(No Model.) 2 Sheets—Sheet 1.

S. S. WILLIAMS.

COTTON SEED HULLER.

No. 435,636. Patented Sept. 2, 1890.

Fig. 1

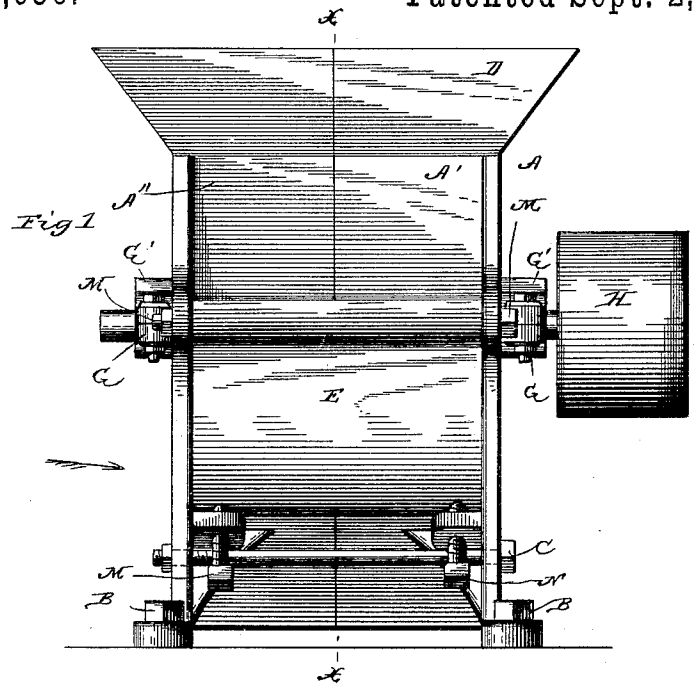
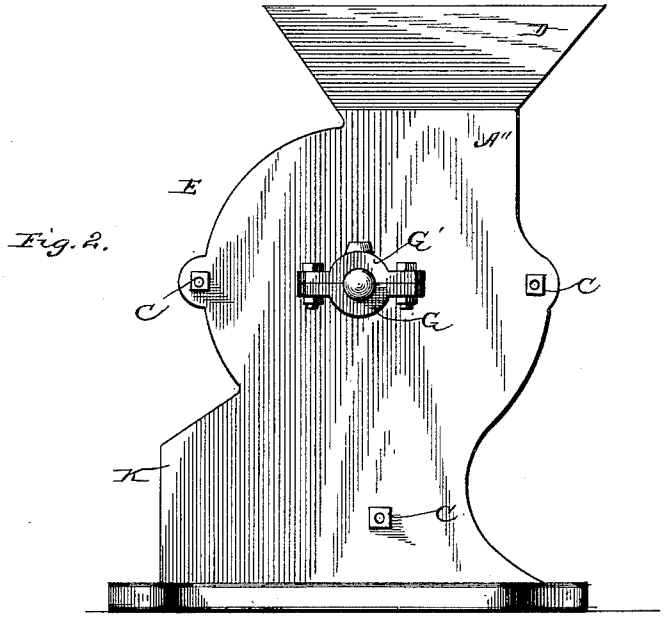


Fig. 2.



Witnesses:
Harry S. Robyn.
J. M. Fowler Jr.

Inventor:
S. S. Williams
by Lawson, Wiles & Crane,
Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

S. S. WILLIAMS.

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Fig. 3

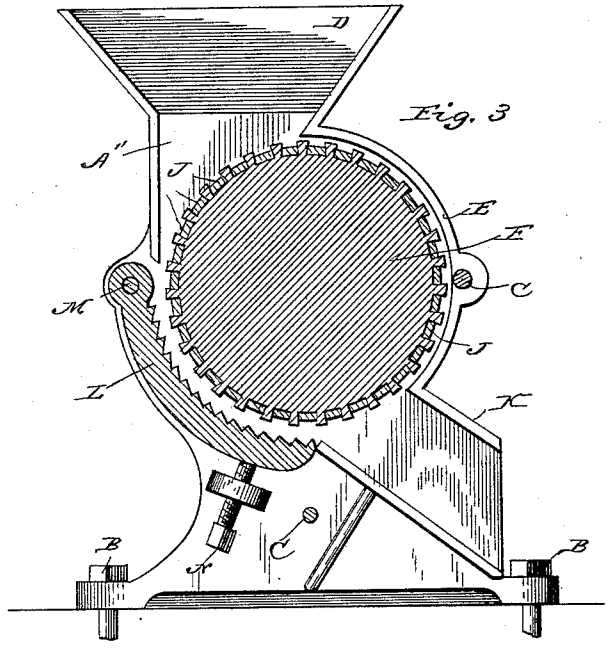


Fig. 4.

