W. W. LEMMON.

FARM TRACTOR.

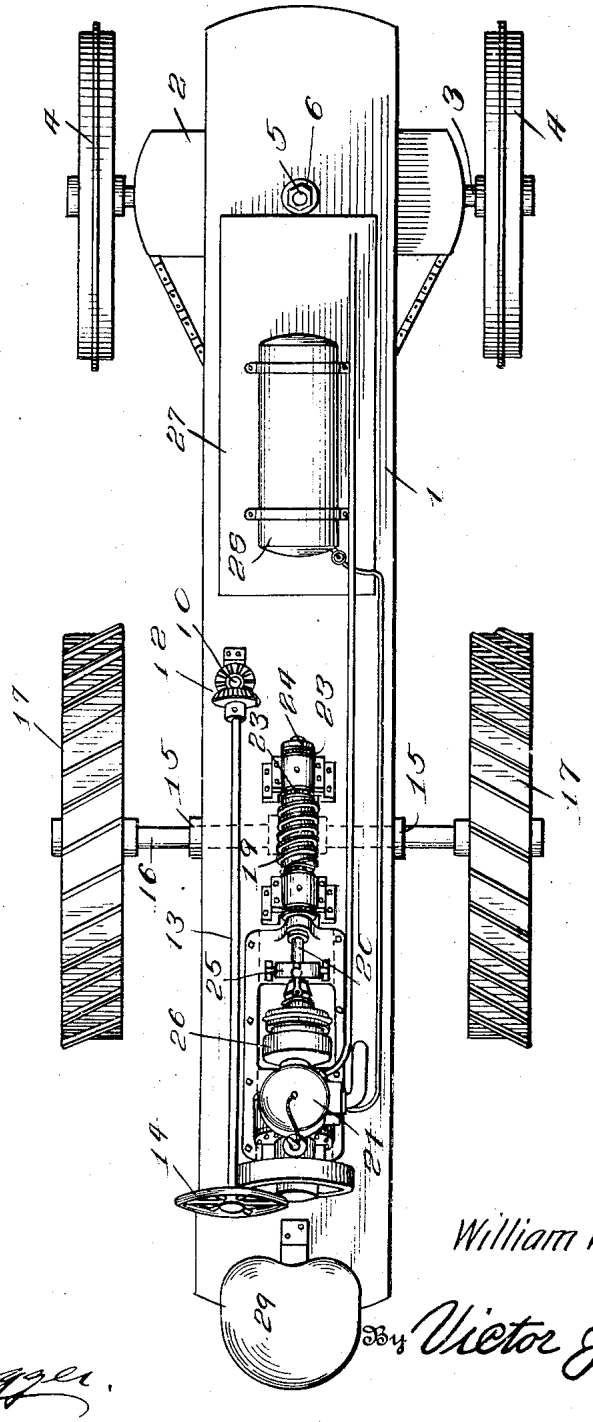
APPLICATION FILED NOV. 22, 1911.

1,109,429.

Patented Sept. 1, 1914.

3 SHEETS—SHEET 1.

Fig. 1.




Witnesses

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3 SHEETS—SHEET 2.

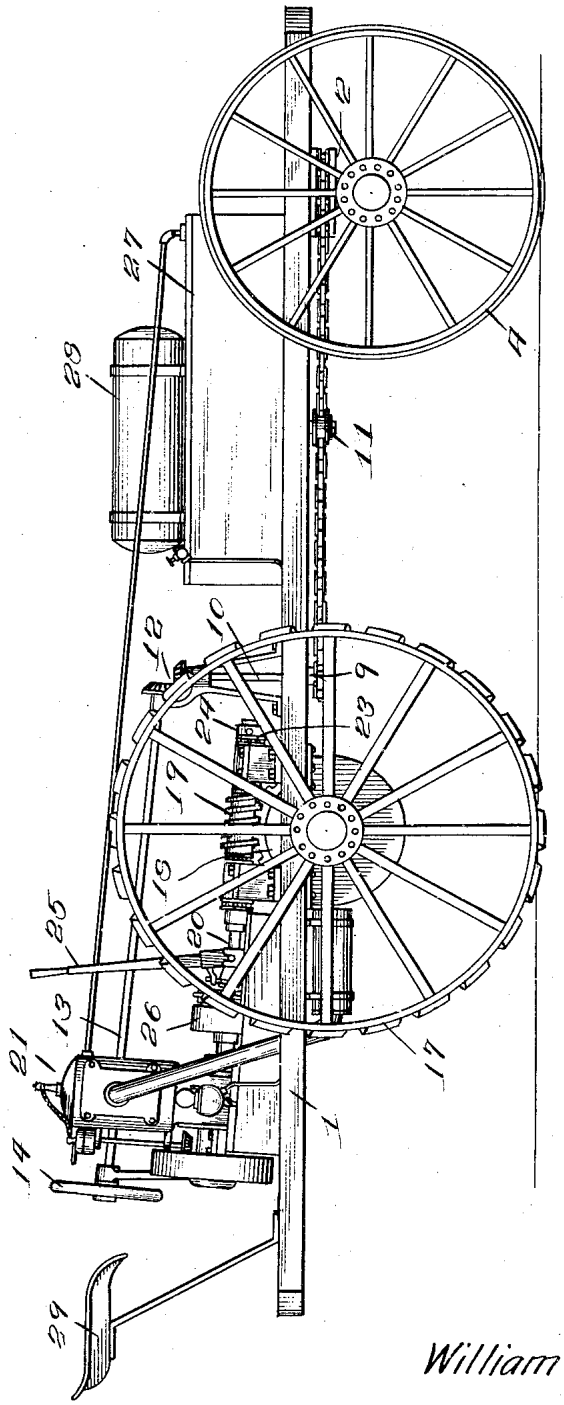


Fig. 2.

