

S. A. De FORCE & W. V. McCONNELL.
Cotton-Scraper, Chopper, and Dirter.

No. 222,255.

Patented Dec. 2, 1879.

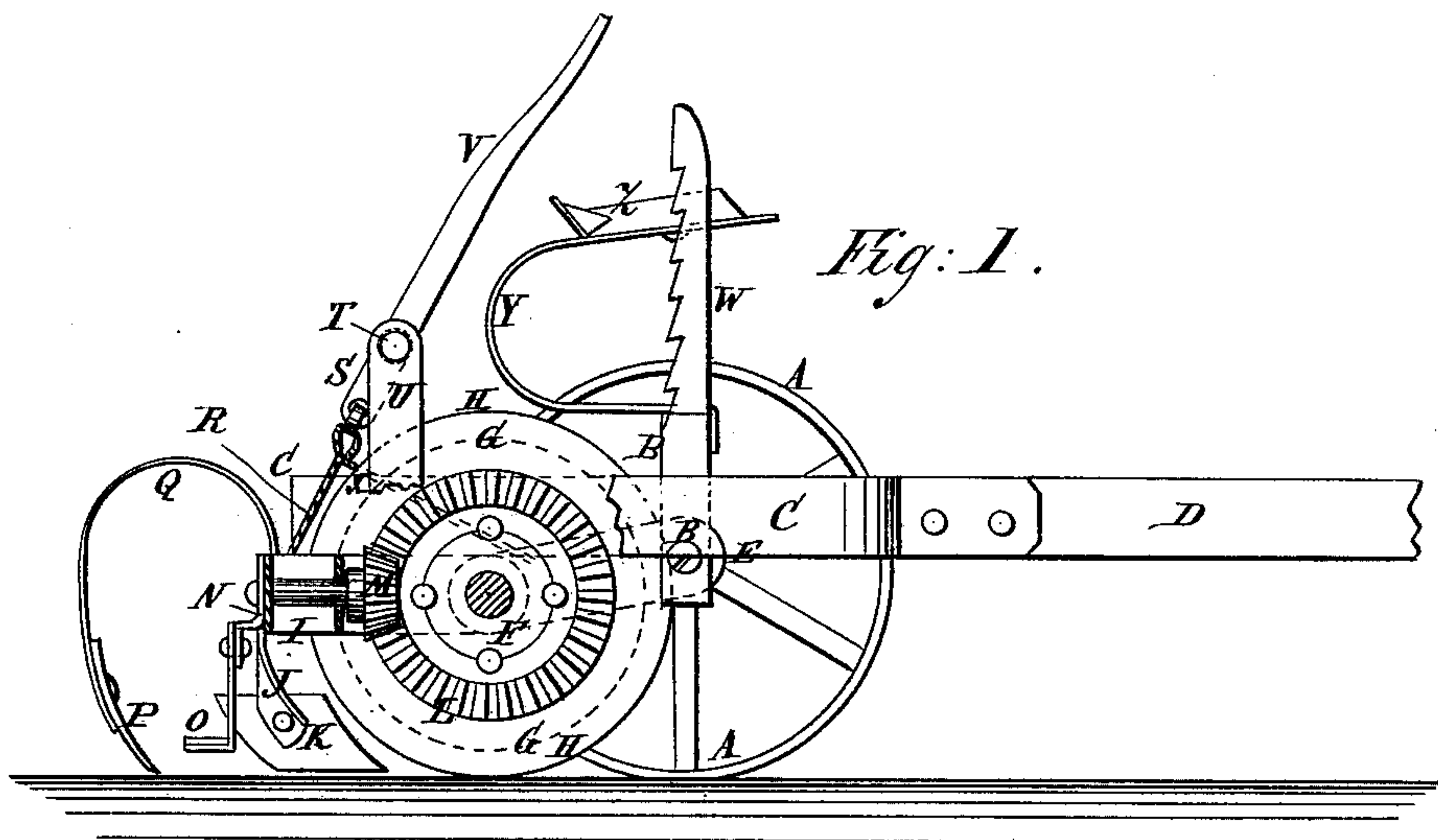


Fig. 2.

