

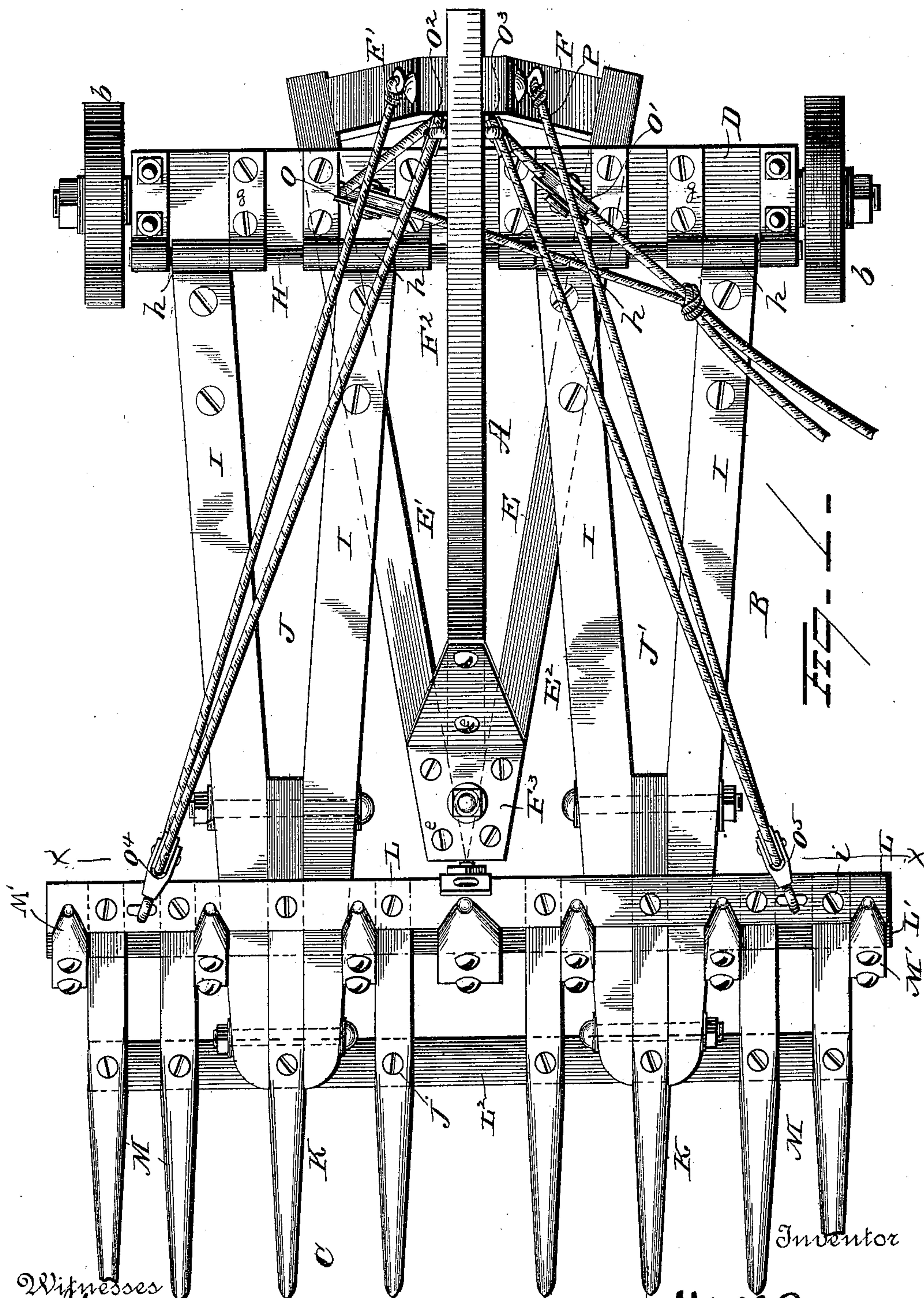
(No Model.)

