

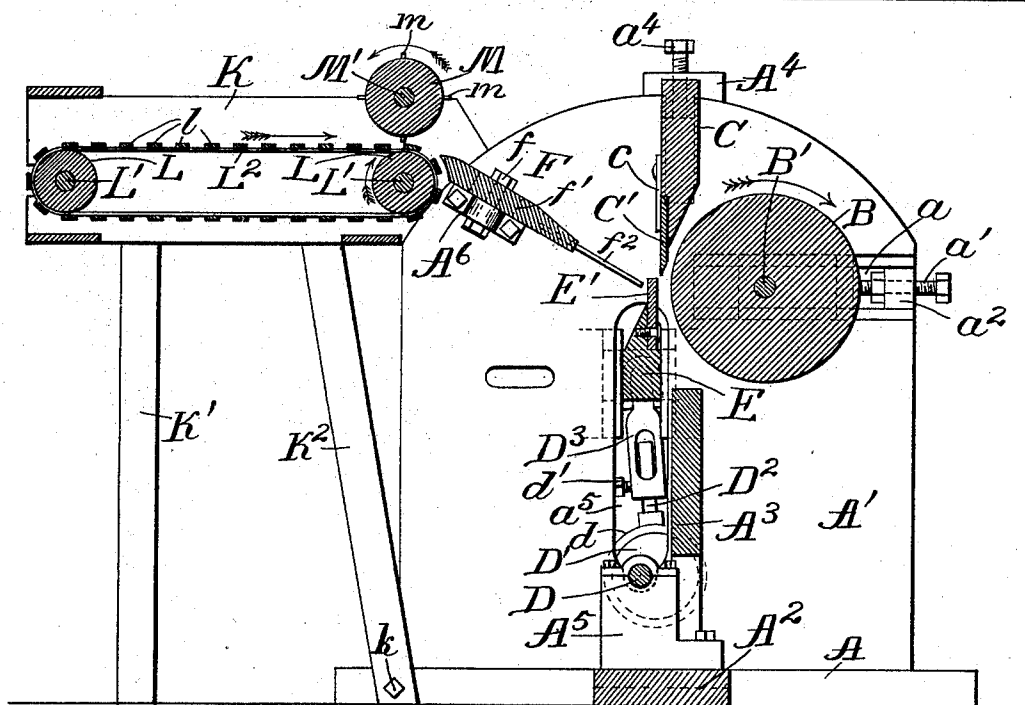
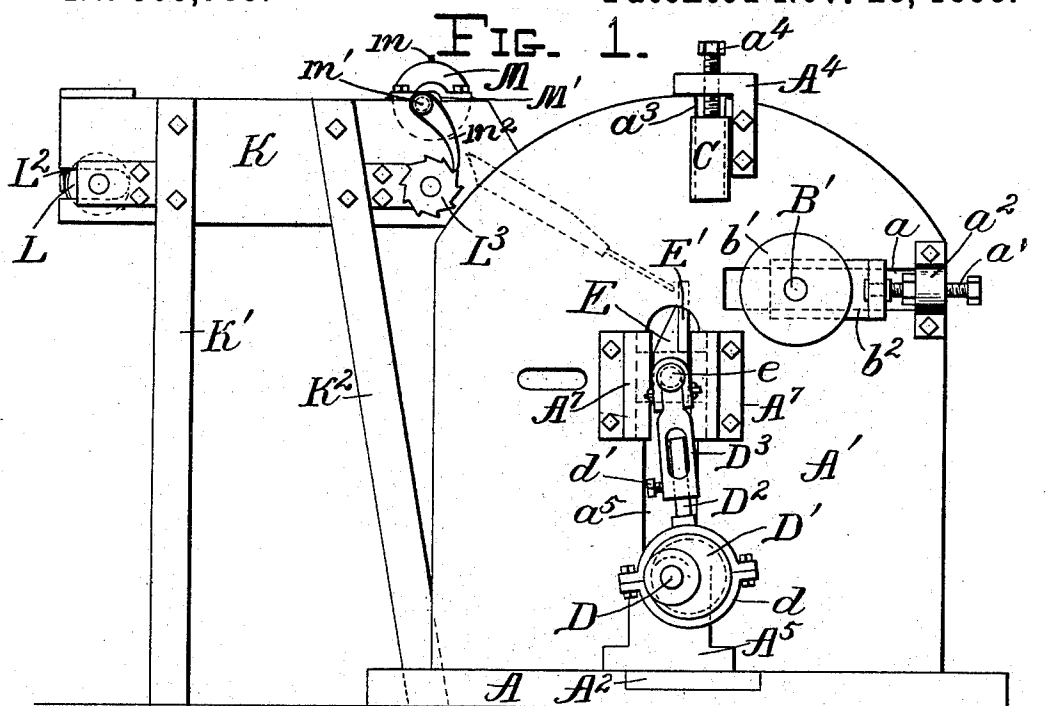
(No Model.)

