

No. 848,167.

PATENTED MAR. 26, 1907.

A. J. GOWAN.

ADJUSTABLE HANGER FOR ELECTRIC DROP LIGHTS.

APPLICATION FILED APR. 19, 1906.

2 SHEETS—SHEET 1.

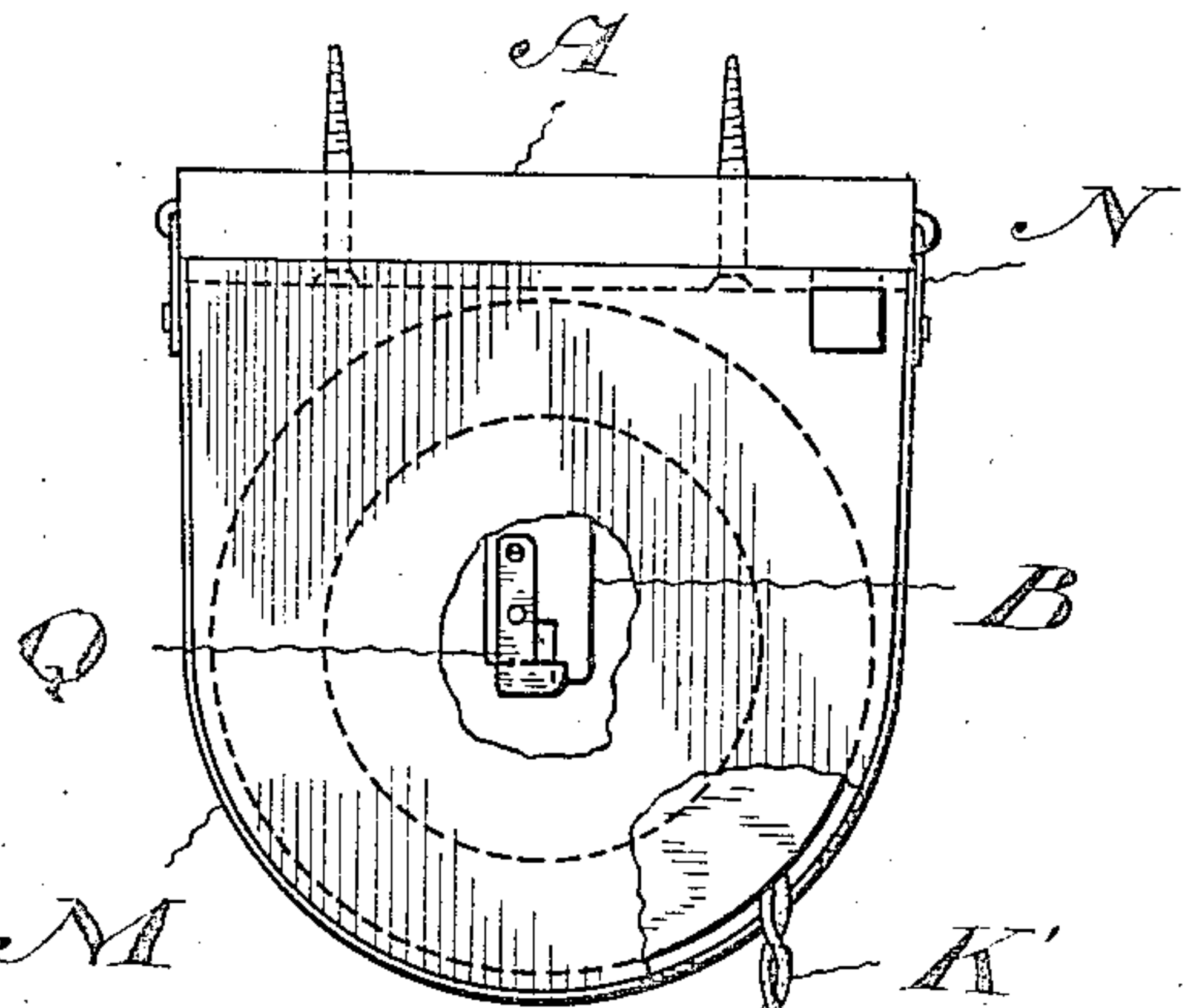


Fig. 1.

