

No. 684,902.

Patented Oct. 22, 1901.

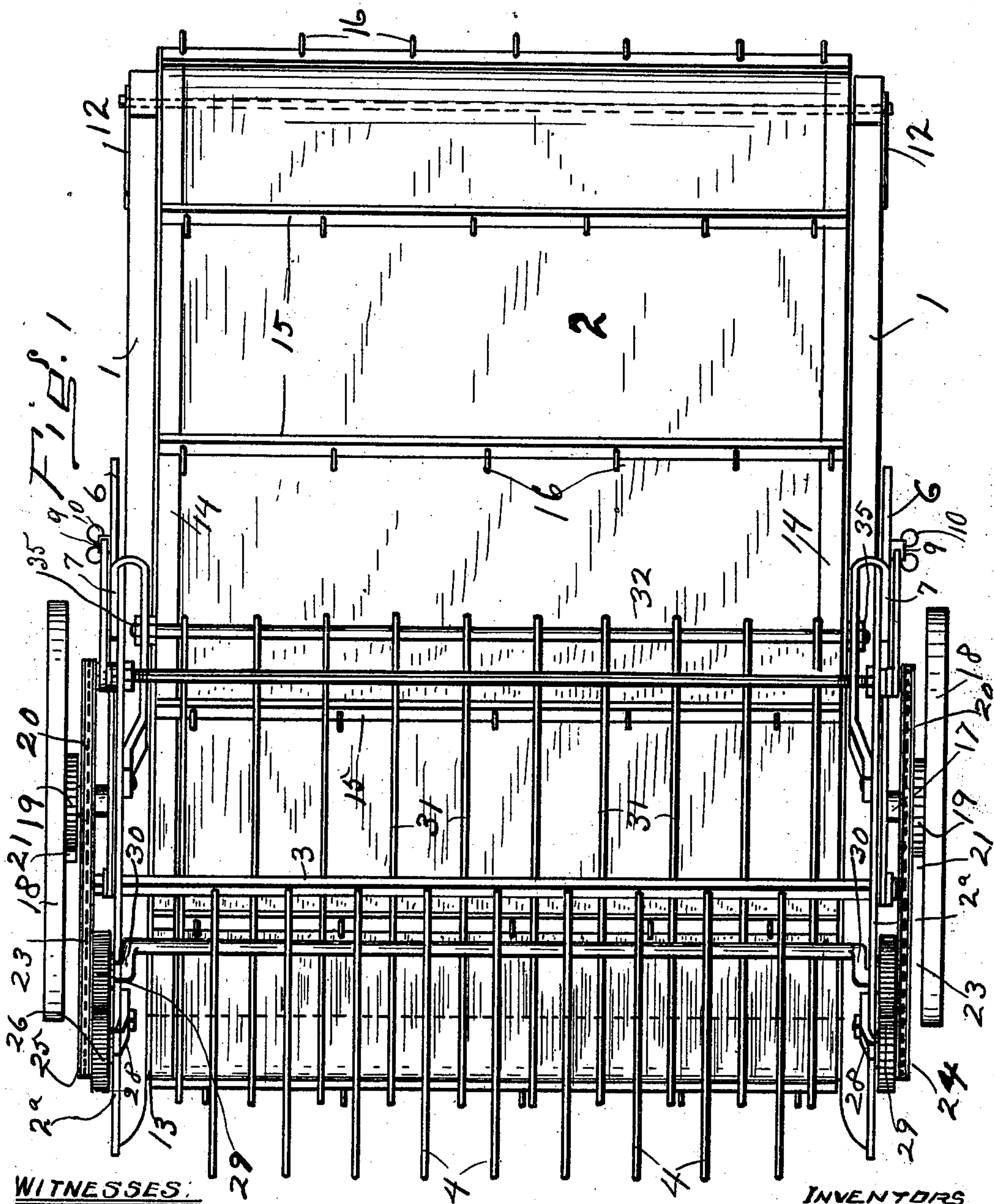
C. F. ASIRE & F. LEDRICH.

HAY LOADER.

(Application filed July 17, 1901.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES:

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*J. R. Bond*

INVENTORS

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ATTY.

