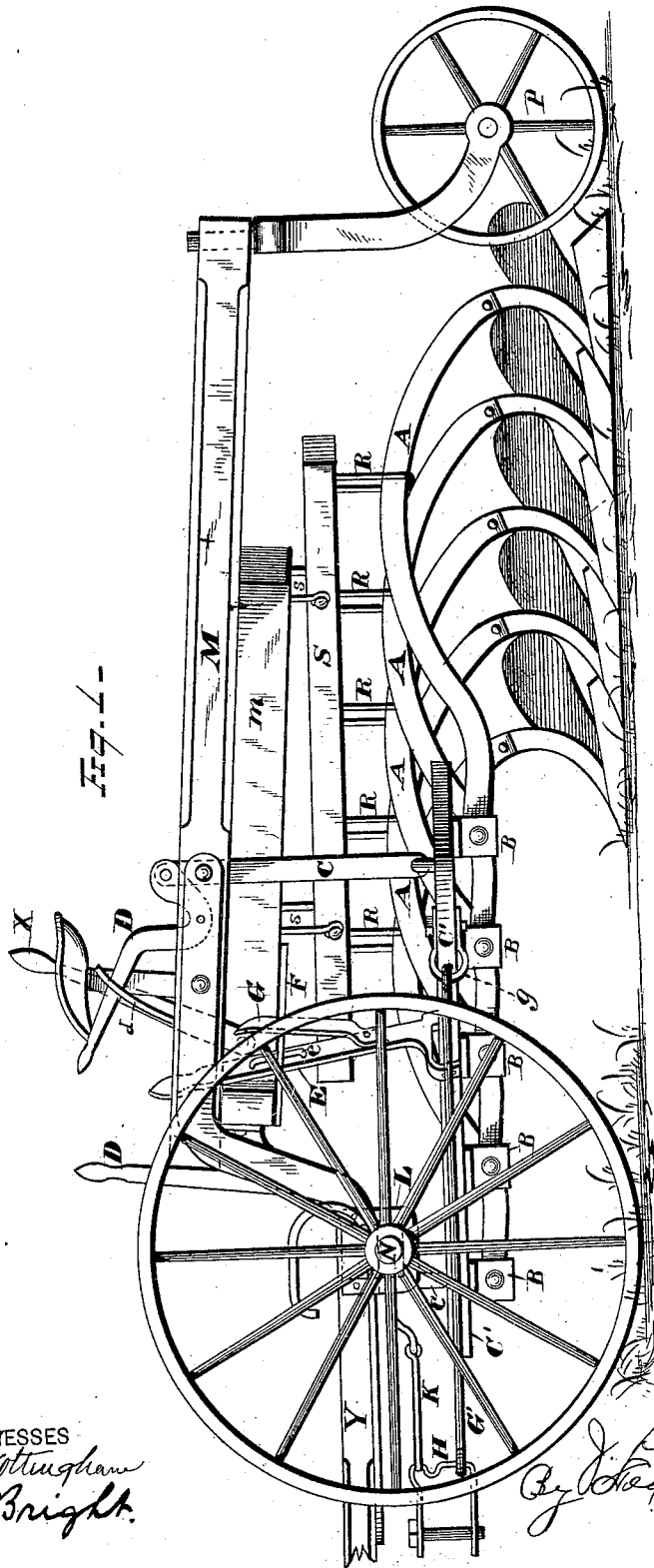


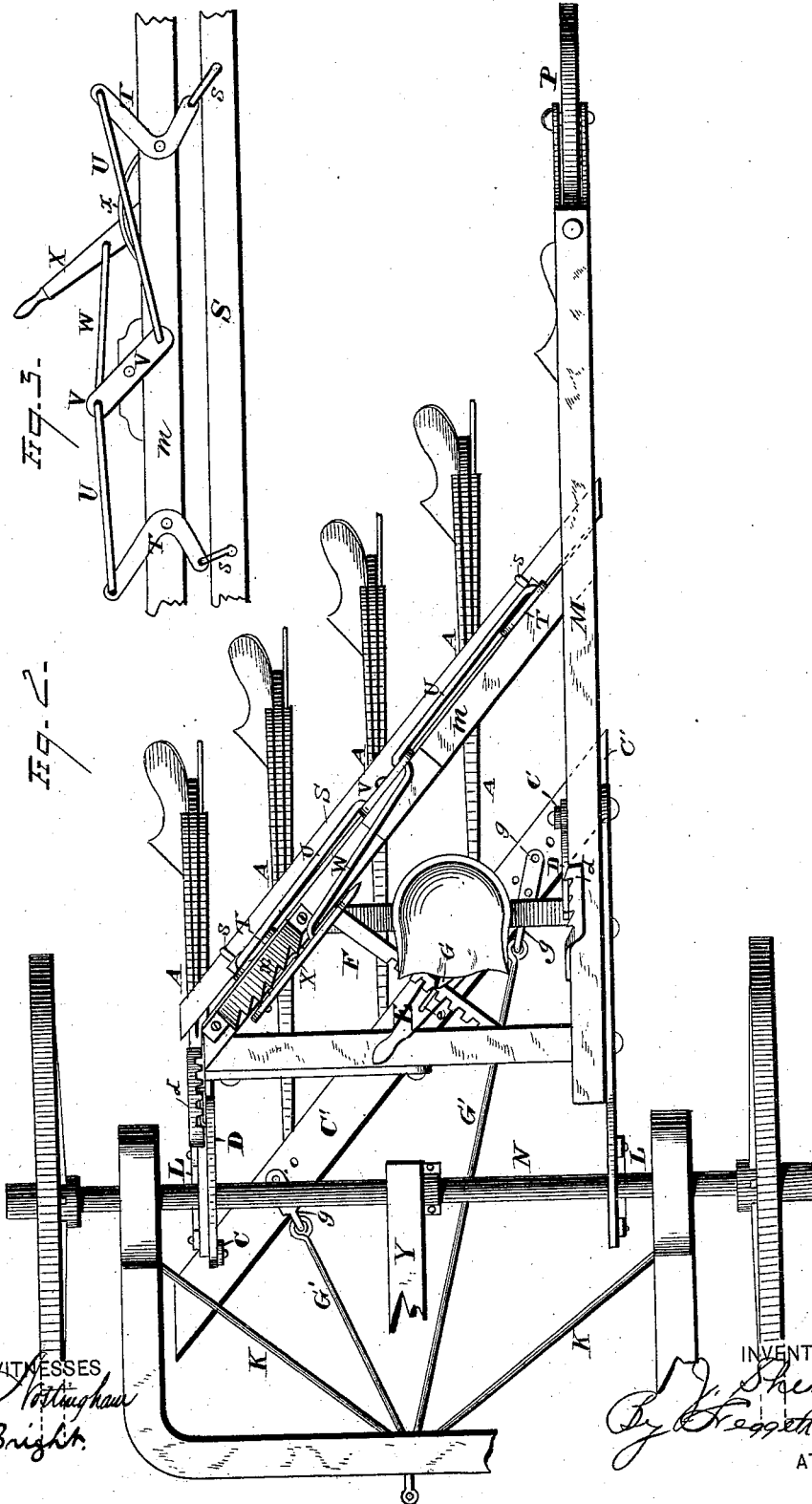
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No. 210,569. Patented Dec. 3, 1878.



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UNITED STATES PATENT OFFICE.

JAMES SHERRILL, OF HARRISBURG, OREGON.

IMPROVEMENT IN GANG CULTIVATOR AND SEEDER.

Specification forming part of Letters Patent No. **210,569**, dated December 3, 1878; application filed July 27, 1878.

