No. 828,438. PATENTED AUG. 14, 1906.

W. K. STONE.

COTTON GIN BREAST HINGE.

APPLICATION FILED OCT. 26, 1905.

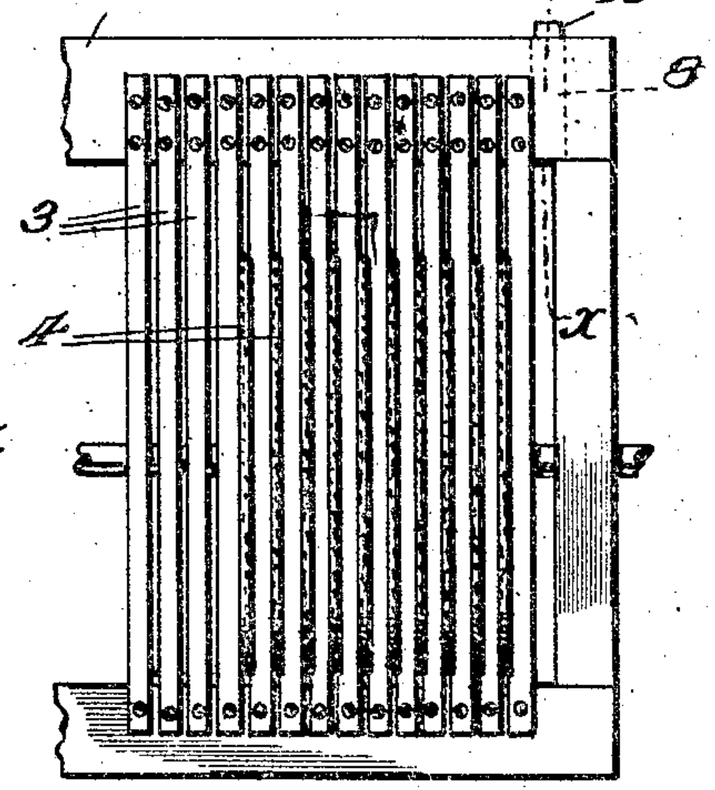

FIG. 1.

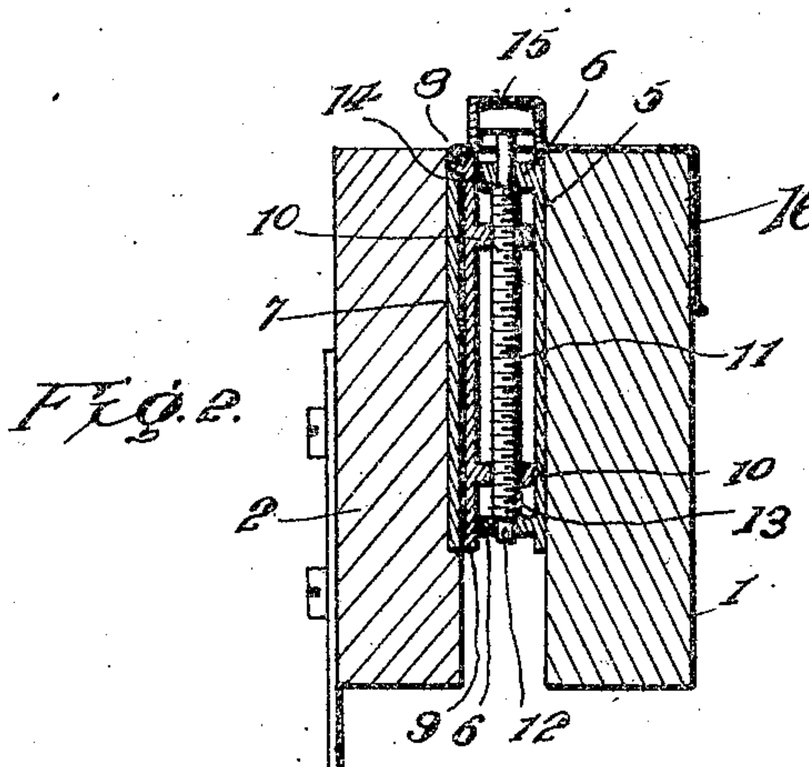

FIG. 2.