3 Sheets—Sheet 1.

W. H. ROUSE.  
STACKER.

No. 435,950.

Patented Sept. 9, 1890.



Witnesses  
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*G. F. Downing.*

By his Attorney

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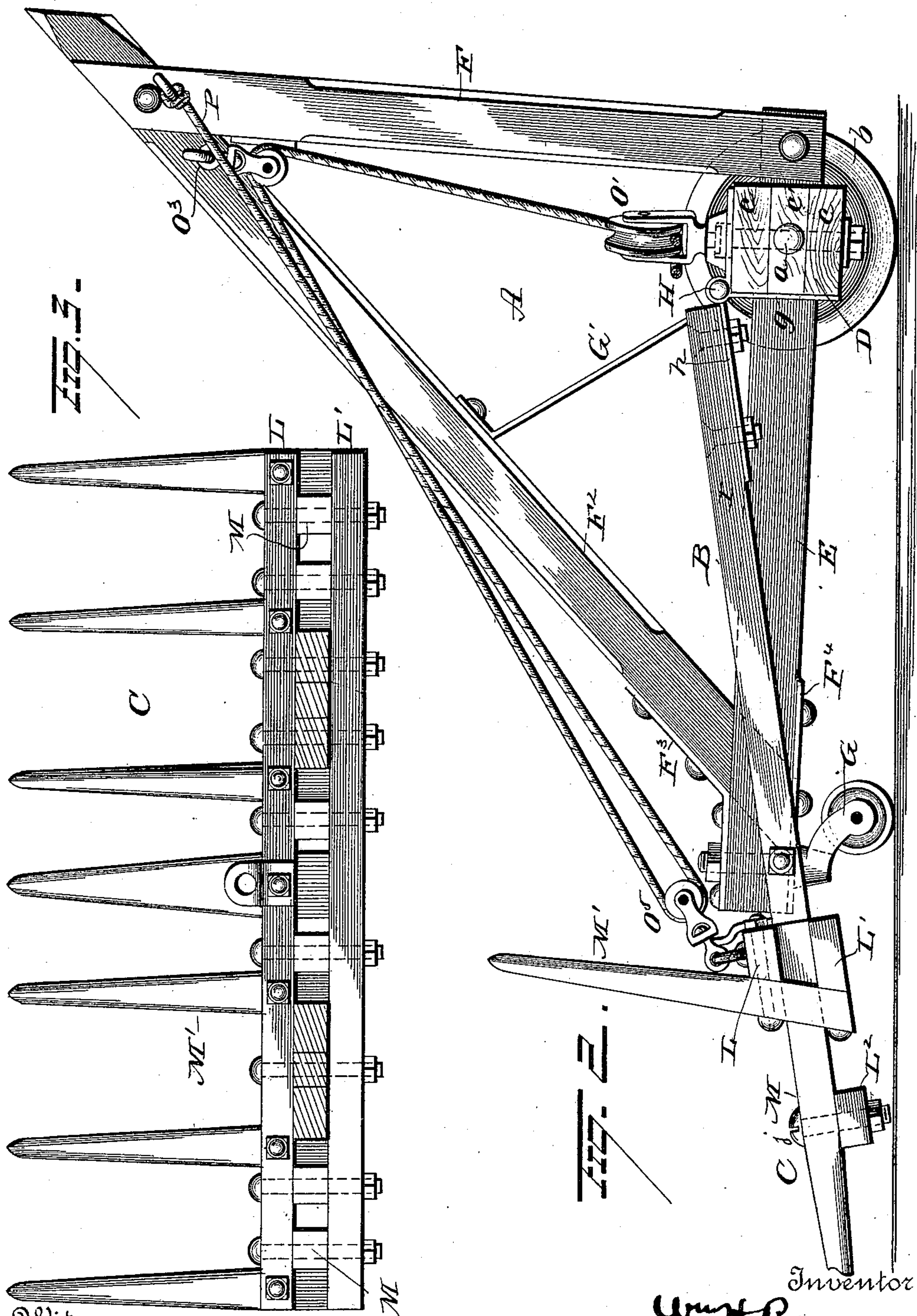
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3 Sheets—Sheet 2.

