(No Model.) 3 Sheets—Sheet 1.

S. A. D. THOMAS.

WHEEL CULTIVATOR.

No. 355,899. Patented Jan. 11, 1887.

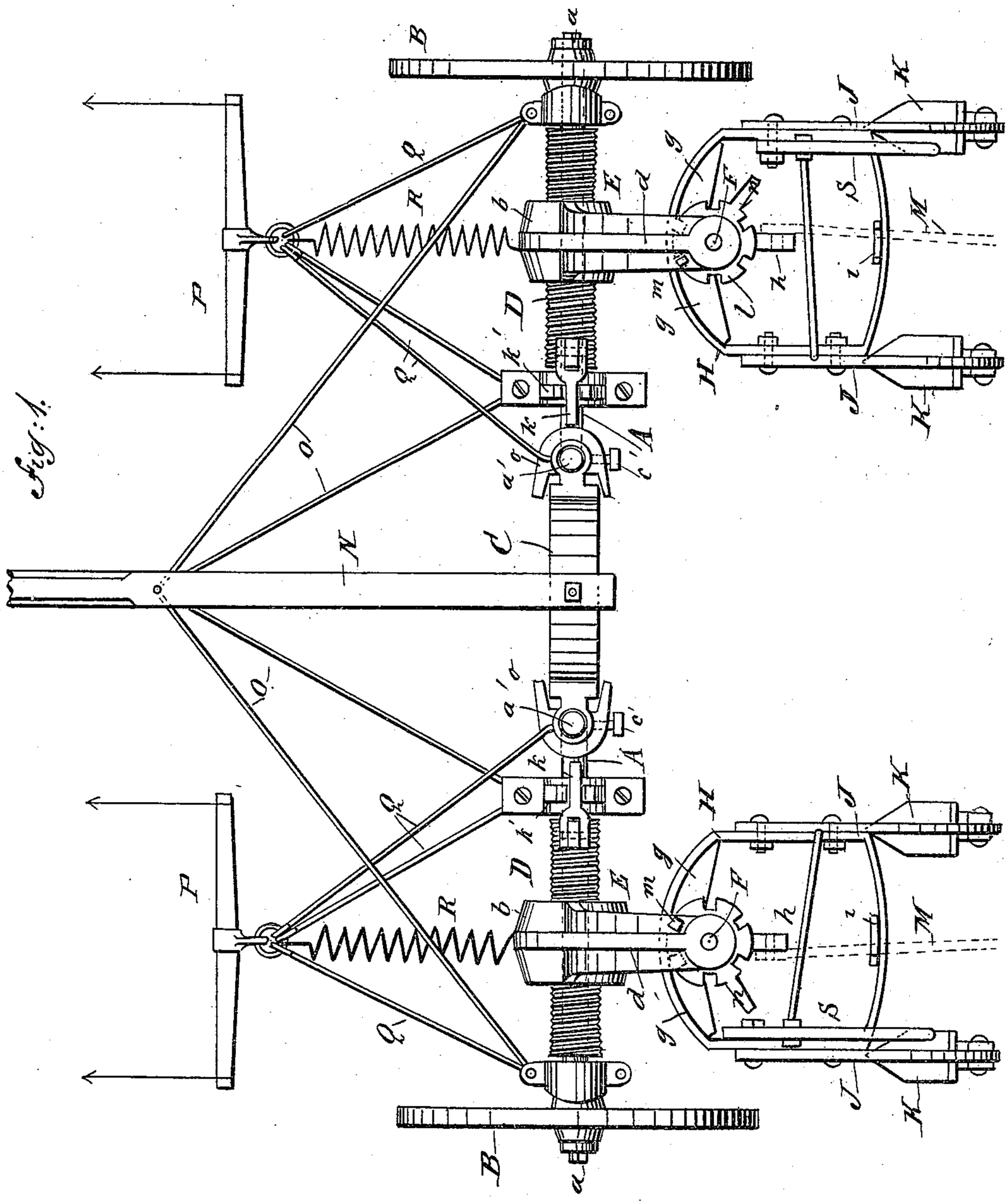

Fig. 1.

