

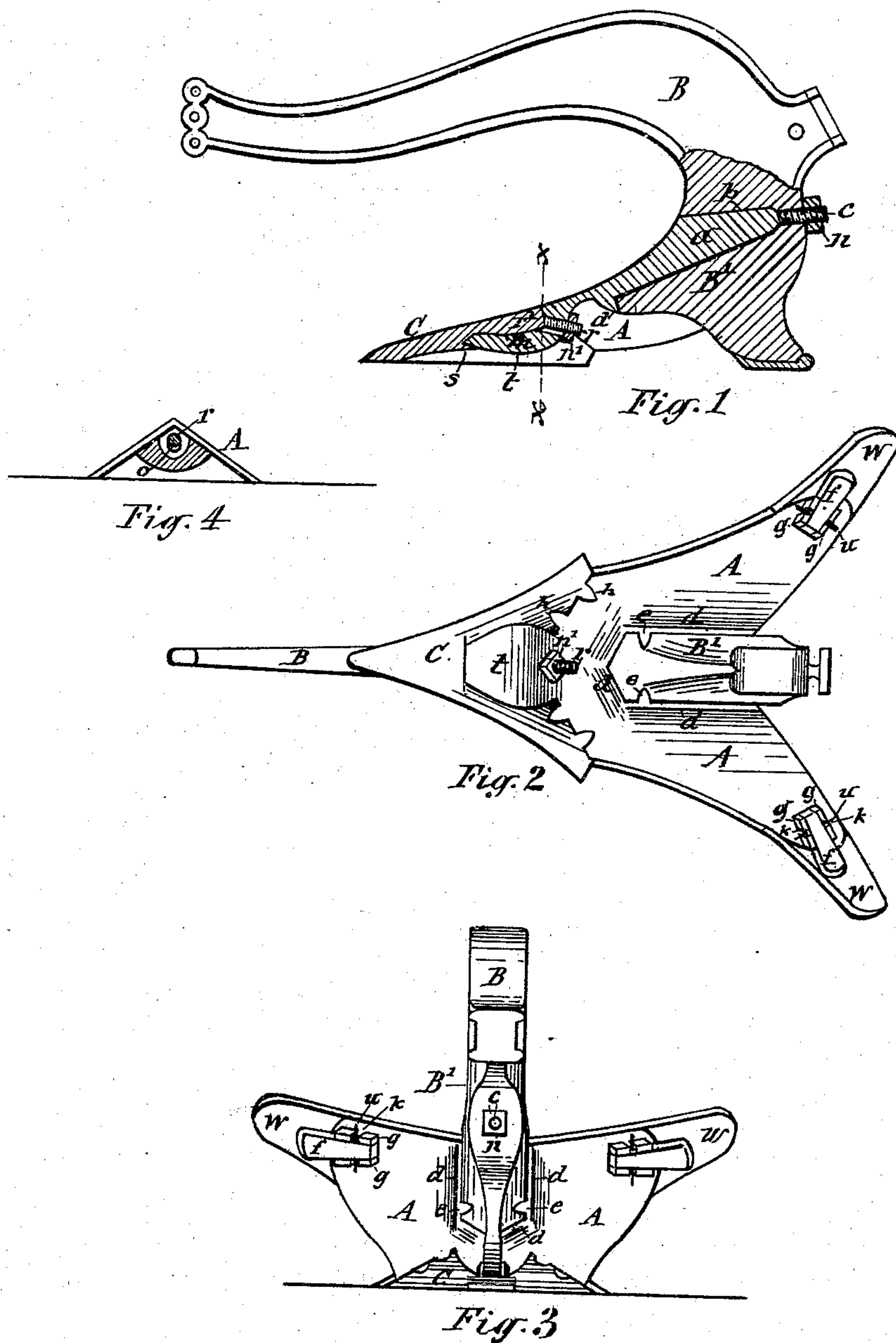
(No Model.)

2 Sheets—Sheet 1.

G. A. De LONG.
Plow.

No. 229,239.

Patented June 29, 1880.



