

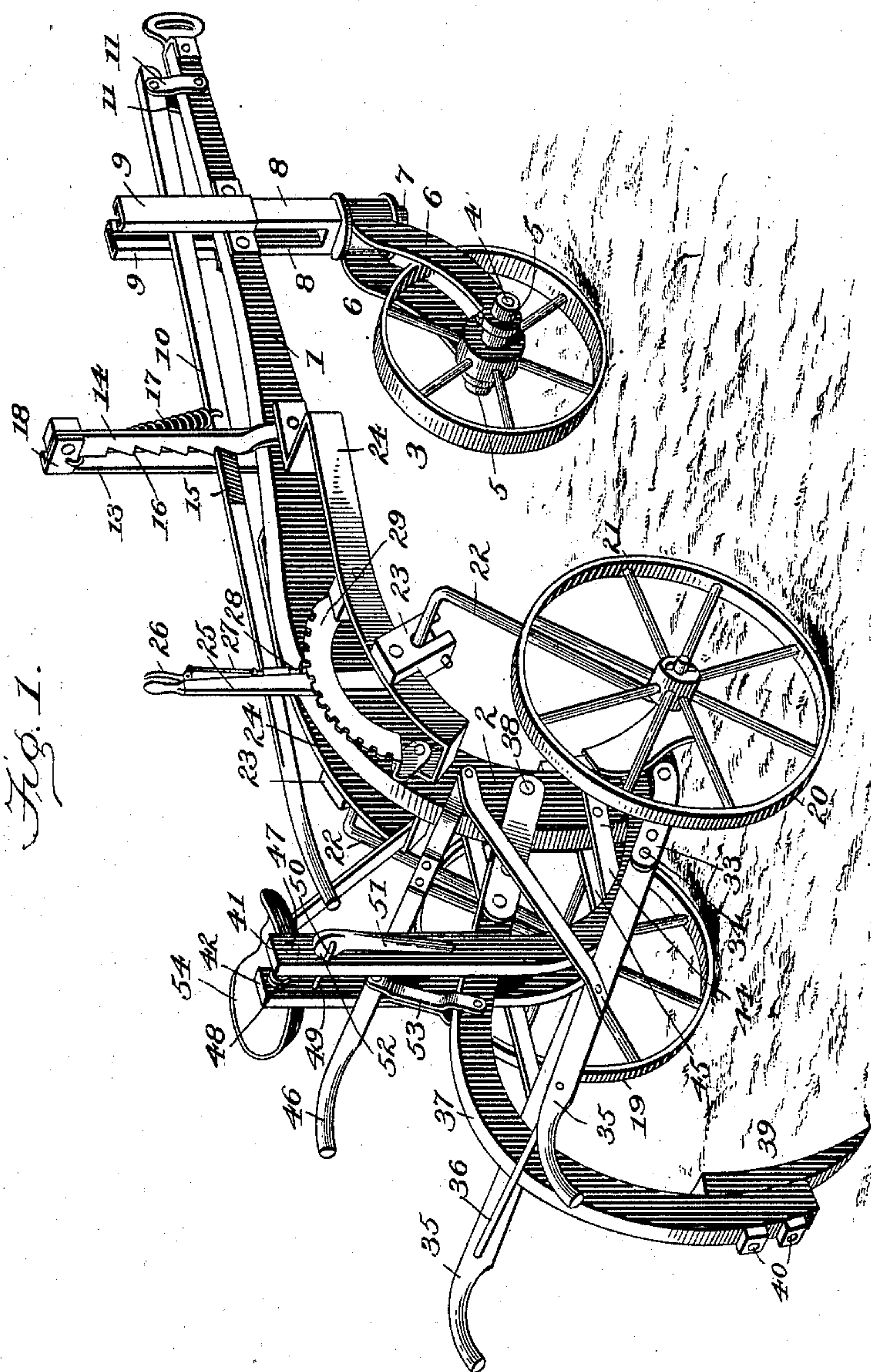
(No Model.)

3 Sheets—Sheet 1.

G. W. GARST.  
PLOW.

No. 590,018.

Patented Sept. 14, 1897.



WITNESSES:

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(No Model.)

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Fig. 2.

