

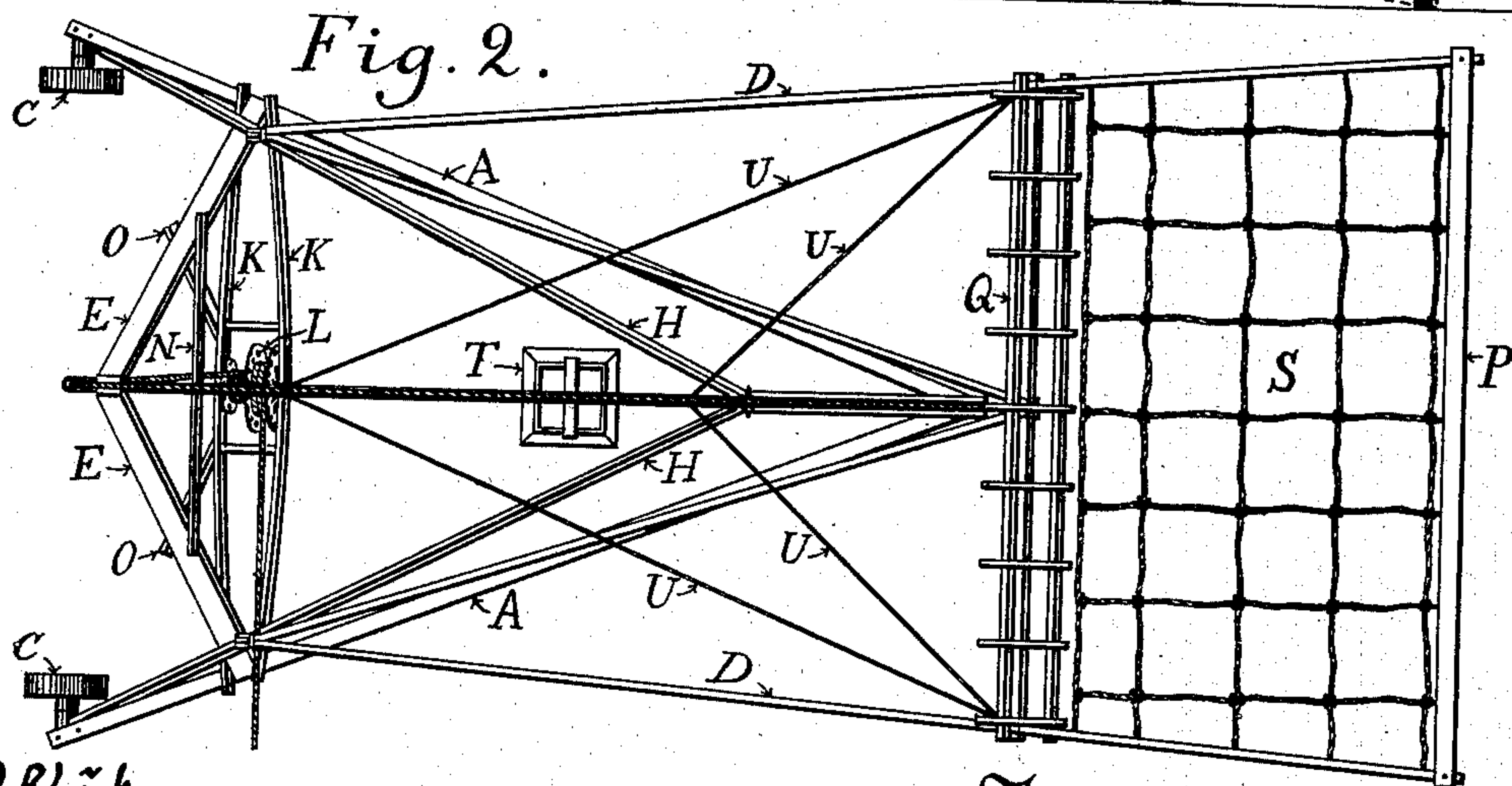
