

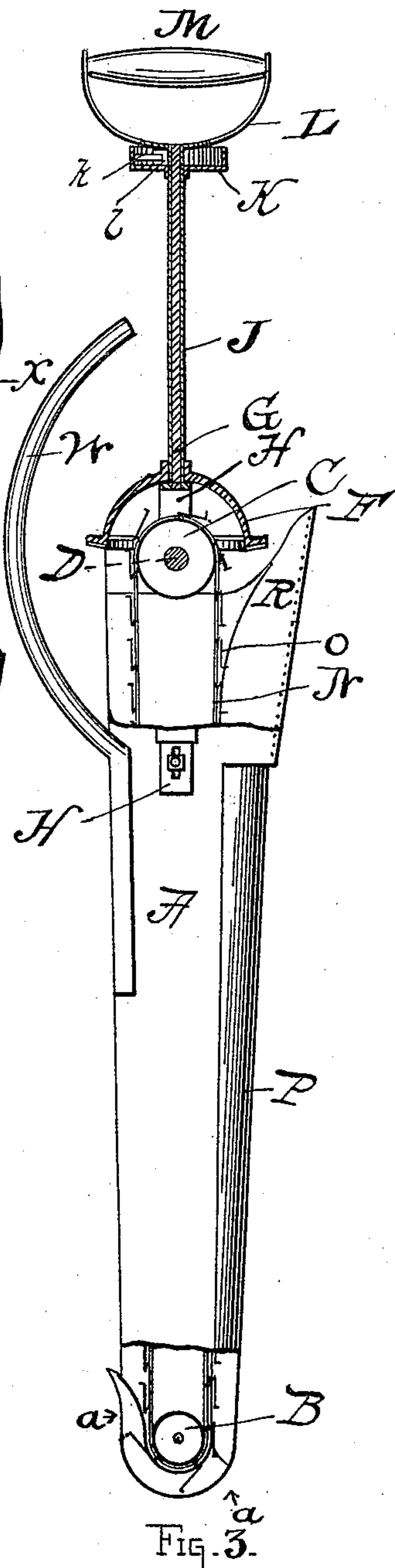
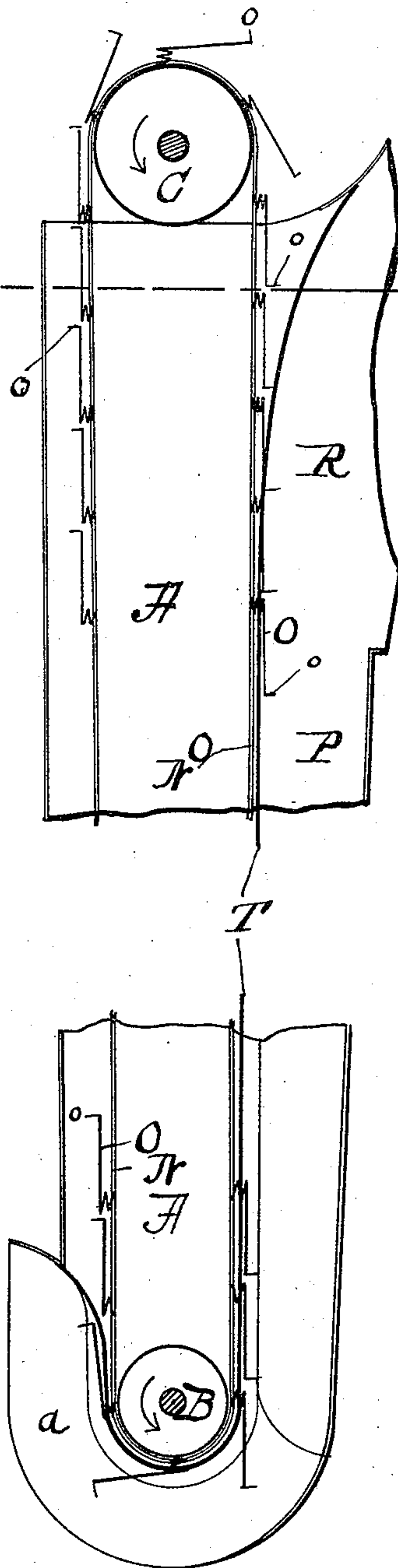
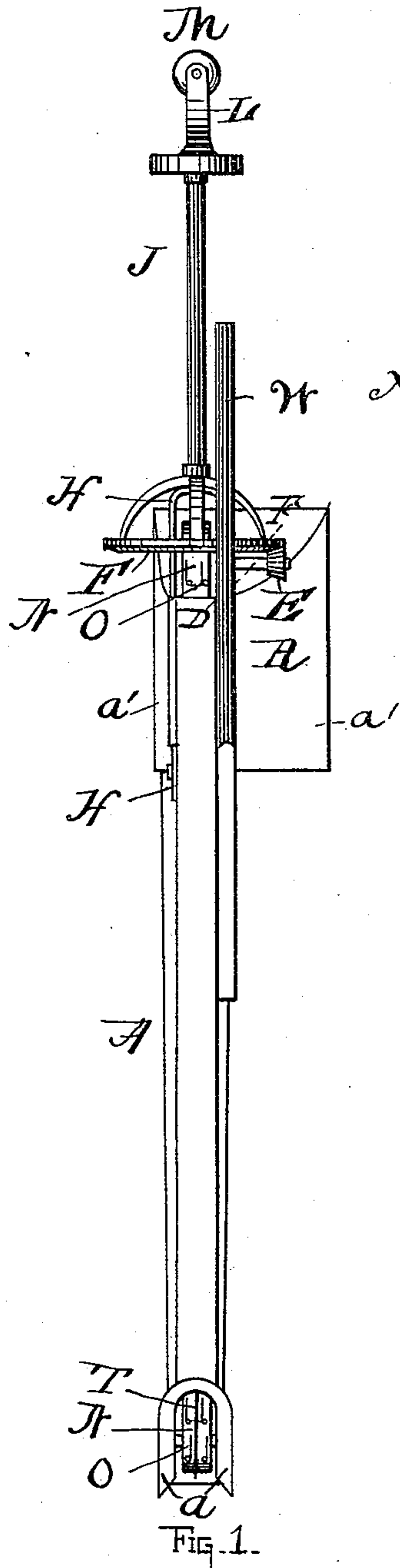
(No Model.)

