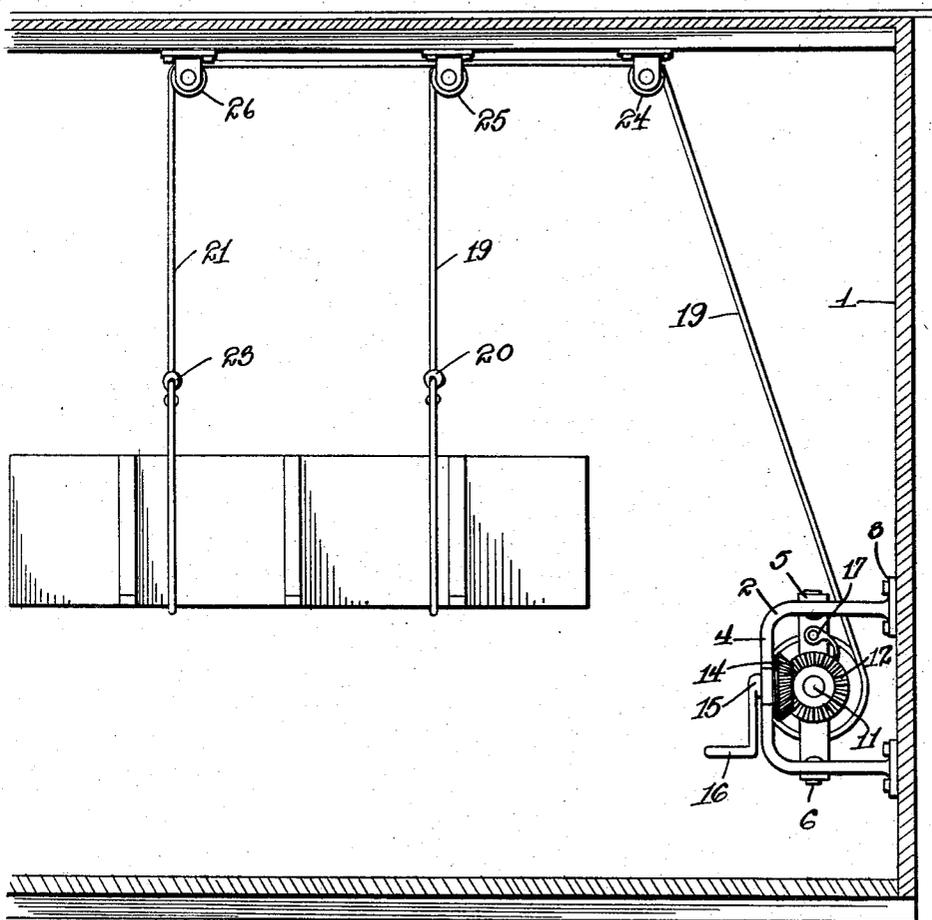


O. C. & A. D. WINTERS.  
WAGON BED HOIST.  
APPLICATION FILED MAY 6, 1913.

1,201,904.

Patented Oct. 17, 1916.  
2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

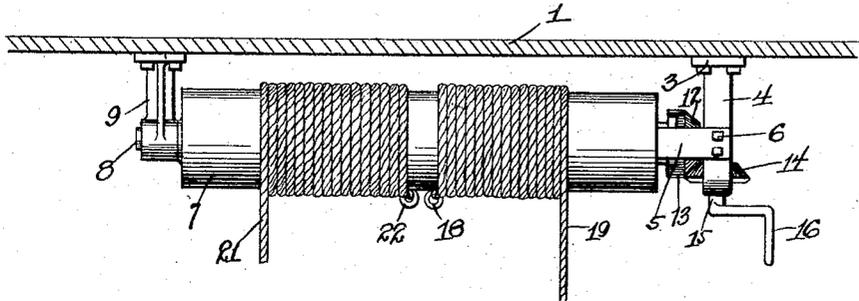


Fig. 3.

