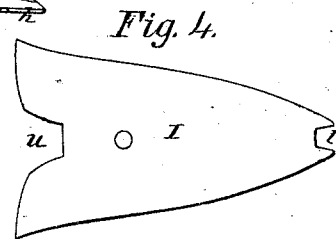
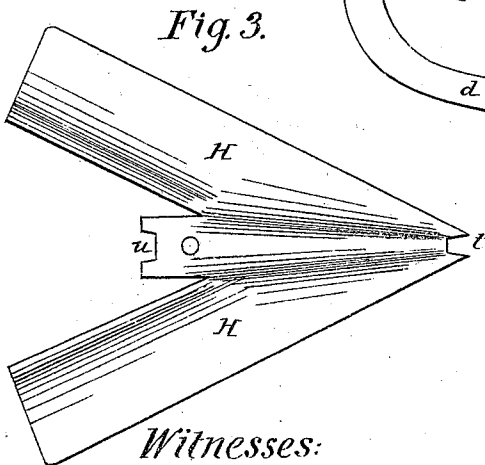
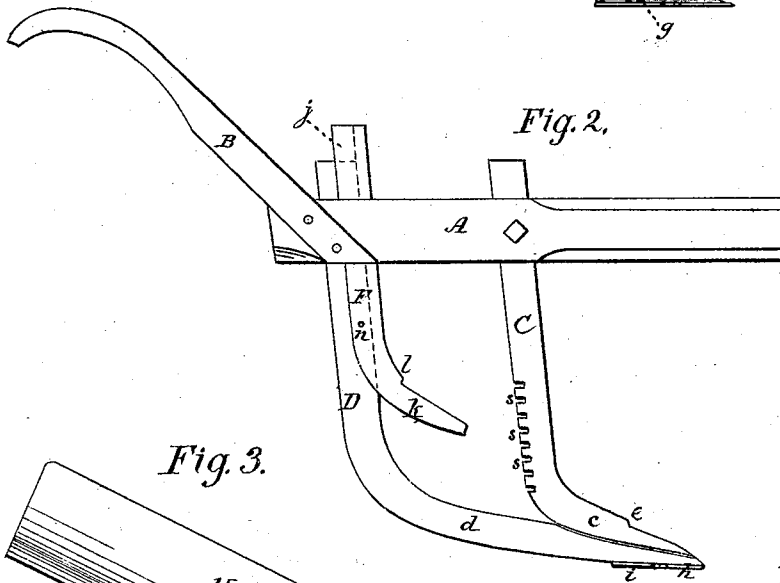
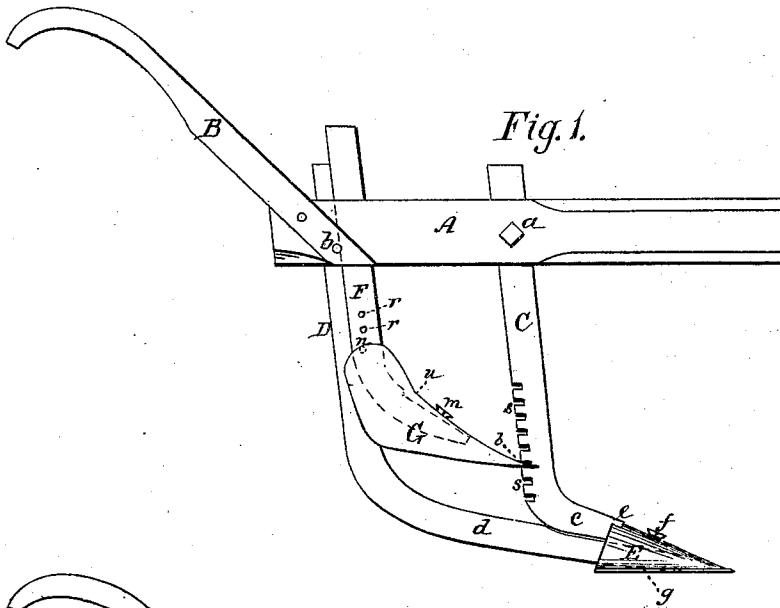


K. McKINNON.
Cultivators.

No. 136,254.

Patented Feb. 25, 1873.



Witnesses:
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UNITED STATES PATENT OFFICE.