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(No Model.)

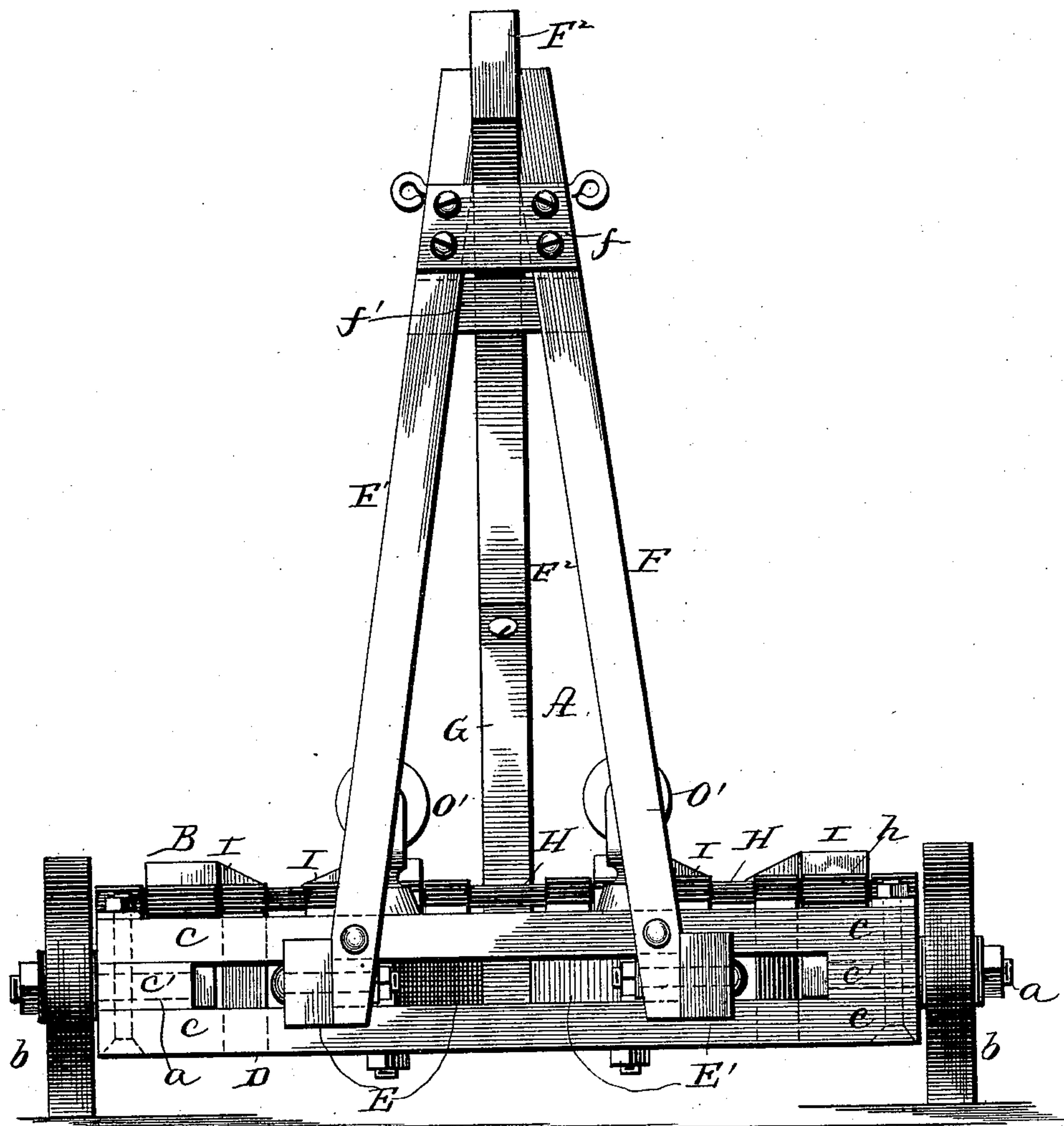
3 Sheets—Sheet 3.