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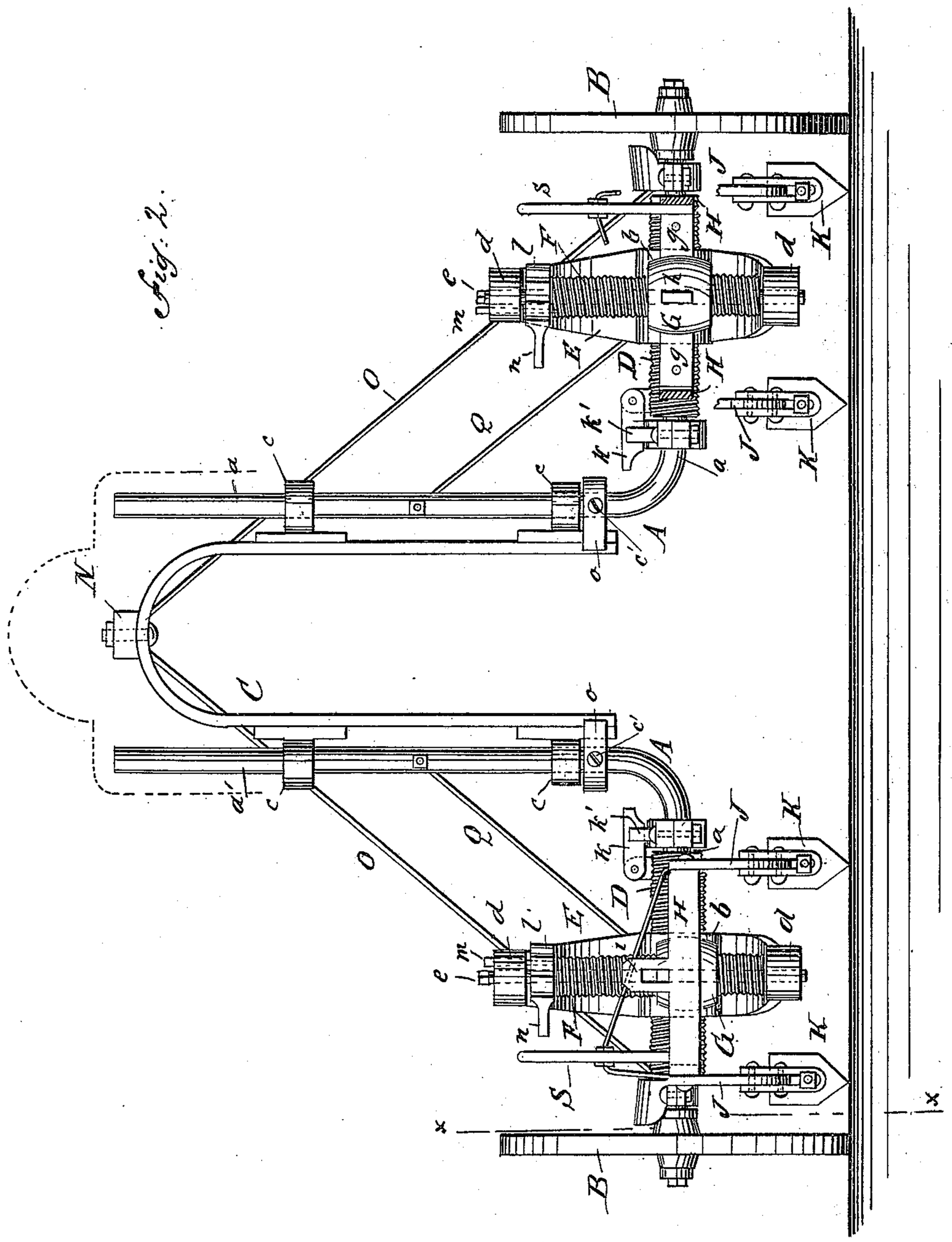
Fig. 2.



