No. 795,381. PATENTED JULY 25, 1905.

E. G. WELLS.

LIFTING DEVICE.

APPLICATION FILED MAR. 9, 1905.

Fig. 1.

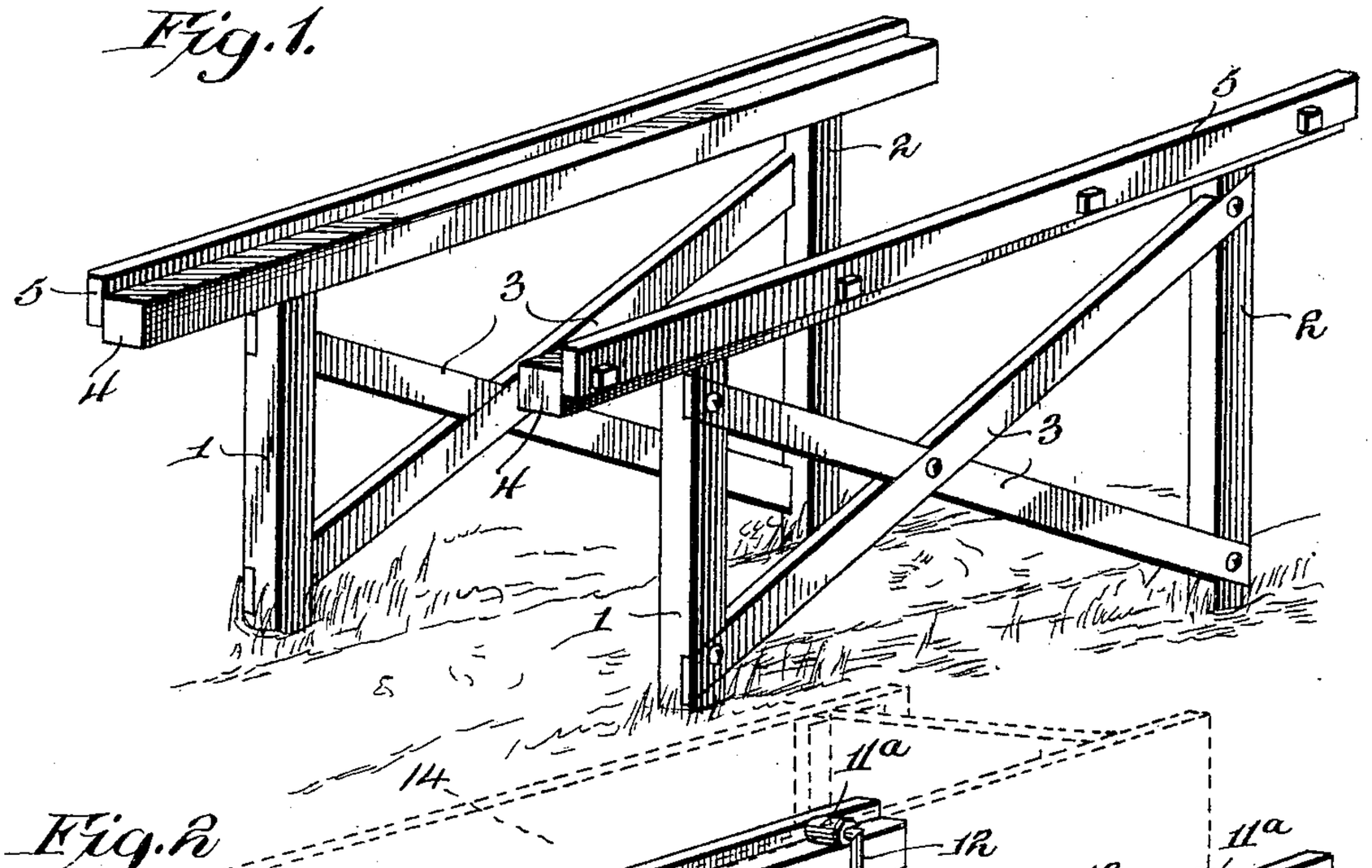


Fig. 2

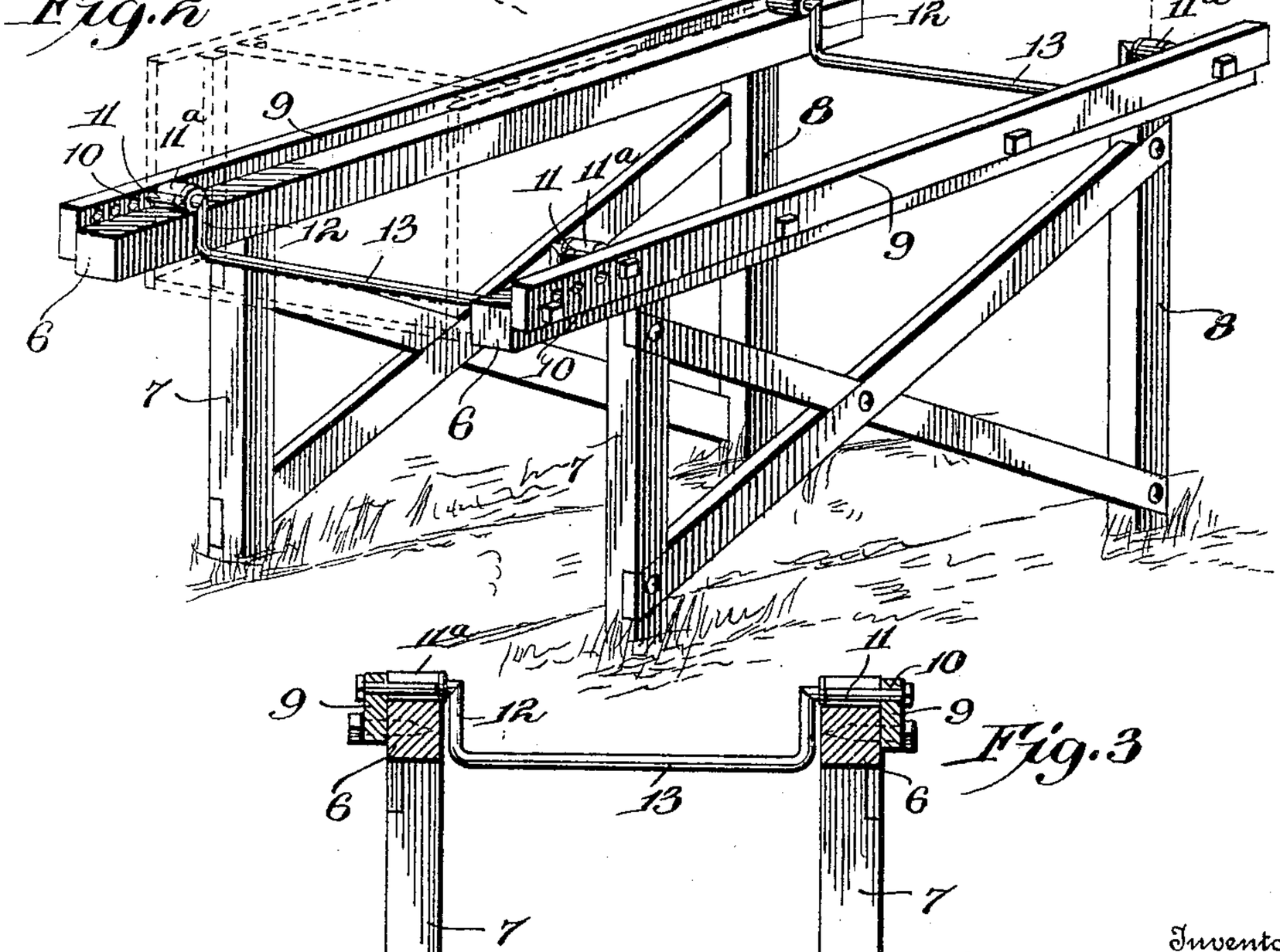
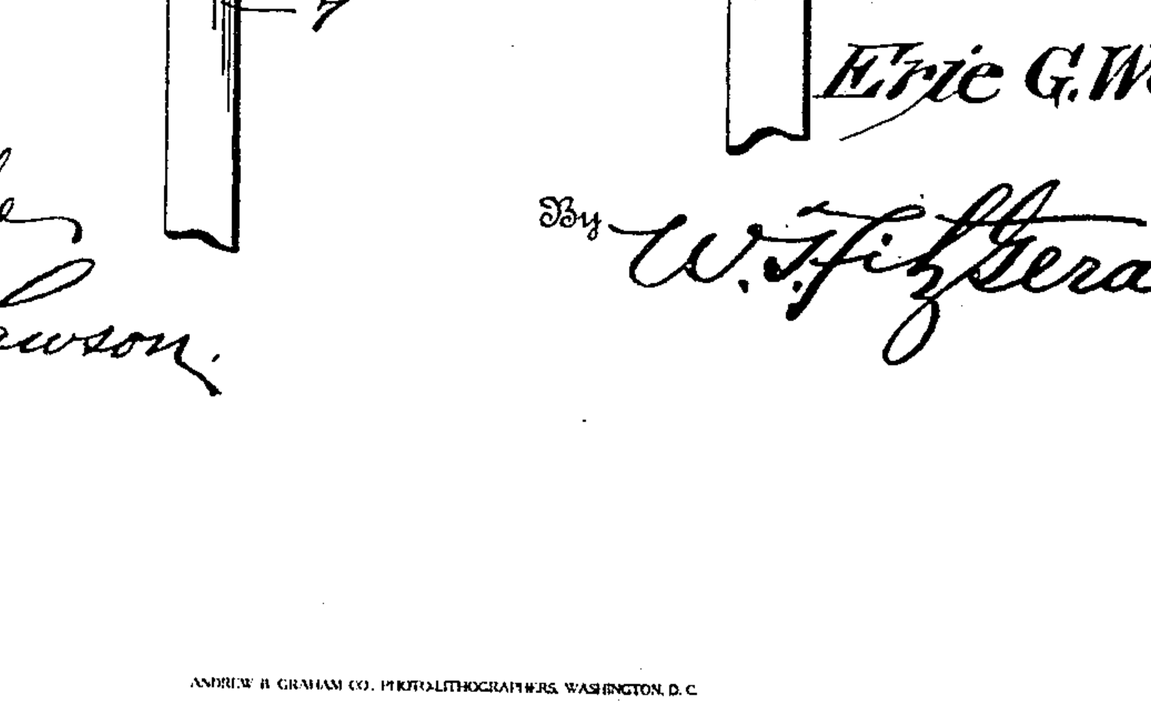


