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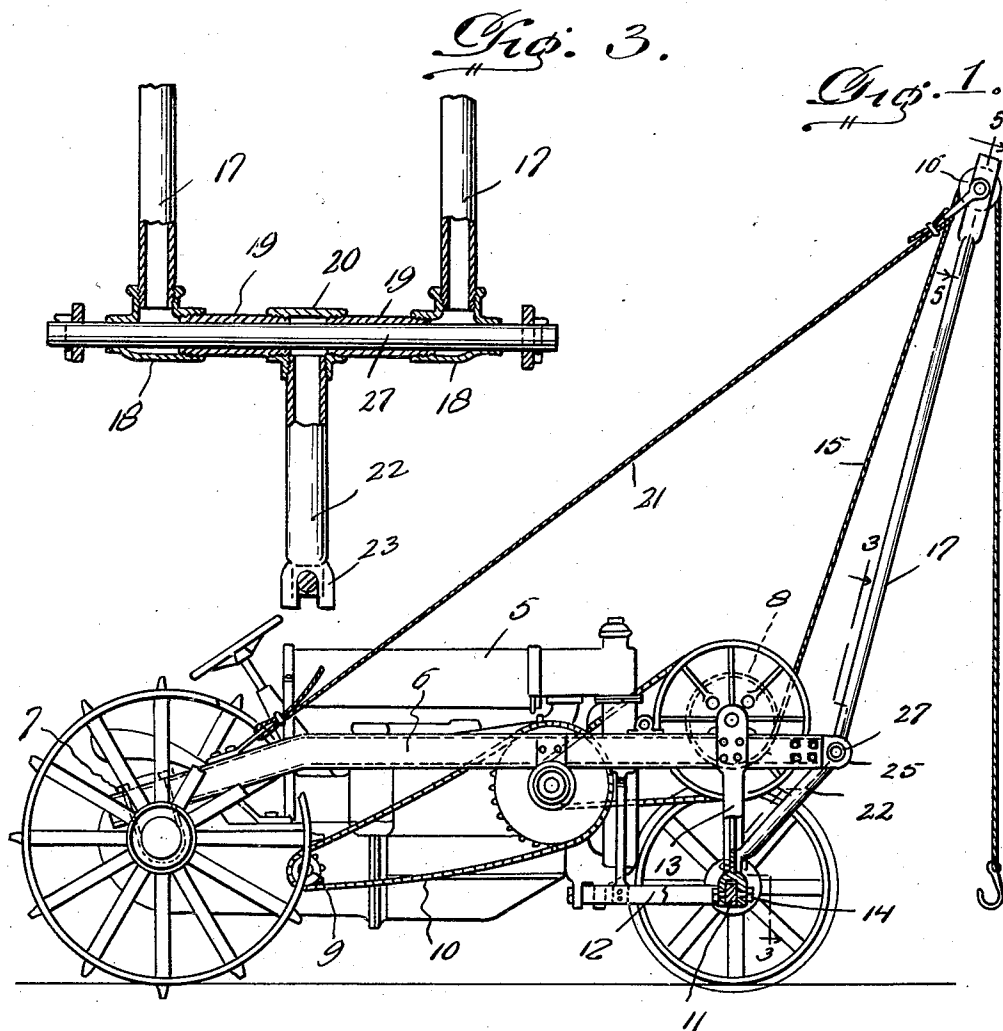
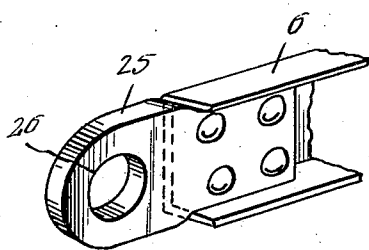
J. B. BARNETT

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CRANE ATTACHMENT FOR TRACTORS

