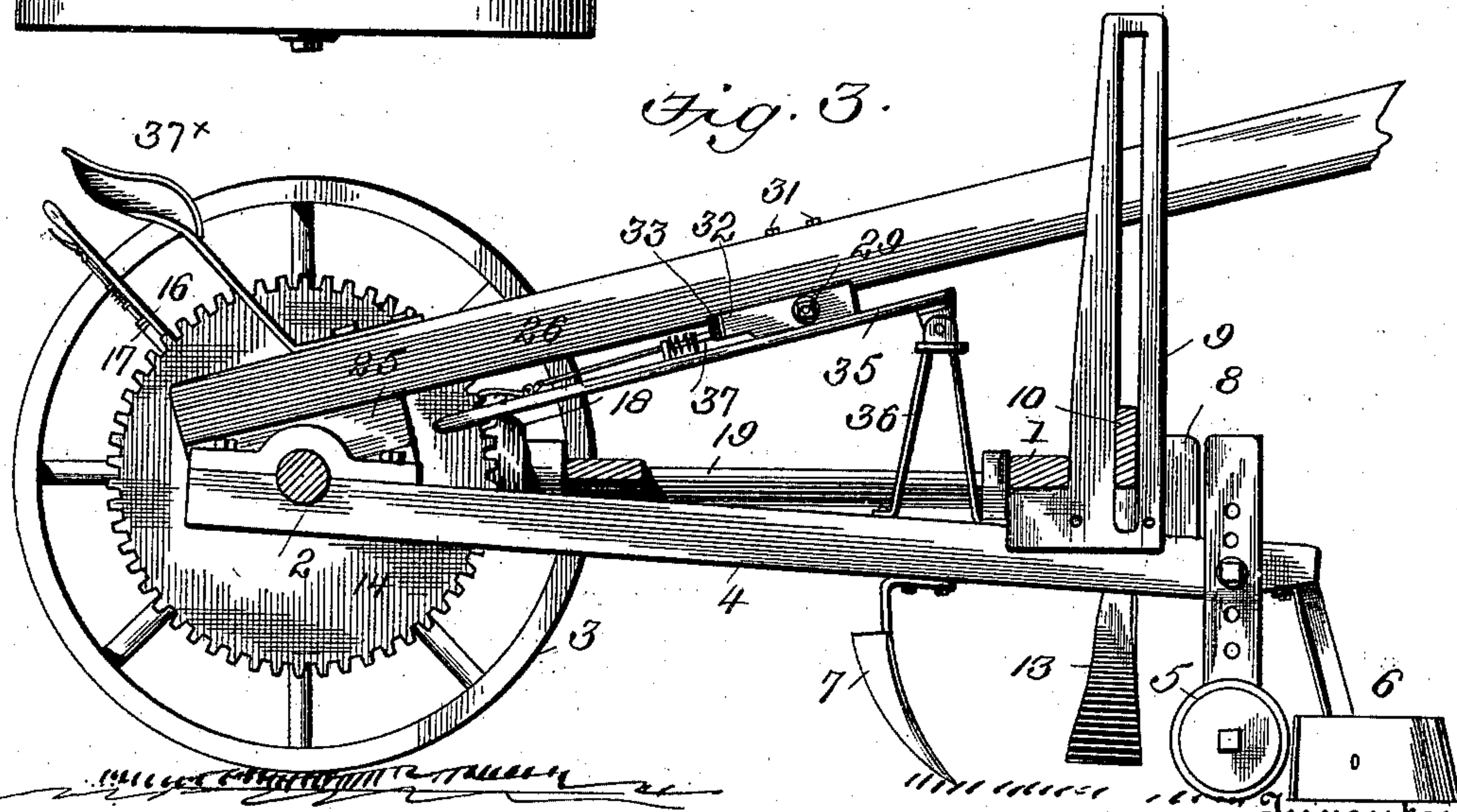


J. I. DUNLAP.
COTTON CHOPPER.

No. 550,603.

Patented Dec. 3, 1895.



