

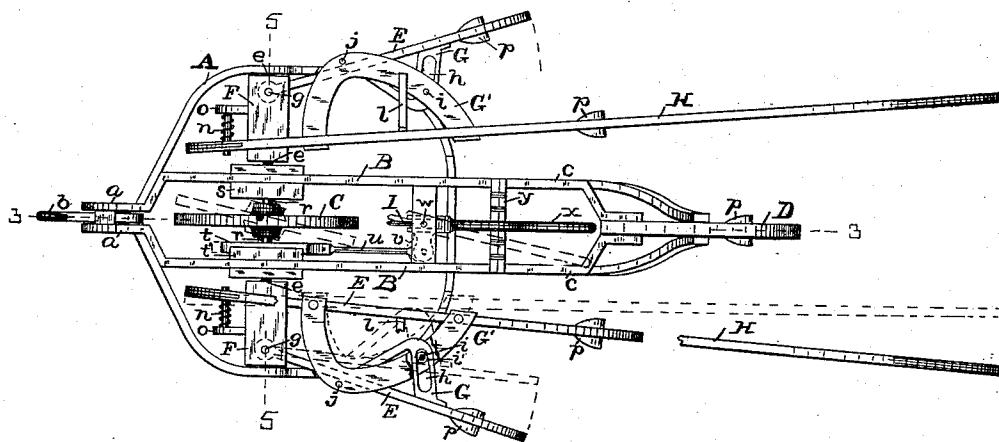
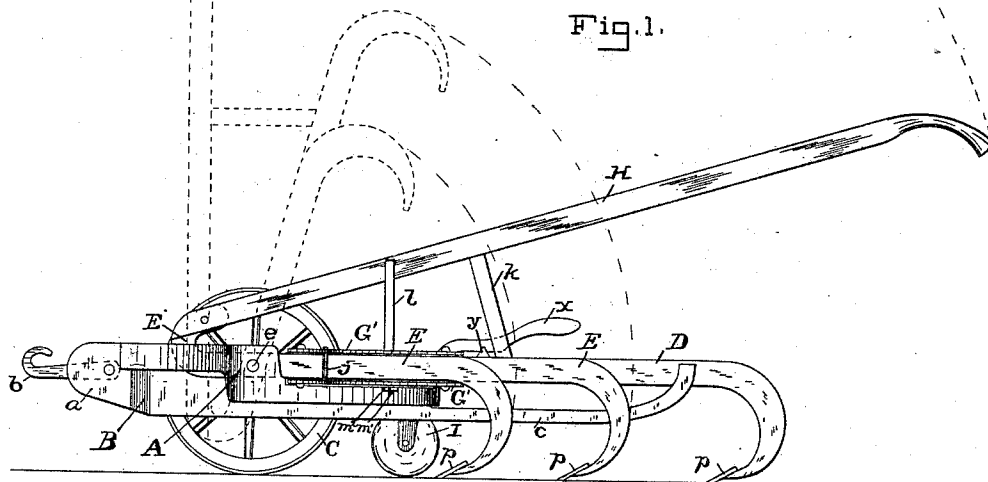
(No Model.)

2 Sheets—Sheet 1.

E. H. FRANKLIN.
CULTIVATING PLOW.

No. 468,743.

Patented Feb. 9, 1892.



WITNESSES:

Otto H. Ehlers.
J. P. Davis.

Fig. 2.

INVENTOR:

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BY

Chas B. Mann

ATTORNEY.

(No Model.)

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Fig. 3.

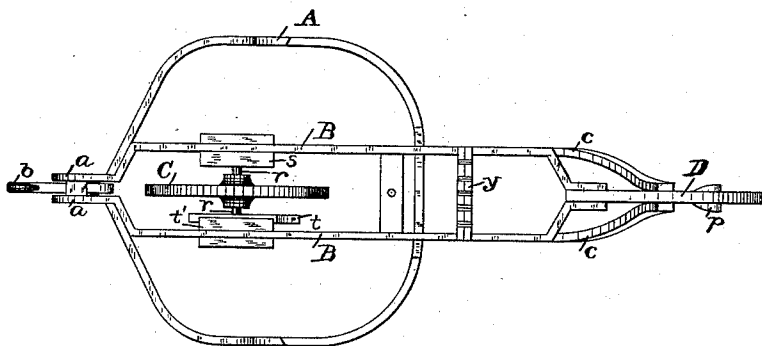
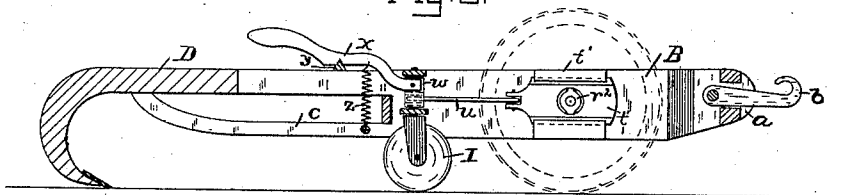


Fig. 4.

