(No Model.)

A. G. DESHAZO.

COTTON CHOPPING MACHINE.

No. 393,821. Patented Dec. 4, 1888.

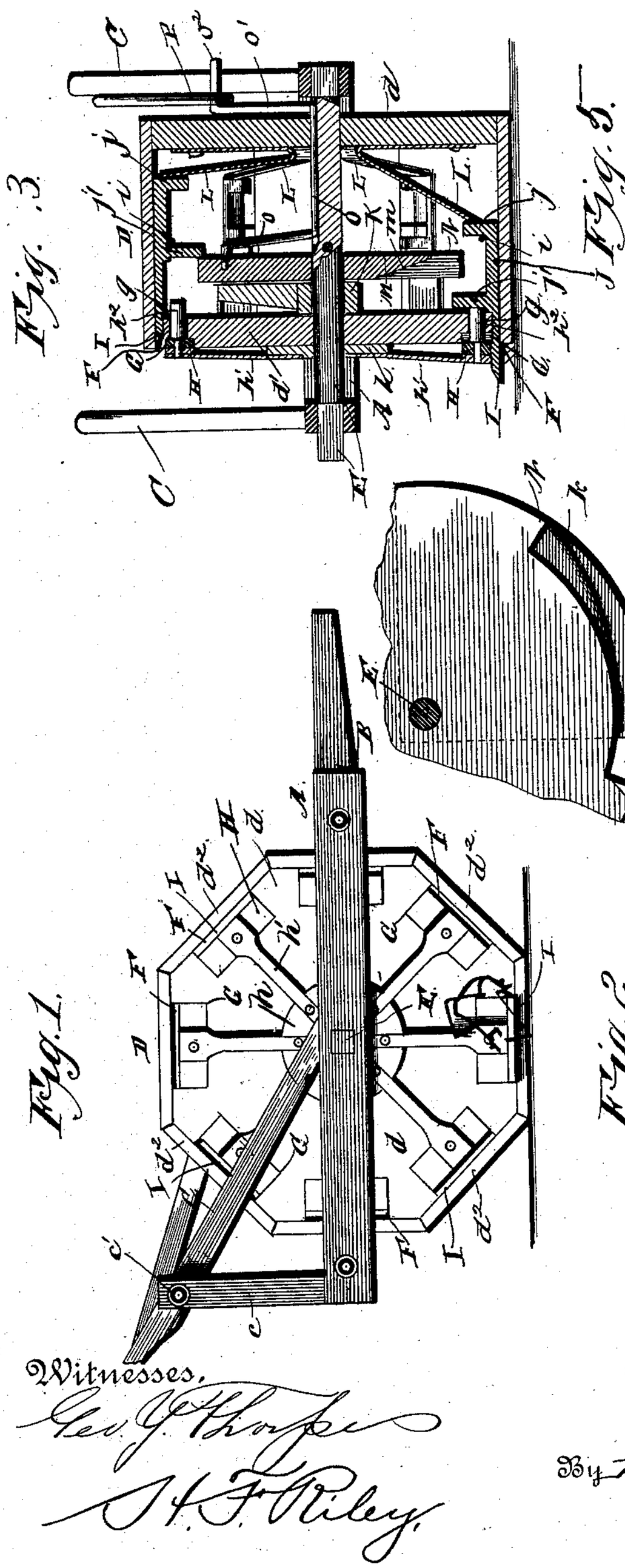

Fig. 3.

