

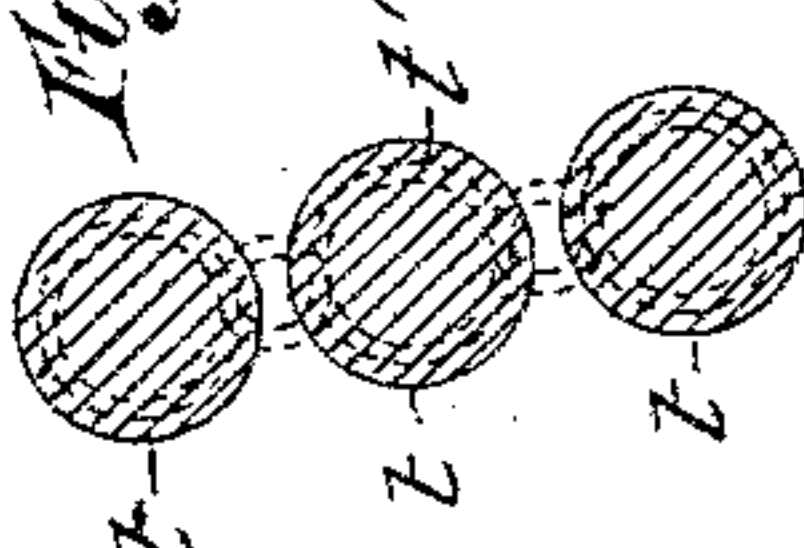
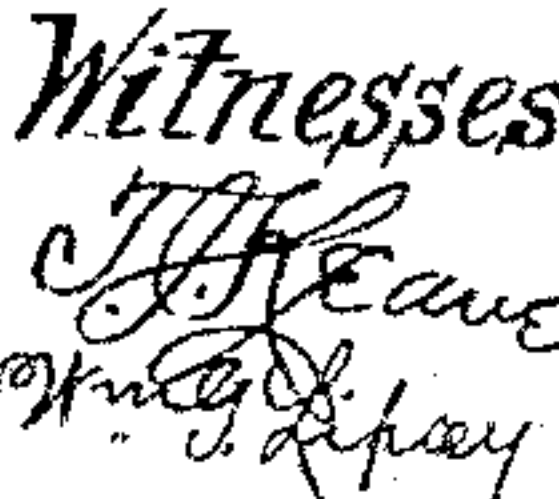
(No Model.)

0. WASHBURNE.
COTTON GIN.

2 Sheets—Sheet 1.

No. 323,548.

Patented Aug. 4, 1885.



Inventor
Oscar Washburne,
by his attorneys,
Sisson & Brown.

(No Model.)

2 Sheets—Sheet 2.

O. WASHBURN.

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Fig. 6.

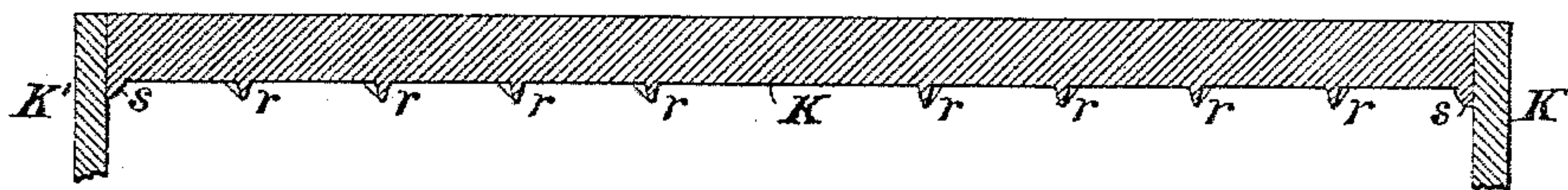


Fig. 7.



Witnesses
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UNITED STATES PATENT OFFICE.

OSCAR WASHBURNE, OF SING SING, NEW YORK, ASSIGNOR TO MARY E. WASHBURNE, OF SAME PLACE.

COTTON-GIN.

SPECIFICATION forming part of Letters Patent No. 323,548, dated August 4, 1885.

Application filed December 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, OSCAR WASHBURNE, of Sing Sing, in the county of Westchester and State of New York, have invented a certain new and useful Improvement in Cotton Gins, of which the following is a specification.

My invention relates to self-feeding cotton-gins.

I will describe a self-feeding cotton-gin embodying my improvement, and then point out the various features in claims.

In the accompanying drawings, Figure 1 is a central vertical section of a self-feeding cotton-gin embodying my improvement and a feeder which acts in conjunction therewith. Fig. 2 is a front elevation of the same having the front plate of the breast removed. Fig. 3 is a view from the inside of one of the side frames and supporting-standards for carrying the apron of the feeder. Fig. 4 is a sectional front view of the same. Fig. 5 is a vertical section illustrating a modification of certain parts. Fig. 6 is a transverse section of the cove of the gin, and Fig. 7 is a sectional view of a portion of the grate-ribs.

Similar letters of reference designate corresponding parts in the different figures.

A designates the frame-work of the machine, which may be of any suitable form or material.

J is the breast or roll-box of the gin having a cove, K, provided with thin parallel ribs or flanges *r*, equidistant apart and arranged at an angle with the heads K' of the breast. At the junction of the cove and heads K' corner pieces, S, are provided corresponding in angles and projection to that of the ribs. These ribs and corner pieces may be either integral with the cove or otherwise secured to it, and may be of any suitable material—such, for instance, as wood, iron, or glass. As shown, they are integral with the cove, and in cross-section the ribs taper to a narrow edge, against which the cotton-roll impinges.

