

No. 703,054.

Patented June 24, 1902.

W. J. FRANK.
HAY RACK LIFTER.

(Application filed Mar. 20, 1902.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 4.

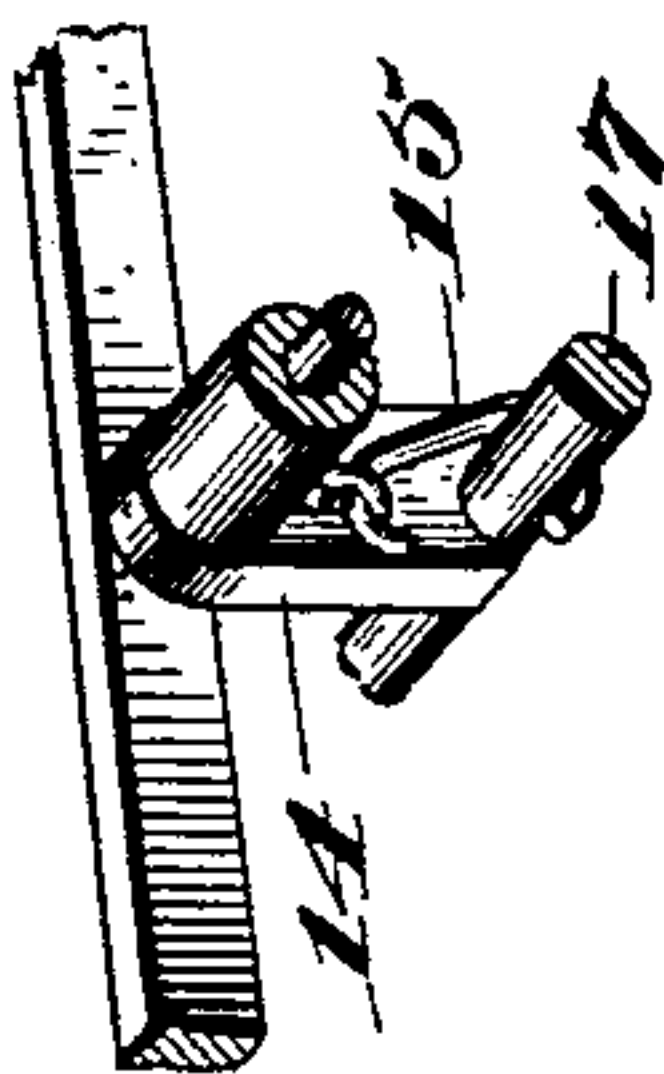


Fig. 1.

