May 31, 1949. A. R. BAKER 2,471,713

TRACTOR TYPE HAYRAKE

Filed Oct. 15, 1947 2 Sheets-Sheet 1

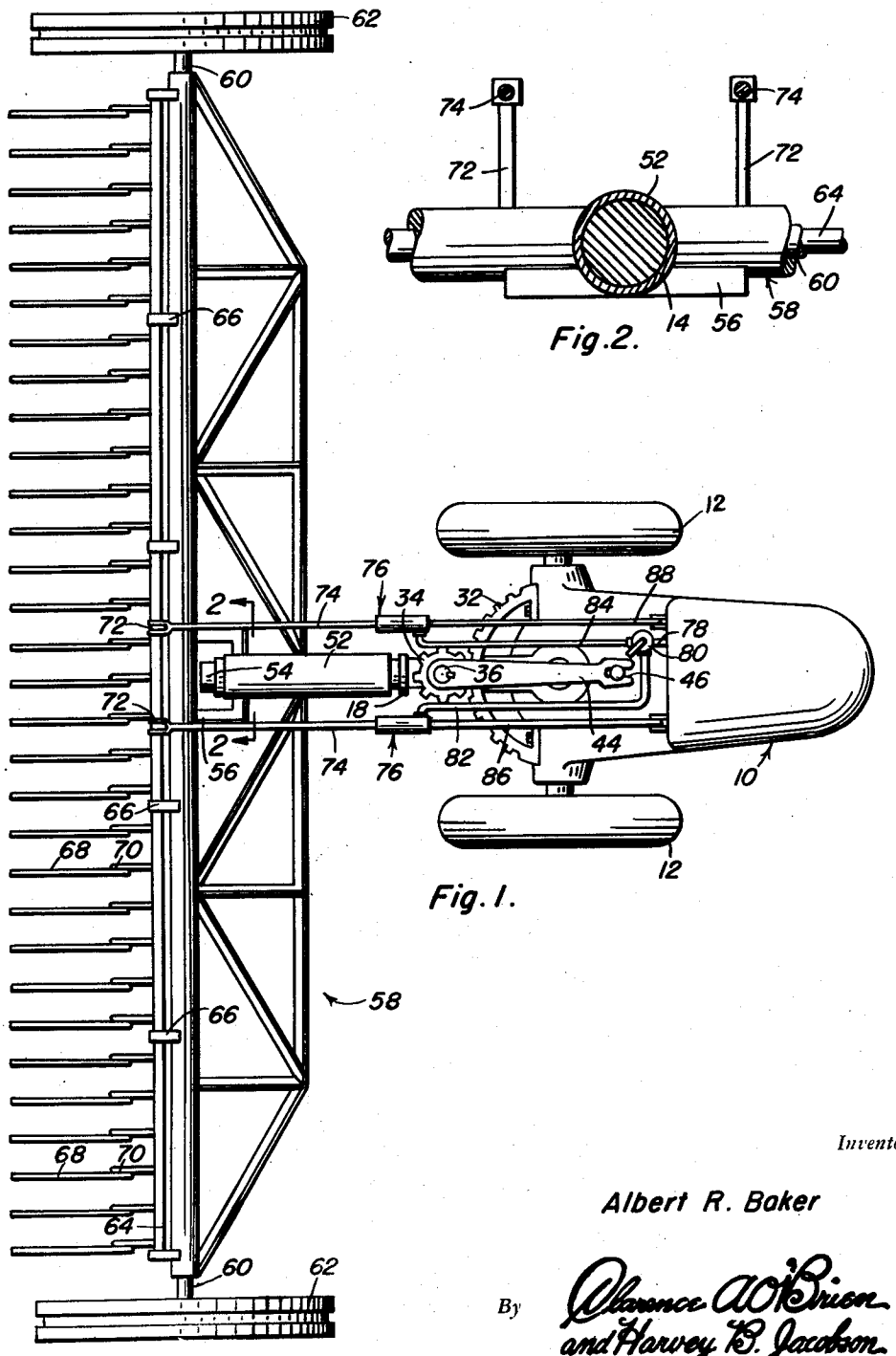


Fig. 2.

Fig. 1.

