

**No. 616,761.**

**Patented Dec. 27, 1898.**

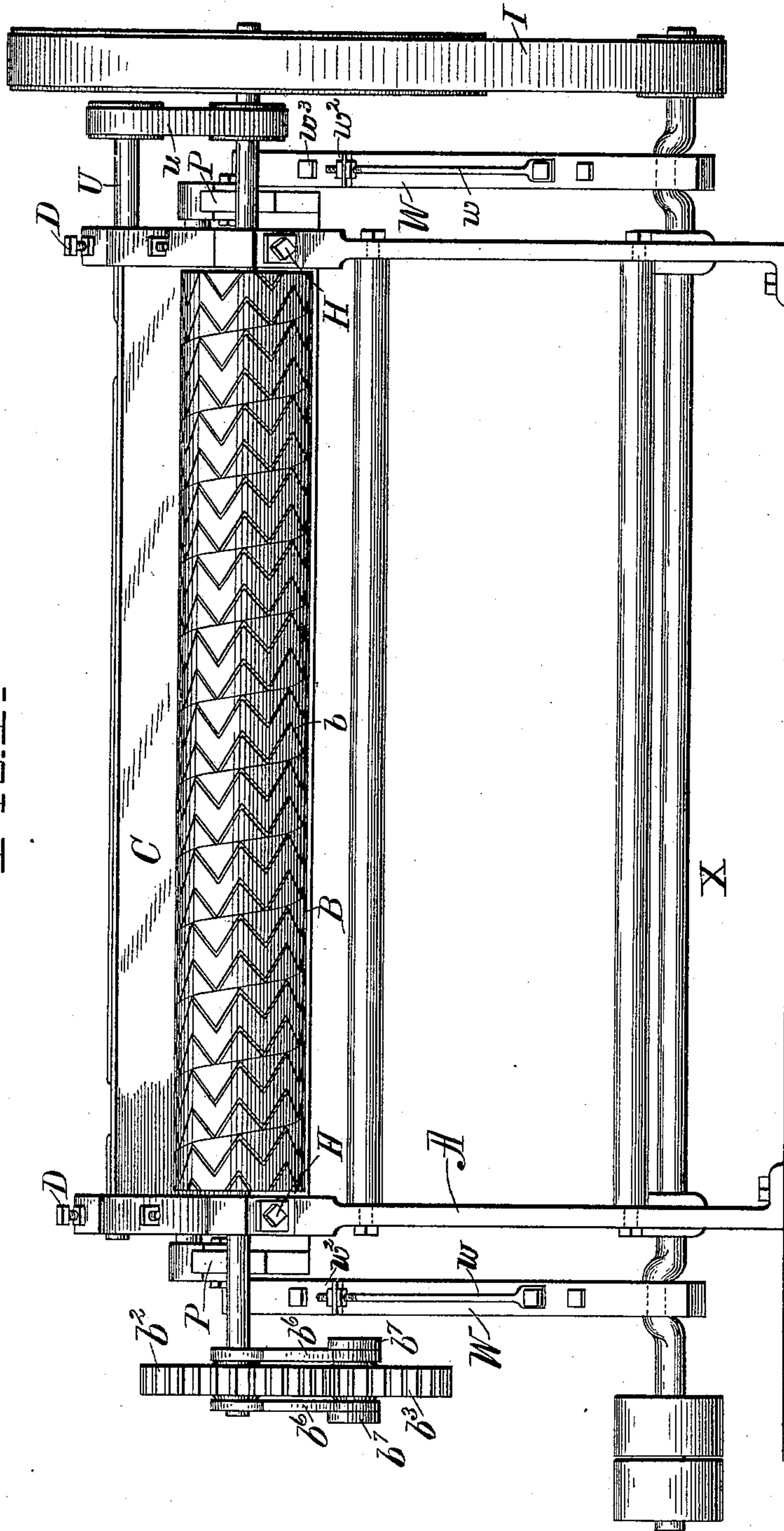
**W. H. BASKIN.**  
**COTTON GIN.**

(Application filed Jan. 8, 1898.)