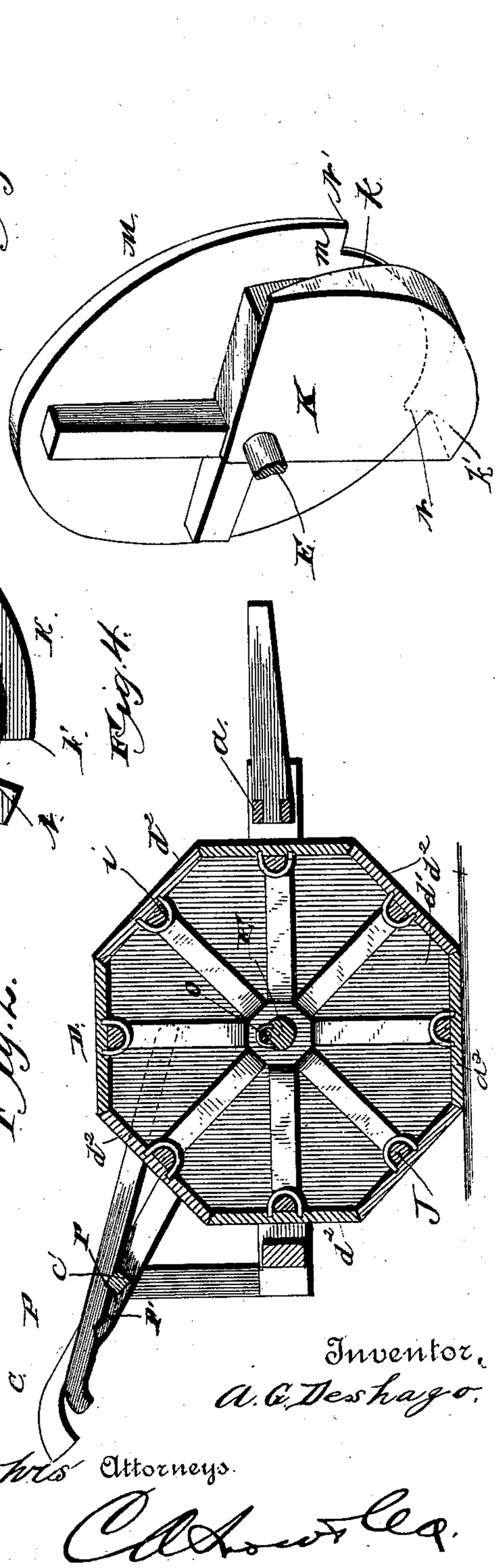

Fig. 5.

Fig. 4.

Fig. 1.

Fig. 2.

Witnesses.

Geo. J. Thornton

H. F. Riley.

Inventor.

A. G. Deshazo.

By his Attorneys.

Chas. Howell & Co.

UNITED STATES PATENT OFFICE.

ALBERT GALLATIN DESHAZO, OF CYPRESS RIDGE, ARKANSAS.

COTTON-CHOPPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 393,821, dated December 4, 1888.

Application filed July 26, 1888. Serial No. 281,070. (No model.)

To all whom it may concern:

Be it known that I, ALBERT GALLATIN DESHAZO, a citizen of the United States, residing at Cypress Ridge, in the county of Monroe and State of Arkansas, have invented new and useful Improvements in Cotton-Chopping Machines, of which the following is a specification.

The invention relates to improvements in cotton-chopping machines; and it consists in the construction and novel combination of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the appended claims.

Figure 1 of the drawings represents a side elevation of a machine embodying the invention. Fig. 2 represents a central longitudinal section thereof. Fig. 3 represents a central transverse section of the machine. Fig. 4 represents in detail the cam and disk in the relative positions in which they stand when the machine is adjusted to operate. Fig. 5 represents the same elements when in position to prevent the chopper-blades from operating.

Referring to the drawings by letter, A designates the rectangular main frame of the machine; B, the tongue standing centrally from the front transverse rail, *a*, thereof, and C C the handles having their front ends secured to the side rails of the main frame and braced and supported by the uprights *c c*, that rise from the rear ends of said side rails. The handles are connected by the transverse bar *c'* near their upper ends.

D is the roller or casing for the chopper-blades, composed of the end boards, *d d'*, preferably octagonal, but which may have any desired number of similar edges, and the boards d^2, connecting the opposite edges of said end boards.

E is the shaft or axle passing centrally through openings in the end boards and with its ends squared and inserted in suitable opposite openings in the side rails of the main frame. The casing D turns on the shaft as the machine progresses and has, within, the operative mechanism.

F F are openings between the edges *f* of the end board, *d*, and the transverse board d^2, through which openings pass the chopper-blades, hereinafter described, and G G are recesses in the outer surface of said end board, standing radially inward, and with the central perforations, *g*, for a purpose hereinafter explained.

H H are blocks resting in the recesses G and connected to the boss *h* of the end board, *d*, by the spring-bars *h'*. The said blocks have the pins h^2 standing inward from them through the corresponding openings or perforations *g* and projecting into the casing.

I I are the chopper-blades, rectangular in shape, projecting out of the openings F, seated centrally against the inner surface of the transverse boards d^2, (in which they are held by guide-staples *i*,) and provided with the shanks J, each of which has the inwardly-projecting arm *j* at its inner end and the similar arm, *j'*, at its junction with the corresponding blade, the latter arm having its outer or engaging surface rounded, as shown.

