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PATENTED MAR. 6, 1906.

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M. E. THOMPSON, ADMINISTRATRIX.

HAY STACKER.

APPLICATION FILED NOV. 30, 1904.

3 SHEETS—SHEET 1.

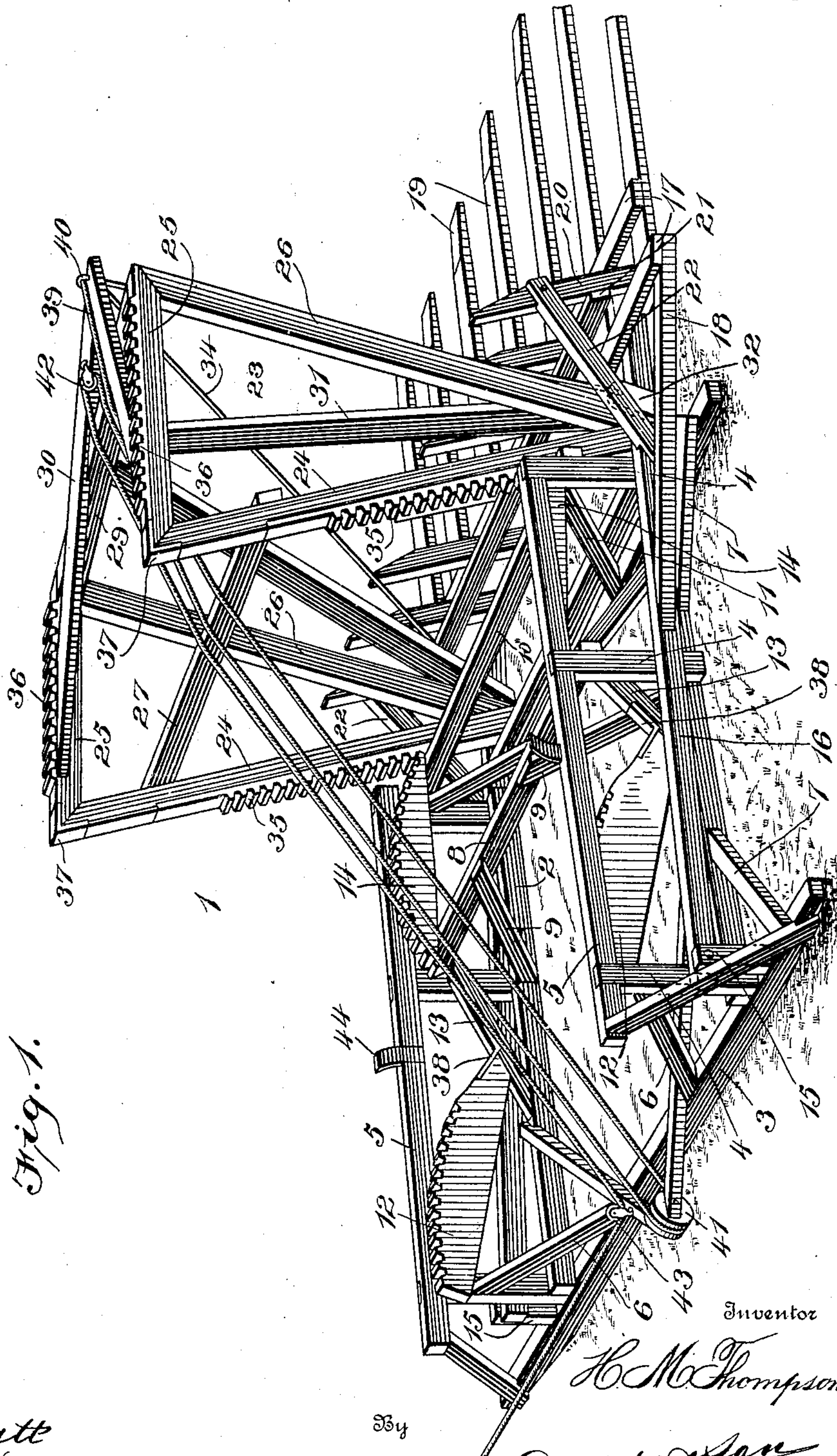


Fig. 1.