(No Model.)

**3 Sheets—Sheet 1.**

11



Witnesses

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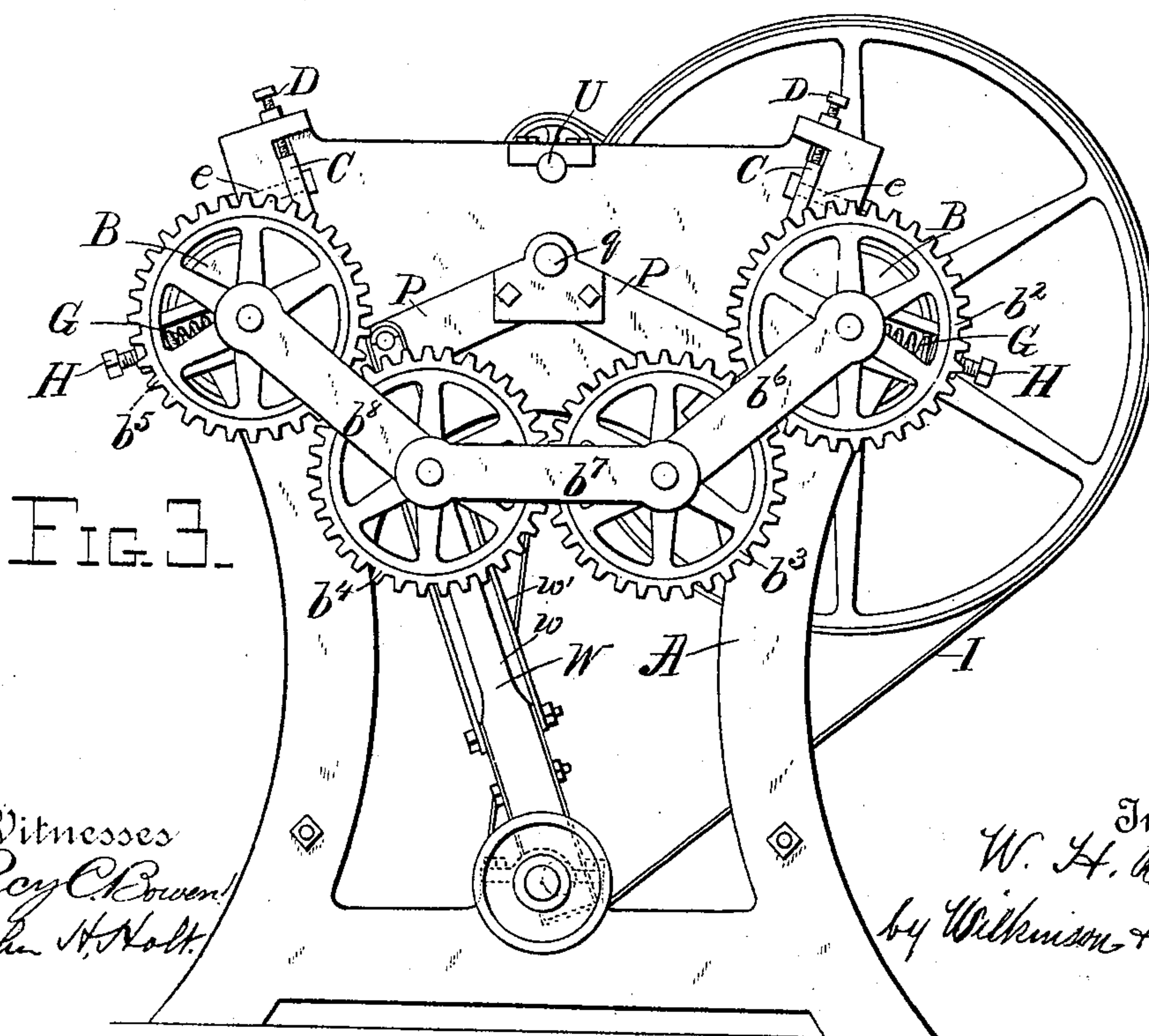
