

(No Model.)

2 Sheets—Sheet 1.

J. P. McINTYRE.  
PLOW STANDARD.

No. 296,861.

Patented Apr. 15, 1884.

Fig 1.

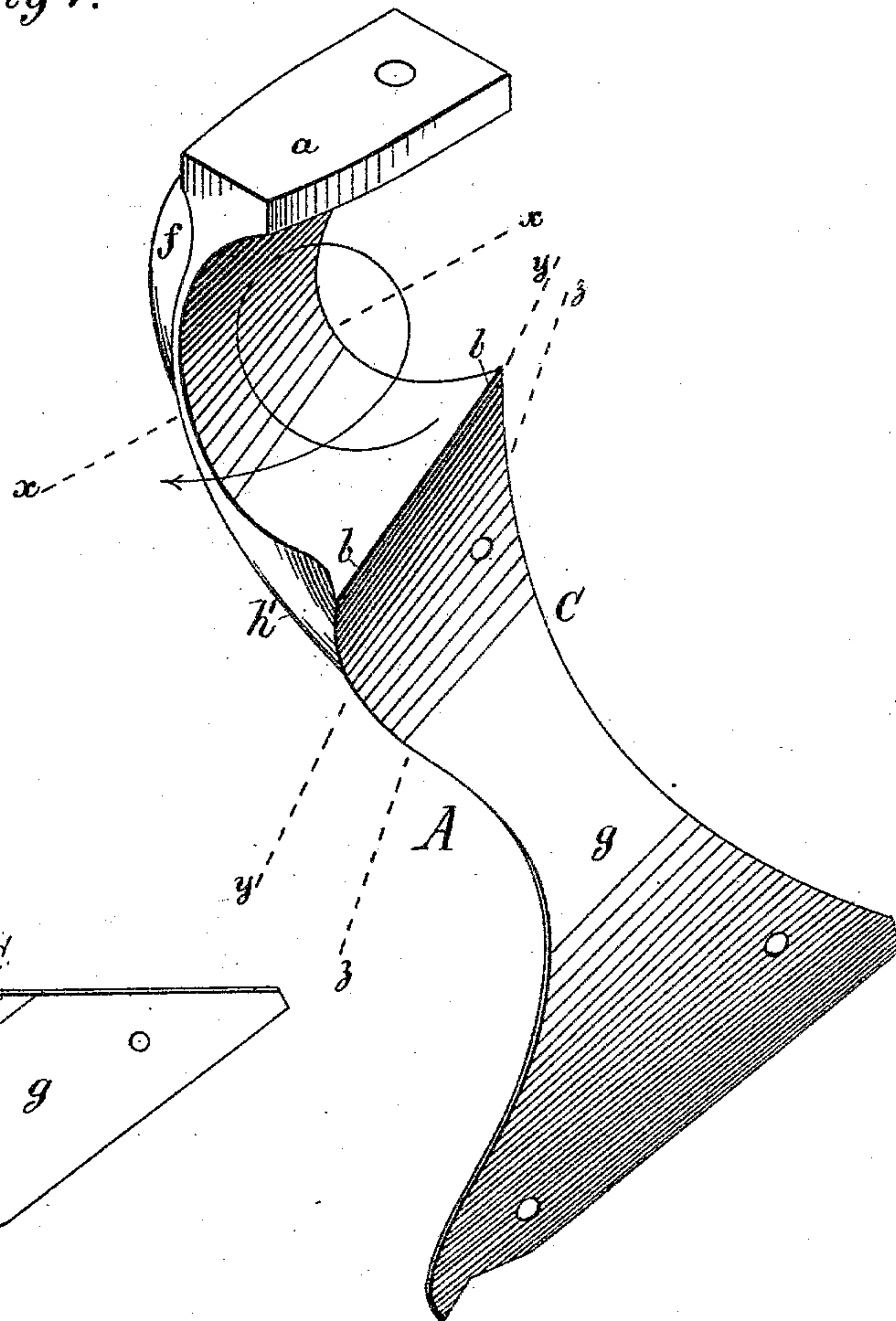


Fig 4

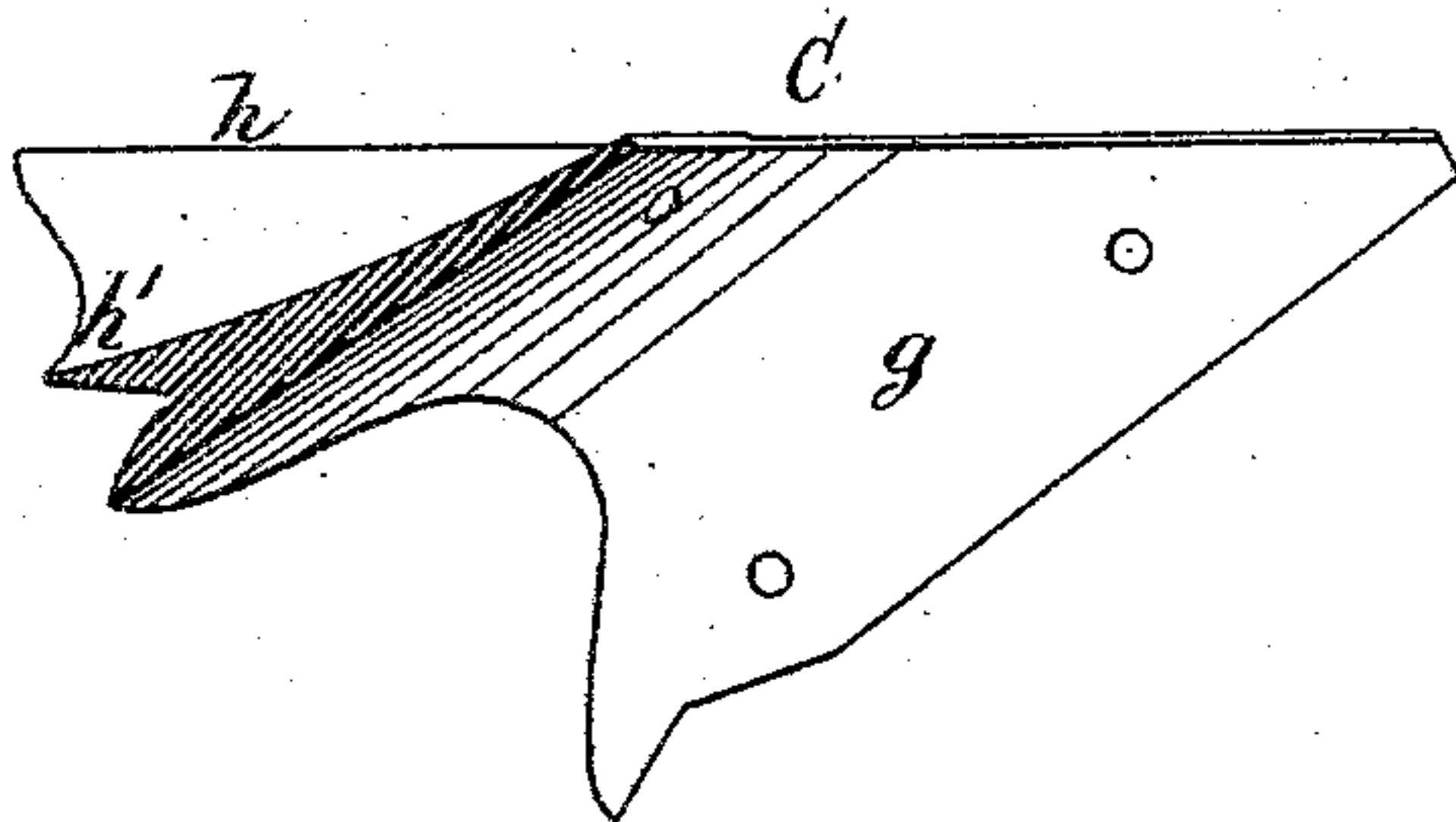


Fig 5.