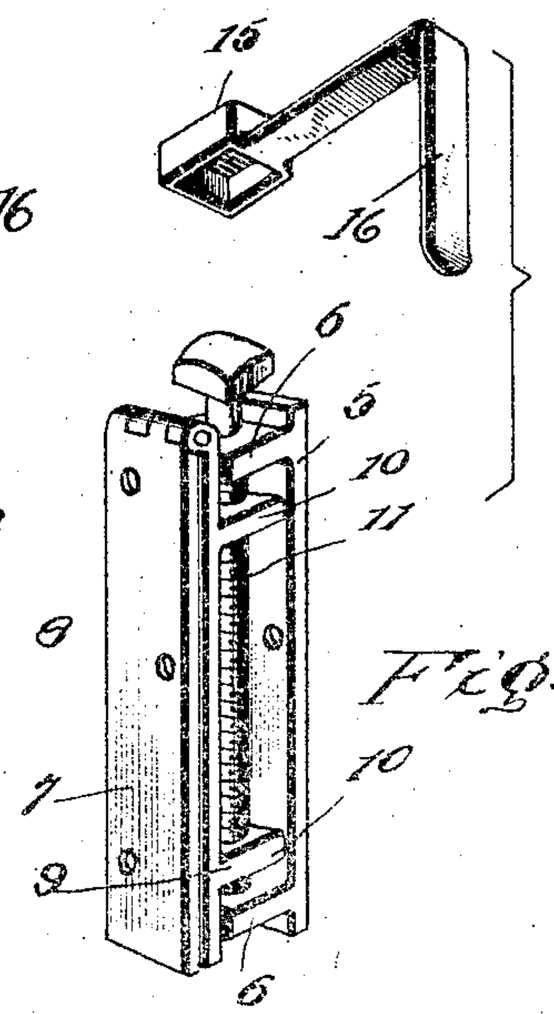

FIG. 3.

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UNITED STATES PATENT OFFICE.

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COTTON-GIN-BREAST HINGE.

No. 828,438. Specification of Letters Patent. Patented Aug. 14, 1906.

Application filed October 26, 1905. Serial No. 284,514.

To all whom it may concern:

Be it known that I, WILLIAM K. STONE, a citizen of the United States, residing at Hunt, in the county of Johnson and State of Arkansas, have invented certain new and useful Improvements in Cotton-Gin-Breast Hinges, of which the following is a specification.

This invention relates to certain improvements in that class of cotton-gins in which circular or other saws pass between ribs on the gin-breast and in their operation pull the lint downward and between the ribs, thereby freeing it from the seed. In this class of cotton-gins the ribs are carried by a breast which has a hinged connection, so that the ribs may play freely, and heretofore great difficulty has been experienced owing to the fact that the saws wear away openings at the points the saw-teeth engage with the cotton and pull the lint downwardly between the ribs, this opening becoming so large in time that the seed and other extraneous and injurious matter may pass through the opening between the ribs with the lint, thereby damaging the cotton and detracting from its marketable value.

The object of my invention is to provide in a cotton-gin of this character an improved hinged breast for the ribs, which breast will be so connected to the gin proper as to allow of its ready vertical adjustment, so that when the ribs are worn away, as before described, the gin-breast may be moved vertically to compensate for the opening that has been worn away, while at the same time the breast is allowed to swing freely.

The invention consists, essentially, in an improved construction of hinge for the breast, said hinge comprising pivotally-connected members, one of which is provided with threaded lugs designed to accommodate the adjusting-screw supported upon a plate attached to the stationary part of the gin-framework, so that by turning said screw the gin-breast may be lowered or raised, as may be desired under the existing conditions.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a front view of the improved gin-breast embodying my invention. Fig. 2 is a transverse sectional view thereof substantially on the line $x\,x$ of Fig. 1 and on an enlarged scale. Fig. 3 is a detail perspective view of the specific form of hinge employed and the locking-cap therefor.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates the stationary portion of the gin-framework to which the breast 2 is designed to be hinged, said breast carrying the ribs 3, between which the saws 4 pass. To the part 1 is rigidly attached a plate 5 by screws or the like, and said plate is provided with an upper and a lower lug or ear 6, each of which is provided with an opening or bore devoid of threads. To the inner side of the gin-breast 2 there is secured one leaf or member 7 of a hinge 8, the other member or leaf of said hinge (designated 9) being provided with interiorly-threaded lugs or ears 10, as shown.

