Feb. 22, 1938. C. McC. BAXTER 2,109,098

WHEEL ATTACHMENT

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Fig. 1.

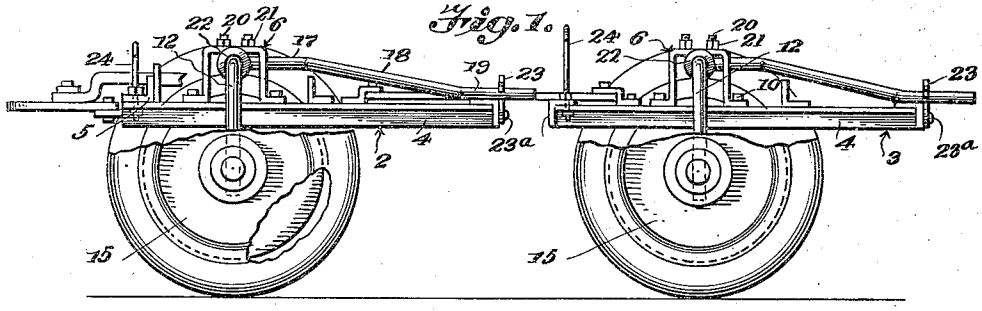


Fig. 2.

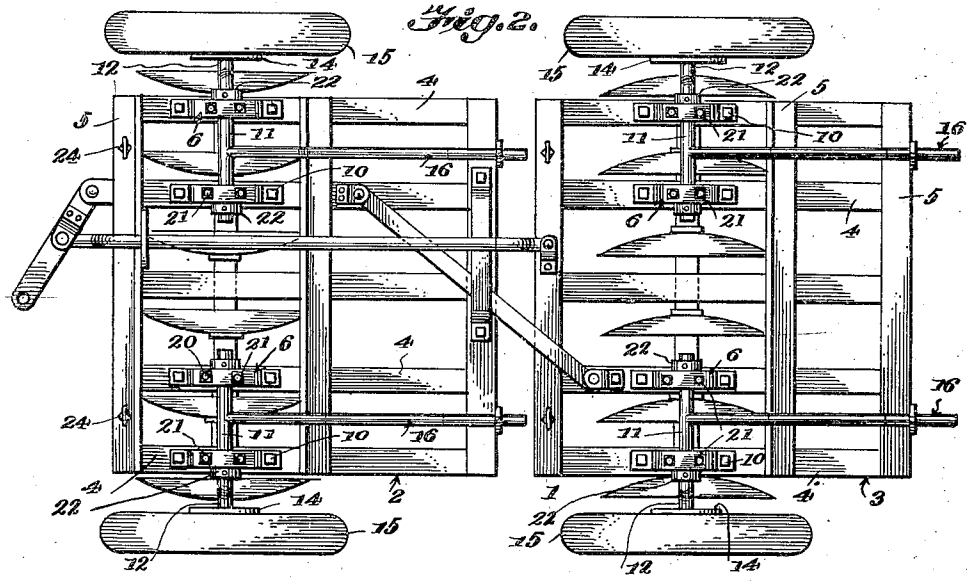
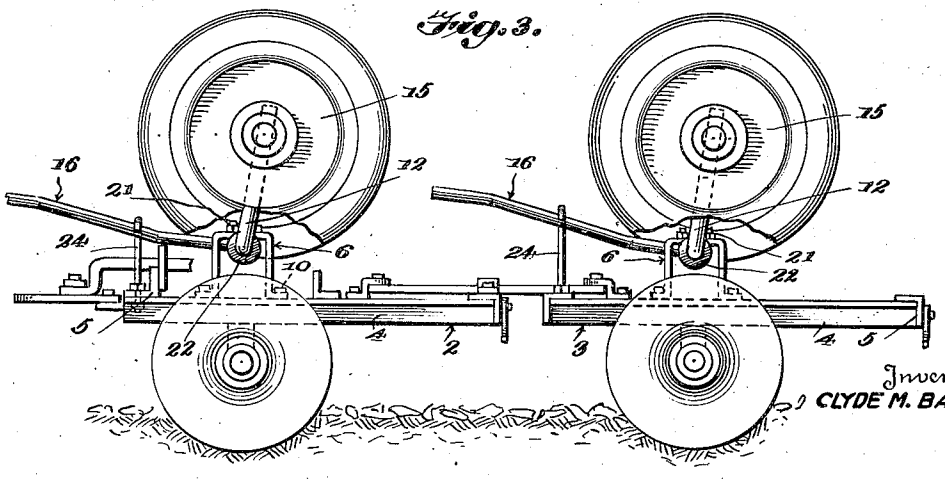


Fig. 3.



