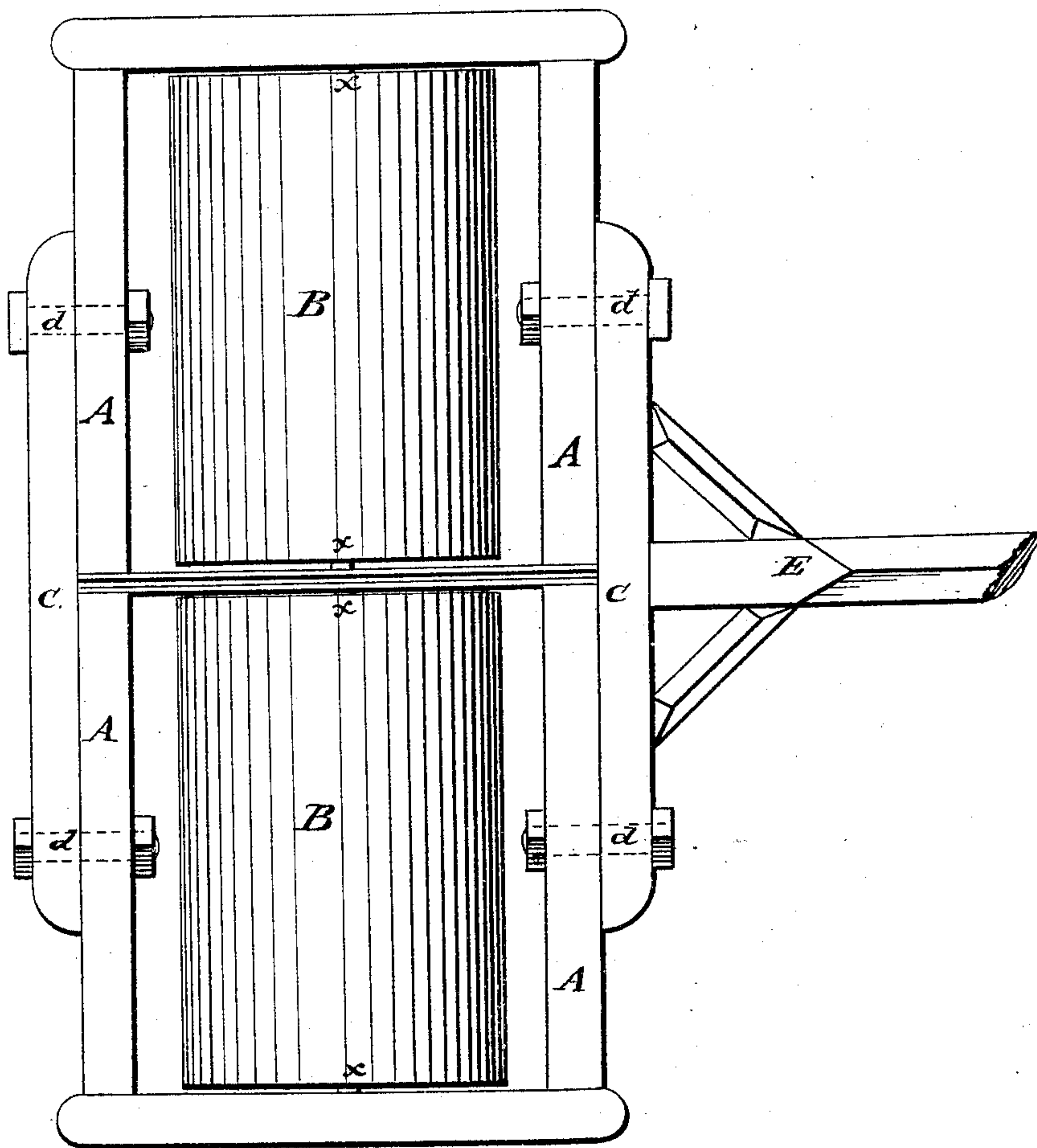


J. WINANS.

Land-Roller.

No. 63,597.

Patented Apr. 2, 1867.



Witnesses:

A. A. Geatman
Charles Alexander

Inventor:

James Winans
per
Alexander M. Mason
Attorneys

United States Patent Office.

JAMES WINANS, OF PLYMOUTH, MICHIGAN.

Letters Patent No. 63,597, dated April 2, 1867.

IMPROVEMENT IN LAND-ROLLERS.

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, JAMES WINANS, of Plymouth, in the county of Wayne, and in the State of Michigan, have invented new and useful Improvement in Land Rollers, 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.

In the annexed drawings, making part of this specification, A A represent two frames, in which are placed the rollers B B. These rollers have shafts at the centres of their ends, which said shafts *xx* have their bearings in the ends of the frames A A. The two frames A A are connected together by means of the bars C C', as represented. *dd* represent bolts, which pass through the bars C C', near their ends, and through the frames A A, at the centres of their back and front sides, for the purpose of connecting the two frames together. The frames oscillate upon the bolts *dd*, so that one roller may rise or fall as the two are being drawn along, without affecting the other, or either end of either roller may rise or fall without affecting the other. By connecting the two frames together in this manner, I am enabled to form a flexible roller which will readily adjust itself to the inequalities of rough ground. The tongue E is connected to the centre of the front bar C', and provided with braces which steady it.

Having thus fully described my invention, what I claim, is—

The two frames A A, connected together by means of the bars C C' and bolts *dd*, which said bolts act as pivots for the frames, allowing them independent motion, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 8th day of February, 1867.

JAMES WINANS.

Witnesses:

L. C. HALL,

GEO. A. STARKWEATHER.