2 Sheets—Sheet 1.

S. F. PREVATT.
ROLLER COTTON GIN.

No. 509,765.

Patented Nov. 28, 1893.



Witnesses

Roy C. Bowen
John A. Wilson

FIG. 2.

Inventor

S. H. Prevatt,

By Whitman & Milkenor
Attorneys.

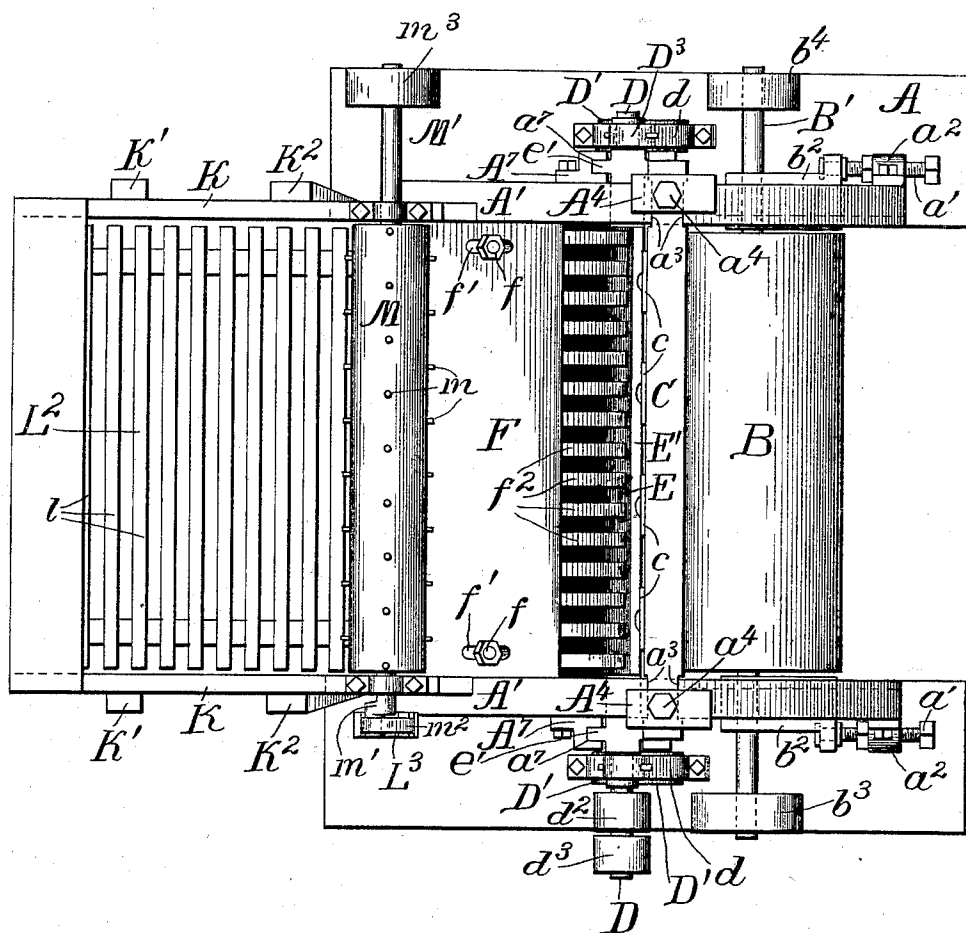
Attorneys.

S. F. PREVATT.
ROLLER COTTON GIN.

No. 509,765.

Patented Nov. 28, 1893.

FIG. 3.



Witnesses
Percy C. Bowen.
John Q. Wilson.

Inventor
S. F. Prevatt
By *Whitman & Wilkinson*
Attorneys.

UNITED STATES PATENT OFFICE.

SIMEON FRANCIS PREVATT, OF SIMS, GEORGIA.

ROLLER COTTON-GIN.

SPECIFICATION forming part of Letters Patent No. 509,765, dated November 28, 1893.

Application filed August 5, 1893. Serial No. 482,486. (No model.)

To all whom it may concern:

Be it known that I, SIMEON FRANCIS PREVATT, a citizen of the United States, residing at Sims, in the county of Lowndes and State of Georgia, have invented certain new and useful Improvements in Roller Cotton-Gins; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to roller cotton gins, and consists of the arrangement and combination of devices which will be fully described hereinafter and the specific points of novelty particularly pointed out in the claim.

In the accompanying drawings in which like letters of reference designate corresponding parts in the several views—Figure 1 represents a side elevation of my improved gin. Fig. 2 represents a central longitudinal section of the same, and Fig. 3 represents a plan view thereof.

The several operating parts of the device are mounted in a rigid frame consisting of the foot pieces A and the side upright pieces A' held together by suitable cross pieces as A² and A³, and braced in any desirable manner. A roller B is mounted upon a shaft B' which extends through slots a in the sides A'. The said shaft B' is journaled in journal boxes b² which are arranged to slide horizontally in the slots a, and are held and adjusted therein by means of adjusting screws a' which pass through threaded lugs a² and are swiveled in the journal boxes b².