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Fig. 4.

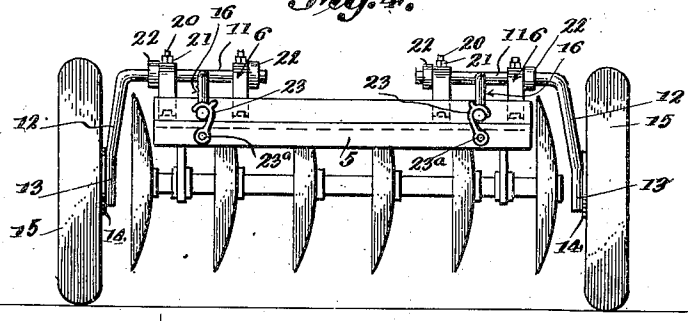


Fig. 5.

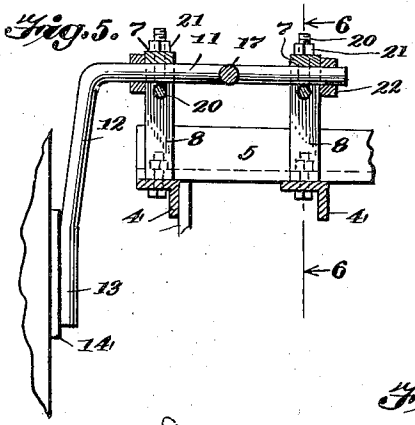


Fig. 6.

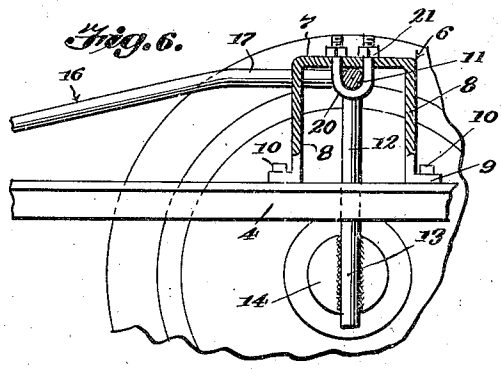


Fig. 7.

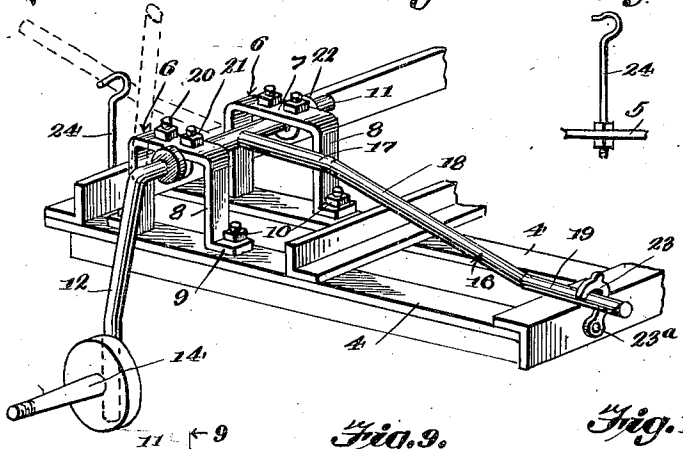


Fig. 10.

Fig. 11.

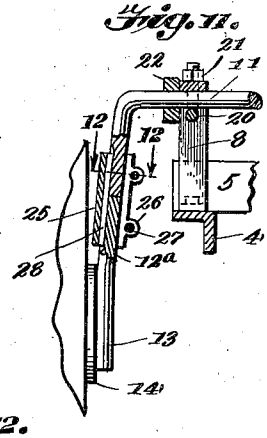


Fig. 8.

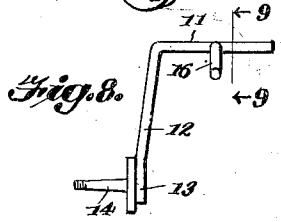


Fig. 9.

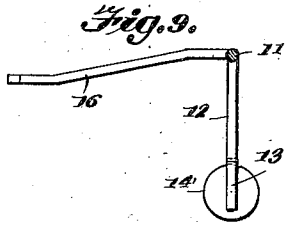
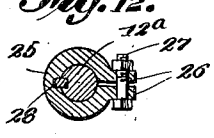


Fig. 12.



