either of the plows strike an obstruction. This
 15 construction also enables the covering-plows and the opening-plow to be adjusted separately, if desired.

To the side of the standard N is secured, by bolts, rivets, or other suitable means, a spout,
 20 W, to receive seed from the discharge-opening in the bottom of the seed-box X and conduct it to the furrow in the rear of the plow M. The seed-box X is secured to the side of the beam A by the bolt Y and the hook-bolt
 25 Z, and is further secured in place by having apart of the forward end of its bottom inserted between the hook-bolt H, and the downwardly-projecting end of the U-bar or keeper a, placed between the beam A and the over-
 30 lapped rear ends of the side bars, D, and secured in place by the said hook-bolt H.

In the upper side of the bottom of the seed-box X is formed a groove to receive the seed-dropping slide b, the ends of which pass out
 35 beneath the lower edges of the ends of the seed-box X. In the slide b are formed two apertures, each of sufficient size to receive enough seed for a hill, to carry the said seed to the discharge-opening in the bottom of the seed-box
 40 X. The escape of any more seed than enough to fill the discharge-opening of the slide b is prevented by a brush, c, placed directly over the discharge-opening in the bottom of the seed-box and secured to a cross-bar, d, attached
 45 to the said seed-box X. The forward end of the slide b has a downwardly-projecting lug, e, formed upon or attached to it, to which is pivoted the rear end of a connecting-bar, f. The forward end of the connecting-bar f is bent
 50 downward and is pivoted to a crank-pin or crank, g, attached to the wheel h, that supports the forward end of the machine. The wheel h is journaled to the lower ends of two bars, i,

the upper parts of which are bent to the rearward, and are secured to the opposite sides of
 55 the plow-beam A by bolts, rivets, or other suitable means.

The forward part of the seed-dropping slide b is held down, so that it will not be raised from its seat by the operation of the connect-
 60 ing-rod f, by a small friction-wheel, j, pivoted to a bracket, k, attached to the forward end of the seed-box X.

With this construction two hills will be dropped at each revolution of the wheel h, and
 65 the hills will be at a distance apart equal to half the circumference of the said wheel.

With this construction, when the machine is to be used as a cultivator the seed-dropping mechanism can be detached, and also the cov-
 70 ering-plows, or both the covering and opening plows.

When the machine is to be taken from place to place the plows can be swung up away from the ground and the machine moved upon the
 75 wheel h, in the manner of a wheelbarrow.

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

1. In a combined seed-planter and cultivator, the combination, with the beam A, of the
 80 side bars, D, having their rear parts bent downward, rearward, and upward to receive the plow-standards, and their ends bent inward and slotted to receive the fastening-bolts, substantially as herein shown and described,
 85 whereby the plows can be adjusted at any desired distance apart, as set forth.

2. The combination of the beam A, widened at the front end and provided with a transverse row of holes, the bolt B, the draft-hook
 90 C, and the front-curved, slotted, overlapping side bars, D, as described.

3. In a combined seed-planter and cultivator, the combination, with the bent rear part of the beam A, of the opening-plow standard
 95 N, the double beam R, carrying the covering-plows, and the curved and slotted brace V, substantially as herein shown and described, whereby the said opening and covering plows can be adjusted together or separately, as set
 100 forth.

GEORGE L. GIFFORD.

Witnesses:

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 HENRY LUETHY.