Witnesses

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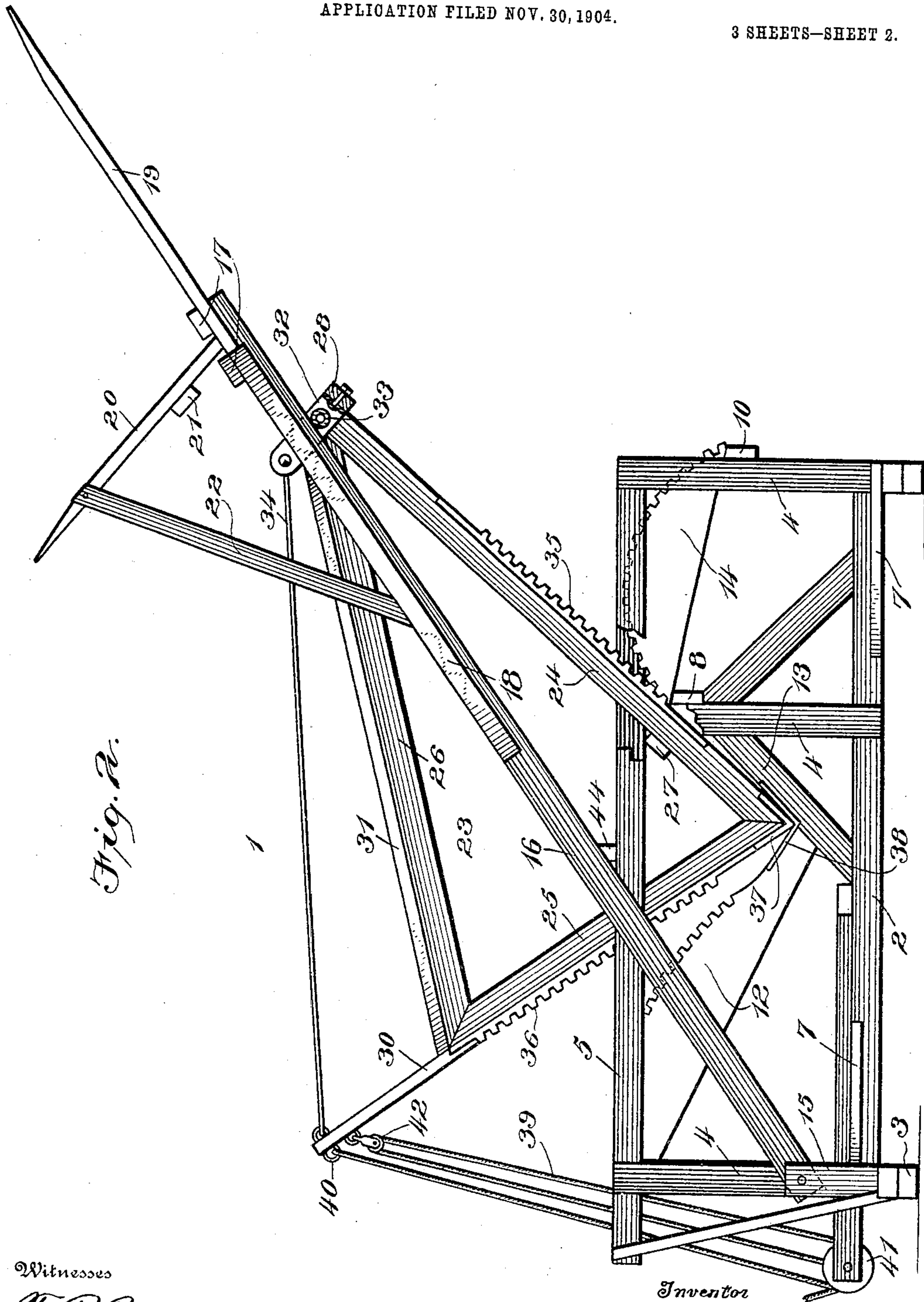


Fig. 2.

