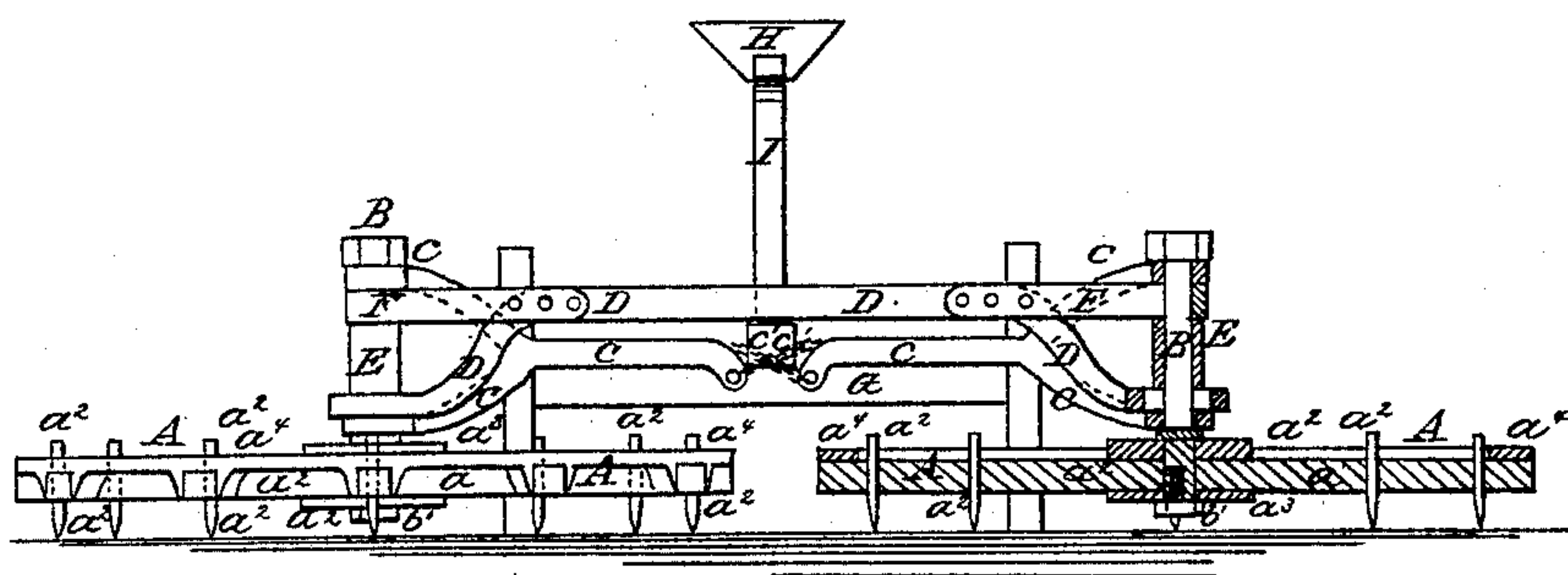
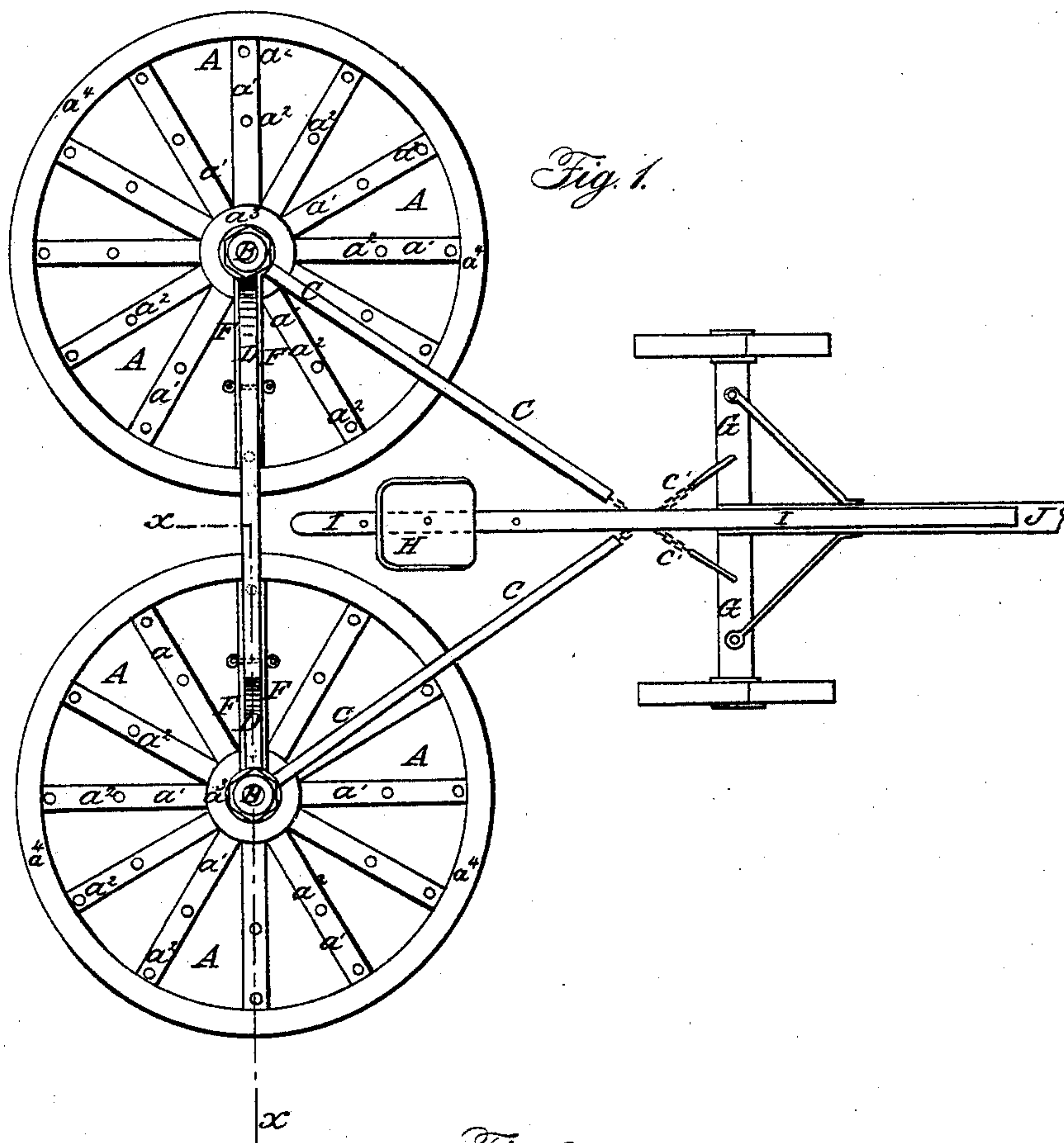


