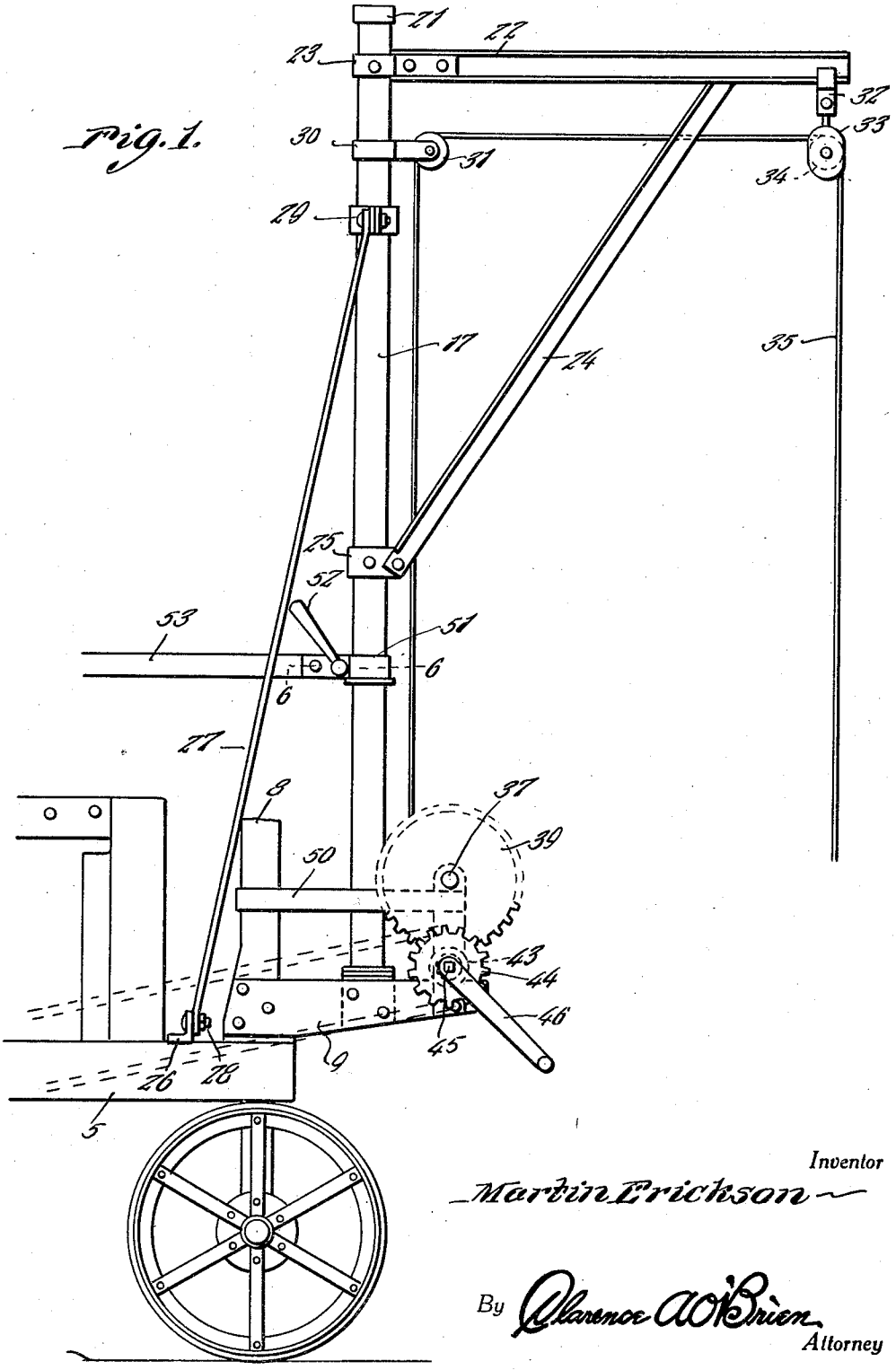
May 31, 1932. M. ERICKSON 1,860,774

GEARED HOIST FOR USE WITH FARM TRACTORS

Original Filed March 28, 1930 4 Sheets-Sheet 1

Fig. 1.



