No. 782,925. PATENTED FEB. 21, 1905.

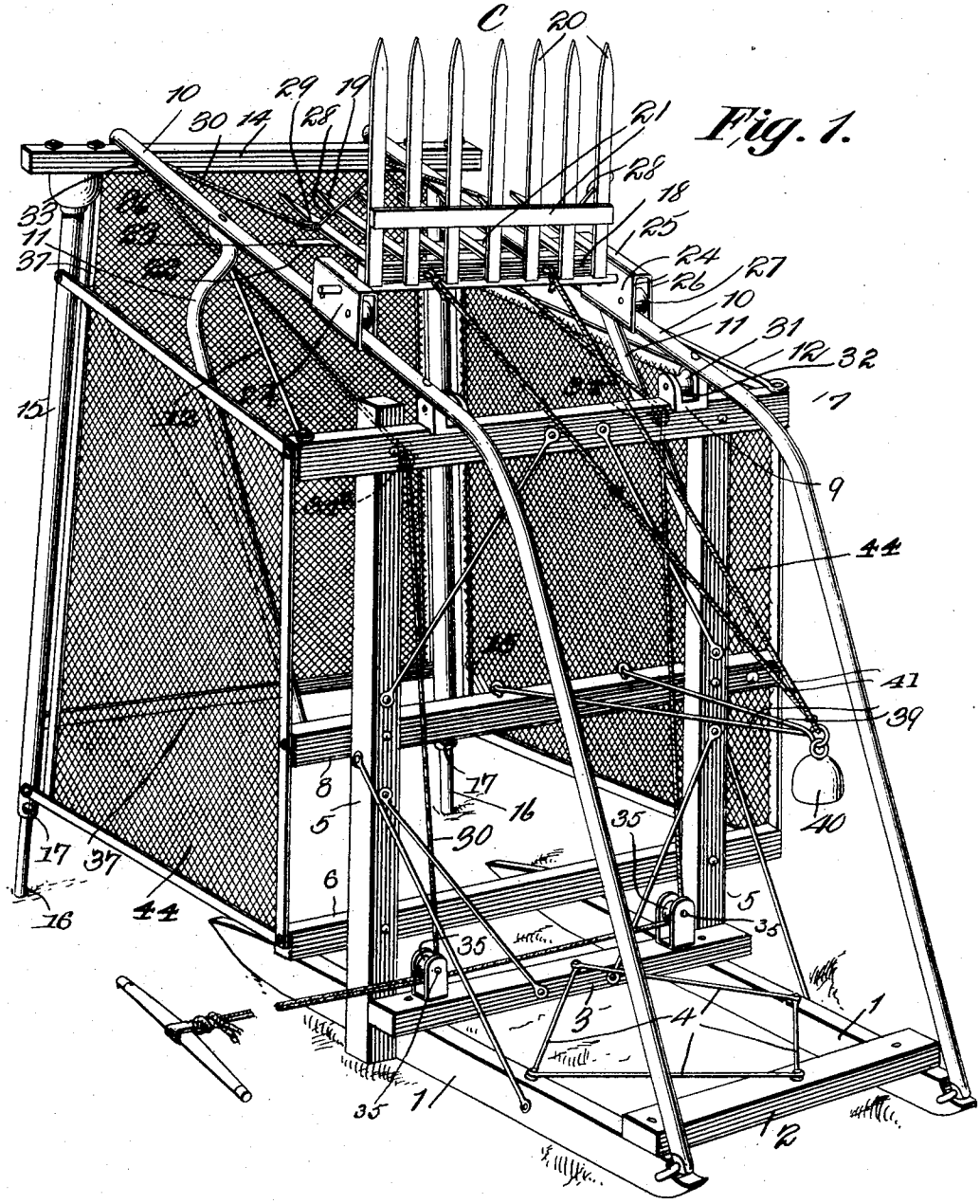
J. L. ROSEBERRY.

HAY STACKER.

