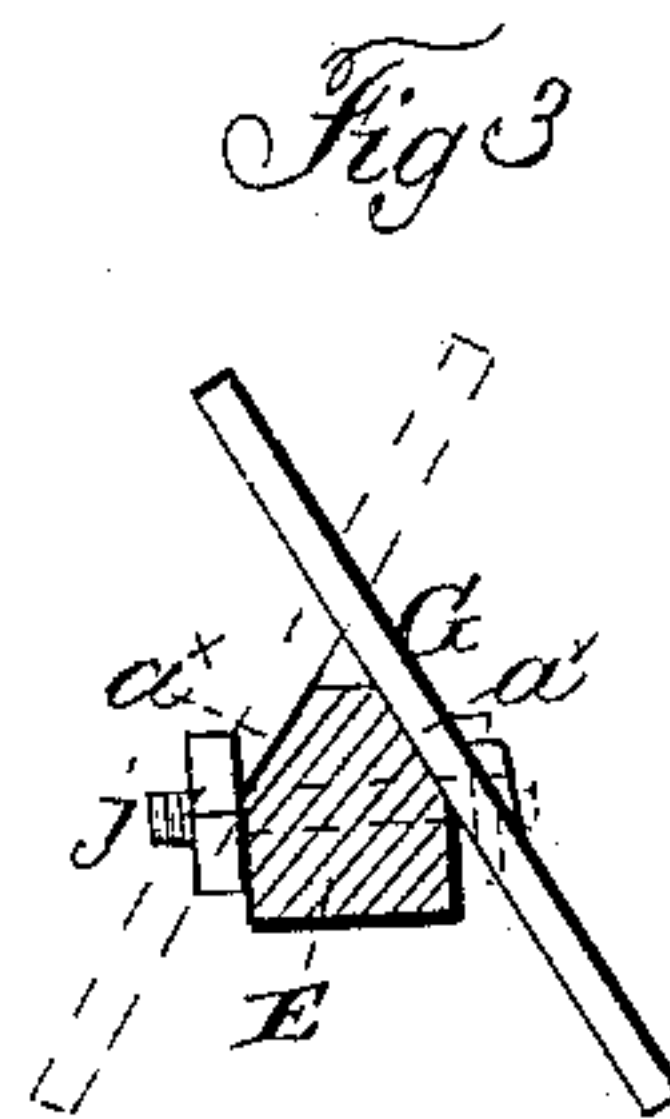
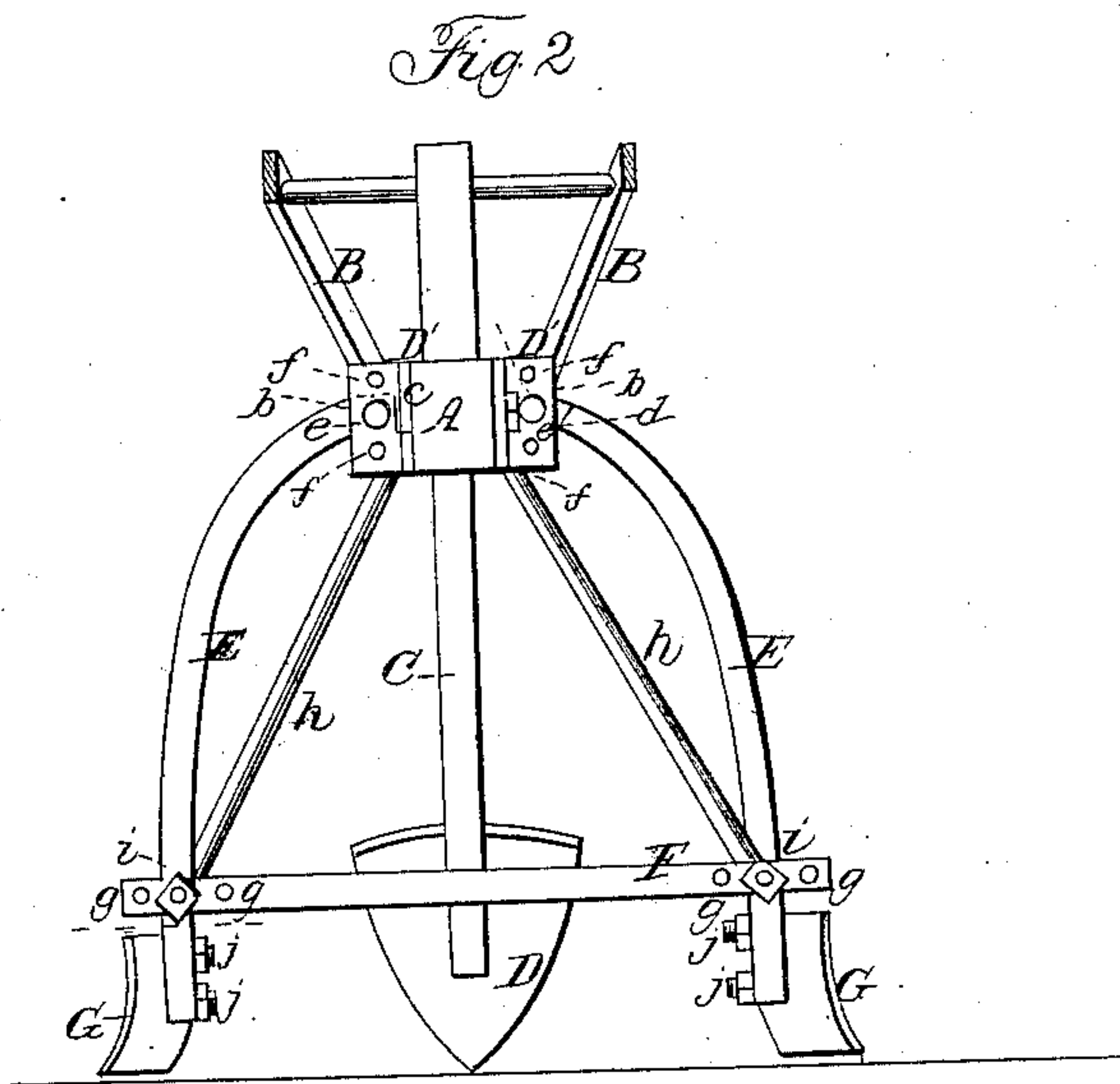