2 Sheets—Sheet 1.

A. A. WOOD.
COTTON HARVESTER.

No. 430,100.

Patented June 10, 1890.



Witnesses
Luke P. Hayden
A. O. Wood.

FIG 2.

Albert A. Wood.

By his Attorneys

Chas. Wood & Son

(No Model.)

2 Sheets—Sheet 2.

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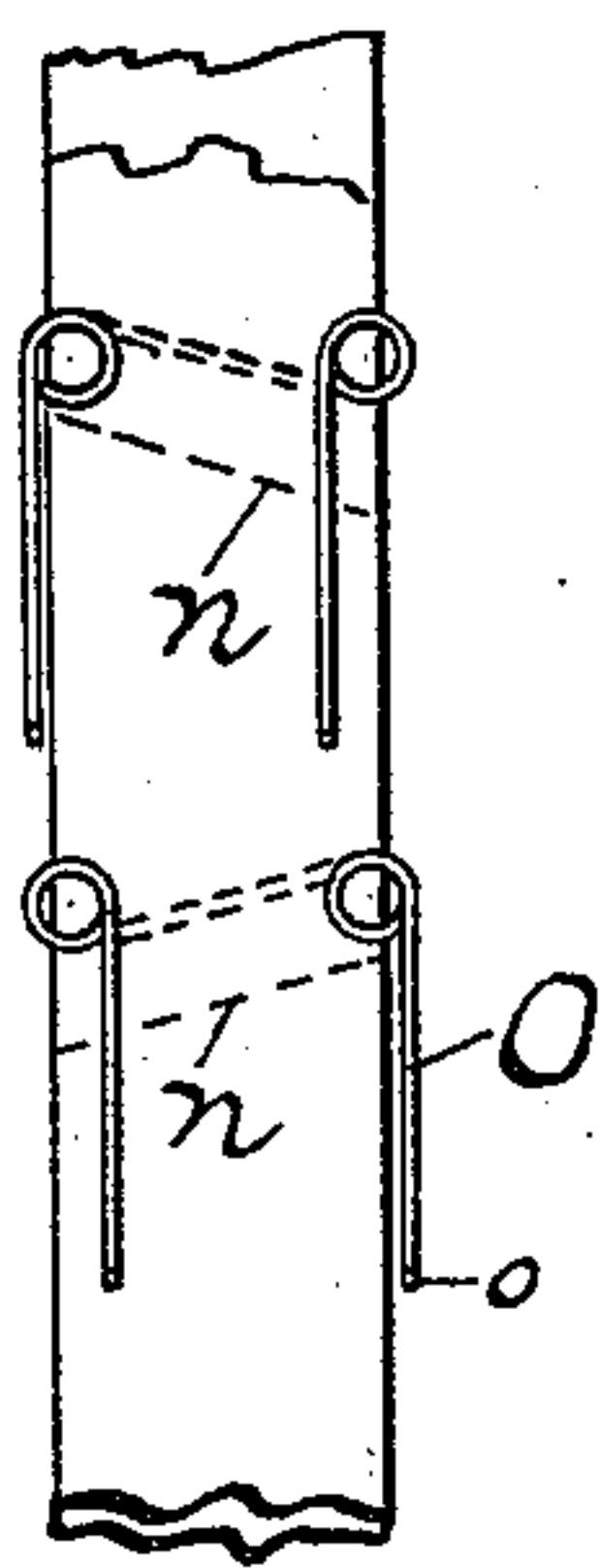


