

(No Model.)

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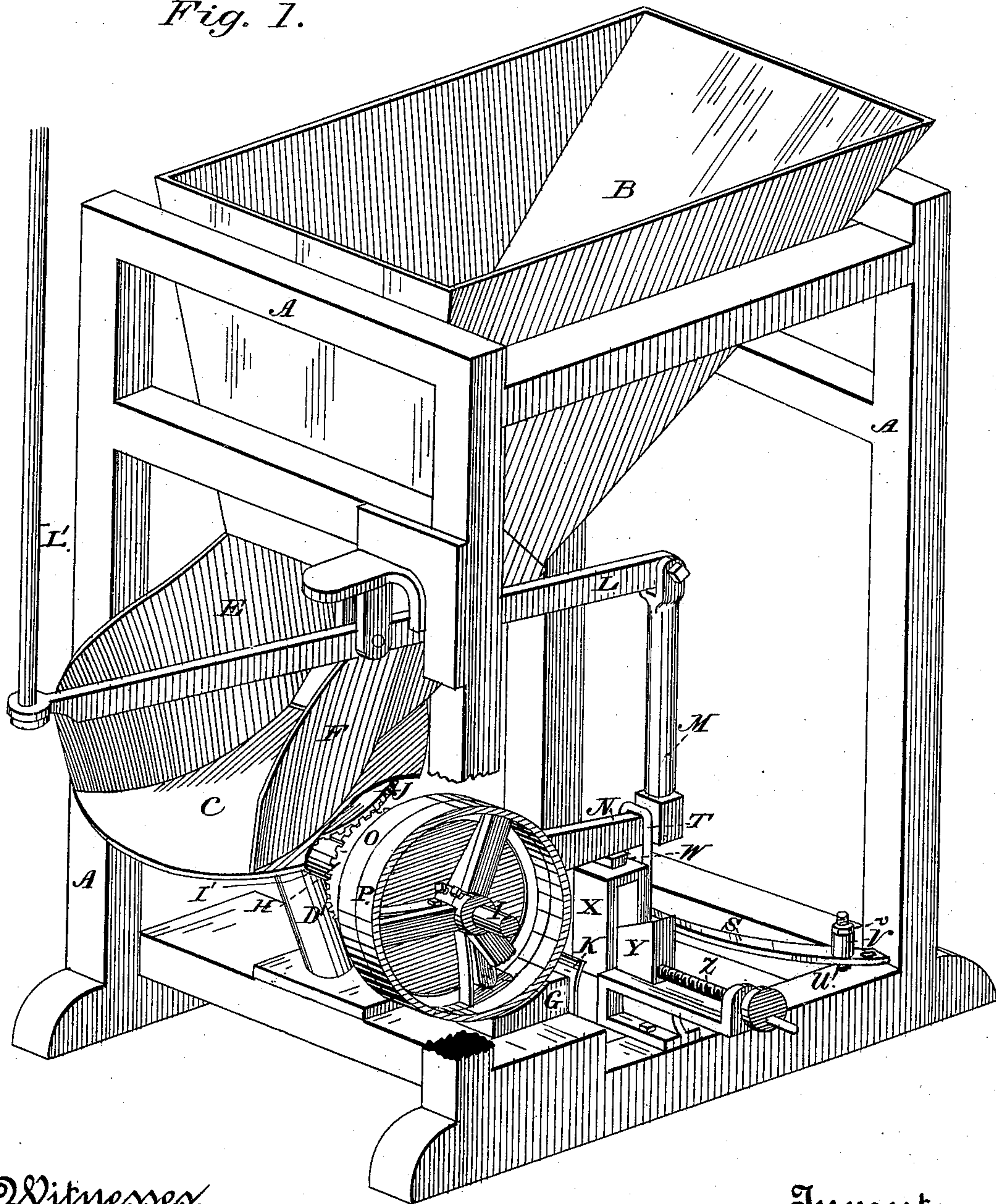
J. HENDY.

ORE FEEDER.

No. 322,716.

Patented July 21, 1885.

Fig. 1.



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(No Model.)

