

E. BUCKLIN, Jr.
Cotton-Gins.

No. 148,175.

Patented March 3, 1874.

Fig. 1.

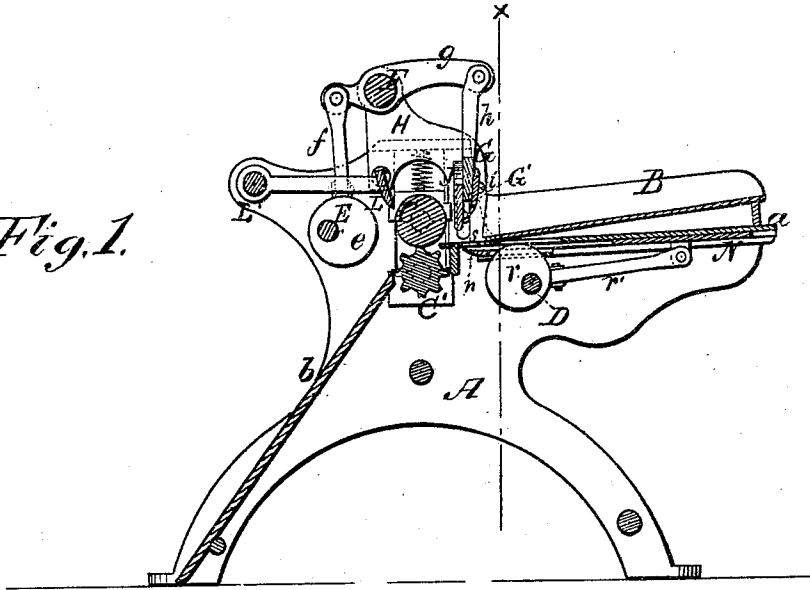
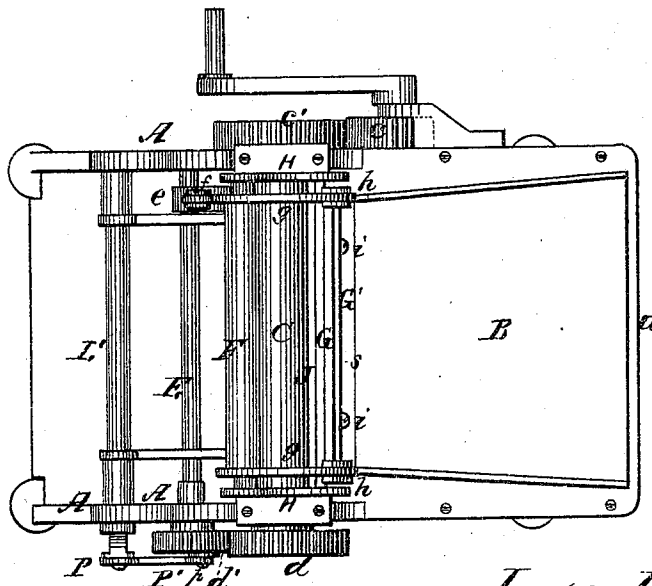


Fig. 2.



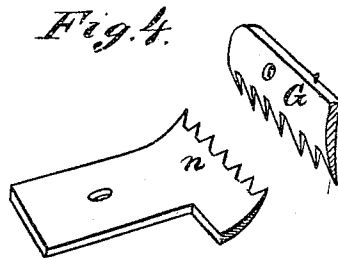
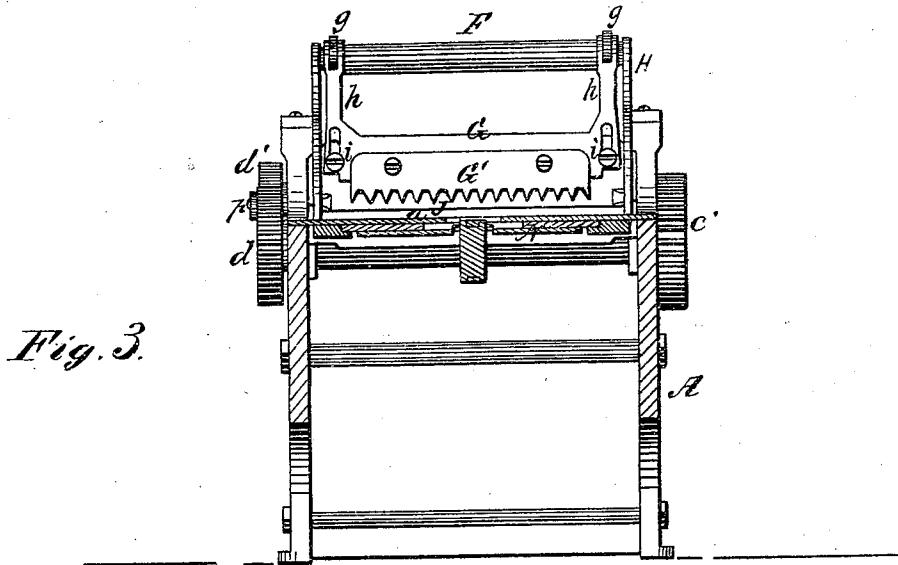
Witnesses.
E. H. Bates,
George E. Upham,