FIG. 4.

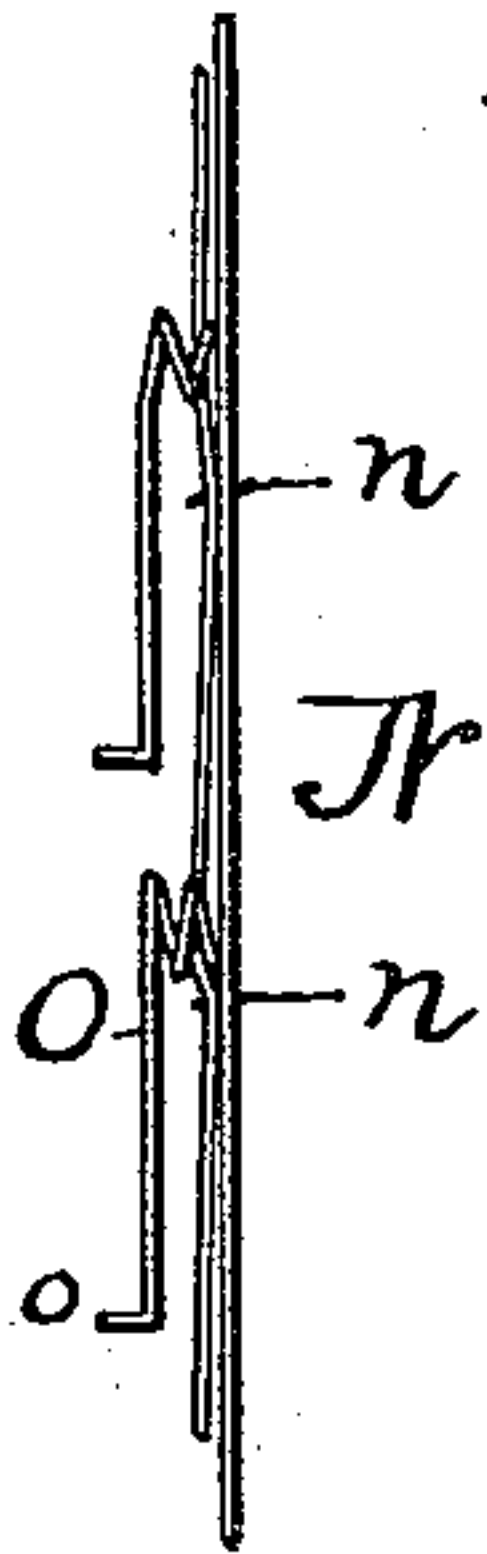


FIG. 5.

