

E. J. KNOWLTON.

Land-Roller.

No. 54,368.

Patented May 1, 1866.

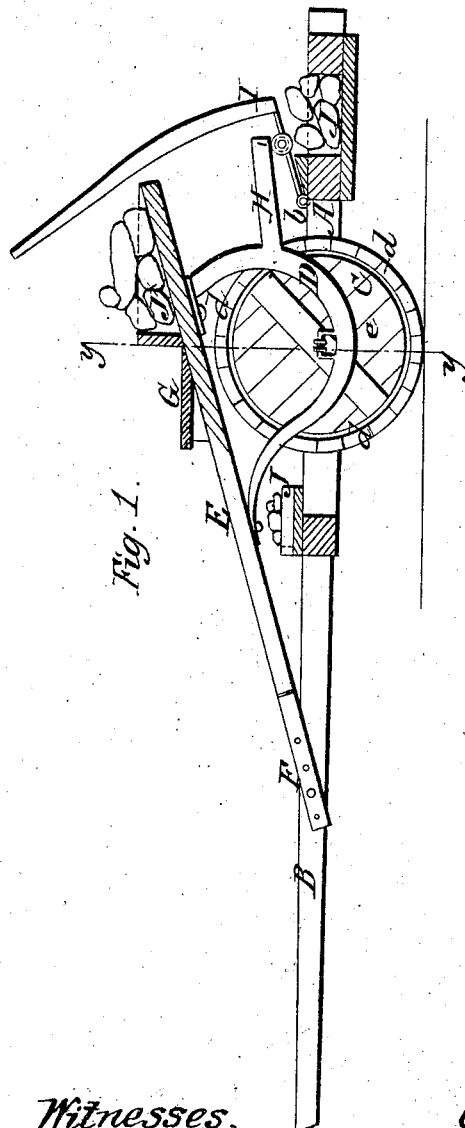


Fig. 1.

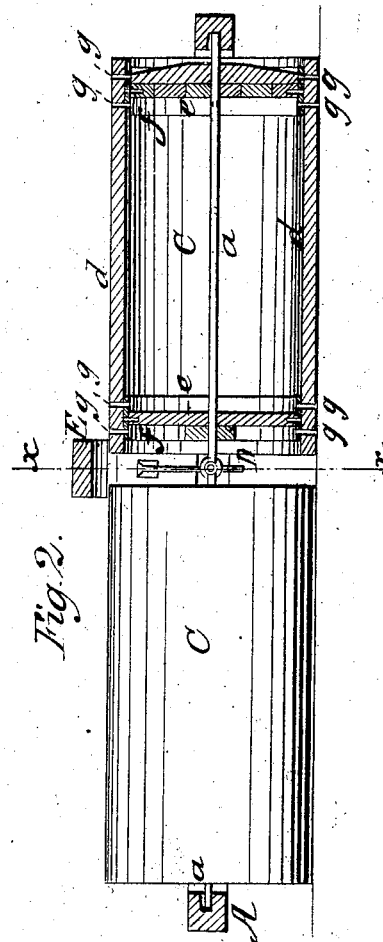


Fig. 2.

Witnesses.

*J. W. Blumhagen*  
*Wm. Freese*

Inventor.

*E. J. Knowlton*  
*per Munn & Co.*  
*Attys.*

# UNITED STATES PATENT OFFICE.

E. J. KNOWLTON, OF SOUTH LYON, MICHIGAN.

## IMPROVEMENT IN LAND-ROLLERS.

Specification forming part of Letters Patent No. 54,368, dated May 1, 1866.

*To all whom it may concern:*

Be it known that I, E. J. KNOWLTON, of South Lyon, in the county of Oakland and State of Michigan, have invented a new and Improved Land-Roller; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *xx*, Fig. 2; Fig. 2, a transverse vertical section of the same, taken in the line *yy*, Fig. 1, one of the rollers not being in section.

Similar letters of reference indicate corresponding parts.

The object of this invention is to obtain a roller for rolling land which will be capable of conforming to the inequalities of the surface thereof, and also capable of being more readily turned than usual.

A represents a rectangular frame having a draft-pole, B, attached to its front end, and two rollers, C C, fitted within it. These rollers C C are placed on separate or independent axles *a a*, the outer ends of the latter having their bearings in the sides of the frame A, and the inner ends having their bearings in a curved pendent bar, D, which is secured to the under side of a plank, E, the front end of which is fitted loosely on a rod, F, the latter passing through the hounds and draft-pole. On the plank E the driver's seat G is secured, and the pendent bar D has an arm, H, extending from its rear, and this arm is fitted in a fork or slot in a lever, I, the fulcrum *b* of which is on a cross-bar, *c*, of the frame A. By this arrangement it will be seen that the rollers C C are allowed to conform to the inequalities of the surface over which they may pass in consequence of the inner ends of the rollers being allowed to rise and fall freely; and it will further be seen that the driver, at any time, may raise the inner ends of the rollers C C by throwing forward the lever I, which is within con-

venient reach of the driver on seat G. This raising of the inner ends of the rollers is necessary in turning the machine, as the latter then rests on the outer ends of the rollers and admits of the machine being turned with equally as great facility as a cart. It will further be seen that the rollers are kept down to their work by the weight of the driver on seat G. This may be necessary, as the inner ends of the rollers might in some instances yield or rise too readily. In case the rollers, as a whole, should require additional weight, the frame A may be provided with boxes J to receive stones, as shown in Fig. 1, and the plank or seat-support E may be provided with a similar box, J\*.

The rollers C C may be constructed of staves *d* secured to cylindrical wooden heads *e*, said heads being encompassed by metal bands *f*, perforated with holes for bolts *g* to pass through. (See Fig. 2.) By this means a very strong, simple, and durable roller is obtained.

The rollers C C, if the device is to operate upon a loose light soil, may be nearly in line with each other; but if a heavy or clayey loam is to be operated upon, the inner ends of the rollers should be set somewhat back of the outer ends—say four or five inches. This will enable the rollers to act as a drag and with a pulverizing or crushing action, so that the hard clayey lumps will be broken.

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

1. A land-roller composed of two parts, C C, having the inner or adjoining ends of their axles fitted in an adjustable bearing or bar, D, substantially as and for the purpose set forth.

2. The lever I, in combination with the bar D, substantially as and for the purpose specified.

3. The plank or seat-support E, in combination with the bar D and rollers C C, arranged substantially as and for the purpose set forth.

E. J. KNOWLTON.

Witnesses:

J. C. KNOWLTON,  
JANE RODGER.