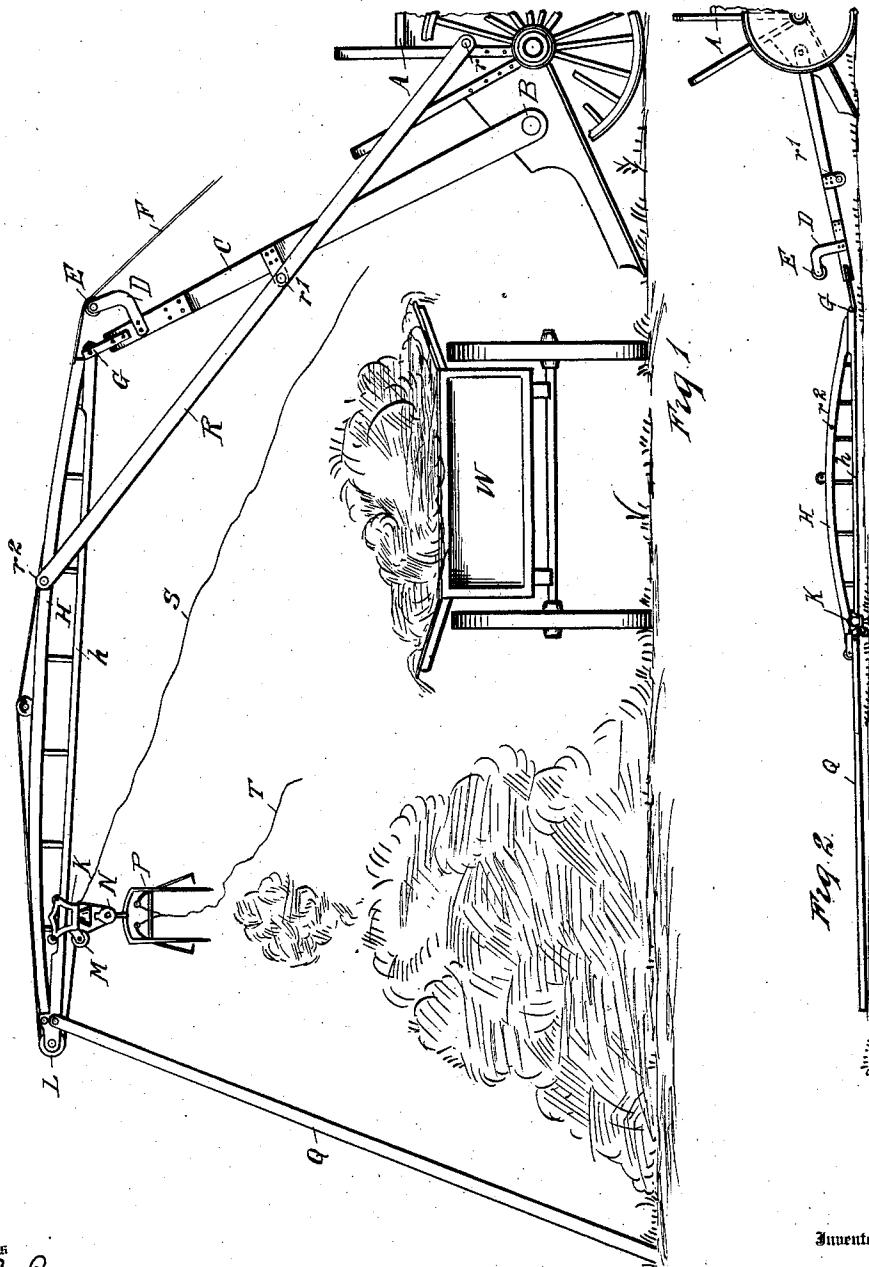


E. HOWLAND.
 APPARATUS FOR LOADING AND STACKING HAY.
 APPLICATION FILED APR. 13, 1911.

1,047,944.

Patented Dec. 24, 1912.



Witnesses

L. L. Bray.

J. C. Spratt

Inventor

Ephraim Howland

By

Parker & Burton

Attorneys

UNITED STATES PATENT OFFICE.

EPHRAIM HOWLAND, OF PONTIAC, MICHIGAN.

APPARATUS FOR LOADING AND STACKING HAY.

1,047,944.

Specification of Letters Patent.

Patented Dec. 24, 1912.

