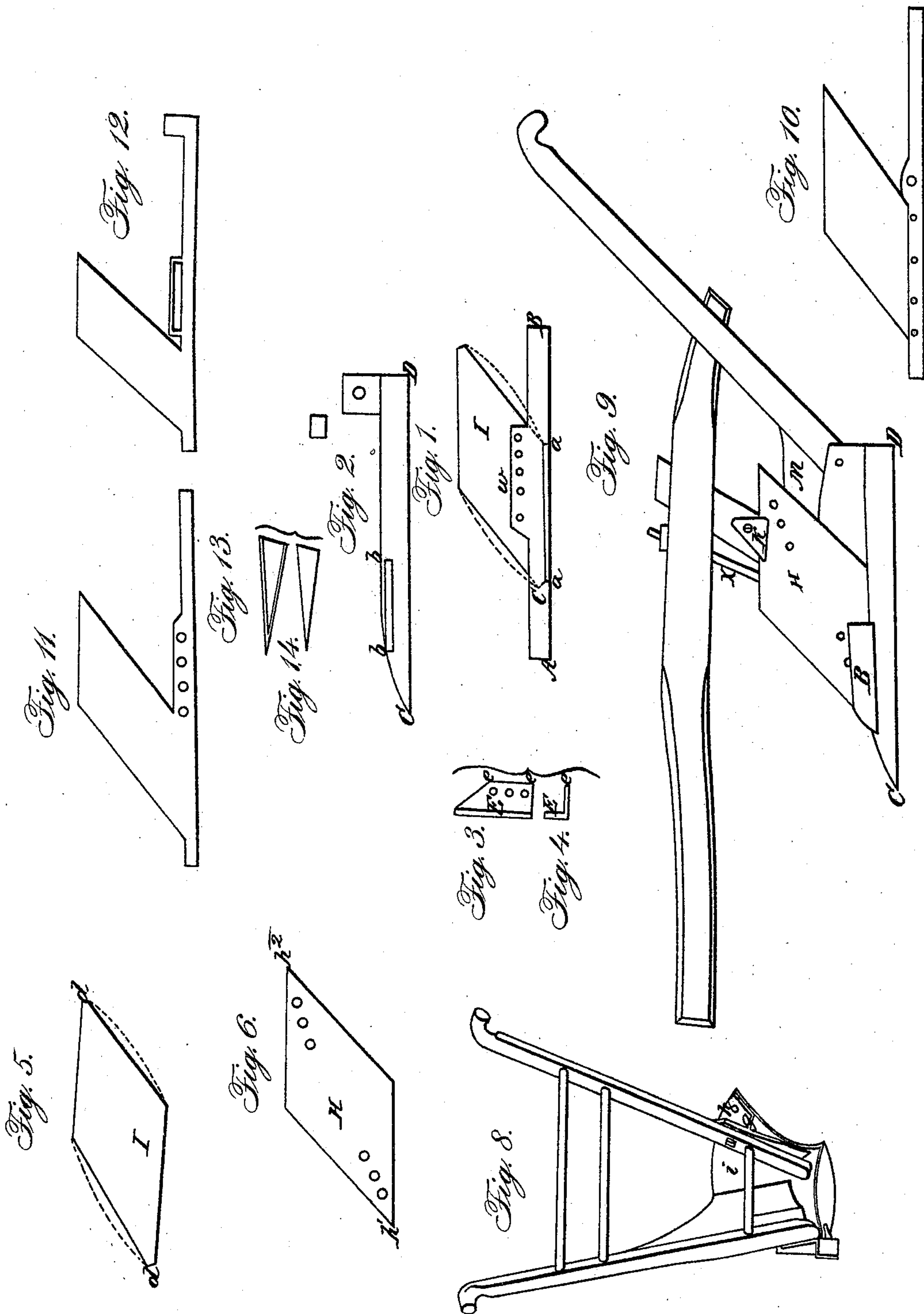


M. SMITH.

Plow.

No. 1,482.

Patented Jan. 28, 1840.



UNITED STATES PATENT OFFICE.

MAHLON SMITH, OF TINICUM TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA.

IMPROVEMENT IN THE MODE OF CONSTRUCTING AND FASTENING THE SHARES AND CUTTERS OF PLOWS.

Specification forming part of Letters Patent No. 1,482, dated January 28, 1840.

To all whom it may concern:

Be it known that I, MAHLON SMITH, of Tinicum township, county of Bucks, and State of Pennsylvania, have invented a new and useful Improvement in the Construction of the Plow, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 represents a top view of an iron bar forming the landside and base, to which the parts are all fastened; Fig. 2, side view of the same—the side toward the land; Fig. 3, an iron plate with a flange turned at right angles; Fig. 4, transverse section of the same; Fig. 5, the share; Fig. 6, rhomboid cutter with four cutting-edges; Fig. 8, view of the hind part of the plow, representing a casting attached to the hind part of the mold-board and straight side of the stilt; Fig. 9, view of the landside of the plow; Fig. 10, share and land-bar riveted together so that the rivets may be driven out and the share moved forward as it wears and again riveted; