(No Model.) 2 Sheets—Sheet 1.

B. A. WASH.

WHEEL HARROW.

No. 456,261. Patented July 21, 1891.

Fig. 1.

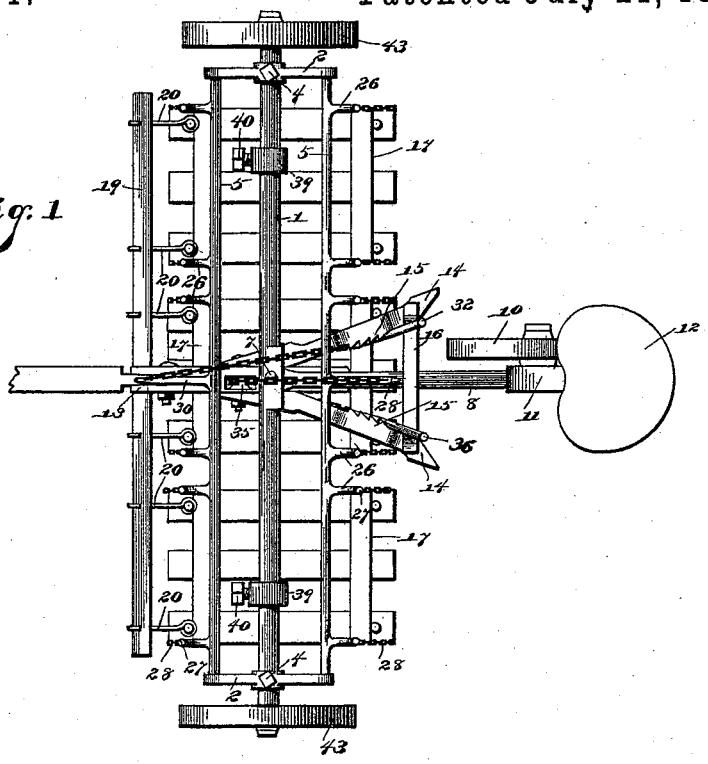
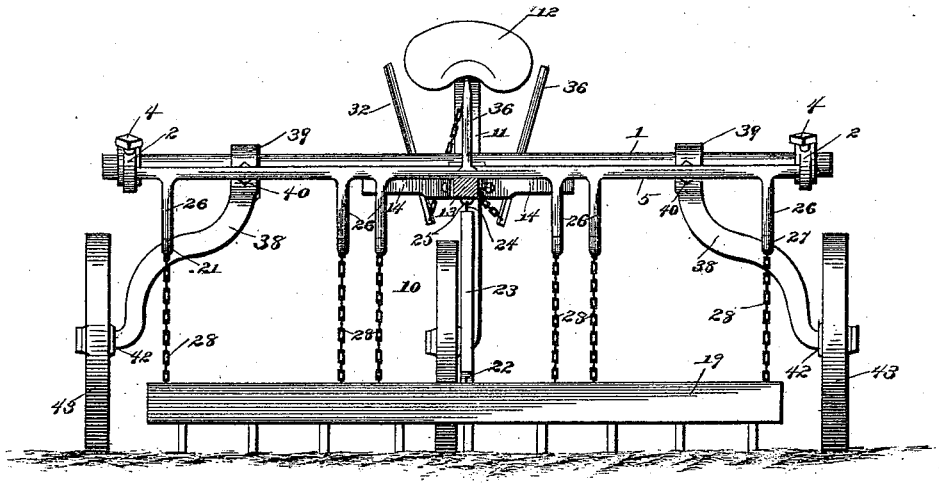


Fig. 2.



Witnesses:

Samuel Ker.

