

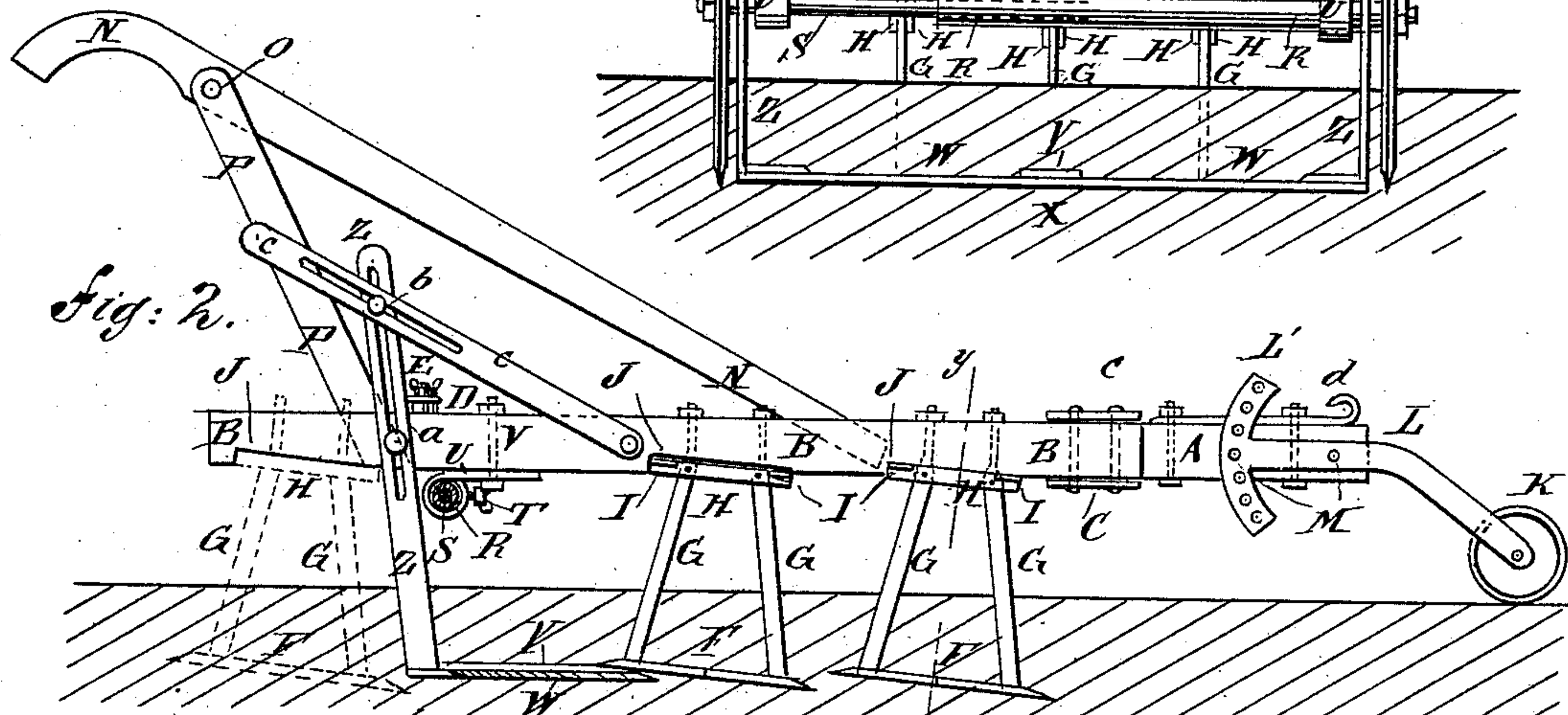
