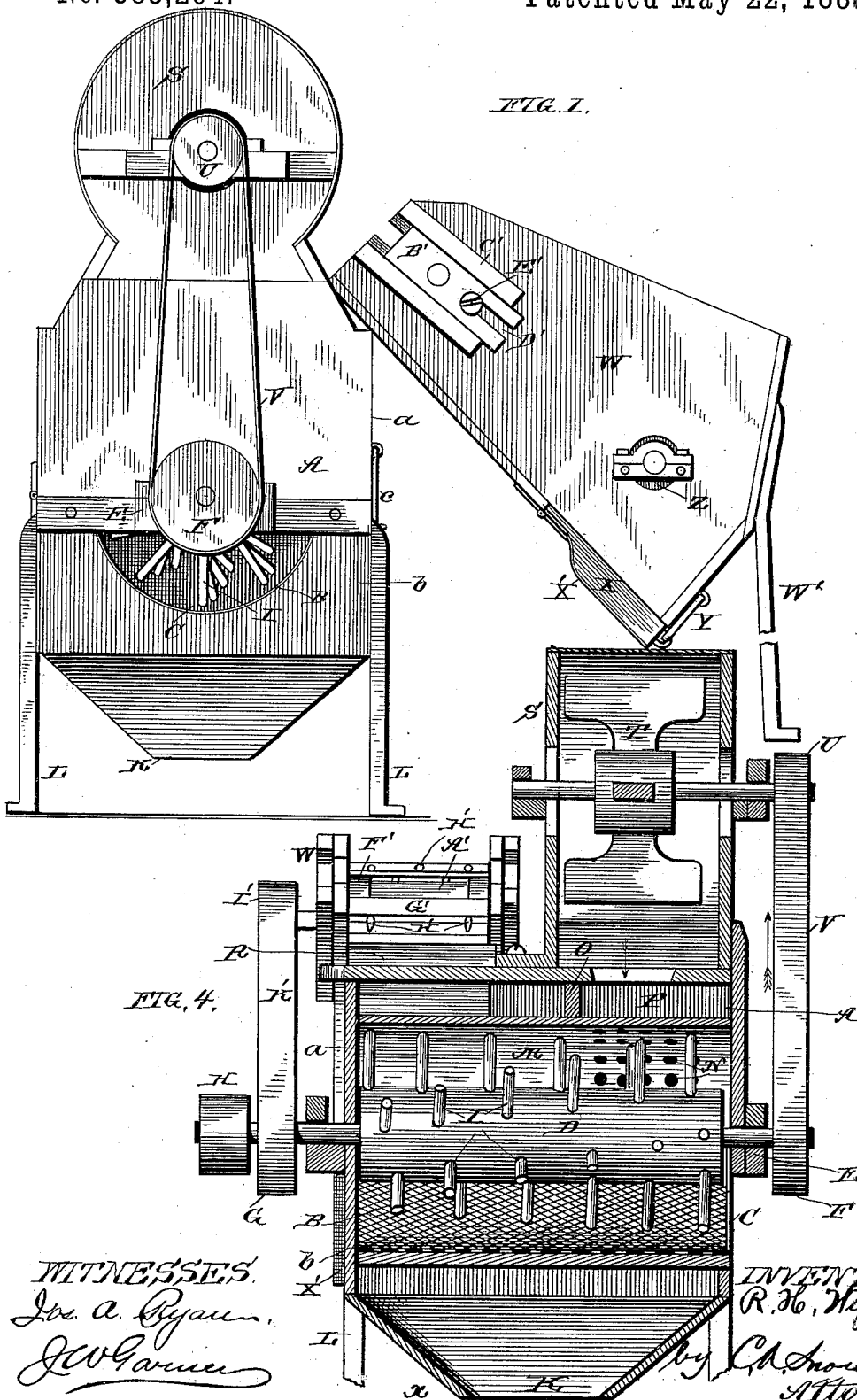


R. H. WIGGINS.

ELEVATOR FOR COTTON CLEANING MACHINES.

No. 383,264.

