W. B. NEWMAN.

SULKY-PLOW.

No. 186,867. Patented Jan. 30, 1877.

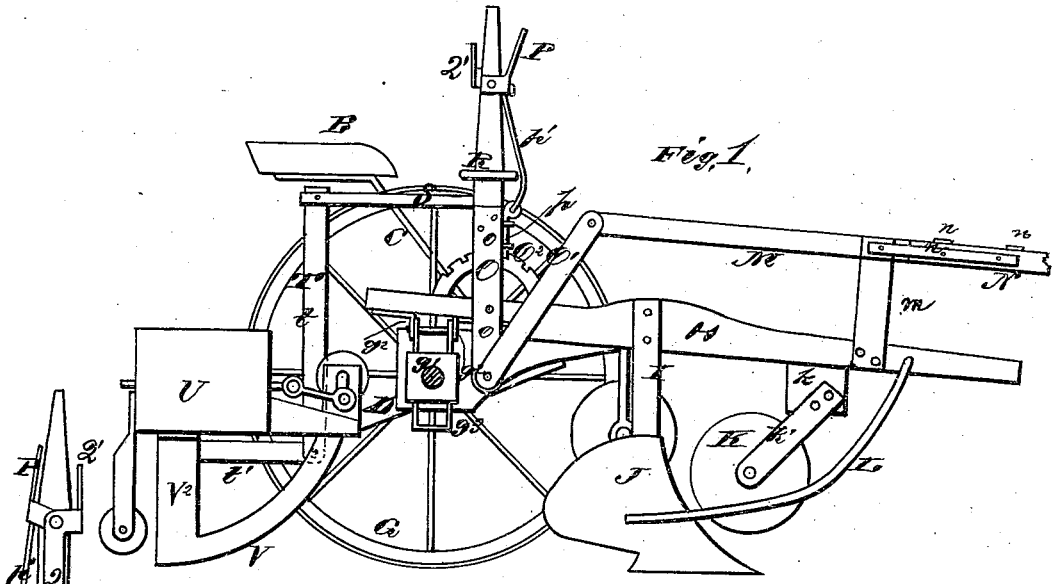

Fig. 1.

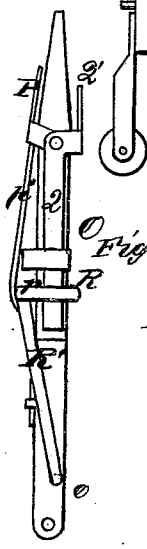

Fig. 4.

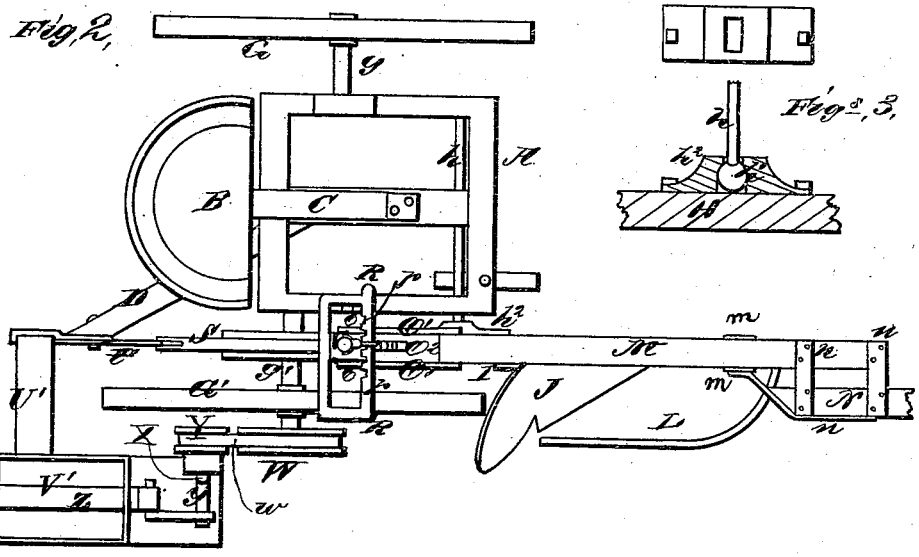

Fig. 2.