Inventor

Martin Erickson

By Clarence A. O'Brien

Attorney

May 31, 1932. M. ERICKSON 1,860,774

GEARED HOIST FOR USE WITH FARM TRACTORS

Original Filed March 28, 1930 4 Sheets-Sheet 2

Fig. 2.

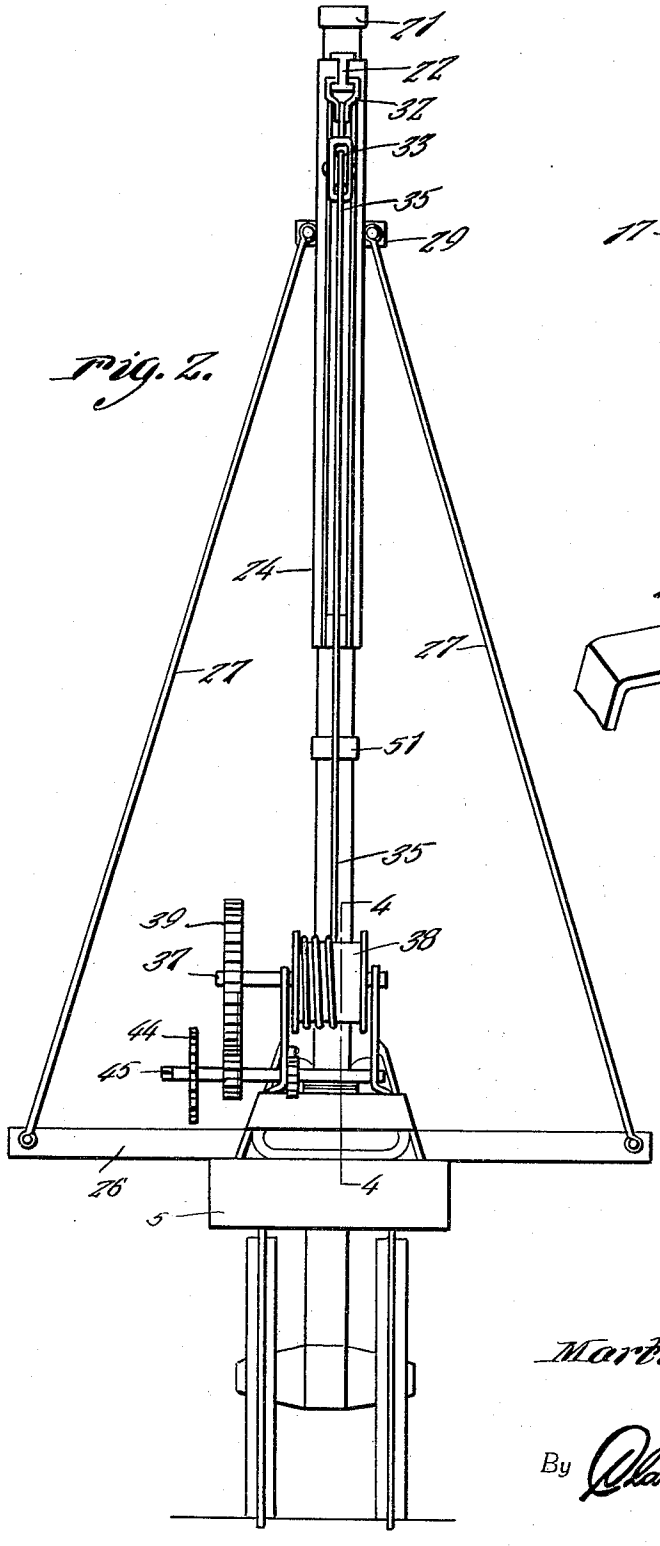


Fig. 7.

