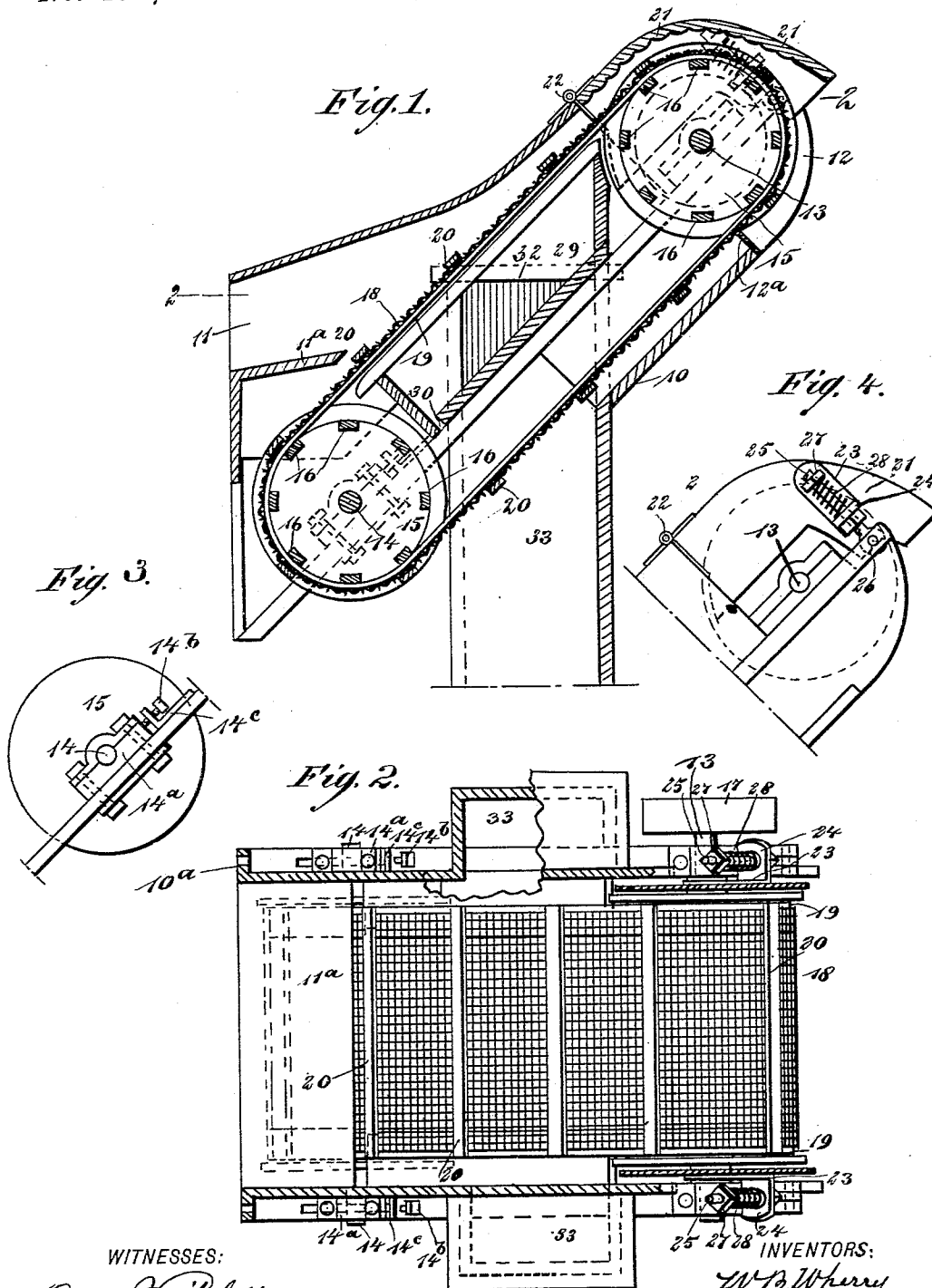


(No Model.)

W. B. WHERRY & W. F. SMITH.
COTTON CLEANER AND CONDENSER.

No. 476,710.

Patented June 7, 1892.



WITNESSES:

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WILLIAM B. WHERRY AND WILLIAM F. SMITH, OF OVERTON, TEXAS.

COTTON CLEANER AND CONDENSER.

SPECIFICATION forming part of Letters Patent No. 476,710, dated June 7, 1892.

Application filed February 20, 1892. Serial No. 422,297. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM B. WHERRY and WILLIAM F. SMITH, both of Overton, in the county of Rusk and State of Texas, have
5 invented a new and Improved Cotton Cleaner and Condenser, of which the following is a full, clear, and exact description.

Our invention relates to improvements in machines for cleaning and condensing cotton;
10 and the object of our invention is to produce a cheap and simple machine of this class which is adapted for use in connection with a cotton-gin and which will rapidly separate the dirt from the cotton and will also con-
15 dense the cotton, so that it may be easily handled and baled.

To this end our invention consists in certain features of construction and combinations of parts, which will be hereinafter described and
20 claimed.

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

25 Figure 1 is a vertical longitudinal section of the machine embodying our invention. Fig. 2 is a broken sectional plan on the line 2 2 in Fig. 1. Fig. 3 is a detail side elevation of one of the sliding boxes of the carrier-belt; and Fig. 4 is a detail side elevation of
30 the upper end of the main case and the swinging hood or lid thereon, showing in detail the spring mechanism for fastening the hood.