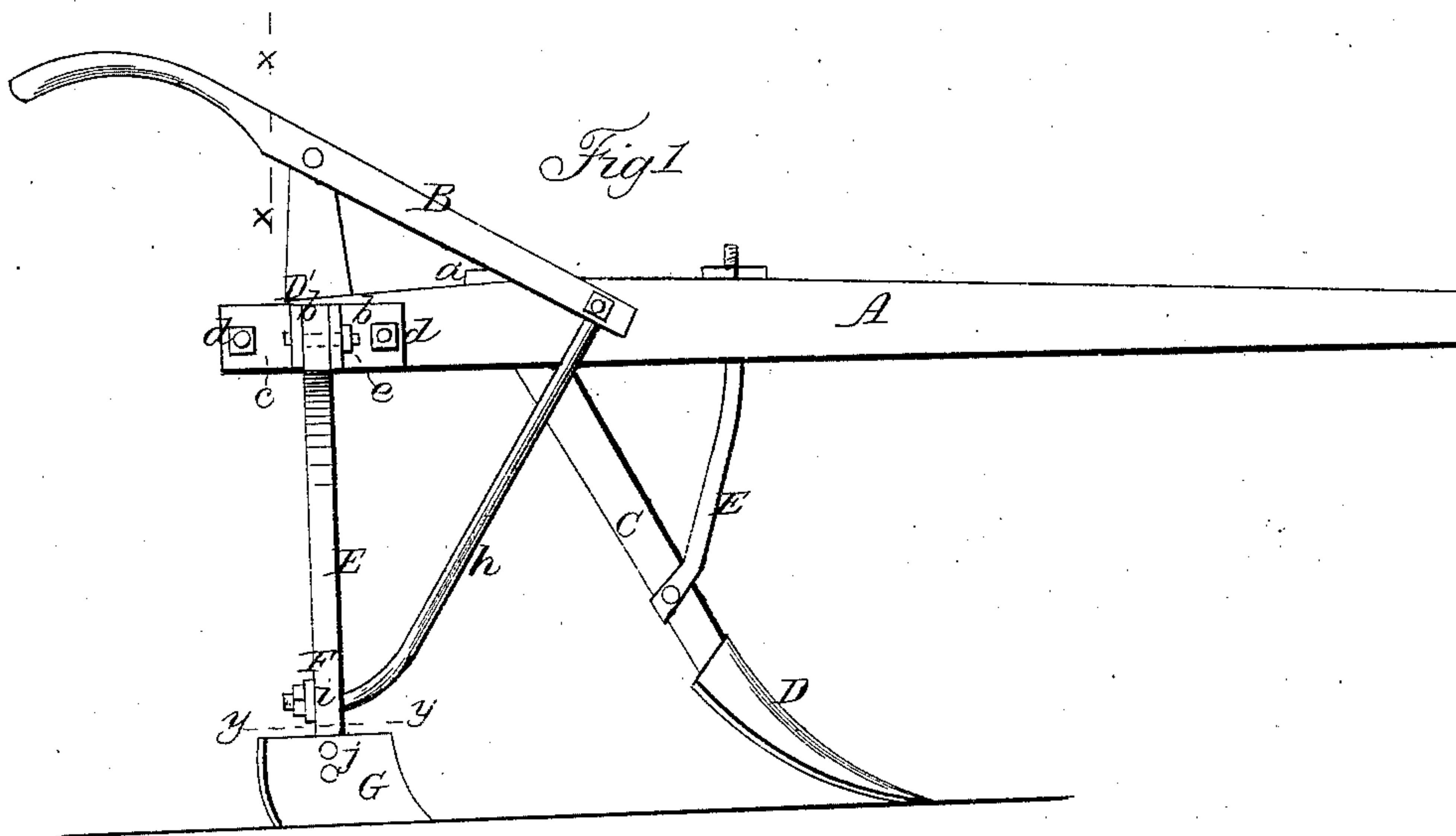