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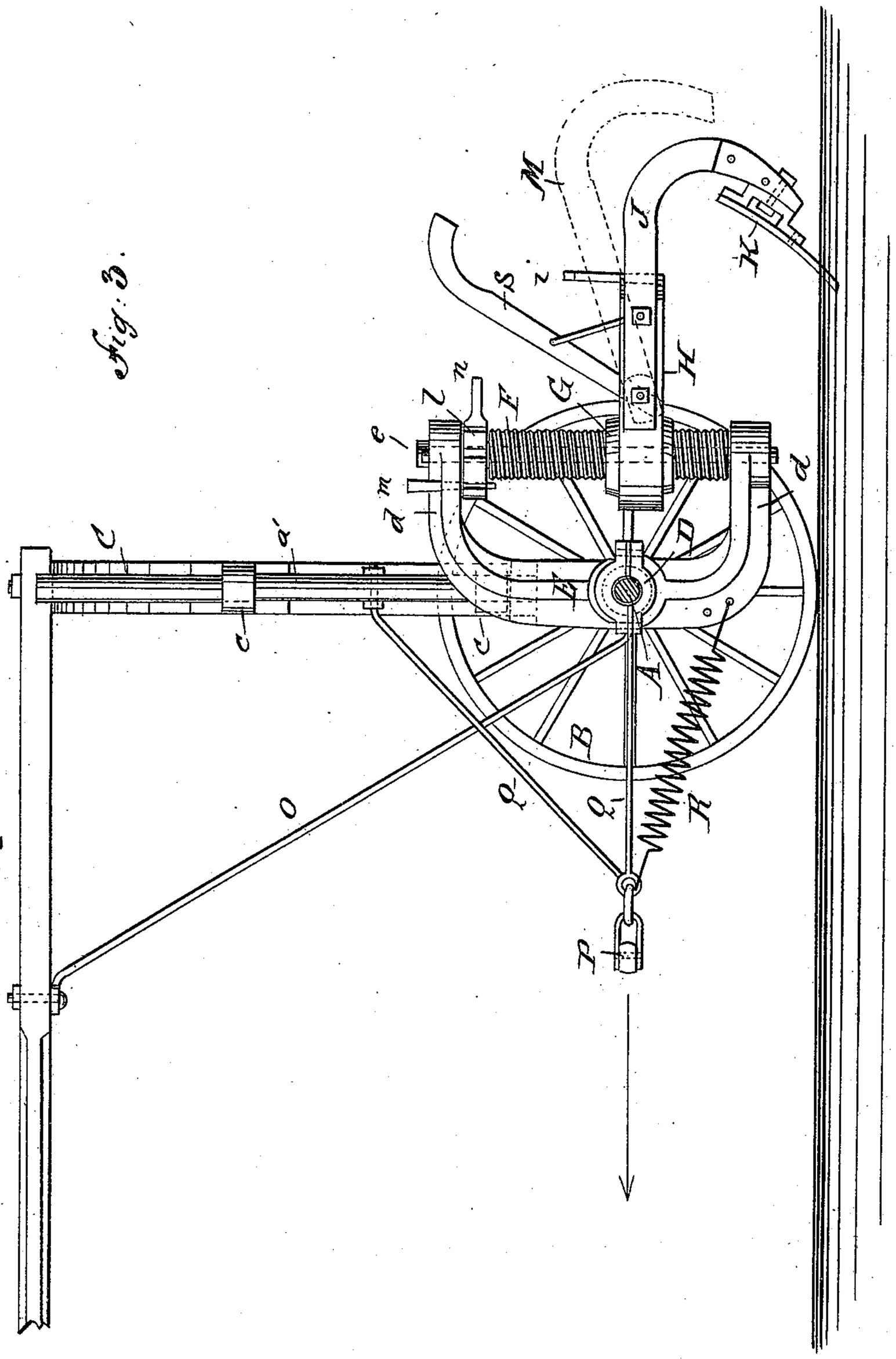
WHEEL CULTIVATOR.

No. 355,899. Patented Jan. 11, 1887.

Fig. 3.



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UNITED STATES PATENT OFFICE.

STEPHEN A. D. THOMAS, OF PERRYSVILLE, INDIANA.

WHEEL-CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 355,899, dated January 11, 1887.

Application filed September 8, 1886. Serial No. 212,993. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN A. D. THOMAS, of Perrysville, in the county of Vermillion and State of Indiana, have invented a new and Improved Wheel-Cultivator, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my new and improved wheel-cultivator. Fig. 2 is a rear elevation of the same, parts of the right-hand cultivator being broken away to show the construction; and Fig. 3 is a sectional side elevation taken on the line *x x* of Fig. 2.

The invention will first be described in connection with the drawings, and then pointed out in the claims.

A A represent two axles, each provided with a wheel, B, and each bent to form a horizontal portion, *a*, and a vertical portion, *a'*. The said axles are coupled together by the arched U-shaped coupling-bar C, connected to the upright portions *a'* of the axles by the collars *c c*.

