

(No Model.)

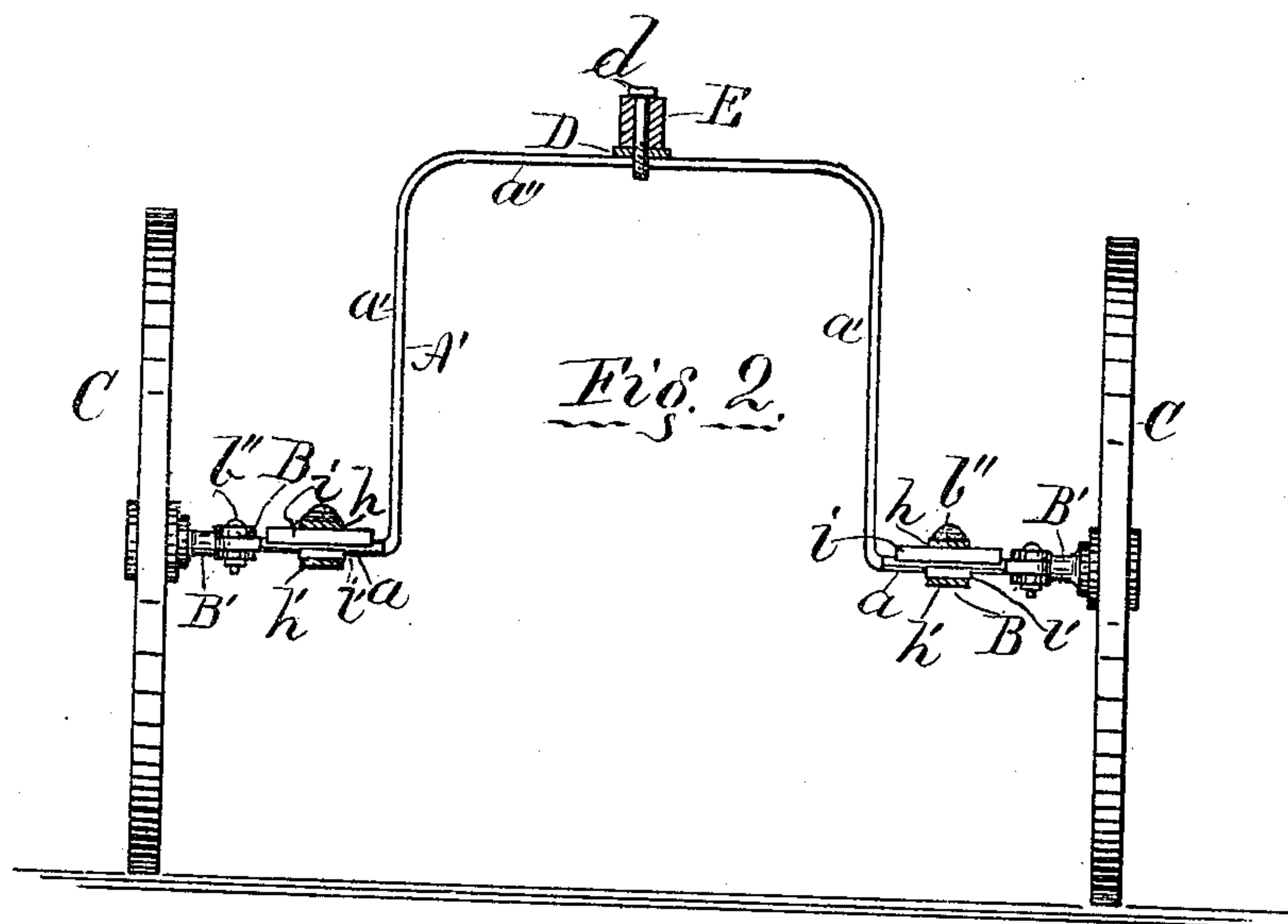
