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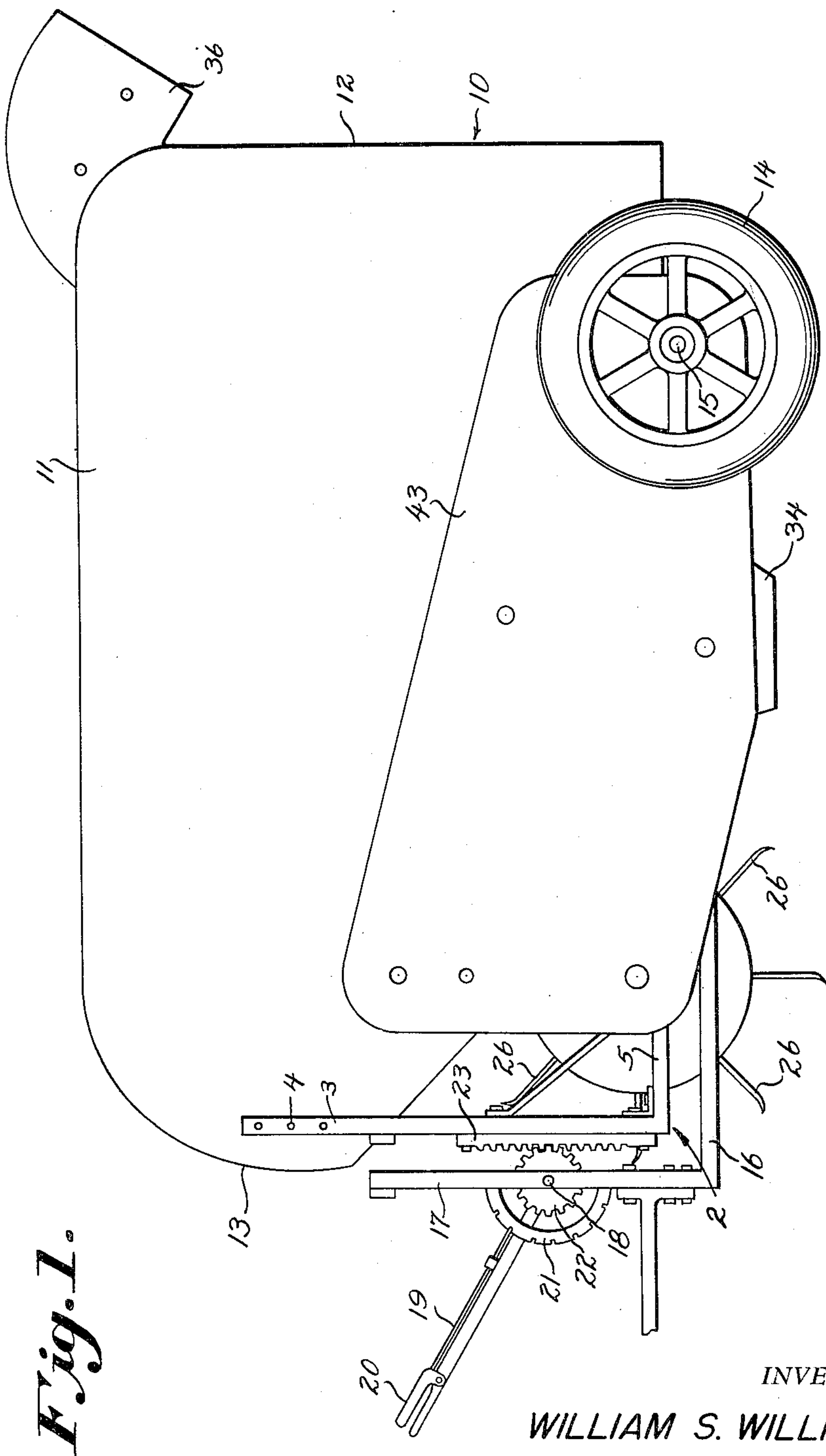
W. S. WILLIS

2,528,102

COTTON BOLL PULLING MACHINE

Filed Feb. 27, 1946

4 Sheets-Sheet 1



INVENTOR.

