2 Sheets—Sheet 1.

J. M. BROWN.

Combined Planter and Cultivator.

No. 219,065. **Patented Sept. 2, 1879.**

Fig. 1.

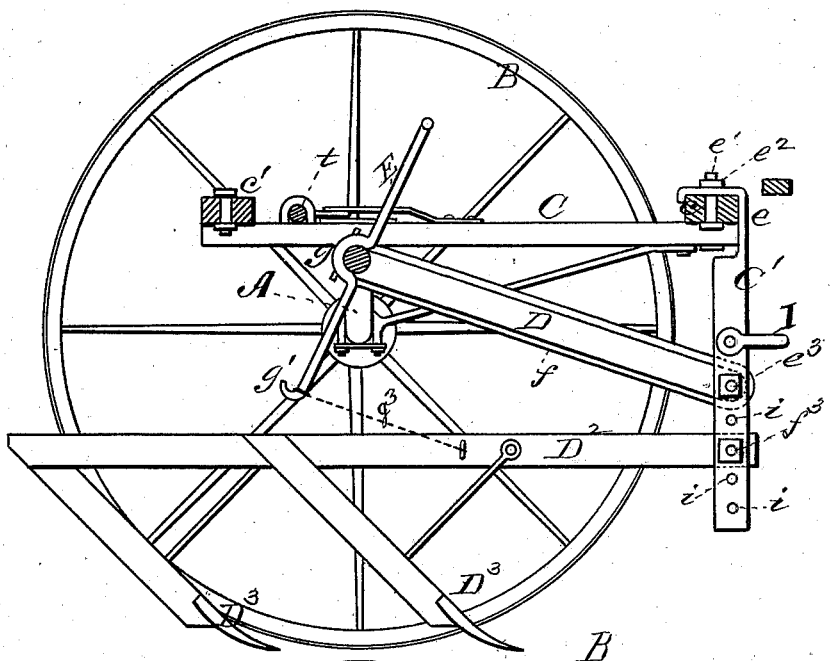
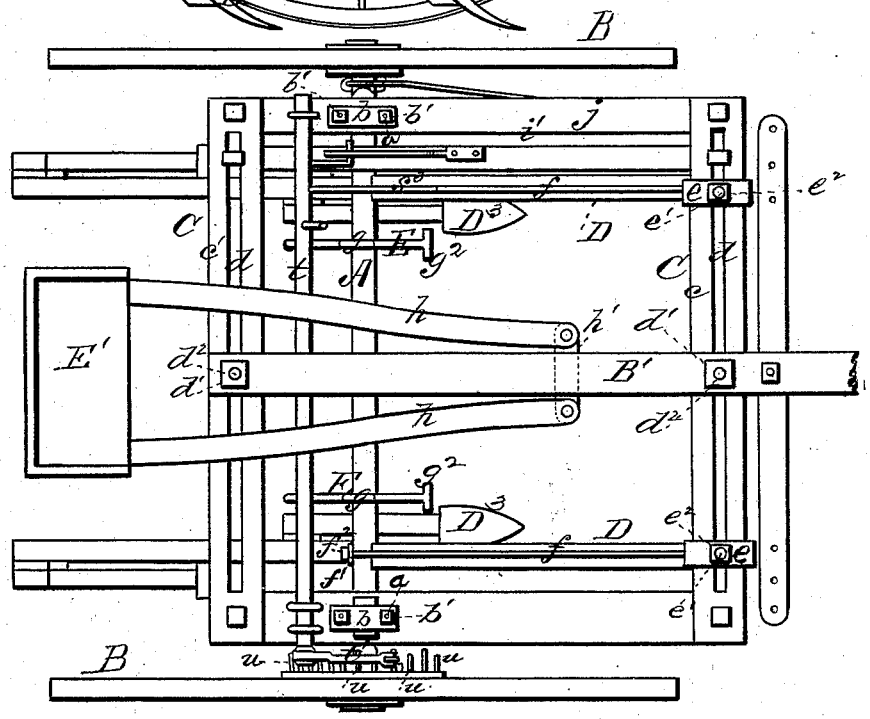


Fig. 2.



