

(Model.)

P. OFFENBACKER.

ROTARY HARROW.

No. 270,245.

Patented Jan. 9, 1883.

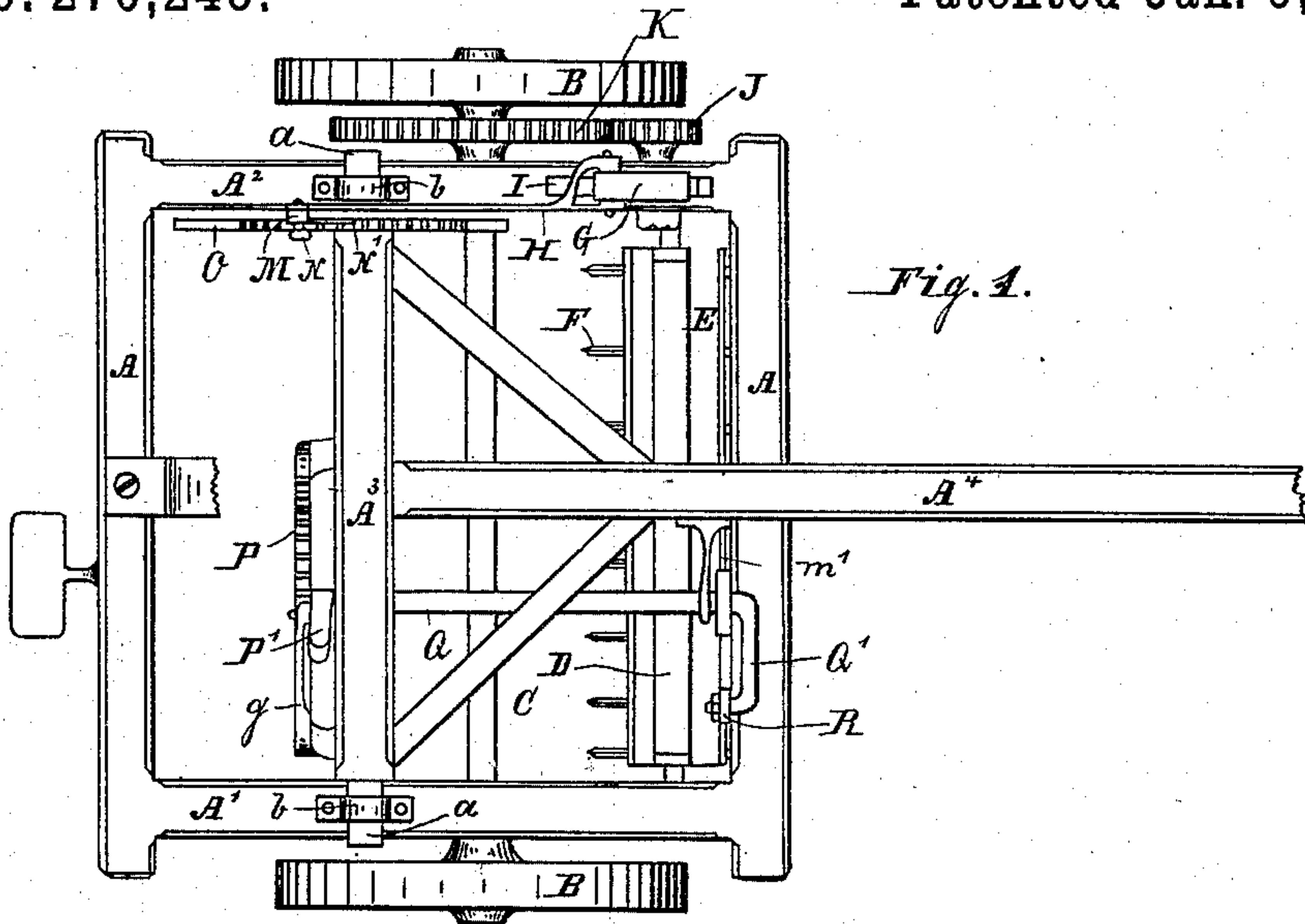


Fig. 1.

