

(No Model.)

D. B. HASELTON.
COTTON HARVESTER.

No. 328,116.

Patented Oct. 13, 1885.

Fig. 1.

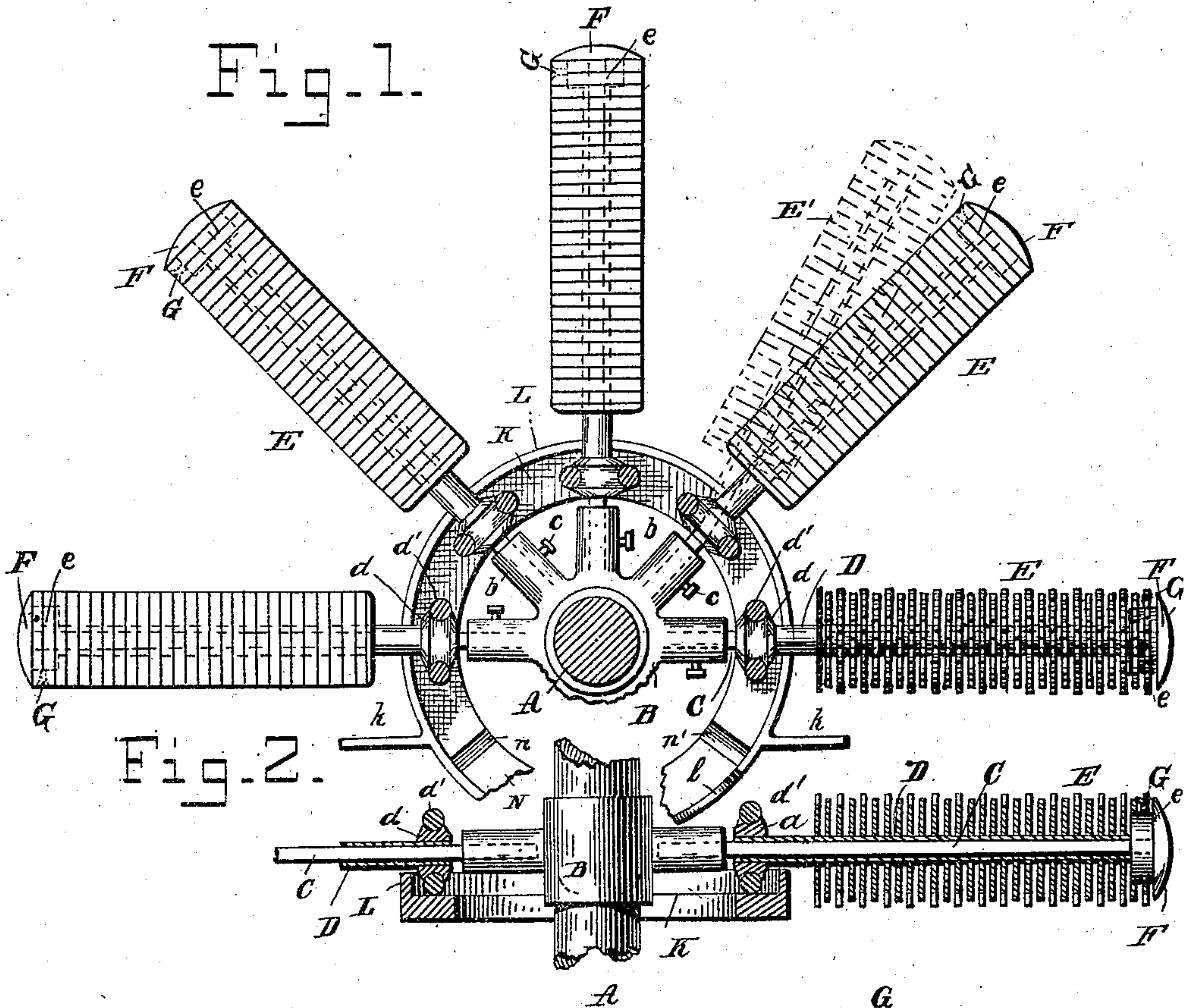


Fig. 2.

