

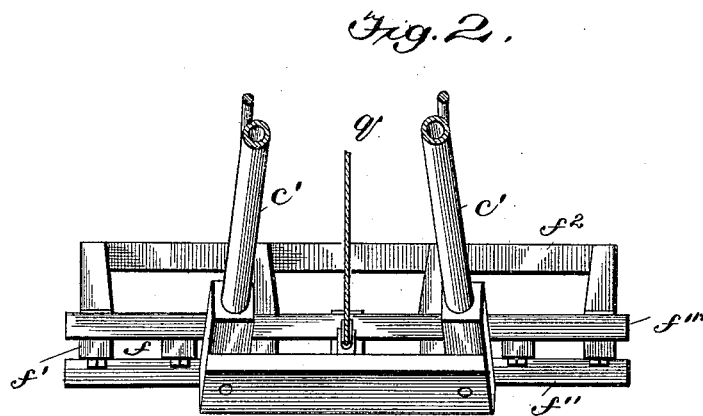
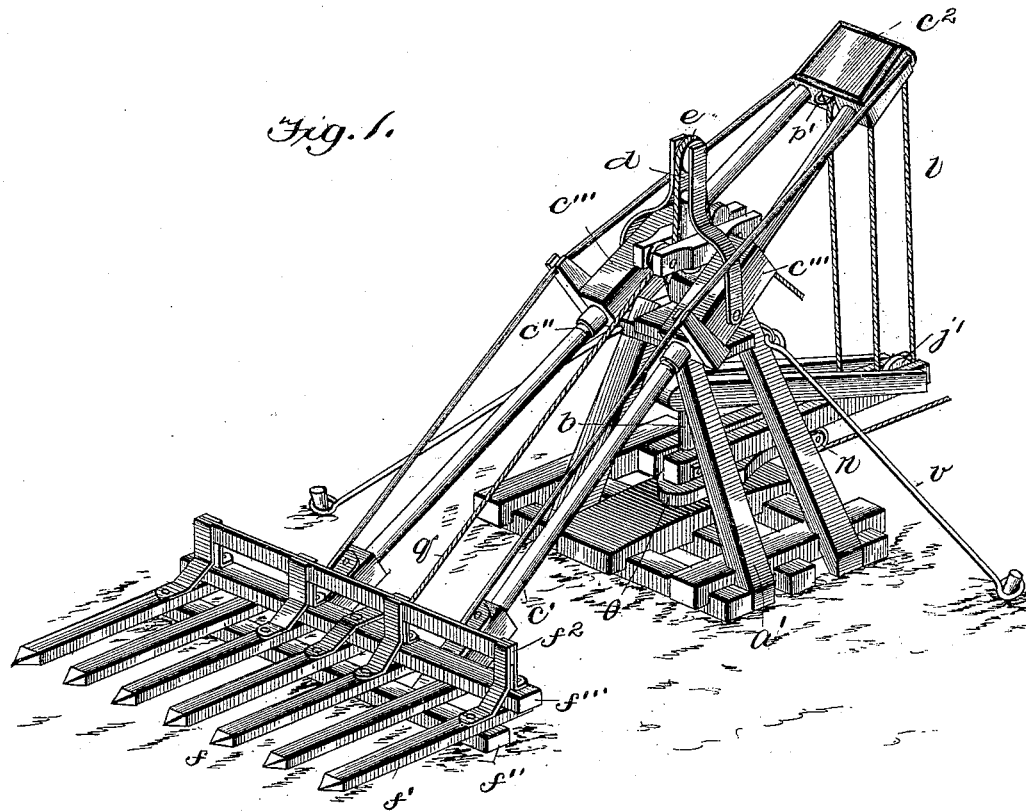
(No Model.)

2 Sheets—Sheet 1.

A. M. CORBIT.  
HAY STACKER.

No. 493,576.

Patented Mar. 14, 1893.



Witnesses

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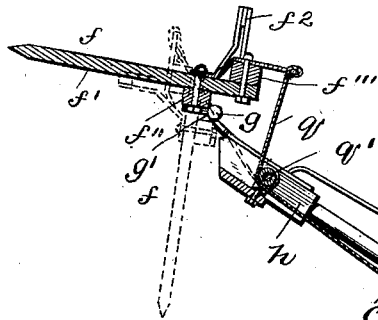


Fig. 3.

