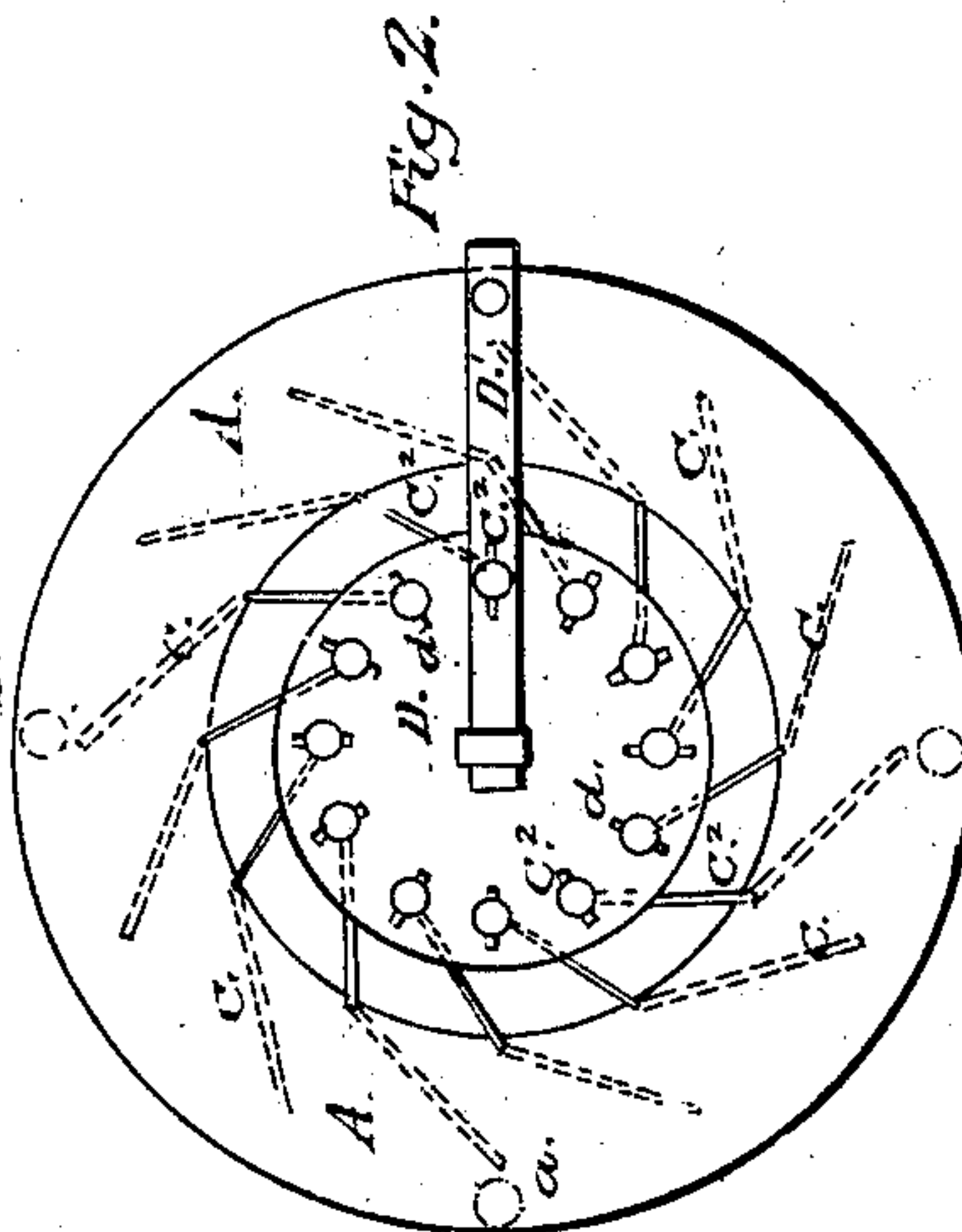