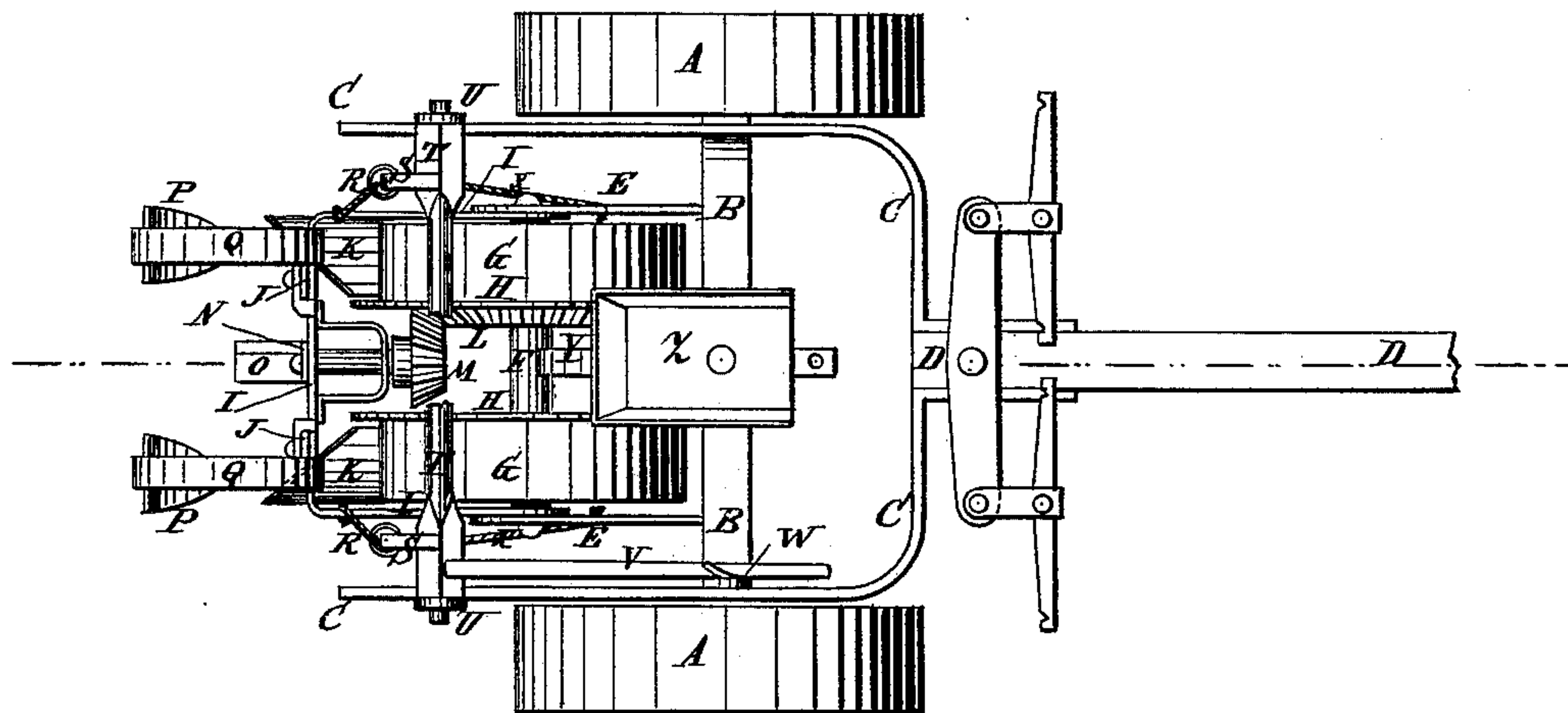
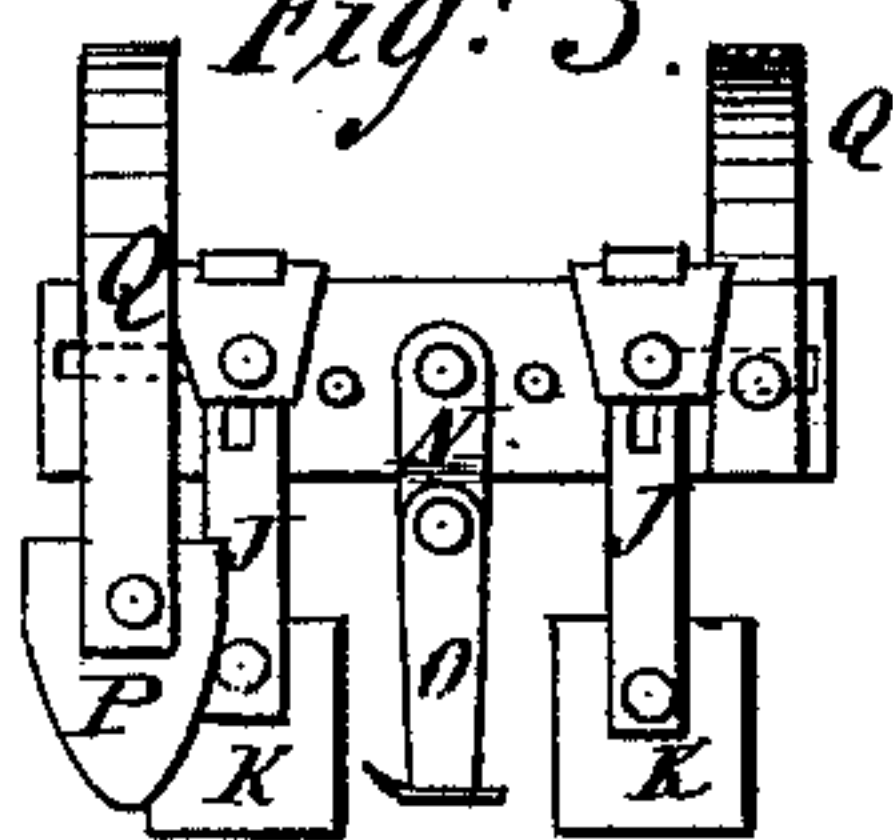