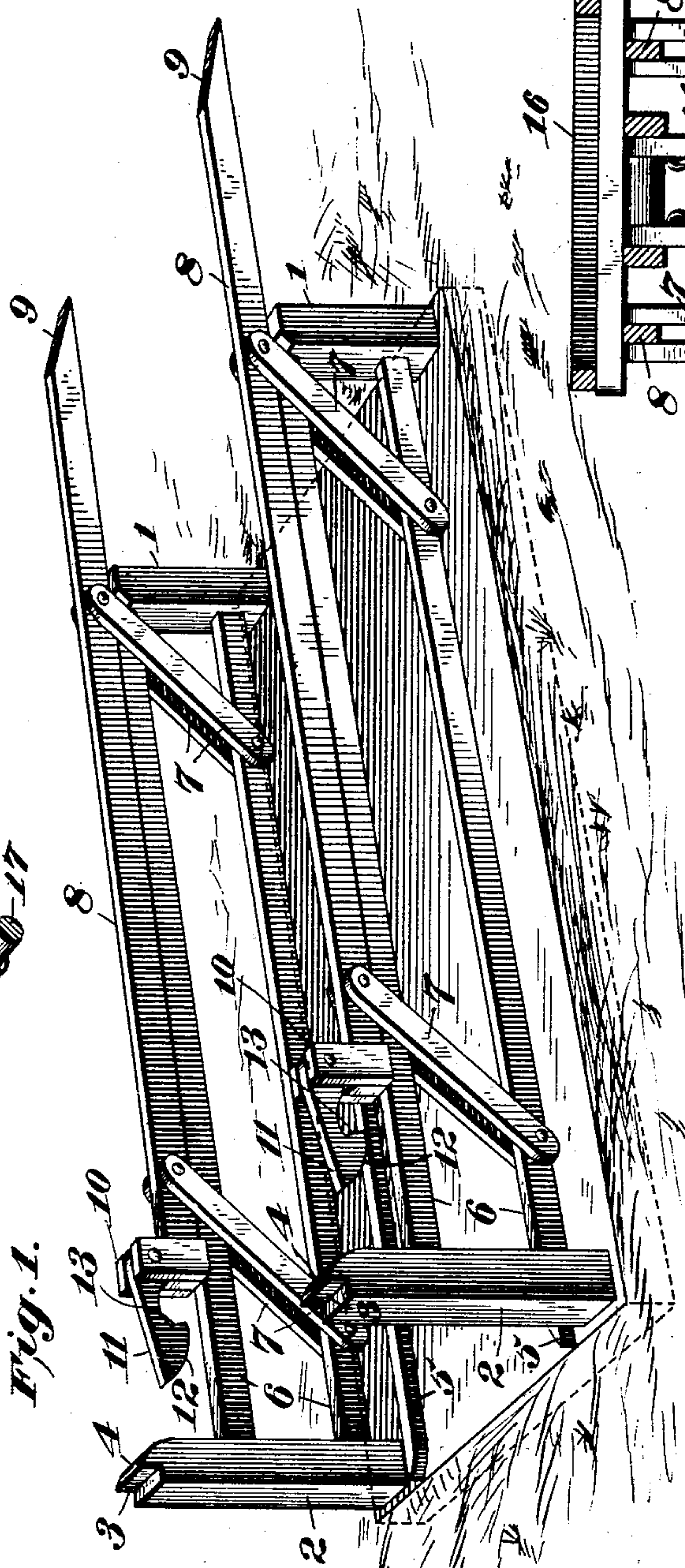
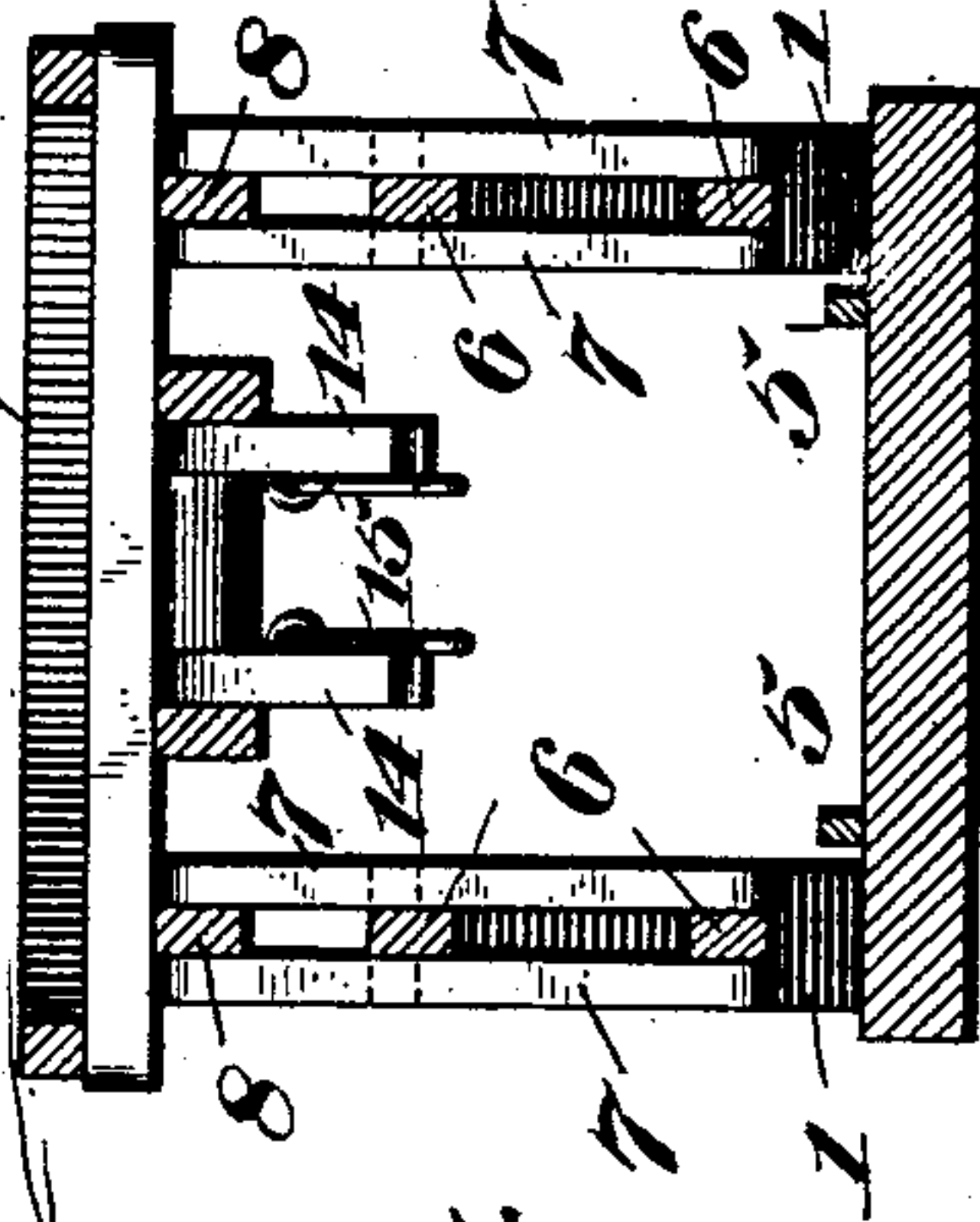