Fig. 3



Witnesses

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LIFTING DEVICE.

No. 795,381 Specification of Letters Patent. Patented July 25, 1905.

Application filed March 9, 1905. Serial No. 249,299.

To all whom it may concern:

Be it known that I, ERIE G. WELLS, a citizen of the United States, residing at Newman Grove, in the county of Madison and State of Nebraska, 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.

My invention relates to devices for lifting hay-racks from or depositing them upon the running-gears of wagons; and its object is to provide a simple and inexpensive device which will automatically raise the rack from a wagon after said wagon has assumed a position within the device and during its forward movement therein.

Another object is to employ means whereby the minimum power will be necessary to raise the rack.

A further object is to provide locking devices for holding the rack in a raised position and which when removed will permit the rack to automatically assume its position upon the running-gear of a wagon.

With the above and other objects in view the invention consists of inclined tracks suitably supported at a proper height, and on these tracks are mounted rollers which support connected hangers. These hangers project between the rails of the track and are adapted to support the rack or wagon-body to be lifted. Stop devices are employed for holding the rollers against downward movement upon the track.

The invention also consists in further novel construction and combination of parts hereinafter more fully described and claimed.

In the accompanying drawings I have shown the preferred form of my invention.

In said drawings, Figure 1 is a perspective view of my improved rack-lifter. Fig. 2 is a similar view of a modified form of device, and Fig. 3 is a transverse section through the lifter shown in Fig. 2.

Referring to the figures by numerals of reference, 1 1 are short standards of equal height, and 2 2 are long standards of equal height, the long standards being connected to the short ones by means of bracing-strips 3, which are preferably crossed, as shown. Supported upon the connected standards are inclined rails 4, which form a track, and secured to the outer surfaces of these rails are guide-strips 5, which project above the rails and form flanges to prevent lateral movement of a rack or wagon-body after the same has been deposited upon the rails. When it is desired to employ this device for lifting a hay-rack from the running-gear of a wagon, the wagon is guided between the standards 1, and as the rails 4 are spaced apart a sufficient distance to permit the opposite sides of the rack to overlap them it will be understood that as the wagon moves forward the front end of the rack will be brought into contact with the upper surfaces of the rails at points between their ends. Further forward movement of the vehicle will cause the rack to slide upward on these rails and between the flanges 5 until at a predetermined point the entire rack will be supported by the rails, and the running-gear of the vehicle can then proceed forward, leaving the rack supported solely by the rails.

