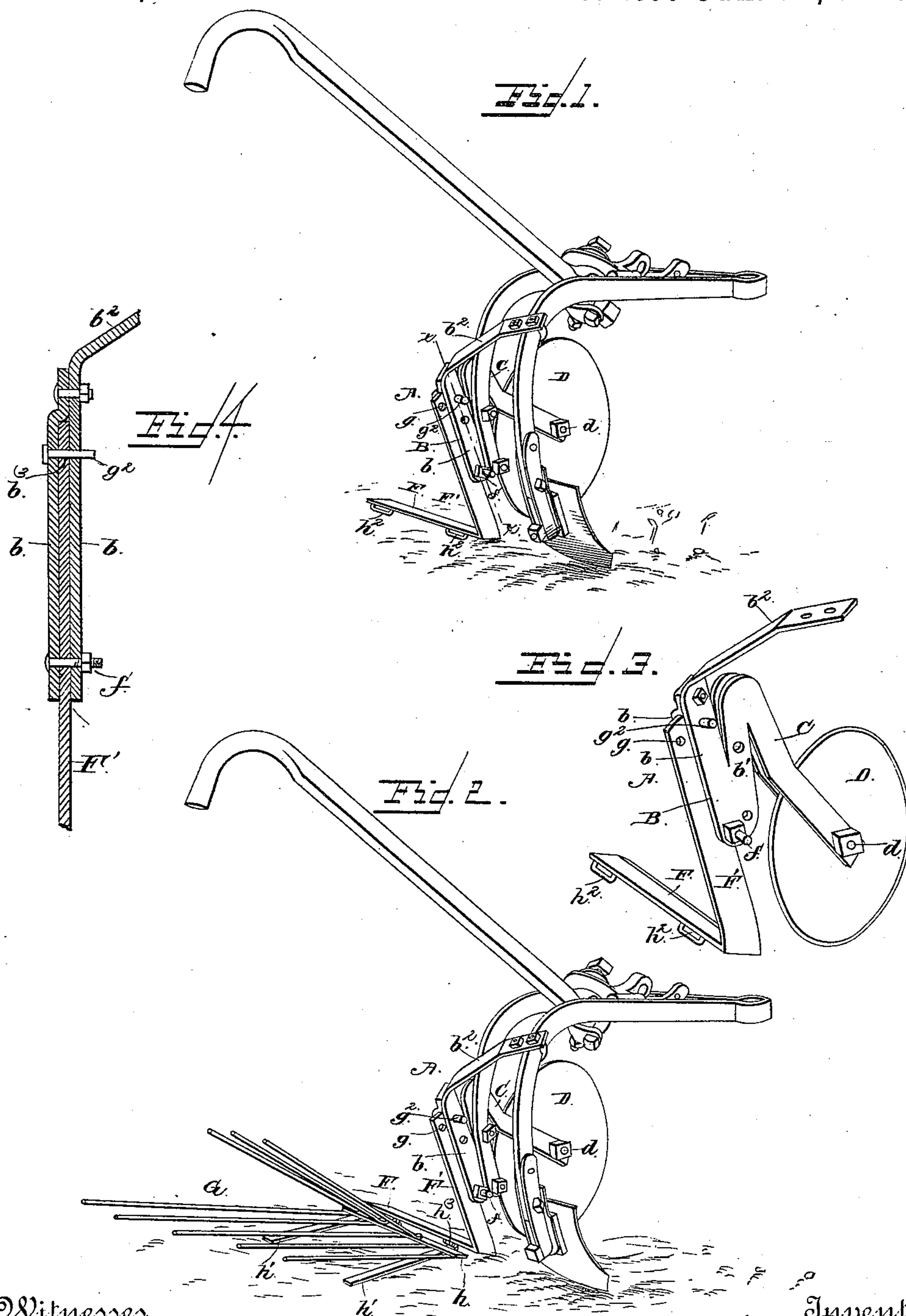


(No Model.)