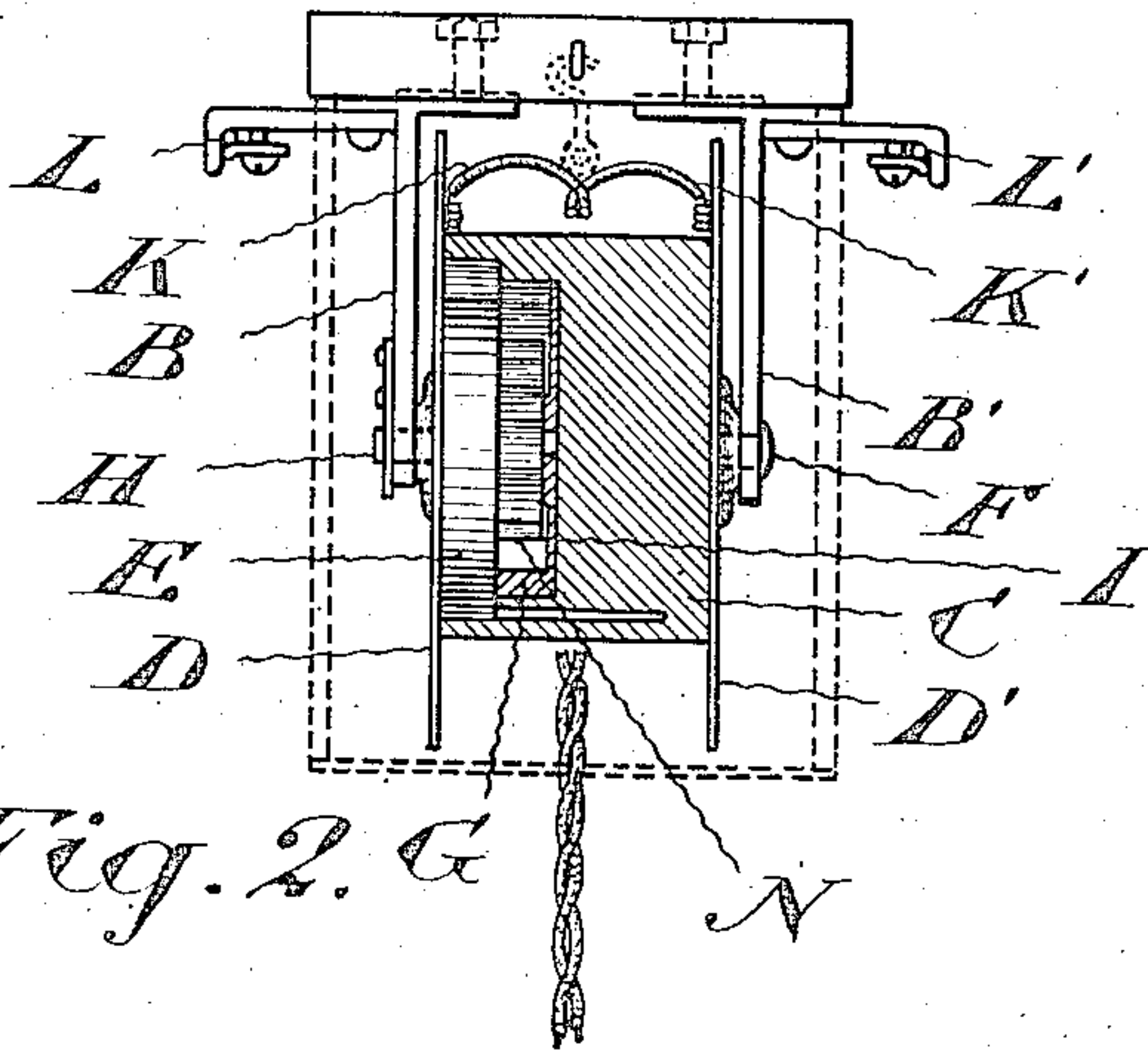


Fig. 2.

