

J. C. SIMMONS.  
 TRACTOR.  
 APPLICATION FILED APR. 16, 1917.

1,321,561.

Patented Nov. 11, 1919.

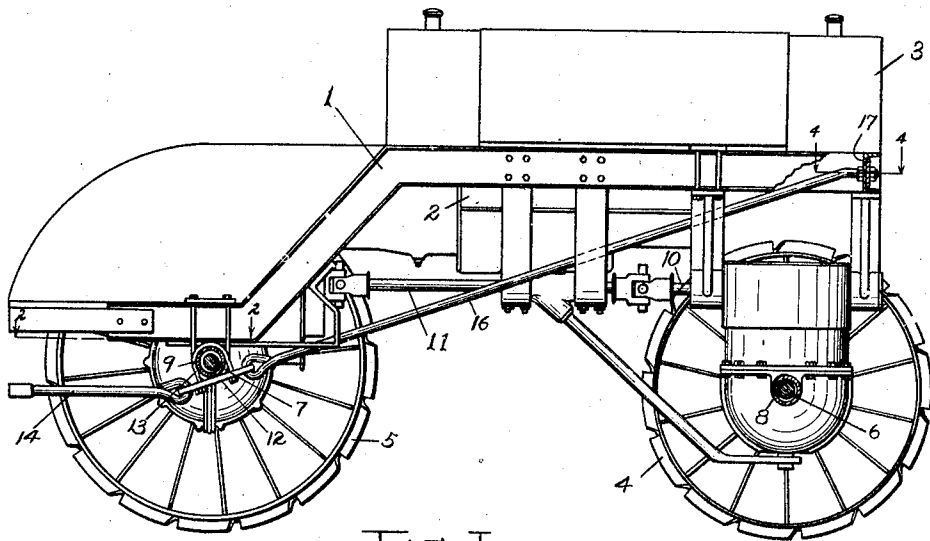


FIG. I.

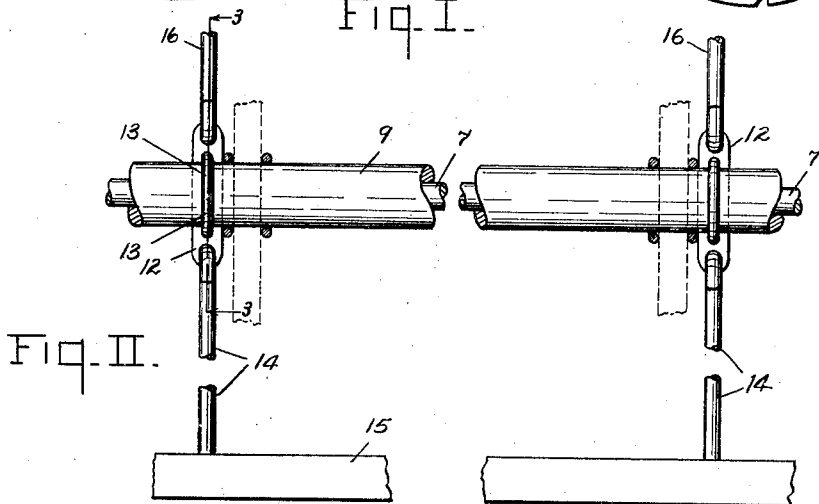


FIG. II.

FIG. III.

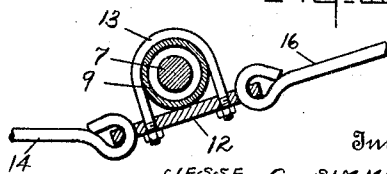
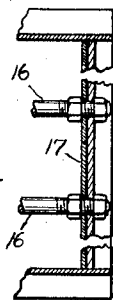


FIG. IV.



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Witnesses  
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# UNITED STATES PATENT OFFICE.

JESSE C. SIMMONS, OF BIG RAPIDS, MICHIGAN, ASSIGNOR TO THE FOUR DRIVE TRACTOR CO. INC., OF BIG RAPIDS, MICHIGAN.

TRACTOR.

1,321,561.

Specification of Letters Patent. Patented Nov. 11, 1919.

Application filed April 16, 1917. Serial No. 162,393.

