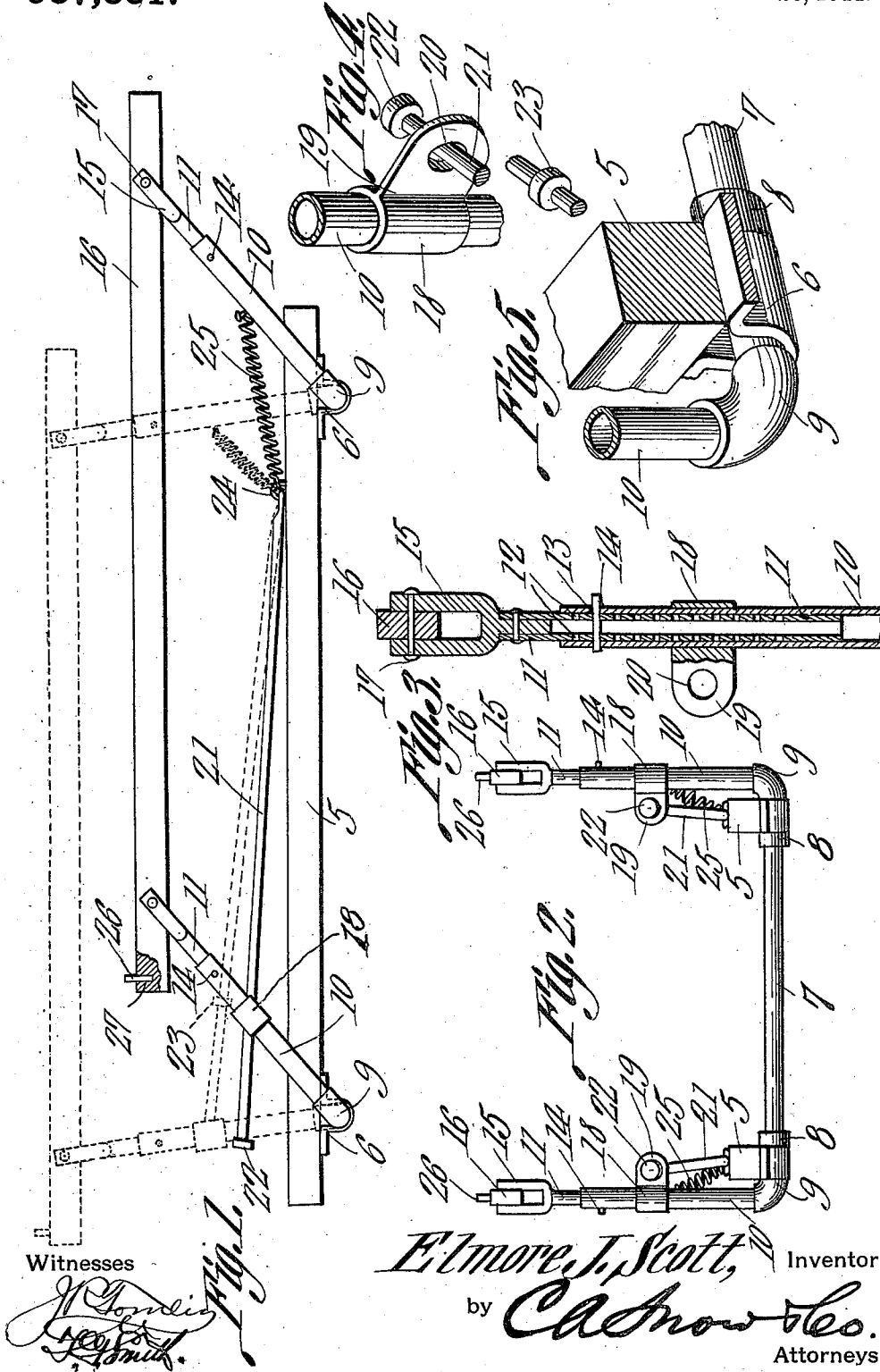


E. J. SCOTT.
RACK LIFTER.

APPLICATION FILED AUG. 11, 1910.

987,831.

Patented Mar. 28, 1911.



UNITED STATES PATENT OFFICE.

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RACK-LIFTER.

987,831.

Specification of Letters Patent.

Patented Mar. 28, 1911.

Application filed August 11, 1910. Serial No. 576,671.

To all whom it may concern:

Be it known that I, ELMORE J. SCOTT, a citizen of the United States, residing at Fergus Falls, in the county of Ottertail and State of Minnesota, have invented a new and useful Rack-Lifter, of which the following is a specification.

It is the object of the present invention to provide an improved construction of rack lifter designed for the purpose of lifting wagon racks from their bed frames.

One aim of the present invention is to provide a rack lifter of this type the parts of which are adjustable so as to adapt the lifter for use in connection with wagon racks of various sizes, or more specifically in lifting wagon racks from bed frames of different heights.

A further aim of the invention is to provide means for cushioning the dropping movement of the lifter so that when the lifter is manipulated so as to drop the wagon rack upon the bed frame of a wagon, it will not be forcibly deposited upon the said frame.

With the above and other objects in view, the invention consists in the general construction and arrangement of parts shown in the accompanying drawings in which,—

Figure 1 is a view in side elevation of the rack lifter embodying the present invention, the same being shown in lowered position in full lines and in elevated position in dotted lines. Fig. 2 is a front end view of the lifter. Fig. 3 is a vertical sectional view in detail through one of the standards of the lifter. Fig. 4 is a perspective view of a portion of one of the standards. Fig. 5 is a similar view of the lower end portion of one of the standards and the cross bar related thereto and extending between the sills of the lifter.

