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BEET HARVESTER

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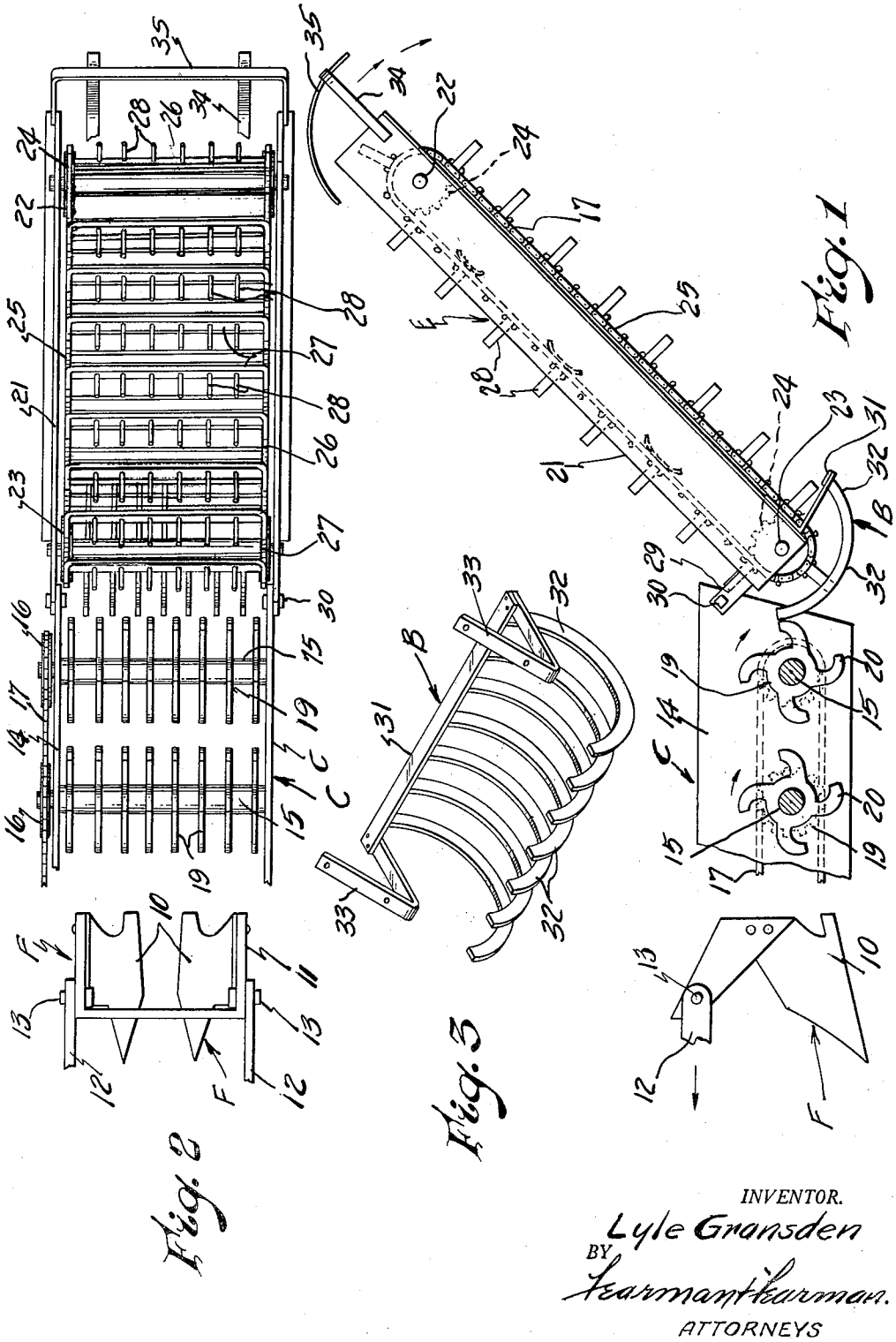


Fig. 1

Fig. 2

Fig. 3

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BEET HARVESTER

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This invention relates to beet harvesters and the like, and more particularly to a beet harvester provided with elevating means including a tined boot or hopper from which the beets are elevated for discharge into a conventional truck or other vehicle for transport to a predetermined site or location.

One of the prime objects of the invention is to provide an elevator having a tined boot associated therewith for receiving the beets as they travel over the shaker conveying means preparatory to being elevated.

Another object is to provide means on the elevator, intermeshing with the tined boot, for agitating the beets delivered to the boot, thus breaking up and screening out clods of dirt which would normally travel with the beets.

A further object of the invention is to provide a tined boot including elevating means for agitating the beets to clean the dirt therefrom as they are elevated.

A further object still is to provide a readily attachable or detachable, tined boot which can be readily mounted on or removed from the elevator and through which the elevator lugs pass as the elevator is driven.

