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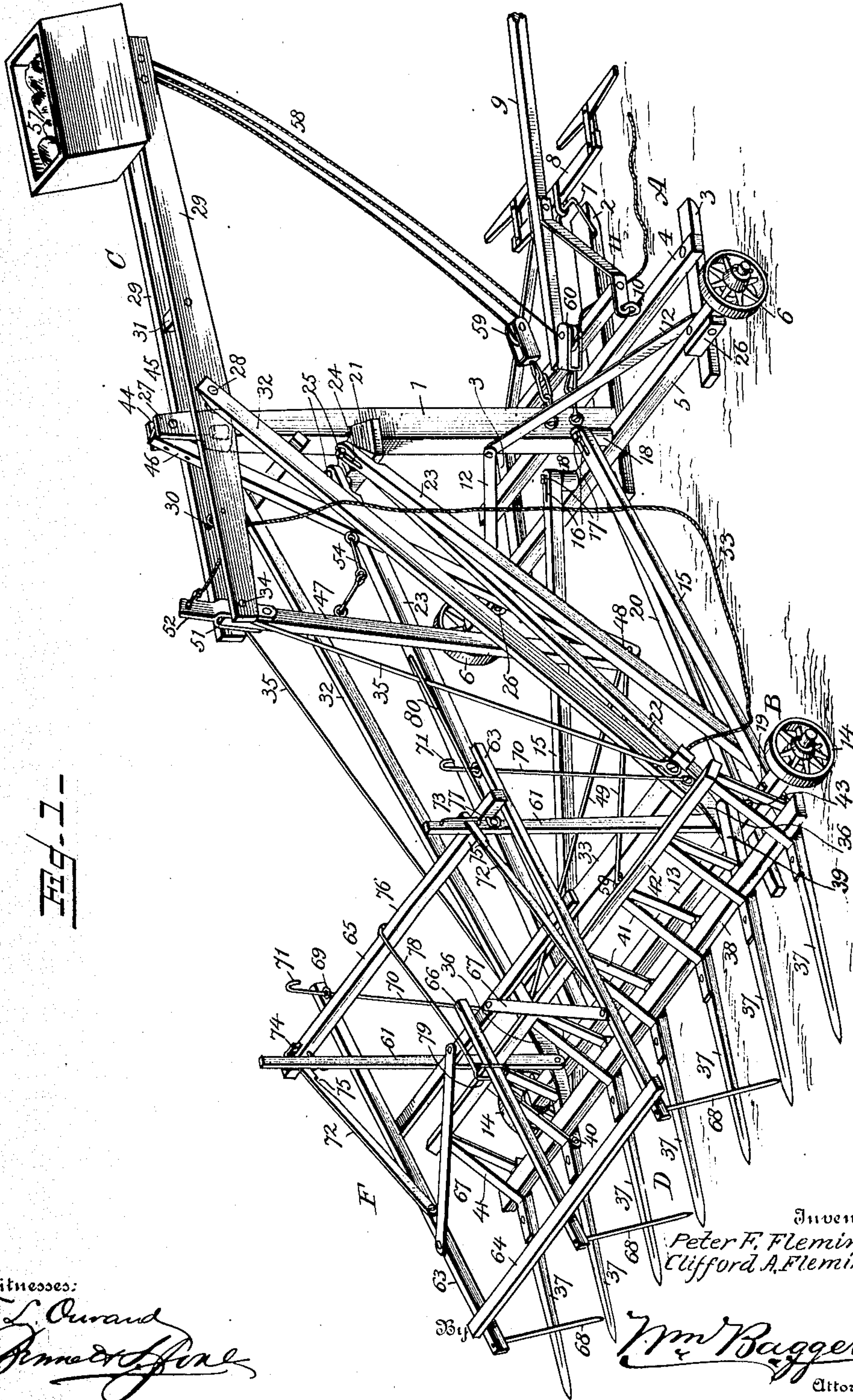
PATENTED JULY 16, 1907.

P. F. & C. A. FLEMING.

HAY STACKER.

APPLICATION FILED DEC. 18, 1906.