To all whom it may concern:

Be it known that I, JAMES SHERRILL, of Harrisburg, in the county of Linn and State of Oregon, have invented certain new and useful Improvements in Gang Cultivator and Seeder; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to gang cultivators and seeders; and consists, first, in the combination, with a diagonal cross-bar, to which the forward extremities of the plow-beams are secured, and which is adapted to move the plows collectively to or from the land, of levers and connecting mechanism adapted to vary and maintain said bar in any desired vertical adjustment; second, in the combination, with a diagonal cross-bar, to which the forward and downwardly-curved extremities of the plow-beams are secured, and a second diagonal cross-bar, to which the rear arched portions of said beams are loosely connected, so as to have free vibratory movement in a lateral direction, of a lever which engages with said front diagonal cross-bar and operates the same in a rocking motion, whereby said plow-beams are thrown to or from the land; third, in the combination of the two cross-bars, to which, respectively, the forward and rear bodies of the plow-beams are connected, said bars being adapted to be independently varied in adjustment to or from the ground, and said forward cross-bar being adapted to be laterally moved or rocked; fourth, in the combination, with a bar to which the plow-beams are secured, and which is capable of moving the plows laterally to or from the land, of mechanism adapted, respectively, to vary the degree of the angular inclination of the plow-points to the ground and to bodily raise or lower the plows relative to the latter; fifth, in the combination, with the front diagonal cross-bar, having depending clamp-pieces on its under side, to which the plow-beams are pivoted, of the upright lever, provided with a spring-clamp, and the horizontal locking-bar, having notches with which the side projec-

tion of said lever engages; sixth, in the combination, with the front diagonal cross-bar, to which the plow-beams are indirectly pivoted, of the levers attached to the top frame, and the connecting-links secured to opposite ends of the cross-bar, said levers being adapted to engage with rack-bars; seventh, in the combination, with the front diagonal cross-bar, to which the plow-beams are indirectly pivoted, so as to have independent vertical movement, of the central draft-clevis, connecting by rods with the axle-tree and said diagonal cross-bar, the latter being provided with rod-connecting clevises, which are longitudinally adjustable thereon; eighth, in the combination, with the top frame, having loop engagement with the axle-tree at its forward end, and provided with a caster-wheel at its rear end, of the rear diagonal cross-bar, supporting the plow-beams by loops, and connected with the top frame by bell-crank levers, which latter are operated by a hand-lever and intermediate connecting-links, said hand-lever engaging with a rock-bar.

Referring to the drawings, Figure 1 is a view in side elevation of my invention. Fig. 2 is a plan view of the same. Fig. 3 is a detail view of parts not well shown in said Figs. 1 and 2.

The plow-beams A are preferably made bifurcated and adapted to connect with the standards of suitable plows, as claimed in a former patent of my own. The forward bodies of the beams are curved downwardly, and their ends are embraced by the clamps B and pivoted thereto, so as to permit of their vertical tilting movement. These clamps are secured by swivel-joint connection with the diagonal cross-bar, so as to allow said clamps to be rotated in a plane parallel with said bar. Links C connect opposite ends of the diagonal cross-bar C' with respective hand-levers D, which latter are secured to the top frame and are adapted to engage with rock-bars d.

This construction permits the depth of the furrows to be changed, as desired, so as to make the same deep or shallow.

An upright hand-lever, E, engages with said diagonal cross-bar, and extends up, so as to be operated by the driver in laterally rocking the several plows. A side projection, e, formed on

said upright lever, engages with the notches in the horizontal locking-bar F, secured to the top frame. A spring clamping-bar, G, is secured to the side of the hand-lever, and passes upon the side of the locking-bar opposite to that of the lever, so as to hold the projection *e* of the latter in engagement with the notches of said locking-bar. By operating this lever the diagonal cross-bar is transversely rocked to or fro, and its movement, communicated to the plows, causes the latter to be laterally rocked or moved without changing their constant upright position. By reason of this adaptation of the plows to be rocked over toward the land-side or toward the shear in a constant upright position, a great advantage obtains in working land which is part wet and part dry, as by this means the plows are caused to take more or less land, as the case requires. Rods G' connect this cross-bar O' with the forward central clevis, H, to which the draft is applied. The clevises *g*, which engage these connecting-rods with the said cross-bar, are adapted to be secured in different positions thereon, whereby the plows are changed in direction relative to the land. By moving both the said clevises toward the center of the bar and nearer each other, the ends of the plow-beams are thrown in toward the land, while by adjusting said clevises farther from each other and respectively toward opposite ends of the bar, the direction of the plow-beams is away from the land.

