

W. O. WATSON.  
COTTON-GIN.

No. 186,910.

Patented Jan. 30, 1877.

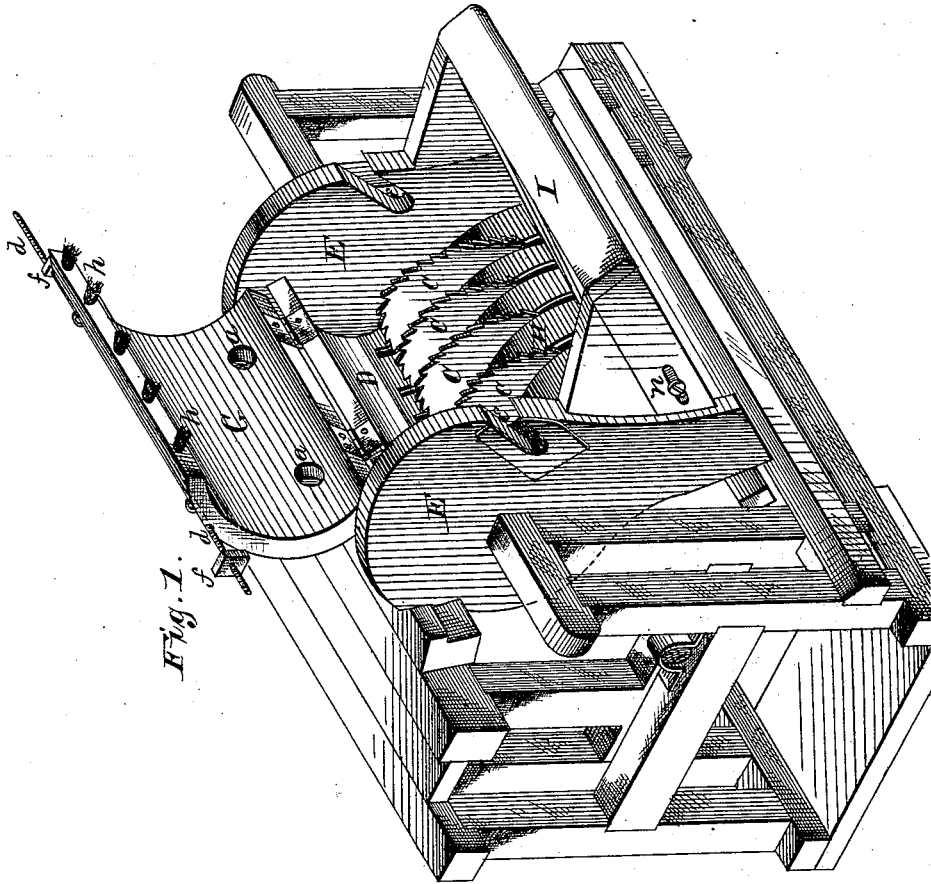


Fig. 1.

Witnesses.  
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A. L. Poirie

Inventor  
W. O. Watson  
per  
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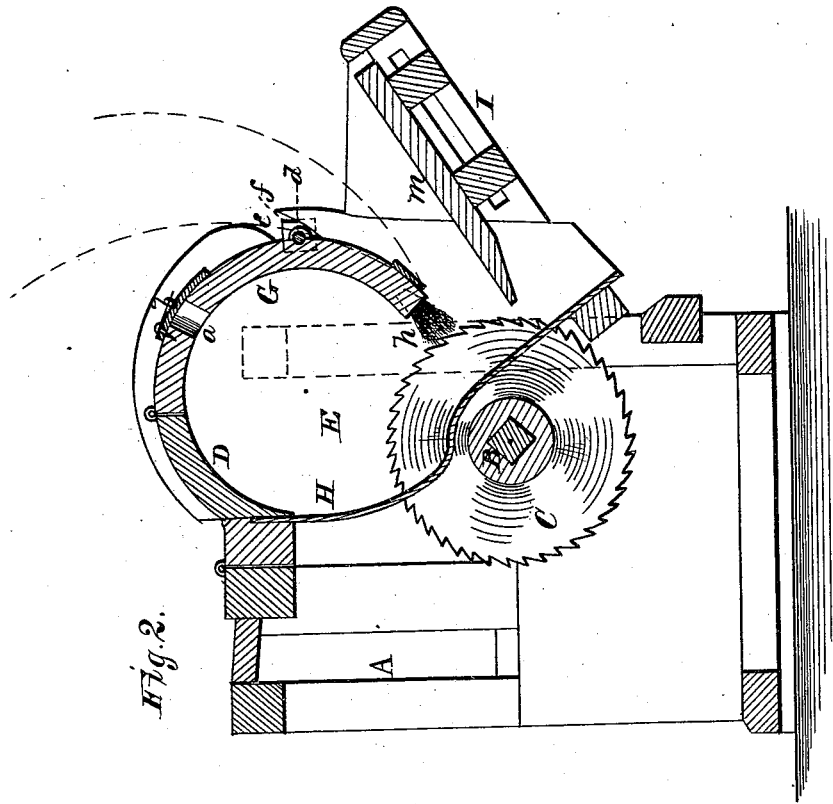


