

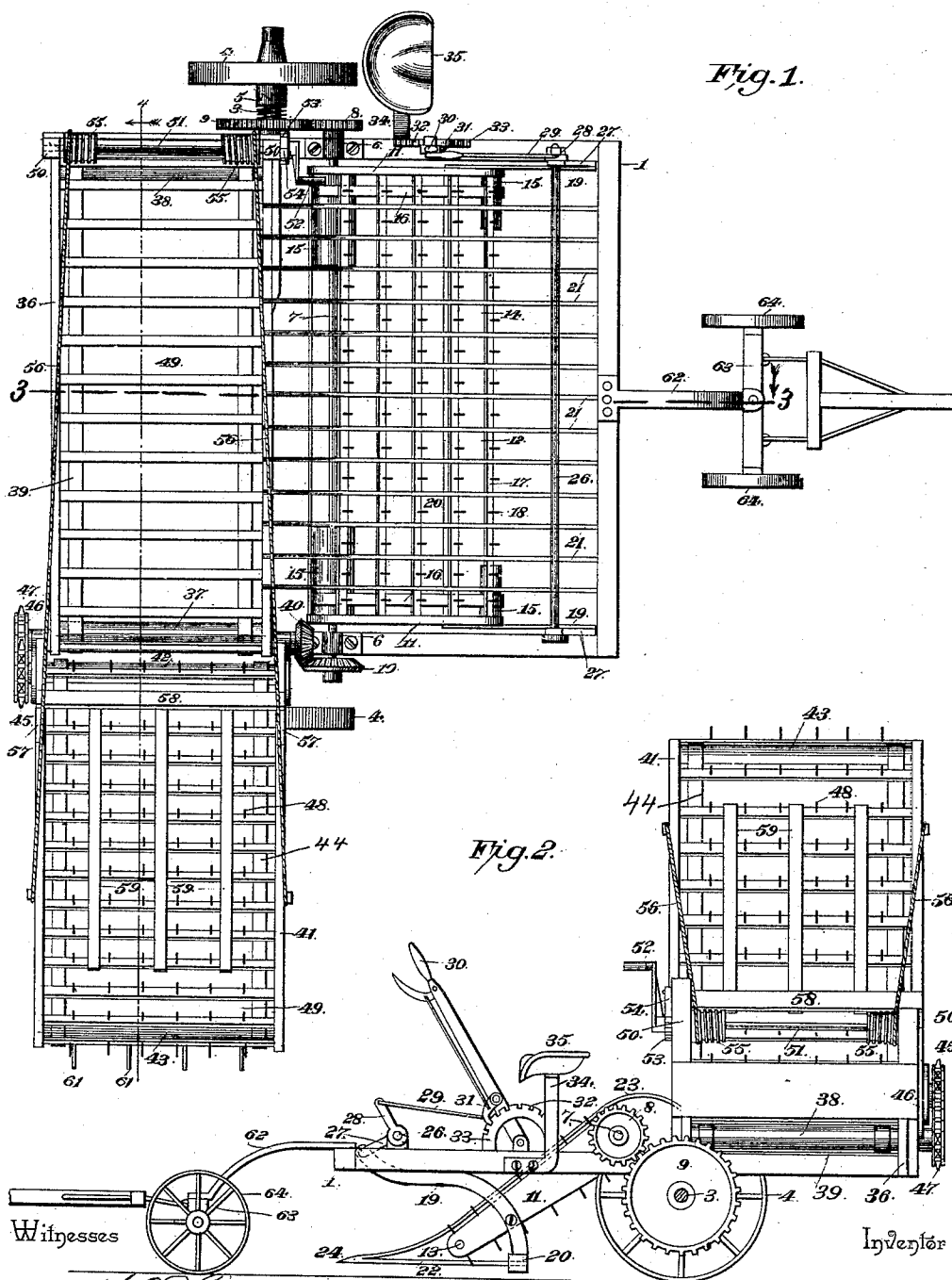
(No Model.)