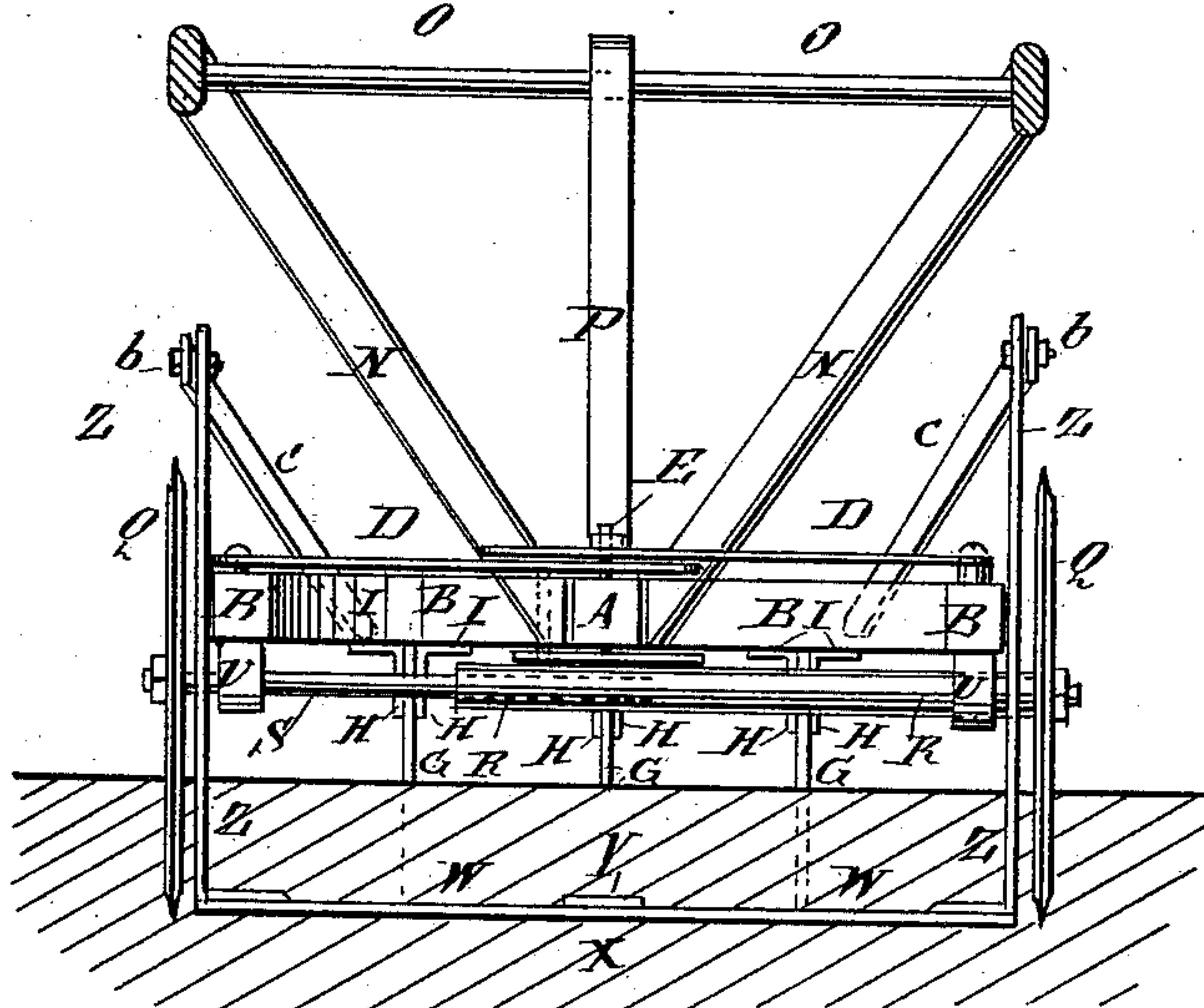
