

No. 862,557.

PATENTED AUG. 6. 1907.

J. HARTOGH.
LIFTING DEVICE.
APPLICATION FILED DEC. 19, 1906.

2 SHEETS—SHEET 1.

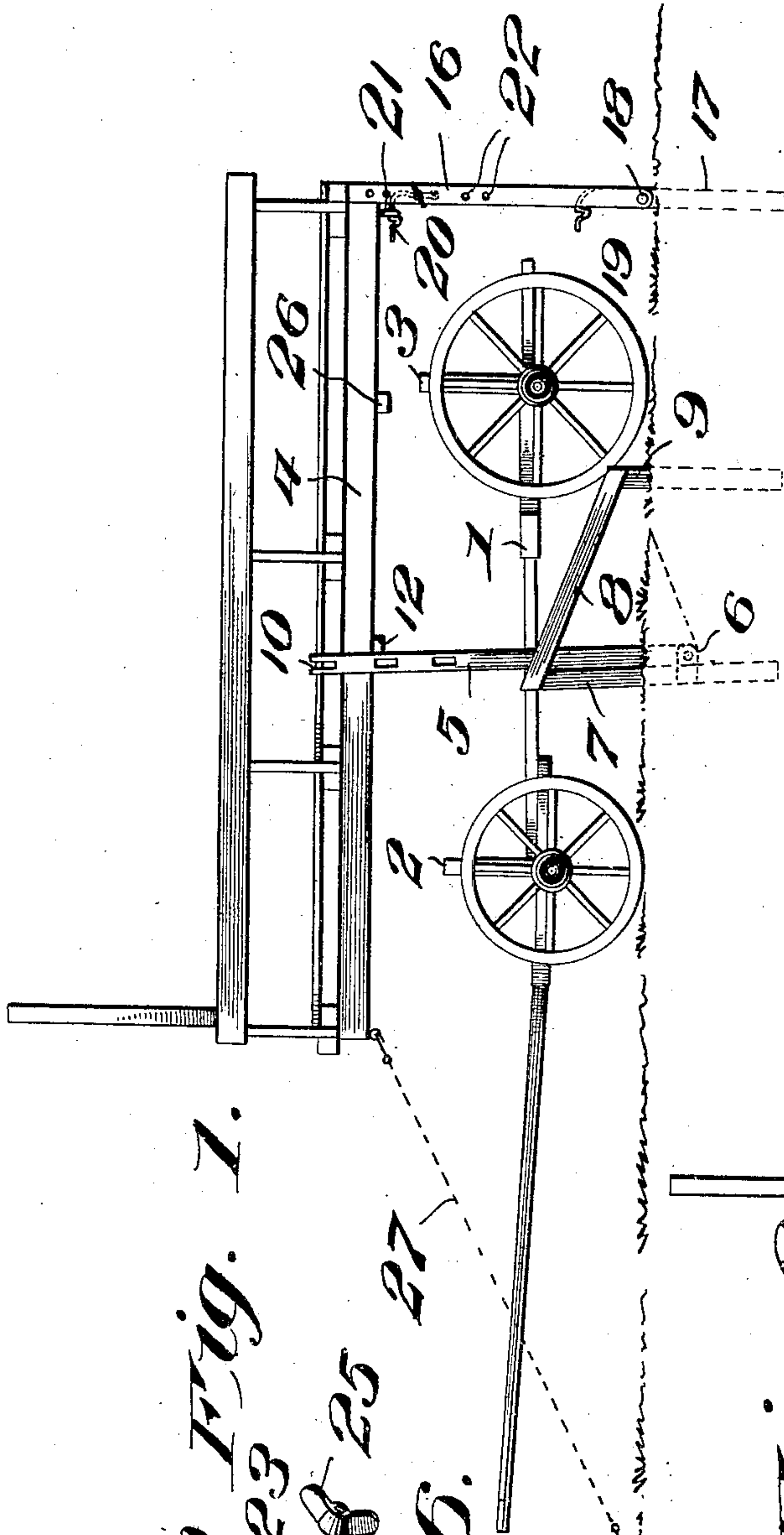


Fig. 1.