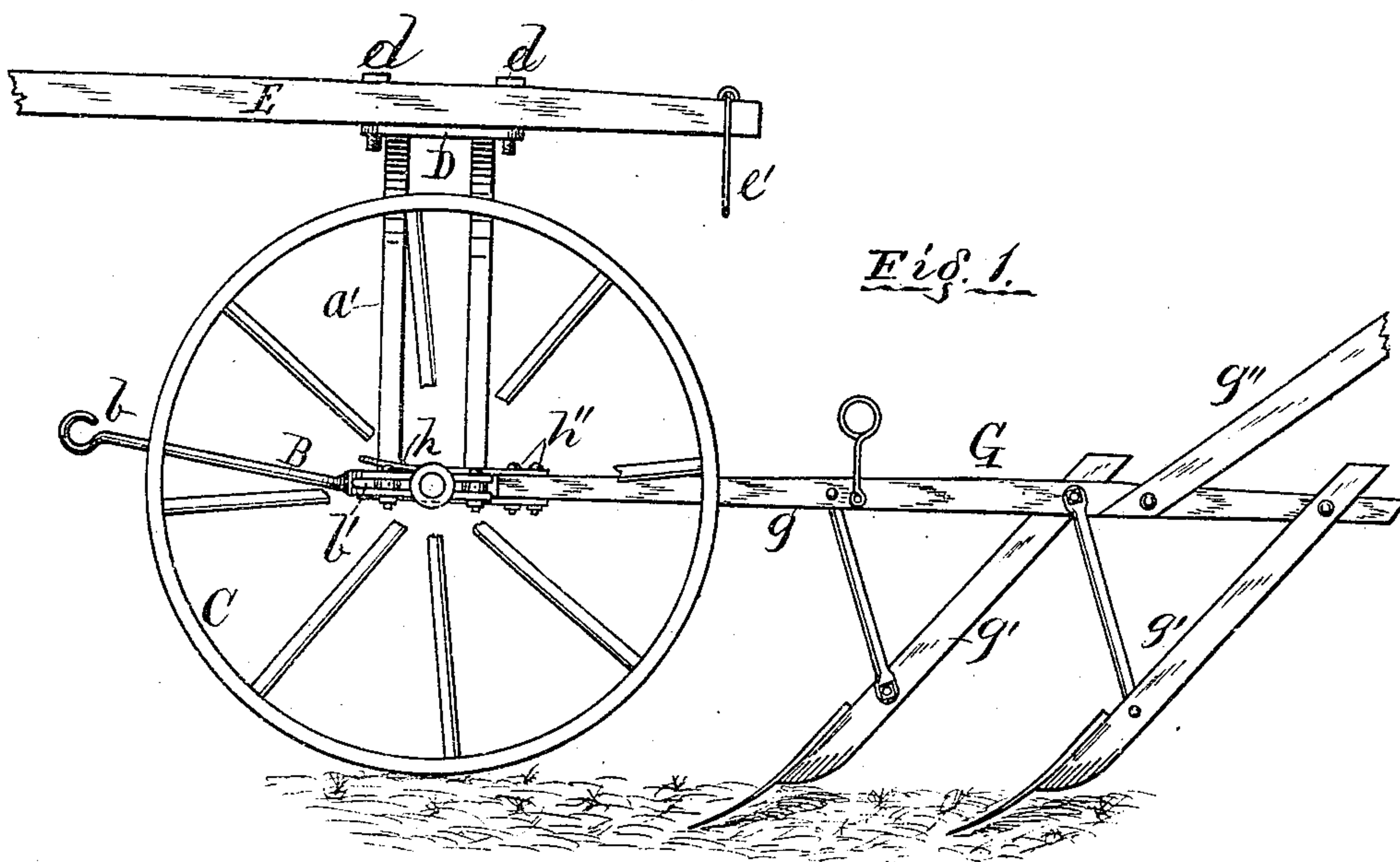
J. B. WEIR.

