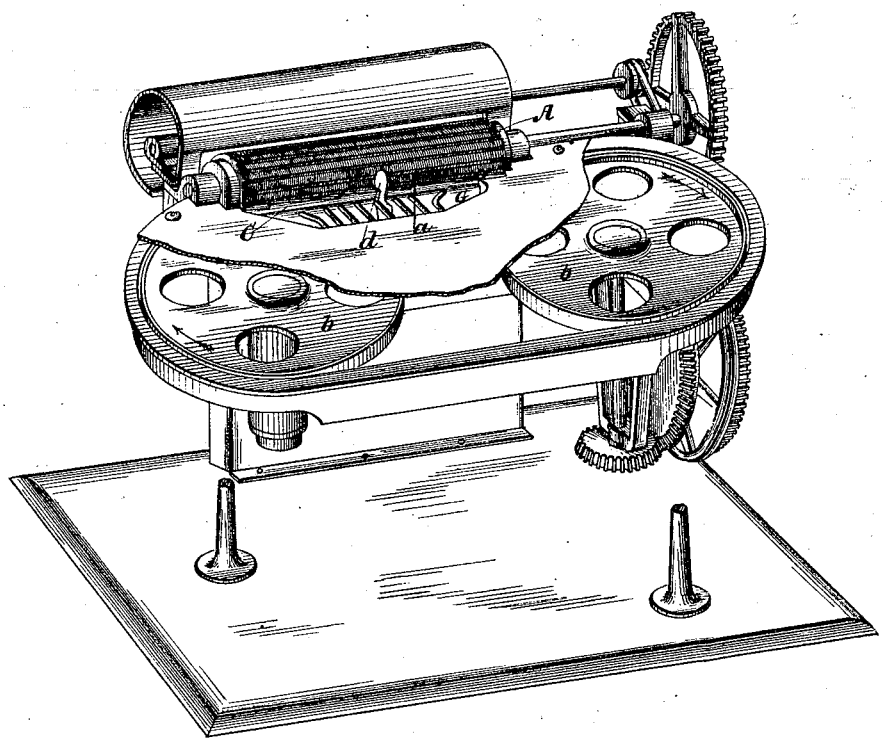
2 Sheets—Sheet 1.

E. OSGOOD.

COTTON-GIN.

No. 185,452. Patented Dec. 19, 1876.

Fig. 1.



Witnesses.

Thomas W Connolly

A. E. Beecher.

Inventor.

Enoch Osgood.

2 Sheets—Sheet 2.

E. OSGOOD.

COTTON-GIN.

No. 185,452. Patented Dec. 19, 1876.

Fig. 2.

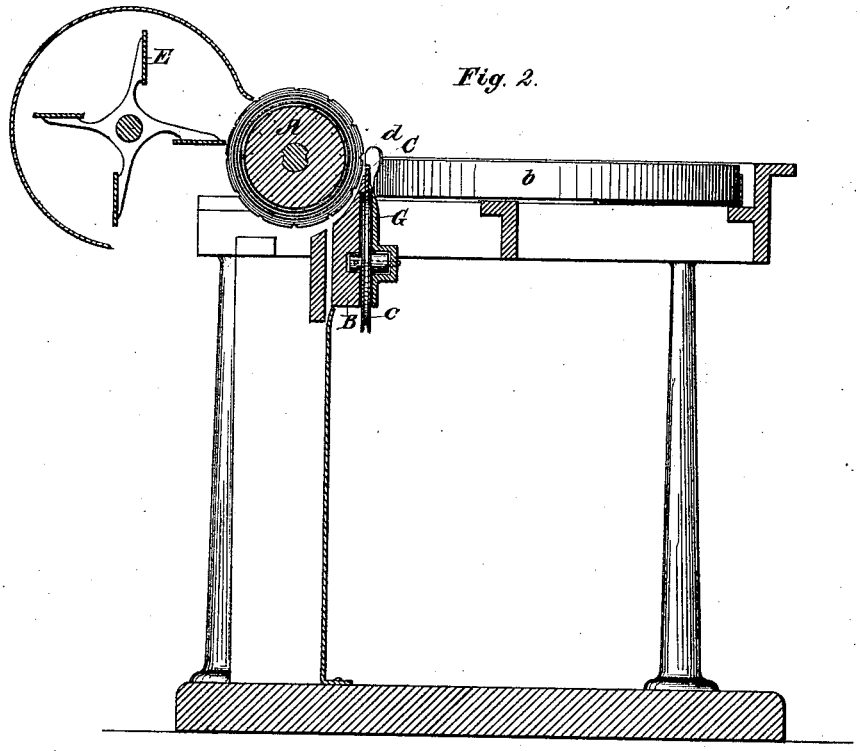


Fig. 3.