WILLIAM S. WILLIS

BY *Victor J. Evans & Co.*

ATTORNEYS

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W. S. WILLIS

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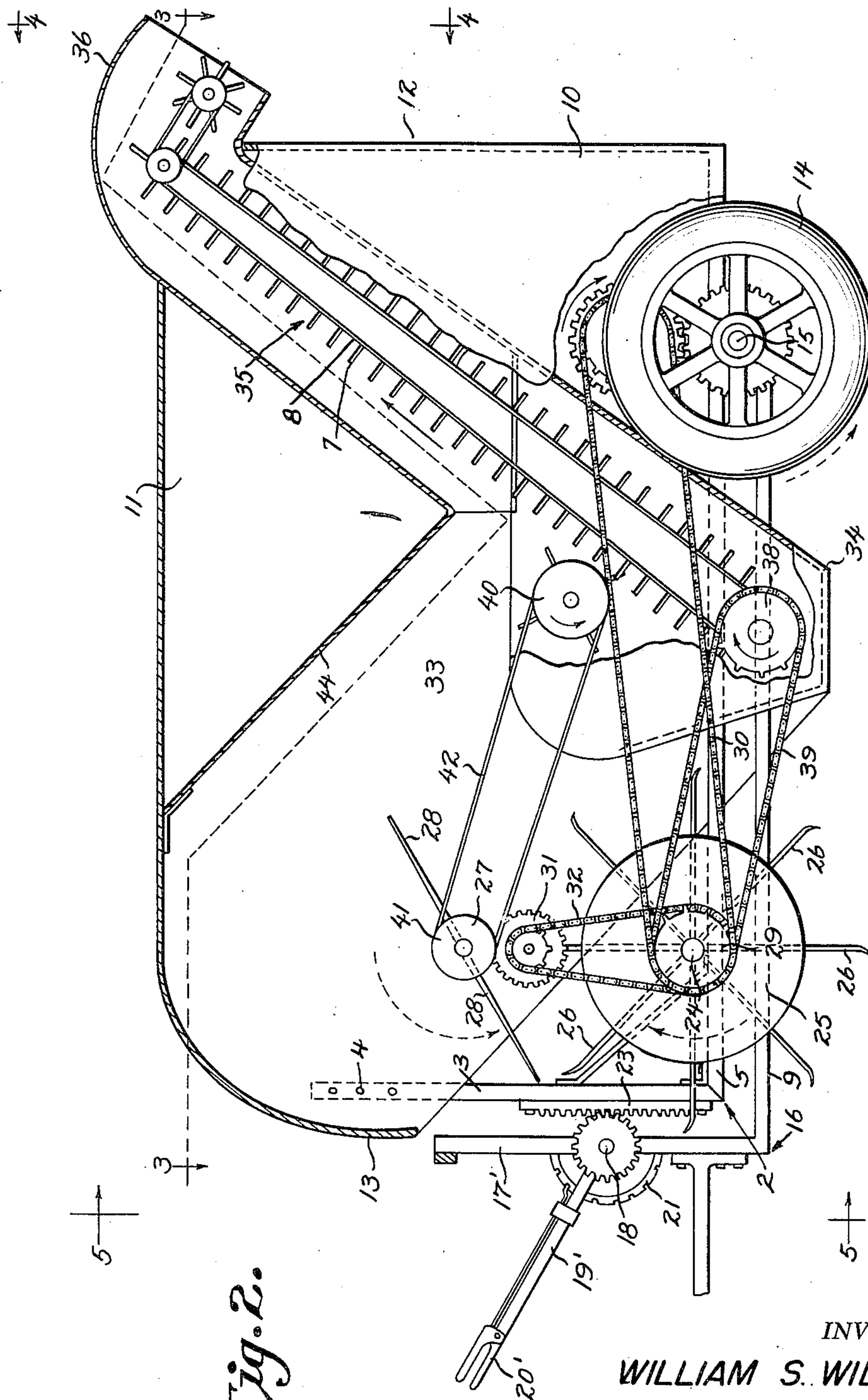


Fig. 2.

