

(No Model.)

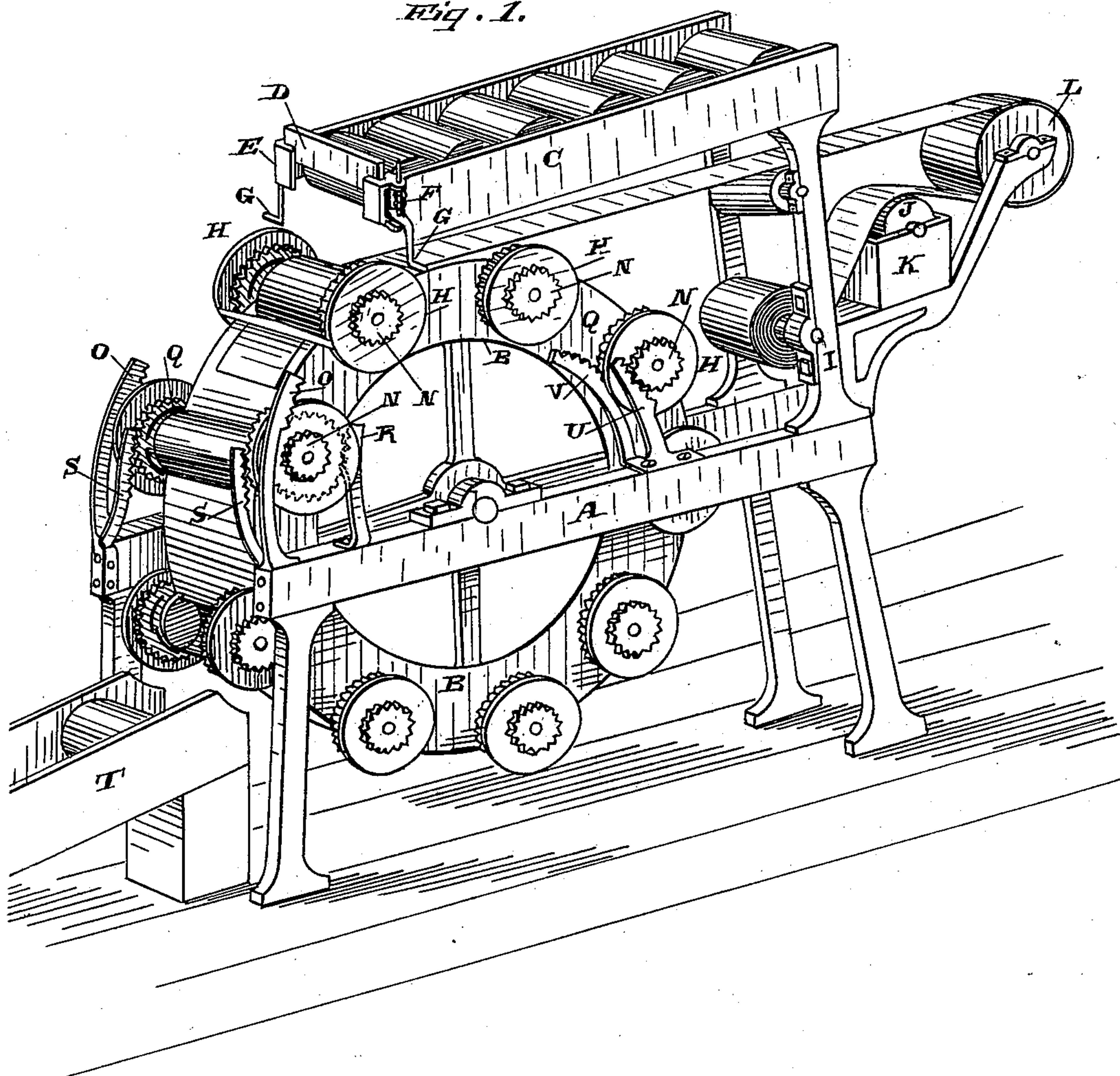
3 Sheets—Sheet 1.