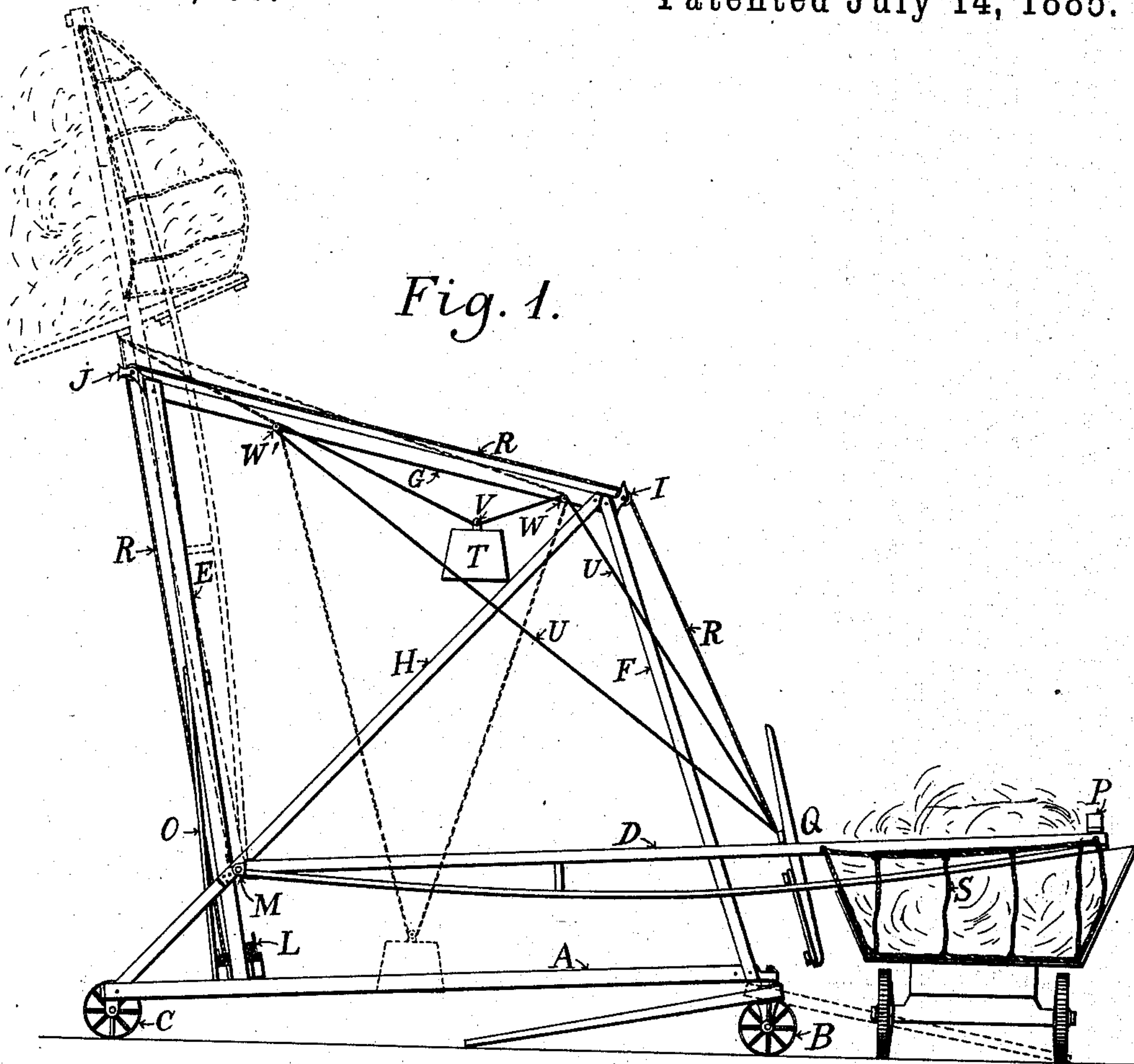
(No Model.)

