

No. 717,393.

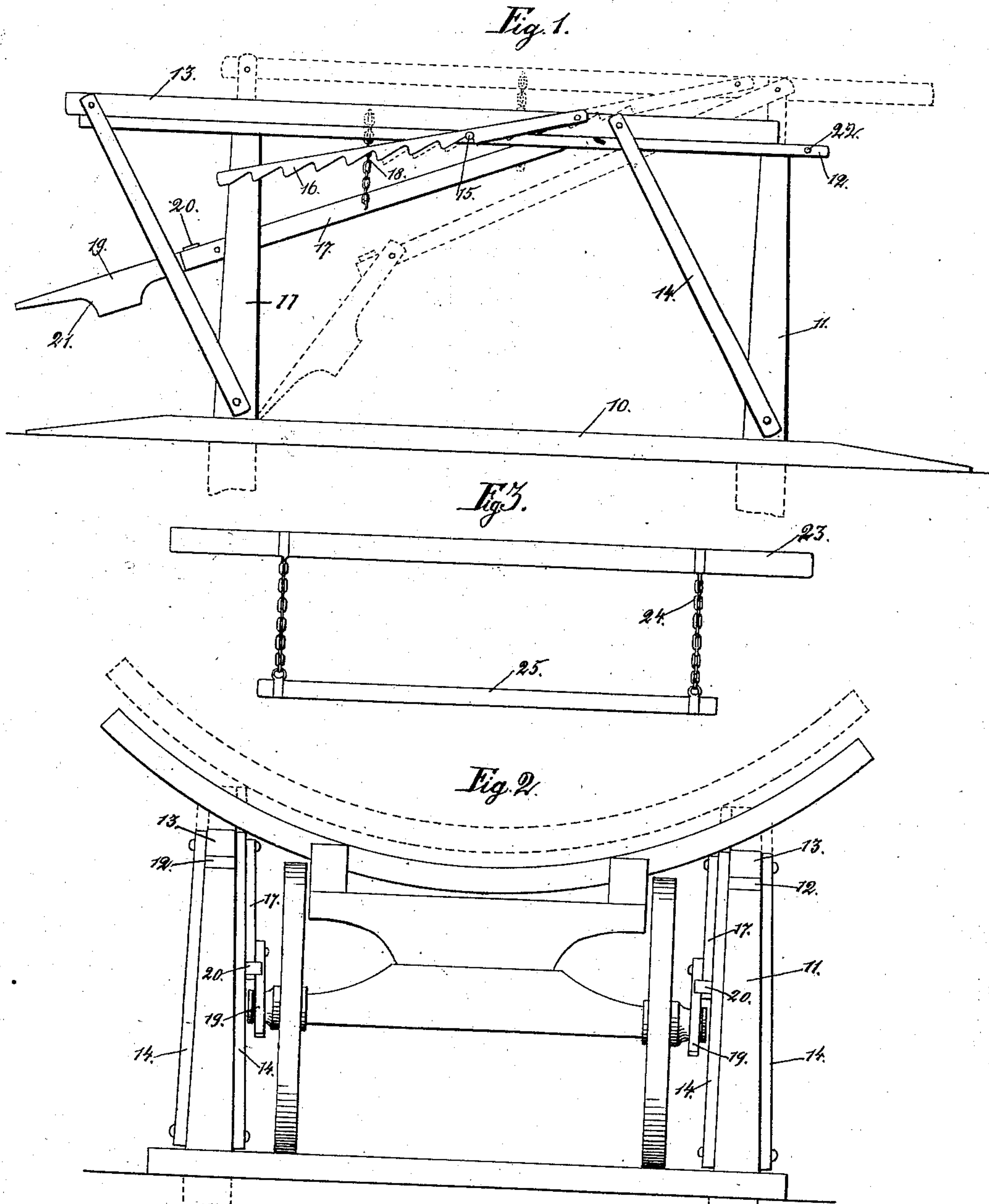
Patented Dec. 30, 1902.

G. E. HALL.

APPARATUS FOR ELEVATING AND SUPPORTING WAGON BOXES, &c.

(Application filed May 5, 1902.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE E. HALL, OF KANSAS CITY, MISSOURI.

APPARATUS FOR ELEVATING AND SUPPORTING WAGON-BOXES, &c.

SPECIFICATION forming part of Letters Patent No. 717,393, dated December 30, 1902.

Application filed May 5, 1902. Serial No. 105,906. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. HALL, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Apparatus for Elevating and Supporting Wagon-Boxes, &c., of which the following is a specification.

