

F. R. GOODNOUGH.
GATHERING MACHINE.
APPLICATION FILED SEPT. 11, 1913.

1,104,986.

Patented July 28, 1914.

2 SHEETS-SHEET 1

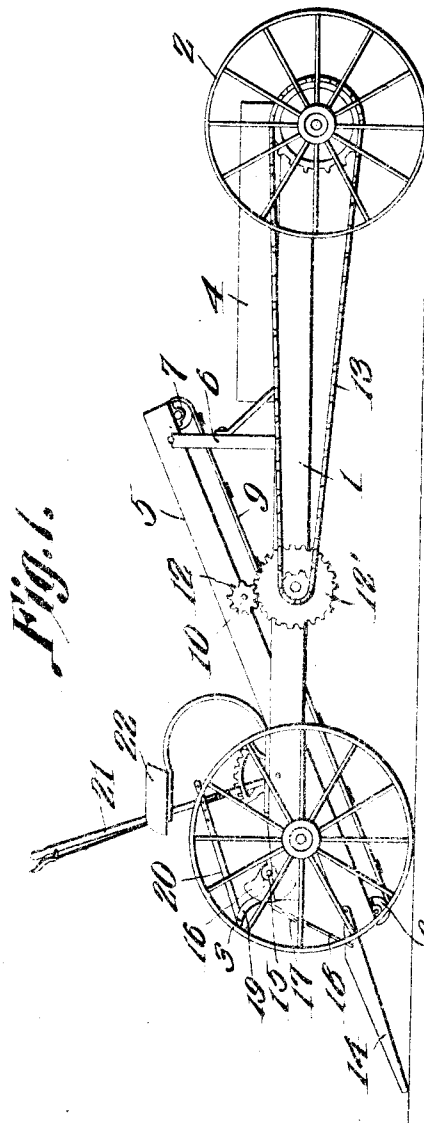


Fig. 1.

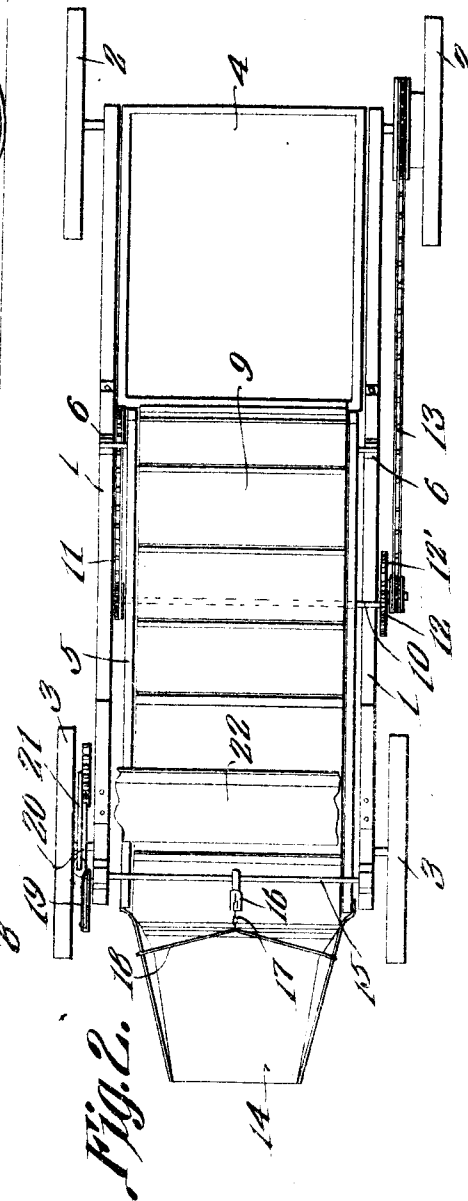


Fig. 2.