3 Sheets—Sheet 1.

B. JACKSON.
STACKING MACHINE.

No. 322,106.

Patented July 14, 1885.



Witnesses.
Geo. H. Strong.
J. H. House.

Inventor.
Byron Jackson
Dewey & Co.
Attorneys

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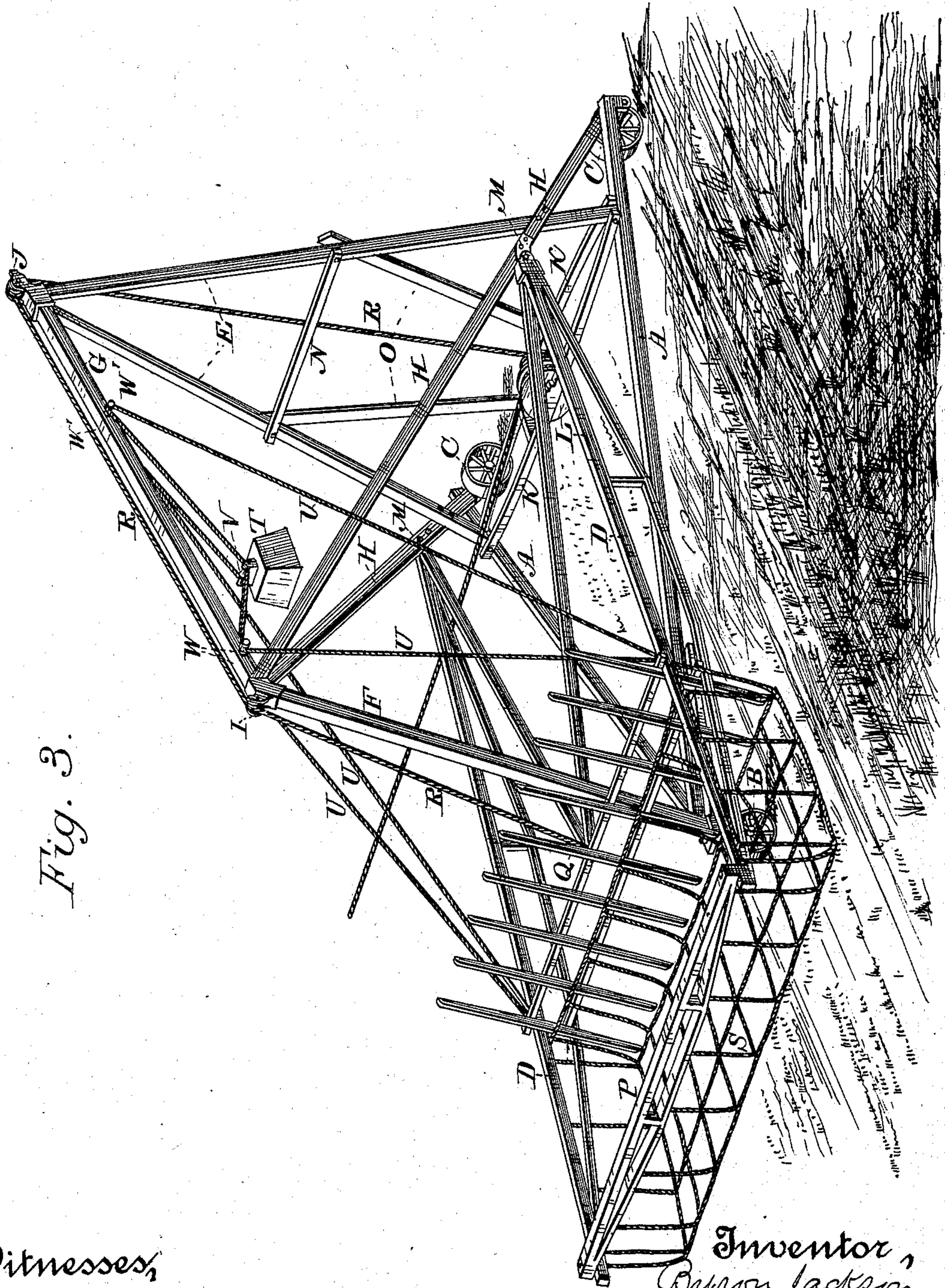


Fig. 3.

