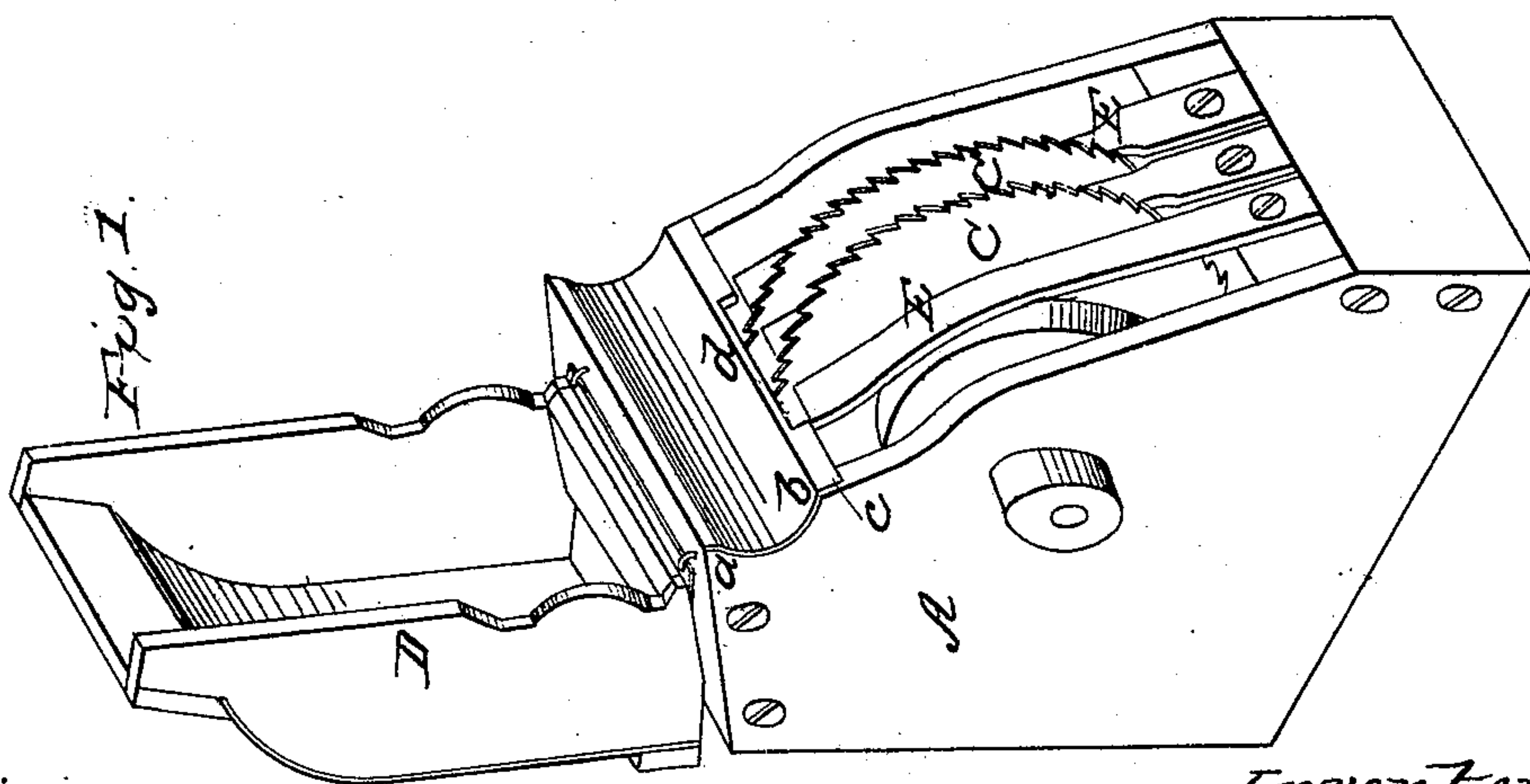