11 designates an adjusting-screw which is provided with a step 12 at its lower end, mounted in the lowermost lug or ear 6 and providing a shoulder 13 on the screw, which bears upon said lug, thereby constituting a journal for the lower end of the screw, and the upper end of said adjusting-screw 11 has bearing in the uppermost lug or ear 6 and is provided also with a shoulder 14, designed to bear upon the under face of said lug. The adjusting-screw, as will be noted, engages with its threads the interiorly-threaded lugs of the hinge member 9. Hence by turning said screw in one direction or the other it is manifest that the entire hinge 8 will be raised or lowered, as may be desired, and thereby result in the consequent raising or lowering of the gin-breast to adjust the ribs 3.

Each of the lugs before described is provided with angular sides fitting between the plate 5 and the opposite plate or hinge member 9 to provide bearings or guide-surfaces which will prevent the attachment from wabbling or skewing in its movement, and thereby holding the ribs firmly to their work. To lock the adjusting-screw from turning, I have in this instance provided a cap 15, which fits down around the square or polygonal head of the screw and is provided with a downwardly-extending flange 16, designed to extend over some stationary part, such as the framework 1, thereby preventing, as will be readily understood, the adjusting-screw from being turned so long as this cap remains in the described position.

From the foregoing description in connection with the accompanying drawings it is manifest that I have provided a simple and efficient construction of hinge for attaching a gin-breast, whereby the breast may be raised or lowered in an expeditious manner and without the necessity of replacing one breast by a new one and without the necessity also of unscrewing the breast from its attached hinge and adjusting the breast on the hinge by screwing it thereto at another point.

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

1. In an apparatus of the character described the combination with a stationary support, of a gin-breast, and a vertically-adjustable hinged connection between said breast and the support.

2. In an apparatus of the character described, the combination of the supporting-framework, a breast hinged thereto, and means for adjusting said breast bodily in a vertical line with respect to the framework.

3. In an apparatus of the character described, a gin-breast, a hinge one leaf or member of which is attached to said breast, and means connected with the other member of said hinge for adjusting said member vertically.

4. In an apparatus of the character described a fixed plate or support provided with ears or lugs, an adjusting-screw mounted in said ears, and a gin-breast provided with a hinge, one leaf of which is provided with ears or lugs in threaded engagement with said screw.

5. In an apparatus of the character described a fixed plate or support provided with lugs or ears, a gin-breast provided with a hinge, one member of which is also provided with ears or lugs, and an adjusting device mounted in said first-named ears and connected with said last-named ears to raise and lower the hinge and breast.

6. In an apparatus of the character described a fixed plate or support provided with ears or lugs, a threaded adjusting spindle or screw having bearings in said lugs, a breast provided with a hinge, one leaf or member of which is formed with lugs or ears interiorly threaded and engaging the threads of said screw, whereby by turning the latter the breast may be raised or lowered, and a locking-cap designed to hold said screw from turning.

7. In an apparatus of the character described, a fixed plate, a gin-breast provided with a hinge embodying two members pivotally connected together, one of said members being fixedly secured to the breast, and vertically-adjustable means connecting the other member of said hinge to said plate.

8. In an apparatus of the character described, a fixed plate or support provided with lugs, a gin-breast provided with a hinge one member of which is also provided with lugs, and an adjusting-screw mounted in said first-named lug and having a screw-threaded connection with said last-named lug to raise and lower the hinge and breast, said screw having a polygonal head, and a locking-cap adapted to fit said head and provided with a downwardly-extending flange adapted to engage some stationary part whereby to hold the screw from turning.

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

WILLIAM K. STONE. [L. S.]

Witnesses:

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