P. B. B. STILES.
Revolving Harrow.

No. 67,372.

Patented July 30, 1867.



Witnesses:

Theo. Tische
Wm. Truwin

Inventor:

P. B. B. Stiles
Per Munn & Co.
Atty

United States Patent Office.

PETER B. B. STILES, OF GALESBURG, ILLINOIS.

Letters Patent No. 67,372, dated July 30, 1867.

IMPROVEMENT IN ROTARY HARROW.

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, PETER B. B. STILES, of Galesburg, in the county of Knox, and State of Illinois, have invented a new and improved Rotary Harrow; 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 top or plan view of my improved harrow.

Figure 2 is a rear view of the same, partly in section, through the line $x x$, fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved rotating harrow, so constructed and arranged as to be more easily operated and more effective in operation than the harrows now in use; and it consists in the construction of the rotating horizontal wheels, and in the combination and arrangement of the parts by which the said wheels are connected and operated.

A are the rotating wheels, to the radial arms or spokes a^1 of which the teeth a^2 are attached, which may be set to project downward more or less, according to the character of the soil or the purpose for which it is being harrowed. The inner ends of the arms a^1 are secured in place by being clamped between two circular plates, a^3 , placed, the one above and the other below the said arms a^1 . B are the centre or pivoting pins, which pass through the centres of the plates a^3 , and between the ends of the arms a^1 , and are secured in place by a screw or nut, b' , clamping the inner ends of the bars a^1 and the plates a^3 , between the said screw or nut and a shoulder formed upon the said pins. a^4 is the rim of the wheel, which is formed with slotted projections upon its lower side, within which the outer ends of the arms or spokes a^1 are placed, and in which they are secured by bolts, or in some other convenient and substantial manner. C are the draught-bars, the rear ends of which are forked and have holes formed through them for the passage of the centre or pivoting pins B, as shown in fig. 2. D is the coupling-bar, by means of which the wheels A are connected to each other and held in their proper relative positions while being operated. The ends of the bar D are bent downward, so that its middle part may be out of the way of the wheels, and they are slotted to receive the centre pins B. The ends of the coupling-bar are placed upon the centre pins B just above the lower arm of the forked ends of the draught-bars C, where they are kept in place by the tubular washer E. F are loops or clevises which pass around the coupling-pins B, just below the upper arm of the forked end of the draught-bars C, and are adjustably secured to the shoulders of the coupling-bar D. By this manner of connecting the wheels A they are held in their proper relative positions while being operated, and at the same time the draught-bars, coupling-bar, and centre pins, so act and react upon each other that the outer sides of the wheels A are pressed hardest upon the ground. To the forward ends of the draught-bars C are attached short chains, c' , which cross each other and are attached to the axle G of the sulky. H is the driver's seat, which is adjustably attached to the spring-bar I, the lower end of which rests upon and is secured to the rear part of the tongue J. If desired, one of the draught-bars C may be made a little longer than the other, so that as the harrow is drawn forward one of the wheels A may be a little in advance of the other.

Claims.

I claim as new, and desire to secure by Letters Patent—

1. The rotating harrow-wheels A, formed by the combination of the rim a^4 , arms or spokes a^1 , clamping-plates a^3 , and centre-pins B with each other, substantially in the manner herein shown and described, and for the purpose set forth.

2. The combination of the adjustable loops or clevises F with the centre-pins B and coupling-bar D, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the draught-bars C and short chains c' with the centre-pins B and axle G of the sulky, substantially as herein shown and described, and for the purpose set forth.

PETER B. B. STILES.

Witnesses:

R. B. CARSON,
ZIMRI POND.