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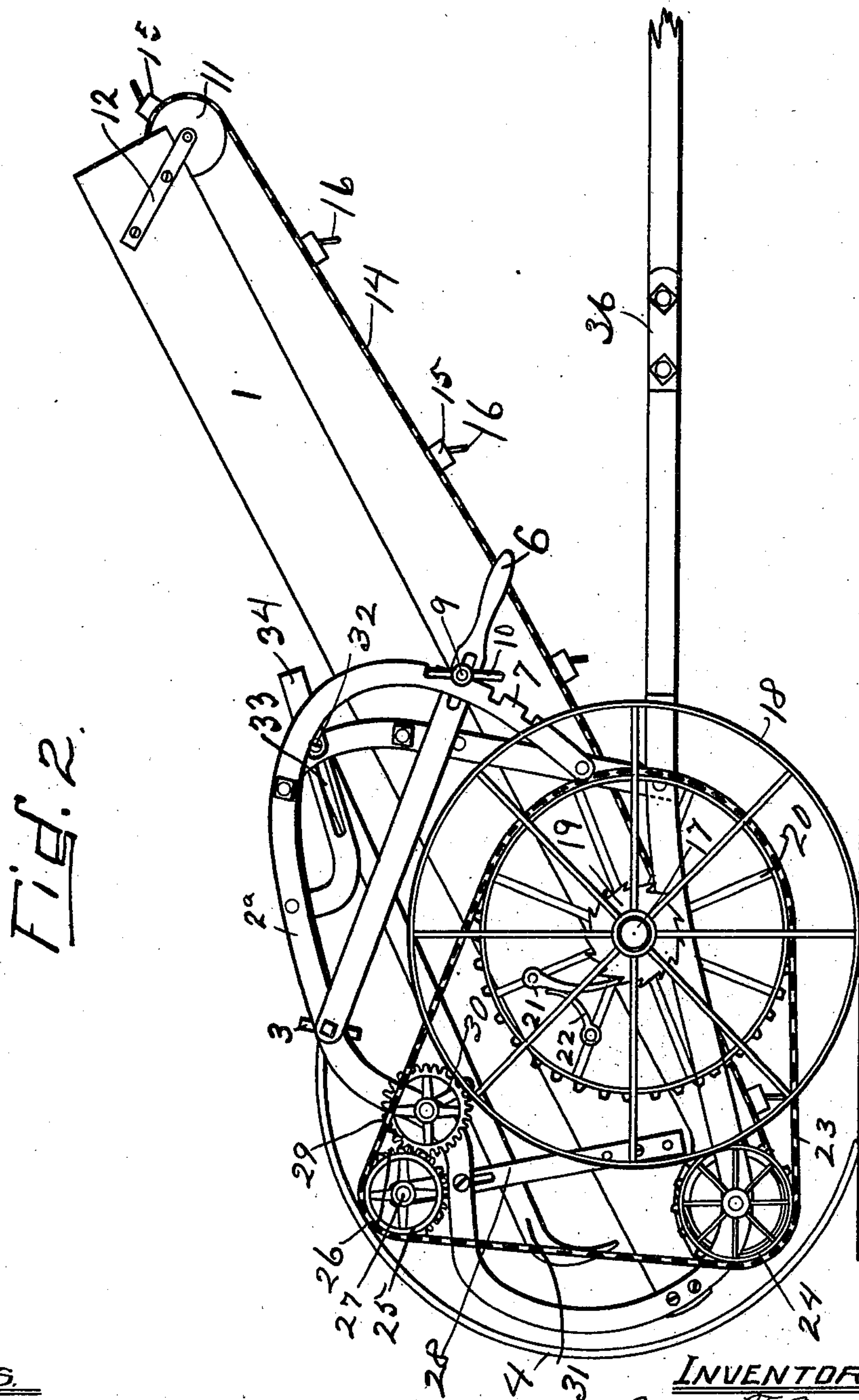
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(No Model.)

3 Sheets—Sheet 2.



WITNESSES.

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3 Sheets—Sheet 3.



# UNITED STATES PATENT OFFICE.

CYRUS F. ASIRE AND FREDRICH LEDRICH, OF BECKS MILL, OHIO, ASSIGN-  
ORS OF ONE-THIRD TO JACOB SHENEMAN, OF BECKS MILL, OHIO.

## HAY-LOADER.

SPECIFICATION forming part of Letters Patent No. 684,902, dated October 22, 1901.

Application filed July 17, 1901. Serial No. 68,577. (No model.)

*To all whom it may concern:*

Be it known that we, CYRUS F. ASIRE and FREDRICH LEDRICH, citizens of the United States, residing at Becks Mill, in the county of Holmes and State of Ohio, have invented certain new and useful Improvements in Hay-Loaders; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the figures of reference marked thereon, in which—

Figure 1 is a top view. Fig. 2 is a side elevation. Fig. 3 is a longitudinal section.

The present invention has relation to hay-loaders; and it consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claims.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents the side bars, which are preferably formed of wood and between which side bars is located the bottom 2, which bottom is formed of any suitable material and is held in place in any convenient and well-known manner. Upon the outside of each side bar 1 are connected the curved or bent bars 2<sup>a</sup>, to which curved bars 2<sup>a</sup> is pivotally attached the rake-head 3, which rake-head is provided with the rake-teeth 4, which rake-teeth are of the ordinary construction and their position changed by means of the lever 6, which lever is fixed to the rake-head 3 and is moved up and down and held in fixed adjustment by means of the notched segmental bar 7 and the sliding bolt 9, which sliding bolt is provided with the nut 10. The devices for holding the lever 6 and the teeth in fixed adjustment may be varied without departing from the nature of our invention.