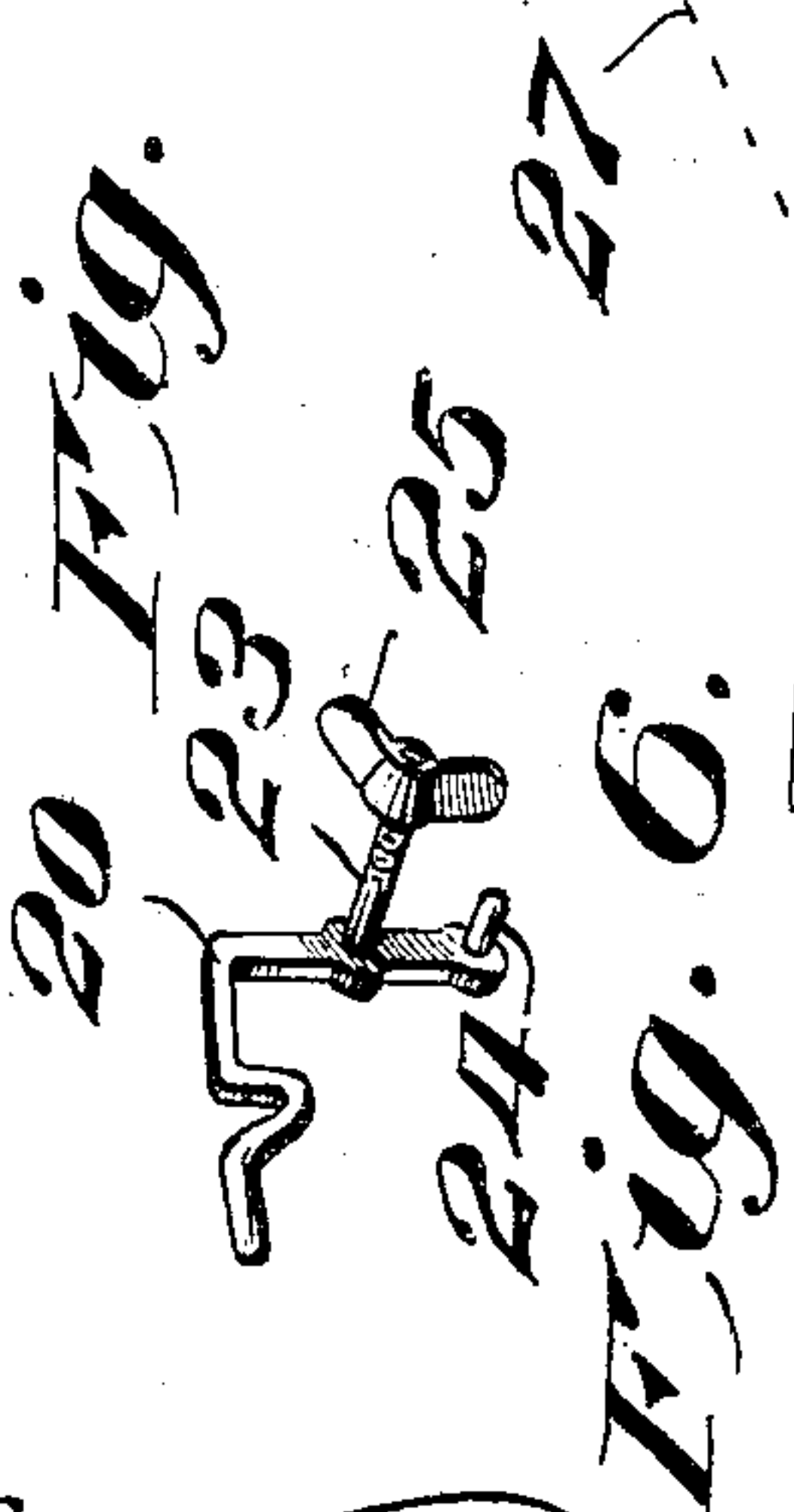


Fig. 6.

