

(No Model.)

2 Sheets—Sheet 1.

A. J. WILLIAMS.
COTTON CLEANER AND FEEDER.

No. 284,151.

Patented Aug. 28, 1883.

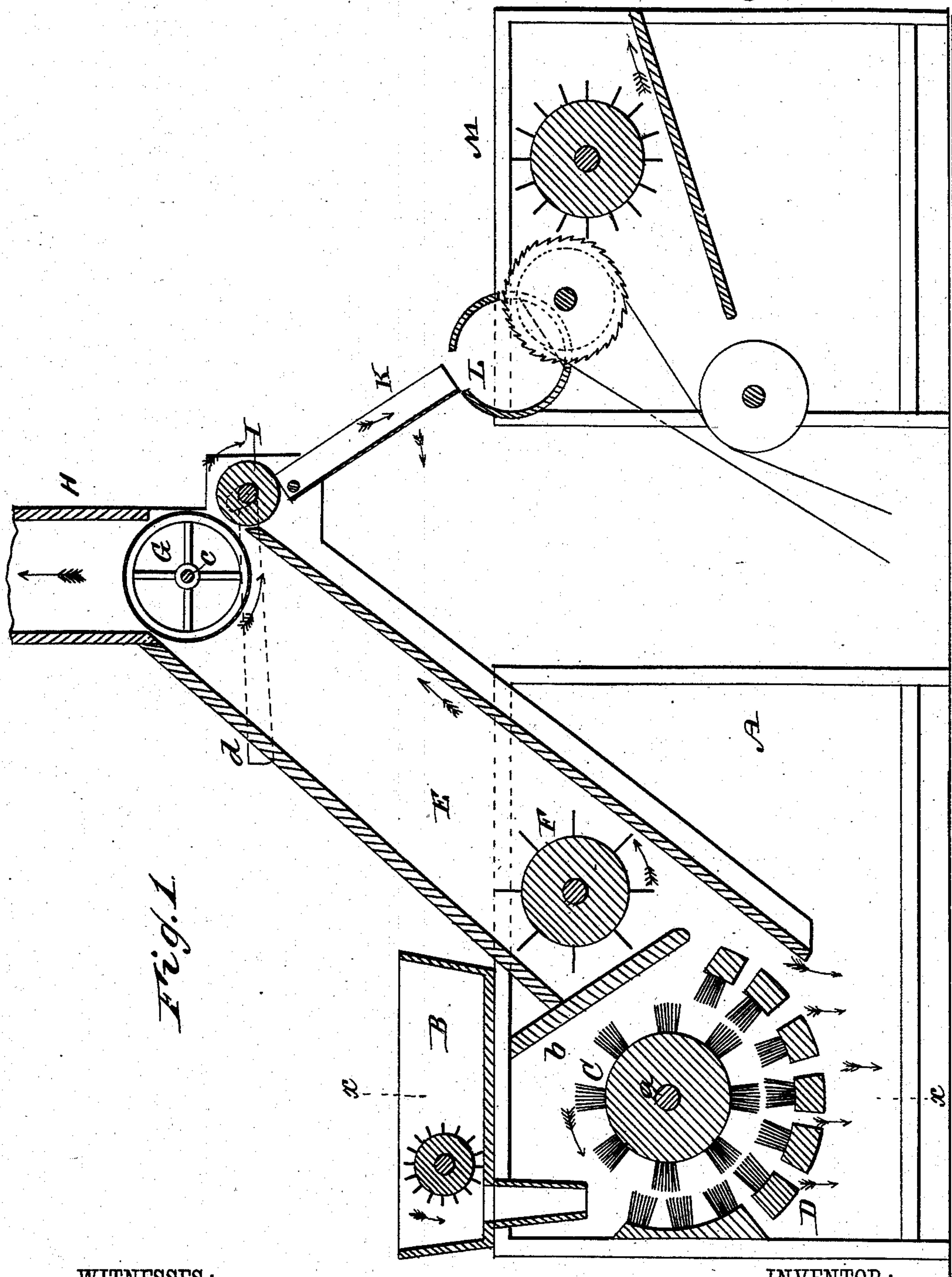


Fig. 1

WITNESSES:

Theo. G. Hoston
C. Sedgwick

INVENTOR:

BY *A. J. Williams*
Mum & Co
ATTORNEYS.