The outer upper ends of the side bars 1 are provided with the roller 11, which roller is properly journaled in the bars 12 or their equivalents. At the rear ends of the side bars 1 and directly in front of the lower portions of the rake-teeth 5 is located the roller 13, which roller is properly journaled in the bent bars 2<sup>a</sup> or their equivalents. Around

the rollers 11 and 13 are located the belts 14, to which belts are attached in any convenient and well-known manner the bars 15, which bars are provided with teeth 16, and the members of the belts 14 so arranged that one member will come below the bottom 2 and the other member above the bottom 2, as illustrated in Fig. 3. To the bent or curved members 2<sup>a</sup> is connected the axle 17, upon which axle are loosely mounted the driving-wheels 18, said driving-wheels having fixed thereto the ratchet-wheels 19.

Upon the axle 17 are also located the sprocket-wheels 20, and for the purpose of providing for independent rotation between the driving-wheels 18 and the sprocket-wheels 20 the ordinary dogs 21 are provided, which dogs engage the ratchet-wheels 19, said dogs being held in operative position by means of springs 22. This construction being common, no detail description is here necessary. From the sprocket-wheels 20 lead the drive-chains 23, said drive-chains passing under the sprocket-wheels 24, which sprocket-wheels are connected to the axle of the roller 13, the drive-chain 24 extending upward and over the sprocket-wheel 25, to the side of which sprocket-wheels are located the cog-wheels 26, said sprocket and cog wheels being mounted upon short shafts 27, which shafts are connected to the upper ends of the posts 28, said posts being fixed to the side bars 1 and to the curved bars 2<sup>a</sup>. The cog-wheels 26 mesh with the cog-wheels 29, said cog-wheels 29 being fixed to the crank-shaft 30.

The object and purpose of locating the cog-wheels as shown in Fig. 3 is to provide means for rotating the crank-shaft 30 in the opposite direction from the rotation of the main traveling wheels 18. It will be understood that the rollers 11 and 13 should rotate in the same direction as that of the traveling wheels, so that the upper members of the belts 14 will move upward as the loader is propelled forward.

To the crank-shaft 30 are pivotally connected a series of hooked bars 31, which hooked bars are located upon the crank-shaft 30 in such a manner that they will come between the rake-teeth 4 as they are moved backward by means of the crank-shaft 30, and



as they move backward they will be moved upward by the upward throw of the crank-shaft 30, by which arrangement they will be disengaged from the hay, and when the crank-shaft 30 starts downward and forward the hooked bars 31 will be moved downward and forward, thereby moving the hay forward onto the endless elevating device, which device consists, as heretofore stated, of chains or belts and tooth-bars. By providing the hooked bars 31 and connecting them to the crank-shaft 30 they will assist in removing the hay as it is gathered by the rake-teeth, and thereby prevent any choking.

For the purpose of holding the front or forward ends of the hooked bars 31 in proper relative position the cross-bar 32 is provided, which cross-bar is formed of a length corresponding substantially with the width of the frame and the ends of said cross-bar located in the slots 33, which slots are formed in the bars 34, said bars being connected to the curved side bars 2<sup>a</sup> in any convenient and well-known manner, said slotted bars 34 being set in a short distance from the inner faces of the curved bars 2<sup>a</sup>.

For the purpose of preventing any end movement of the cross-bar 32 said cross-bar is provided with nuts 35, located upon opposite sides of the bars 34, but should be sufficiently spaced so as to allow a free reciprocating movement of the cross-bar 32.

For the purpose of connecting the loader to the rear end of a wagon an ordinary tongue 36 is provided, which tongue is connected in any convenient and well-known manner.

By our peculiar arrangement the loader is mounted upon the axle of the traveling wheels in such a manner that said axle forms a center for all the different parts of the loader, or, in other words, any oscillation of the loader has for its oscillation-point the axle, it being

understood, of course, that when in use the loader is held against oscillation by means of the tongue 36, the forward end of which is held in fixed position as between said tongue and the part of the wagon to which it is attached, but of course in such a manner that the tongue is free to come and go with the movements of the wagon up and down.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a hay-loader the combination of a traveling frame mounted upon wheels, an endless conveyer carried thereby, a rake-head provided with rake-teeth means for adjusting the rake-teeth, a crank-shaft having journaled thereto, a series of hooked bars, said hooked bars extended rearward and spaced between the rake-teeth, upon the crank-shaft, and means for imparting rotary motion to the crank-shaft, substantially as and for the purpose specified.

2. In a hay-loader the combination of a traveling frame, an endless conveyer carried by the frame, a journaled rake-head provided with rake-teeth, means for holding the rake-teeth in fixed adjustment, a crank-shaft having journaled thereto a series of hooked bars, a cross-bar connected to the forward ends of said hooked bars, slotted bars adapted to carry the cross-bar located at the forward end of the hooked bars, and means for imparting rotary motion to the crank-shaft, substantially as and for the purpose specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

CYRUS F. ASIRE.  
FREDRICH LEDRICH.

Witnesses:

WAYNE COLLIER,  
S. B. BAILEY.