W. KOEHL.

Cotton-Gin.

No. 164,844. Patented June 22, 1875.

Fig 1

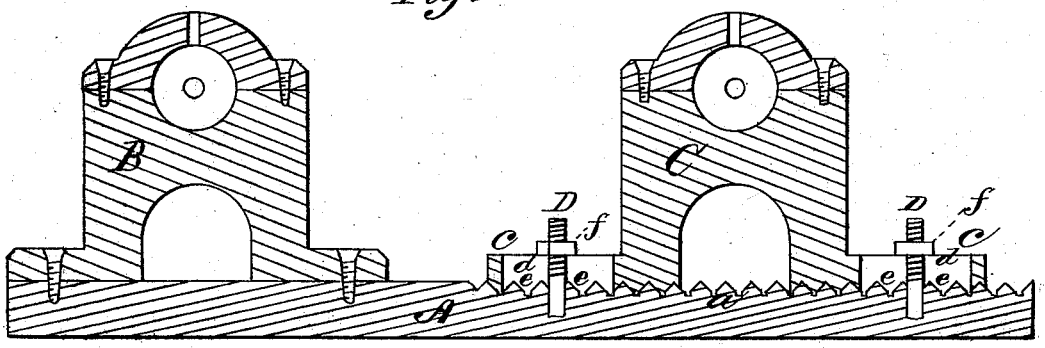
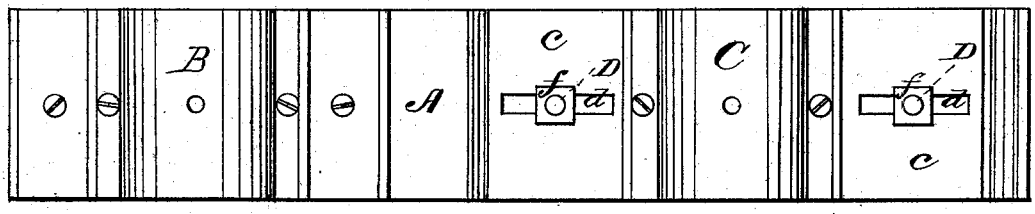


Fig 2



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM KOEHL, OF HUNTSVILLE, TEXAS.

IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. **164,844**, dated June 22, 1875; application filed March 13, 1875.

To all whom it may concern:

Be it known that I, WILLIAM KOEHL, of Huntsville, in the county of Walker and State of Texas, have invented a new and valuable Improvement in Movable Brushes for Cotton-Gins; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a sectional view of my device, and Fig. 2 is a plan view of the same.

This invention has relation to improvements in cotton-gin brushes.

The object of the invention is to devise a means for moving the brushes nearer the saws, when, from constant use, they have been so shortened as to be incapable of performing their function of stripping the said saws, and to render them equally effective when thus approximated as when first put into operation.

To this end, the nature of the invention consists in movable journal bearings for the brush-drum, which bearings are provided, as to their under surfaces, with transverse grooves, forming saw-teeth, adapted to be received into correspondingly-shaped teeth in the gin-frame, whereby the brush-drum is adapted to be moved toward the saw-drum, bringing the brushes of the former in contact with the teeth of the latter.

In the annexed drawings, A designates a beam of the cotton-gin frame; B, the journal-bearing of the saw-drum, and C that of the brush-drum, in connection with which I propose to illustrate my improvements. The upper surface of beam A is provided with a rack-bar, *a*, the teeth of which present the appearance of those of a saw; and this rack-bar may be either a component part of the said beam or a separate and distinct mechanism rigidly secured thereto. In this latter case I prefer that it should be recessed into the beam, so that the apexes of the teeth shall be in the same horizontal plane with the upper surface of the beam; and in either case it may be of metal. The under side or surface of the journal-bearing C of the brush-cylinder has flanges *e*, through which are cut slots *d* in the length thereof, and the under side of these flanges are corrugated or ridged, as shown, which ridges, designated by the letter *e* in the drawings, are of corresponding form with the teeth of the rack-bar *a*, so that when the said journal-bearing is put in position upon beam A, the depressions of the one shall fit snugly over the elevations of the other, shown in Fig. 1. D represents bolts passing from below upward through beam A into slots *d* of the journal-bearing C, upon the upper screw-threaded ends of which are applied nuts *f*. Journal-bearing C is clamped in position on its supporting-beam by setting up nuts *f* forcibly against flanges *e*.

When the brushes have been so worn by the saws as to be no longer capable of performing their function of stripping the latter, I remove the nuts, and thrust the movable bearing C one tooth nearer the saw-drum, thereby replacing them in contact with the saws, and restoring their effectiveness in a degree quite equal to that which they originally possessed.

By this means the brushes are rendered operative until they are completely worn out, thus securing a greater amount of service therefrom, and postponing the time when they will require to be renewed by the manufacturer.

In practice, I propose to make the teeth of rack-bar *a* and those of the movable journal-bearings C three-sixteenths ($\frac{3}{16}$) of an inch apart; but if I so elect I may increase or lessen their interval.

I am aware that cotton-gin brushes have heretofore been adjusted with regard to the fixed saw-shaft, and I therefore lay no claim, broadly, to such invention.

What I claim as new, and desire to secure by Letters Patent, is—

The brush-drum, journal-bearing C, adjustable in relation to the fixed saw-shaft bearing B by means of the serrations *a e*, slotted flanges *e*, bolts D, and nuts *f*, as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM KOEHL.

Witnesses:
W. B. ROME,
THOMAS G. WALKER.