J. ROBSON.

Weed Cutter and Hiller.

No. 160,545. Patented March 9, 1875.

Fig 2

Fig. 1.

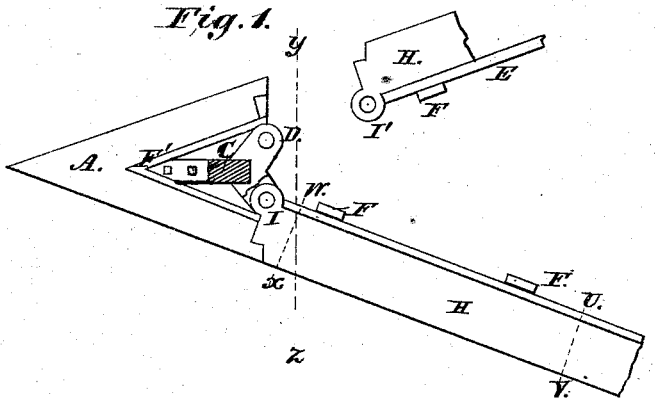
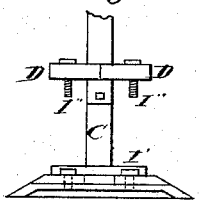


Fig. 3.



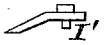


Fig.5.

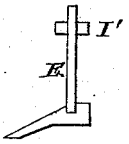


Fig.4.

Fig.6.

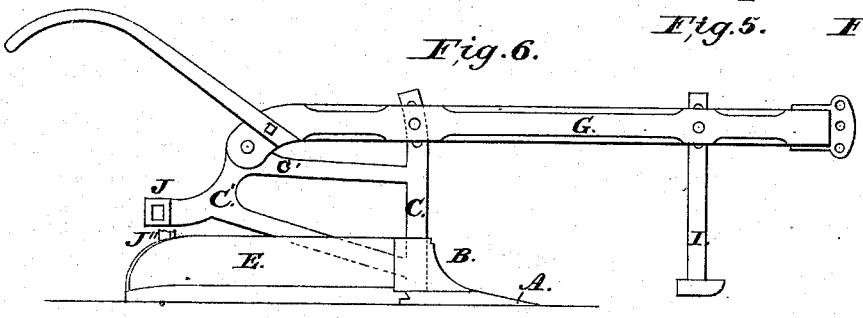
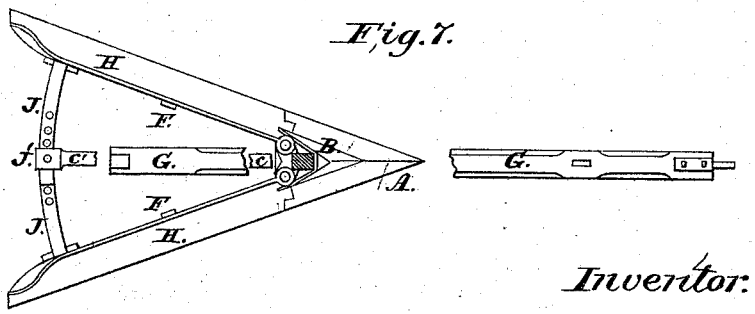


Fig.7.



Witnesses:
Charles E Shepard.
Jacob Christie.

Inventor:
his
Joseph x Robson.
mark.

UNITED STATES PATENT OFFICE.

JOSEPH ROBSON, OF OSCEOLA, WISCONSIN.

IMPROVEMENT IN WEED-CUTTERS AND HILLERS.

Specification forming part of Letters Patent No. **160,545**, dated March 9, 1875; application filed May 7, 1874.

To all whom it may concern:

Be it known that I, JOSEPH ROBSON, of Osceola, Fond du Lac county, Wisconsin, have invented an Adjustable Weed-Cutter and Hiller, of which the following is a specification:

The object of this machine, as its name denotes, is twofold; first, to cut weeds between the hills or rows of agricultural products, such as corn, potatoes, young trees in nurseries, &c.; secondly, to form or throw up ridges about and close to the hills or rows of such products. These two objects may be accomplished either separately or at one time, as hereafter explained. The machine is adjustable within certain limits, so as both to cut weeds at different depths beneath the surface and to throw up the hills or ridges to different heights, and to do either or both of these in a wider or narrower path, according to the distance between the rows.