3 SHEETS—SHEET 1.



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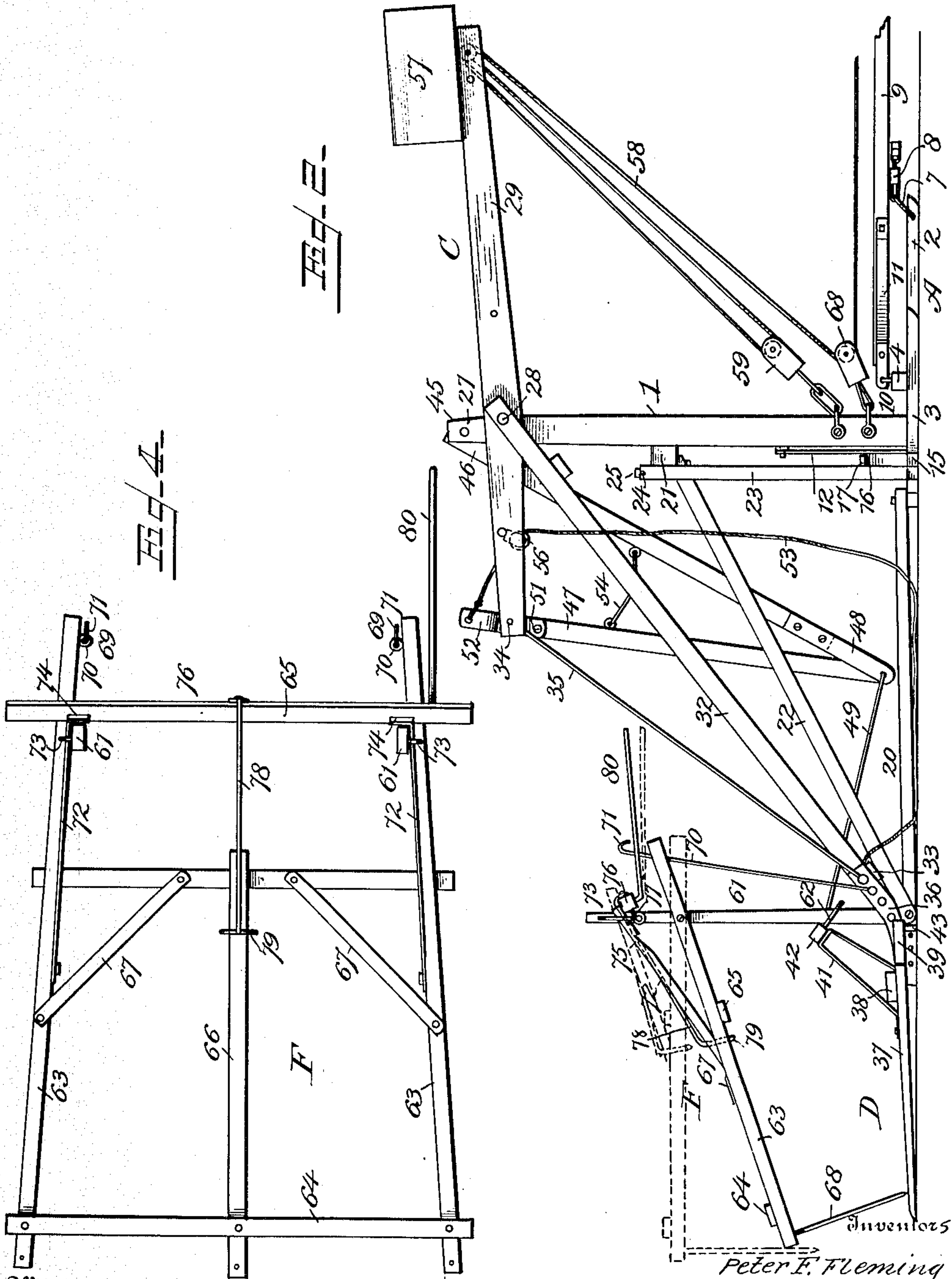
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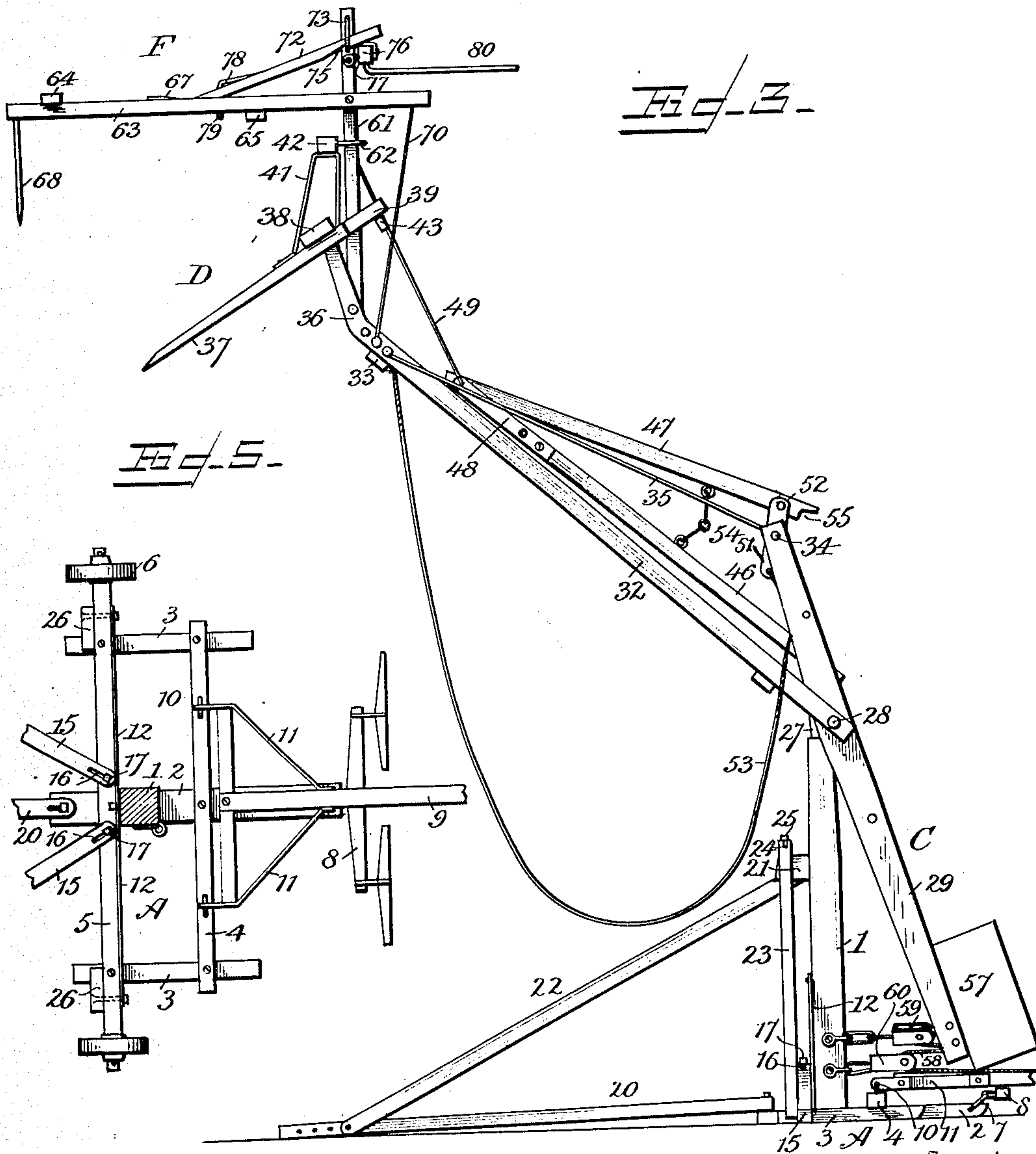
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

