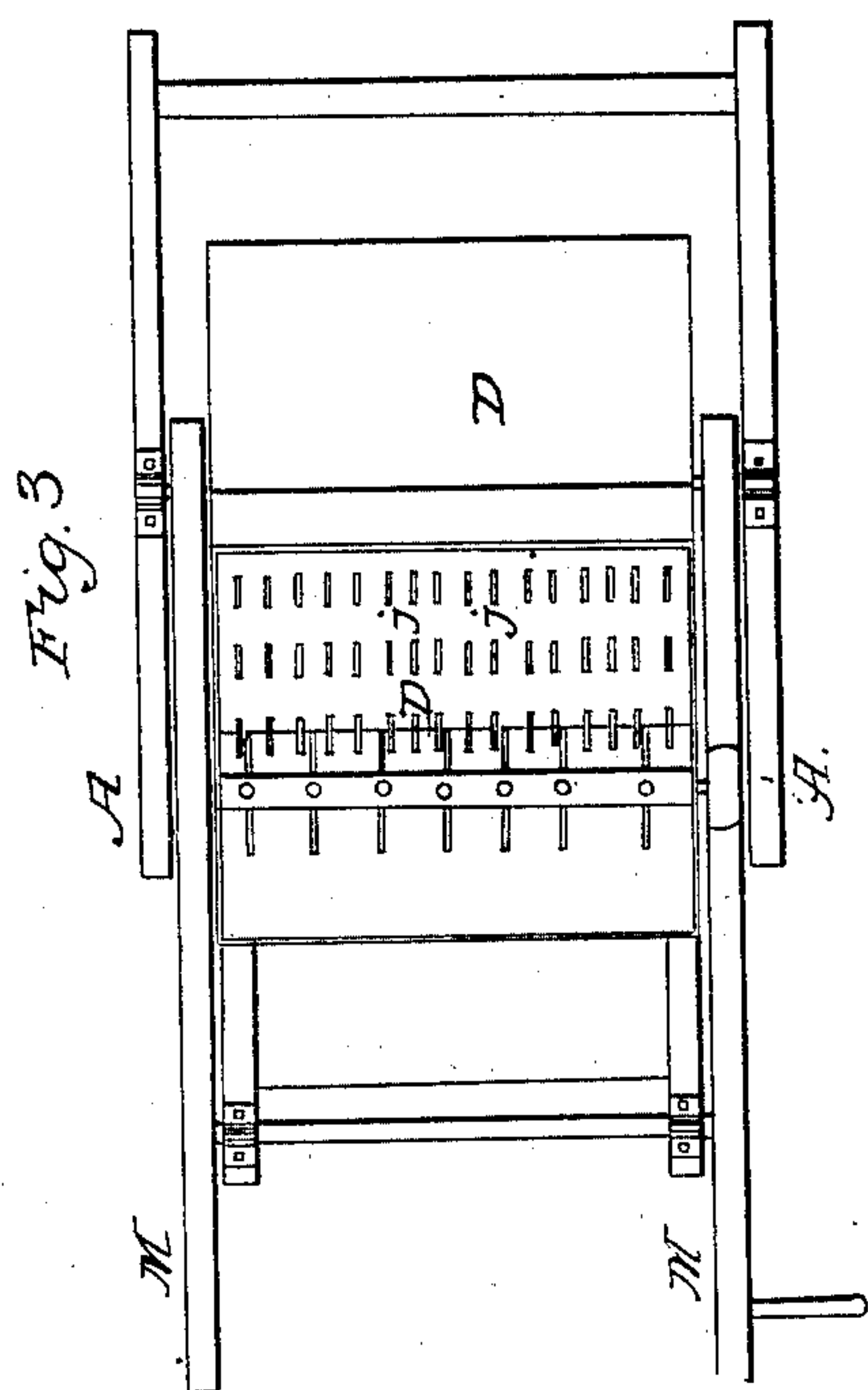
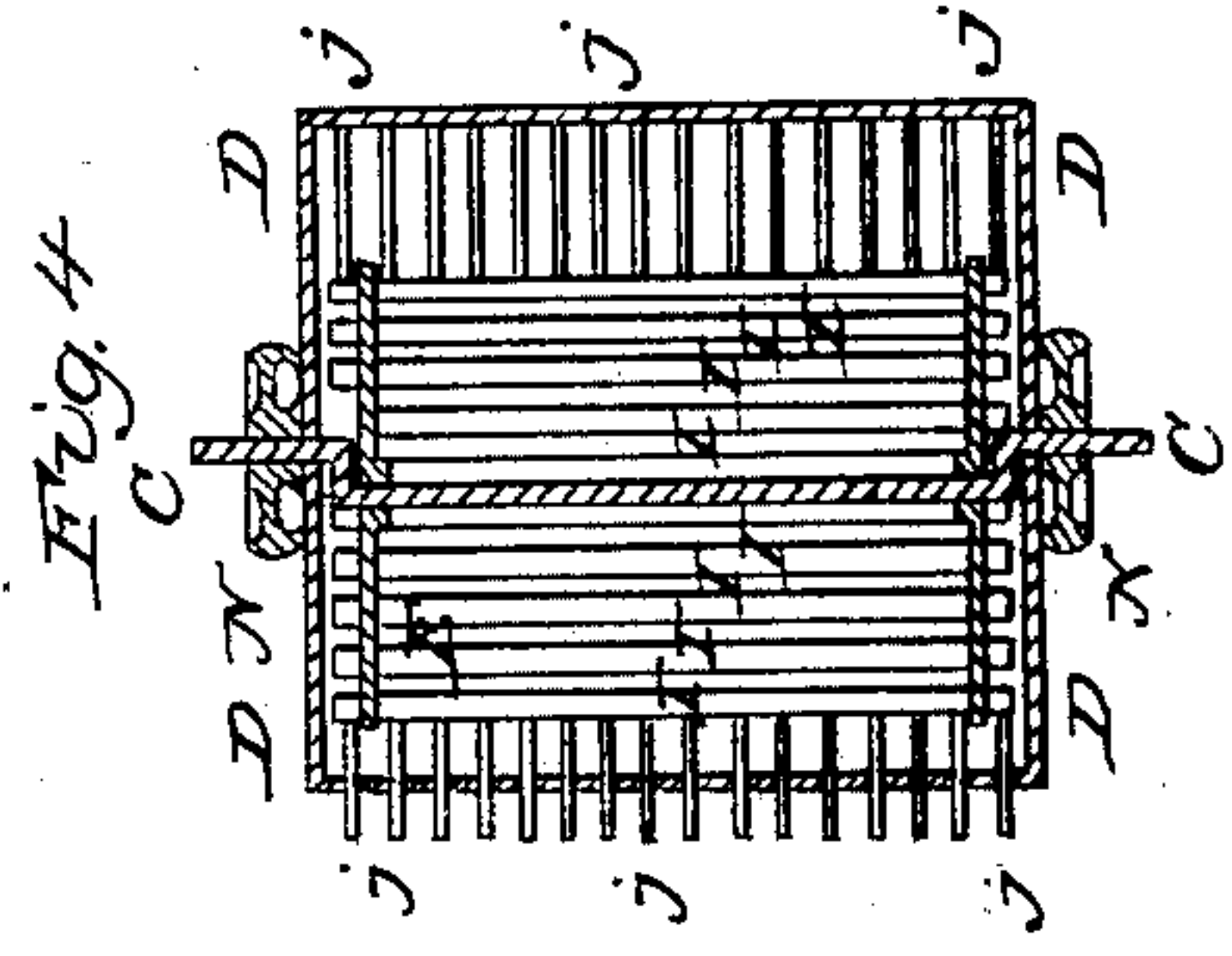