T. B. SWINDLER.
CULTIVATOR ATTACHMENT.

No. 356,052.

Patented Jan. 11, 1887.



Witnesses

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CULTIVATOR ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 356,052, dated January 11, 1887.

Application filed September 21, 1886. Serial No. 214,205. (No model.)

To all whom it may concern:

Be it known that I, THOMAS B. SWINDLER, a citizen of the United States, residing at Findlay, in the county of Hancock and State of Ohio, have invented a new and useful Improvement in Cultivator Attachments, of which the following is a specification.

My invention relates to an attachment for cultivators; and it consists of the peculiar combination and novel construction and arrangement of the various parts for service, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

The object of my invention is to provide an attachment for cultivators which can be adapted to any form of implement of this class for cutting and destroying weeds and the like, which are liable to grow in the field with the corn.

A further object of my invention is to provide the attachment with means for entering the soil and cultivating the growing plants while they are small without injury thereto; and a further object is to provide means for digging potatoes, so that the attachment can be adapted for a variety of uses, and thus save the farmer the expense of a number of separate expensive implements.

In the accompanying drawings, which illustrate a cultivator attachment embodying my invention, Figure 1 is a perspective view showing it adapted for use as a corn-cultivator. Fig. 2 is a similar view showing it adapted for digging potatoes. Fig. 3 is a detached perspective view of the attachment, and Fig. 4 is a sectional view thereof on the line *x x* of Fig. 1.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates my improved attachment, which consists of a main upright or standard, B, the inclined arm C, connected with the standard and arranged at an angle thereto, the revolving colter D, journaled on a pin or shaft, *d*, carried by the lower end of the said inclined arm, the share F, connected to the standard, and the separating-fingers G, detachably connected to the share, the peculiar construction of the several parts above referred to being hereinafter fully and minutely described.

The main standard or upright B consists of two plates or bars, *b*, which are arranged parallel with each other and a short distance apart to provide an intervening space or opening, and the lower end of the said plates of the standard are bent upon themselves to form the arms *b'*, which add to the strength and stability of the device. The standard, its bend or arms *b'*, and the inclined colter-carrying arm C are all formed of a single piece of metal for strength, and the colter-carrying arm is formed of two pieces or sections, between which the colter D is arranged, the shaft of the colter being suitably secured in the lower ends of the sections or parts of the inclined arms, as will be very readily understood. One of the plates *b* of the standard or upright is bent at right angles, to provide an arm or plate, *b''*, which has transverse openings for the passage therethrough of bolts, in order to secure the standard upon the shovel-standards of the cultivator, as shown in Figs. 1 and 2.

My invention can be very easily and readily applied to any class of cultivator by simply removing one of the shovels thereof from the lower end of the shovel-standard and adjusting the device against the said standard so that the vertical standard B will bear against one side of the shovel-standard of the cultivator, and the lateral arm, *b''*, thereof will rest upon the curved portion of the shovel-standard, after which the bolts can be passed through the said lateral arm and the shovel-standard of the implement to which the attachment is applied. The lateral arm is arranged at an inclined position with relation to the standard B, and the latter is arranged in substantially a vertical position, and the inclined arm C projects forwardly of the vertical standard, so that the revolving colter will act upon and cut the weeds and other substances in its path before the advance of the share F. The rotary colter D is arranged on one side of the horizontal knife and out of the path of the same, and when the implement is in use the colter penetrates the earth at one side of the hills, thereby preventing the colter from cutting or otherwise injuring the potatoes. The colter also serves to aid the horizontal knife in resisting the lateral pressure of the soil thereon, and thereby relieving the pivot and bolt of the

