

(No Model.)

J. A. BACHMAN.
SAW GIN.

No. 462,189.

Patented Oct. 27, 1891.

Fig. 1.

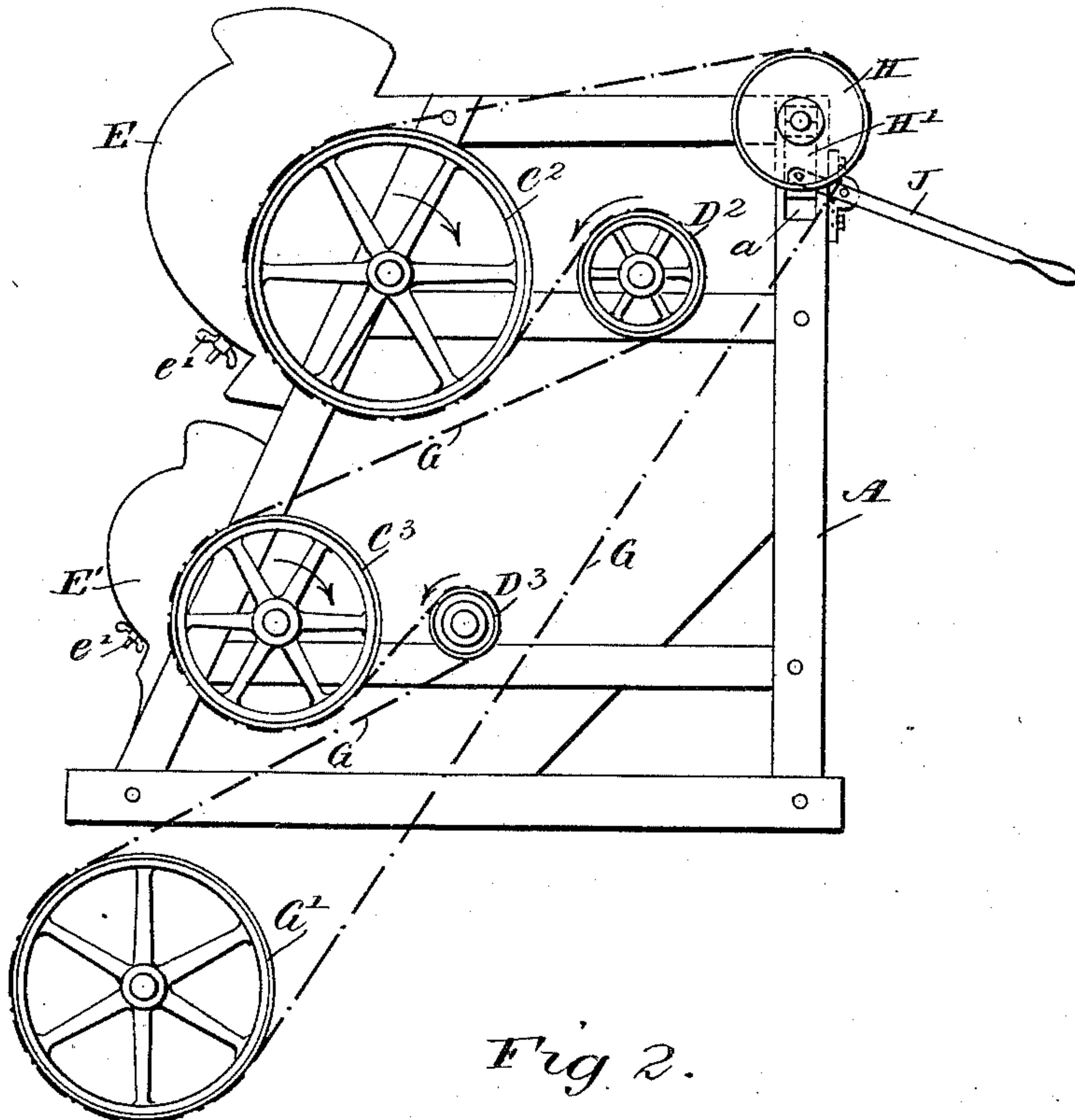
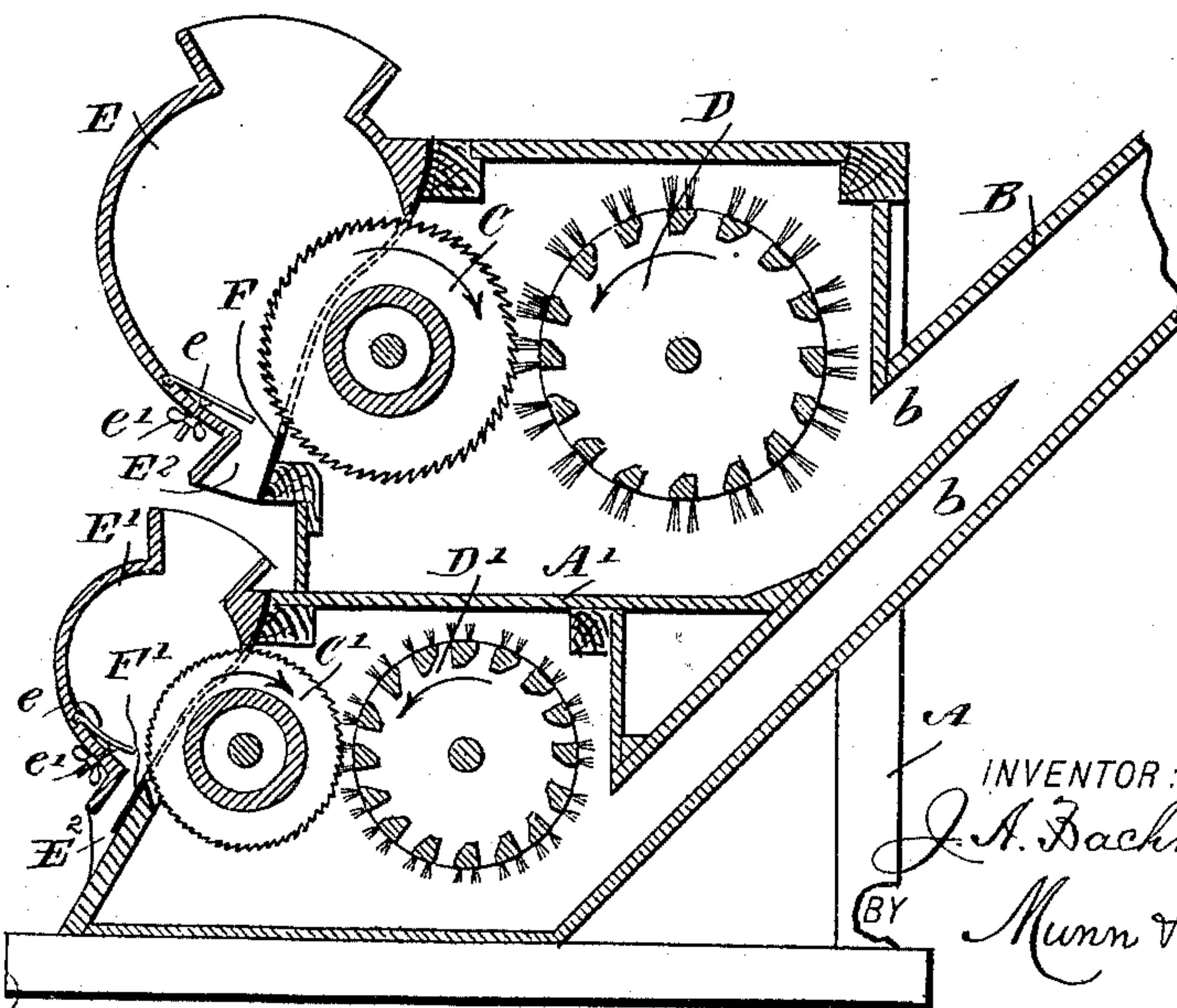