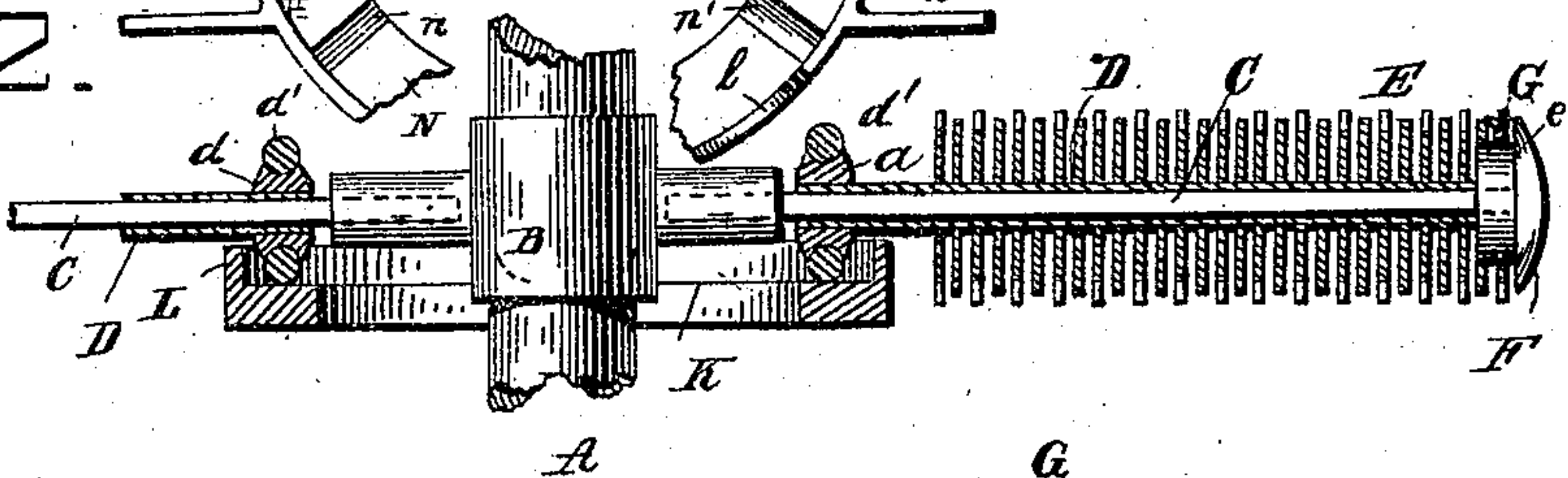


Fig. 3.