Inventor.
Edward Bucklin Jr.,
Chipman & Co.,
Attys.

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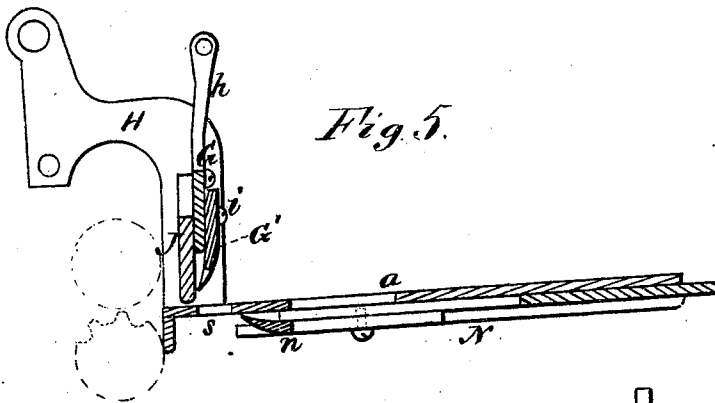


Fig. 5.

Fig. 7

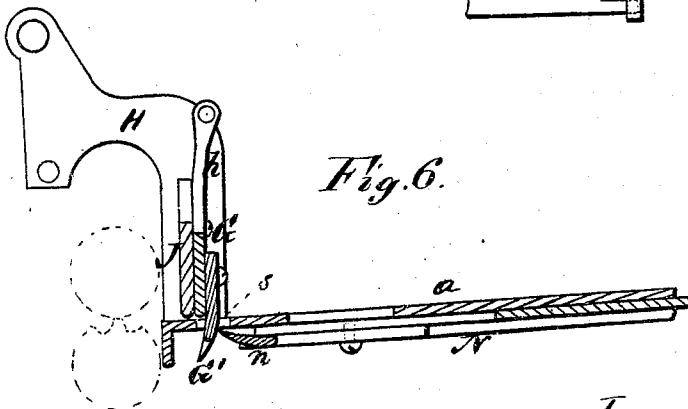
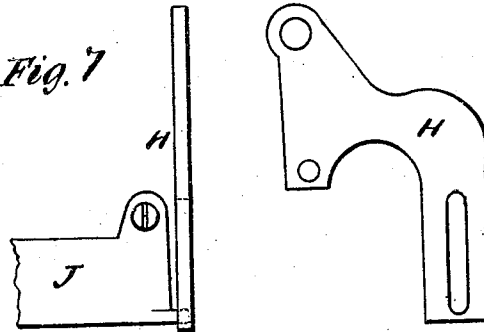


Fig. 6.

Witnesses
C. H. Bates.
George E. Upham.

Inventor.
Edward Bucklin, Jr.
Chipman & Fennell & Co.,
attys.

UNITED STATES PATENT OFFICE.

EDWARD BUCKLIN, JR., OF PAWTUCKET, ASSIGNOR OF ONE-HALF HIS RIGHT
TO LYSANDER FLAGG, OF LINCOLN, RHODE ISLAND.

IMPROVEMENT IN COTTON-GINS.

Specification forming part of Letters Patent No. 148,175, dated March 3, 1874; application filed
January 17, 1874.