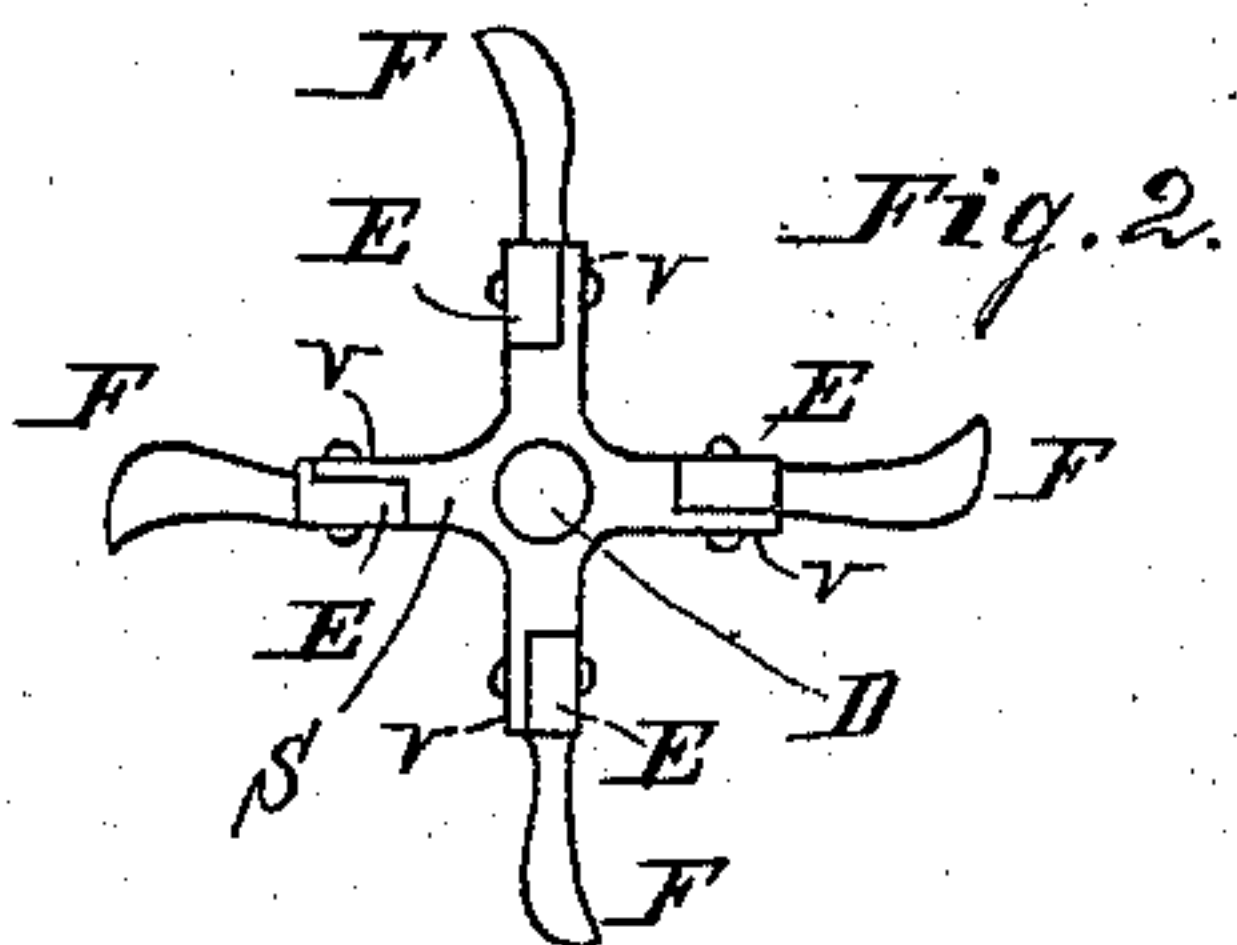


Fig. 2.