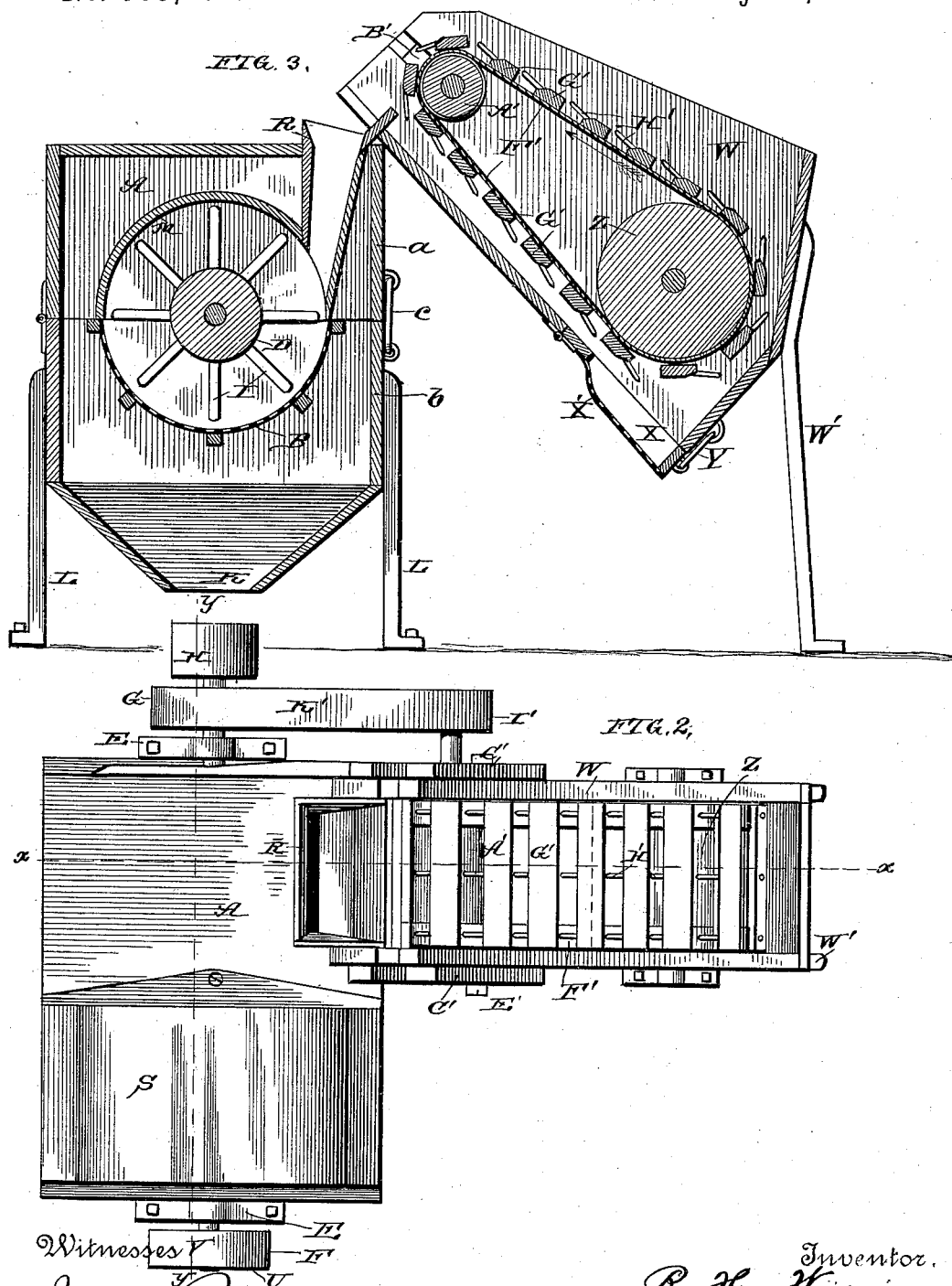
Patented May 22, 1888.





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ELEVATOR FOR COTTON CLEANING MACHINES.

Patented May 22, 1888.



Witnesses  

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UNITED STATES PATENT OFFICE.

RANSOME HUNDLEY WIGGINS, OF NEW SALEM, TEXAS.

ELEVATOR FOR COTTON-CLEANING MACHINES.

SPECIFICATION forming part of Letters Patent No. 383,264, dated May 22, 1888.

Application filed February 23, 1887. Serial No. 237,560. (No model.)

To all whom it may concern:

Be it known that I, RANSOME HUNDLEY WIGGINS, a citizen of the United States, residing at New Salem, in the county of Rusk and State of Texas, have invented a new and useful Improvement in Elevators for Cotton-Cleaning Machines, of which the following is a specification.

My invention relates to improvements in elevators for machines for cleaning cotton; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings I have shown my improved elevator in connection with a cotton-cleaning machine, and in said drawings Figure 1 is a side elevation of a cotton-cleaning machine embodying my improvements. Fig. 2 is a top plan view. Fig. 3 is a vertical longitudinal sectional view taken on the line *xx* of Fig. 2. Fig. 4 is a transverse vertical sectional view taken on the line *yy* of Fig. 2, parts being shown in elevation.

In order that the device may be fully understood, I will first describe the construction of the cotton-cleaning machine.

A represents a rectangular inclosing-case comprising the upper half, *a*, and the lower half, *b*, which are hinged together and are provided with a hook and eye, *c*, by means of which they may be secured when closed. In the lower case, *b*, is arranged a semi-cylindrical screen, B, one end of which terminates in the discharge opening C, that is made in one end of the case.