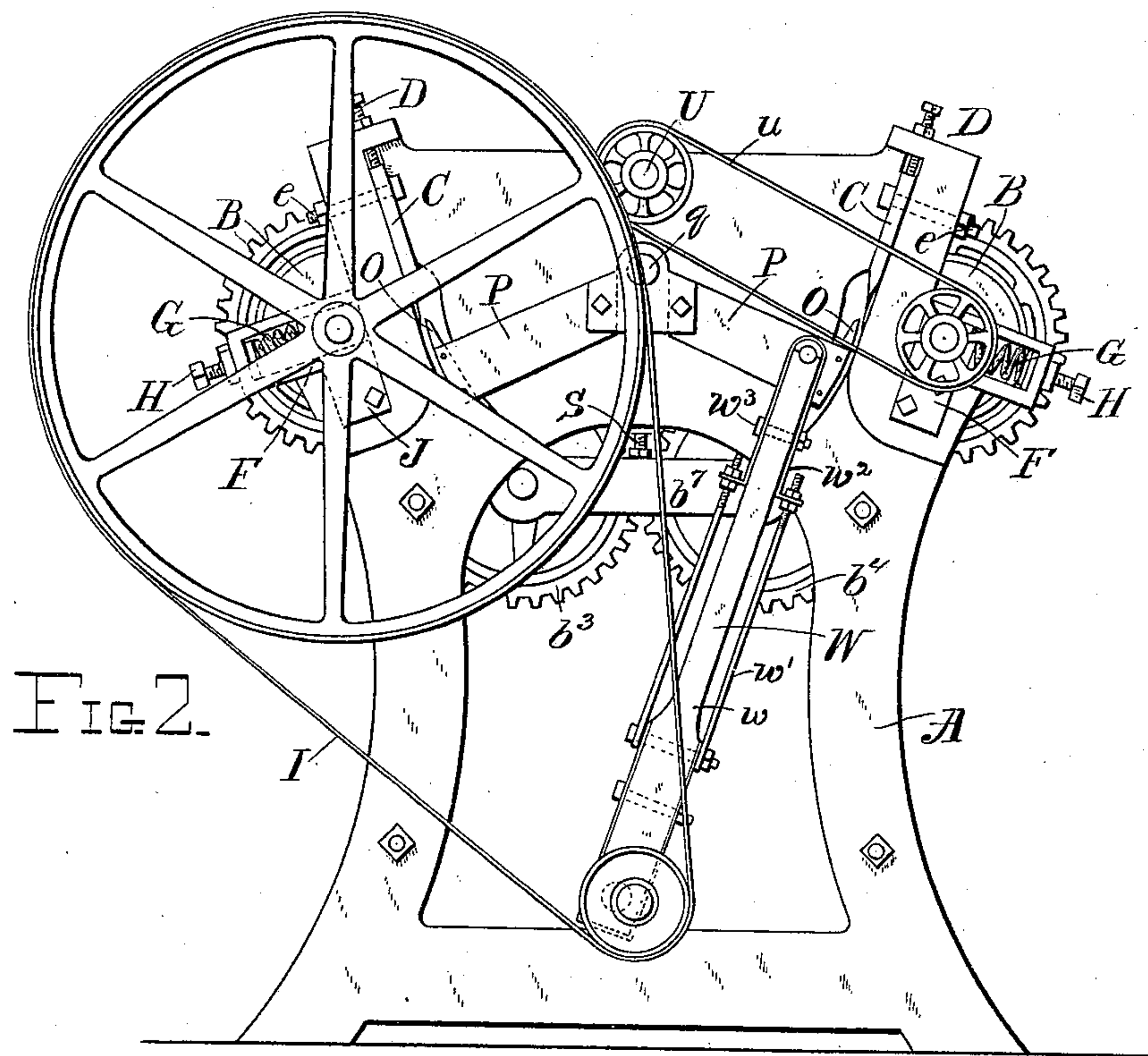
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(Application filed Jan. 8, 1898.)