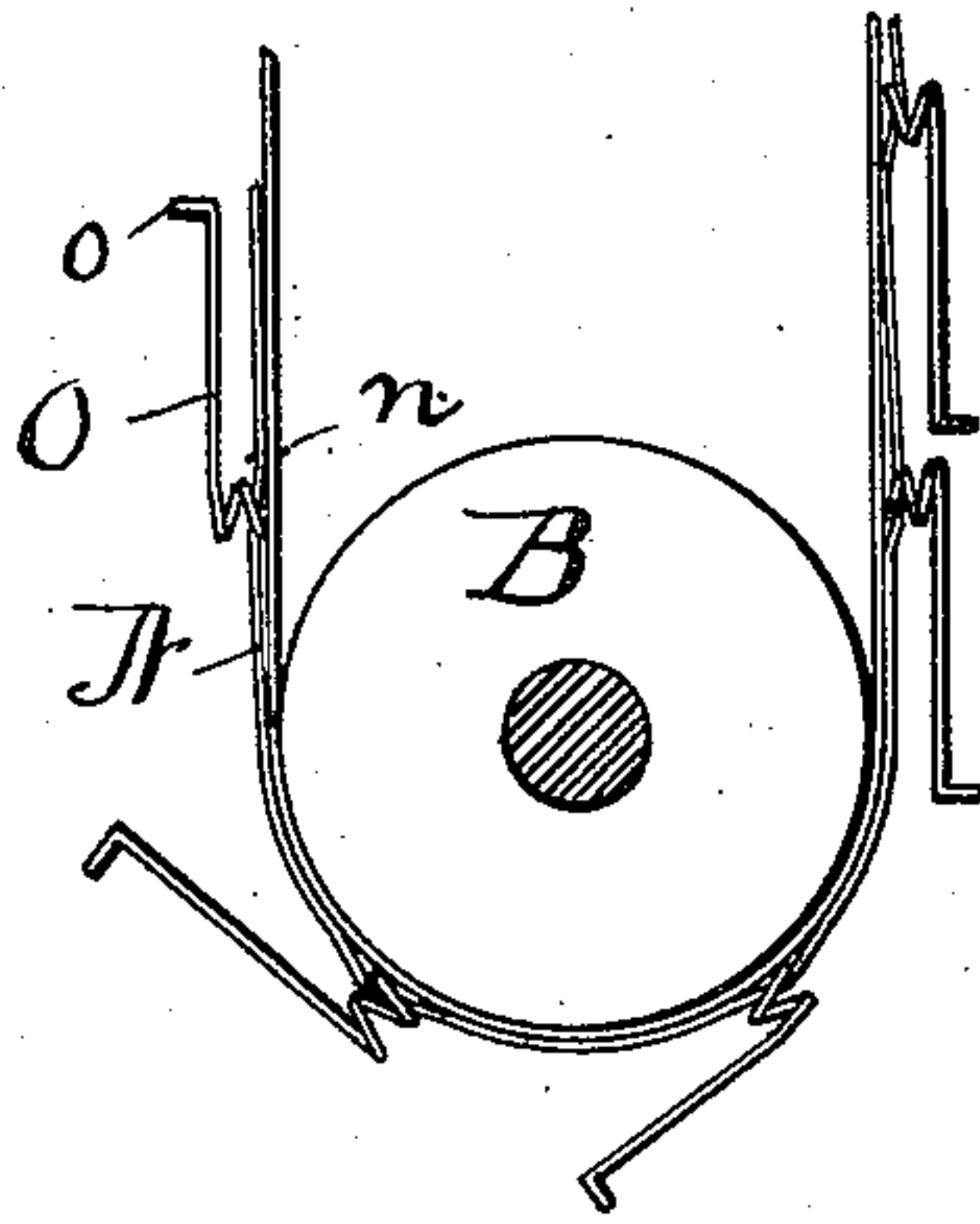


FIG. 6.

