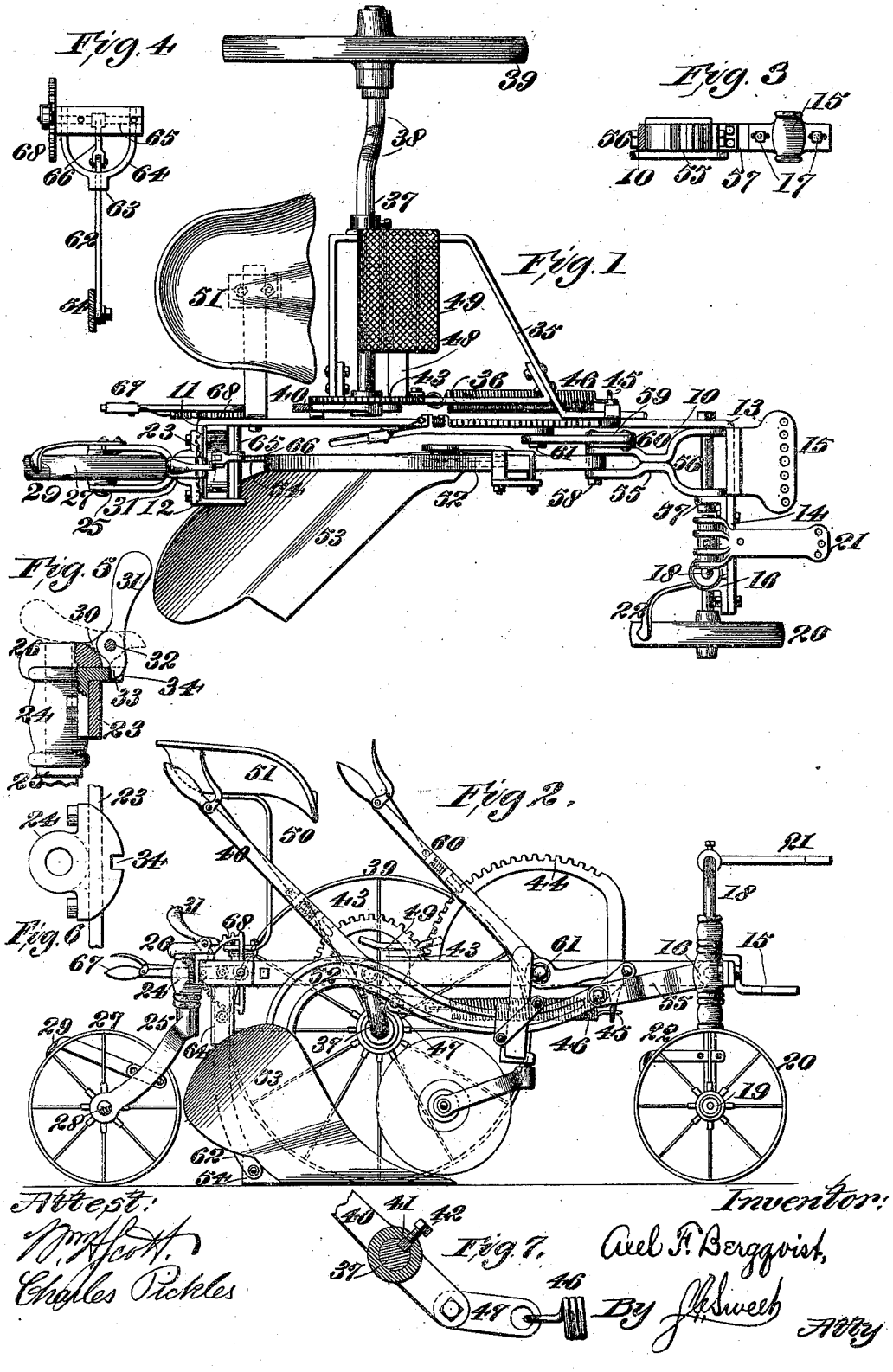
(No Model.)

A. F. BERGQVIST.

SULKY PLOW.

No. 561,477. Patented June 2, 1896.