J. W. Thorne
Thos. A. Green

Joseph I. Dunlap

By James E. Norris.
His Attorney

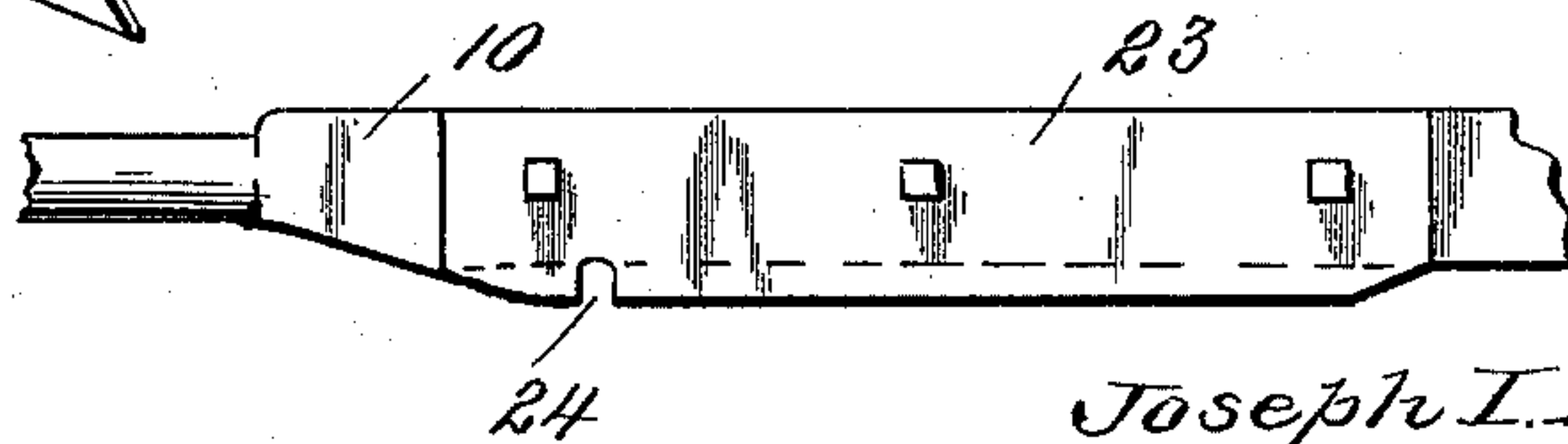
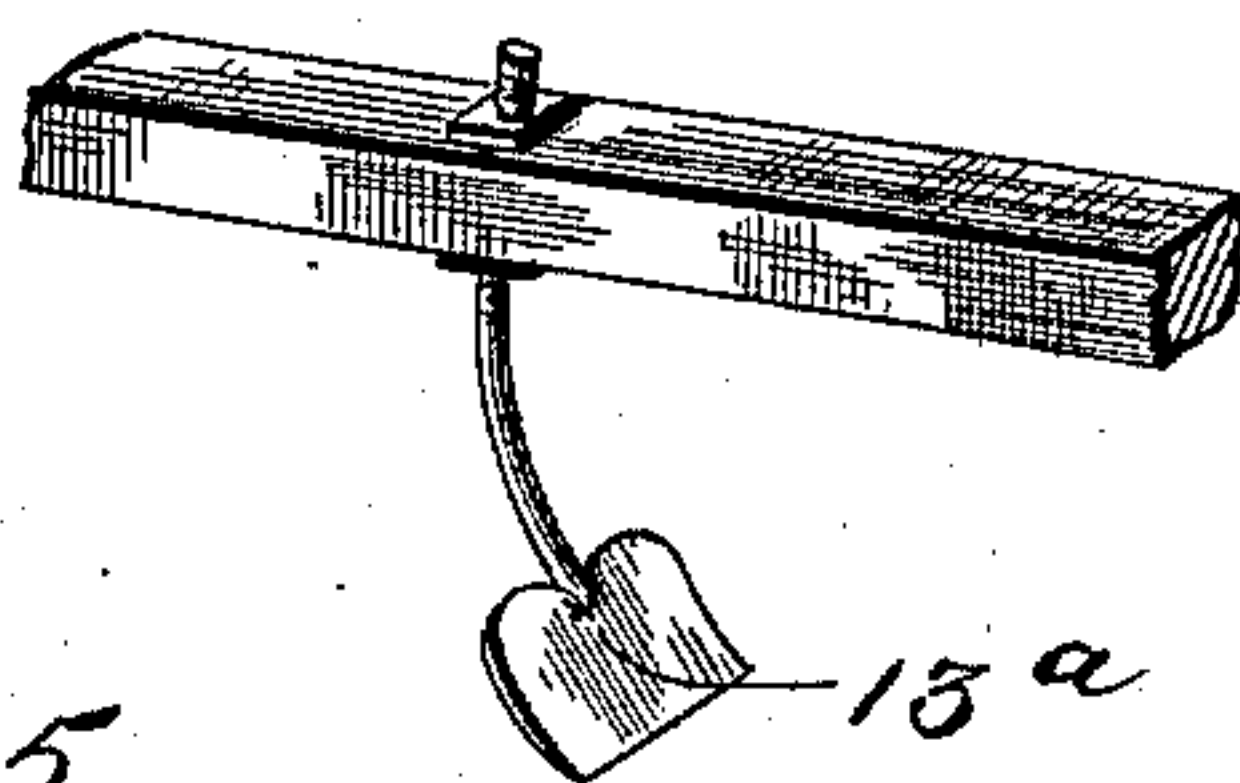