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3 SHEETS—SHEET 3.

Fig. 3.

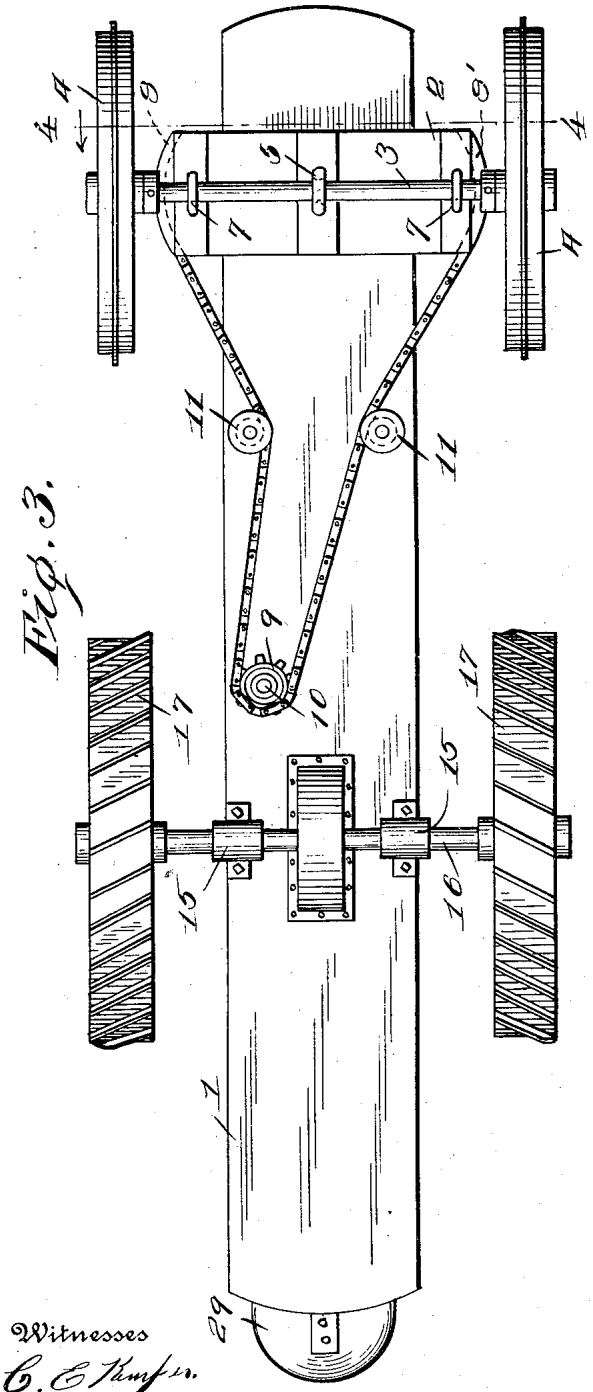


Fig. 5.

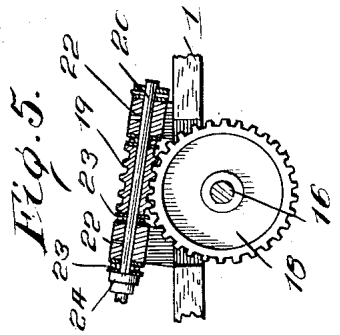
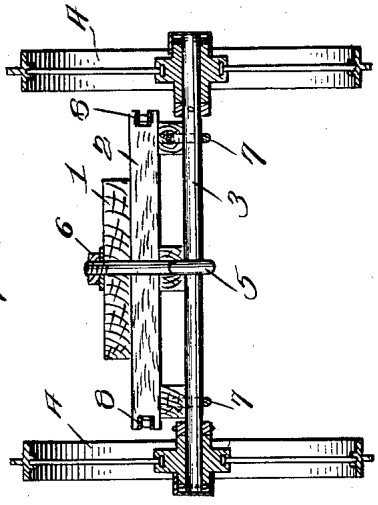


Fig. 4.



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# UNITED STATES PATENT OFFICE.

WILLIAM W. LEMMON, OF JUNIOR, LOUISIANA.

## FARM-TRACTOR.

1,109,429. Specification of Letters Patent. Patented Sept. 1, 1914.

Application filed November 22, 1911. Serial No. 661,802.

