

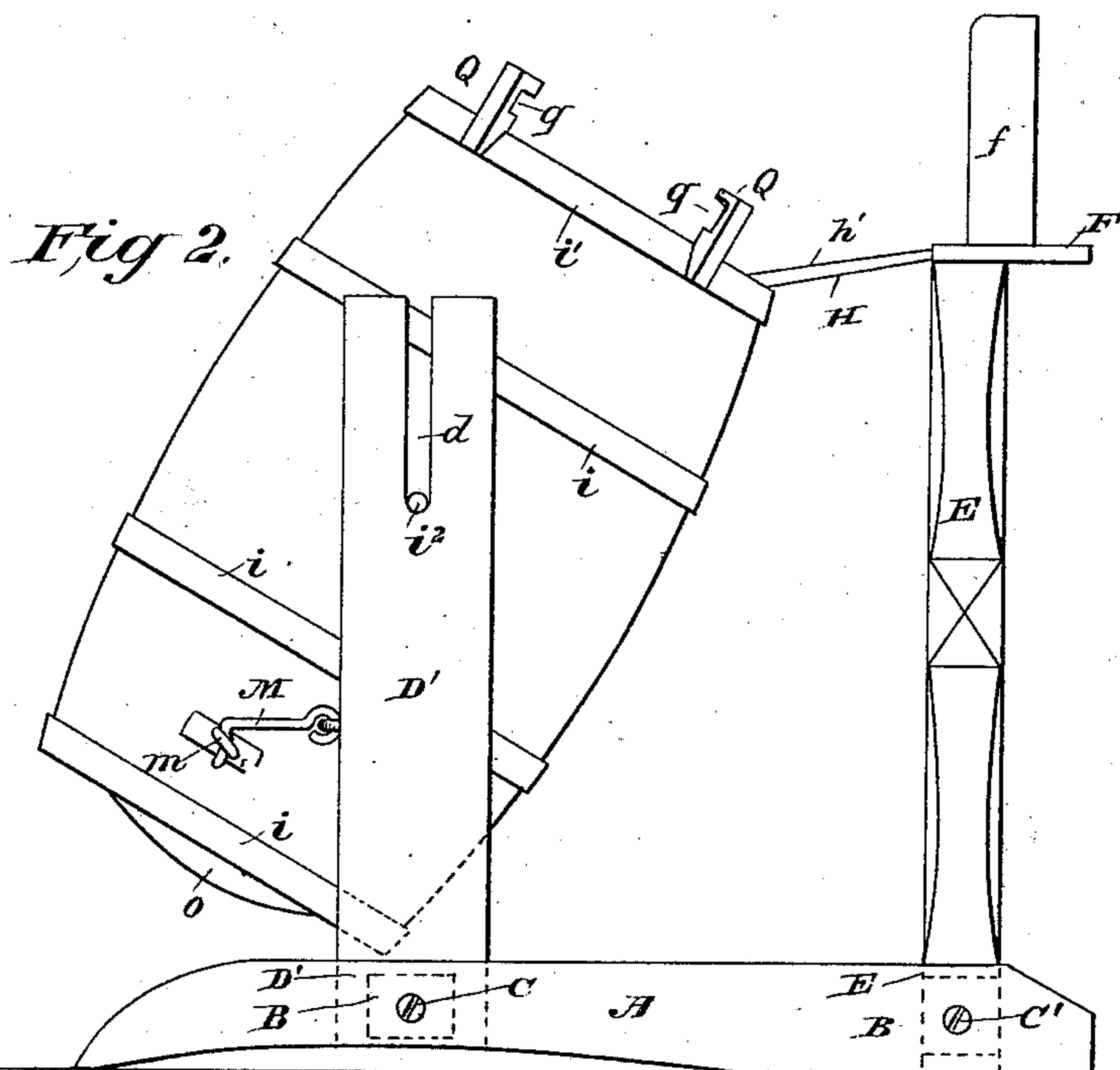
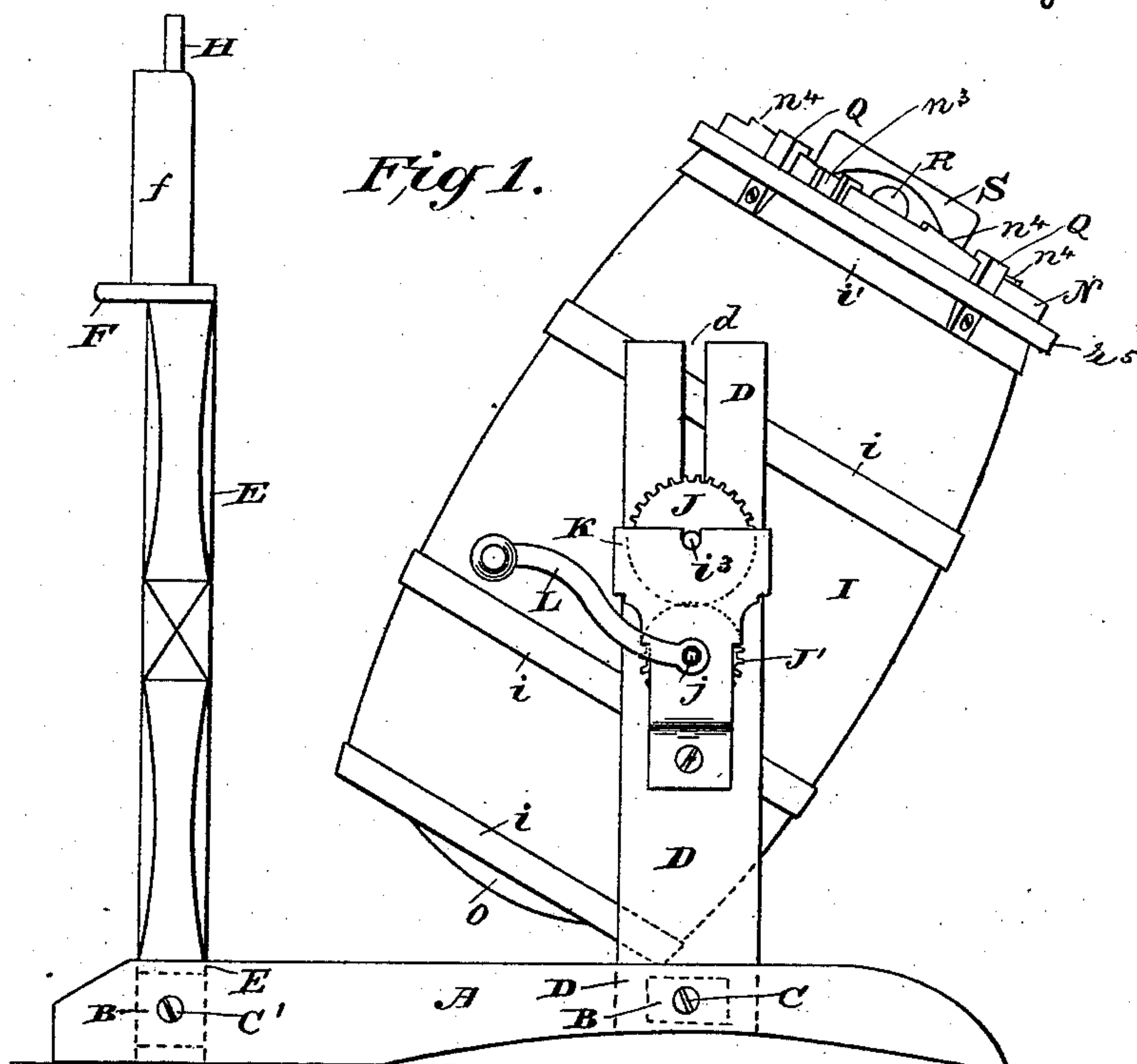
(No Model.)

