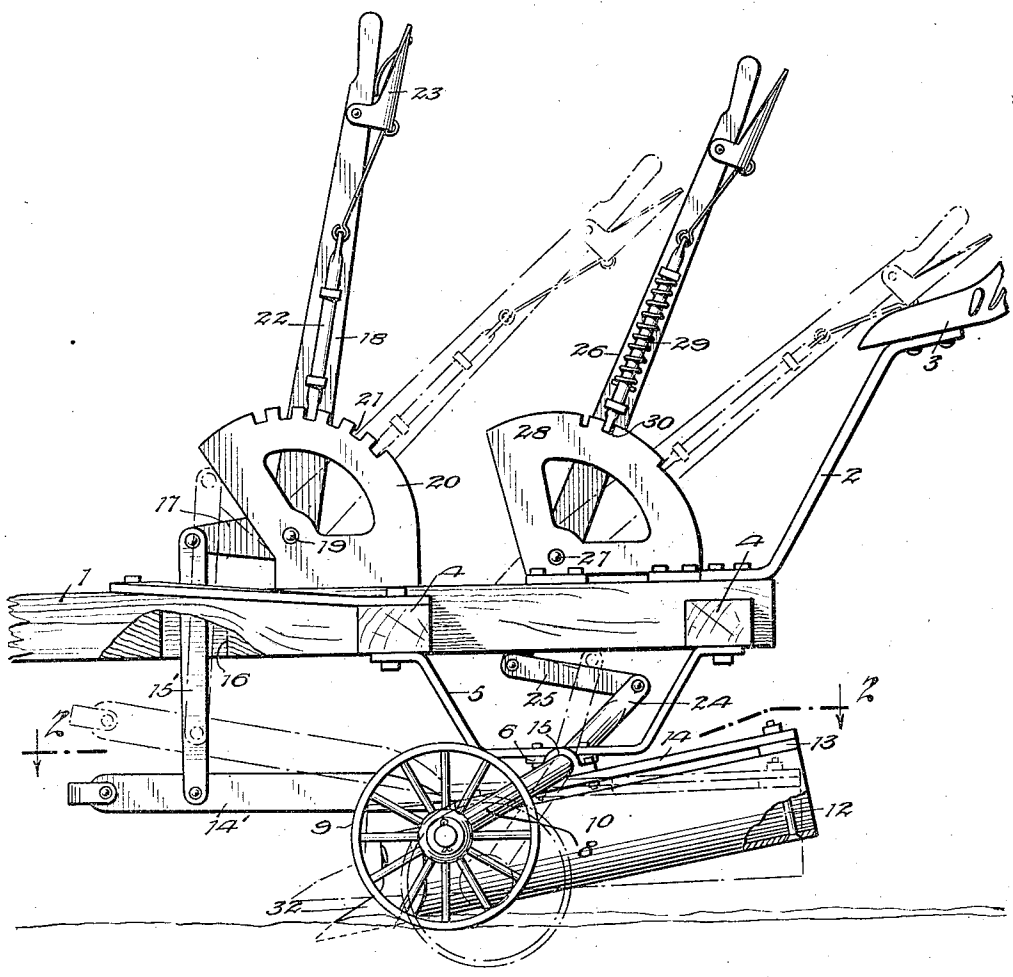
Sept. 9, 1924. 1,508,329

T. HORTON

MARKING MACHINE

Filed April 4, 1922 2 Sheets-Sheet 1

Fig. 1.



WITNESSES

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Fig. 2.