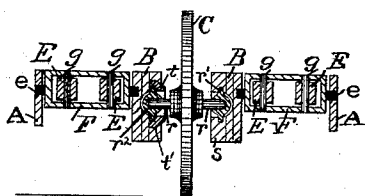


Fig. 5.

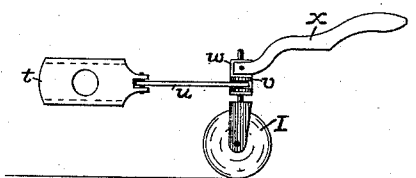


Fig. 6.

WITNESSES:

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INVENTOR:

Elhanan H. Franklin

BY *Chas B. Mann*
ATTORNEY.

UNITED STATES PATENT OFFICE.

ELHANAN H. FRANKLIN, OF BERRETT, MARYLAND, ASSIGNOR OF ONE-HALF TO WILLIAM A. DORSEY, OF SAME PLACE.

CULTIVATING-PLOW.

SPECIFICATION forming part of Letters Patent No. 468,743, dated February 9, 1892.

Application filed April 13, 1891. Serial No. 388,670. (No model.)

To all whom it may concern:

Be it known that I, ELHANAN H. FRANKLIN, a citizen of the United States, residing at Berrett, in the county of Carroll and State of Maryland, have invented certain new and useful Improvements in Cultivating-Plows, of which the following is a specification.

This invention relates to that class of cultivating-plows in which the drag-bars are laterally adjustable to work the shovels closer together or farther apart.

The main objects in view are to provide for the lateral movement of the drag-bars at one side of the plow independent of those at the other side, to provide for raising the drag-bars on pivots to elevate the shovels from the ground, and to provide an improved construction of colter and wheel to facilitate side-hill plowing.

To this end the invention consists in the novel features of construction and combinations of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, illustrating the invention, Figure 1 shows a side view of the plow, broken lines showing the drag-bars raised on their pivots; Fig. 2, a top or plan view showing the drag-bars spread apart, broken lines at one side showing them brought closer together; Fig. 3, a longitudinal section on line 3 3 of Fig. 2; Fig. 4, a top view of the frame with the drag-bars and appurtenances removed; Fig. 5, a cross-section of the plow on line 5 5 of Fig. 2, and Fig. 6 a detail of the colter and slide-bearing of the main wheel.

The letter A designates the frame, which may be of any suitable form. This frame comprises two parallel bars B at the middle, extending lengthwise and having a sufficient space between them to accommodate the wheel C. The said bars B project at the front of the frame, as shown at *a*, and between them is pivoted the draft-clevis *b*. At the rear these bars also project, as at *c*, and between these rearward-projecting ends is rigidly secured the forward end of the center

drag-bar D. This center drag-bar has no movement with respect to the frame and aids in holding the latter in a level position. In the present instance four more drag-bars E are shown, two being on each side of the center drag-bar, and they are pivoted and arranged as will now be described.

In each side of the main frame A is a rocking frame F, the trunnions *e* of which are journaled in the central longitudinal bars B and the sides of the frame A, respectively. The construction at each side is the same, and therefore a description of that at one side only will be given. The forward ends of the drag-bars E are pivoted in the rocking-frame F by pivot-pins *g* to allow of a lateral movement of said drag-bars on these pivots. In the present instance the two bars are connected and their lateral adjustment with respect to each other obtained by means of angular overlapping arms or brackets G G', the bracket G, secured to the outside drag-bar, having in one arm an elongated slot *h* and the overlapping bracket G' of the inside drag-bar having a pin *i* engaging said slot and carrying a roller *i'* to work against the sides thereof. The said bracket G' preferably comprises two parts, secured on the upper and lower side, respectively, of the drag-bar and each extending over and beyond the outside drag-bar and connected by a vertical bolt *j* on the outer side of said bar. The inside drag-bar is extended forward of the rocking frame F and connects with the front end of the handle H, which thence extends rearwardly and upwardly and is braced by the bars *k l*, the former of which extends from the handle to the inside drag-bar and the latter from the handle to the curved bracket G', where it forms a bolt *m'*, extending through the bracket and having on its lower end a nut *m''*. This brace thus serves as an additional means of securing the two parts of the bracket G' together. A spring *n*, placed between a forward projection *o* from the rocking frame F and the forward-extending end of the inside drag-bar, presses against the said drag-bar end

and holds the shovel-carrying end of the drag-bar thrown out from the central rigid drag-bar. It will be observed that when the said inside drag-bar is thus thrown out the outside drag-bar will also be extended laterally and the pin *i* will be at the inner end of the oblique slot *h*.

