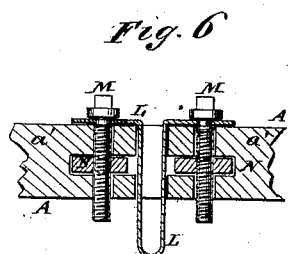
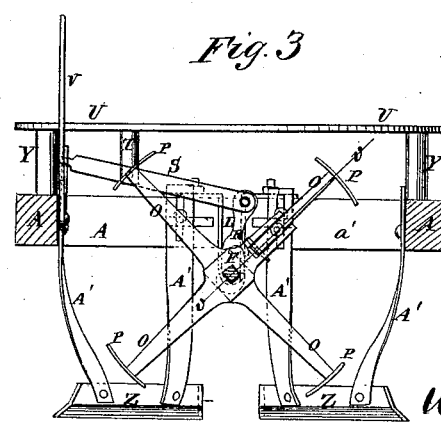
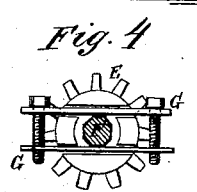
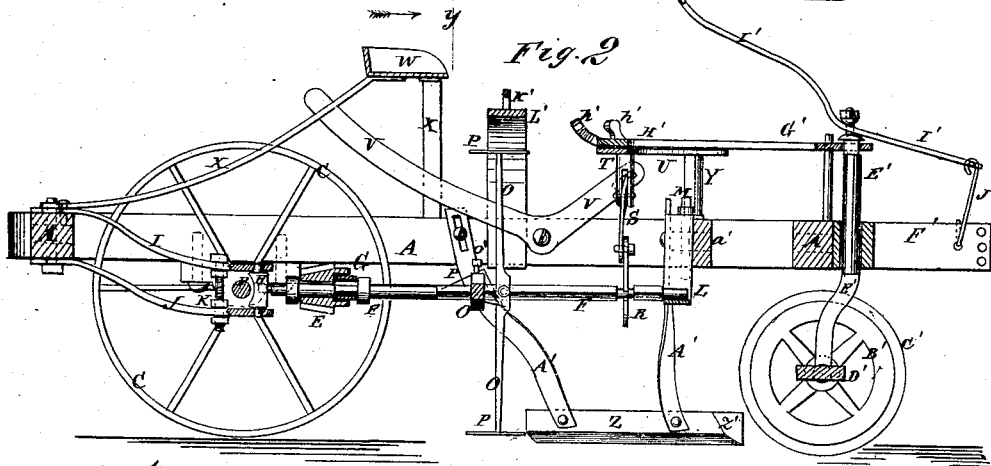
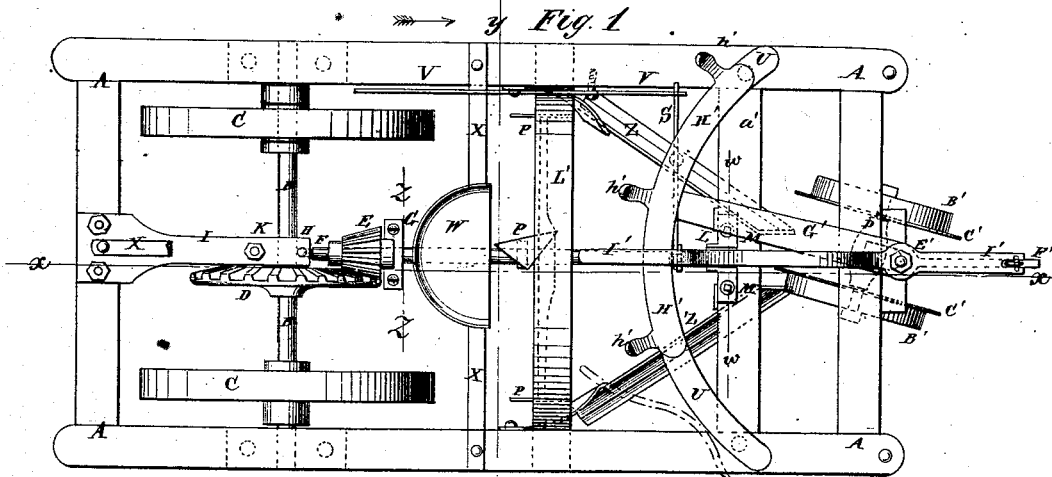


W. H. McCLAUGHERTY.
Cotton Scraper and Chopper

No. 160,111.