The lifter is illustrated as embodying, in its structure, sills 5 which are two in number, they being arranged and held, in a manner to be presently explained, in parallel relation. Secured upon the under side of the sills 5 at their forward and rear ends are bearing clips indicated by the numeral 6 and mounted for oscillatory movement in the clips at the ends of the sills, are cross bars 7. These cross bars are each preferably in the form of a suitable length of pipe and upon each cross bar adjacent each end there is fixed a collar 8 abutting against the inner

sides of the sills and holding them spaced. An elbow indicated by the numeral 9 is threaded upon each end of each cross bar 7 and threaded into each other end of the elbow is the lower end of a tubular standard member 10. Telescopically fitted in the standard member 10 is a member 11, these two members 10 and 11 at the four corners of the device constituting the standards thereof. The member 11 is formed at various points in its length with openings 12 and each member 10 is formed with openings 13. A pin 14 is engaged through the openings 13 and interchangeably through the openings 12, whereby to hold the member 11 at adjustment in the member 10 and provide for lengthening or shortening of the standards as may be desired, depending of course upon the height of the wagon bed frame in connection with which the device is employed. The upper end of each standard member 11 is of yoke formation as indicated by the numeral 15 and received in the yoke 15 of the members 11 at each side of the device is a supporting rail 16, there being pivot bolts 17 secured through the arms of the yoke and said rails. It is upon these rails 16 that the wagon rack is supported and elevated.

Upon the standard member 10 of each forward standard there is secured a collar 18 having a lateral ear 19 formed with a relatively large opening 20 and fitting loosely through the opening 20 of ear 19 is a brace rod indicated by the numeral 21, these rods being formed at their forward extremities each with a head 22 and inwardly of their said extremities with a stop collar 23. The rear end of each brace rod 21 is formed with an eye and driven through this eye and into the respective sill 5 is one leg of a staple 24, it being understood that the brace rods are in this manner pivotally connected with their respective sills so that they may be swung up or down.

When the several standards of the lifter are swung rearwardly, the ears 19 of the collars upon the forward standards will abut against the collars 23 upon the respective brace rods and the standards will be supported in substantially the full line position illustrated in Fig. 1 of the drawing, this being the lowered position of the lifter. On the other hand, when the standards are swung forwardly, their collars 19 will abut

against the heads 22 at the forward ends of the respective brace rods and the standards will be supported in substantially the dotted line position shown in the said Fig. 1, this latter position being the raised position of the lifter. For a purpose to be presently explained, a spring 25 is secured at its forward end to each staple 24 and at its rear end to the member 10 of the adjacent rear standard and these springs 25 tend to swing the rear standards and, owing to the connection between these and the front standards, to also swing the said front standards forwardly. In other words, the tendency of the springs 25 is to move the device into dotted line position shown in Fig. 1 of the drawings. A stop pin 26 is removably fitted in a socket 27 formed in the upper edge of each supporting rail 16 at the forward end thereof.

In using the device, the frame being in the full line position shown in Fig. 1 of the drawings, the wagon, the body of which is lifted by the device, is driven between the sills 5. The forward corners of the wagon rack will come into engagement with the stop pins 26 and further advance of the wagon as a whole will result in the supporting rails 16 being forced forwardly. This movement of the rails being imparted to the standards supporting them, the rails will be elevated as they move forwardly and when the standards have moved past the perpendicular, and the ears 19 of the collars upon the front standards have come into engagement with the heads 22 of the brace rods 21, the supporting rails will be in the dotted line position shown in Fig. 1 of the drawings. The wagon may then be driven from the rack and the rack left supported in elevated position by the device. In order to again position the rack upon the wagon frame, the wagon is backed into position between the sills 5 of the device and the standards are swung rearwardly, the weight of the wagon rack causing them to assume the full line position shown in the drawings, after assuming which position the rack will be in proper place upon the wagon frame. This movement of the device is however against the tension of the springs 25, and consequently, the rack will not be dropped suddenly and forcibly upon the wagon frame, but its disposition thereon will be cushioned. The rack having been disposed

upon the frame in the manner stated, the pins 26 are removed and the wagon is then driven forwardly from between the sills of the device.

It will be readily understood that inasmuch as the cross bars 7 are held for rocking movement against the under sides of the sills 5, the said bars may be embedded in the earth when the device is set up for use so that no obstruction whatsoever is offered to the passage of the wheels of the wagon between the sills 5.

What is claimed is:—

1. In a device of the class described, spaced sills, oscillatory cross bars extending between the sills, standards at the ends of the cross bars, supporting rails supported at the upper ends of the standards, brace rods pivoted to the sills and supporting the standards in their limit-of-movement positions, and means tending to bring the standards to position to elevate the said supporting rails.

2. In a device of the class described, spaced sills, oscillatory cross bars extending between the sills, standards at the ends of the cross bars, supporting rails supported at the upper ends of the standards, the forward ones of the standards being provided with apertured ears, brace rods pivoted to the sills, and working loosely through the apertures in the ears, and spaced abutments upon each brace rod cooperating with the respective gear.

3. In a device of the class described, spaced sills, oscillatory cross bars extending between the sills and spacing the same, standards at the ends of the cross bars, supporting rails supported at the upper ends of the standards, stop pins removably carried at the forward ends of the supporting rails, brace rods pivoted to the sills and supporting the standards in their limit-of-movement positions, and springs connected to the rear standards and tending to swing them to assume one of their limit-of-movement positions.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ELMORE J. SCOTT.

Witnesses:

JOSEPH BAUER,
E. A. JEWETT.