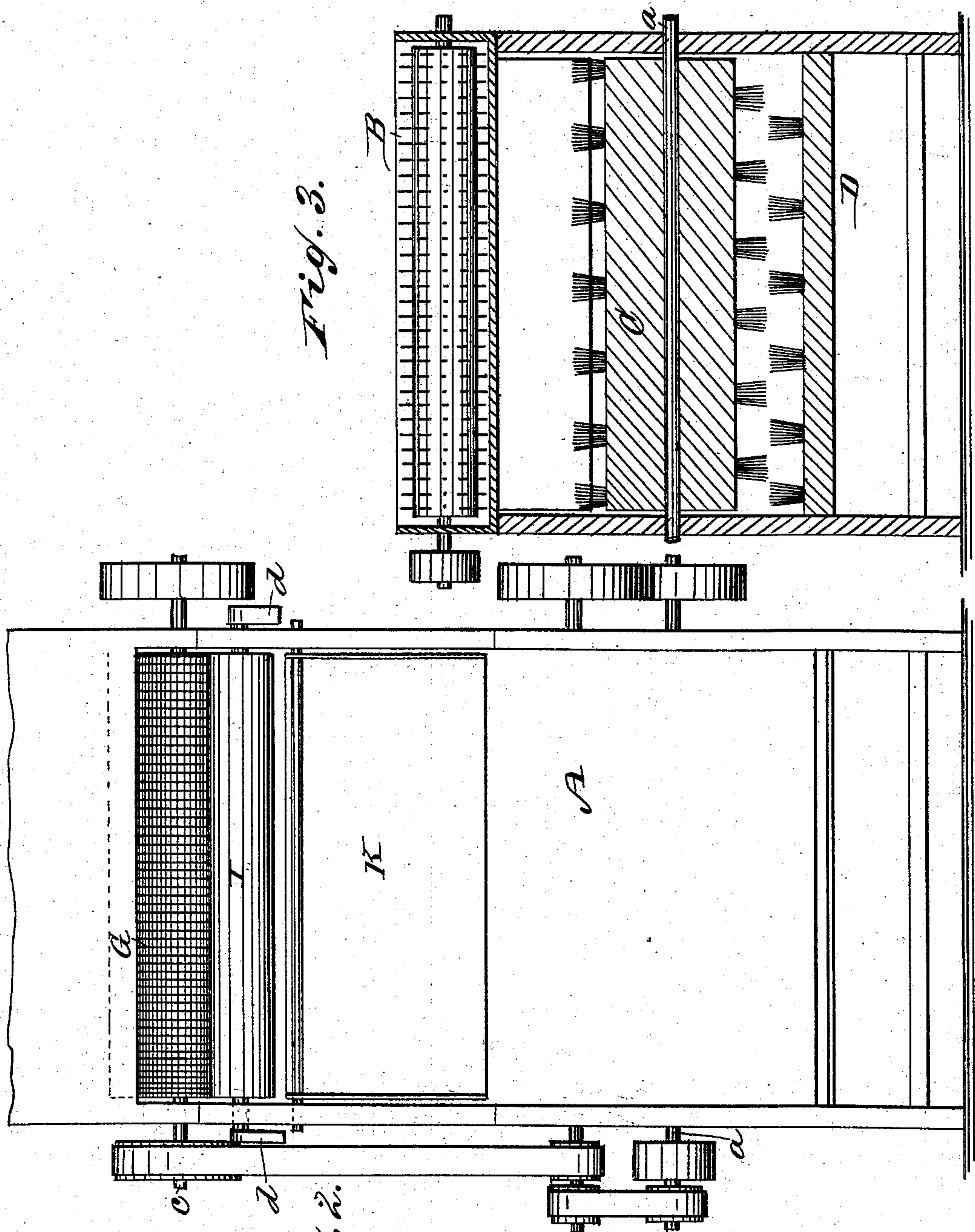
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UNITED STATES PATENT OFFICE.

ANDREW JACKSON WILLIAMS, OF MACON, GEORGIA.

COTTON CLEANER AND FEEDER.

SPECIFICATION forming part of Letters Patent No. 284,151, dated August 28, 1883.

Application filed April 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. WILLIAMS, of Macon, in the county of Bibb and State of Georgia, have invented a new and Improved Cotton Cleaner and Feeder, of which the following is a full, clear, and exact description.

My improvements relate to machines for removing sand, stones, leaves, and other refuse from seed-cotton previous to ginning.