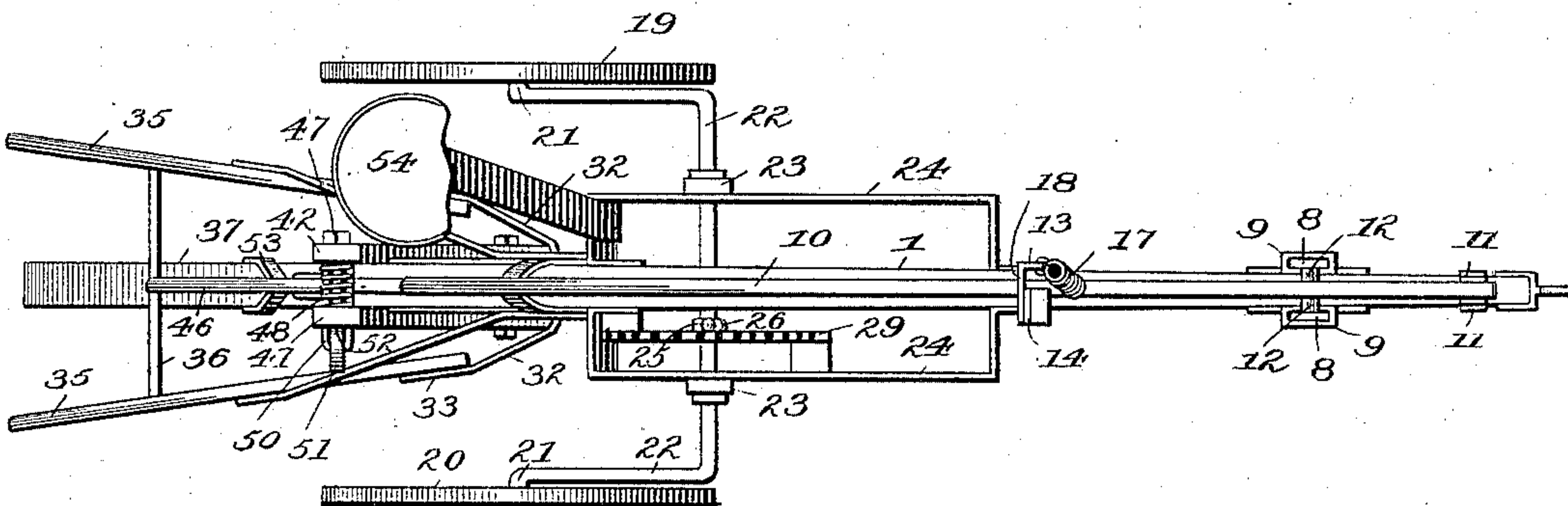
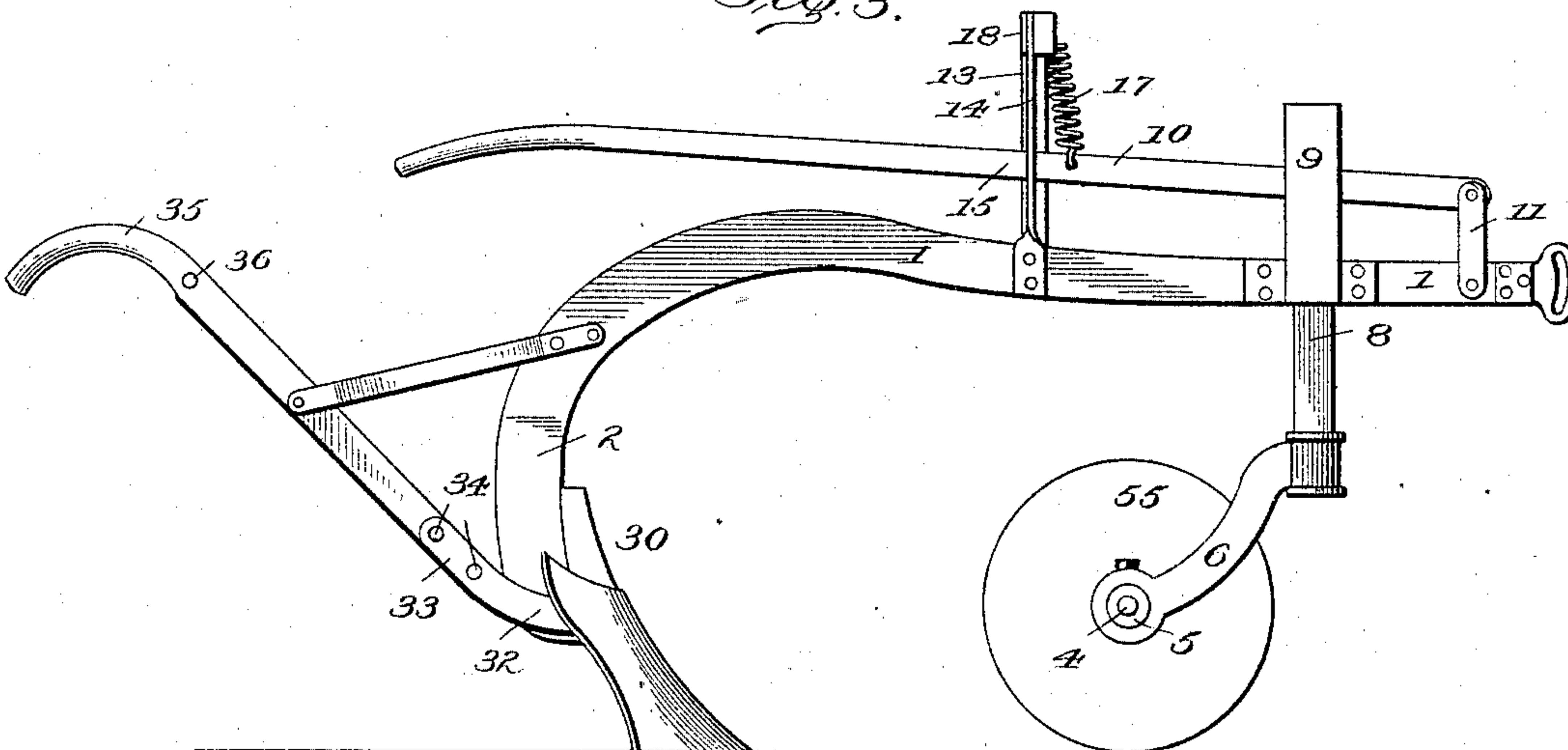


