

UNITED STATES PATENT OFFICE.

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COTTON-GIN BREAST.

996,826.

Specification of Letters Patent.

Patented July 4, 1911.

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To all whom it may concern:

Be it known that I, PETER B. BARNES, a citizen of the United States of America, residing at Floresville, in the county of Wilson and State of Texas, have invented new and useful Improvements in Cotton-Gin Breasts, of which the following is a specification.

This invention relates to cotton gins, and it has particular reference to a cotton gin breast of improved construction.

Cotton gin breasts are usually constructed with an outward bulge in order to promote and facilitate the tendency of the contents to form itself into a compact roll which is kept in a constant state of rotation by engagement with the rapidly rotating gin saws, the roll being maintained approximately at a constant size by fresh material supplied from the feeder to compensate for the lint and seeds discharged from the machine.

The present invention has for its prime object to so construct the gin breast that a direct pressure will be exercised upon the cotton roll in the direction of the saws which will thus engage the lint with more certainty and efficiency.

Further objects of the invention are to simplify and improve the general construction and operation of a device of the character outlined above.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claim.

In the accompanying drawing has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawing,—Figure 1 is a vertical sectional view, showing as much of a cotton gin of ordinary construction as is necessary to illustrate the invention, which is applied to said gin. Fig. 2 is a view in elevation,

showing the improved gin breast detached. Fig. 3 is a sectional view taken on the plane indicated by the line 3—3 in Figs. 1 and 2.

The invention has in Fig. 1 of the drawing been shown applied to a cotton gin which may be of any well known and approved construction; 5 designating the frame or casing, 6, the saw-carrying shaft, 7, one of the gin ribs, 8, one of the saws and 9, the rotary brush cylinder. The gin breast 10 is of the conventional bulging shape, and it has been shown as being provided adjacent to its upper edge with a flange 11 constituting the front wall of the hopper 12 and adjacent to its lower edge with a flange 13 constituting the front wall of the spout 14 through which the cleaned seeds are discharged.

The body of the breast is vertically corrugated, as clearly shown in the drawings, being provided upon its inner face with alternate ribs 15 and grooves 16 of rolling or wavy form in cross section, the ribs being disposed intermediate the saws 8, which latter are thus disposed in direct alinement with the grooves 16.

It will be evident from the foregoing description when taken in connection with the drawings hereto annexed, that when the device is in operation the cotton roll contained in the gin casing will be subjected to the pressure of the ribs upon the breast and that the tendency of said pressure will be to force the yielding material of which the roll is composed in the direction of the saws by which the lint will thus be engaged more readily and efficiently than has heretofore been the case where gin breasts of ordinary construction have been used. Owing to the rolling or wavy form of the ribs and grooves composing the face of the corrugated breast, the pressure of the saws transmitted through the elastic material of the roll will not cause any tendency of said material to stick or to bind, the surface presented to the roll being smooth and free from sharp corners or indentations of any kind which might cause binding, thereby retarding the operation.

The device is extremely simple, and it may be installed at a very moderate expense upon gins of either roll fashion or mod-

ern construction with equally satisfactory results.

Having thus described the invention, what is claimed as new is:—

- 5 In a cotton gin, a bulging breast plate corrugated upon its inner side to present a series of grooves and ribs of rolling, wavy cross section, said grooves and ribs being vertically disposed, in parallel relation, the

grooves being in alinement with the gin 10 saws.

In testimony whereof I affix my signature in presence of two witnesses.

PETER BENJAMIN BARNES.

Witnesses:

S. J. COLLIER,

J. H. BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
