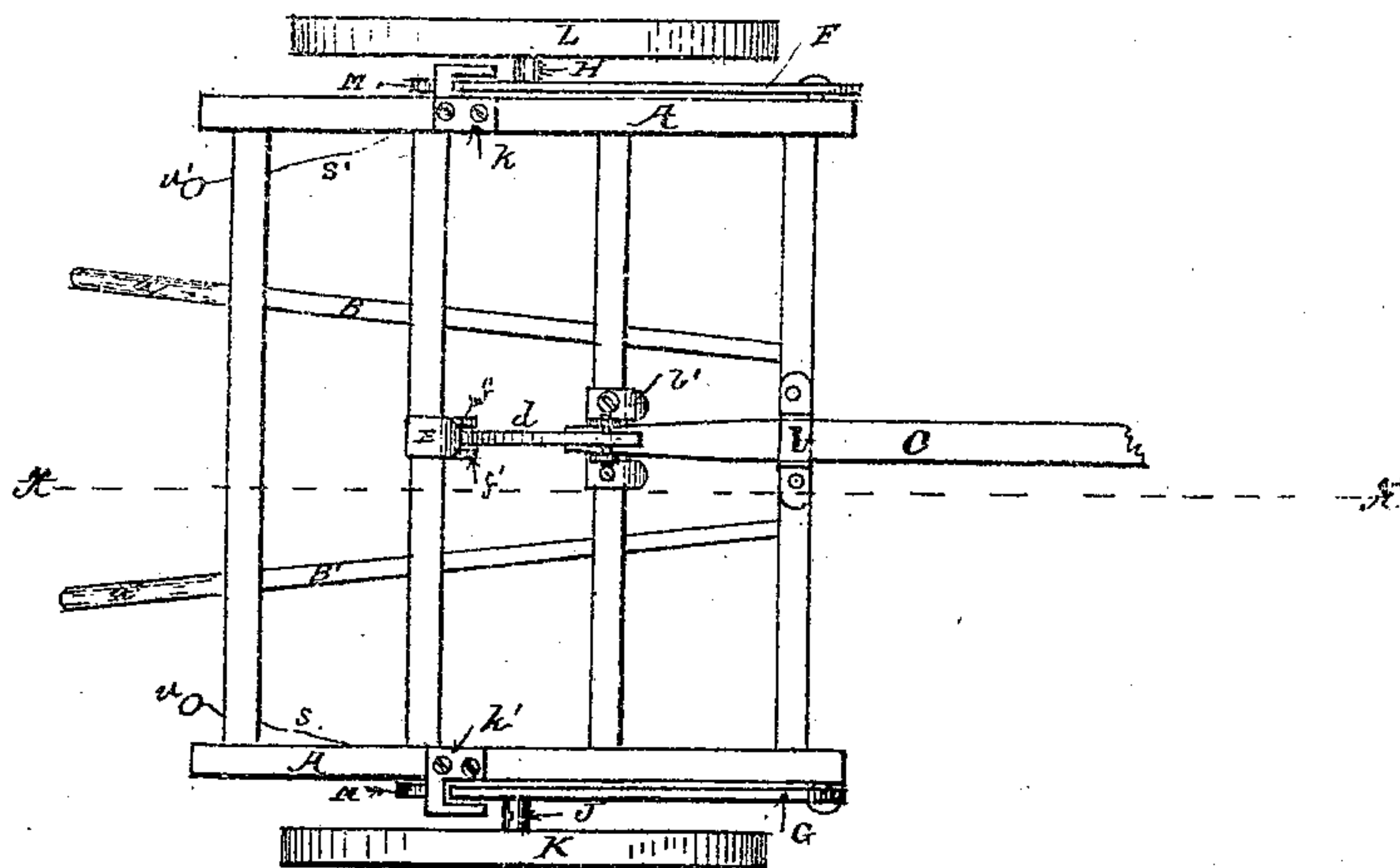
