E. CARVER.

Saw Gin.

No. 3,875. Patented Jan'y 4, 1845.

Fig. 1

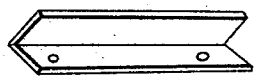


Fig. 2

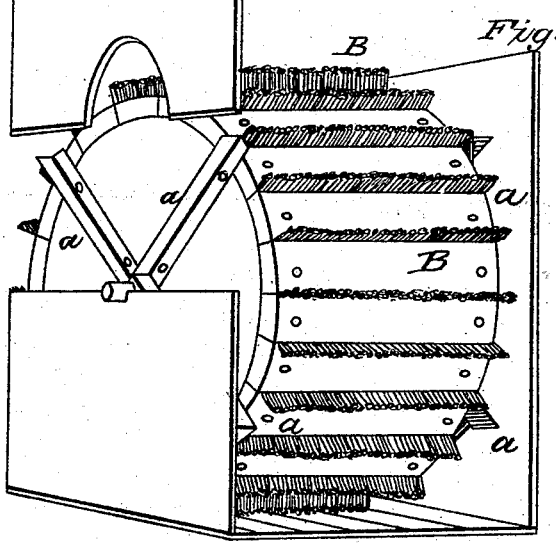
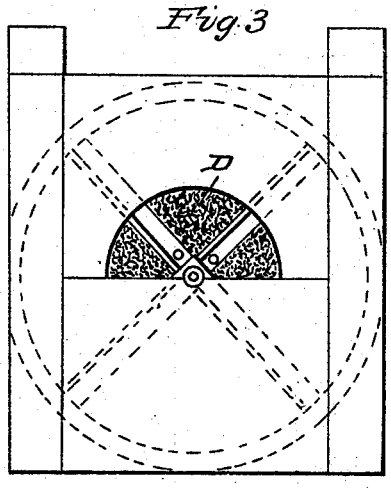


Fig. 3



UNITED STATES PATENT OFFICE.

ELEAZER CARVER, OF BRIDGEWATER, MASSACHUSETTS.

IMPROVEMENT IN SAW COTTON-GINS.

Specification forming part of Letters Patent No. **3,875**, dated January 4, 1845.

To all whom it may concern:

Be it known that I, ELEAZER CARVER, of Bridgewater, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in the Cylinder-Brush used in Saw-Gins for Ginning Cotton; and I hereby declare the following to be a full and exact description thereof, reference being had to the drawings annexed, making part of this specification.

The design of my improvement is to enable the brush to produce a sufficient and regular current of air through the gin, so as to discharge the clean cotton through the machine in a better manner than has heretofore been done.

In the operation of the common gin the brushes usually employed for taking the cotton from the teeth of the saws and discharging it through the gin are apt to produce eddies and counter-currents of air in the gin, which interrupt the regular and direct passage of cotton through the machine, and cause it sometimes to collect at the ends of the brush in such quantities as to retard its motion and endanger the machine. This difficulty I obviate by the application of what I call "fans" to the ends or heads of any cylinder-brush, extending from the axis to the outside of the cylinder, and standing out or projecting from these heads from one to two or more inches, according to the length of the brush. I make these fans of sheet-iron by taking a piece of about the semi-diameter of the cylinder and about three inches wide and bending it lengthwise at right angles, as is shown in the drawings, A, Figure 1. I then attach one side of it to the head of the brush with screws, which causes the other side to project and give the form of the fan required. I usually apply four of these fans to each brush-head, and I have described what I deem to be the best mode of making and attaching them; but a different number may be used, and they may be made of various kinds of material and attached in various ways, either to the brush-head or to the shaft, and answer a similar purpose.

Fig. 2 is a perspective view of a cylinder-brush with the fans attached. B B is the brush, and *a a a a* the fans. A part of the ceiling of the gin C is raised to show the adjustment of the fans more distinctly. These fans are supplied with air through an opening in the ceiling of the gin at or near the axis of the brush.

Fig. 3 is an end view of the brush in the gin, showing the opening in the ceiling D through which the fans are supplied with air.

In the operation of a gin with a cylinder-brush having these fans, a current of air is produced by them leading into the gin at both ends of the axis of the brush through the openings in the ceiling aforesaid, which thus prevents the cotton from collecting at the ends of the brush. This current also supplies the chamber or space over the brush, which prevents in some measure the air and cotton from being drawn in at the back side of the gin, and enables the cylinder-brush to make a sufficient and regular current of air and deliver the clean cotton from the gin properly.

Having thus described my improvement and its advantages, I now claim as my invention and desire to secure by Letters Patent—

The combination of a cylinder-brush having fans on the ends thereof with a cotton-gin, for the purposes and in the manner herein set forth, or in any manner substantially the same.

ELEAZER CARVER.

Witnesses:

ARTEMAS HALE,

CALEB S. HUNT.