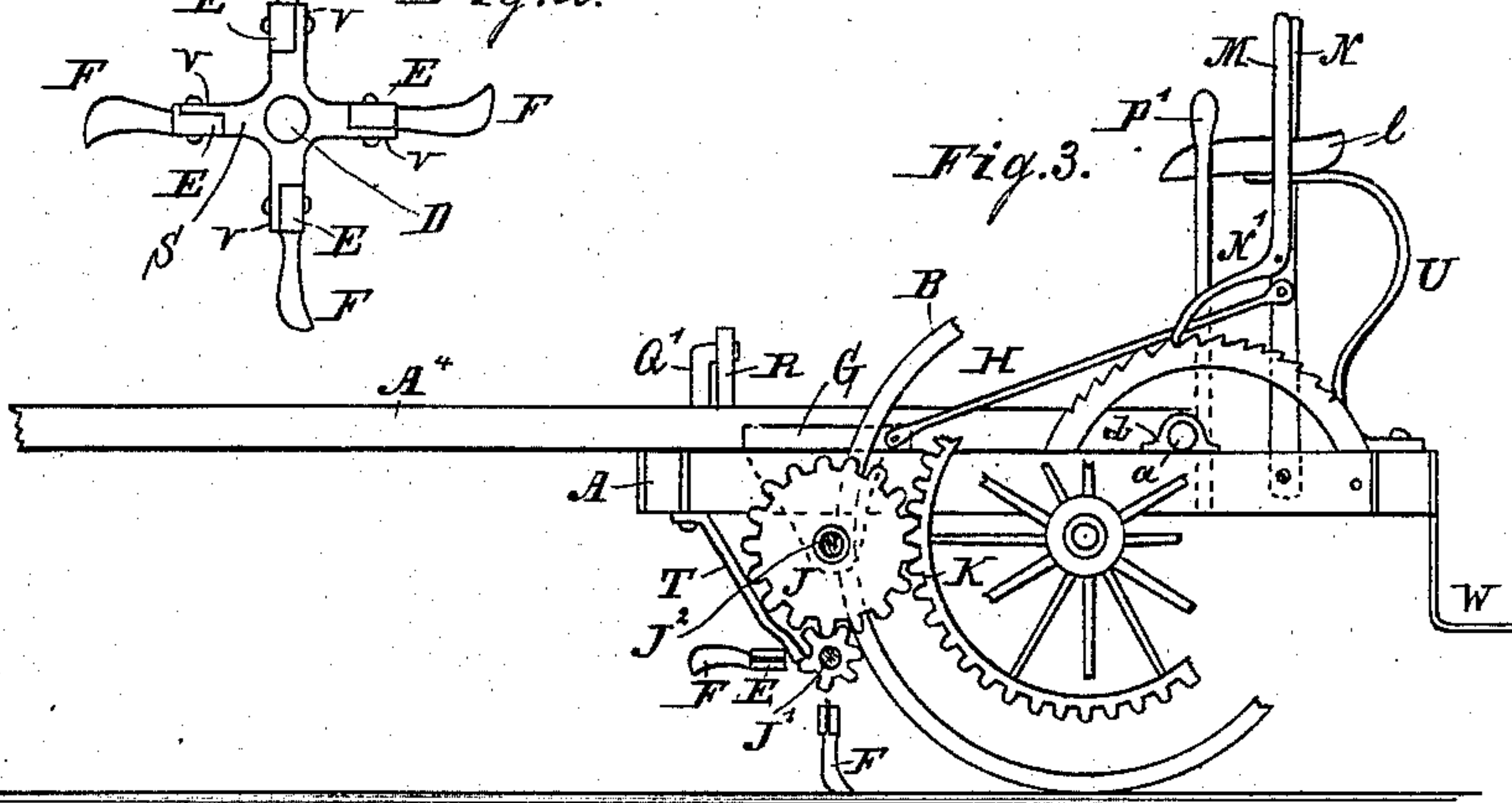


Fig. 3.

