(No Model.)

E. T. GENNERT.

MACHINE FOR DELINTING COTTON SEED.

No. 396,996. Patented Jan. 29, 1889.

Fig: 1.

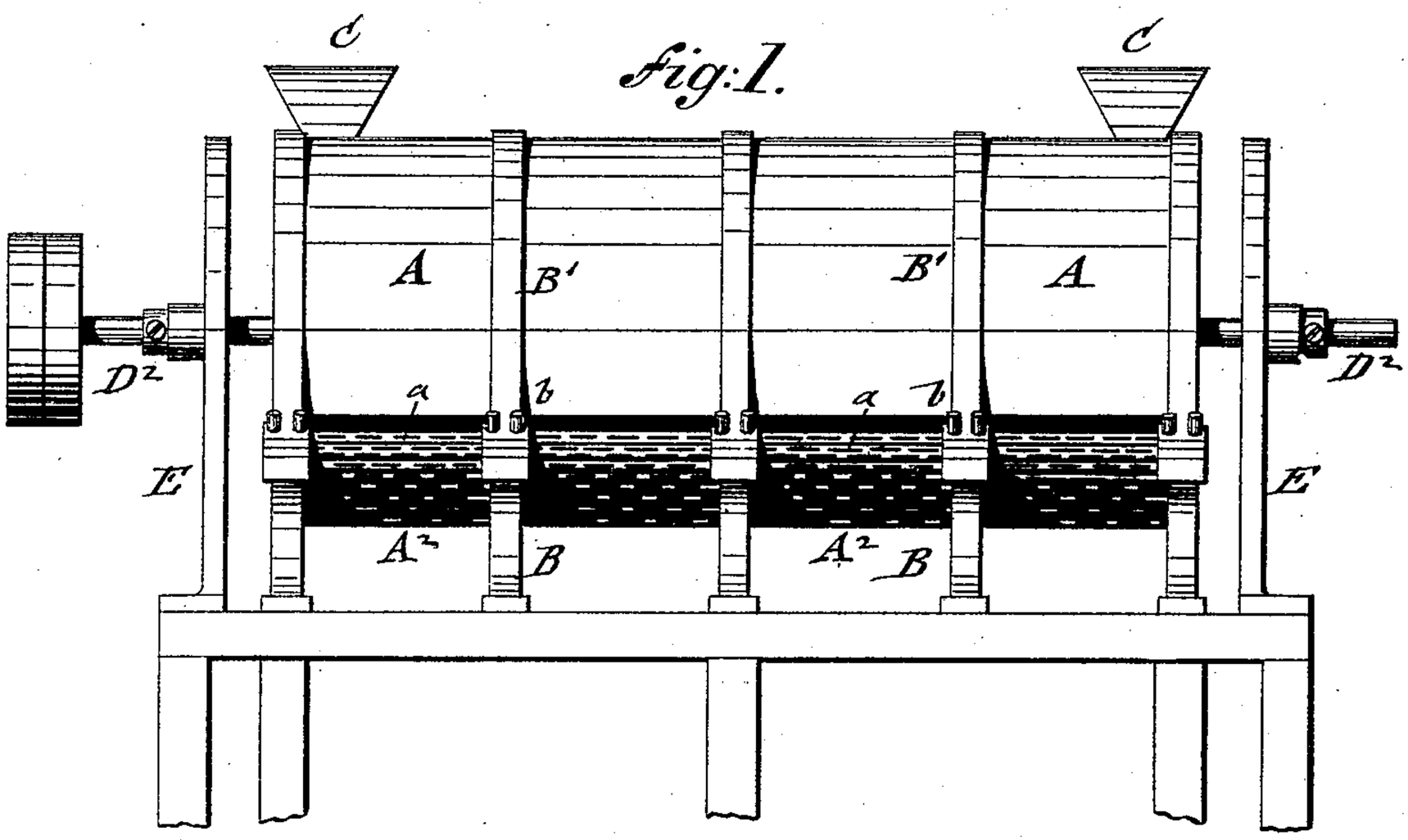


Fig: 2.