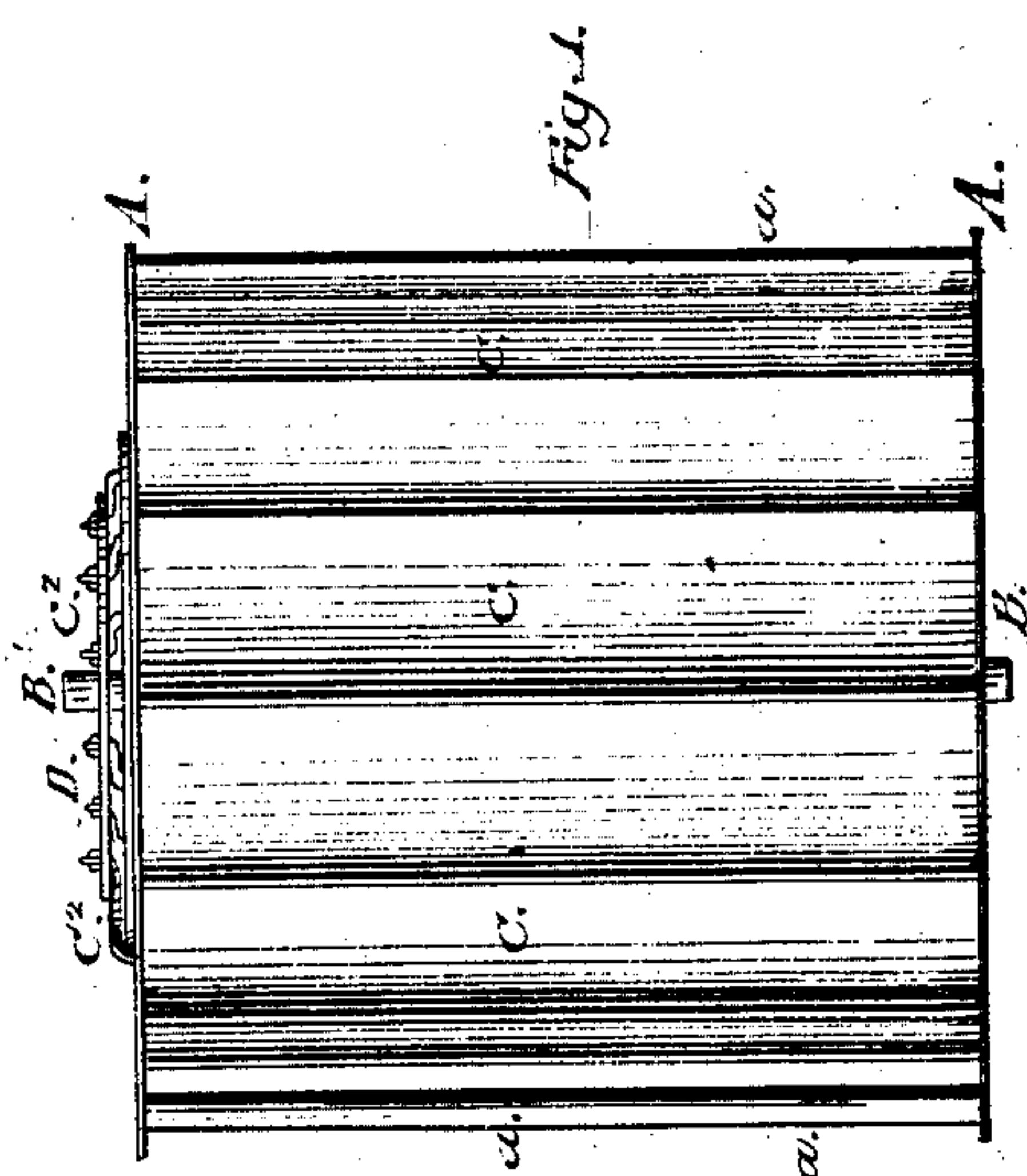
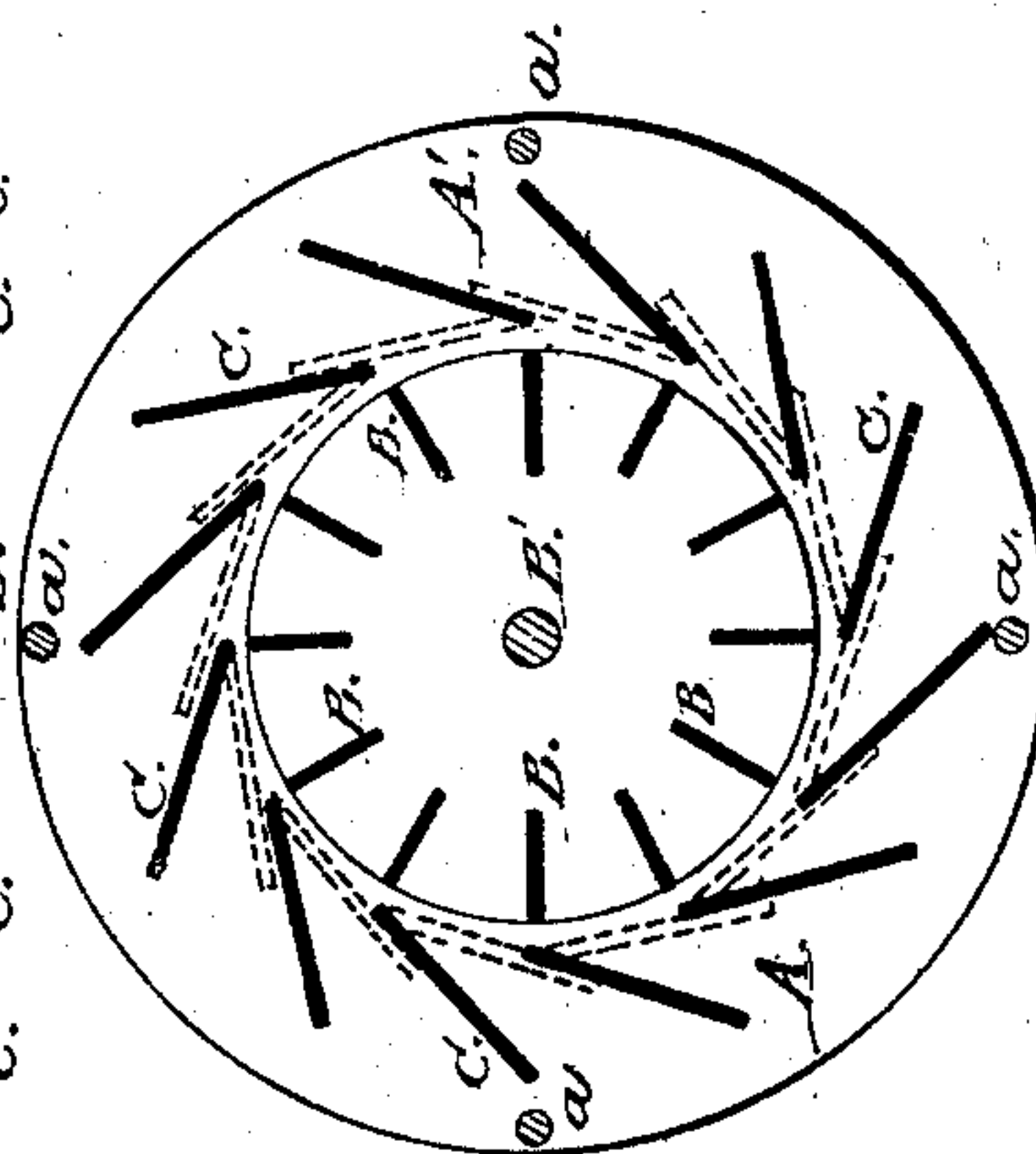
