

(No Model.)

C. YOUNG.  
COTTON GIN.

No. 408,566.

Patented Aug. 6, 1889.

Fig. 1.

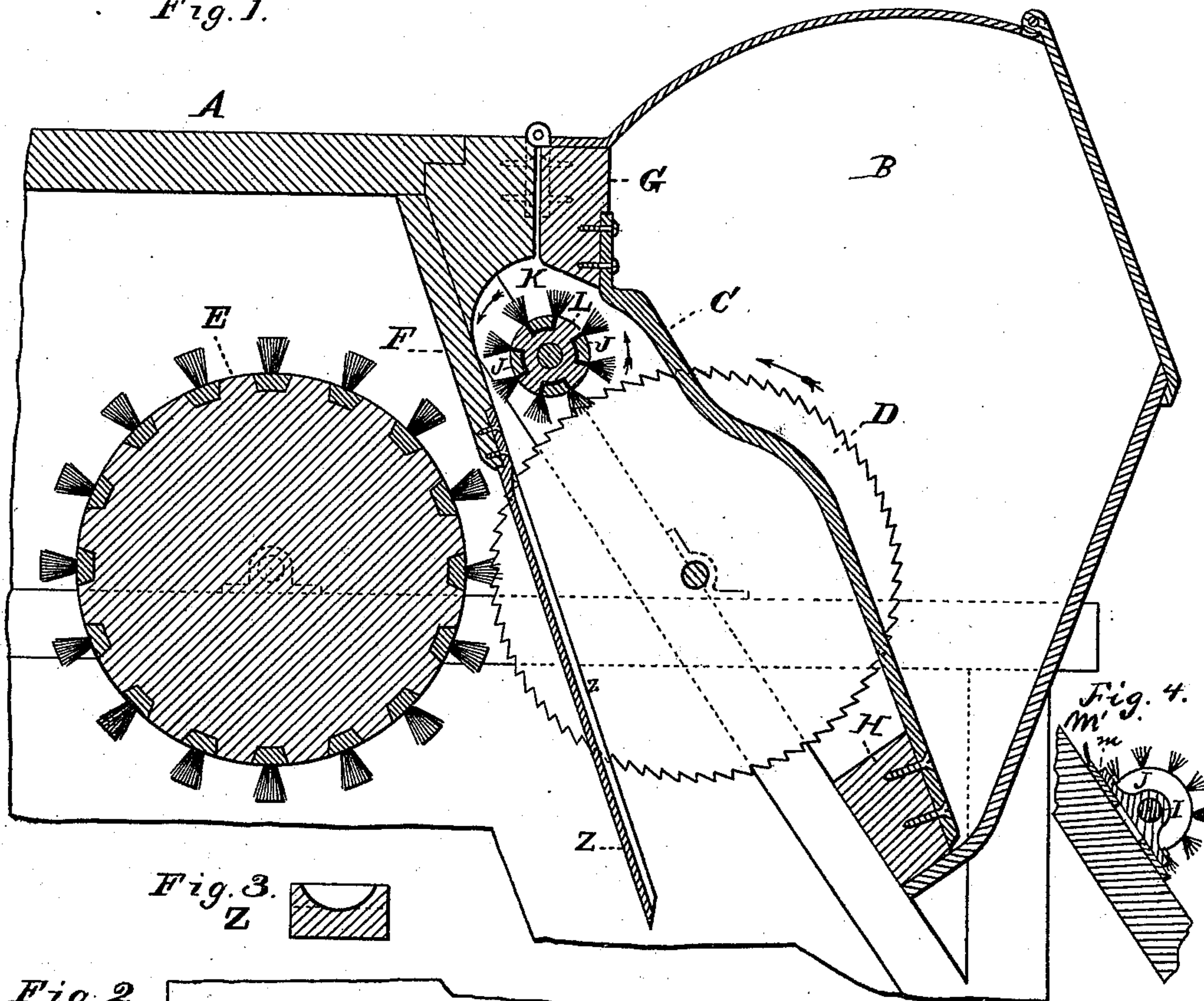
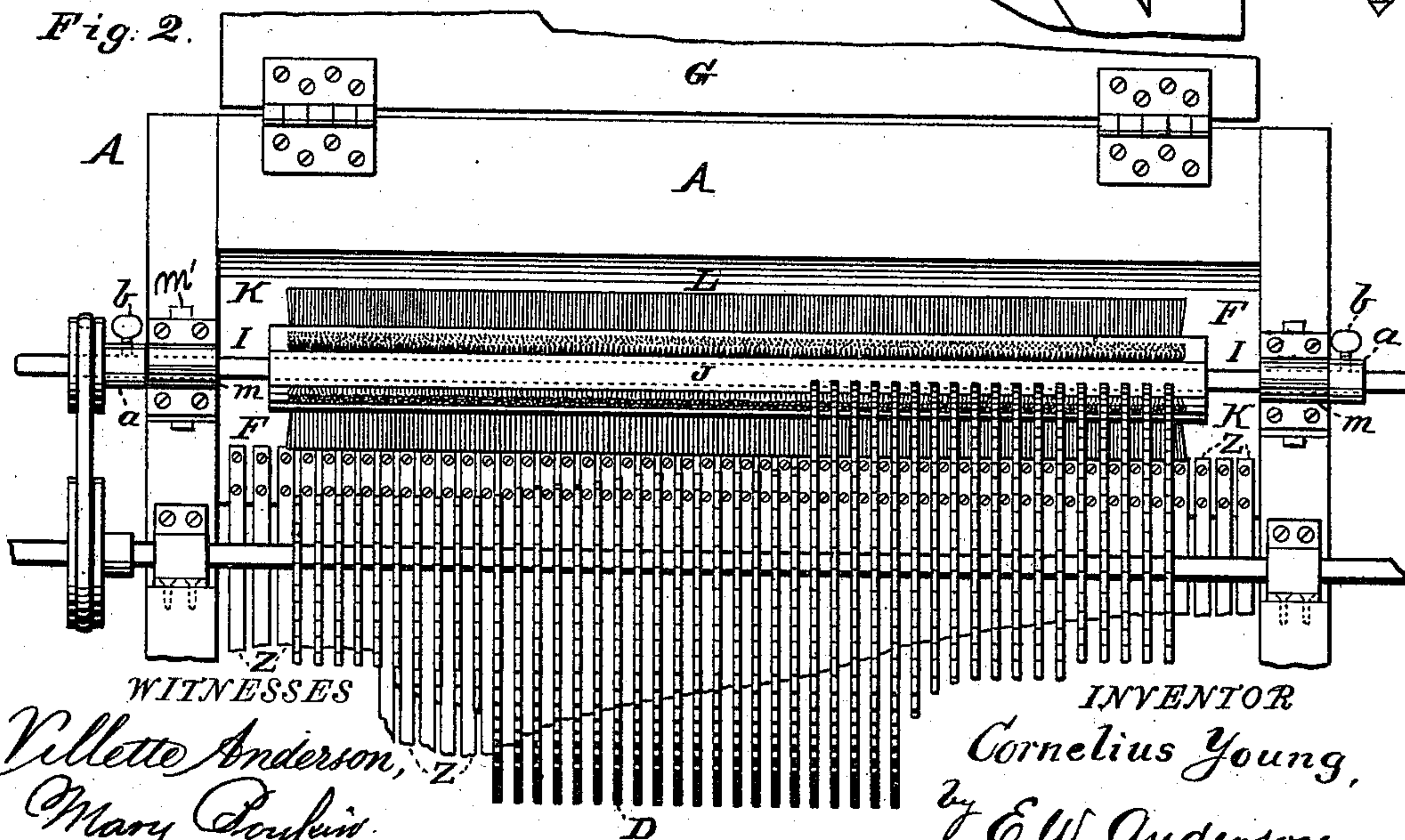