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

SAMUEL A. DE FORCE AND WILLIAM V. McCONNELL, OF CROCKETT, TEXAS.

IMPROVEMENT IN COTTON SCRAPERS, CHOPPERS, AND DIRTERS.

Specification forming part of Letters Patent No. **222,255**, dated December 2, 1879; application filed September 22, 1879.

To all whom it may concern:

Be it known that we, SAMUEL A. DE FORCE and WILLIAM V. McCONNELL, of Crockett, in the county of Houston and State of Texas, have invented a new and useful Improvement in Cotton Scrapers, Choppers, and Dirters, of which the following is a specification.

Figure 1 is a side elevation, partly in section, of our improved machine. Fig. 2 is a plan view of our improvement, partly in section. Fig. 3 is a rear elevation, showing the scrapers, the chopper, and one of the dirters.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine for cultivating cotton which shall be so constructed as to bar off, scrape, chop, and dirt the cotton upon both sides of a row at one passage.

A are the wheels of a two-wheeled vehicle. B is their axle, which is bent up in the form of a bow, so that it will stand above the plants.

To the outer sides of the upright parts of the axle B are pivoted two bars, C, the forward ends of which are bent inward and forward, and are attached to the opposite sides of the rear end of the tongue D.

To the rear parts of the bars C are attached two uprights, U, to receive a shaft, T, provided with arms S, and a lever, V, for raising and lowering the operating parts of the machine.

To the inner sides of the upright parts of the axle B are pivoted the forward ends of two arms, E, with the rear ends of which are connected the ends of a shaft, F.