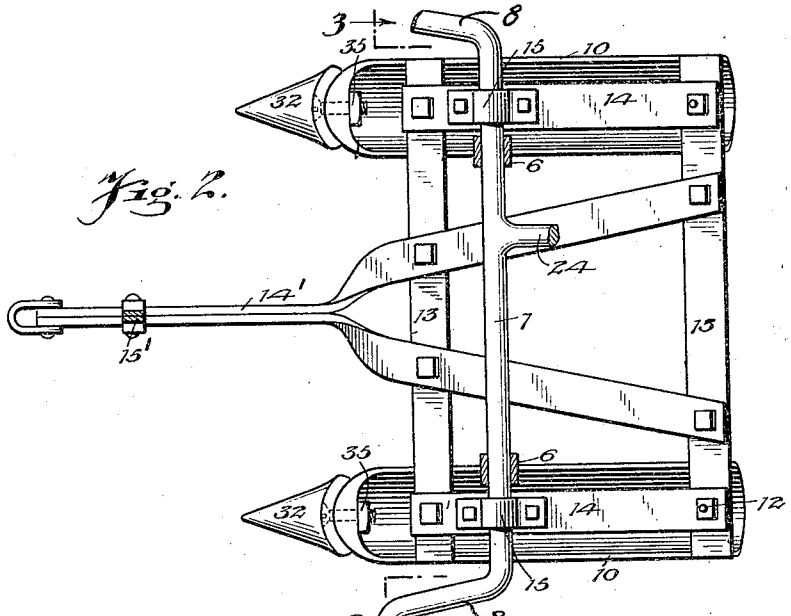


Fig. 3.

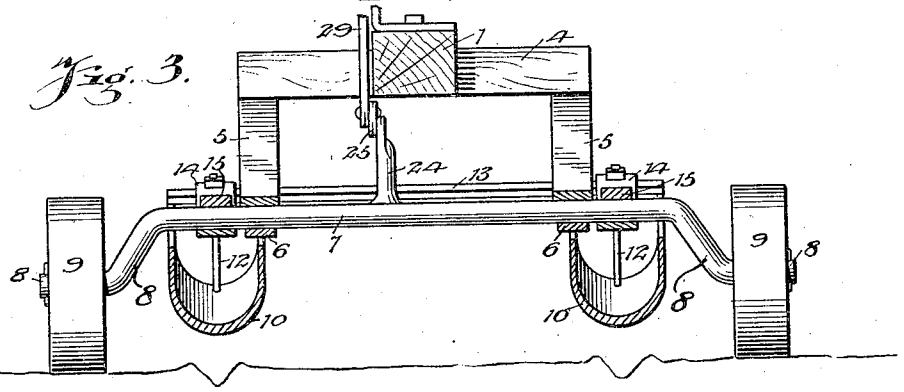
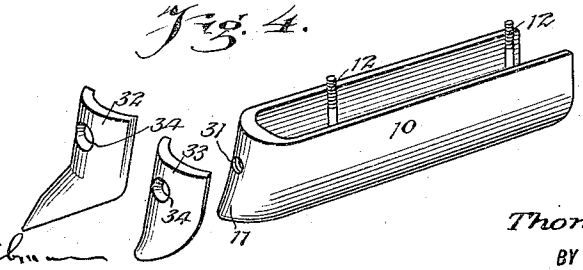


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

THOMAS HORTON, OF CHALLIS, IDAHO.

MARKING MACHINE.

Application filed April 4, 1922. Serial No. 549,459.

To all whom it may concern:

Be it known that I, THOMAS HORTON, a citizen of the United States, and a resident of Challis, in the county of Custer and State of Idaho, have invented a new and Improved Marking Machine, of which the following is a full, clear, and exact description.

This invention relates to improvements in marking machines, particularly to that type of marking machine commonly employed in marking the ground for irrigation purposes.

An object of the invention is to provide a machine of this character, in which novel means is provided for raising and lowering the marking shoes and for adjusting the angle of the marking shoes to regulate their depth of cutting or marking.

A further object is to provide a device of this character provided with a plurality of interchangeable plow points for the shoes so that the device may be used to mark ground to split alfalfa roots, or under various other conditions.

A still further object is to provide a device of this character, which will be simple and practical in construction, strong, durable and efficient in use, comparatively light in weight, easy to operate, and inexpensive to manufacture.

Still another object is to provide a device so constructed that the traction wheels will not fill the marks while turning, which can be turned around without piling up dirt, which is capable of being pulled across ditches, etc.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings:

Figure 1 is a view in side elevation of my improved marking machine:

Figure 2 is a top plan view of the marking shoes and their associated parts on the line 2—2 of Figure 1;

Figure 3 is a view in transverse section on the staggered line 3—3 of Figure 2; and

Figure 4 is a perspective view of one of the marking shoes and certain points which may be attached to the forward end of the shoe for marking various types of ground, etc.

Referring in detail to the drawings, I have used the reference numeral 1 to designate the longitudinally extending draw bar of the machine, upon the rear end of which, a bracket 2 is mounted carrying a seat 3. At spaced intervals along the draw bar I provide a pair of laterally extending cross beams 4 and the ends of the cross beams serve as supports for longitudinally extending hanging brackets 5 of substantially U-shape.