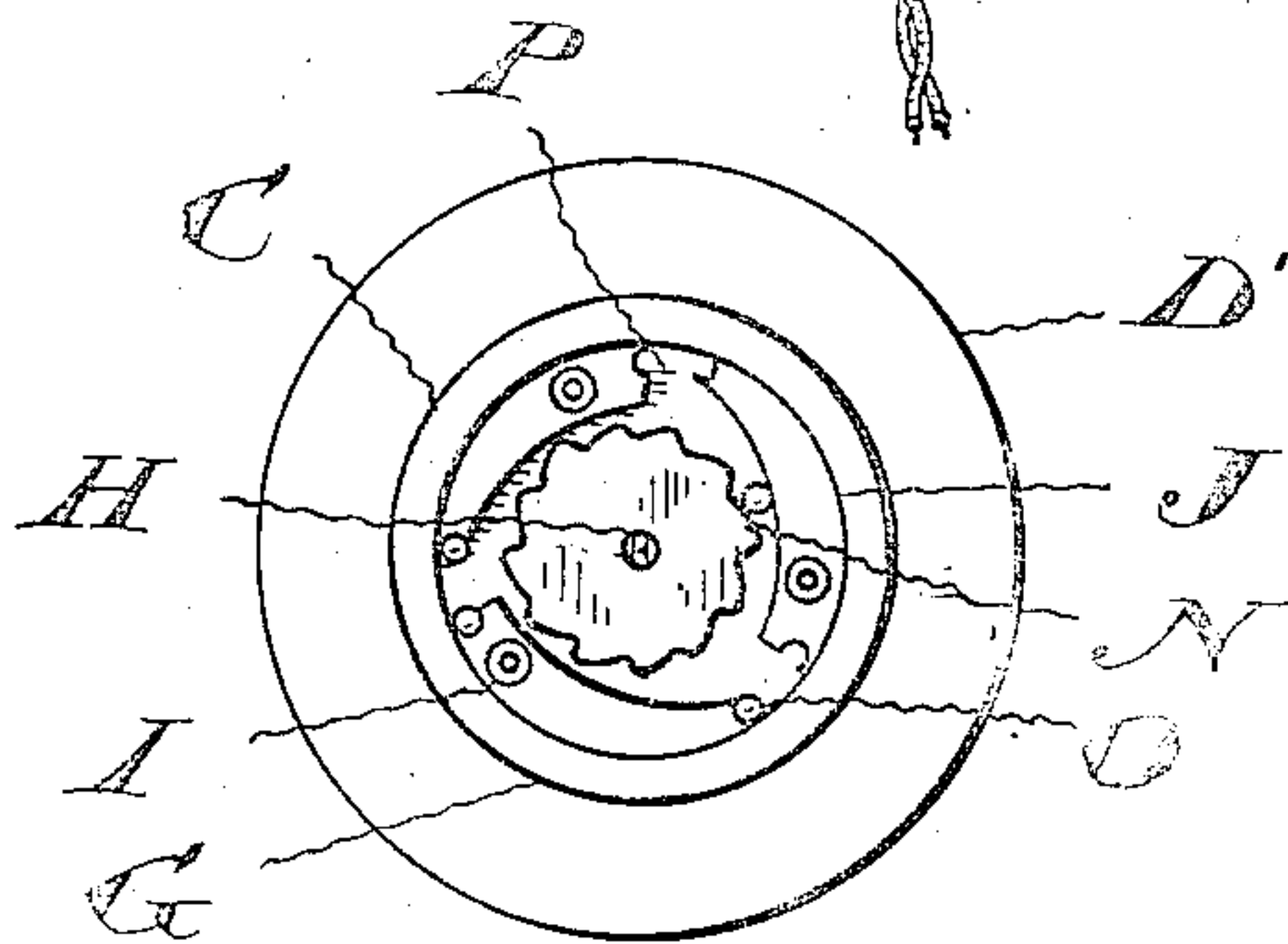


Fig. 3.

