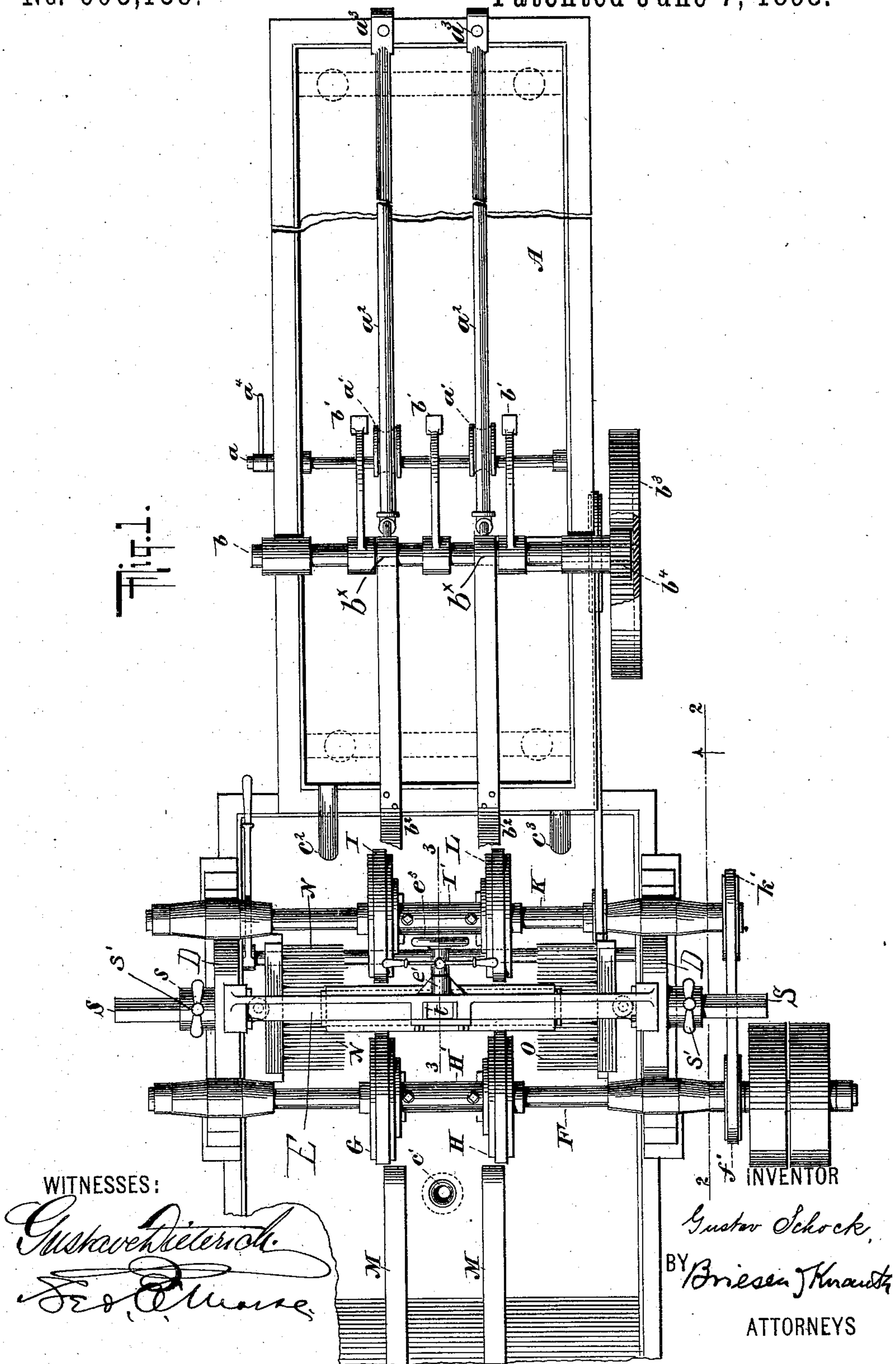


3 Sheets—Sheet 1.

No. 605,138.