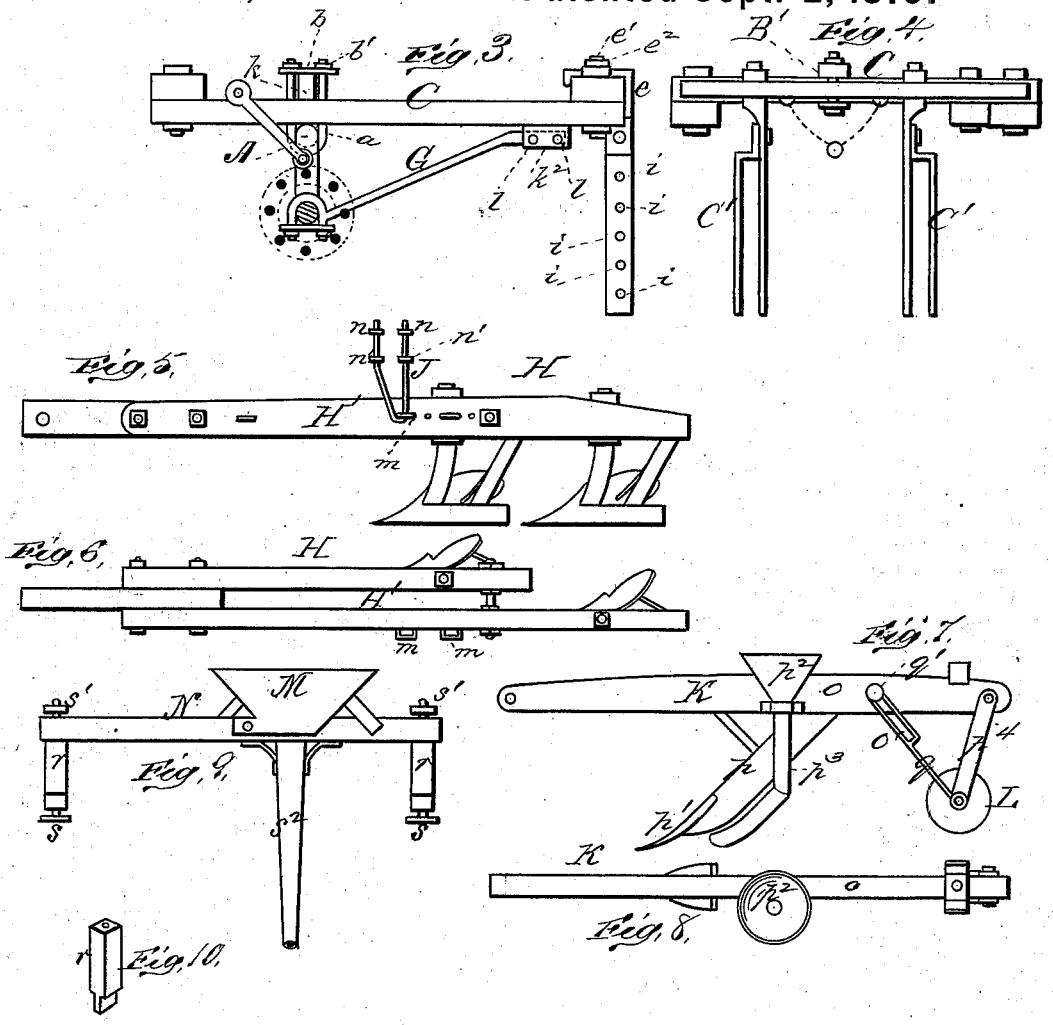
WITNESSES
E. H. Bates
F. J. Masi.

INVENTOR
Joseph M. Brown,
by E. W. Anderson,
ATTORNEY

J. M. BROWN.

Combined Planter and Cultivator.

