Aug. 3, 1943. J. F. PASSA 2,325,704

BEET LOADER

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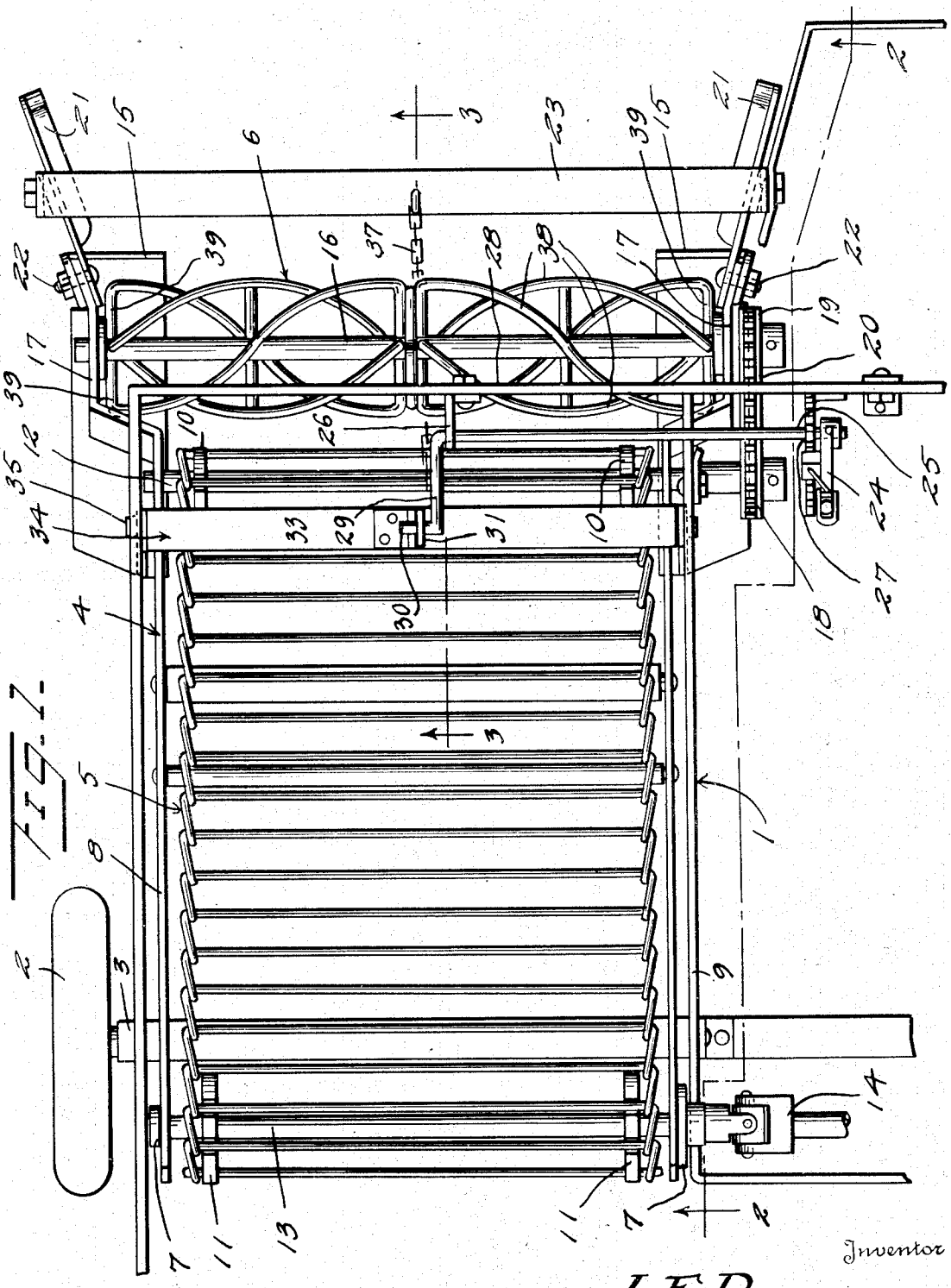


FIG. 1.

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FIG. 2.

