

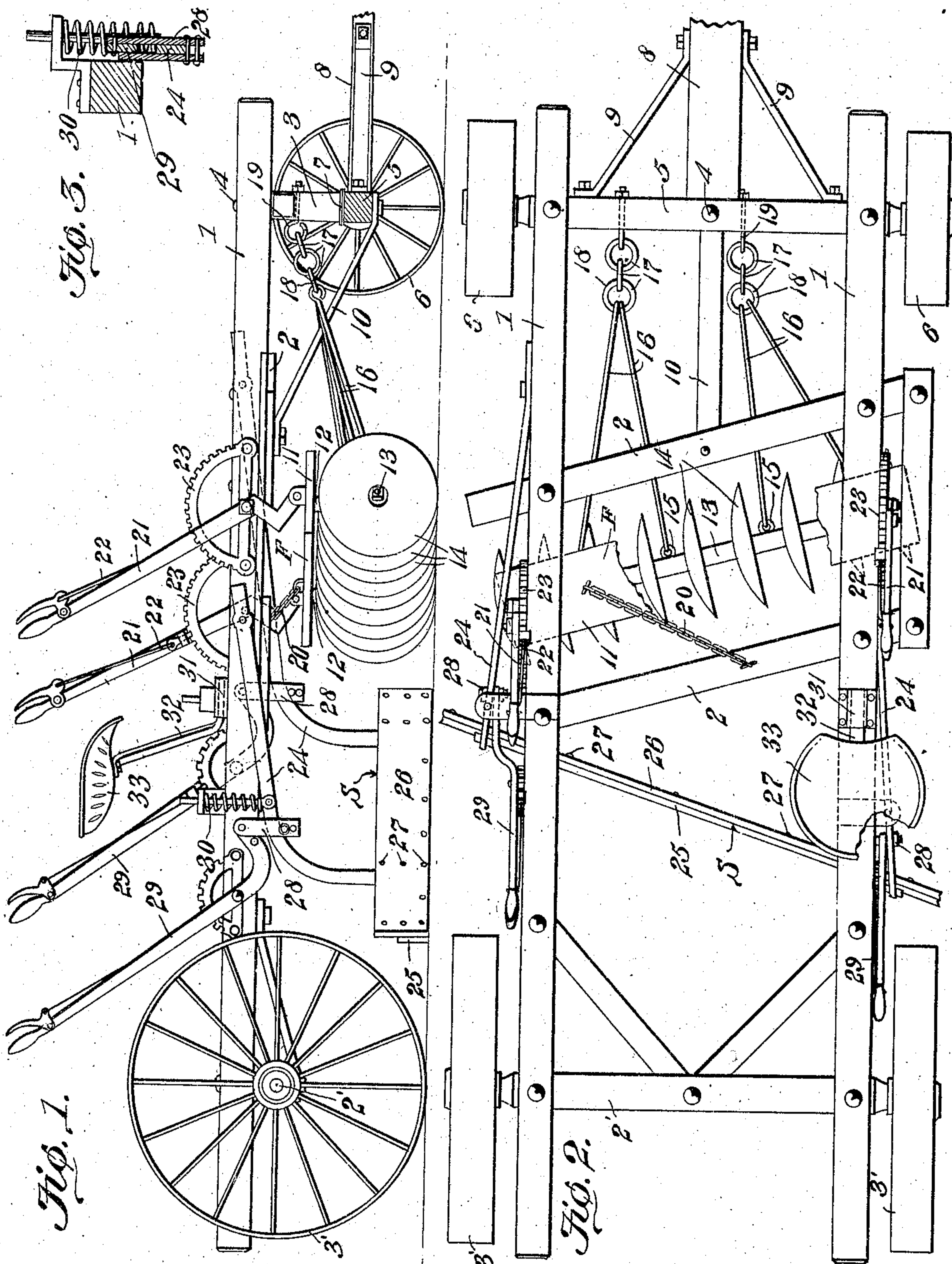
No. 816,085.

PATENTED MAR. 27, 1906.

A. L. FOOTE.

DISK LAND CULTIVATOR, ROAD MACHINE, AND FARM WAGON.