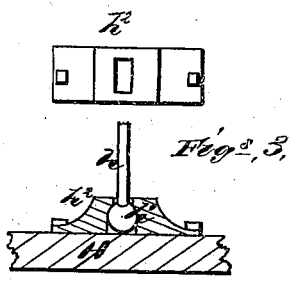

Fig. 2, 3.

WITNESSES

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WILLIAM B. NEWMAN, OF PITTSVILLE, MISSOURI.

IMPROVEMENT IN SULKY-PLOWS.

Specification forming part of Letters Patent No. **186,867**, dated January 30, 1877; application filed September 2, 1876.

To all whom it may concern:

Be it known that I, WILLIAM B. NEWMAN, of Pittsville, in the county of Johnson and State of Missouri, have invented a new and valuable Improvement in Sulky Breaking-Plows; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my plow, and Fig. 2 is a plan view thereof. Figs. 3 and 4 are detail views of the same.

This invention is an improvement upon the devices secured to W. B. Newman and T. J. Wilkinson by Letters Patent dated August 1, 1876, No. 180,624. Said invention consists in a sulky breaking-plow, and in devices whereby both a lateral adjustment of the plow and tongue, and also a vertical adjustment of the front end of the draft-tongue, are effected through the operation of the same lever, and in additional devices, hereinafter particularly described

In the accompanying drawings, A designates the frame of my apparatus, which frame is preferably constructed of either wrought-iron or cast-iron. B designates a driver's seat, of ordinary construction, secured to said frame by seat-bar C; and D designates a brace-beam, running obliquely backward and sidewise, for a purpose hereinafter set forth. To the front part of said frame, near the furrow side thereof, is secured a depending bifurcated metal standard, E, to which is pivoted a gage-wheel, F, which is made adjustable, to regulate the height of the front of said frame, and in consequence, to regulate also the depth of the furrows.

To the sides of said frame are secured two short axles, g g^1, on which are journaled the transporting wheels G G′, the land-wheel G being in advance, diagonally, of furrow-wheel G′. This arrangement enables the driver's weight on seat B to counterbalance the beam and draft more nearly than it could if both transporting-wheels were as far forward as said land-wheel G, and it affords a securer support to said frame A than if both of said transporting-wheels were as far back as furrow-wheel G′.

H designates a plow-beam, which is pivoted to the proximate front corner of frame A by a ball-and-socket connection. (Shown in detail in Fig. 3.) Said ball-and-socket connection or joint consists of a straight rod, h, terminating in a ball, h^1, and secured rigidly to said corner of said frame, in combination with a metal plate or block, h^2, provided with a socket adapted to receive and secure said ball, and rigidly secured to the side of beam H nearest to frame A. This joint allows said beam to rock from side to side, so as to be adjustable, in the manner and by the devices hereinafter described, but keeps the said frame and beam firmly connected together. The rear end of said beam is connected to short axle g^1 of furrow-wheel G′ by means of depending rigid supporting-irons g^2 g^2, which embrace a prismatic enlargement of said axle, or a block secured thereon. Said axle is provided on each side of said straps or irons g^2 g^2 with a square fixed plate, g^3. Said plates g^3 g^3 prevent said axle from being forced longitudinally through between said irons in either direction, and thus preserve the apparatus from being twisted or strained and injured in passing over inequalities of the ground.

