No. 878,373. PATENTED FEB. 4, 1908.

G. B. GAUNTT.

COTTON CHOPPER.

APPLICATION FILED AUG. 31, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

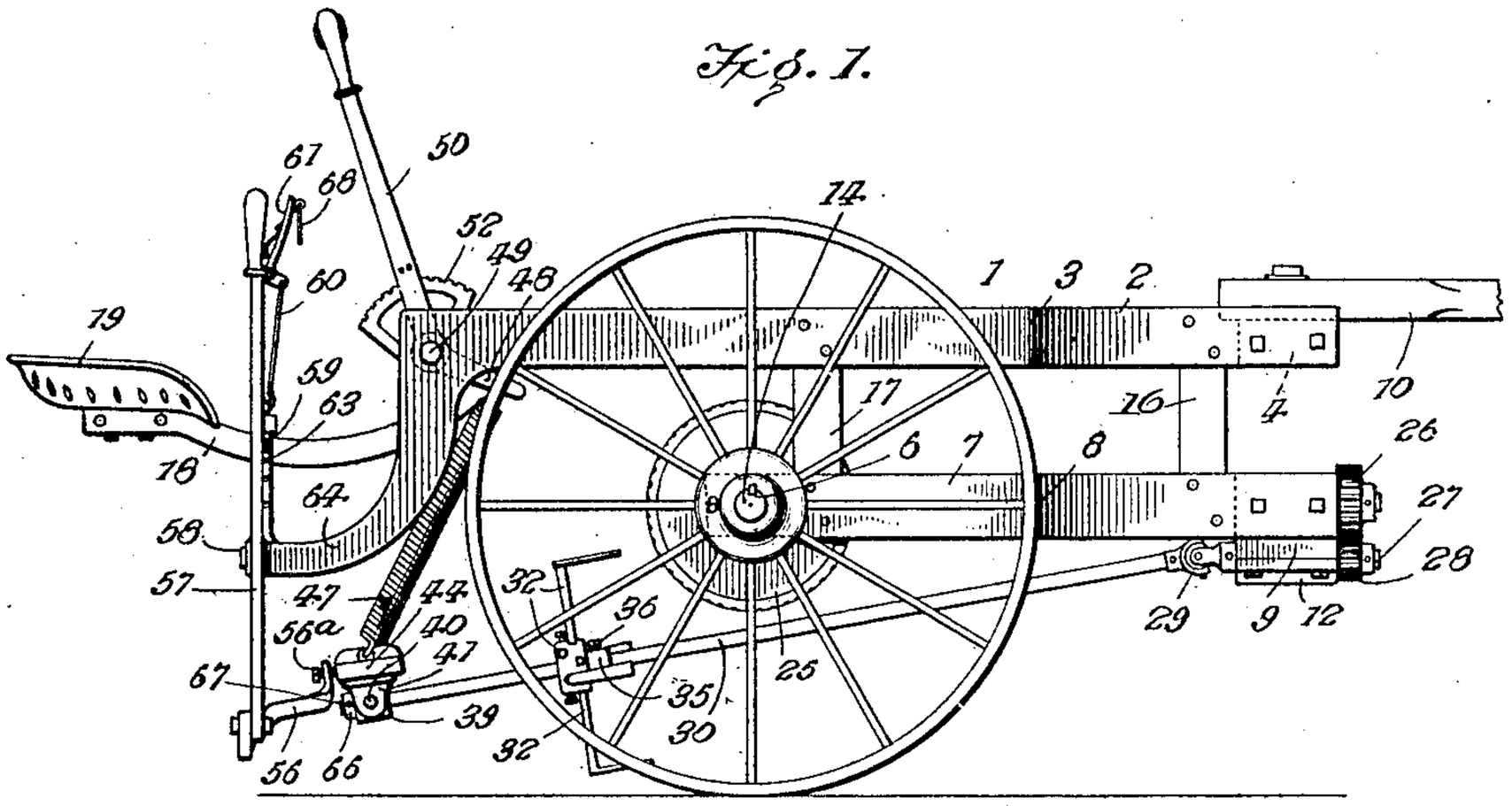


Fig. 2.