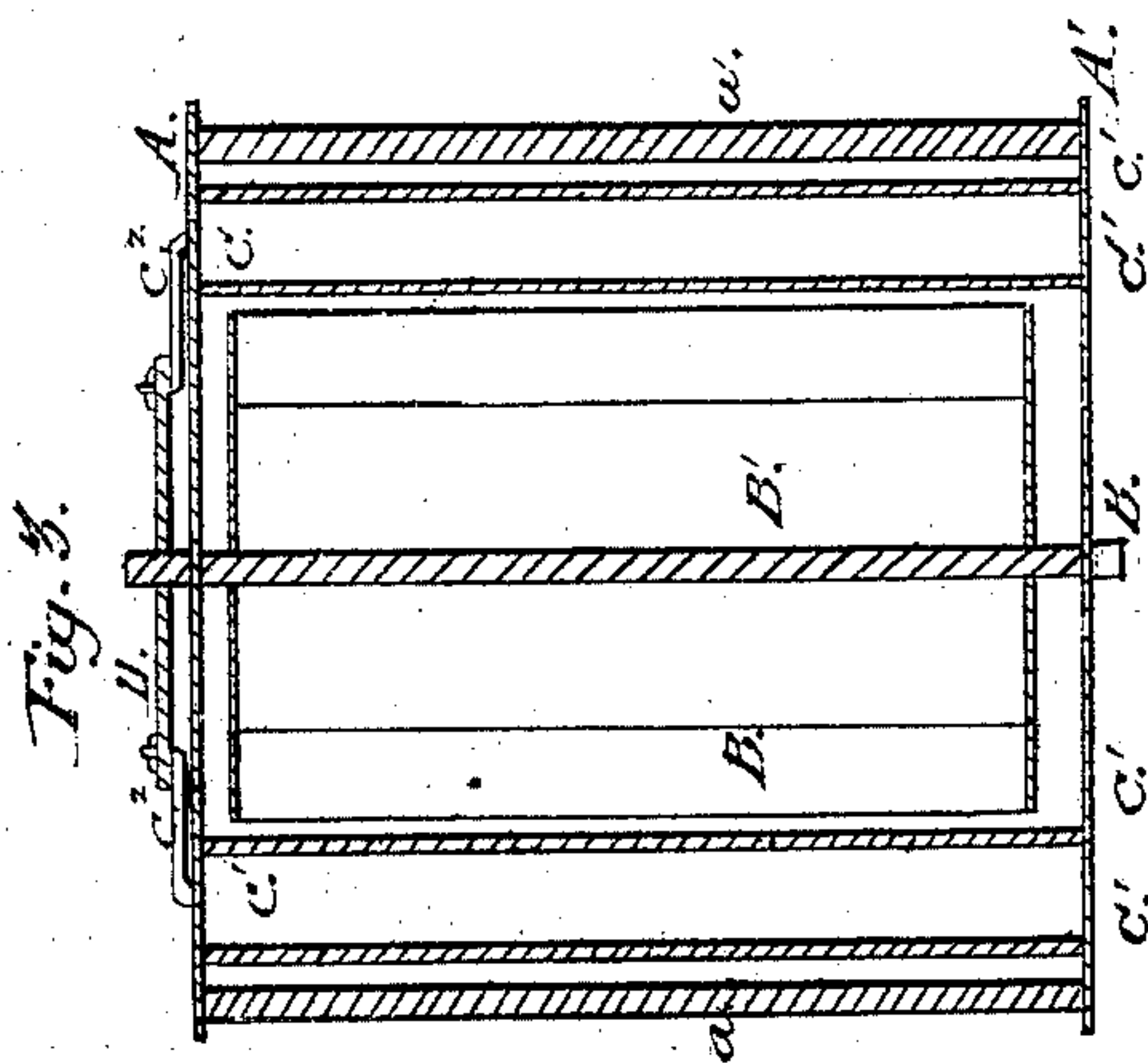