3 Sheets—Sheet 1.

M. K. BARRON.
HAY LOADER.

No. 465,052.

Patented Dec. 15, 1891.



Witnesses

Inventor

M. E. Fowler
Wm. Baggett

By his Attorneys,

Miles K. Barron
C. A. Snow & Co.

(No Model.)

3 Sheets—Sheet 2.

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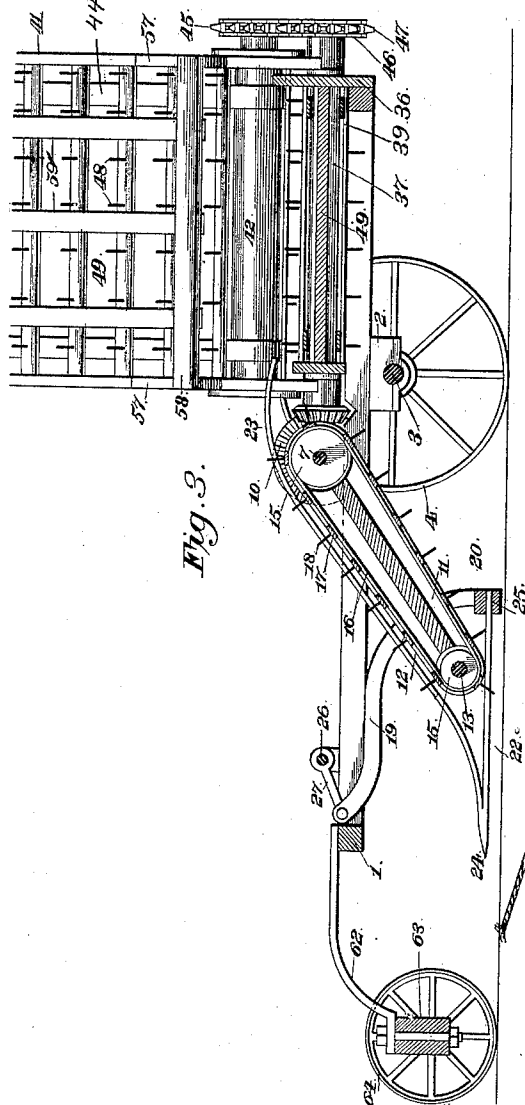


Fig. 3.

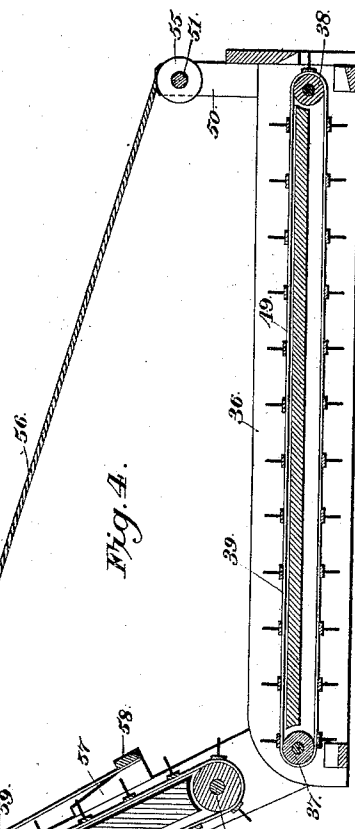


Fig. 4.

