

(No Model.)

T. W. McDILL.

CULTIVATOR.

No. 332,813.

Patented Dec. 22, 1885.

Fig. 2.

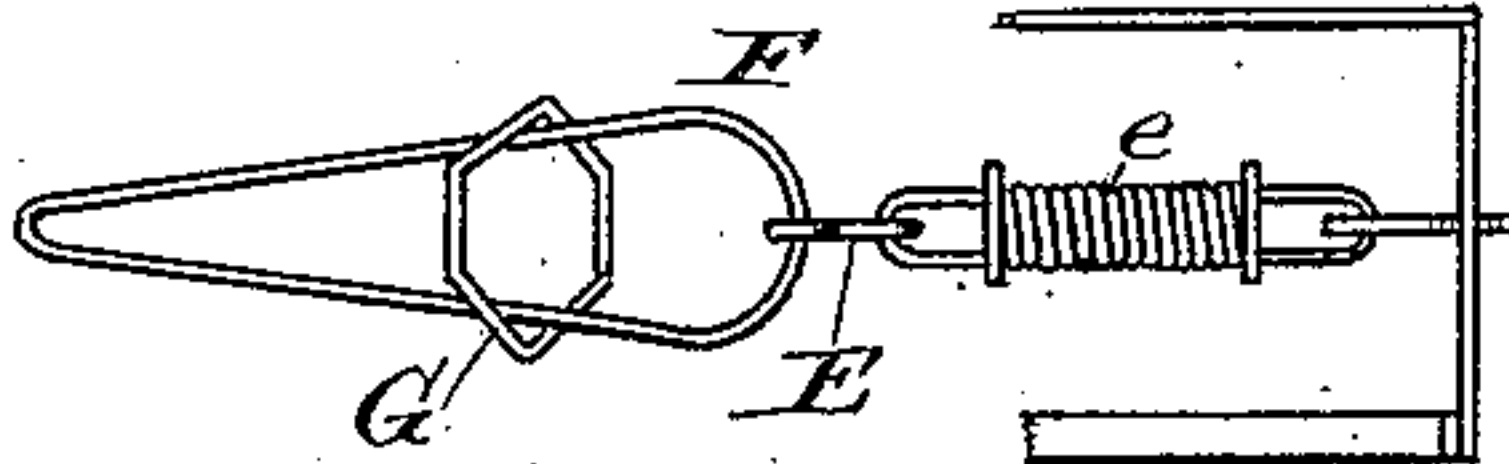
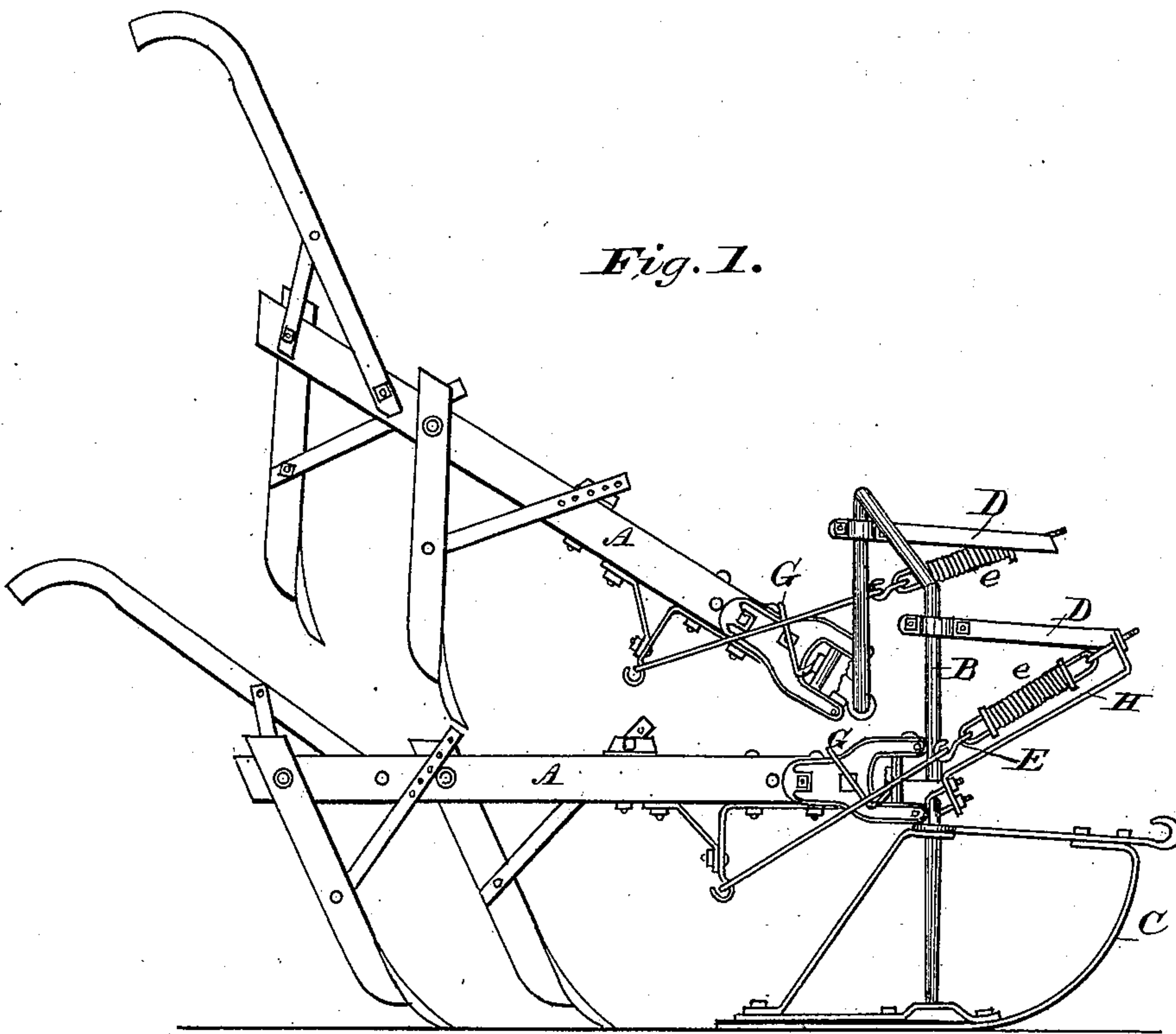