Fig. 2.

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# UNITED STATES PATENT OFFICE.

WILLIAM O. WATSON, OF ALBANY, GEORGIA.

## IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. 186,910, dated January 30, 1877; application filed October 25, 1876.

### To all whom it may concern:

Be it known that I, WILLIAM O. WATSON, of Albany, in the county of Dougherty and State of Georgia, have invented certain new and useful Improvements in Roll-Boxes for Cotton-Gins; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to roll-boxes for cotton-gins; and it consists in the construction of a roll-box so as to feed the same from underneath, whereby dirt and other injurious matter are effectually excluded from the gin, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is a vertical section of the same.

A represents part of the frame of a cotton-gin, with the shaft B, upon which the saws C C are secured. The roll-box is hinged to the frame A, and is composed of the side pieces E E, condenser D, hinged front G, ribs H H between the saws, and the feed-rack I.

The condenser D and hinged front G form part of a perfect circle from the point where the condenser comes in contact with the ribs to the point where the front G comes in contact with the saws. It is, however, not absolutely necessary that the roll-box should be a perfect circle; but I prefer to construct it in that manner. Nor is it necessary that it should be of any particular size. This should be regulated by the size of the gin-saws. If the saws are, for instance, ten inches, the roll-box should be the same, or nearly so, but never larger.

In the hinged front G are apertures *a a*, provided with slides *b b*, the object of which is to see when the roll-box is full. When the ginner has become accustomed to the gin, it will hardly be necessary to uncover these apertures. The slides *b* keep out dirt while the cotton is being pulled over the roll-box in feeding the gin.

The front G is provided with a rod, *d*, the ends of which pass through slots *e e* in the

side pieces E E, and nuts *f f* are screwed upon the ends of the rod, to adjust said front to the saws and hold it steady.

*h h* are bristles attached to the lower edge of the front G, to brush the cotton as it is taken into the roll-box by the saws.

The feed-rack or hopper I is made with fingers *m m*, to let dirt or any hard substance fall out before it gets to the gin-saws, thereby preserving the gin from injury, and may sometimes prevent fire by letting out matches, gun-caps, &c. The fingers *m* are attached to cross-bars, which are made adjustable by means of set-screws *n*, so as to adjust the fingers to and from the saws, as may be required.

It will be noticed that by my construction the roll-box is closed up where the gin is usually fed, and the feed is introduced at the bottom, by means of which the ordinary capacity of the gin is increased without a corresponding increase of draft.

By this under-feed roll-box, a better yield is made by cleaning the seed better, and a better quality of lint-cotton is also obtained.

This is obvious from the fact that the seed-cotton is taken up instead of down into the roll-box, thereby keeping the dirt out of the roll-box. The gin-saws also are less liable to be damaged from rocks, nails, &c.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The roll-box for saw cotton-gins, formed with the side pieces E, condenser D, hinged front G, provided with brushes *h*, in combination with the feed-rack I, substantially as and for the purposes herein set forth.

2. In combination with a roll-box having a bottom feed, the hinged front G, provided with apertures *a*, with slides *b*, for the purposes herein set forth.

3. The adjustable hinged front G, provided with the screw-threaded rod *d* and nuts *f*, in combination with the slots *e* in the side pieces E, as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM O. WATSON.

Witnesses:

THOMAS P. CODY,  
B. T. JONES.