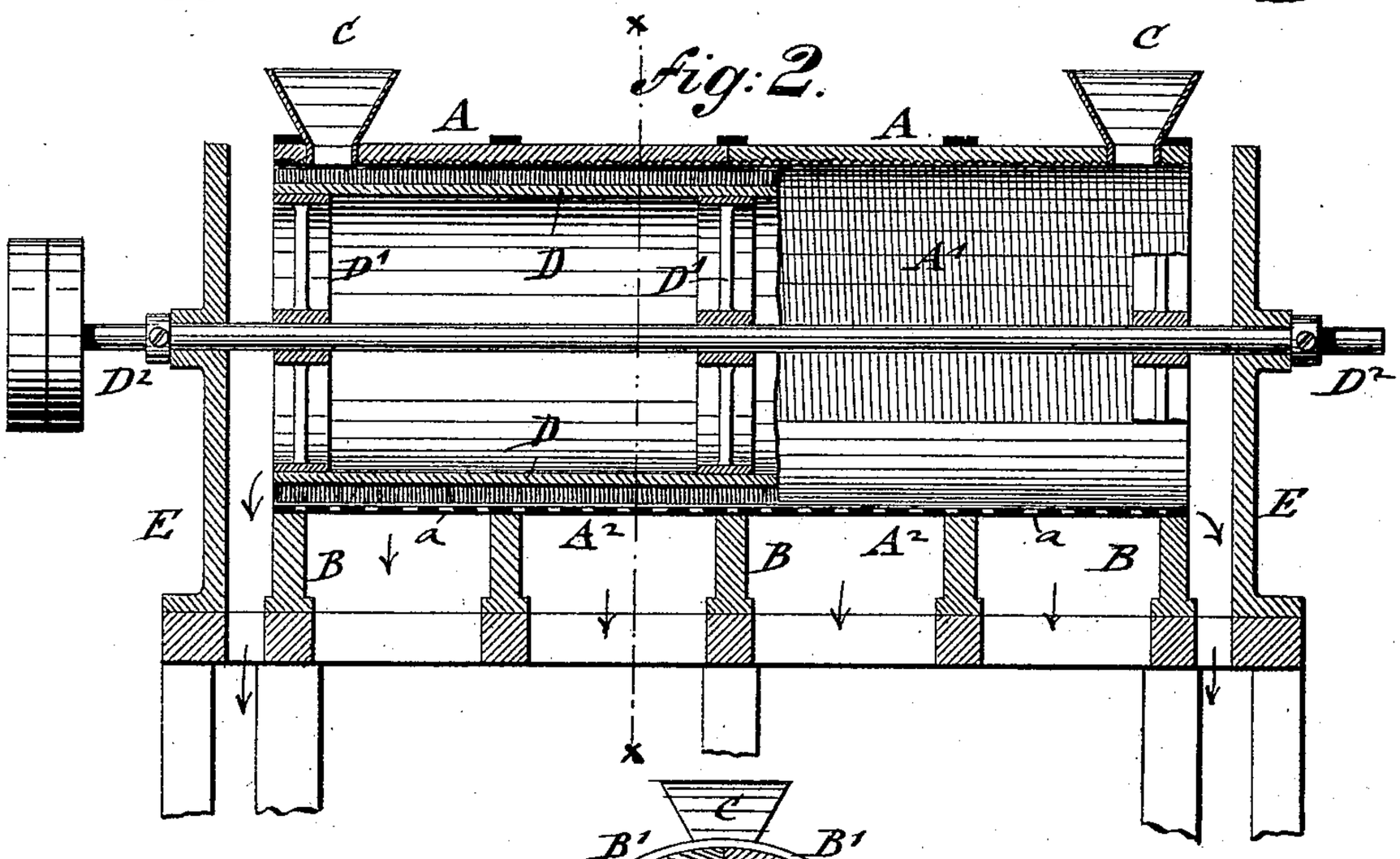
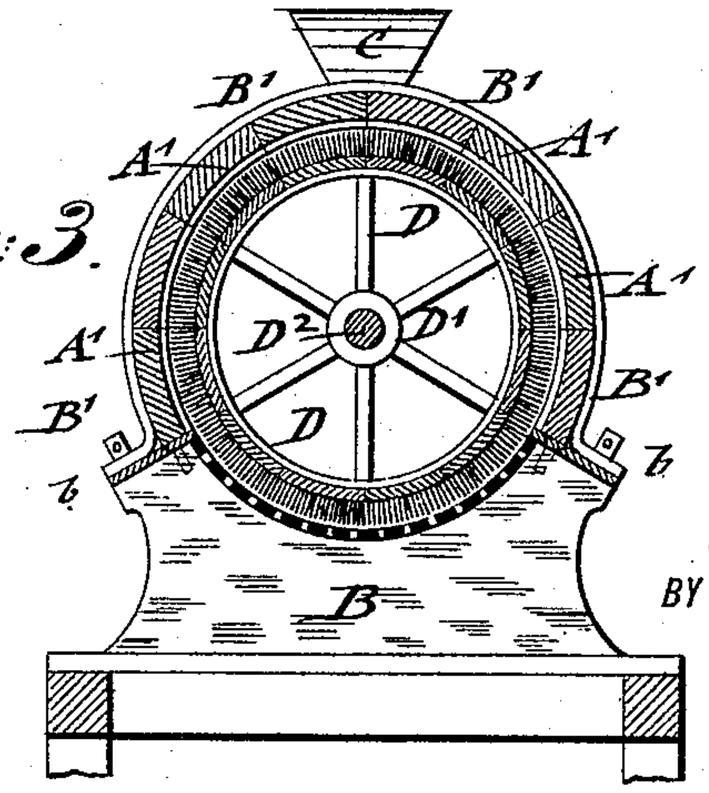


Fig: 3.



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UNITED STATES PATENT OFFICE.

ERNEST TH. GENNERT, OF NEW YORK, N. Y.

MACHINE FOR DELINTING COTTON-SEED.

SPECIFICATION forming part of Letters Patent No. 396,996, dated January 29, 1889.

Application filed October 14, 1887. Serial No. 252,347. (No model.)

