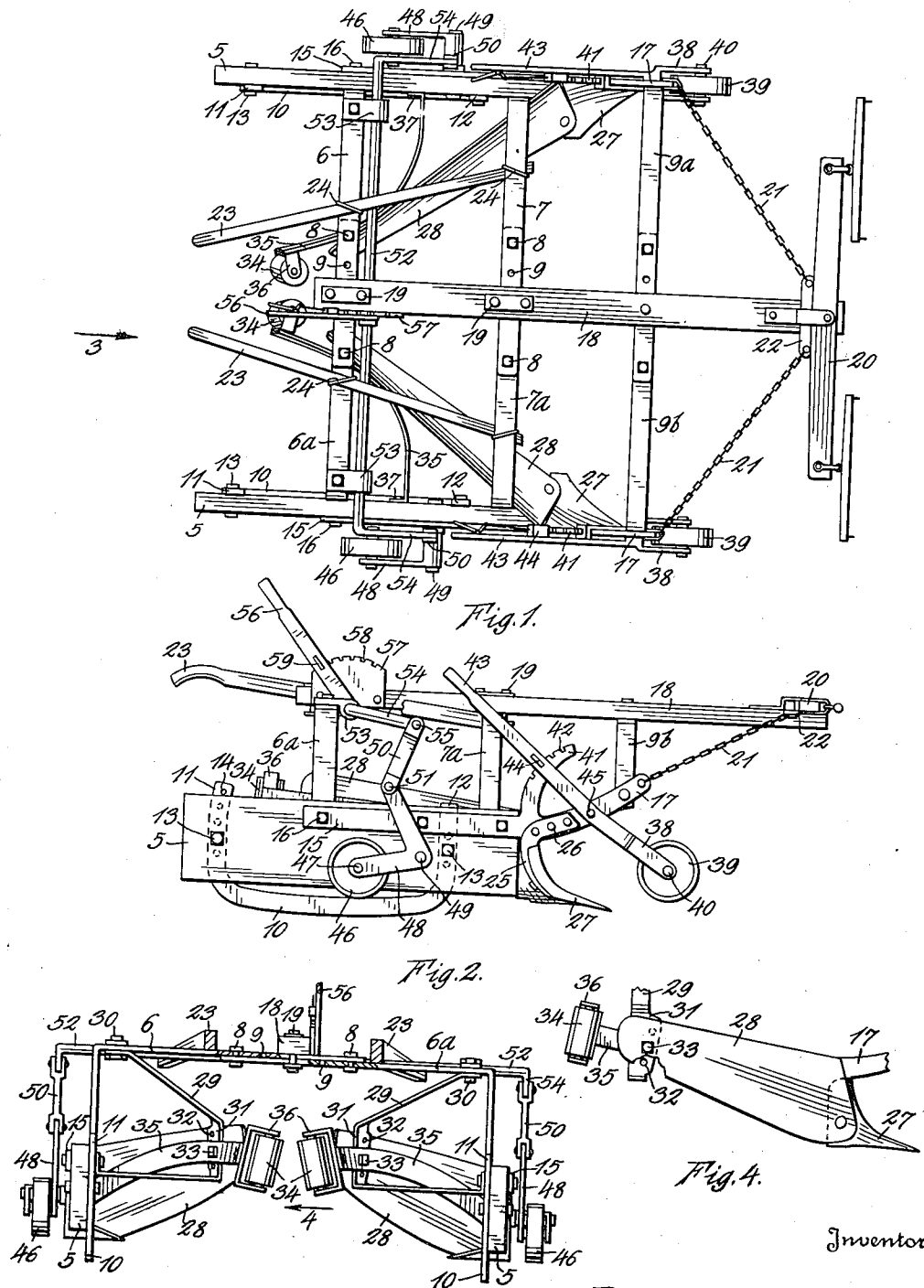


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CELERY HILLER

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Fig. 3.