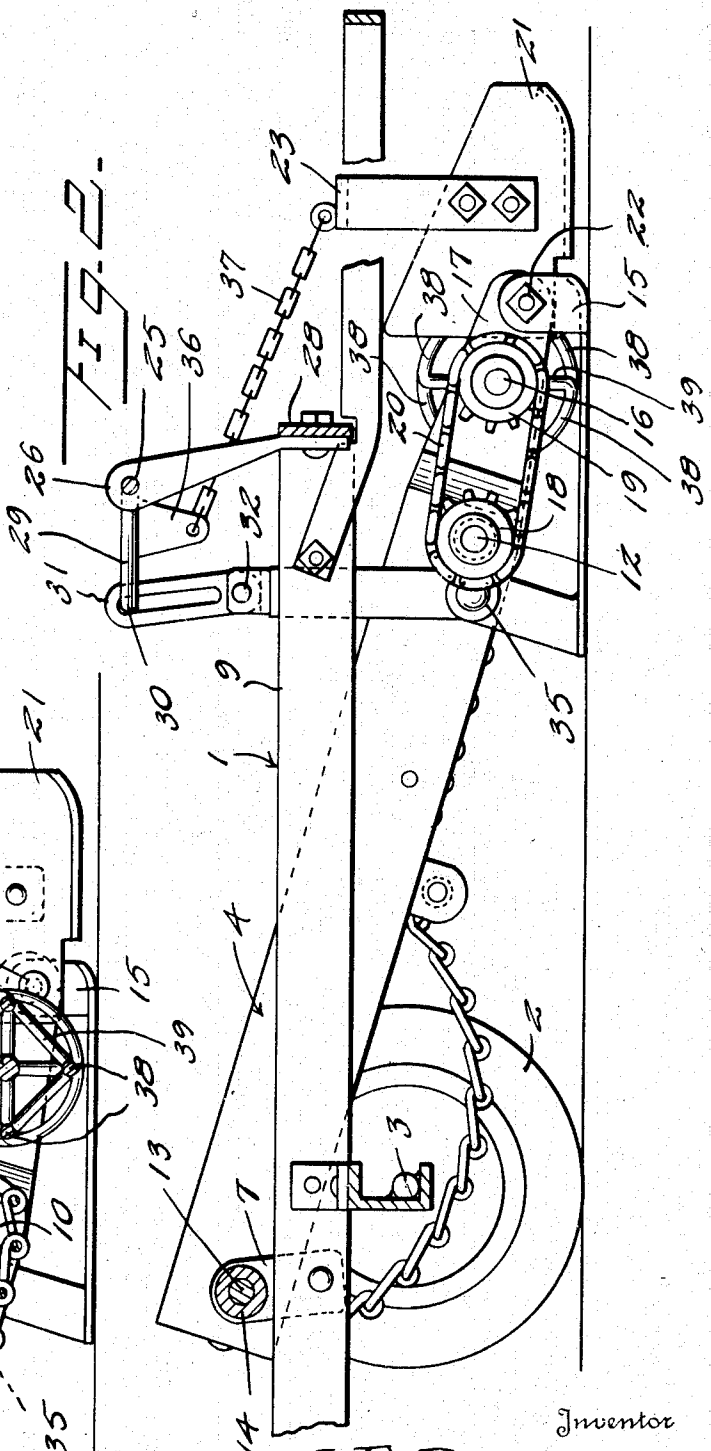
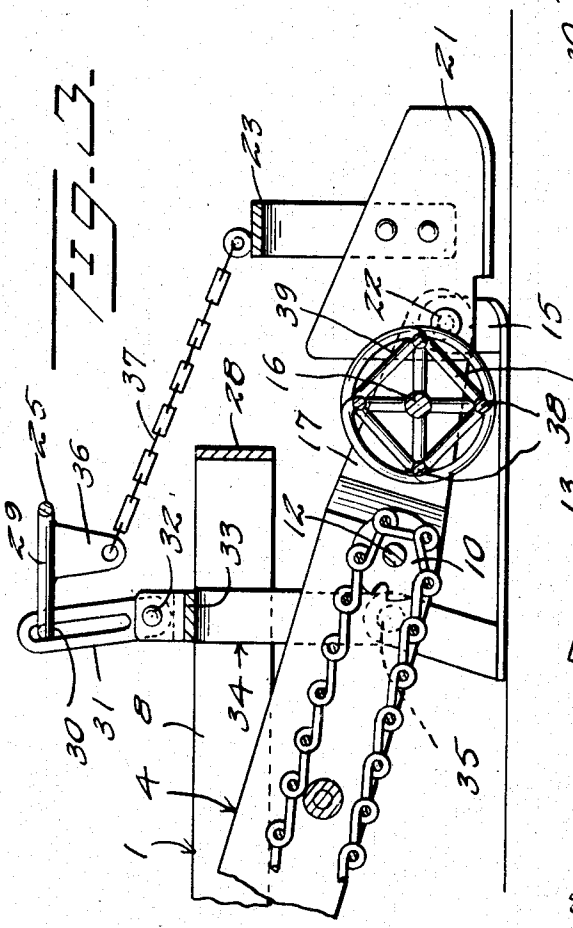


FIG. 3.



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UNITED STATES PATENT OFFICE

2,325,704

BEET LOADER

John F. Passa, Oslo, Minn., assignor to Edward P. Passa, Oslo, Minn.

Application October 17, 1941, Serial No. 415,473

1 Claim. (Cl. 198—9)

This invention relates to new and useful improvements in beet loaders.

One object of my invention is to provide a beet loader with a spiral picker designed to pick up the beets without any dirt.

A further object of my invention is to provide a beet loader with a spiral picker adapted to throw the beets upwardly and inwardly as it rotates toward the center of the carrier.