PETER F. FLEMING AND CLIFFORD A. FLEMING, OF HUNTSVILLE, MISSOURI; SAID PETER F. FLEMING ASSIGNOR TO SAID CLIFFORD A. FLEMING AND BURTON S. FLEMING, OF HUNTSVILLE, MISSOURI.

HAY-STACKER.

No. 860,205.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed December 18, 1906. Serial No. 348,434.

To all whom it may concern:

Be it known that PETER F. FLEMING and CLIFFORD A. FLEMING, citizens of the United States, residing at Huntsville, in the county of Randolph and State of Missouri, have invented certain new and useful Improvements in Hay-Stackers, of which the following is a specification.

This invention relates to that class of hay-stackers in the construction of which there are included a mast or upright, a cap or turn-table mounted upon the mast and capable of rotation in a horizontal plane, a lever or beam pivoted upon the turn-table and capable of movement in a vertical plane, and a stacker fork carried by the beam or lever; said fork including a pivoted platform which may be tilted for the purpose of discharging the load.

This class of machines require to be frequently moved from one place to another, and one object of the present invention is to provide improved supporting and carrying trucks which will facilitate the transportation of the machine from one place to another, and which will enable the machine to be set up for operation in a very secure and efficient manner.

Another object of the invention is to provide an improved rake-off device, which will serve to retain the load upon the platform of the stacker fork when the sweep-rake, which is employed for the purpose of gathering the hay and conveying it to the stacker, is backed away, thus greatly facilitating the work of the attendant or operator who, in the absence of the rake-off device, is compelled to be constantly on the alert to see that the load, or a portion thereof, is not backed away with the rake.

Further objects of the invention are to simplify and improve the general construction and operation of the machine which forms the subject of the invention.

With these and other ends in view which will readily 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 the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to, when desired.

In the drawings:—Figure 1—is a perspective view, showing the machine arranged for transportation. Fig. 2—is a side-elevation, showing the machine arranged for operation, and in load-retaining position. Fig. 3—is a side-elevation showing in full lines the stacker fork elevated to the discharging point and with the

fork, tilted. Fig. 4—is a detail plan view of the rake-off device. Fig. 5—is a detail plan view of a portion of the frame, the mast being shown in section.

Corresponding parts in the several figures are denoted by like characters of reference.

The mast or upright, 1, is mounted securely upon a truck, A, comprising a plurality of runners, 2, 3, 3, supporting and connected by front and rear cross-bars, 4 and 5, which latter constitutes the front axle. The latter is extended well beyond the side-members or runners 3, 3, and it is provided with readily-detachable low transporting wheels, 6, 6; the central or intermediate runner 2 is longer than the side runners, and it carries at its forward end a clevis, 7, with which is connected a double-tree, 8, for the attachment of the draft animals. A tongue, 9, for guiding the machine is hingedly connected with the front cross-bar 4, by means of eye-bolts, 10, engaging the hounds, 11. The mast 1 is supported upon the intermediate runner 2 adjacent to the front side of the axle, with which it is connected by braces, 12, 12.