APPLICATION FILED SEPT. 6, 1905.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## DISK LAND-CULTIVATOR, ROAD-MACHINE, AND FARM-WAGON.

No. 816,085.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed September 6, 1905. Serial No. 277,268.

*To all whom it may concern:*

Be it known that I, ABRAM LAKIN FOOTE, of Fayette, in the county of Fayette and State of Iowa, have invented certain new and useful Improvements in Disk Land-Cultivators, Road-Machines, and Farm-Wagons; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a combined disk cultivator, road-working machine, and farm-wagon.

The invention has for its object to present a machine of this class which may be usefully employed not only for cultivating land, but also for smoothing and repairing the surfaces of roads, and which when the land and road working implements are detached shall present a frame upon which a wagon box or bed may be supported, thus converting the machine into a farm-wagon for general use.

Further objects of the invention are to simplify and improve the construction and operation of the device.

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 there 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 the drawings, Figure 1 is a side elevation of a machine constructed in accordance with the principles of the invention. Fig. 2 is a top plan view of the same, and Fig. 3 is a detail view.

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

The frame of the improved machine is composed, essentially, of two longitudinal beams of side members 1 1, which are connected together and spaced apart by means of obliquely-disposed transverse members 2 2. Additional cross-pieces or connecting-pieces may be used when desired. The side members 1 1 are supported near their rear ends upon a hind axle 2', having carrying-

wheels 3', and near their front ends upon a bolster 3, which is connected, by means of a king-bolt 4, with a front axle 5, having low carrying-wheels 6, which are of such dimensions that they may readily swing under the side members 1 1. Wear-plates or bolster-plates 7 are interposed between the bolster and the front axle, and securely connected with the latter is a tongue 8. Brace-rods 9 9 are employed to assist in securing the tongue firmly upon the front axle, hounds in the ordinary acceptance of the term being dispensed with. A brace 10 connects the king-bolt 4 with the forward cross-piece 2.

A disk-carrying frame F is provided, the same including a head-piece 11, provided on its under side with bearing members 12 for a shaft 13, upon which latter a plurality of disks 14 are supported for rotation. These disks, which may be of any suitable construction, but which are preferably of the ordinary concavo-convex shape, are suitably spaced upon the shaft 13, and the latter is provided at intervals with perforated lugs or eyes 15, with which draft-rods 16 are connected, said draft-rods being assembled in pairs, as shown, and connected at their front ends by means of links 17 of short chains 18, whereby said draft-rods are connected with eyebolts 19, extending through the bolster 3.

It will be observed that the disk-carrying shaft is disposed obliquely with relation to the line of draft in order that the dirt engaged by the disks may be properly overturned and moved. In order to prevent side draft, the points of connection of the draft members 16 with the bolster 3 is sufficiently to one side of the center to compensate for any tendency to side draft that might exist. A chain or flexible element 20 connects the head 11 of the disk-carrying frame with the cross-bar 2.

Pivoted exteriorly upon the side members 1 1 of the main frame are levers 21, having upwardly-extending handles provided with stop members 22, adapted to engage rack-segments 23, whereby said levers may be secured at various adjustments. The lower ends of the levers are pivotally connected with the head 11 of the disk-carrying frame, which latter may be thus raised or lowered to various positions, as will be readily understood. It is obvious that when the machine is to be transported from one place to another the disk-carrying frame will be elevated sufficiently to support the lower edges of the



disks at a suitable distance—say from six to eight inches—above the ground. When the machine is in working position, the disk-carrying frame may be lowered to a position in which the disks will be compelled to enter the ground to the desired depth. It will also be seen that the two ends of the disk-carrying frame are independently adjustable. It follows that the machine is well adapted for operation upon slanting or hilly ground, and it also follows that the machine may be utilized to grade the surface of the ground slantingly, as is sometimes desired in the making or repairing of roads.