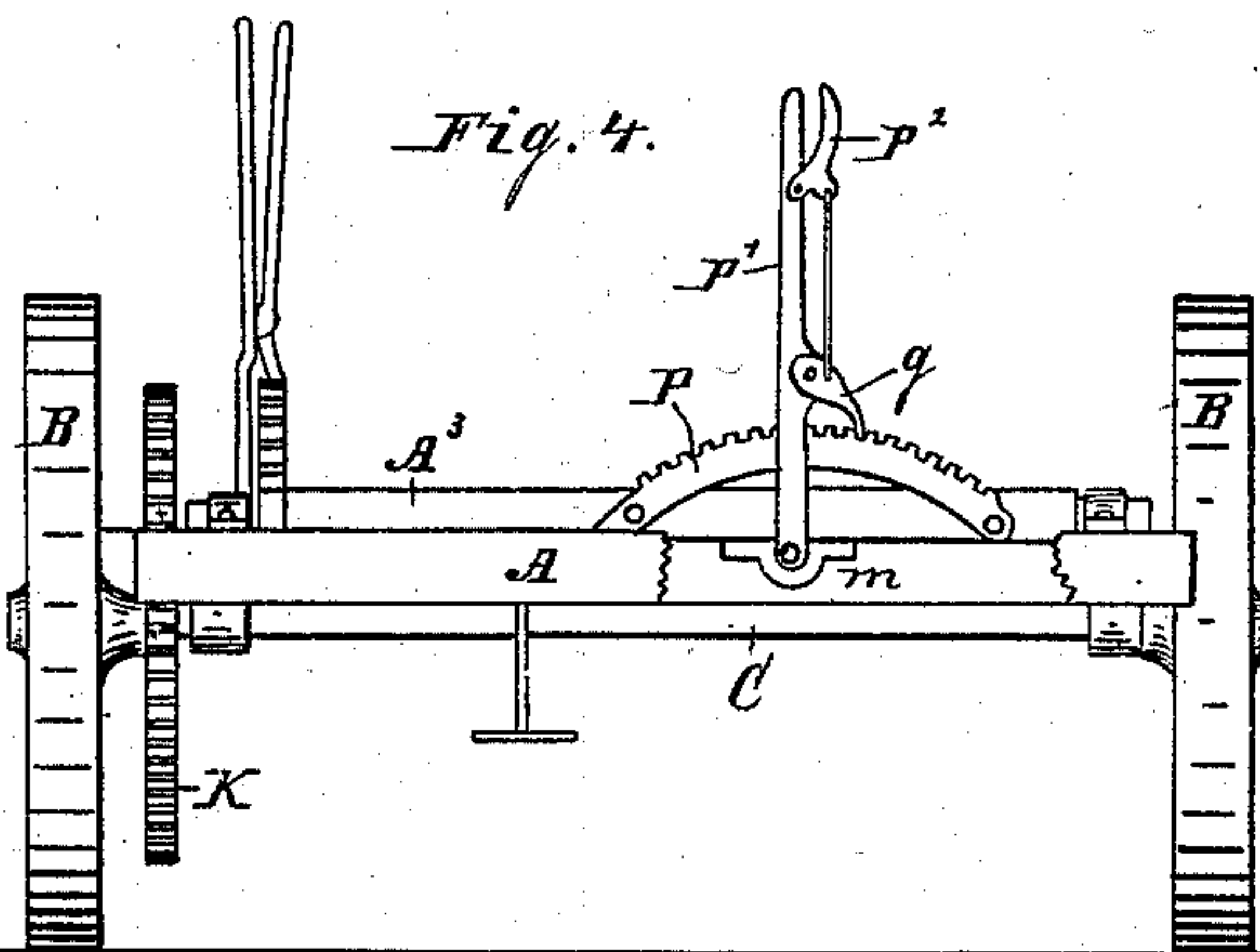


Fig. 4.

WITNESSES:
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UNITED STATES PATENT OFFICE.

PERRY OFFENBACKER, OF BUCK CREEK TOWNSHIP, HANCOCK COUNTY,
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ROTARY HARROW.

SPECIFICATION forming part of Letters Patent No. 270,245, dated January 9, 1883.

Application filed May 13, 1881. (Model.)

