

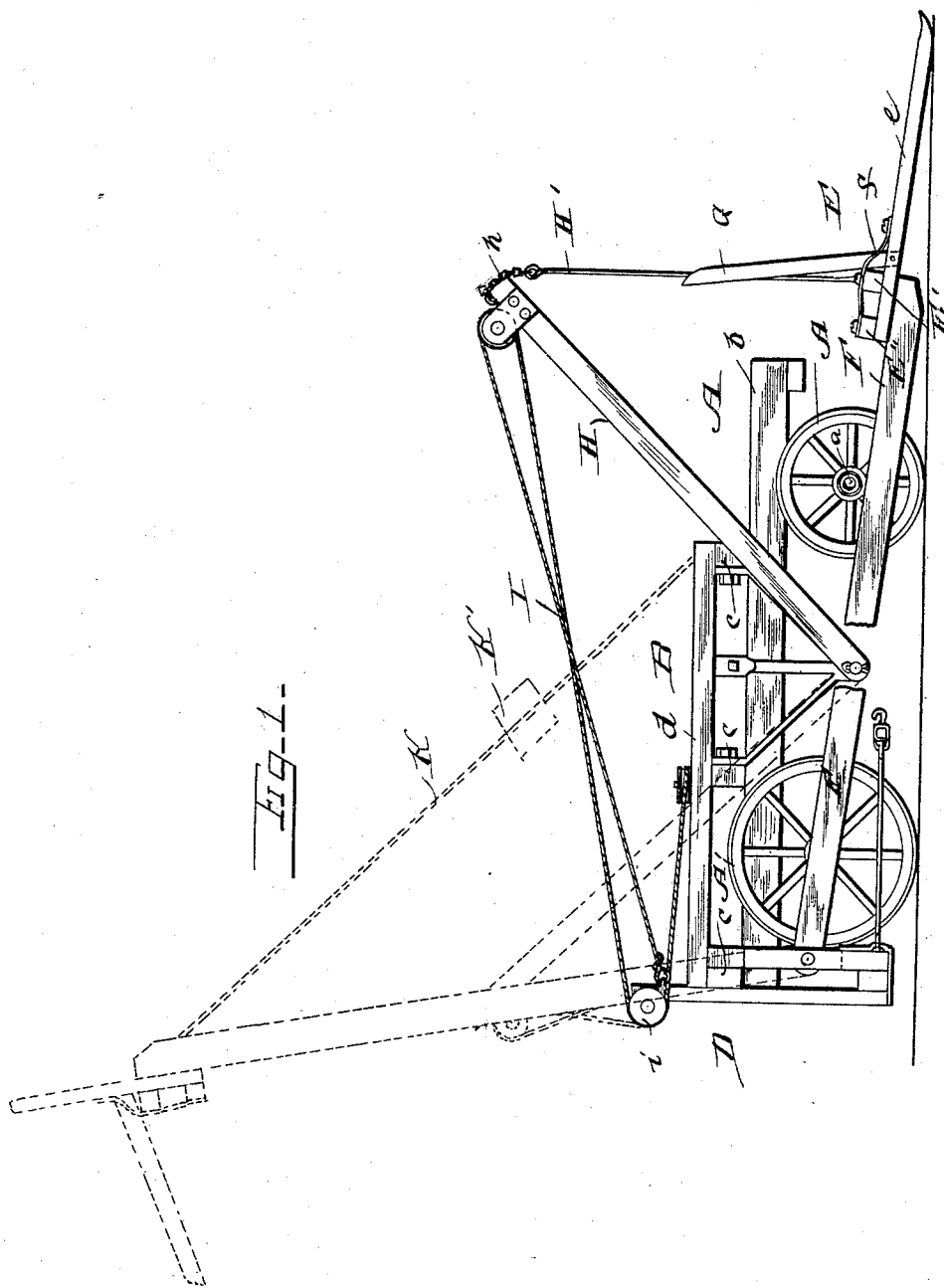
(No Model.)

2 Sheets—Sheet 1.

P. BERNARD.
HAY STACKING MACHINE.

No. 482,611.

Patented Sept. 13, 1892.



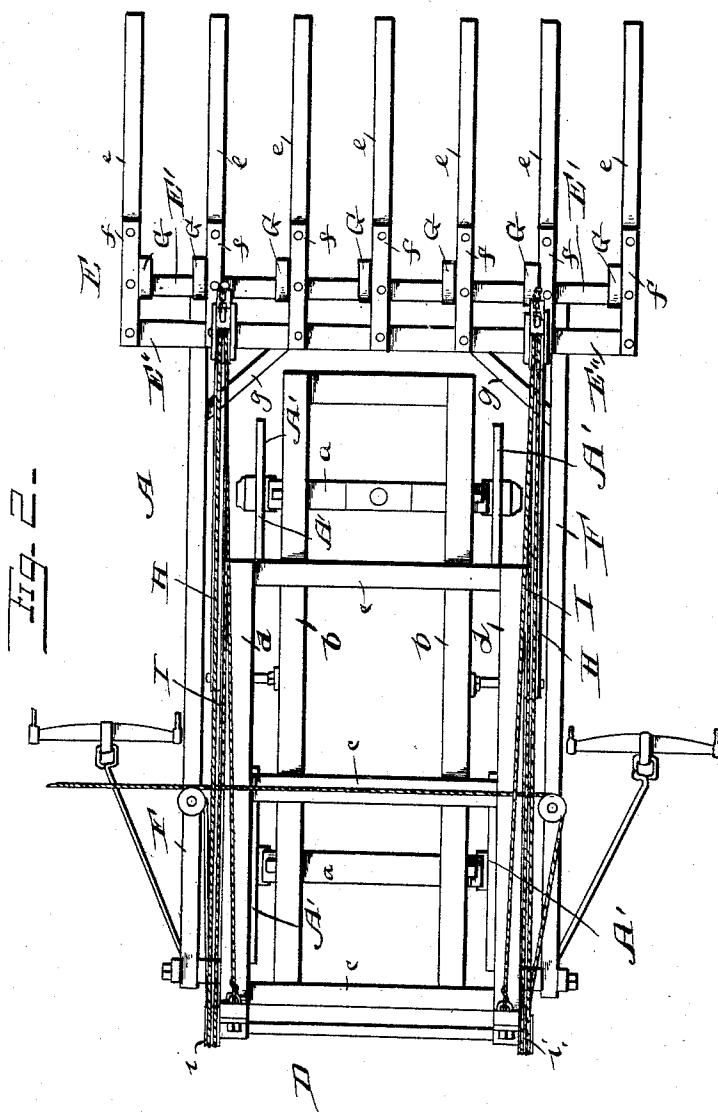
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HAY STACKING MACHINE.