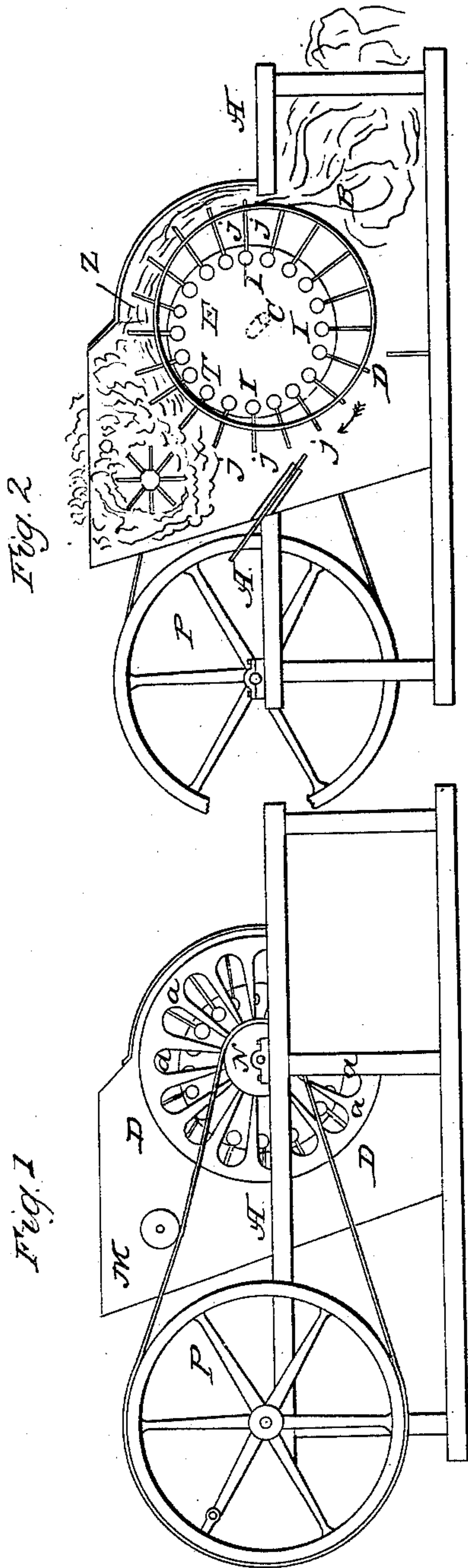