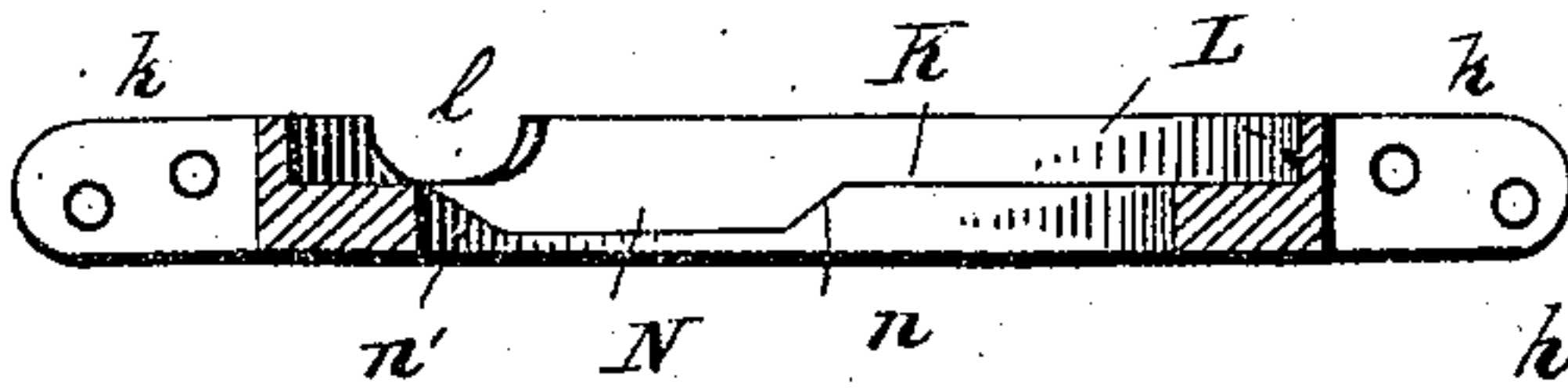
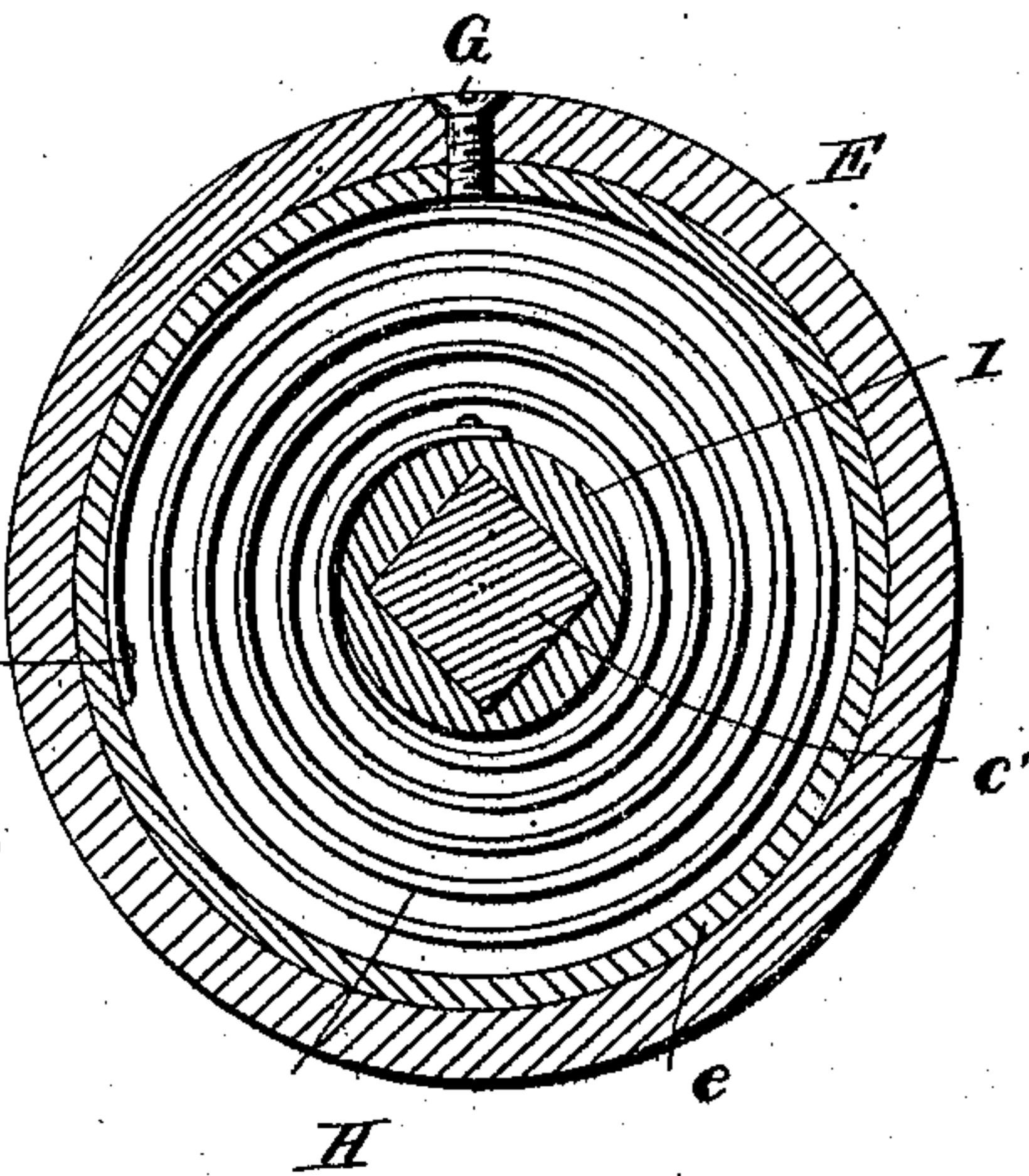


Fig. 4.



WITNESSES

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COTTON-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 328,116, dated October 13, 1885.

Application filed November 20, 1883. Serial No. 112,290. (No model.)

To all whom it may concern:

Be it known that I, DANIEL B. HASELTON, a citizen of the United States, residing at Charleston, in the county of Charleston and State of South Carolina, have invented certain new and useful Improvements in Cotton-Harvesters, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has relation to cotton-harvesters, and the object of it is to simplify the construction and facilitate the operation of the picking mechanism, whereby the plants are thoroughly searched and all of the ripe cotton removed, while the green or unopened bolls are not interfered with; and to these ends the novelty consists in the construction of the same, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings similar letters of reference indicate like parts of the invention.

Figure 1 is a plan view of my improved picker. Fig. 2 is a transverse view, partly in section; Fig. 3, a cross-section of the stationary circular track; and Fig. 4 is a section through outer end of one of the picker-cylinders enlarged, to show the spring in the cap.

A is a central shaft, and B a cast-iron hub having a series of radial arms, *b*, provided with set-screws *c*, by means of which the shafts C are adjustably secured in the holes in said arms.

D is a sleeve, to the inner end of which is secured a disk, *d*, or sleeve, having an elastic ring, *d'*, which forms a friction-pulley and serves to rotate the sleeve when said pulley is in contact with the track.