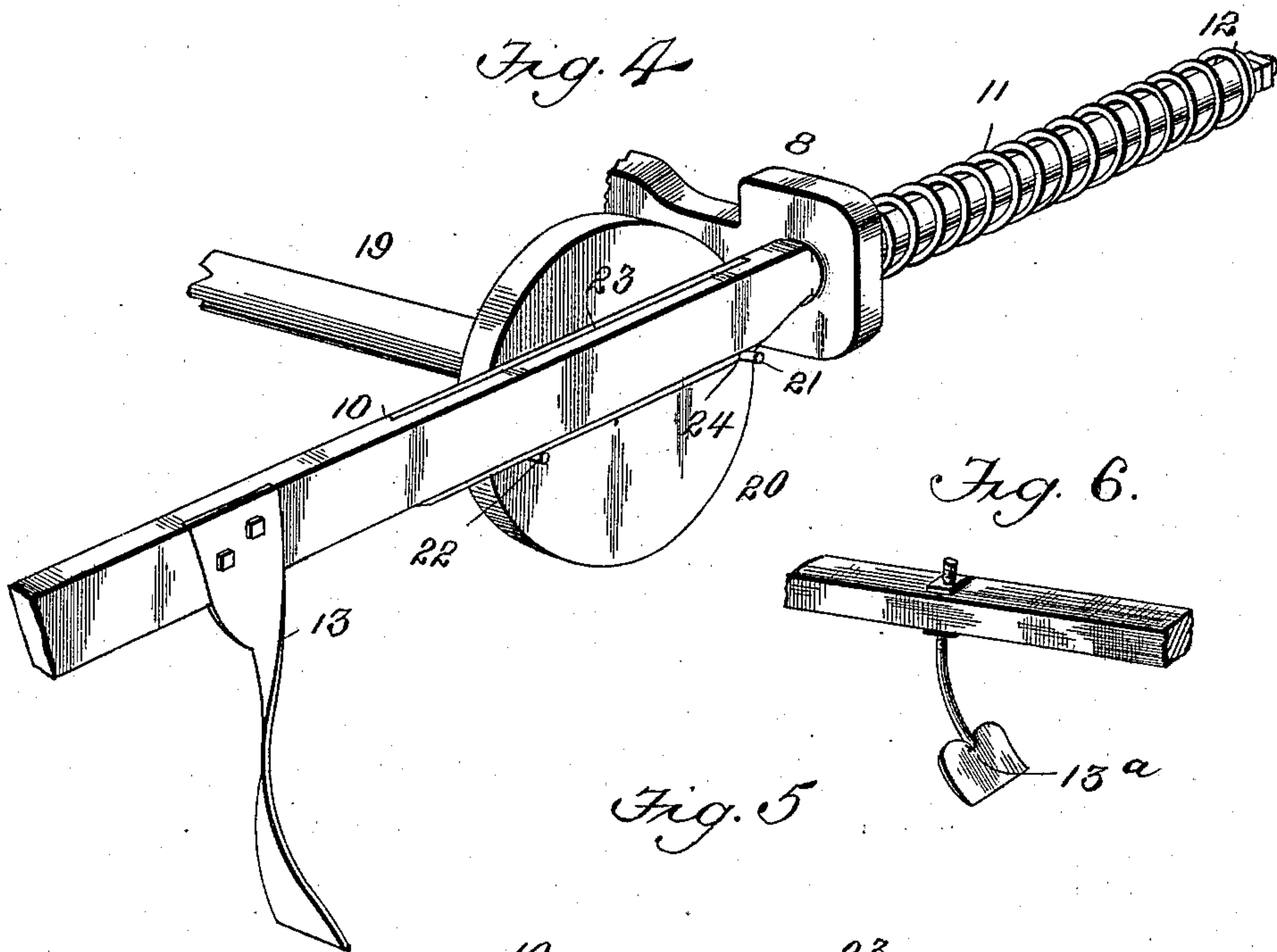
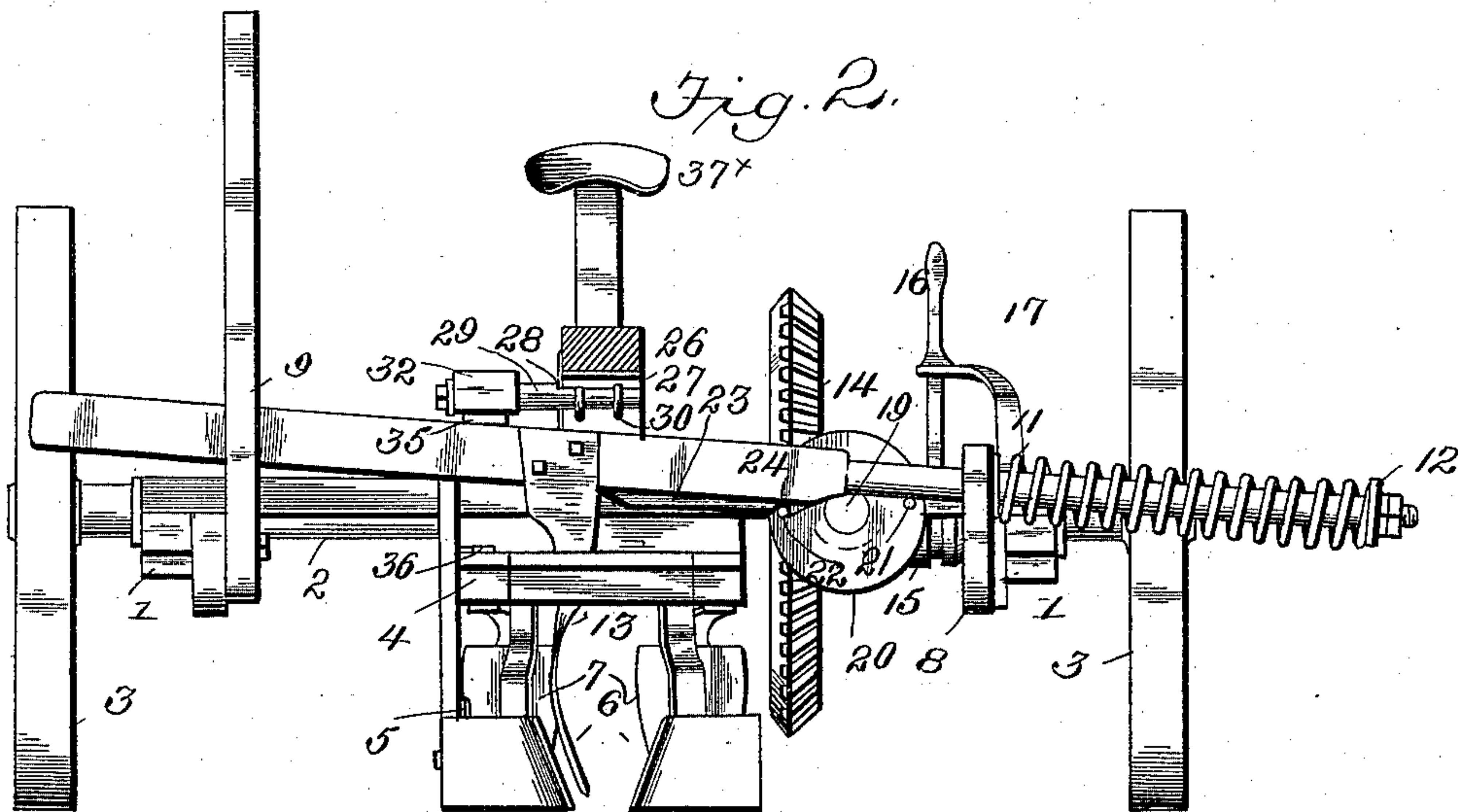
(No Model.)