In the top of the side frames A' are vertical slots a³ in which the reduced ends of a cross beam C are free to slide. This beam C carries the blade C' which is held thereon by the cleats c and is free to move vertically in the slots a³. Brackets A⁴ are secured upon the side pieces A' and extend over the slots a³ and screws a⁴ pass through the said brackets, and may be screwed down upon the ends of the cross beam to hold the same firmly, or they may be raised a little to allow the beam C and blade C' to have a little vertical play, and so allow the blade to rise when an obstruction in the cotton passes under it.

The roller B may be moved to or from the

blade by means of its adjusting screws a' as will be readily understood.

An eccentric shaft D is journaled in the lower part of the frame, in journal boxes A⁵ secured to the foot pieces and cross pieces of the said frame at suitable points; an eccentric D' is rigidly mounted upon each end of the shaft D. The eccentrics D' are provided with the usual eccentric yokes d, to which are secured the lower parts of adjustable pitmen D²; the upper parts D³ of these pitmen being arranged to slide over the lower part, it will be obvious that the length of the pitmen may be varied at will, and the two parts may be firmly clamped at any desired adjustment by the set screws d'.

A reciprocating beam E passes through slots a⁵ in the side pieces A' and is pivoted by the wrist pins e at its ends to the upper parts D³ of the adjustable pitmen. A blade E' is secured to the upper edge of the beam E; thus the rotation of the eccentrics will reciprocate the beam E, and blade E' vertically, as will be readily understood.

Brackets A⁷ having guide ways a⁷ are secured on the sides A' on each side of the slots a⁵, and ribs e' formed on the sides of the ends of the beam E, are arranged to slide in the said brackets A⁷, to guide the said beam E in its vertical movement.

By having the fixed knife C and reciprocating knife E' both adjusted in guides fixed in the rigid frame, the distance between the two may be adjusted with great nicety, and the parts are prevented from springing apart too far causing the gin to work poorly, or springing together close enough to crush the seeds or possibly break the knives. In the same way, a firm, though adjustable bearing is given the shaft B'; and this being adjusted at right angles to both knives, enables the operator to move the roller B exactly the same distance toward or away from both knives.

An inclined feed table F extends across the frame between the sides A', and is supported upon the lugs A⁶. Bolts f pass through the said lugs and through slots f' in the feed table thus making the table adjustable, and furnishing means for clamping it in the required position. The inner edge of the feed table is provided with inwardly projecting

fingers f^2 which extend to within a short distance of the reciprocating blade E' . A frame K supported upon legs K' K^2 is placed against the sides A' in close proximity to the feed table F and may be secured to the main frame by a bolt k . At each end of the frame K is journaled a roller L on shaft L' and around these two rollers passes a carrier L^2 which may be of slats as shown. In the front of the frame K a roller M is journaled directly above the roller L and provided with short teeth or pins m . One end of the shaft L' of the roller L is provided with a ratchet wheel L^3 , and the adjacent end of the shaft M' of the roller M is provided with a short crank m' to which is pivoted a pawl m^2 which rests in engagement with the teeth of the ratchet wheel L^3 ; thus as the shaft M' revolves the pawl m^2 engaging the teeth of the ratchet wheel L^3 will turn it and the roller L the distance of one tooth for each revolution of the shaft M' . This is an old form of feed, however, and is not claimed as a part of my invention.

The ends of the several shafts are provided with pulleys b^3 , b^4 , d^2 , d^3 , and m^3 , and are connected together by a belt so that when power is applied at, say the pulley d^3 , the shafts and rollers will all turn in the proper direction as indicated by the arrows on Fig. 2.

In operation the cotton to be ginned is fed upon the carrier L^2 , which moves slowly in the direction of the arrow as hereinbefore described, and is carried between the carrier and the rapidly moving roller M, the teeth m

upon which throw the cotton on the inclined feed table F, whence it passes down over the fingers f^2 , between the blade C' and the reciprocating blade E' against the roller B, which latter draws it through, carries it over, and delivers it in the usual way.

The upper blade may be adjusted to move vertically, as has been hereinbefore described, to allow lumps or obstructions in the cotton to pass through, and will then fall back to its normal position by its own weight.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

In a roller cotton gin, the combination with the frame A and rigid vertical side pieces A' , with vertical and horizontal slots therein, substantially as described, of the fixed knife C adjustably mounted in the upper vertical slots in said side pieces, the reciprocating knife E' and beam E guided by the lower vertical slots in said side pieces A' ; the journal boxes b^2 adjustably mounted in the horizontal slots a in said side pieces A' , the roller B having its shaft B' mounted in said journal boxes; and means for feeding the cotton to said gin, substantially as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

SIMEON FRANCIS PREVATT.

Witnesses:

J. J. DASHER,

E. S. DASHER.