

Brackett & Dearborn,

Cotton Gin.

No. 87,535.

Patented Mar. 9. 1869.



Fig. 4.



Fig. 3.

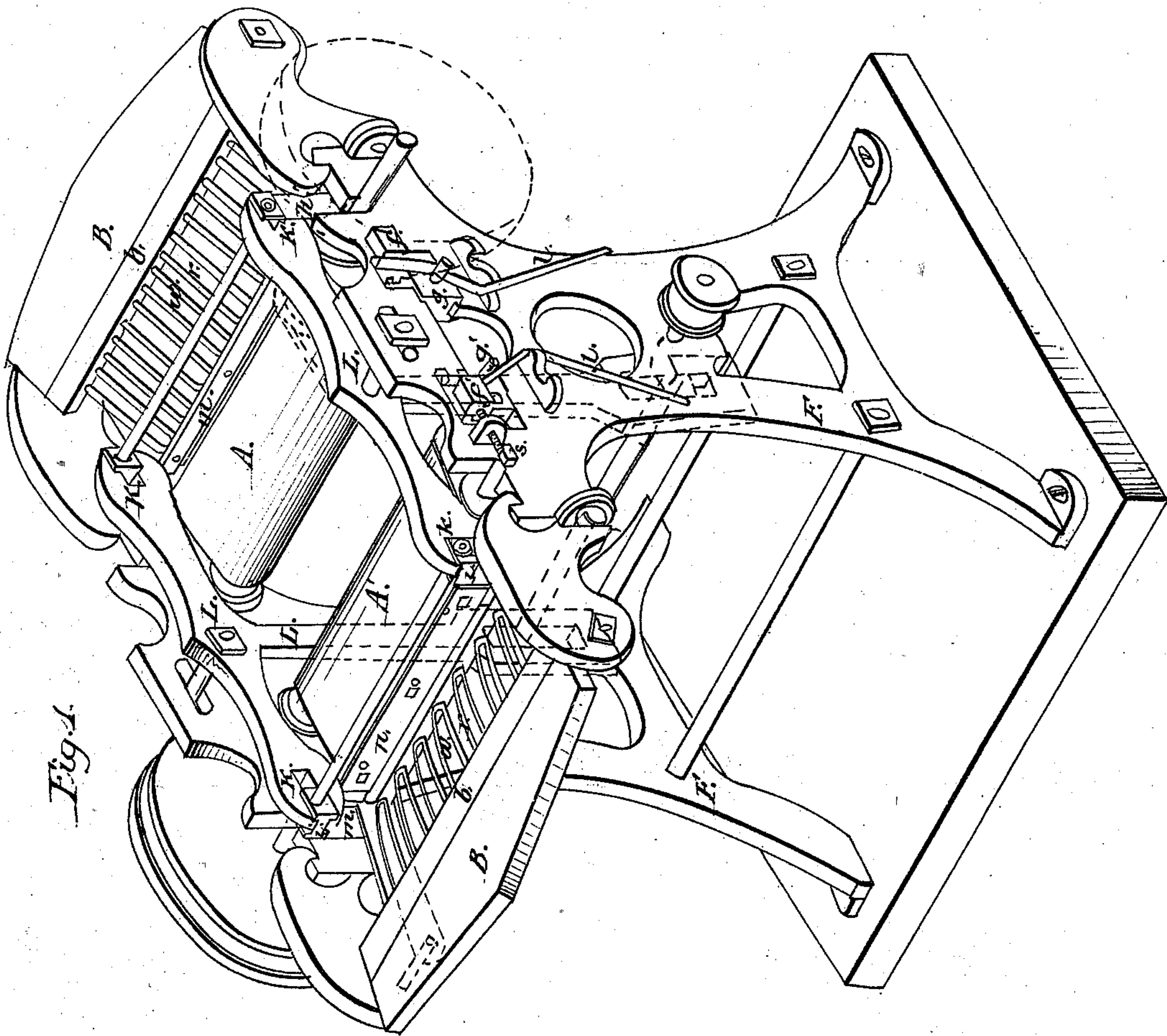


Fig. 1.