W. LEE.  
MACHINE FOR LABELING CANS.

No. 401,039.

Patented Apr. 9, 1889.

Fig. 1.



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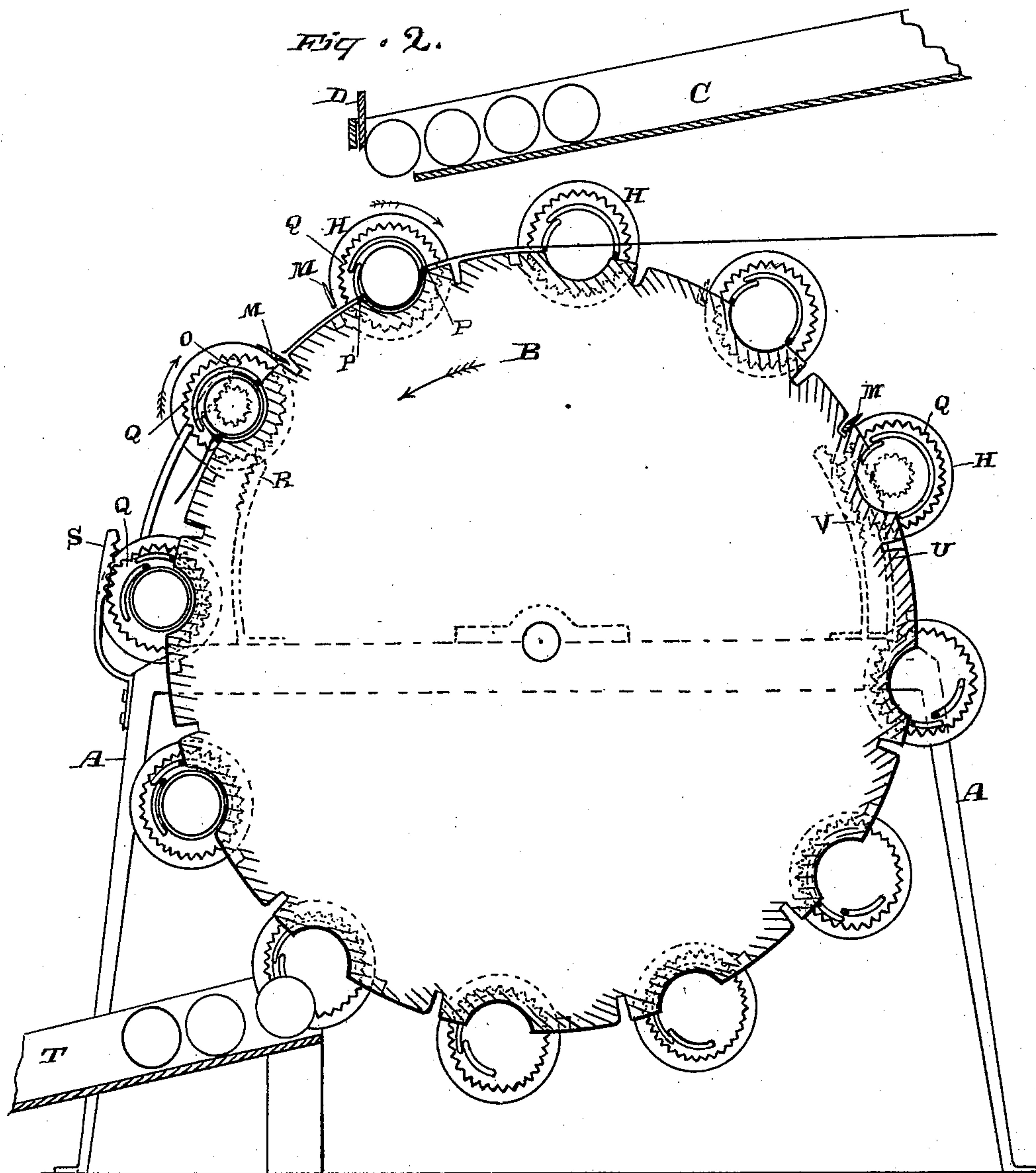
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(No Model.)

