S. G. RAYL.

Cultivator.

No. 107,409. Patented Sept. 13, 1870.

Fig. 1.

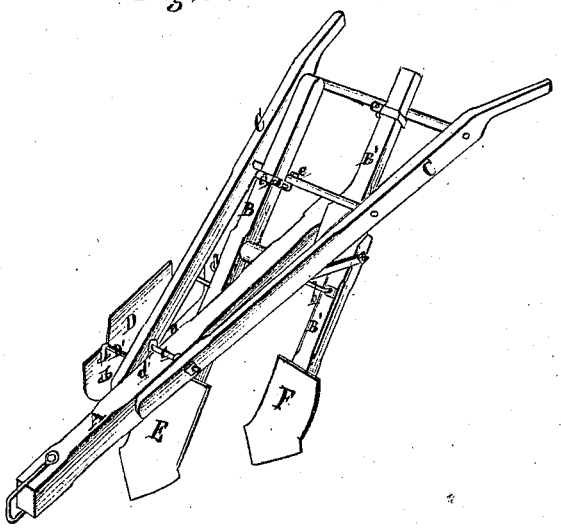
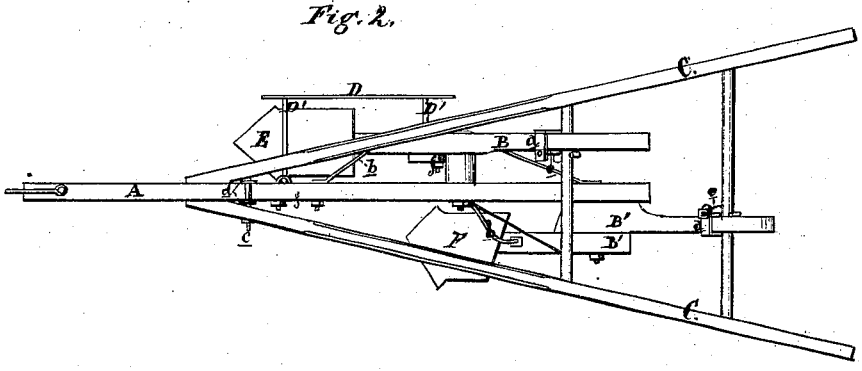


Fig. 2.



Attest

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SAMUEL GARRET RAYL, OF AGENCY CITY, IOWA.

IMPROVEMENT IN DOUBLE-SHOVEL PLOWS.

Specification forming part of Letters Patent No. **107,409**, dated September 13, 1870.

To all whom it may concern:

Be it known that I, SAMUEL G. RAYL, of Agency City, in the county of Wapello and State of Iowa, have invented a new and useful Improvement in Double-Shovel Plows; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is an elevation of my improvement, and Fig. 2 is a plan of the same.

Like letters indicate like parts in each figure.

The nature of this invention relates to an improvement in the construction of adjustable double-shovel plows; and it consists in the construction and arrangement of its several parts, as more fully hereinafter described.

In the drawings, A represents the draft-beam, to which are pivoted the standards B B′ by suitable bolts passing through the beam and standards. The standards are further secured to the beam by the adjustable braces *b*, having screw-nuts at each side of the standards, by means of which the inclination or pitch of the latter is readily adjusted.

C are the plow-handles, whose front ends are held against the cheeks of the beam by a bolt, C, passing through them over the beam, and through the eyes of a stirrup, *d*, which embraces the beam. The rounds of the handles are secured to the standards by hook-bolts *e*, passing through the eyes of stirrups *d*, embracing the standards. The standard B′ is made in two parts, the upper being interposed between the lower and the beam, the bolt serving as a pivot for each, while the other standard has a tubular washer interposed between it and the beam. This arrangement gives the standards the necessary spread or space between them, and allows the handles to be raised or lowered to the height most convenient to the operator. It also permits the standards and their shovels to be changed or shifted to opposite sides of the beam.

D is a clod-fender, cheaply constructed of a plate of metal mounted on properly-curved rods D′, which are secured to the implement by hook-bolts *f*, the forward one passing through the beam and the rear one through the adjacent standard, having a block or washer interposed between the standard and the nut, as shown in Fig. 2. The clod-fender is parallel with the beam; but if more clearance be required, the rear end of the fender may be thrown outward by shifting the block to other side of the standard. It is also adjustable in a vertical direction by moving the rods D′ up or down in the bolts.

E is a pointed square shovel or scarifier secured to the standard B by a couple of bolts, but has interposed between it and the standard a block. By thus placing the shovel in advance of the standard more clearance is obtained for the passage of the earth between its upper edge and the clod-fender and standard, preventing the earth from clogging in the space between the standard and clod-fender.

F is an obliquely curved or twisted shovel secured to the standard B′ by a couple of bolts, the twist of the shovel being designed to throw the greater part of the earth taken up to the right. In such shovels as ordinarily constructed a lateral thrust or pressure is exerted on the implement in an opposite direction to which the earth is thrown. To overcome this objection the point of the shovel is lengthened on the outer or left side, as shown in the drawings, which thus equalizes the draft. In the cultivation of corn and small plants, with the varsous parts of the implement adjusted as shown, a furrow is made in the middle of the space between the rows—a feature of great value in cultivating low, wet, or flat lands, as the furrow drains the water away from the plants and prevents them from being scalded or drowned out, and in rolling ground it draws off the water and prevents the washing away of the plants by heavy rains.

It will be seen that the implement is susceptible of every possible change and variety of adjustment for turning the soil to or from the plants at any desired extent. The clod-fender may be detached when not required, and the shovels moved forward and back by transposing them to opposite sides of the beam. The handles may also be raised or lowered to the height most convenient to the plowman, and the pitch of the shovels adjusted to the inclination best adapted to the nature of the work to be done, making it at once the cheapest, most convenient, and desirable implement for the purposes for which it is designed.

If desired, the standard B may be in two sections similar to the other.

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

1. The arrangement of the standards B B′,

handles C, braces *b*, stirrups *a* and *d*, the bolt *c*, and hook-bolt *e*, when constructed as described and shown, and for the purpose of adjusting said standards.

2. The plow above described, consisting of the beam A, the standards B B′, the handles C, the clod-fender D, the shovels E and F, the stirrups *a* and *d*, bolt *c*, and hook-bolt *e*, when constructed and arranged as described and shown, and as and for the purposes set forth.

SAMUEL GARRET RAYL.

Witnesses:

ANSEL L. CHAMBERLIN,

JESSE B. PILEHER.