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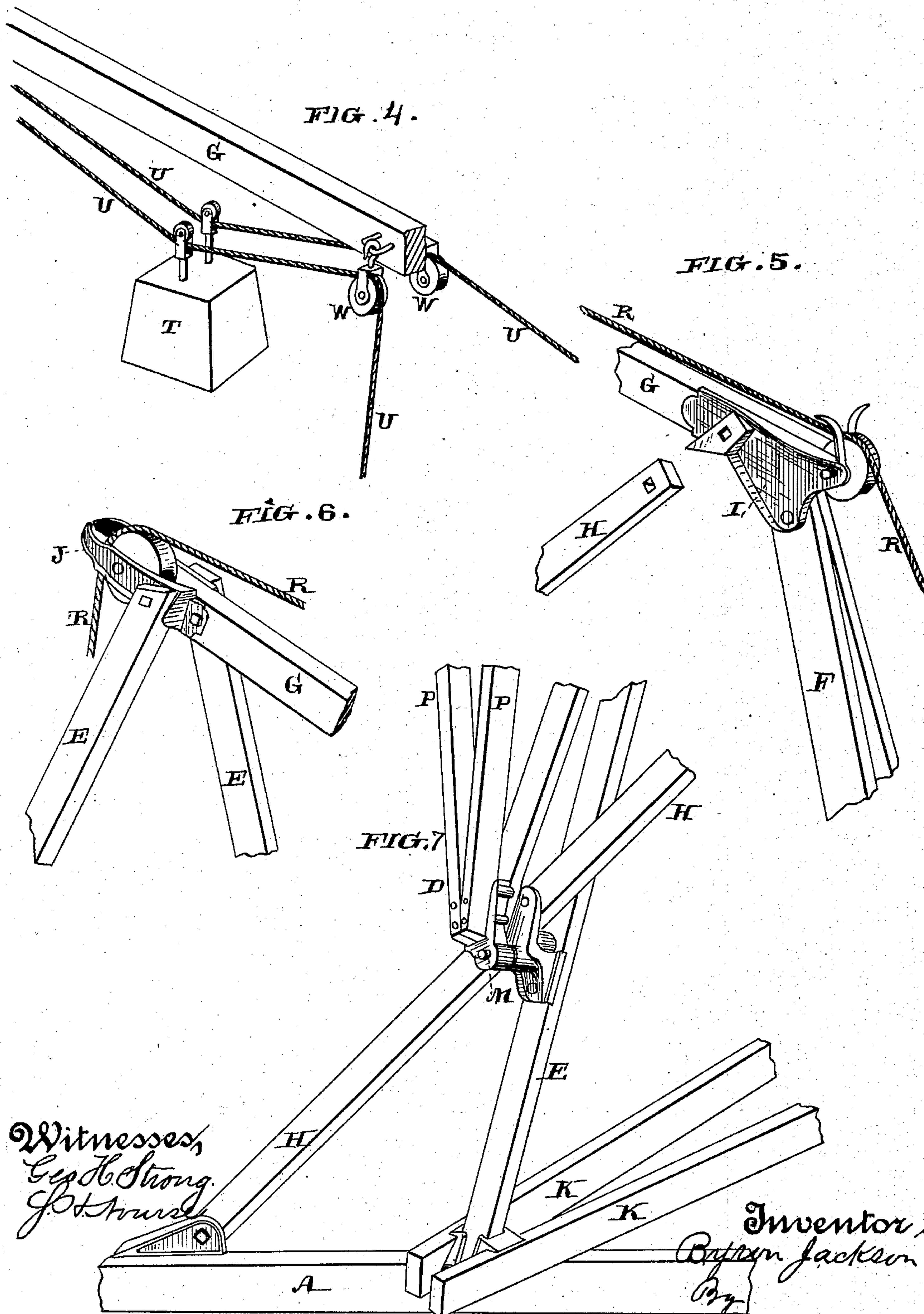
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3 Sheets—Sheet 3.

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Patented July 14, 1885.



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UNITED STATES PATENT OFFICE.

BYRON JACKSON, OF SAN FRANCISCO, CALIFORNIA.

STACKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 322,106, dated July 14, 1885.

Application filed August 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, BYRON JACKSON, of the city and county of San Francisco, and State of California, have invented an Improvement in Stacking-Machines; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a machine for stacking hay and grain; and it consists in certain details of construction hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my machine, showing also the wagon with the net within it, and attached to the swinging frame, said frame being also shown by dotted lines in position to discharge. Fig. 2 is a plan view of the machine. Fig. 3 is a perspective view of the machine. Fig. 4 is an enlarged perspective view showing part of the ridge-beam, the weight, the supporting-ropes, and the pulleys W. Fig. 5 shows the meeting-point of the timbers F F and braces H and the uniting-bracket. Fig. 6 shows the meeting point of the timbers E and G, and the uniting-bracket at this point. Fig. 7 is an enlarged perspective view of one of the base-timbers, A, the upright rear timber, E, transverse and diagonal bracing-timbers with their uniting-brackets; also showing the hinged arms D standing vertically, and the bracket and hinge.