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CELERY HILLER

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1 Claim. (Cl. 97—56)

This invention relates to improvements in celery hillers.

In the cultivation of celery for the market, it is necessary to bleach the stalks and this is accomplished by moving dirt against the stalks or what is popularly termed "hilling". Where only a small amount of celery is raised as in a private kitchen garden, the hilling is usually performed by means of a hoe or shovel, but where a large amount of celery is raised for the market, it becomes necessary to employ a machine for this purpose, and it is to a machine of this type to which this invention relates.

This invention, briefly described, consists of a supporting frame having spaced parallel runners so as to form what may be termed "a sled". The two runners are connected by bars which can be adjusted as to length so as to obtain the proper spacing to fit rows differently spaced. Secured to the sled are two hilling plows, each of which has a point and a moldboard. The plows are reversely arranged so as to throw the dirt inwardly and when the machine straddles a row of celery, the plows will pile dirt along each side of the row so as to perform the hilling operation. Secured to each moldboard is a roller that is located at the rear or discharge end and adjusted so as to press the soil against the celery stalks. The device is also provided with means for adjusting the depth of the furrows cut by the plows and with means for raising the machine during transportation.

Having thus briefly described the machine and called attention to its salient features, the same will now be described in detail, and for this reason reference will be had to the accompanying drawing in which it has been illustrated in its preferred form, and in which:

Fig. 1 is a top plan view of the machine;
Fig. 2 is a side elevation of the machine;
Fig. 3 is a rear elevation looking in the direction of arrow 3, Fig. 1, portions being broken away to better disclose the construction; and

Fig. 4 is a view showing the inside of a moldboard and which is taken looking in the direction of arrow 4, Fig. 3.

In the drawing reference numerals 5 indicate what may be termed the runners of the sled, although they do not in fact serve as runners but are designated in this manner because they form a portion of the runner and occupy a position analogous to an ordinary sled runner. Secured to the inner surfaces of the two runners are bars 6, 7, 6a and 7a. These bars have two portions bent

at right angles and the upper portions overlap and are connected by means of bolts 8. The several bars have each a plurality of openings 9 so that adjustments can be made for width. Secured to each of the runners 5 are curved steel bars 10 which are bent in to substantially U-shape and have their vertically extending side members 11 and 12 secured to the runners 5 by means of bolts 13. The sides 11 and 12 have each a plurality of openings 14 by means of which they can be adjusted vertically with respect to the runner. The bars 10 form the actual runners that come in contact with the ground and have purposely been made narrow so that they will cut into the soil and serve as guides and also as 15 means for preventing side motion of the sled. Secured to each runner is a steel frame member having a rearwardly extending bar-like portion 15 that is fastened to the runners by means of bolts 16. This bar has its front end curved upwardly 20 as indicated by reference numeral 17. Secured to the cross members 6, 7, 6a and 7a is a draft bar 18. This is preferably held in place by means of U-bolts 19. Secured to the front end of the draft bar is a whiffle tree 20. Chains 21 extend from 25 the front ends of members 17 to the cross bar 22 which is secured to the front end of the draft bar 18. Handles 23 for steering the device are secured to the cross bars by means of U-bolts 24 in the manner shown most clearly in Fig. 1. 30

The bar 15 has secured to its front end 17 a plow beam 25 which is held in place by means of bolts or rivets 26. Secured to the lower end of the beam 25 is a plow point 27 and attached to this is a moldboard 28. The rear ends of the moldboards are supported by means of brackets 29 whose upper ends are secured to the transverse bar 6 and 6a by means of bolts 30. The lower ends of the supporting brackets are secured to the vertical portions of the transverse bar by means of bolts 30. The inner ends of the brackets are straight as indicated by reference numeral 31 and are provided with openings 32 for adjusting the position of the mold boards, which are held in place by means of bolts 33. It will be seen from 45 the drawing that the plows are reversely arranged and the moldboards are adjusted to throw the ground inwardly towards the center and against the celery stalks. Located directly towards the rear of the discharge ends of the moldboards are 50 firming rollers 34. These rollers are mounted for rotation in the supports 35 which are provided at one end with spaced parallel supporting members 36 to which the axes about which the rollers rotate are attached. Members 35 have each one end se-

cured to one of the runners by means of bolts 37. Attention is called to the fact that the position of the rollers can be adjusted by the same means as that employed for adjusting the moldboards 5 vertically, so that the rollers will always remain in the proper position with respect to the moldboards.

