

(No Model.)

W. SNURE.
BEAN HARVESTER.

No. 551,055.

Patented Dec. 10, 1895.

Fig. 1.

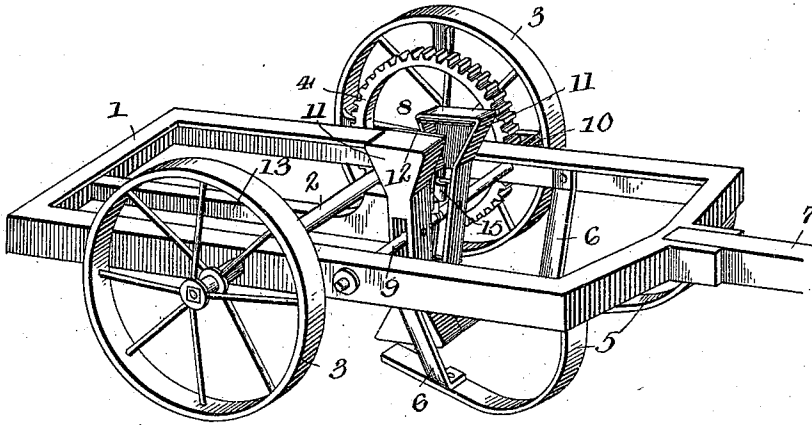


Fig. 2.

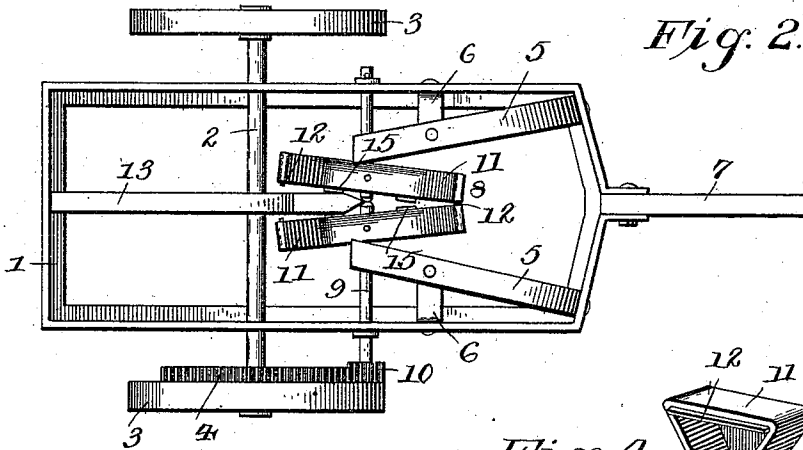


Fig. 4.

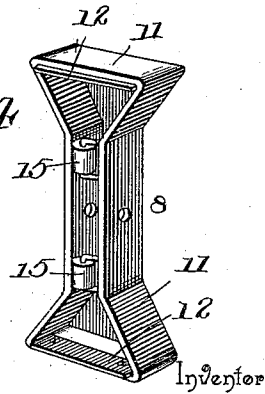
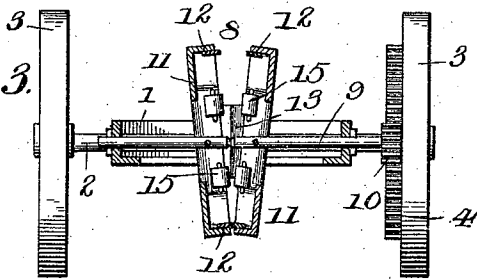


Fig. 3.



Witnesses

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By his Attorneys,

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UNITED STATES PATENT OFFICE.

WILLIAM SNURE, OF LAKEFIELD, MINNESOTA.

BEAN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 551,055, dated December 10, 1895.

Application filed August 10, 1895. Serial No. 558,919. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SNURE, a citizen of the United States, residing at Lakefield, in the county of Jackson and State of Minnesota, have invented a new and useful Bean-Harvester, of which the following is a specification.

