

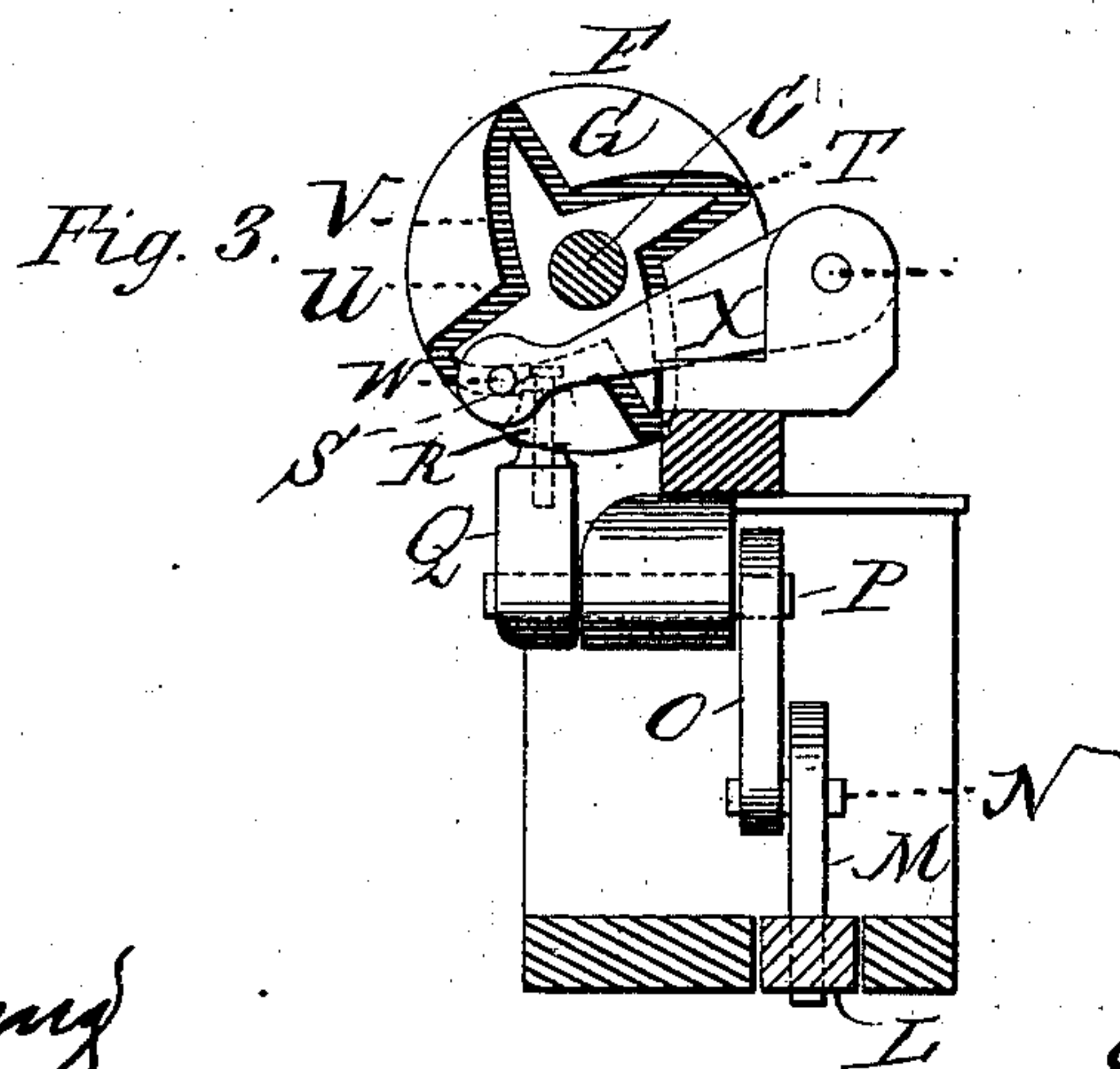