INVENTOR.

WILLIAM S. WILLIS

BY *Victor J. Evans & Co.*

ATTORNEYS

Oct. 31, 1950

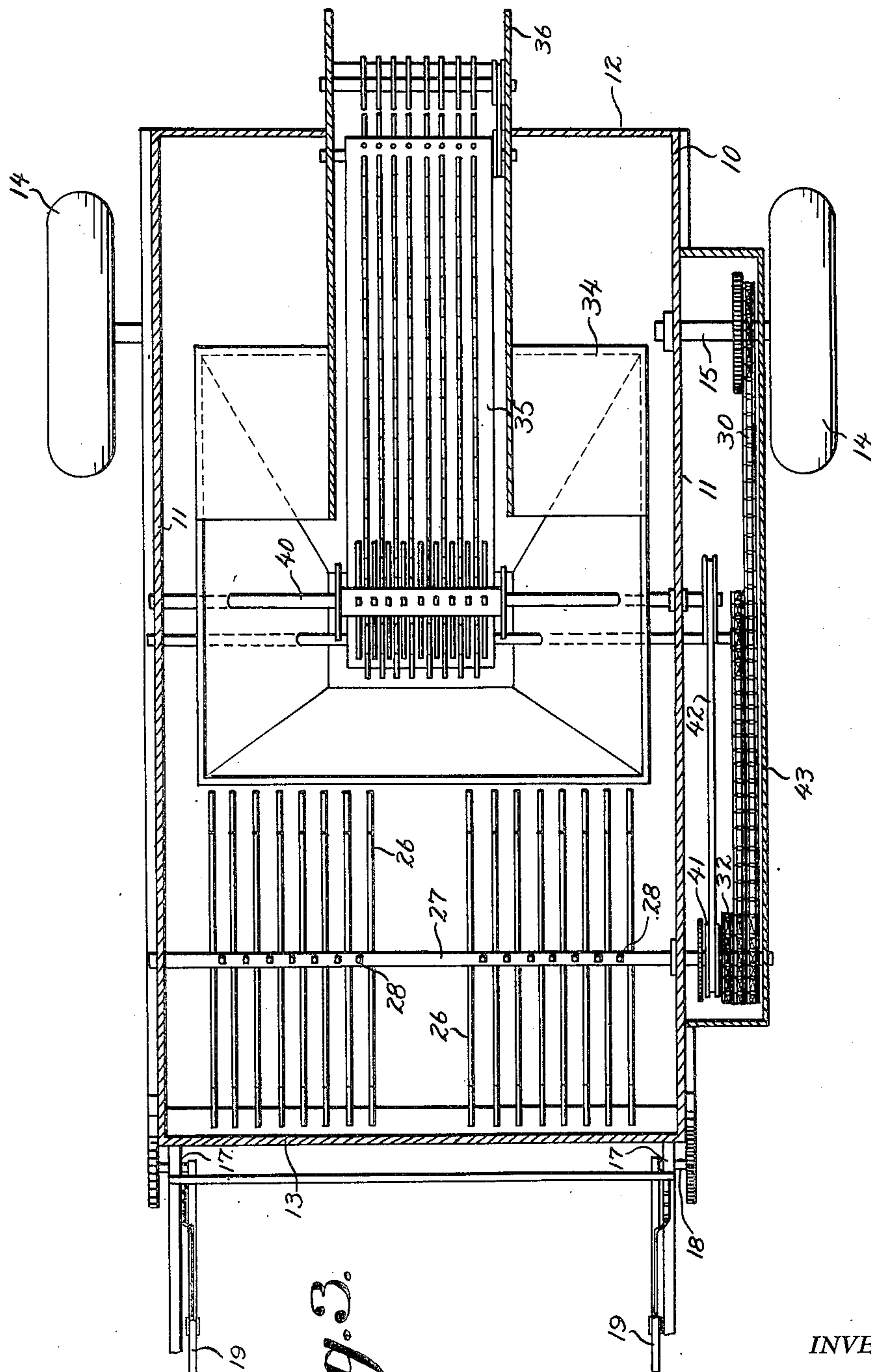
W. S. WILLIS

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4 Sheets-Sheet 3



INVENTOR.