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UNITED STATES PATENT OFFICE.

AXEL F. BERGQVIST, OF FAIRFIELD, IOWA.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 561,477, dated June 2, 1896.

Application filed December 15, 1894. Serial No. 531,870. (No model.)

To all whom it may concern:

Be it known that I, AXEL F. BERGQVIST, a citizen of the United States, and a resident of Fairfield, in the county of Jefferson, in the State of Iowa, have invented certain new and useful Improvements in Sulky-Plows, of which the following is a specification.

This invention relates to the novel construction, arrangement, and combination of parts hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the complete device. Fig. 2 is an elevation of the same. Fig. 3 is a rear elevation of the forward part of the main frame and the swivel-box. Fig. 4 is a rear elevation of the mechanism for vertically adjusting the landside. Fig. 5 is a side elevation, partly in section, of the rear swivel-box. Fig. 6 is a plan of the rear swivel-box, the cap and lever being removed. Fig. 7 is a detailed elevation, partly in section, on the line 7 7 of Fig. 1.

In the construction of the machine, as shown, the numeral 10 designates a longitudinal main frame or bar having a rear end portion bent at 11 into a position approximately at right angles and at 12 into a position parallel with its main portion, and a forward end portion bent at right angles to its main portion at 13 and extended laterally a greater distance than and on the same side as the rear portion thereof. The forward portion 14 of the main frame has secured thereto and extending from its forward face a clevis 15, whereby the motive power may be secured to the plow. A swivel-block 16 is adjustably secured to the rear face of the portion 14 by means of bolts 17 17, which bolts are passed through slots in the said swivel-block, by means of which slots a lateral movement of the said block relative to the frame is obtained. Vertically positioned and mounted for horizontal rotation in the swivel-block 16 is a swivel-stem 18, which swivel-stem is bent laterally in its lower portion and has formed thereon an axle 19, on which is located a wheel 20. The upper portion of the swivel-stem 18 is bent laterally in a direction opposite to the bend in the lower portion thereof and has mounted thereon and removable and replaceable relative thereto a guiding-arm 21 to which a guiding tongue or pole (not shown) may be secured. A clearer-bar 22 is fixed to the swivel-stem 18 and engages the perimeter of the rim of the wheel 20. The rear portion 23 of the main frame has secured thereto a swivel bearing-block 24, in which is mounted for horizontal rotation a yoke 25, a cap 26 being secured to the upper end of said yoke above the block 24. A wheel 27 is mounted for rotation on an axle 28, located in the lower extremity of the yoke 25, and a clearer-bar 29, fixed to said yoke, engages with the perimeter of the wheel 27.

Ears 30 are formed on the forward portion of the cap 26 and a lever 31 is fulcrumed on a pin 32, transversely seated in said ears, a tongue 33 on said lever being adapted for engagement in a notch 34, formed in the central portion of the forward face of the swivel bearing-block 24.

A U-shaped frame 35 is fixed to and extends laterally from the main frame 10, and a cross-bar 36 is fixed to said U-shaped frame and extends within said frame parallel to the body portion of said main frame. An axle 37, having a compound bend 38, is mounted for adjustment in the frame 35 and bar 36, which axle is supported at its outer end in a land-wheel 39. The inner end of the axle 37 has a lever 40 mounted thereon and secured thereto by means of a key 41 and a set-screw 42, Fig. 7, the said lever having a pawl connection with a segmental rack 43, fixed to the bar 36. A segmental rack 44 is mounted on and secured to the body portion of the main frame 10, and the forward end portion of said rack extends below said main frame and has formed thereon a hook 45, to which one end of a retractile spring 46 is secured, the opposite end of said retractile spring being flexibly connected with the lower projecting end of the lever 40 by means of a link 47.

An upwardly-extending U-shaped bar 48 is fixed to the bar 36 and frame 35 and extends transversely of said frame, on which bar 48 is located the foot-plate 49.

A seat-spring 50 is fixed to the main frame 10, near the rear end thereof, on which seat-spring is formed a horizontal portion adapted to support the seat 51, fixed thereto.