To contract the drag-bars for the purpose of bringing the shovels *p* closer together to work in a narrower furrow, the handle *H* is shifted laterally on the pivot *g*, which movement obviously draws the inside drag-bar nearer to the central bar. At the same time the pin *i* is drawn against the rear side of the slot *h* in the angle bracket or arm *G* of the outside drag-bar, and traveling over said side draws the said outside drag-bar in toward the inside bar. It will be seen that when the handle *H* is pushed out again to spread the drag-bars the pin *i* will work against the opposite or forward side of the slot, and thus throw out the outside drag-bar as the inside one moves outward on its pivot. The elongated slot *h* extends on such an angle that the outside drag-bar will always be the same distance relatively from the inside one as the latter is from the central rigid bar. The shovels will thus always work the same relative distance apart. By this construction the drag-bars on one side of the plow can be adjusted laterally entirely independent of those on the other side or both sets can be worked simultaneously.

By raising the handles *H* on the pivots of the rocking frames *F* the drag-bars may be elevated from the ground, as shown in broken lines in Fig. 1, to clear obstacles or for any other purpose, and the drag-bars at one side may be raised without those at the other side, their pivots being entirely disconnected and independent.

The wheel *C*, before mentioned, has trunnions *r*, which are mounted in rocking bearings *r'* *r*². The bearing *r'* at one side is mounted to turn in a stationary bearing *s*, secured to the inside of one of the bars *B* of the frame *A*, and the other rocking bearing *r*² is journaled in a slide *t*, working in a slideway *t'*, secured to the inside of the other bar *B*. This slide is connected by a rod *u* with a lateral arm *v*, projecting from the upright shaft *w* of a colter *I*, mounted in the frame *A* between the bars *B* and in the rear of the wheel *C*. The shaft *w* of the colter turns in bearings in the frame and has a rearward and upward extending handle *x*, which engages in a rack *y* on the frame. This handle is held down in engagement with the said rack by a spring *z*.

In side-hill plowing the handle *x* will be raised from engagement with the rack and shifted to throw the colter-wheel at an angle to the frame, where its natural line of travel will be up the hill. Through the medium of the connecting-rod *u* this shifting of the colter

moves the slide *t* forward and turns the bearings *r'* *r*², so that they carry the wheel *C* on the same angle as the colter-wheel, as shown by broken line in Fig. 2. In this manner side-hill plowing will be greatly facilitated, because the plow will be kept up to its work by reason of the wheels *C* and *I* in their oblique position acting in opposition to the tendency of the plow to slue.

It is evident that my invention might be varied in many particulars, and therefore it is not limited to the exact construction shown.

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

1. In a plow, the combination of a frame carrying a rigid center drag-bar, drag-bars on either side of said center bar, pivoted in the frame to have a lateral movement, those on one side movable independently of those on the other side, a slotted arm projecting from one drag-bar on each side of the plow, an arm projecting from the adjacent drag-bar and carrying a pin engaging the said slotted arm, and handles rigidly connected with the two sets of pivotal drag-bars, respectively.

2. In a plow, the combination of a frame carrying a rigid center drag-bar, drag-bars on either side of said center bar, pivoted in the frame to have a lateral movement, those on one side movable independently of those on the other side, an arm projecting from one of the drag-bars on each side of the plow at an angle to the bar and having an elongated slot, an arm projecting from the adjacent drag-bar and carrying a pin which engages said slot and has a roller therein, and handles rigidly connected with the two sets of pivotal drag-bars, respectively.

3. In a plow, the combination of a frame carrying a rigid drag-bar, a rocking frame mounted in said main frame to turn in a vertical plane, drag-bars pivoted at their forward ends to said rocking frame to have a lateral movement, suitable connections between said pivotal drag-bars to cause them to spread apart when moved outward and to contract when moved inward, and a handle rigidly attached to one of the pivotal bars.

4. In a plow, the combination of a frame carrying a rigid central drag-bar, two rocking frames mounted in opposite sides of the main frame to turn in a vertical plane, drag-bars pivoted at their forward ends in the said rocking frames, respectively, to have a lateral movement, connections between the pivotal drag-bars to cause them to spread apart when moved outward and to contract when moved inward, handles rigidly connected with the pivotal drag-bars, and springs for keeping the latter spread apart.

5. In a plow, the combination of a frame, a wheel mounted therein to shift laterally in its bearings to an oblique position, a colter

in the rear of said wheel, a rod connection between the colter and wheel, and a handle for turning the colter and thereby the wheel.

6. In a plow, the combination of a frame, a
5 wheel mounted therein in rocking bearings, a slide carrying one of said bearings, a colter in the rear of the said wheel, a rod connecting said colter and the said slide, and a han-

dle for turning the colter and thereby the wheel through the rod connection. 10

In testimony whereof I affix my signature in the presence of two witnesses.

ELHANAN H. FRANKLIN.

Witnesses:

F. P. DAVIS,

JNO. T. MADDOX.