(No Model.) 2 Sheets—Sheet 1.

J. J. FAULKNER.

COTTON SEED HULLER.

No. 477,997. Patented June 28, 1892.

FIG. I.

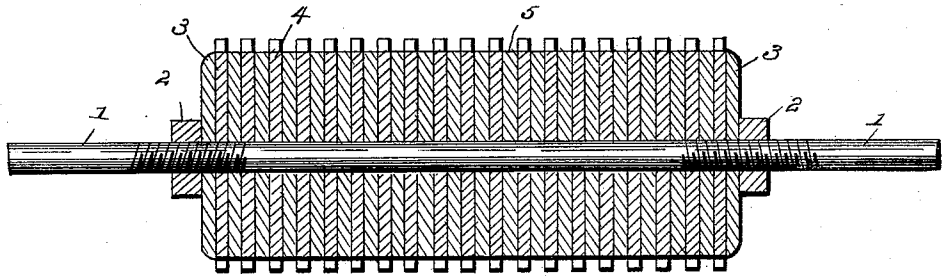


FIG. II.

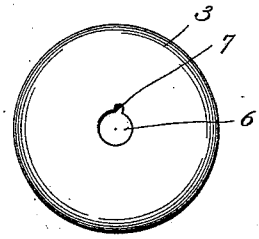


FIG III.

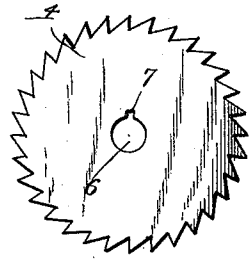


FIG. IV.

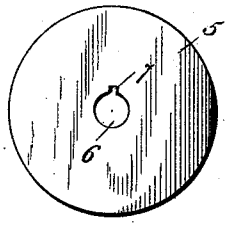
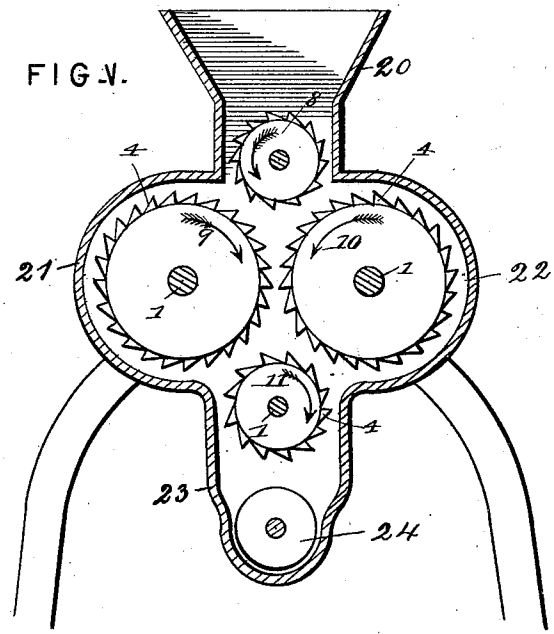


FIG. V.



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

(No Model.) 2 Sheets—Sheet 2.

J. J. FAULKNER.

COTTON SEED HULLER.

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FIG. VI.

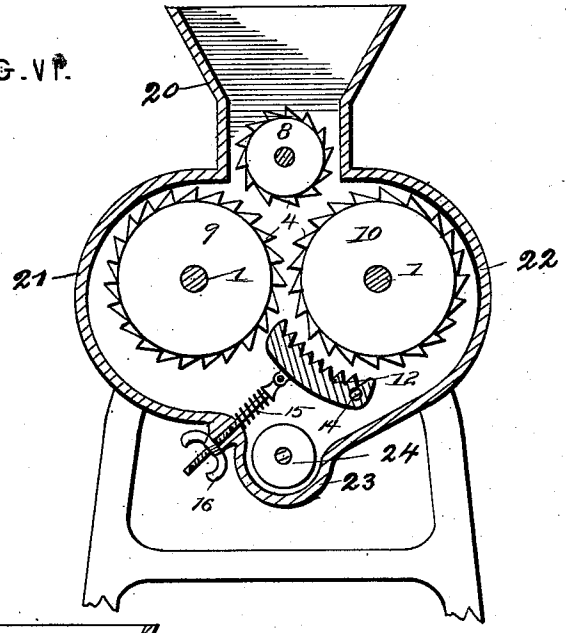


FIG. VII.

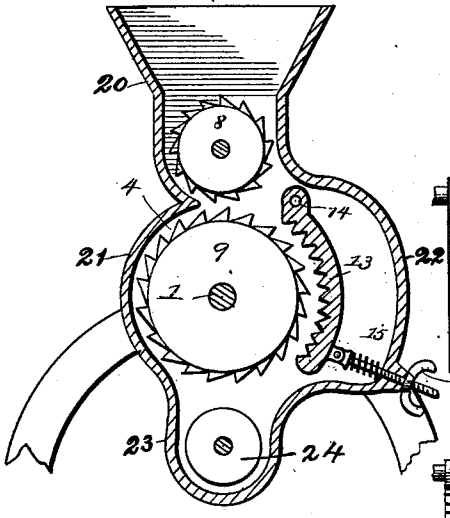


FIG. VIII.