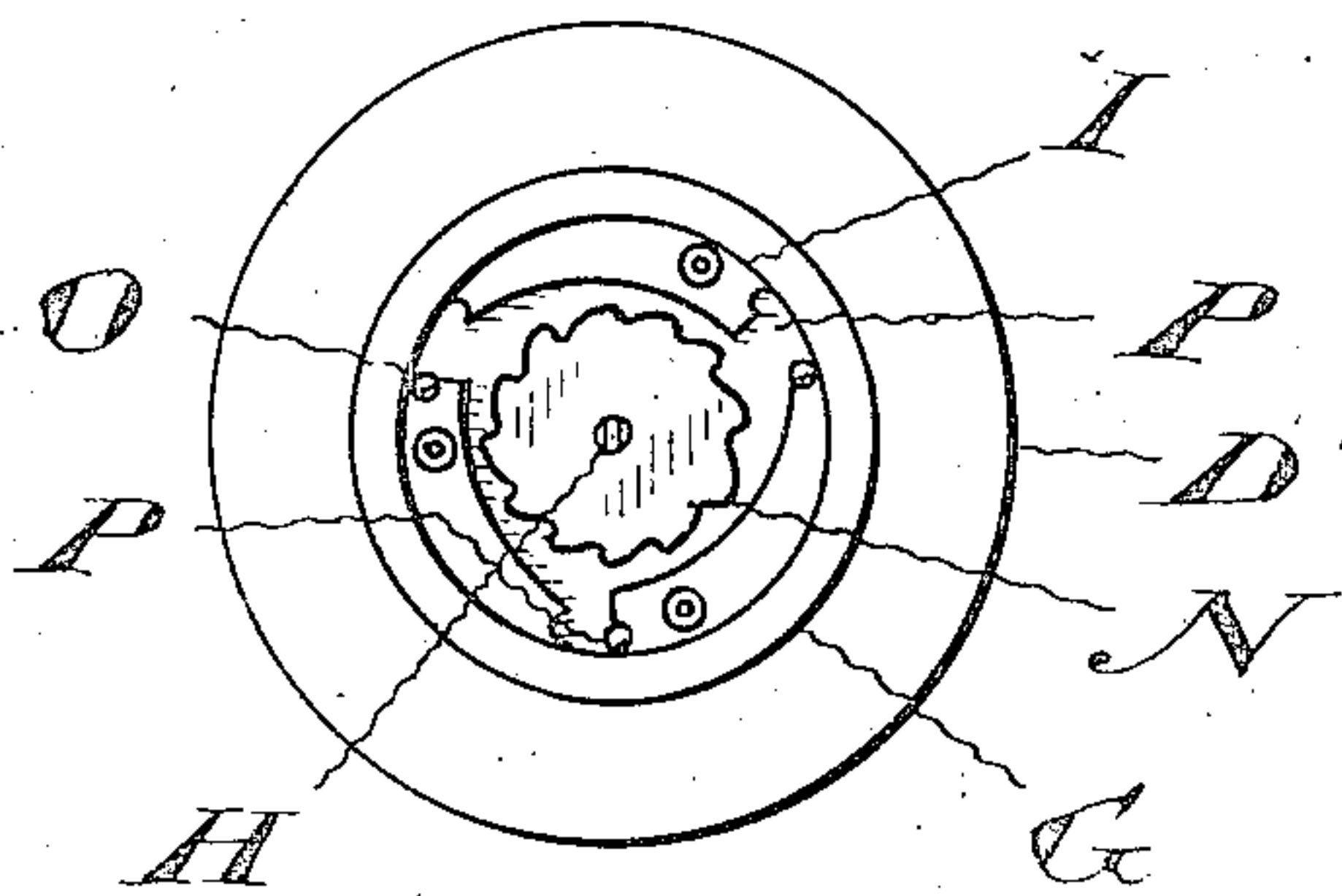


Fig. 4.