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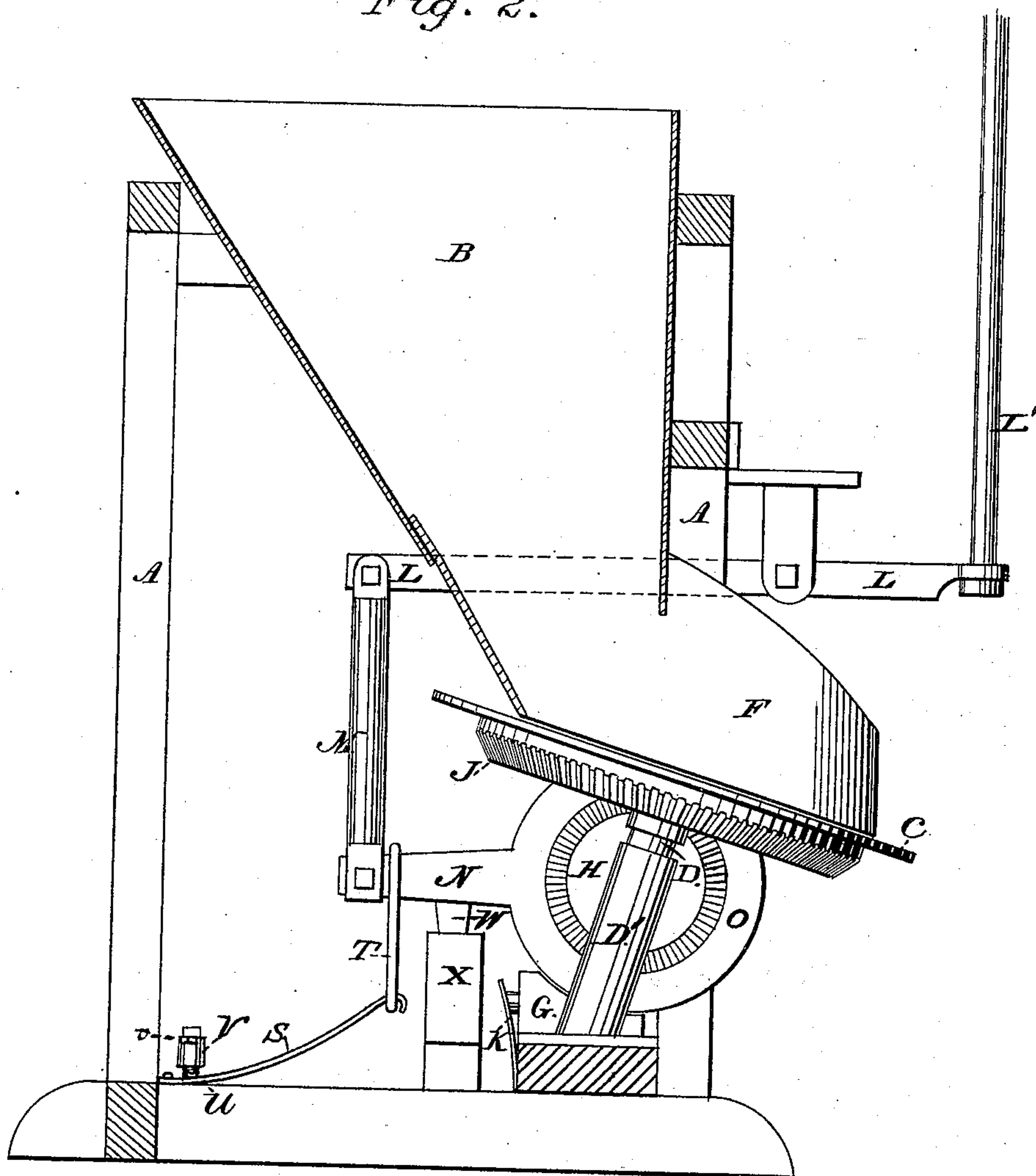
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Fig. 2.



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Fig. 3.