2 Sheets—Sheet 2.

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COTTON CHOPPER.

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Witnesses
John L. Smith
Thos. A. Green

Inventor
Joseph I. Dunlap

By James L. Norris,
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UNITED STATES PATENT OFFICE.

JOSEPH I. DUNLAP, OF WADESBOROUGH, NORTH CAROLINA.

COTTON-CHOPPER.

SPECIFICATION forming part of Letters Patent No. 550,603, dated December 3, 1895.

Application filed October 15, 1894. Serial No. 525,972. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH I. DUNLAP, a citizen of the United States, residing at Wadesborough, in the county of Anson and State of North Carolina, have invented new and useful Improvements in Cotton-Choppers, of which the following is a specification.

My invention relates to an improved cotton-chopper; and it consists in the novel construction, arrangement, and combination of parts hereinafter fully described, and definitely pointed out in the claims following the description, due reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a plan view of my improved machine. Fig. 2 is a front end elevation. Fig. 3 is a section taken on the line 3 3 of Fig. 1. Figs. 4 and 5 are detail views of the mechanism for actuating the chopper. Fig. 6 is a perspective view of a modified form of hoe.

Referring to the drawings, the numeral 1 indicates the frame of the machine, in the rear end of which is journaled the drive-shaft 2, on the ends of which are mounted the wheels 3, provided with ratchet mechanism to permit a free backward movement commonly employed in harvesting machinery of all kinds.

4 indicates the cultivator-frame, mounted at its rear end on the drive-shaft and at its front end is secured to the frame 1. To the forward end of the frame 4 and at one side thereof is secured a vertically-adjustable caster-wheel 5, and to said frame are secured vertically-adjustable cultivator shovels and scrapers 6 7, arranged as shown.

To the front of the frame 1 and at one side thereof is secured a bearing 8, and at the other side of the frame is secured a vertically-slotted guide 9. A bar 10, reduced and rounded at one end, forming a shoulder 10^a, passes loosely through the bearing 8 and at its other end rests in the slotted guide 9, a spring 11 being coiled around the rounded end of said bar and bearing at one end against the bearing 8 and at its other end against the collar 12, secured to the end of the bar. A chopping-hoe 13, consisting of a metallic blade gradually increasing in width downwardly and curved to one side, is secured to the bar

10 and at such point that when said bar is at rest the chopping-hoe will be slightly to one side of the center of the machine.

Instead of the hoe above described I may employ the hoe illustrated in Fig. 6.