Fig. 5

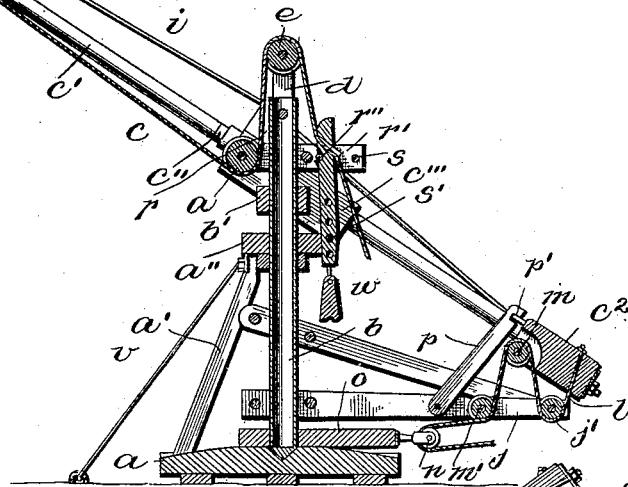
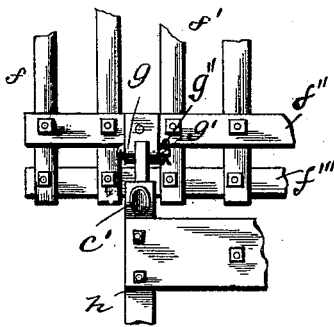
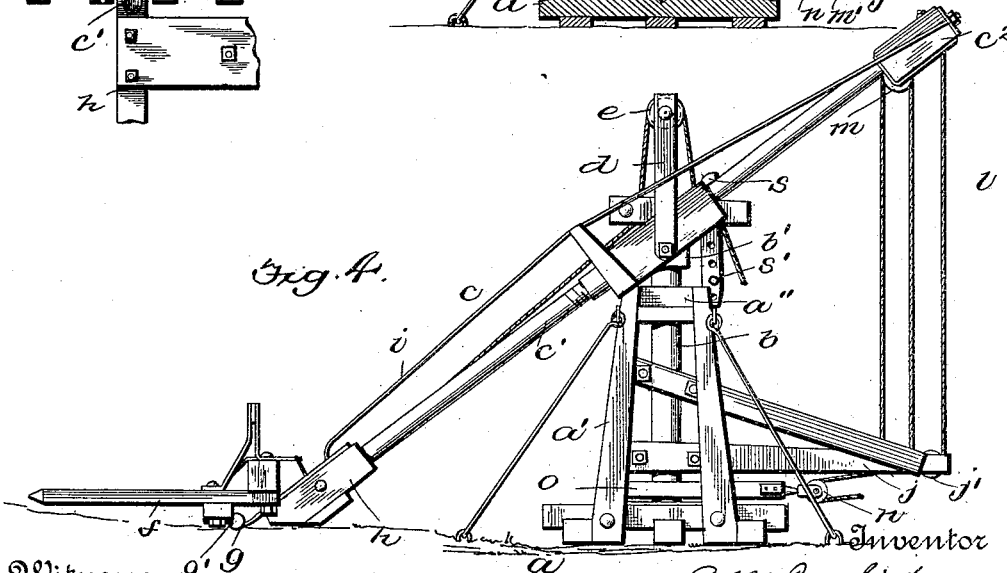


Fig. 4.



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# UNITED STATES PATENT OFFICE.

ANDREW M. CORBIT, OF BETHLEHEM, IOWA.

## HAY-STACKER.

SPECIFICATION forming part of Letters Patent No. 493,576, dated March 14, 1893.

Application filed November 14, 1892. Serial No. 451,856. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW M. CORBIT, a citizen of the United States, residing at Bethlehem, in the county of Wayne and State of Iowa, have invented certain new and useful Improvements in Hay-Stackers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a new and improved hay loader and stacker; and it has for its object to provide a stacker that may be easily set up and operated, and moved from place to place when desired.

The invention consists in the novel combination and arrangement of parts as will hereinafter appear.

In the drawings:—Figure 1 is a perspective view of my improved stacker. Fig. 2 is a detail view showing a rear view of the fork. Fig. 3 is a longitudinal sectional view of the stacker, the fork being raised; and Fig. 4, is a side elevation, the fork being in position for loading. Fig. 5, is a detail view.

