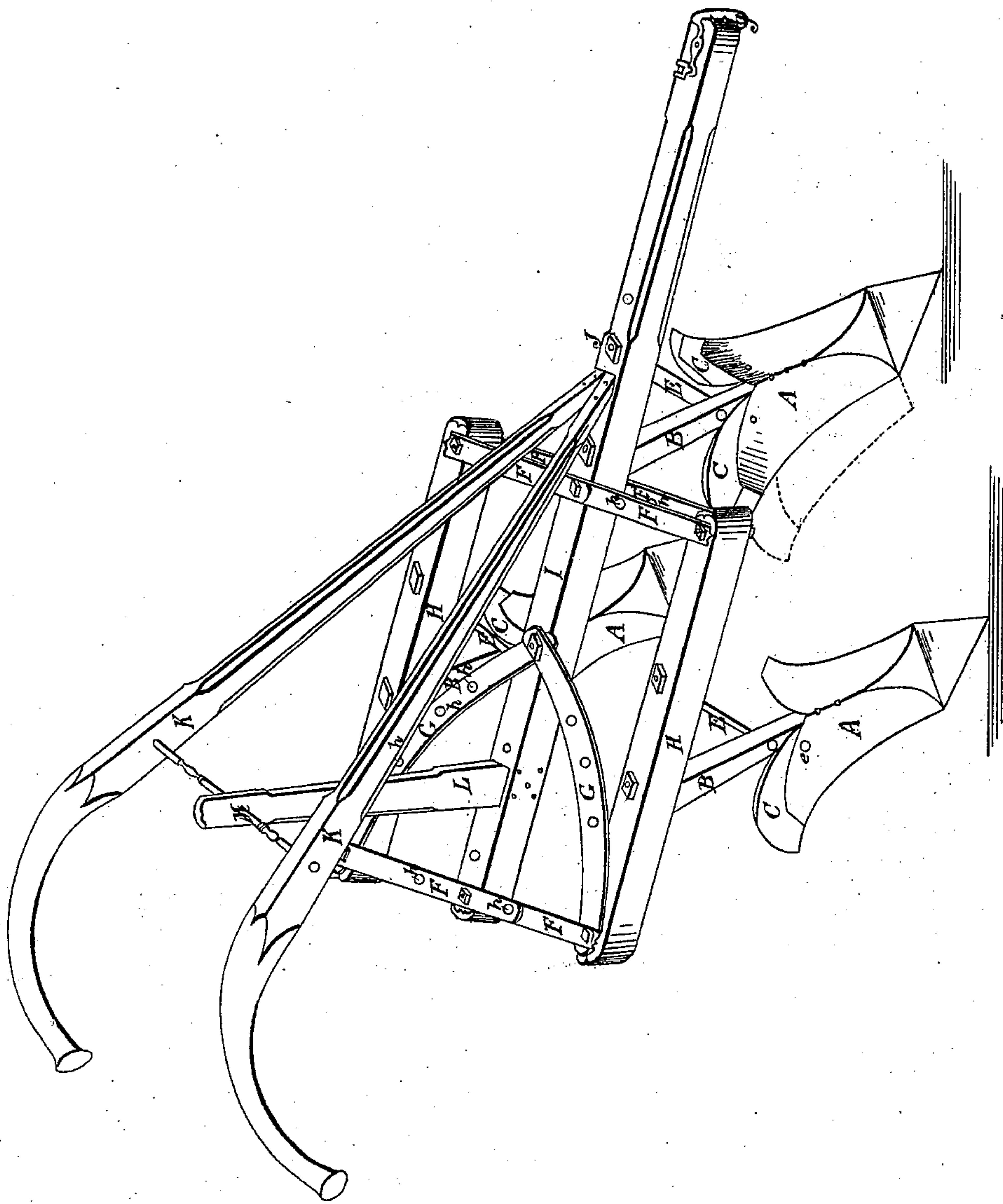


L. J. CASWELL.

Cultivator.

No. 59,358.

Patented Nov. 6. 1866.



Witnesses:

*E. E. Palmer*  
*Geo. A. Klock*

Inventor:

*Lyman J. Caswell*

# UNITED STATES PATENT OFFICE.

LYMAN J. CASWELL, OF SCOTT TOWNSHIP, STEUBEN COUNTY, INDIANA.

## IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 59,358, dated November 6, 1866.

*To all whom it may concern:*

Be it known that I, LYMAN J. CASWELL, of Scott township, in the county of Steuben, State of Indiana, have invented new and useful Improvements in a Cultivator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed perspective drawings, making a part of the specification, in which—

K K are handles; M, cross-brace; L, standard; I, center beam; H H, side beams; F F F F F, armatures; G G, adjusting-braces; B B B, standards to share and mold plates; E E E, braces to standards B, &c.; A A A, steel shares; C C C C, extension turning mold-plates; *e e e e*, &c., bolts and nuts; *h h h*, &c., holes in armatures and braces.

