

(No Model.)

2 Sheets—Sheet 1.

W. HEWITT.
CULTIVATOR.

No. 513,185.

Patented Jan. 23, 1894.

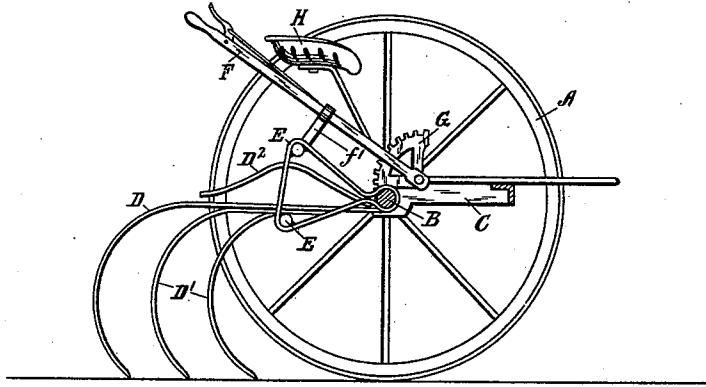


Fig. 1.

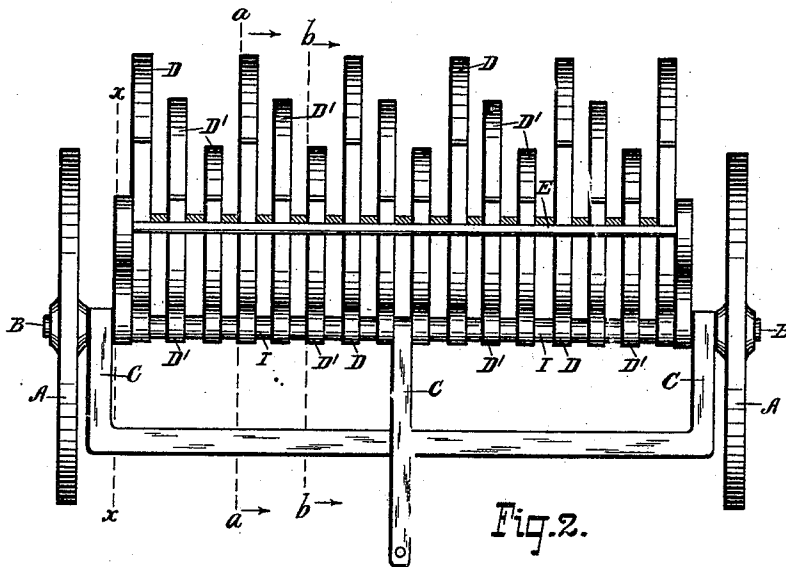


Fig. 2.

Attest
A. Edmunds
Jas. E. Edmunds

Inventor
William Hewitt,
By P. J. Edmunds
Atty.

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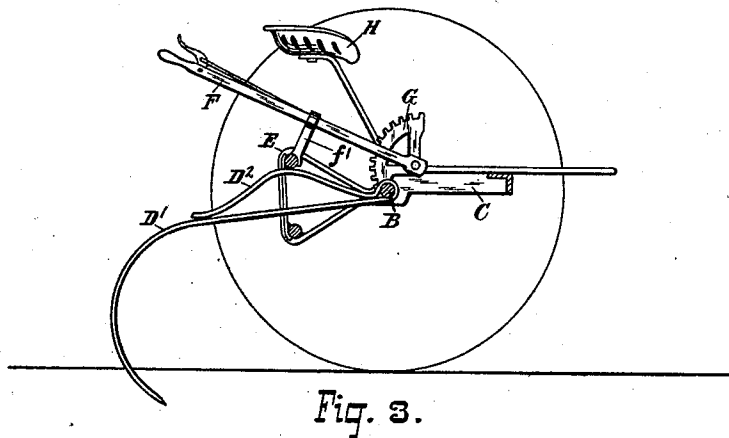


Fig. 3.

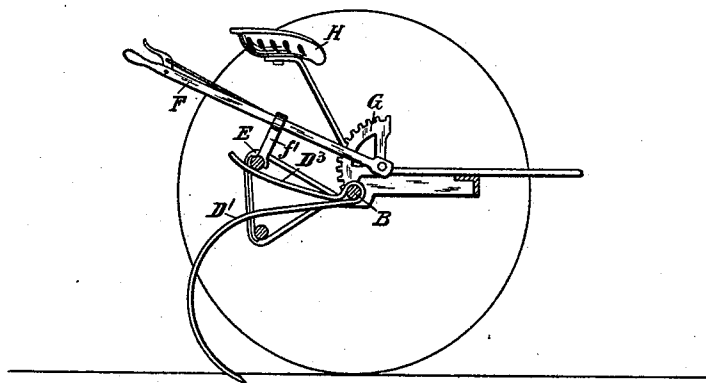


Fig. 4.