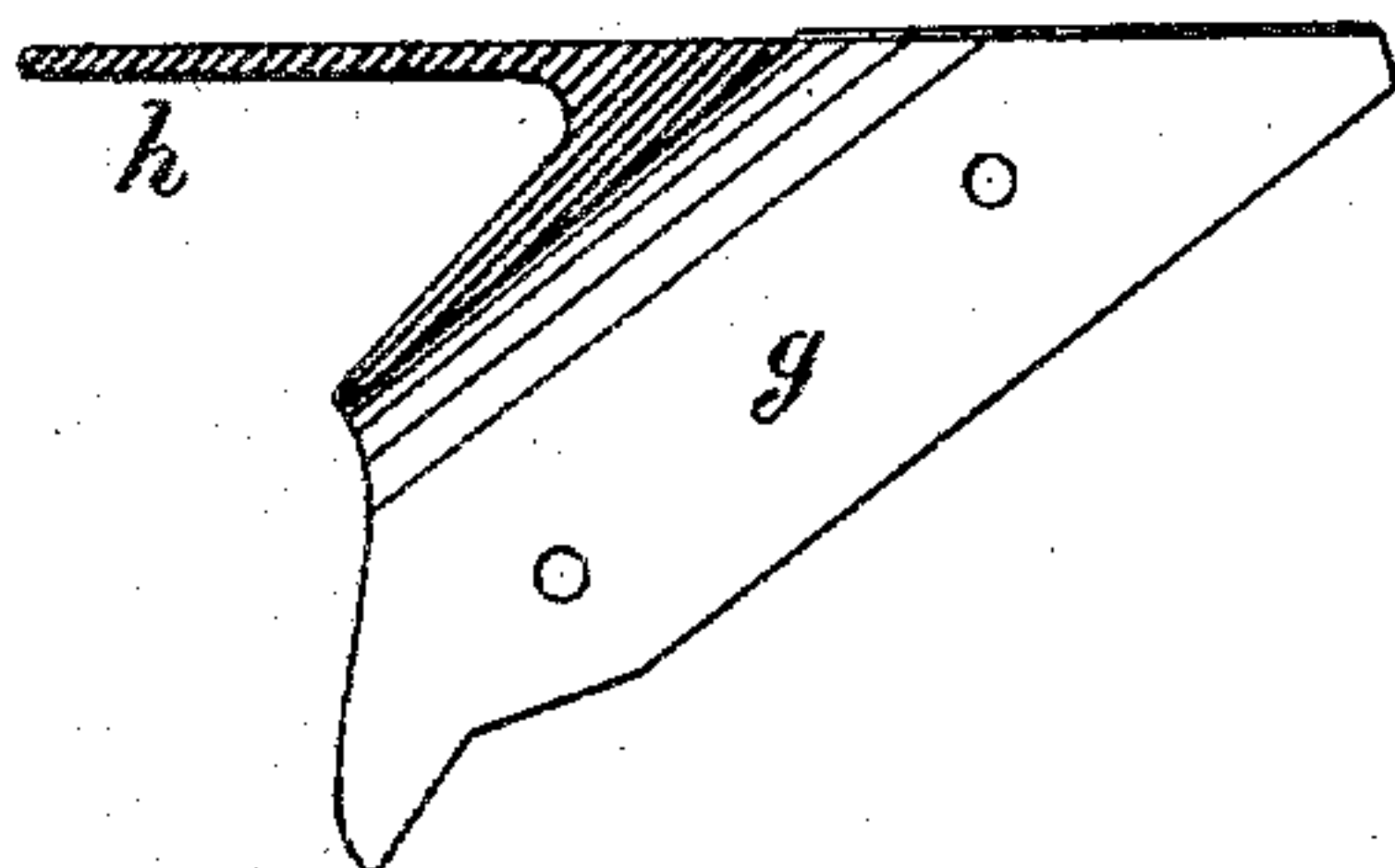