The rear truck, B, is composed of an axle, 13, having transporting wheels, 14. Said rear axle is connected with the front axle by means of sills, 15, 15, the forward ends of which are provided with slots, 16, engaging headed bolts, 17, near the middle of the front axle, adjacent to the sides of the mast or upright; spacing blocks or washers, 18, being preferably placed upon the bolts 17 to elevate the front ends of the sills above the axle. The sills 15 diverge rearwardly and their rear ends are pivoted upon the under side of the rear axle by means of pivotal members such as bolts, 19, which may be readily detached in order to permit the rear truck to be readily disconnected when the machine is to be mounted for operation.

A reach-member, 20, is pivoted upon the rear end of the intermediate runner 2, said reach-member being extended beneath the rear axle. Secured upon the rear side of the mast is a block or bracket, 21, on the under side of which is pivoted the upper, forward end of an inclined brace, 22, the lower, rear end of which is connected with the reach-member 20, near the rear end of the latter. Similar inclined braces, 23, 23, are connected with the sills 15 near their rear ends, the upper, forward ends of said braces being provided with longitudinal slots, 24, engaging headed studs or bolts, 25, upon the block or bracket 21, near the ends of said bracket; said studs or bolts being in axial alinement with the bolts 17 upon which the front ends of the sills 15 are pivoted. It will also be noticed that the ends of the bracket 21 are beveled, so that the braces 23 may freely swing with the sills 15, when the rear ends of the latter are disconnected from the rear axle, to positions directly above, and in the vertical plane of the front axle; this being the position occupied by the sills and

braces when the machine is arranged for operation, as seen in Figs. 2 and 3 of the drawings. It will be observed, that the braces 12 which connect the mast 1 with the axle 5 constitute stops, beyond which the sills 15 may not swing in a forward direction, being thus arrested directly above the axle; upon the rear side of the axle there are pivoted turn-buttons, 26, which may be turned up against the sills, for the purpose of securing the latter temporarily in position upon the axle.

It will be seen from the foregoing, that a truck-frame or traveling frame is provided, including the front and rear trucks A and B, said trucks being connected for transportation by the sills 15, and the front truck carrying the mast or upright 1 which carries mechanism to be hereinafter described. The slots, 16, 24, in the sills 15 and the braces 23, which engage the bolts or pivotal members 17 and 25, prevent an entirely rigid connection between the parts, and permit that latitude of motion which is needed in order to permit short turns to be made when the machine is being moved. In order to arrange the machine for operation, it is only necessary to detach the front wheels; to disconnect the rear ends of the sills from the rear axle, and to swing said sills together with the inclined braces 23 into position directly above the front axle, where they are temporarily secured by the turn-buttons 26, the reach member 20 with the brace 22 being extended rearwardly, intermediate the sills. The mast or upright rising from the front truck will thus be very securely braced; and it will be seen that the machine, having been transported to the desired place, may be arranged for operation very swiftly and efficiently, and without the use of guy-ropes or rods, braces or the like, other than such as are permanent parts of the equipment.

The reach-member 20, as hereinbefore stated, extends loosely beneath the rear axle when the machine is arranged for transportation, and it acts as a trailer, to steady the movement without interfering with the direction.

Upon the upper end of the mast there is pivoted a cap, 27, constituting a turn-table, which is provided with trunnions, 28. C designates the main operating lever which in its preferred form is composed of beams, 29, 29, pivoted upon the trunnions 28, and connected at intervals by bolts, 30, and spacing blocks, 31. The operating lever further includes a pair of rearward-extending arms, 32, 32, the upper, forward ends of which are pivoted upon the trunnions 28; the arms 32 diverge downwardly and rearwardly and are spaced apart and connected by a cross-bar 33; the beams 29 are connected near their rear ends by a bolt, 34, from which brace-rods, 35, extend to the rear ends of the arms 32 with which said brace-rods are securely connected. The arms 32, beams 29, and brace rods 35 thus combine to form a truss-frame constituting an operating lever which possesses in a high degree the requisite qualities of lightness, strength and durability, and which is specially adapted to carry the hay fork and its operating mechanism and other related parts, which will be presently more fully described.

The hay-fork which, as an entirety, is designated by the letter D, is pivotally connected with the lower ends of the arms 32 of the operating lever. In the preferred construction as illustrated in the drawings the rear ends of said arms are provided with metallic angle-plates or

castings, 36, with which the fork is connected instead of being connected direct to the arms 32, which are usually constructed of wood. The fork is composed of a plurality of teeth or tines, 37, secured upon and connected by a cross-bar or head, 38; two of the teeth are extended to form butts or brackets, 39, and the teeth thus extended are connected with the angle plates 36 by means of pivotal pins or bolts 40. The fork-teeth and the head or cross-bar together form a platform which, by the bolts 40, is hingedly connected with the operating lever, with relation to which it is capable of being tilted to various positions. The teeth or tines are provided with inclined, inverted U-shaped guards, 41, connected by a cross-bar 42, and serving to prevent the load from sliding forwardly off the fork-platform, when the device is in operation.

