

G. S. ELLARD.

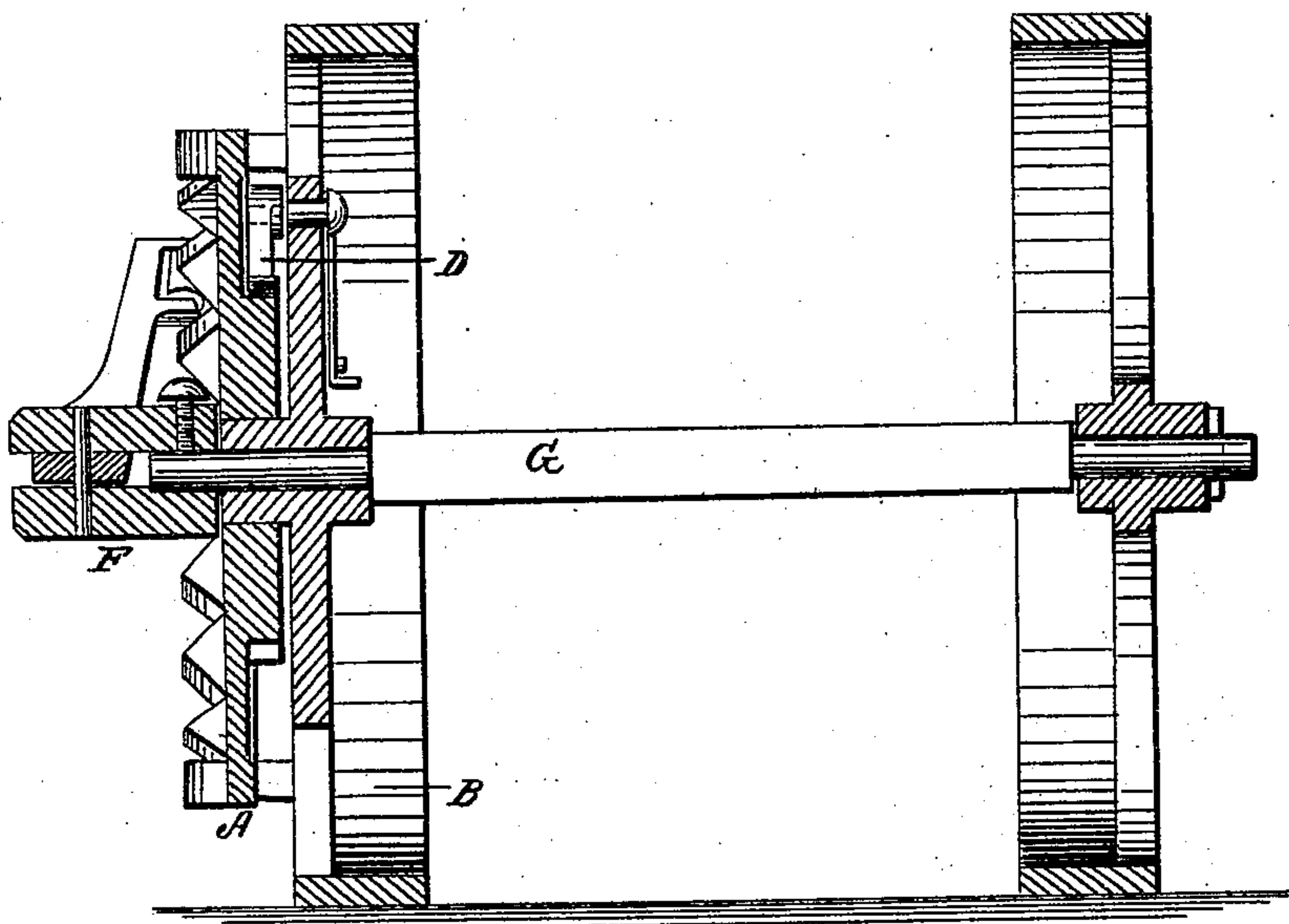
2 Sheets—Sheet 1.

Harvester.

No. 92,294.

Patented July 6, 1869.

Fig: 1.



Witnesses:

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Mrs. A. Morgan.

Inventor:

G. S. Ellard.

per Munn & Co.
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G. S. ELLARD.

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Fig: 2.

