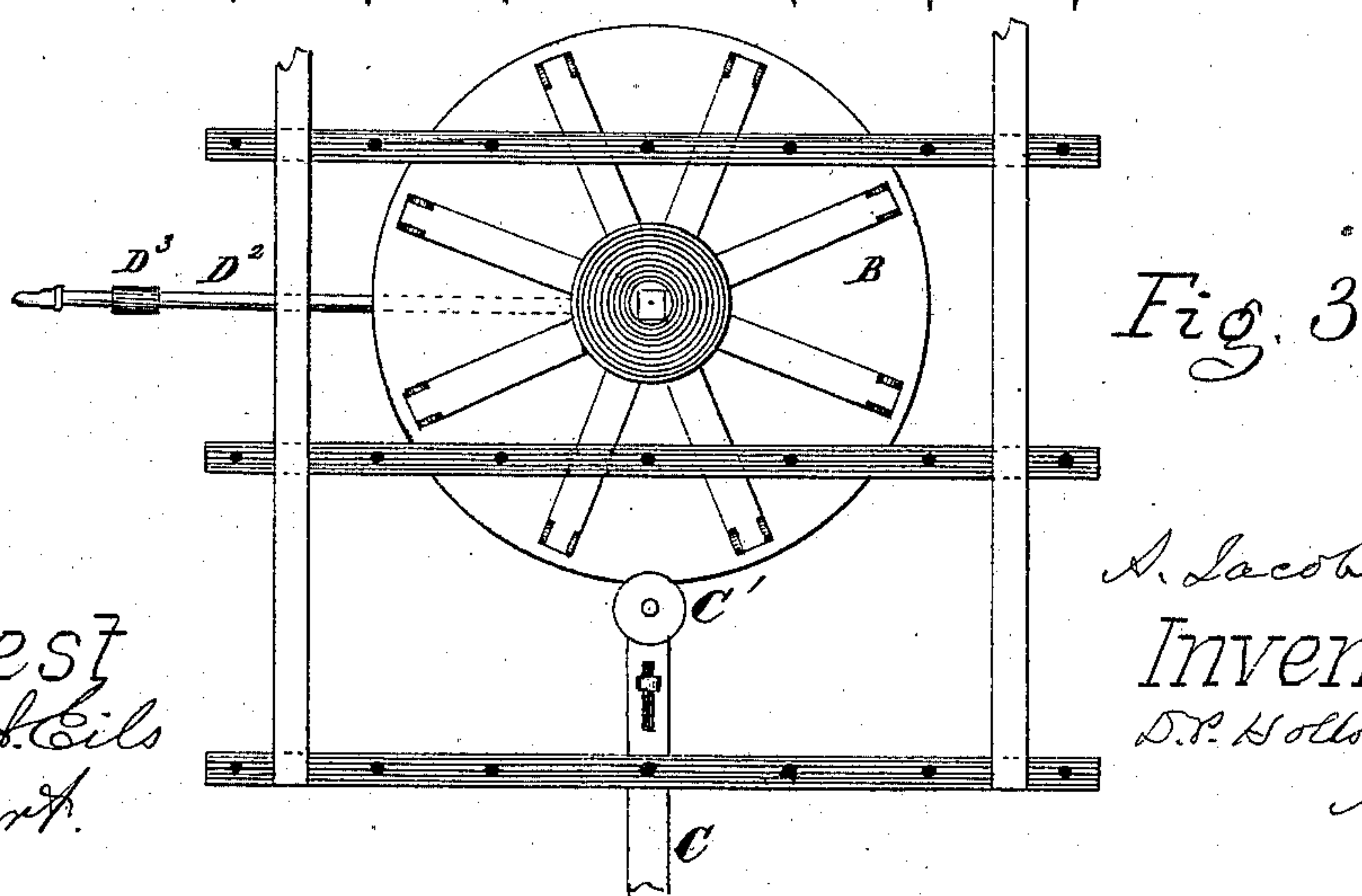
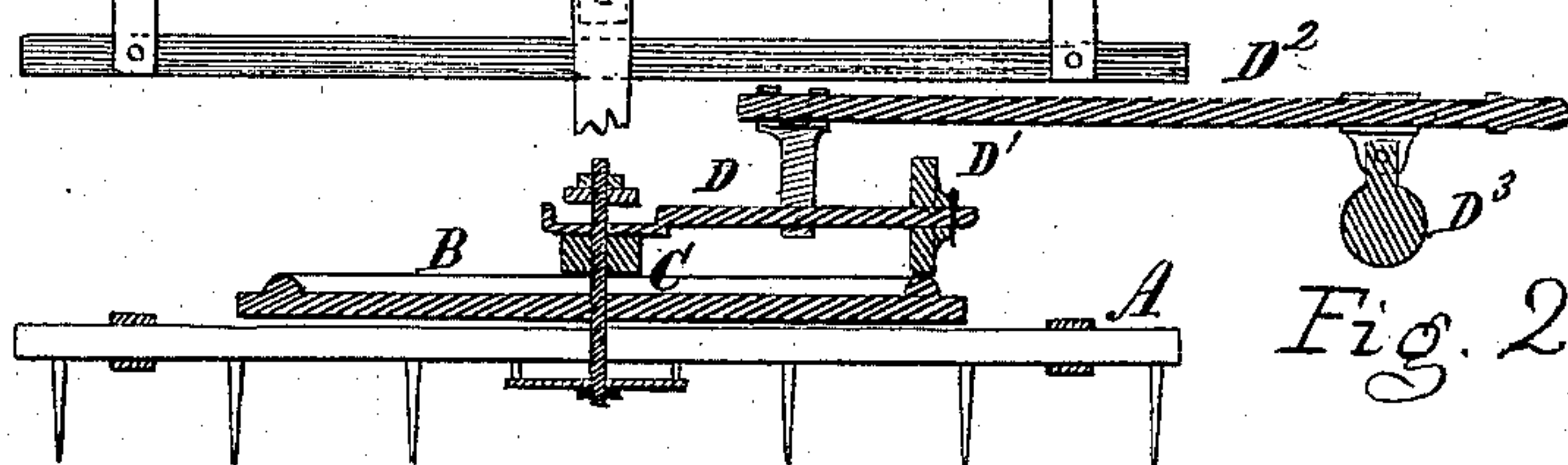