To all whom it may concern:

Be it known that I, ERNEST TH. GENNERT, of the city, county, and State of New York, have invented certain new and useful Improvements in Machines for Delinting Cotton-Seed, of which the following is a specification.

This invention relates to an improved machine for removing the short lint or wool of cotton-seed which remains on the same after it has been passed through the ginning or linting machine, for the purpose of preparing the same in a better manner for extracting the oil contained in the same; and the invention consists of a machine for abrading cotton-seed, which comprises a cylindrical casing or shell composed at the upper part of segmental slabs of a suitable abrading material, and at a lower part of a metallic shell having short longitudinal slots, and of a rotary brush in the interior of the casing that gives the motion to the seed. The casing or shell is provided with hoppers at both ends for supplying the seed and with open ends, so that the abraded seed can pass off at either end of the shell according to the direction of motion imparted to the same by the brush.

In the accompanying drawings, Figure 1 represents a side elevation of my improved machine for abrading cotton-seed. Fig. 2 is a vertical longitudinal section of the same, part of the brush being broken away; and Fig. 3, a vertical transverse section on line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the casing or shell of my improved machine for abrading cotton-seed after the same has been passed through the gin and linting-machine, the machine having for its object the removal of the short lint or fine wool fibers that are left on the cotton-seed after the same has been cleaned in the ginning or linting machine. The casing or shell A is formed at the upper two-thirds of its circumference of arc-shaped stone slabs A′, which are provided on their interior surfaces with grooves or furrows having slight spiral pitch, said slabs being supported by segmental standards B and retained by circumferential bands B′, attached to said standards by screw-bolts *b*, as shown clearly in Figs. 1 and 3. The lower third or bottom of the casing or shell A is formed of a metallic plate or section, A^2, of suitable thickness, which is provided with short longitudinal slots *a*, that are punched into the metallic plate. The slotted bottom part rests on the standards B, as shown in Fig. 3. The casing or shell A is open at both ends, and provided at both ends with hoppers C for supplying the cotton-seed. A rotary brush, D, is arranged in the shell, the brush being made of cylindrical shape and supported on spider-frames D′, that are keyed to a longitudinal center shaft, D^2, which is supported in bearings in the end standards, E, that are arranged at a short distance from the ends of the shell or casing A, so as to leave a space of sufficient width for dropping the abraded cotton-seed from the edge of the shell. According to the direction in which the cylinder-brush is turned, the seed is passed either in one or the opposite direction through the shell A, the direction of motion of the brush being reversed from time to time for the purpose of uniformly wearing off the abrading surfaces of the slabs A′. The short fibers that are removed from the cotton-seed by the abrading action of the furrowed slabs are dropped through the slots of the bottom section of the shell by the action of the brush, while the cleaned seed is delivered at either end, as shown by the arrows in Fig. 2. The seed is delivered to separate receptacles at the ends of the machine, while the short fibers are collected in receptacles below the shell. The width of the grooves or furrows of the abrading slabs corresponds in width and depth to the general shape of the cotton-seed, the fibers on the same being abraded by the action of the roughened surfaces of the slabs, which may be made of any suitable abrading material.

When the cotton-seed is cleaned by removing the wool fibers, it is in a condition for being broken or cracked by the crushing-mill, so that the oil can be extracted in a more perfect manner from the seed, as the removal of the fibers facilitates the crushing and preparing of the seed for the production of cotton-seed oil.

I am aware that abrading-machines for cotton-seeds have been used heretofore, in which

a fixed exterior cylinder is used which is provided with abrading material at its inner surface, said cylinder being perforated for the discharge of the lint removed from the seeds. Within the exterior cylinder is arranged a rotary interior cylinder having a rasp or grating-surface, which, in connection with the abrading-surface of the exterior cylinder, removes the lint from the seeds. In my machine the abrading-surface is confined to the upper part of the exterior cylinder, while the lower part has no abrading-surface, but is provided with slots for the discharge of the lint dropping from the seeds. This is a more effective arrangement than that heretofore in use.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a rotary cylindrical brush, of a fixed exterior casing or shell extending around said brush, and composed of an upper part provided with an abrading material having grooves or furrows and of a smooth and slotted bottom part, substantially as set forth.

2. The combination of an exterior casing or shell, the upper surface of which is provided with abrading material having grooves or furrows, said casing having a slotted bottom part and being provided with open ends, with an interior cylindrical brush, substantially as set forth,

3. The combination of an exterior shell or casing, the upper surface of which is formed of a series of slabs of abrading material, said casing or shell having a slotted bottom part, and said slabs having spirally-arranged grooves or furrows, with an interior rotary brush central to the casing and standards for supporting the shaft of the brush, substantially as set forth.

4. The combination of an exterior casing or shell formed at the upper part of abrading material and having grooves or furrows, said shell or casing having a slotted bottom part, supporting-standards, and encircling-bands for said casing, with an interior rotary brush supported centrally to the casing, said casing being open at the ends and provided with supply-hoppers at both ends, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ERNEST TH. GENNERT.

Witnesses:
PAUL GOEPEL,
MARTIN PETRY.