Patented June 7, 1898.



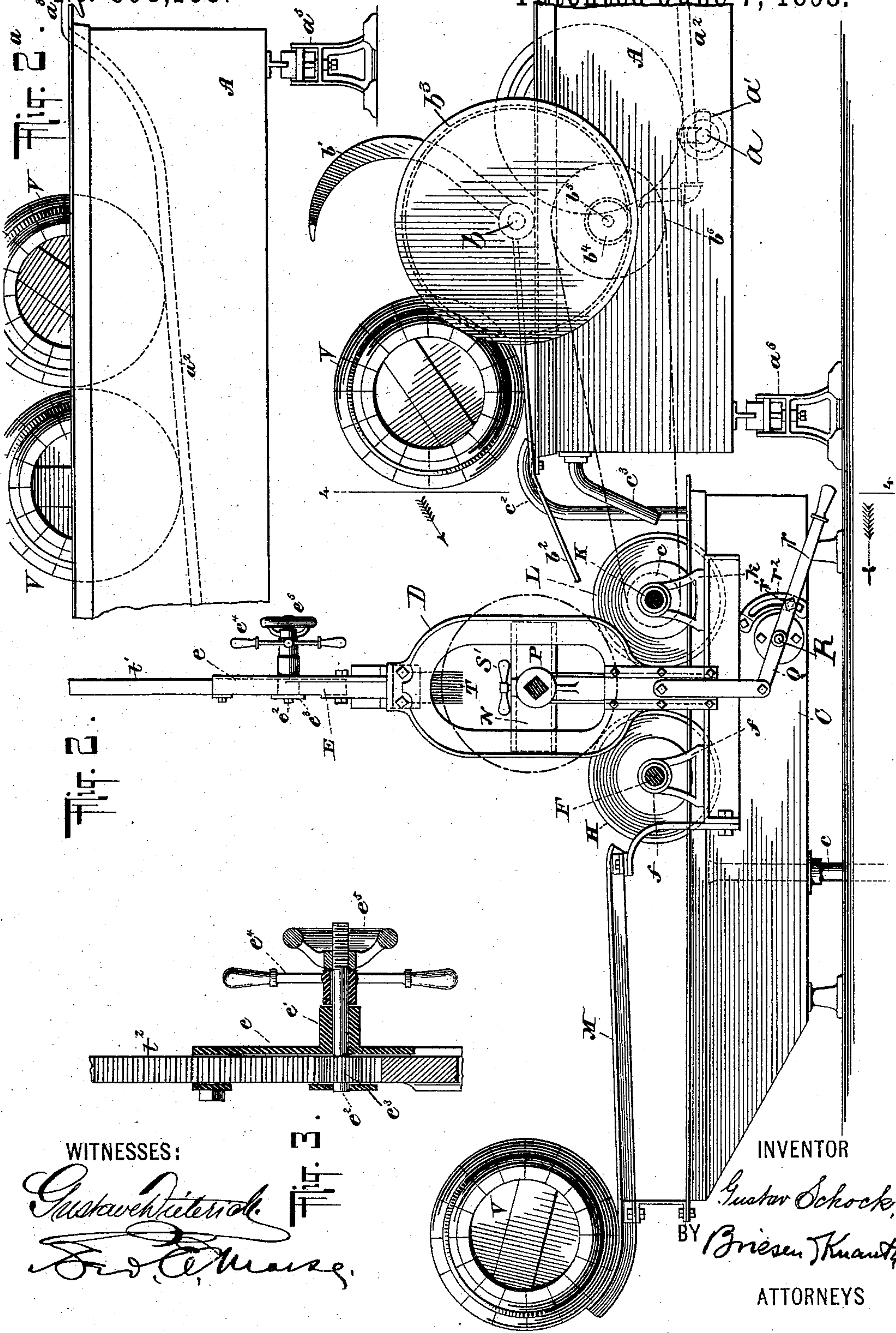
(No Model.)

3 Sheets—Sheet 2.

G. SCHOCK.
BARREL WASHER.

No. 605,138.