No. 219,065. Patented Sept. 2, 1879.



WITNESSES
F. F. Bates
F. J. Kasi.

INVENTOR
Joseph M. Brown,
by E. W. Anderson,
ATTORNEY

UNITED STATES PATENT OFFICE.

JOSEPH M. BROWN, OF FLORENCE, TEXAS.

IMPROVEMENT IN COMBINED PLANTER AND CULTIVATOR.

Specification forming part of Letters Patent No. **219,065**, dated September 2, 1879; application filed March 2, 1878.

To all whom it may concern:

Be it known that I, JOSEPH M. BROWN, of Florence, in the county of Williamson and State of Texas, have invented a new and valuable Improvement in Combined Planter and Cultivator; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my invention. Fig. 2 is a top view thereof, and Figs. 3, 4, 5, 6, 7, 8, 9, and 10 are detail views of attachments.

This invention has relation to improvements in combined cultivator and seed-planter.

The nature of the invention consists in certain novel combinations of parts, whereby my implement is convertible at pleasure into a cultivator, a gang breaker-plow, or a seed-planter, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates an ordinary bent axle, B the transporting-wheels, and C a rectangular frame secured to the axle by means of staple-bolts *a*, straddling the axle, extending through the side rails of the frame, and secured thereto by means of a bearing-plate, *b*, through which the branches of the said bolts extend, and nuts *b'*, applied upon their projecting screw-threaded ends. The front and rear bars, *c c'*, of the frame C are each provided with a longitudinal slot, *d*, and the tongue B' is secured to the frame by means of bolts d^2, extending from below upward through the slots *d* and through the tongue, and provided with clamp-nuts d^1. By loosening these nuts the tongue may be shifted laterally to any desired position on the frame.

C' represents bifurcated draft-irons, the branches of which are provided with spaced perforations *i* on the same level with each other. The shanks *e* of these irons are angular, and the horizontal portion thereof bears upon the front rail of the frame, being secured thereto by means of a bolt, e^1, extending from below upward through the slot *d* of the said rail and a perforation in the said shank, and a nut, e^2, applied to the projecting screw-threaded end of the bolt.

The draft-irons are braced to the axle, and prevented from either backward or forward displacement, as follows: A strong wooden bar, D, is secured, at its front end, to each of the draft-irons between their branches by means of a bolt, e^3, extending through the perforations *i* aforesaid, and extends to the rear and bears against the axle, a recess being made in its contiguous end for its reception. A metallic rod, *f*, bent into U form, is passed around the front end of the bar D, and extends to the rear beyond the axle. A metallic link-plate, f^1, is then passed over the free ends of the said rod, and nuts f^2 screwed thereon outside of said plates, as shown in Fig. 2. The bars D, by their rigidity, effectually prevent any tendency to backward displacement in the said draft-irons, and the U-rods any movement in the opposite direction.

The beams D^2 of the cultivator-shovels D^3 are each secured to one of the draft-irons between its branches by means of a bolt, f^3, and are adjustable for a greater or less penetration of the shovels D^3 by shifting the bolts f^3 to a lower or higher set of perforations, *i*. The rear ends of the beams D^2 are independently raised, thereby drawing the shovels out of the ground by means of the levers E, having at a short distance from their weight ends a semicircular bend, *g*, by means of which they are loosely fulcrumed on the axle. At their weight ends these levers are provided with a hook, g^1, by means of which they are connected to a chain, g^3, upon each of the beams D^2, and at their power ends with a cross handle or step, g^2, bearing upon which with his feet the driver is able to raise the plows at pleasure.

By loosening the nuts e^2 upon the upper ends of the bolts e^1 and those f^2 at the rear ends of the U-rods *f* the beams D^2 may be adjusted to or from each other at pleasure.