WITNESSES:

E. Laass

C. Bendixen.

INVENTOR:

George A. De Long
per Duell, Laass & Hey
attorneys

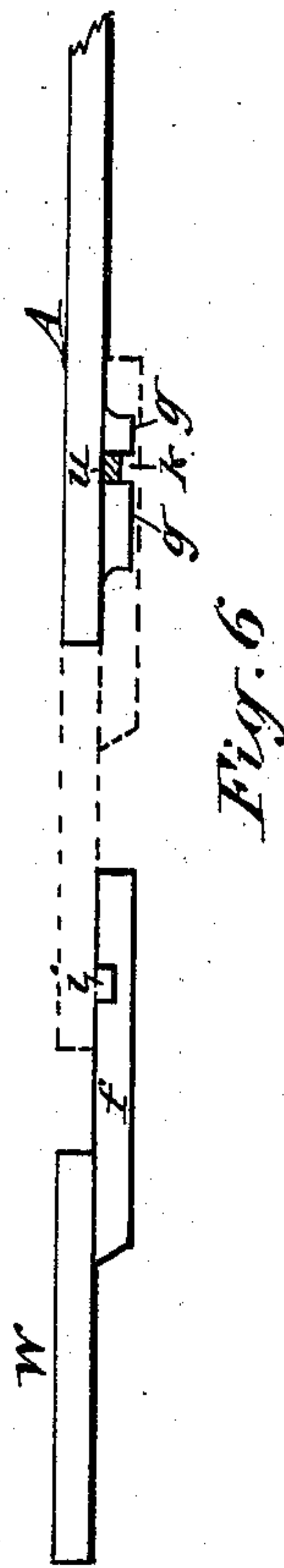
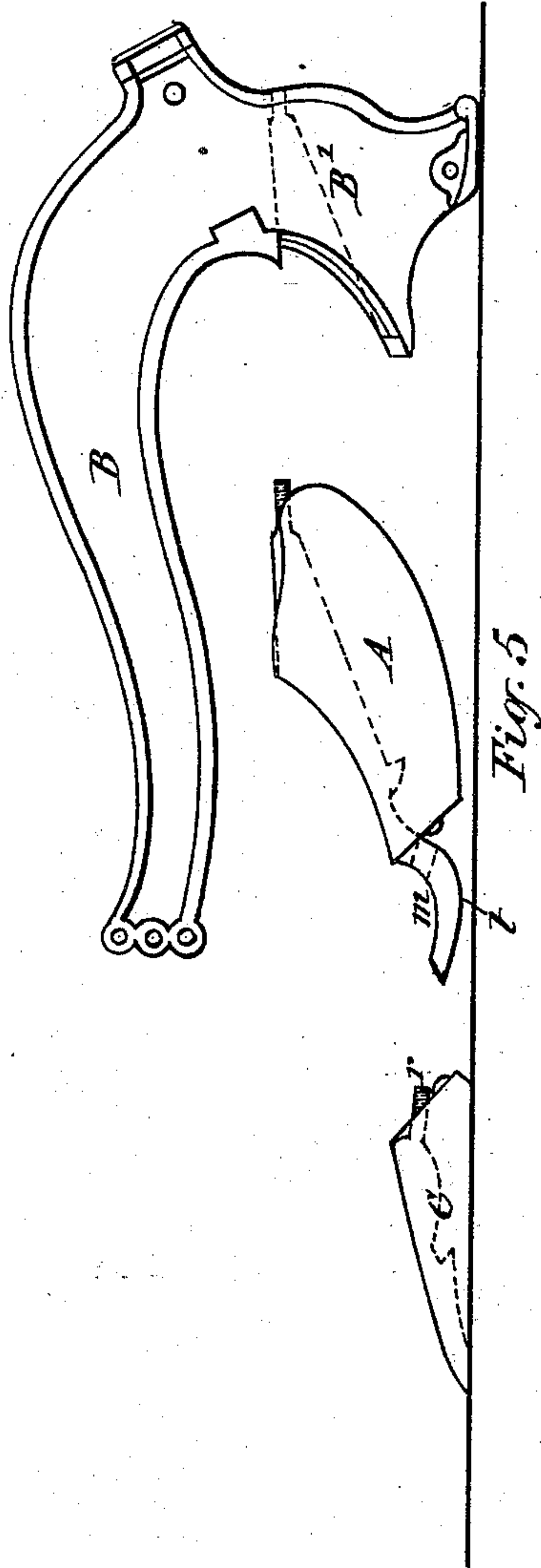
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UNITED STATES PATENT OFFICE.

GEORGE A. DE LONG, OF PHOENIX, NEW YORK.

PLOW.

SPECIFICATION forming part of Letters Patent No. 229,239, dated June 29, 1880.

Application filed March 29, 1880. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. DE LONG, of Phoenix, in the county of Oswego, in the State of New York, have invented new and useful Improvements in Plows, (not patented to me, nor with my knowledge or consent in any foreign country,) and of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of plows designed to cast the soil both sides of the furrow, and has particular reference to that species in which the beam is composed of metal and detachably connected to the mold-board.

