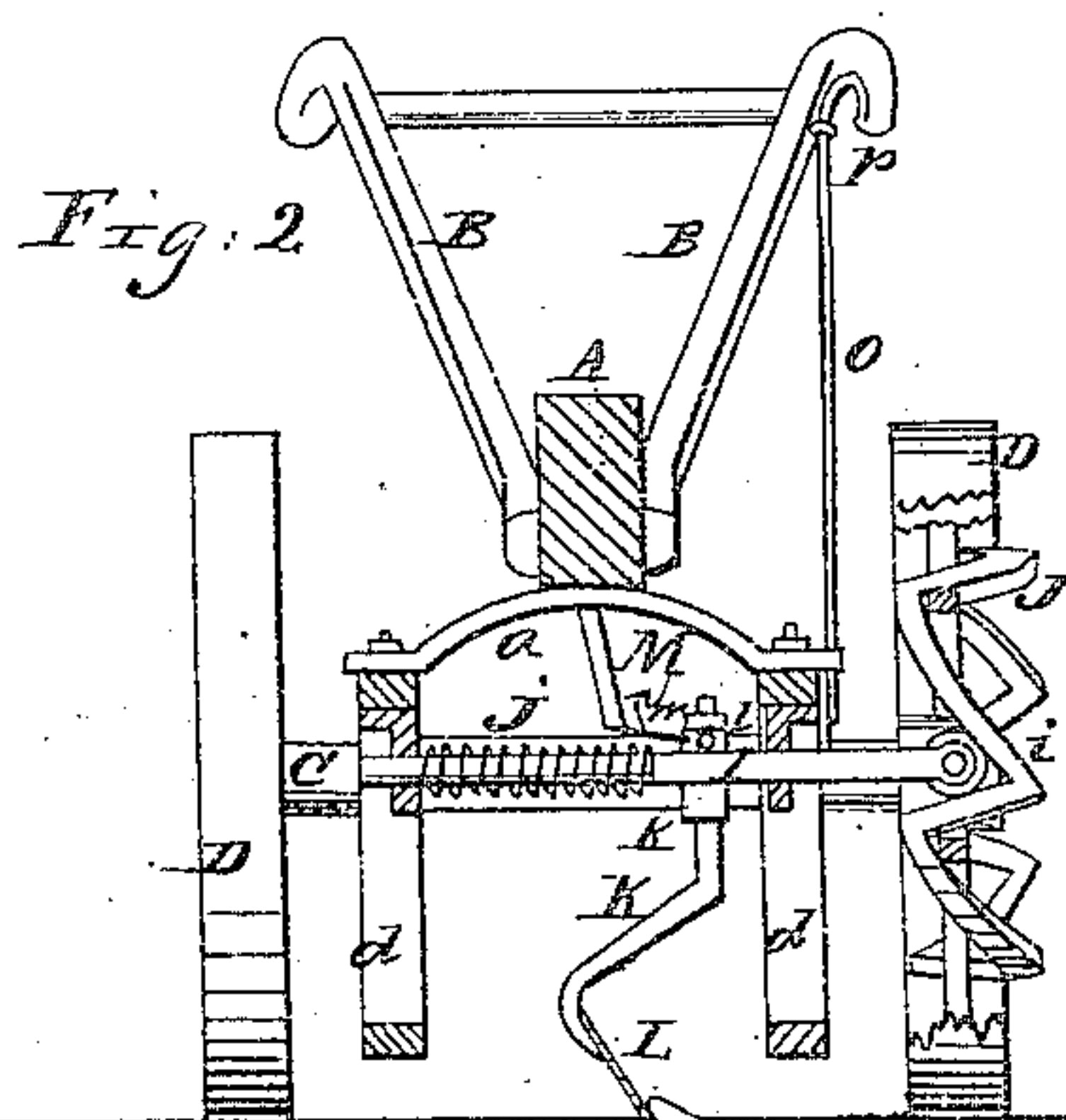
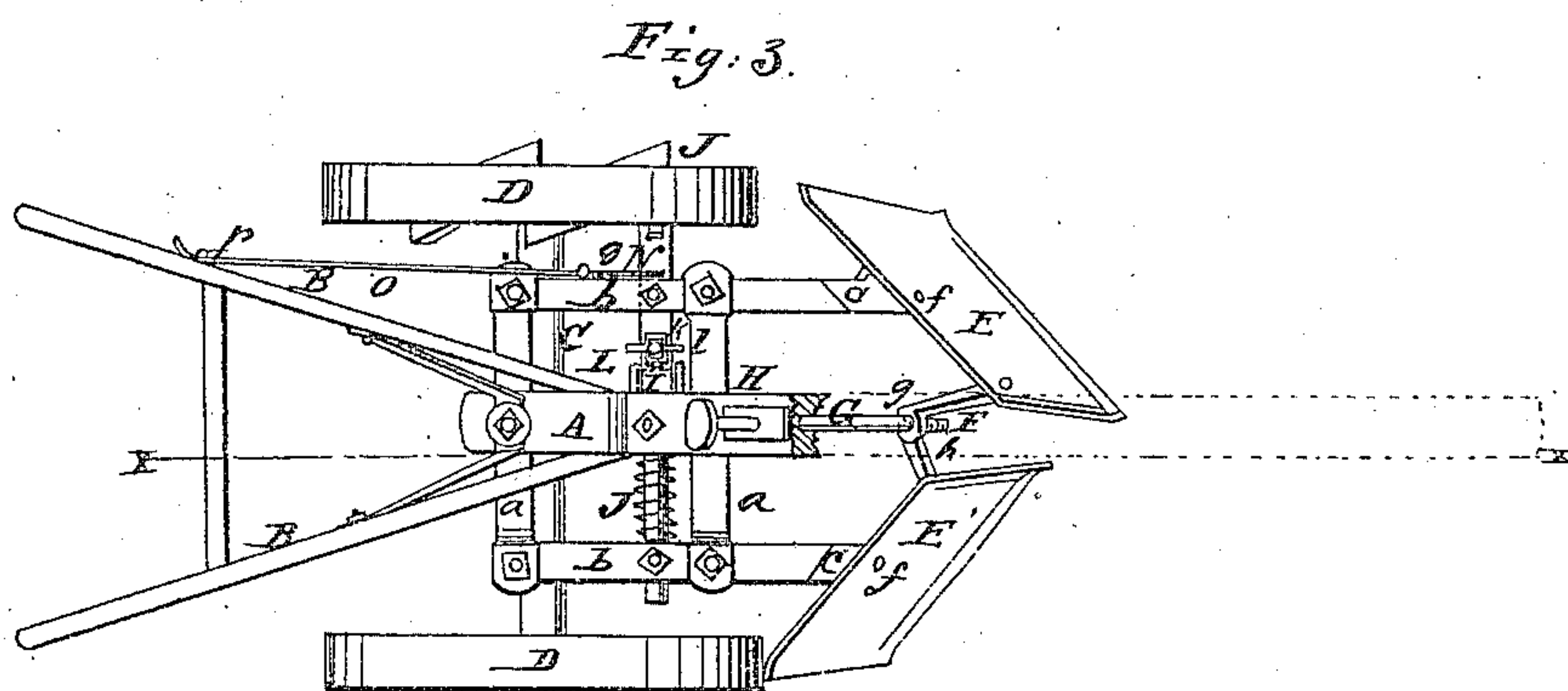
