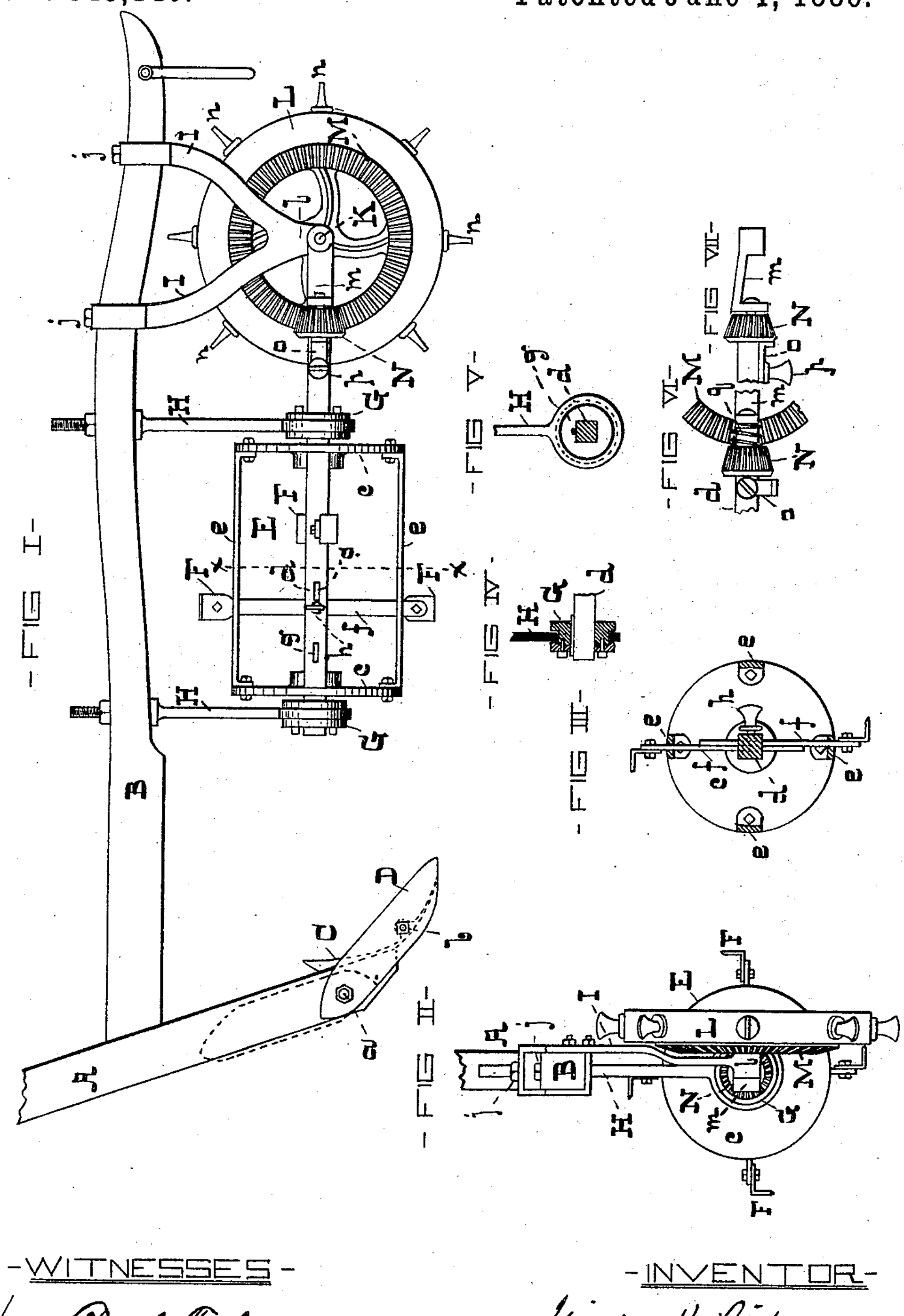
(No Model.)

W. H. RICHARDSON.

COTTON CHOPPER.

No. 343,140. Patented June 1, 1886.



-WITNESSES-

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UNITED STATES PATENT OFFICE.

WILLIAM H. RICHARDSON, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO JOHN M. McCLINTOCK, OF SAME PLACE.

COTTON-CHOPPER.

SPECIFICATION forming part of Letters Patent No. 343,140, dated June 1, 1886.