Two rods, K, connect the draft-clevis H with opposite ends of the axle-tree, and thus the applied draft is independently connected with the carriage and with the working frame of the cultivator. Loops L connect the forward end of the top frame M with the axle-tree N, and are of form adapted to allow the latter to have a laterally vibrating or swinging movement without affecting said plow-supporting frame or changing the direction of the plows. The rear end of the plow-supporting frame is provided with a caster-wheel, P, which runs in the furrow of the rear plow of the gang. The rear bodies of the plow-beams are loosely supported by the metallic loops R, secured to the under side of the rear diagonal cross-bar, S, which latter is placed below and parallel with the bar *m* of the top frame.

Bell-crank levers T are secured to bar *m*, and their weight-arms connect by loops *s* with said rear diagonal cross-bar. Their power-arms are inclined in opposite directions, and connect by links U with pivotal cross-bar V. A link, W, connects this cross-bar with hand-lever X, which latter is adapted to engage with rock-bar *z*. By this means the system of plows can be bodily raised relative to the ground, and held in any desired position. The tongue Y is made adjustable on the axle-tree, so that it can be adapted for three, four, five, or six horses abreast.

I have not represented a seed-box in the drawings, as the same may be of any desired character, and does not enter into this present

invention. I prefer, however, to use one similar to that shown in Letters Patent No. 192,462, granted to me June 26, 1877, to which patent reference was made in the forward part of this specification, when describing the bifurcated plow-beams.

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

1. In a gang-cultivator, the combination, with a diagonal cross-bar, to which the forward extremities of the plow-beams are secured, and which is adapted to move the plows collectively to or from the land, of levers and connecting mechanism adapted to vary and maintain said bar in any desired vertical adjustment, substantially as set forth.

2. The combination, with a diagonal cross-bar, to which the forward and downwardly-curved extremities of the plow-beams are secured, and a second diagonal cross-bar, to which the rear arched portions of said beams are loosely connected, so as to have free vibratory movement in a lateral direction, of a lever which engages with said front diagonal cross-bar and operates the same in a rocking motion, whereby said plow-beams are thrown to or from the land, substantially as set forth.

3. In a gang-cultivator, the combination of the two diagonal cross-bars, to which, respectively, the forward and rear bodies of the plow-beams are connected, said bars being adapted to be independently varied in adjustment to or from the ground, and said forward cross-bar being adapted to be laterally moved or rocked, substantially as set forth.

4. A gang-cultivator constructed with a bar, to which the plow-beams are secured, and which is capable of moving the plows laterally to or from the land, in combination with mechanism adapted, respectively, to vary the degree of the angular inclination of the plow-points to the ground and to bodily raise or lower the plows relative to the latter, substantially as set forth.

5. The combination, with the front diagonal cross-bar, having depending clamp-pieces on its under side, to which the plow-beams are pivoted, of the upright lever, provided with a spring-clamp, and the horizontal locking-bar, having notches with which the side projection of said lever engages, substantially as set forth.

6. The combination, with the front diagonal cross-bar, to which the plow-beams are indirectly pivoted, of the levers attached to the top frame and the connecting-links secured to opposite ends of the cross-bar, said levers being adapted to engage with rock-bars, substantially as set forth.

7. The combination, with the front diagonal cross-bar, to which the plow-beams are indirectly pivoted, so as to have independent vertical movement, of the central draft-clevis, connecting by rods with the axle-tree and said diagonal cross-bar, the latter being provided with rod-connecting clevises, which are longi-

tudinally adjustable thereon, substantially as set forth.

8. The combination, with the top frame, having loop engagement with the axle-tree at its forward end, and provided with a caster-wheel at its rear end, of the rear diagonal cross-bar, supporting the plow-beams by loops, and connected with the top frame by bell-crank levers, which latter are operated by a hand-lever and intermediate connecting-links, said hand-lever

engaging with a rock-bar, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 8th day of July, 1878.

JAMES SHERRILL. [L. s.]

Witnesses:

E. J. SOMMEVILLE,
JAMES RILEY.