(No Model.)

G. W. WILLIAMS.

FEED RACK AND TROUGH.

No. 555,839. Patented Mar. 3, 1896.

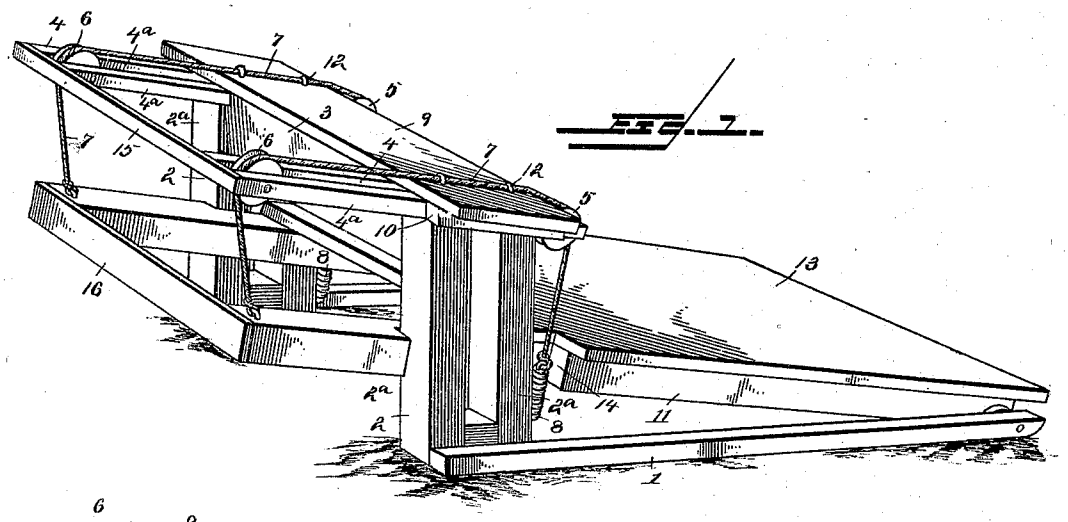


Fig. 1.

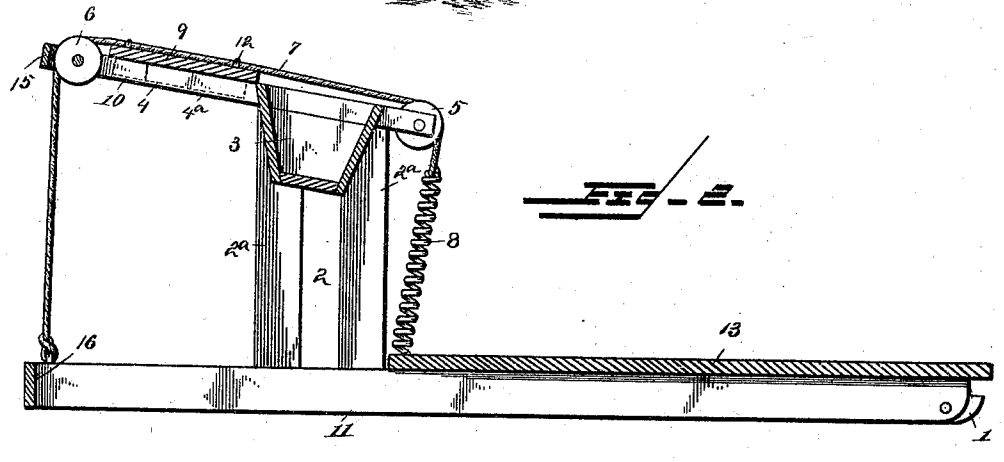


Fig. 2.

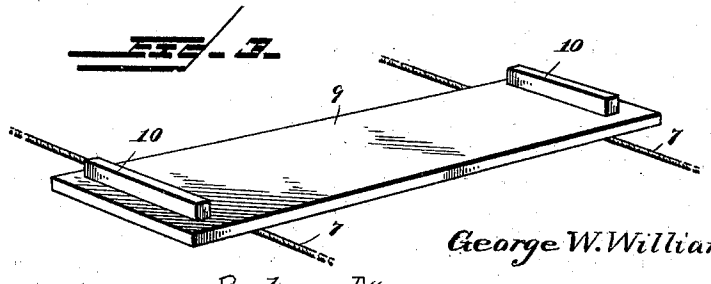


Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE W. WILLIAMS, OF BETHANY, MISSOURI.

FEED RACK AND TROUGH.

SPECIFICATION forming part of Letters Patent No. 555,839, dated March 3, 1896.

Application filed July 29, 1895. Serial No. 557,457. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. WILLIAMS, a citizen of the United States, residing at Bethany, in the county of Harrison and State of Missouri, have invented a new and useful Feed-Rack, of which the following is a specification.