Fig. 1.



Witnesses:

J. C. Brecht
Savitt & Mead

Inventor:

Thos. W. McDill
By J. C. Brecht
Attorney.

UNITED STATES PATENT OFFICE.

THOMAS W. McDILL, OF OTTUMWA, IOWA.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 332,813, dated December 22, 1885.

Application filed December 27, 1884. Serial No. 151,285. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. McDILL, a citizen of the United States, residing at Ottumwa, Iowa, have invented new and useful
5 Improvements in Cultivators, of which the following is a specification.

My invention relates to certain new and useful improvements in cultivators, and is designed particularly for use in cultivators of
10 the kind in which the beam is pivoted at its forward end, and is adapted to be raised out of the ground when the cultivator is turned or moved from place to place.

The object of my invention is to produce a
15 device which is adapted for attachment to almost any of the leading forms of cultivators, the operation of which shall be to assist in the raising of the cultivator-teeth from the ground and to hold them in an elevated position until
20 returned to an operative position by hand.

With these objects in view my invention consists of a contractile connection joining the pivoted beam of a cultivator to some part of the implement which is situated beyond the
25 point at which the beam is pivoted, the places of connection being such that a line drawn from one to the other will pass through the pivot upon which the beam vibrates when the parts are in their normal or operative position, the tendency of which connection is to
30 draw the pivoted beam upward after the same is slightly elevated by hand.

In order that those skilled in the art to which my invention appertains may know
35 how to make and use the same, I will now proceed to describe what I consider the best means of carrying it into effect, in connection with the accompanying drawings, in which—

Figure 1 is a side elevation of a cultivator
40 having two beams, one of which is shown in an elevated position; and Fig. 2 is a detail view of the means employed for raising the beam.

In these drawings, A A represent the beams
45 of the cultivator, which are provided at their forward ends with openings, through which pass the yoke B, being mounted in such a manner as to have a free vibratory motion. The lower ends of the yoke B rest on and are
50 rigidly secured to two runners, C, which slide

along the surface of the earth and support the forward end of the cultivator.

E represents the means employed for assisting in raising the beams and holding them in an elevated position while the cultivator is
55 being turned, as at the end of a row, or in transportation from place to place. These connections are preferably composed, as shown in the drawings, of coil-springs e, provided at each of their ends with means for securing
60 them to the beams and to the rigid yoke. The upper ends of the connection are secured to projections D, which are attached to the rigid yoke B, and extend forward a short distance, and their ends receive a turn, forming a right-
65 angular projection on each, which are provided with openings or other suitable means for attaching the connections. The lower ends of the connections are secured to hangers depending from the lower sides of the beams.
70

The preferred means of joining the lower ends of the springs to the hangers secured beneath the beams is by means of the loops F, the sides of which pass up one on each side of the beam. It will be understood, however,
75 that a simple rod may be used for joining these two when it is desirable. In order to limit the upward movement of the beams, I provide a loop, G, through which passes the connection between the spring and the stirrup, and
80 the said connection is limited in its movement to an elevation which will bring the teeth attached to the plow up enough to pass over any ordinary obstruction. The tension of the
85 spring is regulated by the position of a nut placed upon the threaded end of a rod attached to the upper end of the said spring, by which it is secured to the projection D. In order that this projection shall be capable of
90 successfully withstanding any strain that may be imposed upon it by the tension of the spring, I provide a brace, H, secured at its lower end to the yoke and attached to the bracket D at its upper end, and extending at the angle assumed by the connection G when
95 in its normal position.

From the foregoing it will be apparent that when the parts are in their normal positions—that is, the teeth in the ground ready for
100 work—the two points of attachment of each of

the connections are in line, or nearly so, with the point at which the beams are pivoted to the yoke, so that the springs in the said connections exercise no strain to elevate the beam, and when it is desired to elevate the beam it is only necessary to slightly elevate the beams by hand and thus bring the points of attachment of the spring-connection E out of line with the points at which the beams are pivoted, thus allowing the spring to contract and draw the beams upward to the limit allowed by the stop G, at which point they are held until forced down by hand against the force of the spring.

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

1. In a cultivator, the pivoted beams having the hangers, the runners having the for-

ward projections, and the springs attached 20 at one end to the hangers and at the other to the said projections, the points of attachment of the said spring being in line with the point at which the beams are pivoted when the parts are in their normal positions. 25

2. In a cultivator, the pivoted beam having the hanger for the attachment of the spring, the projection from the frame to which the bars are pivoted, the spring attached to the said hanger and projection, and the loop G, 30 inclosing the spring and limiting its upward movement.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

THOMAS W. McDILL.

Witnesses:

EDWARD CLARK,
S. A. W. CARVER.