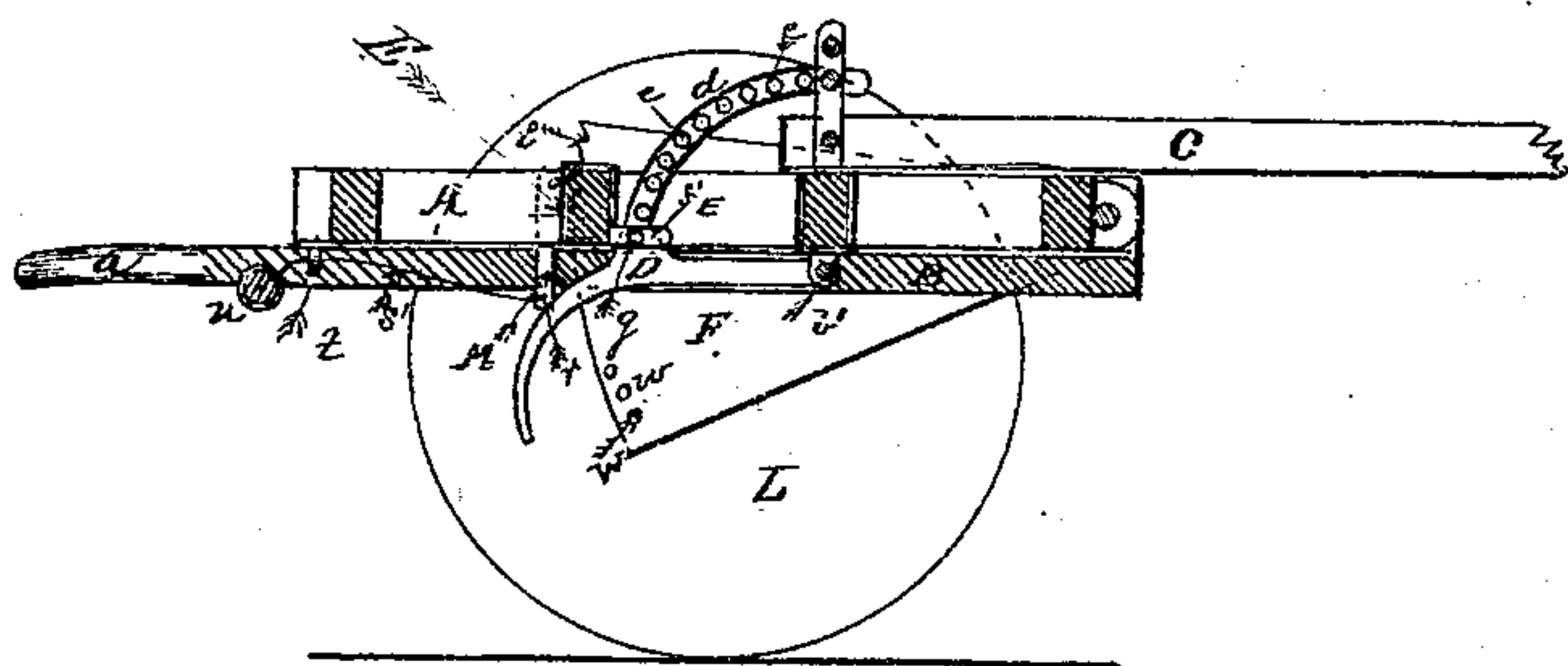