Witnesses

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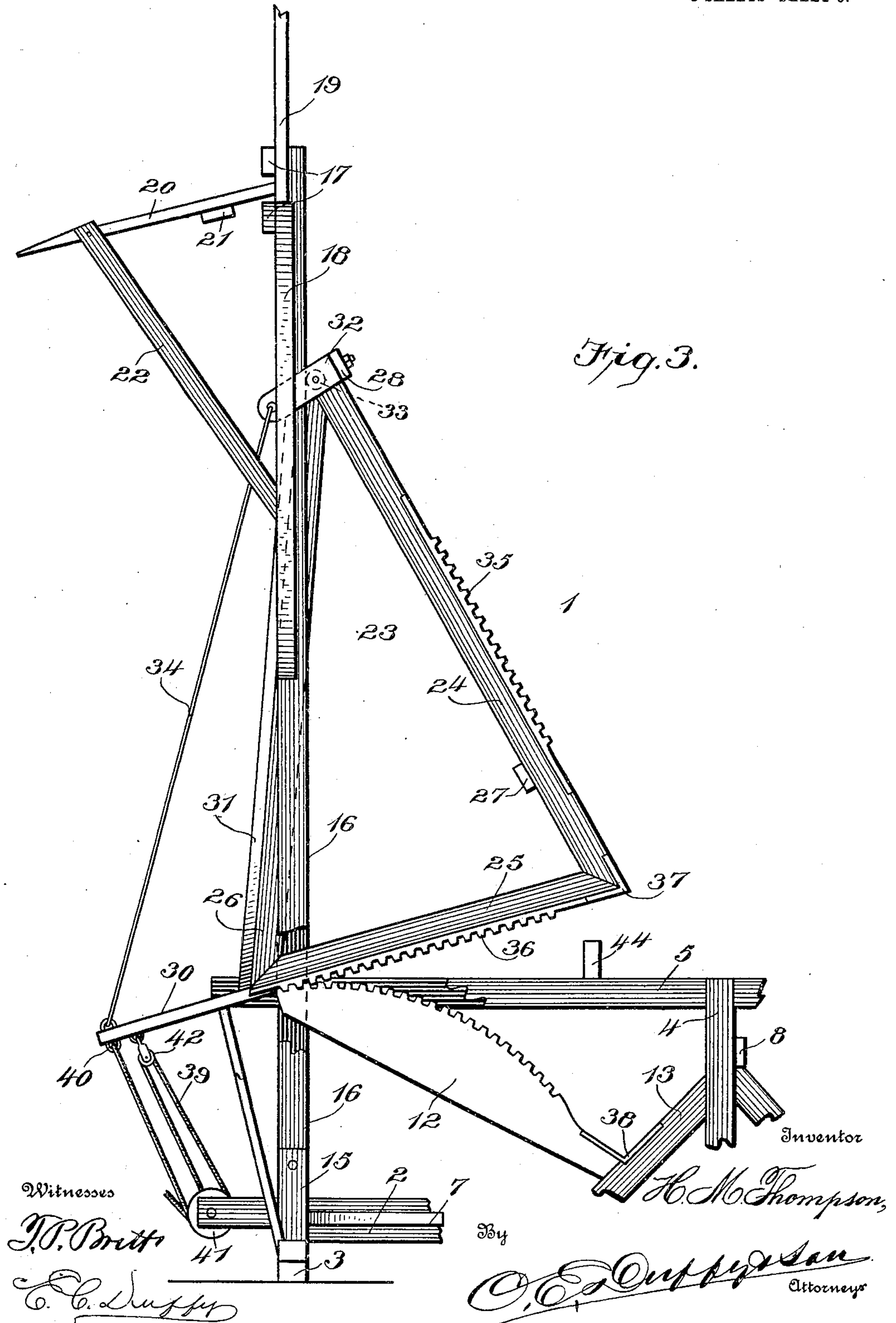
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3 SHEETS—SHEET 3.



UNITED STATES PATENT OFFICE.

HIRAM M. THOMPSON, OF LOGAN, MONTANA; MATTIE E. THOMPSON
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HAY-STACKER.

No. 814,098.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed November 30, 1904. Serial No. 234,903.