3 Sheets—Sheet 1.

A. L. JOHNSON.  
WASHING MACHINE.

No. 281,882.

Patented July 24, 1883.



Attest.

Geo. T. Smallwood Jr.  
Wm. J. Jayers.

*Inventor:*

Adelbert L. Johnson.

134 Knight Bros atty

(No Model.)

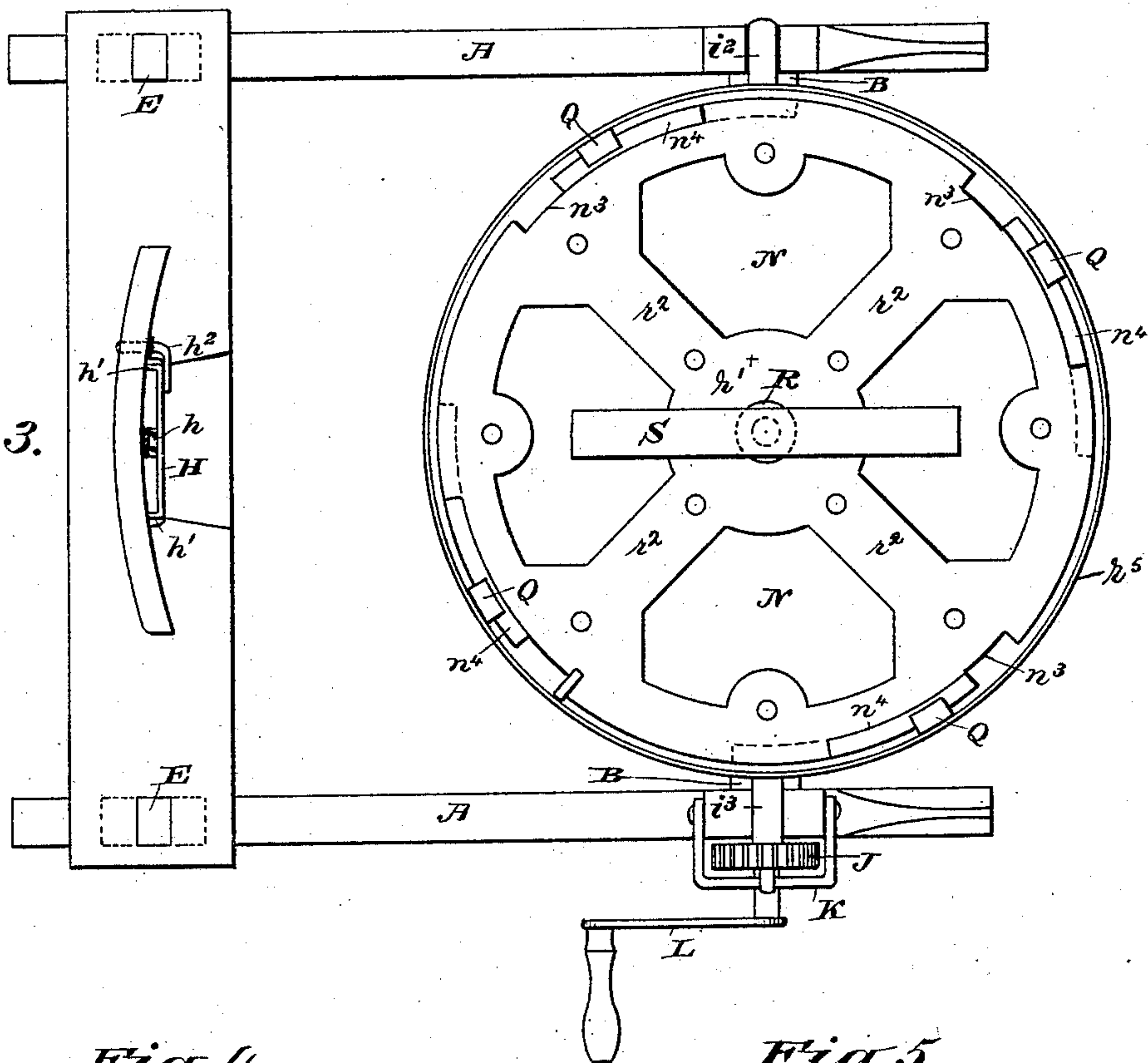