W. S. Duvall.

Inventor

Bishop A. Wash,

By his Attorneys,

C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

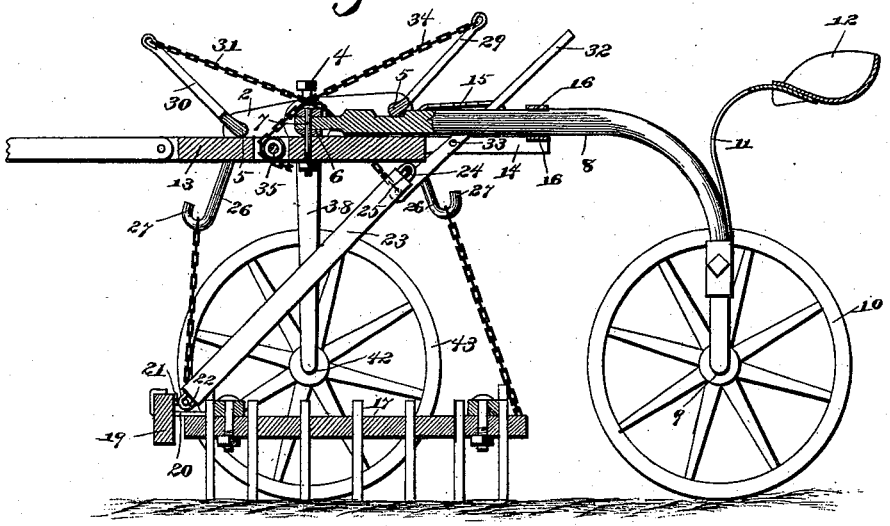
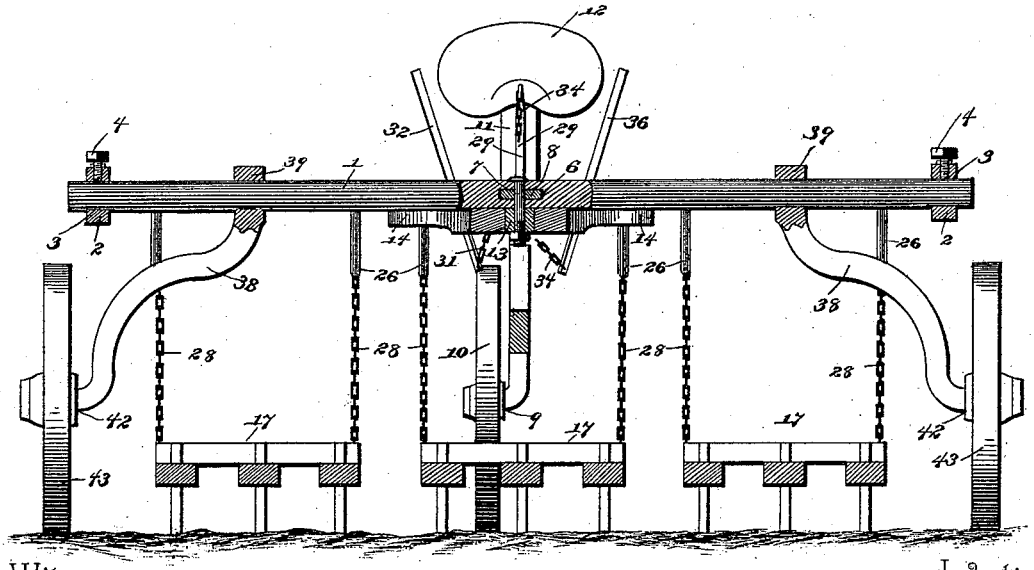


Fig. 4.



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UNITED STATES PATENT OFFICE.

BISHOP A. WASH, OF BEAVER CROSSING, NEBRASKA.

WHEEL-HARROW.

SPECIFICATION forming part of Letters Patent No. 456,261, dated July 21, 1891.

Application filed October 7, 1890. Serial No. 367,303. (No model.)

To all whom it may concern:

Be it known that I, BISHOP A. WASH, a citizen of the United States, residing at Beaver Crossing, in the county of Seward and State of Nebraska, have invented a new and useful Wheel-Harrow, of which the following is a specification.

This invention has relation to riding-harrows; and the objects in view are to provide a harrow frame or truck so constructed as to be adapted to be adjusted for various styles of harrows and to provide means for drawing the same evenly and for raising and lowering either end of a gang of harrows or entirely raising said gang.

With the above objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a plan of a harrow constructed in accordance with my invention. Fig. 2 is a front elevation. Fig. 3 is a longitudinal section. Fig. 4 is a transverse section.

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

1 designates the main beam, of cylindrical or other shape, to the ends of which are secured heads 2. The heads 2 are provided with a central opening 3, which receives the ends of the beam 1, and are made adjustable upon the beam by means of set-bolts 4 passing through the heads opposite the beams and binding thereupon. The corresponding ends of the two heads are connected by rock-shafts 5, there being one shaft located in front of the beam 1 and one in rear thereof. At the center of the beam 1 there is formed a recess 6, and within the same is pivoted by a bolt 7 a curved drag-beam 8, the rear end of which is laterally bent to form a bearing 9, upon which is loosely mounted a following wheel 10. Above the following wheel upon the drag-beam is mounted a seat-standard 11, which supports at its upper end a seat 12.

13 designates the draft-beam, to the opposite sides of which are secured the diverging hounds 14, which hounds, together with the beam, are rigidly secured to the main beam 1. Each of the hounds is provided upon its upper side with a toothed rack-bar 15, and said hounds at their rear ends are connected by opposite straps 16, which form a guide-slot for the guide-bar of the machine.