Patented Feb. 23, 1875.



WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM H. McCLAUGHERTY, OF SEGUIN, TEXAS.

IMPROVEMENT IN COTTON SCRAPERS AND CHOPPERS.

Specification forming part of Letters Patent No. **160,111**, dated February 23, 1875; application filed November 14, 1874.

To all whom it may concern:

Be it known that I, WILLIAM H. McCLAUGHERTY, of Seguin, in the county of Guadalupe and State of Texas, have invented a new and useful Improvement in Combined Cotton Scraper and Chopper, of which the following is a specification:

Figure 1 is a top view of my improved machine. Fig. 2 is a vertical longitudinal section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a vertical cross-section of the same, taken through the line *y y*, Fig. 1. Fig. 4 is a detail cross-section taken through the line *z z*, Fig. 1, showing the gear-wheel clutch. Fig. 5 is a detail section of the adjustable chopper-arm, taken through the line *v v*, Fig. 3. Fig. 6 is a detail section taken through the line *w w*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved machine for scraping cotton and chopping it to a stand, which shall be so constructed that it may be readily adjusted to leave the hills at any desired distance apart, and to scrape the ridge to any desired depth, and which shall be simple in construction, easily guided and controlled by the driver, and effective and reliable in operation.

The invention consists in the construction and combination of the various parts, as will be hereinafter fully described, and set forth in the claims.

A is the frame of the machine, to the under side of the rear part of the side bars of which are attached bearings, in which revolve the journals of the axle B. C are the wheels, one of which revolves loosely upon, and the other is rigidly attached to, the axle B, so that the said axle may be revolved by the advance of the machine. To the axle B, a little at one side of its center, is attached a large bevel-gear wheel, D, the teeth of which mesh into the teeth of the small bevel-gear wheel E placed upon the shaft F, and connected with it by the clamps G, which consists of two bars connected at their ends by bolts. The bars of the clamps G are placed in slots in the forward end of the wheel E, and their

middle parts rest upon the shaft F, which is made polygonal at that point.

By this construction, should one of the chopper-knives strike an obstruction, the bars of the clamp G give enough to allow them to pass an angle of the shaft F, by which time the knife will be carried forward far enough to pass the obstruction.

The rear end of the shaft F revolves in bearings in an upright block, H, which has a pivot formed upon each end. The upper pivot of the block H works in a hole in the forward end of the upper bar or plate I, and its lower pivot works in a slot or notch in the forward end of the lower bar or plate J. The rear ends of the bars or plates I J are attached to the rear cross-bar of the frame A, and the forward parts of the said bars or plates are connected with each other, and held at the proper distance apart by the nuts screwed upon the tie-rod K above and below each of the said bars or plates, as shown in Fig. 2.

This construction allows the forward end of the shaft F to be moved vertically to regulate the depth at which the chopping-knives work, and to be moved laterally for convenience in detaching the said shaft and its attachments when desired.

The forward end of the shaft F works in a U-bar, L, placed in a notch in the rear side of the cross-bar *a'*, of the frame A. The ends of the arms of the U-bar L are bent outward at right angles, and to them are swiveled the screws M, which pass down through the said bar *a'*, and through stationary nuts N, secured in said bar, so that by turning the screws M the bar L may be raised or lowered to adjust the choppers, as may be required.

The forward part of the shaft F is made square to fit into the square holes formed in the centers of the two cross-bars, O, which are placed upon the shaft F at right angles with each other, and are held in place by set-screws *o'*.

To the ends of the cross-bars O are attached triangular knives or cutters P, with an angle forward and slightly inclined toward the front end of the machine, so as to pass through the ground squarely as they revolve, and at the

same time are carried forward by the advance of the machine.

The size of the knives P and the construction of the gear-wheels D E, in connection with the circumference of the drive-wheels C, are such that when the cross-bars O are placed close together upon the shaft F the cuts of the knives P will join or touch each other, so as to be continuous, and all the plants in the row will be destroyed.

By adjusting the cross-bars O at any desired distance apart, say, two inches, for example, two hills of two inches width will be left at each revolution of the shaft F.