3 Sheets—Sheet 3.

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Fig. 3.

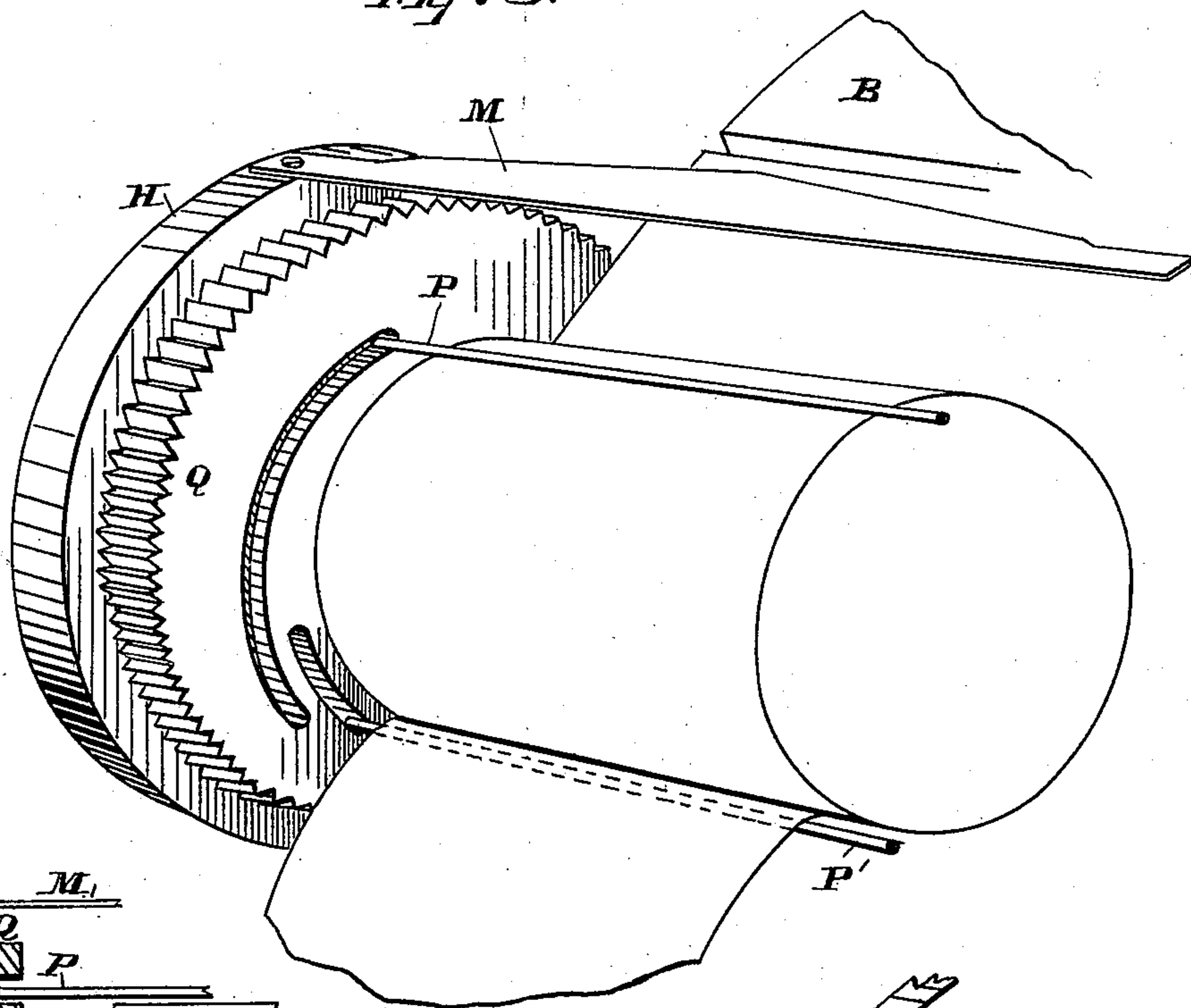


Fig. 5.

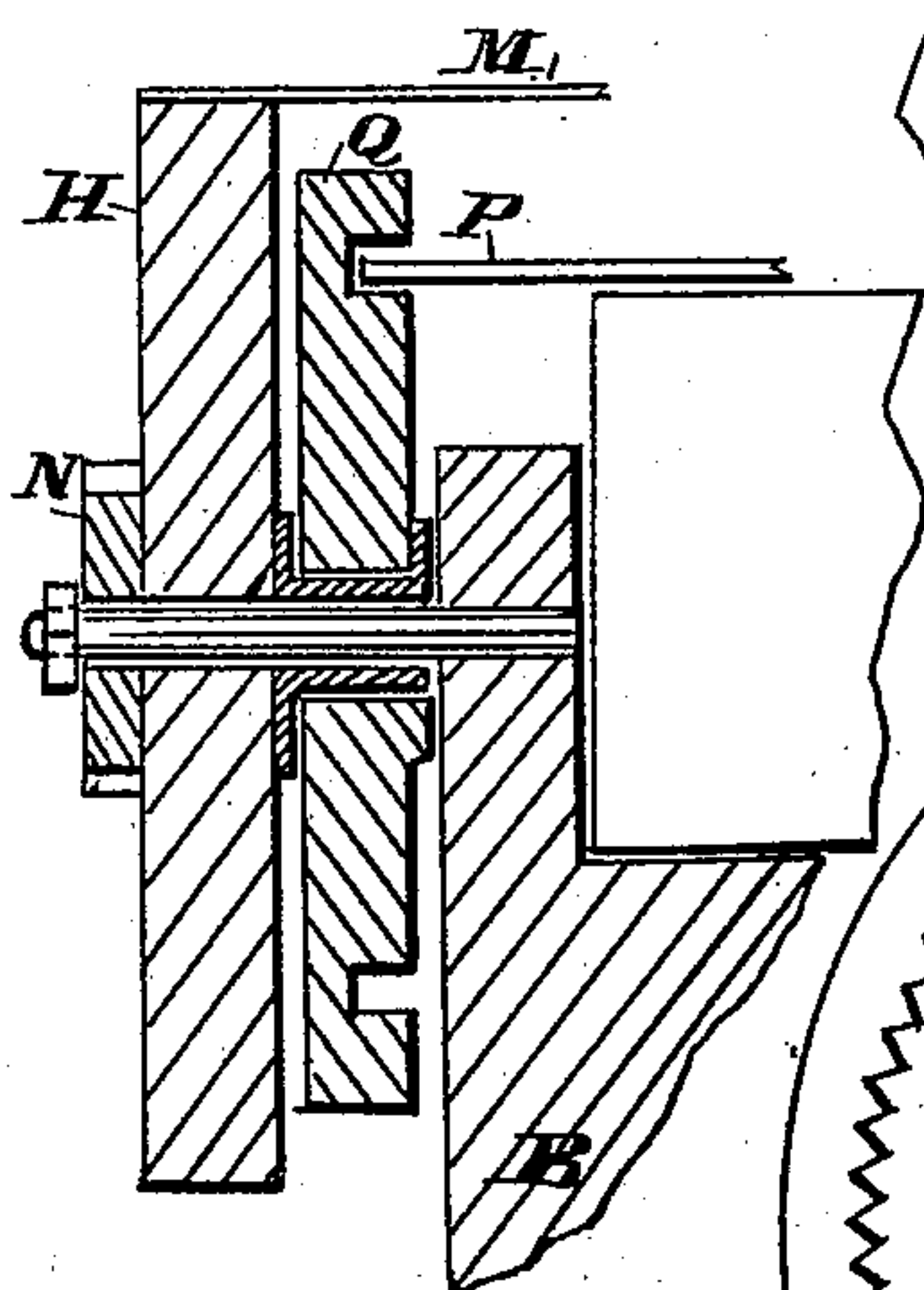
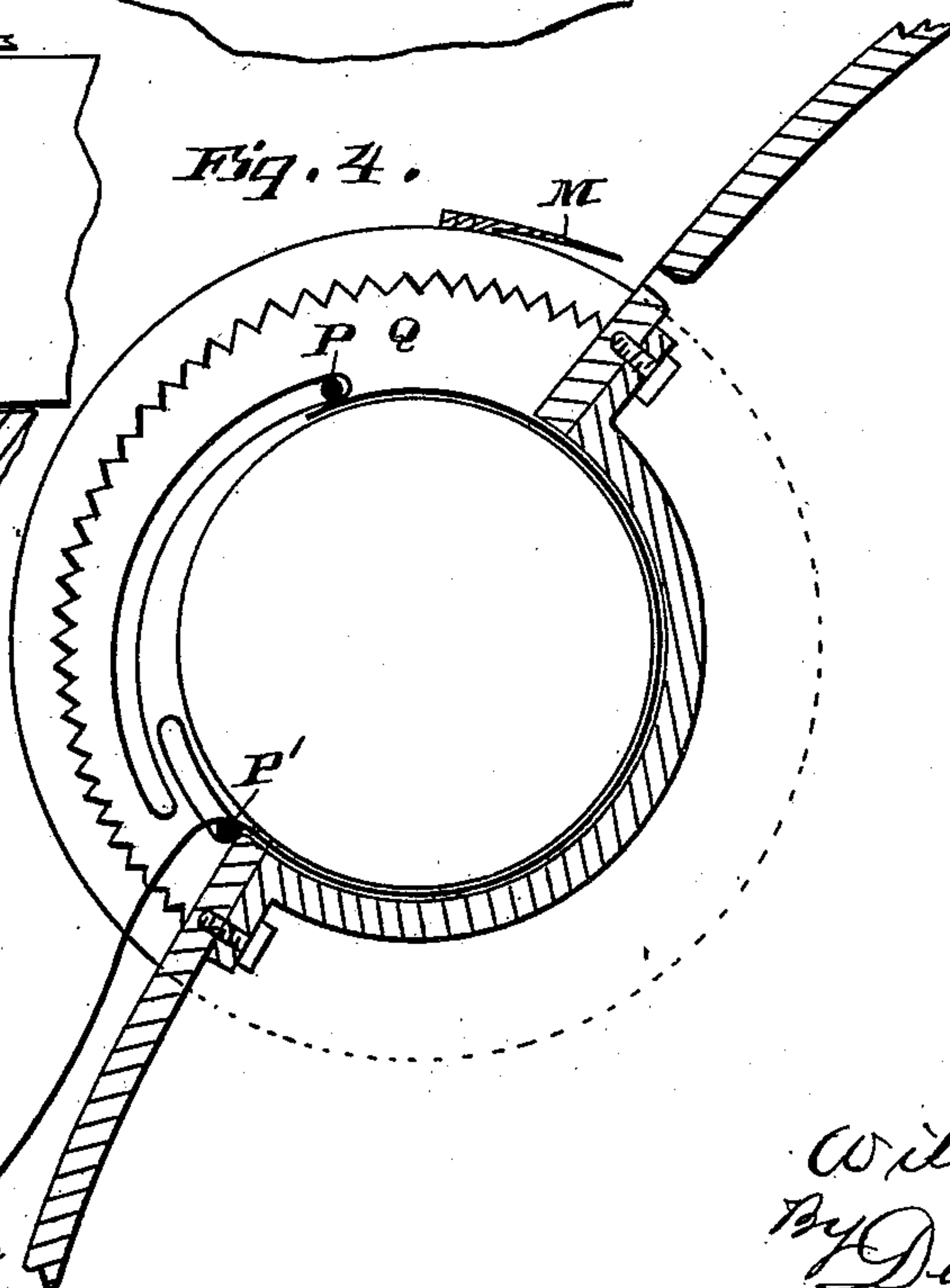