To all whom it may concern:

Be it known that I, EDWARD BUCKLIN, JR., of Pawtucket, in the county of Providence and State of Rhode Island, have invented a new and valuable Improvement in 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 longitudinal sectional view of my cotton-gin. Fig. 2 is a plan, and Fig. 3 a transverse sectional, view of the same. Figs. 4, 5, 6, and 7 are details of the same.

This invention has relation to machinery which is designed for separating seeds from cotton, my object being to perform this work without the use of "saws," which, it is well known, injure the cotton fibers more or less. My invention consists, mainly, in the employment, in a novel manner, of reciprocating combs and a holder, with feeding or taking-off rollers, whereby the seed-cotton will be firmly held over an opening through the feed-table, while the combs remove the seed from it, one comb acting to press out the seed, while the other comb clears it of adhering cotton, as will be hereinafter more fully explained. The invention further consists in novel mechanism for actuating the separating-combs and the reciprocating holder.

The following is a description of my invention:

In the annexed drawings, A designates the frame of the machine, on which is an inclined table, *a*, that supports and holds in place a hopper, B, through which latter the cotton is fed to the separators. C C' are two rollers properly journaled in the cheeks of frame A, and arranged horizontally, for feeding or drawing in the cotton and discharging it over a fixed apron, *b*. The upper roller C may be clothed with leather, or some other suitable material, and the lower roller C' may be serrated longitudinally, similar to the "drawing-rollers" of spinning-machines. The upper roller C is held in contact with the lower one,

C', by means of springs in the journal-boxes. D is the main driving-shaft, carrying on one end a spur-wheel, *c*, and, between the cheeks of frame A, an eccentric. Spur-wheel *c* engages with another spur-wheel, *c'*, which is keyed on the shaft of roller C', on which shaft is also keyed a spur-wheel, *d*, which gears with a spur-wheel, *d'*, on a shaft, E. Shaft E carries an eccentric, *e*, which, by means of a yoke and connecting-rod, *f*, communicates a reciprocating motion to two arms, *g g*, which vibrate on a horizontal shaft, F. Arms *g g* are connected by rods *h h* to a vertically-reciprocating head, G, to which a separating-comb, G', is secured, the teeth of which are on its lower edge and may be constructed in any suitable manner. The head G is constructed with vertical slots through it near its extremities, through which screws *i i* pass, which loosely attach the head to a pressure-plate, J, the ends of which are guided by vertical slots through side bearing-plates H. Beneath the table *a*, and in close relation to its bottom side, is a reciprocating comb, *n*, which is secured to a slide, N, that works forward and backward in guides on the bottom of the table *a*, and receives its movements from the eccentric *r*, through the medium of a yoke and connecting-rod, *r'*.

If desirable, the two combs G'-*n* may be adjustably secured to their respective plates.

In feeding the cotton, with seed and leaf in it, between the rollers C C', it passes over a slot, *s*, through the table *a*, which slot is in close relation to the rollers and directly below the comb G'. The first operation is the descent of the plate G, which presses the cotton which is between the said slot *s* and the rollers C C' down firmly on the table *a*, and holds it there. The comb G' then descends through slot *s* and presses out the seed, and as the comb G' ascends the comb *n* advances to it and clears the cotton from its teeth. During these operations the cleaned cotton is being discharged over the apron *b* by the rollers C C'. It will be observed that the teeth of the comb G' do not tear or in any manner injure the fibers of the cotton, but simply pass down through and separate the seed from it while it is being held by the plate J.

The finished sliver is prevented from being wound around the upper roller C by means of a vertically-reciprocating beater, L, the arms of which are fast on an oscillating shaft, L'. This shaft L' may be oscillated by means of a crank-arm, P, connecting-rod P', and a wrist-pin, p, on the spur-wheel.

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

1. Reciprocating combs G' n and a pressure-plate or holder, J, combined with taking-off rollers, substantially as described.

2. The pressure-plate or holder J, loosely attached to a vertically-reciprocating head, G,

so that it will press the sliver on the table a in front of the opening s, previous to the operation of the comb G' on the cotton-seed, substantially as described.

3. The combination of the holder J and stripping-comb n with a seed-separating comb, G', substantially as described.

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

EDWARD BUCKLIN, JR.

Witnesses:

PHIL. C. MASI,

GEORGE E. UPHAM.