Patented June 7, 1898.



WITNESSES:

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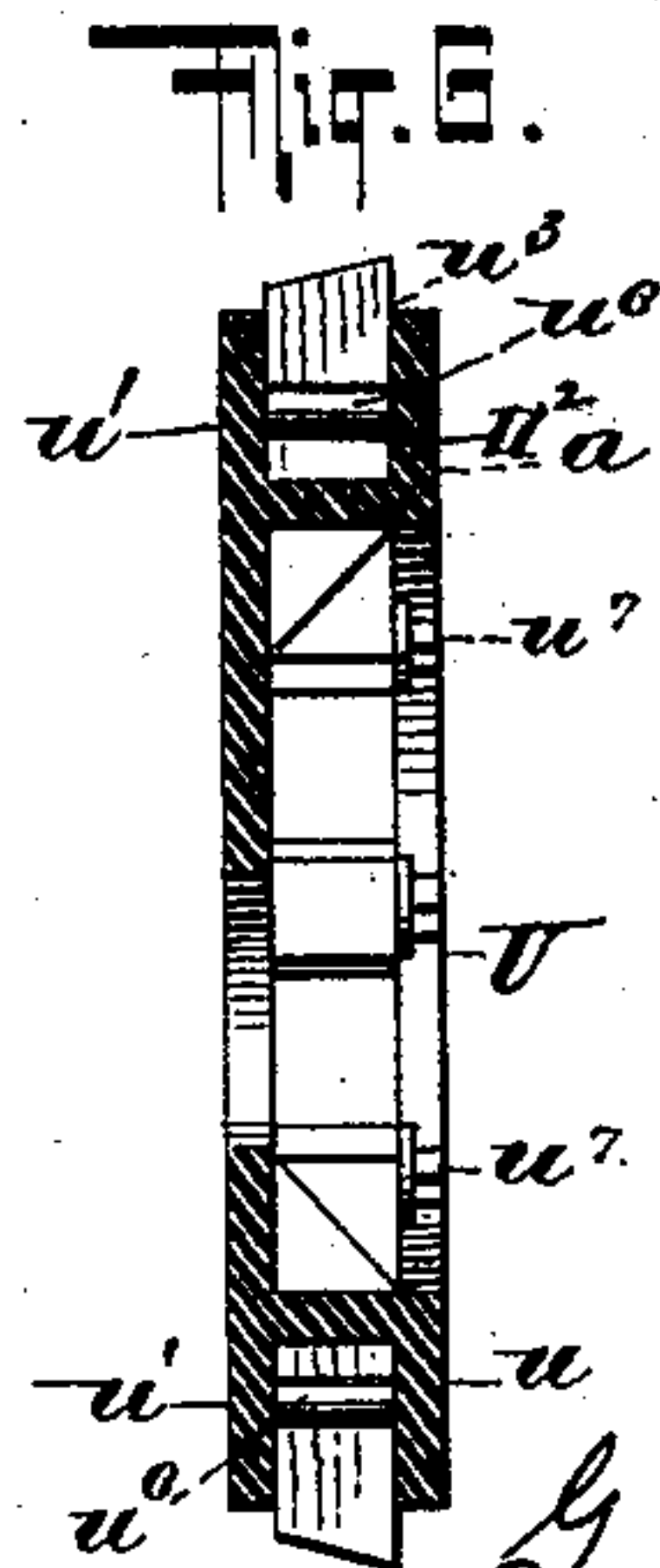