2 Sheets—Sheet 1.

CULTIVATOR.

No. 273,787.

Patented Mar. 13, 1883.



Witnesses:

O. R. Richards,
James Henry.

Inventor:
John B. Weir,
By O. R. Richards,
Atty.

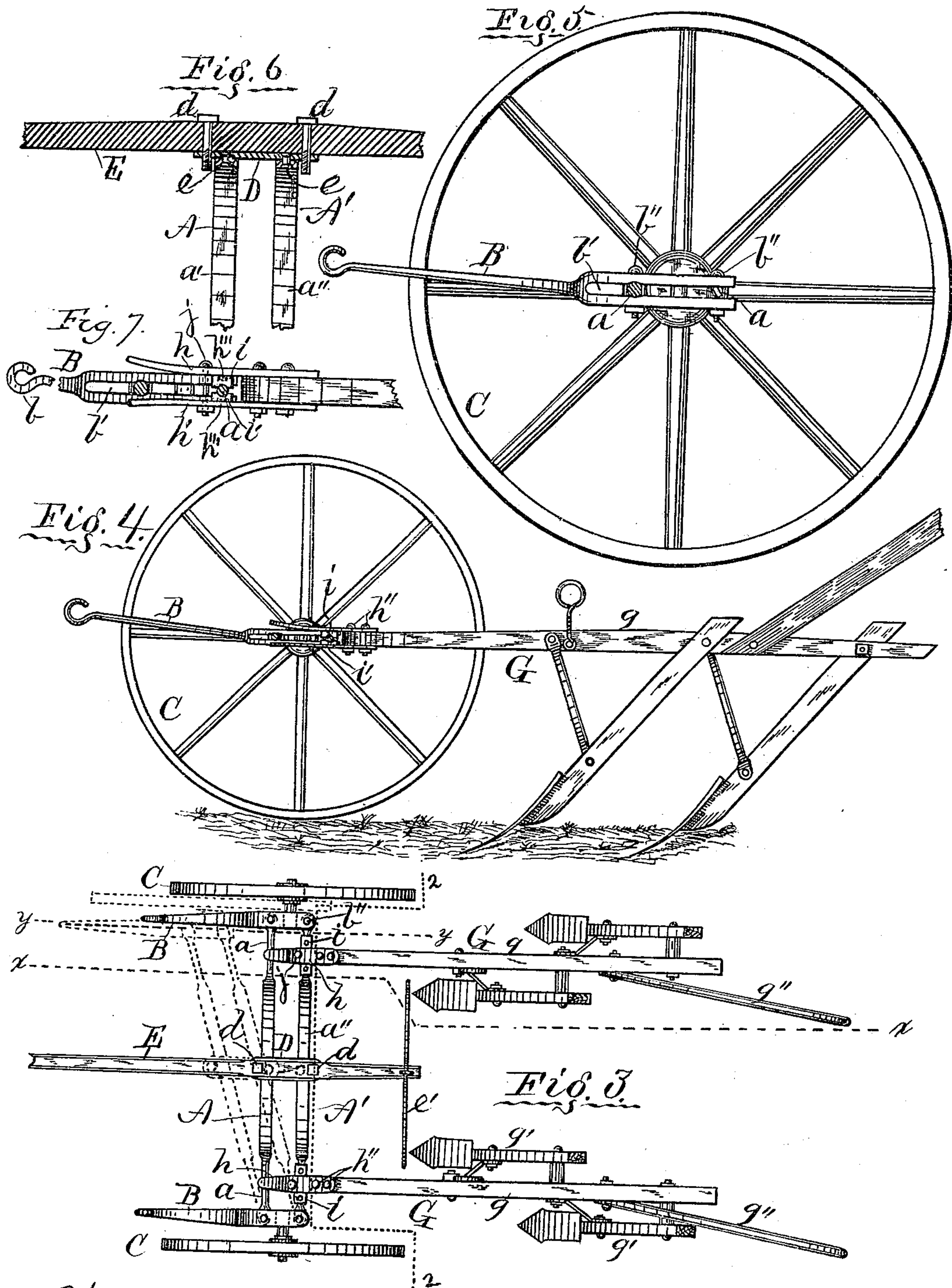
(No Model.)

2 Sheets—Sheet 2.

J. B. WEIR.
CULTIVATOR.

No. 273,787.

Patented Mar. 13, 1883.



Witnesses.
G. R. Richards.
James Henry.

Inventor.
John B. Weir,
W. B. Richards, atty.

UNITED STATES PATENT OFFICE.

JOHN B. WEIR, OF MONMOUTH, ILLINOIS, ASSIGNOR TO WILLIAM S. WEIR,
OF SAME PLACE.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 273,787, dated March 13, 1883.

Application filed October 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. WEIR, a citizen of the United States, residing at Monmouth, in the county of Warren and State of Illinois, have invented certain new and useful Improvements in Cultivators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to that class of "tongueless" or parallel cultivators in which two or more arches that constitute the central part of the axle, or connection between the stub axles or spindles, on which the supporting-wheels are journaled are hinged to the side frames or plates to which said stub-axles are fixed, in such manner that the wheels and side frames will be held in parallel planes by the arches when either wheel is advanced relatively to the other; and the invention consists in constructions and combinations hereinafter described, and set forth in the claims hereto annexed.

In the accompanying drawings, which illustrate a tongueless cultivator as improved by my invention, Figure 1 is a side elevation, the wheel shown partly broken away. Fig. 2 is a sectional elevation in the line 2 2 in Fig. 3. Fig. 3 is a top plan. Fig. 4 is a sectional elevation in the line xx in Fig. 3. Fig. 5 is a sectional elevation in the line yy in Fig. 3. Fig. 6 is a sectional elevation lengthwise of the tongue, showing adjacent parts. Fig. 7 is an enlarged illustration of parts of Fig. 4.

Referring to the drawings by letters, the same letter indicating the same part in the different figures, $A A'$ represent similar central parts of axles or arches, each composed of horizontal ends a , and arched central parts formed of vertical side parts, a' , and horizontal connecting part a'' .