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UNITED STATES PATENT OFFICE

2,109,098

WHEEL ATTACHMENT

Clyde McClain Baxter, San Clemente, Calif.

Application April 20, 1937, Serial No. 138,019

7 Claims. (Cl. 55—73)

This invention relates to a transportation attachment for offset discs, harrows, and other farm equipment.

An object of this invention is to obviate the costly loading and unloading of equipment on a trailer or truck.

Another object of the invention is the construction of an attachment of the class hereinafter specifically described which can not only be used on the offset disc, but also on any piece of equipment which one wishes to move.

The attachment is particularly advantageous to city or private lot cleaning concerns as the mechanism can travel over streets, curbs and sidewalks without injury to same.

A still further object of the invention is the provision of manually operated units near the corners of a frame, whereby a mechanism can be quickly adjusted for operation on a lot or field, or, when desired, the mechanism can be adjusted to place the same in an inoperative position, whereby wheels are placed in position for conveying the mechanism over surfaces, without injury to such surfaces.

With the foregoing and other objects in view, the invention comprises certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is a view in side elevation of a mechanism constructed in accordance with the present invention; while

Figure 2 is a top plan view of the same.

Figure 3 is a view in side elevation, showing the wheels raised to an inoperative position, and the disc in an operative position.

Figure 4 is a view in end elevation, showing the wheels engaging the ground, with the disc in an inoperative position.

Figure 5 is an enlarged view of one of the crank-axle units, partly shown in elevation and partly in section.

Figure 6 is a sectional view, taken on line 6—6, Figure 5, and looking in the direction of the arrows.

Figure 7 is a perspective view of one of the four crank-axle units.

Figure 8 is a view in elevation of one of the four crank-axles, provided with an integral handle, while

Figure 9 is a sectional view taken on line 9—9, Figure 8, and looking in the direction of the arrows.

Figure 10 is a view in elevation of one of the four auxiliary hooks.

Figure 11 is a fragmentary view, partly in elevation and partly in section, of another embodiment of the crank-axle units, while

Figure 12 is an enlarged sectional view, taken on line 12—12, Figure 11, and looking in the direction of the arrows.

Referring to the drawings by numerals, 1 designates a frame which comprises the front section 2 and the rear section 3. Each section includes parallel longitudinally-extending beams 4 to which are secured parallel transverse beams 5. The sections of the frame are suitably connected together, as the connection is not a part of this invention, nor are the discs, since my transportation structure may be applied to frames of different farm equipment.

In the drawings I have preferably shown four sets of wheel-carrying crank-axle units of similar construction, all attached to a frame, preferably near the corners of the sectional frame. Therefore, as these crank-axle units are duplicates it will only be necesary to specifically describe one. The crank-axle unit, near each corner of the frame 1, comprises a pair of parallel substantially U-shape inverted suspension brackets 6. Each suspension bracket 6 includes a horizontal body portion 7 integral with parallel depending legs 8; each leg terminates at its lower end in an outwardly-extending horizontal foot 9. The feet 9 of each bracket 6 are preferably secured by bolts 10 to the same longitudinally-extending beam 4.

A crank-axle is employed comprising a horizontal portion 11 integral at its outer end with an inclined vertical portion 12, and this portion 12 terminates at its outer end in a spindle portion 13; to the spindle portion 13 is fixedly secured a spindle 14 upon which wheel 15 is mounted. All of the wheels 15 are preferably provided with pneumatic tires. Integral with the central portion of the horizontal portion 11 is a handle 16. This handle 16 includes an inner portion 17, a central portion 18 and an outer portion 19 (Figs. 7 to 9). The portions 17 and 19 are preferably formed in parallel planes. The horizontal portion 11 of the crank-axle is placed under the horizontal bodies 7 of suspension brackets 6, and U-shaped bolts 20 are placed around this portion of the axle, with the bolts extending through bodies 7, and nuts 21 are on said bolts 20, whereby the axle is revolvably mounted upon brackets 6. Against the outer edge of each bracket 6 and mounted on portion 11 of the crank-axle are

locking collars 22; these collars are fixedly secured to portion 11 by any suitable means, such as a set screw, not shown. These collars 22 keep the crank-axle in correct position upon brackets 6, preventing any lateral movement or play. When the wheels are in engagement with the surface over which the mechanism is to pass, the outer portion 19 of the handle of the axle unit will be under the primary lock hook 23 (Fig. 7). When the wheels are raised to the inoperative position, as clearly shown in Fig. 3, with the discs in engagement with the ground, then the handles are hooked under the comparatively long auxiliary lock hooks 24.