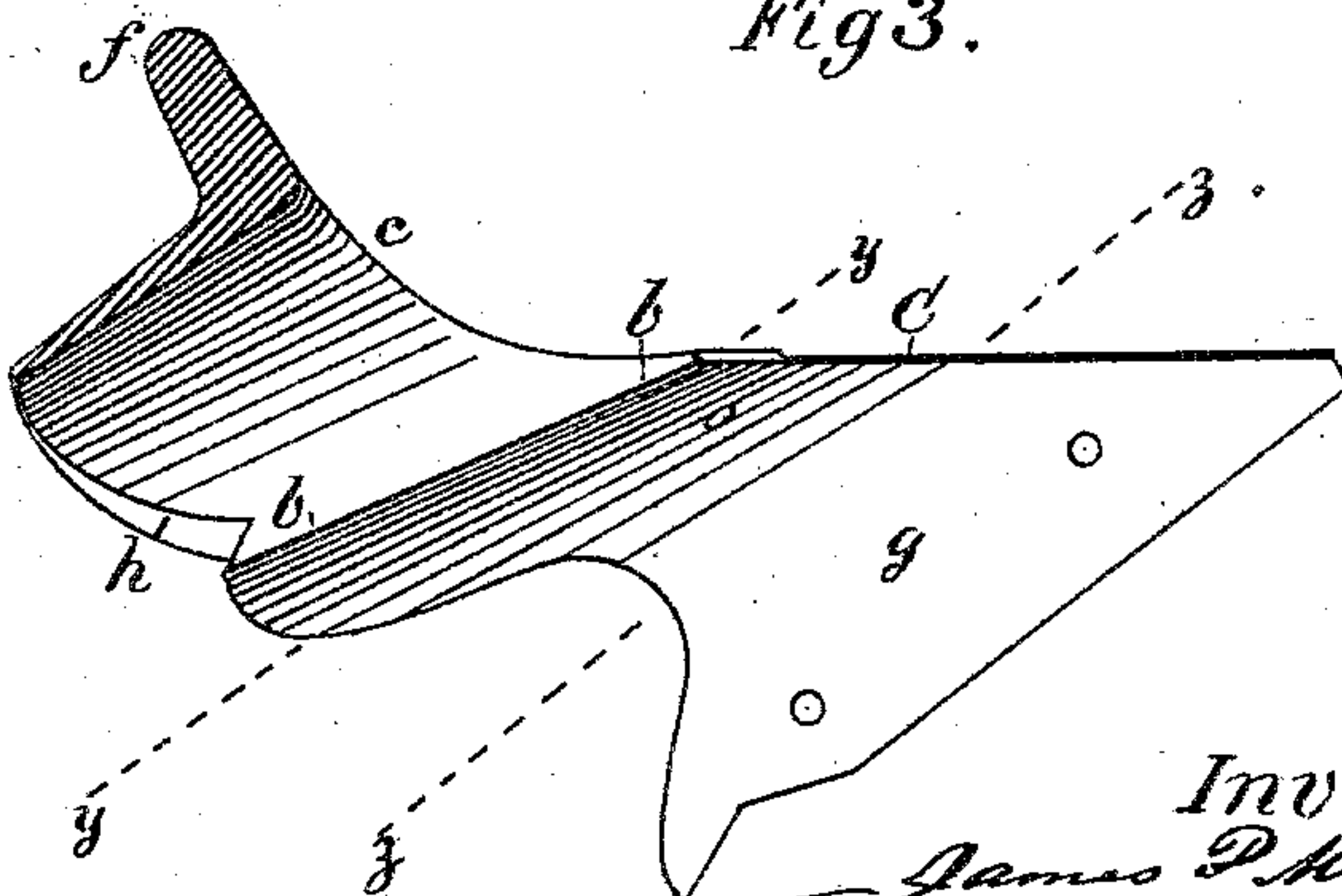