The invention relates to improvements in bean-harvesters.

10 The object of the present invention is to improve the construction of bean-harvesters and to provide a simple and inexpensive machine for pulling beans.

15 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

20 In the drawings, Figure 1 is a perspective view of a bean-harvester constructed in accordance with this invention. Fig. 2 is a reverse plan view. Fig. 3 is a transverse sectional view. Fig. 4 is a detail perspective view of one of the rotating levers.

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

1 designates a substantially rectangular supporting-frame, constructed of any suitable material, preferably flange-metal, and having journaled on it a transverse shaft or axle 2, to which is secured a pair of carrying-wheels 3, one of the carrying-wheels being provided with a gear-wheel 4. The transverse shaft or axle is located slightly in rear of the center of the supporting-frame, and the front of the latter is supported by a pair of runners 5, having their upper ends secured to the front of the frame and connected near their rear ends with the sides of the frame by braces 6. A tongue 7 is secured to the front of the supporting-frame, and the runners converge rearwardly slightly and are adapted to direct the beans to a pair of rotating double wedge-shaped clamping-levers 8, fulcrumed at their centers on a transverse shaft 9, which carries a pinion 10 and which receives motion from the rear wheel 4.

50 Each clamping-lever is provided at its ends with triangular or wedge-shaped jaws 11, open at their inner faces and adapted to engage bean-vines and uproot them, and the engag-

ing portions of the jaws are provided with strips 12 of rubber or other elastic material to avoid bruising beans.

55 The levers may be constructed of any suitable material; but they are preferably constructed of metal, as shown, being provided with central longitudinal openings to receive the transverse shaft 9.

60 As each pair of jaws approach the ground during the rotation of the clamping-levers, they move inward toward each other and engage the plants by reason of the upper portions of the levers being forced outward by a wedge 13, disposed vertically and having a tapered oppositely-beveled front end and located in rear of the transverse shaft 9 and extending above and below the same. The wedge holds the said jaws in contact or engagement with the plants until they come in contact with the top portion of the wedge, thereby giving the levers a sufficient length of pull to uproot the beans. This wedge may be supported in any suitable manner and is preferably provided with a shank extending rearward to the back of the frame.

80 In order to prevent friction resulting from the contact of the clamping-levers with the wedge, the former are provided adjacent to the jaws with antifriction-rollers 15, mounted in the space between the sides of each lever and projecting inward from the levers sufficiently to engage the wedge.

85 It will be seen that the bean-harvester is simple and inexpensive in construction, that it is positive and reliable in operation, and that it is capable of effectively uprooting plants.

90 Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

95 1. In a machine of the class described, the combination of a supporting frame, a transverse shaft, the similar rotating clamping levers centrally fulcrumed on the transverse shaft and provided at their ends with triangular jaws open at their inner sides, and a wedge disposed vertically and arranged in rear of the transverse shaft and adapted to separate one pair of jaws, whereby the other pair is

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caused to clamp plants, substantially as described.

2. In a machine of the class described, the combination of a supporting frame, carrying
5 wheels arranged at the sides of the frame, a pair of runners arranged at the front of the frame, a transverse shaft, gearing connecting the shaft with one of the carrying wheels, the rotating clamping levers centrally fulcrumed
10 on the shaft and provided at their ends with triangular jaws open at their inner faces, the vertical wedge arranged in rear of the shaft and adapted to separate one pair of jaws, to cause the other pair to clamp plants, and rollers
15 mounted on the levers and arranged to engage the wedge, substantially as and for the purpose described.

3. In a machine of the class described, the combination of a frame, runners arranged at the front of the frame, the double wedge-
20 shaped levers fulcrumed intermediate of their ends on the same shaft and touching at one end and separated at the other and working in the space between the runners, the wedge
25 arranged to separate the levers, and means for rotating the latter, substantially as described.

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

WILLIAM SNURE.

Witnesses:

F. L. LEONARD,
M. H. EVANS.