A still further object of my invention is to provide a hinged frame for the endless carrier and the picker, whereby the latter will at all times follow the surface of the ground, regardless of whether the wheels of the main frame go into a hole or over an elevation.

Still another object of my invention is to provide shields in front of the spiral picker designed to guide and direct the beets into the latter and made adjustable to follow the surface of the ground whether smooth or rough.

Still yet another object of my invention is to provide means whereby the front end of the carrier frame and carrier and the picker as well may be raised or lowered by the simple manipulation of a hand lever.

With the foregoing and other objects in view that will appear as the nature of my invention is better understood, the same consists in the novel features of construction, combination and arrangement of parts illustrated in the accompanying drawings and more particularly pointed out in the appended claim.

In the accompanying drawings, which are for illustrative purposes only and are therefore not drawn to scale:

Figure 1 is a plan view, illustrating the application of my invention.

Figure 2 is a vertical longitudinal section, taken on line 2—2 of Figure 1, and Figure 3 is a similar view, taken on line 3—3 of Figure 1.

Referring to the drawings for a more particular description of my invention, and in which drawings like parts are designated by like reference characters throughout the several views, the numeral 1 designates the main frame, 2 the supporting wheels at the rear end of the frame, 3 the main axle, 4 the carrier frame, 5 the flexible carrier and 6 the spiral picker.

In carrying out my invention, the rear end of the carrier frame 4 is hinged to the upright brackets 7 carried by the side members 8 and 9 of the main frame and extends forwardly and downwardly at a suitable inclination. The flexible carrier 5 works over the front and rear sprocket wheels 10 and 11, carried by the transverse shafts 12 and 13, respectively, and is driven by power applied to one end of the shaft 13 through the coupling 14.

Runners 15 are bolted or otherwise fastened to the front end of the carrier frame 4 and follow the surface of the ground at all times, whether smooth or irregular. The spiral picker 6 is rotatably mounted by means of its central transverse shaft 16 between the offset front end portions or terminals 17 of the side members of the hinged carrier frame and is driven from one end of the shaft 12 by the sprockets 18 and 19 and endless sprocket chain 20. A pair of forwardly extending outwardly inclined shields 21 guide and direct the beets into the spiral picker. Said shields are hinged at their inner lower corners, as at 22, to the extreme front ends of the end portions 17 of the carrier frame in front of the spiral picker and are connected together by the cross bar 23, as shown.

My novel method of hinging the rear end of the carrier frame to the main frame permits the front end of the carrier and spiral picker to follow the surface of the ground and the latter will pick up and deliver the beets on the front end of the carrier without picking up any dirt. This is a great advantage over pickers now generally in use which do not have any adjustability and hence, cannot compensate for irregularities in the surface of the ground, with the results that when the wheels of the loader go into a hole or depression, the picker is lowered into the ground and picks up dirt. On the other hand, if the wheels of the machine go over a high place, the picker is elevated above the surface and either passes entirely over the beets or cuts them as it rotates.

The lower end of the carrier frame and carrier as well as the picker may be raised or lowered at will by the simple manipulation of a hand lever 24. This lever is carried by the outer end of the horizontal rock shaft 25 journaled in the bearings 26 and 27 carried by the front cross bar 28 of the main frame 1. The inner or opposite end of the rock shaft 25 is provided with a crank arm 29, formed with the right-angularly disposed pin or extension 30, which works in the slotted link 31. The slotted link 31 is hinged at its lower end, as at 32, to the top of the cross bar 33 of the inverted U-shaped member 34 connected at its ends, as at 35 to the front ends of the side members of the hinged carrier frame. The crank arm 29 is also provided with the depending ear 36 connected by means of the chain 37 or other equivalent means to the cross bar 23.

Particular attention is invited to the fact that the spiral picker is composed of a series of spiral rods or wires 38, which are connected to the central shaft of the picker by the short radial spokes 39. The special formation of the picker is such that it has a tendency to pick up and throw the beets toward and onto the center of the carrier.

From the foregoing description taken in connection with the drawings, it is thought that the construction, operation and advantages of my invention will be readily understood, without requiring a more extended explanation.

Various changes in the form, proportions and minor details of construction may be resorted to without departing from the principles or sacrificing any of the advantages of my invention, as defined in the appended claim.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

In a beet loader of the character specified, a main frame, supporting wheels for said frame, a carrier frame hinged at its rear end to said main frame and extending forwardly and downwardly at an inclination, an endless carrier mounted in the carrier frame, means for driving the endless carrier, runners fastened to the front end of the carrier frame, a spiral gatherer rotatably mounted on the carrier frame in front of the carrier, means for driving the gatherer from the front shaft of the carrier, adjustable shields hinged to the front end of the carrier frame and serving to guide and direct the beets toward the gatherer, and means for raising or lowering the front end of the carrier frame, the carrier and gatherer at will, the spiral gatherer, runners and front end of the carrier adapted to follow the surface of the ground under all conditions.

JOHN F. PASSA.