No. 482,611.

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Witnesses
Jesse Heller
Philip L. Masi.

Inventor
Philip Bernard,
By E. W. Anderson
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UNITED STATES PATENT OFFICE.

PHILIP BERNARD, OF JEFFERSON, SOUTH DAKOTA.

HAY-STACKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 482,611, dated September 13, 1892.

Application filed March 31, 1892. Serial No. 427,263. (No model.)

To all whom it may concern:

Be it known that I, PHILIP BERNARD, a citizen of the United States, and a resident of Jefferson, in the county of Union and State of South Dakota, have invented certain new and useful Improvements in Hay-Stacking Machines; and I do 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side elevation. Fig. 2 is a top plan view.

This invention has relation to certain new and useful improvements in hay-stacking machines; and it consists in the novel construction and combination of parts as hereinafter specified.

In the accompanying drawings, the letter A designates the supporting vehicle or truck, comprising the front and rear axles *a a* with their grooved wheels *A'*, and B is the stacker-frame supported thereon. Said frame comprises the parallel longitudinal bed-pieces *b b*, secured solidly to the axles and on which are supported a series of cross-bars *c*. Secured to these cross bars are the longitudinal side pieces *d*.

D is a vertical end frame secured to the frame B at the rear.

E designates the stacker-fork, which is carried on the forward ends of the bars *F F*, pivoted at their rear ends in the vertical frame D and capable of a movement through a vertical plane from a horizontal to a vertical position. The fork comprises the cross-head *E'*, rigidly secured to the bars *F F*, and to the underside of which are secured a series of teeth *e*. Immediately in front of the head *E'* is a second cross-bar *E''*, to which the teeth are also secured.

f designates a series of metal strips or braces, one for each tooth, connected to the cross-pieces *E''* and *E'* and to the teeth in front of the piece *E'*. The braces do away with the necessity for any cross-braces between the teeth near their ends, which would prevent the approach of the rake.

G is a series of vertical fingers, one of which is pivoted to each tooth in front of the cross-bar *E'*. These fingers are beveled off at their ends, so as to allow the hay to slide freely from them onto the stack when in dumping position. *g g* are braces from the bar *E''* to the side bars *F F*.

H H designate a pair of levers pivoted at their lower ends, one at each side of the machine below the level of the axles *a a*. To the upper end of each of these levers is connected a short chain or cable *h*, running in a groove cut in the end of the lever, and to which is connected one end of a link *H'*, which at its opposite end is connected to the cross-bar *E'*.

I I designate the elevating-cables, each of which is double-rigged to a double pulley block or sheaves on the lever H and to double pulleys on a transverse shaft hung in bearings on the rear frame D. The cables then pass down over pulleys *i i* on said frame D.

The truck or vehicle is driven to the stack after being loaded from the rake. By means of the cables I I the fork is raised into a vertical position over the stack. As it comes to this position the weight of the hay on the fingers G carries them backward against the cross-bar *E'* and allows the hay to slide onto the stack. The entire frame is broad and low, so that there is no danger of its upsetting while in operation. Comparatively little power is required to elevate the fork, owing to the great purchase obtained from the manner in which the cables are connected and by the arrangement of the levers H H. The machine will also operate successfully should the fork be loaded heavier at one side than at the other, owing to the rigid manner in which the fork is constructed.

For the purpose of returning or lowering the fork a chain or cable K may be connected to the cross-head *E''*, to which is attached a weight *K'*.

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

The combination, with the vehicle or truck, the frame supported thereon, the bars *F F*, pivoted at their rear ends to said frame, a cross-head *E''*, rigidly secured to the forward

portion of the said bars, a series of teeth rigidly secured at their rear ends to said bar, a second cross-head E', to which the teeth are also secured, and a series of vertical fingers 5 G, one pivoted to each tooth in front of said cross-heads, of the levers H H, pivoted at their lower ends, one at each side of the machine below the level of the axles, a flexible connection between each of said levers and the cross-head E', and the double-rigged elevating-cables for operating said levers, substantially as specified.

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

PHILIP BERNARD.

Witnesses:

CHARLES E. LAFLEUR.

J. B. SATAIUS.