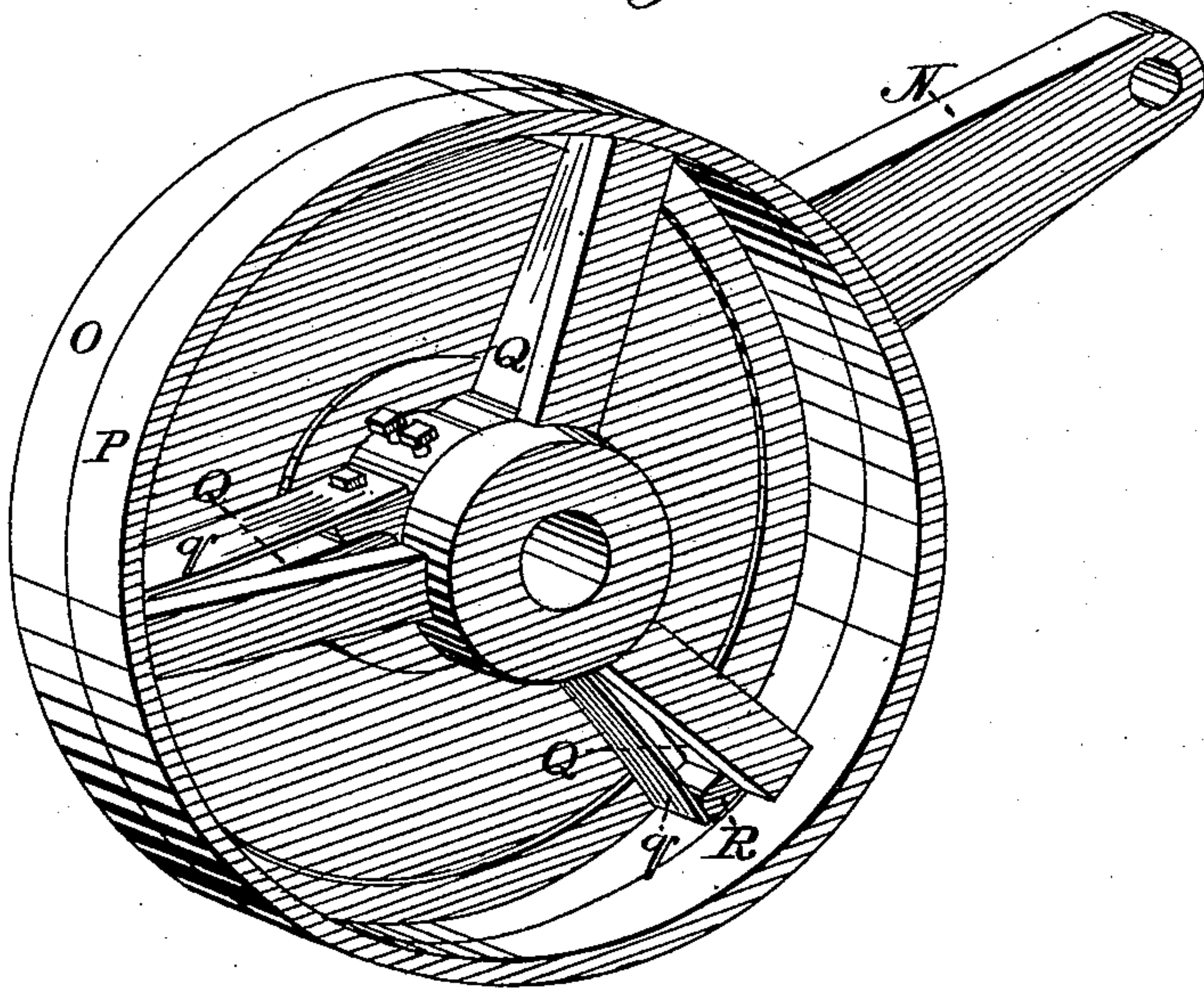


Fig. 4.