Fig. 4.



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# UNITED STATES PATENT OFFICE.

WILLARD LEE, OF LOS GATOS, CALIFORNIA.

## MACHINE FOR LABELING CANS.

SPECIFICATION forming part of Letters Patent No. 401,039, dated April 9, 1889.

Application filed May 8, 1888. Serial No. 273,229. (No model.)

*To all whom it may concern:*

Be it known that I, WILLARD LEE, of Los Gatos, Santa Clara county, State of California, have invented an Improvement in Machines for Labeling Cans; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a machine for applying labels to cans.

It consists in a cylinder having chambers around its periphery, into which the cans are received from the feed-chute, a means for applying paste to the labels in a continuous sheet and leading said sheet to a point where it is applied to the cans, a means for severing the labels from the sheet at the proper point and pressing the ends around the can, together with certain details of construction, all of which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of the machine. Fig. 2 is an enlarged longitudinal vertical section taken through the can-carrying cylinder and operating parts, showing these parts separated to illustrate each operation clearly. Fig. 3 is an enlarged perspective view showing a can with a portion of the label wrapped around it and the rods by which the work is completed. Fig. 4 is an enlarged section of the rim of the carrying-cylinder, showing an end view of the can in its place. Fig. 5 is a section taken through the plane of the axis of the driving-gears and disks between which the cans are supported.

A is a frame-work of any suitable form and size, having journaled upon it a cylinder, B, around the periphery of which are semi-cylindrical chambers of such size and length as to receive the cans to be labeled. These cans are delivered upon the top of the cylinder by any suitable means. In the present case I have shown an inclined trough or chute, C, down which the cans roll. A gate, D, closes the discharge end of this trough, the gate running vertically in guides E and being kept closed by means of springs F, which act upon it, as shown.

G G are arms projecting from each side of the gate and extending downward to the point where their lower ends will be engaged by the disks H upon the outside of the cylinder B as they successively pass beneath the ends of the arms when the cylinder rotates. This

raises the arms G and the gate D, compressing the springs F during the operation, in which the gate is raised sufficiently to allow a single can to roll out beneath it and drop into a semi-cylindrical channel upon the periphery of the cylinder, which arrives at a point beneath the mouth of the chute just in time to receive the can.

The labels are printed upon a continuous sheet of any desired length, which is rolled upon a spindle, as shown at I, and passing from this point over the roller J, which revolves with the lower portion in the paste-trough K, the paste is applied continuously to the lower side of the label-sheet. From this point it passes around the guide or direction roller L, and is led forward to a point above the rotating cylinder B, the end extending across the semi-cylindrical chamber into which the can drops, so that when the can falls from the conveying-trough into the chamber it presses the label into a semi-cylindrical form and pastes the central portion of the label part way around the can.

The disks H before mentioned lie outside of the rims of the cylinder B, and have their axes in line with the axes of the cans when the latter rest in the semi-cylindrical chambers on the periphery of the cylinder B. From one disk to the other a knife or cutter, M, extends, as shown more plainly in Figs. 2, 3, and 4. Attached to the outer faces of the disks H are gear-wheels or pinions N, and short racks O are supported from the frame A or from any other suitable stationary part of the machine, so that after the can has dropped into its semi-cylindrical receiving-chamber and rests upon the label, as before described, the pinions N will engage with the racks O, and this causes the disks H to rotate backward, or in the opposite direction from the motion of the cylinder, thus bringing the knife or cutter down upon the continuous label-sheet, so as to sever that label which is to be applied to the can and leaving both ends of the label free, while the central portion, as before described, is pasted upon the can which lies upon it.

In order to complete the work and paste the ends of the label around the can, rods P P', Fig. 3, extend across just outside of the diameter of the can, extending between the two gear-wheels Q, Figs. 3, 4, and 5. These gear-wheels are mounted loosely upon sleeves