10 The object of the invention is to furnish a machine that will clean the cotton and feed it directly to the gin free of stones and other refuse which might injure the gin or the cotton, and in mass the full length of the roll-box, thereby saving the labor of picking stones, &c., by hand, as is necessary when the cotton is cleaned only by a fan.

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

Figure 1 is a vertical longitudinal section of the cleaner and feeder and of a gin to which it is applied. Fig. 2 is an elevation of the cleaner and feeder at the delivery end, and Fig. 3 is a vertical cross-section on the line *x x* of Fig. 1.

A is the closed case or frame of the machine, provided on its upper side with a feed-opening, to which a box and feeder, B, of any ordinary construction, is applied.

30 C is a beater fitted within the case on a cross-shaft, *a*, and D is a curved apron of slats extending in front of and beneath the beater. The beater is preferably a cylinder provided with steel brushes, and the apron is also fitted with steel brushes, with which the beater-brushes move in contact, or nearly so.

40 E is an inclined trunk or chute, extending from behind the beater and over the back of the case a suitable distance upward. At the foot of the trunk is an inclined board, *b*, terminating near the back end of apron D and above the bottom of the trunk, so that there is space for the cotton to pass to the trunk.

45 F is a fan-blower fitted in the lower part of the trunk.

50 G is a cylindrical screen on a shaft, *c*, fitted across the upper end of the trunk, so as to close the end, except a narrow space at the bottom.

H is a dust-flue connected to the trunk above the screen, the flue passing out of the building, or to any desired place.

I is a roller at the upper end and under side of the trunk, hung on weighted arms *d*, that tend to press the roller toward the screen G. 55

K is a hinged apron hung beneath roll I, so that it may be turned out to connect with the roll-box L of a gin, or swung back out of the way when not in use. 60

L is the roll-box of an ordinary cotton-gin, M.

The shafts of the beater and of the blower and screen are provided with pulleys, and connected by belts in any suitable manner with the driving-power of the gin. 65

In the operation of the machine the seed-cotton from the feeder B is carried between the beater C and apron D, with the effect of loosening up the cotton and allowing the sand to pass down between the slats of the apron, and also loosening the stones and leaves. The loosened cotton then passes over the back of the apron, and is drawn into the trunk and forced up the same by the fan to the revolving screen G, by which the cotton is carried over the roller I to the apron K. While the cotton is passing up the trunk, it being loose, the stones pass down the trunk and out, or, in case any reach the screen, they are forced out by the pressure of the roller I. The cotton, as it passes over the roller, is compacted in a mass the full width of the apron K, which being in width the length of the roll-box L, the cotton is delivered to the gin in the best possible condition and manner. 85

By using the beater as described, stones and other heavy refuse are effectively separated, and leaves which have been caused to adhere to the cotton by frost are broken up and separated. By the arrangement of the inclined trunk as shown the cleaner can be set off from the gin and space left to pass in front of the gin beneath the trunk. 90

In place of using a force-fan at the lower end of the trunk, a suction-blower may be placed in the dust-flue above the revolving screen. I do not limit myself in that respect, nor to the construction of the beater and brush-apron exactly as described. 95

I am aware that cleaners have been made 100

for partially cleaning cotton before ginning; but they have not been constructed to serve as feeders for the gin, and in fact would not be practicable for that purpose, as they do not
5 remove the stones, leaves, &c. I am also aware that machines have been made to clean refuse cotton from gins; but such machines are not adapted for cleaning seed-cotton.

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

1. The combination, with the case A, the beater C, and the curved apron of slats D, said beater and slats having brushes, of the in-
15 clined board *b*, with its lower end arranged a short distance from the rear end of the apron, the trunk E, with its lower end disposed a short distance from the lower end of the board

b, and the fan F, separated by the board *b* from the beater, essentially as shown and de- 20 scribed, and for the purpose set forth.

2. The combination, with the case A, the beater C, and curved apron of slats D, said beater and slats having brushes and inclined board *b*, of the upward-inclined trunk E, having the 25 dust-flue H, the fan F, condensing-cylinder G, weighted roller I, and the apron K, hinged to the upper end of the trunk, whereby the cleaning of the cotton and the feeding of the same into the gin are effected in a continuous operation, as set forth.

ANDREW JACKSON WILLIAMS.

Witnesses:

EDGAR G. DYSON,

EDWARD A. FURLOW.