Witnesses

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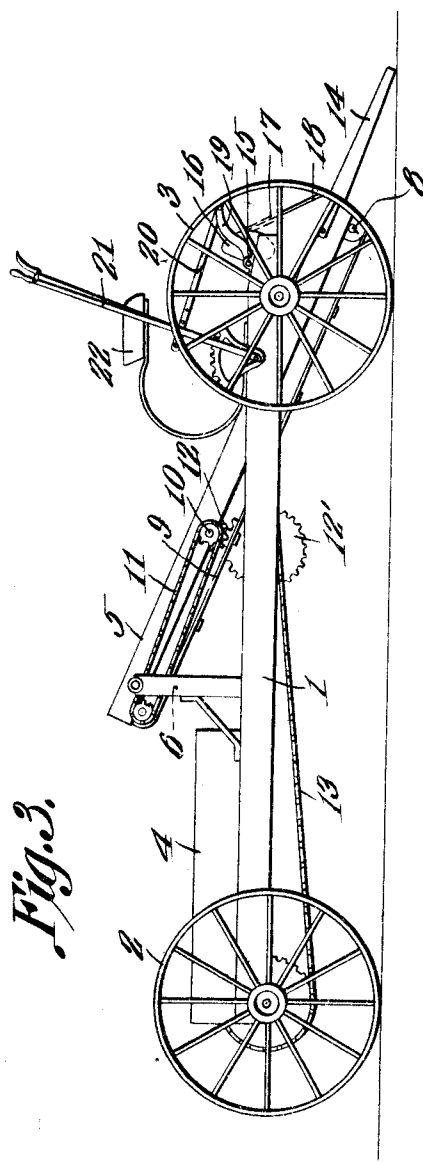


Fig. 3.

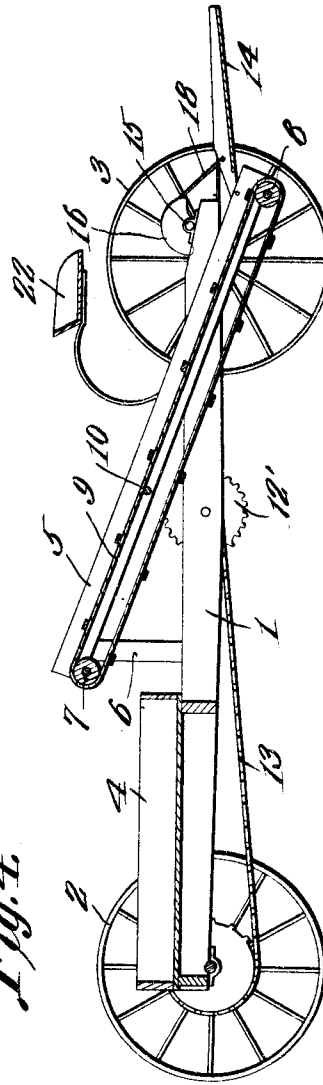


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

FINLEY R. GOODNOUGH, OF MECOSTA, MICHIGAN.

GATHERING-MACHINE.

1,104,986.

Specification of Letters Patent.

Patented July 28, 1914.

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To all whom it may concern:

Be it known that I, FINLEY R. GOODNOUGH, a citizen of the United States, residing at Mecosta, in the county of Mecosta and State of Michigan, have invented a new and useful Gathering-Machine, of which the following is a specification.

The present invention appertains to a gathering machine, and aims to provide a novel and improved apparatus of that character, which is adapted to be drawn or propelled over the soil, to gather or pick up stones, vegetables, trash, or the like, lying or scattered upon the soil, the apparatus being operable to elevate and collect the articles thereon.

It is also the object of the present invention to provide an apparatus of the nature indicated, embodying an inclined elevator, having a scoop at its lower end to run along the soil to elevate the articles onto the elevator in connection with a novel means for adjusting the scoop, and for raising the scoop out of operative position, whereby the elevator may be brought out of operation.

With the foregoing and other objects in view, which will be apparent as the nature of the invention is better understood, the present invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The invention has been illustrated in its preferred embodiment in the accompanying drawings, wherein:—

Figure 1 is a side elevation of the improved apparatus. Fig. 2 is a plan view thereof. Fig. 3 is a side elevation looking in a direction opposite to the line of view of Fig. 1. Fig. 4 is a longitudinal section of the device.

In carrying out the present invention, there is provided a wheel mounted frame comprising the side sills or beams 1, the ends of which are mounted upon the axles of the rear and front wheels 2 and 3, respectively. The particular construction of the vehicle or truck is of no particular moment, with the exception of the side sills 1.

Mounted upon the rear ends of the sills 1, is a box or receptacle 4 for receiving the articles delivered from the elevator. The

box or receptacle may be of any suitable type, and may be removable, in order that its contents may be discharged or dumped, whenever desired.

The elevator, which is inclined, embodies an inclined frame 5 which is disposed or extends between the front end portions of the sills 1, and which has its upper end pivoted or trunnioned between a pair of standards or uprights 6 carried by the sills 1 intermediate their ends. The lower or receiving end of the elevator frame 5 stands between the front wheels 3. Rollers 7 and 8 are journaled within the upper and lower ends, respectively, of the frame 5, and have an endless belt or apron 9 trained thereover, the said apron or belt having transverse slats for facilitating the elevation of the articles within the frame, upon the upper run of the apron. The upper or delivery end of the elevator apron stands above the forward end of the box or receptacle 4, in order that the articles delivered from the elevator may drop into the box.

