A. ELDRED.

Cultivator.

No. 4,320. Patented Dec. 20, 1845.

Fig. 1.

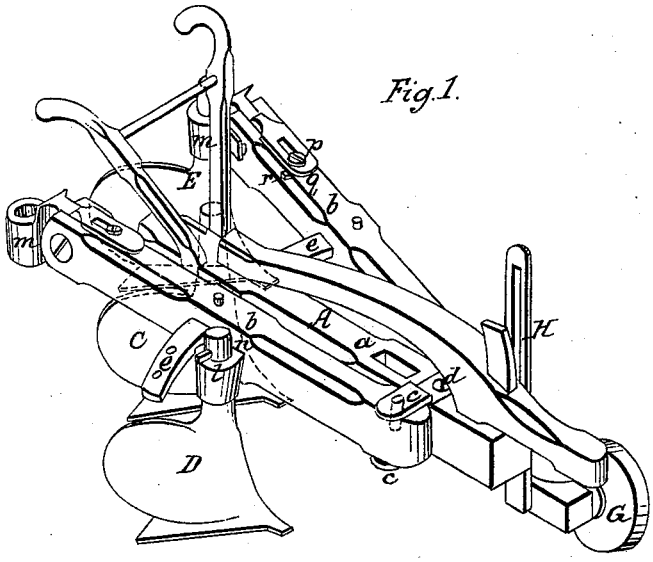


Fig. 2.

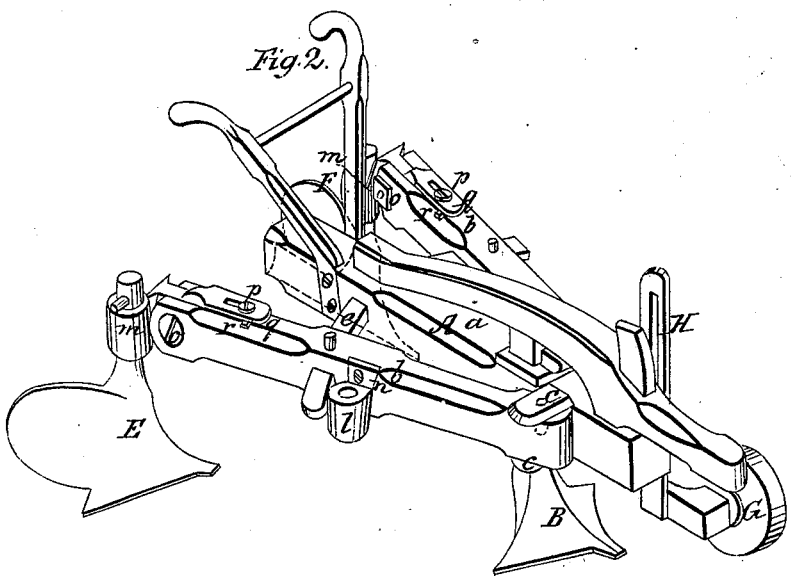
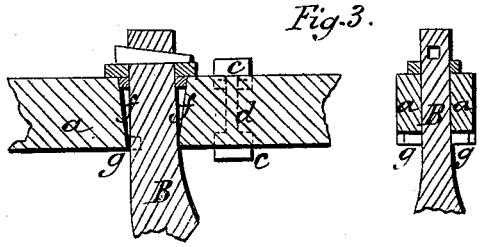


Fig. 3.



UNITED STATES PATENT OFFICE.

ALLEN ELDRED, OF OPPENHEIM, NEW YORK.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **4,320**, dated December 20, 1845.

To all whom it may concern:

Be it known that I, ALLEN ELDRED, of Oppenheim, in the county of Fulton and State of New York, have invented new and useful Improvements in Cultivators; and I do hereby declare that the following is a full, clear, and exact description of the principle or character thereof which distinguishes them from all other things before known, and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective representation of the cultivator with three plows for cultivating wheat; Fig. 2, a like representation of it adapted to the cultivation of corn, and Fig. 3 a section to show the manner of attaching the front tooth.

The same letters indicate like parts in all the figures.

The usual method of attaching cultivators, plows, or teeth to the frame is by inserting the upper part of the standard in holes made in the wood of the frame, which very soon yields under the constant jar and pressure to which such implements are subjected, as well as to the constant cutting of the wedges and keys employed for securing them; and in addition to these objections there is another which is seriously felt in practice, and that is the tendency to choke by the accumulation of grass, earth, &c., against the standard at its junction with the frame through which it passes.

