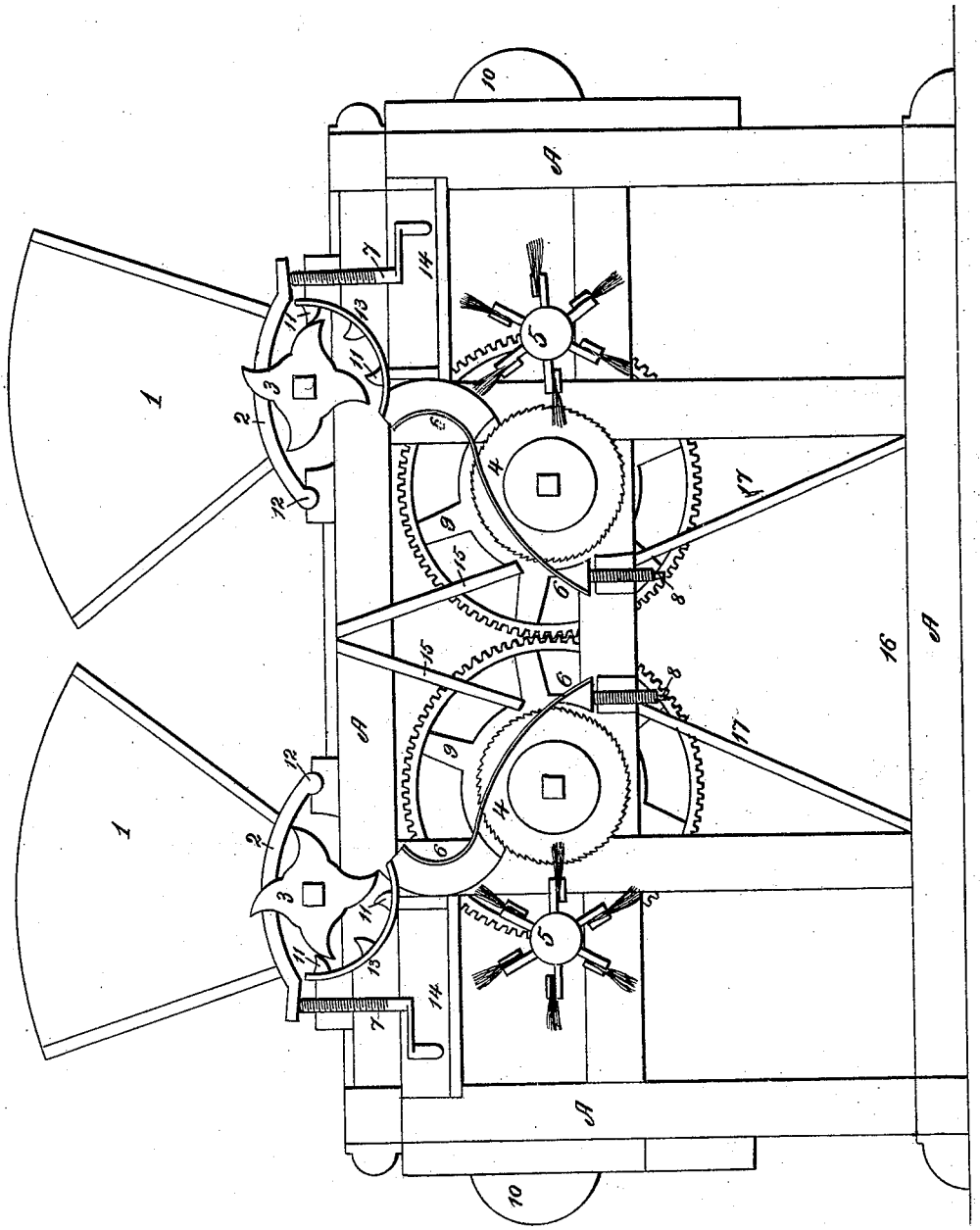
A. JONES.

Cotton Gin.

No. 180. Patented April 25, 1837.



UNITED STATES PATENT OFFICE.

ALEX. JONES, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. 180, dated April 25, 1837.