Application filed September 22, 1885. Serial No. 177,804. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. RICHARDSON, of the city of Baltimore, and State of Maryland, have invented certain Improvements in Cotton-Choppers, of which the following is a specification.

In the description of the said invention which follows reference is made to the accompanying drawings, forming a part hereof, in which—

Figure I is an exterior side view of the invention; Fig. II, an end view of the same; and Fig. III, a section of Fig. I, taken on the dotted line *x x*. Figs. IV, V, VI, and VII are details of the invention, as hereinafter described.

A is the standard, a portion only of which is shown in the drawings.

B is the plow-beam, and C the plowshare, fastened to the standard A.

D is the guard-plate, pivoted to the standard at *a*, and attached to the plowshare at *b*. By removing the bolt at *b* the plate D may be turned up and rendered inoperative, as shown in dotted lines, Fig. I.

E is a skeleton cylindrical drum, formed of the heads *c*, which are fastened to the square shaft *d*, and the bars *e*, bolted to the heads.

F F are hoes, bolted to shanks *f*, which pass through slots *g* in the bars *e* and the square shaft *d*. The shanks *f* of the opposite hoes lap each other, and are held firmly in position by means of set-screws *h*. (See particularly Fig. III.) The bars *e* and the square shaft *d* have a number of unoccupied slots, *g*, in order that the positions of the several hoes may be changed at pleasure or others added. The square shaft *d* is provided with circular grooved collars G, keyed thereto, as shown particularly in Figs. IV and V, and these collars serve as bearings for the shaft and can be made as large as required.

H are hangers for the shaft *d*, and they consist of bars with eyes or circular straps at their lower ends, which fit over the grooved parts of the collars G. These collars are made in two parts or sections bolted together, as shown in Fig. IV, in order to admit of the eyes or straps of the hangers H being used without a break. The hangers pass through the beam B, and are secured to the beam near to its end.

I is a bracket, secured to the beam B near to its end by means of set-screws *j*. In order that the bracket I can be readily applied to the beam B, it is made with eyes *k*, through which the beam is passed. (See Figs. I and II.) The bracket I terminates at its lower end in a lug, *l*, from which extends a supporting-piece, *m*, for the end of the shaft *d*.

K is a stud, fastened in the lug *l*, on which the wheel L turns freely. This wheel is provided with spuds *n* at its periphery, adapted to enter the ground as the machine is propelled, and it has a beveled gear, M, secured to its inner face in any suitable manner.

N is a beveled pinion, adapted to slide longitudinally of the shaft *d*, on which it rests. When the pinion N is moved to the position shown in Fig. I, it is in gear with the beveled wheel M, and it may be secured in such position by means of the button *o*, which hangs on the thumb-screw *p*. If desired, a spiral spring, *q*, (shown in Fig. VI,) may be used between the pinion and the supporting-piece *m*, in order that when the button is thrown down the pinion will be moved back and out of gear with the beveled wheel M. When the plow is forced forward, the revolution of the wheel L effects, through the medium of the gearing described, the rotation of the hoes, and should the machine be drawn parallel with and near to a row of cotton-plants the hoes chop out spaces and leave hills. The size of the hills, or rather the width of portion of the row removed by the hoes, can be regulated by the number and position of the hoes, which can be varied.

It will be seen that the hoe mechanism is removable, and may be applied to any plow by merely boring two holes in the beam for the hangers H. Should the holes or eyes in the bracket I be too large, wooden liners may be used to fill the extra space between the metal and the plow-beam. It will be further understood that the depth of cut of the hoes may be changed by moving the shanks in or out, as required.

I claim as my invention—

1. In combination with the beam of a plow, the removable bracket I, stud K, wheel L, adapted to turn loosely on the said stud, beveled gear M, fastened to the face of the wheel

L, shaft *d*, supported by hangers H H from the beam B, beveled pinion N on shaft *d* in engagement with the beveled gear M, drum E, formed of the heads *c* and bars *e*, extensible hoe-shanks *f*, which pass through the shaft *d* and the bars *e*, and means to secure them in place, and the hoes F, attached to the shanks *f*, substantially as specified.

2. In combination with the plow-beam B, the shaft *d*, carrying the skeleton drum E, with its hoes F, the grooved collars G, and hangers H, substantially as specified.

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