Upon the shaft F are placed two wheels, G, at such a distance apart as to run upon the opposite sides of the row of plants, which wheels G should be secured in place adjustably by collars or other convenient means, so that they may be arranged wider apart or closer together, as may be required.

To the inner sides of the wheels G are attached circular cutter-plates H, of steel, the edges of which project so as to enter the ground to a little greater depth than the scrapers K, so that the said scrapers K will not pull up or loosen any of the plants.

To the rear ends of the bars E, or to the ends

of the shaft F, are pivoted the ends of a bar, I, which is bent twice at right angles, so that its middle part may be parallel with the shaft F and axle B.

To the bar I are secured by bolts the standards J, to the lower ends of which are secured the scrapers K.

The scraper-standards J are slotted longitudinally to receive the fastening-bolts, so that they may be raised and lowered to adjust the scrapers to work at any desired depth in the ground. The bar I should be slotted longitudinally to receive the bolts that fasten the standards J of the scrapers K, so that the said scrapers may be adjusted wider apart or closer together to correspond with the adjustment of the cutter-wheels G H, which slots are not shown in the drawings.

To the inner side of one of the cutter-wheels G H is attached a beveled-gear wheel, L, into the teeth of which mesh the teeth of a small beveled-gear wheel, M, attached to the forward end of the shaft of the crank N. The shaft of the crank N revolves in bearings in the center of the bar I and in a bracket or brace attached to the said bar. To the crank N is secured by a bolt the shank of the chopper-plate or hoe O, so that the said chopping-plate O may be operated by the advance of the machine. The shank of the chopper O should be slotted to receive the fastening-bolt, so that the said chopper may be adjusted to work at any desired depth in the ground. The small gear-wheel M should be movable upon its shaft, so that it may be thrown into and out of gear, as required.

P are the dirting-plows, which are attached to the rear ends of the standards Q. The standards Q are bent into U form, and their forward ends are secured to the bar I by bolts, which pass through them and through longitudinal slots in the said bar I, so that the standards Q may be adjusted to bring the dirting-plows P closer together or farther apart, as circumstances may require. With this construction, when the machine is drawn forward, the plates H will separate the soil to be operated upon from that in which the plants stand, the scrapers K will bar off the plants, the hoe O will chop them to a stand, and the

plows P will dirt them, so that the three operations will be performed by passing along the row once.

To the bar I, at or near its angles, are attached the lower ends of two chains, R, the upper ends of which are attached to the ends of two arms, S, rigidly attached to a shaft, T. The shaft T works in bearings in the upper ends of two uprights, U, the lower ends of which are attached to the bars C. To the rock-shaft T is rigidly attached the lower end of the lever V, which projects into such a position that it may be conveniently reached and operated by the driver from his seat to raise and lower the bar I and its attachments, for convenience in passing obstructions, turning around, and passing from place to place. The lever V moves up and down along the side of an upright bar, W, attached to the axle B, and which is provided with notches or teeth to receive the lever V and hold it in any position into which it may be adjusted.

To the chains R, or to the arms S, are attached the upper ends of two chains, X, the lower ends of which are attached to the bars E at a little distance from their rear ends, so that the bars E and the wheels G H may be raised from the ground at the same time with the scrapers, chopper, and plows.

Y is the seat-standard, which is made in U

shape, and the end of its lower arm is secured to the axle B. The upper arm of the U-shaped standard Y is made the longer, and has a number of holes formed through it to receive the bolt by which the driver's seat Z is secured to it, to allow the seat Z to be moved forward and back, to adjust it so that the driver's weight may balance the machine.

When the machine is to be used in sticky land it should be provided with a scraper to remove the adhering soil from the hoe.

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

1. In a cotton-chopper, the combination, with the frame and axle, of the pivoted arms E, shaft F, wheels G, having flanged cutters H, chains R, rock-shaft S T, and lever V, as shown and described.

2. The axle B, pivoted arms E, and cutting-wheels G, in combination with the bent bar or bail I, pivoted to said arms and carrying scrapers K, chopper O, and plows P, as shown and described.

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Witnesses:

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