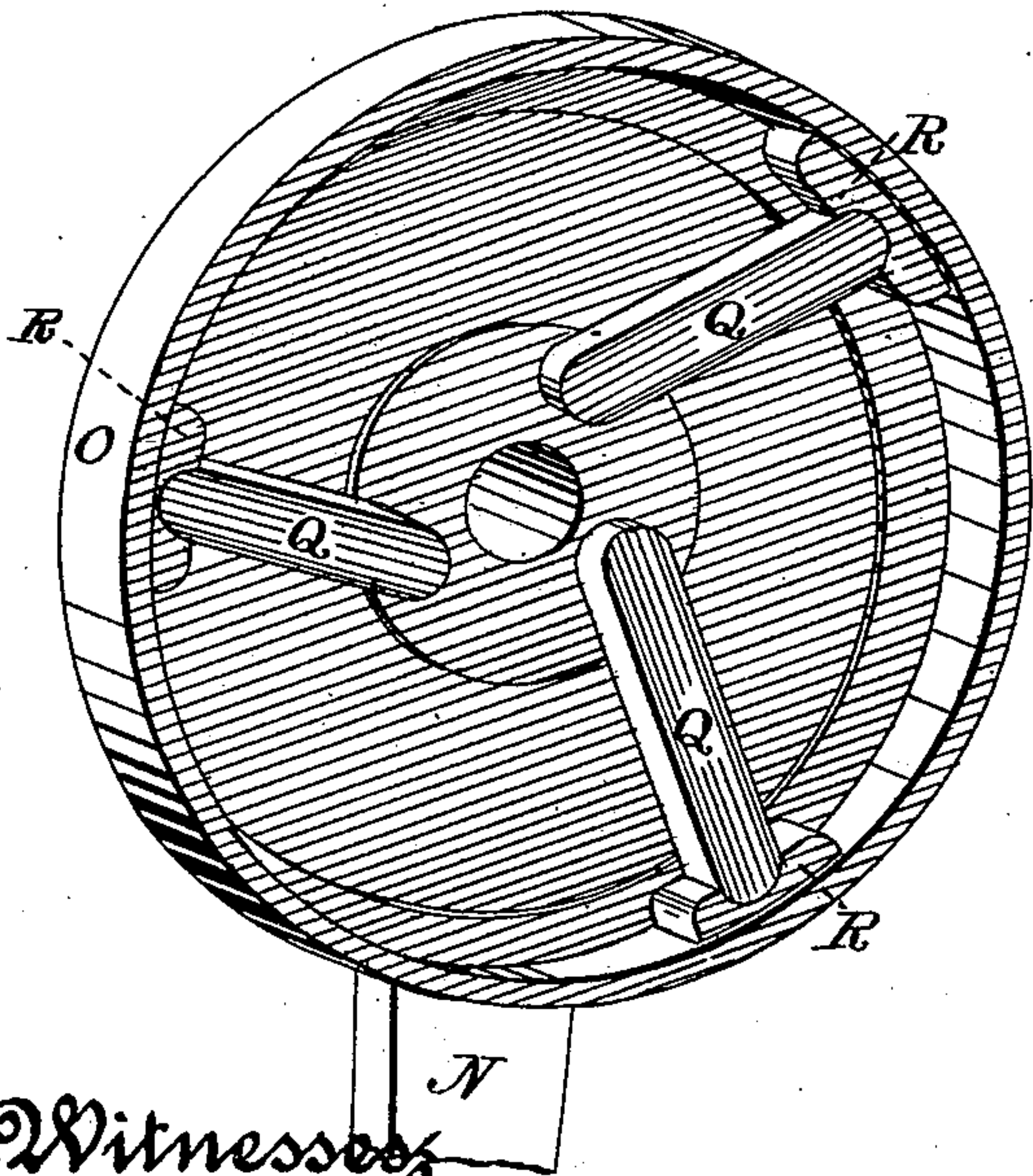
