JAMES H. GATLING.

Improvement in Cotton and Corn-Stalk Choppers.

No. 114,127. Patented April 25, 1871.

Fig. 1.

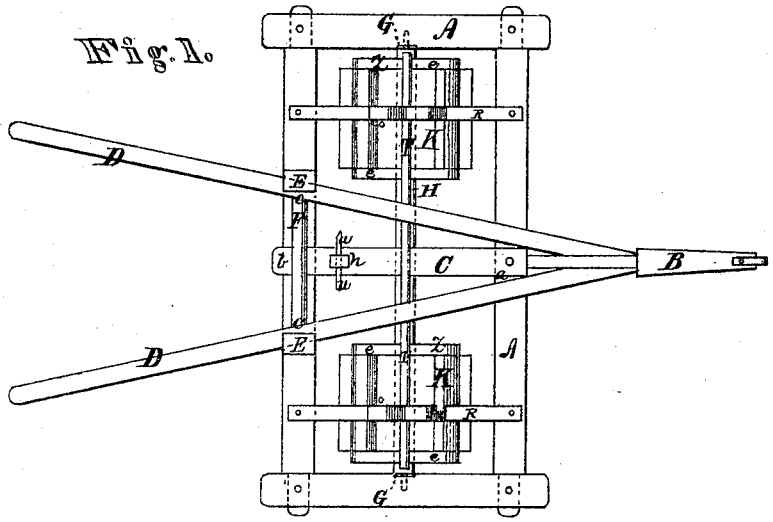
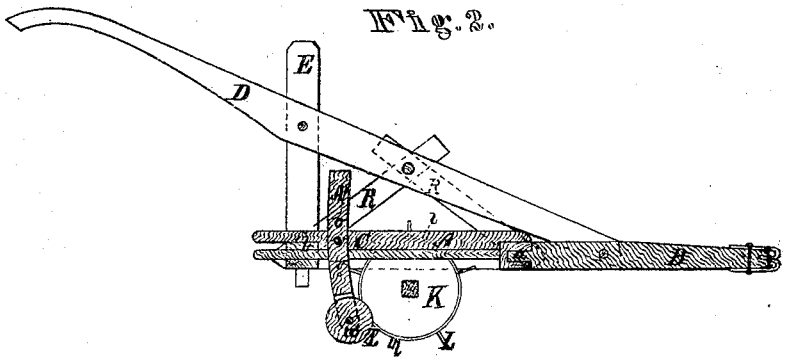


Fig. 2.



Witnesses.
Chas Kenyon
Villette Anderson

Inventor.
J. H. Gatling,
Chipman & Simmons & Co
Attys,

United States Patent Office.

JAMES H. GATLING, OF MURFREESBOROUGH, NORTH CAROLINA.

Letters Patent No. 114,127, dated April 25, 1871.

IMPROVEMENT IN COTTON AND CORN-STALK CHOPPERS.

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

To all whom it may concern:

Be it known that I, JAMES H. GATLING, of Murfreesborough, in the county of Hertford and State of North Carolina, have invented a new and valuable Improvement in Cotton-Choppers; 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 drawing making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a top view of my invention.

Figure 2 is a central vertical longitudinal section of the same.

My invention has relation to means for breaking and cutting cotton, and corn-stalks, weeds, &c.; and

It consists in the construction and novel arrangement of the adjustable chopping-cylinders, the adjustable roller for gauging the depth to which the cylinders shall strike, and the braced rail elevated above the body of the machine, and serving as a means of suspension for sand-bags or weights.

The letter A of the drawing designates a rectangular frame-work, which constitutes the body of my cotton-chopper.

In the construction of this frame the side bars are mortised to receive the tenons of the front and rear transverse bars.

B represents the draft-beam, which is shouldered at *a* to bear against the front transverse bar through a slot in which it passes, and is mortised into the rear transverse beam at *b*.

C represents a strengthening brace, let in between the front and rear bars of the frame A, and secured thereto. This brace is superimposed on that portion of the draft-beam which lies between the transverse bars.

D D represent the handles by means of which the machine is guided. These handles are secured to the sides of the draught-beam in front of the frame A, and in rear are let into the uprights E E, which are mortised into the rear transverse bar.

F represents a round brace, shouldered at *c c*, to keep the handles at the proper distance apart. This rod also extends entirely through the uprights E E, and serves to connect and bind them together near their upper ends.

G G represent metal arms which extend downward from the side bars of the frame A, and serve as bearings for the journals of the cylinder-shaft. These arms are usually let into the side bars as a security against the rear draft of the cylinders, which has a tendency to loosen the arms from their fastenings to the frame.

H represents the shaft on which the cylinders are placed. This shaft is usually made square in its cross-section, and is journaled in the arms G G.

K K represent the chopping-cylinders. These may be made of metal or wood. It is more economical to manufacture them of wood, and in this case the knives may be secured thereto in the manner indicated below.

L L represent the knives, whose inner edges or tangs are inserted in recesses in the cylinders in such a manner that the blades shall extend out radially from the cylindrical surface. At the same time the blades extend lengthwise of the cylinder, so that their cutting-edges are perpendicular to the line of draft and parallel with the axial line of the shaft. Or, sometimes, the cutting-edges may be slightly inclined, alternately, in such a manner that while one blade is arranged to cut more deeply at its inner end the succeeding blade will be shallower at this end and deeper at the outer end.

At each end of the blade an offset, *e*, is formed, which extends out to the end of the cylinder and serves to keep the knives in place when the hooks or tires Z Z are in position on the ends of the cylinder. Each cylinder is capable of lateral adjustment on the shaft H, and is provided with a key, *l*, by means of which its position may be fixed as desired.

In this manner the cylinders may easily be adjusted toward or from each other, according to the distance between the hills.

N represents an adjustable arm, which is arranged to pass through a slot, *h*, in the beam B and brace C, and is provided with perforations *v v* to receive the fastening-pin *u*.

It will be observed that this arm is slightly curved to the front, and that in addition to this its position is somewhat inclined forward and downward with reference to the beam, the object being to throw the roller *w*, which is pivoted to the lower end of the arm, forward between the chopping-cylinders.

This roller may serve to graduate the depth of the cut, and as a means whereby the machine may be turned at the end of the row, the handles being at the same time depressed.

R R represent inclined supporting arms, which are secured together at their upper ends, and respectively to the front and rear transverse beams at their lower ends, thus forming Λ-shaped supports for the rail T, which is designed to serve as a means for suspending bags of earth or weights.

These supports are placed at each end of the frame, and the rail is supported in the center by being passed through the handles.

Having thus fully described my invention,

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

1. The combination, with the adjustable chopping

cylinders K, of the shaft H, adjustable gauge N, and weight-rail T, substantially as and for the purposes shown and described.

2. The adjustable chopping-cylinders herein described, consisting of the wooden cylinders K, longitudinal radial-knives L, provided with the offsets *e* and the tires Z, substantially as specified.

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

JAS. H. GATLING.

Witnesses:
C. H. FOSTER,
ROBT. PARKER.