Upon the under sides of the butts or brackets 39 are secured heel-blocks, 43, which by contact with the ground when the fork is in receiving position, serve to elevate the butts or brackets, correspondingly depressing the points of the teeth or tines, and thus maintaining the fork in proper load-receiving position.

For the purpose of maintaining the platform of the fork normally in an approximately horizontal position, while receiving and elevating the load, and also for the purpose of tilting the fork-platform for the purpose of discharging the load, when desired, the following instrumentalities are provided.

The cap or turn-table 27 is provided with a slot or recess, 44, through which extends a transverse pin, 45, whereon is pivoted a downward-extending bar, 46, connected pivotally at its lower end with a second bar, 47, which extends upwardly at an angle to the bar 46, the two combining to form a V. In the drawings, the lower end of the bar 46 has been shown as provided with metallic plates, 48, receiving between them the lower end of the bar 47, but said plates may be omitted, if desired. The V-shaped frame composed of the bars 46, 47 is joined to the fork by connecting means such as a link, 49, which may be of any suitable material and of any desired construction; in the drawings it has been shown as a yoke, the body of which extends through apertures in the plates 48 and through the lower end of the bar 47, thus dispensing with the necessity of separate connecting means; the terminal ends of the arms or side-members of the yoke are connected with the cross-bar 42 of the fork, by means of eye-bolts, 50.

Upon the bolt 34 at the rear end of the operating lever C there is pivoted a trip-member consisting of an inverted U-shaped clip, 51, having an upward-extending arm, 52, with which is connected a flexible member or trip-rope, 53, the opposite end of which may be made fast to one of the lifting arms 32. The upper end of the bar 47 is pivoted in the U-shaped clip 51, at a suitable distance from the fulcrum of the latter; said clip or trip-member thus constitutes a cam or eccentric, whereby the bar 47 may be manipulated to tilt the fork through the medium of the yoke or connecting link or member 49. The bars 46, 47 are connected with each other by a short chain, 54, for the purpose of relieving undue strain upon the trip-member and the connecting bolts.

The bolt 34 engages a notch or recess, 55, in the upper end of the bar 47, and constitutes a stop to limit the movement of the upper end of said bar in a forward

direction. The trip-rope is guided over a suitably arranged guide-pulley, 56.

Upon the lever C, near the front end thereof, is mounted a weight-box, 57, in which weights are to be placed for the purpose of suitably counterbalancing the fork and related parts, thereby greatly facilitating the operation of the machine. One end of the hoisting rope or flexible element, 58, is suitably made fast near the front end of the lever C, and said rope is guided over suitably disposed pulleys, 59, 60, near the front end of the lever and near the lower end of the mast, to the point of attachment of the power.

Near the lower ends of the lifting arms 32 are pivoted uprights 61, said uprights being in the present instance connected pivotally with the angle plates or castings 36. The uprights 61 extend through loops or keepers 62 which are secured upon the front side of the cross-bar 42, and said uprights serve to support a frame F, the side members of which, 63, are pivoted upon the uprights. The frame F comprises the side members 63, cross-bars 64 and 65, which connect said side members, and an intermediate longitudinal bar 66; braces 67 may be used to reinforce the construction. The side members 63 and intermediate bar 66, are provided at their rear ends with downward extending prongs or tines 68 having sharp points or extremities that will readily pierce the load of hay placed upon the fork; the side members 63 of the frame are extended forwardly of the uprights 61 and are provided with eyes or staples 69 for the passage of rods 70, the lower ends of which are pivoted upon the angle plates 36 and the upper ends of which have terminal hooks 71 adapted to engage the eyes 69. Pivoted upon the outsides or faces of the side members 63 of the frame F are latch members 72 that extend through loops or keepers 73 near the upper ends of the uprights 61, said latch members being provided with terminal hooks 74 adapted to engage the rear sides of the uprights for the purpose of limiting the downward movement of the rear portion of the frame; the latch members are provided with notches 75 adapted to engage the keepers 73 for the purpose of sustaining the frame F with its rear portion in an elevated position in order to permit the load to be placed upon the fork.