KENNETH MCKINNON, OF PLEASANT HILL, ALABAMA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 136,254, dated February 25, 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 Plow and Cultivators, of which the following is a specification:

The object of my invention is to break and loosen the deep soil, and at the same time to cultivate the crop with such sweeps or wings as the nature of the work requires, or to open furrows for planting seed or other purposes; and my said invention consists in combining an adjustable bar constructed with a foot-support for the upper share with the front and rear standards, between which the cultivating-share is arranged and supported; and in constructing the rear side of the front standard with notches to receive and support the point of the cultivating-share, according to the height at which it is adjusted by its standard above the point or subsoil-share; and in the combination and arrangement of the several parts of the cultivator, by which the upper cultivator-support is adapted to receive between it and the front standard turning-wings, sweeps, and openers for either cultivating or planting.

In the accompanying drawing, Figure 1 represents a side elevation of a plow and cultivator embracing my invention. Fig. 2 represents a similar view, showing the point and cultivator-share removed; and Figs. 3 and 4, a sweep and opener for the rear standard, detached.

The beam A and handles B are of the usual construction. Through oblong mortises in the beam iron or steel standards C and D pass edgewise, one behind the other, about ten inches apart, and secured to the beam by one or two bolts, *a b*, from which they extend parallel to each other down to a bend, which is given to each bar so as to bring their lower ends together in foot-branches *c* and *d* in front of the forward bar C. At their junction their adjacent sides are made flat, with the front foot *c* fitted upon that of the rear standard. Upon the upper foot-branch *c* the subsoil-point *E* is fitted and secured against a shoulder, *e*, by a screw-bolt, *f*, which passes through the point and the foot-branches, and fastened by a screw-nut, *g*, on the under side of the bottom branch *d*, which secures the three parts together. The

screw-tap *g* and the lower foot are protected by two steel plates, *h i*, and the point extends on each side to a level with the steel plates. The point is about six to eight inches long, three or four wide, and two and a half thick at the bolt. An adjustable standard, *F*, is fitted upon the rear standard D, being provided with a groove, *j*, in its rear side for that purpose. It is also formed with a foot, *k*, extending forward at about the same angle with the lower foot *d*, about half-way between the space between the standards C and D, and to which the upper share is fitted and secured against a shoulder, *l*, and by a screw-bolt, *m*, passing through the foot-branches. The standard *F* passes through the mortise in the beam A with the standard D, and is made adjustable vertically upon the latter by its groove, and fastened by a bolt, *n*, passing through the sides of the grooved standard *F*, and any one of a series of holes, *r*, in the standard D, to allow the upper or rear plowshare to be adjusted at any desirable height above the point or subsoil-plow. To this adjustable standard *F* and the front standard C the cultivator-share is secured; and in order that this may be properly done, the rear side of the front standard is notched to receive the point of the share and secure and brace it both vertically and laterally by the point entering said notches *s*, and it is notched itself to embrace the sides of the standard at whatever height the grooved standard may be adjusted. By this adjustment of the plow-share the point can be run at any desirable depth, and the openers and sweeps at any depth in the surface of the soil desired.

In the drawing, I have shown three forms of shares, *G* being a side turning-wing, *H* a sweep, and *I* an opener, each having its point notched to fit into the notches *s* of the front standard C, and by which they are secured and adjusted correspondingly with that of the grooved standard. These shares, however, may be of any desirable pattern which will admit of their arrangement between and attachment to the two standards.

The cultivator-shares *H* and *I* are provided with notches *t* and *u*, both front and rear, the latter to embrace the adjustable standard and fit against the shoulder *l*, so that the share is braced laterally at both ends.

The cultivator may also be used for plant-

ing by having a point-plow to open a furrow; and a turning-wing can be used to throw the earth into ridges; then the subsoils and sweeps can be used in cultivating young crops; and, finally, a sweep can be attached to the subsoil-standard to cultivate crops when shallow plowing is required.

Having described my invention, I claim—

1. In combination with the front and rear standards C and D, united to each other, as described, the adjustable grooved standard F with its foot *k* and cultivator-share, constructed and arranged substantially as described.

2. In combination with the adjustable standard F and cultivator-share, arranged as described, the notches *s* in the front standard C for securing and bracing the notched point of the share at any height corresponding with the adjustment of the supporting-standard F, substantially as described.

3. The cultivator-shares G H I, provided with notches *t u* at their upper and lower points of attachment to brace them laterally to the standard C F, to which they are secured.

4. The combination and arrangement of the standards C D and the adjustable standard F with their foot-branches *c, d, and k*, the subsoil-point E, and the cultivator-share made adjustable in the notched standard C, the several parts being constructed and arranged for use as described.

In testimony whereof I have hereunto set my hand this 19th day of July, A. D. 1872.

KENNETH MCKINNON.

Witnesses:

JOSEPH G. MAYO,

PETER L. ULMER.