Fig 3.



Witnesses:  
J. P. Theo. Lang  
R. Carlyle Fenwick

Inventor:  
James P. McIntyre  
by his attys.  
Fenwick & Lawrence

(No Model.)

2 Sheets—Sheet 2.

J. P. McINTYRE.

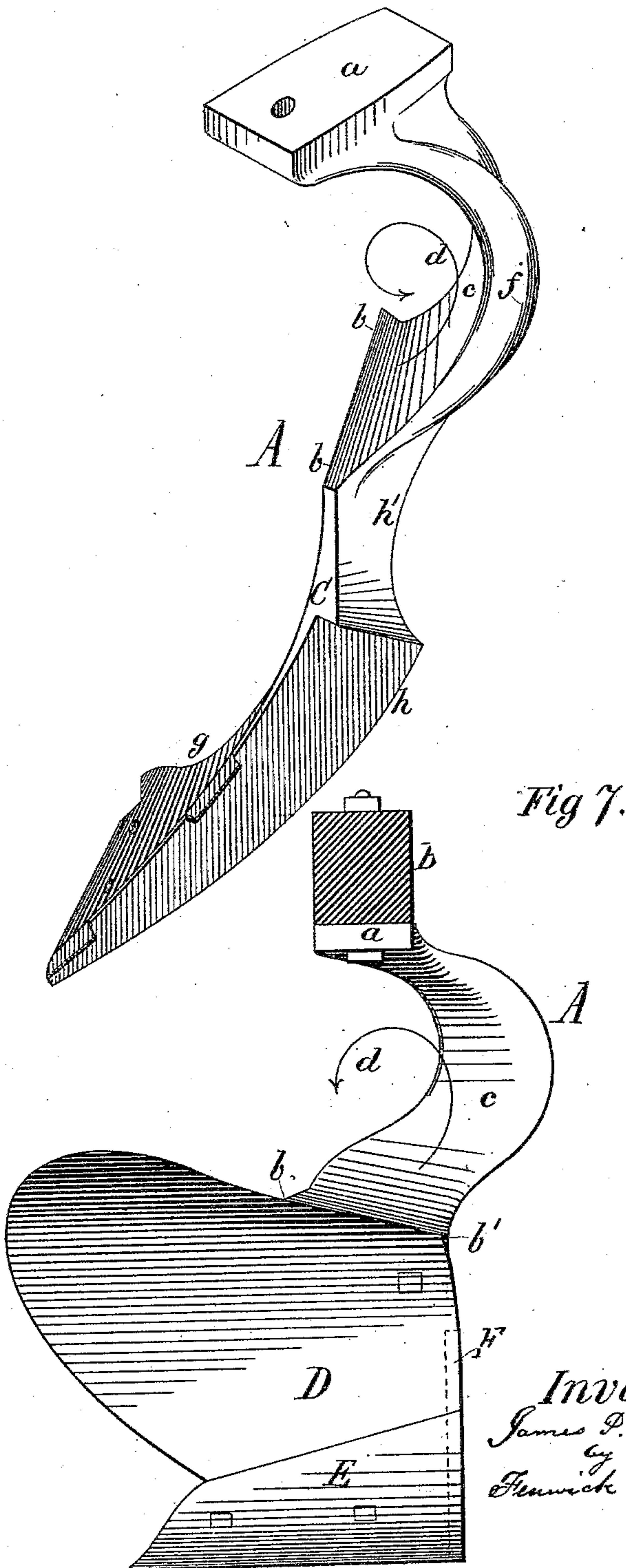
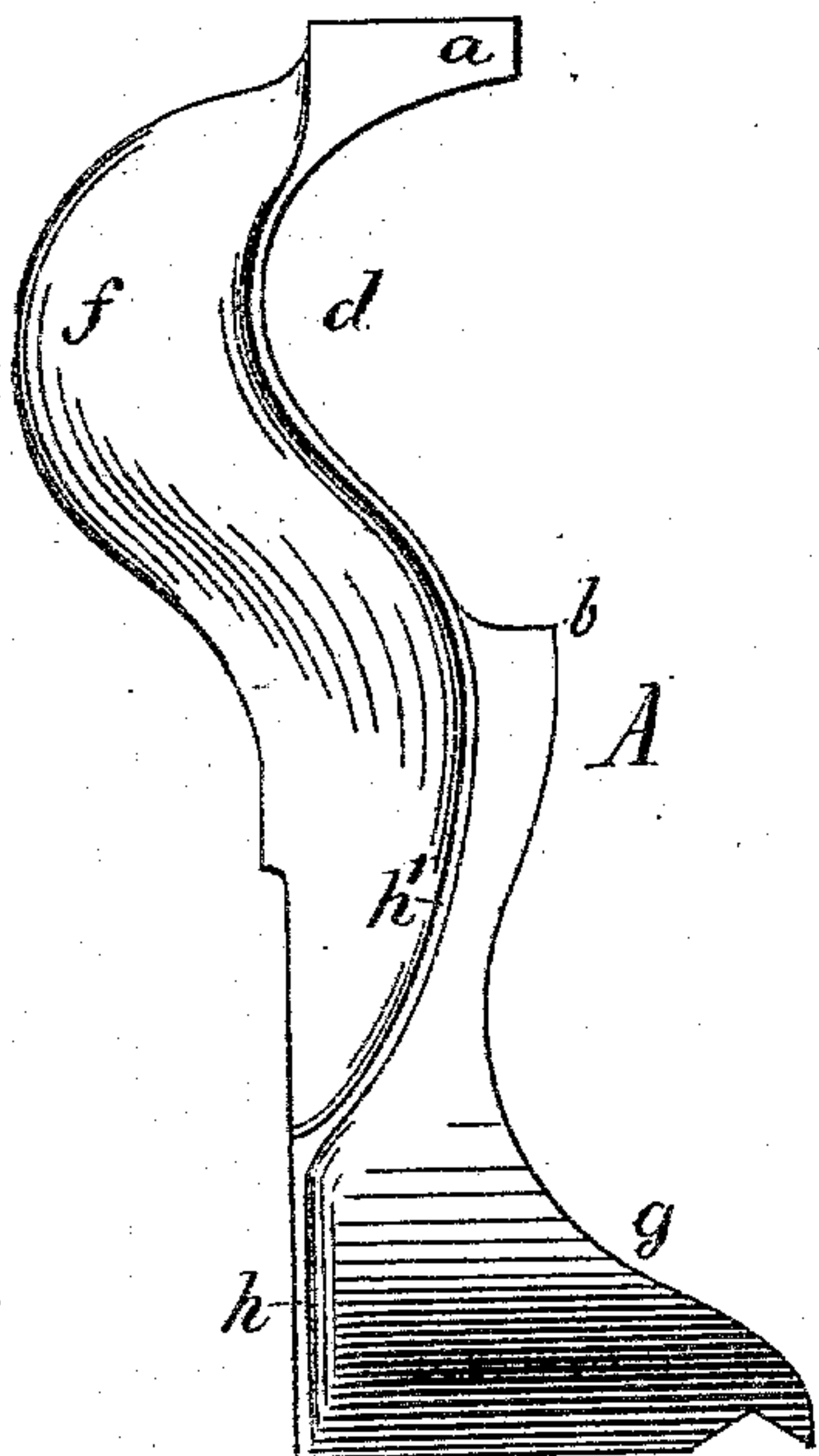
PLOW STANDARD.

