

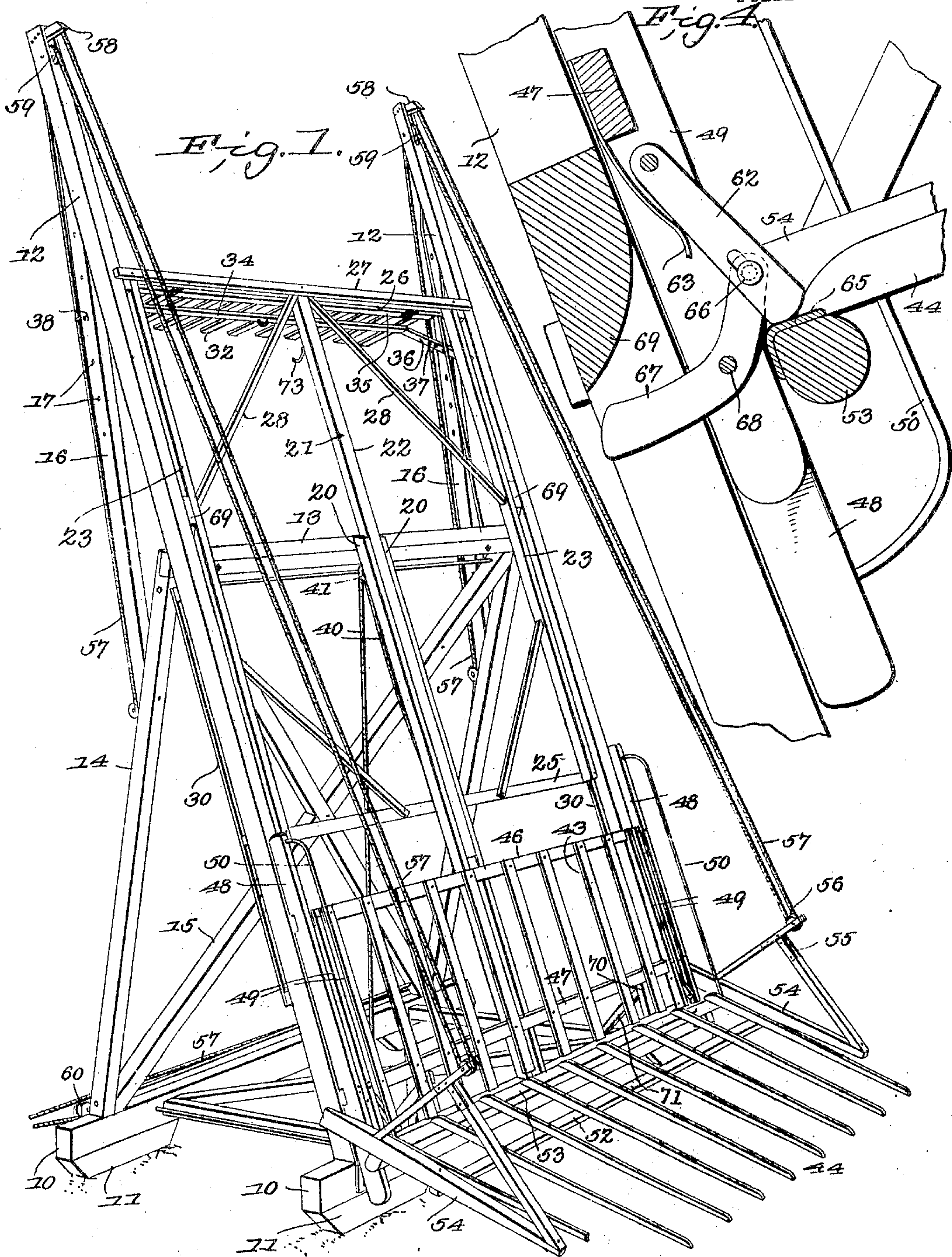
No. 797,567.

PATENTED AUG. 22, 1905.

W. FAGAN.  
HAY STACKER.

APPLICATION FILED NOV. 9, 1904.