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A. L. JOHNSON.  
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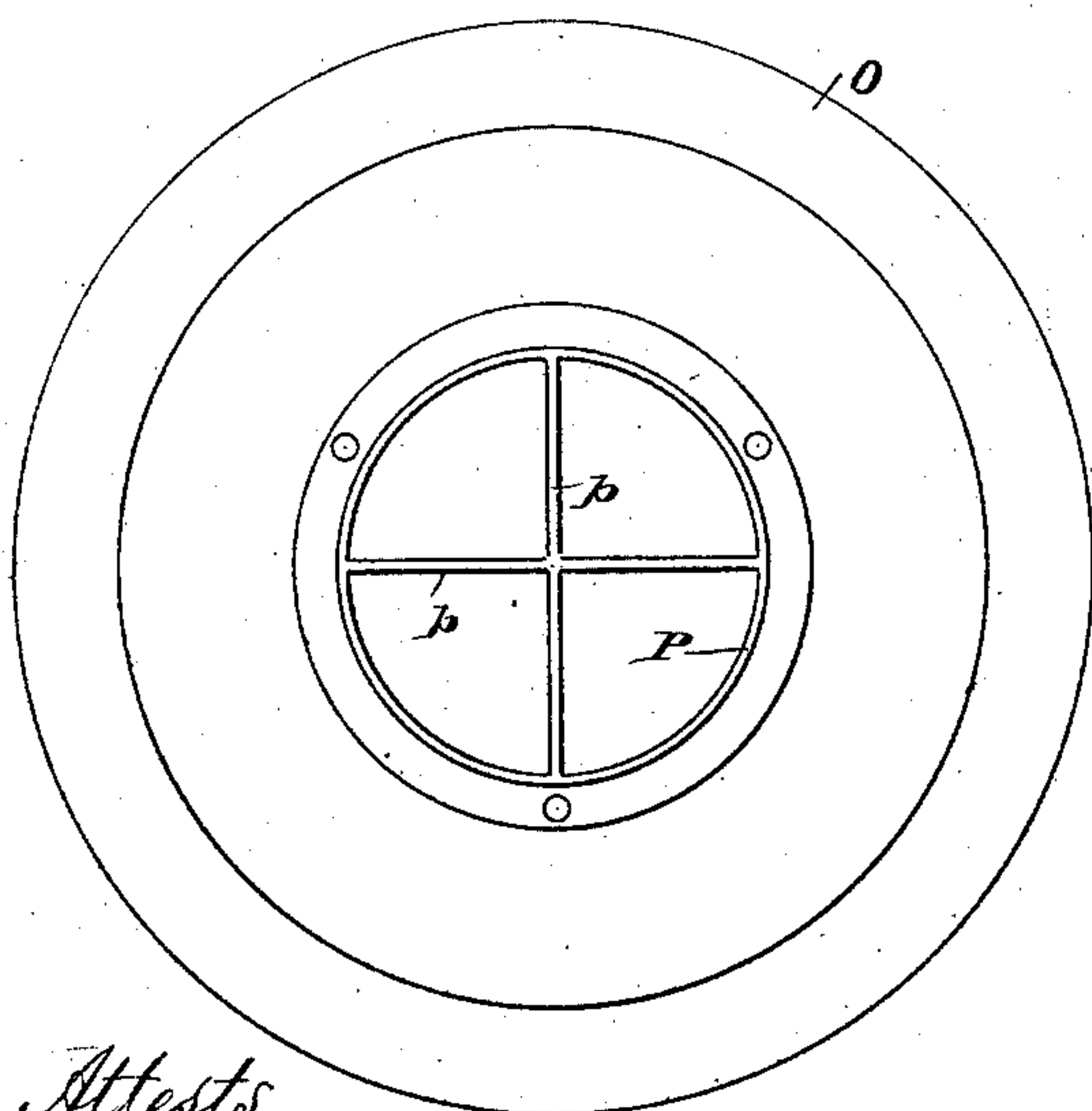
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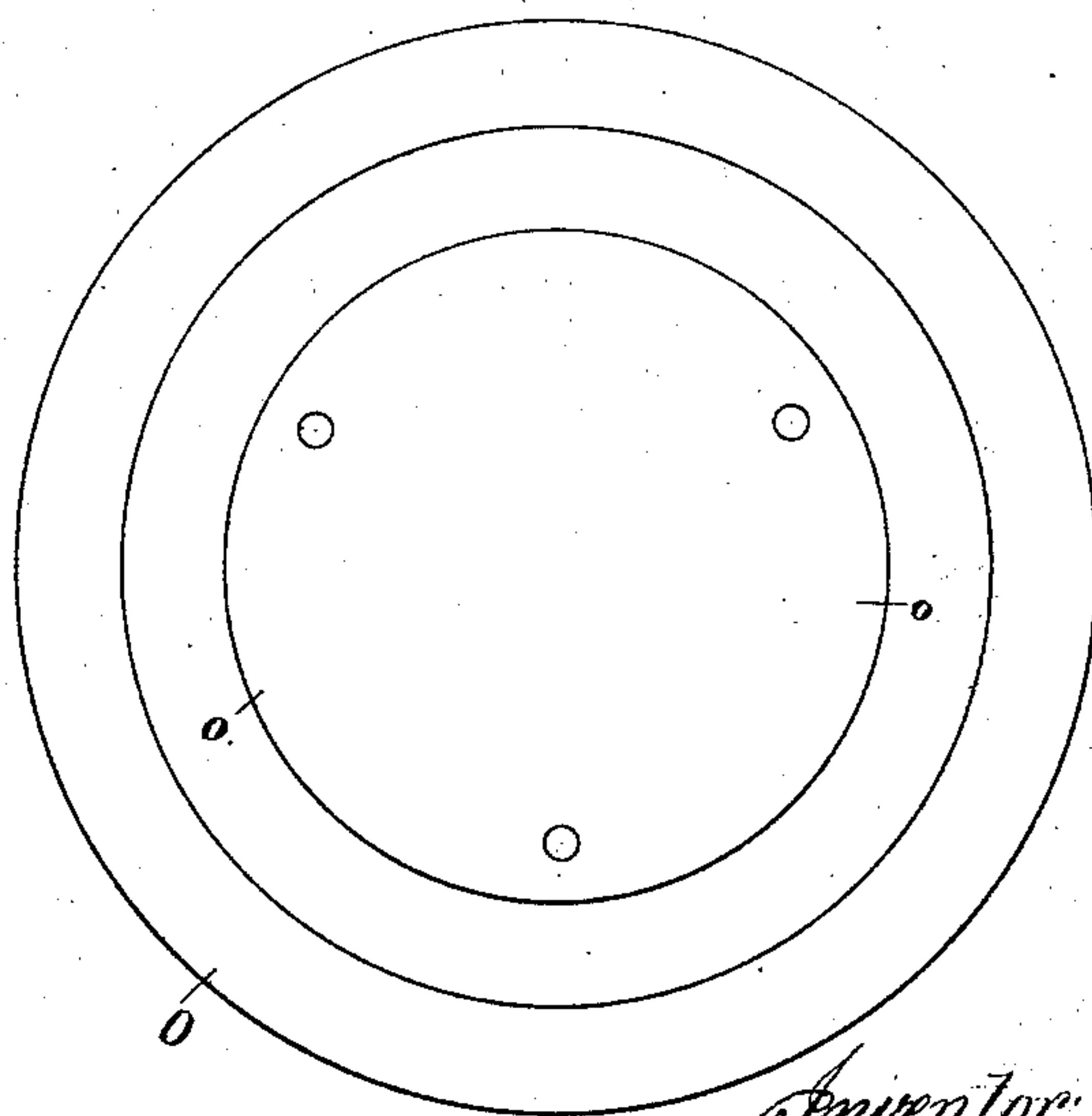
*Fig 3.*



