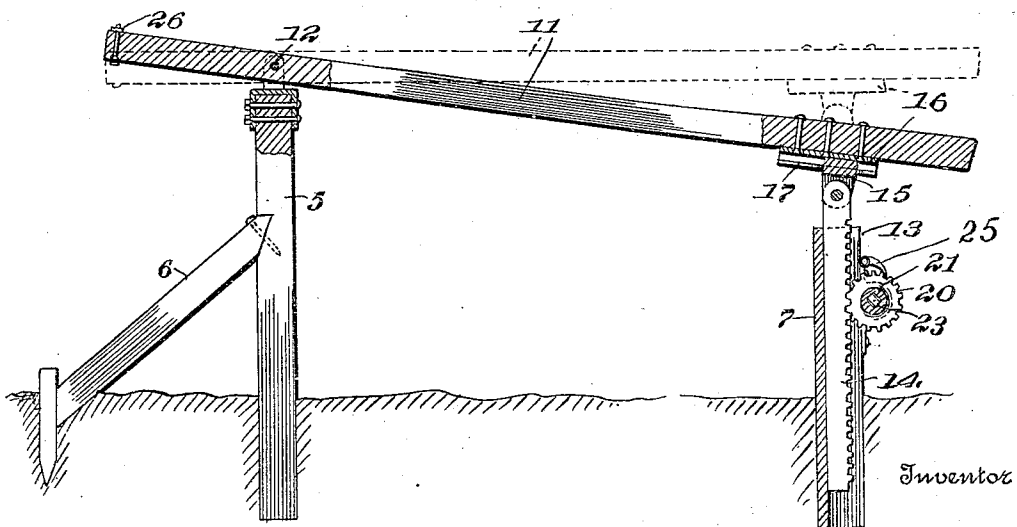


958,396.

Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

OTTO R. HENKE, OF GRANT, WYOMING.

LOADING AND UNLOADING DEVICE.

958,396.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed September 28, 1909. Serial No. 519,939.

To all whom it may concern:

Be it known that I, OTTO R. HENKE, citizen of the United States, residing at Grant, in the county of Laramie and State of Wyoming, have invented certain new and useful Improvements in Loading and Unloading Devices, of which the following is a specification.

This invention relates to loading and unloading devices, and has for its object to provide a strong, durable and thoroughly efficient device of this character, especially designed for elevating hay racks or wagon bodies above the running gear of a wagon, and positioning the rack or body on the running gear after the load has been removed therefrom.

A further object is to provide a loading and unloading device including spaced sets of standards of different heights, to the rear set of which are pivotally connected longitudinally disposed supporting bars, the latter being actuated to effect the raising and lowering of the hay rack or wagon body, by means of a rack and pinion secured to the front set of standards and operatively connected with the adjacent ends of the supporting bars.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a loading and unloading device constructed in accordance with my invention; Fig. 2 is a vertical longitudinal section.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved device forming the subject matter of the present invention comprises spaced rear posts or standards 5 having their lower ends embedded in the ground and

their upper ends reinforced and strengthened by the provision of inclined braces 6. Disposed in advance of the rear set of standards 5 are front posts or standards 7 also having their lower ends embedded in the ground and preferably of less height than the rear standards 5.

Secured to the upper ends of the standards 5 are clips 8 having perforations formed therein for the reception of bolts or similar fastening devices 9, said clips being provided with spaced upstanding ears 10 adapted to receive between them the adjacent longitudinally disposed supporting bars 11, the latter being pivotally mounted on the rear standards 5 by means of pivot bolts or pins 12 extending through the ears 10 and piercing the bars 11, as shown. The forward standards 7 are provided with vertically disposed recesses 13 opening through the front edges of the standards and in which are mounted for vertical movement, rack bars 14 having their upper ends provided with substantially T-shaped heads 15.

Secured to the lower longitudinal edges of the horizontal supporting bars 11, are guide plates 16 having inwardly extending flanges 17 which overlap the T-shaped heads 15 and thus allow a slight longitudinal play of the supporting bars 11 as the latter are raised and lowered.

Secured to the forward edges of the front standards 7 on opposite sides of the recesses 13, are strap irons 18 having their intermediate portions bent laterally to form bearings 19. Interposed between the strap irons 18 are pinions 20 having oppositely disposed extensions or sleeves 21 secured thereto and mounted for rotation in the bearings 19, said sleeves being provided with alined openings 22, preferably angular in cross section and adapted to receive a correspondingly angular transverse shaft 23, as shown.

Secured to one end of the angular shaft 23 is an operating handle or crank 24, so that by rotating the handle 24 the pinions 20 will engage the teeth on the rack 14 and thus elevate the supporting bars 11 so as to raise the rack or wagon body off of the running gear, said rack bars 14 being retained in elevated position by means of pawls 25 engaging the teeth on the pinions 20, as shown.

Secured to the rear ends of the longitudinal supporting bars 11, are substantially wedge shaped stop lugs or blocks 26 adapted to engage the rear end of the wagon body or

hay rack when unloading the latter from the running gear.

In operation, the transverse shaft 23 is first removed from the forward standards, after which the team is driven between the longitudinal supporting bars 11 from the front end of the device. As the team travels in the direction of the rear standards 5, the rack or wagon body will ride up on the inclined supporting bars 11 and thus elevate the front end of the wagon body from the running gear. The driver or operator then inserts the shaft 23 in the openings 22 in the pinions 20 and rotates said shaft so as to raise the front end of the longitudinal bars 14 and thus elevate the rear end of the wagon body or rack off of the running gear so that the team will be relieved of the weight of the load.

In order to position the wagon body or rack on the running gear, the vehicle is backed between the rear standards 5 until the rear bolsters are beneath the forward ends of the supporting bars 11, after which the operator lowers said bars so that the rack or wagon body will rest on the running gear, a further rearward movement of the vehicle causing the rack or wagon body to slide down the longitudinal bars onto the rear running gear, as will be readily understood.

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

1. A loading and unloading device including front and rear sets of standards, longitudinally disposed supporting bars pivotally connected with the rear set of standards, guides secured to the forward portions of the supporting bars and provided with inwardly extending flanges, rack bars mounted for vertical movement on the front standards and provided with heads slidably mounted between the flanges of the adjacent guides, and pinions mounted for rotation on said front standards and adapted to engage

the rack bars for raising and lowering the adjacent ends of the supporting bars.

2. A loading and unloading device including front and rear sets of standards, the front set of standards being provided with vertical recesses opening through the adjacent faces of said standards, longitudinally disposed supporting bars pivotally connected with the rear set of standards, rack bars slidably mounted in the recesses of the front standards and having a slidable connection with the adjacent ends of the supporting bars, strap irons secured to the front standards on opposite sides of the recesses therein and provided with bearings, pinions provided with sleeves engaging said bearings, and a shaft extending through the sleeves and provided with an operating handle for rotating the pinions to effect the raising and lowering of the supporting bars.

3. A loading and unloading device including spaced rear standards, clips secured to the upper ends of the rear standards and provided with upstanding ears, longitudinally disposed supporting bars pivotally mounted between the ears and provided with terminal stops, spaced front standards having vertical recesses formed therein, guides secured to the lower longitudinal edges of the supporting bars and provided with inwardly extending flanges, rack bars slidably mounted in the recesses of the front standards and having terminal T-shaped heads slidably mounted between the flanges of the guides, pinions mounted for rotation on the front standards, and a removable shaft extending through the pinions and provided with a crank for rotating the pinions to raise and lower the rack bars.

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

OTTO R. HENKE. [L. s.]

Witnesses:

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