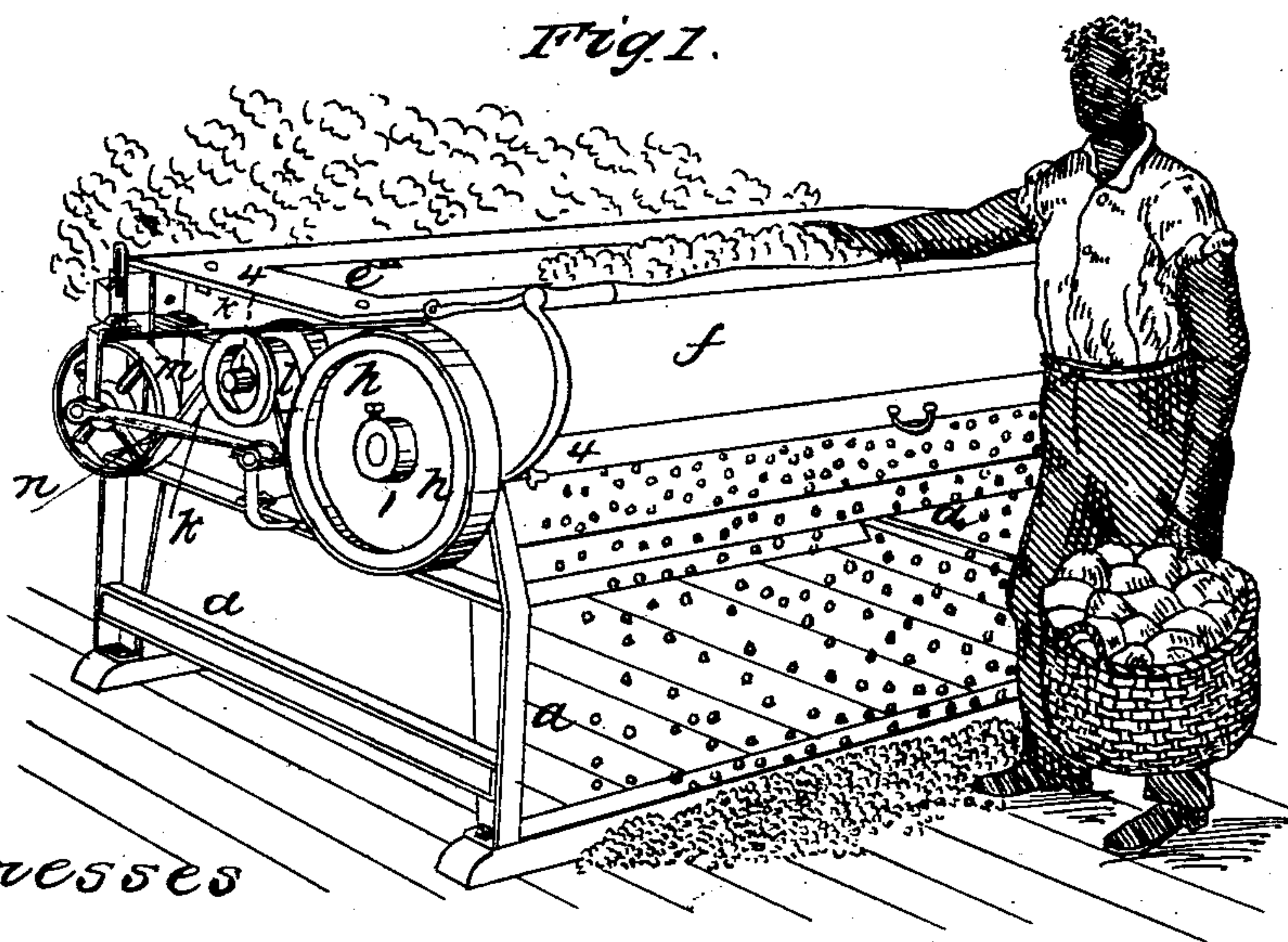