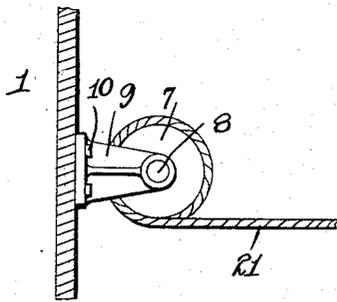
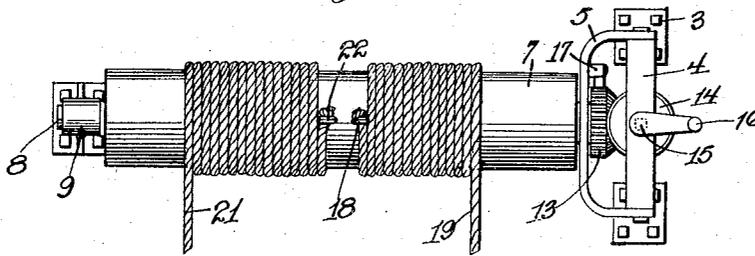


Fig. 4.

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# UNITED STATES PATENT OFFICE.

ORVAL C. WINTERS AND ARTHUR D. WINTERS, OF HUTSONVILLE, ILLINOIS.

## WAGON-BED HOIST.

1,201,904.

Specification of Letters Patent.

Patented Oct. 17, 1916.

Application filed May 6, 1913. Serial No. 765,818.

*To all whom it may concern:*

Be it known that we, ORVAL C. WINTERS and ARTHUR D. WINTERS, citizens of the United States, residing at Hutsonville, in the county of Crawford and State of Illinois, have invented certain new and useful Improvements in Wagon-Bed Hoists, of which the following is a specification.

This invention relates to an improved wagon bed hoist or lift of simple construction and so arranged upon a suitable structure as to retain the wagon bed in elevated position above the ground or floor, and beneath which the wagon may be drawn or stationed for replacing the bed thereupon.

A further object of the invention resides in the provision of a hoisting device wherein means is provided for operating and supporting a suitable drum or windlass, the said drum being arranged upon any suitable support and connected to the wagon bed through the medium of a plurality of ropes and pulleys for hoisting or lowering the same according to the rotation of the said drum.

A still further object of the invention contemplates the provision of a specially constructed bracket or frame within which one end of the drum or windlass is journaled, the said frame adapted to form a support for a plurality of gears and other mechanism whereby rotation of the drum is controlled through the operation of a suitable crank handle carried by one of the gears.

The above and additional objects are accomplished by such means as are illustrated in their preferred embodiment in the accompanying drawings, described in the following specification and then more particularly pointed out in the claim which is appended hereto and forms a part of this application.

In describing our invention in detail, reference will be had to the accompanying drawings, wherein like characters denote like or corresponding parts throughout the several views and in which:—

Figure 1 is a side elevation of a wagon bed hoist constructed in accordance with our invention, the wagon bed being shown in hoisted or elevated position; Fig. 2 is a top plan view of the drum and its operating means, the support therefor being shown in section; Fig. 3 is a front elevation of the parts illustrated in Fig. 2; and Fig. 4 is a side elevation of the said drum illus-

trating the detail construction of one of its bearings.

Referring now to the drawings, wherein is illustrated the preferred form of our invention, the numeral 1 designates a suitable structure within and upon which the wagon bed hoist or lifter is arranged, the said hoist comprising a suitable frame 2 adapted to be bolted or otherwise secured as at 3 upon one of the side walls of the said structure. The frame 2 comprises a substantially U-shape member 4 extending laterally from the structure 1 to which it is bolted as at 3, the said member 4 having a bracket 5 likewise secured thereto as at 6, the frame portion 4 and the bracket 5 being disposed or adapted to extend at right angles to one another for a purpose to be hereinafter fully described.