K is a cam secured upon the axle to the outer sides of the arms *j'* and having the inclined cam-face *k* on its inner side to engage against the arms *j'* and force the chopper-blades inward.

L L are U-shaped springs secured to the inner surface of the end board, *d'*, their bends being inward and their outer legs bolted or otherwise attached to said end board. The inner free legs of said springs bear against the arms *j* of the shanks of the chopper-blades and force the latter outward when released from the cam-face *k*, the blades escaping past the transverse shoulder *k'* at the end of the cam.

M is a disk on the shaft or axle, provided with a cam-surface, *m*, on its outer side parallel to and facing the face *k* of the cam K. The said disk is provided with the radial shoulders N N', respectively, the former of which stands a suitable distance from the shoulder *k'* of the cam in the direction opposite that of the rotation of the axle, so that the shanks of the chopper-blades can readily escape between the shoulders N and *k'* when the springs are permitted to force the chopper-blades outward. The inner surface of the disk is flat and the said disk can be turned slightly on the shaft or axle and the shoulders N and *k'* made to abut against each other by the rod O, which lies in a groove in the axle, in which it is retained by staples,

and has an arm, *o*, that projects radially from the shaft or axle and has its end secured to the disk, as shown in Fig. 3. The said rod O has a radial arm, *o'*, outside of the end board, *d*, which has its end outstanding, as at o^2, and engaged to the inner end of a handle, P, which is provided in its lower edge with notches *p p'*, that engage upon the transverse bar *c'*. When the notch *p* is so engaged, the shoulders N and *k'* will be disconnected, and when the notch *p'* is engaged on the bar the said notches abut and the shanks of the hopper-blades cannot be sprung outward therebetween. The disk is moved into the latter position when there are stumps or other obstructions on the ground. The shoulder *k'* is so placed that the chopper-blades will be sprung out when the corresponding boards, d^2, rest on the ground. When the chopper-blade is forced outward by the corresponding spring, its arm *j'* strikes against the corresponding arm, h^2, and drives the block H outward, throwing the dirt and grass out of the way between the furrows.

My device is intended to chop the cotton but once and leave a stand.

In practice a scraper is first drawn along the ground between the rows of plants, after which the chopper is drawn along the scraper-furrow at the left-hand side of the row, the right-hand side of the chopper being held close to the plants. As the drum or casing is drawn along every time a blade is brought to its lowest position it is forced outward by the spring in rear of the same, thereby chopping out the plants, so as to leave them growing in hills at regular intervals apart.

It will be readily understood, of course, that the size of the chopping-blades is varied accordingly as it is desired to have the hills at a greater or less distance apart. It will also be understood that the scraper forms a flat smooth furrow, so that when the chopper is drawn therealong it will run regularly and evenly.

Having described my invention, I claim—

1. In a cotton-chopper, the combination of the chopper-blades having shanks lying against and moving on the inner surface of the sides of the casing, the springs secured to one end of the casing and forcing said shanks and blades outward, and the cam attached to the axle and driving the blades inward against the action of said springs, substantially as specified.

2. The combination of the casing composed of angular end boards, preferably octagonal in contour, and side boards connecting the opposite edges of said end boards, the chopper-blades with their edges projecting through openings adjoining the edges of the adjacent end board and moving on the inner surfaces of the corresponding side or transverse boards, which blades are provided with shanks having the inward-standing arms *j' j*, the U-shaped springs bearing in the arms *j*, and the cam K, having the cam-face *k* and transverse shoulder *k'*, substantially as specified.

3. The combination of the casing, the chopper-knives having the arms *j j'*, the U-shaped springs, the cam having the cam-face *k* and shoulder *k'*, the disk M, having the shoulders N N', the rod O, having the arms *o o'*, and the handle P, pivoted or connected to the end of the arm *o'* and provided in its under edge with the notches *p p'* to engage the transverse bar *c'*, substantially as specified.

4. The combination of the chopper-blades having the shanks J, provided with the projecting arms *j j'* and passing through openings F, the blocks H, lying in the recesses G and provided with the pins h^2, standing through the openings *g* in the paths of the arms *j'*, and the spring arms or bars *h*, connecting said blocks to the bars of the end board, *d*, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses:

ALBERT GALLATIN DESHAZO.

Witnesses:

CHAS. W. BRICKELL,

MONROE A. DUNLAP.