J. PERCY.  
Cotton Gin.

No. 35,109.

Patented April 29, 1862.



Witnesses  
George Downing.  
Paul and Delbert.

Inventor  
John Percy.



# UNITED STATES PATENT OFFICE.

JOHN PERCY, OF ALBANY, NEW YORK.

## IMPROVEMENT IN MACHINERY FOR GINNING COTTON.

Specification forming part of Letters Patent No. **35,109**, dated April 29, 1862.

*To all whom it may concern:*

Be it known that I, JOHN PERCY, of the city and county of Albany, and State of New York, have invented and made a new and useful Improvement in the Construction of Cotton-Gins; and I declare the following specification, with the drawings hereto attached as part of the same, to be a full and complete description of my invention.

My improvement is in the construction and operation of that portion of the cotton-gin known as the "picker," commonly formed like a circular saw with large teeth, which are made to run through the raw cotton with great velocity, drawing out the fiber and tearing out the seeds and any foreign material that may interfere with its proper working into thread. The operation of this saw to a considerable extent injures the staple of the cotton, tearing the long fibers into short fragments, to the detriment of the strength of the thread and cloth made from it.

The object of my invention is to obviate this evil, and by the form and movement of the picker-teeth comb out the foreign material without injuring the fiber of the cotton.

Figure 1 represents the external appearance of the machine in a profile view. Fig. 2 is a sectional view of the same in a vertical plane of its length. Fig. 3 is a plan view of the machine. Fig. 4 is a sectional plan of the picker through its axis.

Similar letters in the different figures denote the same parts of the apparatus.

The frame, hopper, mote-board, bars, and space for the delivery of the cotton or lint are in arrangement and proportion similar to the ordinary saw-gin; but my picker is thus constructed: On the upper rail, A, of the frame of the machine a shaft, C, is fixed so as to remain immovable during the operation of the machine, but so as to be loosened and capable of being turned and adjusted in any position, when required. Upon this shaft a hollow cylinder, D, is fitted to revolve, driven by pulley N, belt M, and wheel P, or any other convenient mechanical device. The shaft C is bent into a crank form, as shown in Fig. 4, its elbows lying close to the sides of the cylinder D. Upon this shaft and just inside of each elbow a disk, E, is fitted to revolve freely within the outer cylinder, D. Near the periphery of these disks, and not far from each

other, rods I I are arranged with journals at their ends, fitted to turn or oscillate slightly within bearings within the disks, forming what may be called an "inner cylinder." Into each of these rods, at small distances apart and in range with each other on each rod, are fixed metal pins or teeth *j j*, the points and edges of which are made oval, smooth, and a little flattened. In the periphery of the outer cylinder, D, opposite to these teeth, slots are cut sufficiently large to pass these teeth, in order to vibrate through it, smoothly but snugly, back and forth as the cylinders revolve, for it will be seen that from the construction of the machine the revolution of the outer cylinder must, by pressure upon the teeth, revolve the inner one, and that since the inner cylinder turns on an axis eccentric to that of the outer one the teeth will on that side, where the rods I I approach the periphery of cylinder D, protrude beyond it and in the opposite direction be drawn inward. The teeth are made of such length that when in the latter position, as shown in Figs. 2 and 4, their points cannot pass within the cylinder, but will align with its outer surface. The oscillation of the rods is to permit the teeth to pass through smaller slots and operate with greater nicety than if they were fixed immovably upon the surface of a cylinder, and for the purpose of freeing them more perfectly from the cotton-lint which adheres to them during their passage through the cotton. To facilitate further this result, I make openings in the ends of the outer cylinder, D, as shown at *a a*, Fig. 1, so that the movements of the inner cylinder may produce a current of air through the teeth-slots of the outer one.

It will be perfectly manifest from the above description and an inspection of the drawings that the movement of the teeth *j j*, instead of being directly against the cotton, making a rude cut through it like the operation of the saw-teeth, is in an elliptical direction, entering the cotton with a gradual motion forward as well as downward, and passing out of it with the same oblique action backward and downward, which movement I consider to be equally effective in the removal of foreign substances from the cotton as that of the saw-gin, but forming the lint without tearing the fibers and injuring the staple of the material; but the most important result from this motion is that

after the teeth have passed the bars at Z their gradual withdrawal through the slots frees them from the cotton-lint which adheres to them and leaves it free to pass off and out from the gin at B. This avoids the necessity of employing a brush-wheel, as in the saw-gin, to clear the lint from the pickers, and materially simplifies the machine.

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

The construction of a picker for a cotton-gin consisting of a hollow revolving cylinder, D, having through its outer periphery slots or openings for the passage through them of teeth

jj, affixed to rods which oscillate in bearings placed near the outer periphery of a pair of disks, E, located within the cylinder, these disks being arranged to revolve simultaneously with the cylinder D on an axis eccentric to its axis, so as to cause the said teeth to vibrate back and forth through the slots, substantially in the manner and for the purposes set forth in this specification.

JOHN PERCY.

Witnesses:

GEORGE DOWNING,  
RICHD. VARICK DE WITT.