*To all whom it may concern:*

Be it known that I, WILLIAM W. LEMMON, a citizen of the United States, residing at Junior, in the parish of Plaquemines and State of Louisiana, have invented new and useful Improvements in Farm-Tractors, of which the following is a specification.

This invention relates to farm tractors, and it has for its object to produce a simple and inexpensive machine of this character which may be used in connection with various farming implements for plowing and cultivating the soil, as well as for other purposes for which traction power is required.

A further object of the invention is to produce a machine of the character described which will occupy little space so that it may be utilized between rows of growing plants, said machine being also so constructed that it may be conveniently turned and otherwise manipulated.

A further object of the invention is to produce a machine of the character described which may be conveniently steered, the steering gear being of simple and improved construction.

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 claim.

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 claim may be resorted to when desired.

In the drawings,—Figure 1 is a top plan view of a machine constructed in accordance with the invention. Fig. 2 is a side elevation of the same. Fig. 3 is a bottom plan view. Fig. 4 is a transverse sectional view taken on the line 4—4 in Fig. 3. Fig. 5 is a sectional detail view taken longitudinally through the worm gearing.

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

The bed or body 1 of the improved tractor is composed of a relatively narrow elongated plank, the dimensions of which may conveniently be given as 16 inches wide by 12 feet long and four inches in thickness, although these dimensions may be varied or departed from, as may be found desirable and convenient. The front end of the bed or body is supported upon a bolster 2 having rounded ends which project beyond the sides of the body 1, said bolster being supported on an axle 3 upon which the front wheels 4—4 are supported for rotation. The axle is secured upon the underside of the bolster by means including an eye bolt 5, the shank of which projects upwardly through an aperture in the bed or body 1, said shank being provided with a nut 6. The shank of the eye bolt constitutes a pivot for the bolster 2 of the axle, which latter may thus be swung so as to present the front wheels at various angles to the bed or body which may thus be steered. This manner of constructing and assembling the parts, while extremely simple, durable and inexpensive has been found to be thoroughly efficient for all practical purposes. It may be mentioned that in addition to the eye bolt 5, the axle is preferably connected with the bolster by fastening means such as staples or keepers 7.

Flexible members, such as the ends of a link belt 8 are attached to the front edge of the bolster from whence they are guided around the arcuate ends of said bolster which are preferably grooved, as shown at 8′, to accommodate the link belt. The latter is also guided around the sprocket wheel 9 fixed upon the lower end of a vertical shaft 10 which extends through the bed or body, being mounted in suitable bearings upon the same. Additional guide pulleys 11 for the link belt 8 are mounted upon the underside of the bed or body for the purpose of holding said link belt in proper engagement with the ends of the bolster. The upper end of the shaft 10 is connected by suitable gearing, such as bevel gears 12, with a longitudinally disposed shaft 13 having a hand wheel 14 whereby it may be rotated for the purpose of operating the steering mechanism. The underside of the bed or body is provided with pillow blocks or bearings 15 for the rear axle 16 which is mounted for rotation and which carries the traction wheels 17. Secured upon the axle 16 is a worm gear 18 which extends upwardly through the bed or body and meshes with a worm 19 on the main driven shaft 20 of a suitable motor 21 of the internal combustion or other suitable type which is mounted upon the bed

or body 1. The shaft 20, as will be seen, is disposed longitudinally of the machine so that the worm gear 19 will mesh with the gear 18 driving the latter and the traction wheels.

The main driven shaft of the motor or engine 21 is partly supported in boxes 22 containing ball bearings 23 that are engaged by thrust collars 24 upon the shaft at either side of said boxes, said ball or anti-friction bearings serving to take up end thrust in either direction and thus enabling the machine to be run in either direction and reversed without undue friction. The reversing gearing which is actuated by a lever 25 is contained in a casing 26 and is not shown in detail, reversing gearing of ordinary and well known construction being employed.

The bed of the machine supports in front of the engine water and fuel tanks 27 and 28. A seat 29 for the operator is supported in rear of the engine in a position where the hand wheel 14 of the steering gear may be conveniently reached and where the parts of the engine are likewise conveniently accessible.

The improved tractor may be used for operating plows, cultivators, seed planters and other agricultural implements, and it may likewise be utilized as a road engine for general traction use.

The small size and compact construction of the improved machine makes it particularly available for general farm use as well as the fact that the construction, while strong and durable, is extremely inexpensive, and the further fact that the machine may be conveniently steered and turned where tractors of a heavier type cannot be conveniently employed.

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

A farm tractor including a narrow elongated body, tractor wheels for supporting the rear end of the body, an engine mounted on said rear end of the body to drive the tractor wheels, a bolster pivoted to the front end of the body, and having arcuate grooved ends extending beyond the opposite sides of the longitudinal edges of the elongated body adjacent the front end thereof, steering wheels secured to the bolster, a vertical shaft extending through the body and having a sprocket wheel on its lower end, a linked belt engaging the sprocket wheel and terminally connected to and flush with the front edges of the bolster and adapted to be guided around the grooved ends thereof to turn the same, and a steering rod suitably geared to the upright shaft.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM W. LEMMON.

Witnesses:
JAMES WILKINSON,
JOSEPH COSSÉ.