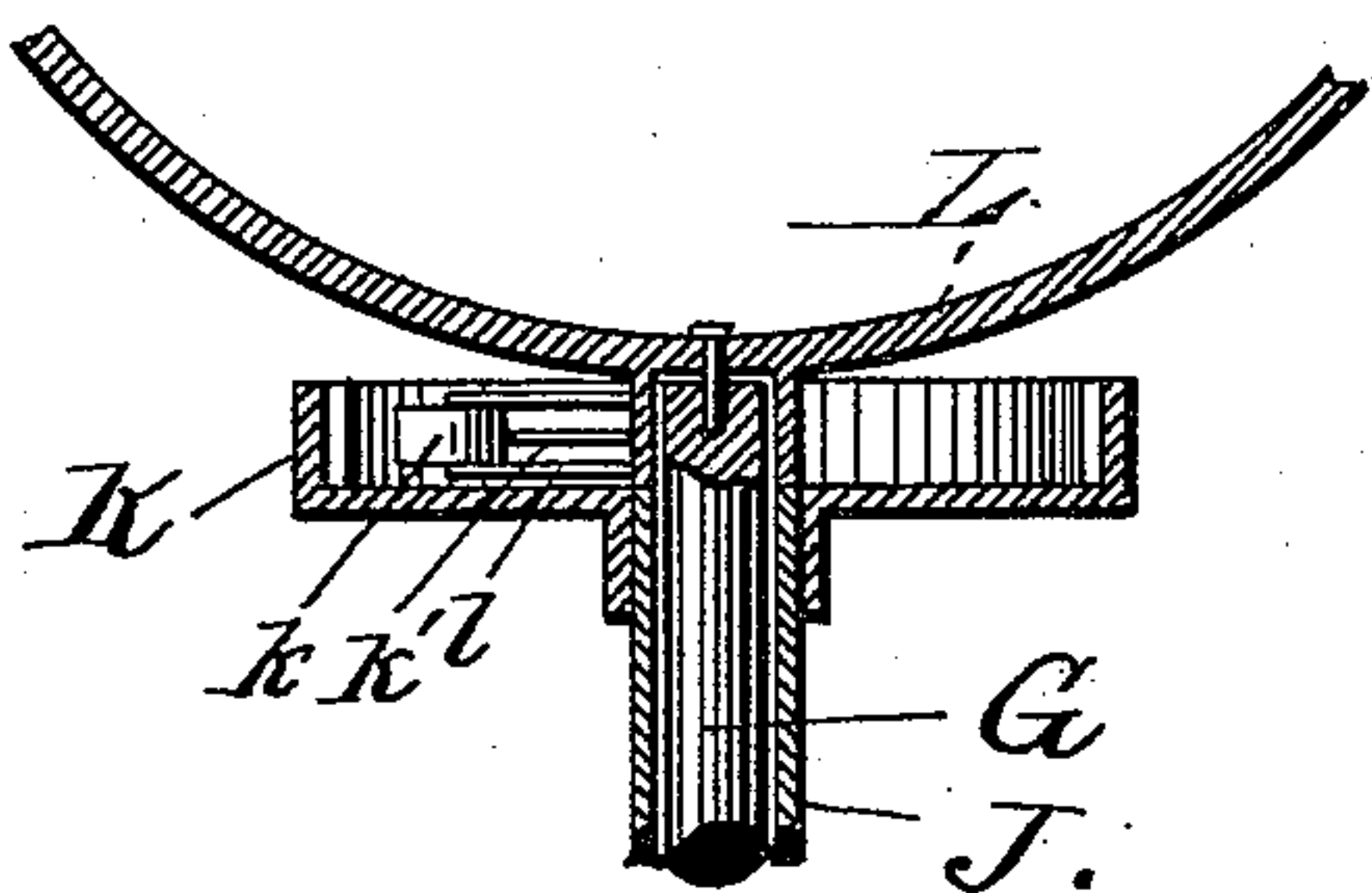


FIG. 7.