Pivotaly mounted upon the outer sides of the side beams 1 1 are a pair of rearwardly-extending and downwardly-curved beams 24, carrying a scraper S, which may be composed of a head-block 25 and a metallic facing-plate 26, the said head-block being suitably connected by means of bolts, rivets, or other fastening members, as 27. The beams 24 are supported in links 28, connected with adjusting-levers 29, which latter may be and are preferably provided with means whereby they may be retained securely at various adjustments. Springs, as 30, are also provided whereby the scraper-carrying beams are normally forced in a downward direction, thus holding the scraper in ground-engaging position in such a manner that in the event of obstructions being encountered the scraper shall be capable of yielding in an upward direction against the tension of the springs, and thus riding over and clearing all obstructions without danger of breakage.

Upon the upper side of one of the side members 1 1 there is secured a keeper 31, in which the lower end of an upright 32 may be detachably supported, said upright carrying at its upper end a seat 33 for the driver or operator of the machine. This seat, as will be seen, may be readily detached when desired.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of this improved machine will be readily understood by those skilled in the art to which it appertains. It will be observed that the land which is operated upon by cultivator-disks is moved in one direction only and is not bedded or ridged, as is commonly the case with disk cultivators. When the machine is used for road-working purposes, the scraper following in rear of the disks will serve to level the soil that has been loosened and overturned by the action of the disks, and said disks, as well as the scraper, may be pivotally adjusted to any desired inclination or grade. The scraper is preferably disposed obliquely to the line of draft, but opposite to the inclination of the disk-carrying shaft.

The cultivator-disks may be used independently of the scraper, and the latter may be used independently of the cultivator-disks

by properly manipulating and adjusting the disk-carrying frame and the scraper-carrying beams. It will be seen that the scraper, as well as the disk-carrying frame, may very easily and quickly be detached from the supporting-frame. When this is done, the same frame may be utilized to support an ordinary wagon box or bed, which may be fitted upon the bolster and the hind axle and upon the transverse members 2 2 between the side members 1 1, thus converting the machine into a very strong and durable farm-wagon which may be utilized for general purposes.

I claim—

1. A carrying-frame including side members, obliquely-disposed cross members, a hind axle and a front bolster; a front axle pivoted beneath the bolster, a brace member connecting the front axle with the forward oblique cross-bar; a disk-carrying frame, a disk-carrying shaft supported in said frame, draft means connecting said shaft with the front bolster; flexible means connecting the head of the disk-carrying frame with the rear oblique cross-bar; a draft-tongue connected rigidly with the front axle; and means for vertically adjusting and for retaining at various adjustments the ends of the disk-carrying frame.

2. In a machine of the class described, a carrying-frame including side members, a hind axle and a front bolster; a front axle pivoted beneath the bolster; an adjustably-supported disk-carrying frame, a disk-carrying shaft in said frame and means connecting said shaft flexibly with the front bolster; a draft-tongue connected rigidly with the front axle; rearwardly-extending downwardly-curved beams pivoted upon the side beams of the carrying-frame, a scraper carried by said beams, and means for adjusting the scraper-carrying beams and for retaining them at various adjustments.

3. In a machine of the class described, a carrying-frame including side members, a hind axle and a front bolster; a front axle pivoted beneath the bolster; an adjustably-supported disk-carrying frame, a disk-carrying shaft in said frame, and means connecting said shaft flexibly with the front bolster to one side of the line of draft; a draft member connected rigidly with the front axle; rearwardly-extending downwardly-curved beams pivoted upon the side beams of the carrying-frame, a scraper carried by said beams, springs disposed to exert downward pressure upon the scraper-carrying beams, and means for adjusting said beams and for retaining them at various adjustments.

4. In a machine of the class described, a carrying-frame, rearwardly-extending downwardly-curved beams pivoted upon the side beams of the carrying-frame, a scraper carried by said beams, springs disposed to exert downward pressure upon said beams, adjust-



ing-levers pivoted upon the side beams of the frame, links connected pivotally with said levers and supporting the scraper-carrying beams, and means for securing the levers at  
5 various adjustments.

5. In a machine of the class described, the combination with a carrying-frame, of an obliquely-disposed adjustably-supported disk-

carrying frame and an adjustably-supported obliquely-disposed scraper; the disk-carry- 10 ing frame and the scraper being obliquely disposed in opposite directions.

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