To the under side of beam H is secured the standard I of a breaking-plow, J, of ordinary construction, and also in advance thereof a rotating cutter, K, pivoted in inclined plates k' secured to brackets k. In front of said cutter is secured to the side of said beam a bent rod, L, which extends outward and downward, for the purpose of holding down weeds while they are being turned under by plow J. M is a longitudinal draft-bar or supplemental plow-beam, arranged parallel to, and immediately above, plow-beam H, to which it is pivotally secured a little in advance of cutter K by supporting-plates m m. To the front end of said supplemental beam or draft-bar M, at the side thereof, is attached, by metal straps n n n, a draft-tongue, N. The object of attaching supplemental beam M in advance of cutter K is to throw more weight upon said cutter, so that it may cut corn-stalks in plowing land that has previously been planted in corn. O is an upright adjusting-lever, piv-

oted to the rear end of main plow-beam H by two downwardly-extending plates, *o o*, which are connected to the rear end of supplemental plow-beam M by inclined links O^1 O^1. In consequence of this connection, when lever O is tilted backward, the rear end of said pivoted supplemental beam M is raised, and its forward end correspondingly depressed, thereby effecting a vertical downward adjustment of the said draft-tongue N. Under said lever O, between plates *o o*, a rigid raised segmental rack, O^2, is secured to the upper side of plow-beam H. Said rack is notched at intervals to receive and lock a vertically-movable rod, *p*, which slides in guides on said lever O, and is operated by rod *p'* and handle P. By means of said notched rack and vertically-movable rod, said draft-tongue N and supplemental beam M are secured at any desired degree of vertical pivotal adjustment. Said lever O is also provided with a pivoted plate, Q, operated by a handle, Q', which locks with a fixed rack, *r*, on the inside of the front bar of loop R, which is supported by rod R' on frame A. Said rod is pivotally connected to said frame, so as to be capable of a backward and forward motion, whereby it does not interfere with the backward and forward motion of said lever O, but is restrained from lateral motion, so that it may lock said lever at any point desired by the operation of the devices above described, when said lever is tilted laterally. The lateral tilting of said lever tilts sidewise with it the said plow-beam H and plow J, with the other parts attached thereto, thereby effecting the lateral, pivotal, or hill-side adjustment of the said apparatus.

The same lever O is thus adapted to effect two adjustments—a vertical one and a lateral or hill-side adjustment. To the rear side of said lever O is secured a rearwardly-extending bifurcated arm, S, in the forked end of which is pivoted the upper end of an L-shaped compound lever, T, consisting of an upright link, *t*, and a horizontal link, *t'*. Said link *t'* is pivoted to brace-beam D, about the middle of the length of said link, and it bears on its outer end a detachable cross-plate or cross-bar, U', which supports a corn-planter, U, provided with a sledge-runner, V, a dropper, V^1, and a dropping-tube, V^2. By the arrangement of levers and bars or arms above described, the said corn-planter is raised whenever (by adjusting-lever O) the draft-tongue is lowered, so as to prevent said corn-planter from dragging too heavily upon the ground in going downhill, and by the same agency it is lowered in going uphill, so as not to be held above the surface of the ground. W is a pulley secured to, and turning on, the extreme end of axle g^1, which is extended through furrow-wheel G'. Said pulley W communicates motion, by belt *w*, to a smaller pulley, Y, pivoted on one end of a bar, X, that is secured to said corn-planter U. Said pulley Y, by means of a crank, *y*, operates the feeding-slide Z of the device.

All of the above-described devices are preferably constructed of metal except the beam, supplemental beam, or draft-bar, tongue, and adjusting-lever, which are preferably constructed of wood. Any known equivalents may be substituted for any of the devices shown.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of adjusting-lever O with the draft-tongue, the pivoted plow-beam, and the bars *o'*, whereby said lever is adapted to adjust the draft-tongue vertically, and the plow-beam and plow laterally, substantially as set forth.

2. The combination of lever O with pivoted plate Q and loop R, having rack *r*, and with plates *o o*, rod *p*, and segmental rack O^2, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM BUTLER NEWMAN.

Witnesses:
E. S. LUCAS,
J. H. JANNEY.