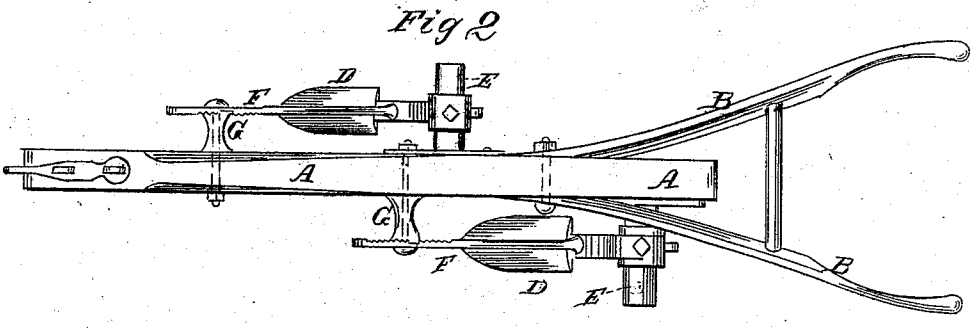
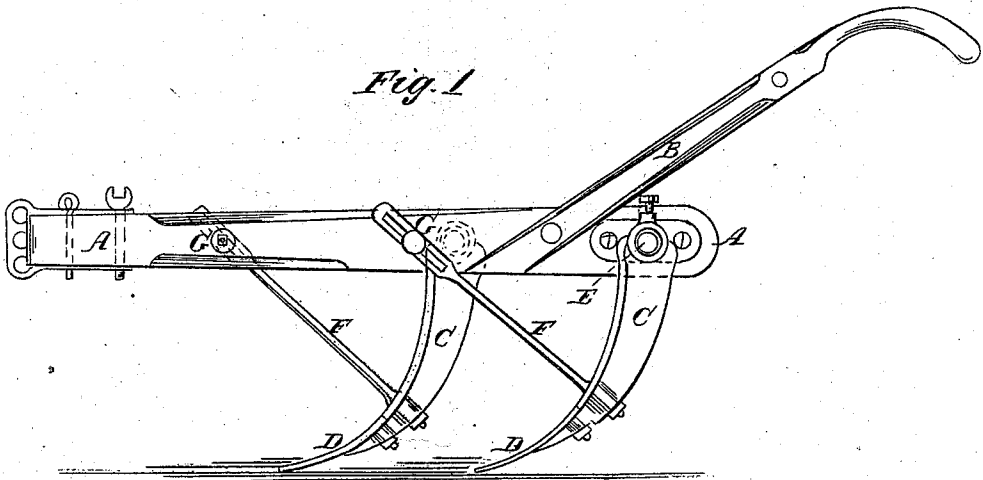


E. Ward,

Cultivator.

No. 93,507.

Patented Aug 10, 1869



Witnesses:

A. W. Almquist
Geo. T. Nabee

Inventor:

E. Ward
PER *[Signature]*
Attorneys.

UNITED STATES PATENT OFFICE.

EDWARD WIARD, OF LOUISVILLE, KENTUCKY, ASSIGNOR TO B. F. AVERY,
OF SAME PLACE.

IMPROVEMENT IN EXPANDING DOUBLE-SHOVEL PLOWS.

Specification forming part of Letters Patent No. 93,507, dated August 10, 1869.

To all whom it may concern:

Be it known that I, EDWARD WIARD, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and Improved Expanding Double-Shovel Plow; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which--

Figure 1 is a side view of my improved plow. Fig. 2 is a top view of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved double-shovel plow, which shall be so constructed and arranged that the shovels may be adjusted to work at any desired distance apart or at any desired pitch, as the circumstances of the case may render desirable; and it consists in the construction and combination of the various parts of the plow, as hereinafter more fully described.

A represents the plow-beam, and B the handles, about the construction of which parts there is nothing new.

C are the plow-standards, which are made in about the form and manner shown in the drawings—that is to say, they are made in the form of thin plates having a laterally-projecting flange upon each side of their forward edges, to obtain the greatest amount of strength with the smallest amount of metal, thus producing very light and at the same time very strong standards.

Upon the forward sides of the lower ends of the standards C are formed shoulders to receive the shovels D, each of which is secured in place upon said standards by a single short bolt, as shown in Fig. 1.

Upon the upper ends of the standards C are formed sockets, fitting upon the hollow or tubular spindles E, where they are secured in place, when adjusted, by means of set-screws, keys, or other well-known means. The hollow spindles E are secured to the opposite sides of the beam A by screws or bolts passing through said beams and through ears formed upon the inner ends of said spindles, as shown in Figs. 1 and 2. This construction allows the plows to be conveniently adjusted farther apart or closer together, as may be required.

F are brace-bars, the rear ends of which pass

through a hole in the lower parts of the standards C, and are secured in place by screw-nuts, as shown in Fig. 1. The upper parts of the brace-rods F are slotted and rest in notches in the outer ends of the short posts or arms G. The brace-bars F have notches or teeth formed in the inner sides of their forward ends, into which fits a ridge or tooth formed in the bottom of the notches in the ends of the posts or arms G, to prevent said braces from slipping under the draft strain. The brace-rods F are secured to the posts G and to the beam A by bolts which pass through the slot in the rods F, through the posts G, and through the beam A, as shown in Fig. 2.

If desired, the braces F may be placed in the rear of the standards C and their upper ends connected with the rear end of the beam A, which should be extended rearwardly to receive them. In this case the lower ends of the braces F may be formed solid with or attached to the lower parts of the standards C, as may be desired. The adjustable brace-bars F enable the pitch of the plows to be conveniently regulated as desired.

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

1. Adjustably connecting the plow-standards to the plow-beam by means of sockets formed in the upper ends of said standards and the hollow spindles E, substantially as herein shown and described, and for the purpose set forth.

2. The plow-standards C, made of a thin plate with a flange upon both sides of its forward edge, substantially as herein shown and described, and for the purpose set forth.

3. The slotted brace-rods F and posts or arms G, in combination with the standards C and beam A, whether said braces be placed in front or rear of said standards, substantially as herein shown and described, and for the purpose set forth.

4. An improved expanding double-shovel plow formed by the combination of the plows D, standards C, hollow spindles E, brace-bars F, posts or arms G, beam A, and handles B with each other, substantially as herein shown and described, and for the purposes set forth.

EDWARD WIARD.

Witnesses:

H. T. HANFORD,
JNO. C. COONLEY.