

No. 830,113.

PATENTED SEPT. 4, 1906.

A. THOMPSON.
COTTON CHOPPER AND CULTIVATOR.

APPLICATION FILED SEPT. 27, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

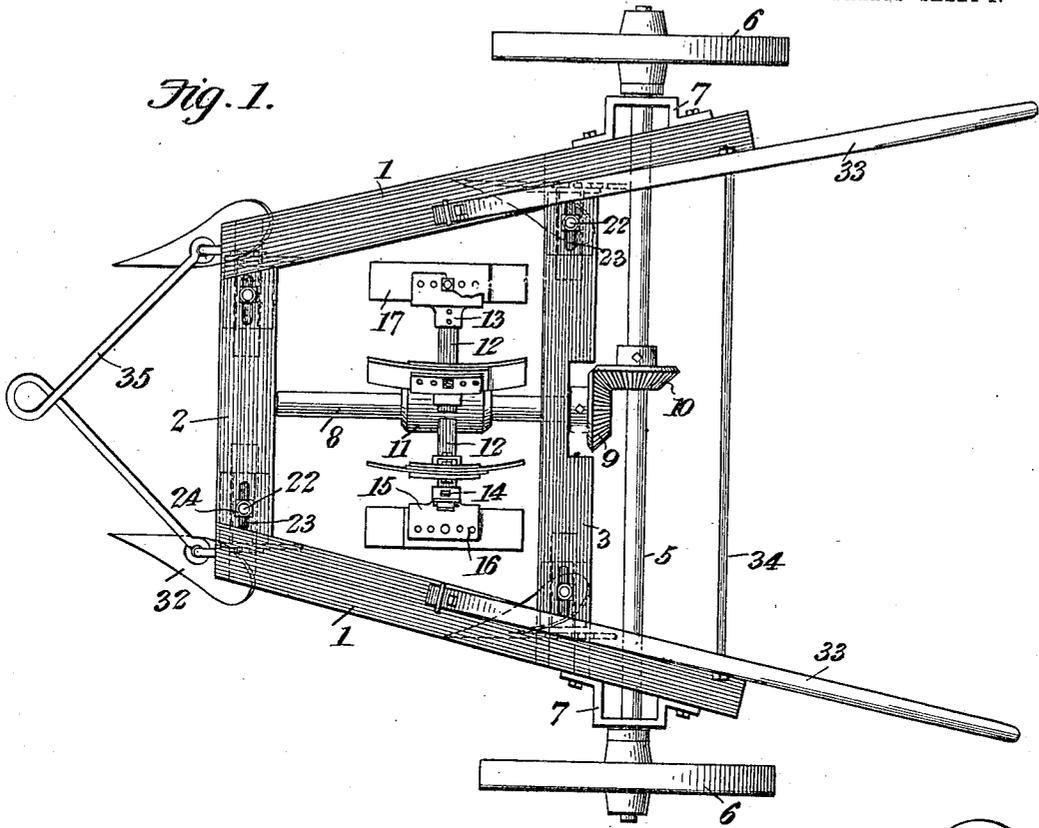
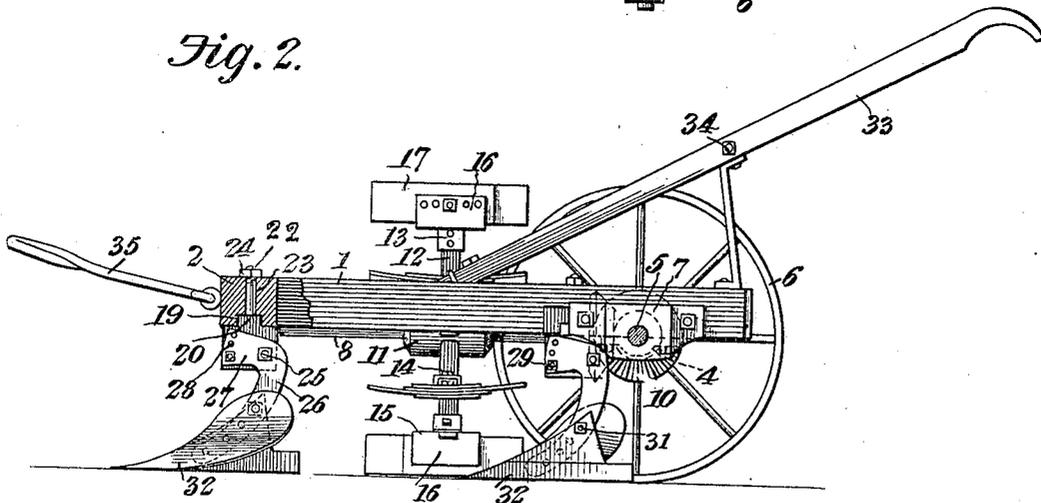