It will of course be understood that the frictional contact of the rack with the rails will prevent it from sliding from its position thereon. When it is desired to replace the rack upon the running-gear, the vehicle is backed between the standards 2, and after it has been brought into proper position the rack is pulled downward on the rails 4 until it contacts with the running-gear, and the further movement of said gear will cause the rack to be pulled from the track and to be deposited in proper position.

In Figs. 2 and 3 I have shown another form of lifting device which is particularly adapted for use in raising the box-bodies of vehicles from the running-gear, although it will be understood that this device is also capable of use for lifting hay-racks. By referring to Figs. 2 and 3 it will be seen that the rails 6 are inclined and are mounted upon standards 7 and 8, which are similar to the standards 1 and 2 described in connection with Fig. 1. These rails are also provided with guide-strips 9 along their outer edges; but these strips have series of apertures 10 adjacent their lower ends, which are adapted to receive stop-pins 11. A pair of rollers 11^a is mounted on each rail, and each of these rollers has a hanger 12 depending from it and overlapping the inner surface of the rail on which the roller is mounted. The hangers of the corresponding rollers of the pairs are connected by cross-strips 13, and these strips serve as supports for the box-bodies of vehicles during the operation of lift-

ing them from the running-gears. When it is desired to utilize this modification for the purpose of raising the body of a vehicle, said vehicle is guided between the standards 7, and before the forward end of the body 14 thereof (shown by dotted lines in Fig. 2) comes in contact with the rails 6 one set of rollers is so placed as to bring its connecting-rod 13 under the front end of the wagon-body. The forward movement of the vehicle will therefore cause this set of rollers to travel upward on the rail 6, and just before the rear portion of the body 14 leaves the wagon-gear the connecting-rod 13 of the second set of rollers is placed beneath said body and shoved upward until it comes in contact therewith. The further forward movement of the vehicle will therefore cause the weight of the body 14 to be transferred to both of the rods 13, and as soon as this result has been accomplished the stop-pins 11 are placed in the apertures 10 which are nearest the lowest set of rollers 11^a, and the downward movement of the rollers and the wagon-bodies supported thereby is therefore prevented. When it is desired to replace the wagon-body upon the running-gear of the vehicle, the pins 11 are removed, and the rollers 11^a are then free to travel downward, carrying the wagon-body 14 with them. As soon as the rear end of the body comes in contact with the running-gear said running-gear can be backed and will pull the body therewith until the same has been entirely deposited thereon.

It will be seen that the device herein described is of extremely simple and inexpensive construction and by its use loads of different weights can be quickly lifted from the running-gears of vehicles and can also be easily returned into proper position thereon.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

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

1. A device of the character described comprising standards, parallel inclined rails fixedly secured to the standards and forming a track and guide-strips extending upward from the outer edges of the rails.

2. A device of the character described comprising inclined parallel rails, supports therefor, guides extending longitudinally along the outer edges of the rails, connected rollers mounted upon the rails and means for preventing movement of the rollers in one direction.

3. A device of the character described comprising immovable inclined rails, supports therefor, guides extending longitudinally along the outer edges of the rails, rollers upon the rails, means for connecting the rollers in pairs, said means extending from one rail to the other and stop devices connected to the guides.

4. A device of the character described comprising immovable inclined rails, supports therefor, guides extending longitudinally along the outer edges of the rails, rollers upon the rails, means for connecting the rollers in pairs, said means extending from one rail to the other and stops adjustably connected to the guides for limiting movement of the rollers in one direction.

5. A device of the character described comprising immovable inclined rails, supports therefor, longitudinally-extending guides upon the outer edges of the rails, said guides having apertures, rollers mounted upon the rails, hangers supported by the rollers, means connecting the hangers in pairs, said means extending between the rails and stop devices engaging the apertured guides.

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

ERIE G. WELLS.

Witnesses:
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