*To all whom it may concern:*

Be it known that I, JESSE C. SIMMONS, a citizen of the United States, residing at Big Rapids, county of Mecosta, State of Michigan, have invented certain new and useful Improvements in Tractors, of which the following is a specification.

This invention relates to improvements in tractors.

My improvements are especially designed by me for embodiment in four wheel drive tractors of the type illustrated in my application for Letters Patent, filed Feb. 2, 1917, Ser. No. 156,084, and I have illustrated the same in the accompanying drawing as embodied in such a structure. My improvements are, however, capable of embodiment and desirable for use in other four wheel drive tractors.

The main objects of this invention are:

First, to provide an improved draft device for four wheel drive tractors.

Second, to provide an improved draft device for four wheel drive tractors in which the load hauled increases the traction of the front traction wheels.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure I is a detail elevation of a four wheel drive tractor embodying my improvements, the rear wheels being omitted, parts being shown in sections and other parts broken away in the interests of clearness of illustration.

Fig. II is a detail horizontal section on a line corresponding to line 2—2 of Fig. I, showing the relation of the draft members to the rear axle.

Fig. III is a detail section on a line corresponding to line 3—3 of Fig. II.

Fig. IV is a detail horizontal section on a line corresponding to line 4—4 of Fig. I, showing the connection for the draft or stress rods to the front end of the running gear frame.

In the drawing similar reference charac-

ters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, 1 represents the running gear frame, the front end of which is elevated to support the engine 2 and its housing 3 in proper relation to the other parts. The front and rear traction wheels 4 and 5 are provided with front axles 6 and 7, respectively. The front axle is provided with a housing 8 and the rear axle with a housing 9. The axles are driven through the propeller shafts 10 and 11, the driving connections not being illustrated or described in detail herein, as they form no part of my present invention.

My improved draft device comprises draft members or draft plates 12 which are disposed below and secured to the axle housing by means of the U-bolts 13. Thus mounted, the draft members lie below the plane of the axis of the rear axle and are of course substantially pivoted thereon, as will be seen by reference to Fig. III.

Draft bars 14 are connected to the rear ends of the draft members 12 and on the rear ends of these draft bars is a cross or evener bar 15 to which the connection for the machine or vehicle to be hauled is made. Draft or stress rods 16 connect the forward ends of the draft members 12 to the front gear frame 1, the connection being preferably made to the front cross piece 17 of the running gear frame, which is in a plane well above the horizontal plane of the front axle.

With this arrangement of parts the pull or load of the draft bars 14 serves to hold the front wheels downward and increase the traction thereof and adds greatly to the hauling capacity or power of the tractor.

I have illustrated and described my improvements in a simple and practical form in which I have embodied the same. I have not attempted to illustrate or describe other embodiments or adaptations as I believe the disclosure made will enable those skilled in the art to which my improvements relate to embody or adapt the same as circumstances may require.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a tractor, the combination of a run-

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ning gear frame, front and rear axles, front and rear traction wheels, driving means therefor, a housing for the rear axle, draft plates disposed below said rear axle housing, supporting clips for said draft plates embracing said axle housing, draft rods connected to the front end of said running gear frame above the front axle and to the front ends of said draft plates, a pair of draw bars connected to the rear ends of said draft plates, and a cross bar connected to said draw bars, the connection for the draft plates to the axle being such that a substantial portion of the draft is sustained by the said draft rods.

2. In a tractor, the combination of a running gear frame, front and rear axles, front and rear traction wheels, driving means therefor, a housing for the rear axle, a draft plate mounted below said rear axle housing, a draft rod connected to the front end of said running gear frame above the plane of the front axle and to the front end of said draft

plate, and a draw bar connected to the rear end of said draft plate, the draft plate being mounted so that a substantial portion of the draft is sustained by the draft rod.

3. In a tractor, the combination of a running gear frame, front and rear axles, front and rear traction wheels, driving means for said traction wheels; a draft member disposed below the axial center of the rear axle, and a draft rod connected to the front end of said draft member and to said running gear frame in a plane above the plane of the front axle, the parts being arranged so that a substantial portion of the draft is sustained by the draft rod.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

JESSE C. SIMMONS. [L. S.]

Witnesses:

FRED A. ASHLEY,  
W. L. LINDBLOM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."