D represents a cylinder or roller, which is journaled in bearing-boxes E at the ends of the lower section of the case, and at one end of the said roller is a band-pulley, F, and at the opposite end thereof are a band-pulley, G, and a band pulley, H, the latter being smaller than the former. Radial arms I project from the face of the roller D and are arranged in a spiral which extends from one end of the roller to the other.

The lower section, *b*, of the case is provided at its lower side with a discharge-opening, K, and the said lower section is supported upon feet L at the corners thereof.

In the lower part of the upper section of the case is formed a semi-cylindrical case, M, which is made of sheet metal and is provided near one end with a series of openings, N. The said upper section of the case is divided transversely near the center by a partition, O, which is arranged between the top and sides of the case and the semi-cylindrical case M, thereby leaving an air-space, P, around the latter. A hopper, R, or feed-spout, extends from the upper side of the top section of the case, at one end thereof, downwardly through the non-perforated portion of the casing M. On the opposite end of the upper section of the case, and on the upper side thereof, is arranged an inclosing-case, S, in which is journaled a rotary fan or blower, T, the shaft of which is provided at one end with a pulley, U, that is connected to the pulley F by means of an endless belt, V. The lower side of the case S communicates with the air-space above the perforated portion of the semi-cylindrical casing M.

W represents an elevating-trough, which is attached at its upper end to one side of the case A, just above the hopper R. The outer end of the elevating-trough is provided with feet W', by means of which it is supported in an inclined position. On the lower side of the elevating-trough, at the lower end thereof, is a hinged door-frame, X, which is covered by a wire screen, X'. A hook, Y, is attached to the elevating-trough, and is adapted to engage the free end of the hinged screen, so as to close the same against the lower side of the trough.

Z represents a large roller or drum, which has its shaft journaled in the elevating-trough, near the lower end thereof.

A' represents a roller or drum, which is of less diameter than the roller Z and has its shaft journaled in longitudinally-movable blocks B', that are secured in guideways C' on the sides of the elevating-trough, near the upper end thereof. The said blocks B' are provided with longitudinal slots D', and set-screws E' extend through the said slots and enter the sides of the trough. The said screws serve to clamp the blocks B', so as to secure the roller A' at any desired adjustment with relation to

the roller Z. Endless belts F' connect the ends of the rollers Z and A', and the said endless belts are connected by means of transverse slats G'. From the front edges of these slats 5 project forwardly and upwardly extending spurs H'. On one end of the shaft of the roller A' is secured a pulley, I'.

K' represents an endless belt which connects the pulley I' with the pulley G. The 10 pulley H serves to connect the machine with any suitable motor by means of an endless belt.

The operation of the machine is as follows: When motion is imparted to the roller D by 15 means of the pulley H, the band or blower is also rotated, and the endless carrier in the elevating-trough is moved in the direction indicated by the arrow in Fig. 3. The raw cotton, before being ginned, is fed into the elevat- 20 ing-trough and is caught by the endless carrier and conveyed thereby to the upper end of the hopper R. The cotton drops through the said hopper or spout onto the inner end of the rotating roller D, and is revolved by the 25 same and thoroughly stirred by the radial arms or fingers of the said roller and thereby beaten against the semi-cylindrical screen arranged under the roller. By reason of the fingers or arms on the roller being arranged spirally, like a screw-thread, the cotton is forced 30 endwise in the screen while it is being beaten and agitated. The agitation and beating to which the cotton is subjected causes dirt and foreign substances to be released therefrom and 35 to fall through the screen. The rotating fan or blower causes a strong current of air to be forced downwardly through the perforated

casing N onto the outer portion of the roller, and this current of air serves to blow away the leaves, twigs, and other impurities from the 40 cotton, thus leaving the latter clean. The cotton, being gradually moved endwise in the lower semi-cylindrical screen by the rotation of the roller, is finally forced out through the opening C in the case. The particles of dirt 45 and other impurities which are dislodged from the cotton while it is passing over the screen are discharged through the opening in the lower side of the case. After the cotton has been cleaned it is ready to be ginned. 50

Having thus described my invention, I claim—

The combination of the elevating-trough having the hinged screen X' on its lower side and the hook to secure the screen when closed, 55 the guideways C' on the sides of the trough, near the upper end thereof, the slotted blocks B', secured in the guideways, the screws E', extending through the slots in the blocks and entering the sides of the trough, the roller Z, 60 journaled in the lower end of the trough, the roller A', journaled in the movable blocks B', the endless belts connecting the said rollers, and the cross-slats connecting the said belts and having the spurs H', substantially as de- 65 scribed.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

RANSOME HUNDLEY WIGGINS.

Witnesses:

P. H. TALLEY,
JNO. L. AUTREY.