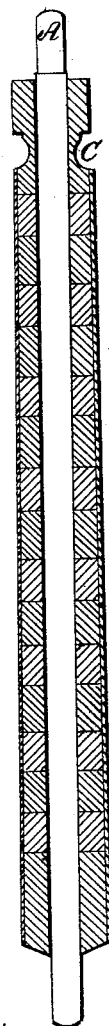


I. F. BROWN.
Roller for Cotton Gins.

No. 45,695.

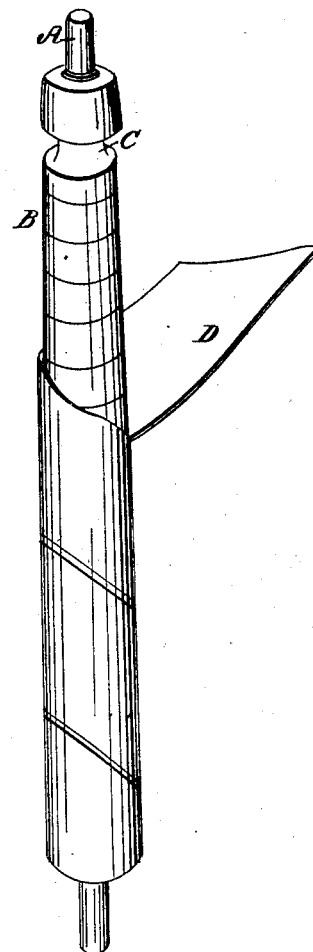
Patented Jan. 3, 1865.

Fig: 1.



Witnesses:
W. Frewin
J. Tusch.

Fig: 2.



Inventor:
J. F. Brown
per Munn & Co
Atty.

UNITED STATES PATENT OFFICE.

ISRAEL F. BROWN, OF NEW LONDON, CONNECTICUT.

IMPROVEMENT IN ROLLERS FOR COTTON-GINS.

Specification forming part of Letters Patent No. **45,695**, dated January 3, 1865.

To all whom it may concern:

Be it known that I, ISRAEL F. BROWN, of New London, in the county of New London and State of Connecticut, have invented a new and useful Improvement in Rollers for Cotton-Gins; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a sectional view of a roller, illustrating a mode of carrying out my invention. Fig. 2 is an outside view of the roller as ready for use, part of the covering being removed to show the body of the roller.

Similar letters of reference indicate like parts.

The use of roller-gins is mostly confined to that class of cotton which has a long staple, and which can be peeled off from the seed without tearing the fiber. One of the defects in the operation of this kind of gin has been that when a bunch or wad of cotton, whether tangled by pressure or compacted by moisture, presents itself to the roller and begins to be drawn through between it and the breast-plate the wad causes the breast-plate to spring away from the face of the roller in order to open for itself a passage through the gin, thereby permanently bending the plate and subjecting it to injury by means of the stripper, thus making it incapable of doing good work until it is repaired. In order to get rid of this difficulty in working the roller-gin, I have invented a new and useful method of making the roller whereby I am also enabled to do more work in a given time and in a better manner than can be done by any roller-gin known or in use.

A is the shaft, and C the foundation of the roller, having a pulley turned on one of its ends, as shown.

D is the leather or other covering, which is wrapped around the body of the roller in a spiral course, as shown, the joint made by its edges being cut or otherwise deepened into a spiral groove of sufficient depth to make the cotton take a sidelong direction as it passes through the gin.

I make the surface of the roller partly solid and partly elastic. The figures give one example of my roller in which the elastic surface is made by putting rubber rings B upon the roller and fitting and securing them in grooves, as shown. I accomplish the same result by securing only segments of elastic material upon the roller, either in regular or alternate order or in a continuous or in an interrupted spiral course or courses. My experiments with some specimens of cotton have led me to prefer the method shown in the drawings.

The operation of my roller is as follows: A wad of cotton being presented to the gin it will be drawn in by the roller, and the spiral direction of the path it is made to take brings it quickly opposite to the yielding surface of the roller, when it is carried through the gin without injuring any of its parts.

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

1. Making the drawing-in or working roller of a roller cotton-gin with a surface partly solid and partly elastic, substantially as described.

2. Putting elastic bands or rings around the roller of a roller-gin in parallel and in continuous or in interrupted lines, substantially as described.

I. F. BROWN.

Witnesses:

GEO. E. STARR,
ABIEL CONVERSE.