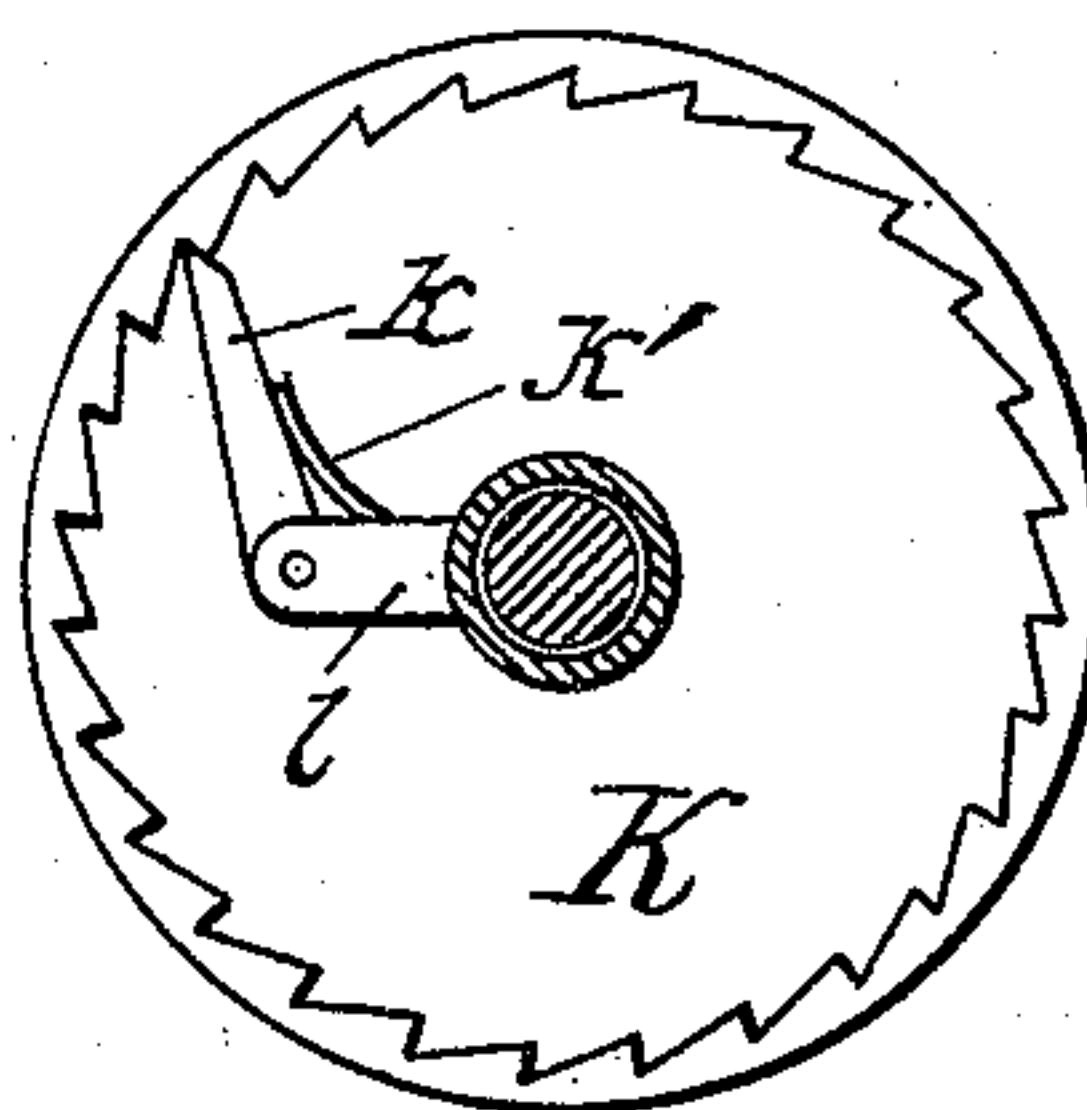


FIG. 8.