APPLICATION FILED JULY 2, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

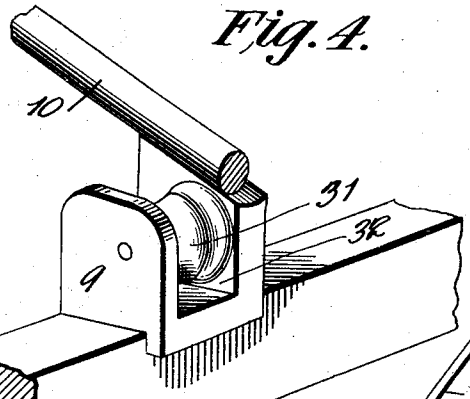
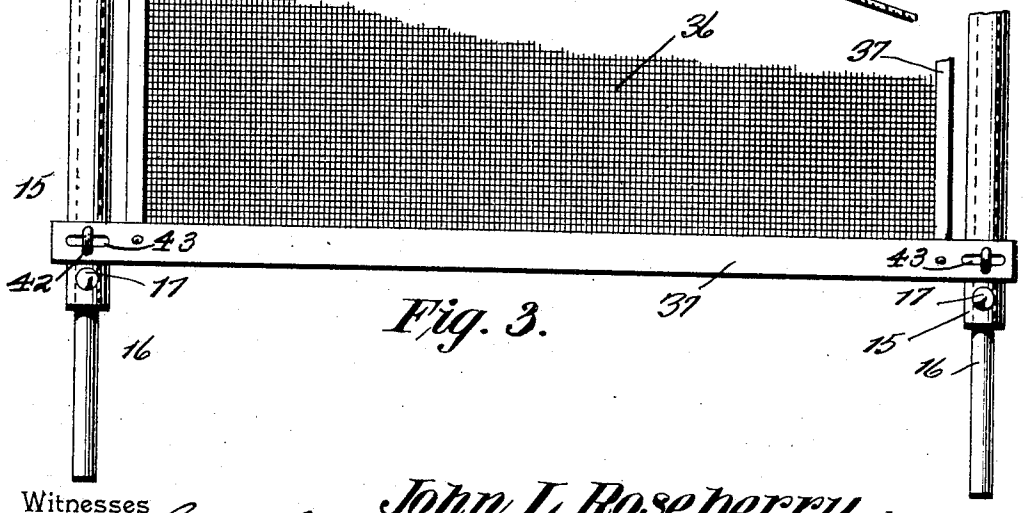


Fig. 2.

Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN L. ROSEBERRY, OF PULLMAN, NEBRASKA.

HAY-STACKER.

SPECIFICATION forming part of Letters Patent No. 782,925, dated February 21, 1905.

Application filed July 2, 1904. Serial No. 215,174.

To all whom it may concern:

Be it known that I, JOHN L. ROSEBERRY, a citizen of the United States, residing at Pullman, in the county of Cherry and State of Nebraska, have invented a new and useful Hay-Stacker, of which the following is a specification.

This invention relates to hay-stackers; and it has for its object to provide a device of this class capable of being transported from one place to another, said stacker being provided with tracks and with a carrier movable upon said tracks for the purpose of elevating and dumping material placed thereon.

My improved stacker is furthermore provided with screens or shields forming wing-guards to prevent the hay or other material which is being elevated from being blown away or scattered by the wind while it is being dropped from the carrier, thus enabling an even well-appearing stack to be built, which is obviously advantageous, inasmuch as a well-built stack is much better fitted to resist the elements than one which is unevenly built.

With these and other objects in view, which will readly appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being understood, however, that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications which come fairly within the scope of the invention and which may be resorted to without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a perspective view showing the hay-stacker in position for operation with the carrier partly elevated upon the tracks. Fig. 2 is a sectional detail view showing the carrier in dumping position. Fig. 3 is a detail rear view. Fig. 4 is a detail view of one of the track-supporting blocks.

Corresponding parts in the several figures are indicated by similar characters of reference.