**L. W. DICKERSON.**  
**Quack Diggers and Cultivators.**  
 No. 147,245. Patented Feb. 10, 1874.

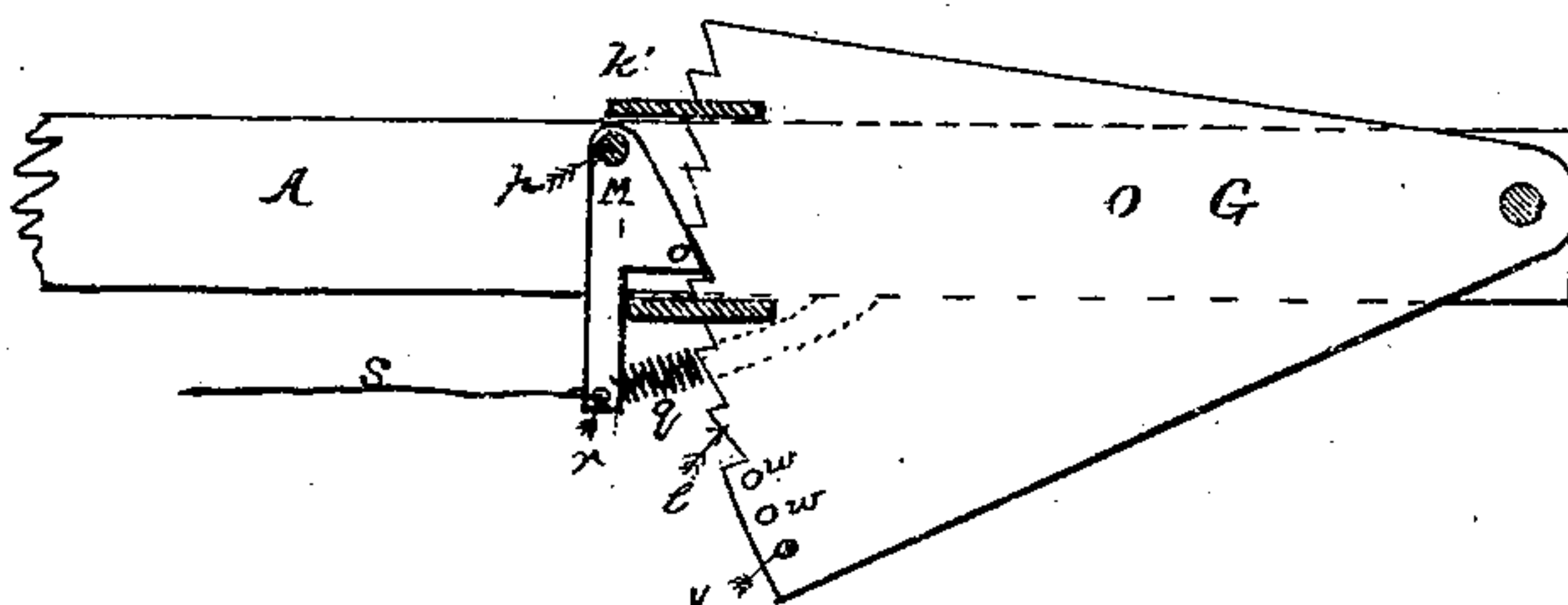
*Fig. I.*



*Fig. II.*



*Fig. III.*



WITNESSES:  
 Franklin Barritt.  
 Richard Corner.

INVENTOR:  
 Lyman W. Dickerson  
 PER Henry Corner  
 Attorney.

# UNITED STATES PATENT OFFICE.

LYMAN W. DICKERSON, OF MANLIUS, NEW YORK.

## IMPROVEMENT IN QUACK-DIGGERS AND CULTIVATORS.

Specification forming part of Letters Patent No. **147,245**, dated February 10, 1874; application filed September 20, 1873.

*To all whom it may concern:*

Be it known that I, LYMAN W. DICKERSON, of Manlius, Onondaga county, State of New York, have invented certain Improvements for Digging Quack and Cultivating generally, of which the following is a specification:

The object of my invention is to construct and provide for a machine for digging quack and cultivating generally, the frame of which can be raised or lowered, as may be required, for the purpose of adjusting the digger higher or lower in the soil.

Figure I is a plan view of a machine embodying my invention. Fig. II is a section cut through line *xx*, Fig. I. Fig. III is a detached side view of the adjusting device.

A is the frame. B B' are two bars fastened to the frame A, with handles *a a'*. C is the pole guiding the machine, held to the frame by aid of the clamps *b b'*. D is the digger, pivoted to these clamps and given any desired pitch by the arm *d*, which is provided with holes *e e*. A clamp, E, is attached to the frame A, and to it are attached the two arms *f f*, in which the holes *g g* are drilled. The arm *d*, describing a curve, is inserted between these two arms *f f*, and by aid of the pin *h*, which is inserted in the holes *e e* and *g g*, the arm can be raised or lowered, which gives to the digger D the pitch desired. To the frame A is pivoted, by the bolts *i i*, one on each side, the two segments F and G, to which the axles H and J are fastened, which carry the wheels K and

L. These segments are held in a position parallel to the sides of the frame by the guides K K'. In the circle line of these segments are formed the teeth *l l*, with which the points *o o* of the ratchets M M', pivoted at *p p* to the frame, engage, and are held in contact with the teeth by the springs *q q*. In the lower ends, or in the arms of the ratchets, are holes *r r'*, in which are inserted ropes or chains *s s'*, which run through the ring-bolts *t t*, and are provided at their ends with rings *u u*. *v v'* are pins, inserted in the holes *w w*, said holes being drilled near to the teeth in the segments F and G. Said pins serve to prevent the segments from being raised higher than necessary for keeping them in the guides K K.

The operation is readily understood. The driver, guiding the machine by aid of the handles, can set it at will by pulling the ropes, and thus releasing the ratchet-points from the teeth in the segments, by which action the frame will be lowered, and consequently the digger made to go deeper into the ground.

Having thus fully described my invention, I desire to claim—

The segments F and G, with teeth *l l*, in combination with the frame A, ratchets M M', and ropes *s s*, substantially as and for the purpose hereinbefore set forth.

LYMAN W. DICKERSON.

Witnesses:

STEPHEN DICKERSON,  
ANDREW DICKERSON.