To avoid these defects is the object of my invention, which consists in connecting the plows with the frame by means of iron sockets secured to the side of the side and center pieces of the frame, and in jointing these sockets to the frame for the purpose of regulating the set of the plows to cut deeper or shallower, and in securing the front double tooth to the frame by inserting it in a mortise of sufficient length to receive a wedge front and back, projections being made on each side of the standard, that lies in recesses made for that purpose in the under face of the center piece of the frame, to act as journals, so that by driving the wedges front or back the point of the double tooth may be elevated or depressed to cut deeper or shallower.

In the accompanying drawings, A represents an expansion cultivator-frame, consisting of the middle piece, *a*, with the side pieces, *b b*, jointed to it at the forward end by means of two plates, *c c*, one above and the other below, cast with journal-pins that fit in corresponding holes in the ends of the side pieces, as represented by dotted lines, so that by securing the two plates to the middle piece of the frame by one single bolt, *d*, instead of the three usually employed, the side pieces are effectually and permanently jointed. The side pieces toward the back end slide on an arch, piece, *e*, and may be secured at any angle desired by means of pins in the usual manner.

The upper part of the standard of the front double tooth, B, is made square, and is received in a mortise in the middle piece, *a*, of the frame, the said mortise being made longer at the top than at the bottom to receive wedges *f f* front and back of the standard, as represented by Fig. 3, for the purpose of adjusting the point to cut deeper or shallower, as may be desired, the frame resting on a journal-like projection, *g*, cast on each side of the standard, and fitting in a recess in the under face of the frame, and the whole secured by a key and washer in the usual manner.

The cultivator-plows C D E F have their standards rounded at the upper end and fitted in metallic sockets *l l m m*, and secured by a key in the usual manner. These sockets for the forward plows, (that only require to be set in the line of the landside,) such as C D, are attached by a flange, *n*, let into the side of the side and middle pieces and secured by a screw-bolt; but those at the back—such as E F—are elongated and let into the back end of the side pieces, and there turn on a screw-bolt, *o*, to admit of adjusting the point of the plow to cut deeper or shallower, which is effected by a set-screw, *p*, that passes through an elongated hole in a projection, *q*, of the socket to depress the point, and a wedge, *r*, to elevate it.

By these modes of adjustment the tooth and plows can be adjusted with the greatest accuracy—as for instance, the front double tooth cannot be attached to the side of the frame by a socket for the want of room between the middle and side pieces, and, as it requires no adjustment to the land, it is made adjustable for cutting deep or shallow by the wedges and elongated mortise through which the standard passes. The two plows C D, that need only

to be set in the direction of the land when the frame is expanded or contracted, are readily adjustable on the metallic sockets, which do not wear and become loose, as if fitted in wood, and at the same time places the standard at a sufficient distance from that part of the frame to which they are attached to admit of the free passage of the earth and weeds, which otherwise would choke the plows; and the rear ones, E F, that require to be adjusted to the land for the same reason as the preceding, and also for cutting deeper or shallower, can be adjusted in both directions by the means fully specified.

For cultivating wheat it is preferable to have the plows arranged, as represented in Fig. 1, without the front double tooth, B, which may be dispensed with, and the back tooth, E, of Fig. 2 removed to the place of the back tooth, F, thus making a gang of three plows; and for cultivating corn I prefer to arrange them as represented in Fig. 2, in which the two plows C and D are removed.

A guide-wheel, G, turning on a pin at the lower end of an adjustable standard, H, connected with the forward part of the frame by means of a screw passing through an elongated slot to adjust it to the height required, may be employed, if desired, to regulate the depth to which the plow shall cut.

It will be evident from these examples that other dispositions may be made of the plows to suit the kind of grain to be cultivated, the two given above being deemed sufficient for illustration.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Jointing the sockets that receive the standards of the plows to the frame, as herein described, to admit of adjusting in a vertical as well as horizontal direction, as specified.

2. The method of adjusting the front double tooth by means of the enlarged mortise and wedges, in combination with the journal-projections on the standards, as described.

ALLEN ELDRED.

Witnesses:
C. W. M. KELLER,
T. C. DONN.