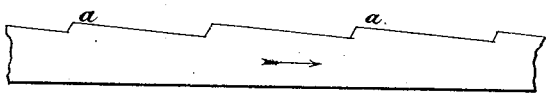
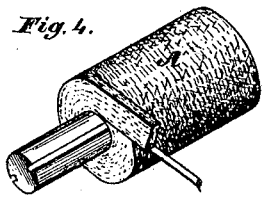


Fig. 4.



Witnesses.

Thomas L. Connolly.

A. E. Beecher

Inventor.

Enoch Osgood

UNITED STATES PATENT OFFICE.

ENOCH OSGOOD, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. **185,452**, dated December 19, 1876; application filed November 17, 1876.

To all whom it may concern:

Be it known that I, ENOCH OSGOOD, of Boston, county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Cotton-Gins, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of gin. Fig. 2 is a section view of gin. Fig. 3 is a plan view of band seed-clearer. Fig. 4 is a perspective of elastic roller, showing mode of winding.

My improvement relates to the construction and arrangement of a serrated metallic band in front of an elastic roller and concave bar, by the operation of which the seeds are severed from the cotton-fiber, as hereinafter more fully described, the same being an improvement on a gin described in Letters Patent granted to me August 13, 1872, numbered 130,438.

The elastic roller is represented by the letter A, the concave bar by the letter B, both of which are fully described in my patent above named, except as hereinafter stated. The elastic roller A is formed upon an iron shaft, and consists of a series of disks of vulcanized rubber and canvas wound around the shaft radially, pressed compactly together and vulcanized. Pulverized pumice-stone may be mixed with the rubber paste before the same is vulcanized. The surface of the roller is turned true and straight, and provided with a series of longitudinal grooves or depressions about half an inch apart, and about the tenth of an inch deep, and about the same or a little greater in width. The concave bar B consists of a strong bar of steel, having a concave surface of about an inch in width that fits the elastic roller A. The front side of the bar B is straight and vertical, and the upper edge is made thin, hard, and smooth. C represents an endless steel band, not unlike in its appearance to an endless-band saw. It is mounted upon two horizontal wheels, *b b*, which are banded upon their edges with vulcanized belting to prevent attrition and consequent wearing of the endless band C. This endless metallic band C is supported in front of the concave bar B by a series of rollers having their axes at right angles to the vertical face of the concave bar B, and the endless band, as shown at *c c*, each having a groove upon its circumference to steady the lower edge of the band C. The upper edge of the endless band C is provided with a series of inclined planes or elongated serrations, having their depressions inclining in the direction in which the band rotates, as indicated by the arrows. G represents a guard-plate secured in front of the concave bar B, having its upper edge a little above the edge of the concave bar, leaving a space between the said concave bar and the guard-plate sufficient for the endless band C to run freely. The guard-plate G is cushioned on the side contiguous to the endless band C with leather. It is vertically adjustable, and has upon its upper edge, at intervals of two or three inches, projections *d*, about half an inch in height, to prevent the cotton-fiber from drifting in the direction of the movement of the serrated endless band C.

Motion is given to the elastic roller A and endless band C by any convenient gearing, so constructed as to give to the endless band C four or five times the velocity of the surface of the elastic roller A.

An open grating supports the cotton as it enters the machine, and the seeds, as they are severed from the fiber, fall through beneath the feed-table, and the fiber is swept from the roller by the revolving fan in its rear.

What I claim as my improvement in the cotton-gin is—

1. The described serrated endless band C, in combination with the elastic roller A and concave bar B, substantially as and for the purpose set forth.

2. The endless serrated band C, constructed as described, in combination with the elastic roller A, concave bar B, and guard-plate G, substantially as and for the purpose set forth.

3. The metallic band C, having long serrations or incline planes upon its edge, the inclinations falling in the direction of its motion, as specified.

4. The grooved elastic roller A, in combination with the serrated band C, guard-plate G, and projections *d*, substantially as specified.

ENOCH OSGOOD.

Witnesses:

THOMAS C. CONNOLLY,

A. E. BEECHER.