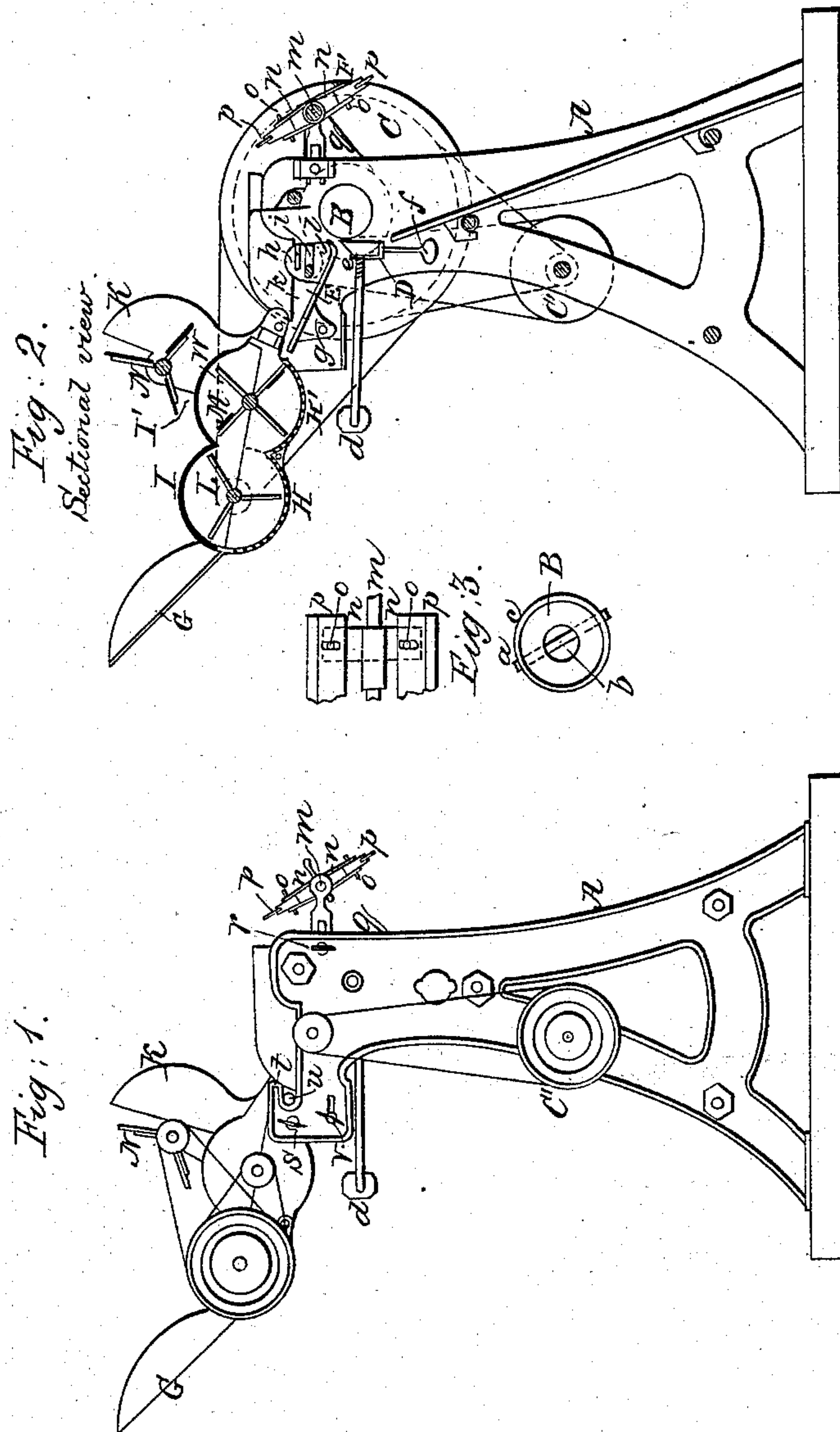


BRACKETT & DEARBORN.

Cotton Gin.

No. 68,035.

Patented Aug. 27, 1867.



Witnesses;

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JOHN B. BRACKETT AND WYMAN DEARBORN, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 68,035, dated August 27, 1867.

IMPROVEMENT IN COTTON-GIN AND PICKER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, JOHN B. BRACKETT and WYMAN DEARBORN, of Boston, in the county of Suffolk, and State of Massachusetts, have invented a new and useful Cotton-Gin and Picker; and 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 accompanying drawings, forming a part of this specification, and containing four figures.

Our endeavor in this invention has been, first, to so arrange a small cleaner or picker in connection with a roller-gin, as to serve at once as a cotton-cleaner and gin-feed; second, to provide a new and improved roll for use in roller-gins; third, to present a new form of clearer operated in a simpler manner than any yet introduced; fourth, to provide a means of clearing the roll of the cotton when the seeds are doffed off; and, fifth, to so arrange and construct the various parts that produce the desired results as to make the complex design of simple construction, great durability, and easy repair. In the drawings—

Figure 1 is a side elevation,

Figure 2 a vertical section,

Figure 3 a transverse section of the roller and

Figure 4 a front elevation of the attachment of the cotton-doffer, showing its construction.