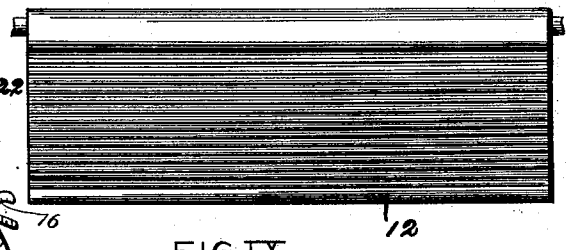
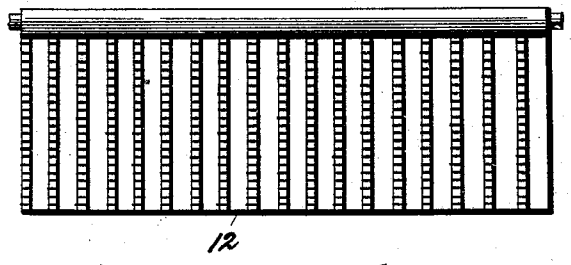


FIG. IX.



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UNITED STATES PATENT OFFICE.

JAMES J. FAULKNER, OF MEMPHIS, TENNESSEE, ASSIGNOR TO THE NATIONAL COTTON SEED OIL AND HULLER COMPANY, OF SAME PLACE.

COTTON-SEED HULLER.

SPECIFICATION forming part of Letters Patent No. 477,997, dated June 28, 1892.

Application filed December 24, 1890. Serial No. 375,687. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. FAULKNER, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Cotton-Seed Hullers, of which the following is a specification.

The invention relates to a machine for removing the hulls from the cotton-seed without crushing the seed or breaking the oil-sacks therein; and the invention consists in certain novel features in the construction of such apparatus, to be hereinafter more fully described, and specifically pointed out in the claim.

In the accompanying drawings, Figure I represents in axial section a hulling-cylinder constructed in accordance with my invention. Figs. II, III, and IV represent, respectively, the outside washer, the saw, and the inside fibrous packing-washer, which when mounted upon a shaft and secured by suitable nuts constitute my improved cylinder. Figs. V, VI, and VII represent three arrangements or forms of machine embodying my invention. Figs. VIII and IX show concaves having different forms of surface.

1 represents the shaft, 2 the jam-nuts, 3 the the outside clamping-washers, 4 the saws, and 5 the inside paper packing-washers, which together constitute my improved cylinder. The shaft 1 is of steel or other suitable material and has threaded portions near its opposite ends for the reception of the screw jam-nuts 2. The clamping-washers, saws, and packing-washers have perforations 6, which adapt them to fit snugly upon the shaft 1, and they may be keyed upon the shaft by notches 7, though this will not ordinarily be necessary. In setting up the cylinder, one of the jam-nuts being in place, the clamping-washer is placed on and then the saws and packing-washers successively passed over one end of the shaft until the cylinder is formed of the desired length, when the other clamping-washer is placed on and the other jam-nut screwed into place until all the disks are clamped tightly together. A cylinder may be constructed of any desired length in this manner and its distance from the ends of the shaft regulated to suit the form of machine. It is important that the washers 5 be made of paper, as I have found this to be the most satisfactory material, owing to its small cost, light weight, and durability.

In Fig. V is represented a machine having a feed-roller 8 of any desired construction and three co-operating differential hulling-cylinders 9 10 11, made according to my invention. The cylinder 9 is slow, while the cylinder 10 is a fast one, and these co-operate with a bottom finishing-cylinder 11, which also travels slowly to completely remove the hulls from the seed. The contiguous faces of the upper pair of cylinders travel downward, while the adjacent face of the lower cylinder travels in the same direction as that of the fast cylinder, but opposite to that of the slow cylinder. The result is that the seeds are delivered between the fast cylinder and finishing-cylinder.

In Fig. VI the arrangement is similar to that described with reference to Fig. V, except that the finishing-cylinder 11 is replaced by a stationary concave 12, concentric to the fast cylinder. The concave is for many purposes the equivalent of the finishing-cylinder. If preferred, this concave 12 may be pivotally supported and kept to its work by a spiral spring in the manner shown in Fig. VII.

In Fig. VII is illustrated a similar arrangement. Here but one cylinder is used, and in connection with it the complementary working surface consists of a concentric concave 13, mounted upon trunnions 14, held to the cylinder by a spring 15 and regulated by a screw 16.

In Figs. VIII and IX are shown two different forms of corrugation for the concaves 12 and 13, Fig. VIII representing a surface formed of a number of intersecting planes, while Fig. IX represents a surface covered with a number of closely-arranged transverse saw-edges. The latter form is closely allied in the effect produced to the saw-toothed cylinder 11 described in Fig. V.

The casing is formed with a hopper 20, within which the feed-roller rotates with expanded portions 21 22, within which the slow and fast hulling-cylinders are located, and with a drop portion 23 for the finishing-cylinder and for the conveyer 24, as shown.

A machine constructed in the manner above described will be found to neatly remove the hulls from the seeds by cracking said hulls without crushing the seed or rupturing the oil-sacks.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

A cotton-seed huller consisting of a casing formed with a hopper, with expanded portions beneath the hopper and with a drop portion beneath the expanded portions, the feed-roller located within the hopper, the slow and fast cylinders located within the expanded portions, and the finishing-cylinder and the conveyer located in the drop portion, substantially as described.

JAMES J. FAULKNER.

Witnesses:
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J. J. MURPHY.