Pivotaly attached to each of the forwardly extending members 17 is a wheel fork 38. A roller 10 39 is pivoted to the lower end of each fork as indicated at 40. Member 15 is provided with a curved quadrant 41 having spaced notches 42 and the wheel forks have handles 43 which extend upwardly and are provided with a conventional 15 detent mechanism, a portion of which has been designated by reference numeral 44 in Fig. 2. The wheel forks are pivoted to the members 17 by bolts or rivets 45.

The position of the rollers 39 determine the 20 depth to which the plows will sink into the ground and this in turn determines the depth of the furrows and the amount of soil that is transferred towards the celery stalks. When the device is to 25 be transported, the rollers 39 are moved downwardly as far as possible and the sled portion is supported by the rollers 46 which are pivotaly attached at 47 to the lower ends of the bell crank 30 levers 48. The levers 48 are pivoted at 49 to the runners. The link 50 is pivotaly attached at 51 to the upper end of the vertical arm of the bell crank lever. A rod 52 extends across the top of the sled and is journaled in bearings 53. The ends 35 of this rod are bent as indicated by reference numeral 54 and the upper ends of the links 50 are pivotaly attached to the bent ends 54 at 55. An adjusting lever 56 is nonrotatably secured to the bar 52 and cooperates with a quadrant 57 40 which is provided with a plurality of notches 58. The lever 56 is provided with a conventional detent 59 for engaging the notches to hold the parts in adjusted position. By rotating the arms 54 45 clockwise in Fig. 2, the bell crank levers will be turned counterclockwise and will bring the rollers 46 to a point down below the lower edge of the runners 10, and when in this position the machine will be supported above the surface of the ground so that it can be readily transported from place to place.

For the purpose of bracing the plows and hold-

ing them against outward movement, a transverse bar 9a, 9b has been provided, as shown in the drawing.

From the above it will be seen that I have produced a very simple and substantial celery hiller 5 device that can be drawn by two horses and which will transfer soil to the sides of a celery row in any quantity required and which will also firm the soil against the stalks so that the air will be excluded and proper bleaching obtained.

I desire to call particular attention to the runners 10 that also serve as guides and means for preventing transverse movement, as this assures that the device will not slide from side to side during operation. I also wish to call attention 15 to the means employed for adjusting the depth of the furrows and for transporting the device over the rows, as well as the firming rollers with which the moldboard are provided.

Having described the invention what is claimed 20 as new is:

A celery hiller formed of a pair of similar, complementary units adjustably interconnectible to complete a rigid, unitary assembly and for variation of the lateral spacing therebetween, each of 25 said units comprising a relatively long, longitudinally-disposed, rigid base member, a guide flange fixed to and projecting beneath the lower margin of said base member, a plow beam secured to and projecting forwardly from said base member, a 30 plow point in fixed relation with the forward portion of said beam and arranged to throw a furrow inwardly of said base member, a bracket projecting laterally in fixed relation from and inwardly of a rearward portion of said base member, a 35 moldboard hinged at its forward end to and for cooperation with said plow point and supported for adjustment of its rear end through a vertical arc on said bracket, a firming roller independently and adjustably carried by said base member and 40 bracket adjacent and in substantially the projected plane of the rear end of said moldboard, manually-adjustable, ground-engaging means carried by the forward end of said plow beam for control of the penetration of said plow point, and 45 laterally-extending frame bars carried by said base member for cooperative engagement with similar bars of the complementary unit.

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