*Fig 4.*



*Fig 5.*



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Fig 6.

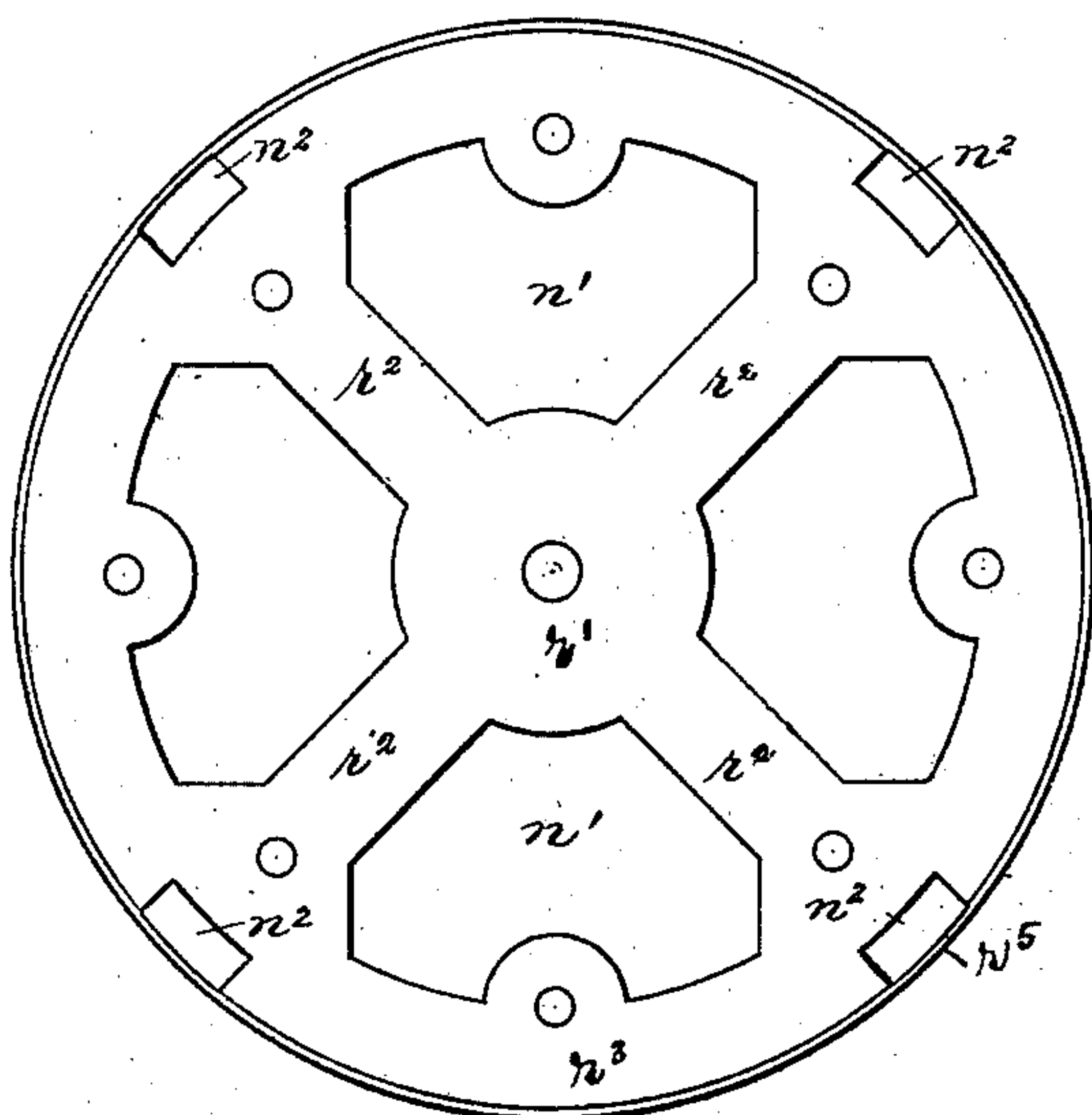


Fig 7.