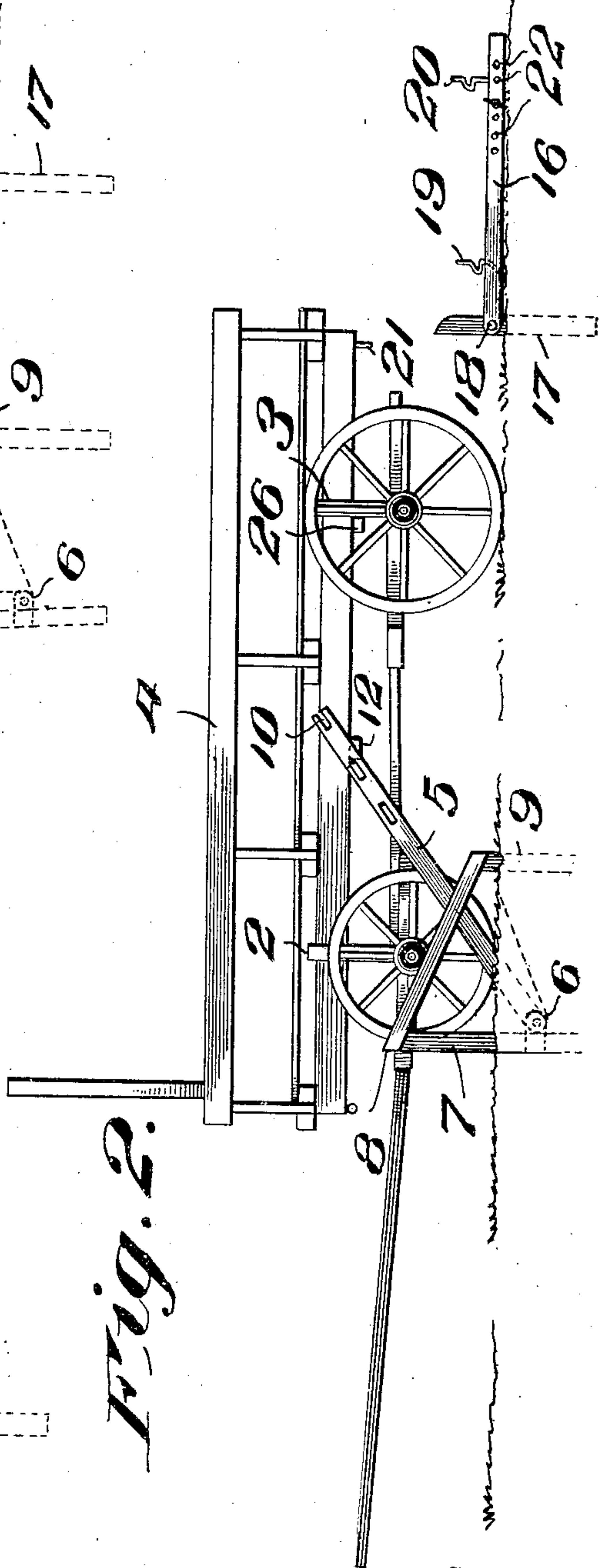


Fig. 2.

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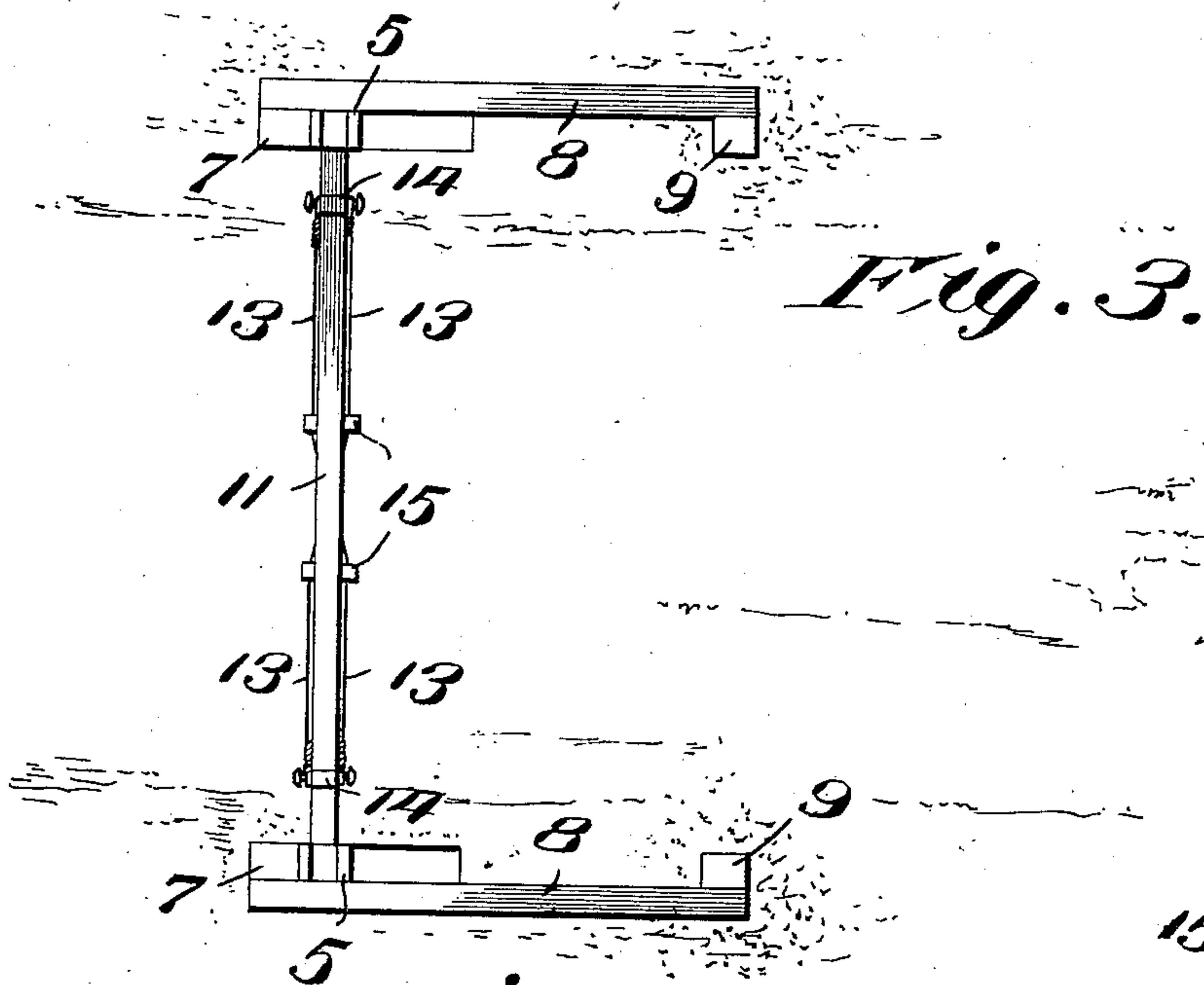