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Fig. 4.



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# UNITED STATES PATENT OFFICE.

WILLIAM HENRY ROUSE, OF FAIRMONT, MINNESOTA.

## STACKER.

SPECIFICATION forming part of Letters Patent No. 435,950, dated September 9, 1890.

Application filed February 21, 1890. Serial No. 341,331. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HENRY ROUSE, a citizen of Fairmont, in the county of Martin and State of Minnesota, have invented certain new and useful Improvements in Stackers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in machines for stacking hay, &c., and has for its object to produce an apparatus for this purpose which shall be effectual in the performance of its function, substantial in its construction, and secure against lateral movement.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of the apparatus with the parts in their normal positions ready for the reception of a quantity of hay to be elevated or stacked. Fig. 2 is a side elevation with the hinged frame elevated. Fig. 3 is a sectional view on the line  $x x$  of Fig. 1. Fig. 4 is a rear view of the machine.

A represents the main frame, and is adapted to support a hinged frame B, which latter carries at its free end a series of fingers constituting a head C.

Constituting a portion of the main frame A is a horizontal timber or axle D, preferably made square in cross-section and provided at its ends with spindles supported in wheels  $b$ . The axle D may be made of a single timber; or, if desired, it may be made of two pieces  $c c$ , separated by blocks  $c'$ , and secured together by means of suitable bolts.

Two horizontal timbers  $E E'$  protrude at their rear ends between the pieces  $c c$  of axle D, or in sockets in said axle in case the latter be made of one solid piece, suitable bolts being passed through the axle and these projections to secure the timbers  $E E'$  to the axle. The timbers  $E E'$  are secured at one end to the axle D at points at opposite sides of its center and at their opposite ends are secured

together, as presently explained, thus producing a V-shaped base  $E^2$  to the main frame.

Two uprights  $F F'$  are secured to the rear face of the axle at points adjacent to where the horizontal timbers  $E E'$  are secured to said axle. The uprights  $F F'$  are made to form a V-shaped frame, having inserted between their upper ends a bracing-timber  $F^2$ , a bolt being passed through the uprights and brace-timber to secure these parts together. The brace-timber  $F^2$  extends from its connection with the uprights  $F F'$  in a downward oblique direction to the forward end of the horizontal timbers  $E E'$  and is inserted between these timbers just in rear of the V-shaped frame formed by the timbers  $E E'$ .

To bind the forward ends of the timbers  $E E'$  together and to the brace-timbers  $F^2$ , two heavy metallic plates  $F^3 F^4$  are employed, secured, respectively, above and below the timbers  $E E'$ . The plate  $F^3$  is made diamond-shaped, one portion being secured to the forward ends of the timbers  $E E'$  and the other portion of said plate  $F^3$  being secured to the diagonal brace-timber  $F^2$  by means of suitable bolts  $e$ . The plate  $F^4$  is substantially V-shaped and is secured by means of suitable bolts to the under faces of the timbers  $E E'$ . The uprights  $F F'$  are further secured together by means of metallic plates  $f f'$ , secured, respectively, to opposite faces of said uprights by means of suitable bolts.

At or near the forward end of the horizontal V-shaped frame  $E^2$  a perforation is made for the accommodation of the pintle of a caster G.

If desired, the brace  $G'$  may be secured at one end to the diagonal timber  $F^2$  and at the other end to the axle.

The main frame constructed and secured together as above explained is very simple and substantial and may be moved about in any desired direction.

Secured to the upper forward edge of the axle D by means of straps  $g$  or otherwise is a rod H, to which the frame B is hinged.