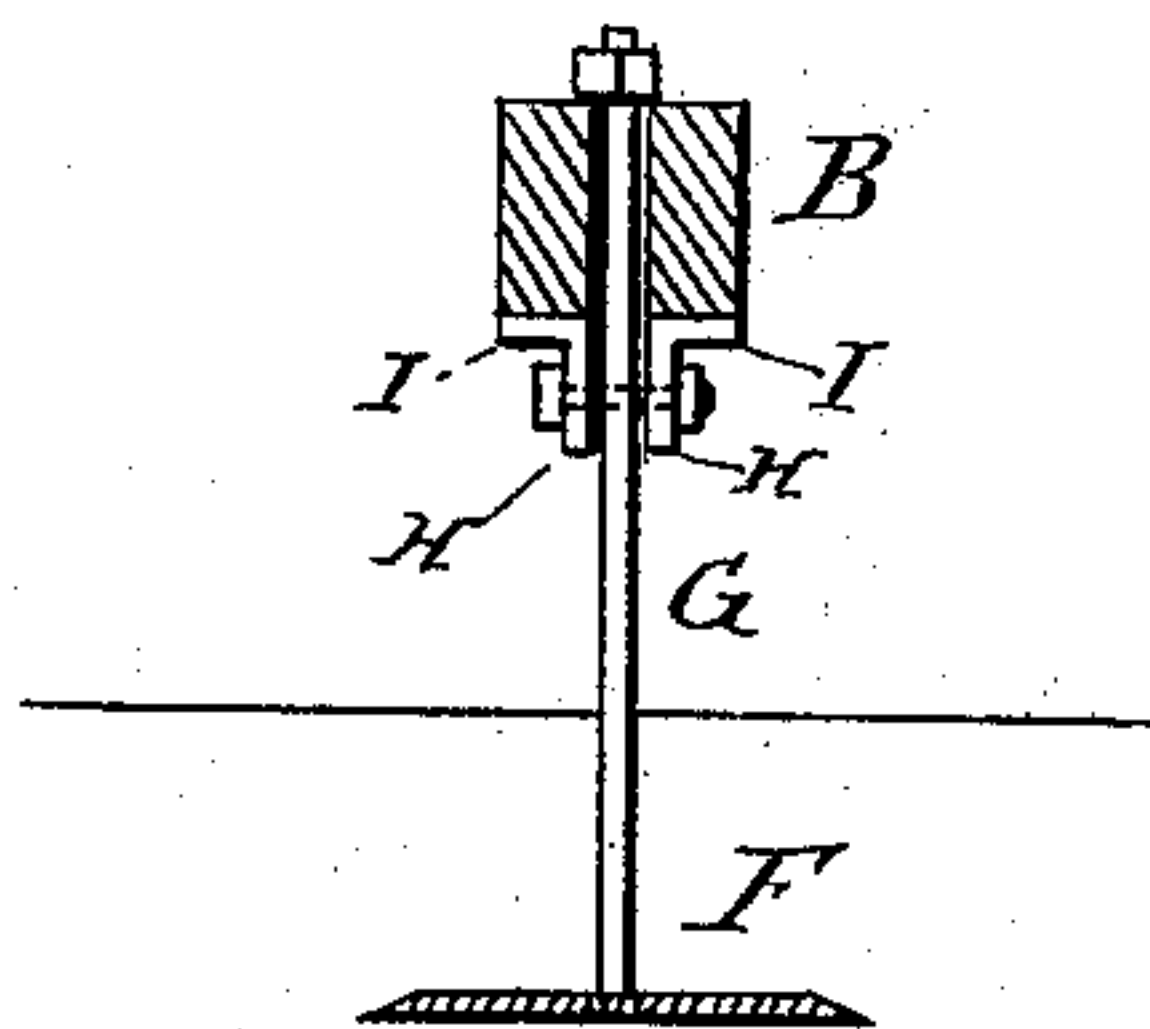
