

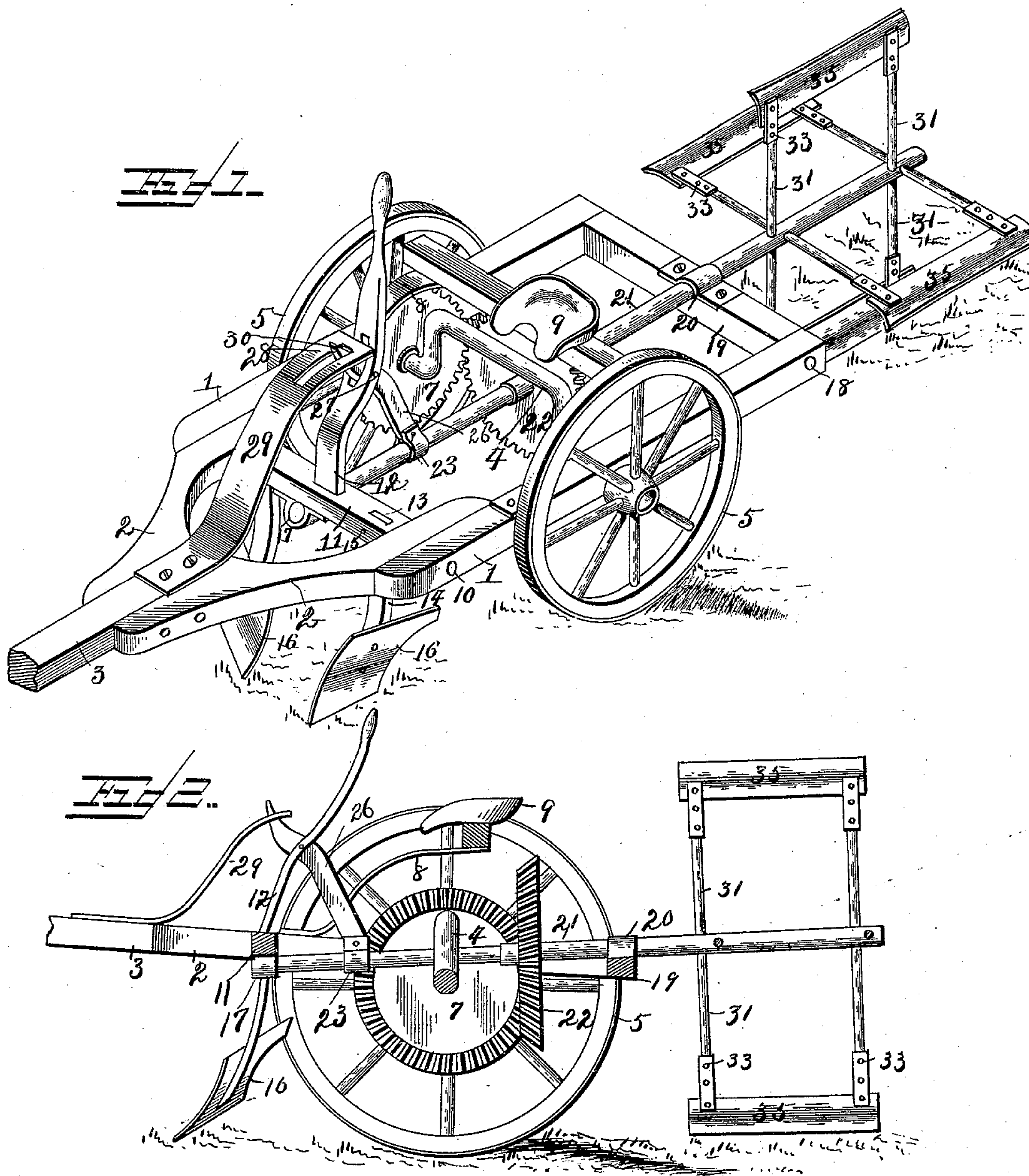
(No Model.)

2 Sheets—Sheet 1.

A. WHITLEY.  
COTTON CHOPPER.

No. 488,592.

Patented Dec. 27, 1892.