Fig. 5.



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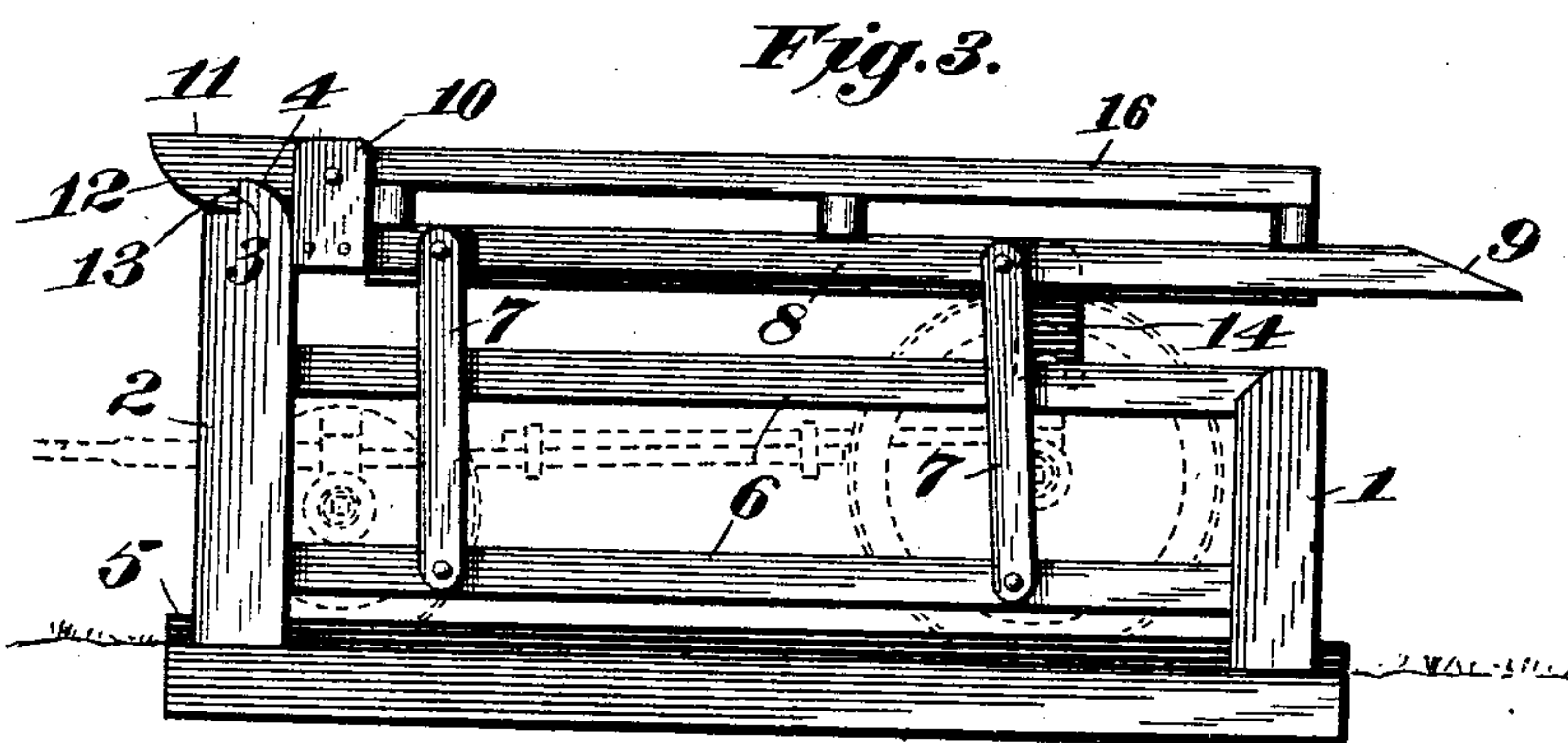
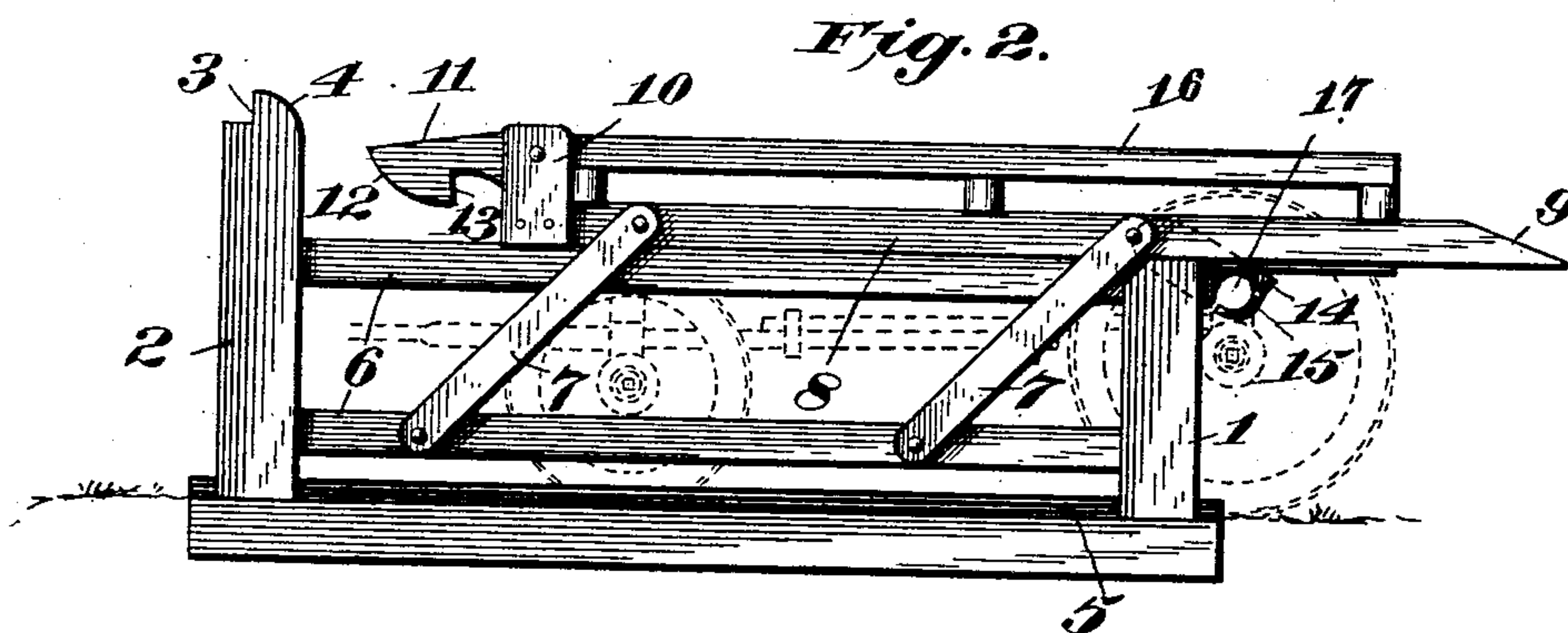
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

WILLIS J. FRANK, OF ALCESTER, SOUTH DAKOTA.

HAY-RACK LIFTER.

SPECIFICATION forming part of Letters Patent No. 703,054, dated June 24, 1902.

Application filed March 20, 1902. Serial No. 99,104. (No model.)

To all whom it may concern:

Be it known that I, WILLIS J. FRANK, a citizen of the United States of America, residing at Alcester, in the county of Union and State of South Dakota, have invented certain new and useful Improvements in Hay-Rack Lifters, of which the following is such a full, clear, and exact description as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to improvements in hay-rack lifters; and its object is to provide a device of a strong and simple construction by the use of which the rack will be automatically lifted from the wagon running-gear and will be held firmly in its raised position, so that it cannot be dislodged by the wind or by chance blows.