For the purpose of manipulating the frame F, which constitutes a rake-off and load-retaining device there is provided a cross bar 76 having short arms 77 which are pivoted upon the sides of the uprights 61 with which the cross-bar 76 is thus connected. Said cross-bar has a forwardly-extending arm 78 provided with a terminal hook 79 which loosely engages and supports the intermediate bar 66 of the frame F; the cross bar 76 is disposed directly beneath the forward ends of the latch members 72, and it is provided with a lever 80 constituting the handle whereby it may be rocked in an upward direction for the purpose of lifting the free ends of the latch members so as to disengage the notches 75 of said latch members from the keepers 73; by rocking the bar 76 in the opposite direction, the hooked rod 78 will lift or elevate the pivoted frame F, thus permitting the notched latch members to engage the keepers 73, whereby the pivoted frame will be sustained in an elevated position, as previously described. It will be seen that when the rock-bar 76 is manipulated to elevate the pivoted frame, the said rock-bar is swung in a

downward direction, and out of the path of the latch members, which latter will thus be free to gravitate downwardly until the notches 75 engage the keepers 73; conversely, when the rock-bar is manipulated to release the latch members from the keepers 73, the hooked rod 78 will swing downwardly so as to permit the pivoted frame F to gravitate downwardly; the weight of said frame being sufficient to cause the prongs or tines 68 to pierce the load that has been placed upon the fork.

The improved stacker is intended to be used in connection with sweep rakes or drag rakes of any well known construction, such rakes being employed in the usual manner to gather the material that is to be stacked, and to deposit the same upon the platform of the fork, which latter in the mean time occupies the load-receiving position illustrated in Fig. 2 of the drawings.

The manner of arranging the machine for operation will be readily understood from the foregoing description taken in connection with the drawings; it being understood that the rear axle or truck is disconnected from the sills and temporarily removed, the sills being swung into alinement with the front axle and held in position by means of turn buttons upon said axle; the reach member also serves to brace and sustain the machine in position for operation. The operating lever which carries the fork is capable of swinging with the turn table or cap at the upper end of the mast in a horizontal plane, and the load may be received from and delivered in any desired direction by properly manipulating the said lever and turntable. It is intended that the fork and its attachments shall sufficiently overbalance the counterweight carried in the box 37 to enable said fork to gravitate to a load-receiving position; when in this position, the heel blocks upon the under sides of the forward extending teeth of the fork will engage the ground, and will thus depress the terminal prongs of the fork teeth, so that the load conveyed by the gathering rake will readily slide onto the platform of the stacker fork. When the latter is in the load-receiving position, the latch members 72 of the rake-off device are to engage the keepers 73 by the notches 75, thus sufficiently elevating the pivotal frame F to prevent the prongs 68 from obstructing the load that is being conveyed onto the fork. As soon as the load is in position, the rock-bar 76 is manipulated by the lever or handle 80 to release the latch members 72 from the keepers 73, and the prongs at the rear end of the pivoted frame will thus penetrate the load, and retain the latter upon the platform of the fork while the rake is being withdrawn or backed away. Draft is now applied to the hoisting rope, thus swinging the operating lever C upon its fulcrum and elevating the fork carrying the load, the platform of the fork being maintained in an approximately horizontal position while it is being thus elevated, so that there will be no possibility of the load sliding off; it will also be seen that the frame F that constitutes the rake-off device will serve to bind the load upon the fork and to hold it very securely in such a manner that there will be no danger of the load being scattered by the wind. The uprights 61 carrying the pivoted frame F are farther distant from the fulcrum of the operating lever than the hooked rods 71 that extend through the eyes 69 at the

rear ends of the side members of the pivoted frame, and said hooked rods are made of such length that when the stacker fork approaches the upward limit of its movement, the hooks 71 will engage the eyes 69 and draw the forward projecting ends of the side members 63 in a downward direction, thus tilting the frame F automatically in an upward direction, and disengaging the prongs 68 from the load. When the upward limit of the movement, or the desired elevation of the stacker-fork has been reached, or, if preferred, prior to reaching the desired elevation, the lever C is swung by the cap or turn-table 27 until the fork is presented in the direction in which it is desired to dump or deposit the load. The dumping is effected by pulling the trip rope 53, which serves to tilt the trip member or clip 51, which actuates the trip-bar 47 and the yoke 49 to tilt the platform of the fork from which the load will thus freely slide, the frame F having the prongs 68 being previously automatically tilted to a non-obstructing position, as already described. The fork is now permitted to gravitate or descend to a load-receiving position, by releasing the draft upon the hoisting rope, and while it thus descends, a smart jerk upon the trip-rope will be found sufficient to restore the trip member 51 and related parts to their normal or initial positions.

As will be seen from the foregoing description taken in connection with the drawings hereto annexed, the improved hay stacker of the present invention is simple in construction, light and durable. Machines of this class frequently require to be moved from one place to another, and by the construction herein described it is obvious that this machine may be very conveniently transported, a few minutes being sufficient to enable the front wheels and rear truck to be detached or replaced, as may be required. The construction of the running gear is such that short turns may readily be made. The machine may be arranged and braced for operation without the use of guys or braces other than those which form permanent parts of the frame structure. The hoisting mechanism is simple and effective, the hoisting lever in particular being so trussed and reinforced as to possess great strength and lightness, considering its dimensions. The rake-off and load-retaining device is also considered an important feature of the invention; said device serving positively and automatically to retain the load upon the forked platform and the rake or gathering implement is withdrawn, and also to hold the load securely upon the fork while it is being elevated to the discharging position when, by the mechanism described, the said retaining device is automatically moved to a non-obstructing position where it will in no wise interfere with the dumping of the load when the fork platform is tilted to its discharging position.