The objects of my invention are to produce
10 a device of this class of simple, durable, and inexpensive construction, by the use of which a wagon may be backed or driven upon the machine and the elevating-levers placed against the rear hubs of the wagon and then
15 when the wagon is advanced the wagon-box will be automatically elevated above the wagon and securely supported in an elevated position and the wagon proper moved from under the wagon-box or the like. Further-
20 more, the wagon-box may be replaced upon the wagon quickly and easily, both of these operations being performed without the use of pulleys, elevating-screws, and the like and without detaching the draft-animals from the
25 wagon or applying power other than that of the draft-animals attached to the wagon.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device, where-
30 by the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows a side elevation of the complete device in position to receive a wagon and also illustrating by dotted lines the position of the device when elevated. Fig. 2 shows a rear end elevation of the complete device with a wagon in position thereon and
40 also showing by dotted lines the position of the wagon-box when elevated above the wagon, and Fig. 3 shows a side elevation of the device to be used for engaging wagon-boxes or similar devices that will not overlap the sides
45 of the machine-frame or that do not project beyond the wagon-hubs.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate the platform, preferably inclined at
50 both ends. Placed at each of the four corners of the platform are the uprights 11, preferably smaller at their tops than at their

lower ends, and their lower ends entering the ground. Fixed on top of the uprights are two rails 12 to extend longitudinally of the machine-frame. On top of each rail 12 is a wagon-supporting bar 13. Pivoted to the base of each of the uprights 11 are two levers 14, one on the inside and one on the outside. These levers extend parallel with the sides of the uprights and are pivotally connected at their tops with the said bars 13. They are considerably longer than the uprights 11, so that when the levers 14 are in a vertical position they will support the bars 13 some distance above the rails 12, or the bars 13 may be rested upon the rails 12 by inclining the levers 14, as shown in Fig. 1. On each of the rails 12 is a pin 15, and pivoted to each of the bars 13 is a rack-bar 16, designed to engage said pin. Hence when the bars 13 are elevated the rack-bars 16 will engage the pins 15 and hold the bars 13 in their elevated position. I have also pivoted to each of the bars 13 an arm 17. Each of these arms 17 is connected with the adjacent bar 13 by means of short chains 18 to limit its downward movement. Pivoted to the outer end of each of the arms 17 is an extension 19, and a stop 20 is fixed to the top of the arms 17 to limit the upward movement of the extension 19 relative thereto, so that the extension 19 cannot pass upward beyond a line parallel with the arms 17, but may freely move downward. At the rear end portion of each of the extensions 19 is a rounded shoulder 21, preferably made on a curve somewhat greater than the curve of an ordinary wagon-hub.

I have fixed to the sides of the rails 12 a number of stops 22, so that the levers 14 will engage them and be prevented from passing beyond a vertical position when moving forward. In practical use with this portion of the device a wagon is driven upon a platform between the sides of the rails 12, and the bars 13 will project under the wagon-box, hay-rack, or other device on the wagon. Then the extensions 19 are placed against the rear hubs of the wagon. When the draft-animals attached to the wagon are advanced, it is obvious that the bars 13 will move forward and upward, thereby elevating the wagon-box or the like. When the bars 13 have been sufficiently elevated for the wagon-box to clear the wagon,

the levers 14 will strike against the stops 22, and the extensions 19 will then fold relative to the arms 17 and permit the wagon to pass off of the platform. The curved shoulder 21
 5 on the extensions will roll slightly relative to the hubs as the side bars 13 are elevated, and hence change the point of contact of the extension with the hub to such an extent that when the lever 14 assumes a vertical position
 10 the said extension will fold upwardly and permit the wagon to pass from under the wagon-box or the like.

In lowering the wagon-box or the like the wagon is backed under the wagon-box or the
 15 like and the extensions 19 are brought to rest against the rear hubs. Then, obviously, as the said bars 13 are lowered the wagon-box will assume its proper position on the wagon.

I have provided means for elevating and
 20 supporting wagon-boxes or the like that do not project over the sides of the bars 13, as follows: The numeral 23 indicates a straight bar of a length designed to extend from one of the bars 13 to the other and rest on the top
 25 of them. Fixed to the bar 23 are the chains 24. These chains support a short cross-piece 25. In use the device just described is placed in position with the cross-piece 25 under one end of the wagon-box or the like, and the bar
 30 23 rests on top of the bar 13. A similar device is placed under the other end of the wagon-box or the like, and then the wagon-box is elevated in the same manner as before described.

35 Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

1. An improved wagon-box elevating and

supporting device, comprising in combination, two side rails arranged parallel to each
 40 other and supported in an elevated position, two side bars above the side rails, levers pivoted to the opposite end portions thereof and also pivoted to supports beneath the side rails,
 45 said levers being of such length that when in a vertical position they will support the side bars above the side rails, means for securing the side bars in their elevated position, and
 50 arms pivoted to the side bars and designed to engage the hubs of a wagon standing between the side rails, for the purposes stated.

2. An improved wagon-box elevating and supporting device, comprising in combination a platform, uprights at the four corners
 55 of the platform, two parallel side rails supported on top of the uprights, two levers pivotally connected with the bottom portion of each upright and projected vertically some distance above the top of the side rails, two
 60 side bars above the side rails pivotally supported by said levers, means for limiting the movement of the levers in one direction, means for supporting the side bars in any position in which they may be placed, an arm
 65 pivoted to each side bar, limiting-chains connecting the arms with the side bars, an extension pivoted to each arm capable of folding downward but not upward, and a curved shoulder at the outer end of each extension,
 70 all arranged and combined to operate in the manner set forth and for the purposes stated.

Des Moines, Iowa, May 10, 1901.

GEO. E. HALL.

Witnesses:

GEO. H. ROBERTS,
 J. M. HALL.