2 SHEETS—SHEET 1.



Witnesses  
*E. J. Stewart*  
*John E. Carter*

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Attorneys



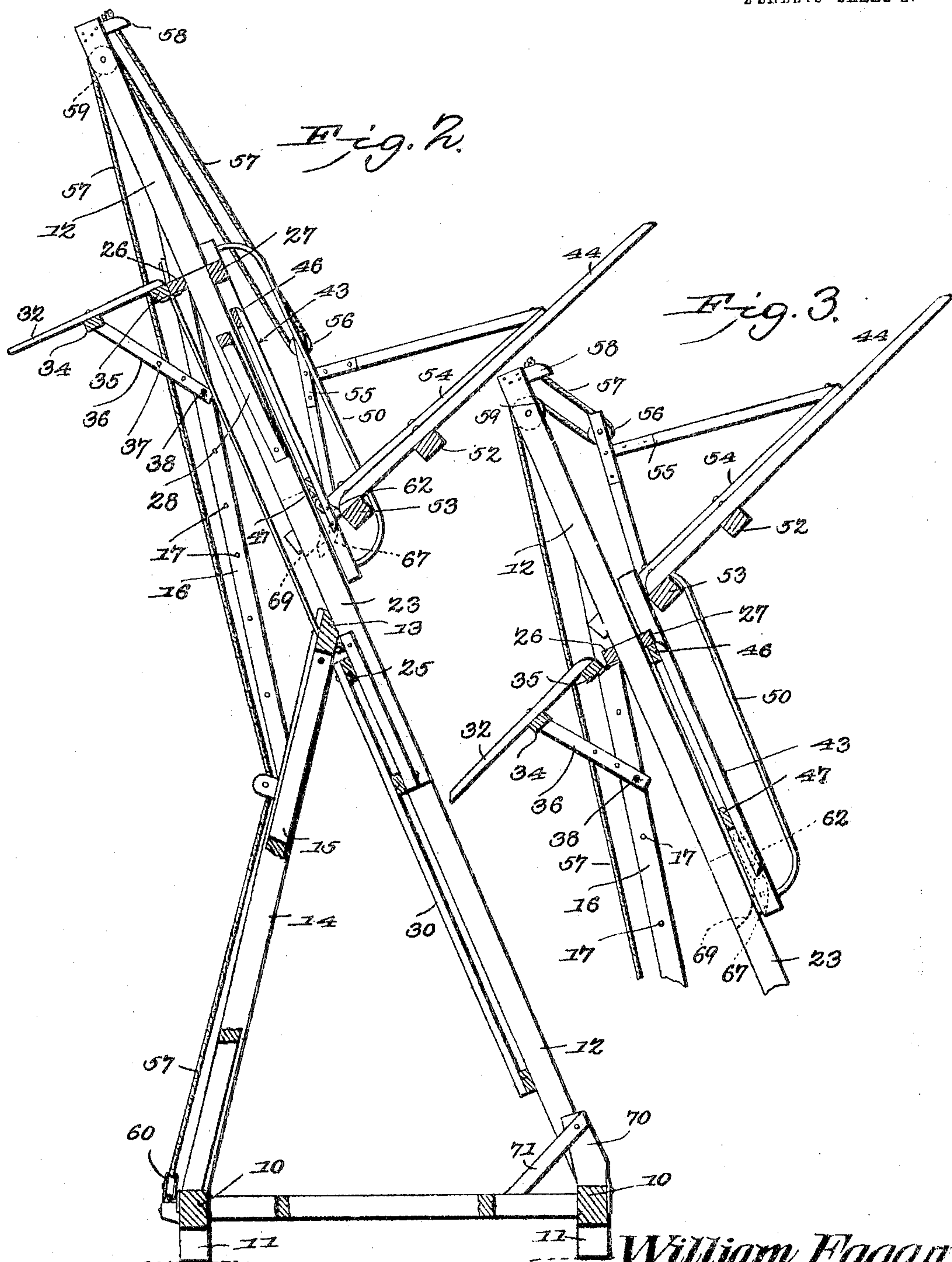
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# UNITED STATES PATENT OFFICE.

WILLIAM FAGAN, OF ABBOTT, NEBRASKA.

## HAY-STACKER.

No. 797,567.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed November 9, 1904. Serial No. 232,036.

*To all whom it may concern:*

Be it known that I, WILLIAM FAGAN, a citizen of the United States, residing at Abbott, in the county of Hall 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 has for its principal object to provide a novel form of stacker in which the parts may be readily adjusted for the delivery of the load at any desired point.

A further object of the invention is to provide a hay-stacker in which the carrier is provided with a detachable back piece that travels with the load carrier or platform during a portion of the upward movement of the latter, the back piece stopping immediately in advance of the delivery-frame, while the load-carrier continues its upward movement.