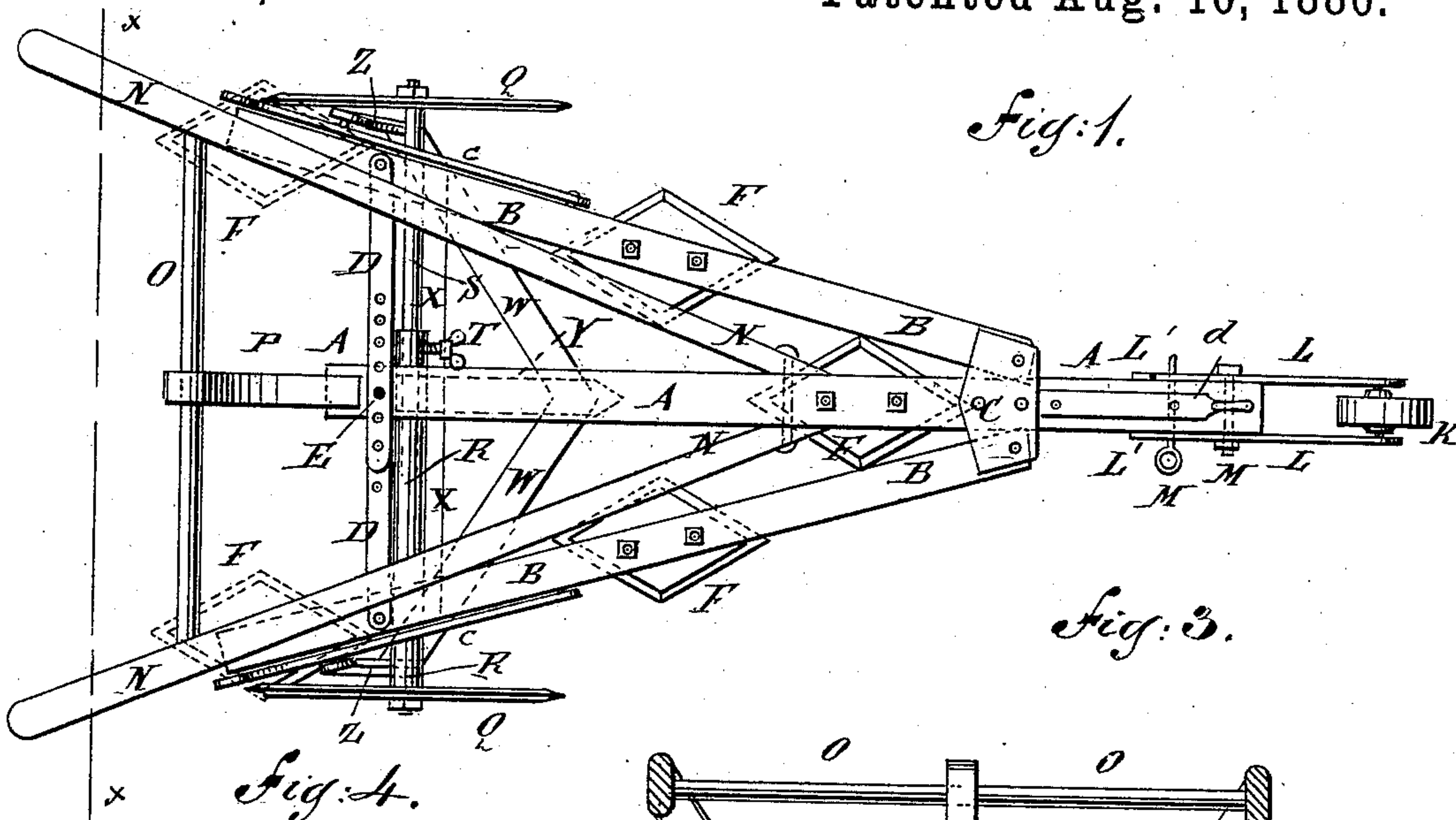
(No Model.)