Witnesses

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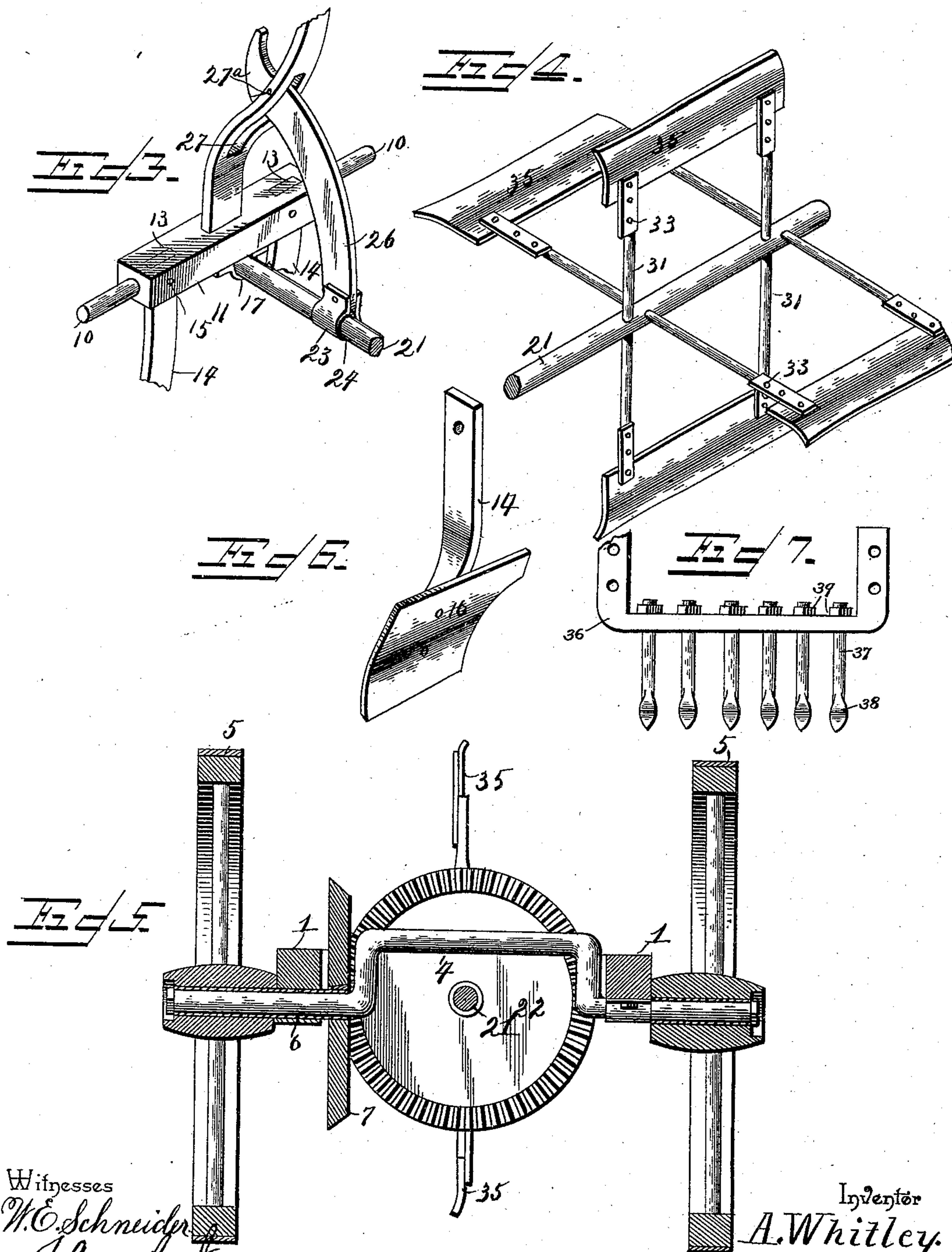
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# UNITED STATES PATENT OFFICE.

ALBERT WHITLEY, OF WOODVILLE, MISSISSIPPI, ASSIGNOR OF ONE-HALF TO  
FRANK S. ROBINSON AND RICHARD O. HORNSBY, OF SAME PLACE.

## COTTON-CHOPPER.

SPECIFICATION forming part of Letters Patent No. 488,592, dated December 27, 1892.