17 designates a series of (in this instance three) ordinary rectangular harrow-sections, which sections are connected at their front ends by a transverse bar 19, links 20 serving to connect the front corners of the sections with the bar. The central portion of the harrow-section connecting-bar is provided on its rear side with an eye 21, in which interlocks an eye 22 upon the front end of a short inclined bar 23, the upper end of which is provided with an eye 24, which interlocks with an eye 25 upon the under rear side of the draft-beam 13. The opposite rock-shafts vertically opposite each corner of each harrow-section are provided with rock-arms 26, each of which terminates at its lower end in a hook 27, said hook being connected to a corresponding corner of the harrow-section by means of a short chain 28. The rear rock-shaft at its center is provided with a vertical rock-arm 29, and the front rock-shaft at its center is provided with a vertical rock-arm 30. The vertical rock-arm 30 is connected by a short chain 31 to the lower end of a lever 32, located adjacent to the driver's seat and pivoted, as at 33, to one of the hounds 14, so that said lever may be locked in position by the toothed locking-bar upon said hounds, and by its manipulations may swing the vertical rock-arm 30 and rock the front rock-shaft, thus elevating the rock-arms of said shaft, and consequently the front ends of the harrow-sections. The rear rock-arm 29 or that projecting from the rear rock-shaft has connected to its upper end a chain 34, said chain being passed over a pulley 35, located in a recess in the draft-beam 13 in front of the rock-arm 29, thence rearwardly and connected to the lower end of a second hand-lever 36, pivoted to the opposite hound, as at 37, and located in close proximity to the driver's seat. By manipulating this lever the rear rock-arm 29 is drawn to the front, the rear rock-shaft rocked, and its arms elevated, as are also the rear ends of the several harrow-sections, so that the teeth of the latter may be easily cleared of trash. By grasping both levers and operating the same the rock-shafts are operated in opposite directions, as are also their rock-arms, and thus the entire series of harrow-sections raised from the ground

and clear of such obstructions as bowlders, stumps, &c.

38 designates a pair of vertical curved bearing-standards, which at their upper ends have formed perforated heads 39 for the reception of the bar 1. These heads are adjustable upon the bar by means of set-screws 40, so that the standards may be widened more or less to receive a greater number of harrow-sections or sections of different proportions and styles. The lower ends of these standards have bearings 42, upon which are mounted the ground-wheels 43.

From the above construction it will be apparent that I have provided a riding-harrow frame designed to receive various styles and proportions of harrow-sections, so constructed that the sections may be elevated clear of the ground, whereby said harrow may be transported from one field to another or to and from a field or adjusted to run deep or shallow, as will be evident. In some instances I may employ two rear wheels, thus adapting the harrow for use in harrowing corn, said wheels to straddle the corn-row.

Having described my invention, what I claim is—

1. In a harrow-frame, the combination, with the main transverse bar, the opposite standards adjustably mounted upon the bar and carrying wheels, the opposite heads adjustably mounted upon the bar outside of the standards, and rock-shafts journaled in the ends of the heads and provided with rock-arms, of a series of harrow-sections, chains connecting the same with the rock-arms, and means for rocking the shafts, substantially as specified.

2. In a harrow-frame, the combination, with the main transverse beam or bar, the opposite standards depending therefrom, the opposite transverse heads, and the front and rear rock-shafts journaled in the heads and provided with rock-arms, of a series of harrow-sections, chains connecting the same with the rock-arms, and means for independently rocking said rock-shafts, substantially as specified.

3. In a harrow-frame, the combination, with the main transverse beam or bar, the depending wheel-standards, the opposite heads mounted on the ends of the beam, and the front and rear rock-shafts journaled in the heads and each provided with an upwardly-disposed rock-arm and a series of downwardly-disposed rock-arms, of a series of harrow-sections, chains connecting the same to the downwardly-disposed rock-arms, a draft-tongue having opposite diverging hounds connected to the main beam, levers pivoted to the tongues, a chain connecting the rock-arm of the front rock-shaft to the lower end of one lever, a chain connecting the upper end of the upper arm of the rear rock-shaft with the lower end of a second lever and between the two passing over a guide-pulley located in front of said rock-shaft, and means for locking said levers in any of their adjusted positions, substantially as specified.

4. In a harrow-frame, the combination, with the main transverse beam, the opposite transverse heads, and the rock-shafts journaled in the heads and having rock-arms, of means for rocking said shafts, a series of harrow-sections, a series of chains connecting the corners of the sections each with a rock-arm, a transverse bar located in front of the sections, links connecting the front corners of the sections with the bar, an eye located at the center of the bar, an inclined bar loosely connected to the eye, and a draft-beam secured to the transverse beam and connected to the upper end of the bar, substantially as specified.

5. In a harrow-frame, the combination, with the main transverse bar, the opposite depending standards, the opposite transverse heads, the wheels journaled on the standard, and the opposite rock-shafts, together with means for operating the same, of harrow-sections located below the beam, chains connecting the same with the rock-shafts, a draft-beam connected to the main beam, a rearwardly-curved drag-beam pivoted to the center of the main beam and terminating at its lower end in a bearing, a wheel mounted on the bearing, and a seat in its standard supported upon the drag-beam, substantially as specified.

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

BISHOP A. WASH.

Witnesses:
H. W. BENTLEY,
R. W. BAILEY.