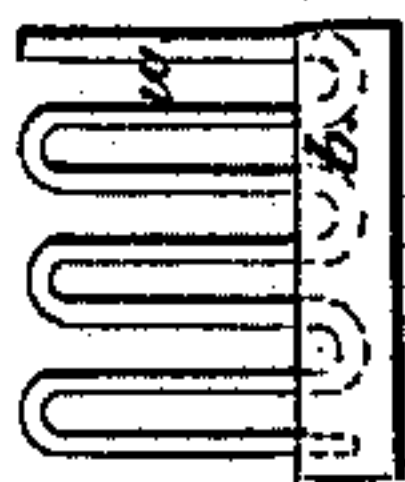


Fig. 2.

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

Letters Patent No. 87,535, dated March 9, 1869; antedated March 2, 1869.

IMPROVEMENT IN COTTON-GIN.

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 Improvement in Cotton-Gins; and we 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.

This improvement is upon our gin, patented March 26, 1867, and is designed to afford a double-belt gin, as well as to show some improvements which can be applied to any belt-gin, such as a new adjustment and construction of clearers, new forms of pressure-bars, a finer and more delicate adjustment of the tension of the belt, and a new and improved rack.

In the drawings—

Figure 1 is an isometric perspective view of the gin, set up;

Figure 2 is a plan, showing the construction of the rack; and

Figures 3 and 4 are sections of pressure-bars.

Like letters indicate like parts in all the figures.

A A are the belts, running on rolls, as described in the patent referred to, and tightened by levers *l*, having fulcrum *f*, adjustable by set-screws *s*, so that the exact degree of tension required may be given to the belt by the variation of the fulcrum.

The cotton is fed to the gin over tables B, which are edged by rack *r*. This is constructed, as shown in fig. 2, of a single wire, *w*, looped back and forward, and fixed in back, *b*, which is of cast-iron poured round the wires while they are set in a mould.

The cotton fed into the gin is caught between the belt and pressure-bar, as in the belt-gin already referred to, patented by us, and the seeds are knocked out by the clearers.

The pressure-bar may be of one of four constructions: convex, as described in the previous patent; concave, and arranged near one of the rollers, to fit the convexity of the belt, in section like an isosceles triangle, as shown in fig. 3; to be arranged like the convex bar relative to the belt, or like the concave bar nearer the rolls; or as we consider the best form, shown in fig. 4, where C is the bar, having a hollow cut in it

on the side toward the belt, in which is placed roller *d*, pressing against the belt, and forced up to it by spring *g*, either of rubber or metal, making the bearings of journal *e*.

The clearers are of new construction. They hang by arms *h* from boxes *i*, which reciprocate in slots *k* of rock-shaft L.

The arms *h* are connected by bar *m*, upon which is fastened, by screws *o*, knife-blade *n*.

The screws pass through slots in the knife-blade, so that it is readily adjustable up and down.

Rock-shaft L receives its motion from a cranked shaft passing through boxes sliding in the slots of arms *x*, or in any other suitable way to give the rocking or belt-crank motion.

The advantages of the double-belt gin are that all its parts and motions, on opposite sides of the median vertical, are exactly balanced. The movable fulcrum give a very delicate adjustment to the tension of the belt, and may be used on any gin. The roller pressure-bar, with its spring-journals, allows cotton to be fed more rapidly, with less care to spread it evenly over the feed-table, as in other gins, and secures its passage through the machine. The construction of the rack is much cheaper than in the old way, with separate teeth, and quite as durable. The reciprocating boxes, at the ends of the rock-shaft, are a novel adaptation to secure quietness in running, freedom from shocks and jars, and the mode of constructing the clearers is an assurance that they can always be adjusted to their work much more readily than in the old way, when they were made all in one piece.

We, therefore, claim as our invention, and desire to secure by Letters Patent of the United States—

1. The arrangement of knife-blade *n*, by screws *o* passing through slots in said knife-blade upon clearer-bar *m*, so as to be adjustable, substantially as described.

2. The pressure-bar C, as arranged with roll *d*, and adjusting-springs *g*, substantially as described.

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Witnesses:

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