Application filed August 2, 1892. Serial No. 441,959. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT WHITLEY, a citizen of the United States, residing at Woodville, in the county of Wilkinson and State of Mississippi, have invented a new and useful Cotton-Chopper, of which the following is a specification.

My invention relates to improvements in cotton choppers; and the objects in view are to provide a machine combining simplicity of construction, cheapness, and effectiveness in operation, and designed to chop out or thin rows of cotton, thereby bringing them to proper stands; and to construct the machine so that it can be managed by a single operator, who, by one movement and manipulation of one lever, may throw the cotton choppers and scrapers out of operative position or down into operative position, and at the same time disengage or engage the driving mechanism with the chopping mechanism.

With the above objects in view the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings: Figure 1 is a perspective view of a cotton chopper embodying my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a detail perspective of the operating-lever, the scraper-plow-supporting shaft, and the front end of the chopper-shaft, together with their connections. Fig. 4 is a detail perspective of the rear end of the chopping-shaft. Fig. 5 is a transverse section of the machine. Fig. 6 is a perspective of one of the scrapers. Fig. 7 is a detail hereinafter referred to.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing my invention I employ a substantially rectangular frame, which, as shown in the drawings, preferably consists of a pair of opposite longitudinal frame-bars 1, which are connected at their front ends by and embrace a pair of curved hounds 2, which are disposed forwardly and embrace the opposite sides of the draft tongue or pole 3, to which they are bolted. The longitudinal frame-bars 1 have journals upon their under sides which receive, and one of which is rigidly secured to, the transverse axle 4, whose middle or in-

intermediate portion is upwardly cranked or offset, and whose extremities are reduced to form the usual bearing-spindles for the accommodation of the ground-wheels 5. One of the bearings located upon one of the frame-bars 1 is larger than the axle and loosely receives a hollow shaft 6, which is rigid on the hub of the ground-wheel 5 at that side of the machine, extends through the bearing of the frame-bar and is secured rigidly to and supports the beveled gear 7. This hollow shaft or sleeve, as it might be called, is loosely mounted upon the axle, and loosely revolves within the bearing. Inasmuch as this shaft 6 is hollow and rigid with the wheel, it will be seen that it revolves about the axle and carries with it the master-gear just mentioned. A pair of standards 8 rise upward and extend rearward from the frame-bars 1 to a point above the axle, where they support and have secured thereto a seat 9 for the accommodation of the driver, who is the operator of the machine. The hounds and bars 1, near the front end of the frame, have transversely opposite bearings 10 formed in them, and they accommodate the reduced extremities of a transverse rock-shaft 11, from the center of which rises a compoundly-curved lever 12, whose lower end is rigid with the rock-shaft. Mortises 13 are formed in the rock-shaft at each side of the lever, and in the mortises are tenoned the upper ends of a pair of transversely-opposite pendent standards 14, secured in position by bolts 15. To the lower ends of the standards inclined scraper-shovels 16 are attached, the front ends of the same converging and, by reason of their inclination, they are capable of scraping the opposite convexed sides of a cotton row, and ridding the same of weeds and other foreign growth. Beneath the lever the rock-shaft 11 has a bearing-socket 17, the purpose of which will presently appear. Bearings 18 are formed transversely opposite each other in the frame-bars 1, near their rear ends, and a rock-shaft 19 has its extremities reduced and fitted loosely within these bearings. The upper side and center of the rock-shaft has a bearing 20, which is in longitudinal alignment with the bearing-socket before mentioned as being formed in the rock-shaft 11. In this bearing 20, and having its end



entered removably in the bearing 17 of the rock-shaft 11, is the longitudinally-disposed rotary chopping-shaft 21, whose rear end projects beyond the aforesaid bearing 20. A beveled gear 22 is mounted fixedly on the chopping-shaft and is designed to receive motion from the master-gear and transmit the same to the chopping-shaft. A clip 23 loosely receives the chopping-shaft near its front end and is let into a groove 24, formed in the chopping-shaft. The clip 23 is pivotally connected at its terminals to and embraces the opposite sides of the lower end of a link 26, whose upper end passes through a slot 27, formed in the lever 12, at its curved portion, to which it is pivoted by a bolt 27<sup>a</sup>, and beyond which it extends in the shape of a cam-tooth 28. A curved standard 29 rises from the rear end of the tongue; and near its rear end, which is immediately above the tooth of the link, it is provided with a slot 30, which receives the tooth.