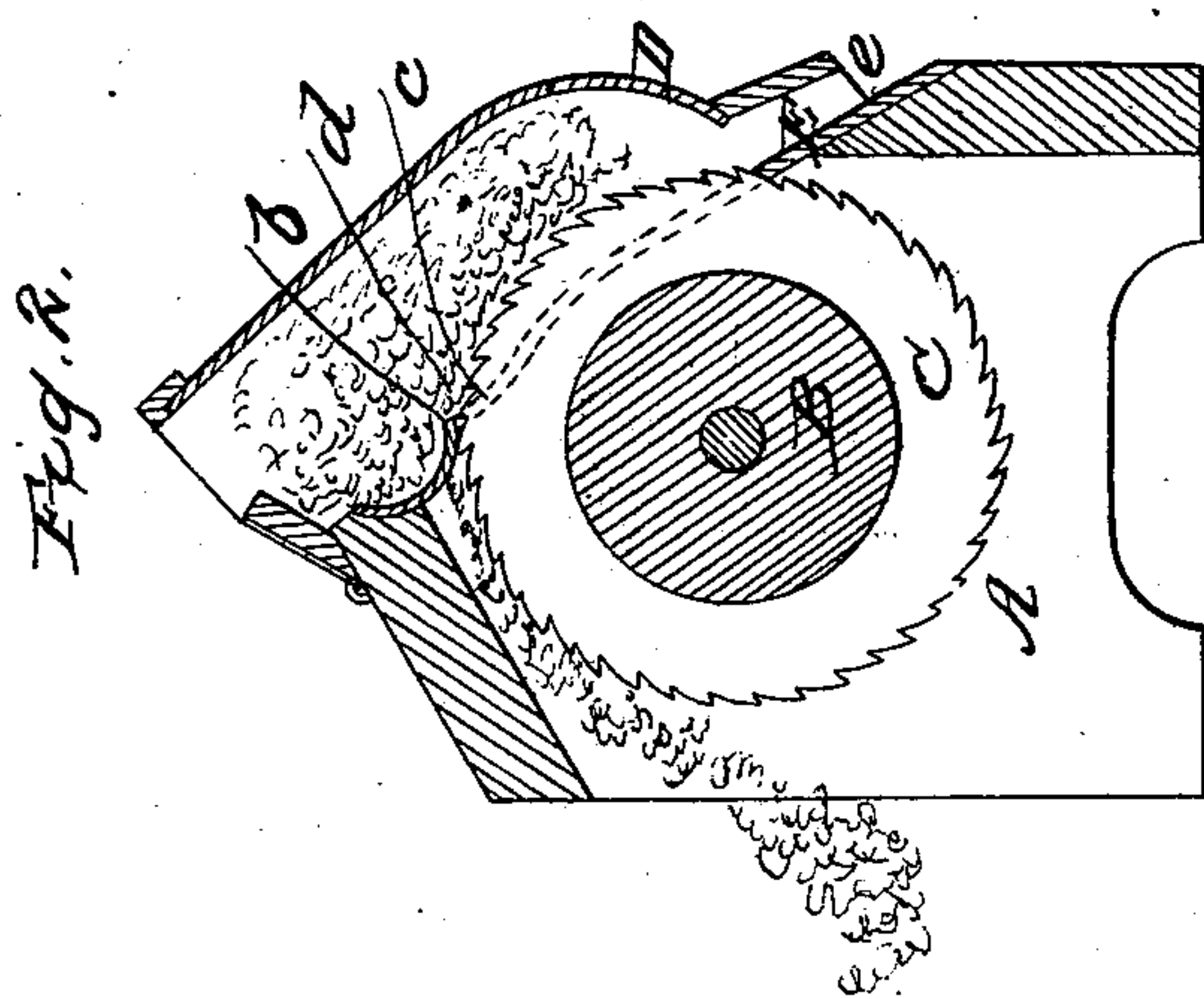


