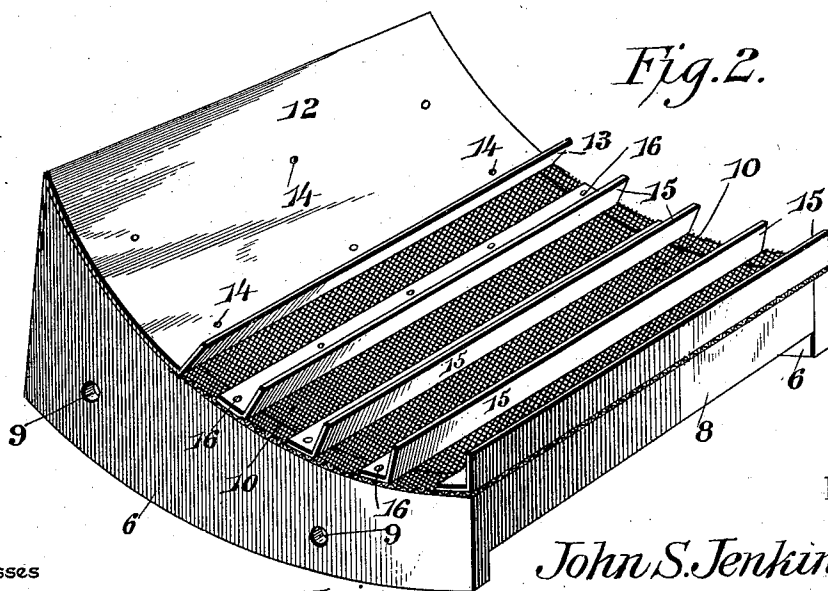
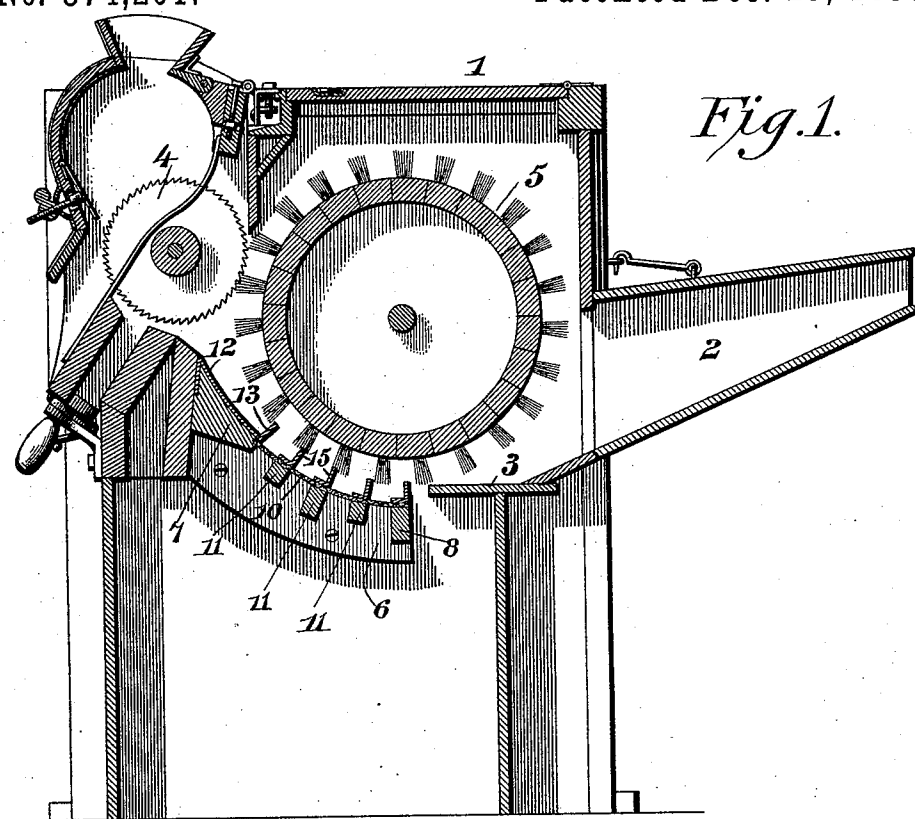


(No Model.)

J. S. JENKINS.
SCREEN FOR COTTON GINS.

No. 574,201.

Patented Dec. 29, 1896.



Inventor

John S. Jenkins

Witnesses

Jack H. McEachran
S. P. Folchamper.

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

JOHN S. JENKINS, OF HARTSELL'S, ALABAMA.

SCREEN FOR COTTON-GINS.

SPECIFICATION forming part of Letters Patent No. 574,201, dated December 29, 1896.

Application filed June 12, 1895. Serial No. 552,508. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. JENKINS, a citizen of the United States, residing at Hartsell's, in the county of Morgan and State of Alabama, have invented certain new and useful Improvements in Screens for Cotton-Gins; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to cotton-gin attachments; and it has for its object to provide a cleaning attachment for cotton-gins, having simple and efficient means for separating dust, sand, and other foreign substances from the lint or fiber, and also for straightening the fiber, so as to improve the quality thereof, while at the same time the attachment is so constructed as to catch and retain small sizes of seed that may be carried through the ribs by the saws.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a vertical sectional view of a cotton-gin equipped with the cleaning attachment constructed in accordance with this invention. Fig. 2 is a detail in perspective of the cleaning attachment removed from the gin stand or casing.

Referring to the accompanying drawings, the numeral 1 designates the gin stand or casing, having arranged therein, in their usual relative positions, the lint-discharge flue 2, the mote-board 3, the rotary gin-saws 4, and the brush 5, operating to remove the lint from the saws and impelling the same through the discharge-flue 2. This construction is the usual construction of ordinary cotton-gins, and the present invention contemplates the use of a cleaning attachment, employed in conjunction with the brush, for the purpose of separating dust, sand, and other foreign substances from the lint, and also for straightening the lint or fiber.