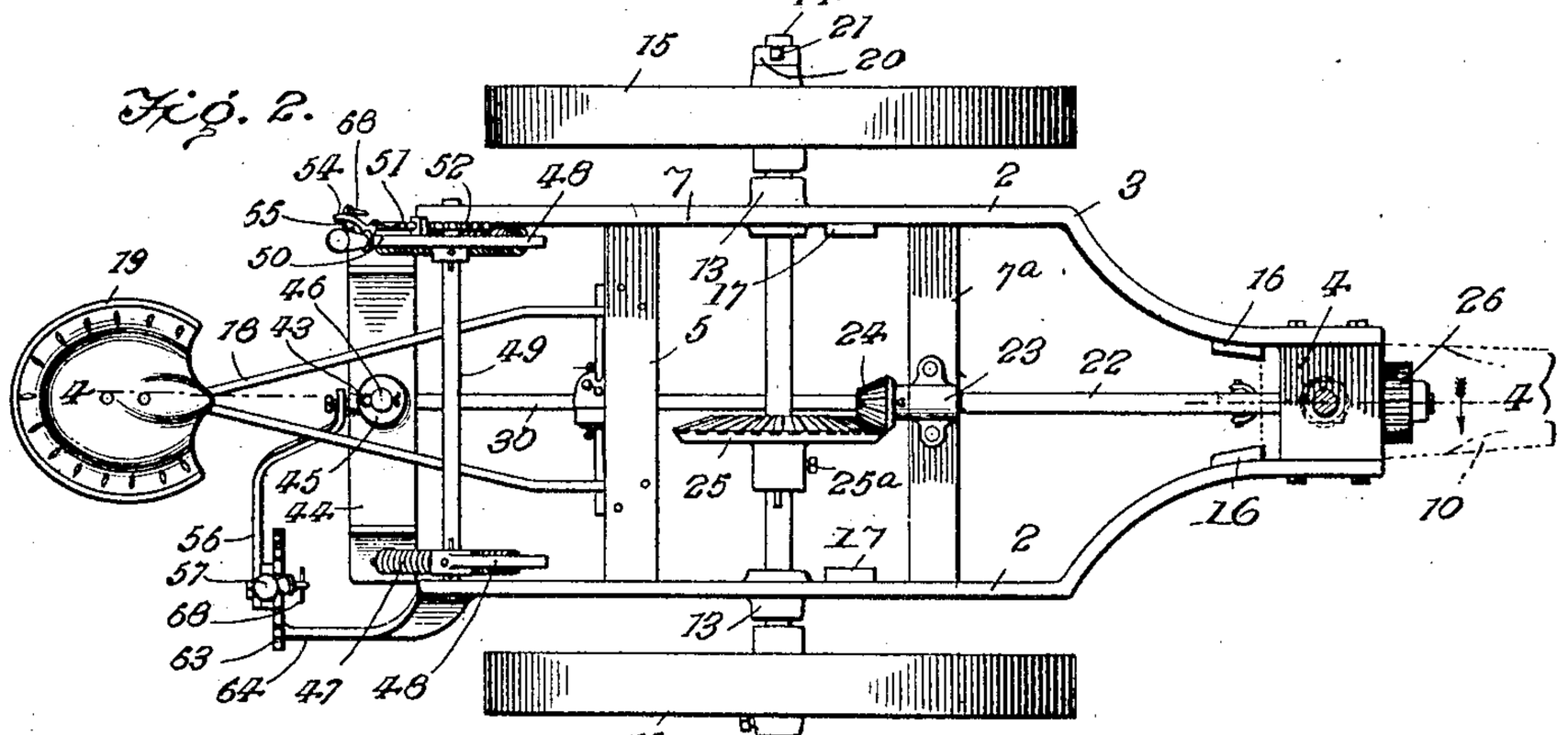
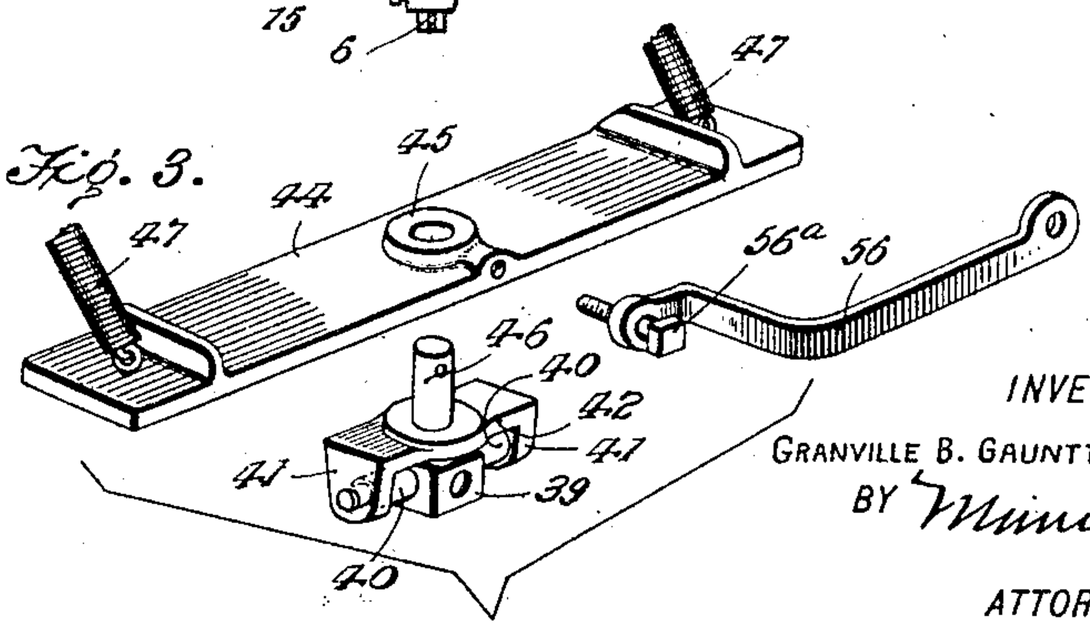