G. E. BRIGGS.

CULTIVATOR.

No. 347,087.

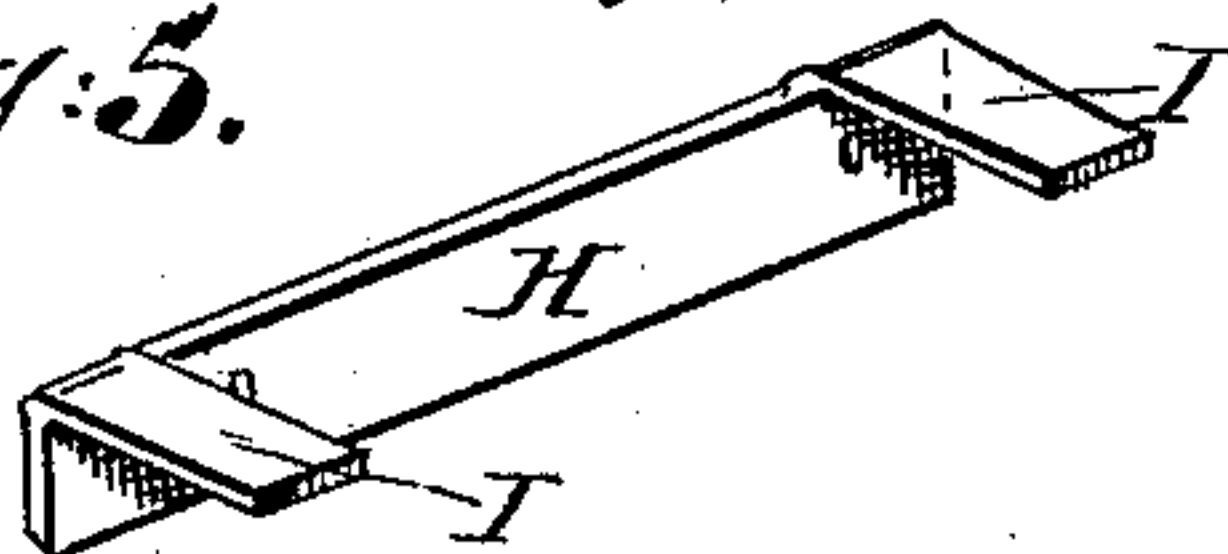
Patented Aug. 10, 1886.



WITNESSES:

Chas. Nida.
to Sedgwick

Fig: 5.



INVENTOR:

G. E. Briggs

BY

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE E. BRIGGS, OF BOWLING GREEN, MISSOURI.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 347,087, dated August 10, 1886.

Application filed March 6, 1886. Serial No. 194,274. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ELLSWORTH BRIGGS, of Bowling Green, in the county of Pike and State of Missouri, have invented a new and useful Improvement in Cultivators, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improved cultivator. Fig. 2 is a side elevation of the same, the rotary colters being removed and the colter-shaft being shown in section. Fig. 3 is a rear elevation of the same, the handles being shown in section through the line *xx*, Fig. 1. Fig. 4 is a sectional elevation of a part of the same, taken through the line *yy*, Fig. 2. Fig. 5 is a perspective view of one of the bars for securing the knife-standards to the beams.

The object of this invention is to improve the construction of the cultivators for which Letters Patent were allowed to me September 29, 1885, in such a manner as to make them more reliable in operation.

The invention consists in the construction and combination of various parts of the cultivator, as will be hereinafter fully described. A represents the main or central beam, and B the side beams of the cultivator.

To the upper and lower sides of the central beam, A, at a little distance from its forward end, are secured, by bolts or rivets, the middle parts of two plates, C, the ends of which project at the opposite sides of the beam A, and to and between the said projecting ends are hinged, by bolts or rivets, the forward ends of the side beams, B, so that the rear ends of the said side beams can have a lateral movement.

To the rear part of the side beams, B, are bolted the outer ends of two bars, D, the inner parts of which overlap each other, and have numerous holes formed through them to receive the bolt E, that secures them to each other and to the rear end of the central beam, A, so that by adjusting the said bolt E the rear ends of the said side beams, B, can be adjusted at a greater or a less distance apart, as the distance between the rows of plants may require.

F are diamond-shaped cutters to the acute

angles of which are secured, by bolts or other suitable means, the lower ends of pairs of knife-standards G, which incline slightly toward each other, and their upper parts are bolted to and between two bars, H, which have outwardly-projecting lugs I upon the upper edges of their ends to rest against the lower sides of the beams A B. The upper ends of the knife-standards G pass through the beams A B, and have nuts screwed upon them.