In Figures 11 and 12 I have shown a modification designed particularly for orchard work, so that the wheels and the portions of the axles which stick up can be removed with very little effort, thus giving a disc that can be used for close work. In this embodiment the vertical inclined portion 12*a* is made of two sections, and on the abutting ends of these sections I place an annular clamp or sleeve 25 which has parallel lips 26. Fastening bolts 27 extend through these lips 26, with nuts thereon, whereby the sleeve can be securely clamped upon the ends of the portion 12*a*. A spline or key 28 is in the abutting ends of the axle section as well as in sleeve 25, preventing rotation of said sleeve on the axle. By this means the wheels can be quickly removed from the apparatus, and likewise can be quickly replaced after removal.

In carrying out my invention it will, therefore, be seen that I have preferably shown a frame provided with parallel longitudinally-extending beams upon which the suspension brackets are specifically mounted for supporting the crank-axles.

In operation when the crank-axle units are in the position shown in Figures 1 and 2, the wheels 15 will be in engagement with the surface, and the handles of the crank-axle units will be hooked under the primary locking hooks 23. When the operator desires to place the mechanism in position for the harrows to operate, all he has to do is to slightly move each handle to one side, to disengage it from hook 23, or as hook 23 is pivotally mounted on the frame at 23*a* the hook itself can be moved to easily release the handle, whereupon the operator can swing the handle in a half circle, so as to bring it in engagement with the auxiliary locking hook 24, as clearly shown in Figure 3. Then the discs will be in position to operate.

It is also to be understood that the novel crank-axle units may be attached in like manner to frames of other equipment than a disc harrow.

While I have described the preferred embodiments of my invention and illustrated the same in the accompanying drawings, certain minor changes or alterations may appear to one skilled in the art to which this invention relates during the extensive manufacture of the same, and I, therefore, reserve the right to make such changes or alterations as shall fairly fall within the scope of the appended claims.

What I claim is:

1. In a mechanism of the class described, the combination of a frame, a plurality of crank-axle units on said frame, each crank-axle unit comprising suspension brackets above said frame, a crank-axle suspended on said brackets and spaced from said frame, and said crank-axle provided with a handle adapted to be placed in different positions upon said frame.

2. In a mechanism of the class described, the combination of a frame provided with parallel longitudinally-extending beams, a plurality of crank-axle units on said frame, each crank-axle unit comprising a pair of suspension brackets secured to the top of said parallel longitudinally-extending beams, a crank-axle provided with a portion under portions of said suspension brackets and spaced from said beams, bolts engaging said crank-axle and said suspension brackets entirely above said beams, whereby the crank-axle is rotatably mounted on said suspension brackets, and a lever handle extending outwardly from said crank-axle between said suspension brackets.

3. In a mechanism of the class described, the combination of a frame provided with parallel longitudinally-extending beams, a plurality of crank-axle units on said frame, each crank-axle unit comprising a pair of suspension brackets, each suspension bracket including a horizontal body portion terminating in parallel legs, each leg terminating at its lower end in a horizontal foot, means securing the feet of said brackets to said longitudinally-extending beams, a crank-axle extending transversely of and under the body portion of said suspension brackets, U-shaped bolts partly around portions of said crank-axle and fastened to the horizontal body portions of said brackets, locking collars on said crank-axle and against the outer edges of said suspension brackets, and an angular lever handle integral with said crank-axle between said suspension brackets.

4. In a mechanism of the class described, the combination with a frame, of brackets on said frame, crank-axle units on said brackets, each crank-axle unit including a crank-axle comprising abutting sections, a sleeve on said abutting sections, means for clamping said sleeve on said sections, and a key within said sleeve and against said abutting sections.

5. In a mechanism of the class described, the combination with a frame, of brackets on said frame, crank-axles on said brackets, each crank-axle provided with an inclined vertical portion comprising abutting sections, a clamping sleeve around the abutting ends of said sections, said sleeve provided with parallel lips, bolts extending through said lips, and a comparatively long key in said sleeve and extending into said sleeve and said abutting sections.

6. In a mechanism of the class described, the combination with a frame, of substantially U-shape brackets secured to the top of said frame, wheel-carrying axles fastened only to the top of said U-shape brackets, and manually-operated means connected to said axles.

7. In a mechanism of the class described, the combination with a frame, of sets of inverted U-shape brackets fastened to the top of said frame near its corners, an axle suspended from the top portion only of each set and having a portion projecting beyond the side of said frame, wheels on said axles, and manually operated means connected to said axles.

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