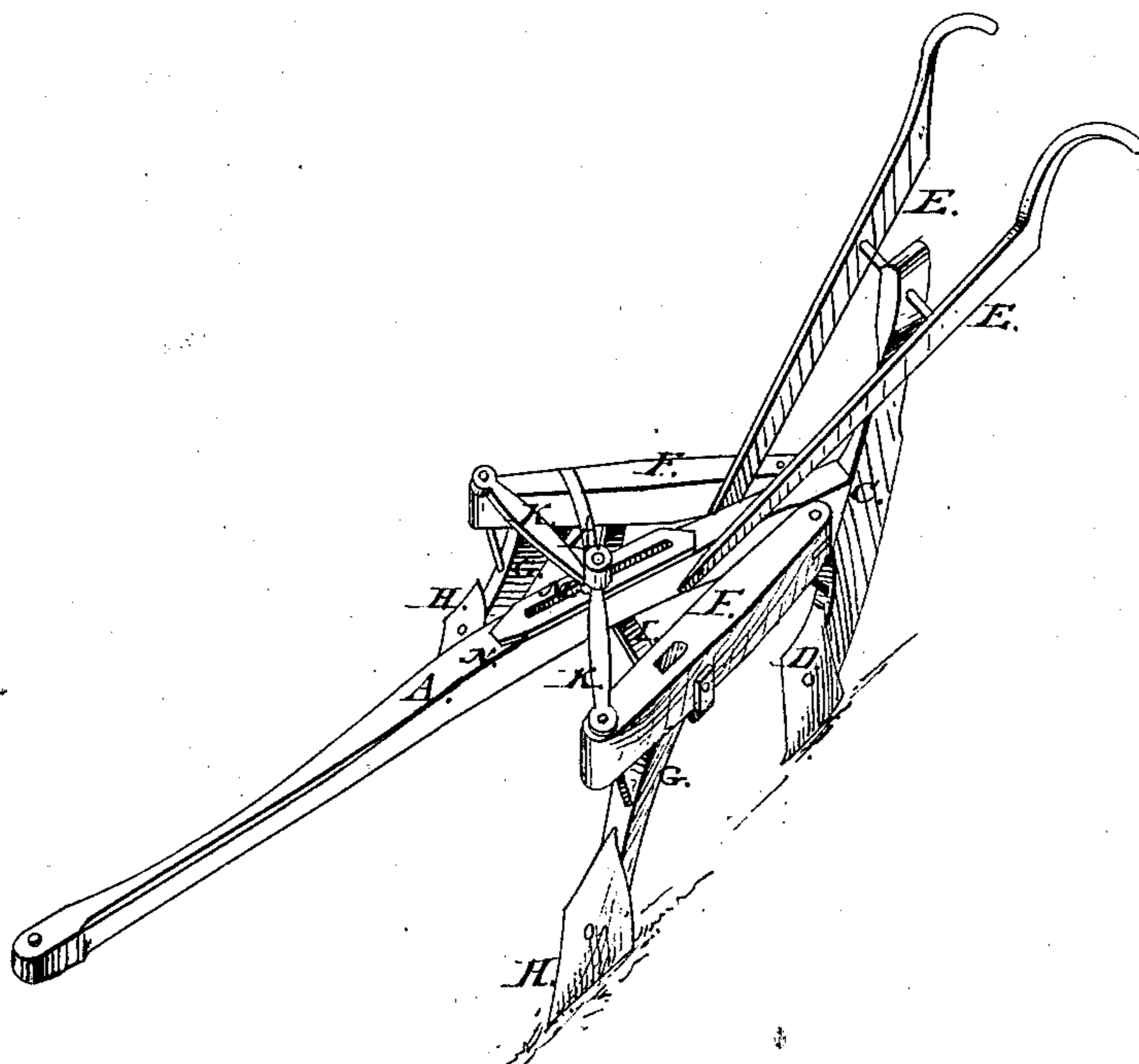


*T. Thorley,*  
*Cultivator,*

*N<sup>o</sup> 82,180.*

*Patented Sep. 15, 1868.*



*Witnesses:*  
*H. F. Everts*  
*N. J. Sprague*

*Inventor:*  
*Thos. Thorley*  
*Per attorney*  
*Thos. B. Sprague*

# United States Patent Office.

THOMAS THORLEY, OF SOUTHFIELD, MICHIGAN.

*Letters Patent No. 82,180, dated September 15, 1868.*

## IMPROVEMENT IN CULTIVATORS.

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

### TO WHOM IT MAY CONCERN:

Be it known that I, THOMAS THORLEY, of Southfield, in the county of Oakland, and State of Michigan, have invented a new and useful Improvement in Cultivators; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon and being a part of this specification.

The nature of this invention consists in so constructing a cultivator that it may be adjustable to suit the width necessary to be cultivated. Also to reverse the ordinary operation of cultivators, as commonly built, by attaching the draught at the widest part of the machine, while the handles by which the operator guides it are attached at the narrow end of the cultivator. By this arrangement, the operator is given plenty of room for walking, while he can easily watch the course and working of the teeth of the cultivator when used for cleaning between rows, and for hilling purposes, the teeth next the rows being placed in front of him, instead, as in cultivators of ordinary construction, of being directly under the handles. In the latter case the operator needs two pairs of eyes, the one to guide his team and general course of the machine, and the other to watch the teeth next the rows, to prevent them from cutting up the corn or other plants. By this arrangement I also prevent the constant strain upon the arms of the operator, by the tendency to "jump" of the rear end of the cultivator.

In order to accomplish these ends, I construct a proper beam, A, at the rear end of which is attached the vertical standard C, provided at its lower end with cultivator-tooth D. To this beam and standard I attach suitable handles, E.

The arms F are pivoted or hinged to the beam A, at or near its rear end, and are provided with standards G, to which are attached the teeth H.

I is a quadrant, rigidly attached at its centre to the beam A, and is provided at each end with flange J, and acts as a rest and guide for the arms F.

K are levers pivoted at one end to the forward ends of the arms F, and extending to the adjustable bolt and hand-nut L, which works in and through the slot M in the plate N, and are designed to enable the operator to adjust and regulate the expansion and contraction of the cultivator, as occasion may require.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The quadrant I, provided with flanges J, when attached, and operating substantially as and for the purposes herein described.

2. The levers K, the bolt and hand-nut L, and the plate N provided with the slot N, when arranged and operating substantially as and for the purposes herein shown.

3. The combination of the beam A, the vertical standard C, the teeth D and H, the handles E and arms F, the standards G, the quadrant I, the flanges J, the levers K, the bolt and hand-nut L, the slot M, and plate N, when constructed, arranged, and operating substantially as and for the purposes herein set forth, described, and shown.

THOMAS THORLEY.

Witnesses:

H. S. SPRAGUE,

H. N. SWEENEY.