L designates ribs forming the grate of the breast and having those portions of their upper parts beyond the saws inclined laterally to correspond with the inclination of the ribs *r*. That portion of the grate-rib so inclined may be provided with a rib on its front side having the same inclination as the ribs *r* of the

cove, and which projects a suitable distance at the top end and gradually diminishes in projection toward the lower end thereof, where it becomes even with the grate-rib. In this case the grate-ribs so inclined would be T-shaped in the cross-section. By means of the corner pieces S, ribs *r*, and the angular portions of the ribs L, the cotton-roll is caused to travel from the ends of the breast toward the center of the same, allowing the end saws to have fresh or unginned seed-cotton to act on constantly.

The breast, consisting of the cove K, ribs L, and heads K', is adjustable relatively to the saws by means of the hinges J' and the set-screw J².

M designates saws mounted on the shaft M'.

N is a brush-cylinder inclosed in a chamber, here shown as formed in the lower portion of the frame-work.

The brush-cylinder and the saws may be constructed and operated in the usual manner.

The brush-cylinder is driven by a belt, N', passing from a pulley, M², on the saw-spindle over a pulley, N², on the shaft of the brush-cylinder and around an idler, N³. If desired, a belt may be used at both sides of the machine, as shown.

The frame A supports a feeder for the gin. I have appended only a sufficient description of this feeder to render its operation clear, as the same does not, broadly, constitute part of this improvement, except in combination with certain parts, as hereinafter claimed; and for the feeder, independently of its combination with such parts, I have filed another application for Letters Patent No. 164,753, May 8, 1885. In this feeder B designates a hopper, having rollers C arranged along the bottom for carrying the seed-cotton forward to a feeding-cylinder, D. These rollers are rotated by means of a train of gear-wheels, *a a*, actuated from a ratchet-wheel, *b*, pawl *c*, lever *d*, pitman *f*, and crank-disk *d* on the shaft of the feeding-cylinder D.

The feeding-cylinder D may consist of a hollow drum, of wood, provided with projecting pins or spikes. This cylinder is mounted on a shaft, *i*, journaled in suitable bearings in the sides of the hopper, and receives motion

from a gear-wheel, *j*, pinion *k*, pulley *l*, belt *m*, and pulley *n*, on a saw-spindle, *M'*, of the gin.

h is a plate hinged to the stationary part *h'*, and capable of being dropped at intervals to pass out the rubbish accumulated thereon.

E is an endless apron, here shown as consisting of wooden slats *E'*, which are made independent and separated from each other. They are secured to endless belts *E²* *E³* of flexible material, passing over rollers *E⁴* *E⁵*. These rollers are journaled in sliding frames *E⁶* *E⁷*, and are shown with their central portions of reduced diameter. The upper roller, *E⁴*, is journaled in boxes *E⁸*, vertically adjustable within slots in the frames *E⁶* *E⁷* by means of the screws *E⁹*, and the lower roller, *E⁵*, is journaled directly into the frames *E⁶* *E⁷*. By this means any slack in the endless apron may be taken up.

The frames *E⁶* *E⁷* are supported by the standards *F*, secured to the hopper and having flanges *F'* to embrace the sides of the frames *E⁶* *E⁷*. The ends of the upper roller, *E⁴*, pass through the slots in the standards to afford additional support.

G is a shaft journaled in the standards *F*, and having pinions *G'* to engage with racks within the slots of the frames *E⁶* *E⁷*. By this means the apron may be raised or lowered. A pawl, *G²*, pivoted to one of the standards, *F*, and adapted to engage with the ratchet-wheel *G³*, secured to the shaft *G*, serves to hold the apron in any desired position. Motion is imparted to the apron by means of the ratchet-wheel *H*, pawl *H'*, and arm *H²*. This arm is actuated through a pitman, *H³*, by the crank-disk *g*.

In lieu of the endless apron a series of two

or more rollers, *t*, having a longitudinal ribbed or a plain smooth surface, may be used, as shown in Fig. 5.

I I are guide-plates, of zinc or other suitable material, vertically inclined to conduct that portion of the seed-cotton delivered upon them by the feeding-cylinder into the ends of the breast of the gin. These plates *I I* are preferably secured to the hinged cover-plate *I'*, which is held in place by the button *I²*, by which access to the guide-plates is afforded.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a self-feeding cotton-gin, the combination, with a breast, of a cove provided with upwardly-inclined ribs, serving to direct cotton from the ends to the center of the breast, substantially as specified.

2. In a self-feeding cotton-gin, the combination of a breast and a cove, provided with upwardly-inclined ribs, serving to direct cotton from the ends to the center of the breast, of ribs forming the grate of the breast, having their upper portions inclined laterally toward the center of the breast, substantially as specified.

3. In a self-feeding cotton-gin, the combination, with a breast, of guide-plates, whereby the feed of seed-cotton will be caused to enter the breast of the gin in larger quantity at the ends than at the center thereof, and a cove provided with upwardly-inclined ribs, serving to direct the seed-cotton from the ends toward the center of the breast, substantially as specified.

OSCAR WASHBURN.

Witnesses:

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