In the construction of the improved hay-stacker is employed a base-frame comprising a pair of longitudinal beams or runners 1 1, resting upon the ground and having rounded front ends so that they may readily drag upon the ground. The side beams or runners are connected upon their upper sides by means of cross-pieces 2 and 3, which are disposed upon said runners. A truss or quadrilateral brace 4 connects the runners 1 1 with the cross-pieces 2 3 for the purpose of adding strength and stability to the device. Near the rear ends of the runners and in contact with the extended ends of the cross-brace 3 are mounted a pair of uprights 5, connected near their lower ends by a cross-piece 6, near their upper ends by a cross-piece 7, and intermediate of their upper and lower ends by a cross-piece 8, each of said cross-pieces having extended ends, as shown. The upper cross-piece 7 supports a pair of blocks 9, having concave recesses in their upper sides, which are for the purpose of partially supporting the track-bars 10. The latter are composed, preferably, of round iron rods or pipes, the lower ends of which are firmly connected with the front ends of the runners 1, the track-bars being thence extended obliquely in an upward and rearward direction, and thence curved over the cross-piece 7, the extended upper ends of the track-bars being supported in the recesses of the blocks 9. The track-bars are extended from the blocks 9 rearwardly at a comparatively slight upward incline, the length of said track-bars being modified to suit the size and capacity of the stacker. The upward and rearward extensions of the track-bars from the cross-piece 7 are supported by means of braces 11, leading to the extended ends of the cross-piece 8, and additional braces 12, leading to the extended ends of the cross-piece 7. The extended ends of the tracks are thus securely braced and enabled to support any weight that may in practice be imposed thereon.

The rear ends of the track-bars are connected on their under sides by means of a cross-beam 14, with the under side of which are connected by swivels, ball-and-socket joints, as shown in the drawings, or other suitable connecting means a pair of supporting-bars or uprights 15. These supporting-bars are preferably tubular at their lower ends for the reception of extension members 16, capable of being retained in adjusted position by means of set-screws 17 or other suitable and convenient means. The cross-bar 14 and legs or supports 15 obviously serve as additional supports for the extreme rear ends of the track-bars when the machine is set up in position for operation. When the machine is to be transported from one place to another, the extension members 16 may be withdrawn within the tubular portion of the uprights 15 and there secured, so as not to drag upon the ground while the machine is being moved.

The frame, composed of the top cross-piece 14 and the supporting legs or uprights 15, is covered with screen material, as indicated at 36, said material being bound all around, and especially at the bottom, by means of strips 37 of binding of any suitable kind which shall serve to strengthen and reinforce the screen. This screen is preferably made fast to the top cross-piece 14 and is connected detachably with the lower ends of the uprights 15 by such means as turn-buttons 42, adapted to engage slots 43 in the lower binding-strip. Screen material, as shown at 44, is likewise attached to the sides of the entire structure, said material being made fast to the uprights 15 and to the extended ends of the cross-pieces 6, 7, and 8, the side screens thus formed being also suitably bound, so as to strengthen and reinforce them.

A carrier C is provided which is composed, essentially, of a head 18, fingers 19 and 20, extending upwardly and forwardly from said head, and cross-bars 21, bracing and connecting said fingers. Between the head 18 and the cross-bar 21, which connects the upwardly-extending fingers, is interposed a suitably-curved resilient rod 22, having extended ends 23, which when the load is dumped will strike against the track-bars, and thereby prevent injury either to the track or carriage by any sudden and violent concussion and which will also while the carriage is being lowered contact with the track-rails, so as to maintain the carrier in the proper position without danger of its being overturned.

Suitably engaging each of the track-bars is a carriage 24, which may be constructed of a piece of sheet metal by bending the same so as to present a back 25 and sides 26, the extremities of which are bent around the track-bars, so as to retain the carriages in position thereon. Each carriage is provided with a pair of caster wheels or rollers 27, journaled between the sides thereof and engaging the upper sides of the tracks. Firmly secured to the rear side of the head 18 of the carrier is a round iron bar or axle, the ends of which extend through the side walls of the two carriages, which are thereby firmly connected with said axle and through the latter with the carrier, which may thus be conveniently moved upon the supporting-tracks.