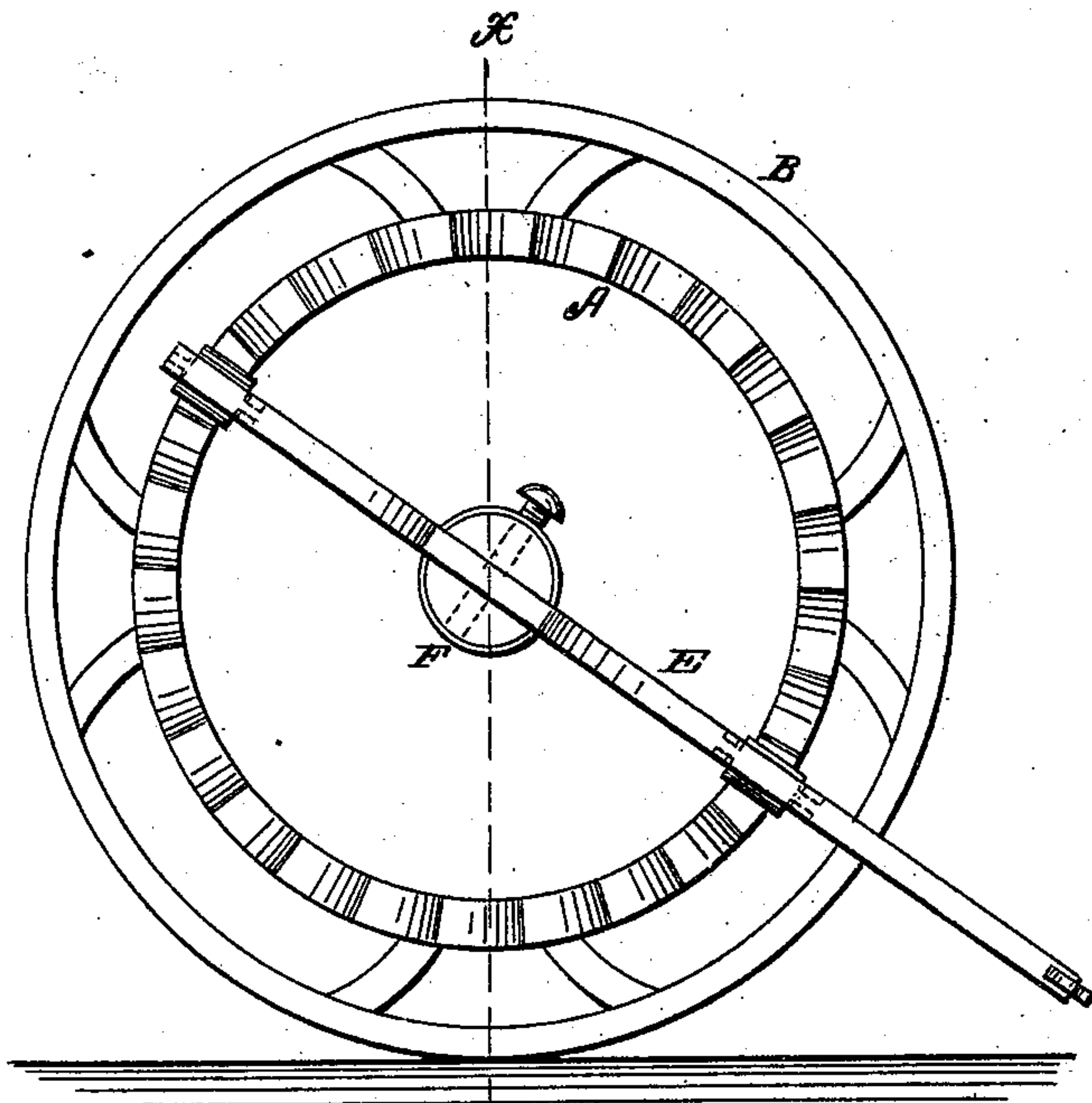
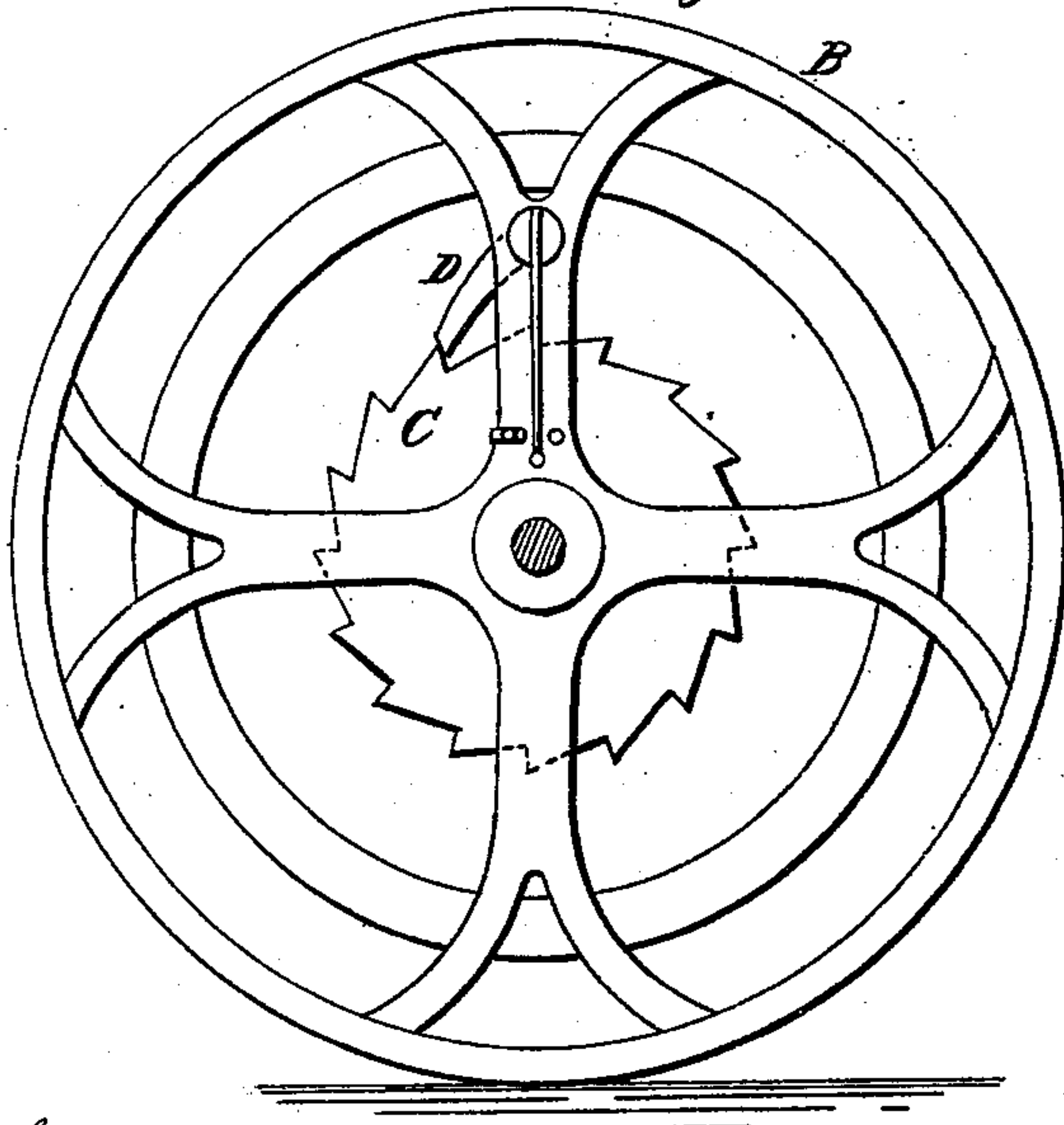