WILLIAM S. WILLIS
BY *Victor J. Evans & Co.*

ATTORNEYS

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Fig. 5.

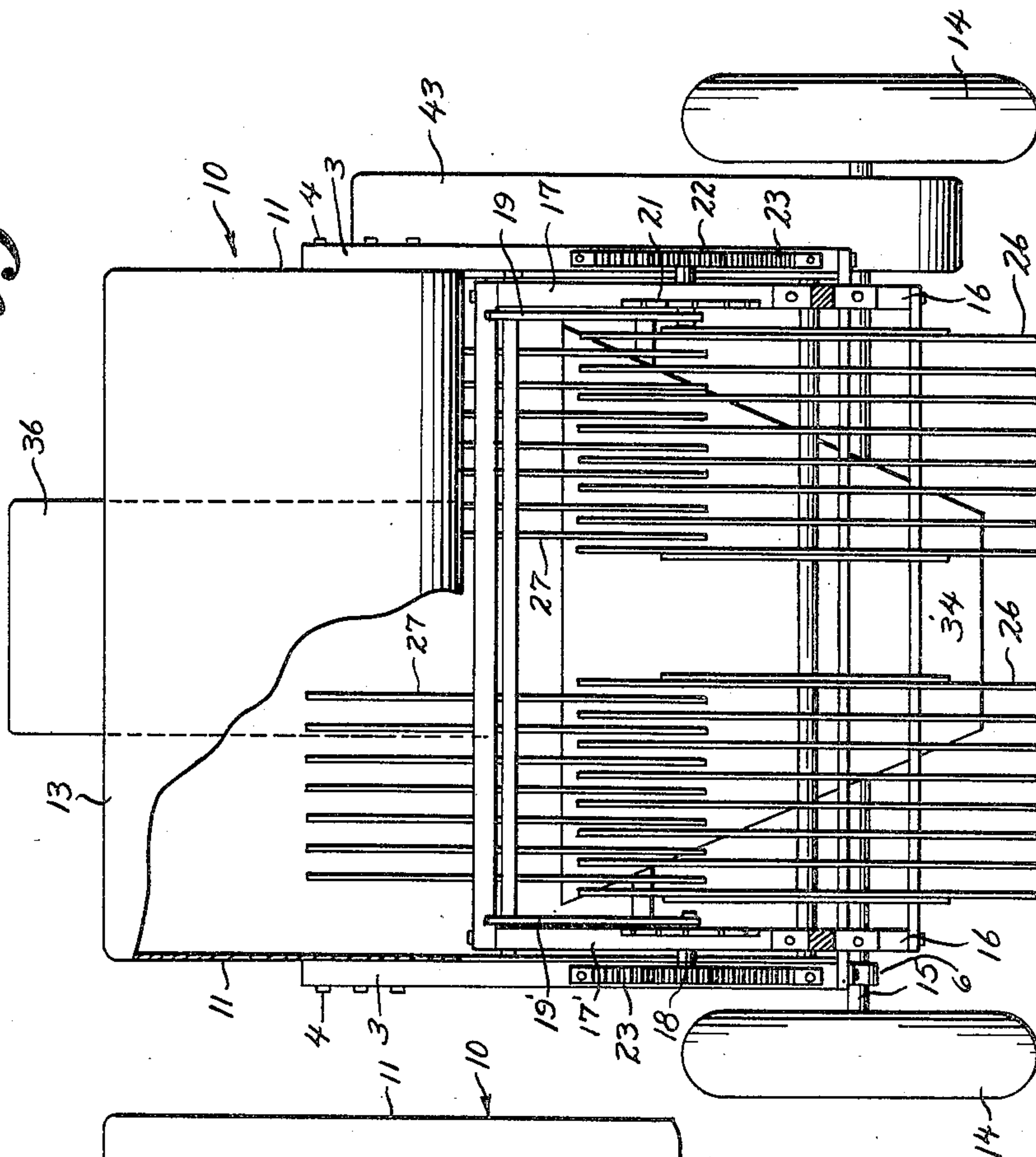
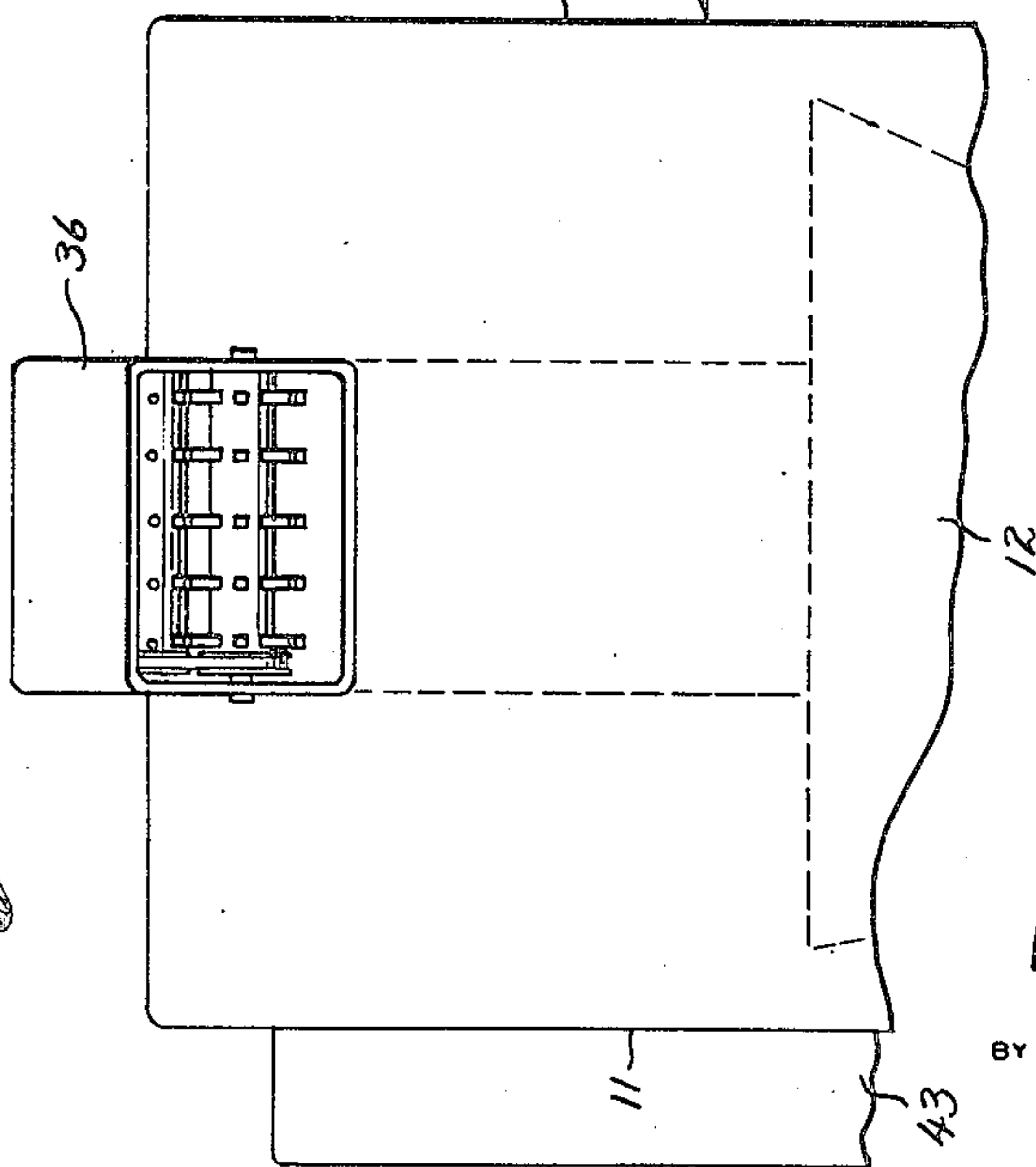


