

K. McKINNON.
Cultivator-Plows.

No. 145,222.

Patented Dec. 2, 1873.

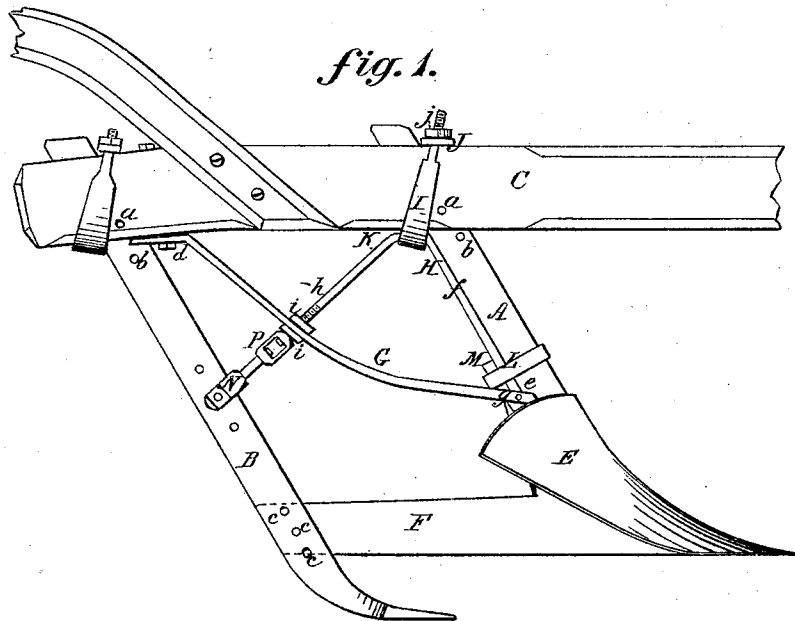


fig. 2.

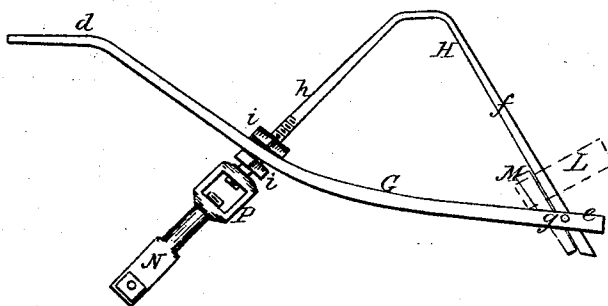
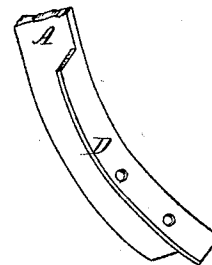


fig. 3.



Witnesses:

Wm. Wagner,
Harry Coleman.

Inventor:

Kenneth McKinnon.
By Johnson, Mauck & Co.
his Attorneys.

UNITED STATES PATENT OFFICE.

KENNETH MCKINNON, OF PLEASANT HILL, ALABAMA.

IMPROVEMENT IN CULTIVATOR-PLOWS.

Specification forming part of Letters Patent No. **145,222**, dated December 2, 1873; application filed May 31, 1873.

To all whom it may concern:

Be it known that I, KENNETH MCKINNON, of Pleasant Hill, in the county of Dallas and State of Alabama, have invented certain new and useful Improvements in Cultivator-Plows, of which the following is a specification:

The object of my invention is to furnish an effective bracing device, applicable to adjustable and removable plow or shovel standards and the beam, by the combination of a diagonal adjustable brace with a fixed angular brace of two or three branches, to the ends of which the adjustable brace is secured, the said angular brace being united to the plow standard or standards and the beam by means of a yoke and loop, which clamp them firmly together at two points, so as to admit of their easy removal when desired for any purpose, and the adjustment of the branches of the angular brace more easily to the plow-beam, the standard, and the diagonal brace, as shown in the side elevation, Fig. 1, of the accompanying drawings, in which—

Figure 2 is a detached view of the standard bracing device, and Fig. 3 is a view of the flanged end of the plow-standard.

The bracing device is adapted for use with separate standards, or with two standards. When two are used, one of them forms a subsoil-plow and the other for the attachment of a turning plow-share, a shovel, scooter, scraper, or sweep. When one is used, either of these devices may be used with it.

The drawings show the front standard A for the cultivating devices, and the subsoil standard B in the rear, but their positions may be reversed. They are secured in mortises in the beam C by screw-bolts *a*, and are provided with holes *b* to admit of their vertical adjustment. The standard A has formed upon it a side flange, D, whereby the turning plow-share E is secured so that it can be easily removed and other cultivating devices fastened to the same standard by screw-bolts, the flange D forming a ready seat for the purpose, and without requiring a change of the standard. The land-side F connects the two standards, its connection with the subsoil-standard B being made adjustable by holes *c*, to let it run any depth in the soil. When one standard is used the land-side is connected to the beam by an

upright bar. The front standard is braced by a rear diagonal bar, G, whose upper end, *d*, is secured to the under side of the beam, and its lower end, *e*, is forked to embrace the rear side of the standard A, and is also secured, at *g*, to the upright branch *f* of an angular brace, H, fitted against the rear side of the standard A, the under side of the beam, and deflected downward and united by a branch, *h*, to the diagonal brace G, by screw-nuts *i*, arranged above and below the brace upon the screw-threaded end of said branch *h*, to give support and strength to the diagonal brace G, and to change its angle when necessary to make it and the branch *f* adjustable to the standard A. The angular brace H is secured to the beam, by a clamp-yoke, I, with cross-plate J and screw-nuts *j* on the upper ends of the yoke. This clamp-yoke I is arranged to cross diagonally the end of the standard A, where it passes through the beam, in order to lock the standard A and angular brace H, at their crotch K, with the beam by the yoke-plate J, secured against the front side of the standard on the top of the beam. The lower end of the branch *f* of the angular brace is secured against the standard A by a loop-band, L, into which a wedge, M, is inserted and driven downward, so as to force and hold the brace *f* firmly against the standard. The end of the diagonal brace G is slotted for the wedge to pass into and to receive the end of the loop-clamp L, the object being to unite the standard A to the brace as low down as possible, so as to give it support and strength at that point.

The loop-clamp L is passed over the standard A before the latter is secured to the beam, and over the branch *f* of the angular brace H before the latter is fastened to the diagonal brace G. The upper and lower ends of this brace G embrace the standards at their connections, to render it more secure against lateral displacement.

By the employment of this bracing device the standards can be much longer, and thus obtain more space between the beam and the ground, to prevent the plow choking.

In using the plow with turning or cultivating devices, a single horse will answer; but two may be used when the subsoil is attached.

Any kind of plow required in the prepara-

tion of the soil and in the cultivation of the crops can be used with the standard-braces. The two standards are braced by the same device, each to other and to the beam, the brace for the rear standard being a detachable prolongation, N, of the branch *h* of the triangular brace H, the section N being united to the brace G H by screw-coupling or union piece P, by which the brace N can be easily applied and adjusted, or removed when the rear standard is not used.

Having described my invention, I claim—

1. The combination of the separate diagonal and annular braces G H with the plow-standard A, the beam C, and the clamping devices I and L, constructed and arranged substantially as described.

2. The brace N, in combination with the braces G H, the screw-coupling B, and the standard B, as and for the purpose described.

KENNETH MCKINNON.

Witnesses:

W. A. RICE,
W. R. SMYLY.