

GEORGE FAWCETT.

Improvement in Cultivators.

No. 126,276.

Patented April 30, 1872.

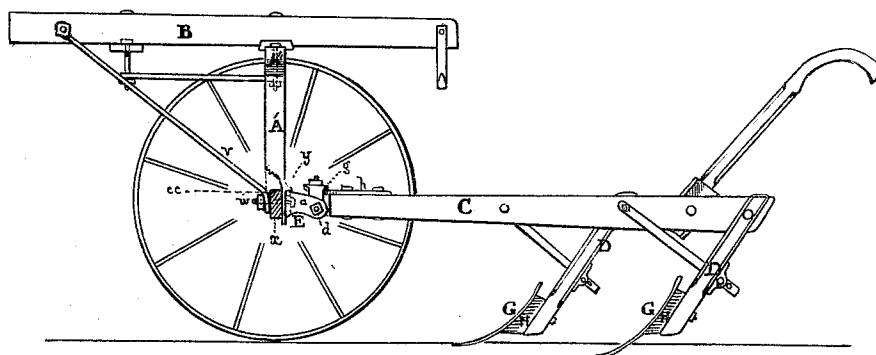


Fig. 1.



Fig. 10.

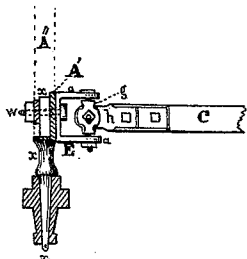


Fig. 2.

Sec. Thro. "cc" Fig. 1.

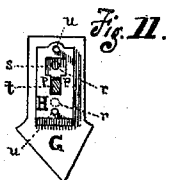


Fig. 11.

Fig. 4.

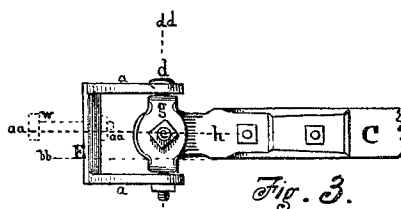


Fig. 3.

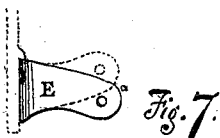


Fig. 7.

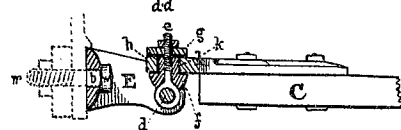


Fig. 5. Sec. Thro. "aa" fig. 3.

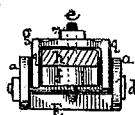


Fig. 8.

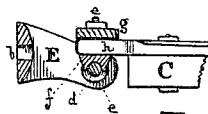


Fig. 6. Sec. Thro. "bb" fig. 3.

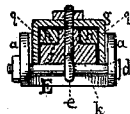


Fig. 9.

Vertical Sec. Thro. "dd, dd" in fig. 3.

Witnesses
Henry W. Wells
James M. Moore

Inventor
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by Edmund Thurston
his Attorney

UNITED STATES PATENT OFFICE.

GEORGE FAWCETT, OF FARMINGTON, ILLINOIS.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 126,276, dated April 30, 1872.

To all to whom it may concern:

Be it known that I, GEORGE FAWCETT, of Farmington, in the county of Fulton and in the State of Illinois, have invented an Improvement in Cultivators and Joint to attach Plow-Beams to Cultivators; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a longitudinal elevation of cultivator and joint; Fig. 2, plan of "joint" and sectional plan of vertical brace A', showing attachment by one bolt of "brace" for draft axle-brace A', and axle *x*, and the "joint" itself; Fig. 3, plan of "joint;" Fig. 4, elevation of clevis; Fig. 5, section, vertical through line *a a*, Fig. 3; Fig. 6, vertical section of same through line *b b*, Fig. 3; Fig. 7, side elevation of clevis, showing its reversibility; Fig. 8, rear elevation of clevis and joint, the beam-plate *h* being seen in "section;" Fig. 9, vertical section through center of joint; Fig. 10, vertical section of shovel-block, or attachment of shovel to shank of plow-beam; Fig. 11, rear elevation of same, with the shank or shovel-stem removed.

Scale of drawing about one inch to the foot.

This invention consists in the improvement of the joint, which attaches the plow-beam to the body of the cultivator; a clevis having horizontal arms is fastened to the rear of the axle-brace, the bolt or fastening of the same passing through the said brace, the axle, and the draft-rod. The plow-beam plate is pivoted on a vertical eye-bolt, held on a horizontal stationary bolt, held between and by the arms of the clevis, the eye-bolt being protected from wear from the plow-beam plate by means of a cylindrical thimble or rim, which is an upward extension or projection of the riding-bearing, which carries the said plate, and which in turn rests on the base of the eye-bolt and the horizontal bolt below. The whole is inclosed by a washer, the two arms of which rest on said horizontal bolt, and is secured by a nut above; also, in the mode of attaching the plow-stems to their shovels by a slotted recess, bolt, and nipples in the adjusting-block behind the shovel.

