No. 854,651. PATENTED MAY 21, 1907.

C. A. JOSE.

WAGON LOADER.

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Fig. 1.

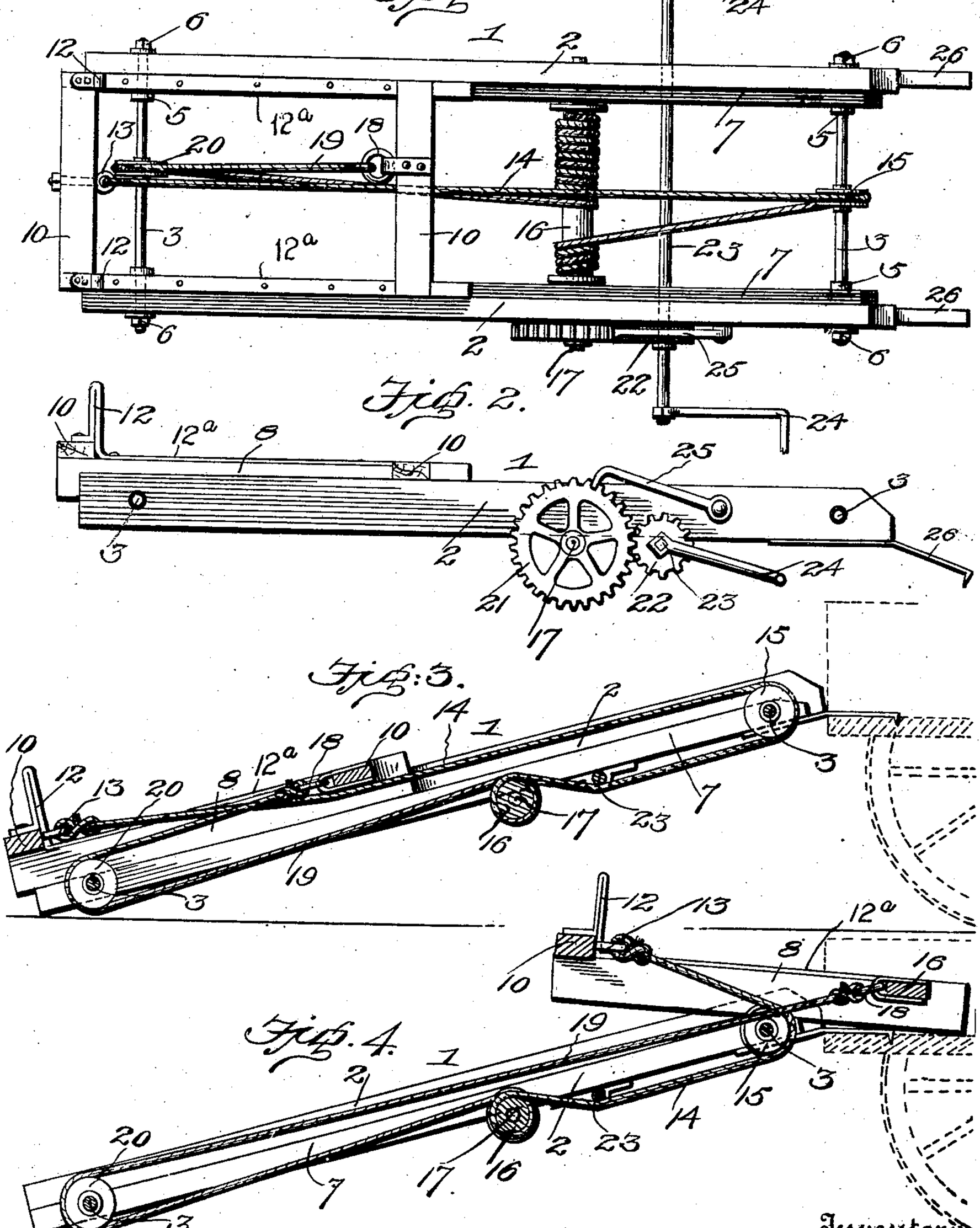

Fig. 2.

Fig. 3.

Fig. 4.

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WAGON-LOADER.

No. 854,651. Specification of Letters Patent. Patented May 21, 1907.

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To all whom it may concern:

Be it known that I, CHARLES A. JOSE, a citizen of the United States, residing at Argyle, in the county of Marshall and State of Minnesota, have invented certain new and useful Improvements in Wagon-Loaders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in wagon loaders.

The object of the invention is to provide a device of this character by means of which heavy articles may be quickly and easily loaded into and unloaded from a dray or wagon.

A further object is to provide a device of this character which will be simple, strong and durable in construction, efficient in operation and adapted for raising or lifting heavy articles.