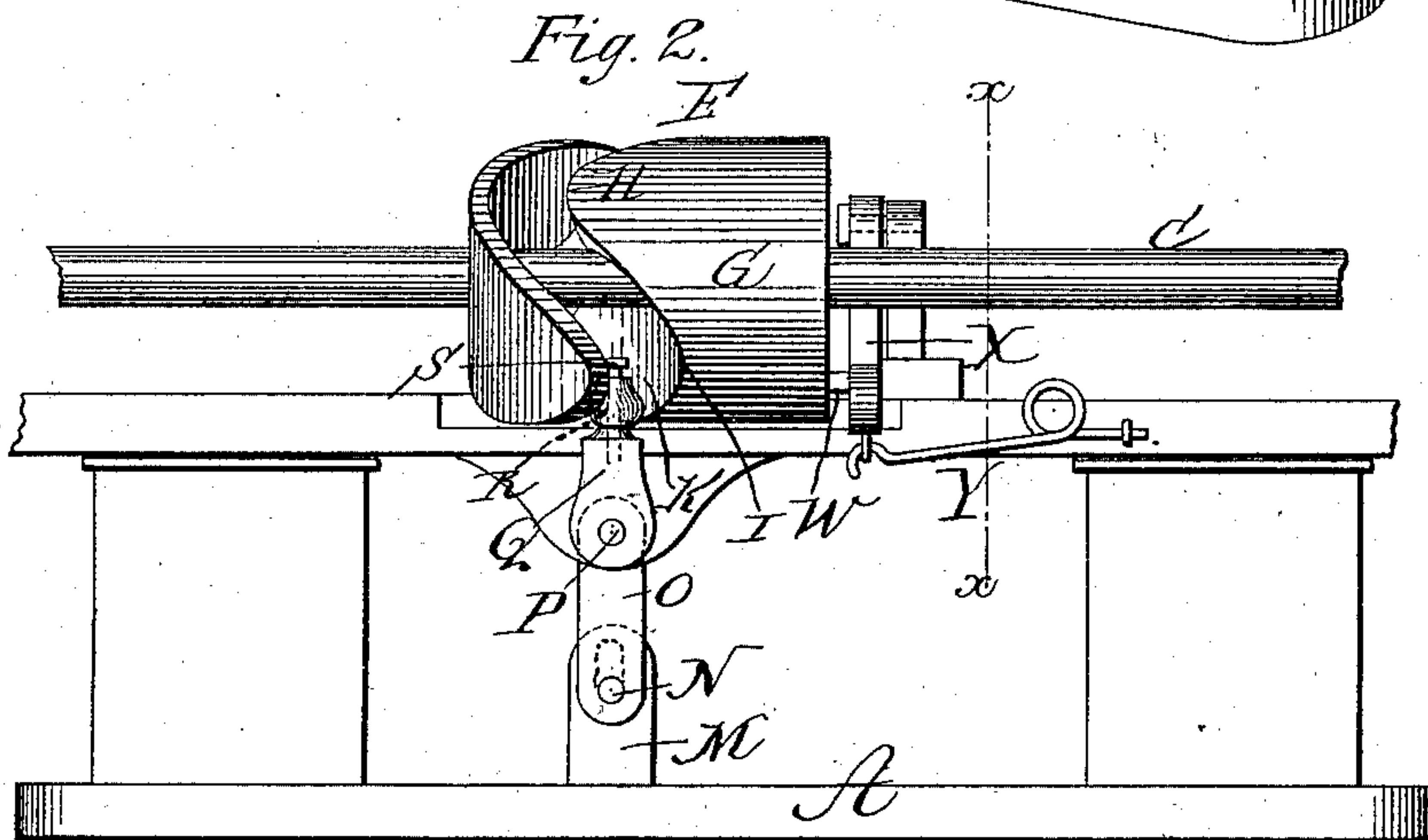
