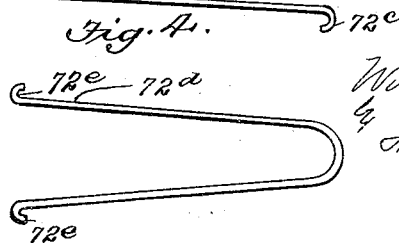
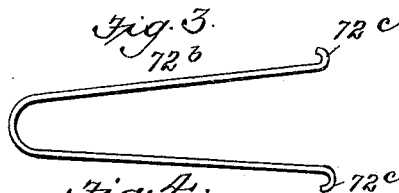
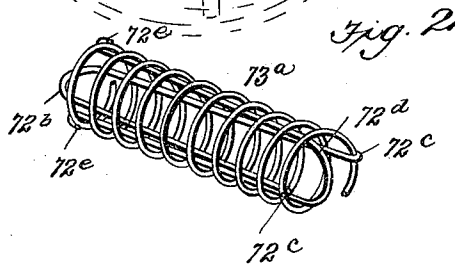
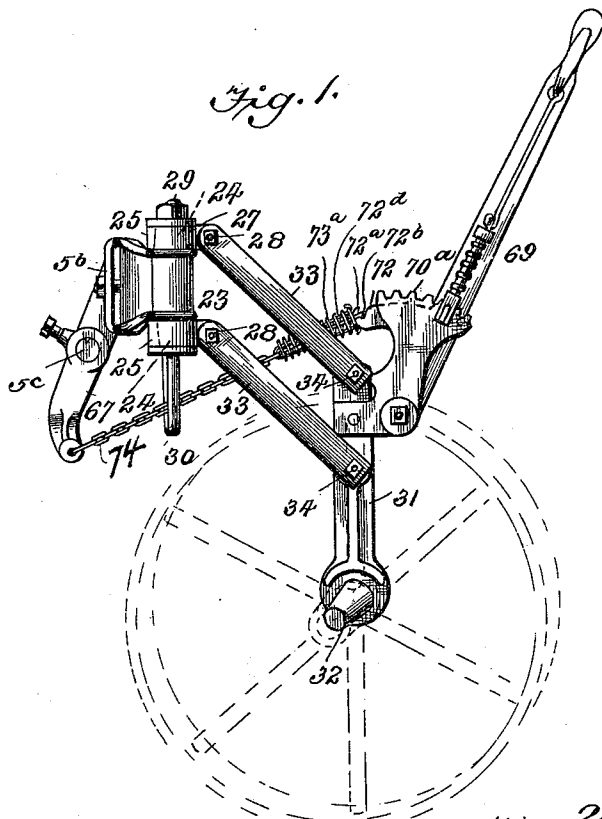


(No Model.)

W. L. CASADAY.  
WHEEL OR GANG PLOW.

No. 544,284.

Patented Aug. 13, 1895.



Witnesses  
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*Lucas B. Hill*

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# UNITED STATES PATENT OFFICE.

WILLIAM L. CASADAY, OF SOUTH BEND, INDIANA.

## WHEEL OR GANG PLOW.

**SPECIFICATION** forming part of Letters Patent No. 544,284, dated August 13, 1895.

Application filed March 13, 1895. Serial No. 541,562. (No model.)

*To all whom it may concern.*

Be it known that I, WILLIAM L. CASADAY, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Wheel or Gang Plows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in the means for attaching the land-wheel to the frame of a wheel or gang plow, and also to the means employed for operating the same, and is more particularly an improvement upon the wheel or gang plow for which I made application for Letters Patent on the 28th day of December, 1894, Serial No. 533,149.

My said invention consists in certain novelty in the construction, arrangement, and combination of the various parts, all of which I will now proceed to point out and describe, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my said invention, and Figs. 2, 3, and 4 are enlarged details of various parts of the same.

Referring to said drawings, the numeral 23 indicates a casting secured to the landside of the frame of a wheel or gang plow.

24 are vertical trunnion-bearings formed on the casting 23, on which are mounted collars 25, having horizontal bearings 27, in which are inserted bolts 28. The collars are held in place by a bolt 29, having on its lower end or head an elongated eye or yoke 30.

31 is a vertical arm or casting forming the land-wheel axle and having on its lower end a downwardly and forwardly inclined spindle 32, on which the land-wheel 32<sup>a</sup> (shown in dotted lines) is mounted.