$B B$ are side frames or plates, each having its forward end formed into a draft-hook, b , and a horizontal slot, b' , in its rear end. The horizontal slot b' in each plate B receives the ad-

jacent horizontal ends a of the pair of arches $A A'$, and a pivot-bolt, b'' , passes vertically through each arm a and through the plate B .

A stub-axle, B' , is secured to and projects laterally and outwardly from each plate B at a point about midway between the ends of the pair of arches.

C are the supporting-wheels, journaled on the stub-axes B .

The axles $A A'$ are connected at their upper central parts by a plate, D , which is pivoted to each arch by bolts e .

A tongue or pole, E , is shown in the drawings pivoted to the plate D by pivot-bolts d . This pole E may be dispensed with, if preferred, but may be used, if preferred, mainly for the purpose of suspending the plows in the ordinary manner, when not in operation, on the hooks e' , which are attached to its rear extended end.

$G G$ are plow-gangs, each having a beam, g , plow g' , and handles g'' . These gangs may be of any other ordinary or desired construction, and with or without handles. Each plow-beam has a plate, h , extending forward from its upper side and forward end, and a similar plate, h' , extending in same manner from its lower side. The plates $h h'$ are bolted to the plow-beam by bolts h'' , and receive the end a of the arch A' between them and near the end of the plow-beam. Plates $i i'$ are located between the plates $h h'$ and the arm a , and are constructed similar to and receive the lugs h''' from the plates $h h'$ in same manner and for same purpose as shown in Letters Patent granted to William S. Weir, March 17, 1874, No. 148,787, and hence need not be any more fully herein described, further than to state that the lugs h''' are the centers of motion for swinging the plow-gangs laterally, and the arms a the centers of motion for swinging them vertically. The plates $h h'$ extend forward slightly beyond the arm a of the arch A . The plate h is some little distance above said arm a , so as to permit raising the plow-gangs some height at their rear ends, while at the same time the distance between them is not so great but that said arm a will come in contact with the plate h , and thus prevent the arches tilting or falling rearward. The plate h' is somewhat nearer the arm a of

arch A than is the plate *h*, and will prevent the arches A A' falling forward when the draft is not applied to them, especially when the tongue is removed. A bolt, *j*, preferably passes
 5 through the plates *h h'*, forward of the arm *a* of the arch A', same as shown in the patent hereinbefore referred to.

The arches A A' will retain the plates B and wheels parallel with each other when either
 10 wheel is advanced relatively to the other, as shown by dotted lines at Fig. 3, and will permit of oscillating the wheels laterally, but not independently of each other, as they move in unison.

I do not claim broadly the feature herein described of sustaining the axle of a tongueless cultivator by means of a beam-plate hinged to a horizontal bar of any kind and passing forward beneath another bar, as such feature
 20 broadly is in my opinion the invention of William S. Weir; but

What I claim as new is—

1. In combination with arches A A', having elevated central parts and horizontal ends or
 25 arms *a*, the plates B, provided with stub-axles for the wheels, and hinged to the horizontal ends *a* of the arches A A', substantially as and for the purpose specified.

2. The arches A A', having horizontal ends
 30 hinged to plates B, to which the supporting-wheels are attached, in combination with gangs of plows hinged to the horizontal ends of one of the arches, substantially as and for the purpose specified.

3. Twin arches A A', having horizontal ends
 35 hinged in slotted plates B, in combination with

plow-gangs hinged upon the horizontal end of the arch A', substantially as and for the purpose specified.

4. In combination with the arches A A', having elevated central parts and horizontal ends or arms *a*, plates B, provided with stub axles for the wheels, and hinged to the horizontal ends *a* of the arches, and the plate D, hinged to the upper central part of the arches A A', sub-
 45 stantially as described.

5. In combination with the arches A A' and wheel-plates B, hinged to the horizontal ends of said arches, the plate D, hinged to the upper central parts of the arches, and the tongue
 50 E, hinged to the plate D, substantially as and for the purpose specified.

6. In combination with arches A A', hinged to the side plates, B, plow-gangs hinged to the horizontal ends of the rear arch, and provided
 55 with plates which extend forward, one above and one below the horizontal end of the forward arch, substantially as and for the purpose specified.

7. The arches A A', having horizontal ends
 60 *a*, hinged to side plates, B, in combination with plow-gangs having beam-plates *h h'*, hinged to the horizontal end of the rear arch, and extended forward, one above and one below the end *a* of the forward arch, substantially as and
 65 for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN B. WEIR.

Witnesses:

J. H. MOORE,
 V. H. WEBB.