(No Model.)

3 Sheets—Sheet 2.



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3 Sheets—Sheet 3.

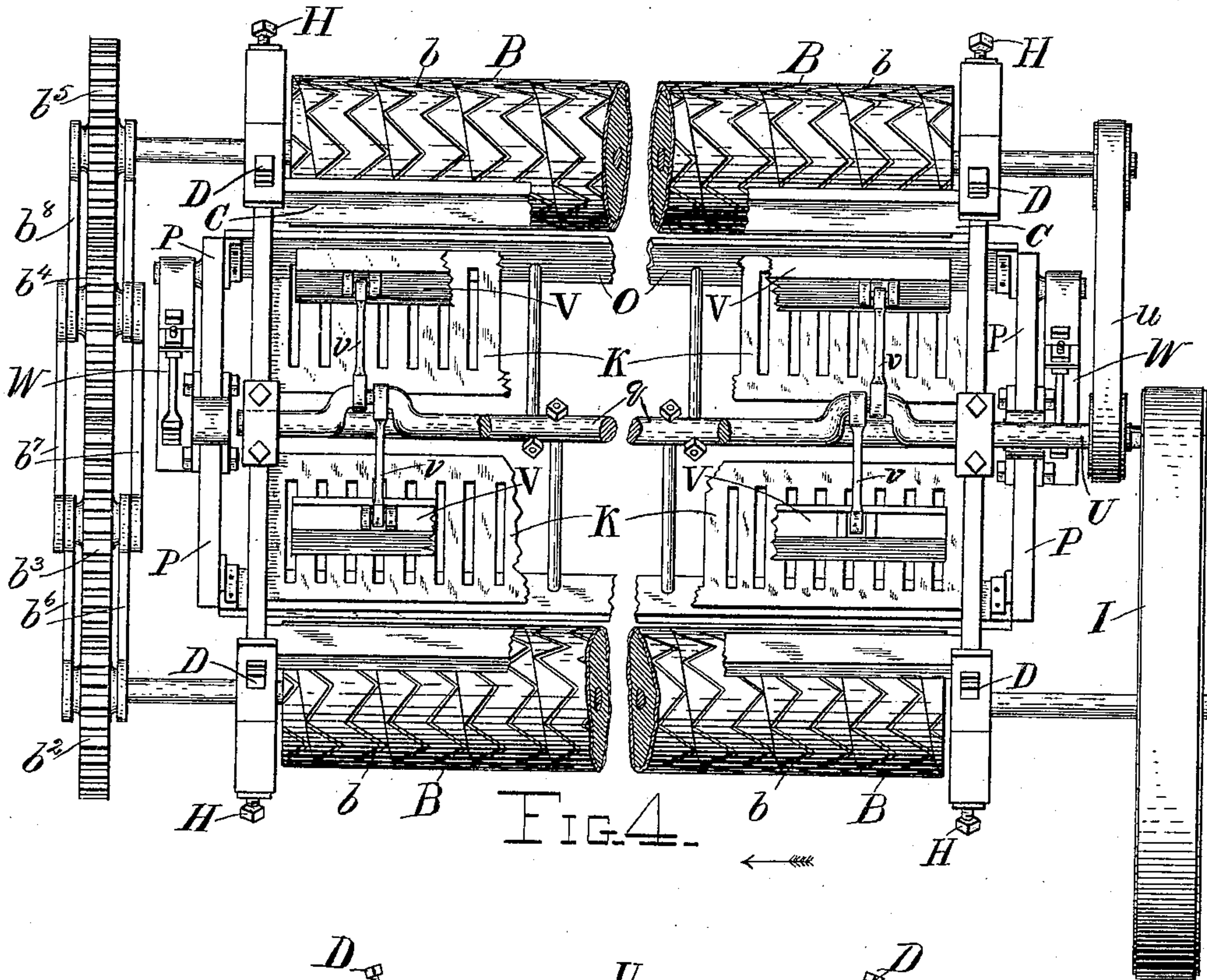


FIG. 4.