E is a cylinder secured to the sleeve D so as to revolve with it, and the periphery of the cylinder is provided with a series of teeth, the points of which are depressed below the surface, so they will engage the elastic or ripe cotton, while not the unripe bolls or twigs and the like.

The outer end of the cylinder E has a recess, *e*, and a cap, F, is secured thereto by means of the screw G, and the inside of this cap has a spiral spring, H, the outer end of which is secured to said cap at *h*, and its inner end to a

collar, I, provided with a square central opening to receive the square end *c'* of the shaft C; and from this construction it will be seen that as the cylinder is rotated upon the shaft C by means of the disk *d* bearing on the track K when the central shaft A is revolving, the spring H will be wound up, and when the friction is removed between the disk *d* and track K, the spring throws the cylinder rapidly in the opposite direction, and the spring resumes its normal position. The circular track K is rigidly secured to the frame-work of the machine by means of the brackets *k*, and L is a guard extending around the rail K, which prevents the disks *d* from slipping off, except at the point *l*, where the guard is recessed to allow the picker-cylinders to be removed and replaced, as occasion requires.

N is a recess or depression in the face of the track, so that the friction-disk *d* is clear of the track at that point.

In operation the shaft A is revolved, and as one of the friction-disks *d* strikes the end *n* of the track K it begins rotating, which of course rotates the picker-cylinders on the radial shafts C, in addition to the motion imparted to them in their own plane by the shaft A; and during this motion the teeth collect the ripe cotton and the cylinder winds up the spring H until the friction-disk *d* arrives at the point *n'*, which is the beginning of the depression N in the track K, when the friction and winding suddenly cease, the motion of the cylinder is reversed, and the picked cotton removed from the teeth by its own rapid reversed motion, and it falls into any convenient receptacle in position to receive it. As the friction-disk passes across the depression N its revolution on its own axis is reversed with the cylinder, and does not begin to wind again until it comes in contact with the end *n*, which is the beginning of the track, when it revolves, picks the cotton, and winds up the spring, as before.

In the cylinder E' (shown in dotted lines in Fig. 1) I have given the shaft C a slight bend at the end of the arm *b*, and by adjusting said shaft in the arms by means of the set-screw, so that it will project up or down, it will be seen that the series of cylinders which are mounted on the same hub will not travel in

the same plane, and consequently the cotton-plant will be more thoroughly searched in the harvesting operation.

It will also be observed that should one of the picker-cylinders come in contact with any rigid substance, so as to bend the shaft at the hub, it remains just as effective as ever, as the sleeve D revolves true on the shaft C without reference to the position of said shaft. Of course, if the bend be a great one, the set-screw *c* would have to be loosened, the bent shaft removed, and a new one inserted; but where the bend is only a slight one, which would simply throw the shaft out of its line or plane, the cylinders will revolve and operate as effectively as before, as above set forth.

In practice, the shaft A may be of any desired length, and a series of the hubs B secured thereto at suitable distances to accomplish the best results; and I have found that great advantage results when these central shafts are mounted in an inclined position with the shafts inclined forward, so as to begin operation upon the top of the plant and work downward toward the base.

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

1. The combination, with the rotating hubs B and stationary circular track K, of the shafts C, upon which are mounted the sleeves D, having friction-disks *d d'*, and picking-cylinders E, as and for the purpose set forth.

2. The combination, with the hubs B, having radial shafts C, provided with square heads *c'*, of the collars I and sleeves D, having caps

F, provided with springs H, as and for the purpose set forth.

3. The hubs B, shafts C, sleeves D, springs H, and friction-wheels *d d'*, in combination with the circular track K, having recess N, as and for the purpose set forth.

4. The combination, in a cotton-harvester, of the sleeves D, provided with friction driving-wheels, and the picker-cylinders mounted on said sleeves, as and for the purpose set forth.

5. The combination, with the rotating picker-cylinders E, having friction-driving wheels *d*, of the track K, provided with guard L, having recess *l*, as and for the purpose set forth.

6. The combination of the rotary shaft, the series of rotary picker-cylinders mounted thereon, and means, substantially as described, for rapidly rotating the cylinders in the reverse direction at a higher rate of speed than in their forward rotations, whereby the gathered cotton may be discharged by the said rapid rotation of the stems, as set forth.

7. In a cotton-harvester, the combination of a rotary shaft, a series of picker-cylinders radially mounted thereon, means, substantially as described, for rotating said cylinders on their own axes in one direction to gather the cotton, and means, substantially as described, for consecutively rotating them at an accelerated speed in the opposite direction to discharge the gathered cotton, as set forth.

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

DANIEL B. HASELTON.

Witnesses:

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E. H. BRADFORD.