Filed July 21, 1928

2 Sheets-Sheet 1



Inventor
John B. Barnett,

By *Stanley Burch*
Attorney

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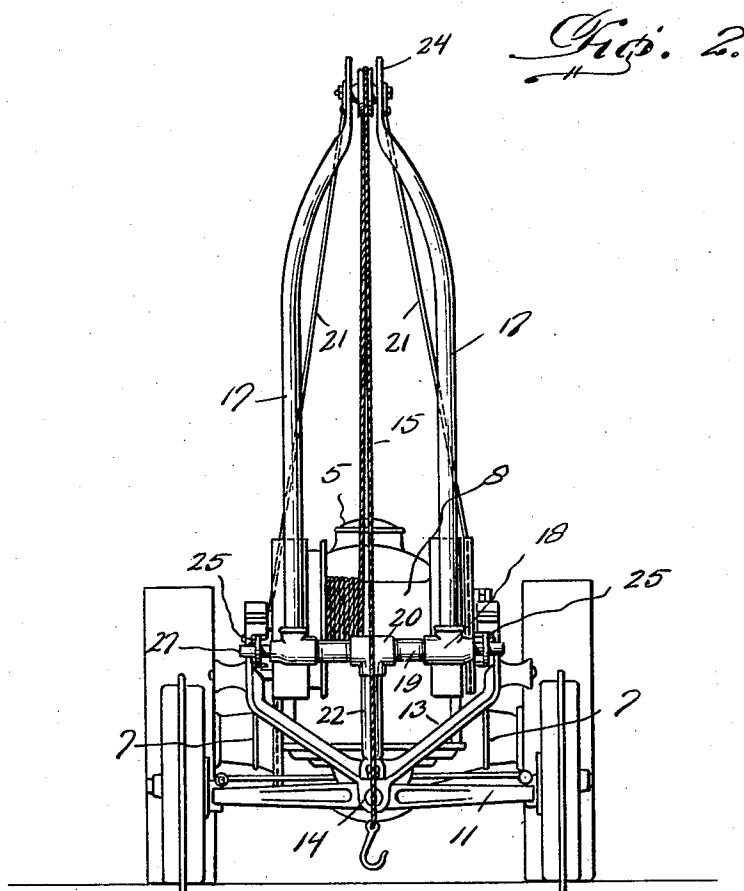
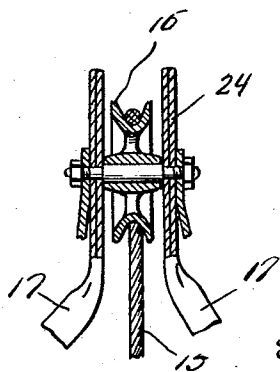
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Inventor
John B. Barnett,

By *Stanley Burch*

Attorney

UNITED STATES PATENT OFFICE

JOHN B. BARNETT, OF HOLLIDAY, TEXAS

CRANE ATTACHMENT FOR TRACTORS

Application filed July 21, 1928. Serial No. 294,470.

This invention relates to a crane attachment for tractors, and has more particular reference to means associated with a winch attachment for tractors to provide a crane for enabling use of the tractor in lifting and transporting heavy objects or articles.

The primary object of the invention is to provide a simple means for readily converting a winch attachment for tractors into an efficient crane.

A further object is to provide a device of the above kind including a boom which is simple and durable in construction and light in weight, and efficient means to mount the boom on the front of the winch attachment frame in position to cooperate with the winding drum of the winch.

Other objects will appear as the nature of the invention is better understood, and the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings:

Figure 1 is a view, partly in side elevation and partly in section, of a tractor equipped with a crane attachment embodying the present invention.

Figure 2 is a front elevational view thereof.

Figure 3 is an enlarged fragmentary vertical section of the boom and adjacent parts, taken on line 3—3 of Figure 1.

Figure 4 is an enlarged fragmentary perspective view of an end of one of the side frame members of the winch and the attached mounting bracket for the boom of the crane; and

Figure 5 is an enlarged fragmentary section on line 5—5 of Figure 1.

