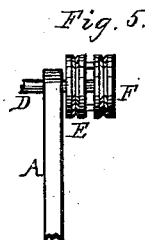
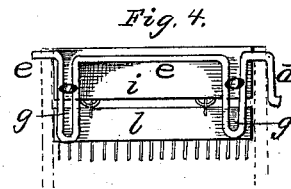
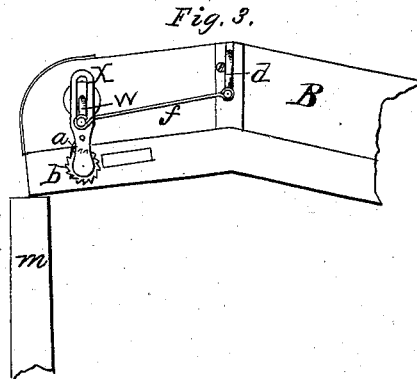
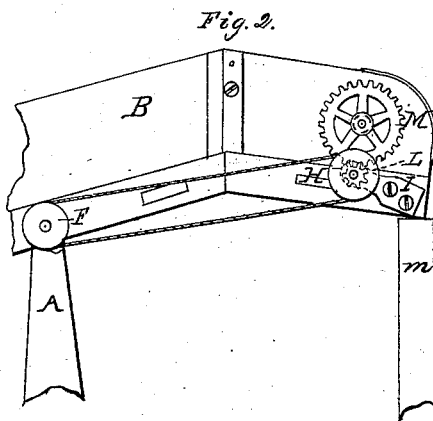
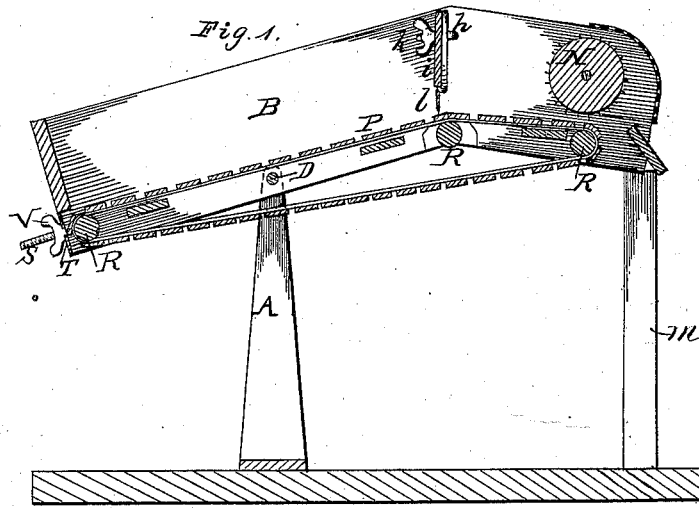


J. W. ELLIOTT.
COTTON-GIN FEEDERS.

No. 194,661.

Patented Aug. 28, 1877.



WITNESSES;
F. Walter Fowler,
Chas. O'Neil

INVENTOR;
James W. Elliott
By his Atty.
Cox and Cox

UNITED STATES PATENT OFFICE.

JAMES W. ELLIOTT, OF PRATTVILLE, ALABAMA, ASSIGNOR OF ONE-HALF HIS RIGHT TO WASHINGTON L. ELLIS, OF SAME PLACE.

IMPROVEMENT IN COTTON-GIN FEEDERS.

Specification forming part of Letters Patent No. 194,661, dated August 28, 1877; application filed July 6, 1877.

To all whom it may concern:

Be it known that I, JAMES W. ELLIOTT, of Prattville, in the county of Autauga, and State of Alabama, have invented a new and useful Improvement in Cotton-Gin Feeders, of which the following is a specification, reference being had to the accompanying drawings.

The invention relates to an improvement in cotton-gin feeders; and consists in the mechanism hereinafter more fully described, the object being to furnish a simple and effectual means of feeding cotton to the gin.

Figure 1 is a central vertical longitudinal section of a device embodying the elements of the invention. Figs. 2 and 3 are obverse and reverse detached plan views of the rear portion of the elevator. Fig. 4 is a side elevation of the elevator-rake. Fig. 5 is an end view of wheels E F.