To all whom it may concern:

Be it known that I, ALEXANDER JONES, of the city of New Orleans, in the State of Louisiana, have made certain Improvements in the construction of the cotton-gin or machine for the cleaning and ginning of cotton and freeing it from dust and seed; and I do hereby declare that the following is a full and exact description thereof, reference being had to the drawing which accompanies and makes a part of this specification.

My improved gin is in many of its parts similar to the saw-gin in general use. The cylinder of saws, the grate-bars through which they work, and the brush by which the cotton is removed and thrown off from the saws are all of this description; but in the manner of feeding and in the combining of two ginning-cylinders and certain other operating parts auxiliary to this combination, and to be presently described, so as to operate conjointly in one frame, it differs essentially from such as have heretofore been used or known.

In the accompanying drawing, which is a vertical section along the middle of the machine, A A is its frame, which is surmounted by two tunnels or hoppers, 1 1, the bottoms of which hoppers extend from one side of the frame to the other, their ends being vertical. The bottoms of these hoppers consist of curved bars of iron, forming a grating which extends from front to back of each hopper. The sides of one of these bars is shown at 2 2. They are at such distance apart as to allow the seed-cotton to be drawn between them by the action of the tooth-plates upon a shaft, which constitute the feeding cylinders or beaters. The shafts of these cylinders revolve immediately under the hoppers. The toothed plates 3 3 upon these shafts are made in the form represented in the drawing, but the number of teeth upon each plate may be varied. These teeth work between the grate-bars which constitute the bottoms of the hoppers, drawing the seed-cotton in between them so as to feed it to the saws, for the action of which they prepare it in a very advantageous manner. There is, of course, such a toothed plate to every space between the respective bars. The feeding of the seed-cotton should be regulated according to its particular quality and its state of dryness, which is influenced by the weather, as well as by other circumstances; and to accomplish this object the hoppers, with their grate bars, are made capable of being raised or lowered, while the feeding-cylinders retain their places, and the feeding-teeth are thus made to enter the hoppers to any required distance. This raising and lowering may be effected in various ways, but that represented in the drawing is at once simple and convenient. One side of each of them is made to rest upon gudgeons 12 12, and the other side is raised or lowered by means of a screw, 7 7.

Under that part of the hoppers where the cotton is drawn in I sometimes place wire screens extending from side to side of the frame, sections of which screens are shown by the curved lines 13 13. Through these screens particles of dust will fall into the spaces 14 14, which are partitioned off from the other parts of the machine, and it will thus be prevented from passing onto the saws or brushes. Upon these concaves and under each bar of the grating forming the bottom of the hopper there is a stationary tooth or finger, 11 11, which serves to clear the cotton from the teeth of the feeding-cylinders and prevent its being carried up against the bars. The cylinders of saws 4 4 work through grate-bars, represented by the curved lines 6 6, and constructed otherwise in the ordinary manner. Partition-boards 15 15 cross the frame from side to side and serve to keep the seed against the saws until it is cleaned, and, consequently, so reduced in size as to pass under the partitions, and thence fall into the space 16 left to receive them between the partitions 17 17. Excepting this space 16 the sides of the machine are everywhere inclosed. The brush-wheels 5 5 operate in the usual way, clearing the saws and driving the cotton out from each end of the machine.

The driving apparatus may be differently constructed and arranged; but the most direct mode of communicating motion to the saw-shafts is to place a spur-wheel, 9 9, upon the axle of each, these wheels being of such a size as to gear into each other. The cylinders of saws are thus made to revolve in reversed directions. The feeding-cylinders and the brushes are made to revolve by bands and whirls connected with the shafts of the saws

in a manner well known. The lower edges of the saw-grates may be raised or lowered, so as to regulate the space between them and the partition-boards 15 15 by means of the screws 8 8.

In an instrument so well known as the cotton-gin it has not been thought necessary to give any particular admeasurements or proportions of parts or to designate the number of saws used, as this will vary according to the power applied and the quantity of work to be done by the machine.

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

The within-described method of feeding the cotton to the saws by means of hoppers and feeding-cylinders, constructed and operating substantially in the way or upon the principle herein set forth, whether such feeding apparatus be applied to a single machine or to my combined machine.

ALEXANDER JONES.

Witnesses:
THOS. N. MORGAN,
HIRAM GRAVES.