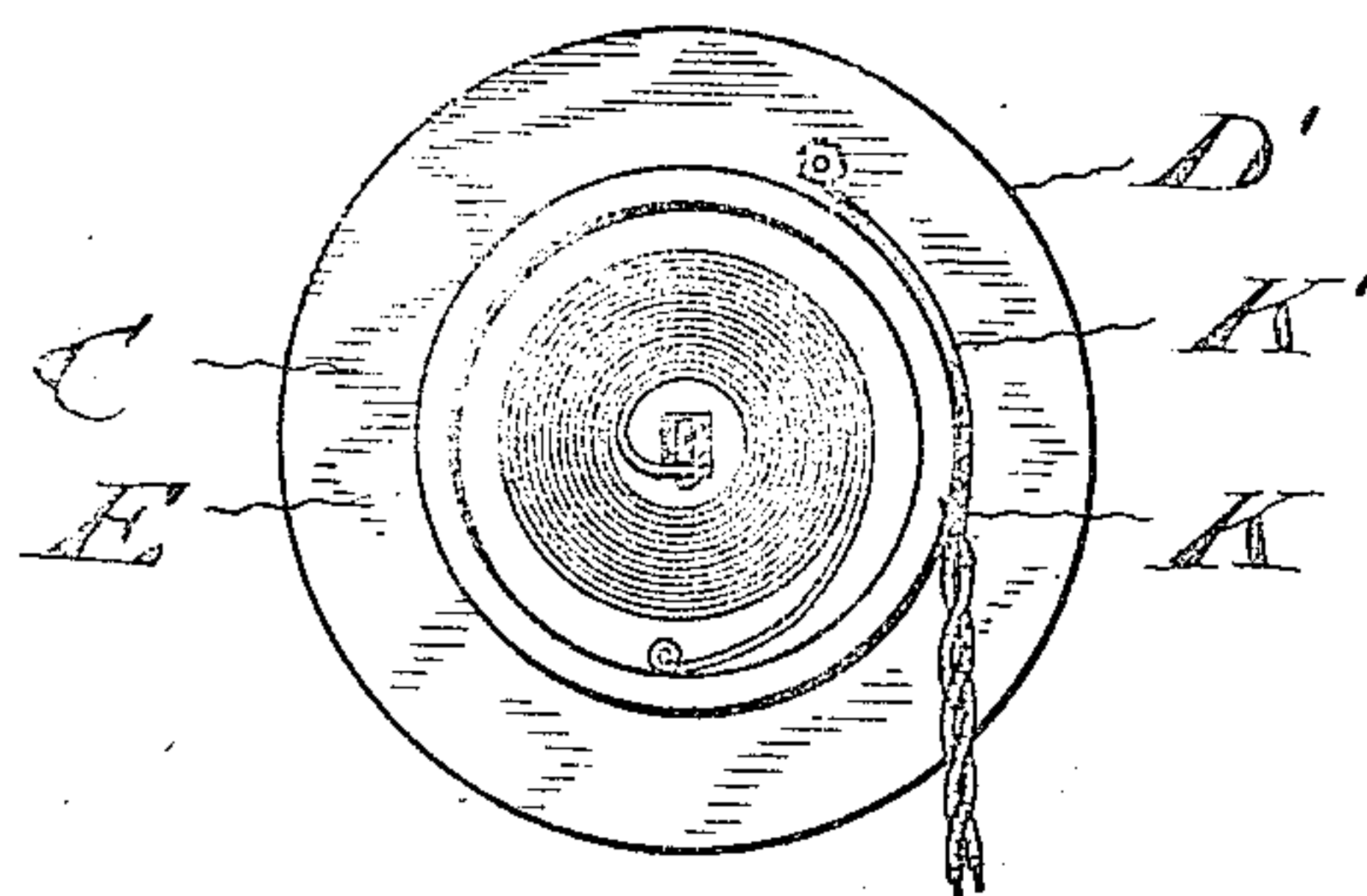


Fig. 5.