Fig. 3.



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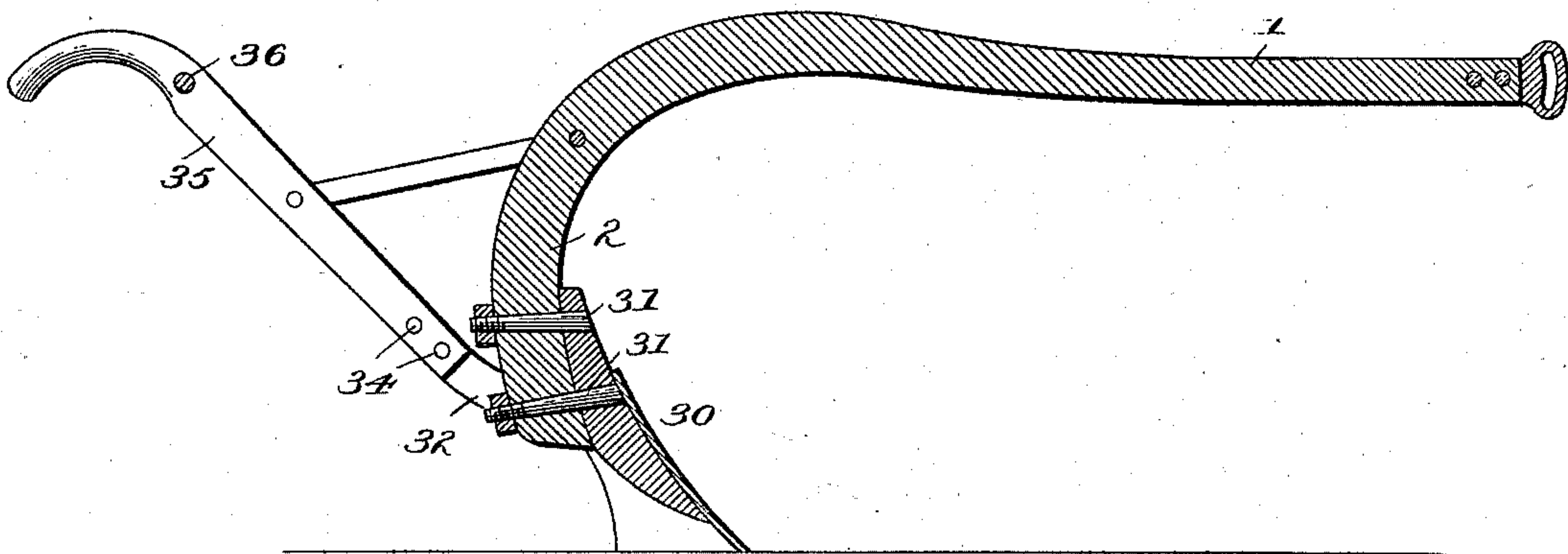
3 Sheets—Sheet 3.