At the ends of corners of the carrier are provided diagonal brace-bars 28, which connect the forwardly-extending fingers with the upwardly-extending fingers at the ends of the carrier. These brace-rods are provided at their upper ends with eyes 29, to which are attached the hoisting-ropes 30. These hoisting-ropes are guided over pulleys 33, supported adjacent to or connected with the top beam 14, passing from thence over pulleys 31^a, connected with the cross-beam 7, and under guide sheaves or pulleys 35, connected with the cross-bar 3, being guided over the latter pulleys to the point of attachment of the draft. The supporting-blocks 9 on the upper side of the cross-beam 7 are provided with recesses 32, in which are mounted guide-pulleys 31, that serve to guide the hoisting-ropes when the carrier is lowered from the position shown in Fig. 1 of the drawings.

Hingedly connected with the cross-bar 8 is a triangular frame 39, which extends in a forward direction and which carries at the apex thereof a weight 40, which is connected by a chain or other flexible connecting means 41 with the head 18 of the carriage. The counterweight serves to restore the carrier to its normal lowered position after a load has been elevated and dumped.

The operation and advantages of this invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed.

The device may be constructed throughout of either wood, metal, or other suitable material. A light metallic frame structure will probably be preferred on account of its strength and non-liability to destruction by wear or by exposure to the weather; but a wooden framework with iron tracks and provided where necessary with metallic braces may also be deemed desirable.

When the carrier of the device is at its lowermost position, the hay or other material to be elevated will be deposited thereon by rakes of ordinary construction, and when a load has been accumulated draft is attached to the ends of the hoisting-ropes, which may be joined together for the convenient attachment of a whiffletree. The carrier will thus be caused to ride upwardly upon the inclined tracks, over the rounded front corners, and upwardly and rearwardly until the point has been reached at which the load is to be discharged. By slightly releasing the draft the weight of the load, which is at this point supported upon what has in the foregoing speci-

fication been termed the "upwardly-extending fingers" of the carrier, will cause the latter to be tilted, thus dumping the load within the space which is confined by the screens connected with the sides and the rear end of the main frame, said screens positively preventing the hay or other material from being dispersed or scattered by the wind. As soon as the load has been dumped the counterweight carried by the triangular frame pivoted to the cross-piece 8 will exert draft upon the carrier in a downward direction, and the carrier will thus quickly be restored to its normal receiving position.

Owing to the herein-described arrangement of the side and end screens, material elevated by the carrier will at all times be protected and will be dumped in such a manner as to form a solid and compact stack of a neat and regular appearance. When the stack has been formed, the rear screen is disconnected from the lower ends of the supports or uprights 15, and the latter having swivel connection with the cross-beam 14 will spread sufficiently to permit the side screens to be spread apart from the sides of the stack so that the stacker may be moved without liability of injury to said side screens. The rear screen being connected with the cross-piece 14 only may be readily elevated or folded out of the way or may be dragged over the top of the stack, if preferred, while the machine is being moved into position for building another stack.

Having thus described the invention, what is claimed is—

1. A hay-stacker having a carrier, and a wind-guard forming an inclosure to receive material from the carrier.

2. A hay-stacker having a carrier, and a wind-guard forming an inclosure to receive material therefrom, the wind-guard having an outwardly-displaceable wall.

3. A hay-stacker having a carrier, and a wind-guard forming an inclosure to receive material therefrom, said wind-guard having a wall pivoted to swing outwardly at one edge.

4. A hay-stacker having a carrier, and a wind-guard forming an inclosure to receive material therefrom, said wind-guard having a wall pivoted to swing outwardly at its lower edge to pass over a stack when the stacker is moved.

5. A hay-stacker having a carrier, and a wind-guard forming an inclosure to receive material therefrom, the wind-guard having a swinging rear wall and laterally-movable side walls.

6. In a hay-stacker, a pair of runners suitably spaced and connected, a cross-bar upon said runners, uprights connected with the runners adjacent to the rear edge of said cross-piece, a cross-piece connecting the upper ends of said uprights, track-bars connected with the front ends of the runners and having upward and rearward extensions supported upon the cross-bar at the upper ends of the uprights, a cross-bar connecting intermediate parts of the uprights and having extended ends, and braces connecting the extended ends of the track-bars with the extended ends of the cross-bars connecting the uprights of the frame.