L. H. DOYLE.

Cultivator.

No. } 1,756, {
32,760. }

Patented July 9, 1861.



Witnesses;
J. W. Coombs
C. W. Simpson

Inventor
L. H. Doyle
per M. W. H. Co
Attys

UNITED STATES PATENT OFFICE.

L. H. DOYLE, OF WATERLOO, IOWA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 32,760, dated July 9, 1861.

To all whom it may concern:

Be it known that I, L. H. DOYLE, of Waterloo, in the county of Black Hawk and State of Iowa, have invented a new and Improved Cultivator-Plow; 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 which—

Figure 1 is a side view of my invention; Fig. 2, a back sectional view of the same, taken in the line *x x*, Fig. 1; Fig. 3, a horizontal section of one of the standards of the same, taken in the line *y y*, Fig. 1.

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

The object of this invention is to obtain an efficient and simple implement for the cultivation of crops which are grown in hills or drills.

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

A represents the beam of the implement, which may be of wood, of the usual form, with handles B B attached to it in the usual way.

To the beam A, at a point a short distance in front of its back end, there is attached an inclined foot or standard, C, to the lower end of which a shovel-share, D, is secured. The standard C is braced by a rod, E, from the beam A. The upper end of the foot or standard C is rounded in bolt form, has a screw-thread cut on it, and passes through the beam, with a nut, *a*, on its upper end. The brace E is also similarly secured in the beam A.

To the back part of the beam A, at each side of it, there is attached a metal socket, D'. These sockets are each formed of two plates, *b b*, which project at right angles from a plate, *c*, which is secured to the beam by bolts *d*, said bolts securing both plates to the beam. Between the plates *b b* the upper ends of curved feet or standards E E are secured by bolts *e*, one foot or standard being at each side of the beam, and through the plates *b* a series of holes, *f*, are made in vertical lines, through

any of which the bolts *e* pass for the purpose of securing the feet or standards E in a more or less elevated position. The lower ends of the feet or standards E E are connected near their lower ends by a horizontal bar, F, said bar having a series of holes, *g*, made in it near each end, through which the lower ends of braces *h* pass, said braces also passing through the feet or standards E, and having nuts *i* on their outer ends. It will be seen that the lower ends of the feet or standards E may be secured at a greater or less distance apart by passing the lower ends of the braces *h* nearer to or farther from the ends of the bar F. The braces *h* are simply metal rods attached at their upper or front ends to the beam A. The lower part of each foot or standard E is beveled at each side, as shown at *a'* in Fig. 3, and these beveled surfaces form the surfaces against which the shares G of the feet or standards E bear. The shares G are secured to these beveled surfaces by bolts *j*, and it will be seen by referring to Fig. 3 that the shares G may be made to have an oblique position either to the right or left, according to which side of the feet or standards the shares are secured. The shares G are of the usual turn-plow form, and of course they are changed from one foot E to the other, according to which side of the foot they are to be secured.

I do not claim separately any of the within-described parts; but

I do claim as new and desire to secure by Letters Patent—

The sockets D' D' at the back end of the beam A, with the feet or standards E E fitted therein, as shown, in connection with the bar F and braces *h h*, arranged to brace the feet or standards E E, and at the same time connect the same to the bar F at the desired distance apart, substantially as and for the purpose set forth.

L. H. DOYLE.

Witnesses:

JOHN MESICK,
WM. S. ROBINSON.