G. W. GARST.  
PLOW.

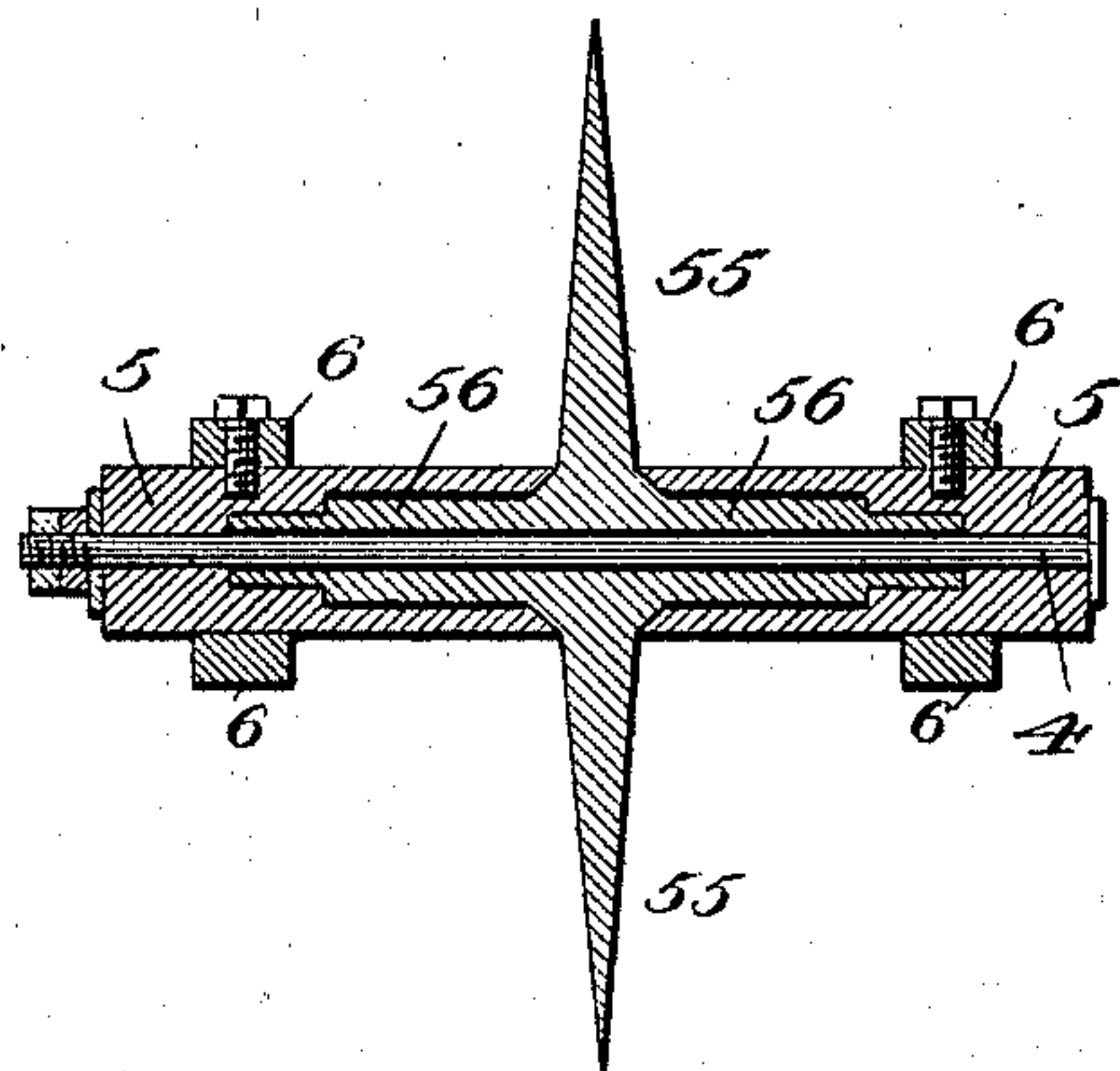
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*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

GEORGE W. GARST, OF McPHERSON, KANSAS.

## PLOW.

SPECIFICATION forming part of Letters Patent No. 590,018, dated September 14, 1897.

Application filed January 26, 1897. Serial No. 620,755. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. GARST, a citizen of the United States, residing at McPherson, in the county of McPherson and State of Kansas, have invented certain new and useful Improvements in 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 has relation to improvements in the construction of plows, and more particularly to that class of cultivators known as "subsoilers" and "listers;" and the object is to provide a combined subsoiler and lister that will be convenient, durable, and effective; and to this end the novelty consists in the construction, combination, and arrangement of the several parts of the same, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings the same reference-characters indicate the same parts of the invention.

Figure 1 is a perspective view of a cultivator embodying my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a side elevation with the riding-wheels removed and the rolling colter shown attached to the beam. Fig. 4 is a longitudinal section showing the subsoiler detached and the plow organized as an ordinary cultivator. Fig. 5 is a horizontal transverse section through the colter-spindle.