Fig. 3.

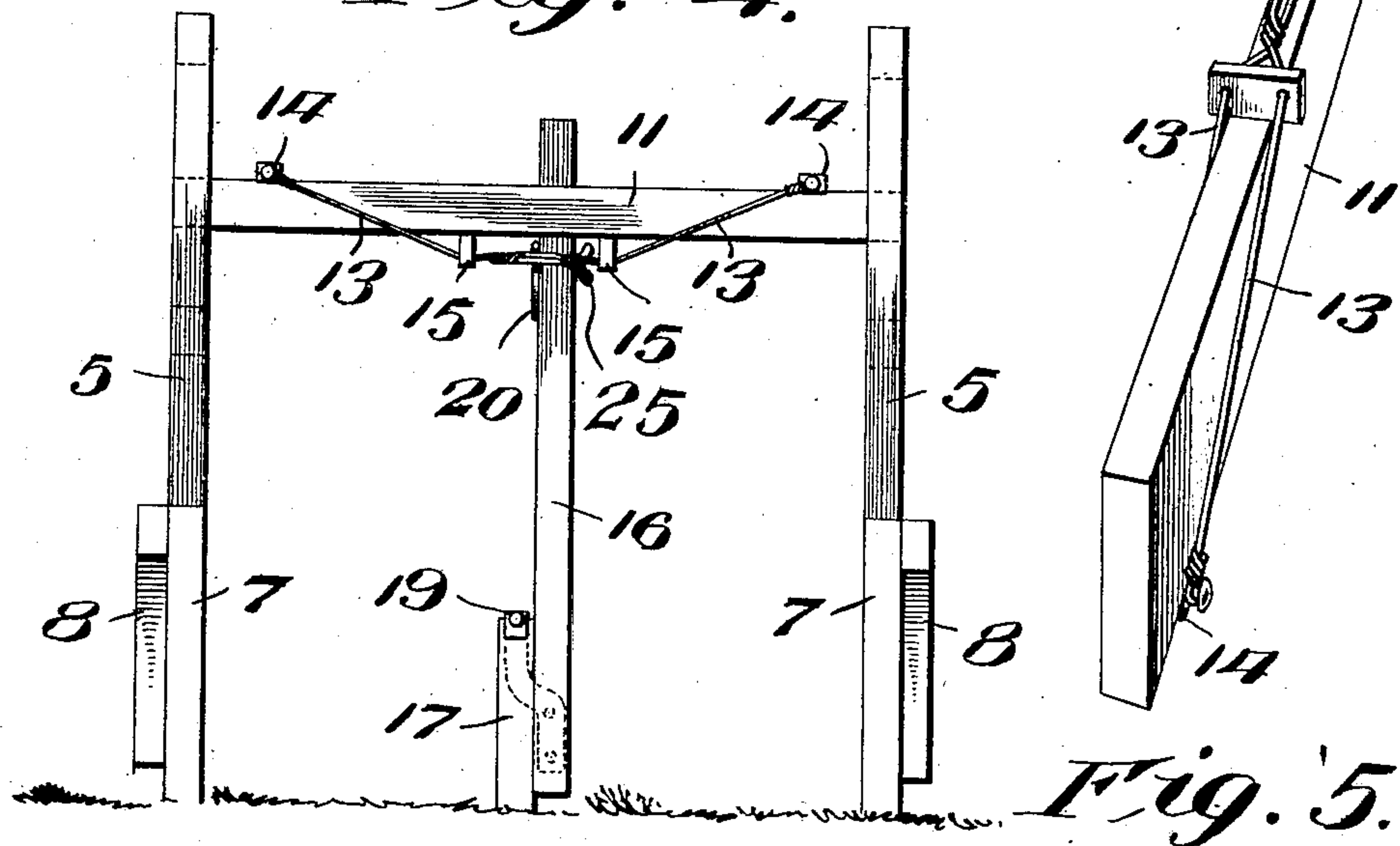


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN HARTOGH, OF ELMA, IOWA.

LIFTING DEVICE.

No. 862,557.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed December 19, 1906. Serial No. 348,556.

To all whom it may concern:

Be it known that I, JOHN HARTOGH, a citizen of the United States, residing at Elma, in the county of Howard and State of Iowa, have invented certain new and useful Improvements in Lifting Devices; and I do hereby 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.

10 My invention relates to new and useful improvements in lifting devices and more particularly that class adapted to be used in removing hay racks or the like from vehicles and is designed as an improvement over a patent granted to me on October 30, 1906 and
15 numbered 834381.

My object is to provide a cheap and economical device for lifting the rack or bed and removing the same from the vehicle with a minimum amount of labor.

20 A further object is to provide means for retaining the rack in its elevated position.

Other objects and advantages will be hereinafter referred to and more fully pointed out in the claims.

25 In the accompanying drawings which are made a part of this application, Figure 1 is a side elevation of my improved device showing the rack in its elevated position and above the vehicle. Fig. 2 is a similar view showing the device in readiness to elevate the rack. Fig. 3 is a top plan view of the lifting device. Fig. 4 is a front elevation thereof. Fig. 5 is a perspective
30 view of the rack supporting bar, and Fig. 6 is a perspective view of a spring latch employed in connection with my improved lifting device.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the
35 several views 1 indicates the vehicle which may be of the usual or any preferred form and provided with front and rear standards 2 and 3 respectively said standards being disposed in pairs and adapted to receive therebetween any suitable form of rack or bed 4.