Fig. 3.



Fig. 2.



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# UNITED STATES PATENT OFFICE.

CORNELIUS YOUNG, OF SELMA, ALABAMA.

## COTTON-GIN.

SPECIFICATION forming part of Letters Patent No. 408,566, dated August 6, 1889.

Application filed November 27, 1888. Serial No. 291,996. (No model.)

*To all whom it may concern:*

Be it known that I, CORNELIUS YOUNG, a citizen of the United States, residing at Selma, in the county of Dallas and State of Alabama, have invented certain new and useful Improvements in Cotton-Gins; and I do 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention and is a vertical section through a portion of a gin. Fig. 2 is a broken front view; with the gin-breast raised, of a portion of the gin. Fig. 3 is a cross-section through one of the ribs Z. Fig. 4 is a detailed sectional view showing the laterally-adjusting contrivance of the cleaning-brush.

The object of this invention is to provide means in a gin for improving the condition of ginned cotton by cleaning the same and straightening the lint; and the invention is also designed to provide means for extinguishing fire that may take place in the roll-box and be carried on the saws through the ribs of the gin. It is also intended to keep the gin-saws clean when damp cotton is being ginned.

In the accompanying drawings, the letter A designates the framing of the gin, and B the roll-box.

C represents the gin-ribs, and D the gin-saws.

E is the ordinary large gin-brush which takes the lint from the saws, and F is a wind-board or fender secured to the framing above and extending down between the upper portions of the gin-brush and the gang of gin-saws in an inclined position, its lower edge approximating the edges of said saws, as shown.