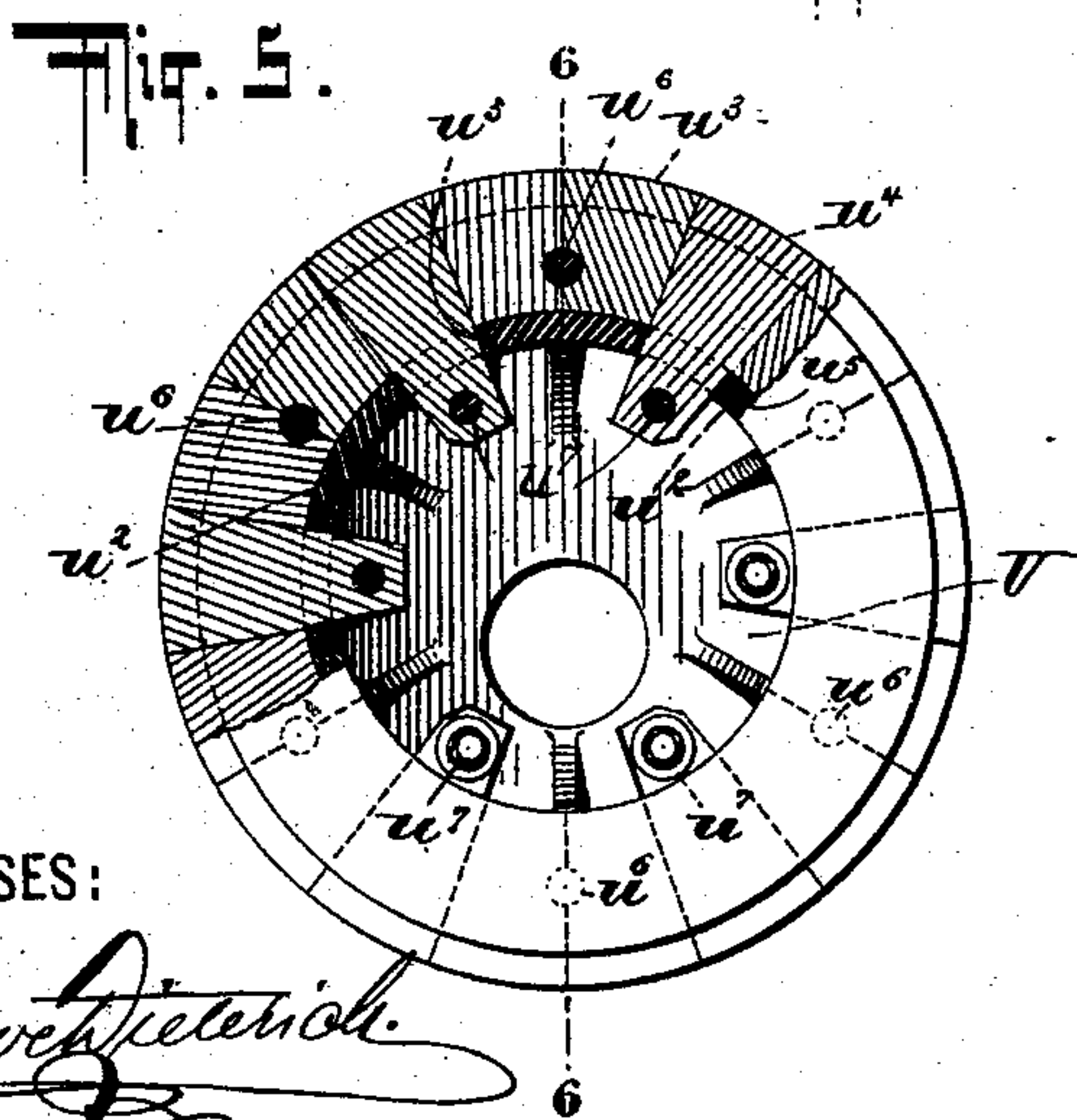
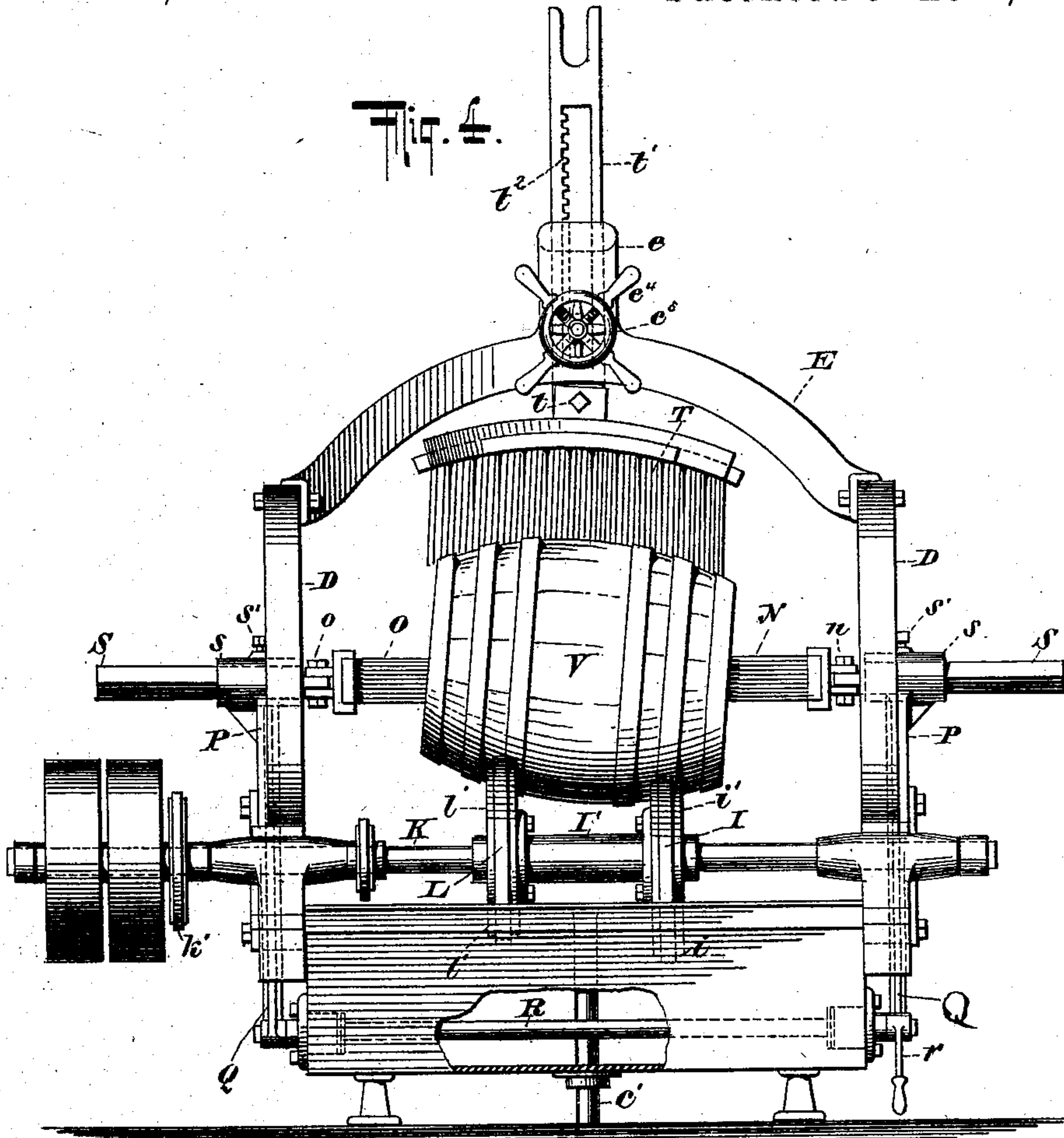
(No Model.)

