

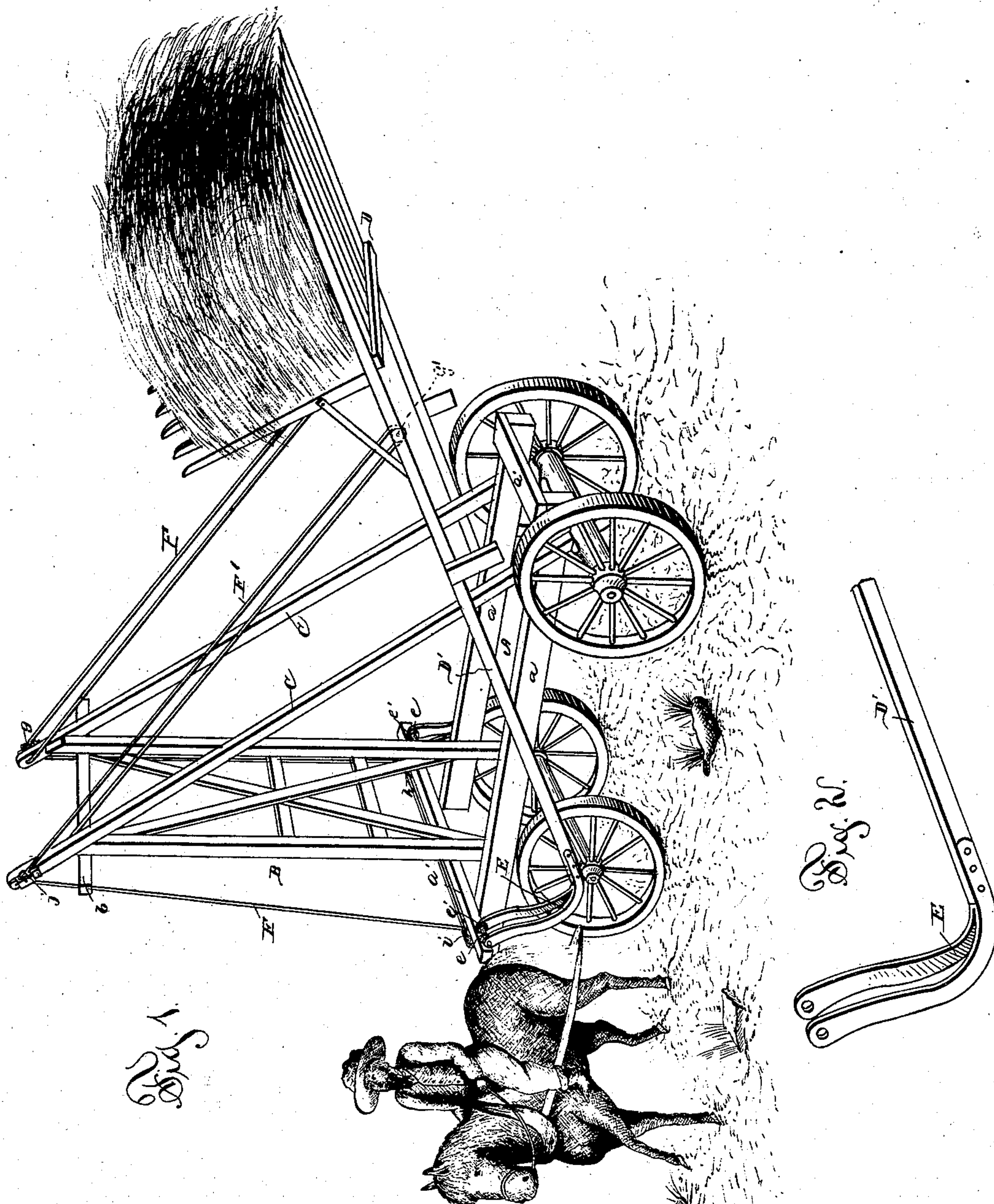
(No Model.)

S. B. GILLILAND.

HAY STACKER.

No. 372,138.

Patented Oct. 25, 1887.



Witnesses:

John Enders, Jr.  
Photo-Litho.

Inventor:

Samuel B. Gilliland  
By *[Signature]*  
Attorneys:



# UNITED STATES PATENT OFFICE.

SAMUEL B. GILLILAND, OF MONROE CITY, MISSOURI.

## HAY-STACKER.

SPECIFICATION forming part of Letters Patent No. 372,138, dated October 25, 1887.