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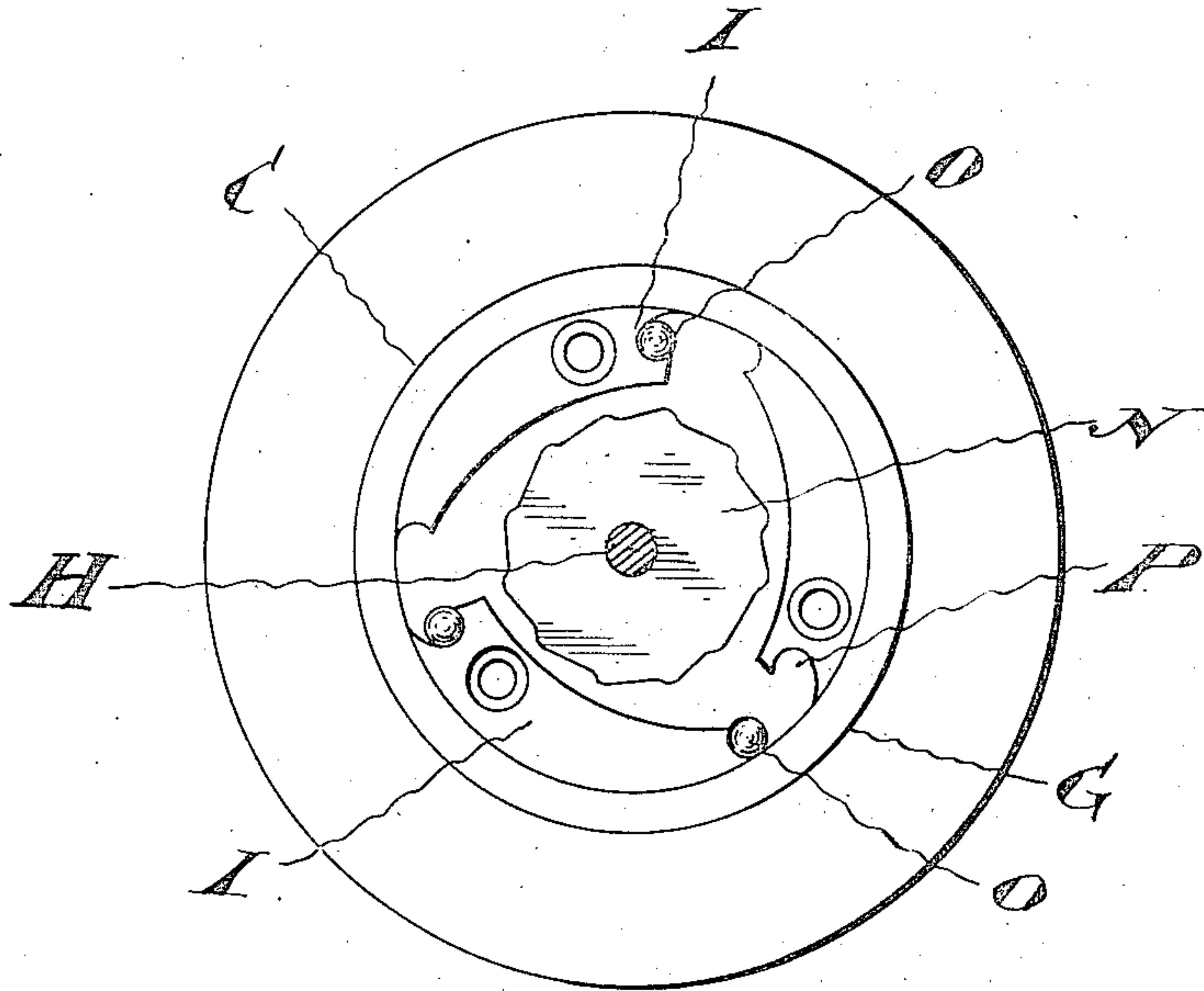


Fig. 6.