33 are parallel upper and lower links of equal length pivoted at one end to the bolts 28 and at their other end to the arm or axle of the land-wheel by bolts 34.

5<sup>c</sup> is a horizontal rock-shaft mounted in suitable bearings on the front of the main frame of the plow, one bearing 5<sup>b</sup> being shown. The frame, plows, and other parts are not shown, as they are fully described and illus-

trated in the former application, to which reference has been made.

67 is a downwardly-extending and outwardly-curved rock-arm keyed on the rock-shaft and adapted to rock with said shaft as the same is operated.

69 is a lever pivoted to the upper end of the vertical arm or land-wheel axle 31 and is provided with a spring-actuated locking-dog, which engages a toothed sector 70<sup>a</sup>, bolted to said arm or axle.

72 is a short curved arm formed on and projecting from the lever 69 and having the hook end 72<sup>a</sup>.

72<sup>b</sup> is a loop having flaring hook ends 72<sup>c</sup>. Said loop is attached to the hook 72<sup>a</sup>. 72<sup>d</sup> is a similarly-shaped loop having flaring hook ends 72<sup>e</sup>. Said loops are placed one within the other, with their hook ends in opposite directions, and are surrounded by a coiled spring 73<sup>a</sup>, the hook ends of the loops engaging the opposite ends of the spring, thus holding the several parts together.

74 is a chain or other suitable connection attached at one end to the end of the rock-arm 67 and at its other end to the loop 72<sup>d</sup> and forms a slightly-yielding spring connection between the rock-shaft and the upper end of the vertical arm or axle of the land-wheel. The chain 74 passes through the yoke or eye on the end of the bolt below the trunnion-bearings, and its line of draft is diagonally across the rectangular space formed between the parallel links.

It will readily be seen that by moving the land-wheel lever back or forward the length of the chain or other connection between the end of the rock-arm and upper end of the vertical arm or axle of the land-wheel is, in effect, lengthened or shortened, and thus regulates and limits the vertical movement of the parallel links, at the same time regulating and limiting the height that the land-wheel can be raised with relation to the level of the frame and plow-bottoms and determining the depth of the furrow. The dog of the locking-lever, being adjusted in the proper notch of the sector, holds the chain or other connection as adjusted and causes the plow to turn the furrow at the predetermined depth. The spring connection of the chain with the land-

wheel lever permits the land-wheel to run over rough or cornstalk land or to pass over any unusual obstruction without raising or lowering the plow-bottoms, which would be done if the connection were rigid and unyielding.

Suitable mechanism is provided for operating the rock-shaft. This and the other parts of the plow are so fully described in my former application above referred to that it is unnecessary to further describe the same, my present invention consisting of the spring connection for rock-shaft and land-wheel levers.

15 Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a wheel or gang plow, the combination with the land wheel arm or axle, carrying the  
20 land wheel, pivoted links connecting said axle with the plow frame, a land wheel lever pivoted to the upper end of the land wheel axle, and means for locking said lever as adjusted, of a rock shaft, a chain or other connection secured to said rock shaft, and a  
25 spring connecting the chain and land wheel lever, all constructed, arranged and operating substantially as shown and described.

2. In a wheel or gang plow, the combination with a land wheel arm or axle 31, carrying  
30 the land wheel, pivoted links connecting said axle to the plow frame, and a land wheel lever 69, pivoted to the upper end of said arm or axle 31, of a rock shaft having a rock arm 67, a chain or other connection 74 secured at  
35 one end to the rock arm 67 and a spring 73<sup>a</sup>, connecting the said chain with the land wheel lever, all constructed, arranged and operating substantially as shown and described.

3. In a wheel or gang plow, the combination  
40 with a land wheel arm or axle 31, carrying a land wheel, a toothed sector 70<sup>a</sup>, secured to said axle, and a land wheel lever 69 pivoted to said axle and provided with a spring locking dog, adapted to engage the sector, of a  
45 rock shaft having a rock arm, and loops 72<sup>b</sup> and 72<sup>d</sup> and spring 73<sup>a</sup> connecting the chain with the land wheel lever, all constructed, arranged and operating substantially as shown  
50 and described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM L. CASADAY.

Witnesses:

OWEN D. MYERS,  
A. D. BAKER.