Fig: 3.



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Inventor:
G. S. Ellard.
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UNITED STATES PATENT OFFICE.

GEORGE S. ELLARD, OF WESTERLY, RHODE ISLAND.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 92,294, dated July 6, 1869.

To all whom it may concern:

Be it known that I, GEORGE S. ELLARD, of Westerly, in the county of Washington and State of Rhode Island, have invented a new and Improved Motion for Reapers and Mowers, and other purposes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and improved method of producing a reciprocating motion, more especially designed for reapers and mowers, in operating the cutter-bars of those machines, but applicable to other purposes; and consists in arranging, in combination with a driving-wheel, a wheel with a zigzag flange, by which the ends of a lever are given a reciprocating or vibrating motion, and in connecting therewith a ratchet and pawl, and arranging the whole in such a manner that the wheel will cease to revolve during any backward movement, and also when the pawl is thrown from the ratchet, as will be hereinafter more fully described.

In the accompanying plate of drawings, Figure 1 represents a vertical section of a pair of wheels with my improvement attached, the section being through the line *xx* of Fig. 2. Fig. 2 is a face view of my improvement connected with a driving-wheel, showing the vibrating lever from which motion is imparted to the cutter-bar of a reaper or mower, or for other purposes. Fig. 3 is a view of the reverse side, showing the ratchet and pawl, and the inside of the driving-wheel.

Similar letters of reference indicate corresponding parts.

A is the wheel from whence I obtain my vibrating motion. It revolves on the hub of the driving-wheel B when it is not carried with the driving-wheel by the pawl in the ratchet C. This ratchet is attached to the wheel A. The pawl D is attached to the driving-wheel B, and is operated by a rod, D', as

seen, on the inside of the driving-wheel B. The zigzag which produces the reciprocating motion is on a flange projecting from the face of the wheel A, as seen in Fig. 1. E is the vibrating lever, the fulcrum of which is in a sleeve, F, on the end of the axle G. This sleeve is fastened to the axle by a set-screw, as seen in the drawing. The lever E is provided with two friction-rollers, which engage with the face of the zigzag flange on the wheel A alternately, so that the revolution of the wheel causes a horizontal vibrating motion in the ends of the lever suitable for operating the cutter-bar of a reaper or mowing-machine.

When it is desired to stop the motion of the lever E, it is only necessary to throw the pawl out of the ratchet, when the wheel A will cease to revolve.

When a back movement occurs the pawl will slip over the teeth of the ratchet without revolving the wheel.

It will be seen that by this arrangement the lever E is placed directly across the diameter of the actuating-wheel A, and receives motion from each of its sides, thus equalizing the strain, and producing the desired motion by a single zigzag.

This arrangement occasions much less friction, and requires much less power than it does to produce the motion by gear-wheels in the ordinary manner, or by a double zigzag, as sometimes used for this purpose.

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

The wheel A, constructed, as described, with the ratchet C and corrugated flange upon opposite sides, in combination with the driving-wheel B, pawl D, and sleeve F, carrying the lever E, all arranged as described, for the purpose specified.

GEORGE S. ELLARD.

Witnesses:

WM. H. CHAPMAN,
WILLIAM P. COY.