No. 296,861.

Patented Apr. 15, 1884.

*Fig 2.*

*Fig 6.*



*Fig 7.*

Witnesses:  
J. P. Theo. Lang.  
B. Carlyle Fenwick.

Inventor:  
James P. McIntyre  
by his atty,  
Fenwick & Co.



# UNITED STATES PATENT OFFICE.

JAMES P. MCINTYRE, OF EAU CLAIRE, WISCONSIN, ASSIGNOR TO THE EAU CLAIRE CHILLED PLOW COMPANY, OF SAME PLACE.

## PLOW-STANDARD.

SPECIFICATION forming part of Letters Patent No. 296,861, dated April 15, 1884.

Application filed September 15, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES P. MCINTYRE, a citizen of the United States, residing at Eau Claire, county of Eau Claire, and State of Wisconsin, have invented a new and Improved Standard for Plows, of which the following, in connection with the annexed drawings and the letters of reference thereon, is a specification.

10 In the construction of plow and cultivator standards it has been attempted in various ways to so shape the neck portions thereof as to ease the upward and backward passage and escape of weeds and clogging substances which  
15 rise on the shin or landside edge of the share and mold-board, and have a tendency to accumulate directly under the beam and on said neck portion of the standard. The shape generally adopted for effecting this object has been  
20 either a simple bend or concave surface in form of a segment of a circle or of an ellipse at right angles to the beam or a rectangular segmental bend in the neck portion of the standard, which extends laterally from immediately beneath the beam over upon the land-  
25 side of the plow. As instances among many patents, see Nos. 44,745, 87,533, 175,216, and 251,370.

30 The different constructions heretofore contrived do not accomplish the twofold purpose of my improved standard—viz., easing the passage upward, inward, and backward of weeds and other choking or clogging matter, and at the same time discharging the  
35 same on the furrow side of the neck toward the mold-board side of the plow.

My invention consists in a plow-standard having a spirally-hollowed and inwardly and upwardly inclined neck, the forward portion  
40 or landside edge of the curved neck resembling very closely parts of the two curves of a cyma reversa, and the hollowed surface formed upon the front of the neck from said landside edge to the furrow-side edge being throughout  
45 of substantially the same outline as the landside edge, excepting that the diameter of the segmental hollow surface very slightly diminishes inwardly toward the furrow side—that is, changes gradually but very slightly from a  
50 cylindrical segmental to a truncated conical seg-

mental hollow surface. The hollowed surface is on a spiral line forming an oblique up, back, and inward incline plane, whereby the weeds and other clogging matters are caused to glide diagonally upon the hollow surface of the neck  
55 in an inward, upward, and backward direction, and thus to pass over the same from the upper terminus of the shin and landside of the plow toward the furrow side, and deposit on the mold-board side of the plow, as will be  
60 hereinafter described; and my invention also consists in a peculiar construction of the entire standard, for the purpose of forming upon it the improved spirally-hollowed neck, and at the same time rendering it strong and light,  
65 and adapting it for supporting the share or point, mold-board, and landside, and for sustaining the strain caused by the work which the plow performs.

In the accompanying drawings, Figure 1 is  
70 a perspective view of my improved standard as viewed from the front and mold-board side. Fig. 2 is a perspective view of the same as viewed from the front and land side. Fig. 3 is a horizontal section in the line *xx* of Fig.  
75 1. Fig. 4 is horizontal section in the line *yy* in Figs. 1 and 3. Fig. 5 is a horizontal section in the line *zz* of Figs. 1 and 3. Fig. 6 is a rear elevation of the standard; and Fig. 7 is a front view of a plow with its mold-board,  
80 share or point, and landside-bar applied to my improved standard, the beam being shown in cross-section.

A in the figures represents the standard, having a head, *a*, to which the beam B is at-  
85 tached.