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

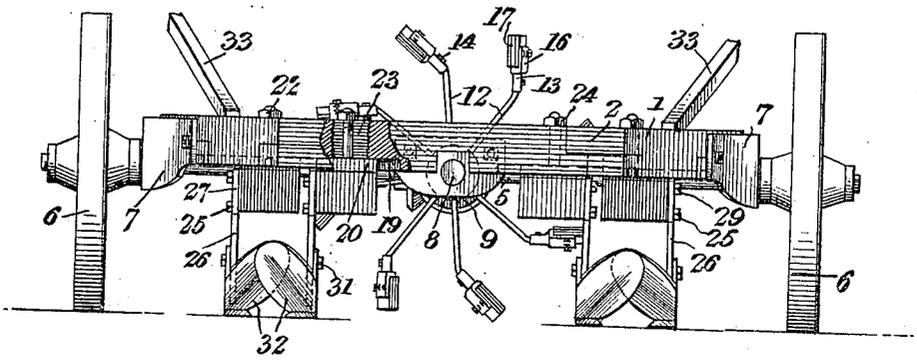


Fig. 4.

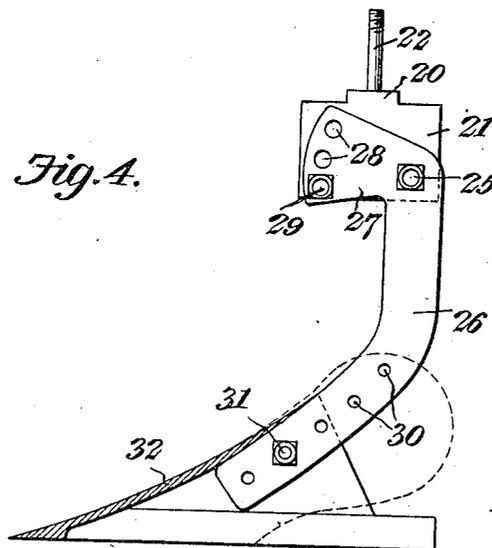


Fig. 5.

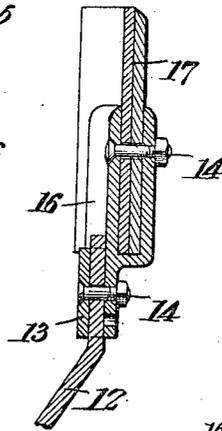


Fig. 6.

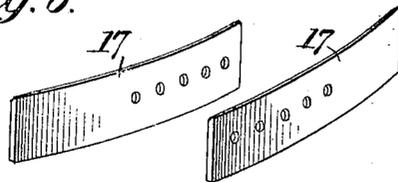
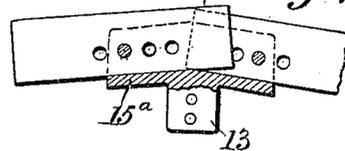
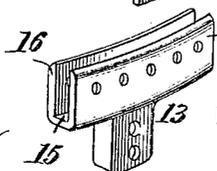


Fig. 7.



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UNITED STATES PATENT OFFICE.

ASA THOMPSON, OF SPARTANBURG, SOUTH CAROLINA.

COTTON CHOPPER AND CULTIVATOR.

No. 830,113.

Specification of Letters Patent.

Patented Sept. 4, 1906.

Application filed September 27, 1905. Serial No. 280,356.

To all whom it may concern:

Be it known that I, ASA THOMPSON, a citizen of the United States, residing at Spartanburg, in the county of Spartanburg and State of South Carolina, have invented a new and useful Cotton Chopper and Cultivator, of which the following is a specification.

This invention relates to cotton choppers and cultivators; and the objects of the invention are to simplify and improve the construction and operation of this class of devices.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations, and modifications within the scope of the invention may be made when desired.

In said drawings, Figure 1 is a top plan view of a machine constructed in accordance with the principles of the invention. Fig. 2 is a sectional side elevation of the same. Fig. 3 is a front elevation, partly in section. Fig. 4 is a side view of one of the plow-carrying blocks and the standard connected therewith. Fig. 5 is a sectional detail view, enlarged, of one of the chopping-hoes and the supporting means for the same. Fig. 6 is a perspective detail view of the hoe-support and the blades detached from the same. Fig. 7 is a detail view illustrating a modification in the form of the hoe-support.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

A frame is provided, which is composed of forwardly-converging side members 1 1, which are connected and spaced apart by front and rear cross-pieces 2 and 3, said side members being extended in rear of the rear cross-piece 3 and provided with boxes or bearings 4 for the main shaft or axle 5, upon which the carrying-wheels 6 are fixed. Upon the outer sides of the side members 1 1, near the rear ends of the latter, are brackets 7, having their outer sides arranged in parallel lanes, said brackets affording bearings for

the inner ends of the hubs of the carrying-wheels, which are thereby steadied, while lateral movement of the axle with relation to the frame is prevented.