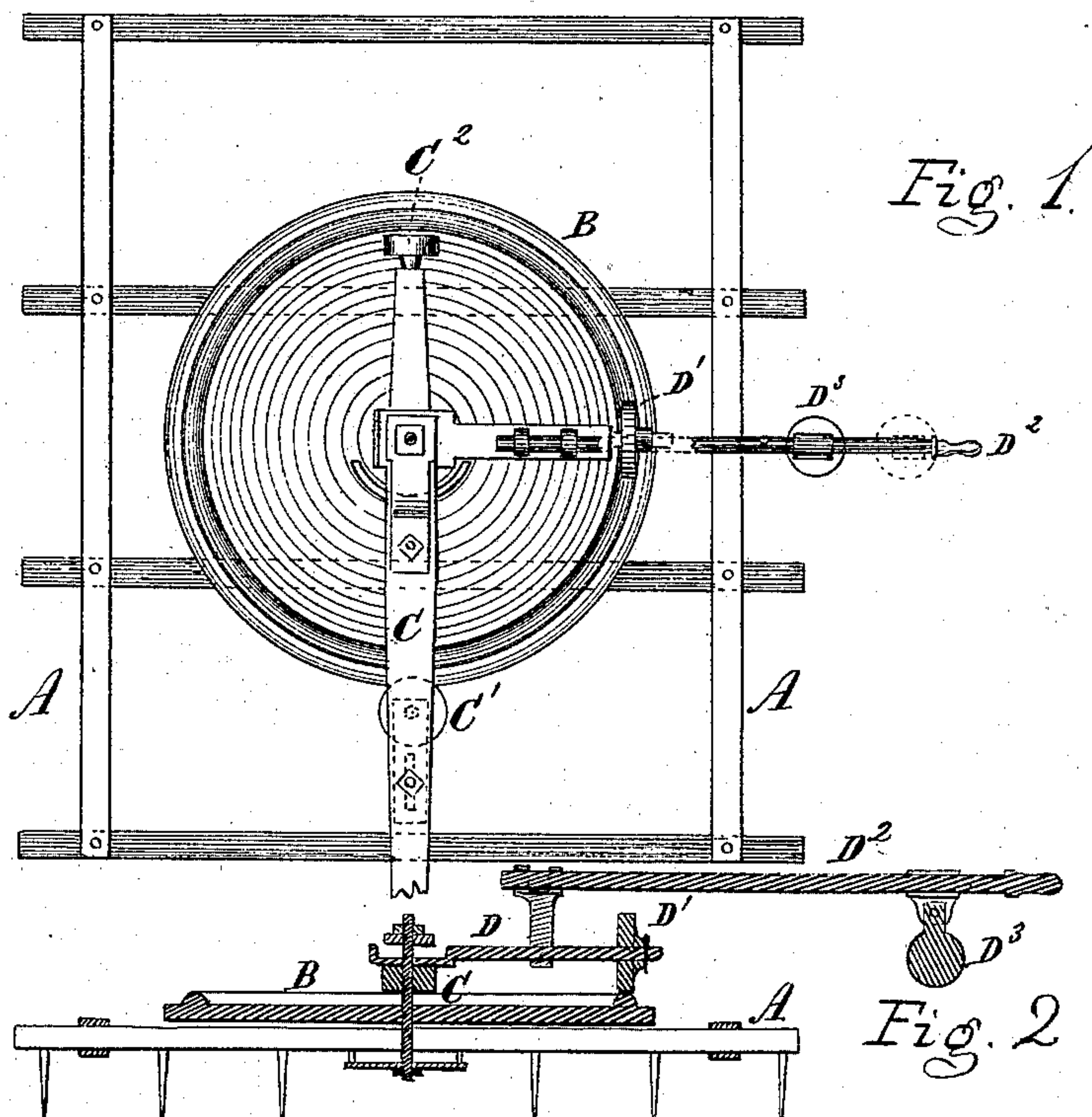