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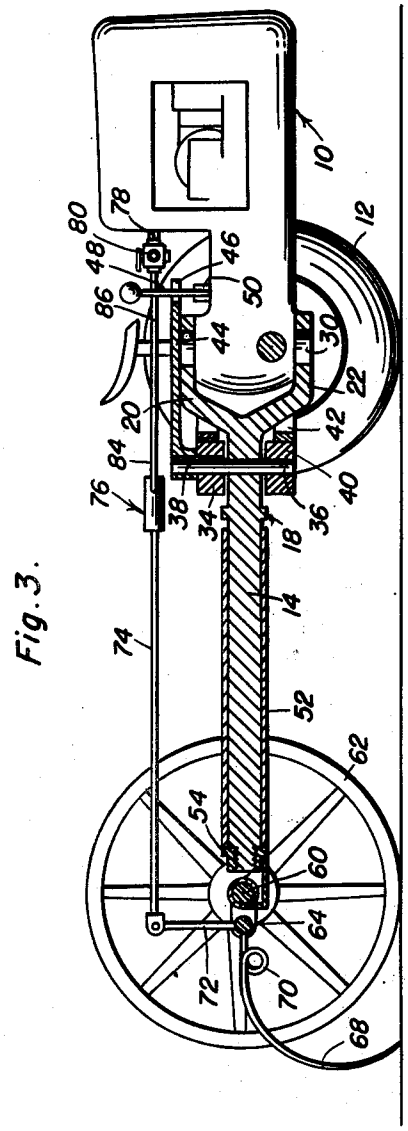


Fig. 3.

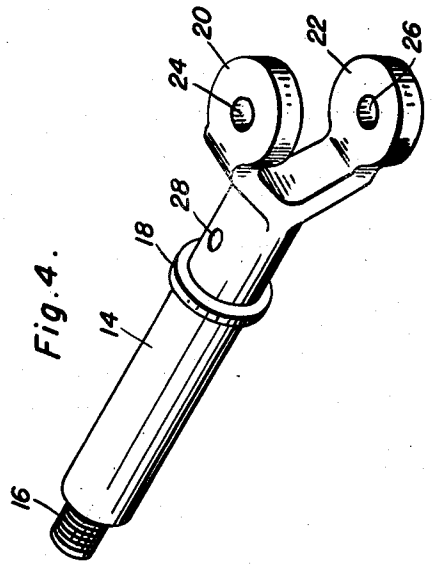


Fig. 4.

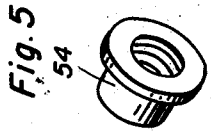


Fig. 5.

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UNITED STATES PATENT OFFICE

2,471,713

TRACTOR TYPE HAYRAKE

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Application October 15, 1947, Serial No. 779,885

1 Claim. (Cl. 56—27)

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This invention appertains to novel and useful improvements in farm implements, particularly those of the power-driven type.

An object of this invention is to easily rake or scrape various flora appurtenant to efficacious farming.

Another purpose of this invention is to provide means for carrying out the above mentioned function.

Another object of this invention is to provide a frame having means for pivoting the said frame to a prime mover, said pivoting means having a second pivot substantially normal to the longitudinal axis of the said first-mentioned pivot means and improved means for actuating said second-mentioned pivot means.

Another purpose of this invention is to provide adjustable cultivator means on said frame having fluid-actuated means for operation adjustably thereof.

Another purpose of this invention is to provide an attachment to be utilized in association with a tractor or the like whereby raking operations may be more easily performed.

Another purpose of this invention is to provide a relatively inexpensive device of the character described capable of many adjustments to suit the terrain and natural grade thereof.

Ancillary objects and features of novelty will become apparent to those skilled in the art, in following the description of the preferred form of the present invention, illustrated in the accompanying drawings, wherein:

Figure 1 is a plan view of one form of the invention showing the same utilized in association with a prime mover having the front wheels removed;

Figure 2 is a transverse sectional view of the invention shown in Figure 1 and taken on the line 2—2 thereof and in the direction of the arrows;

Figure 3 is a longitudinal sectional view of the invention shown in Figure 1;

Figure 4 is a perspective view of the bifurcated rods utilized in association with this invention; and

Figure 5 is a stop or collar which is detachably associated with the bifurcated rods.

Referring now in detail to the illustrated preferred form of the present invention, like reference characters are used throughout to indicate similar elements.

This invention has been conceived and developed to provide a device for more efficacious and dextrous farming operations. As illustrated,

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the present inventive concept shows a device which is utilized for raking. However, it is within the purview of the present invention to use various and sundry cultivator means for performing many operational steps upon farm lands and the like.