A still further object of the invention is to provide a novel form of load-carrier, including a main carrier-frame and a back piece formed of separate sections, and to provide means for locking and unlocking said sections.

A still further object of the invention is to provide a novel form of discharge-frame which may be adjusted vertically as the height of the stack or rick increases and may further be adjusted to alter its angle to the horizontal in accordance with the build of the rick.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a perspective view of a hay-stacker constructed in accordance with the invention. Fig. 2 is a sectional elevation of the same. Fig. 3 is a view similar to Fig. 2, illustrating the position assumed by the parts when the carrier arrives at the point of discharge. Fig. 4 is a detail sectional view, on an enlarged scale, illustrating the means for locking and unlocking the carrier and its back piece.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The device forming the subject of the present invention is mounted on sills 10, having suitable runners 11 to permit the apparatus to be hauled from place to place. The sills 10 are disposed in parallel relation, and from the front sill extend two obliquely-disposed skid-beams 12, that are connected at a point intermediate of their length by a cross-bar 13. The cross-bar 13 forms a part of a strut-frame 14, that is supported by the rear sill 10, said frame being strongly braced by diagonals 15, and from the upper portion of said strut-frame extends a pair of bracing-beams 16, that are connected to the upper portions of the skid-beams 12, said bracing-beams being provided at intervals with perforations 17 for a purpose hereinafter described.

Extending from the front of the cross-bar 13 is a pair of spaced guide-bars 20, these serving to guide a slidable discharge-frame 21. The frame 21 includes a central beam 22 and side beams 23, that are connected at the bottom by a cross-bar 25 and at the top by a pair of bars 26 and 27, the frame being further braced by diagonals 28. The bottom cross-bar 25 is extended and fits behind the skid-bars and is held from displacement by a pair of auxiliary guide-bars 30, that are secured to said skid-bars. The upper bar 27 slides on the front edges of the skid-beams, and the cross-bar 26 serves to support a discharge-grate 32. The discharge-grate 32 is formed of a plurality of spaced bars connected by transverse bars 34 and 35, the latter being connected to the bar 26 by suitable hinges or other pivotal connections. To the opposite ends of the cross-bar 34 are connected the ends of links 36, said links having perforations 37 for the passage of securing-pins 38. The pins 38 are passed through the perforations 37 and the perforations 17 of the bracing-beams 16 and permit the adjustment of the discharge-grate to any desired angle. This discharge-frame may be raised or lowered by a hoisting-cable 40, connected at one end to the lower portion of the bar 22 and passing from a suitable sheave 41 on the cross-bar 13, the lower end of the cable being attached to a suitable plate or other fastening at or near the lower portion of the main frame. By this means the discharge-frame may be raised at intervals, as the height of the rick gradually increases, it being unnecessary to carry the load to the extreme top of the skid-frame at each operation.

The carrier includes a back frame 43 and a carrying-platform 44, both of which are pref-



erably grate-like in form in order to reduce the weight, although in some cases the platform and the back piece may be formed of solid planks or sheets of material where the device is employed for the hoisting of different classes of material.

The back piece 43 includes grate-bars and cross-beams 46 and 47. The cross-beams are connected to side bars 48, and near each of the latter is arranged a pair of slightly-spaced bars 49, that are disposed in parallel relation with the grate-bars. To each of the side bars 48 is connected the opposite ends of a guide-bar 50, that serves as a means for limiting the movement of the carrier-platform with respect to the back piece.

The carrier-platform includes grate-bars that are connected by cross-bars 52 and 53, these in turn being connected together by side bars 54, that are rearwardly extended and engage the outer faces of the side beams 48 of the back piece and the sides of the skid-bars, these serving as guides for the carrier during its movement toward the discharge-point. To each of the side bars is secured a truss-frame 55, each truss-frame being provided with a small sheave 56 for the reception of a hoisting-cable 57. The cables are secured at one end to projecting arms 58 at the top of the skid-beams and thence pass over the sheaves 56 and around sheaves 59 near the top of the skid-frames and down to guiding-sheaves 60 on the rear sills 10, at which point they may be connected to a draft animal or animals.