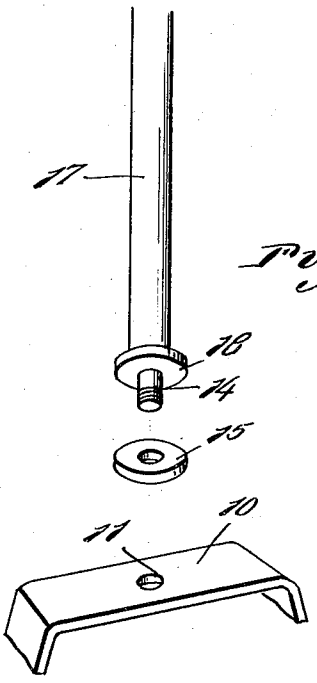
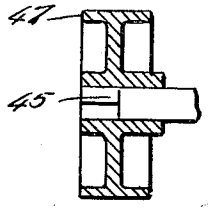


Fig. 8.



Inventor

Marvin Erickson

By Clarence A. O'Brien

Attorney

May 31, 1932. M. ERICKSON 1,860,774

GEARED HOIST FOR USE WITH FARM TRACTORS

Original Filed March 28, 1930 4 Sheets-Sheet 3

Fig. 3.

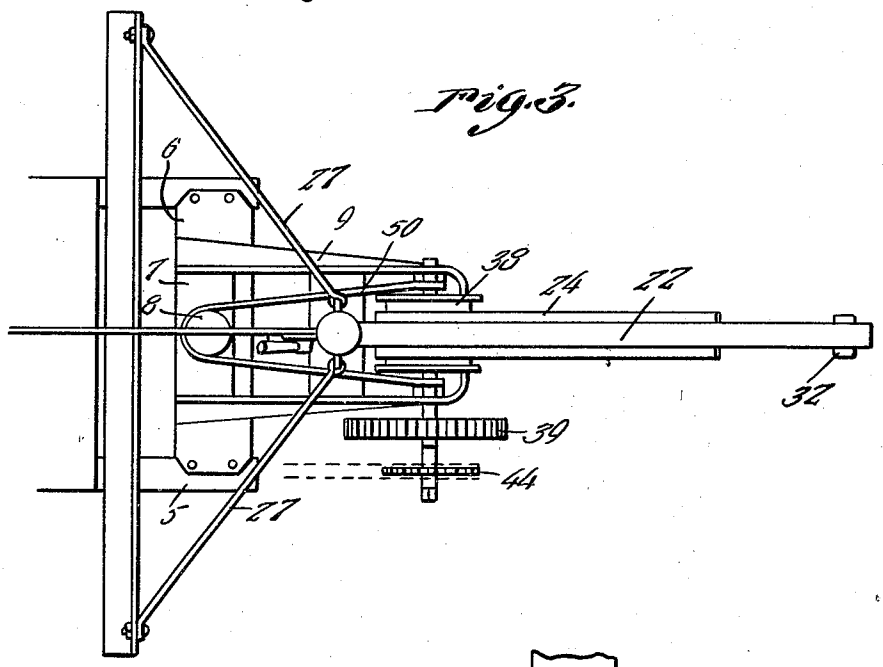
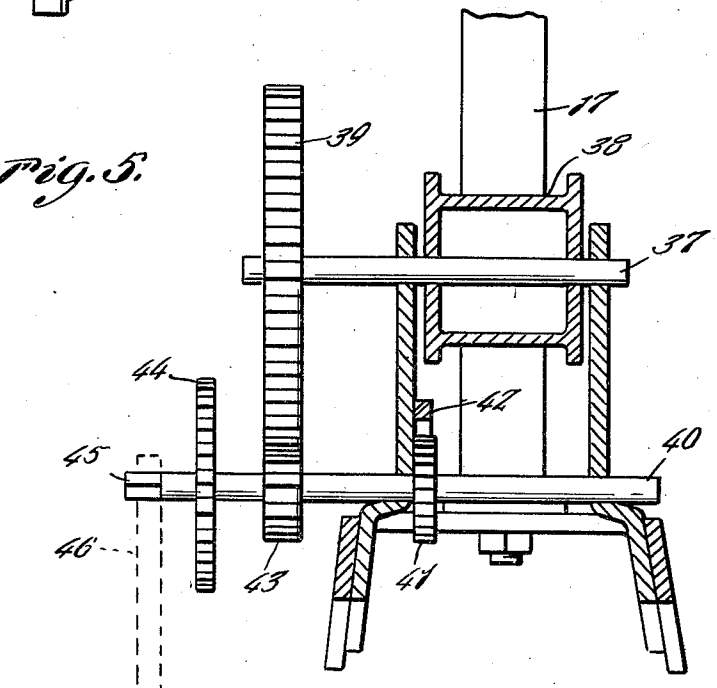