On the drive-shaft 2 is loosely mounted a beveled gear-wheel 14, and splined upon said shaft is a clutch 15, adapted to be thrown in and out of engagement with the gear-wheel 14 by a lever 16, pivoted to a bracket 17, secured to the frame 1 and extending to within convenient reach of the driver. Meshing with the gear-wheel 14 is a beveled pinion 18, secured to one end of a shaft 19, journaled in the frame 1, and to the other end of said shaft is rigidly secured a disk 20, provided with two oppositely-arranged pins 21 22. To the rear side of the bar 10 is secured a metallic plate 23, that projects slightly below the lower edge of said bar and is provided with a notch or recess 24, that is adapted to be engaged by the pins 21 22, as will be more fully hereinafter described. Loosely mounted on the center of the drive-shaft 2 is a collar 25, to the upper side of which is pivoted or swiveled the rear end of a tongue 26. To the under side of the tongue is secured a metallic wear-plate 27, against which rests a pin 29, which is rigidly held to its seat by threaded staples 30, that are passed through suitable perforations formed in said plate and the tongue and held in place by nuts 31, tapped over the threaded ends of the staples. Upon the projecting end of the pin 29 is journaled a segmental plate 32, provided at its rear end with teeth 33, and to said plate is pivotally secured, by means of a set-screw 34, a lever 35, which at its forward end is swiveled on a bracket 36, secured to the frame 1 of the machine. The lever 35 is provided with a spring-latch 37, of ordinary and well-known construction, that is adapted to engage the teeth 33 of the segment-plate 32 and lock said plate and lever together.

It will be understood that the plate 32 may be freely oscillated about the pin 29, upon which it is journaled, and that the lever 35 may be oscillated laterally about the screw 34. The end of the lever 35 being attached to the frame of the machine by the bracket

36, by swinging said lever to one side or the other the frame will be correspondingly thrown to one or the other side of the line of draft, and, owing to the described manner of
 5 pivotally connecting the tongue, the machine may follow the inequalities of the ground without affecting the position of the tongue.

To the rear end of the tongue is secured a seat 37^x, to within convenient reach of which
 10 extend the levers 16 and 35.

The operation of my improved machine is as follows: The machine is driven in such manner as to cause the cultivators 6 and 7 to travel between the rows of plants and loosen
 15 and pulverize the soil and throw the same up against the plants. The rotation of the drive-shaft 2 communicates, by means of the mechanism described, a rotary movement to the disk 20, which causes one of the pins—as 21,
 20 for example—to engage the notch or recess 24 in the plate 23, secured to the bar 10, and raises said bar, and with it the chopping-hoe 13, over the young plants to the opposite side of the row, and then lowers it in readiness to
 25 make its stroke. As the disk 20 continues to rotate, the pin 22 strikes against the under side of the bar 10 and lifts said bar, so as to disengage the notch 24 from the pin 21, when the spring 11 forces back the bar 10 in the
 30 opposite direction, causing the chopping-hoe 13 to cut out the plants in a line at a right angle to the row and in a true horizontal direction, as contradistinguished from those machines employing rotary cutters, which
 35 leave the surface between the plants uneven and lowest in the center, which is objectionable. By means of the lever 35 and its connections before described the frame of the machine may be adjusted at an angle to either
 40 side of the line of draft, making the same conform to the trend of the row and keeping the drive-wheels always in the middle of the rows.

It will be apparent that by increasing the length of the drive-shaft and the bar 10 two 45 or more cultivator-frames and chopping-hoes may be employed to cultivate and then cut a corresponding number of rows simultaneously.

Having described my invention, what I 50 claim is—

1. In a cotton-chopper, the combination with the frame 1 pivotally mounted on a drive shaft 2 and carrying chopping mechanism and provided at its front end with a sup- 55 porting wheel 5, of a tongue 26 swiveled upon a collar loosely mounted on the drive shaft, an adjustable connection between the frame 1 and the tongue for permitting said tongue to move both vertically and laterally inde- 60 pendently of the frame and drive shaft, and means for locking said tongue to said frame upon either side of the center of the latter, substantially as described.

2. In a cotton chopper, the combination of 65 the frame 1 mounted on a drive shaft 2 and carrying chopping mechanism and cultivator shovels, of a tongue 26 swiveled upon a collar 25 loosely mounted on said drive shaft, a pin 29 projecting laterally from one side of 70 the tongue, a segmental toothed plate 32 journaled on said pin and a latch lever 35 pivoted to said plate 32 and provided with a latch for engaging the teeth thereof, said lever being connected at one end to the frame 1, substan- 75 tially as shown and described, and for the purpose specified.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

JOSEPH I. DUNLAP. [L. S.]

Witnesses:

JAMES C. MARSHALL,
 W. D. WEBB.