Fig. 3.



WITNESSES

L. H. Schmidt.

C. E. Trainor

INVENTOR

GRANVILLE B. GAUNTT,

BY Munn & Co.

ATTORNEYS.

No. 878,373. PATENTED FEB. 4, 1908.

G. B. GAUNTT.

COTTON CHOPPER.

APPLICATION FILED AUG. 31, 1907.

2 SHEETS—SHEET 2.

Fig. 4.

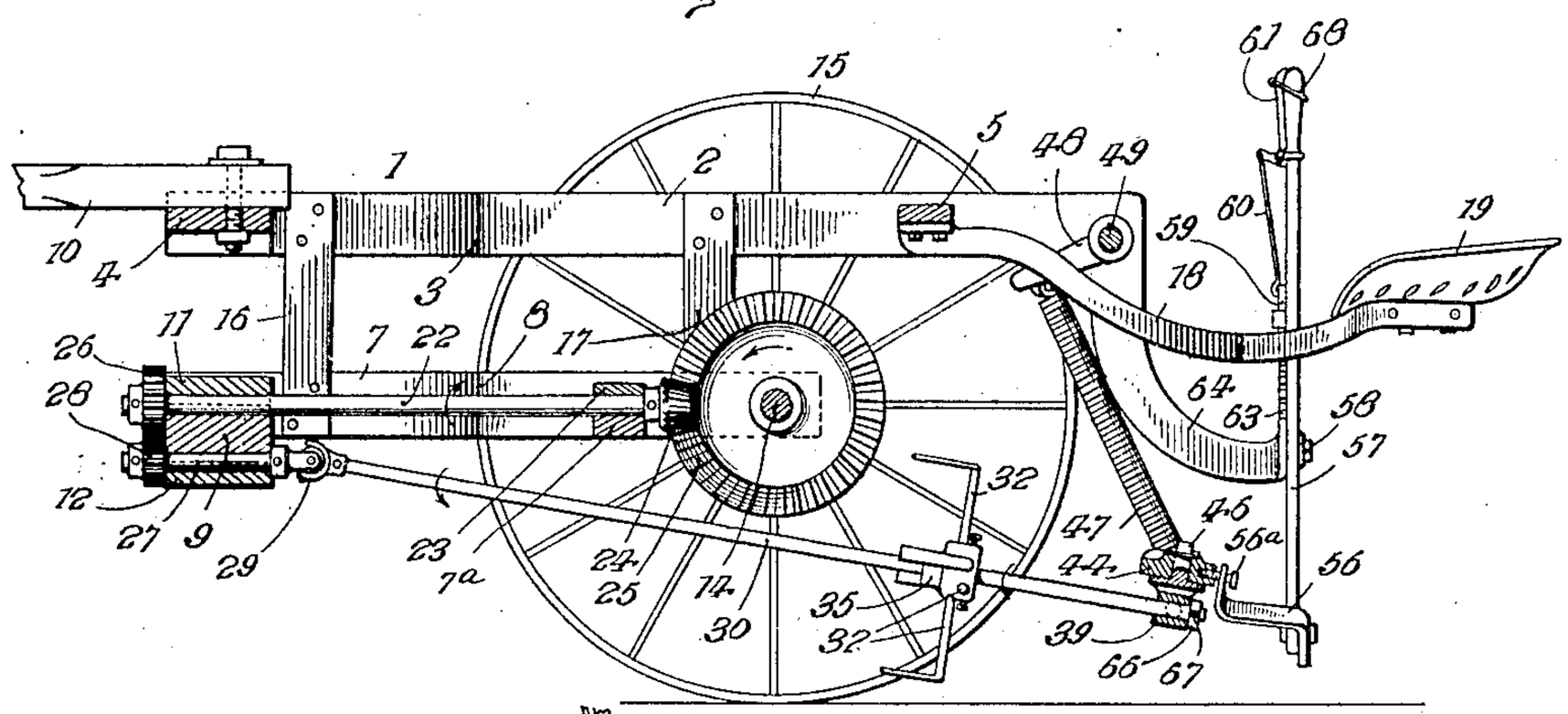


Fig. 5.

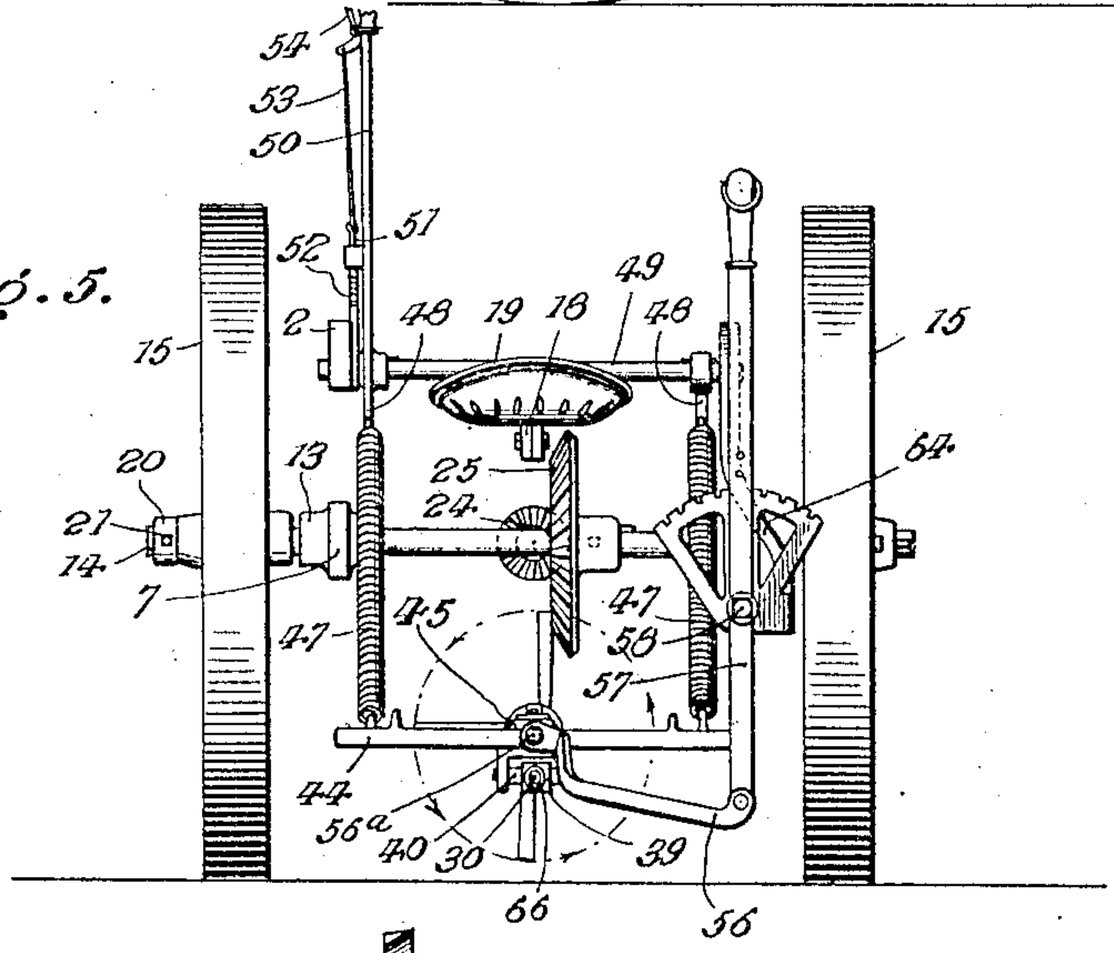
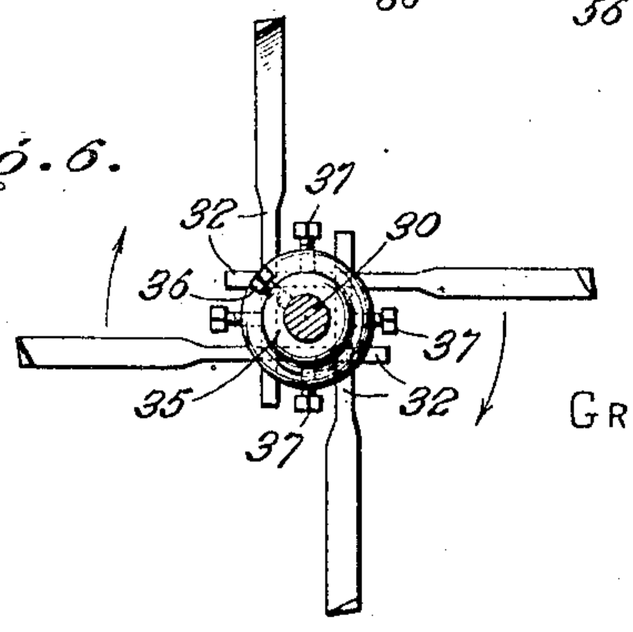