My invention relates to feed-racks, and has for its object to provide a simple and efficient construction whereby the trough, which is adapted to contain salt, grain, &c., is normally protected to exclude dust, rain, &c., and is opened by the weight of an animal in approaching the same to feed.

Further objects and advantages of this invention will appear in the following description and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a rack constructed in accordance with my invention. Fig. 2 is a longitudinal section showing the platform depressed. Fig. 3 is a perspective view of the sliding trough-cover inverted.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates the base-beams, from the front ends of which rise standards 2, each consisting of parallel bars 2^a, and supported between the upper ends of said standards is the feed-trough 3. Supported by the standards contiguous to the opposite ends of the trough are the parallel inclined guides 4, extending beyond the front and rear sides of the standards and each comprising parallel bars 4^a. Between the rear projecting ends of the parallel bars are mounted the pulleys 5, and between the front extremities of the same are mounted similar pulleys 6 to carry the operating-cables 7, the rear ends of said cables being attached to return-springs 8, which are secured at their lower extremities to the standards near the planes of the beams 1. The guides incline upward toward their front ends and support a trough-cover 9, consisting of a board resting upon the upper surfaces of the guides and projecting at its extremities beyond the outer sides thereof, where it is provided with depending strips 10, the inner surfaces of which bear against the outer surfaces of the guides.

Pivoted at their rear ends to the beams 1 and operating between the planes thereof are the operating-levers 11, which extend forward beyond the standards and are connected at their extremities to the front ends of the operating-cables 7, the front ends of the operating-levers being elevated when the operating-springs are contracted and the cover 9 being at the same time in position over the trough to exclude dust, rain, &c. The cover is secured to the operating-cables by means of clips or staples 12.

The operating-levers support a platform 13, adapted to support stock in approaching the trough, and as the operating-levers are fulcrumed to the beams 1 the depression of the platform will bring the lower edges of the levers in the same horizontal plane with the lower edges of the beams 1, whereby said lower edges of the operating-levers will rest upon the ground or other surface by which the rack is supported. The springs, or other equivalents, inasmuch as weights will serve with equal efficiency in this connection, are of just sufficient strength to raise the platform and operating-levers when relieved of the weight of stock, and therefore as the stock approach the trough their weight immediately depresses the platform until the operating-levers rest upon the ground and the parts of the mechanism are relieved of strain. The operating-levers are cut away at their outer sides, as shown at 14, to avoid frictional contact with the standards, and the front ends of the operating-levers and the guides are connected by cross-bars 15 and 16, respectively, to act as guards to prevent stock from approaching the trough from the side opposite to the platform.

From the above description it will be seen that the cover is held from transverse displacement by means of the depending strips 10 arranged, respectively, in contact with the outer sides of the guides, and is held from displacement in other directions by means of the operating-cable by which connection is made with the operating-levers and the counterbalancing device, consisting in the construction illustrated of the springs 8.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. In a feed-rack, the combination of pivotal operating-levers supporting a platform, a trough arranged transversely above the plane of the operating-levers at an intermediate point of the length thereof, upwardly and forwardly inclined guides consisting of straight bars arranged contiguous to the extremities of the trough and approximately in the same vertical planes with the operating-levers, said guides extending forwardly beyond the front sides of the trough a distance approximately equal to the width of the trough, a cover mounted to slide upon said guides to close or open the trough, operating-cables attached at their front extremities to the front ends of the operating-levers, supported by direction-pulleys at opposite ends of the guides and attached at intermediate points to the cover, and counterbalancing devices connected to the rear ends of the cables and adapted to close the cover and elevate the operating-levers when the platform is relieved of weight, said cables serving to hold the cover in place on the guides, substantially as specified.

2. In a feed-rack, the combination of horizontal beams, standards rising from the front ends of the beams, a trough supported transversely between the upper ends of the standards, forwardly and upwardly inclined guide-bars arranged with their upper sides flush with the upper edges of the trough, and projecting at their ends beyond the front and rear sides thereof, the front ends projecting a greater distance than the width of the trough, guide-pulleys arranged, respectively, at the front and rear ends of the guide-bars, a cover mounted to slide upon the guide-bars to close and open the trough and provided near its extremities with depending strips to bear against the corresponding sides of the bars, operating-levers pivoted at their rear ends between the beams and extending between the standards and beyond the vertical plane thereof, a platform supported by the operating-levers, flexible connections, as cables, attached to the front ends of the operating-levers extended over said guide-pulleys, parallel with the guide-bars, and permanently attached at intermediate points to the cover, and counterbalancing-springs attached to the rear ends of the cables and adapted to close the cover and elevate the front ends of the operating-levers when the platform is relieved of weight, substantially as specified.

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

GEORGE W. WILLIAMS.

Witnesses:
M. A. HIGGINS,
R. L. ALVORD.