Referring more in detail to the drawings, 5 indicates a conventional form of tractor having a winch mounted thereon, which may be of any well known or preferred construction, and which embodies side frame members 6 disposed at opposite sides of the tractor and projecting forwardly beyond the front end of the latter, the rear ends of the frame members 6 being fastened to the rear axle housing of the tractor as at 7, and the winding drum 8 of the winch being mounted on

the projecting ends of the frame members 6 as shown. In the embodiment illustrated, the drum 8 is operatively connected to the laterally projecting power-take-off shaft 9 of the tractor by means including sprocket gearing 10, whereby the drum 8 may be operated by the engine of the tractor independently of the travel of the latter; the usual clutch and brake means, not shown, being provided for controlling transmission of power to the drum and for holding the latter from turning when idle. The front axle 11 is also shown as set forwardly of its normal position by extension mounting elements 12 and 13, thereby lengthening the wheel base of the tractor to prevent any tendency of the tractor to overturn and adapt the same to effectively take any severe strains involved when subjecting the winch to heavy duty. As shown, the element 13 consist of a supporting yoke having its upper ends fixed to the projecting front ends of the frame members 6 directly below the bearings for the shaft of drum 8, the front axle 11 being pivoted as at 14 to the yoke 13 for lateral tilting movement in the usual way.

In accordance with the present invention, an upright boom is mounted on the front ends of the frame members 6 directly in front of the drum 8, the cable 15 of said drum being trained over a guide pulley or sheave 16 journaled in the upper end of the boom, so that when the free end of the cable is engaged with a heavy object or article the winding drum may be operated for hoisting such object or article clear of the ground, for ready transportation to a desired point when the tractor is propelled to such point.

As shown, the boom consists of a pair of spaced tubular or pipe members 17 provided at their lower ends with T-fittings 18 which are transversely alined and connected by a pair of pipe sections 19 and an intermediate T-fitting 20 which may be loosely threaded together to permit forwardly swinging movement of the boom members 17 to adjust the inclination of the latter. The boom is inclined forwardly and sustained at the desired inclination by means of guy cables 21 attached to the upper ends of the boom members 17 and

adjustably clamped to the frame members 6 or other suitable parts near the rear end of the tractor. The branch of the fitting 20 is directed downwardly and has the upper end of an inclined brace arm 22 threaded therein, said brace arm being in the form of a pipe section having a flattened and slotted lower end 23 detachably bolted to the lower portion of the axle-supporting yoke 13. In this way the arm 22 assists in sustaining the load placed on the boom when the heavy object is lifted by the hoisting cable 15.

The upper ends of the boom members 17 are directed laterally toward and adjacent each other where they have parallel flattened terminals 24 between which the sheave 16 is journaled.

Fixed to and projecting forwardly from the front ends of the frame members 6 are supporting brackets 25 having transversely alined openings 26 in which are engaged and suitably retained the ends of a transverse horizontal supporting rod 27 which may consist of a pipe section removably inserted through the transverse connecting member embodying the T fittings 18 and 20 and pipe sections 19. The boom is thus readily and effectively detachably mounted at its lower end in position in front of the drum 8.

Thus it will be seen that when a tractor is equipped with a winch such winch may be readily converted into an efficient crane by the device contemplated by this invention.

Minor changes may be made without departing from the spirit and scope of the invention as claimed.

What I claim as new is:

Means for converting a winch attachment for tractors for use as a crane, wherein said winch attachment comprising side frame members having a winding drum mounted between the forward ends thereof, comprising brackets adapted to be fixed to the forward ends of said frame members, a crane boom adapted to be mounted at its lower end in said brackets and having a hoisting cable guide sheave journaled at the upper end thereof, said boom embodying a pair of spaced similar members offset laterally toward each other at their upper ends and having the guide sheave journaled therebetween, a tubular open-ended rigid connection between the lower ends of said boom members, and a supporting shaft extending through said connection and having its ends projecting laterally therefrom.

In testimony whereof I affix my signature.
JOHN B. BARNETT.