E' represents the driver's seat, of the usual form, to which are attached in the same plane therewith two converging supports, *h*, connected together at their free ends by a brace, *h'*. When in position the supports *h* rest upon the rear bar of the frame, the tongue being between the supports and the brace *h'* under the tongue, and, being separate from the tongue and frame, the seat is readily adjustable to the rear or front, so that the weight of the driver

may balance the weight of the frame and the draft. The seat is also adjustable laterally with the tongue. The side rail, *j*, at the left hand of the driver, is slotted from end to end, as shown at *i'*, for a purpose hereinafter set forth.

For breaking ground the cultivator beams are detached and the tongue shifted to the right-hand side of the frame.

The block *k*, which is shown in Fig. 3 on top the frame under the staple *a*, is drawn out and inserted under the frame between it and the axle, thereby raising the right-hand side of the frame, so that it will be level and hold the plows level when the wheel runs in a furrow. In order that this may be accomplished, the rod G, which connects the right-hand side of the frame directly to the axle, is adjustably secured to the frame This latter is provided upon its under side with a metallic plate having spaced lugs k^2, between which the front end of the said brace G is received, being secured thereto by means of a pin passing through registering-perforations in the brace and lugs, there being two or more sets of said perforations in the lug, as shown at *l*, Fig. 3.

The gang-plow H may be either double or single, and is secured to the draw-irons in the same manner as the cultivator-beams. Its beam H' is provided with a staple, *m*, upon its side, through which one of the branches of a V-shaped keeper-rod extends. This rod J has its ends screw-threaded, and is secured to the frame by passing its ends through the slot *i'* of rail *j*, and clamping it in position by means of the nuts *n n'*, the one above and the other below the said rail *j*. This keeper is upon the land-side of the beam, and serves to prevent the plows from working in upon the land, thereby holding the beams in the line of the draft—that is, at right angles to the axle.

The gang breaker-plows are adjustable for penetration, and may be raised out of the ground in precisely the same manner as the cultivators.

K represents the planter, consisting of a beam, *o*, a standard, *p*, having an opening-shovel, p^1, and a funnel-like hopper, p^2, having a spout, p^3, extending to a point just behind the opener. Behind the shovel, at the rear of the beam, are two vibrating hangers, p^4, in the lower ends of which is journaled a wheel, L, that is braced to the beam by the rods *q*. The rods are bent at their ends contiguous to the beam *o* to form a long loop, *o'*, and are adjustably clamped thereto by a through-bolt, *q'*, extending through the said loops and beam, and having clamp-nuts upon its projecting screw-threaded ends.

To attach this planter the cultivating attachments are removed, and the device above described substituted therefor, the tongue being shifted to the center of the frame, the two long draft-irons being at each side thereof, and the block *k* being placed under the staple on top of the frame. The storing-hopper M upon a beam, N, having at each end a depending standard, *r*, is then attached to the left-hand side of the frame by passing the tenoned ends of the said standards into the slot *i'* of the rail *j*, passing a broad-headed bolt, *s*, up through the standard and beam, and forcibly setting up the nuts s^1.

The spout s^2 of the hopper M opens into the hopper p^2, and its valve is operated to discharge the seed at intervals by an arm, s^3, upon a rock-shaft, *t*, that engages the said valve.

The rock-shaft is transversely mounted at the rear portion of the frame, and has upon its end opposite to the hopper an arm, *t'*, that is struck by tappets *u* upon the wheel during its rotation, thereby opening the valve and discharging the seed.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the frame C, having slots *d* in its front and rear rails, *c c'*, and a slot, *i'*, in its side rail, *j*, tongue B, extending across the frame, and driver's seat E', both tongue and seat being laterally adjustable together on the frame and axle A, with the laterally-adjustable draft-irons C', draft-bars D, rods *f*, elongated staple *a*, arranged on the right-hand rail of the frame, plate *b*, block *k*, and adjustable brace G, whereby the implement is convertible and adapted to operate either as a cultivator, a gang-plow, or a seed-planter, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH MARTEN BROWN.

Witnesses:

S. B. McCLAIN,

U. J. BECK.