While, in the foregoing, the preferred construction has been described throughout, it is desired to be understood that no limitation is necessarily made to the details herein shown and described, but that changes and modifications within the scope of the invention may be resorted to when desired.

What is claimed is:—

1. In a hay stacker of the class described, having independent front and rear trucks a front truck comprising outside runners and an intermediate runner, an axle extending beyond the outside runners and a front cross-bar

supported on said runners, and a tongue connected with the front cross-bar; the intermediate runner being extended forwardly and provided with a clevis for the attachment of the draft.

2. In a hay stacker of the class described, having independent front and rear trucks a front truck comprising outside runners and an intermediate runner, and cross bars secured upon and connecting said runners, one of said cross-bars being extended beyond the outside runners and constituting an axle; a mast rising from the intermediate runner adjacent to the axle; and inclined braces connecting the rear side of the mast with the front side of the axle, near the ends of the latter.

3. In a hay stacker of the class described, a front truck comprising a plurality of runners and cross bars secured upon and connecting the same, one of said cross bars constituting an axle, a mast rising from an intermediate runner, and braces connecting the rear side of the mast with the front side of the axle near the ends of the latter; sills pivoted upon the axle; and inclined braces pivoted upon the mast and connected with the sills near the rear ends of the latter.

4. In a hay stacker of the class described, a front truck having a plurality of runners, a mast rising from one of the runners, an axle secured upon the runners in rear of the mast, inclined braces connecting the rear side of the mast with the front side of the axle, near the ends of the latter, the rear axle, sills pivoted upon the front axle closely adjacent to the mast and connected detachably with the rear axle near the ends of the latter, the bracket secured upon the mast, inclined braces pivoted upon said bracket and connected with the sills near the rear ends thereof, and turn-buttons on the rear side of the axle.

5. In a hay stacker of the class described, a front truck having a plurality of runners including a central or intermediate runner which extends forwardly and rearwardly of the remaining runners, a mast rising from the intermediate runner, an axle secured upon the runners adjacent to the rear side of the mast, a bracket secured upon the rear side of the mast and having beveled ends, headed pins or bolts secured upon the bracket and upon the axle, in axial alinement, sills having slots engaging the headed pins upon the axles, inclined braces connected with the sills and having slots engaging the headed pins upon the bracket, turn-buttons upon the rear side of the axle, and inclined braces connecting the axle with the mast and serving to limit the forward movement of the sills when the latter are swung into alinement with the axle.

6. A front truck having a plurality of runners including an intermediate runner which extends forwardly and rearwardly of the remaining runners, a mast rising from the intermediate runner, an axle secured upon the runners in rear of the mast, a bracket secured upon the rear side of the mast and having beveled ends, sills connected pivotally and slidably with the axle closely adjacent to the mast, inclined braces connected pivotally and slidably with the bracket and connected at their opposite ends with the sills, and a rear axle connected detachably with the sills near the rear ends of the latter.

7. A front truck having a plurality of runners and an axle secured upon said runners, a mast rising from the intermediate runner adjacent to the front side of the axle, rearwardly diverging sills pivoted upon the axle adjacent to the mast and having slots engaging the pivotal members, a bracket secured upon the mast, inclined braces pivoted upon the bracket and having slots engaging the pivotal members, said brackets being connected with the sills near the rear ends of the latter, a rear axle connected detachably with the sills, a reach member pivoted upon the rear end of the runner supporting the mast and extending loosely beneath the rear axle, and an inclined brace pivoted upon the under side of the bracket secured upon the mast and connected with the reach member near the rear ends of the latter.

8. In a hay stacker of the class described, a front truck, a mast supported upon the front truck, inclined braces connecting the mast with the axle which constitutes an element of the front truck, sills pivoted upon the axle adjacent to the mast and connected with the latter by inclined pivoted braces enabling said sills to swing into

alignment with the axle, means upon said axle for securing the sills in position upon said front axle, a trailing reach member connected pivotally with the truck, and an inclined pivoted brace connecting said trailing reach member with the mast.

9. In a hay stacker of the class described, an operating lever having divergent lifting arms, a fork platform connected hingedly with the lifting arms and fork-sustaining and tripping mechanism including a trip member pivoted to upon the operating lever, a trip bar pivoted eccentrically upon said trip member and having a recess at its upper end to engage a stop which is formed by the bolt or pin upon which the trip member is pivoted, a yoke connected with the fork platform and extending through the trip bar, a link bar pivoted upon said yoke adjacent to the trip bar and having its opposite end pivoted upon the member which supports the operating lever at a short distance from the fulcrum of the lever, and a flexible member connecting the link bar with the trip bar.