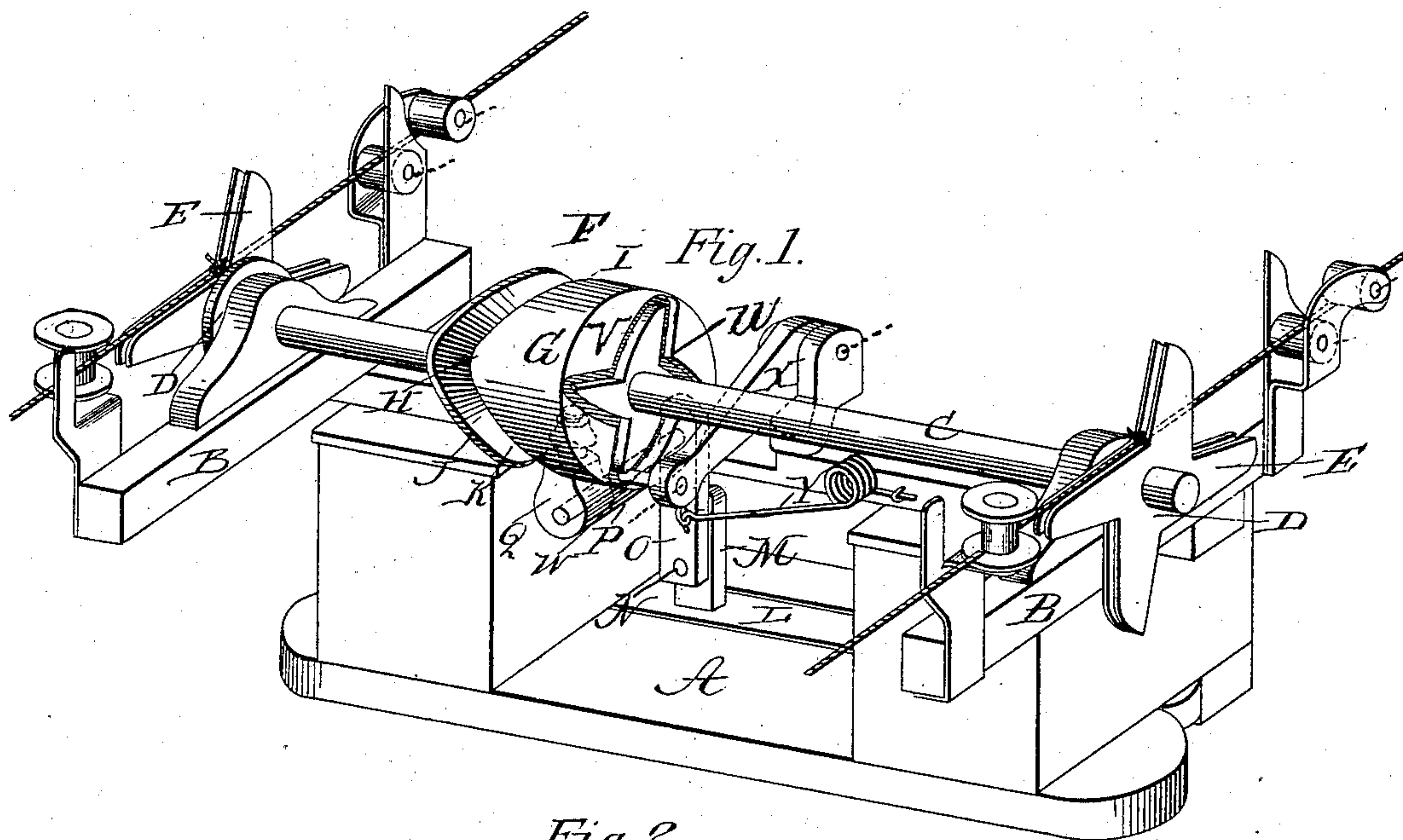
(No Model.)