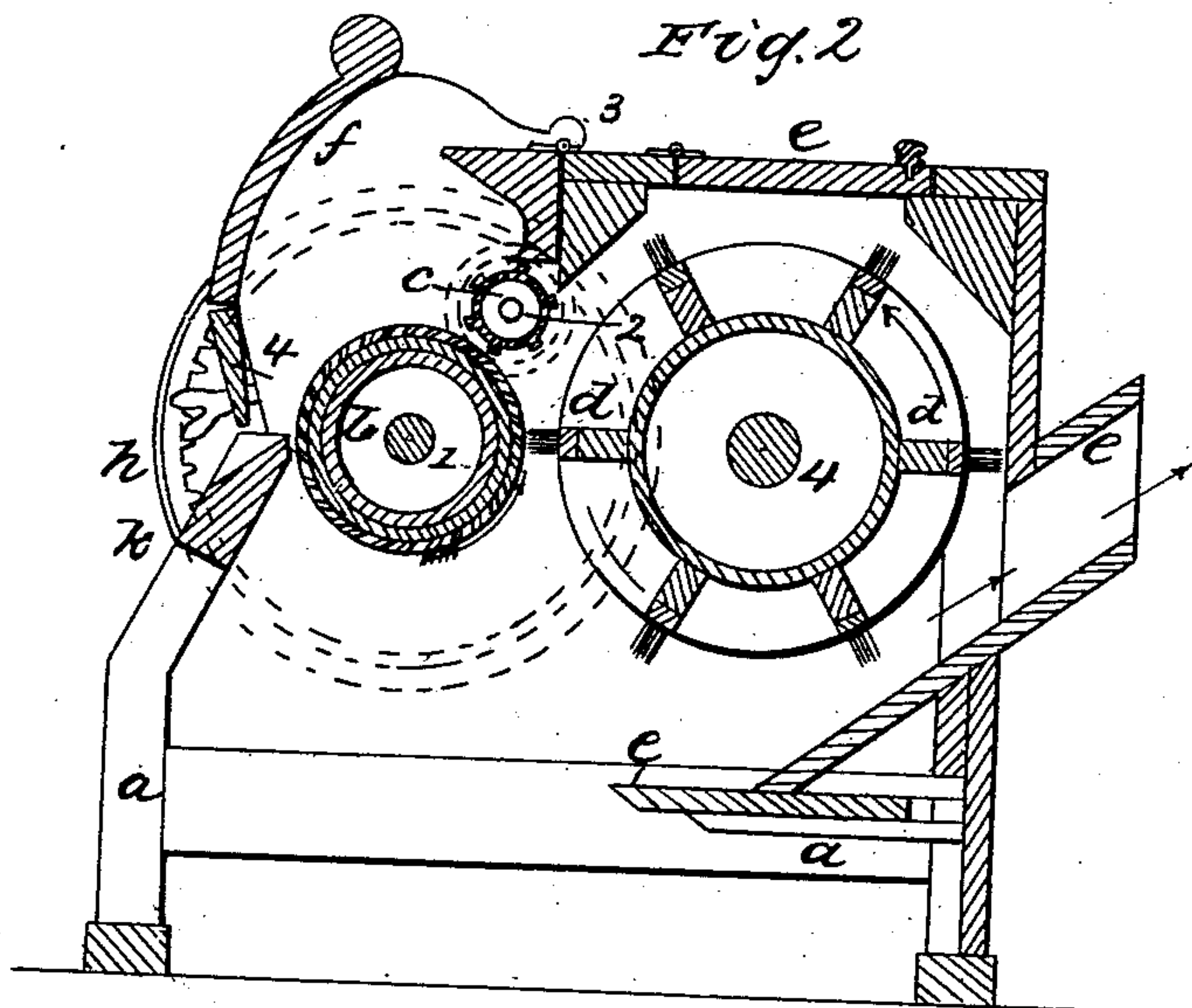