Witnesses

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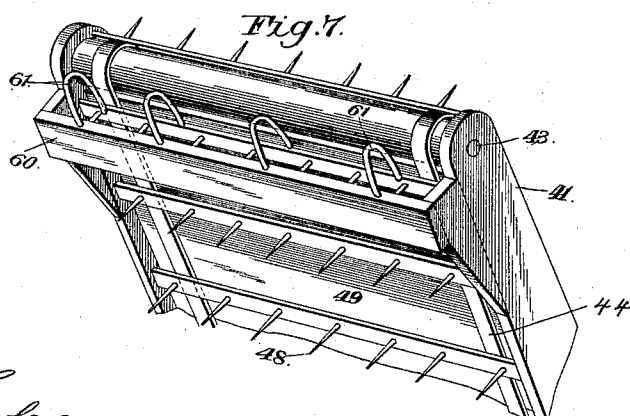
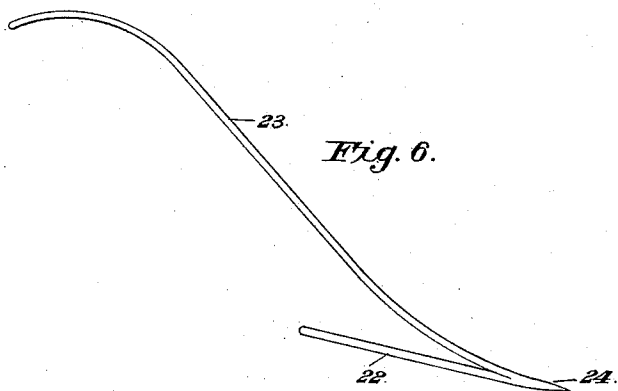
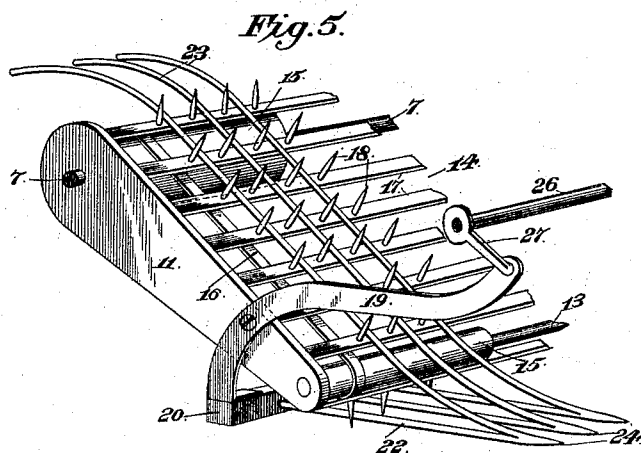
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Inventor

UNITED STATES PATENT OFFICE.

MILES K. BARRON, OF CANTON, ASSIGNOR OF ONE-HALF TO W. W. WHITE,
OF FOREST CITY, ILLINOIS.

HAY-LOADER.

SPECIFICATION forming part of Letters Patent No. 465,052, dated December 15, 1891.

Application filed January 19, 1891. Serial No. 378,302. (No model.)

To all whom it may concern:

Be it known that I, MILES K. BARRON, a citizen of the United States, residing at Canton, in the county of Fulton and State of Illinois, have invented a new and useful Hay-Loader, of which the following is a specification.

This invention relates to that class of hay-loaders which are used for gathering the hay in the field and loading it onto wagons; and it has for its object to provide a device of this class which shall be simple in construction, durable, and effective in operation.

With these ends in view the invention consists in the improved construction, combination, and arrangement of parts which will be hereinafter described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a plan view of a loader constructed in accordance with my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical sectional view taken on the line 3 3 in Fig. 1. Fig. 4 is a vertical sectional view on the line 4 4, Fig. 1. Fig. 5 is a perspective detail view of a portion of the pivoted inclined frame carrying the rake-teeth and the endless carrier or elevator. Fig. 6 is a perspective detail view of one of the rake-teeth detached. Fig. 7 is a detail view of the upper end of the adjustable frame having the elevating-carrier and the curved elastic guides.

Like numerals of reference indicate like parts in all the figures of the drawings.

The frame of the machine, which is designated by 1, is provided with boxes or bearings 2 for the shaft or axle 3, carrying the transporting-wheels 4, which are preferably connected with said axle by means of clutches 5, forcing the axle to revolve with the transporting-wheels when the machine is traveling in a forward direction and to remain stationary when the machine is being backed. The clutches 5 may be of any ordinary well-known construction.

