

F. H. CHASE.
ROLLER COTTON GIN.

Patented Jan. 7, 1890.

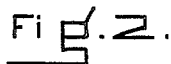


Fig. 1.

Fig. 3.

WITNESSES

John W. Brown
B. W. Williams

INVENTOR

Frank A. Chase
By his Atty.
Henry Williams

UNITED STATES PATENT OFFICE.

FRANK H. CHASE, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR OF TWO-THIRDS TO LORENZO W. CHASE AND CHARLES W. CHASE, BOTH OF SAME PLACE.

ROLLER COTTON-GIN.

SPECIFICATION forming part of Letters Patent No. 418,908, dated January 7, 1890.

Application filed August 26, 1889. Serial No. 322,026. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. CHASE, of Haverhill, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Roller Cotton-Gins, of which the following is a specification.

My invention applies to that class of cotton-gins known as "roller-gins," in which ordinarily a vertically-reciprocating motion of the clearer or stripper is found.

This invention utilizes a revolving stripper; and it consists in a novel means and construction for feeding in the cotton, fully described below, and illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical section of a cotton-gin to which my feeding device is applied. Fig. 2 is a perspective view of a portion of the drawing-roller with my feed mechanism applied thereto. Fig. 3 is a front elevation of one of the fingers of my feed removed. Fig. 4 is a section on line *xx*, Fig. 3.

Similar letters of reference indicate like parts.

A represents the frame of a cotton-gin of the character mentioned above.

B is the table from which the seed-cotton is fed into the machine.

C is the drawing-roller.

D is the clearer or stripper.

E is the upper doffer for throwing back the unginned cotton.

F is the lower doffer for taking down the ginned cotton to the board H, and I is the pressure-bar adjusted by the screw mechanism J.

None of the above parts are new in this invention, and as their operations are well known in the art to which this device appertains no further detailed description is deemed necessary.

The directions of the rotations of the rollers and doffers are indicated by arrows.

K is a bar, preferably triangular in cross-section, situated in front of and slightly below the center of the drawing-roller C. This bar is adjustably supported by the frame of the machine, preferably by means of squared ends K' thereof lying in boxes L, provided with set-screws L', whereby the bar may be

raised, lowered, or moved horizontally with relation to the drawing-roller. The object of this bar is to support the fingers P, which constitute my friction-feed. These fingers extend from plates or shanks P', which are screwed to the bar K, each finger preferably, but not necessarily, having its independent plate, so that a broken or damaged finger may be easily replaced. Each finger lies close to the drawing-roller, being curved so as to conform to the surface of said roller C, and extends spirally with relation to the roller—i. e., a front elevation of the finger and plate (see Fig. 3) shows the finger P, or, at least, the edge P'' thereof, to be not perpendicular to or at right angles with the plate P' and bar K, but at an angle of less than ninety degrees with them. The effect is that as the roller C rotates its surface is constantly approaching the edges P'' of the fingers, and as the cotton is fed up it is quickly drawn under said edges P'' of the fingers and instantly and surely carried to the pressure-bar I. By this means the seed-cotton is fed in without uncertainty and with great rapidity, as the slightest particle catching under a finger-edge takes in the whole connecting shred or wad with it. The shape of the fingers is not material, so long as the edge P'' is at an angle as described, nor the exact degree of the slant, the shape and slant shown being, perhaps, the best as far as known at present.

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

1. In a roller cotton-gin, the combination, with the drawing-roller, of a series of stationary fingers P, held up to said drawing-roller by a suitable support, said fingers conforming on their under sides substantially to the surface of said roller, and one edge, at least, of each finger extending spirally over the surface of the roller, or at an angle of less than ninety degrees with the axis of the roller, whereby the cotton being fed in is caught and drawn under said finger-edge as the roller rotates, substantially as set forth.

2. In a roller cotton-gin, the combination, with the drawing-roller, of a finger, as P, 100

held mechanically close to or against the surface of said roller, with at least one edge conforming substantially to the shape of the roller-surface and at such an angle that the
5 path of rotation of the portion of the surface of the roller next the finger is under and across said edge of the finger, substantially as set forth.

3. In a roller cotton-gin, the combination,

with the drawing-roller C, clearer or stripper 10 D, and frame, of the fingers P P' P'' and bar K, constructed and arranged substantially as described.

FRANK H. CHASE.

Witnesses:

HENRY W. WILLIAMS,

B. W. WILLIAMS.