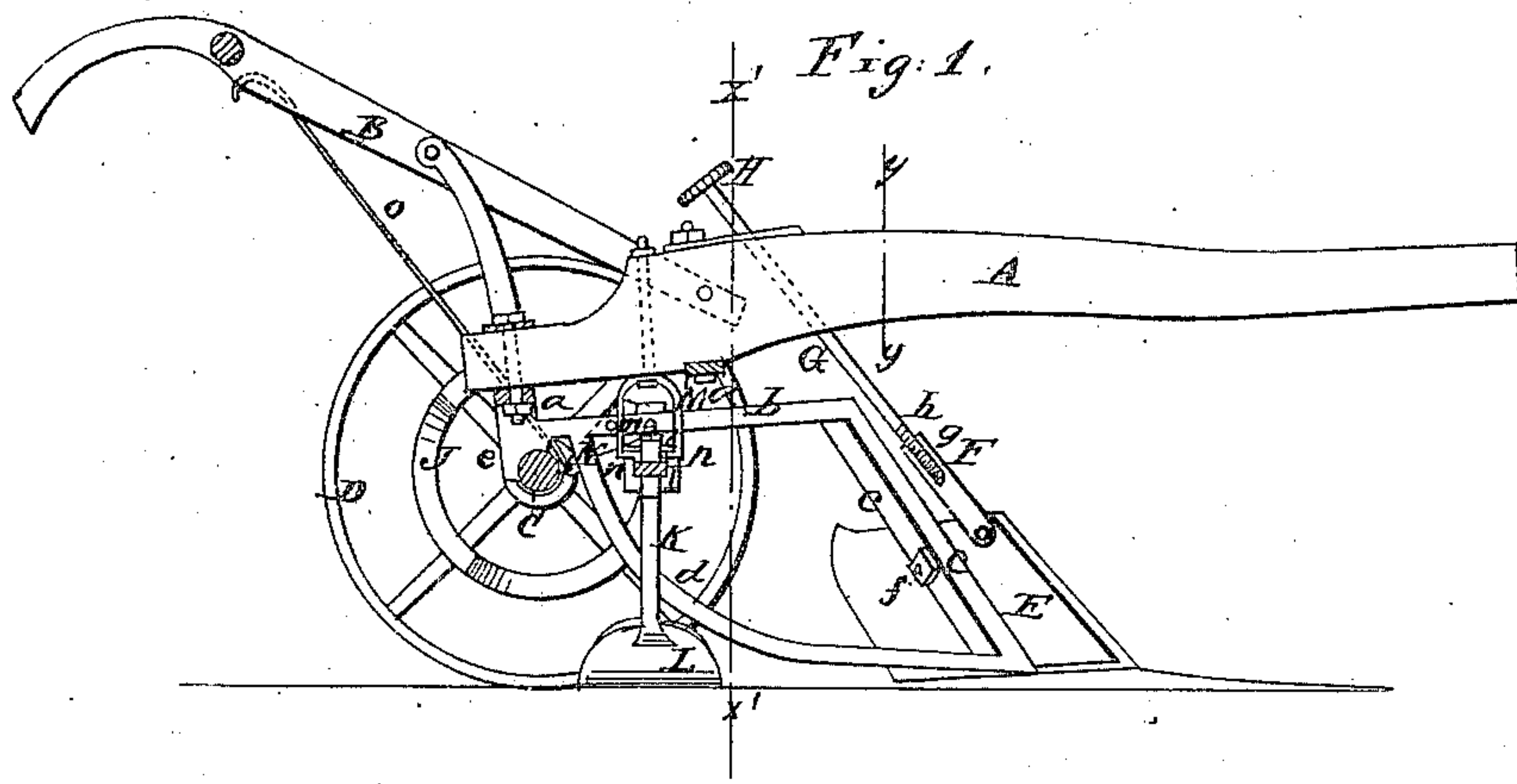