Bearing brackets 6 depend from the intermediate portions of the brackets 5 and provide mounting for a transverse crank shaft 7. Crank arms 8 are offset from the ends of the shaft 7 and provide mounting for traction wheels 9. These traction wheels preferably are formed with relatively wide tread surfaces and are spaced a considerable distance apart for a purpose which will be more fully hereinafter pointed out.

I have used the reference numerals 10, 10 to designate a pair of elongated substantially semi-cylindrical marking shoes, provided with plow points 11 at their forward ends. These shoes are each provided with a pair of upstanding threaded bolts 12 to which the ends of transverse frame bars 13 are attached. Longitudinal frame bars 14 bolted to the frame bars 13 carry bearing brackets 15 which are hung upon the crank shaft 7, whereby the shoes 10 extending in parallelism with the draw bar 1 are pivotally mounted.

It is of course necessary to provide some adequate means for tilting or angling the shoes to regulate their depth of cutting or marking, and to accomplish this object I provide a tongue 14′ extending forwardly from the transverse frame bars 13. A link 15′ pivotally connected to the tongue adjacent its forward end extends upwardly through a slot 16 in the draw bar 1 and is pivotally connected to one arm 17 of an angular lever 18. The lever 18 is fulcrumed, as indicated at 19, upon a sector plate 20 having notches 21 therein, said sector plate being mounted upon the draw bar. Forward swinging of the lever operates through the medium of the link 15′ and tongue 14′ to positively incline the noses of the marking shoes downwardly and dig them into the ground while rearward movement of the lever 18 operates as indicated in dotted lines in Figure 1 to swing the marking devices into horizontal position and out of engagement with the ground.

A spring pressed locking dog 22 upon the lever 18 is engageable selectively in any of the notches 21 to hold the shoes 10 at the desired angle and manually operable means, such as the handle piece 23, connected to the dog is utilized for forcibly lifting the dog out of the notches to permit swinging of the lever.

It has been heretofore pointed out that one object of the invention was to provide marking shoes mounted for tilting movement and another object to provide means for elevating these shoes off the ground. This second object is accomplished by providing mechanism which will swing the crank shaft 7 so that the crank arms 8 fulcrum upon the wheel axles to lift the entire machine clear of the ground. In accomplishing this purpose I provide a crank finger 24 adjacent the intermediate portion of the crank shaft 7, said crank finger being connected through the medium of a pivoted link 25 to the lower end of a lever 26 fulcrumed as indicated at 27 upon a second sector plate or bar 28. A manually controlled spring pressed locking dog 29 is engageable in notches 30 in the sector plate to prevent swinging of the lever. Rearward swinging of this lever to the position indicated in dotted lines in Figure 1 operates to raise the entire machine so that the shoes are lifted well off the ground, as indicated by the relative dotted line positions of the shoes and wheels in Figure 1.

It will be noted that by virtue of the fact that the shoes are capable of being lifted well off the ground and that the wheels are spaced well apart, turning of the machine will not operate to fill the furrows made by the shoes. Furthermore, the marking device may be dragged across ditches or other depressions without injury to the shoes.

The forward ends of the shoes 10 are provided with threaded openings 31 therein and a plurality of plow points 32 and 33 have openings 34 therein adapted to register with the openings 31 in the shoes 10. In marking an alfalfa field, or under various conditions other than marking plowed fields, either of these plow points may be bolted onto the forward ends of the shoes 10, the registering openings 34 and 31 serving to accommodate a securing device such as a bolt 35, indicated in Figure 2.

I have illustrated one of the preferred embodiments of the invention and it will be evident that numerous changes might be made in the general form and arrangement of the parts described without departing from the invention and hence I do not wish to limit myself to the precise details set forth, but shall consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. In a marking machine, the combination with a wheeled frame including a crank shaft, of a second frame pivotally supported by said shaft and including longitudinal and transverse frame members, marking shoes arranged below said longitudinal frame members and extending longitudinally thereof, means extending upwardly from said shoes and engageable with said longitudinal and transverse frame members for supporting said shoes in position, and means for tilting said second frame to vertically adjust said shoes.

2. In a marking machine, the combination with a wheeled frame including a crank shaft, of a second frame pivotally supported by said shaft and including longitudinal and transverse frame members, marking shoes arranged below said longitudinal frame members and extending longitudinally thereof, bolts adjacent the forward and rear ends of said shoes and extending upwardly therefrom and through said longitudinal and transverse frame members, and means for tilting said second frame to vertically adjust said shoes.

THOMAS HORTON.