7. In a hay-stacker, a base-frame composed of runners suitably connected and spaced apart, uprights connected with said runners near their rear ends, a cross-bar connecting the upper ends of said uprights, track-bars connected with the front ends of the runners, supported upon the cross-bar, and having rearward extensions, a cross-bar connecting the rear extremities of the track-bars and supporting members for said cross-bar.

8. In a hay-stacker, a base-frame including suitably spaced and connected runners, a vertical frame connected with said base-frame near its rear end, track-bars connected with the front ends of the runners, supported on top of the vertical frame and extended rearwardly in an upward direction, braces supporting the extended ends of the track-bars, a cross-bar connecting the rear ends of the latter, legs connected flexibly with said cross-bar, and adjustable extension members at the lower ends of said legs.

9. In a hay-stacker, a base-frame, an upright frame, track-bars connected with the base-frame, supported by the upright frame and extended rearwardly from the latter, a cross-bar at the rear ends of the track-bars, supporting members for said cross-bar, and screens supported at the sides and at the rear end of the machine.

10. In a hay-stacker, the combination with a frame, track-bars supported by said frame, a carrier, and operating means for the latter, of screen material connected with the sides and with the rear end of the frame to confine material dumped within said frame.

11. In a hay-stacker, a base-frame, an upright frame near the rear ends of said base-frame, track-bars connected with the front ends of the side members of the base-frame, supported on top of the upright frame and extending rearwardly from the latter, supporting means for the rear ends of the track members, carriages riding upon the track-bars, a carrier including a head and forwardly and upwardly extending fingers, suitably connected, and braced, a rod connected with the rear side of the head and extending through the casings of the carriages, a resilient bar connected with the carrier and having ends extended in the path of the track-bars, hoisting-ropes connected with the carrier and guides for said hoisting-ropes.

12. In a hay-stacker, a base-frame including suitably spaced and connected runners, an upright frame connected with the base-frame

near the rear end of the latter, track-bars connected with the front ends of the runners, supported upon the top of the upright frame, and extended upwardly and rearwardly, a supporting-frame for the rear ends of the track-bars including a cross-bar connected directly with the latter and extension-legs connected flexibly with said cross-bar, a screen, suitably bound and reinforced and connected with the rear supporting-frame, side screens connected with the extension-legs of the rear frame and with the upright frame rising from the base-frame, and a carrier traveling upon the track and adapted to discharge within the space confined by the rear and side screens.

13. In a hay-stacker, a base-frame having runners, an upright frame connected with said base-frame near the rear end of the latter, track-bars connected with the front ends of the runners, supported on top of the upright frame and extended upwardly and rearwardly, a carrier mounted to travel upon the track, hoisting-ropes and guide means for the latter, a frame connected hingedly with a cross-bar of the upright frame and having a counterweight at its free end, and flexible connecting means between the weighted end of said frame and the carrier.

14. The combination with a hay-stacker, of a wind-guard composed of screen or foraminous material connected with the frame of said stacker.

15. The combination with a hay-stacker having extended tracks and supporting means for the rear ends of said tracks, of a wind-guard including screens connected with and supported by the main frame and by the track-supporting means.

16. In a hay-stacker, a suitably-mounted supporting-frame, track-bars connected with said frame and having rearward extensions, supporting means for the extended ends of the track members including a cross-bar and legs connected flexibly with the latter, side screens connected with said supporting-legs and with the main frame, and a rear screen permanently connected with the cross-piece connecting the rear end of the track members and detachably connected with the lower ends of the supporting-legs.

17. A hay-stacker having extended track members and supporting-legs for the latter, in combination with a wind-guard consisting of side pieces of foraminous material connected permanently with the supporting-legs of the extended track members and with the main frame, and a rear foraminous shield suitably secured at its upper edge and detachably connected at its lower edge with the supporting-legs.

18. A hay-stacker having extended tracks, a carrier movable upon said tracks, and a wind-guard forming an inclosure to receive material dumped by the carrier.

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

JOHN L. ROSEBERRY.

Witnesses:
F. S. ALLRIGHT,
R. T. BURNS.