With the above and other objects in view, the present invention consists of a combination and arrangement of parts, hereinafter more fully described, illustrated in the accompanying drawing, and more particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportion, and minor details of construction, without departing from the spirit, or sacrificing any of the advantages of the invention.

In the drawing:

FIG. 1 is a fragmentary, side elevational view, showing the beet lifting, conveying and agitating means, and the elevator, with the tined boot attached to the elevator.

FIG. 2 is a top plan view thereof.

FIG. 3 is a perspective view of the tined boot.

Referring now to the drawing in which I have shown the preferred embodiment of my invention, the letter "F" indicates a beet lifting mechanism which comprises transversely spaced conventional lifter members 10 mounted on a frame 11 and a yoke member 12 is secured thereto by means of bolts 13 for hauling by a tractor or other power means (not shown). The beet conveying and agitating means "C" is disposed in the rear of the lifter blades 10, and comprises side plates 14 having a plurality of transversely disposed shafts 15 spanning said plates, and sprockets 16 are provided on one end of each shaft, a chain 17 being trained over the sprockets and serves to drive said shafts as usual, this driving means being connected to any convenient source of power (not shown). Transversely spaced agitators 19 are mounted on the shafts 15 and are formed with angularly disposed legs 20 which agitate the beets as they travel thereover for discharge into a tined boot "B" which is mounted on the elevator "E." Disposed directly in the rear of the conveying means "C," is an inclined elevator "E," which elevator is formed with side plates 21. Upper and lower shafts 22 and 23 span the side plates and sprockets 24 are mounted thereon, chains 25 being trained over said sprockets, and a flexible grate type belt 26 connects said chains, this belt being similar to that used on a potato harvester. Bars 27 span the chains 25 and are connected thereto in any desired manner, each bar having a plurality of lugs 28 mounted thereon, and connecting bars 29 are secured to the side plates 21 and 14 respectively by means of bolts 30 or the like. The tined boot "B" is

mounted on the lower end of the elevator, and comprises a horizontally disposed bar 31 to which a plurality of spaced apart upwardly curved tine members 32 are welded or otherwise connected, said tines being so spaced that the lug members 28 travel therebetween as the elevator is driven. This also holds true for the spacing of the agitator members 19, the legs 20 of which also pass between the tines.

Angularly disposed shaped mounting bars 33 are connected to the bar 31, these bars being fitted to the side walls or plates 21 of the conveyor, and are secured thereto by means of bolts or the like (not shown).

Upwardly projecting bars 34 are secured to the upper end of the bars 21 by welding or the like, and a curved guard mechanism 35 is secured thereto, the beets being elevated by the elevator and are discharged as indicated by the arrow shown in FIG. 1 of the drawing.

In practice, the harvester is attached to and is drawn by a tractor or the like (not shown), the beets being discharged into the conveyor C, and the driven agitators 19 tumble the beets so as to remove the dirt therefrom as they are conveyed rearwardly and discharged into the tined boot "B," from which they are picked up by the chain lugs 28, which travel between the tines, further tumbling and agitating the beets until they engage the elevator bars 27 and are carried upwardly to the discharge end from where they are discharged into a truck hopper or the like (not shown).

It will be understood that the digger blades, conveyor and elevator are of conventional design, the present invention being directed to the tined boot that receives beets from the conveyor prior to being carried upwardly by the elevator.

From the foregoing description it will be clearly obvious that I have perfected a very simple, practical, and inexpensive tined elevator boot, interposed between the conveyor and the elevator, so that the beets may be thoroughly agitated, clods of earth may be broken up, and dirt removed from the beets as they are picked up by the elevator chain.

What I claim is:

1. The combination with a beet harvester having a horizontally-disposed conveyor and an upwardly inclined elevator adjacent the lower end of the conveyor and in horizontal alignment therewith, said elevator including, an endless belt provided with outwardly projecting lugs, of a tined boot unit releasably secured to and encircling the lower end only of said elevator, said boot comprising a transversely disposed bar having a plurality of curved, transversely-spaced apart tines having one end secured thereto, said tines being curved around the lower end of the elevator, with the free ends of the tines spaced below the conveying surface of said conveyor to receive beets discharged therefrom, said belt lugs extending into said boot between the tines for agitating the beets and moving them upwardly onto said belt as the mechanism is driven.

2. The combination defined in claim 1 in which said boot unit comprises, angularly-disposed bracket members secured to the ends thereof for attachment to the lower side walls of said elevator, said plurality of upwardly-curved, spaced-apart tine members being secured at one end only to said main bar, said tines encircling the lower end of the elevator and spaced outwardly therefrom to receive beets from said conveyor.

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