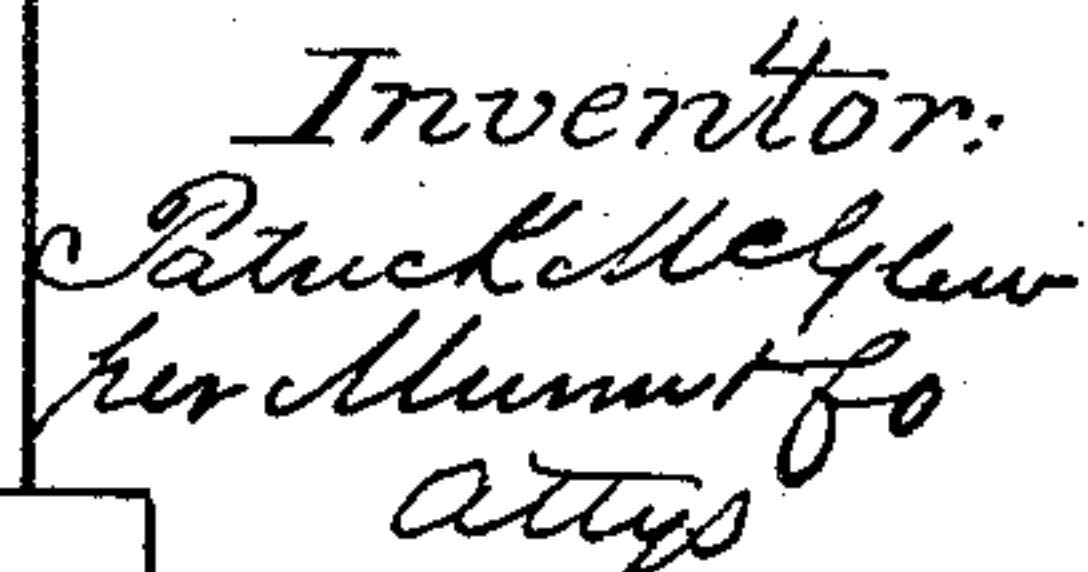


Wheel-Cultivator.

Patented Feb. 9. 1864.



UNITED STATES PATENT OFFICE.

PATRICK MCGLEW, OF DES MOINES, IOWA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 41,523, dated February 9, 1864.

To all whom it may concern:

Be it known that I, PATRICK MCGLEW, of Des Moines, in the county of Polk and State of Iowa, have invented a new and Improved Cultivator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *xx*, Fig. 2; Fig. 2, a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a new and improved cultivator of that class designed for plowing crops at each side of a row simultaneously.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a rectangular frame, to the back part of which there are secured at each side two oblique bars, B B, connected by cross-bars *a*, and firmly secured to the frame A by bolts *b*. These bars B extend down some distance below the frame A, and the wheels C, which support said frame, have their axles *c* fitted in the lower part of the bars B. By this arrangement the frame A is elevated at a sufficient height to clear the tops of the plants under cultivation. The bars B are firmly braced by rods *d*, so that they will be securely held in position.

D represents the draft-pole, the back part of which is secured by a bolt, *e*, between two hounds, *f f*, which are bolted on the frame A parallel with each other. The draft-pole is allowed to work freely on the bolt *e*, and to the back end of the draft-pole there is attached an eye, *g*, into which the lower end of a screw-rod, E, is fitted or connected by a hook, *h*. This screw-rod E passes up through the front end of a lever, F, the fulcrum *i* of which is on one of the hounds *f*, as shown in both figures.

On the screw-rod E, above the lever F, there is placed a nut, *j*, having a handle, *k*, attached. By this arrangement it will be seen that by pressing down the back part of the lever F the front part of the frame A will be elevated, and that the front part of the frame may be re-

tained in a more or less elevated state by adjusting the nut *j*, for this nut, in connection with the lever F and the attachment of the latter to the pole D, controls the position of the frame A. This adjustment of the frame A regulates the depth of the penetration of the shares into the earth, and also admits of the latter being elevated entirely above the surface of the ground when required, as in turning at the ends of rows or transporting the machine from place to place.

To each hound *f* there is attached a metallic plate, G. These plates project beyond the sides of the hounds *f f*, and each has an oblong slot, *k*, made in it, through which a plow-standard, H, passes, the lower end of said standards having each a shovel-plow, I, attached. The plates G are attached to the hounds *f f* by means of screws *l*, which pass through oblong slots *m* in the plates, said slots admitting of a certain degree of adjustment of the plate G longitudinally with the hounds *f f*, as will be understood by referring to Fig. 2.

The upper ends of the plow-standards II II are connected by a cross-bar, *n*, the ends of which are fitted loosely in mortises in the standards, and have bolts *o* passing through any one of a series of holes, *p*, made in them, said bolts also passing through the standards H. To the cross-bar *n* an upright handle, I', is attached, and the lower end of said handle is attached to a cross-bar, J, the ends of which are fitted loosely in mortises in the standards. Each standard has a bar, K, attached to it by a pivot, and the front ends of said bars are connected by hooks and eyes *r r'* to the front cross-bar of the frame A. By this arrangement the plows I may be moved laterally to conform to the sinuosities of the rows of plants under cultivation by working the handle I' laterally, and said plows may also be raised upward entirely free from the earth when desired. This latter movement, however, is only designed for a temporary adjustment of the plows to clear obstructions or to prevent the plowing out of plants which may be materially out of line with those of the main rows.

L L are two plow-standards, which have shovel-plows M attached to their lower ends. These plow-standards pass upward between

inclined guides *s*, attached to longitudinal bars *t* in the frame *A*. These guides *s* have metal plates *n* secured to their lower ends and wooden bars *u'* secured to their upper ends, said plates and bars *u u'*, in connection with the bars *t*, keeping the standards *L* between the guides *s*. The standards *L*, like the standards *H*, are connected to the front part of the frame *A* by bars *N*, and each bar *N* is connected by a rod, *v*, with a bar, *O*, the ends of which are fitted in guides *P* attached to the under side of the frame *A* and back of the wheels *C*. This bar *O* has two scrapers, *Q Q*, attached to it, one near each end.

R represents a bail-shaped rod, which is attached to the scraper-bar *O* and to a lever, *S*, the fulcrum of which is at the under side of one of the hounds *f*. By operating this lever *S*, which is done by the driver with his feet, the bar *O* will be actuated and the plow-standards *L L* raised or lowered or kept to their work as desired. This forms a very simple and convenient arrangement for adjusting or operating the plows *M*.

The parts herein described are all operated by the driver while on his seat *M'*.

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

1. The two plow-standards *H H*, fitted in the metal plates *G* and connected to the front part of the frame *A* by bars *K*, in connection with the handle *I*, attached to the bars *n J*, which are fitted to the standards *H*, as shown, to operate as described.

2. The plow-standards *L L*, connected to the front part of the frame *A* by the bars *N*, and fitted between the guides *s* and secured between them by the plates *u* and bars *u' t*, in connection with the bar *O*, attached to the bars *N* by the rods *v* and connected to the lever *S* by the rod *R*, all arranged to operate as set forth.

PATRICK MCGLEW.

Witnesses:

SIM. D. WELLING,
WESLEY REDHEAD.