

T. C. GARLINGTON.

Cotton Gin.

No. 19,415.

Patented Feb. 23, 1858.

Fig 1

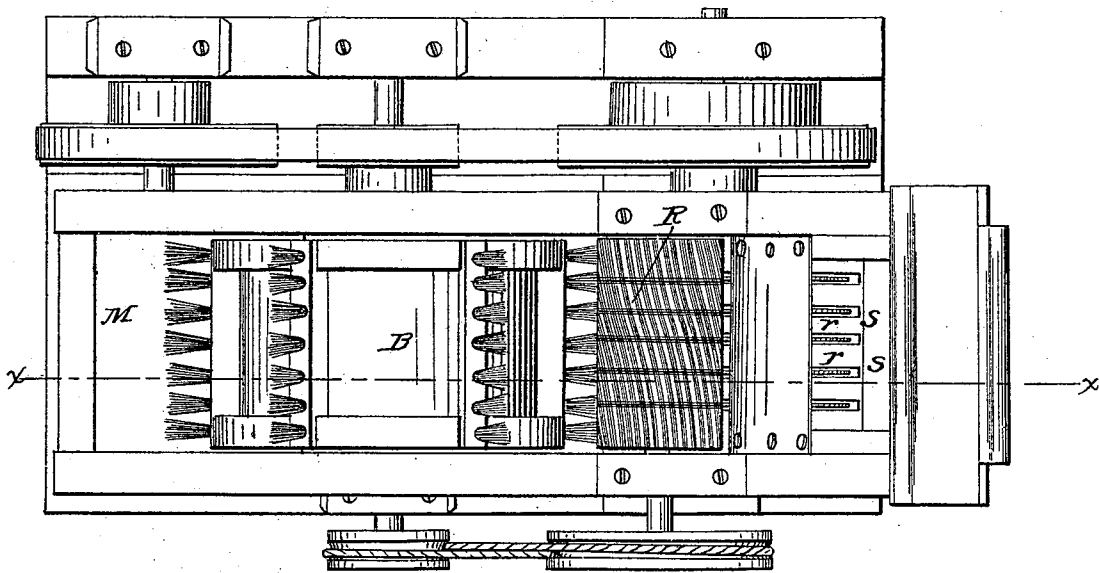
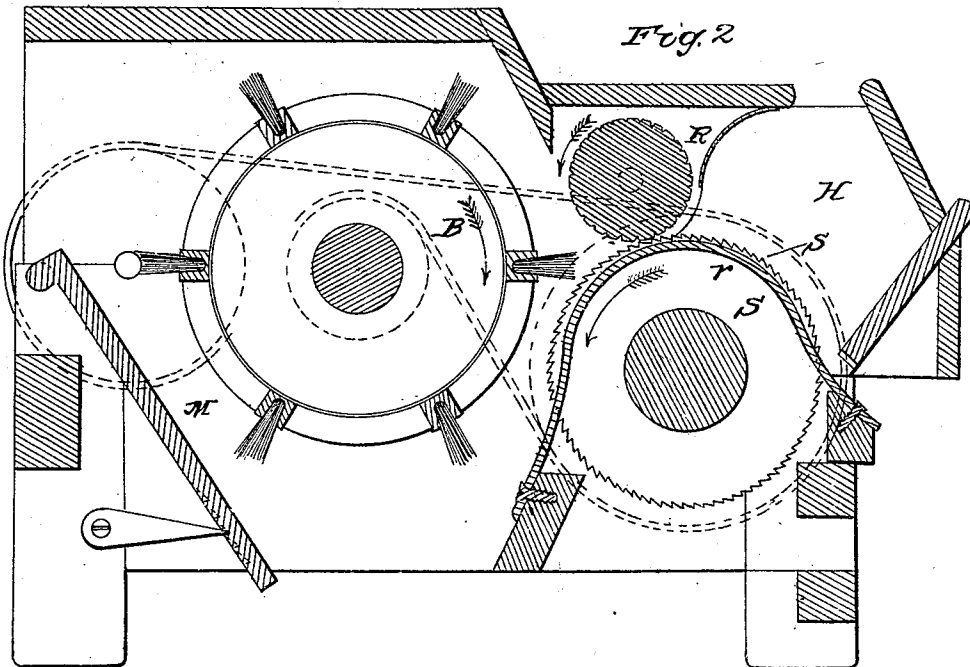


Fig. 2



UNITED STATES PATENT OFFICE.

T. C. GARLINGTON, OF LAFAYETTE, ALABAMA.

IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. 19,415, dated February 23, 1858.

To all whom it may concern:

Be known that I, T. C. GARLINGTON, of Lafayette, in the county of Chambers and State of Alabama, have invented a new and useful Improvement in Cotton-Gins; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, forming part of this specification, in which—

Figure 1 is a top view of the machine with cover removed. Fig. 2 is a vertical section on *x x*.

Similar letters of reference denote the same part of the gin.

The nature of my invention consists in the employment of a peculiarly grooved roller above and revolving in the same direction as the saws, and swept by the cleaning-brush, in combination with an arrangement of ribs which gives the saws a gradual decrease of protrusion, until the teeth alone project as they pass under the roller, the object being to effect the separation of the fiber with less injury to the staple than now obtains.

The details of construction and operation are as follows:

In the drawings, B is the brush-cylinder, S the saws, and R the supplementary roller. M is the mote-board, adjustable in inclination, and *r r* the ribs through which the saws pass. The ribs *r* are so formed that the protrusion of the saws gradually diminishes as they approach roller R, and when under it the teeth alone project above the ribs. The protrusion again increases after the passage from beneath the roller. The roller R is longitudinally grooved, as shown in Fig. 1, and is grooved in planes perpendicular to its axis, where it passes over the saws. It revolves in the same direction as the saws, and nearly in contact with them, and is swept by the clearing-brush. Its velocity of rotation is the same as the roll of cotton in the hopper H.

The other portions of the gin, being well known, will readily be understood from the drawings without a detailed description.

The operation of my combination is as fol-

lows: The saw-teeth take hold of the fiber and draw it gradually until the roller R is reached, owing to the diminution of protrusion above mentioned. The encounter of the seed with the rollers causes the fiber to be stripped from it, to a great extent unbroken, as the longitudinal grooves enable the staple to be drawn out by the roll of the cotton in the hopper, the rotation of the saws, and the revolution of the roller, the action being different from that which obtains when the saws effect a quick separation of the fiber and seed—a result which necessarily breaks the staple to a greater or less extent. The cotton passes under the transverse grooves of roller R, and is stripped from the saws by the brush B, which also cleans the roller R.

The advantageous results claimed for this construction of gin are due to the peculiar grooving of the roller R, the oblique longitudinal grooves permitting the staple to be drawn out as the cotton is carried through the transverse grooves by the saws. The effect of this grooving is altogether different from spiral grooving of the roller, since in this last-named construction the paths of the saw-teeth are across all the ridges of the roller, and the drawing of the fiber over these ridges tends to break the staple to a greater degree than will obtain by my system of grooving.

I do not claim, broadly, placing a roller above the saws; nor do I claim spirally grooving such rollers, as shown in the patented gin of Parkhurst; but

What I do claim as new, and desire to secure by Letters Patent, is—

Grooving the roller R transversely above each saw and obliquely across the said transverse grooves, substantially as herein set forth, when used in combination with ribs *r*, which diminish the protrusion of the saws gradually, as described.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

T. C. GARLINGTON.

Witnesses:

J. M. DRIVER,
T. PENNINGTON.