A vehicle 10 having wheels 12 and a prime mover (unshown) associated therewith is provided with an operative mechanism illustrating the inventive concept.

A rod 14 is provided with a reduced extension 16 having external threads thereon. A collar 18 is provided on the said rod 14 and is spaced from the said reduced portion 16. It is further noted that bifurcations 20 and 22 extend from a terminal portion of the said rod 14 and aligned apertures 24 and 26, respectively, are provided in each of the said bifurcations. An aperture 28 is positioned in the said rod 14 between the said bifurcations and the said collar or stop 18.

Reference to Figure 3 clearly discloses that the said rod 14 is pivoted to the said prime mover or vehicle 10 through the medium of a pin 30 extending therethrough and through the said apertures 24 and 26, respectively, in the said bifurcations.

Means for adjusting the said rod 14 about the said pin 30 as an axis is provided. This means is preferably a stationary gear segment 32 secured to the said prime mover 10 having a planetary gear 34 enmeshed therewith. This planetary gear 34 has a stub shaft or pivot pin 36 pinned thereto through the utility of a conventional pin 38. Of course, an idler gear 40 may be supplied beneath the said rod 14 and may be enmeshed with a second stationary gear 42. If found desirable, this idler gear 40 may also be pinned to the stub shaft 34 for driving purposes. It is further quite obvious from an inspection of Figure 3 that the said pin or stub shaft 36 extends through the aforementioned aperture 28 which is positioned in the said rod 14.

A link or actuation means 44 is also pinned to the said stub shaft 36 and has a slot 46 at one terminal portion thereof. A handle 48 is pivoted to the said prime mover 10 through utility of the bosses 50 and a suitable pivot pin (unshown). This handle 48 extends through the said slot 46 and it utilized for the purpose of selectively positioning the said planetary gear 34 relative to the stationary gear segment 32.

A sleeve 52 is rotatably positioned on the said rod 14 and is held in place by means of the stop or collar 54 which is received on the said reduced

portion 16 of the said rod 14. This sleeve 52 is secured to a suitable platform 56 which is secured to and forms a portion of a frame, generally indicated at 58.

This frame 58 is preferably of a truss formation and has suitable axles 60 associated therewith for the purpose of journaling wheels 62 at each terminal portion thereof.

A shaft 64 is journaled in a plurality of suitable brackets or bearings 66 positioned along the said frame 58. Operatively associated with the said shaft 64 is a plurality of resilient rake elements 68. The preferable construction of these rake elements (seen in Figure 3) is the utility of a single leaf spring having a coil 70 therein and a sharpened terminal portion thereon.

A number of arms 72 are secured to the said shaft 64 and a corresponding number of links 74 are pivoted thereto. Each of the said links 74 terminates in hydraulically actuated cylinder-piston constructions, generally indicated at 76. A suitable pump is provided in the prime mover 10 having a conduit 78 extending therefrom. This conduit has a three-way valve 80 associated therewith and the usual two pipes or hoses 82 and 84, respectively, extending therefrom. These hoses terminate in the piston-cylinder constructions 76 for the obvious selective actuation purposes. Upon proper manipulation of the valve means 80, the shaft 64 may be rotated, thereby raising and lowering the said cultivator means 68. Of course, a suitable pivoted link construction such as indicated at 86 may connect the fluid-actuation means 76 to the prime mover 10.

It will be noted that the cultivator means 68 may be pivoted about the shaft 64 as an axis, and also the frame 58 may be pivoted about the rod 14 as an axis, thereby compensating for variable sloping and graded terrain.

While there has been described and illustrated only a preferred form of the present invention, it is apparent that variations may be made without departing from the spirit thereof. Accordingly, limitation is sought only in accordance with the scope of the following claim.

Having described the invention, what is claimed as new is:

A farm implement comprising a vehicle, a rod pivoted at one end to said vehicle, a sleeve rotatively journaled on said rod having a frame secured thereto, a tool bar pivoted to said frame, means for adjustably positioning said frame including a gear secured to said vehicle, a pivot pin carried by said rod, a planetary gear mounted on said pin engaging said first-mentioned gear, means for rotating said tool bar including a link pivoted to said tool bar, fluid-actuated means for adjusting said link and manually operable means for operating said rod in a substantially horizontal plane including a link fixed at one end to said pivot pin, a handle pivoted to said vehicle and a lost motion connection attaching said handle to the opposite end of said last-mentioned link.

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