To all whom it may concern:

Be it known that I, HIRAM M. THOMPSON, a citizen of the United States, residing at Logan, in the county of Gallatin and State of Montana, have invented certain new and useful Improvements in Hay-Stackers; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to hay-stackers, and has for its object to provide a device of this class which will stack hay with a minimum amount of power and in the shortest possible period of time.

A further object of my invention is to provide a hay-stacker which is simple in its construction, cheap and easy to manufacture, strong, durable, and efficient.

With these objects in view my invention consists in the novel construction of the triangular operating-frame.

My invention also consists in certain other novel features of construction and in combinations of parts, which will be first fully described and afterward specifically pointed out in the appended claims.

Referring to the accompanying drawings, Figure 1 is a perspective view of the hay-stacker in a lowered position. Fig. 2 is an elevation of the hay-stacker in a partly-raised position; and Fig. 3 is an elevation of the hay-stacker in its highest position, parts being broken away in order to enlarge the view.

Like numerals of reference indicate the same parts throughout the several figures, in which—

1 indicates the stacker, which comprises the longitudinal frames 2, the transverse base-pieces 3, the vertical uprights 4, the horizontal frame-pieces 5, the transverse braces 6, and the longitudinal braces 7.

Connecting the central vertical uprights 4 is a transverse horizontal brace 8, supported by two braces 9, and connecting the rear uprights 4 is the transverse horizontal brace 10, supported by braces 11.

Secured to the horizontal frame-pieces 5 on the inside thereof is a curved rack-plate 12, said rack-plate being inclined, as shown, and secured also to the longitudinal brace 13. Supported by the central transverse brace 8 and the rear transverse brace 10 are two curved rack-plates 14.

Pivoted between the front vertical upright 4 and a short post 15 are the long movable arms 16. Secured to the rear ends of said arms are two transverse pieces 17, and stiffening said arms is a brace 18. Secured to the under side of the transverse pieces 17 are the hay-stacking fingers 19, and secured to the said movable arm 16 and also to the said hay-stacking fingers 19 are the hay-supporting fingers 20, said latter fingers being also secured to the transverse piece 21 and to a longitudinal brace 22, as clearly shown in Figs. 1 and 2.

23 indicates the non-pivoted traveling triangular operating frame or lever, which comprises the forward piece 24, the short side 25, and the rear piece 26, said parts being secured together to form a triangle, as clearly shown. Connecting the pieces 24 is a transverse horizontal brace 27, and also connecting the said pieces 24 is a transverse horizontal brace 28, Figs. 2 and 3.

Connecting the sides 25 and 26 is the transverse horizontal frame 29, and secured to the sides 25 and supported by the frame 29 are the two frame-pieces 30, which are connected together at their rear ends, and connecting the sides 26 with the transverse horizontal frame-piece 29 are the bracing-pieces 31.

Secured to the transverse horizontal frame-piece 28, Fig. 2, is a metallic yoke 32, and located in said yoke, as shown, is a roller 33. Connecting the said yoke with the rear ends of the frame-pieces 30 is a rod 34, the movable arm 16 passing through the yoke 32 and resting on the rollers 33 therein.

The pieces 24 and 25 of the triangular operating frame or lever 23 are provided with racks 35 and 36, and the points formed by the two sides 24 and 25 are provided with a metallic strip or plate 37. A small metallic strip or plate 38 is provided in the angle formed by the rack-plates 12 and the longitudinal braces 13, to which said rack-plates are secured.

39 indicates the operating-cable, which is connected to the frame-pieces 30 at the point 40, said cable 39 passing forward and around the pulley 41, whence it is again carried back and around the pulley 42, located on the frame 30. The cable is again carried forward under the pulley 43, where it passes to a suitable windlass or where it can be grasped by hand to be pulled manually.

Located on the horizontal brace-pieces 5 are two upright outwardly-curved guides 44.