The frame B is made up of four timbers I, bolted together in pairs to produce V-shaped frames  $J J'$ , and between the parts I of each of these frames  $J J'$ , at the forward end thereof, a finger K is secured, which fingers go to



make up a portion of the head C. The V-shaped frames J J' are made of a length sufficient to project beyond the forward end of the main frame A, and the timbers I of each of these frames are made divergent at their rear ends to an extent sufficient to nearly fill the space between the wheels b and the center of the axle. To the rear end of each timber I a loop h is secured and adapted to encircle the rod H, and thus the frames J J' are hinged to the axle. By thus constructing the frame B and attaching it to the main frame a very broad connection of these parts is attained, and the hinged frame is made capable of withstanding great lateral strain without in any degree weakening the structure, and, furthermore, the timbers I of the V-shaped frames J J' constitute in themselves braces, thus avoiding the necessity of the employment of additional braces.

Securely bolted to the upper and lower faces, respectively, of the V-shaped frames J J' near their forward ends are two cross-bars L L', and secured at their rear ends between these cross-bars by means of bolts i is a series of fingers M. Another cross-bar L<sup>2</sup> is made to extend across the entire series of fingers on the under side thereof and is securely bolted to each finger by means of bolts j. A second set of fingers M' is secured to the cross-bars L L', each finger M being bolted to each cross-bar and made to project upwardly at an angle preferably somewhat greater than a right angle. It will be noticed by reference to Fig. 1 that the space between the two center fingers of the series of fingers M is somewhat greater than the space between the remaining fingers of this series, this space being made wider for the accommodation of a large central finger of the series of fingers M'.

Attached to the axle by means of swivel-connections are two pulleys O O'. Pulleys O<sup>2</sup> O<sup>3</sup> are attached by means of swivel-connections at or near the upper end of the brace-timber F<sup>2</sup> and on opposite sides thereof. Other pulleys O<sup>4</sup> O<sup>5</sup> are attached by means of swivel-connections to the respective ends of the cross-bar L.

Attached to an eye secured to the upper end of the upright F is one end of a rope P, which extends downwardly and over the pulley O<sup>5</sup> on cross-bar L, thence upwardly over pulley O<sup>3</sup> on brace-timber F<sup>2</sup>, thence downwardly and under pulley O', and is finally carried off to one side of the machine. Another rope P' is

attached to an eye secured to the upright F' and extends downwardly and around pulley O<sup>4</sup>, thence upwardly and over pulley O<sup>2</sup> on brace-timber F<sup>2</sup>, thence downwardly and under pulley O, and finally is carried off at the same side of the machine as the rope P. The ropes are secured together or to a singletree, to which latter power may be applied.

From the foregoing description the operation of the machine is apparent, and will be readily understood without further explanation thereof.

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

1. The combination, with an axle, of two V-shaped frames secured thereto at an angle to each other, a brace connecting the apexes of said V-shaped frames, and a frame hinged to said axle, substantially as set forth.

2. The combination, with an axle, of two V-shaped frames secured thereto at their larger ends, a brace connecting the apexes of these V-shaped frames together, wheels on the axle, a caster attached to one of the V-shaped frames, and a frame hinged to the axle, substantially as set forth.

3. The combination, with an axle, of two horizontal timbers secured thereto and secured together at their forward ends by means of metallic plates, two upright timbers secured at their lower ends to the axle and united at their upper ends by means of metallic plates, a brace uniting the two V-shaped frames thus formed, and a frame hinged to the axle, substantially as set forth.

4. The combination, with an axle, of two V-shaped frames secured thereto, a brace connecting the apexes of these frames, metal plates securing the apexes of said frames and the brace together, and a frame hinged to the axle, substantially as set forth.

5. The combination, with an axle, of two V-shaped frames secured thereto, a brace connecting the apexes of these frames, a brace connecting the first-mentioned brace with the axle, and a frame hinged to the axle, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM HENRY ROUSE.

Witnesses:

B. F. VOREIS,  
C. H. BULLARD.