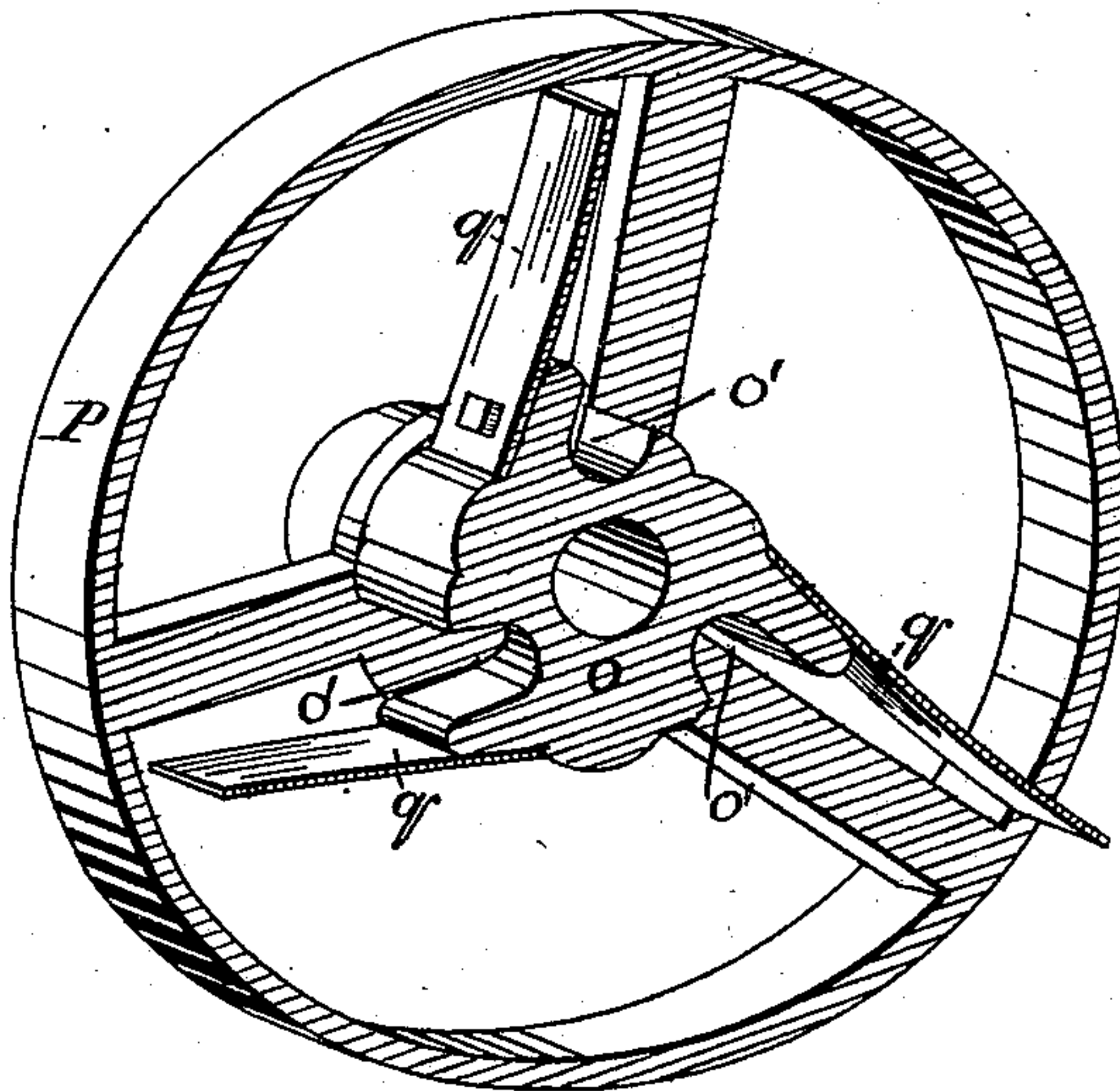