Fig. 4.



INVENTOR.

WILLIAM S. WILLIS

BY Victor J. Evans & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE

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COTTON BOLL PULLING MACHINE

William S. Willis, Grand View, Tex.

Application February 27, 1946, Serial No. 650,426

2 Claims. (Cl. 56—35)

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The invention relates to a cotton boll puller, and more especially to a powered cotton boll pulling machine.

The primary object of the invention is the provision of a machine of this character, wherein cotton can be gathered by pulling cotton bolls from the stalks, through the operation of sectional pulling fingers, then dropping the bolls into a receiver, then cleaning such bolls of cotton and separating the latter therefrom, when the cotton will be conveyed to a trailer for delivery therein, the machine being entirely relieved from choking and the cotton can be gathered and deposited with ease and dispatch.

Another object of the invention is the provision of a machine of this character, wherein it is operated by the draft from a tractor or the like, and can be raised and lowered so as to regulate the said machine to all ground conditions.

A further object of the invention is the provision of a machine of this character, which is simple in construction, thoroughly reliable and efficient in operation, strong, durable, automatic in the working thereof, assuring cotton boll pulling with dispatch, possessed of minimum operating parts, thus economical in repairs and replacements, such parts being readily accessible and inexpensive to manufacture and install.

With these and other objects in view the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawings, which disclose the preferred embodiment of the invention and pointed out in the claims hereunto appended.

In the accompanying drawings:

Figure 1 is a side elevation of the machine in its entirety constructed in accordance with the invention.

Figure 2 is a side elevational view of the machine, with parts broken away and in section.

Figure 3 is a sectional view taken on the line 3—3 of Figure 2 looking in the direction of the arrows.

Figure 4 is a fragmentary end elevation looking in the direction of the arrows from the line 4—4 of Figure 2.

Figure 5 is an opposite end view, partly broken away and looking in the direction of the arrows from the line 5—5 of Figure 2.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings in detail, the cotton boll puller constituting the present invention

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comprises, an elongated vertically disposed confining body or housing 10 having closed vertical opposite side walls 11, while the aft end is closed by a vertical end wall 12, and the fore end 13 is partially closed by an upper rounded walling area. The aft end of the body 10 has beneath it traction wheels 14, its axle 15 having projected forwardly therefrom a chassis frame 16 and this axle creates a horizontal axis for the body 10, which is susceptible of vertical swing from the aft end thereof.

The chassis frame 16 includes a bottom portion 9 and at its forward end has rising therefrom stand posts 17 and 17' to which are pivoted at 18 raising and lowering levers 19 and 19'. The lever 19 has a hand-released latch 20 normally engaged with a companion keeper segment 21 fixed on its mate post 17, the lever 19 operating a rack gear 22 meshing with a companion rack 23 vertically fixed to the fore end of the body 10, so that the latter can be raised and lowered and latched in an adjusted position. Similarly, the other lever 19' has a latch 20' which serves the same purpose as the latch 20.