A' A' represents the usual transverse axle-

brace, which connects the axles and carries the hounds and tongue. To each of the vertical arms of this brace A' are attached a draft-brace or rod, *v*, an axle, *x*, and the clevis or coupling E by one bolt *w*. The draft-brace extends forward to the hounds, one brace being situated on either side of the machine. B, the hounds; C, the plow-beam, carrying the usual shovels D D, but differently attached, the mechanism of which is described below; E, the coupling or clevis, which consists of an oblong plate, having a horizontal slot, *b*, and an arm, *a a*, on either end of the slot, through which arms passes a horizontal bolt, *d*, which is secured from turning therein by having its head beveled square, and let into a corresponding recess at the entrance of one of the holes. The clevis is attached to the rear side of the axle-brace A', immediately below a horizontal rib, *y*, projecting from said brace by a bolt, *w*, which at once passes through said slot *b*, the brace A', the axle *x*, and the eye of the draft-brace or rod *v*, on the outside of which it is fitted with a nut. The bolt *d* passes through an eye-bolt, *e*; the shank of the latter passes upward through the riding-bearing *f*, which is recessed on its under side to fit the surface of the bolt *d* and the eye-bolt *e*; the upper surface of the bearing *f* is horizontal, and has around the hole, through which the shank of the latter bolt *e* rises, a cylindrical guard or nipple, *k*, cast with the bearing *f*, which retains the eye of the plow-beam plate *h*. Above these parts, and between the nut which secures the joint, and which screws on the upper end of the bolt *e*, is placed the box or washer *g*, which terminates on either side of the riding-bearing *f* and the beam-plate *h* in a vertical arm, *q q*, each provided with recesses in their lower extremities, which partly embrace the bolt *d*. (See Figs. 8 and 9.) G G represent two of the shovels, and are represented with their adjusting-blocks in detail, in Figs. 10 and 11. H is an iron block, riveted to the shovel at *r r*, and having a recess, *s*, behind it large enough at the entrance to admit the head of the bolt *t*, which passes through the shovel-stem D. From this opening the recess is elongated beneath the surface of the block, so as to leave two rectangular wings, *p p*, above this deeper recess, which are divided by a slot, which clasps the neck of the bolt *t* immediately under the head,

and so retains the block and shovel against the stem D when the final washer and nut are applied behind the stem. Two nipples, *u u*, at either end of the block H, serve the purpose of engaging the same with the recesses made to receive them in the stem D.

The operation of this joint or coupling is as follows: First, to raise or lower the point of the beam C, for deeper or shallower cultivation, the clevis E is made reversible, as seen in Fig. 7, the arms *a a* being curved from a line or horizontal plane passing through the slot, so that on reversing the clevis, (as seen in dotted lines,) the point of the beam C can be raised or lowered. The point of the said beam is also shifted laterally by means of the horizontal slot *b*, by loosening the same bolt *v*, which accomplishes the connection of the clevis to the brace A', axle *x*, and draft-brace *v*. Second, the plow-beam is held by the plate *h*, the latter not touching the eye-bolt *e*, its center of motion, but plays around the thimble or nipple *k* of the rider *f*. Vertical motion to the plows and beam are provided for by the horizontal bolt *d* and its engaged eye-bolt *e*; and

the bridge, box, or washer *g* riding on the former bolt *d*, prevents the loosening, by oscillation, of the crowning-nut of the latter bolt *e*. The shovels are readily engaged or disengaged by merely loosening the nut behind the stem D sufficiently to enable the head of the bolt *t* to be slipped out of the covered recess *s*, by sliding the block until the wings *p p* cease to retain the head of the bolt at the same time that the nipples *u u* are disengaged from their respective recesses in the plow-stem D.

What I claim as my invention is—

The reversible slotted clevis E, having curved arms *a a*, in combination with bolt *d*, eye-bolt *e*, riding-bearing *f*, bridge *g*, cylindrical nipple or bolt-guard *k*, and plate *h* attached to beam C, all constructed and arranged in the manner and for the purpose as set forth.

In testimony that I claim the foregoing improvement in cultivators, I have hereunto set my hand this 16th day of December, 1871.

GEO. FAWCETT.

Witnesses:

WM. JACK,

JOHN HAMMOND.