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOSHUA HENDY, OF SAN FRANCISCO, CALIFORNIA.

ORE-FEEDER.

SPECIFICATION forming part of Letters Patent No. 322,716, dated July 21, 1885.

Application filed January 22, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSHUA HENDY, of the city and county of San Francisco, State of California, have invented an Improved Ore-Feeder; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to certain improvements in ore-feeders; and it consists in the combination of devices hereinafter described and claimed.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of an ore-feeder with my improvements attached. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is an enlarged view of the wheels O and P. Fig. 4 is a detached view of the oscillating wheel O, and showing the clutch-arms Q. Fig. 5 is a detached view of the wheel P, showing the hub and springs.

In the drawings, A is the frame of the feeder supporting a hopper, B, into which the ore is received; and C is a circular disk or table having a central shaft, D, turning in a box, D', and standing at such an angle that the upper surface of the table will be inclined downward from the rear of the hopper toward the front or discharge edge.

E F are guides, between which the ore passes and by which it is directed to the proper point of discharge.

The table is rotated by a bevel-pinion, H, secured to a horizontal shaft, I, and engaging a bevel gear-wheel, J, formed with or fixed to the lower side of the inclined table, as is fully shown in a patent granted to Thomas Cochran March 17, 1874, No. 148,597. The shaft I has a bearing at one end in the frame of the machine, and at its opposite end in a sleeve, I', projecting from the box D'. Upon the outer end of the shaft I is fixed a clutch mechanism, by which the shaft is rotated and the table turned by the action of the dropping-stamp.

A collar or equivalent device upon the stamp-stem strikes the end of the lever L or a rod, L', connected with it and extending upward from it. This lever is connected by a pitman, M, with an arm, N, which projects from the rim of a wheel, O, which turns loosely upon the shaft I. To one side of this wheel is another wheel, P, which is keyed fast to the

shaft. (See Figs. 3, 4, and 5.) The wheel P has a hub, o, provided with sockets o' to receive the inner ends of arms Q. These arms are placed tangential to the shaft I, and are of such a length as to bind against the inside of the rim O when it is moved in one direction, and thus turn the wheel p in the same direction; but when the wheel O turns back these cams are held by springs q, so as to slide along the rim of wheel O without binding. The rim P is prevented from rotating backward by a curved block, G, which is pressed against it by a spring, K, producing an intermittent forward movement of the wheel P, shaft I, and feeding-table.

The constant movement of the clutch-arms Q will in time wear the ends into points, which will indent the rim of wheel O so that it will be notched and irregular, and the delicacy of the feed-movement will be impaired. To avoid this, I form blocks R with their outer faces curved to fit the inner curve of the rim of wheel O, and their inner faces fitted to receive the ends of the arms Q, so that the blocks R act as feet, with a broad surface to bear upon the inside of the rim and prevent wear. I make no claim to this feature, as I desire to make a separate application therefor.

In order to return the lever L to the point of action after each stroke of the stamp, and with it the oscillating wheel O, I employ an arm, S, one end of which is connected by a link, T, with the lever-arm N. The opposite end of arm S engages a screw-bolt, u, fixed in the frame-timber, which bolt extends up through a hole in the plate near its bearing end.

A block of rubber, V, is adjusted upon the bolt by a nut, v, at the top, so as to give any desired elastic pressure upon the arm S, and thus return the various parts with a positive motion after the action of the stamp-stem upon them.

W is a block, preferably of wood, upon the top of which the arm N rests when relieved by the action of the spring. This block W fits into an opening in the top of a slotted box, X, through which a wedge, Y, passes, as shown in Fig. 1. This wedge is operated by a screw, Z, and serves to raise or lower the blocks W to suit any degree of movement of the feed apparatus which may be desired.

By this mechanism I am enabled to control the movement of the rotary table and the amount of ore fed very accurately, and to adjust and regulate the parts to the best advantage.

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

1. In an ore-feeder, the inclined rotary table C, the shaft D, driving-gear clutch mechanism, levers L and N, and pitman M, in combination with the plate S, link T, and the elastic adjustable spring or buffer V, substantially as herein described.

2. In an ore-feeder, the inclined table, clutch mechanism, levers L and N, and means for operating the same, in combination with the block W, box X, adjusting-wedge Y, and screw Z, substantially as herein described.

3. An ore-feeder comprising a hopper, an inclined table, and means for rotating the same, a clutch mechanism consisting of the loose and fast wheels O and P, a slotted hub, o, arms Q, springs q, and levers actuated by the stamp to operate the clutch and rotate the table, an adjusting-spring, S, and link T for retracting the levers, and an adjusting screw and wedge for regulating the movements of the feed apparatus, all substantially as and for the purpose herein described.

In witness whereof I hereunto set my hand.

JOSHUA HENDY.

Witnesses:

P. C. MOSEBACH,
GEORGE W. HENDY.