Fig. 6.



WITNESSES

L. H. Schmidt.

C. E. Trainor

INVENTOR

GRANVILLE B. GAUNTT.

BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GRANVILLE B. GAUNTT, OF TAYLOR, TEXAS, ASSIGNOR OF ONE-HALF TO FRANK C. FLOECKINGER, OF TAYLOR, TEXAS.

COTTON-CHOPPER.

No. 878,373. Specification of Letters Patent. Patented Feb. 4, 1908.

Application filed August 31, 1907. Serial No. 390,900.

To all whom it may concern:

Be it known that I, GRANVILLE B. GAUNTT, a citizen of the United States, and a resident of Taylor, in the county of Williamson and State of Texas, have invented certain new and useful Improvements in Cotton-Choppers, of which the following is a specification.

My invention is an improvement in cotton choppers, and consists in certain novel constructions and combinations of parts hereinafter described and claimed.

Referring to the drawings forming part hereof Figure 1 is a side view of my improvement. Fig. 2 is a plan view. Fig. 3 is a detail perspective view of the shaft supporting bar and its connections. Fig. 4 is a section on the line 4—4 of Fig. 2. Fig. 5 is a rear view of the improvement, and Fig. 6 is a detail view of the hoes and their attachment to the shaft.

The present embodiment of the invention comprises an upper frame and a lower frame, said upper frame comprising side bars 2 which converge toward each other at their front ends, as at 3, the converging ends being connected by a plate 4, and the bars being connected by a cross-bar 5. A tongue 10 is connected with the plate 4.

The lower frame is composed of side bars 7 also converging at their front ends as at 8, and connected by a block 9, the said block being provided with upper and lower bearings 11 and 12 for a purpose to be hereinafter described. The upper and lower frames are arranged in parallel planes and are connected together by a pair of vertical bars 16 at their front, and a pair of vertical bars 17 at the rear of the lower frame, the upper frame projecting rearwardly beyond the lower frame. The side bars 7 of the lower frame are provided at their rear ends with bearings 13 in which is journaled the shaft 14, having journaled on its outer ends supporting wheels 15, one of said wheels being keyed to the shaft, as shown at 6, whereby to cause said shaft to rotate when the wheel rotates. The hubs of the wheels abut against the bearings on the inside, and are provided with collars 20 on the outer ends of the shaft, the said collars being held in place by setscrews 21. The cross-bar 5 of the upper frame has connected therewith rearwardly extending plates 18, the plates converging at their outer ends and having secured thereto a seat 19.