A drum or windlass 7, one end of which is provided with a spindle 8 journaled within a suitable supporting bracket 9 secured to the structure 1 as at 10, is mounted adjacent the frame 2 of the device, the opposite end of the said drum from that supported by the bracket 9 being journaled within the U-shape bracket or frame portion 5 of the frame, the spindle 11 at this end of the drum extending through the said bracket 5 and having keyed or otherwise secured thereto, a suitable bevel gear 12. A ratchet wheel 13 is formed integrally with the bevel gear 12, the teeth of the said gear terminating at their diverged extremity in the teeth of the ratchet wheel 13, thus forming the said gear and the said ratchet wheel from one and the same casting or piece of metal. A second bevel gear 14 is mounted upon a stud shaft 15 carried by the frame portion 4, the said wheel 14 being disposed at right angles to the gear wheel 12 to permit operation thereof, the support 4 to the said gear wheel 14 being so arranged or disposed with respect to the bracket or frame portion 5 as to effect a suitable bearing for the stud shaft 15 upon which the gear 14 is mounted. A crank handle 16 is formed upon the outer extremity of the stud shaft for imparting motion thereto, which motion is transmitted to the drum 7 through the medium of the gears 14 and 12 provided for that purpose. A pivoted pawl 17 is arranged upon the inner face of the frame portion 5, the said pawl adapted to engage the teeth of the ratchet wheel 13 for supporting the drum against reverse rotation after the same has

been rotated for hoisting the wagon wheel in a manner that will subsequently appear.

Connected to the drum 7 as at 18 is a guy or hoisting rope 19, the opposite end of the said rope adapted to pass around the wagon bed to be lifted or hoisted where it is secured or fastened to itself through the medium of a hook 20 adapted to engage the said rope above the wagon bed. A similar rope 21 is likewise connected to the drum 7 as at 22, the opposite end of the said rope 21 likewise adapted to pass around the wagon bed and be connected to itself directly over the said bed by means of a hook 23. A double pulley 24 is secured to the ceiling of the structure 1 over which the ropes 19 and 21 pass, the former passing over a second pulley 25 and depending therefrom to the wagon bed to which it is secured as above set forth, while the rope 21 likewise passes over a pulley 26 arranged in spaced relation to the said pulley 25 from which it depends to the wagon bed to which it is likewise secured near the opposite end from that to which the rope 19 is fastened.

Although we have shown and described a double pulley 24, we do not wish to limit ourselves to this provision as two separate pulleys may be easily as well employed without in any way affecting the utility or operation of the device.

Having described in detail the construction of the hoisting device, the operation of the same will now be fully set forth. The ropes 19 and 21 are first fastened to the wagon bed to be hoisted, by arranging the hooks 20 and 23 over the said ropes as illustrated in Fig. 1 of the drawings. After securing the wagon bed to the guy-ropes as above set forth, operation of the crank handle 16 will impart rotary movement to the drum or windlass 7 which will in turn wind the said ropes thereupon until the wagon bed is hoisted free from the ground or floor of the structure, within which the hoisting device is arranged.

It will be seen from the above, taken in connection with the accompanying drawings, that reverse rotation of the drum, during hoisting operation, is prevented by the pivoted pawl 17 provided therefor; that by the novel and peculiar construction and ar-

angement of the frame, bearings are formed for the stud shaft 15 and spindle 11 for effectually supporting the same in an operative manner; and that the arrangement of the pulleys upon the ceiling of the structure 1 is such as to elevate or lift the wagon bed in a level and properly balanced manner.

In reduction to practice, we have found that the form of our invention, illustrated in the drawings and referred to in the above description, as the preferred embodiment, is the most efficient and practical; yet realizing that the conditions concurrent with the adoption of our device will necessarily vary, we desire to emphasize the fact that various minor changes in details of construction, proportion and arrangement of parts may be resorted to, when required, without sacrificing any of the advantages of our invention, as defined in the appended claim.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent is:

In a device of the character described, the combination with a support means, a shaft associated therewith, and means carried by said support to carry one end of said shaft, of means to support the other end of said shaft, comprising a U-shaped member having its arms connected with said support and arranged in spaced relation to the adjacent end of said shaft, a second U-shaped member having its arms detachably connected to the arms of said first mentioned member and extending at a substantially right angle with respect thereto, the intermediate portion of said second U-shaped member having the adjacent end of said shaft extending therethrough, and the end of said shaft terminating short of said first mentioned member, a gear wheel on said shaft and disposed adjacent said first mentioned U-shaped member, and means carried by said first mentioned U-shaped member to drive said shaft.

In testimony whereof we affix our signatures in presence of two witnesses.

ORVAL C. WINTERS.  
ARTHUR D. WINTERS.

Witnesses:

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