In the lower sides of the beams A B are formed tapered recesses J, to form inclined seats for the bars H, and against the shoulders of which the rear ends of the said bars rest, as shown in Fig. 2, to give a downward inclination to the forward ends of the cutters F. The cutters F and knife-standards G are connected with the forward part of the central beam, A, and with the middle and rear parts of the side beams, B, and are designed to be so arranged that the paths of the cutters F will slightly overlap, so that all the grass, weeds, and vines will be cut off. The depth to which the cutters F enter the ground is regulated by the gage-wheel K, which is journaled to and between the forward ends of two bars, L. The bars L serve as a standard for the wheel K, incline upward and rearward, and their rear parts extend horizontally along the opposite sides of the forward end of the central beam, A. The angular bars L are secured to the beam A by two bolts, M, the forward one of which passes through holes in the said bars L at a little distance from their rear ends, and through a hole in the forward end of the said beam A. The rear bolt, M, passes through one or another of several holes formed in the curved cross-heads L', formed upon the rear ends of the bars L, so that the gage-wheel K can be raised or lowered to regulate the depth to which the cutters F enter the ground by adjusting the rear bolt, M, from one to another of the holes in the said curved cross-heads L'.

To the opposite sides of the middle part of the central beam, A, are attached the forward ends of the handles N, the rear parts of which are connected and held in proper relative positions by a round, O, and are supported at the desired height by a brace, P, the upper end of which is connected with the center of the round O, and its lower end is secured to the rear end of the central beam, A.

Q are two rotary colters, which are attached

to the outer ends of the extensible shafts R S. The part R of the extensible shaft is tubular, and the part S is placed within it, and is secured in place by a set-screw, T, passing in
 5 through the side of the said tubular part R and resting against the other part, S, so that the said shaft can be readily adjusted to correspond with the adjustment of the side beams, B. The shaft R S revolves in the eyes of the eye-plates
 10 U, secured by bolts V to the lower sides of the side beams, B.

W is a wide V-shaped cutter the arms of which meet at an obtuse angle, and are connected at their rear ends by a cross-bar, X. The
 15 cutter W is further strengthened by a central longitudinal bar, Y, the forward end of which is secured to the said cutter at its angle, and its rear end is secured to the center of the cross-bar X.

20 To the ends of the cutter W are attached the lower ends of the standards Z, the upper parts of which are slotted longitudinally to receive the bolts *a*, that secure them to the side beams, B, so that the said standards can be adjusted to
 25 cause the cutter W to work at a greater or a less depth in the ground by loosening the said bolts *a*.

To the upper ends of the standards Z are attached bolts *b*, which pass through longitudinal
 30 slots in the rear parts of the braces *c*, so that the inclination of the cutters W can be regulated by adjusting the bolts *b* in the slots of the braces *c*. The forward ends of the braces *c* are bolted to the sides of the side beams, B.

35 If desired, the rear cutters, F, and knife-standards G can be detached when the cutter W is used.

The cutter W is designed for use when the

rows of plants are at the ordinary distance apart. When the rows of plants are at a greater
 40 or a less distance apart, and the cultivator-frame has to be expanded or contracted, the cutter W must be detached.

To the upper side of the forward end of the center beam, A, is bolted a hook, *d*, to receive
 45 the whiffletree-ring.

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

1. In a cultivator, the combination, with the
 50 beams A B, having tapered recesses J, and the diamond-shaped cutters F and knife-standards G, of the pairs of bars H, having end lugs, I, substantially as herein shown and described, whereby the said cutters and standards will be
 55 firmly supported in place, as set forth.

2. In a cultivator, the combination, with a center beam and two adjustable side beams, of an adjustable shaft journaled in the side beams, and rotary cutters on the ends of the said shaft,
 60 substantially as herein shown and described.

3. In a cultivator, the combination, with the center beam, A, and the side beams, B, adjustably hinged to the said center beam, of the
 65 eye-plates U, secured to the side beams, the extensible shaft R S, fitting loosely in the said eye-plates, and the rotary cutters Q on the ends of the shaft, substantially as herein shown and described.

The foregoing specification of my new and
 70 improved cultivator signed by me.

GEO. E. BRIGGS.

Witnesses:

W. F. MAYHALL,
 ED. MAYHALL.