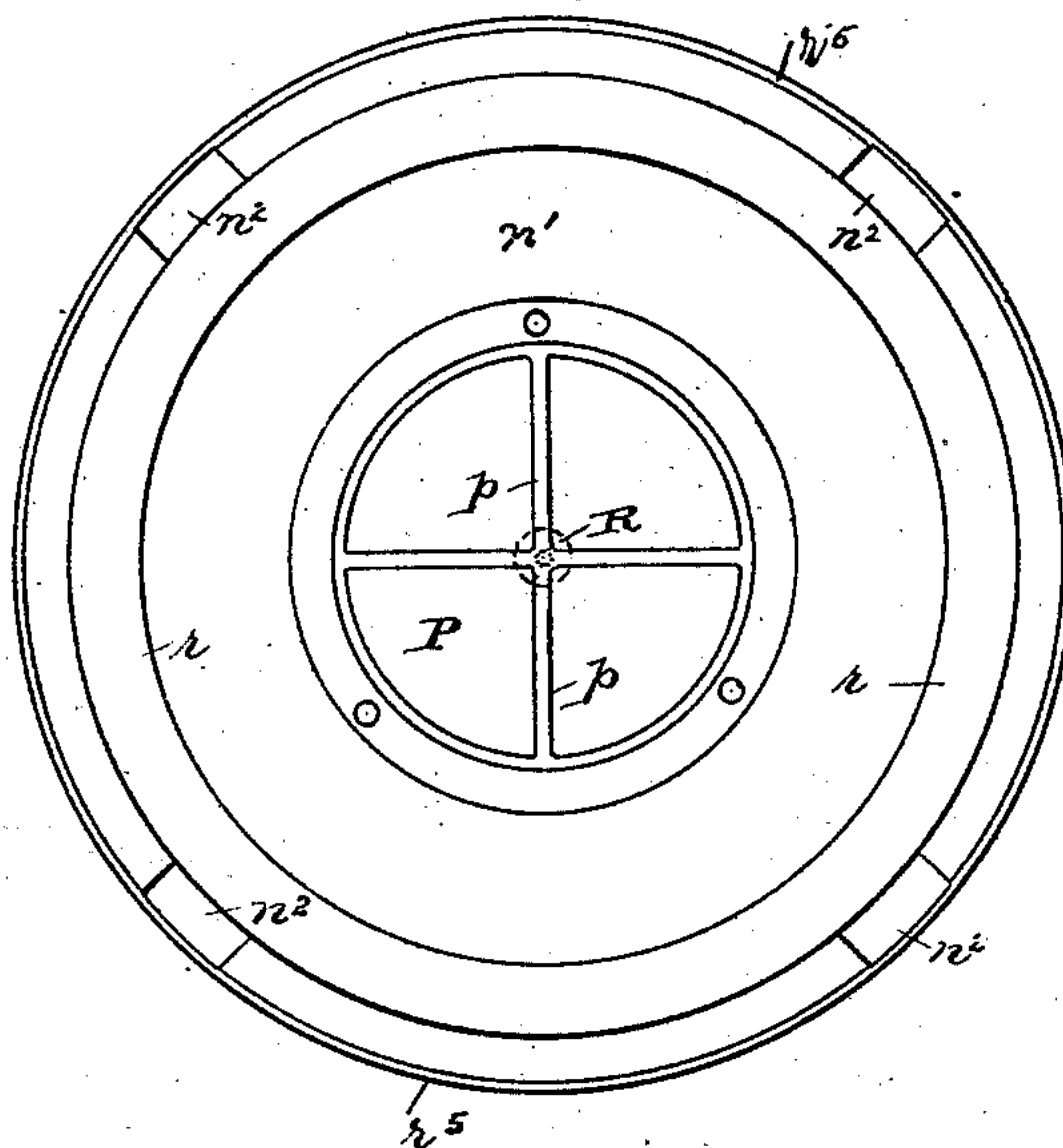


Fig 8.