The means for actuating the elevator apron embody a transverse shaft 10 journaled through the sides of the elevator frame 5 intermediate the ends of the frame 5, or directly above the sills 1, one end of the shaft 10 being operatively connected with the respective end of the roller 7, by means of a chain or belt 11. A pinion 12 is keyed or secured upon the other end of the shaft 10 and ordinarily meshes with a driving spur gear 12' journaled to one of the sills 1, and operatively connected with the rear driving axle by means of a chain or belt 13.

A scoop 14 of any suitable character has its sides pivoted to the sides of the elevator frame at the lower or receiving end of the said frame, to run along the surface of the soil to direct the stones or other articles on to the lower end of the elevator apron. The forward end of the scoop is free. The scoop 14 and the lower or receiving end of the elevator are controlled through the medium of the rock shaft 15 journaled upon the forward ends of the sills 1 and having a segment 16 secured upon its central portion, a chain or flexible element 17 being attached to the segment and being connected to a bail 18 having its ends pivoted to the sides of the scoop 14 adjacent the pivots of the scoop. The shaft 15 is provided at one end with an arm 19, which is connected by means of a link 20, to a hand lever 21 fulcrumed to one

sill 1, adjoining the operator's seat 22, mounted upon the forward end portions of the sills 1.

In the operation of the machine, the same 5 is either drawn over the soil by means of draft animals or is propelled by means of a suitable motor, whichever is desired, it being understood that the present apparatus is more or less diagrammatically illustrated; 10 the structure being more or less conventional or arbitrary. As the machine is run over the soil, the hand lever 21 being thrown or swung forwardly, will permit the scoop 14 to engage the surface of the soil, so as to direct stones, or other articles lying in the 15 path of the machine, onto the lower or receiving end of the elevator apron, the elevator apron preferably being foraminous in order that dust and other fine matter may precipitate therethrough back onto the soil. 20 The scoop 14 in being lowered, will permit the lower end of the elevator frame 5 to swing downwardly, in order to bring the pinion 12 in mesh with the driving gear 12', so that the elevator apron will be actuated 25 by means of the rear wheels. The pinion 12 seating upon the gear 12' will also support the elevator frame when in its lowered position. It is also evident that by swinging 30 the hand lever 21, the scoop may be raised or lowered to accommodate the irregularities of the soil, or to permit the scoop to engage under the surface of the soil to any suitable depth desired, within practical limits. To 35 bring the scoop out of operation, the hand lever 21 is thrown rearwardly, which will swing the scoop upwardly, due to the fact that the lever 21 will rock the shaft 15, so as to cause the chain 17 to be wound upon 40 the segment 16, so as to raise the bail 18, and consequently the free portion of the scoop. The salient or cardinal feature of the present invention resides in the fact, that when the scoop is raised out of operative 45 position, the lower or receiving end of

the elevator frame 5 will be raised slightly, as seen in Fig. 4, to lift the pinion 12 out of mesh with the driving gear 12' and consequently, the elevator apron will be brought to a stop. Thus, the scoop and elevator 50 apron may be simultaneously brought out of operation, and conversely, they may be simultaneously brought to operative position.

It is to be understood that the pinion 12, 55 driving gear 12', and driving chain 13, may be duplicated at the two sides of the machine, if desired, and other changes and alterations may be made within the scope of the appended claim, without departing 60 from the spirit of the invention.

Having thus described the invention, what is claimed as new is:—

A gathering machine embodying a wheel mounted frame, an inclined elevator frame 65 fulcrumed to the aforesaid frame, an endless apron carried by the elevator frame, a scoop having its sides pivoted to the sides of the elevator frame at the lower end thereof, the wheel mounted frame having 70 means for supporting the elevator frame when the same is swung downwardly, a bail having its ends pivoted to the sides of the scoop adjacent the pivotal points of the scoop, and actuating means carried by the 75 wheel mounted frame and connected to the said bail for swinging the scoop to and from the ground when the elevator frame is in its lowermost position, and adapted to swing the scoop upwardly to inoperative position 80 and to simultaneously raise the lower end of the elevator frame, the forward end of the scoop being free.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses. 85

FINLEY R. GOODNOUGH.

Witnesses:

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