Having thus fully described the several parts of my invention, its operation is as follows: Referring to Fig. 1, which shows the device in perspective and which illustrates the non-pivoted, revoluble, and moving triangular operating frame or lever 23 in an inverted vertical position, the hay-stacking fingers 19 being in a horizontal position and the hay-supporting fingers 20 in a substantially vertical position, it will be seen that the said triangular operating frame or lever 23 is supported on the curved rack-plate 14. As the end of the cable 39 is pulled by any suitable power, the triangular operating frame or lever 23 is turned forward until it reaches the position shown in Fig. 2, the rack 35 on the said operating frame or lever 23 acting on the curved rack-plates 14, thus bringing the said triangular operating frame or lever 23 forward and causing the points 37 thereof to engage the angle 38 between the curved rack-plate 12 and the longitudinal brace 13, as shown in Fig. 2. A further pull on the cable 39 causes the rack 36 of the operating frame or lever 23 to engage the curved rack-plate 12, and as the cable 39 is pulled the said operating frame or lever 23 moves forward on the said curved rack-plate 12 until it reaches the position as shown in Fig. 3, which illustrates the triangular operating frame or lever 23 in an upright position. As the yoke 32, which is carried by the operating frame or lever 23, is in engagement with the movable arm 16, carrying the hay-stacking teeth 19 and 20, said arm 16 and hay-stacking teeth are carried from a horizontal to a vertical position by the movement of the operating frame or lever 23, as is illustrated in the three positions shown in Figs. 1, 2, and 3. A quantity of hay having been pitched upon the hay-stacker and fingers 19, when the said fingers are in position shown in Fig. 1, the said hay is raised and stacked when the arms 16 are raised in a vertical position by the movement of the operating frame or lever 23, as is obvious. Thus it is seen that hay can be quickly and effectually stacked by this device in a very short period of time and in an easy and convenient manner. As the operating frame or triangle 23 is passing from the position shown in Fig. 1 to that shown in Fig. 2 the small guide-pieces 44, located on the horizon-

tal frame-pieces 5, guide the said triangular frame so as to insure a proper movement of the same and to prevent the said triangular frame or lever from striking the horizontal frame-pieces 5 during the rotation of the said triangular frame.

Having thus fully described my invention, I do not wish to be understood as limiting myself to the exact construction as herein set forth, as various slight changes may be made therein which would fall within the limit and scope of my invention, and I consider myself clearly entitled to all such changes and modifications.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a hay-stacker, the combination of a suitable frame, rack-plates carried on said frame, movable arms pivoted to said frame, hay-carrying means secured to said arms, a triangular operating-frame connected to said arms, racks on said triangular operating-frame to engage said rack-plates, and means for operating said triangular operating-frame, substantially as described.

2. In a hay-stacker, the combination of a suitable frame, hay-carrying means associated therewith, rack-plates carried on said frame, a revoluble element connected to said hay-carrying means and adapted to revolve on said rack-plates, substantially as described.

3. In a hay-stacker, the combination with a suitable frame of movable arms associated therewith, hay-carrying means supported by said movable arms, a non-pivoted moving element constructed to operate on said frame and to engage said movable arms to raise the same, substantially as described.

4. In a hay-stacker, the combination of a suitable frame, hay-carrying means associated therewith, means for supporting said hay-carrying means on said frame, a non-pivoted revoluble element associated with said hay-carrying means, and means for revolving said revoluble element to raise said hay-carrying means, substantially as described.

5. In a hay-stacker, the combination with a frame, of hay-carrying means associated therewith, a non-pivoted traveling element connected to said hay-carrying means, and means for operating said traveling element to raise said hay-carrying means, substantially as described.

6. In a hay-stacker, the combination with a frame, of hay-carrying means associated therewith, a non-pivoted revoluble and traveling element connected to said hay-carrying means and means for operating said revoluble and traveling element to raise said hay-carrying means, substantially as described.

7. In a hay-stacker, the combination of a
frame, hay-carrying means associated there-
with, lying normally in a horizontal position,
a non-pivoted traveling element connected
5 to said hay-carrying means, said element
resting normally at the rear of said frame,
and means for operating said traveling ele-
ment to cause the same to move to the front
end of the frame and to raise said hay-carry-
ing means, substantially as described. 10
In testimony whereof I affix my signature
in presence of two witnesses.
HIRAM M. THOMPSON.

Witnesses:

H. A. BOLINGER,
R. R. FINLAY.