C. Cammaday.
Rotary Cultivator.

N^o 22,487.

Patented Jan. 4, 1859.



Witnesses:
B. C. Bond
J. G. Riegg

Inventor:
Calvin Cammaday

UNITED STATES PATENT OFFICE.

CALVIN CANNADAY, OF INDIANAPOLIS, INDIANA.

COTTON-CULTIVATOR.

Specification of Letters Patent No. 22,487, dated January 4, 1859.

To all whom it may concern:

Be it known that I, CALVIN CANNADAY, of Indianapolis, in the county of Marion and State of Indiana, have invented a new and
5 Improved Cotton-Cultivator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in
10 which,—

Figure 1, is a longitudinal vertical section of my invention taken in the line x, x , Fig. 3. Fig. 2, is a transverse vertical section of do, taken in the line x', x' , Fig. 1. Fig. 3,
15 is a plan or top view of do, the head being bisected as indicated by the line y, y , Fig. 1.

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

This invention consists in a peculiar arrangement of the shares or blades of the implement whereby the same are prevented
20 from being choked or clogged and also rendered capable of being adjusted to suit the form of the ridges of the rows of cotton plants.
25

The invention also consists in a thinning hoe peculiarly arranged and operated automatically so as to thin out the cotton plants in the drills the required distance apart as
30 the implement is drawn along.

To enable others skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents the beam of the implement
35 which may be constructed similarly to an ordinary plow beam.

B, B, are handles attached to the back part of the beam, the handles being also constructed similar to plow handles.

40 To the back part of the beam A, a metallic frame is attached, said frame being formed of two curved transverse bars a, a , attached to the beam, said bars having attached to them at each end a horizontal bar b , provided each with an inclined standard bar c ,
45 at their front ends and a curved brace bar d , the latter being connected to the lower ends of the standards c , and the back parts of the bars b , as shown clearly in Fig. 1. To the
50 back parts of the bars b , the bearings e , of an axle C, are placed.