Fig. 5.



Inventor

Martin Erickson

By Clarence A. O'Brien

Attorney

May 31, 1932. M. ERICKSON 1,860,774

GEARED HOIST FOR USE WITH FARM TRACTORS

Original Filed March 28, 1930 4 Sheets-Sheet 4

Fig. 4.

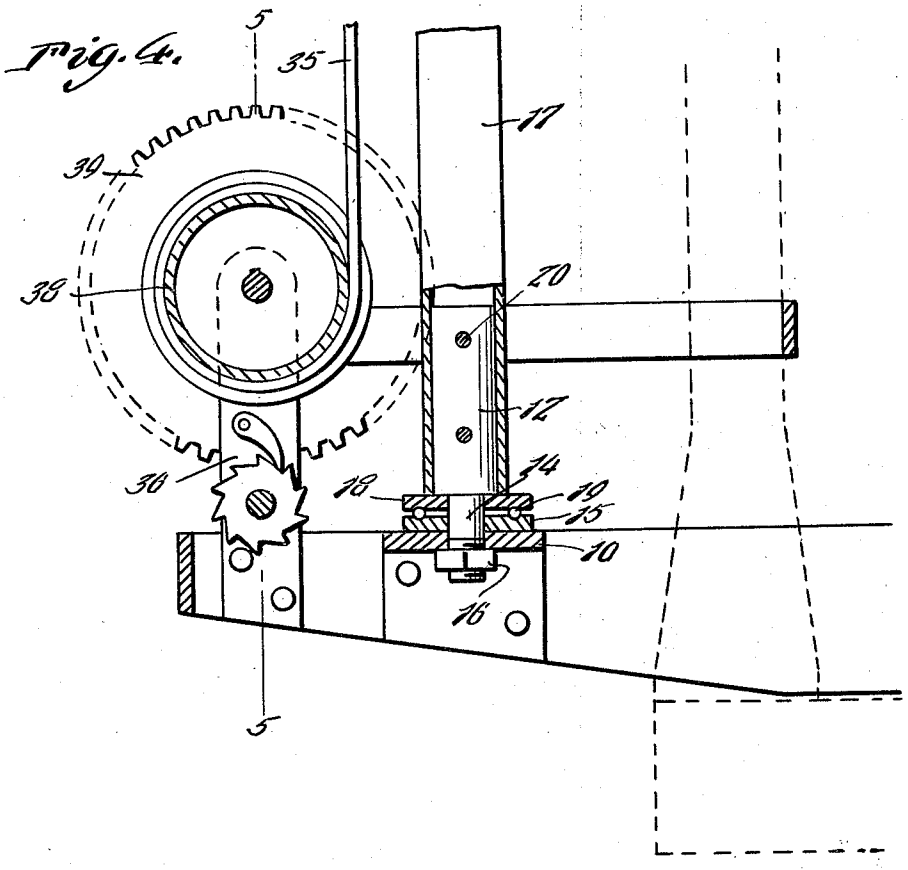
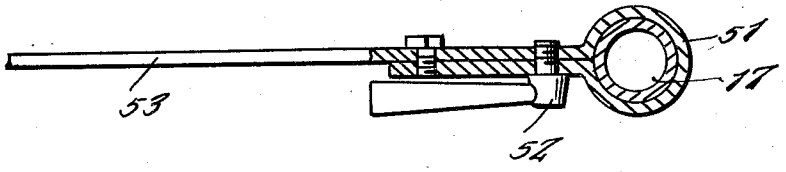