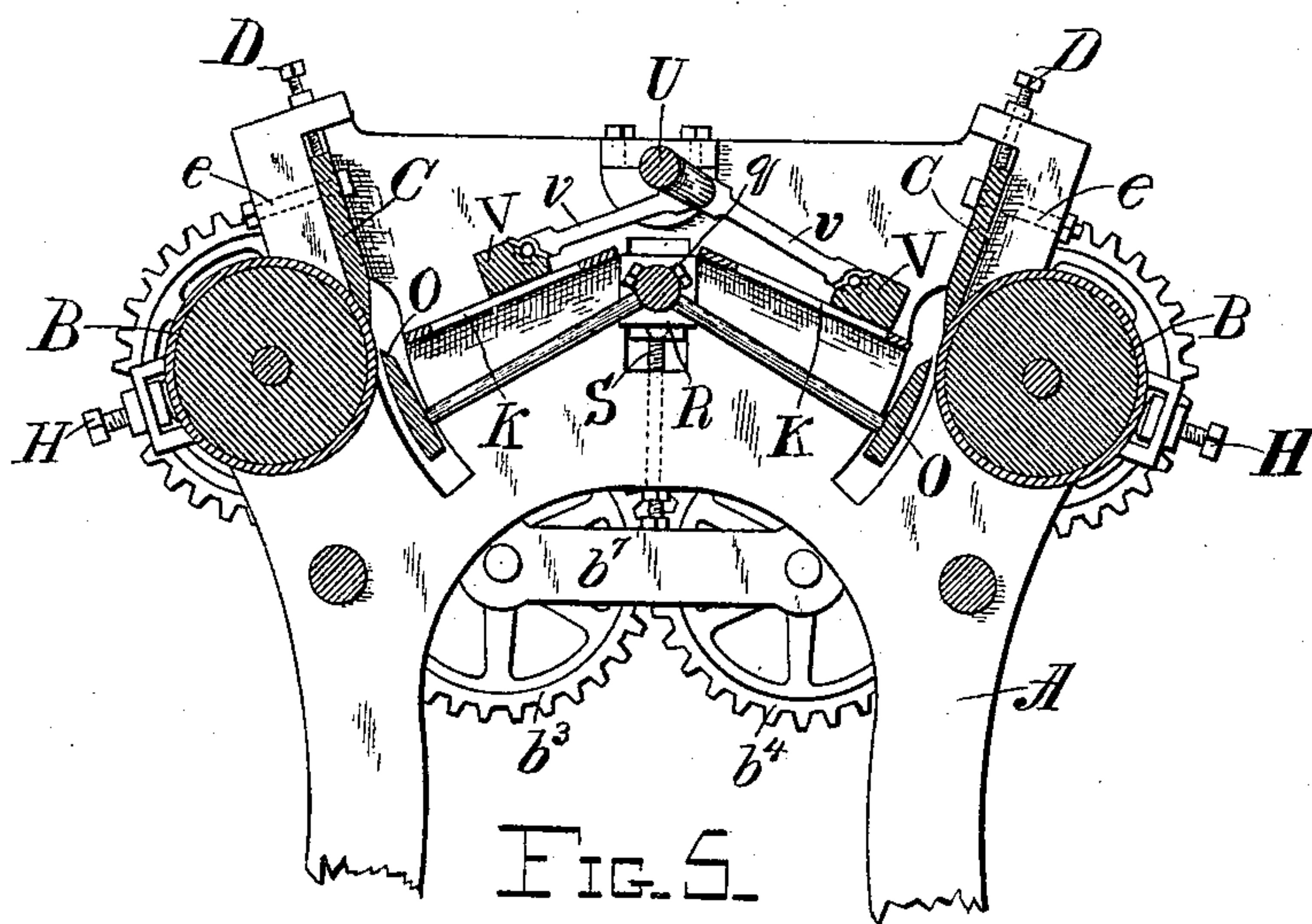


FIG. 5.

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# UNITED STATES PATENT OFFICE.

WILLIAM HATCHER BASKIN, OF WAY CROSS, GEORGIA, ASSIGNOR OF ONE-HALF TO WILLIAM MORRISON TOOMER, OF SAME PLACE.

## COTTON-GIN.

SPECIFICATION forming part of Letters Patent No. 616,761, dated December 27, 1898.

