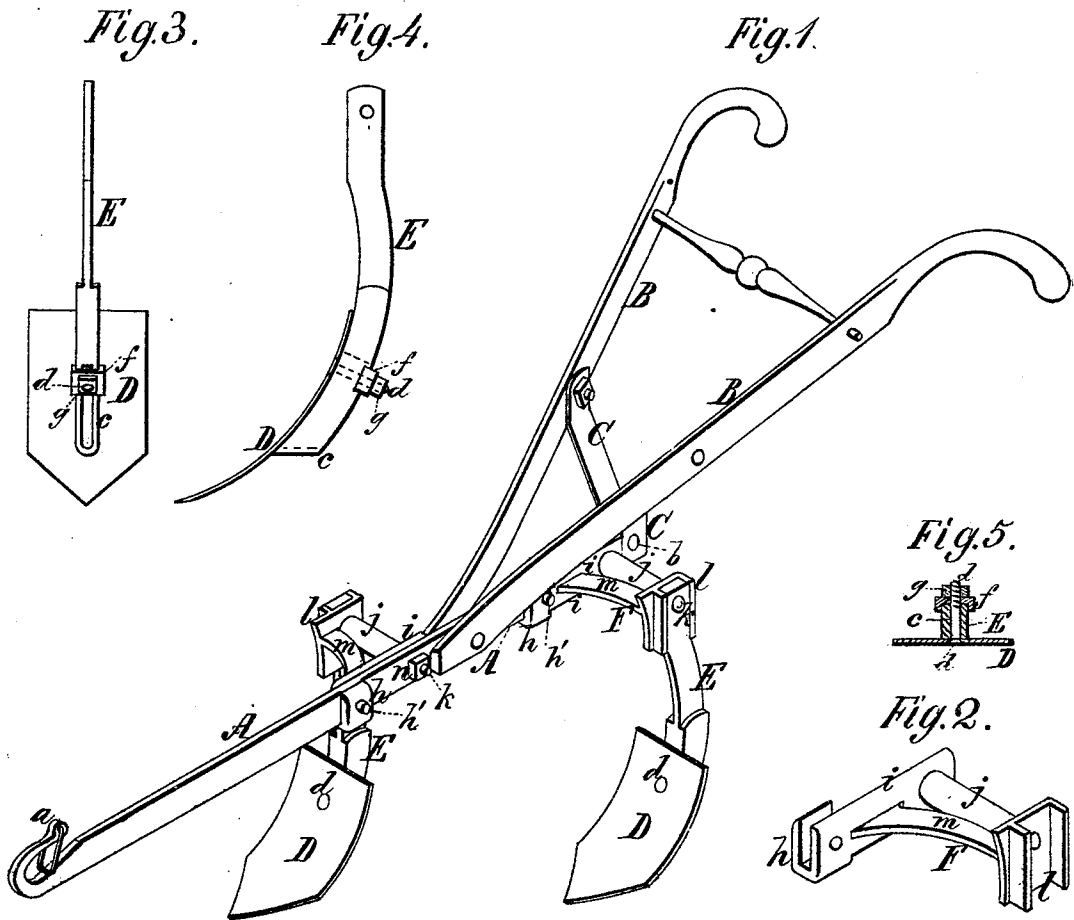


E. WIARD.
CULTIVATORS.

No. 183,090.

Patented Oct. 10, 1876.



Witnesses:
James Martin Jr.
J. P. Theodore Lang.

Inventor:
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UNITED STATES PATENT OFFICE.

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

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 183,090, dated October 10, 1876; application filed April 17, 1876.

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 useful Improvement in the Iron-Beam Double-Shovel Plow; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of my improved plow. Fig. 2 is a perspective view of one of the bracket-braces by which the plows are connected to the beam. Figs. 3, 4, and 5 are views of one of the shovels and the standard thereof, showing the way of connecting the former to the latter.

The nature of my invention consists in a single iron-beam double-shovel plow, having its shovels arranged on opposite sides of the beam, one in rear of the other, and sustained by peculiar braced and stayed brackets in such manner that a strong and light double-shovel plow is produced. It consists, second, in a peculiar bracket with a broad plate for abutting against the side of the beam, a tubular bolt-stay extending laterally from the side plate, a broad-flanged plate at the outer end of the tubular bolt-stay for receiving the standard of the shovel, and a diagonal brace between the abutting-plate and the shovel-standard plate. This construction affords a bracket-brace of great lightness and strength, all made in one piece, and through which the devices by which the shovels are confined to the beam may be readily passed and secured. It consists, third, in the lever-acting bracket, constructed with a loop, to receive the beam edgewise, and with a horizontal passage through its looped portion, to permit the insertion of a wooden pin through the looped portion and the beam.

In the accompanying drawings, A is a single wrought-iron or other metal beam for a double-shovel plow. This beam is in form of a broad, narrow bar, and has a suitable clevis-hook, *a*, formed on, or attached to, its front end. B B are the handles, attached to the beam at a point which is forward of its rear end about one-third the length of the beam. C C are two braces, extending down, respectively, from about the middle of the length of

the handles to the end of the beam, and converging toward one another until they touch the beam, where they are fastened together and to the beam by a single bolt, *b*. D D are shovel plows or blades attached to curved standards E E. The lower ends of the standards are looped, as at *c*, and through these looped portions screw-bolts *d*, with counter-sunk heads, are passed, said bolts being first inserted through the holes in the shovels. On the ends of the bolts *d* flanged clamping-bars *f* are placed, and behind these bars are nuts *g*. The bars extend across the back of the looped ends of the standards and bind against the sides of the same, and, when the nuts are screwed up, they keep the shovel steady against any movement on either side of its center. By loosening the nuts the shovels can be raised or lowered for plowing shallow or deep. The standards, with the shovels attached, are arranged upon opposite sides of the beam, one in rear of the handles, and the other forward of the same. The connecting devices between the shovels and the beam consist of the lever-brackets F F, made of malleable cast-iron, or other metal, and formed with a loop, *h*, to receive the beam edgewise, and a wooden relief-pin, *h'*, which is passed horizontally through the loop and beam, and with an abutting-plate, *i*, for bearing against the side of the beam, a tubular stay, *j*, for a long fastening screw-bolt, *k*, to pass through, a flanged plate, *l*, for receiving the upper end of the shovel-standard, and a curved diagonal brace, *m*, for staying the plates against the lateral thrust or strain caused by the labor of plowing performed by the shovels. The bolt *k* is formed with a head on one end, and screw on the other, on which latter a nut, *n*, is applied. Said bolt is passed horizontally through the shovel-standard, tubular stay and plates of the bracket-brace, and the beam, and receives the nut *n* on its screw end, and the said wooden pin passes through the loop and beam, all as shown in the drawings.

I do not claim, broadly, as my invention wooden relief-pins applied to agricultural implements; but

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

1. The combination, in the double-shovel

plow, of the single iron-beam, the two shovels, and the braced and stayed brackets, all constructed and arranged as and for the purpose set forth.

2. The plow-shovel bracket F, constructed with the abutting side plate, the tubular stay, flanged plate, and diagonal brace, in the manner and for the purpose described.

3. The lever-bracket, as described, made

with an open loop, to receive the plow-beam edgewise, and with a passage through its looped portion, to permit the insertion through it and the beam of a wooden pin, substantially as described.

EDWARD WIARD.

Witnesses:

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