A. I. Maxwell.

Wind Wheel.

N^o 94,624.

Patented Sep. 7, 1869.



WITNESSES:

Jos. R. Edwin
A. Ruffert

INVENTOR:

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Per
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Attorneys

United States Patent Office.

AMBROSE I. MAXWELL, OF MORRISON, ILLINOIS.

Letters Patent No. 94,624, dated September 7, 1869.

IMPROVEMENT IN WIND-WHEELS.

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, AMBROSE I. MAXWELL, of Morrison, in the county of Whitesides, and State of Illinois, have invented a new and useful Improvement in Windmills; and I 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.

Figure 1 represents an elevation of the windmill;

Figure 2, a plan view of the same, showing the arrangement by which all the doors of the box, which encloses the wind-wheel, may be opened or closed simultaneously;

Figure 3 represents a vertical section; and

Figure 4, a lateral section, the red lines indicating the position of the doors when the wind-wheel is at rest.

Like letters denote like parts in the several figures of the drawings.

My invention relates to that class of windmills in which the wind-wheel is enclosed in a box, consisting of pivoted doors, which are opened more or less, to regulate the amount of wind admitted to act on the wings of the wheel.

My invention consists in the arrangement by which these doors are opened and closed, as more fully described hereinafter.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A and A' represent the upper and lower plates of the box. They are connected by standards *a a*.

B represents the wind-wheel, which is pivoted in the centre of the box by its shaft B', to which it is secured. This shaft extends through the plates of the box, and its ends are connected by the necessary gearing to the machinery which the mill is intended to drive.

C C represent the doors, which are placed around the wind-wheel. Their inner edges are provided with journals *c c* and *c' c'*, which are pivoted in the upper and lower plates respectively.

The upper journals extend through the upper plate, and are then bent to form cranks, *c² c²*, which point

inwardly, and are all of the same length. The wrists of the several cranks work in the radial slots of the round disk D. The positions of the cranks relatively to each other and to the disk are such, that all the doors are swung simultaneously and equally by turning the disk, and thus the wind is directed upon the buckets of the wind-wheel.

D represents a round disk, which is placed on the shaft of the wind-wheel, a little distance above the upper plate A.

It is provided with radial slots, *d d*, near its periphery, equidistant from each other. Each slot receives the wrist of a crank.

Fastened to the disk is the handle or lever D', by means of which the disk may be turned on the shaft, for the purpose of opening the doors more or less, and thereby to regulate the speed of the mill, or to close the doors entirely, shutting out the wind, and stopping the mill.

I am aware that water-wheels have been constructed with swinging chutes or guides, for directing the water upon the buckets of the wheel, but such chutes or gates have been pivoted at or near the centre. I do not, therefore, claim, broadly, combining swinging chutes or gates with a revolving wheel, whether propelled by water or wind; but

Having thus described my invention,

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

The disk D, provided with radial slots *d d*, lever D', cranks *c² c²*, and doors or chutes C C, in combination with the wind-wheel B, when the doors or chutes are pivoted at their inner edges, and when the parts are constructed and arranged substantially as and for the purpose set forth.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

AMBROSE I. MAXWELL.

Witnesses:

FRANK CLENDENIN,
GEO. H. FAY.