Referring to the drawings by letter *a* designates a suitable base upon which is mounted a frame or tower *a'* which supports the tubular center post *b*. The lower end of this center-post rests and turns in a bearing secured to the base *a*, and its upper end extends through and above the upper platform *a''* of the tower. Rigidly secured to said post, at a suitable distance above the platform *a''*, is a cross-bar *b'*, and on this cross-bar, on each side of the post *b* are pivoted the long levers, or side bars *c'* of the crane *c*. The outer ends of the cross bar are supported in the lower ends of the braces *d* which are secured to the center post above the crane, their upper ends extending above the upper end of the said post, and having supported between them the pulley *e* for a purpose hereinafter described. The crane *c* consists of the side bars *c'* formed preferably of tubular metal, such as gas pipe, jointed at its middle as shown at *c''* and provided with the blocks *c'''* which surround them and by means of which they are pivoted on the cross bar *b'*. The bars of the crane are secured at their rear ends in a weight *c<sup>2</sup>* which securely holds them in position and nearly counterbalances the weight of the fork *f* which

is secured to the forward diverging end of the bars *c'* of the crane. This fork consists of the forwardly extending teeth *f'* which are connected near their rear ends by a bar *f''* which is bolted to the teeth on their underside, and a bar *f'''* which is bolted to them at their rear ends on the upper side thereof; and a railing *f<sup>2</sup>* which extends upwardly from the bar *f'''*, as shown.

The fork is detachably connected to the forward ends of the bars of the crane by means of the hinges *g*, one half of which are secured to the bar *f''* of the fork, the other half being secured to the upper side of the blocks *h*, which are secured to the forward ends of the arms *c'* of the crane, the bolt *g'* of said hinges being held in place by means of a removable key *g''*. It will be readily understood that when the key *g''* is removed the bolt *g'* may be drawn out, thereby separating the two halves of the hinges and permitting the fork to be moved separately. The forward ends of the bars of the crane are suitably connected and braced, and truss-rods *i* connect the opposite ends of each of the bars *c'*, said truss-rods being provided with suitable tightening devices.

Secured to the center post at a suitable point above the base *a*, is a rearwardly extending beam *j*, said beam being suitably braced, the forward ends of the braces being also secured to the center post. These beams are adjustably secured to the center post in order that they may be swung around close to the tower to facilitate moving the striker.

To provide for elevating the fork, I secure one end of a rope *l* to the weighted rear end of the crane, and pass it around a pulley *j'* secured in the rear end of the beam *j* and then up over a pulley *m* which is secured in a recess formed in the weight on the rear end of the crane, and from thence carry it down to a pulley *m'* mounted on the beam *j* in front of pulley *j'* and then to a swivel pulley *n* which is mounted on the rear end of a beam *o* which is secured to the center post below the beam *k*, suitable devices being secured to the end of the rope to which the horses may be attached. The pulley *n* is mounted on a swivel in order that it may adjust itself

to proper operative position when the horses are turning the crane to properly place the fork over the point where it is desired to drop the hay.

5 A suitable catch or hook *p* is pivoted to the beam *j* and is arranged to engage a suitable device, such as a staple *p'* on the rear end of the crane when said rear end is lowered, to hold the fork carried by the forward end of  
10 said crane in its raised position, in order that when it is desired to hold the loaded fork in this position the horses may be relieved of the strain.

A rope *q* is secured to the rear cross-bar of  
15 the fork, and passes under a pulley *q'* mounted on the bar which connects the forward ends of the bars of the crane, and then passes rearwardly and under a pulley *r* which is secured between the forward ends of two bars *r'*  
20 which are secured to the center-post, on each side thereof, above the cross-bar *b'*, and then up over the pulley *e* and thence down on the rear side of the center post, and has adjustably secured to it the catch-bar *s*. This bar  
25 *s* works between the bars *r'* on the rear side of the post *b* and is adapted to engage a pin or stop *r''* supported between said bars, and a transverse pin *s'* is carried by this bar, said pin engaging the lower edges of the bars *r'*  
30 when the bar *s* is raised, as hereinafter described. A series of holes is provided in the bar *s* to permit of the adjustment of the pin *s'* in order to regulate the movement of the catch-bar.