The frame 1, which is preferably rectangular in form and which may be almost square, supports in front of the axle boxes or bearings 6 for a shaft 7, which is provided at one end with a pinion 8, meshing with the spur-wheel 9 upon the axle of the machine. The opposite end of the shaft 7 carries a bevel-gear 10.

Pivotaly mounted upon the shaft 7 are the side pieces 11 of a forwardly and downwardly extending frame 12. At the outer end of the frame 12 is journaled a shaft 13. An endless carrier 14 is mounted upon drums 15 upon the shafts 7 and 13. The said endless carrier is composed of flexible bands 16, mounted upon the drums 15 and connected by transverse slats 17, which are preferably provided with outwardly-extending prongs or tines 18.

Pivotaly secured to the outer sides of the side pieces 11 are a pair of curved forwardly-extending arms 19, the rear ends of which are extended downwardly and connected by means of a cross-piece 20, which extends transversely under the frame 12. Suitably secured to the cross-bar 20 are the rake-teeth 21. Each of the latter is composed of a lower straight portion 22, converging at its front end with a rearwardly and upwardly curved tooth 23, which joins the lower horizontal portion at the point 24, which is normally in a horizontal position. The lower horizontal portion 22 of each tooth may be connected with the cross-bar 20 in any suitable manner. Preferably, however, the said cross-bar is provided with horizontal perforations 25 for the passage of the horizontal portions of the rake-teeth. Of the latter any desired number may be employed, and the upper portions or bodies of the said teeth are extended upwardly and rearwardly a suitable distance in rear of the upper shaft 7, supporting the endless carrier of the frame 12.

26 designates a rock-shaft, which is mounted transversely in suitable bearings upon the frame 1 near the front end of the latter. Said rock-shaft is provided with radial arms 27, which are connected pivotaly with the front ends of the curved arms 19, supporting the cross-bar 20, in which the rake-teeth are mounted. The rock-shaft 26 is also provided at one end with an arm 28, which is connected by a link or rod 29 with a lever 30, which is suitably pivoted to the frame and which is provided with a suitable latch 31, adapted to engage any one of a series of notches or recesses 32 in a segmental bracket 33, which is secured to the frame. The latter has a support 34 for the driver's seat 35, which is located within reach of the operating-lever 30.

The main frame 1 of the machine in rear of

the axle 2 supports a horizontal frame 36, at the ends of which are journaled shafts 37 and 38, having drums or rollers which support an endless carrier 39. The shaft 37 is provided at its front end with a bevel gear or pinion 40, meshing with the bevel-gear 10 upon one end of the shaft 7.

41 designates a supplemental frame, which is mounted pivotally upon the shaft 37 and which is provided at its lower and upper ends with shafts 42 and 43, having drums or rollers which support an endless carrier 44. The lower shaft 42 is provided with a sprocket-wheel 45, connected by a chain 46 with a sprocket-wheel 47 upon the rear end of the shaft 37, from which motion is thus transmitted to the endless carrier 44. The slats of the latter are preferably provided with upwardly or outwardly extending teeth or prongs 48. The frames 36 and 41, supporting the endless carrier 39 and 44, are provided in the usual manner with bottom boards 49 to support the hay which is to be loaded.

The frame 36 is provided at one end, directly above the shaft 38, with uprights 50, having bearings near their upper ends for a shaft 51, provided at its front end with an operating-crank 52. Said shaft is also provided with a ratchet-wheel 53, engaged by a pawl 54, which is pivoted to the front upright 50. The crank-shaft 51 is provided with winding-drums 55, to which are attached the lower ends of ropes, chains, or other flexible connections 56, the upper ends of which are suitably attached to the sides of the elevator-frame 41. The latter, as will thus be seen, may be adjusted to and retained in any desired position for operation by simply manipulating the shaft or windlass 51.