3 Sheets—Sheet 3.

G. SCHOCK.
BARREL WASHER.

No. 605,138.

Patented June 7, 1898.



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UNITED STATES PATENT OFFICE.

GUSTAV SCHOCK, OF NEW YORK, N. Y.

BARREL-WASHER.

SPECIFICATION forming part of Letters Patent No. 605,138, dated June 7, 1898.

Application filed May 14, 1897. Serial No. 636,435. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV SCHOCK, a resident of the city, county, and State of New York, have invented certain new and useful
5 Improvements in Apparatus for Soaking, Scrubbing, and Washing Barrels by One Continuous Operation, of which the following is a specification.

My invention relates to self-acting keg or
10 barrel scrubbers and washers, and has for its object to produce a machine which will supply a keg with a predetermined quantity of water and place the same in a scrubber and which will efficiently soak, scrub, and wash
15 the keg at one continuous operation.

A further object of my invention is to improve the construction of keg washers and scrubbers, all of which will be hereinafter set forth and claimed.

20 My invention will be understood by referring to the accompanying drawings, in which—

Figure 1 is a broken-away plan view of a keg scrubbing and washing apparatus embodying my invention. Fig. 2 is a side elevation of the left-hand portion of the mechanism illustrated in Fig. 1, Fig. 2^a being an elevation of the right-hand portion, the section-line on which the sectional portion of
25 Fig. 2 is taken being the line 2 2 in Fig. 1. Fig. 3 is a detail sectional view of the mechanism for raising and lowering the upper brush of the scrubber and for locking the same in position, the section being taken on the line 3 3 of Fig. 1. Fig. 4 is an end elevation of the keg scrubbing and washing apparatus, the direction of view being the direction indicated by the arrows adjacent the line
30 4 4 in Fig. 2. Fig. 5 is a broken-away detail sectional view of the wheels for supporting and rotating the keg while it is being washed and scrubbed, and Fig. 6 is a transverse section on line 6 6 of Fig. 5.

Referring particularly to Figs. 1, 2, and 2^a,
45 A is a barrel or keg feed tank which is filled with water up to a predetermined line. Disposed across the barrel-feed tank is a rock-shaft *a*, provided with arms *a'*, which are recessed, as indicated in Fig. 1, to receive the
50 free ends of the inclined runs *a*², which are shown as provided with hooks *a*³ at the opposite ends that are hooked over the edge of the

tank and supported therein. These runs, which I term "gravity-runs," swing freely on their hooks and are swung up and down by
55 the rock-shaft *a* by means of the handle *a*⁴, which is connected to said rock-shaft on the outside of the casing. The kegs, having previously had their bungs driven out or opened, are placed on the runs and water from the
60 tank enters the said kegs, the amount of water entering being regulated by raising and lowering the free ends of the runs by means of the rock-shaft *a*. The barrel-feed tank is shown as mounted on adjustable legs *a*⁵, so
65 as to regulate the position of the said tank and to level it. Located adjacent to the rock-shaft *a* is a shaft *b*, which is provided with hooks or arms *b'* to lift the kegs and convey them to the run *b*², along which they pass to
70 the scrubber. The run *b*² is supported at one end by hook-like portions *b*^x, which partly surround the shaft *b*, and at the other end by the tank A, to which it is bolted. By this means the run *b*² is supported so that it offers
75 no obstruction to the rotating arms or hooks *b'*. The shaft *b* may be rotated in any suitable manner. In the present instance I have shown the shaft as provided with an internal gear *b*³, with which meshes a pinion *b*⁴ on a
80 shaft *b*⁵, which also carries a wheel *b*⁶, belted to a wheel *c* on the shaft K of the barrel-scrubber, as will be explained.

The barrel-scrubber is shown in the present instance as consisting of a waste-tank C,
85 upon which yokes or standards D are mounted, which yokes or standards are joined at their top by a brace or tie-bar E. Shafts F K are shown mounted in brackets *f* *k* on the waste-tank and are provided with wheels or
90 rollers which are specially arranged to give the barrel both a rotating and oscillating motion, so that as the barrel is rotated and oscillated the water therein will be slushed against the heads of the barrel, so as to thoroughly wash the said heads. These wheels
95 G, H, I, and L are shown arranged as follows: One pair G H are concentrically mounted on their shaft F and are bolted to an iron sleeve H', which is in turn bolted to the shaft F, so
100 that the said wheels will turn together. The wheels I and L are eccentrically mounted with respect to their shafts, being bolted to an iron sleeve I', which is in turn secured to the