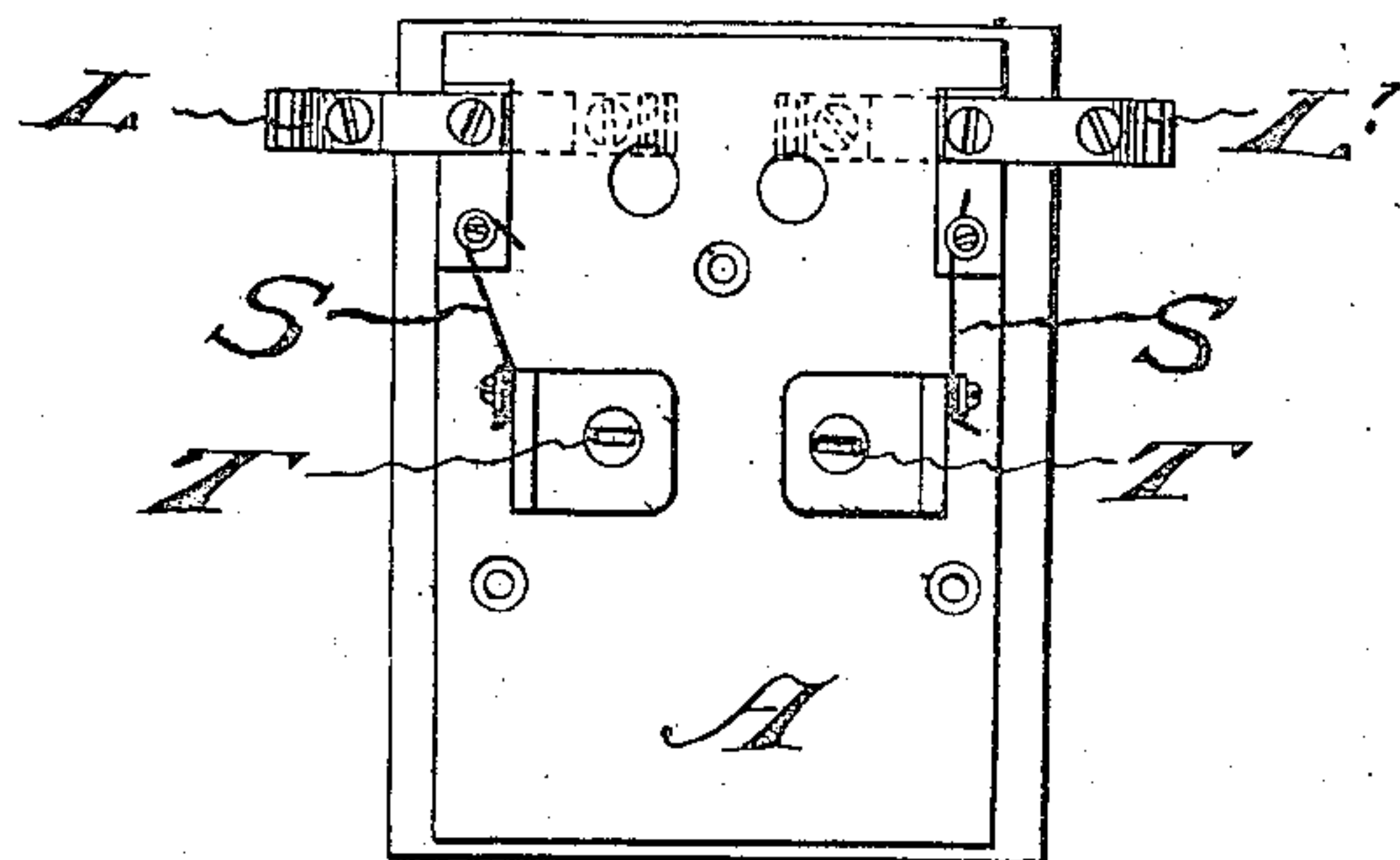


Fig. 7.

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ADJUSTABLE HANGER FOR ELECTRIC DROP-LIGHTS.

No. 848,167.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed April 19, 1906. Serial No. 312,637.

To all whom it may concern:

Be it known that I, ALLEN J. GOWAN, of Norwich, in the county of Oxford, Province of Ontario, Canada, have invented certain new and useful Improvements in Adjustable Hangers for Electric Drop-Lights, of which the following is a specification.

The object of my invention is to devise an adjustable hanger for electric drop-lights; and it consists, essentially, of a spring-actuated drum on which the lamp cord or cords are wound and which is arranged to convey current from the supply system to the wires of the cords and of a centrifugal gravity-detent whereby the drum may be locked in any desired position or released to allow the spring to wind up the cords, substantially as hereinafter more specifically described and then definitely claimed.

Figure 1 is a front elevation of my improved hanger. Fig. 2 is a vertical section of the same. Fig. 3 is side elevation of part of the device, showing the gravity-detent. Fig. 4 is a similar view of the gravity-detent in a different position. Fig. 5 is a similar view showing the spring. Fig. 6 is an enlarged view of the detent, showing two balls lifted in the deep pockets. Fig. 7 is a plan of the under side of the base.

In the drawings like letters of reference indicate corresponding parts in the different figures.

A is the base, which is secured to the ceiling in the ordinary way. Connected to this porcelain or non-conducting base are two metal brackets B B', connected by fuse-wires S with the connections T. (See Fig. 7.) Between the brackets is journaled a drum comprising a cylindrical body C, of any suitable insulating material, and metal end disks D D'. This drum is recessed to receive a flat spiral spring E, one end of which is secured to the drum and other to a pivot-pin H. This pivot-pin at its outer end engages a slot in the bracket B in such a manner that it is held from rotating. (See Fig. 1.) The slot is preferably open at the bottom, and the pivot-pin is held therein by means of the pivoted latch Q, which may be swung aside when it is desired to release the pin. Within the drum is located a centrifugal gravity-detent G of the type hereinafter described. F is a pivot-pin secured to the other side of the drum C. The pivot-pin F is journaled in the bracket B'. The wires K K' of the lamp-cord are connected, respectively, with the end

disks D D'. These end disks are in electrical connection with the pivot-pins F and H, and thus with the brackets B B'. The wires L L' from the supply system are connected, respectively, with the connections T, as shown. From this construction it follows that the current may flow through the wire L, bracket B, pivot H, end disk D, and wire K to the lamp, returning through the wire K', end disk D', pivot-pin F, bracket B', and wire L'. Of course the current may pass in the reverse direction, if desired.

