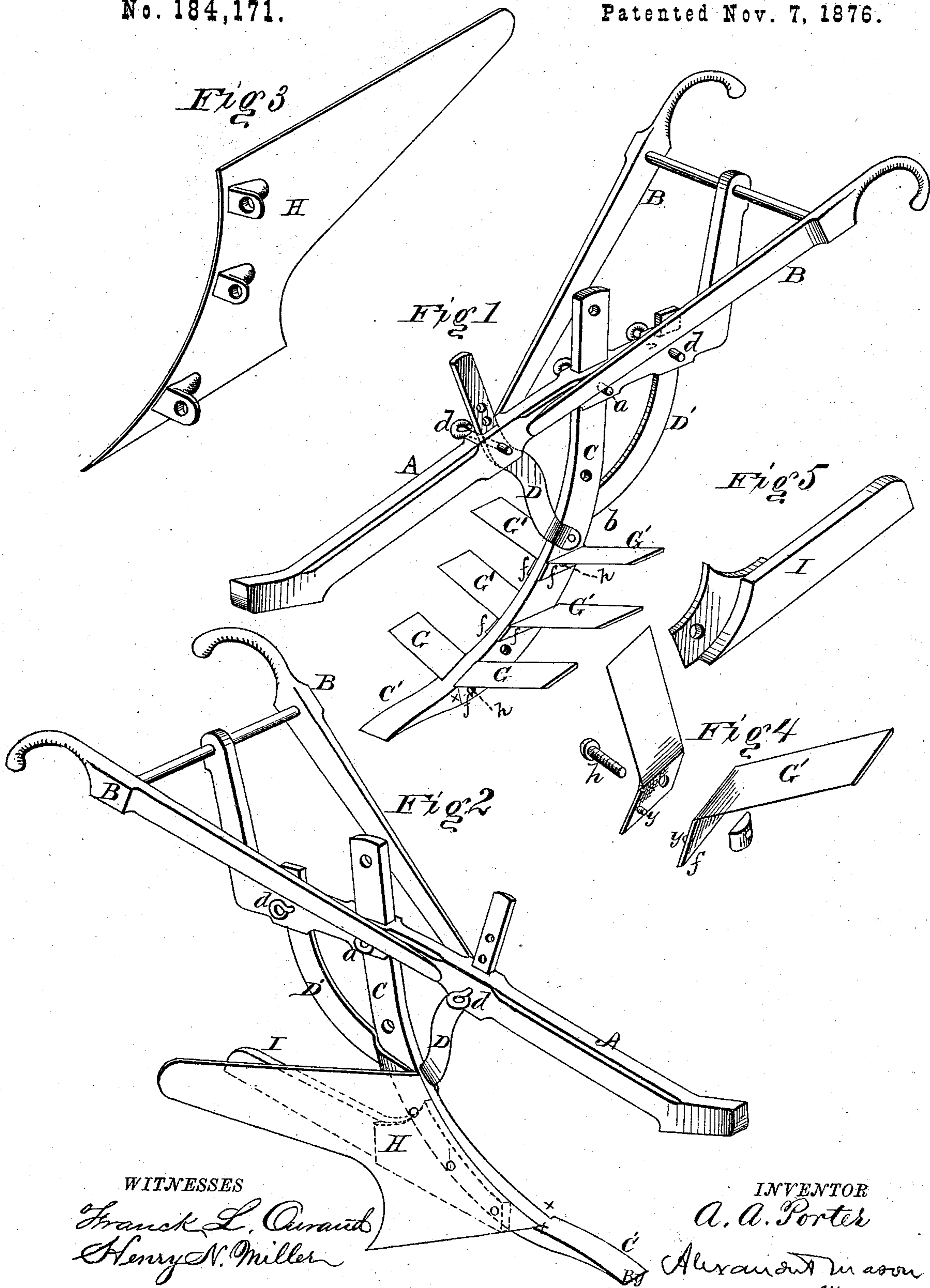


A. A. PORTER.
SUBSOIL FLOW.

No. 184,171.

Patented Nov. 7, 1876.



WITNESSES

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UNITED STATES PATENT OFFICE.

ARCHIBALD A. PORTER, OF GRIFFIN, GEORGIA.

IMPROVEMENT IN SUBSOIL-PLOWS.

Specification forming part of Letters Patent No. 184,171, dated November 7, 1876; application filed May 10, 1876.

To all whom it may concern:

Be it known that I, A. A. PORTER, of Griffin, in the county of Spaulding, and in the State of Georgia, have invented certain new and useful Improvements in Subsoil-Plows; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a subsoil-plow and pulverizer, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view of my subsoiler and pulverizer. Fig. 2 is a similar view, showing a land-side and mold-board attached thereto. Figs. 3, 4, and 5 are perspective views of detached parts thereof.

A represents the plow-beam, with handles B B, constructed in the usual manner. C represents the plow foot or standard, made of a plain bar of wrought-iron, drawn to a point at C', and given the proper curve. The upper end of this standard passes through a mortise in the beam A, and may be adjusted up or down, as required, and held at any point by means of a pin, *a*, passing through the beam and the standard. The standard C is held rigid by means of a front colter, D, and back brace D', curved as shown, their lower ends being secured on opposite sides to the standard by a single bolt, *b*, and their upper ends passing through mortises in the plow-beam, and therein adjusted and held by pins *d d*. On each side of the standard C, near the point C', is secured a blade, G, which forms the subsoiling-wings, and above the same, on each side of the standard, are attached several plates, G', as many as may be necessary, forming the pulverizing-wings. These blades or wings are set at varying angles on the plow-

standard, the lower blades G G subsoiling the ground, and the blades G' G' pulverizing the same from one to three feet, keeping it from breaking in clods. The blades are, at their inner ends, provided with downward-projecting flanges *f f*, through which bolts *h* are passed to fasten the blades to the standard. The subsoiling-blades G are held from turning by said flanges coming against shoulders *x* on the standard, while the pulverizing-blades G' have their flanges provided with points or lugs *y*, which enter corresponding recesses in the sides of the standard.

By removing the various blades various other attachments may be used with the plow-standard—for instance, as shown in Fig. 2, where a mold-board, H, and land-side bar I are fastened to the standard by providing said parts with suitable lugs, through which the bolts *h* are then passed. A sweep, scraper, and other attachments may also be used, if desired.

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

1. The combination, with the mortised plow-beam A, of the adjustable standard C, adjustable colter D, and the adjustable brace D', the colter and brace being connected on opposite sides of the standard, and all three held in the mortised plow-beam by pins *a d*, as and for the purposes herein set forth.

2. The combination, with the standard or foot C, having shoulders *x*, of the blades G G, secured on opposite sides in rear of said shoulders, and the wings G', provided with the downward-projecting flanges *f f* and lugs *y y*, and all connected by the bolts *h*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of April, 1876.

ARCHIBALD A. PORTER.

Witnesses:

GEO. W. BATTLE,

THOS. W. THURMAN.