To enable others to make and use my invention and improvements, I describe their construction and operation.

K K and M and L are handles, braces, and standard to handles. I construct these in the usual way. Height of standard and length of brace one foot seven inches clear by standards, and feet of handles fasten them to the center beam.

I is a center beam. I construct this of strong wood, four feet six inches long; thickness and width, two inches by three inches, putting usual clevis in draft end, making proper vertical holes through it for bolting armatures, braces, and standards. These may be made in any convenient place for adjustment of side beams and center share. In this beam is also set, in a mortise, the handle, post, or standard.

H H are side beams. I construct these of similar wood of center beams, same thickness and width, and two feet six inches long, making vertical holes in each end for armature-bolts, and convenient distance from each end for share-standard and standard-brace. These, by means of their braces and armatures, may be adjusted forward and backward and in distance from center beam.

F F F F F F are armatures. I make these of iron, sufficient width and thickness—the four forward, one foot nine inches long, the two hind ones one foot eleven inches long. I make holes in each end of these, and convenient intermediate holes for adjusting side beams. I place four of these at the fore end

of side beams, two above and two below. The two longest I place above, at the hind end of the beams. I bolt one end of these armatures to the center beam, the other ends to the ends of the side beams, leaving them so as to turn on the bolts.

G G are adjusting-braces. I make these of iron, of sufficient thickness and width for strength, making bolt-holes at both ends, and convenient intermediate bolt-holes. Braces straight or curved, about one foot five inches long. One end of these I sustain by a bolt on top, and about one foot and three inches from hind end of center beam, and inclining them out and back. I sustain the other ends, or at convenient distances on the top sides of side beams, by bolts, leaving them to turn on the bolts. By these I graduate and sustain the side beams in their proper places.

B B B are share-standards. I make these of iron, 1.5 inches wide, 0.625 inches thick, nine inches from share to beam, slightly curved, lower ends flattened, and riveted to shares, the upper end of center standard flattened, and extending along the under edge of the center beam far enough to be fastened with two bolts. Upper ends of side standards similarly flattened, and extended sufficient for two bolts, turning on the forward bolt, and a mortise for the hind bolt, so that the standards may be slightly turned on the forward bolt. By these mortises and bolts the points of the shares may be turned slightly in or out.

E E E are standard-braces. I make these of round iron three-eighths inch thick, long enough to pass through the beams and fasten at top with thread and nut, and turned at lower end and passed through holes in the standards, and cause the standards to stand at an angle of about fifty-three degrees forward with the beams, and braces placed nearly vertical. These sustain the standards, and turn sod or sward from the standards and shares.

A A A are shares or shovels. I make these of shear-steel, from six to eight inches wide, one-fourth of an inch thick, pointed forward from each side at an angle of about forty-five degrees, flattened from point to angles of pointing, and inclined about five degrees from this line the angle of the shovels is about twenty-five degrees, or convenient angle, and the



shares have the usual curves, extending at the center about ten inches, continuing curved molds upward and outward about five inches. These I bolt to their standards.

C C C C are extension curved mold-plates. I make these of the same sheet-steel of shovels, corresponding their curves to curve of shovels, extending above the shovels about four inches, and far enough out to coincide with the sides of the shovel, and extending below upper part of shovels, to be bolted on their under sides. These are put on for deep furrows and taken off for shallow furrows. I place one on each side of the center shovel and on the outside of each side shovel.

The operation of the different constructions are such that, by means of the turning-armatures F F F F F F, the side beams and side shovels may be placed forward, so that the three shovels will form a shovel-plow. The side shovels may be placed any convenient distance from the center line. One side shovel may be placed back, the other forward, any proper distance from the center, and, by means of the braces G G, sustained in place. By means of the braces E E E the points of the shovels may be

elevated or depressed. By the mortises in the standards B B the points of side shovels may be turned in or out slightly. By means of the extension mold-plates a deeper furrow may be turned; when off, a shallower one.

What I claim as my invention and improvements in a cultivator is—

The application of the turning-armatures F F F F F F to the cultivator to change the positions of the side shovels, so as to form a shovel-plow or a cultivator; the application of the braces G G to sustain the side beams and side shovels in their proper positions; the application of the braces E E E to the shovel-standards, to elevate and depress the shovel-points and turn the sod or sward; the application of the curve to the extension mold-plates; the mortise in the ends of the shovel-standards, and the flattening the points of the shovels; and I disclaim a right to patent of all other parts of a cultivator.

LYMAN J. CASWELL.

Witnesses:

D. E. PALMER,  
GEO. A. KLOCK.