shaft. The arrangement of these eccentric wheels is clearly shown in Fig. 4, wherein it will be observed that the higher side l of the wheel L is placed diametrically opposite to the higher portion i of the wheel I, the lower portions l' and i' of the respective wheels being similarly oppositely placed, so that as the wheels turn together and the keg or barrel rests upon them the said barrel will be given a swinging or oscillating as well as rotary motion. The wheels G II derive their power from the shaft F, which receives its power through a pulley or pulleys of suitable character, and the wheels I L receive their power from the shaft K, which is driven from the shaft F in any suitable manner—as, for instance, by belting the wheel h' on the shaft K to the wheel f' on the shaft F—motion being communicated to the shaft K, as explained, by means of a belt belting the wheel c on the shaft K with the wheel b^6 on the shaft b , which drives the hooks or arms b' .

By placing the concentrically-mounted wheels and eccentrically-mounted wheels in the machine in the manner shown and described I am enabled to provide an oscillation and rotation of the keg or barrel and am at the same time assured of the proper delivery of the barrel from the scrubber to the receiving-run when the hooks b' are rotated to convey a fresh keg to the scrubber to replace the one being operated upon. The waste-tank is shown as provided with a run or table M, upon which the kegs are discharged from the scrubber and from which the said kegs are taken to be further rinsed inside. The waste-tank is also provided with a waste-pipe c' . The supply to the barrel-feed tank is brought by means of the pipe c^2 , the overflow-pipe c^3 of the barrel-feed tank discharging into the waste-tank C. The side brushes N O are mounted in vertically-sliding cross-heads P, which are connected to arms Q on a rock-shaft R, which are operated by a handle r , which is locked by a set-screw r' , cooperating with an are r^2 , mounted on the side of the waste-tank. By this means the side brushes are made adjustable up and down. They are likewise adjustable toward and from the barrel-heads, being pivoted at n o to sliding rods S, which slide in sleeves s in the cross-heads P and are held in adjusted positions by means of set-screws $s' s'$. The upper brush T is pivoted at t to a rack-bar t' , which slides in a guide e , secured to or integral with the tie-bar or bracket E. This tie-bar or bracket is provided with a boss e' , through which passes a shaft e^2 , flanged at the outer end and carrying a pinion e^3 , which engages the teeth t^2 of the rack t' . This shaft is turned by means of a hand-wheel e^4 , which is connected with said shaft by means of a feather, so that the hand-wheel and shaft will rotate together, but will allow a slight longitudinal movement of the shaft independent of the hand-wheel. The hand-wheel is rotated to raise and lower the brush, the said parts being held in their

adjusted position by means of a jam-nut e^5 on a screw-threaded portion of the shaft e^2 , it being understood that as the jam-nut E^5 is tightened it draws the flange on the shaft e^2 in contact with the rack-bar t' and at the same time causes the hub on the hand-wheel to be jammed against the face of the boss e' . It will thus be observed that all the brushes are universally adjustable. The wheels upon which the kegs rest consist, preferably, of a cast-metal hub or spider U, having an annular angular flange u and a flange u' , between which is a peripheral channel u^2 , in which blocks $u^3 u^4$ are carried. The bottom of this channel is pierced throughout its length with apertures u^5 for the passage of the blocks u^4 , as will be explained. The wheels are provided with dowel-pins u^6 , crossing the same at predetermined points and adapted to be seated within apertures contained in the edges of the blocks u^3 .

The manner of building up the wheel is as follows: Blocks u^3 are placed in position encircling the dowel-pins u^6 , and then the blocks u^4 are driven in and secured at their inner ends to the spider by means of bolts u^7 , thereby producing a compact coherent structure.