Journalled horizontally crosswise in the body 10 at the fore open bottom portion thereof is a driven shaft 24 of a rotatable boll pulling or stripping means that comprises a roller 25 which has radially disposed forwardly curved boll pulling tines or teeth 26 adapted to pull bolls from cotton stalks, not shown, when the machine is advanced in a field. Within the body 10 above the roller 25 is grouped a rotary doffer means 27 having fingers 28 adapted to remove cotton bolls from the tines or teeth 26 in the operation of the machine. The body 10 has secured thereto L-shaped bars 2. The bars 2 each include a vertical portion 3 which is secured to the side of the body 10 by suitable securing elements, such as rivets 4, and the bars 2 further include horizontal portions 5 which are secured to the bottom of the body 10. Suitable bearings 6 are arranged in engagement with the rear axle 15 and the bearings serve to pivotally connect the bottom portion 9 of the chassis frame and the horizontal portions 5 of the bars to the axle 15.

The roller 25 is rotated through sprocket gear and sprocket chain connections 29 and 30, respectively, with the axle 15, while the cleaners 27 are driven through sprocket gear and sprocket chain connections 31 and 32, respectively, with the roller 25 as best seen in Figure 2 of the drawings.

Rearwardly of the roller 25 and built within the body 10 is a passageway 33 which is defined by the baffle 44 coacting with the walls of the body

10. In the crest of the lower crotch of the baffle 44 is a hopper or basket 34, from which rises at a forward inclination vertically an endless conveyor or 35, with its upper end carried into a delivery chute 36, directed downwardly for deposit of cotton within a suitable trailer. The fore end of the machine is suitably hitched to a tractor or the like, not shown, which is the draft medium for the machine. The conveyor 35 includes a plurality of spaced parallel chains or belts 8 which have projecting therefrom a plurality of spaced fingers 7 which serve to engage with and carry the cotton rearwardly.

The conveyor 35 is driven by chain and sprocket connections 38 and 39 respectively, with the roller 25 and coacting with the conveyor is a feeder reel 40, which is driven by pulley and belt connections 41 and 42 respectively, with the doffer means 27 as best seen in Figure 2 of the drawings. The reel 40 insures that the cotton bolls will be fed to the inclined conveyor and also helps to properly pack the bolls on the conveyor.

The connections 29, 30, 38, 39, 41 and 42 with adjuncts thereof are enclosed within a housing 43 broadside of the body 10.

The tines or teeth 26 of the roller 25 can be set with relation to the ground under all conditions thereof by adjusting the body 10 by the levers 19 and these tines or teeth gather the cotton bolls from the stalks when the machine is under draft by a tractor or the like, whence the bolls are cleared from the tines or teeth 26 by the cleaners which also clean them of cotton, which latter is directed into the basket 34 to be taken up by the conveyor 35 and delivered through the spout or chute 36 into the trailer at the rear of the machine. The bolls are thrown against a baffle 44 by the doffer and are directed into the hopper 34.

The traction wheels 14 furnish the driving power to the machine as the same is drawn by the tractor or the like.

What is claimed is:

1. In a cotton boll picking machine, a mobile main frame, a housing adjustably mounted on said main frame, said housing including spaced parallel vertically disposed side walls, a horizontally disposed top wall extending between the up-

per ends of said side walls, a horizontally disposed driven shaft journaled in the front of said housing and extending between said side walls, means for rotating said shaft, a stripping means comprising a roller mounted on said driven shaft, a plurality of radially extending spaced parallel tines projecting from said roller, a rotary doffer means arranged above said roller and journaled in said housing, said stripping means rotating in a direction opposite to the direction of rotation of said doffer means, a plurality of spaced parallel fingers projecting from said doffer means and positioned to move between the tines projecting from said roller, a V-shaped baffle arranged in said housing and dependently carried by the latter, an open-topped hopper positioned in said housing below said baffle, said doffer means adapted to toss the cotton bolls against said baffle whereby the cotton bolls are directed by said baffle into said hopper, an inclined conveyor having its lower end projecting into said hopper, a feeder reel coacting with said conveyor, and means connecting said conveyor to said roller.

2. The apparatus as described in claim 1, and further including a delivery chute projecting rearwardly from said housing for receiving the cotton bolls from said conveyor.

WILLIAM S. WILLIS.

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