The chopping-shaft, in rear of the framework, is provided with a series of pairs of radial arms 31, that extend through openings formed in the shaft. To each pair of arms there is connected, by means of bolts 33, pairs of straps 34, which, having a series of perforations, may be adjusted upon the arms. Each pair of straps supports and is connected to the upper corners of a longitudinally-disposed hoe-blade 35, which blades may be adjusted with relation to the chopping-wheel by arranging the bolts in the various openings of the straps.

This completes the construction of the machine, whose operation I will now proceed to describe. It will be readily observed how the motion is conveyed from the ground-wheel to the chopping-mechanism and further description of this need not be given. In order, however, to place the machine in operative position the lever 12 is thrown forward, and through the medium of the link draws the shaft that carries the choppers forward until its front end engages with the bearing-socket 17, and the gear is in engagement with the master-gear. Such movement of the lever, also oscillates the front rock-shaft, lowering the scrapers to operative position. In this manner the machine traveling through the field of cotton and straddling a row, brings the cotton to a stand and scrapes or cultivates the sides of the hill or row. By bringing the lever 12 to the rear, the cam-tooth of the link being prevented from rising by the rearwardly-curved standard that engages the upper end of the link, the lower end of the link is thrown to the rear and withdrawn from the socket of the rock-shaft, the link serving to depress said lower end of the rock-shaft and elevate the rear end of the rock-shaft with its chopping-mechanism, and at the same time reciprocate said chopping-shaft so as to withdraw its front end from the socket-bearing and its gear 22 from the master-gear. Thus the machine may be transported to and

from the field of operation. In order that the choppers may be given a shearing cut and thus increase their effectiveness, said choppers are, at their front ends, given a slight bend so as to strike the row of cotton more nearly at a right angle to the row.

In Fig. 7 of the drawings I have illustrated a form of hoe that may be employed in connection with the machine for the purpose of thinning small plants, such as buckwheat, sorghum, rice, flax, hemp, indigo, &c. This hoe consists of a U-shaped hoe-bar 36, the ends of which are perforated and adapted to be removably bolted to the arms 31. The hoe-bar, at intervals, is provided with threaded openings, and in the same are threaded the shanks 37 of a series of teeth 38. The upper ends of the shanks extend beyond the bar and are there provided with nuts 39 by which they are held in position.

Having described my invention, what I claim is:

1. In a machine of the class described, the combination with the rectangular frame having bearings in opposite sides thereof and at its rear end, of an axle mounted in the bearings, a rock-shaft journaled in the frame in front of the axle, a lever for rocking the rock-shaft, scraper-carrying standards depending from the rock-shaft, ground wheels for the axle, the chopping shaft mounted in the rear bearing and longitudinally-disposed, a gear wheel thereon, a gear-wheel on the axle and a link on the chopping-shaft loosely connected with the lever of the rock-shaft and connected to the chopping shaft in rear thereof, substantially as specified.

2. In a machine of the class described, the combination with the rectangular frame having the bearings in its opposite side-bars at the front, center, and rear ends, of an axle mounted in the center bearings, front and rear rock-shafts mounted in the front and rear bearings, a lever extending upwardly from the front rock-shaft, scraper-carrying shovels depending from said shaft, a handle-lever rising from the rock-shaft, a standard in front of the same provided with a slot, a bearing-socket in the front rock-shaft, a bearing on the rear rock-shaft, a chopping-shaft mounted for reciprocation and rotation in the latter bearing, a gear-wheel on the same, a master-gear on the axle for operating said gear-wheel, and a link loosely connected at its lower end to the front end of the chopping-shaft, near its upper end passed through the slot in the hand-lever wherein it is pivoted, and having its front end, beyond the handle-lever, engaging with the slot in the standard, substantially as specified.

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

ALBERT WHITLEY.

Witnesses:

JOHN RAWLE,  
JAMES O'CONNOR, Jr.