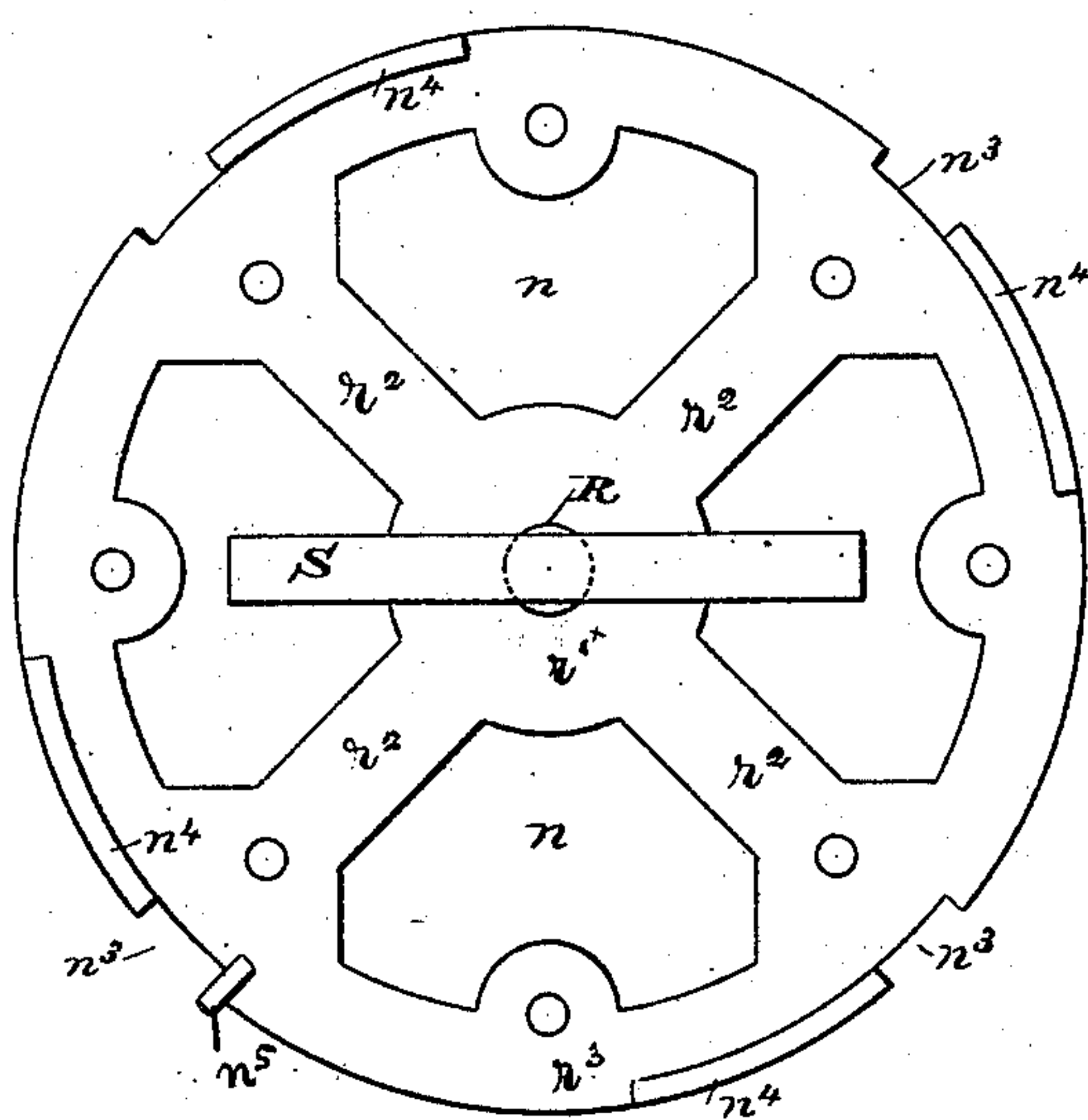
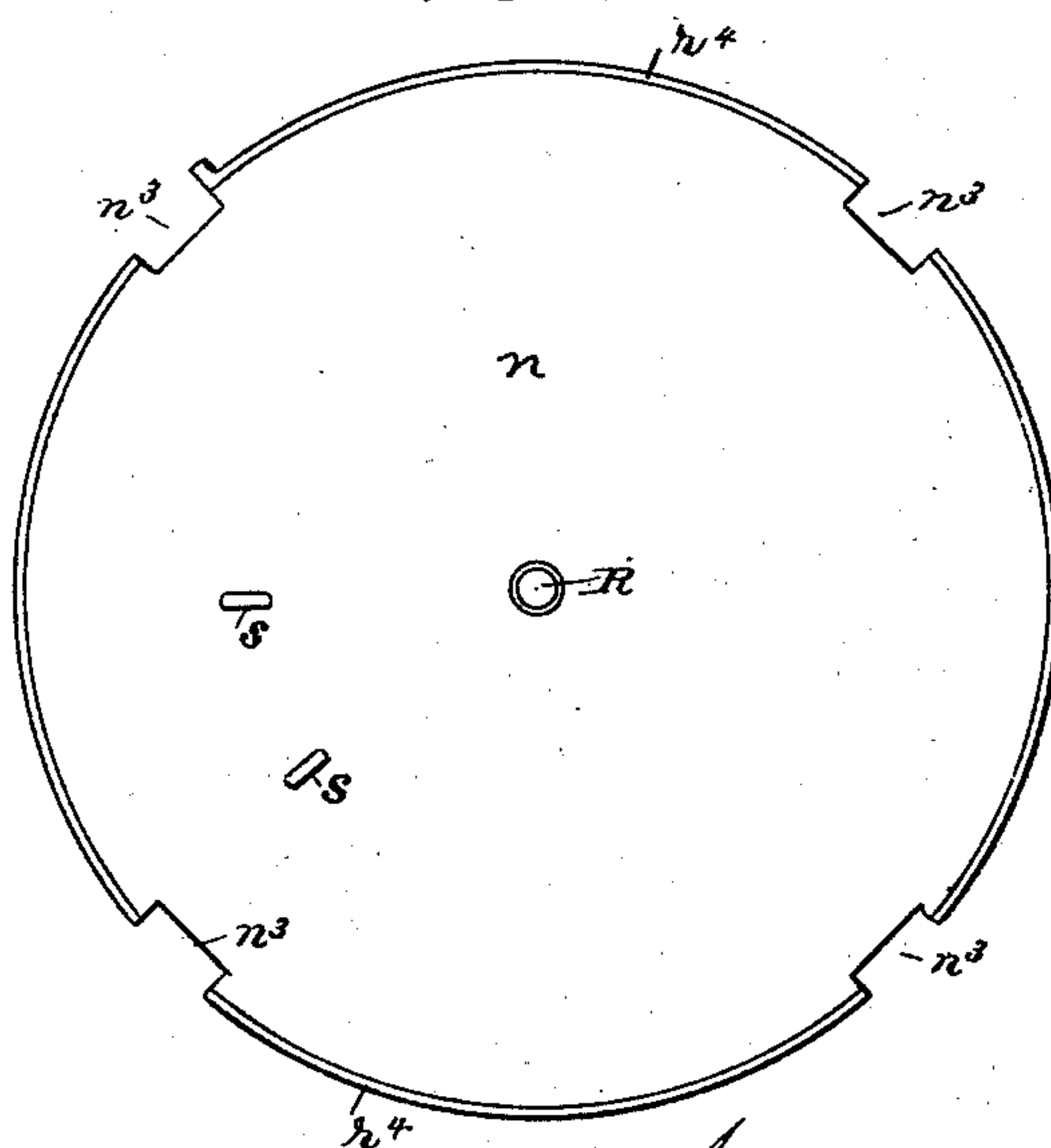