Immediately under the head *a*, and terminating on a line with the upper edge, *b*, of the mold-board D, and the top *b'* of the curved  
90 shin C of the plow, the standard is formed with a spirally-twisted neck, *c*, which is shaped on a segmental curve, forming at all points nearly half-circles of very gradually and slightly diminished diameters, the draft of the  
95 said curved surface being, as shown, inward and upward and backward toward the furrow side of the plow, and serving to direct and incline the weeds and clogging matters obliquely inward and upward from the landside, and thereby cause them to discharge rearward of  
100



and on the mold-board side of the plow. The spiral twist given to the hollowed neck is such that a straight-edge moved over the hollowed surface of the neck, beginning directly beneath the head *a* of the standard and terminating at the top of the curved shin *C* and upper edge of the mold-board *D*, will touch, or at least nearly so, every part of the same. This construction presents a very easy acting curved surface, and the same very readily conducts off all weeds, clogging matters, and fouling stuff through the broad-surfaced spirally-inclined open throatway *d*, in the manner indicated by the arrow in the drawings, and thereby prevents the choking of the plow immediately below the beam and just above the top of the curved shin or upper edge of the mold-board, as experienced with plows not provided with my invention. The standard thus formed with the improved neck or throatway is provided with a broad bracing-flange, *f*, on the landside, in rear of the hollowed surface of the neck, in order to give the neck the requisite strength. Below the neck, and forward of the same, the standard is formed with a broad portion, *g*, which fits the share *E* and mold-board *D*, and to which the said parts are bolted. It also is formed with a broad landside portion, *h*, to which the landside-bar *F* is bolted. This portion *h* is extended inward toward the mold-board side of the plow, and the extension forms a web-brace, *h'*, to the mold-board and neck, as shown.

The described construction of standard enables me to form the spirally-hollowed neck, and at the same time gives great strength and stiffness, while the plow-standard is comparatively light.

It is my preference, in carrying out the invention herein described, to cast the standard entire in one piece; but it is not necessarily so cast, as the peculiarly-shaped neck might be made separately from the other part of the standard, and afterward united to a suitable base portion of the standard.

The peculiarly-formed hollow neck might have its curved shape somewhat changed without departing from the essence of my invention, which mainly consists in the hollowed neck spirally twisted, and with the inclination

and draft inward, upward, and backward toward the furrow side of the plow.

From the foregoing specification and accompanying drawings, it will be seen that the standard of the plow is so constructed that the weeds and foul stuff pass over toward the mold-board side of plow with the sod, soil, or turned-up furrow-slice, and deposit outside the furrow being plowed, and also that from the neck downward the standard-shin is curved, and that this curved portion forms a base for a land-side cutting-edge of about four inches in length, and by this construction the weeds are caused to partially turn over just before entering the throatway of the neck, and thus are in a good condition for being turned inward toward the mold-board side of the plow by the spirally-inclined surface of the neck of the standard.

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

1. A standard neck for a plow, having a spirally-twisted hollow surface extending from the landside inward, upward, and backward toward the furrow side of the plow, substantially as and for the purpose described.

2. The standard formed with a neck having the spiral upwardly and inwardly inclined throatway *d*, substantially as and for the purpose described.

3. The standard formed with the head *a*, neck *c*, flange-brace *f*, mold-board, share, and landside supporting portions *g* and *h*, and the web-brace *h'*, substantially as and for the purpose described.

4. The spirally-twisted neck *c*, forming the throatway *d*, and having the flange-brace *f* on its landside edge, in combination with the mold-board, share, and landside supporting portions *g* and *h*, and the bracing-web *h'*, substantially as described.

5. The neck of the plow-standard, twisted spirally, and having a throatway which inclines inward, upward, and backward, and is of segmental curvature, and diminishes gradually but slightly toward the furrow side of the plow, substantially as described.

JAMES P. MCINTYRE.

Witnesses:

GODFREY DAWE,  
F. R. SABENTHALL.