Application filed January 8, 1898. Serial No. 666,104. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HATCHER BASKIN, a citizen of the United States, residing at Way Cross, county of Ware, and State of Georgia, have invented certain new and useful Improvements in Cotton-Gins; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in cotton-gins such as are used for ginning sea-land or other long-staple cotton, and is designed to separate the seed more rapidly and at the same time to perform the work in a thorough manner without injuring the fiber in the slightest degree.

To this end my invention consists in the construction and combinations of parts, as hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of my improved gin. Fig. 2 is an end elevation of the same. Fig. 3 is an elevation of the end opposite to that shown in Fig. 2. Fig. 4 is a top plan view, the center of the machine being broken away; and Fig. 5 is a transverse vertical section of the same looking in the direction of the arrow in Fig. 4.

A represents a cast-iron frame, in the upper part of which two rollers B are mounted. These rollers run the whole length of the gin and are parallel to each other. Said rollers are covered with an elastic material *b*, such as very thick leather, applied spirally to the rollers and provided with zigzag grooves to clear the motes and trash from the hollow-ground knives C, which are located just above the rollers, extending the full length thereof and being parallel thereto. The edge of each of these knives is formed with a double curvature, the curvature on one side corresponding to the curve on the rollers B and on the other side corresponding with the path of the oscillating blades O. These knives are raised or lowered to suit to staple of the cotton by means of bolts D and are held to the

main frame A by bolts *e*, working in slots in said knives.

The rollers B are held in contact with the knives C by means of springs G, which press against the slotted bearings F, which in turn are held in the main frame by projections J, engaging in slots in said main frame A, and the tension of these springs may be regulated by the bolts H.

O represents two oscillating blades extending the full length of the rollers and connected at the ends with the arm-pieces P, which are rigidly secured to the rocker-shaft *q*, mounted in bearings R, which are adjustably supported in the slot in the frame A by the screws S and are held firmly in any desired position by stay-bolts. These blades work close to the hollow-ground knives within an eighth of an inch and are reciprocated by means of the levers W, driven by cranks upon the main shaft of the machine X. The usual stroke of these blades is about two and a half inches—three-fourths of an inch above the edge of the curved knives and one and three-fourths inches below.

V represents movable feeding devices located on each side of the machine, which are reciprocated by crank-arms upon the shaft U. These feeding devices rest directly upon the seed-grates K, which extend from the center of the machine nearly to the curved blades O. These grates are slightly inclined from the center toward the sides of the machine to feed the cotton to the rollers B. These grates are provided with elongated openings wide enough to allow the seed to pass through freely. The feed devices V are pivoted to the cranks *v*, by which they are connected to the shaft U. They thus rest upon the grates and by their reciprocating motion tend to keep the openings clear. At the other end of the machine gearing is shown by means of which the moving parts of the machine, with the exception of the blades O, are driven.

The shaft X through the belt I drives one of the rollers B. This shaft is provided with a gear *b*<sup>2</sup> upon its opposite ends, which is the



first of the train of gears  $b^2, b^3, b^4$ , and  $b^5$ . The last-named gear is secured to the shaft through roller B. These gear-wheels are mounted in pivoted arms  $b^6, b^7, b^8$ . Thus it will be seen that either of the rolls may yield against the springs G if any hard substance comes between it and one of the knives C, and yet the transmitting-gear will always be in an operative position. The shaft U is driven by a belt  $u$ , running from a pulley on a shaft of one of the rollers B to the pulley on the shaft U. The levers W are formed of a main part  $w$ , to which are attached on each side bolts  $w'$ , to which is fastened a strap  $w^2$ , which passes over the pivot-pin in the arm P. A transverse bolt  $w$  passes through this strap and holds it to the part  $u$ .