A. JACOBSON.

Improvement in Revolving Harrows.

No. 125,395.

Patented April 9, 1872.



Attest
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UNITED STATES PATENT OFFICE.

ANDREW JACOBSON, OF LOGAN, NEBRASKA.

IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. 125,395, dated April 9, 1872.

Specification describing certain Improvements in Rotating Harrows, invented by ANDREW JACOBSON, of Logan, in the county of Dodge and State of Nebraska.

This invention relates to that class of harrows which are caused to rotate as they are drawn over the field; and it consists in the construction, combination, and arrangement of some of its parts, as will be more fully explained hereinafter.

Figure 1 is a plan view of my improved harrow, showing the frame, the center-plate, the draw-bar, the counter-weight, and the arm upon which it is adjusted. Fig. 2 is a central vertical section, showing the arrangement of the parts. Fig. 3 is a bottom view, showing a portion of a square frame with the center-plate attached to it, and showing also the construction of the plate that is to be followed when it is desirable to construct a circular frame.

Corresponding letters refer to corresponding parts in all the figures.

In constructing implements of this character any suitable style of frame may be used, which may be of the square form shown in the drawing, or it may be circular in form; in either case it is to be provided with the requisite number of teeth to properly pulverize the earth, and to give the rotating motion to the frame. Upon the upper surface of the frame, when a square one is used, there is placed a plate of metal, which has upon its upper surface a raised track for the wheel D' to run upon. The under surface of this plate, at its center, is provided with studs or pins, which project downward a distance equal to the thickness of the timbers composing the frame, they having upon their lower ends a plate of metal, which, together with the pins and the upper plate, form sockets for the inner ends of the arms which compose the frame when a circular one is used; the outer ends of such arms being held between downwardly-projecting flanges upon the center-plate B, to which they are secured by bolts. The draw-bar C is pivoted to the center-plate, at the center thereof, by means of a stud which passes down through it, and is held by means of a nut upon its lower end. This bar is provided at its outer end with a clevis to which to attach the drag-chain, and, at its opposite end, with a roller,

which runs upon the upper surface of the center-plate B. Between its pivotal point and its outer or forward end there is placed another roller, which turns in an adjustable frame, it being so arranged as to bear against the periphery of the center-plate, and thus form a support for the draw-bar at that point. Near the pivotal point of this bar there is attached a yoke, one end of which forms a bearing for the upper end of the stud, upon which the lever turns, and it is also provided with segmental projections upon its sides, which engage with shoulders upon the arm which carries the adjustable weight, soon to be described, when it is turned from one side of the harrow to the other. To provide for carrying the adjustable weight an arm, D, is pivoted to the stud which passes through the center-plate, the upper surface of which, at its inner end, is provided with projections which extend upward far enough to engage the yoke upon the draw-bar C, and thus hold it in position upon either side of the harrow. This arm extends outward from its point of connection with the draw-bar far enough to receive upon its outer end a roller, D' , which has a groove in its periphery to enable it to run upon the raised track upon the upper surface of the center-plate. Just inside of the roller D' there is fastened to the arm D a stud, which rises vertically and has its upper end provided with a socket for the reception of the lever D^2 , as shown in Fig. 2. Upon the lever D^2 there is placed an adjustable weight, D^3 , it being so arranged upon said lever that it may be slid inward or outward at pleasure, and thus cause a greater or less amount of weight to be thrown upon the side of the harrow toward which the lever points, the object being to insure the constant rotation of the frame of the harrow while in use, by causing the teeth upon one of its sides to penetrate the earth to a greater depth than those upon its opposite side, and thus cause them to offer a greater resistance to the onward movement of the harrow.

One great advantage due to the adjustable weight consists in the fact that it may be turned from one side to the other, which enables the operator to use it upon hill sides, and still have it move in a straight line, which can always be done by placing the weight

upon the lower or descending side of the harrow.

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

1. The center-plate B, when constructed with projections upon its under surface for the reception of the arms of a harrow, and a raised track upon its upper surface for the roller which supports the weighted lever to run upon, in combination with draft-bar C and

rollers C¹ C², and D¹, 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.

ANDREW JACOBSON.

Witnesses:

W. C. MUTTON,
WILLIAM CORSON.