In the accompanying drawings, A represents the standards, in the upper ends of which is mounted the elevator-frame B on the axle or trunnion D, one end of which is provided with the pulley or band wheel E adjacent the standard A, and at its extremity with the similarly-constructed wheel F, which may be furnished with an ordinary clutch on its inner face in order to communicate motion to the said wheel E, which is connected by a band to the wheel H mounted on an axle in the hanger I, wherein is also mounted the pinion L. This pinion meshes with the gear-wheel M secured on the axle of the drum or picker-roller N, which has bearings on opposite sides of the elevator-frame B at the rear end of same and immediately above the endless apron P. The elevator frame and apron incline upward a suitable distance, and then downward, as shown, to effectually consummate the object of the invention, as will be observed hereinafter. At each end of the frame B and slightly removed from its center is furnished a roller, R, upon and over which the apron or carrier belt P is placed, the middle and rear rollers being pivotally secured, and the front one adjustably, the ends of its axle being furnished with the threaded bolts S, which move in the guide-slots T and protrude beyond the ends

of same, where they are provided with set-screws V.

It is obvious that when the screws are worked toward the end of the elevator-frame the bolts S are drawn frontward, thus making taut the apron P, and when the screws receive a reverse movement the tension of the apron is loosened.

The end of the axle of the picker-roller N opposite the gear-wheel M is furnished with a crank, W, the short arm of which travels in the slot of the oscillating bar X mounted on the axle of the front roller R, and supplied on its inner face with the pawl *a*, which engages the teeth of the ratchet-wheel *b*, also mounted on the shaft of the front roller R, and in close relation to the bar X. The crank W is connected to the crank *d* formed on the end of bar *e* by the draw-rod *f*, which insures unto the two cranks a corresponding movement. The bar *e* is bent downward at suitable points, making a short turn, and thence upward, forming the guides *g*, as shown, in which the threaded bolts *h* are placed, their enlarged ends being on the rear of the guides, and their front ends extending forward, where the board *i* is placed on them and prevented from escaping by the set-screws *k*, whereby the board can be adjusted vertically, or entirely detached, without affecting the said guides or bar *e*.

To the lower edge of the board *i* is hinged the rake *l*, which, when the board is secured to the bar *e*, receives a movement similar to that of the crank *d*, and is employed to assist in conveying the cotton to the picker-roller, and at the same time to spread it out evenly in a sheet or bat, so that the same can be delivered to the cotton-gin (which is immediately in front of the feeder) in a suitable form.

The upper and rear portion of the drum or roller N may be covered with gauze wire or other perforated material, as shown, so that a space is allowed between the lower edge of the same and the elevator-belt to allow the passage of the cotton to the gin.

It is evident that the elevator, being pivotally mounted on the axle D, can be inclined

on any desired angle, and thus permit the operator to clean or adjust the mechanism at will. The rear end of the frame B rests upon the standards *m*, which may be secured to the floor of the gin-house.

The saw-shaft of the cotton-gin is connected with and communicates motion to the wheel F, which, in turn, imparts its motion to the wheel E; thence it is conveyed through a belt to the wheel H, pinion L, wheel M, and picker-roller N. This further communicates the motion through the crank *d* to the mechanism operating the rake, and to the pawl *a* and ratchet *b*, which cause the rotation of the elevator-apron P.

It is also evident that when the oscillating bar X is carried forward it draws the pawl *a* with it, and when that movement is reversed it pushes the pawl rearward, and, as the end of the said pawl is engaged by a tooth of the ratchet, it will force the same and the front roller R to rotate. This gives the endless apron a similar movement, and thus causes its operation.

The cotton is placed upon the apron at the front end of the feeder, and is carried upward under the rake and over the roller N at the rear of the frame, where it is delivered to the gin. At the same time any dirt that may be in the cotton will pass on the downward in-

cline of the apron beneath the drum N, and be precipitated to the floor of the gin-house.

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

1. The elevator-frame B, provided with an endless apron having a double incline, and pivotally mounted upon the axle D, substantially as set forth.

2. The drum N, provided with the crank W, operating in the slotted bar X, having the pawl *a*, which engages the ratchet *b*, in combination with the draw-rod *f*, crank *d*, and rake *l*, substantially as shown and described.

3. A cotton-gin feeder mounted on trunnions placed at or about its center of gravity, substantially as set forth.

4. The combination of the bar *e*, board *i*, bolts *h*, set-screws *k*, and rake *l*, substantially as specified.

5. The apron P, having a double incline in combination with the drum N and rake *l*, substantially as expressed.

In testimony that I claim the foregoing improvement in cotton-gin feeders, as above described, I have hereunto set my hand this 28th day of June, 1877.

JAMES W. ELLIOTT.

Witnesses:

J. W. MATTHEWS,
M. E. PRATT.