The shaft 14 is provided with a bevel gear wheel 25 secured thereto by a setscrew 25^a, the gear wheel meshing with the bevel gear 24 on the rear end of the shaft 22 journaled in the upper bearing 11 of the block and in a bearing 23 on a cross-bar 7^a of the lower frame, and provided at its front end with a pinion 26, meshing with a pinion 28 on a countershaft 27 journaled in the lower bearing 12 of the block.

The rear ends of the side bars 2 of the upper frame are provided with bearings in which is journaled a shaft 49, having rigid therewith forwardly projecting arms 48 connected by springs 47 with a plate 44 provided at its center with a bearing 45 in which is journaled a stud shaft 46 secured to a U shaped bracket 42 in whose depending arms 41 the trunnions 40 of the block 39 are journaled. The stud shaft is retained in the bearing by a pin 43, traversing an opening in the stud shaft.

The hoe shaft 30 is connected at its front end by a universal joint 29 with the countershaft 27 before described, and the rear end of the shaft is journaled in the bearing of the block 39 before mentioned, a collar 66 being arranged on the outer end of the shaft and secured in place by setscrew 67 to retain the parts in their respective positions. A link 56 has its one end connected by a setscrew 56^a with the plate 44, and its other end connected to the lower end of the lever 57 pivoted at 58 to a bracket 64 integral with one of the side bars of the upper frame, and provided with a toothed quadrant 63 engaged by a catch 59 on the lever, the catch being connected by a link 60 with a grip 61 pivoted to the lever and actuated by a spring to normally retain the catch in engagement with the quadrant. The hoe shaft 30 has adjustably mounted thereon a hub 35, by means of the setscrew 36 and the hub is provided with a plurality of openings tangential to the shaft, and within the openings are received the shanks 32 of the hoes, the blades 31 thereof being turned at right-angles to the shanks as shown in Figs. 1 and 4, and sharpened at one edge as shown in Fig. 6. The shanks being engaged by the setscrews 37 they retain the knives in place.

A lever 50 is connected rigidly with the shaft 49 before described and is provided with a catch 51 for engaging a toothed quadrant 52 secured to one of the side bars of the upper frame, and normally retained in engagement therewith by a spring 55

operating on a grip 54 which is connected by link 53 with the catch. Each of the grips 54 and 61 is provided with a ring 68 adapted to pass over the end of the handle and retain the catch out of engagement with the quadrant.

In operation the machine is driven with the wheels thereof on each side of the row, and when in motion the hoe shaft through its connection with the driving shaft is rotated to bring the knives into engagement with the plants near the top of the ground to cut them down. By operating the lever 51, the rear end of the hoe shaft may be swung from side to side whereby to follow the convolutions of the row, and by operating the lever 50, the rear end of the shaft may be elevated to raise or lower the hoes in accordance with the height of the ridge upon which the plants are growing.

By the mechanism shown and described the hoes may be adjusted toward and from the plants and transversely of the machine, without disturbing the driving relation between the said shaft and the driving shaft.

It will be noticed that the hoes are arranged in an annuar series on the hoe shaft, and that the hoes are in spaced relation with respect to each other. The blade portion of the hoes may also be arranged projecting rearwardly instead of forwardly, as shown by the drawing, and this position is preferable when working in weeds or vines. The blades of the hoes may also be made in sets of different lengths, since they are interchangeable.

It will be noticed that in applicant's construction, the hoes are yieldingly supported and may be moved up and down by the feet of the operator resting on the plate supporting the rear end of the hoe shaft. The shaft may also be swung from side to side in the same manner without having recourse to the levers. When shifting the hoe shaft from side to side, the catch of the rear lever would be released from the quadrant leaving the lever free to swing.

I claim:

1. A cotton chopper comprising connected upper and lower trames, each composed of side bars converging at their front ends and connected together, a tongue connected with the front of the upper frame, a shaft journaled in the rear ends of the side bars of the lower frame, wheels on the ends of the shaft, a block between the front ends of the side bars of the lower frame, said block being provided with upper and lower bearings, a shaft journaled in the upper bearing, and provided with a pinion at its front end and with a bevel gear at its rear end, a bevel gear on the driving shaft meshing therewith, a counter shaft journaled to the lower bearing and provided with a pinion meshing with the pinion on the upper shaft, a hoe shaft having a universal joint connection with the counter shaft, a hub on the hoe shaft near the rear end thereof, said hub being provided with a plurality of transverse openings, hoes comprising a shank for insertion in the holes of the hub, and a blade arranged at right angles to the shank and parallel with the shaft, set screws for securing the blade in place, a plate in which the rear end of the shaft is journaled, a shaft journaled in the rear ends of the side bars of the upper frame, and provided with arms projecting therefrom, springs connecting the arms with the ends of the plate, means for oscillating said shaft whereby to raise and lower the hoe shaft, and means for swinging the plate from side to side of the frame.