Between each pair of bars 49 is pivoted a locking-tongue 62, the lower end of which is pressed outward by a loop-spring 63 and is adapted to engage with the rear edge of the cross-bar 53 of the carrier-platform, said cross-bar being preferably reinforced by a metal sheathing 65. The tongue 62 is slotted, and through said slot extends a pin 66, that is carried by a lever 67, pivoted on a pin 68, the rear end of the pin extending between the skid-frame and the side bars 23 of the discharge-frame. To each of the side bars of the discharge-frame is secured a cam 69, said cams being placed a distance below the upper cross-bar 27 about equal to the height of the back carrier, and as the carrier-frame is traveled upward the levers 67 are engaged by said cams and the back carrier is disengaged from the carrier-platform.

To the front sill are secured small posts 70, preferably provided with bracing-bars 71, and these posts project slightly beyond the lines of the skid-bars, as indicated in Fig. 2, and serve as stops which engage the cross-bar 47 and limit downward movement of the back of the carrier.

In the operation of the device the carrier-platform assumes the position shown in Fig. 1, and the hay or other material is loaded

thereon in the usual manner. The draft-animals are then started, and the stress on the cables 57 first raises the front of the carrier-platform until it assumes the angle illustrated in Fig. 2, the rear bar 53 engaging against the lower ends of the locking-tongues 62, and then the carrier-platform and back piece start on their upward movement. The upward movement continues until the levers 67 come into contact with the cams 69, whereupon the locking-tongues are moved from engagement with the cross-bar 53, and by this time the upper portion of the back piece of the carrier has arrived at a point adjacent to or in alignment with the top of the discharge-frame, being at this time merely in contact with the upper bar 27 of said frame, as shown in Fig. 3. The carrier-platform being unlocked from the back piece then continues its upward movement, the round end of the rear bar 53 riding on the side bars 49 of the back piece and being held from displacement by the auxiliary guide-bars 50. The upward movement of the carrier-platform is checked when the rear bar 53 engages the ends of said guide-bars 50, and by this time the platform has arrived at the position shown in Fig. 3, being then in alignment with the discharge-shelf 32, and the load slides off by gravity in the usual manner.

It is obvious that the discharge-frame may be adjusted from time to time as the height of the stack increases, and it will therefore be unnecessary to raise the load to the same height throughout the stacking operation, this saving considerable time and labor in the building of the ricks. The discharge-shelf may, moreover, be adjusted to any desired level, and when the device is to be hauled from place to place the discharge-shelf may be locked in position by a hook 73 in order to prevent accidental displacement. During transportation the carrier-platform may be folded back against the backing-piece and may be tied or otherwise secured in place.

Having thus described the invention, what is claimed is—

1. In a hay-stacker, a skid-frame, a carrier slidable thereon and including a back piece and a platform, and means for disconnecting the back piece from the platform in advance of the arrival of the latter at the point of discharge.

2. In a hay-stacker, the combination with a skid-frame, of a carrier including a separable back piece and platform, and means for disconnecting the back piece from the platform and retaining said back piece in position to form a guide for the material during further movement of the platform.

3. The combination in a hay-stacker, of a skid-frame, a carrier including a back piece and a platform, means for separating the back piece from the platform and retaining said



back piece in position to form a guide for the material, and a platform-guiding means carried by said back piece.

4. The combination in a hay-stacker, of a skid-frame, a discharge-frame, cams carried by the discharge-frame, a carrier including a separable back piece and a platform, and locking-tongues for holding the back piece and platform to each other, said tongues being movable to unlocking position by the cams.

5. The combination in a hay-stacker, of a skid-frame, a carrier including a separable back piece and a platform, pivoted tongues for locking the back piece and platform together, levers connected to said tongues, a vertically-adjustable discharge-frame, and cams carried by said discharge-frame and disposed in the path of movement of the levers.

6. The combination in a hay-stacker, of a skid-frame, a vertically-adjustable discharge-frame supported thereby, a discharge-shelf carried by the frame, means for adjusting the angular position of the shelf, and a carrier guided by the skid-frame.

7. The combination with a skid-frame, of a vertically-adjustable discharge-frame, a pivotally-mounted shelf carried by said discharge-frame, means for locking the shelf in adjusted position, a carrier carried by the skid-frame, a back piece forming a part of the carrier, and means for arresting the vertical movement of the back piece in advance of the completion of the upward movement of the carrier.

8. The combination in a hay-stacker, of a skid-frame, a carrier including a back piece and a platform, and means for connecting and disconnecting the carrier and platform, the extent of vertical travel of said carrier being greater than the extent of travel of the back piece.

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

WILLIAM FAGAN.

Witnesses:

R. R. HORTH,  
MABEL M. PALMER.