Fig 9.



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# UNITED STATES PATENT OFFICE.

ADELBERT L. JOHNSON, OF ATCHISON, ASSIGNOR OF ONE-HALF TO H. R. TOMLINSON, OF LAWRENCE, KANSAS.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 281,882, dated July 24, 1883.

Application filed October 18, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, ADELBERT L. JOHNSON, of Atchison, in the county of Atchison and State of Kansas, have invented an Improved Washing-Machine, of which the following is a specification.

My invention relates to those washing-machines in which a barrel-formed receptacle is employed, the barrel being revolved endwise. In my improvement I employ a supporting-frame having a pair of longitudinal base-pieces secured together by transverse ties, which are bolted thereto. At one end of the frame are a pair of uprights slotted at their upper ends and adapted to support the barrel. A pair of standards are located at the front end of the frame to support a shelf or table, which in turn supports a wringer-frame, and a hinged apron, held out of the way of the barrel when not in use by a suitable fastening on the wringer-frame while the barrel is turned. This form of supporting-frame has the advantage over others of being readily put together for use and as easily separated for shipment. The barrel is provided on each side with studs or trunnions, forming journals which have bearing in the slotted uprights. A spur-wheel is located on the end of one journal, which has additional bearing in a strap-plate secured to one of the uprights, the strap-plate, also, with said upright, supporting a pinion gearing with the spur-wheel, having a short shaft turning in the strap-plate, and carrying at its outer end a winch or crank handle for imparting the desired rotary motion to the barrel. On the opposite side the barrel is provided with an eye or ring engaged by a hook for holding the barrel in inclined position, and secured to the upright on that side. The barrel-heads are each provided on the inside with an open circular chamber divided by cross-pieces or partitions. The barrel is provided with ordinary metal bands; but the top band is formed with vertical lugs having transverse grooves or recesses on the inside inclined at top, the lugs passing through recesses in a lower stationary member of a double barrel-head having wedge-shaped cleats on an upper rotatable member engaging in the

grooves to bind the head to its seat. Each member of the head has a peripheral binding and flat radial bands extending to the center on the upper side to strengthen the wooden portion and prevent it warping. Studs or pins on the inner face of one member play between two radial arms on the inner face of the opposite member to limit the rotation of the upper member, which is pivoted by a center bolt to the lower member. The lower member is provided with a packing-ring. A flattened weight is secured to the lower barrel-head to counterbalance the weight of the additional member of the upper head.