35 The operation of my improved stacker is as follows:—The fork is placed on the ground, and loaded in any suitable manner, and the catch-bar *s* is adjusted on rope *q* so that it will engage the pin *r''* when the fork is loaded  
40 and the front end of the teeth are resting on the ground. The fork is now elevated by means of the rope *l*, and as it is raised the distance between the pulley *q'* carried by the crane and the pulley *r* mounted on the center  
45 post becomes less, by reason of the crane being pivoted below and in the rear of pulley *r*, and the slack caused in the rope between the pulley *q'* and *r* is taken up, by the weight of the hay on the fork raising the rear  
50 end of the fork and thereby keeping the fork in a horizontal or approximately horizontal position throughout the upward movement of the crane. When the fork is over the point where it is desired to drop the hay the catch-  
55 bar is released from the pin *r''* and the fork allowed to turn down forwardly on its hinges the bar *s* being drawn up between the bars *r'* until the pin *s'* engages the underside of said bars. When it is desired to throw the hay  
60 out from the end of the crane the pin *s'* is placed in one of the upper holes of the bar *s*, and when it is desired to drop it vertically it is placed in one of the lower holes of the series in the catch-bar, as will be readily understood. A weight *w* is attached to the lower  
65 end of the catch-bar to bring the fork back

to its normal position after it has deposited a load of hay. The stacker is secured in position by means of suitable braced rods *v* which are attached to the tower at one of their ends  
70 and are stacked in the ground in any suitable manner.

It will be readily understood from the foregoing that my stacker may be easily transported, as the crane arms may be divided at  
75 their connections *c''*, and the fork may be detached from them, thereby allowing the stacker to be packed in a much smaller space than is ordinarily required.

Trucks may be provided for the stacker if  
80 desired, as is evident.

Having thus fully described my invention, what I claim is—

1. A hay stacker consisting of a supporting frame, a center post, a crane pivoted on  
85 said post, said crane consisting of two arms formed of separable sections, the rear ends of the arms of the section being connected, said section being permanently carried by the center post, the forward section being connected  
90 to the rear section forward of its connection to the post, and a fork detachably secured to the front end of the forward section, substantially as described.

2. A stacker consisting of a support, a crane  
95 pivoted on said support, a fork pivoted on the crane, a rope secured to the rear end of the fork and extending rearwardly and passing over pulleys secured to the support, a bar secured to said rope said bar adapted to engage  
100 a stop carried by the support, adjustable devices carried by this bar and adapted to engage a stationary part of the support, whereby the throw of the fork may be regulated, substantially as described.  
105

3. A stacker consisting of a support, a crane pivoted on said support, a fork pivoted on the crane, a rope secured to the rear end of the fork, and passing under pulleys *q* and *r*, and over pulley *e* and down on the rear side of  
110 the support and between bars *r'*, catch bar adjustably secured to this rope and adapted to work between the bars *r'* and to engage a pin carried by said bars, and an adjustable stop carried by said bar and adapted to en-  
115 gage the under side of the bars *r'*, and a weight secured to the catch bar, substantially as described and for the purpose set forth.

4. A stacker consisting of a support, a crane pivoted on the support, a fork pivoted on one  
120 end of the crane, and means for elevating said fork, a rope attached to the rear end of the fork and passing rearwardly and provided with a catch to engage a stop secured to the support, and an adjustable stop secured to  
125 said rope whereby the throw of the fork may be so regulated that it may automatically discharge its load at any desired angle, substantially as described.

5. A stacker consisting of a support, a center  
130 post, a crane pivoted on said post, a fork pivoted on the front end of the crane, and

means for elevating the crane, said means consisting of the rope *l* which is secured to the rear end of the crane and is passed down around a pulley *j'* pivoted on a beam *j*, up over  
5 a pulley *m* mounted in a recess in a block secured to the rear end of the crane, down over a pulley *m'* mounted on beam *j*, and then over a swivel pulley *n* mounted on a beam *o*

the beams *j* and *o* being secured to the center post, substantially as described. 10

In testimony whereof I affix my signature in presence of two witnesses.

ANDREW M. CORBIT.

Witnesses:

J. C. F. DRAPER,

W. H. TALKINGTON.