The following is a description of my invention with reference to the annexed drawings.

The principal parts of this machine are an ordinary plow-beam, G, and handles, a shoe upon an upright adjusting-rod, I, passing through the beam near its front end; a frame, C C′, consisting of a standard and one or more braces which hinge on a horizontal bolt at the back end of the beam, the standard passing through the beam at the usual point; a pointed triangular cutter, A, permanently fastened to the lower end of the standard C; two knives, H H, hinged to the cutter A in such a way that, by means of horizontal adjusting-rods J J, the angle of the knives to each other may be varied; and the mold-boards E E, removably secured to the point A and to the knives.

Figure 1 is a top view of the cutter A and of one of the knives H, showing the standard C in section. F′ is the rabbet, and F F are the catches to hold the mold-board in place when attached. I′ represents the hinging apparatus (hole and bolt) which fastens the knives H to the cutter A, and by which it is set or adjusted. D bears a like relation to the mold-board. (Not seen in this figure.)

Fig. 2 represents part of knife and mold-board—catch for the latter and the bolt-hole for the former. A projection at the front end of the knives H, being a sector of a circle whose center is the middle point of the bolt-hole, is countersunk into a corresponding depression in the upper surface of the cutter A, Fig. 1, and thus keeps the knife-edges of both in the same horizontal line.

Fig. 3 represents a section at Y Z, Fig. 1, with the mold-boards removed.

Fig. 4 represents a section at U V, Fig. 1, showing the knife with the mold-board E fastened in the rabbet by the catches.

Fig. 5 represents a section of knife and bolt at W X, Fig. 1.

Fig. 6 is a side view of the whole machine ready to operate, with mold-boards on. I is the vertical adjusting-rod with shoe or runner. A wheel may be used in place of this shoe, but I prefer the latter, as it is not so likely to sink into slight depressions in the surface, and thus preserves a more even movement. By means of holes in the rod, and a pin passing through the beam horizontally, its length below the beam is varied. B is a fender, which is permanently fastened to the standard C and point A. The mold-boards E slightly overlap the fender B inside. The standard C has an adjustment by which the point of the cutter may be elevated or depressed.

Fig. 7 is a vertical view of the beam (broken) and the knives and horizontal adjustment. J″ (seen in Fig. 6) is the upright, and J the horizontal part of the adjuster, fastened to each knife. J′ is that part of C′ through which the adjusting-arms pass, and where they are secured by a pin. The knives H are set at different angles to each other by means of this horizontal adjusting apparatus, the maximum width being when the edges are in a line with the sides of the point A.

The mode of operation is as follows: When the machine is to be used only for cutting weeds the runner I is set so that the edges of the knives are as much lower than the under surface of the runner as it is desired to cut below the surface of the ground. The knives are set to the proper width of swath. The machine is then operated like an ordinary plow or cultivator, the knives cutting the weeds beneath the surface, and being kept at a uniform depth by the runner I. When hills or ridges are to be made the mold-boards are

attached, the horizontal adjustment is made as before, and the vertical one is regulated according to the amount of earth to be thrown aside. Both operations can be performed together, but it is preferable to perform them separately. The vertical adjustment of the standard C is not necessary to any of the operations of the machine, and that part may be made immovable; but it is useful for economizing force and adjusting the beam G nearer to the line of draft; but as it tends to force the point A downward its use is limited.

Having thus described my machine, I claim as my invention—

1. The adjustable standard C, with rearwardly-projecting arms C′ C′, which are hinged to the rear end of the beam G, and have a socket to receive the adjusters J, in combination with the triangular weed-cutter A and horizontal knives H, substantially as and for the purposes described.

2. The combination of the standard C, having arms C′, weed-cutter A, knives H, having adjusters J, and mold-board E, substantially as described and shown, and for the purposes set forth.

his
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mark.

Witnesses:
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