Application filed May 19, 1886. Renewed August 24, 1887. Serial No. 247,731. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL B. GILLILAND, a citizen of the United States of America, residing at Monroe City, in the county of Monroe and State of Missouri, 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.

10 This invention pertains to improvements in hay-stackers, having for its object to promote simplicity; and the invention consists of the combinations of parts, including their construction, substantially as hereinafter set forth, and  
15 pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of my improved hay-stacker with the fork and its elevating-arms in the act of elevating the hay. Fig. 2 is a similar detail view of the fork-arm elbows.

20 In the embodiment of my invention I employ a horizontal frame, A, suitably constructed of longitudinal side pieces, *a a*, and transverse end pieces, *a' a'*, preferably secured with their  
25 sides placed horizontally upon the upper surfaces of the side pieces and having their ends projecting beyond said side pieces. This frame as thus constructed is mounted upon an ordinary farm-wagon for the purpose of portability.

30 B is an upright stationary frame, which is bolted at the lower ends of its upright side pieces to the inner sides of the side pieces, *a a*, of the horizontal frame A. The upright side pieces of the frame B are connected at  
35 their middle and near their ends by cross-pieces. The upper cross-piece, *b*, projects at its ends beyond the upright side pieces, so as to serve as stops for limiting the movement of the fork-carrying arms (presently described)  
40 as the fork delivers its contents or load.

The frame B is braced by struts or longitudinal pieces extending diagonally nearly from end to end of said frame and crossing each other.

45 C C are two obliquely-disposed uprights, the lower rear ends of which are fastened to the outer sides of the side pieces of the horizontal frame A near their rear ends, while they are secured near their upper ends to the upper  
50 ends of the upright frame B, their extreme upper ends overhanging the cross-bar *b* of the

latter frame and forming supports for pulleys *d*, the function of which will appear farther on.

D is the fork, of the usual construction, its side bars being extended inwardly and forming its carrying-arms *D'*, which arms are pivotally connected to the horizontal frame A at their forward ends by elbows *E*. A curved elbow, *E*, is applied to each side of each arm *D'* by means of bolts passed through the normally lower ends thereof. The bolts enter or pass through the arm and secure thereto two elbows. The normally vertical or upper ends of said elbows are spread apart toward their upper ends, and are formed with eyes or apertures, which receive pivot-bolts *e*, supported in brackets or pendent ears *e'*, bolted to the rear side of the projecting portions or ends of the forward cross-bar, *a'*, of the horizontal frame A, a pair or two elbows being pivoted upon the same bolt or pivot at each side of the frame. These elbows are made of heavy wrought-iron to render them weighty, whereby they will, without the use of the springs or weights usually required, have the effect to automatically lower or return the fork, with its carrying-arms, to its lowered position after delivering its load, as said elbows are so curved as to cause the center of gravity of the fork and arms to be always in rear of the pivots, even when the fork and arms are located in front of the vertical plane passing through said pivots.

F F' are the fork-elevating ropes, one end of one of which is secured to the upper end, say, of the right-hand oblique upright C, and it is thence carried down and around an ordinary pulley (not shown) connected to the corresponding fork-carrying arm, *D'*, near the fork, thence up around or over a pulley, *g*, on the upper end of said right-hand upright, thence down around a pulley, *h*, supported near the right-hand end of the front cross-piece *a'*, and thence over to and under a pulley, *i*, supported at the left-hand end of said piece *a'*, after which it is connected to the whiffletree at the end of traces of horse's harness. A second rope, F', is likewise connected to the upper end of the other or left-hand upright, C, and is thence passed down and around another pulley, *g'*, (shown in dotted lines,) on the frame-work of the fork, and thence back again up over a second pulley, *j*, supported at the upper end of said left-



hand upright, and is then passed down and around the pulley *i*, (or it may be around a supplementary pulley the counterpart of said pulley *i*,) after which it is also connected to  
5 the draft-horse.

The above-described fork-elevating ropes may, if desired, be connected with a suitable mechanical power for elevating the fork with its contents or load to effect the delivery of the  
10 latter upon or the formation thereof into a stack.

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

The combination, with the frame, the fork, 15 the fork-arms, and the lower forward cross-piece of the horizontal frame, of the curved elbows secured to said fork-arms and pivoted on said cross-piece, whereby the center of gravity of the fork and arms is always in rear of the 20 pivots, substantially as shown and described.

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

SAMUEL B. GILLILAND.

Witnesses:

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