With the above and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings:—Figure 1 is a plan view of a loading device constructed in accordance with the invention; Fig. 2 is a side view of the same; Fig. 3 is a longitudinal sectional view of the same and the rear of a wagon, showing the position of the parts when ready for use; and Fig. 4 is a similar view, showing the movable carriage of the loader elevated to the position it assumes when discharging a load that has been lifted thereby.

Referring more particularly to the drawings, 1 denotes the loader, which preferably consists of a pair of longitudinally disposed bars 2, which are connected together and spaced apart near their opposite ends by means of rods or bars 3, which also serve as shafts upon which are mounted guide pulleys, the object of which will be hereinafter described. On the bars or rods 3 adjacent to the inner sides of the bars 2 are arranged stop collars 5, by means of which the bars 2 are spaced apart. On the outer threaded ends of the rods 3 are adapted to be screwed clamping nuts 6, by means of which the bars 2 are firmly held together.

Bolted or otherwise secured to the inner sides of the bars 2 are longitudinally disposed track bars 7, upon which are adapted to slide a truck or carriage, which is here shown and preferably consists of longitudinally disposed side bars 8 which are connected together near their opposite ends by cross-bars 10. To the upper edges of the bars 8 and the lower cross bar 10 is secured upwardly-projecting guard arms 12, by means of which the load is held in place on the truck or carriage. The extensions 12ª of the guards are secured to the bars 8 and extend from the lower to the upper cross-bar and serve to shield the bars from abrasion and wear, and also to reinforce them, and by disposing the lower cross-bar upon the upper edges of the side bars, and securing the guards thereto, the latter are materially braced and strengthened, and are prevented from bending rearwardly from strains.

Arranged in the lower cross bar 10 of the carriage is an eye-bolt 13, with which is connected one end of a hoisting cable 14, said cable passing around a pulley 15 which is revolubly mounted on the upper cross rod or bar 3 of the loader frame. The cable 14 after passing around the pulley 15 extends to and is connected with a winding drum 16 mounted on an operating shaft 17 journaled in suitable bearings on the lower sides and near the upper ends of the bars 2, as shown. To the upper cross bar 10 of the truck or carriage is secured a ring 18, with which is connected one end of a lowering cable 19, said cable passing around a guide pulley 20 journaled on the lower cross rod 3 of the loader frame. The cable 19 after passing around the pulley 20 is connected with and adapted to be wound upon the drum 16 on the operating shaft 17. The cable 19 is connected to the opposite end of the drum from the cable 14, said cables being also adapted to be wound upon the drum in opposite directions, so that when one cable is wound up, the other will be unwound, as will be understood.

Mounted on one end of the shaft 17 is a spur gear wheel 21, with which is adapted to be engaged a spur gear pinion 22 mounted upon a drive shaft 23, said shaft being mounted in suitable bearings on the under side of the bars 2 adjacent to the shaft 17. The ends of the shaft 23 project beyond the sides of the loader frame and have secured thereto operating cranks 24, by means of which the

shaft 23 and the winding drum 16 are turned in one direction or the other to wind and unwind said cables, thereby raising or lowering the truck or carriage and the load thereon. Pivotally mounted on the side of one of the bars 2 adjacent to the gear 21 is a pawl 25, which is adapted to be engaged with the teeth of the wheel 21 to lock the same and the drum 16 against movement.

When it is desired to unload heavy articles from a wagon or to lower the same from an elevated position, the carriage is drawn upwardly in the manner hereinbefore described until the same is in a horizontal position. The load or article to be lowered is then placed on the carriage and the latter tipped back upon the track bars. The shaft 23 is then operated to unwind the lifting cable and to wind up the lowering cable, which will draw the carriage down over the track bars and thus lower the article to the ground. The carriage frame when being thus lowered is held against slipping or too rapid movement by means of the gradual unwinding of the lifting cable from the drum, as will be understood.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, as defined by the appended claim.

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

In a loading device, the combination with a supporting frame, having longitudinally-disposed side bars, and track bars secured to the side bars, of a carriage slidably mounted upon the track bars, and embodying side bars, and upper and lower cross bars, the former being rabbeted in the side bars and the latter being superposed thereon, guards secured to the side bars and the lower cross-bar and serving to connect and brace the parts, the guards being reinforced at their points of juncture with the side bars by the lower cross bar, a lifting cable connected at one end to the lower cross bar, a guide pulley mounted on a rod secured in the upper end of the frame to receive the lifting cable, a winding drum supported by the frame to actuate the lifting cable and thereby draw the carriage upwardly, a lowering cable connected at one end to the upper end of the carriage and at the other end to the winding drum, a guide pulley mounted upon a rod secured in the lower end of the frame to receive the lowering cable, a drive shaft journaled in the frame and geared to the shaft of the winding drum, means for operating the drive shaft, and means for holding the winding drum against movement.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES A. JOSE.

Witnesses:
PETER KIRSCH,
FRANCIS X. KIRSCH.