With this object in view the invention consists in certain novel features of the device illustrated in the accompanying drawings, as will be hereinafter first fully described, and then particularly pointed out in the claims.

In the drawings just mentioned, Figure 1 is a perspective view of a hay-rack lifter embodying my invention in position to receive a rack. Fig. 2 is a side elevation of the same, showing a rack in position thereon, the position of the running-gear being indicated in dotted lines. Fig. 3 is a similar view showing the rack elevated. Fig. 4 is a detail perspective view of one of the drop-legs on the rack, and Fig. 5 is a transverse section showing the rack in position.

In carrying out my invention I employ a pair of posts 1, which are set in the ground or in a platform or base which is buried in the ground. At some distance from the posts I set up the head-posts 2, which are somewhat higher than the posts 1 and have their upper ends formed into the shoulders 3 and the beveled or curved faces 4, as clearly shown. The posts 2 are the same distance apart as the posts 1 and in line therewith, while between the pairs of posts are located the longitudinal guide-rails 5 to keep the wagon in a true line when it is being driven between the posts. Secured to and extending between the corresponding posts of each pair are the sills or beams 6, and to the lower sills I piv-

otally secure the levers or links 7, which have their upper ends pivoted to the lifting-rails 8. The levers or links 7, it will be noticed, are each composed of two similar members which pass upward on opposite sides of the sills 6, and are thereby prevented from swaying laterally. The ends of the lifting-rails farther from the head-posts are beveled on their upper faces, as shown at 9, to prevent clogging in the movement of the rack onto the rails, and the front ends of the rails are provided with the vertical stop-blocks 10, in the upper ends of which are pivoted the dogs or latches 11, adapted to ride over the head-posts and engage the shoulders or recesses thereon. To facilitate the action of the latches or dogs, the under edges of the same are beveled or inclined upward and outward, as shown at 12, and are constructed with notches or shoulders 13 in rear of the beveled or inclined portions.

The rack 16 is provided with depending swinging drop-legs 14, which engage the rear bolster (indicated by 17) of the running-gear, and on each drop-leg I hang a hook 15, which is adapted to be engaged around the said bolster to lock the rack thereto.

In practice when it is desired to raise the rack from the running-gear the wagon is drawn between the posts and the hooks 15 are disengaged from the bolster. The continued forward movement of the team will then cause the rack to be moved forward on the lifting-rails under the influence of the drop-legs until the front end of the rack impinges against the stop-blocks 10. After the rack impinges against the said stop-blocks its forward movement will be transmitted to the said blocks, and the lifting-rails will consequently be caused to rise by reason of the levers or links 7 swinging on their pivots, as will be readily understood on reference to Figs. 2 and 3. This upward and forward movement of the rails will continue until the stop-blocks strike against the head-posts, at which instant the dogs or latches will drop into engagement with the shoulders on the tops of the said posts and lock the device in its raised position. As the lifting-rails rise the rack is lifted off the running-gear and the drop-legs fall into a vertical position, owing to removal of the bolster from under the same. When

it is necessary to again use the rack, the running-gear is driven into position thereunder, the latches released from the head-posts, and the hooks 14 engaged with the bolster of the running-gear, after which the rack may be lowered onto the gear by simply moving the wagon backward from between the posts.

My device is very simple in its construction and is entirely automatic in its operation. The downward movement of the lifter in returning the rack to the wagon is arrested by the lifting-rails coming into contact with the upper beams or sills 6, and the said sill forms a firm rest for the lifting-rail until the operator is satisfied that the rack is properly adjusted. When the rack is in its elevated position, the levers or links 7 are in a vertical position and constitute a strong support for the rack, while the dogs or latches engaging the head-posts effectually prevent the dislodgment of the rack by the wind or by stock rubbing against it.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. The combination with the posts having shoulders on their upper ends, of lifting-rails provided with stop-blocks at their front ends, latches pivoted on the stop-blocks and adapted to engage the shoulders on the posts, and swinging supports for the lifting-rails.

2. As means for lifting a hay-rack from a wagon running-gear, a pair of lifting-rails adapted to receive and support the rack, swinging supports for the said rails, and drop-legs pivoted on the rack and adapted to rest on the bolster of the running-gear and each provided with a hook adapted to be locked on the bolster.

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

WILLIS J. FRANK.

Witnesses:

J. B. VAN DYKE,
A. H. COLLINS.