10. In a hay stacker, a carrying fork, pivoted uprights supported adjacent to the fork, a frame pivoted upon the uprights and having load-engaging prongs, keepers upon the uprights, and latch members pivoted upon the frame, extending through the keepers and having notches for engagement with the latter.

11. In a hay stacker, a carrying fork, pivoted uprights supported adjacent to the fork, a frame pivoted upon the uprights and having load-engaging prongs, keepers upon the uprights, and latch members pivoted upon the frame, extending through the keepers and having terminal hooks for engagement with the uprights.

12. In a hay stacker, a carrying fork, pivoted uprights supported adjacent to the fork, a frame pivoted upon the uprights and having load-engaging prongs, keepers upon the uprights, and latch members pivoted upon the frame, extending through the keepers and having terminal hooks for engagement with the uprights and notches for engagement with the keepers.

13. In a hay stacker, a carrying fork, pivoted uprights supported adjacent to the fork, a frame pivoted upon the uprights and having load-engaging prongs, keepers upon the uprights, latch members pivoted upon the frame and extending through the keepers, said latch members being provided with notches and with terminal hooks, and a rock-bar supported upon the uprights and engaging the free ends of the latch members.

14. In a hay stacker, a carrying fork, uprights supported adjacent to the fork, a frame pivoted to the uprights and having load-engaging prongs, latch members adapted to support the frame in various positions with relation to the uprights, a rock-bar supported upon the uprights and engaging the latch members, and a rod extending from the rock-bar and having a terminal hook loosely engaging the frame.

15. In a hay stacker, a carrying fork having guard members and a cross-bar connecting the same, loops or keepers on said cross-bar, uprights supported pivotally adjacent to the fork and extending through the loops or keepers, a frame pivoted upon the uprights and having load-engaging prongs, means for sustaining said frame in various positions with relation to the fork platform, and means for manipulating the frame to move the latter to a non-obstructing position with relation to the load.

16. In a hay stacker, a carrying fork having a cross-bar provided with loops, pivoted uprights supported adjacent to the fork and extending through the loops, a frame piv-

oted upon the uprights and having load-engaging prongs, keepers upon the uprights, latch members pivoted upon the frame extending through the keepers and having notches engaging said keepers and terminal hooks engaging the uprights, a rock-bar pivotally supported upon the uprights beneath the free ends of the latch members, and a rod extending from the rock-bar and having a terminal hook loosely supporting the frame.

17. In a hay stacker, a carrying fork, uprights supported pivotally adjacent to the fork, a frame pivoted upon the uprights and having load-engaging prongs, latch means for sustaining the frame in various positions with relation to the carrying fork, a rock-bar supported upon the uprights and having a hooked frame-supporting member, said rock-bar being disposed adjacent to the latch members which may be released by rocking said bar, and a lever or handle connected with the latter.

18. In a hay-stacker, a lifting frame or lever, a carrying fork connected hingedly with said lever, pivoted uprights supported adjacent to the fork, a frame pivoted upon the uprights and having load-engaging prongs and forwardly extended side-members, latch means for sustaining the frame in various positions with relation to the fork-platform, means for sustaining the fork-platform in an approximately horizontal position while it is being elevated and for tripping said platform, and means connected with the lifting lever for tilting the pivoted frame upward when the fork-platform approaches the upward limit of its movement.

19. In a hay-stacker, a lifting frame or lever, a carrying fork connected hingedly with said lever, pivoted uprights supported adjacent to the fork, a frame pivoted upon the uprights and having load-engaging prongs and forwardly extended side-members, latch-means for sustaining the frame in various positions with relation to the fork-platform, means for sustaining the fork-platform in an approximately horizontal position while it is being elevated and for tripping said platform, eyes upon the forwardly extended portions of the side-members of the pivoted frame, and hooked rods connected with the lifting lever and extended through said eyes.

20. In a hay-stacker, a lifting lever having rearwardly extending divergent lifting arms, angle plates secured at the rear extremities of said arms, a carrying fork connected hingedly with the angle plates said fork having forwardly extending brackets formed by the butts of the teeth and having heel-blocks on their under sides, uprights pivoted upon the angle plates in front of the fork, keepers upon the latter confining the uprights, a rake-off and load-retaining frame supported pivotally upon the uprights, means for tilting said frame and for sustaining it in various positions with relation to the fork-platform, means for sustaining the fork-platform in an approximately horizontal position while it is being elevated to a load-discharging position, and means connected with the lifting lever for engaging and automatically tilting the rake-off and load-retaining frame when the fork approaches the upward limit of its movement.

In testimony whereof we affix our signatures, in presence of two witnesses.

PETER F. FLEMING.
CLIFFORD A. FLEMING.

Witnesses:

DORSEY BURCKHARTT, Jr.,
JIM L. HAMMETT.