Upon the horizontal portion of each axle A is placed a tube, D, screw-threaded upon its outer surface, and upon each of the tubes D is placed a yoke, E, the hollow hub *b* of which is internally screw-threaded to match the screw-threads of the tube, so that by turning the tube upon the axle the yoke E may be moved to the right or left, as desired, to properly position the cultivator-teeth with respect to the rows of corn. The yokes E are made bow-shaped, with upper and lower curved arms, *d d*, and in and between the members *d* of each yoke is journaled an externally-screw-threaded vertical rod, F, on which is placed a hollow hub, G, formed with internal screw-threads to match the screw-threads of the rod F, so that by turning these rods by a crank applied to the upper square end or by other means the said hubs G may be raised or lowered to change the pitch of the cultivator-teeth. The hubs G are each formed with side arms, *g g*, to which the frames H are secured, and to these frames are secured the curved beams J, which are provided at their lower ends with the cultivator-teeth K. The hubs G are each formed with a flange, *h*, to which a third cultivator-beam, M, (shown in dotted lines,) may be attached, if desired, and for holding this beam I form a shoulder, *i*, upon the rear part of each frame H, to which the beam may be connected, as with the plate *h*, by a bolt.

For turning the tubes D for laterally shifting the cultivators, I provide each tube with a hinged arm or lever, *k*, which is pivoted to the tube and adapted to be turned to one side into a notched keeper, *k'*, secured upon the axle for locking the tubes.

For locking the rods F, I secure a notched disk or plate, *l*, at their upper ends, into which notches a pin, *m*, is adapted to be inserted, the pin first passing through an orifice in the upper members of the yokes E, so that by simply lifting out these pins the rods F may be turned, and by inserting them said rods are locked and entirely prevented from turning of their own accord. In some cases, instead of using a crank applied at *e* for turning the rods F, I shall form the flanges *l* each with an arm, *n*, by which the rods may be conveniently turned.

In order to keep the arch C in proper position relative to the upright portions *a' a'* of the axles A, I secure to each axle by set-screws *c'* a clevis-like device, *o*, which embraces the arch C below the lugs *c*, as shown clearly in Fig. 1, and by loosening these set-screws the arch-bar may be raised or lowered, as desired, and to the bend of the arch I secure a tongue, N, by which the cultivator is held steady and guided, and the cultivator is braced at each side from the tongue by the rods O O, and is provided with the single-trees P P, attached by the rods Q Q to the axles A, and by the coiled springs R R to the yokes E E, as shown clearly in Fig. 3, so the jar of the cultivators will not be communicated to the horses.

The cultivators are guided by the user by the handles S. (Shown clearly in Figs. 2 and 3.)

Instead of making the arch-bar C to come between the vertical portions of the axles, it may be made to reach outside of the said vertical portions of the axle, as shown in dotted lines in Fig. 2.

I am aware that a plow-frame has been vertically and laterally adjusted by means of crank-screws, and I therefore do not broadly claim such adjustment.

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

1. In a wheel-cultivator, the combination, with a sectional axle, of an externally-screw-threaded sleeve upon each section, and a screw-threaded yoke on each sleeve and carrying the cultivator-frames, substantially as described, whereby provision is made for adjusting the cutivators independently of each other, as set forth.

2. In a wheel-cultivator, the combination, with an axle, and yokes adjustable thereon, of screw-threaded rods in the said yokes, and cultivator-frames provided with internally-screw-threaded hubs to receive the said rods, substantially as herein shown and described.

3. In a cultivator, the combination, with the externally-screw-threaded sleeve D, of the yoke E, having upper and lower curved arms, *d*, and a central hub having internally-screw-threaded hub *b*, substantially as herein shown and described.

4. In a cultivator, the combination, with the screw-threaded sleeve D, and the yoke E, having the screw-threaded hub *b*, of the screw-threaded rod F, journaled between the arms of the said yoke, and the cultivator-frame H, provided with the internally-screw-threaded hub G, substantially as herein shown and described.

5. The screw-threaded sleeve D, placed upon the horizontal portion of the axle and provided with the hinged arm *k*, in combination with keeper *k'*, into which the arm *k* may be turned for locking the screw-threaded tube, substantially as described.

6. The cultivator-frame H, provided with the hub G, having the flange *h* on its rear side, substantially as herein shown and described.

7. In a wheel-cultivator, the combination, with the axles A A, having the vertical portions *a' a'*, of the U-shaped coupling-bar C, adjustably secured to the said vertical portions of the axles, substantially as herein shown and described.

8. In a wheel-cultivator, the combination, with the axles A, having vertical partitions *a'*, of the U-shaped coupling-bar secured to said vertical portions, the tongue N, secured to the coupling-bar, and the yokes E, adjustable on the axles of the single-trees P, the braces Q, and the springs R, substantially as herein shown and described.

STEPHEN A. D. THOMAS.

Witnesses:

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JOSHUA JUMP.