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To all whom it may concern:

Be it known that I, EPHRAIM HOWLAND, a citizen of the United States, residing at Pontiac, county of Oakland, State of Michigan, have invented a certain new and useful Improvement in Apparatus for Loading and Stacking Hay, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to apparatus for loading or stacking hay or other kindred substances, and consists in the various improvements and combinations hereinafter described and specified in the claims.

In the drawings:—Figure 1, is an elevation of the same when in use. Fig. 2, shows the structure for the crane thereof before erection, the parts being drawn upon a smaller scale than in Fig. 1.

Similar letters refer to similar parts.

In the drawings, A represents a loader and dumping device which forms substantially the subject matter of my former Patent No. 811,923, dated February 6, 1906. To the rear end of the box thereof is pivoted at B a crane C, carrying upon its upper end upon a bracket D a friction pulley E over which passes a rope F. At the upper end of the crane at G is pivoted a truss H, the lower member *h* of which forms a track upon which travels a wheeled car K which may be of any suitable form for that purpose.

The rope F is continued to the farther end of the truss H passing over a pulley L to a pulley M and thence to a pulley N at the upper end of an ordinary hay fork P, and then is attached to the car K at any convenient point. The outer end of the truss has a pivoted brace or support Q, the lower end of which rests upon the ground in use. In Fig. 2, the hay fork and traveling carriage are mounted and remain in position as shown. When erected in the form shown in Fig. 1, a brace R is attached to the bridge of the loading device of my former patent at r to the crane at r^1 and to the upper member of the truss at r^2 which serves to stiffen the whole arrangement.

In placing the apparatus in operative position the crane C is elevated to a position permitting the attachment of the brace R

to the three points respectively, r , r^1 , r^2 , the brace Q takes the position naturally as shown in Fig. 1, and affords thereby supporting means for the outer end of the truss. The rope F is properly attached at the outer end of the truss to the car K mounted thereon, engaging the fork P, whereby the fork P can be controlled in its position. A guy rope S may be used to return the carriage K with the fork P to the opposite end of the truss, although the truss being on a slight incline, the releasing of the rope F will permit the carriage K to travel down the incline to the opposite end.

The fork P is controlled by a trip rope T in the usual manner. As there is nothing novel about the fork or its arrangement as any standard fork may be employed, it is deemed entirely unnecessary to describe it. It is obvious that by permitting the carriage to take the position over the rod N, the fork can be allowed to descend, and when loaded, raised by the rope F, and then caused to travel to the opposite end of the crane, and the load on the fork can be deposited as described in the usual manner. It is obvious that the reverse of this operation may take place, as for instance, the fork can be loaded by dropping it from the position shown and then permitting or compelling the loaded fork to travel to the end of the crane G, its load may be deposited upon the wagon W so that its action is reversible.

Having thus described my invention, what I desire to claim is:—

1. In a hay loader in combination with a vehicle, a jointed apparatus adapted to open out on the ground and comprising a crane pivoted at one end to the vehicle, a truss provided with a track pivoted to the other end of the crane, a brace pivoted to the end of the truss opposite the pivoting of the crane, a loading carriage adapted to travel on said track, and means for controlling said carriage, the said apparatus being set in operative position by lifting the truss member whereby the brace is dragged into supporting position, substantially as described.

2. In a hay loader in combination with a vehicle, a jointed apparatus adapted to open out on the ground and comprising a crane at one end pivoted to the vehicle, a truss provided with a track pivoted to the other end of the crane, a brace pivoted to the end of the truss opposite the pivoting of the crane, a loading carriage adapted to travel on said

track, means for controlling said carriage, a fastening device on the vehicle, a fastening device on the crane, a fastening device on the truss and a second brace member attached to the vehicle by the fastening device
5 thereon and adapted to be separately attached to the crane and truss by the other fastening devices when the truss is lifted so as to drag the first mentioned brace into supporting position, substantially as described.
10 3. In a hay loader, in combination with a vehicle, a jointed apparatus adapted to open out on the ground comprising a crane pivoted at one end to the vehicle, a truss provided with a track pivoted to the other end
15 of the crane, a brace pivoted to the truss at

the end opposite the pivoting of the crane, a pulley on said last mentioned end of the truss, a loading device provided with a fork, a rope attached to the loading device and
20 passing over the said pulley on the end of the truss and thence to the vehicle, a second rope attached to the loading device with which it can be pulled in an opposite direction on the track, and a trip rope for operating the fork, substantially as described.
25

In testimony whereof, I sign this specification in the presence of two witnesses.

EPHRAIM HOWLAND.

Witnesses:

VIRGINIA C. SPRATT,
R. A. PARKER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."