Figs. 3 and 4 are enlarged.

Between two side frames, A, is placed the roller B, which is the main shaft of the machine. This roll, as shown in fig. 3, is of wood, pierced through its axis for the spindle *b*, to which it is attached at either end by pin *a* fixing it in position, and allowing it to be readily removed for repairs. This roll has a covering, *c*, preferably of shark skin or dog-fish skin, but thin raw hide dressed and prepared as shagreen may be used, though not so well adapted as the natural scale, for the purpose of tearing the cotton from the seed. From this roller B, by bands or gear-wheels C, are driven all the movable parts of the machine. Behind the roll B is pressure-bar D, set in brackets on the frame of the machine, concave on its upper rear edge, to allow of the motion of the clearers, and presenting only an edge to the roller B. The closeness of this pressure-bar to the roll is regulated by thumb-screw *d*, which passes through the bar, is keyed on the forward end, and has a shoulder in rear of the bar, and passes through bracket *e*, as a screw, whereby either end of the pressure-bar may be forced in or out, as desired, and the vertical position is arranged by means of set-screws *f*. Above and in rear of the pressure-bar is the clearer E, pivoted at *g* upon a pin which rides in a slot in the frame, and is fixed as desired by thumb-screw *v*, and operated by eccentric pin *i*, revolved by belts or gears from wheels C C' with great rapidity, playing in slotted side plate *h*, as shown. This clearer is made with longitudinal bars *k*, and shallow-toothed cross-bar *l*, for lightness and efficiency, and a longitudinal section is substantially such as shown, fig. 2. In order to clear the roll from cotton passing through the gin, there is placed beyond the roll a doffer, F, revolved with great rapidity from band-wheel C, and sweeping the surface of the roller clean at every revolution. This doffer is constructed as follows: Upon a shaft, *m*, are affixed at each end wings *n*, which serve as a frame for the back of the rubber brush *p*. This back is a strip of wood grooved at the edge for the insertion of a narrow plate of sheet rubber *p*, forming the rubber brush. These bars are slotted, as shown in fig. 4, to allow of setting out the brush as it wears, and the whole doffer is supported by brackets *q*, slotted as shown, which may be fixed in their desired position by thumb-screw *v*.

The feed-table of this gin is also a picker. It can be detached when desired by loosening thumb-screws *s*, and unhooking pin *u* from the hook *t* of the frame. This picker is arranged as follows: Two semi-cylindrical sieves, H H', having semi-cylindrical covers I I', are arranged side by side, and in the case so arranged revolves the toothed cylinder L, and a second cylinder carrying two fans, M, and teeth *w*. This second cylinder may, instead of carrying teeth and fans, carry teeth alone, in which case the upper fan N will be absolutely necessary, though in case the fans M are carried, the fans under cover K may be dispensed with. Dirty unginned cotton is fed in over feed-table G, and is drawn in by the air-blast, is picked and passed on, lightened of dirt, and loosened by the picker-teeth, and is then blown forward upon the clearers by the fans M or N, or both, is caught by the teeth of the shark skin and drawn past the pressure-bar, cleaned of seed by the clearers, and is then brushed off the roller by doffer F, and falls in a pile at the front of the gin. In gearing the various parts we arrange so that the clearers shall reciprocate very much more rapidly than the roll revolves, the first picker

very much faster than the roll, the second picker and fan faster than the first, and the doffer at several times the speed of the roll.

We are aware that a cotton-picker resembling this in many details is an old device, but we do not know of one with fans as a constituent part, nor do we know of one attached as a feed to a cotton-gin. The method of operating the clearers by an eccentric pin, and without connecting-rods, we believe to be a great advantage, and the new substance for covering the roll we believe to be admirably adapted to its purpose, and it is certainly very accessible in cotton countries near the coast. We prefer to wind it on spirally, simply cutting in strips, wetting them, and fastening with glue. Several rolls may be kept constantly on hand and slipped on the spindle, while the one used up may be put aside to be recovered at leisure.

We claim as our invention, and desire to secure by Letters Patent—

1. The employment of shark skin, dog-fish skin, or shagreen-dressed hide as a covering for rollers of cotton-gins, substantially as and for the purpose described.
2. The method of adjusting pressure-bar D by thumb-screw *d* and set-screw *f*, arranged and operating substantially as described.
3. The arrangements described and shown for adjusting and operating clearers E, consisting of pivot pin *g*, fixed in a slot of the frame by screw *u* and the slotted side plate *h* of the clearer and eccentric pin *i*, revolved as described, all operating together in the manner set forth.
4. The doffer F, consisting of slotted cross-bars with their rubber brush *p*, sustained by wings *n* and clamping-screws *o* upon shaft *m*, the whole driven and operating substantially as described, and also when arranged with slotted brackets *q*, as and for the purpose described.
5. The arrangement, as a feed-table to a cotton-gin, or in combination with the feed-table to a cotton-gin, of the cleaning and feeding apparatus, consisting of sieves, covers, toothed cylinders, and fans, as and for the purpose described.
6. The arrangement of fans M or N with toothed cylinders in a cotton-cleaner, all operating substantially as described.

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Witnesses:

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