40 In order to readily elevate the rack and remove the same from the vehicle I have provided a pair of posts 5 the lower ends of said posts extending below the surface of the ground and are pivotally secured to arms 6 extending laterally from a vertically disposed post 7
45 said post having its lower end firmly embedded within the ground. Secured to the upper end of said vertical post is a rail 8 which is disposed at an angle to the vertical plane of the post 7 and has its opposite end secured to a brace post 9 the lower end of which is similarly embedded within the ground. The posts 5 are
50 adapted to swing upon the arms 6 and thereby assume a substantially horizontal or vertical position. The free end of each of the posts 5 are provided with registering slots 10 in which are adapted to take the ends
55 of a supporting bar 11 which is adapted to engage blocks

12 secured to the bottom of the rack 4 and substantially at the central portion thereof. As considerable weight is directed upon the bar 11 it is necessary to brace the same in order to prevent sagging thereof and to this end I have provided a pair of brace wires 13
60 which are secured at their opposite ends to blocks 14 carried by the upper edge of the supporting bar 11 and one upon each side of the supporting bar. The wires are directed through tension blocks 15 which are disposed below the supporting bar 11 and are adapted
65 to engage the lower edge thereof, that portion of the wires between the tension blocks being brought together and twisted thereby holding said blocks a predetermined distance apart and when it is desired to exert a greater tension upon the brace wires the blocks
70 15 are moved away from each other and thereby increasing the tension upon the wires.

In order to support the rack in its elevated position I have provided an auxiliary post 16 which is pivotally secured to an anchor post 17 which is in turn firmly
75 seated within the ground the upper end of said anchor post extending a distance above the pivot point 18 and is adapted to be engaged by a spring latch 19 carried by the auxiliary post 16 so that when said auxiliary post is moved to a vertical position the latch 19 will engage the
80 anchor post and hold the auxiliary post firmly in place.