Fig. 6.



Inventor

Martin Erickson

By Clarence A. O'Brien

Attorney

Patented May 31, 1932 1,860,774

UNITED STATES PATENT OFFICE

MARTIN ERICKSON, OF VERMILION, SOUTH DAKOTA

GEARED HOIST FOR USE WITH FARM TRACTORS

Application filed March 28, 1930, Serial No. 439,682. Renewed January 30, 1932.

The present invention relates to a device for loading farm products in the field or other places with efficiency and adapted for use on a farm tractor with mechanical or hand power, and the general object of the invention resides in the provision of a geared hoist which is simple in construction, inexpensive to manufacture and install, thoroughly reliable in use, and otherwise well adapted to the purpose for which it is designed.

With the above and numerous other objects in view as will appear as the description proceeds, the invention resides in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter more fully described and claimed.

In the drawings:

Figure 1 is a side elevation of the hoisting mechanism embodying the features of my invention showing the same attached to the front end of the tractor,

Figure 2 is a front elevation thereof,

Figure 3 is a top plan view thereof,

Figure 4 is a vertical section therethrough taken substantially on the line 4—4 of Figure 2,

Figure 5 is a vertical sectional view taken substantially on the line 5—5 of Figure 4,

Figure 6 is a detail sectional view taken substantially on the line 6—6 of Figure 1,

Figure 7 is a perspective view of the bottom end of the pole showing parts disassembled,

Figure 8 is a detail sectional view showing a pulley on the operating shaft.

Referring to the drawings in detail it will be seen that the numeral 5 denotes the tractor across the front end of which is mounted a plate 6 on the central portion of which rises a block 7 having a post 8 rising from the center thereof. A U-shaped bracket 9 has its ends secured to the plate 6 and straddling the sides of the block 7 and extending forwardly in a horizontal position.

A plate 10 is disposed across the U-shaped member 9 and has a central opening 11. A post 12 has a stud bolt 14 at its bottom end extending through the opening 11 and a washer 15 is disposed about the stud bolt above the bolt plate and a nut 16 is engaged with the stud bolt below the plate 10.

A hollow pole 17 is received over the post 12 and has a disk 18 at the bottom end thereof circumjacent the stud 14. Ball bearings 19 are interposed between the disk 18 and the washer 15. The bottom end of the pole 17 is fixed to the post 12 by suitable cross pins or the like 20.

This hollow pole 17 rises for a distance and has a cap 21 at the upper end thereof. An I beam 22 is fixed to the upper end of the pole by suitable strap means 23 and projects horizontally and forwardly therefrom. Braces 24 of angle iron or the like are engaged with the forward portion of the I beam 22 and with an intermediate portion of the pole 17 by a strap collar 25 or the like.

An angle bar 26 is disposed across the frame 5 to the rear of the plate 6 and braces 27 are attached to the ends thereof as at 28 and project upwardly and are attached to a collar 29 about the upper portion of the post 17 below the strap means 23.

A bracket 30 is disposed on the pole 17 between the elements 23 and 29 and supports a pulley 31. A clamp 32 has dependent therefrom a pulley guard 33 in which is journalled a pulley 34. A cable 35 is trained over the pulleys 34 and 31.