The invention consists in certain peculiarities in the connection of the mold-board with the beam of the plow and the connection of the point with the mold-board, whereby the said parts are strengthened and properly secured in their respective positions, all as hereinafter fully described.

In the accompanying drawings, Figure 1 is a side elevation of my improved plow, shown partly in section to better illustrate the invention. Fig. 2 is an inverted plan view of same; Fig. 3, a rear-end view. Fig. 4 is a vertical section on line *x x* in Fig. 1; Fig. 5, a side view of all the parts detached, and Fig. 6 an enlarged detail view of the connection of the wings with the mold-board.

Similar letters of reference indicate corresponding parts.

A denotes the mold-board, B the beam, and C the point, of the plow.

The mold-board A is of the type used with the so-called "hilling" or "shovel" plows, and having two sides flaring from the center outward and rearward. The mold-board is provided at its center with a rigid rearward-projecting tapered shank, *a*, the taper of which is chiefly on its under side, so as to extend its connection down nearly the length of the angle or center of the mold-board, and thus thoroughly brace both of said parts.

The beam B is formed at the rear end with a forwardly-curved extension, B', which is provided with a cavity or socket, *b*, extending through it and tapered to fit the shank *a* of the mold-board, which shank is inserted in said cavity *b*, and is provided on its end with a

threaded stud, *c*, which protrudes through the rear of the beam B. By means of a nut, *n*, on the protruding end of the stud *c* the mold-board is drawn up against the beam and secured thereon. The inclination or taper of the shank *a* causes the same to be drawn upward and become tightly wedged in the cavity *b* of the beam.

The under side of the mold-board is provided at opposite sides of the shank *a* and at the lower end thereof with a flange or shoulder, *d*, which abuts against the sides and end of the extension B' of the beam, and thereby prevents the mold-board from turning sidewise. Lips *e*, projecting from the mold-board and embracing the extremity of the extension B' of the beam, effectually lock the parts together.

The mold-board is provided at its front end with a forward-projecting tongue, *t*, which fits the under side of the central rear portion of the point C, and has its extremity entering a recess, *s*, in the same. The point is provided with a rigid rearward-projecting threaded stud, *r*, having around its base a conical enlargement, *r'*, by which both the stud and point are re-enforced. The tongue *t* has in its top a recess, *m*, corresponding to the enlargement *r'* of the stud *r*, which latter passes through a hole, *o*, in the rear end of the tongue, and has on its protruding end a nut, *n'*, by means of which the point is securely fastened to the mold-board. The bolt-hole *o* is elongated vertically, so as to allow the point to be drawn upward during the fastening of same. The point and mold-board are each provided at their joining edge with projecting lips *h h*, which engage the under side of the other, and thus prevent the point from turning in its central connection with the mold-board.

It will be observed that the before-described means of connecting the point to the mold-board avoids bolt-holes in the surface of said parts, and thus leaves the same perfectly smooth.

W W are wings or extensions frequently applied to the mold-board for increasing the sweep of same. I cast these wings with a shank, *f*, which slides endwise between dovetail cleats *g g* on the back of the mold-board. The side of the shank adjacent to the mold-board is provided with a transverse groove, *i*,

and in the cleats *g g* are notches *k*, through which notches and groove I insert a key, *u*, which effectually retains the wing on the mold-board. It will be observed that by that means
5 I dispense with bolt-holes in the mold-board, and the connection and disconnection of the wings is easily effected when desired; and, furthermore, the groove *i* and notches *k*, being easily cast in the respective parts, save the
10 expense of drilling or other machinist work.

Having thus described my invention, what I claim is—

1. The mold-board having the tapered shank *a*, with the threaded stud *c* and nut *n*, and provided with the abutments *d* and lips *e*, in combination with the beam *B*, having the extension *B'*, provided with the socket *b*, all constructed and combined substantially in the manner described and shown.

2. The point *C*, having the threaded stud *r*, 20 with conically-enlarged base *r'* and nut *n'*, and provided with recess *s* and lips *h h*, in combination with the mold-board having the tongue *t*, provided with the recess *m* and vertically-elongated hole *o*, and provided on its edge 25 with lips *h h*, substantially as described and shown.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence of two attesting witnesses, at Syracuse, in the 30 county of Onondaga and State of New York, this 9th day of March, 1880.

GEORGE A. DE LONG. [L. S.]

Witnesses:

E. LAASS,

WM. C. RAYMOND.