Adjustably secured to the upper end of the auxiliary post 16 is an auxiliary latch 20 which is adapted to engage any suitable form of keeper 21 secured to the end of the rack 4 so that when the auxiliary latch is moved into
85 engagement with the keeper the rack will be held substantially horizontal upon the supporting bar 11.

In order to hold the rack in a substantially horizontal position upon the supporting bar 11 when said bar is disposed into any one of the registering slots 10 I have
90 provided a plurality of openings 22 in the auxiliary post 16 which are arranged to correspond to the distance between the slots in the posts 5 and said openings are disposed in pairs one of which is adapted to receive a bolt 23 while the opposite opening is adapted to receive
95 a pin 24 so that when said bolt and pin are directed into the openings the auxiliary latch will be fixed with respect to the auxiliary post. The free end of the bolt 23 is threaded to receive a wing nut 25 so that said auxiliary latch may be readily released and adjusted to
100 the different sets of openings upon the auxiliary posts.

In operation the auxiliary post 16 and the posts 5 are lowered or disposed substantially to a horizontal position after which the vehicle is driven between the posts
5. The supporting bar 11 is then disposed below the
105 bottom of the rack and into the slots in the posts, after which the bar and posts are elevated until they engage the lower edge of the rack when by moving the vehicle outwardly the posts will pivot upon the arms 6 and elevate the rack and in order to prevent the rack from
110

slipping rearwardly I secure to the lower edge thereof cleats 26 which are adapted to engage the standards 3 and prevent rearward movement of the rack.

As soon as the vehicle has been moved forward a sufficient distance to dispose the posts 5 in a vertical position or into engagement with the posts 7 the rear end of the rack is elevated out of engagement with the standards 3 and the auxiliary post 16 moved into a vertical position and the auxiliary latch 20 directed into engagement with the keeper 21 the spring latch 19 at the same time engaging the upper end of the anchor post 17 and thereby readily holding the auxiliary post in its vertical position. By this construction it will be seen that the rack is elevated by the draft animals and it will further be seen that by placing the supporting bar at substantially the center of the rack that the rear end of the rack may be readily elevated without the requirement of undue manual labor.

When it is desired to replace the rack upon the vehicle said vehicle is placed substantially as shown in Fig. 1 of the drawings after which the auxiliary post 16 is removed from engagement with rack and said rack tilted until the cleats 26 are again directed into engagement with the standards 3 whereupon by moving the vehicle rearwardly the posts 5 will swing upon their respective pivot points and lower the bed upon the vehicle.

In order to securely retain the bed in its elevated position and to prevent the same from being blown from the lifting device I provide a cable 27 one end of which is adapted to be secured to the forward end of the rack while the opposite end thereof is secured to an anchor 28 this construction being shown in Fig. 1 of the drawings. It will now be seen that I have provided a very cheap and economical device for raising racks or the like and suspending the same in an elevated position and it will further be seen that this result may be accomplished without the employment of an undue amount of man-

ual labor. It will further be seen that I have provided positive means for holding the rack in its elevated position.

What I claim is:—

1. The herein described means for elevating and supporting a rack comprising vertically disposed posts, parallel posts pivotally secured to said vertically disposed posts, a brace post, a rail connecting said vertically disposed post and brace post, a supporting bar adapted to be disposed between said parallel posts and enter slots therein said bar being disposed below the rack and into engagement with blocks thereon, an anchor post at a distance from said parallel posts, an auxiliary post pivotally secured thereto, means on said auxiliary post adapted to engage said anchor post and hold the auxiliary post in a vertical position, a latch at upper end of said auxiliary post adapted to engage said rack and hold the same in its elevated position.

2. In a device of the class described, the combination with a pair of elevating posts, of an auxiliary post, an anchor post therefor and means at the upper end of said auxiliary post adapted to engage a rack carried by the elevating posts and hold the same in a substantially vertical position.

3. The combination with a pair of pivotally mounted posts and a supporting bar therefor, of an anchor post, an auxiliary post pivotally secured to said anchor post and a spring latch on said auxiliary post adapted to engage the upper end of said anchor post and hold the auxiliary post in a vertical position.

4. The combination with a pair of elevating posts and a supporting bar therefor, of an anchor post, an auxiliary post pivotally secured to said anchor post and at a point below the upper end thereof, means carried by said auxiliary post adapted to engage the upper end of said anchor post and hold said auxiliary post in a vertical position, an auxiliary latch at the upper end of said auxiliary post and means to removably and adjustably secure said latch to the auxiliary post.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN HARTOGH.

Witnesses:

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J. T. AYERS.