G represents the upper transverse bar of the gin-breast, to which the upper ends of the ribs are secured, and H indicates the lower bar of the breast, to which the lower ends of said ribs are attached. The gin-breast is hinged to the fixed portion of the gin-frame.

Between the wind-board F and the upper portions of the saws in rear of the upper parts

of the ribs is an interspace K, in which is located the long rotary cleaning and straightening brush L, said brush being laterally or tangentially adjustable in order that the saws may work more or less deeply in it, as may be required by the condition of the cotton subjected to the action of the gin. The brush L is disposed above the line of engagement of the gin-saws D with the main gin-brush E. This brush is of comparatively small diameter, and its body is usually made of wood, the wooden body having a strong metal shaft passing through it and extended at each end beyond the body portion to form elongated journals, as indicated at I; or these elongated journals may be made independently and firmly secured to the body of the brush. The bristles may be fastened in the body by grooving the latter and using fastening-strips J; or the brush may be constructed in any well-known manner of making rotary brushes, its body portion, however, being rigid enough to extend along the gang of gin-saws without bending. On one of the journals is provided a small pulley for a driving-belt, which may be driven by a pulley on the saw-shaft or main brush-shaft by gearing or by friction. The extended journals or rods I are provided with bearings *m*, which are secured to parts of the main frame, and in order to raise the journals or lower the same to enable the saws E to work more or less deeply in the brush L small plates *m'* are provided, which are designed to be readily introduced under the bearings *m* or to be removed therefrom. The body portion of the brush does not extend the entire distance between the walls of the gin-case, but intervals are left through which the elongated journals I extend, and these journals project beyond the bearings, as indicated, it being designed to permit the brush to be readily shifted endwise from right to left, or reversely, at times to bring different parts of the brush to bear on the saws. This adjustment enables the full extent of the rows of bristles to be utilized, prevents them from being unevenly worn, and increases the life of the brush. The elongated journals are provided with adjustable collars *a*, having set-screws *b*, and when the brush has been adjusted to position these collars are secured adjacent to the bearings and serve to hold



the brush to its adjustment. This brush L, I prefer to rotate against the saws, as indicated in the drawings; but it may be revolved in the opposite direction with good results.

5 This brush L operates to clean fibers of lint cotton on the gin-saws before it has been swept from the latter by the main gin-brush E. It is also intended to smooth out and straighten the fibers and to clean the saws  
10 when damp cotton is being ginned. In order to prevent leaf and dirt from being carried to the main gin-brush E and then into the lint-room or condenser, I usually employ a series of ribs Z, which are longitudinally grooved as  
15 at z, on the face next the saw-shaft. These ribs extend downward from the wind-board or in the direction thereof and terminate below the saws, between which they extend. The ribs Z being grooved, carry the dirt and trash off  
20 more readily than if they were smooth on the face.

The brush L may be held stationary and the gin-saws allowed to pass through it and good results will be obtained; but the improvement  
25 in the sample of cotton is much greater when the brush is rotated against the saws.

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

30 1. In a cotton-gin, the combination of the adjustable cleaning-brush, the gang of saws, the gin-ribs, and the main gin-brush, said adjustable cleaning-brush being arranged between the upper portions of the said saws and above  
35 the line of engagement of said saws with said main gin-brush, and means for rendering the cleaning-brush adjustable, consisting of the bearing-plates and their tangentially-adjust-

ing plates, substantially as and for the purpose set forth.

40 2. In a cotton-gin, the combination, with the gang of saws and the gin-ribs, the main gin-brush, and the inclined fender, of the endwise and tangentially adjustable cleaning and smoothing brush between said fender and  
45 the upper portion of said gang of saws and above the line of engagement of said gang of saws with the main gin-brush, and the means for effecting the tangential and endwise adjustment of said cleaning and smoothing  
50 brush, consisting of bearing-plates and their tangentially-adjusting plates, and the collars having set-screws and fitted upon the journals of said brush, substantially as specified.

55 3. In a cotton-gin, the combination, with the gang of saws and the gin-ribs, the main gin-brush, the fender, and the grooved ribs, of the endwise and tangentially adjustable cleaning and smoothing brush between said  
60 fender and the upper portion of the gang of saws and above the line of engagement of said gang of saws with the main gin-brush, and the means for effecting the tangential and endwise adjustment of said cleaning and  
65 smoothing brush, consisting of bearing-plates and their tangentially-adjusting plates, and the collars having set-screws and fitted upon the journals of said brush, substantially as specified.

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

CORNELIUS YOUNG.

Witnesses:

J. W. ROBINSON,  
ROBT. W. YOUNG.