Uprights 36 rise from the forward end of the member 9 and have a shaft 37 journalled in their upper ends and on this shaft is a drum 38 between the uprights and also a gear 39 at the end of the shaft 37. A shaft 40 is journalled through the lower portion of the upright and has a ratchet wheel 41 thereon between the uprights and adjacent one to be engaged by a pawl 42 pivotally mounted on one of the uprights.

A pinion 43 is on the shaft 40 to mesh with the gear 39. A sprocket 44 is mounted on the shaft 40 to be operated by a chain driven from the tractor. The end of the shaft 40 is squared as at 45 so that a hand crank 46 may be engaged thereon also that a pulley 47 may be engaged thereon for driving the shaft 40 by a belt from the tractor or the like. When the shaft 40 turns, of course, the shaft 37 is

turned for winding and unwinding the cable 35 thereon.

A U-shaped strap 50 has its bight disposed about the pole 8 with its ends secured to the upper portions of the uprights 37 so as to brace them securely. A clamp 51 is disposed about the pole 17 below the collar 25 and is operated by a hand lever 52. A lever 53 is attached to the clamp 51 so that the pole 17 may be rotated to point the beam 22 in the desired direction.

It is thought that the construction, operation, utility and advantages of this invention will now be quite apparent to those skilled in this art without a more detailed description thereof.

The present embodiment of the invention has been disclosed in considerable detail merely for the purposes of exemplification since in actual practice it attains the features of advantage enumerated as desirable in the statement of the invention and the above description.

It will be apparent that changes may be made in the details of construction, and in the combination and arrangement, without departing from the spirit or scope of the invention as hereinafter claimed or sacrificing any of its advantages.

Having thus described my invention, what I claim as new is:

1. A hoisting attachment for tractors comprising a cross plate for attachment to the front end of a tractor frame, a block on the central portion of the cross plate, a U-shaped bracket member having its ends affixed to the plate and straddling the block and fixed thereto and extending forwardly and horizontally therefrom, a plate across the intermediate portion of the bracket member, a pole rising from the plate and rotatably engaged therewith.

2. A hoisting attachment for tractors comprising a cross plate for attachment to the front end of a tractor frame, a block on the central portion of the cross plate, a U-shaped bracket member having its ends affixed to the plate and straddling the block and fixed thereto and extending forwardly and horizontally therefrom, a plate across the intermediate portion of the bracket member, a pole rising from the plate and rotatably engaged therewith, a beam extending laterally from the upper portion of the pole, a pulley mounted on the upper portion of the pole below the beam, a second pulley, means for mounting the second pulley below the end portion of the beam, uprights rising from the forward portion of the bracket member, a shaft in the upper ends of the uprights, a drum on the shaft, a cable windable over the drum and trained over the pulleys for rotating the shaft.

3. A hoisting attachment for tractors comprising a cross plate for attachment to the front end of a tractor frame, a block on the central portion of the cross plate, a U-shaped bracket member having its ends affixed to the plate and straddling the block and fixed thereto and extending forwardly and horizontally therefrom, a plate across the intermediate portion of the bracket member, a pole rising from the plate and rotatably engaged therewith, a beam extending laterally from the upper portion of the pole, a pulley mounted on the upper portion of the pole below the beam, a second pulley, means for mounting the second pulley below the end portion of the beam, uprights rising from the forward portion of the bracket member, a shaft in the upper ends of the uprights, a drum on the shaft, a gear on the shaft, a second shaft journalled through the lower portions of the uprights, a gear on the first shaft, and a pinion on the second shaft, and means for rotating the second shaft.