To all whom it may concern:

Be it known that I, PERRY OFFENBACKER, a citizen of the United States, residing at Buck Creek Township, in the county of Hancock and State of Indiana, have invented a new and useful Improvement in Adjustable Rotary Harrows, of which the following is a specification.

My invention relates to improvements in rotary harrows in which the revolving harrow is hung to an adjustable frame and operated to be thrown into or out of gear with a spur-wheel on the main driving-shaft; and the invention consists in the construction, arrangement, and combination of parts, as hereinafter more fully described, and specifically pointed out in the claim.

The invention is illustrated in the annexed drawings, in which Figure 1 represents a top or plan view of the entire device. Fig. 2 is an end view of the revolving harrow. Fig. 3 is a side elevation of the machine, and Fig. 4 a rear elevation of the same.

Similar letters refer to like parts throughout the several views.

A A represent the front and rear portions of the frame; A' and A², the sides of the same. A⁴ represents the tongue, secured to the rocker A³, said rocker A³ having its ends provided with journals *a a*, which operate in boxes *b b*, secured to the side frames, A' A².

To the front frame-timber, A, is pivoted a link, R, its upper end being connected with the crank Q' of the rod Q, which runs longitudinally of the machine, and is supported in suitable boxes—that is, the box *m* on the rocker A³ and box *m'* on the tongue A⁴. The rear end of the shaft Q is provided with a lever, P', trip P², and pawl *g*, said pawl *g* operating in the notches formed in the segment P, as shown in Fig. 1, but more fully in Fig. 4. Thus when the lever P' is thrown to one side the crank Q' moves the link R and front end of the frame A A down, thus carrying the revolving harrows into contact with the ground, the depth of cut of the harrow being regulated by the amount of vertical adjustment given to the front end of the frame.

An end view of the revolving harrow is shown in Fig. 2, in which the main shaft D is

provided near each end with heads S, having arms *v v v v*, to which the harrow-bars E are securely bolted. On these harrow-bars E the harrow-teeth F are made fast in any ordinary manner. Said harrow-teeth have knife-edges for cutting into the earth as they revolve. The revolving harrow is mounted at one end in a hanger secured to the under side of the frame A', near the front end. The other end of the harrow is mounted in the bracket T. The sliding box G operates in a slot, I, formed in the front end of the side frame, A², said sliding box G being operated by the rod H and lever M, said rod H being pivoted to each, and the lever M is provided with a pawl, N', and the lever-handle N, in close proximity to the lever M, by means of which said pawl may be released from or brought into contact with the ratchet-teeth of the quadrant O and the sliding box G moved forward or backward in the slot I of the frame.

The end of the harrow-shaft D which projects beyond the bracket-hanger T is provided with a small pinion, J', as shown in Fig. 3, and the sliding box G is provided with a stud, J², on which the intermediate pinion, J, operates. This intermediate pinion works in gear at all times with the pinion J' below, but is thrown into or out of gear with the spur-wheel K by the levers M N and rod H, as before described. The spur-wheel K is secured to the revolving axle C, and the axle C is mounted in suitable boxes attached to the under sides of the side frame, A' A², and secured fast to the wheels B B.

In operation, the horses are attached to the tongue A⁴. The driver mounts the machine and sits on the seat *l*. The lever P' is moved close up to the seat, thus causing the front end of the frame and the harrow to be raised off of the ground. The harrow is then hauled on the ground to be harrowed. The levers M N are then operated to move the intermediate pinion, J, into gear with the spur-wheel K, thus causing the harrow to revolve. The lever P' is then moved away from the driver's seat, thus causing the front end of the frame A and the harrow to be lowered until the harrow penetrates the ground to the desired depth. The

harrow-blades F then cut and harrow the ground.

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

5 In a rotary harrow, the combination of a frame having slotted side piece, A², revolving axle C, provided with spur-wheel K, harrow-shaft D, having pinion J', the slide-box G, adapted to move in the slotted frame and pro-
10 vided with a stud, J², carrying pinion J, the

quadrant O, levers M N, rod H, and pawl N', substantially as and for the purpose described.

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

PERRY OFFENBACKER.

Witnesses:

G. H. RENNETT,

E. O. FRINK.