D, D', are the wheels of the axle.

To the inclined standards c, c , shares or blades E, E', are pivoted, one to each, as
55 shown at f , the pivots passing through the

upper parts of the blades near their centers. The share E, is placed slightly in advance of E', the standard c , of said plate projecting rather farther forward than the other, see Fig. 3. The shares or blades E, E', are
60 placed in oblique positions relatively with each other as shown clearly in Fig. 3, and the inner ends of the shares or blades at their upper parts are pivoted to the prongs of a
65 fork F, at the upper end of which a nut g , is attached.

G, is a rod which passes obliquely through the beam A. This rod has a screw thread h on its lower end, said screw thread fitting in the nut g . The upper end of the rod G, has
70 a hand wheel H, attached.

I, is a sliding rod which is parallel with the axle C, and also fitted in bearing attached to the under sides of the bars b . This rod has a friction roller i , fitted in one end
75 of it and a spiral spring j , is also placed on the rod, said spring keeping the roller i , against a zig-zag annular cam J, which is attached concentrically to the wheel D'.

K, is a bent bar to the lower end of which
80 a hoe L, is permanently attached, the bar being so bent that the hoe may be inclined at an angle of about 45° , see Fig. 2. The upper part of the bar, K, is perfectly vertical and is fitted loosely in a socket k , in
85 the rod I. A pin l , passing transversely through the bar K, near its upper end and a nut m , is fitted on the upper end of the bar, the nut retaining the bar K, in the rod.

To the under side of the beam A, a pend-
90 ent fork M, is attached, each prong having a spring n , fitted to it, said spring being slightly inclined from a horizontal position as shown clearly in Fig. 2.

To the outer side of one of the bars b ,
95 a small lever N, is attached by a pivot o , and to one end of the lever N, a rod O, is secured, said rod extending up through a guide p , attached to one of the handles B.

The operation is as follows:—As the ma-
100 chine is drawn along, the shares E, E', scrape the ridge or drill at each side of the cotton plants lightening up and pulverizing the soil the shares being inclined to a
105 greater or less degree according to the form of the ridge or as may otherwise be required, by turning the rod G, the screw h , and nut g , effecting such result. A sufficient space is allowed between the inner ends
110 of the shares or blades so that the plants

will not be injured or at all interfered with and as one share E, is placed somewhat in advance of the other the space between their inner ends will not be liable to become clogged or choked as would otherwise be the case especially if the ground under cultivation be rough. The cam J, and spring j, give the hoe L, a transverse movement across the row of plants and thin out the same. The hoe is forced quickly across the row to cut out the plants by the spring j, and is moved gradually back so as to be acted upon by the spring, by the cam J. This quick movement of the hoe in cutting out the plants is essential in order to insure a square or transverse cut. As the hoe L, is shoved or moved by the cam J, the pin l, passes on the top of the springs n, n, and the bar K, and hoe L, will consequently be elevated so as to clear the plants the bar and hoe descending by their own gravity as soon as the pin l, passes off the elevated ends of the springs. During the movement of the hoe when acted up on by the spring j, the pin l, passes underneath the springs n, n, which readily yield or spring upward so so as not to appreciably interfere with its movement. In case the movement of the hoe L, requires to be retarded at any time the operator or attendant merely draws up the rod O, and thereby causes the end of lever N, to press on the rod I, and stop its movement. This stopping of the hoe is essential

in case of obstructions lying in its path, such as stones, stumps and the like.

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

1. The two shares or blades E, E', when placed obliquely with each other, pivoted to their respective standards e, e, and adjusted by the rod G, nut g, and fork F, substantially as and for the purpose set forth.

2. The employment or use of the reciprocating hoe L, attached to the bar K, which is connected with the rod, I, the hoe being operated substantially as shown, to wit, through the medium of the cam J, and spring j, in connection with the pin l, and springs n, n, so that the transverse movement of the hoe relatively with the row of plants will be obtained and also a vertical movement to allow the hoe to clear the plants when passing over them previous to each thinning out stroke, substantially as shown and described.

3. The lever N, when applied to the rod I, and used in connection with the thinning hoe L, substantially as and for the purpose set forth.

CALVIN ^{his} ~~X~~ CANNADAY.
mark

Witnesses:

AZARIAH COMPTON,
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