standard that carries the knife of a portion of the strain thereon. This share is arranged at an angle to a vertical arm or standard, F', by which it is carried, and the lower front edge of the said inclined share is beveled or inclined to provide a cutting-edge, to cause the share to very easily and readily enter or penetrate the earth in cultivating the corn while the latter is growing. The vertical arm or standard F' of the share is fitted or arranged between the parallel plates of the standard B, and the said standard F' is pivoted at an intermediate point of its length, near its middle, by means of a through-bolt, f, which passes through the two standards B and F', as clearly shown. The upper end of the standard F' is provided with two or more openings, g, which are adapted to align with a single transverse opening, g', in the standard B, and through the aligned openings g g' passes a pin, g², to adjustably connect the standard F' to the standard B, to vary the angle or inclination at which the share F is presented to the ground, the pins or bolts f and g² being of sufficient strength to resist the strain exerted thereon by the knife and standard, and thereby securely hold the latter in place. The said share F can thus be presented at different angles to the ground to enter the same to a greater or less depth, as may be required in subsoil cultivation of the growing corn-plants, by simply removing the pin and swinging the standard on its pivot, and the standard can be also detached from the standard B by removing the pin and the through-bolt. The share is arranged to project from one side of the standards B F', and it is also arranged out of the path of the rolling colter and in rear of the latter, as is necessary in cultivating the plants, the share penetrating the earth to reach the corn, which lies to one side of the line of movement, followed by the rolling colter in destroying weeds and the like in the field.

The separating-fingers G of the potato attachment to the device are carried by the share F. There are two series of these fingers provided—an upper and a lower. The lower series of fingers are arranged in substantially a horizontal plane and in line with each other, and the upper series of fingers are arranged in an inclined position, the upper series of fingers alternating with the lower series, as shown. The forward ends of the upper and lower series of fingers are secured in any suitable or preferable manner to a common supporting bar or rod, h, and this bar or rod is provided with flat plates h', having hooks h³ at their forward ends, which engage loops or eyes h², that are affixed to the lower rear side of the supporting-bar, in order to prevent the separating-fingers from becoming detached from the horizontal knife when the device is drawn along with the cultivator. It will thus be seen that when it is desired to dig potatoes it is only necessary to apply the sepa-

rating-fingers to the share by attaching the plates h' thereof, by means of the hooks h³, to the loops of the share, so that the connecting-bar will be concealed from view and out of the way beneath the share, and the separating-fingers will project rearwardly from the share, as is obvious.

The potato-digging attachment can be very easily and readily applied to and detached from the share F, and the entire attachment can be applied to the shovel-standard in like manner, the blade or shovel of the cultivator-standard to which my invention is applied being removed when the attachment is connected thereto.

I thus provide an improved attachment which can be adapted to a number of uses, and which is very simple and cheap, and the device saves the farmer the expense of two or more implements, which is very desirable.

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

1. An attachment for cultivators, comprising a standard adapted to be rigidly fastened to the implement, a horizontal knife projecting outwardly from the standard, and a rotary colter journaled on the said standard and arranged in advance and to one side of the said knife, substantially as described, for the purpose set forth.

2. An attachment for cultivators, comprising an angular fixed standard, B, adapted to be rigidly fastened to a cultivator, an arm, F, pivotally connected to the said fixed standard, and a horizontal knife rigidly connected to the said arm, and adjustable therewith at varying inclination to the ground, substantially as described, for the purpose set forth.

3. An attachment for cultivators, comprising the main standard C, adapted to be rigidly affixed to a cultivator, a horizontal knife connected to the standard and projecting outwardly therefrom, the horizontal bar carrying the two series of inclined fingers, which are arranged one above the other and at different angles to the bar, and means for loosely and detachably connecting the said bar to the knife, substantially as described, for the purpose set forth.

4. An attachment for cultivators, consisting of the standard having the inclined arm, the colter carried by the arm, the swinging standard carrying the share and pivotally and adjustably connected to the standard, and the separating-fingers detachably connected to the share and arranged in series one above the other, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

THOMAS B. SWINDLER.

Witnesses:

DAVID REIGEL,
J. H. JOHNSTON.