My invention consists in details of construction hereinafter described and claimed.

In order that the invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a side view or elevation of my improved washing-machine. Fig. 2 is a view or elevation of the opposite side, the upper head being omitted and the barrel in position for removing the contents. Fig. 3 is a top view of the barrel, the upper head being shown unfastened in dotted lines. Figs. 4 and 5 are respectively top and bottom views of the lower head. Figs. 6 and 7 are respectively top and bottom views of the lower member of the upper head. Figs. 8 and 9 are respectively top and bottom views of the upper member of the upper head.

A A are a pair of longitudinal base-pieces secured together by transverse pieces B B and screw-bolts C C C' C'.

D D' are a pair of uprights at the rear end of the frame, secured by the screws C C, and formed with slots *d d* to receive the trunnions on the barrel.

At the front end of the frame are a pair of standards, E E, secured by the screws C' C', and supporting a shelf or table, F, on which is secured a convex-concave upright block, *f*, adapted to form a support to a wringer. (Not shown.)

On the rear side of the block, also secured to the table by a suitable hinge, *h*, is a platform, H, adapted to be raised and lowered,



and formed with upturned flanges  $h'$ , so as to, when in its lowest inclined position, direct the drainings from the clothes into the barrel, on which its outer end rests when down. When raised the platform rests against the wringer-block, and is secured in this position by a hook,  $h^2$ .

I is the barrel-body, bound by metal bands  $i$   $i'$ , and provided on each side with studs or trunnions  $i^2$   $i^3$ , by which it is journaled in the slots  $d$   $d'$  of the uprights, the stud or trunnion  $i^3$  being extended to receive a spur-wheel, J, and having additional bearing in a strap-plate, K, secured to the upright D.

J' is a pinion secured to a short shaft,  $j$ , turning in the upright D and strap-plate K, the pinion meshing with the spur-wheel, and the shaft carrying on its outer end a winch or crank handle, L, by which, through the described mechanism, the barrel is revolved.

On the opposite side of the barrel is an eye or ring,  $m$ , engaged by a hook, M, on the upright D' to retain the barrel, when open, in inclined position toward the wringer and platform.

N is the upper barrel-head, consisting of upper rotatable member,  $n$ , and lower stationary member,  $n'$ , so as to provide a double barrel-head.

O is the lower head, having on the outside a weight,  $o$ , to counterbalance the weight of the upper head. Both the upper and lower heads are provided on the inside with an open chamber, P, having cross-pieces or partitions  $p$ . The lower head is secured in the usual manner by tongue and groove, but the upper head is attached as now described.

Q are lugs projecting perpendicularly from the upper band,  $i'$ , and formed with transverse grooves  $q$  inclined at top. These lugs are inserted through recesses  $n^2$  in the periphery of the lower member, and through recesses  $n^3$  in the periphery of the upper member. Inclined cleats  $n^4$  on the upper member enter the grooves of the lugs to bind the head to its seat when the upper member is turned on the lower member on a center pin, R. A packing,  $r$ , is provided on the bottom of the lower member. Both members are metal-bound on their upper sides, as shown at  $r'$   $r'$ , thus providing flat radial arms  $r^2$   $r^2$ , outer portions,  $r^3$   $r^3$ , and pe-

ripheral binding  $r^4$   $r^5$ . This binding strengthens the members of the head, and the binding on the lower member forms a smooth bearing for the upper member. Stud  $s$  on the under side of the upper member play between the arms of the binding on the upper side of the lower member to limit the movement of the upper member, or a stop,  $n^5$ , may be employed as an equivalent.

S is a handle by which the upper member is turned. As my upper barrel-head consists of two members, the upper one turning easily on the lower one, the fastening of the upper head does not disturb the lower fixed member, which is provided with the packing which seals the barrel.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The combination of base A A B B, uprights D D', having slots  $d$   $d'$ , standards E E, table F, wringer-support, washing-barrel I, supported by its trunnions in the slots of the uprights, strap-plate K, secured to upright D, spur-wheel J, and pinion J', journaled in the strap-plate and upright D, and a suitable handle for turning the journal of the pinion to revolve the barrel and adjust it to the table, as set forth.

2. The washing-barrel I, having suitable lower head, the top band,  $i'$ , having lugs Q, formed with grooves on the inside inclined at top, and the upper head, N, consisting of a stationary lower member,  $n'$ , having packing  $r$  on the under side, recesses  $n^2$  at the edge, peripheral binding  $r^5$ , and binding  $r'$   $r^2$   $r^3$  on the upper side, an upper rotatable member,  $n$ , having recesses  $n^3$  at the edge, peripheral binding  $r^5$ , binding  $r'$   $r^2$   $r^3$ , and inclined cleats  $n^4$ , and a center pin, R, pivoting the upper member to the lower member, as set forth.

3. The washing-barrel I, having lugs Q, the upper head, N, and lower head, O, the upper head consisting of two metal-bound members,  $n$   $n'$ , and the lower head provided with counterbalance-weight  $o$ , as set forth.

ADELBERT L. JOHNSON.

Witnesses:

J. G. MILLER,  
W. S. BRIGGS.