The operation of the device shown is as follows: The kegs V are placed in the inclined runs in the barrel-feed tank and running down the same by their own weight receive water by means of their bung-holes, and as a keg gets beneath the hooks or arms b' , which revolve in a direction opposite to that of the feed of the barrels on the inclined runs, the barrel is lifted off of the runs and is delivered to the run b^2 , whence it is discharged into the scrubber. It will be observed that as the revolving arms are ascending with one keg the next adjacent keg is carried by its own weight and the weight of the kegs behind it into position to be carried up on the next revolution of the arms. When a keg is conveyed to the inclined run b^2 by the arms, it is carried by said run to the keg-scrubber. When it is in the scrubber, the brushes are in contact with the keg while it is rotated by the wheels G II I L and thoroughly scrubbed and washed, the shaking motion imparted to the keg serving to thoroughly agitate the water inside of it, so as to reach all parts of the keg. After the keg has been subjected to the action of the scrubber it is automatically forced out and replaced by the next succeeding keg, grasped by the arms b' , and is forced along the run M, the wheels G II being of such height as to readily allow the keg to roll onto the run, as shown in Fig. 2, and thence it may be taken to be further washed by means of a jet-washer or other suitable contrivance.

It will be seen that by my invention I am enabled to provide a simple and efficient keg-scrubbing device which is adapted for all sizes of kegs and wherein weight of the kegs themselves is sufficient to automatically feed

them in the receiving or feeding tank to a position where they are automatically taken up and conveyed to the scrubbing device, automatically replacing the barrel being scrubbed. The various operations take place without the least liability of the apparatus being broken by a barrel jamming in its passage through the apparatus.

It will also be observed that the feeding-tank may be readily flooded and cleaned, as there is but little mechanism to interfere therewith, and that each keg receives a preliminary washing of considerable duration by reason of the fact that many kegs are contained in the feeding-trough at all times during the operation of the machine.

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

1. In a barrel-washing apparatus, the combination of a barrel-feed tank, an inclined run in said tank adapted to support a plurality of barrels and to enable them to move thereon in one direction and revolving hooks and means for revolving them in the opposite direction so that they will mechanically pick the first of said barrels off of the inclined run in the feed-tank, substantially as described.

2. In an apparatus for soaking, scrubbing and washing barrels at one continuous operation, the combination of a scrubbing device, a feed-tank, mechanism for transferring the barrels from the feed-tank to the scrubber and gravity-runs within the feed-tank for automatically feeding barrels in one direction to the transferring mechanism moving in the opposite direction.

3. In a barrel-washing apparatus, the combination of a barrel-feed tank, gravity-runs therein in pivotal connection with the tank, and means for adjusting the said runs so as to give the keg the desired quantity of water so that large and small packages can be supplied with water to the desired extent, substantially as described.

4. In a barrel-washing apparatus, the combination of a barrel-feed tank, movable gravity-runs therein, means for raising and low-

ering one end of the runs whereby to supply the barrels on the runs with the desired quantity of water, and means for lifting the barrels off of said runs.

5. In a barrel-washing apparatus, the combination of a barrel-feed tank, gravity-runs therein, arms for picking up barrels from the gravity-runs and delivering the same from the tank, and gear for operating the arms in a direction opposite to the motion of the barrels on the gravity-runs.

6. In a machine of the character described, the combination of barrel-carrying wheels comprising a spider grooved at the edge and provided with dowel-pins u^6 , a plurality of adjacent blocks u^3 embracing the dowel-pins, and key-blocks u^4 secured to the wheels to lock the blocks in place.

7. In an apparatus for soaking, scrubbing and washing barrels by one continuous operation, the combination of a barrel-feed tank, inclined runs therein, means for adjusting the runs to various inclinations, means for lifting the barrels from the barrel-feed tank, and a barrel-scrubber to which the barrels are delivered by the lifting mechanism, the barrel in the scrubber being automatically discharged and replaced by the next succeeding barrel delivered from the lifting means.

8. In an apparatus for soaking, scrubbing and washing barrels by one continuous operation, the combination of a barrel-feed tank adapted to contain a plurality of barrels, inclined gravity-runs within said tank along which runs the barrels are free to move from end to end, a barrel-scrubber, revolving hooks moving in a direction opposite to that of the feed of the barrels, said hooks being adapted to lift the first barrel of the series off the runs and deliver it from above to the scrubber, the barrel in the scrubber being automatically replaced by the next succeeding barrel delivered from the revolving hooks.

GUSTAV SCHOCK.

Witnesses:

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GEO. E. MORSE.