which project inwardly from the disks H, and they are so arranged that after the label has been cut off, as before described, the further rotation of the cylinder B will cause the gears 5 Q to engage with the stationary racks R, which will cause the gears to rotate in the direction of the travel of the cylinder B, and this moves the rod P so as to press down the end of the label just secured upon the can. The rods P 10 are long enough so that their ends enter slots or openings in the sides of the gear-disks, so that when the gears are rotated these rods are carried around just outside of the can, and the loose ends of the label thus press these ends 15 down upon the body of the can. When the rotation of the cylinder B brings the gears Q to a point where they will engage the stationary racks S, the gears will be rotated in an opposite direction or backward, and this motion carries the rod P' over the remaining 20 loose end of the label, so as to paste it down. The opposing faces of the disk-gears Q have curved slots made in them, and the ends of the rods extend into these slots. When the 25 gears turn in the same direction with the rotation of the cylinder B, the rod P, carried by the gears as they turn, will press the end of the label which is beneath it down upon the can, and when the gear is turned in an opposite direction a corresponding action of the 30 rod P' takes place, which presses down the other end of the label and finishes the work. A further rotation of the cylinder B carries the cans down to the trough T, into which 5 they drop and roll off to a point where they may be taken out and packed. The disks H, carrying the cutters M, remain in the position where they were left by the action of the stationary racks O until the cylinder B has 10 completed the larger part of its rotation, when each of the pinions N are engaged by the stationary racks U, and the disks are thus rotated as they pass, the knives or cutters M being carried by them to a point where they 5 will be in readiness to again sever the labels at the proper point.

In the same manner the gears or disks Q, carrying the rods P P', by which the ends of the labels are pasted down, are returned to 10 their first positions by reason of the gears Q engaging the stationary racks V at the rear of the machine.

Having thus described my invention, what I claim as new, and desire to secure by Letters 15 Patent, is—

1. In a machine for labeling cans, a rotary cylinder having chambers upon its periphery, a chute from which the cans are delivered successively into said chambers, in combination with a vertically-sliding gate controlling the mouth of the chute, arms connected with said gate, and lugs or projections by which the gate is opened to discharge a can into each of the chambers of the cylinder, substantially as herein described.

2. The rotary cylinder having chambers

upon its periphery, a chute having a gate operated periodically by the rotation of the cylinder, so as to deliver cans into the chambers, in combination with a paste-roller and 70 direction roller or rollers, whereby the labels are delivered upon the periphery of the cylinder and across the can-receiving chambers, substantially as herein described.

3. The rotary cylinder having semi-cylindrical chambers upon its periphery into which the cans are delivered automatically during its rotation, a mechanism, substantially as 75 described, for applying the paste to one side of the label-band and delivering it across the chambers of the cylinder, so that the cans are placed upon the label-band, in combination with the rotary disks, cutters M, and gear-wheels N and racks O, by which the cutters 80 are moved, so as to sever the labels, substantially as herein described.

4. The rotary cylinder having chambers upon its periphery across which the continuous label-band is carried after paste has been applied to one side, and means, substantially 90 as specified, for depositing cans upon that portion of the label which lies across the chamber, a cutter, and mechanism, substantially as set forth, for operating the same, whereby the labels are severed after the can has been 95 placed upon them, in combination with the rods P and P', gear-wheels Q, and stationary racks R and S, with which said gear-wheels engage, so as to cause the rods to move over the ends of the label and paste it upon the 100 can, substantially as herein described.

5. The rotary cylinder chambered upon its periphery to receive cans from a constant source of supply, means, substantially as described, for supplying paste to the label- 105 band and guiding it across the chambers in the cylinder, so that the cans when delivered to the same will rest upon the labels, in combination with disks carrying cutters, a mechanism, substantially as set forth, for rotating 110 said disks and cutters so as to sever the labels, and rods extending transversely across the cylinder, and having their ends connected with gears by which the rods are moved alternately, so as to press the ends of the labels 115 down upon the cans, substantially as herein described.

6. The rotary cylinder with the chambers containing cans, the means for applying the labels thereto during the rotation of the cylinder, in combination with the fixed racks U 120 and V, which engage the gear-wheels Q and N, and return the cutters and rods to the proper position for again cutting and applying a label before the cylinder completes its 125 rotation, substantially as herein described.

In witness whereof I have hereunto set my hand.

WILLARD LEE.

Witnesses:

G. A. BUTLER,  
L. E. HAMILTON.