1 represents the plow-beam, the rear end of which terminates in the usual integral curved standard 2.

3 represents the forward riding-wheel, journaled on a horizontal shaft 4, journaled in the sleeves 5 5, mounted in the rearwardly-curved diverging arms of a bracket 6, the vertical hub of which is journaled on the lower end of a cylindrical shaft 7, formed with vertical parallel arms 8 8, sliding snugly in the vertical guide-brackets 9 9, secured to the beam 1.

A lever 10 is fulcrumed at its forward end between the pivoted bars 11 11 on the beam, and this lever carries a transverse rod 12, the outer ends of which engage the parallel arms 8 8 and serve to regulate the height of the

wheel as the lever 10 is raised and lowered. This lever passes through two vertical arms 13 14 and it is formed with a beveled edge 15, which engages the teeth 16 on the arm 14 to hold it in the position to which it may be adjusted, and a spiral spring 17 is secured at one end to said lever and at its other end to the cross-brace 18, connecting the upper ends of the arms 13 14, to hold the same in an elevated position when released.

19 and 20 represent the rear carrying-wheels, which are journaled on the outer ends 21 of a bent axle 22, mounted in bearings 23 23, detachably secured to the parallel brackets 24 24, bolted on each side of the beam. 25 is an adjusting-lever secured to the bent axle 22, and it is provided with the usual hand-grip 26, rod 27, and pivoted pawl 28, which engages the segmental rack-bar 29, by means of which the rear carrying-wheels may be adjusted to correspond to the position of the forward wheel 3.

30 represents a detachable plow-point secured by tapering bolts 31 31 to the foot of the standard 2, and 32 represents a brace likewise secured to the standard, and its rearwardly-diverging arms 33 33 are secured by bolts 34 to the lower ends of the plow-handles 35 35, the upper ends of which are connected by the usual cross-brace 36.

37 represents an auxiliary curved standard pivoted at its forward end to the main standard 2 by the transverse bolt 38, and to its foot is removably secured the point 39 by the tapering bolts 40.

41 42 represent vertical guide-arms, the lower curved ends of which are secured by a bolt 43 to opposite sides of the lower end of the standard 2, and 44 and 45 are short braces connecting said arms to the standard to assist in supporting the guide-arms in a vertical position. These arms 41 42 extend upwardly on each side of the auxiliary standard 37 and also its adjusting-lever 46, the upper ends of said arms being connected by a loose bolt 47 and a spiral spring 48, encompassing said bolt and serving to press the outer ends of the arms apart, and a staple 49 has its ends secured in the arm 42, while its opposite end 50 passes through the opposite arm 41, and on this end 50 is mounted a cam-lever 51, the cam-face 52 of which bears against the arm



41 and, through the medium of the staple 49, draws the two arms together and securely binds the subsoiler-standard between them after it has been adjusted by the lever 46.

5 This lever 46 is also pivoted to the standard 2 and is connected by the connecting-rod 53 to the subsoiler or auxiliary standard to conveniently raise and lower the same as desired.

54 represents the riding-seat, its forward end being secured to one of the brackets 24, while the seat itself is within convenient reach of the adjusting-levers.

I will now proceed to describe the construction of the colter, and as the forward carrying-wheel 3 is mounted in the same manner the description of one will answer for the other.

The colter 55 is formed with two horizontal hubs 56 56, through which the shaft 4 passes, and also through the outer ends of the sleeves 5 5, which encompass said hubs, and from this construction it will be seen that while the colter revolves freely the sleeves 5 5, which are secured in the bracket 6, remain fixed, and consequently do not entangle the weeds and grass while the plow is in operation, which is an important improvement over that class in which the colter is mounted on a revolving shaft.

30 Although I have specifically described the construction of my invention, I do not desire to be limited to the same, as various modifi-

cations will readily suggest themselves to those skilled in the art without departing from the spirit thereof.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. A plow of the class described, comprising the beam 1, the integral curved standard 2, the pivoted auxiliary standard 37, its adjusting-lever 46 and the vertical guide-arms 41 42 removably secured to said standard 2, and means as described for adjustably clamping said auxiliary standard between said vertical guide-arms, as and for the purpose set forth.

2. A plow comprising the beam, the integral standard and the detachable plow-point, in combination with the colter formed with the horizontal hubs mounted on the shaft 4, said shaft and hubs being journaled in the adjustable stationary sleeves 5 5 secured in the arms of the bracket 6, which in turn is secured upon the lower end of the shaft 7, secured to and vertically adjustable upon the plow-beam, as shown and described.

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

GEORGE W. GARST.

Witnesses:

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