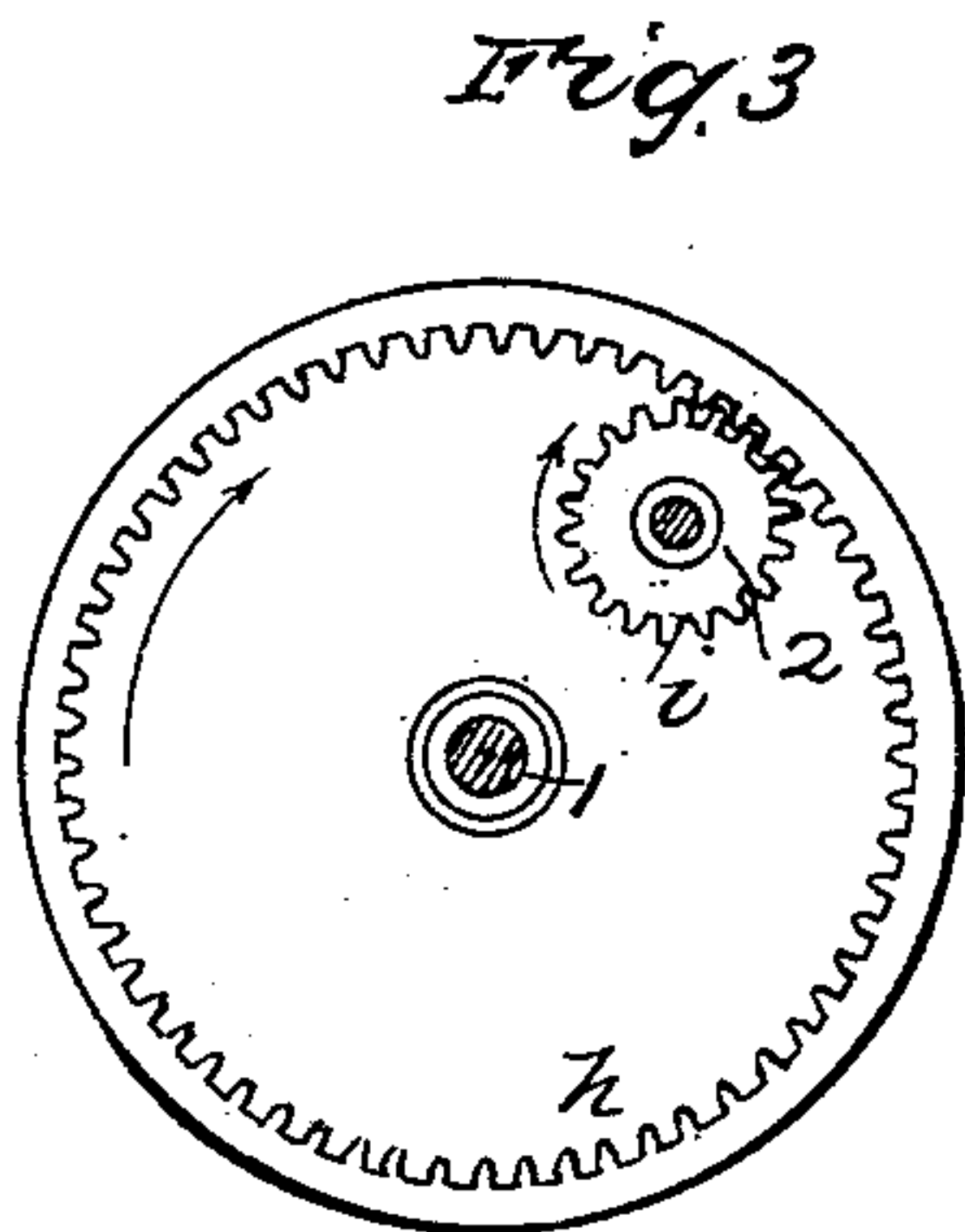