The frame 41 of the elevating-carrier is provided at its sides with blocks 57, supporting the cross-bar 58, from which flexible arms 59 are extended in an upward direction nearly to the top of the frame. These arms will in operation bear against the hay which is being elevated and serve to prevent the same from being blown up or dropped. The frame 41 is provided on its underside, near its upper end, with a cross-bar 60, having curved elastic or spring guides 61, between which the teeth or prongs 48 pass over and whose free ends the slats of the carrier 44 slide. The rounded portions of these guides serve to pass the hay from the carrier transversely across the upper end of this carrier and cause it to fall properly to the ground or into the wagon being loaded and prevent it from being entangled with and carried back by the endless carrier.

Suitably secured to the front cross-bar of the main frame 1 is a forwardly-extending arm or brace 62, to the front end of which is pivotally connected an axle 63, having the transporting and guiding wheels 64, and to which the draft is to be hitched in the usual manner.

From the foregoing description, taken in

connection with the drawings hereto annexed, the operation and advantages of my invention will be readily understood. When the machine passes over the field, the hay will be gathered by the action of the rake-teeth, over which it is elevated by the endless carrier 14 and deposited upon the endless carrier 39 of the frame 36. The latter carries the hay to the upwardly-extending inclined frame 41, where it is caught by the endless carrier 44, elevated, and eventually deposited in the wagon, which is driven alongside of and parallel to the loading apparatus. The elevating-frame 41 may be adjusted to any desired position to suit the operator. The frame 12, in which the endless carrier 14 is mounted, may be likewise adjusted. The said frame 12 is adjusted by means of the hand-lever 30, and the latter, as will be observed, likewise controls the cross-bar 20, in which the rake-teeth are mounted, thus enabling the latter to be adjusted at any desired distance above the drum. For transportation the rake-teeth and the frame 12 may be suitably elevated, as will be readily understood.

I have in the foregoing described what I consider to be the preferred construction of my invention; but I desire it to be understood that I reserve the right to any changes and modifications which may be resorted to without departing from the spirit of my invention.

Having thus described my invention, what I claim is—

1. In a machine of the class described, the combination of a suitable frame supported upon an axle and having a transverse shaft receiving motion from said axle, a frame mounted pivotally upon said shaft and supporting an endless carrier deriving motion from the latter, a horizontal endless carrier arranged in rear of the pivoted frame and operating laterally to the latter, and an inclined adjustable frame supporting an endless conveyer or elevator, substantially as and for the purpose set forth.

2. In a machine of the class described, the combination of an inclined pivoted frame having an endless carrier, the curved arms pivoted to the sides of said frame, a cross-bar connecting the lower ends of said curved arms, and the rake-teeth secured to said cross-bar below the frame and having arms curved in an upward and rearward direction above said frame and terminating in rear of the latter, substantially as set forth.

3. In a machine of the class described, the combination, with the main frame supporting a horizontal endless carrier and an inclined adjustable conveyer or elevator, of the pivoted adjustable frame having an endless carrier, the arms pivoted to the sides of said frame, the cross-bar connecting said arms below the frame, the rake-teeth mounted in said cross-bar and having horizontal arms converging at their front ends with the upwardly and rearwardly curved arms, and adjusting

mechanism connected with the front ends of the arms pivoted to the sides of the adjustable frame, substantially as and for the purpose set forth.

5 4. In a machine of the class described, the combination of the inclined adjustable frame having an endless carrier, the curved arms pivoted to the sides of the said frame, the cross-bar connecting the lower ends of said
10 arms below the frame and having the rake-teeth constructed as herein described, a rock-shaft arranged in front of the inclined adjustable frame and having radial arms con-

nected pivotally with the upper front ends of the pivoted curved arms, and an operating-lever and connecting mechanism for operating said rock-shaft, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in
20 presence of two witnesses.

MILES K. BARRON.

Witnesses:

A. R. HAYNES,
A. I. SHEPLY.