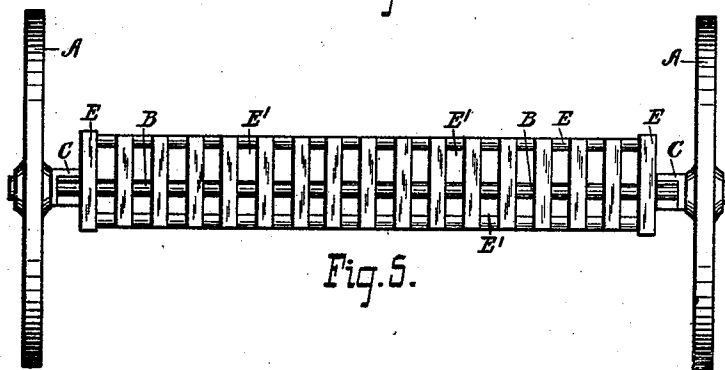


Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM HEWITT, OF BRANTFORD, CANADA.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 513,185, dated January 23, 1894.

Application filed February 28, 1890. Serial No. 342,154. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HEWITT, a subject of the Queen of Great Britain, and a resident of Brantford, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Cultivators, of which the following specification, taken in connection with the accompanying drawings, forms a full, clear, and exact description.

This invention relates to an implement which stirs the ground to prepare it for seed, &c., and it consists of the improved construction and combination of parts of the same, as will be hereinafter first fully set forth and described, and then pointed out in the claim, reference being had to the drawings already mentioned, wherein—

Figure 1. is a side elevation, partly in section, on the line, *x, x*, of Fig. 2, of an implement, embodying my invention. Fig. 2. is a plan view of same; in this view, the seat and lever are removed. Fig. 3. is a detailed sectional view on the line, *a, a*, of Fig. 2. Fig. 4. is a detail sectional view on the line, *b, b*, of Fig. 2. Fig. 5. is a rear view of Fig. 2; in this view, the teeth, seat, and lever are removed.

A, designates the wheels; B, the axle, on which the wheels revolve; and, C, the frame, which is pivotally secured to the axle, B.

D, D', designate the cultivator teeth, which are loosely hung on the axle, B, or other suitable support.

E, designates a supplemental frame, which is also loosely hung on the axle, B, but independent of the teeth D, D', and this frame, E, is provided with slots, E'.

F, designates a lever, connected by an arm, *f'*, to the supplemental frame, E. This lever is pivoted on the frame, C, and is provided with a spring actuated dog, which engages with the notches in a notched segment, G, to hold the lever, F, as well as the frame, E, at the position to which they may be adjusted.

H, is a seat for the driver.

I, designates a collar or sleeve which encircles the axle, B, between the teeth, D, and, D', which is used to assist in retaining the teeth, D, and, D', the same distance apart, thereby preventing them from interfering.

The teeth, D, and, D', are of graduated lengths, and are pivotally secured to the axle, B, or other suitable support, by being hung thereon and contracted at the rear of and almost encircling said support, and each of

these teeth, D, D', as well as their returned ends extend through a slot, E', of the supplemental frame, E, which retains them the same distance apart, to prevent them from interfering, when in operation, and also prevents them from stripping from their pivotal support. And by compressing the supplemental frame, E, on the returned ends, D², D³, of these teeth, by means of the lever, F, the rigidity of the teeth in the ground, is increased or reduced, and the same pressure is applied equally to each tooth, so that by means of this frame, E, each tooth is given the same rigidity in the ground, or is raised the same proportionate distance out of the ground. The teeth, D, extend some distance beyond the frame, E, and the returned ends, D², of these teeth, D, are formed longer, so as to rest on the tooth beyond said frame, E, to retain an equal stiffness or rigidity throughout the tooth, but the returned ends, D³, are required to extend only sufficient beyond the frame, E, so that the latter would not be disengaged from, or move off the end of the former, and by the abutting of the returned ends, D², D³, of the teeth, D, and D', against the inside of the slot, E', in the frame, E, or other suitable abutment, the strain of the tooth when in operation, is distributed throughout the tooth, as well as its returned end.

Having thus described my invention, I claim—

In a harrow, the combination with the axle, of a supplemental frame consisting of a series of triangular braces each having at one angle a loop encircling the axle and being secured one to the other at their other angles by transverse rods, teeth having their upper ends bent to form loops about said axle between the respective loops of the braces of the supplemental frame and having their extremities carried rearwardly between said braces and the respective transverse rods of the supplemental frame, and means for swinging said frame about the axle as a center whereby the plane of the points of said teeth is varied, substantially as set forth.

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

WILLIAM HEWITT.

Witnesses:

P. J. EDMUNDS,
JAS. E. EDMUNDS.