S. R. PARKHURST.

Cotton Gin.

No. 20,086.

Patented April 27, 1858.



Witnesses  
Samuel W. Leimell  
Thomas G. Harder  
" " "

Inventor  
S. R. Parkhurst



# UNITED STATES PATENT OFFICE.

S. R. PARKHURST, OF NEW YORK, N. Y.

## IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. 20,086, dated April 27, 1858.

*To all whom it may concern:*

Be it known that I, STEPHEN R. PARKHURST, of the city, county, and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Cotton-Gins; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a perspective view of my cotton-gin. Fig. 2 is a vertical longitudinal section, and Fig. 3 is an internal view of the gearing connecting the cylinder and stripper.

Similar marks of reference indicate the same parts.

In roller and other cotton-gins the cylinder of teeth travels in such a manner that the cotton is carried over the top thereof back toward the brush, and the roller or stripper placed above said cylinder rotates in the same direction, so that its lower surface near the said cylinder travels in the reverse direction to the motion of the cotton to free the same and roll the mass over. This cylinder and stripper have heretofore been connected to each other by belting, which, under the strain and shortness of the belts, is apt to slip. They have also been geared together by an intermediate pinion; but in this case it becomes difficult to obtain the proper speed on the stripper, and also the said gears are exposed to catching dirt, cotton, sticks, and other obstructions, and also to becoming entangled in the clothes of the attendants, (generally negroes,) or inflict personal injury, independent of the cost of said gears and the trouble of fitting the same.

The nature of my said invention consists in connecting the stripper and ginning-cylinder with what I term an "internal gear"—viz., a female gear-wheel surrounding and driving the pinion on the end of the stripper-shaft—by which means the proper motion is given to the stripper from the cylinder. The two are always compelled to rotate simultaneously, and there is no chance for the cotton to clog. There is no part of the gearing exposed, so as to become injured itself or entangled in any surrounding or contiguous articles. The gearing is kept clean, and the drum formed by the internal gear gives opportunity for applying

power at this point or taking off a belt to the blower. My gin is thus compact, cheap, reliable in operation, safe for the attendants, and not liable to injury.

In the drawings, *a a* are the side frames of the gin, of any desired character, carrying by journal-boxes the shaft 1 of the surface-tooth ginning-cylinder *b*; also, the shaft 2 of the stripper *c* and the shaft 4 of the brush-blower *d*.

*e e* is the case of the blower, fitted so as to be opened at top for cleaning, if necessary. *f* is a hopper hinged at 3 3, and provided with an adjustable bottom edge, 4, by which the mouth or opening for the escape of seed between said hopper and the frame is adjusted so as not to allow any cotton to drop out—only the seeds, sticks, &c. The cylinder-stripper and blower are rotated by competent power (applied to a pulley on the shaft 1) in the direction of the arrows, and the parts operate on the cotton in the usual manner. The motion is communicated from the shaft 1 of the cylinder *b* through the internal gear, *h*, acting on the pinion *i* on the shaft 2 of the stripper *c* to drive the same, as before specified; and *k* is a belt from the outside of the internal gear-wheel, *h*, passing over the pulley *l* on the shaft 4 of the brush-blower to drive the same, thence around the tightening-pulley *m* to the wheel *h* aforesaid. The tightening-pulley *m* is set in suitable slings, *n*, and is adapted to be adjusted in such a manner as to keep the belt tight to the pulley *l* of the blower.

I do not claim the ginning-cylinder or stripper, nor the combination of the same with the brush-blower, each revolving in the directions specified; neither do I claim internal gears in themselves; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The manner herein described of connecting a ginning or card cylinder with a stripper, by combining with said cylinder and stripper the internal gear, *h*, and pinion *i*, substantially as and for the purposes specified.

In witness whereof I have hereunto set my signature, this 17th day of December, 1857.

S. R. PARKHURST.

Witnesses:

LEMUEL W. SERRELL,  
THOMAS G. HAROLD.