The machine is provided with a main case
35 10, having end flanges 10^a to facilitate its attachment to a cotton-gin and which has an inlet 11 at one end and an outlet 12 at the upper and opposite end, the inlet 11 having a shelf 11^a beneath it, so that the cotton may
40 be directed upon the carrying-belt, as hereinafter described, and the outlet 12 having at its lower edge a guard-plate 12^a, which comes in close contact with the carrying-belt and prevents the cotton from being carried
45 past the outlet. The inlet 11 is adapted to be connected with a cotton-gin, so that the ginned cotton will be blown directly into the cleaner. Mounted transversely in the upper
50 and lower ends of the case—that is, adjacent to the outlet 12 and beneath the inlet 11—are shafts 13 and 14, which carry drums com-
posed of end pieces 15, secured to the shafts

and connecting-bars 16, and the upper shaft 13 projects through the side of the case and has a driving-pulley 17 at one end. The
55 lower shaft 14 is mounted in boxes 14^a, which are supported upon the sides of the case, and the boxes are adjustable to and from the upper shaft 13 by means of bolts 14^b, which extend through clips 14^c, mounted on side pieces
60 on the outside of the case, and it will be seen that by turning the bolts, which extend through the clips and into the boxes, the boxes may be moved up or down, and the object of this adjustment is to enable the belt 18, which
65 is carried by the drums, to be tightened or loosened, so that it may have the requisite tension to work nicely.

The carrying-belt 18 is composed of wire screening, as best shown in Fig. 1, and it extends in an inclined direction through the
70 case and runs upon the drums at the upper and lower ends of the case. The screening has side belts 19 at the edges to give it the necessary strength, and on the outside of the
75 belt or screening and at frequent intervals are cleats 20, which engage the cotton and cause it to be carried forward.

Above the upper drum and at the outlet of the machine is a swinging hood 21, which in-
80 closes the upper portion of the upper drum, and this hood is corrugated on its under side, the corrugations serving to cause the cotton carried beneath the hood to be condensed and partially rolled, so as to be delivered in a com-
85 pact mass from the outlet of the machine. The hood is hinged at its back side to the top of the case, as shown at 22 in Figs. 1 and 4, and it will be understood that the distance between the upper side of the belt and the
90 case-top gradually decreases as the upper drum is reached, so that the cotton which is carried up by the belt 18 will be gradually forced into a smaller passage-way and thus compressed.

95 Near the free end of the hood and on opposite sides thereof are plates 23, having near their lower ends outwardly-extending ears 24. A bolt 25 extends through each ear 24, the lower ends of the bolts being pivoted to side
100 pieces on the rigid portions of the case, as shown at 26 in Fig. 4, and the upper ends of the bolts are provided with nuts 27, between which and the ears 24 are spiral springs 28,

which encircle the bolts, and this arrangement holds the hood fast down upon the case, but permits it to rise under any unusual pressure, thus preventing the machine from choking. When the hood is to be raised, the nuts 25 and springs 27 are removed and the hood may then be thrown back.

Between the upper and lower drums of the machine and inside of the belt 18 is a sand-box 29, which is supported on the inside of the case, which box is open at the top and has at its lower end and on the under side a small outlet 30, through which the sand may pass, and this sand, dropping through the meshes of the belt on the lower side, will have a tendency to clean the belt. The box has side openings 32, leading into the air-boxes 33, there being one of these boxes on each side of the machine, and the openings 32 are provided with parallel bars, as shown in Fig. 1, to prevent too coarse material from passing into the air-boxes. These air-boxes are adapted to connect with the blower, which is used in connection with the gin, and the lighter portions of the dust and dirt will be drawn out through the boxes, while the heavier dirt or sand will fall through the opening 30.

The operation of the machine is as follows: The cotton as it comes from the gin will be blown into the inlet 11 and will be carried by the forwardly-moving belt 18 to the upper end of the case 10, being compressed between the upper drum and the hood 21, and after it passes the hood it will fall out of the outlet 12. It will be noticed by reference to Fig. 1 that the hood is enlarged slightly at its free end, so that the cotton may have an easy vent.

In carrying out the invention the case may be made of any desired length, and the carrying-belt may also be made of any required length, so that the belt will serve as an eleva-

tor and carrier and will deliver the cotton to any point desired.

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

1. The combination of the case or frame having an inlet at its lower end and a hinged downward-curved hood at its upper end with the endless carrier mounted in the said case or frame with its higher end within the curved hood, substantially as set forth.

2. The combination of the case having an inlet at its lower end and a curved internally-corrugated hood at the upper end, and the endless carrier in the casing, with its higher end within the curved hood, substantially as set forth.

3. The combination of the case having an inlet at one end and an outlet at the other, an endless carrying-belt, drums for said belt arranged beneath the inlet and above the outlet, and a spring-pressed corrugated hood hinged to the case and extending above the upper drum, substantially as described.

4. The combination of the movable screen-carrying belt and the sand-box arranged within the belt and having an opening at its lower end, substantially as described.

5. The combination of the case having an inlet at one end and an outlet at the other, a movable endless screen-belt held to move between the inlet and outlet, a sand-box mounted within the belt, and air-pipes opening from the sides of the sand-box to convey the dust and dirt away, substantially as described.

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Witnesses:

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