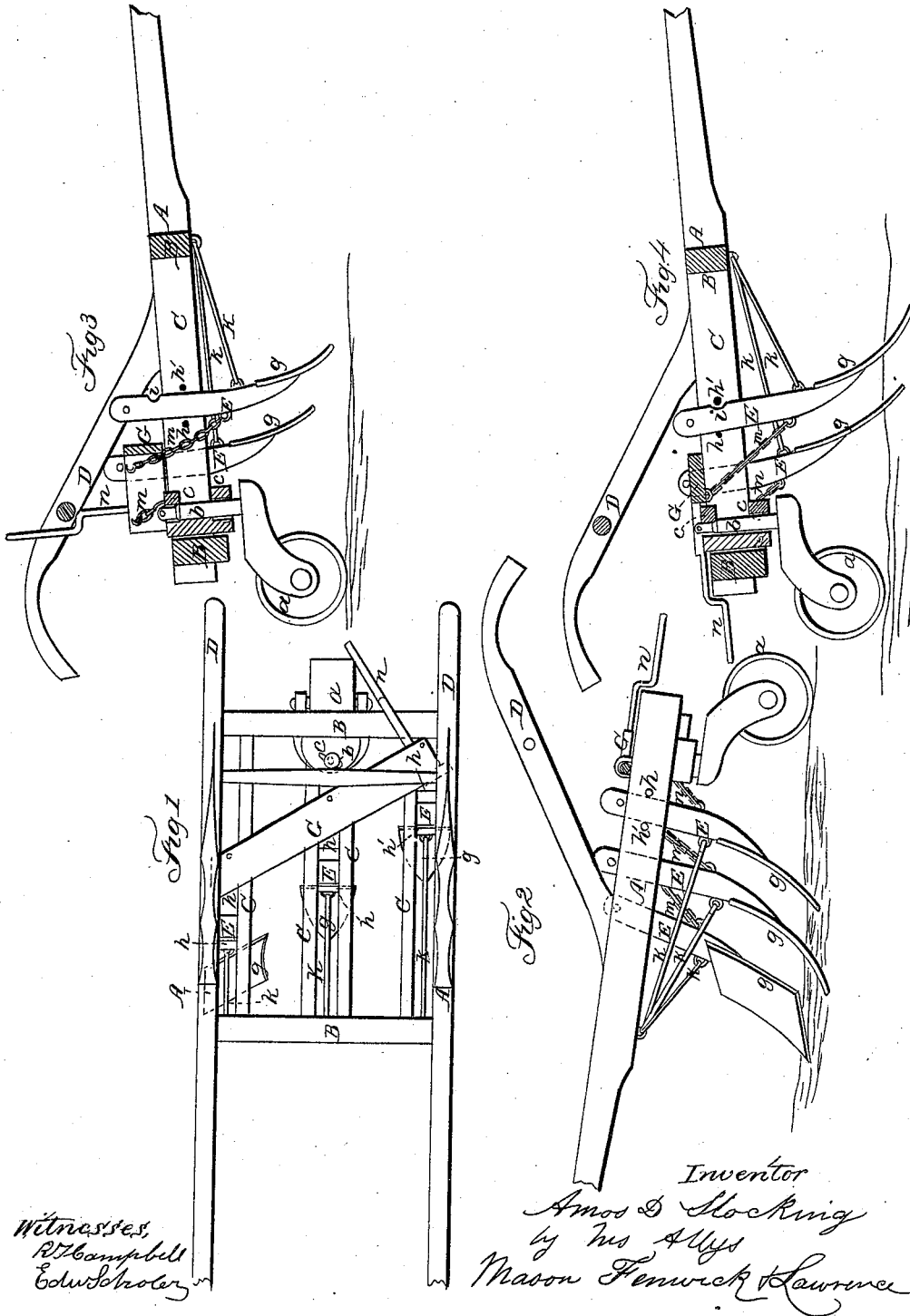


A. D. STOCKING.

Cultivator.

No. 55,175.

Patented May 29, 1866.



UNITED STATES PATENT OFFICE.

AMOS D. STOCKING, OF DOWAGIAC, MICHIGAN.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 55,175, dated May 29, 1866.