4. A hoisting attachment for tractors comprising a cross plate for attachment to the front end of a tractor frame, a block on the central portion of the cross plate, a U-shaped bracket member having its ends affixed to the plate and straddling the block and fixed thereto and extending forwardly and horizontally therefrom, a plate across the intermediate portion of the bracket member, a pole rising from the plate and rotatably engaged therewith, a beam extending laterally from the upper portion of the pole, a pulley mounted on the upper portion of the pole below the beam, a second pulley, means for mounting the second pulley below the end portion of the beam, uprights rising from the forward portion of the bracket member, a shaft in the upper ends of the uprights, a drum on the shaft, a gear on the shaft, a second shaft journalled through the lower portions of the uprights, a gear on the first shaft, and a pinion on the second shaft, and means for rotating the second shaft, pawl and ratchet means associated with the second shaft.

5. A hoisting attachment for tractors comprising a cross plate for attachment to the front end of a tractor frame, a block on the central portion of the cross plate, a U-shaped bracket member having its ends affixed to the plate and straddling the block and fixed thereto and extending forwardly and horizontally therefrom, a plate across the intermediate portion of the bracket member, a pole rising from the plate and rotatably engaged therewith, a beam extending laterally from the upper portion of the pole, a pulley mounted on the upper portion of the pole below the beam, a second pulley, means for mounting the second pulley below the end portion of the beam, uprights rising from the forward portion of the bracket member, a shaft in the upper ends of the uprights, a drum on the shaft, a gear on the

shaft, a second shaft journalled through the lower portions of the uprights, a gear on the first shaft, and a pinion on the second shaft, and means for rotating the second shaft, pawl and ratchet means associated with the second shaft, a pole rising from the block, a U-shaped strap having its bight about the pole and its end secured to the upper portion of the uprights.

6. A hoisting attachment for tractors comprising a cross plate for attachment to the front end of a tractor frame, a block on the central portion of the cross plate, a U-shaped bracket member having its ends affixed to the plate and straddling the block and fixed thereto and extending forwardly and horizontally therefrom, a plate across the intermediate portion of the bracket member, a pole rising from the plate and rotatably engaged therewith, a beam extending laterally from the upper portion of the pole, a pulley mounted on the upper portion of the pole below the beam, a second pulley, means for mounting the second pulley below the end portion of the beam, uprights rising from the forward portion of the bracket member, a shaft in the upper ends of the uprights, a drum on the shaft, a gear on the shaft, a second shaft journalled through the lower portions of the uprights, a gear on the first shaft, and a pinion on the second shaft, and means for rotating the second shaft, pawl, and ratchet means associated with the second shaft, a pole rising from the block, a U-shaped strap having its bight about the pole and its end secured to the upper portion of the uprights, a bar across the tractor frame to the rear of the cross plate, braces secured to the end of the bar and rising upwardly therefrom, and a collar clamped about the pole adjacent the upper end thereof to which the upper end of the brackets are secured.

7. A hoisting attachment for tractors comprising a cross plate for attachment to the front end of a tractor frame, a block on the central portion of the cross plate, a U-shaped bracket member having its ends affixed to the plate and straddling the block and fixed thereto and extending forwardly and horizontally therefrom, a plate across the intermediate portion of the bracket member, a pole rising from the plate and rotatably engaged therewith, a beam extending laterally from the upper portion of the pole, a pulley mounted on the upper portion of the pole below the beam, a second pulley, means for mounting the second pulley below the end portion of the beam, uprights rising from the forward portion of the bracket member, a shaft in the upper ends of the uprights, a drum on the shaft, a gear on the shaft, a second shaft journalled through the lower portions of the uprights, a gear on the first shaft, and a pinion on the second shaft, and means for rotating the second shaft, pawl and ratchet means associated with the second shaft, a pole rising from the block, a U-shaped strap having its bight about the pole and its end secured to the upper portion of the uprights, a bar across the tractor frame to the rear of the cross plate, braces secured to the end of the bar and rising upwardly therefrom, and a collar clamped about the pole adjacent the upper end thereof to which the upper end of the brackets are secured, a clamp collar about the pole with a lever projecting therefrom, and means for tightening the clamp collar about the pole.

In testimony whereof I affix my signature.

MARTIN ERICKSON.