The gravity-detent hereinbefore referred to is seen in Figs. 3 and 4. Within the end of the drum C is formed a recess, within which is located a casing I, provided with the inwardly-facing ratchet-shaped cam-surfaces J. The pivot-pin H is journaled in the disk D and in the casing I. On this pivot-pin is formed or secured a disk N, the surface of which is preferably undulated. These undulations may take the form of substantially ratchet-shaped teeth oppositely set to the ratchet-shaped cam-surfaces J, as shown. O are balls, preferably corresponding in number with the cam-surfaces, which may be two or more in number, three being ordinarily preferable. Each end of each cam-surface is provided with a recess P, adapted to receive the balls O. From this construction it follows that when the drum is rotated by pulling on the cord the balls will offer no resistance to the rotation of the drum. As soon, however, as the downward movement is stopped one of the balls is certain to be in position to engage the disk and one of the cam-surfaces, thus holding the drum in exactly the position to which it has been turned. A pull downward on the cord, followed by a sudden release, will cause the balls to enter the pockets P, and each ball will continue to occupy one or the other of two adjacent pockets as long as the drum is in rotation in either direction. The pockets in the larger or rear ends of the cam-surfaces are deeper than the pockets facing them, as two of these deep pockets must hold two of the balls when the drum is rotated forward previous to a release to wind up the cord, as it is important that they do not drop out till the third ball has had an opportunity to fall into the lowermost of the smaller pockets. (See Fig. 6.) Thus I have succeeded in devising a detent or clutch which will hold the drum in any desired position and which will yet permit of the rotation of the drum in

either direction if the proper mode of operation be followed.

This construction above described gives a very simple, neat, and convenient hanger, by means of which the height of the lamp may be quickly and accurately adjusted at any time with a minimum of trouble. This hanger is further simple and cheap to manufacture and is not liable to get out of order. It is preferably covered in with a casing M, which is held to the base by means of the hooks R, pivoted to the casing and adapted to engage eyes on the base.

What I claim as my invention is—

1. The combination of a stationary vertical disk; a rotatable drum concentric with the disk; a plurality of inwardly-facing cam-surfaces formed therein; balls between the disk and the cam-surfaces; and recesses formed at each end of each cam-surface to receive the balls when the drum is rotating, substantially as described.

2. The combination of a stationary vertical disk, provided with an undulated surface; a rotatable drum concentric with the disk; a plurality of inwardly-facing cam-surfaces formed therein; balls between the disk and the cam-surfaces; and recesses formed at each end of each cam-surface to receive the balls when the drum is rotating, substantially as described.

3. The combination of a stationary vertical disk; a rotatable drum concentric with the disk; a plurality of inwardly-facing cam-surfaces formed therein; balls between the disk and the cam-surfaces; recesses formed at each end of each cam-surface to receive the balls when the drum is rotating; a spring adapted to rotate the drum in a direction to cause the balls to grip between the cam-surfaces and the disk; and means wound on the drum whereby the latter may be revolved in the reverse direction, substantially as described.

4. The combination of a stationary vertical disk; a rotatable drum concentric with the disk; a plurality of inwardly-facing cam-surfaces formed therein; balls between the disk and the cam-surfaces; and recesses formed at each end of each cam-surface to receive the balls when the drum is rotating, the recesses at the ends of the cam-surfaces nearest the disk being deeper tangentially than the other recesses, substantially as described.

5. The combination of a stationary vertical disk, provided with an undulated surface; a rotatable drum concentric with the disk; a plurality of inwardly-facing cam-surfaces formed therein; balls between the disk and the cam-surfaces; and recesses formed at each end of each cam-surface to receive the balls when the drum is rotating, the recesses at the ends of the cam-surfaces nearest the disk being deeper tangentially than the other recesses, substantially as described.

6. The combination of an inner vertical stationary disk; an outer rotatable drum concentric therewith; a plurality of inwardly-facing cam-surfaces formed thereon; recesses formed in each end of each of said cam-surfaces, the recesses at the ends of the cam-surfaces nearest the disk being deeper tangentially than the other recesses; balls alternatively occupying the larger and smaller recesses when the drum is rotated in a forward direction and when the movement of the latter is quickly reversed; and a spring adapted to rotate said drum in a reverse direction whereby the balls are normally caused to drop from their recesses and to grip between the cam-surfaces and the disk, substantially as described.

Norwich, Ontario, April 9, 1906.

ALLEN J. GOWAN.

In presence of—

JOHN ROWE,
SAMUEL KELSO.