The plow-beam 52, carrying the plowshare 53 and landside 54, is located on the opposite

side of the main frame 10 from the frame 35. The forward end of the plow-beam 52 is pivotally connected with and combined within a bifurcated end portion of a yoke 55, the opposite end of said yoke being also bifurcated and pivoted upon a bolt 56, horizontally located in the forward end of the main frame, and an angle-plate fixed to said main frame in alinement with the clevis 15. The bolt 58, which forms the connection between the plow-beam and yoke 55, also serves as a connection with the lower end of a link 59, the upper end of which link is pivotally connected with the lower and forward end portion of a lever 60, fulcrumed on a bolt 61, located transversely and horizontally in the body portion of the main frame 10. The lever 60 has a pawl connection with the segmental rack 44.

The rear end portion of the landside 54 is pivotally connected to a standard 62, which standard is vertically connected through a bearing 63 in the lower portion of a yoke 64, which yoke is fixed to the rear portion of the main frame 10. A rock-shaft 65 is mounted in the upper portion of the yoke 64 and has rigidly secured thereto a crank-arm 66, which is pivotally connected to the upper end of the standard 62. A lever 67 is rigidly secured to one end of the rock-shaft 65 and has a pawl connection with a segmental rack 68, mounted on the main frame 10.

It will be apparent that by rotating the bent axle 39 in its bearings in the frame 35 by means of the lever 40 the height of the said frame and the main frame 10, with the seat 51 thereon, may be adjusted, while by means of the lever 60 the front end of the plow-beam 52 may be either raised or lowered, as desired, and that by means of the lever 67 and standard 62 the landside at rear end of the plowshare is adjusted.

What I claim is—

1. In a sulky-plow, a main frame consisting of a bar having its rear end doubly bent, as at 11, and 12, and its front end laterally bent on the same side thereof as the bent rear portion and extending laterally beyond the same, substantially as and for the purpose set forth.

2. A sulky-plow having a main frame, consisting of a single bar having bent front and rear portions on the same side, a clevis secured to said front portion, a swivel-block adjustably secured to the rear side of said front portion, a vertical stem mounted in said block and having a horizontal extension at its lower end carrying a wheel, and provided at its upper end with an opposite extension, a guiding-tongue on said upper extension and a plow adjustably connected with said front and rear portions, said parts being combined substantially as described.

3. In a sulky-plow, a frame having a single bar, a U-shaped frame secured to one side thereof, a cross-bar secured to said U-shaped frame parallel to said main bar, a bent axle mounted in said U-shaped frame and cross-bar, a lever rigidly connected with said axle, a rack secured to said cross-bar, a link connected with the lower end of said lever and a spring connected with said link and the main frame, said parts being combined substantially as described.

4. In a sulky-plow, a frame consisting of a single bar having a doubly-bent rear portion as at 11 and 12, and a bent front portion on the same side thereof as said rear portion, an angle-plate connected with said front portion, a yoke connected with said angle-plate and the main portion of the said bar, and a plow-beam connected with said yoke and provided with means adjustable in said doubly-bent rear portion for supporting said plow-beam, said parts being combined substantially as described.

5. A sulky-plow having a main frame, consisting of a single bar having a doubly-bent rear portion as at 11, and 12, a yoke secured to said rear portion, a rock-shaft mounted in said yoke, a crank-arm connected with said shaft, a standard pivotally connected with said arm and guided in said yoke, a plowshare having the rear end of its landside pivotally connected with said standard and mechanism connected with said main frame and plow-beam and supporting the front end of the latter, said parts being combined substantially as described.

6. A sulky-plow frame having a single bar with front and rear lateral extensions on the same side thereof, an auxiliary frame on the side of the bar opposite said extensions, a wheel journaled on an adjustable support on said front extension, a wheel mounted on a support secured to said rear extension, a wheel mounted on an adjustable axle journaled in said auxiliary frame and a plowshare vertically adjustable at both its front and rear ends and connected with said front and rear extensions, said parts being combined substantially as described.

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In presence of—
T. L. JAMES,
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