To all whom it may concern:

Be it known that I, AMOS D. STOCKING, of Dowagiac, in the county of Cass and State of Michigan, have invented a new and Improved Cultivator; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top view of the improved cultivator. Fig. 2 is an elevation of one side of the same. Fig. 3 is a longitudinal vertical section through the cultivator, showing the shovel-standards elevated. Fig. 4 is a similar view, showing the standards depressed.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain novel improvements on one-horse cultivators which are guided and controlled by a person walking behind them.

It consists, in part, in sustaining the rear end of such a cultivator upon a caster-wheel in such manner that the person having hold of the handles of the machine can more perfectly, and with less inconvenience, guide and control its movements in cultivating between rows of plants and in moving the machine about generally, as will be hereinafter described.

It also consists in arranging the shovel-standards between longitudinal bars of the main frame and keeping the standards down in working position by means of transverse rods which take into notches in the front edges of said standards and act in conjunction with front bracing-rods, as will be hereinafter described.

It also consists in the employment of a pivoted lever-board which is arranged transversely across the top of an open frame of a cultivator having its shovels arranged in a gang, said board being connected to the several shovel-standards in such manner that they can all be raised or lowered together by the person guiding the machine, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

The frame of the cultivator consists of two side beams, A A, which are prolonged, so as to form the thills, and which are secured together

by means of transverse beams B B', between which longitudinal pieces C C are framed, as shown in Fig. 1. This frame is provided with two stilts or handles, D D, by which a person walking behind it can control its movements. Beneath this frame, and at its rear end, I apply a caster-wheel, *a*, the turning stem *b* of which passes through a metallic bearing, *c*, which is suitably secured between the two central pieces, C C, and bolted to the rear transverse beam, B', as shown in the sectional views, Figs. 3 and 4. This caster-wheel forms the rear support for the machine, and, as it is allowed to swivel or turn freely in the bearing-plate, it will enable the attendant to guide the machine toward the right or left and to control its movements without an expenditure of much manual labor. The caster-wheel support will greatly assist the attendant in cultivating between rows of plants, particularly the rows which are irregularly laid out, as it will avoid the necessity of lifting the machine bodily from one side to another.

The machine which I have represented in the drawings is adapted for receiving three shovel-standards, E E E, which carry on their lower ends shovels *g g g*, of any suitable form. The standards are fitted to move freely but snugly between the longitudinal beams of the frame, which prevent any lateral displacement of these standards.

Two rods, *h h'*, are applied in front and rear of each standard E, so as to form forward and back supports therefor. The rear rod, *h*, serves merely to keep the standard in place and allow it to move up and down; but the front transverse rod, *h'*, serves, in conjunction with a notch or notches, *i*, in the front edge of the standard, to prevent this standard from slipping upward during the forward movement of the machine when the shovel is in the ground. During this operation the inclined brace *k*, which is attached to the standard and also to the front transverse beam, B, prevents any backward movement of the standard. It will be seen that the pressure backward against the shovels would force the upper ends of their standards upward and forward were this pressure not resisted by the notches *i* and transverse rods *h'*. By moving the machine slightly backward the standards can all be detached from their rods *h'* and then moved upward.

To raise or depress the shovel-standards I employ a wide board, G, which is arranged obliquely across the cultivator-frame and pivoted at its ends to the outside longitudinal beams thereof, as shown in Fig. 1. To this vibrating board G, I attach each one of the shovel-standards by means of chain *m*, and also apply a lever-arm, *n*, to the board G, by which the attendant walking behind the machine can raise or lower the shovel-standards at pleasure. The lever-arm *n* is so applied to the pivoted board G that this board can be moved so far forward in raising the shovel-standards as to keep them in such position.

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

1. The application of a swivel-wheel, *a*, to the rear end of the frame of a cultivator which is constructed substantially in the manner described.

2. Keeping the shovel-standards E in proper position during their passage through the soil by means of the transverse rods *h'* and notches *i*, combined with the forward braces *k*, substantially as described.

3. The pivoted board G, or its equivalent, arranged transversely across the cultivator-frame and connected to the shovel-standards E, substantially as described.

AMOS D. STOCKING.

Witnesses:

JASPER L. MCKENNEY,
NOEL B. HOLLISTER.