The cleaning attachment is carried by a supporting-frame that is mounted within the gin stand or casing below and at one side of

the vertical center of the brush 5, and said supporting-frame of the cleaning attachment essentially comprises a pair of oppositely-located cleats 6 and front and rear cross-bars 7 and 8, respectively connecting the cleats 6 at their front and rear ends. The upper edges of the frame-cleats 6 are curved from end to end, the rear portions of said cleats being more abruptly curved than the front portions, and the upper edges of the bars 7 and 8, connecting the cleats 6, are also curved, so as to lie flush with the curved upper edges of the cleats, the latter being provided with screw holes or openings 9, to receive screws or other suitable fastenings for securing the cleats to the opposite inner sides of the gin stand or casing, so as to dispose the supporting-frame in a position below and at one side of the vertical center of the rotary brush 5.

Suitably fitted on the curved upper side of the supporting-frame, consisting of the cleats 6 and the bars 7 and 8, is a curved separating-screen 10, extending across the space between the cross-bar 8 and one edge of the oppositely-located cross-bar 7, which latter cross-bar is considerably wider than the bar 8 and forms on its upper curved side a support for the imperforate curved deflecting-plate 12, leading from one end of the frame to the edge of the separating-screen 10 opposite the cross-bar 8 of the frame. The said imperforate metallic deflecting-plate 12 is arranged in the same circular plane as the separating-screen 10 and extends from the screen to the front side of the gin stand or casing, so as to serve to deflect the lint cotton toward the screen and prevent the same from being thrown by the gin-brush between the cleaning attachment and the front side of the gin stand or casing, as will be readily apparent to those skilled in the art.

The curved deflecting metallic plate 12, fitted on the curved upper side of the cross-bar 7, is secured in place by means of nails or other suitable fastenings 14, and is provided at its lower edge with an offstanding upwardly-disposed flange 13, forming a drag-strip to assist in the threshing or straightening out of the cotton lint or fiber. The offstanding flange 13 of the plate 12 is arranged parallel with and forms one of a series of L-shaped plates 15, fitted directly on the upper sur-

face of the curved separating-screen 10. The L-shaped plates 15 are arranged parallel and at regularly-spaced distances apart, and the vertically-disposed portions of these plates form drag-strips, across which the cotton is dragged by the bristles of the rotary brush. The said L-shaped plates 15, forming drag-strips, are preferably secured in a fixed position by means of nails or similar fastenings 10 16, passed through the horizontal portions of said plates into the upper sides of the transverse brace-bars 11, connecting the cleats 6 of the supporting-frame between the front and rear cross-bars 7 and 8. The said transverse 15 brace-bars 11 are disposed directly against the under surface of the separating-screen 10 to provide for supporting said screen and bracing the same against the pressure of the cotton fiber worked thereover by the rotary 20 gin-brush. By reason of spacing the drag-strips formed by the flange 13 and the plates 15 at regular distances apart portions of the screen are exposed to the rubbing action of the cotton, which is worked thereover by the 25 brush as the same is dragged from strip to strip during the threshing or straightening operation.

In the operation of the gin the cotton is caught up from the saws by the rotary brush 30 in the usual manner, and is dashed directly against the curved metallic deflecting-plate 12, which deflects the lint or fiber toward the separating-screen 10 and the row of drag-strips. As the brush continues to revolve 35 the lint or fiber is dashed against the drag-strips in succession, as well as trailed or dragged across the edges of said strips, thereby causing the lint or fiber to be thoroughly straightened while at the same time 40 agitating the same sufficiently to shake out sand, dirt, and other foreign substances which work through the portions of the screen exposed between the drag-strips. During the threshing of the cotton fiber or lint across 45 the drag-strips some of the cotton is necessarily worked directly against the upper surface of the screen 10, which also assists in shaking sand, dirt, and the like from the cotton and causing the same to be forced 50 through the meshes of the screen and into

the bottom of the gin stand or casing. At this point it will be observed that by reason of the employment of a succession of transverse spaced drag-strips any small sizes of cotton-seed that may be worked between the 55 saw-ribs will be worked out of the cotton, so that the lint which is discharged through the flue 2 will be in a thoroughly cleaned and whitened condition.

Changes in the form, proportion, and the 60 minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what 65 I claim, and desire to be secured by Letters Patent, is—

In a cleaning attachment for cotton-gins, the combination with the gin saws and brush; of a supporting-frame fitted within the gin 70 stand or casing below and at one side of the vertical center of the brush and provided with a curved upper side, a curved separating-screen fitted on the curved upper side of the frame and extending to one edge thereof, 75 a series of spaced parallel transverse bars fitted in the supporting-frame against the under side of the curved separating-screen, an imperforate curved deflecting-plate fitted on the curved upper side of the frame 80 and extended from one edge of the curved screen, in the same circular plane as the screen, to the front side of the gin stand or casing, below the saws, to deflect the cotton 85 directed thereagainst toward the screen, said deflecting-plate being provided at its lower edge with an offstanding flange forming a transverse drag-strip, and a plurality of parallel spaced drag strips or plates fitted transversely on the upper surface of the screen, 90 so as to leave the portions of the screen therebetween exposed to the rubbing action of the cotton, as it is worked thereover by the brush, substantially as described.

In testimony whereof I affix my signature 95 in presence of two witnesses.

JOHN S. JENKINS.

Witnesses:

H. E. KELLY,
WILLIAM DOBBS.