A. H. BURDINE.

Cotton Gin.

No. 29,765.

Patented Aug. 28, 1860.



Witnesses:  
William B. Albee  
Charles Dittrich

Inventor:  
A. H. Burdine.  
by Munroe & Co  
attys

# UNITED STATES PATENT OFFICE.

A. H. BURDINE, OF CHULAHOMA, MISSISSIPPI.

## IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. 29,765, dated August 28, 1860.

*To all whom it may concern:*

Be it known that I, A. H. BURDINE, of Chulahoma, in the county of Marshall and State of Mississippi, have invented a new and useful Improvement in the Breasts of Cotton-Gins; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of a portion of a cotton-gin. In this view the breast is represented as adapted for working in connection with only two saws; but of course a greater number of saws and a greater number of ribs are to be employed. Fig. 2 is a vertical transverse section of the same.

Similar letters of reference in each of the several figures indicate corresponding parts.

With the old Whitney cotton-gin, which is almost universally used even to this day, a serious difficulty, I believe, has always been experienced—namely, the cotton, in order to be stripped of its seed, has to pass between the ribs of the breast, and in doing so is bent over the teeth of the saws in a manner to break its fiber and very materially impair its quality. With my invention the cotton is not drawn between the ribs, but is caught by the teeth of the saws and carried up to the horizontal opening, and as said opening is not large enough to allow the seed to pass through, it is ginned or stripped of its seed and carried through the opening in an unbroken or unimpaired condition.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The gin in all its details, with the exception of a change in the construction of the upper part of the breast and the location of the teeth of the saws relatively to said upper part of the breast, is of the usual or the most approved construction, having mote and dust brushes and other necessary parts.

A represents a portion of the frame of a cotton-gin; B, the cylinder, provided with saws C C, as usual; D, the hinged hopper, and E the ribbed breast.

It will be seen from an examination of the drawings that the upper part of the breast, from *a* to *b*, is made concave, and from *b* to *c* it is inclined and flat, and that near the lower

termination of this concave in the flat part *b c* of the breast a horizontal opening, *d*, is formed, said opening extending from the first to the last saw of the cylinder. In order to thus construct the breast with a horizontal opening and have the teeth of the saws extend into and work through the same, all of the ribs of the breast, excepting the first and last ones, are constructed to terminate at the base of said opening and to have their upper ends detached or unsupported by any fixed object. Thus having the ribs constructed and arranged is not objectionable, as will be shown in the following statement of the operation of the invention.

The cotton to be ginned is introduced into the hopper as shown in red. As it descends it falls upon the saws, which in their revolution take hold of the cotton, and, while supporting it entirely above the ribs, carry it up to the shoulder *c* of the breast, and at this point, while the shoulder is bearing all the strain, a portion of the cotton in the hopper is ginned or deprived of its seed and carried by the teeth of the saws through the horizontal opening *d*, the seed falling at the same moment down to the bottom of the hopper and escaping at *e*. That portion of the cotton in the hopper which has during this operation been thrown upon the concave portion of the breast is caused to take a turn by the continuous revolutions of the saws and fall over, as indicated by the arrows, upon the saws, and thus be ready to be carried up to the horizontal opening. Thus the operation continues with very beneficial results.

The horizontal opening allows of a greater quantity of cotton in a given time with the same speed being carried through and ginned perfectly than is possible with the ordinary Whitney gin. It also obviates much friction; and while these two advantages are secured the more important disadvantage of having the cotton broken and torn is avoided.

I do not claim anything exhibited in the cotton-gin patented by John H. Sherard, April 3, 1844; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

Cutting away a part of the upper portion of the breast of a cotton-saw gin, in the manner and for the purpose described, so that there shall be a horizontal opening across the breast



the full width of the saws and of less depth than the size of a cotton-seed, and so that the teeth of the saws shall extend a short distance beyond the upper end of the ribs of the breast and into the horizontal opening, substantially as and for the purposes described.

The above specification of my improved cot-

ton-gin signed and witnessed this 18th day of May, 1860.

A. H. BURDINE.

Witnesses:

R. W. FENWICK,  
GUSTAVUS DIETERICH.