Fig. 2.



WITNESSES:

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JOSEPH A. BACHMAN, OF AUSTIN, TEXAS.

SAW-GIN.

SPECIFICATION forming part of Letters Patent No. 462,189, dated October 27, 1891.

Application filed December 22, 1890. Serial No. 375,482. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. BACHMAN, of Austin, in the county of Travis and State of Texas, have invented a new and Improved Saw-Gin, of which the following is a full, clear, and exact description.

My invention relates to improvements in cotton-gins; and the object of the invention is to produce a gin which will do a great amount of work, which will occupy but little space, and which will separate the cotton into parts of different quality.

The various parts of the machine embodying my invention are not in themselves new, but the parts are arranged in such a manner as to form a new combination. As gins are ordinarily constructed, the seed and lint are entirely separated in one roll box or hopper, and the operation of the machine is comparatively slow, as it takes a considerable period of time to entirely separate the lint from the seeds; but by means of my invention the operation is performed in less than one-half the time, owing to the upper roll-box being especially adapted to raw cotton and the lower one to half-ginned cotton, as the lint and seeds are only partially separated in one roll-box and are then delivered into another, where the operation is completed.

My invention consists in certain features of construction and combinations of parts, which will be hereinafter fully described, and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a side elevation of the machine embodying my invention, and Fig. 2 is a vertical longitudinal section of the same.

The frame-work or casing A is divided by a horizontal floor A', extending centrally through it into two compartments, each of which communicates by a flue b with a main flue B, which discharges into a condenser in the ordinary way, and mounted in the front portions of the frame-work in each of the compartments are the saws C and C', behind which are brushes D and D', respectively, which revolve in opposite directions to the saws and which brush the lint from the saws, and at the same time create a current of air

strong enough to drive the lint up through the flue B.

The saws and brushes are of the usual construction, and the saws project through grates F and F', respectively, into the roll-boxes E and E', which are arranged one above the other, as shown, and which have openings E² at the bottom, and are also open at the top, so that the half-ginned cotton in the upper roll-box will be delivered into the lower box, and the seeds may be allowed to drop from the lower box in the usual manner.

In the bottom of each box E and E' is a regulating-plate e and an adjusting-screw e' for the same, which plates are used for regulating the cleaning of the seed in the ordinary way and form no part of my invention. The saws C and the grates F in the upper portion of the casing A are coarser than the saws and grates in the lower compartment, and the regulating-plate in the upper roll-box E is adjusted so that the upper saws will only remove the best and longest fibered lint from the seeds, and this will be removed from the saws by the brush D and delivered into the flue B. The half-ginned seed will drop into the roll-box F' and the finer saws C will separate the remaining portion of the lint from the seeds, and this will be removed by the brush D' and also be delivered into the flue B. It will thus be seen that the gin will work faster than two ordinary machines, as only half the work of ginning is done in one roll-box and finished in the other, each box being especially adapted to the condition of the cotton at the different stages of the operation.

In the drawings I have shown the upper and lower brushes arranged to deliver into one flue B; but it is obvious that separate flues may be provided, and that thus two qualities of cotton may be produced, and it is also evident that the arrangement of the device may be carried out to a further extent and three or more sets of saws and brushes provided; but in practice two sets are found most convenient.

The shafts on which the saws and brushes are fixed extend outward through one side of the casing A, and the ends of the saw-shafts are provided with pulleys C² and C³ and the brush-shafts are provided with pulleys D² and D³, and the brushes and saws are all driven

by one belt G, which extends over a driving-pulley G', and is then made to extend around the other pulleys and over an idler H on the upper portion of the frame or casing. The
5 idler-pulley H is mounted in a box H', which moves vertically in a slideway *a* of the main frame, and the box is pivotally connected with a lever J, by means of which the box and pulley may be raised, thus tightening the
10 belt G.

I have not shown the detailed construction of the lever and box, as any means may be used for raising the latter. It will be seen by reference to the drawings in the Fig. 1
15 that the pulleys are arranged in such a manner that the belt extends around a greater portion of their bearing-surfaces and a great deal of power will thus be imparted to them and the saws and brushes with which they
20 are connected.

I do not claim in detail the construction of the parts described above; but the arrangement of the coarser and finer saws and the roll-boxes and grates for the same embody the
25 essential features of my invention.

The operation of the machine will be readily understood. The cotton is fed in a raw state into the upper roll-box E in the usual manner, the coarser lint is separated from the seeds in the usual manner, and the seeds
30 and the finer lint drop into the lower roll-box, where the operation of ginning is completed.

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

A cotton-gin comprising a case having two compartments therein, one above the other, and provided with a common flue, a roll-box for each compartment, one being made to deliver into the other, grates of different degrees of fineness for the roll-boxes, revoluble
40 saws of different sizes mounted in the compartments and projecting through the grates, and revolving cleaning-brushes for the saws, substantially as shown and described.

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Witnesses:

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