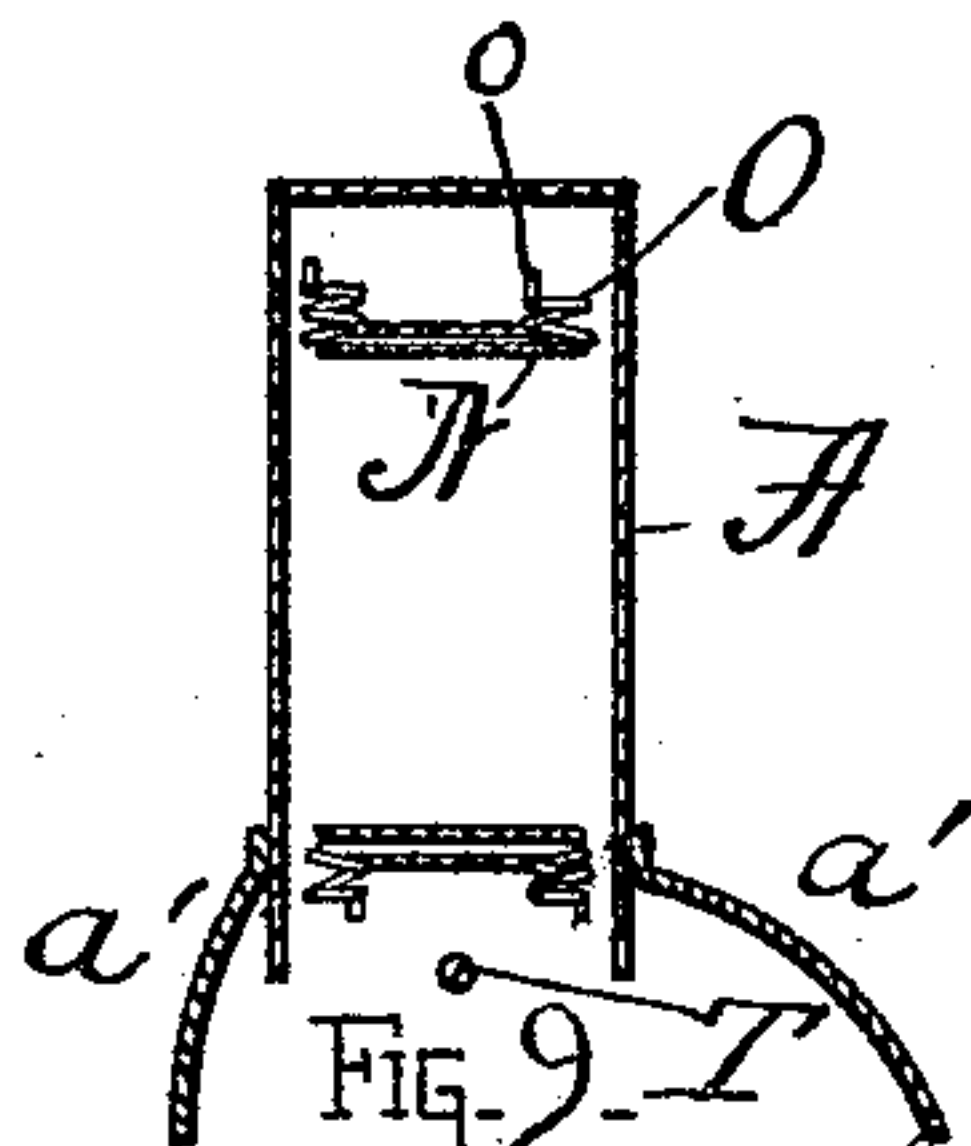


FIG. 9.

Witnesses

Luke F. Hayden
M. P. Wood.

Inventor

Albert A. Wood

By his Attorneys

A. A. Wood & Son

UNITED STATES PATENT OFFICE.

ALBERT A. WOOD, OF ATLANTA, GEORGIA.

COTTON-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 430,100, dated June 10, 1890.

Application filed August 1, 1889. Serial No. 319,422. (No model.)

To all whom it may concern:

Be it known that I, ALBERT A. WOOD, a citizen of the United States, and a resident of Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Cotton-Harvesters; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form part of this specification.

In the accompanying drawings, Figure 1 is a plan of the device. Fig. 2 is an enlarged vertical longitudinal section of a portion of each end, the picker-belt, and the casing in which it is inclosed. Fig. 3 is a side elevation, partly in section, showing most of the details. Fig. 4 is a plan of a portion of the belt, showing two pairs of fingers. Fig. 5 is an edge view of the part of the belt and fingers shown in Fig. 4. Fig. 6 shows one of the pulleys over which the belt runs and the positions assumed by the fingers in passing around said pulley. Fig. 7 is a section central to the main shaft, showing the interior of the ratchet. Fig. 8 is a section through the main shaft and sleeve by which the handle is attached, and showing the ratchet and pawl. Fig. 9 is a cross-section on the lines *xx*, Fig. 2.

In the figures, like reference-marks indicating corresponding parts in the several views, A is a casing that carries the pulleys B and C, one being journaled in each of its ends. The pulley B runs loosely on its shaft; but the pulley C is fastened to the shaft D, as is also the bevel-pinion E, which engages with the bevel spur-gear F.

