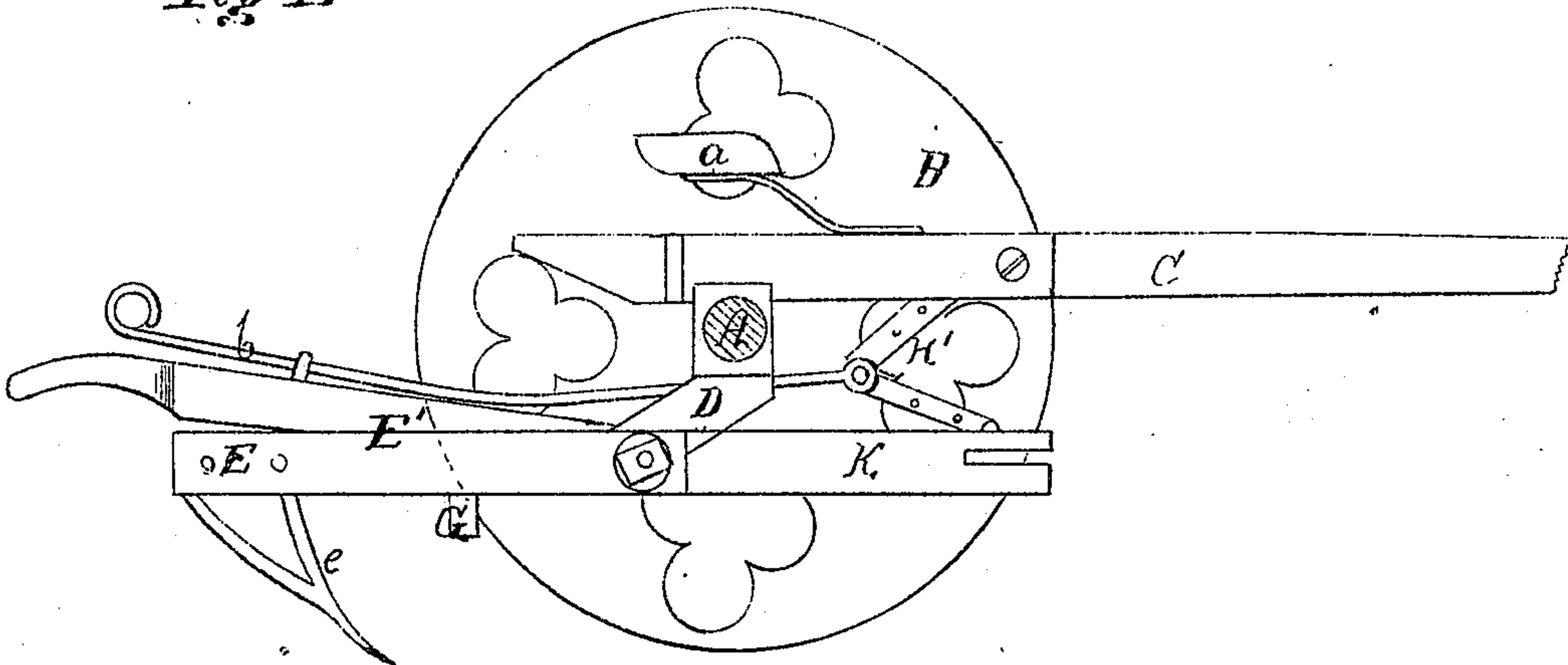


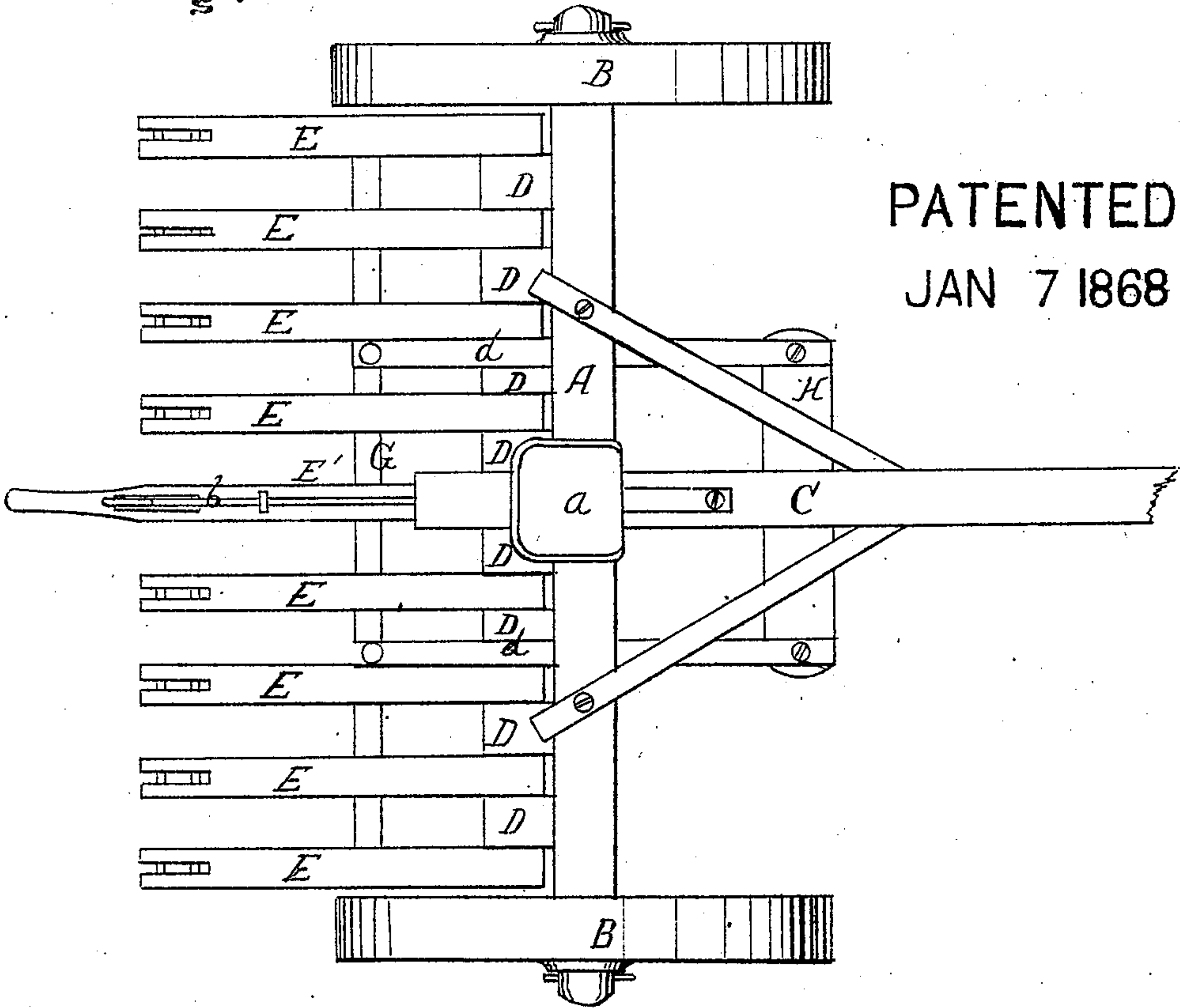
W.O. Hargrave's Cultivator.

73094

*fig 1.*



*fig. 2.*



PATENTED  
JAN 7 1868

Witnesses.

A. A. Yeatman  
C. R. Shaw

Inventor.

W. O. Hargrave  
per  
Alexander H. Mason  
Att'y

# United States Patent Office.

W. O. HARGRAVE, OF RIPON, WISCONSIN.

*Letters Patent No. 73,094, dated January 7, 1868.*

## IMPROVEMENT IN CULTIVATORS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, W. O. HARGRAVE, of Ripon, in the county of Fond du Lac, and in the State of Wisconsin, have invented certain new and useful Improvements in Cultivators; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

Figure 1 represents a side view, with one wheel extracted, and

Figure 2 a plan view.

In the annexed drawings, A represents an axle, having suitable wheels, B B, and provided with a tongue, C, upon which is placed the seat *a*, for the driver. Connected to the under part of the axle is a series of short obliquely-placed blocks, D D D, which are set at suitable intervals from each other. Between these intervals is hinged a short beam, E, having a drill-tooth or shovel, *e*, said bars being thus hinged by means of a horizontal rod, which is passed through the beams and the blocks. Directly under the rear of the tongue, a little forward of the seat, is a foot-board, which is connected to said tongue by a hinge, H', and has two bars, *d d*, which extend to the rear of the blocks D D, and are there attached to and support a horizontal bar, G, which forms a rest for the beams E E. All of the beams E are loose, excepting the centre one, E', which is provided with an extended handle, to be operated upon by the driver when he is walking behind the cultivator. *b* represents a rod which lies upon the beam E', and passing forwards, connects to the centre of the hinge H', so that whenever it is desired, the teeth can be elevated from the earth by forcing this rod forward. This can also be done by the driver pressing upon the board H, causing the hinge to straighten and the shovels to be elevated. These beams working independently, can be thrown up, and clear any obstacle in cultivating.

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

1. The board H, connected to the tongue C by the hinge H', so that the drill-teeth can be elevated by the driver, in the manner as set forth.
2. The axle A, with its blocks D D D, between which are hinged the beams E E E, provided with their shovels *e e e*, when used in connection with the board H, bars *d d*, securing the horizontal resting-bar G, and operated by the rod *b* upon the beam E by the hinge H', the whole constructed and used in the manner substantially as specified.

In testimony that I claim the foregoing, I have hereunto set my hand, this 24th day of September, 1867.

W. O. HARGRAVE.

Witnesses:

THOMAS HARRIS,  
W. T. RUNALS.