The operation of my device is as follows: Motion is imparted to shaft X from any convenient source of power. The lever-arms W cause the arms P to rock, which imparts a reciprocating motion to the blades O. By means of the belt I one of the rollers B is driven, which drives, through the medium of the train of gearing  $b^2, b^3, b^4$ , and  $b^5$ , the other roller B, which by means of the belt  $u$  drives the shaft U, operating the feeding device V. The cotton is then fed into the machine. The feeding devices V reciprocate the cotton over the grates K, through the openings of which most of the seed escapes. The cotton gradually works down toward the curved knives C, under which it is drawn by the action of the rollers B aided by the reciprocation of the blades O. The seed falls toward the center of the machine and may be collected in any way by means (not shown) such as troughs and conveyers. The ginned cotton is drawn around by the rollers B, and may then be delivered directly to the condensing-rollers or be disposed of in any desired manner. Brushes (not shown) or any other clearing means may be used outside of the rollers B, if desired. The hollow-ground knives will gin one-third more cotton in a given space than straight knives, as the friction against the elastic covering of the rollers will be greatly increased, which results in giving an increased pull to the fiber, enabling the rollers to perform their work with much less pressure against the knives. This results in a further advantage in that the elastic covering of the rollers is subject to less wear.

It is obvious that many changes might be made without departing from the spirit of my invention, and I do not confine myself to the exact details described.

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

1. In a cotton-gin, the combination of a roller provided with an elastic covering having zigzag grooves in its surface, a knife having a hollow-ground edge, the curvature thereof of corresponding to the curvature of the roller,

means for adjusting said knife toward and from said roller, and feeding devices, substantially as described.

2. In a cotton-gin, the combination of rollers, yielding bearings supporting said rollers, means for driving one of said rollers, and means for driving the other of said rollers from the first roller, consisting of gear-wheels attached to the shafts of said rollers, and gear-wheels meshing with said first-named gear-wheels and supported in a frame, the parts of which are pivoted together and pivotally supported on the shafts of said rollers, knives mounted near said rollers and means for feeding the cotton to the said rollers and knives substantially as described.

3. A double-roller gin, comprising a main frame, rollers provided with grooved elastic coverings supported in said frame, a main shaft also supported in said frame, a belt passing over a pulley on the main shaft and another pulley on the shaft of one of the rollers, yielding bearings mounted in said frame and supporting said rollers, gear-wheels mounted on the shafts of the rollers at one end of the machine, a pivoted frame mounted on said shaft at the same end, gear-wheels mounted in said frame and meshing with the gear-wheels on the shafts of the rollers, adjustable knives with hollow-ground edges, oscillating blades, arms supporting said blades, a shaft supporting said arms, rock-arms connected to said shaft, and operating-levers for said rock-arms mounted on cranked portions of the main shaft, inclined seed-grates, feeding devices resting upon said seed-grates, arms pivoted to said feeding devices, a shaft having cranked portions to which said arms are connected, and a driving-belt for said shaft passing over a pulley on said shaft and another pulley on the shaft of one of the rollers, substantially as described.

4. In a double-roller cotton-gin, the combination of rollers provided with a grooved elastic covering, one of said rollers mounted on each side of said gin, knives having hollow-ground edges and adjustably mounted adjacent to said rollers, a cranked shaft mounted between said rollers, arms secured to and extending from both sides of said shaft, blades secured to the ends of said arms and adapted to be oscillated thereby in front of the said knives and rollers, a feeding device mounted above said oscillating arms and means for imparting motion to the rollers, oscillating arms and feeding device, substantially as described.

5. In a double-roller cotton-gin, the combination with rollers provided with an elastic covering having zigzag grooves in the surface thereof, one of said rollers mounted on each side of said gin, knives having hollow-ground edges and adjustably mounted adjacent to said rollers, a cranked shaft mounted between said rollers and extending longitudinally of



said gin, arms secured to and extending from both sides of said shaft, blades secured to the ends of said arms and adapted to be oscillated thereby in front of said knives and rollers, seed-grates mounted above said oscillating arms and sloping from the center of the gin toward the rollers on either side, a bar extending the whole length of said seed-grate, arms pivoted to said bar, a shaft provided

with crank portions carrying said arms and means for driving said shaft, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM HATCHER BASKIN.

Witnesses:

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J. C. REYNOLDS.