A is the base of my machine, consisting of two timbers and joined at one end, while the others are separated in the form of a triangle, and have the traveling wheels C turning on suitable journals or axles, so as to support these ends. The front end is supported upon a single wheel, B, which may be a caster-wheel, or may have a pole by which it is turned and the machine guided from place to place. From this angle, which I call the front of the machine, an upright, F, extends upward, sloping also somewhat backward, and from the rear portion of the base-timbers, A, two other uprights, E, extend upward and backward, meeting so as to form a triangle in themselves, and having their upper ends connected with the upright F by a ridge-beam or timber, G.

I and J are cast-frames or brackets, within which pulleys are journaled over which the hoisting-rope passes, as will be more fully

explained hereinafter. These brackets may have sockets or depressions into which the timbers E, F, and G are fitted and bolted, and the bearing I is also adapted to receive the upper end of the inclined braces H, which extend down across the uprights E, being bolted to them, and thence backward to the castings, to which wheels C are journaled, being also securely fastened to these. The uprights E are being bolted at the base of the cross-pieces K, and these pieces K are bolted to the main sills A, thus saving any angular cut in the timber which might weaken them, and they are easily made. By this construction I produce a frame which is braced in every direction and can be made very much lighter than if rectangular, and needs no supplemental braces.

At the points M where the timbers H cross and are secured to the uprights E are hinged the rear ends of the frame or arms D, by which the load is to be raised from the wagon to the stack. These arms D are made in two pieces, sprung apart in the middle, with intermediate cross-timber, so as to form a rigid truss-beam, and they have their outer ends united by a similar truss-beam, P, while the frame Q extends between them at a point just forward of the upright F, thus forming a sort of rectangular space between the side arms, D, and the front and rear timbers, P and Q, between which the net S with its load may be suspended. The arms D are hinged at such a height above the ground that their outer ends will be high enough to allow the team of horses with the wagon containing the net and the load to be driven beneath them, and attachments are fixed to each corner of the rectangular frame formed by the arms and the bars D, P, and Q, as before described, so that the net may be connected therewith, and with its whole load raised out of the wagon, carried upward and backward, as shown by dotted lines in Fig. 1, so as to discharge the load upon the stack.

L is a windlass or wheel and axle of such proportionate diameter that the team may be attached to the rope passing around the larger portion, so as to cause it to revolve when driven out, and the rope R winds around the smaller portion, extending thence over the pulley in the bracket J, thence forward over the pulley in the bracket I, thence downward,

so as to be secured to the frame Q to elevate the arms D with the load.

T is a counterbalance-weight of considerable size, supported upon two parallel parts 5 of the ropes U by means of two pulleys which are journaled to the weight, so as to rest upon these ropes. These two sets of ropes extend from the points W and W' down to the arms D, where they are secured near the ends of 10 the transverse frame Q, the two ropes extending parallel with each other between the pulleys W and W', so that the weight may hang upon these two parts between those points.

By this arrangement it will be seen that the 15 weight is equally supported by these two independent ropes, and it will not be necessary to exercise much care in getting the load centrally placed in the net, as each independent rope supports one end or side of the net, and 20 if there should be more weight upon one side than the other the tendency of that side to pull downward would be resisted by the counterbalance-weight, which would derive more of its support from that rope than the 25 other. When the load is lifted so as to discharge it, the counterbalance-weight T sinks downward toward the ground by the slackening of its ropes, and when the arms D are again dropped to a position over the wagon this 30 counterbalance-weight is raised and its power to resist the weight of these arms increases as the ropes U gradually become straightened between pulleys W and W', so that when the

net has finally reached the wagon there will be nearly or quite an exact balance. 35

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a portable stacking-machine, the triangularly-arranged rear uprights and the single 40 front upright, with the uniting beam or ridge, in combination with the triangularly-arranged diagonal braces H, and the brackets whereby the meeting angles are united and the whole frame supported without separate braces, substantially as herein described. 45

2. In a stacking-machine, the combination of the triangular base with the uprights arranged as shown, the hinged swinging arms journaled at the rear, transverse beams P and 50 Q, detachable wagon-net, and means for raising the arms, substantially as herein described.

3. In a stacking-machine, the combination of a frame, arms D hinged thereto, fastenings upon said arms, a detachable lifting-net, and mechanism by which the loaded net may be carried 55 up over the frame to discharge its contents upon the stack and returned to its place in the wagon, substantially as herein described.

In witness whereof I have hereunto set my 60 hand.

BYRON JACKSON.

Witnesses:

S. H. NOURSE,
H. C. LEE.