The cross-pieces 2 and 3 are provided with bearings for a shaft 8, having a bevel-pinion 9, meshing with a bevel-pinion 10 upon the axle 5, from which the shaft 8 is driven at a rate of speed which may be governed by the relative sizes of the pinions. The shaft 8 carries a hub 11, provided with a plurality of radially-extending arms 12, upon the outer ends of which sleeves 13 are adjustably mounted by means of set-screws 14 or other securing means, said sleeves being provided at their outer ends with supporting-plates 15, having curved concentric upstanding flanges 16 for the reception of the hoe-blades, each of which is composed of two curved members 17, overlapping at their inner ends, which are secured adjustably between the flanges 16 by means of transverse connecting-bolts or other suitable means.

It will be observed that under the construction set forth the hoe-supports may be adjusted radially to regulate the depth of the cut to be made, while the length of the cut may be regulated by properly adjusting the members cooperating to form the hoes.

The front and rear cross-beams of the frame are each provided in their under sides with grooves 19 for the reception of ribs 20 upon the upper sides of laterally-slidable blocks 21, which are provided with bolts 22, extending upwardly through slots 23 in the said front and rear members, with which the said blocks may thus be adjustably connected, the ribs 20 serving to engage the grooves 19, thereby preventing the blocks 21 from turning axially upon or with the connecting-bolts 22, which latter are provided at their upper ends with tightening-nuts 24. Pivotaly connected with the several blocks 21, as by means of bolts 25, are plow-carrying standards 26, which are provided at their upper ends with segment-plates 27, each having a plurality of perforations 28 concentric with the pivot 25 and adapted for engagement with a bolt 29, whereby the tilt of the standard may be adjusted. Each standard is also provided with a plurality of perforations 30 for the passage of a connecting-bolt 31, whereby a plow 32 is adjustably connected with the standard, the depth to which said plow is permitted to enter the soil being regulated by its adjustment upon the standard. It will be

seen that there are two front plows and two rear plows, the front plows being made right and left hand, so as to throw the dirt in an outward direction, and the rear plows being likewise made right and left to throw the dirt in an inward direction. The rear plows are preferably spaced farther apart than the front plows. Handles 33 are provided, said handles being secured upon the side members of the frame and connected by means of a rung 34. A draft attachment, such as a loop 35, is connected with the front part of the frame.

In Fig. 7 of the drawings has been illustrated a modified form of the hoe-supporting device, which consists, essentially, in making the supporting-plate (here designated 15^a) slightly angular, so that one of the hoe-blade members which overlaps the other will present a sharp point 16^a, adapted to cut through the ground, making the operation more certain and effective.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood by those skilled in the art to which it appertains. When the machine progresses over the field, the front plows will throw the dirt away from the growing plants, which are thus ridged, so as to be readily operated upon by the choppers, which cut out the superfluous plants, leaving stands which may be of any desired size.

While it is obvious that any desired number of hoes may be used, the number will be to some extent determined by the circumference of the carrying-wheels. Assuming that the bevel-pinions 9 and 10, whereby motion is transmitted from the axle to the hoe-carrying shaft, are of the same size, it follows that said shaft and axle will rotate synchronously. By dividing the circumference of the carrying-wheels into an equal number of spaces, each of a suitable length to include one stand and one space, the divisor will represent the

number of hoes that are to be used. Thus, for instance, assuming the circumference of each carrying-wheel to be seventy inches and the length of the desired stand plus the desired space being fourteen inches, five hoes would be required. When the proportionate sizes of the transmission-wheels 9 and 10 are changed, the number of the hoes employed will obviously be changed to correspond.

The rear plows will throw the loose dirt in the direction of the roots of the plants, which are thus bedded, and it will be seen that the combined operation of the plows not only relieves the choppers from the strain of carrying a considerable portion of dirt, but that they operate to loosen and pulverize the dirt as well as to destroy weeds and the like.

Having thus described the invention, what is claimed is—

1. In a cotton-chopping machine, a shaft supported for rotation, a hub upon said shaft having radially-extending arms or spokes, sleeves supported adjustably upon said spokes and having plates at their outer ends, curved concentric flanges upon said plates, and chopping members secured adjustably between said flanges.

2. In a cotton-chopper, a hoe-supporting member including a sleeve having a plate at its outer end and curved concentric flanges rising from said plate.

3. In a cotton-chopper, a hoe-supporting member including a sleeve having a plate at its outer end and curved concentric flanges rising from said plate, in combination with a hoe or chopping member comprising two blades overlapping each other between said flanges.

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

ASA THOMPSON.

Witnesses:

P. H. FOSTER,
M. O. GENTRY.