The stud G (shown in section in Fig. 3) is attached to the casing A, preferably by a U-shaped piece H, that is longitudinally adjustable on the casing A, as shown in Fig. 1. On the stud G is a sleeve J, to which is attached at one end the bevel-gear F and at the other the internally-toothed ratchet K, as shown in Fig. 3. The U-shaped piece L, carrying the handle M, is also journaled on the stud. (Best shown in Fig. 7.) The arm *l* on the sleeve of the part L carries the pawl *k*, that engages with the ratchet K and is held in engagement by the spring *k'*.

It is obvious that an oscillating motion of the handle M will produce an intermittent forward movement of the ratchet and its connecting mechanism to and including the pulley C. On the pulleys C and B runs the belt N, to which are attached the hooked fingers O. The belt N is preferably made from cotton or linen tape and double, for reasons to be hereinafter explained, the seams *n*, Fig. 4, being sewed diagonally across it to prevent the backward slipping of the fingers O. The fingers O are made from wire (so small in size as to make available its flexibility) that passes diagonally across the belt between the two tapes, as shown in Fig. 4, and is coiled at each side, leaving free ends and hooks *o*, as is shown in Figs. 4 and 5. The fingers might be sewed to a belt made from a single tape; but I prefer the form shown—that is to say, with the wire passing between two tapes and resting against a seam—as it permits the fingers to change position laterally on striking any substance except lint, which, added to their resilience, will permit a greater lateral movement and allow them to slip off and pass around the bolls, limbs, or other obstructions without hindering the revolution of the belt. It is also obvious that the wire might pass at a right angle across the belt, or that it be coiled alternately in different directions, as shown, or uniformly in the same direction on each edge of the belt.

In either of the above cases the fingers have a considerable breadth of base in the direction of the length of the belt, so that as they pass around the pulleys the hooked points *o* will be considerably elevated, as shown in Figs. 2, 3, and 6, and these hooks being nearly at a right angle to their line of movement at all other times will, while in this elevated position, have a considerable forward inclination, which will cause them to more efficiently grasp the lint and withdraw it from the boll. After passing around the pulley B the fingers will again assume a position parallel to the belt, and the hooks *o* a position at a right angle to the line of motion, which will permit the cotton to drop off the said hooks.

The casing A should be provided with a flanged or enlarged opening or mouth *a* and a flue P, extending from the mouth to the

part R, to which a sack may be attached to receive the cotton.

The wire T (best shown in Figs. 1, 2, and 9) is attached to the casing at its mouth and passes close to the belt and between the fingers and attached at its other end to the part R. Near the end last described the wire diverges from the belt, as do also the edges a' of the vertical walls of the casing A. This divergence of the edges a and wire T will force the cotton to discharge from the fingers if it does not fall off by gravity.

The handle W may be attached in any approved way to the machine.

The machine being carried in one hand by the handle W, by the other hand an intermittent forward motion of the belt and fingers is produced by the oscillation of the handle M, which will cause the hooks o to pass downwardly into the flue P and carry with them the cotton in the boll, to which the mouth a is applied, the flexibility of the fingers preventing the stopping of the belt by their engagement with the solid parts of the boll, as by experiment it is ascertained that they will readily disengage themselves from everything except the lint. The continued forward motion of the hooked fingers will carry the cotton through the flue P and discharge it through the opening in the part R, the diverging edges a' and the wire T assisting its weight in disengaging from the hooks o .

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-harvester, a casing having bearings for the pulleys B and C, the belt having fingers O, and means for actuating said belt, and the wire T, substantially as shown and described, and for the purpose set forth.

2. In a cotton-harvester, the fingers O, carrying hooks o and attached to a revolving belt N, said fingers having a rearward extension substantially parallel to the belt when straight and of sufficient length to produce the required elevation and forward inclination of the hook o as the belt passes around the pulleys, substantially as shown and described, and for the purpose specified.

3. In a cotton-harvester, the combination of the revolving double belt N, the seams n , and the wire fingers O, arranged substantially as shown and described.

4. In a cotton-harvester, the belt N, carrying picker-fingers, pulleys B and C, pinion E on shaft D, gear F, ratchet K, and pawl k , and handle M, and suitable casing for the operating parts, all arranged and operating in conjunction, substantially as shown and described.

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

ALBERT A. WOOD.

Witnesses:

A. P. WOOD,
HAL MORRISON.