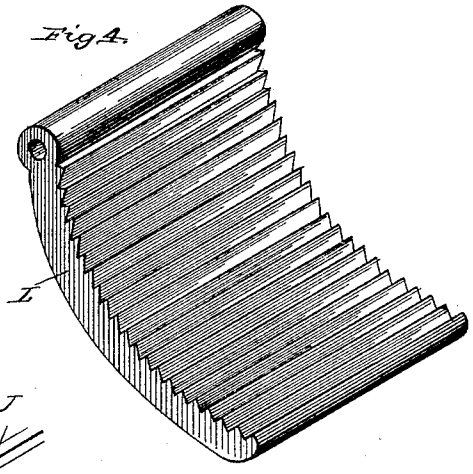


Fig. 5.

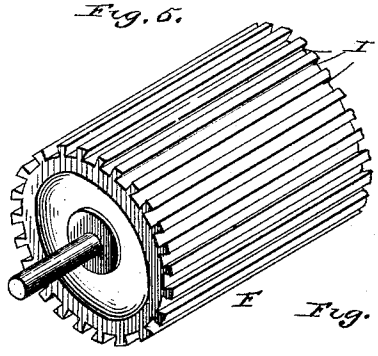
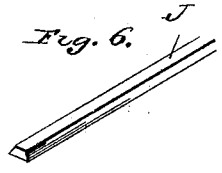


Fig. 6.



Witnesses:

Harry S. Rohrer

J. M. Fowler Jr.

Inventor:

S. S. Williams

By Lawson, Wiles & Keene

Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SAMUEL S. WILLIAMS, OF MERIDIAN, MISSISSIPPI.

COTTON-SEED HULLER.

SPECIFICATION forming part of Letters Patent No. 435,636, dated September 2, 1890.

Application filed June 18, 1890. Serial No. 355,845. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL S. WILLIAMS, a citizen of the United States, residing at Meridian, in the county of Lauderdale and State of Mississippi, have invented certain new and useful Improvements in Cotton-Seed Hullers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention is fully illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the machine. Fig. 2 is a view in the direction of the arrow of Fig. 1. Fig. 3 is a section on the line *x x*, Fig. 1. Figs. 4, 5, and 6 are detail views.

In the figures, A is a frame cast in halves A′ A″ and adapted to be secured to any suitable support by bolts B. The halves are united by bolts C, and when properly joined form a casing E, a hopper D, and a spout K. Within the casing closely fits a cylinder F, whose shaft projects at each end and rests in bearings G, formed integrally with the frame and covered by caps G′. Upon one end of the shaft is fixed a pulley H, by which the cylinder is rotated in the usual manner, power being supplied from any convenient source. The cylinder is of metal and is provided with a series of longitudinal grooves I, each dovetail in cross-section. In the grooves lie strips J of wood, which are slipped into place from the end of the cylinder, and which have their outer surfaces at a small uniform distance within the general surface of the cylinder. When the cylinder is in place, it forms the bottom of the hopper and cuts off the upper part of the spout. Between the hopper and the spout, upon one side of the cylinder, the casing is continuous, but upon the opposite side it is entirely cut away and replaced by a toothed "concave" L, extending the whole length of the cylinder and pivoted at one edge upon a bolt M. Its dress is longitudinal ribs extending from side to side nearly parallel to the axis of the cylinder and having their upper edges abrupt or radial with reference to the cylinder. It is adjusted in distance from the cylinder by means of set-screws N, working in lugs O upon the frame and pressing against the outer face of the concave at some distance from its pivot. In this adjustment the upper end of the concave maintains its distance from the cylinder, the space between the two gradually diminishing toward the spout.

In operation the seed placed in the hopper is carried around between the cylinder and concave and hulled by the combined abrasive action of the two. The parts may be so adjusted that the seed is ground to any desired degree of fineness. The dovetail form of the grooves in the cylinder gives two distinct results. The working edges of the metal, being undercut, are sharper and otherwise better adapted to give the best results with small expenditure of power. The grooves alone hold the strips with absolute security, and yet the latter may be readily slipped out longitudinally if the cylinder be first removed from the casing, and may be reduced in thickness from time to time as the outer face of the metal wears away in use. This operation requires no skill and only the simple tools always at hand, and it serves to keep the cylinder practically unchanged until some time after the wood has been entirely removed.

The device as a whole may be used alone or may be run in connection with a gin, receiving the seed therefrom and being driven by the same power. The capacity can be made as great as desired by increasing the length of the cylinder, which has a length of about six inches to hull the seed from a sixty-saw gin.

What I claim is—

1. The revoluble metallic hulling-cylinder having in its surface a series of longitudinal grooves of dovetail cross-section, and a series of wooded strips fitting in said grooves, respectively, and having their outer surfaces within the general convex surface of the cylinder.

2. The combination, with a suitable casing and a frame supporting the same, of a metallic cylinder revolubly mounted within said casing and provided with longitudinal grooves of dovetail cross-section, strips of wood partially filling said grooves, and a ribbed concave partially enveloping said cylinder.

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

SAMUEL S. WILLIAMS.

Witnesses:
W. T. DABNEY,
J. M. KIMBROUGH.