2. A cotton chopper, comprising connected upper and lower frames, each composed of side bars converging at their front ends and connected together, a tongue connected with the front of the upper frame, a shaft journaled in the rear ends of the side bars of the lower frame, wheels on the ends of the shafts, a block between the front ends of the side bars of the lower frame, said block being provided with upper and lower bearings, a shaft journaled in the upper bearing and provided with a pinion at its front end and with a bevel gear at its rear end, a bevel gear on the driving shaft meshing therewith, a counter shaft journaled in the lower bearing and provided with a pinion meshing with the pinion on the upper shaft, a hoe shaft having a universal joint connection with the counter shaft, a hub on the hoe shaft near the rear end thereof, hoes comprising a shank connected with the hub, and a blade arranged parallel with the shaft, a plate in which the rear end of the shaft is journaled, a shaft journaled in the rear ends of the side bars of the upper frame, and provided with arms projecting therefrom, springs connecting the arms with the ends of the plate, means for oscillating said shaft whereby to raise and lower the hoe shaft, and means for swinging the plate from side to side of the frame.

3. A cotton chopper comprising connected upper and lower frames, each composed of side bars converging at their front ends and connected together, a tongue connected with the front of the upper frame, a shaft journaled in the rear ends of the side bars of the lower frame, wheels on the end of the shaft, a block between the front ends of the side bars of the lower frame, said block being provided with upper and lower bearings, a shaft journaled in the upper bearing and provided with a pinion at its front end, a driving connection between the said shaft and the driving shaft, a counter shaft journaled in the lower bearing, and provided with a pinion meshing with the pinion on the upper shaft, a hoe shaft having a universal joint connec-

tion with the counter shaft, a plurality of hoes connected with the shaft, a plate in which the rear end of the hoe shaft is journaled, means in connection with said plate for raising and lowering the rear end of the hoe shaft, and means in connection with the plate for swinging said plate transversely of the frame.

4. A cotton chopper, comprising a frame, a tongue connected therewith, a shaft journaled on the rear frame, wheels for supporting the shaft, a block connected with the front of the frame and provided with upper and lower bearings, a shaft journaled in the upper bearing and having a driving connection with the wheels, a counter shaft journaled in the lower bearing and having a driving connection with the upper shaft, a hoe shaft having a universal joint connection with the counter shaft, a plurality of hoes connected with the hoe shaft, a plate in which the rear end of the hoe shaft is journaled, a yielding connection between the plate and the rear frame, means for raising and lowering the plate, and means for swinging the plate transversely of the frame.

5. A cotton chopper comprising connected upper and lower frames, wheels for supporting the lower frame, a shaft journaled in the lower frame longitudinally thereof, a driving connection between the wheels and the shaft, a hoe shaft having a universal joint connection with said shaft, a plate in which the rear end of the hoe shaft is journaled, a yielding connection between the hoe shaft and the upper frame, means in connection with the upper frame for raising and lowering the plate, means in connection with the upper frame for swinging the plate transversely thereof, and a plurality of hoes connected with the hoe shaft, each of said hoes comprising a shank arranged perpendicular to the shaft, and a blade extending parallel therewith.

6. A cotton chopper comprising connected upper and lower frames, wheels for supporting the lower frame, a shaft journaled in the lower frame longitudinally thereof, a driving connection between the wheels and the shaft, a hoe shaft having a universal joint connection with said shaft, a plate in which the rear end of the hoe shaft is journaled, a yielding connection between the hoe shaft and the upper frame, means in connection with the upper frame for raising and lowering the plate, means in connection with the upper frame for swinging the plate transversely thereof, and a plurality of hoes connected with the hoe shaft.

GRANVILLE B. GAUNTT.

Witnesses:
G. E. KING,
D. E. HOLCOMB.