A. W. THOMPSON.

CHECK ROWER.

No. 277,856.

Patented May 15, 1883.



Witnesses:

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UNITED STATES PATENT OFFICE.

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CHECK-ROWER.

SPECIFICATION forming part of Letters Patent No. 277,856, dated May 15, 1883.

Application filed October 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, ASA W. THOMPSON, of Monmouth, in the county of Warren and State of Illinois, have invented certain new and useful Improvements in Check-Rowers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved check-row mechanism. Fig. 2 is a detail view of the cam and seed-slide operating mechanism; and Fig. 3 is a side view, partly in section, of the same on line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to check-row mechanism for corn-planters; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates part of the planter-frame, upon the ends of which two cross-pieces, B, are secured, which form bearings for the shaft C of the check mechanism. This shaft is provided at both ends with two disks, D, having four slotted or bifurcated arms, E, at right angles to each other, through which the knotted check rope or wire passes, the slots being of a sufficient width to allow the check-rope to pass freely through them, while preventing the knots from passing, so that as the machine is propelled across the field the knots upon the rope will bear against the edges of the slotted arms, tilting them over until they occupy a horizontal position, allowing the knots to slide along the edges and pass out at the rear of the machine, the shaft making one-fourth of a revolution for each knot.

A cam, F, is fastened upon the central portion of the shaft C, and consists of a cylindrical body, G, the end of which is cut out to form two diametrically-opposite projections, H, and two depressions, I, and a plate, J, bent to conform to the shape of the end of the cylinder, forming a waved channel, K, the ex-

treme curvatures of which lie in the same planes as the arms E.

L is the seed-slide, which slides in ways in the frame, and has fastened upon its upper surface an upright lug, M, slotted at its upper end, into which slot the pin N of a crank, O, projects and slides, so that when the crank is rocked the pin will slide in the slot of the lug M, and at the same time slide bar L forward and back. This crank O is fastened to the end of a rock-shaft, P, rocking in a bearing fastened to the frame, and having upon its other end an arm, Q, which projects up into the channel K of the cam. Upon the upper end of this arm Q is a pear-shaped cam, R, journaled upon a pin, S, inserted into the end of said arm Q, and the shape of which knob, tapering upward, admits of its rocking in the channel K, and turning when coming in contact with either side of the channel when the shaft and cam are revolved.

In the end of the cylindrical part of the cam is cut a ratchet-shaped groove, T, consisting of four straight radial portions, U, facing in the direction in which the cam revolves, alternating with four curved eccentric portions, V, all connecting with each other at their inner and outer ends, forming one continuous groove, the outer ends or points of the same being in the same planes with the extreme points and depressions of the cam.

A pin, W, projecting laterally from the outer end of a gravitating arm, X, pivoted upon the frame, extends into groove T, and slides in the same as the shaft is revolved, and it will be seen that as a knot upon the check-rope comes in contact with and bears against the edge of one of the bifurcated arms, turning it one-fourth revolution, the pin W will slide from the outer end of one of the curved portions of the groove into the inner corner of the same, bearing against the inner end of the straight portion and stopping the revolution of the shaft. As, now, the knot slides along the edge of the horizontally-tilted arm and off from it, the gravity of the arm, aided by a spring, Y, engaging its outer end and fastened to the frame, will cause it to drop, the pin sliding downward in the straight portion of the groove, which at that time is in a vertical position,

bringing the pin into the point of the grooves, allowing the cam to make another one-fourth revolution, and so on in the same manner.

I am aware that cams having zigzag-shaped grooves in their faces have been used for converting rotary to reciprocating motion in check-rowers and in other machinery, and I do not claim such a cam, broadly; but

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

1. In a check-rower, the combination of the cam F, consisting of the cylindrical body G, fastened upon the revolving shaft, cut at one end to form curved points H and hollows I alternately, and plate J, fastened upon the shaft, and bent to correspond with the end of body G, forming channel K, with the rock-shaft P, having arm Q, projecting into channel K at one end, and arm O at the other end, operating the seed-slides, as and for the purpose shown and set forth.

2. The locking or stop-motion mechanism in a check-rower, consisting of the ratchet-shaped groove T, cut into the flat side of a disk or cylinder fastened upon the revolving shaft, and consisting of straight radial portions U and curved eccentric portions V, forming a number of points corresponding to the number of part revolutions of the shaft, and the pivoted gravitating arm X, having laterally-extend-

ing pin W, traveling in groove T, as and for the purpose shown and set forth.

3. The combination of the cam F, having ratchet-shaped groove T upon its flat side, with the gravitating arm X, pivoted upon the frame, and having laterally-projecting pin W and spring Y, as and for the purpose shown and set forth.

4. The combination of the shaft C, disks D, having bifurcated arms E, cam F, having channel K and ratchet-shaped groove T, rock-shaft P, having arm Q, projecting into channel K, and seed-slide operating arm O, and gravitating arm X, having laterally-projecting pin W and spring Y, as and for the purpose shown and set forth.

5. As an improvement in check-rowers, the combination of the knotted check rope or wire, disk D, having bifurcated arms E, shaft C, cam F, having channel K, pear-shaped knob R, arm Q, rock-shaft P, arm O, slotted lug M, slide L, ratchet-shaped groove T, gravitating arm X, having pin W and spring Y, all constructed to operate in the manner and for the purpose shown and set forth.

ASA W. THOMPSON.

Witnesses:

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