One of the arms of one of the cross-bars O is made in two parts, which overlap and are hinged to each other, and are provided with a swiveled screw, Q, as shown in Fig. 5, so that by turning the said screw the knife P attached to the movable part of said cross-bar may be moved back out of working position.

By this construction, when the cross-bars O are close together and the movable knife P turned back out of working position, one hill will be left at each revolution of the shaft F. These two adjustments enable the chopper to be set to chop the cotton to any desired stand. Upon the shaft F, near its forward end, is formed a neck or journal, which fits into a longitudinal slot in the bar R, in the side of which bar is formed a notch or opening to enable the said bar to be readily slipped upon and off the shaft F. The upper end of the slotted and notched or hooked bar R is pivoted to the end of a lever, S, which is pivoted to the lower end of a stud or hanger, T, attached to the curved guide-bar U. The other end of the bar or lever S is pivoted to the end of a bent lever, V, which is pivoted at its bend or angle to the frame A, and the free end of which projects back into such a position as to be readily reached and operated by the driver from his seat W.

This construction enables the driver to raise the choppers from the ground when, on account of the thinness of the plants or other cause, he does not wish to have the choppers operate and does not wish to raise the scrapers. The driver's seat W is supported by bars X, attached to the side and rear end bars of the frame A.

The curved guide bar or plate U is supported by short posts Y, attached to the frame A. Z are the scraper-plates, which are bent or curved longitudinally to give them the proper form to scrape the soil and weeds away from the plants. The extreme forward end of the scrapers Z are bent so as to form a vertical lip, z', as shown in Fig. 2, to enable the scrapers to work close to the plants without breaking away the soil in which they grow, or otherwise injuring them.

To the rear and forward ends of the scraper-plates Z are attached the lower ends of the

bars A', the upper parts of which are slotted to receive the bolts, by which they are secured to the frame A a', so that by loosening the said bolts the scrapers may be readily adjusted higher or lower, as may be desired. The forward end of the machine is supported by the small wheels B', which run upon the opposite sides of the row of plants being cultivated, and have ring-knives C' attached to the inner sides of their rims to cut and break any stalks or other rubbish that may be upon the row, to prevent the plants from being injured by said stalks when struck by the scrapers or choppers.

The wheels B' revolve upon journals formed upon the opposite ends of the short axle D', to the middle part of which is rigidly attached the lower end of the standard E', which is curved or inclined forward to cause the wheels B' to act as caster-wheels in guiding the machine. The upper part of the standard E' passes up through a guide or keeper attached to the center of the front cross-bar of the frame A, and which may be formed in the base of the draw-bar F'.

The upper end of the standard E' is squared off to fit into the square hole formed in the forward end of the lever G', to the rear end of which is attached a curved cross-bar, H', which rests and slides upon the curved guide-bar U, and has two or more projections, h', formed upon it for foot-rests, so that the lever H' G' may be operated to turn the wheels B', and thus guide the machines. To the upper end of the standard E' is swiveled a lever, I', the forward end of which is connected with the forward part of the draw-bar F' by a short rod or chain, J'. The rear end of the lever I' extends back into such a position that it can be conveniently reached and operated by the driver from his seat.

By this construction, by operating the lever I', the forward end of the frame A may be raised, raising the scrapers and choppers away from the ground, for convenience in passing obstructions, turning around, or passing from place to place.

The rear end of the lever I', when lowered, is secured in place, to hold the scrapers and choppers away from the ground, by a catch, K', attached to the center of the arched bar L', the ends of which are attached to the side bars of the frame A, and which is made wide, so as to serve as a guard to cover the choppers and keep them from coming in contact with the legs of the driver.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the clamp G with the slotted or grooved end of the small gear-wheel E, and with the polygonal section of the chopper-shaft F, substantially as herein shown and described.

2. The combination of the pivoted bearing-

block H, and the vertically-adjustable U-shaped bar or slotted bearing L, with the adjustable chopper-shaft F and frame A, as and for the purpose described.

3. The arm of one of the cross-bars O that carry the chopper-knives P, made in two parts, hinged to each other, and provided with an adjusting swiveled screw, Q, substantially as herein shown and described.

4. The combination of the two wheels B',

short axle D', pivoted and sliding bent standard E', and foot-lever G' H', with the forward part of the frame A, that carries the scrapers and choppers, substantially as herein shown and described.

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Witnesses:

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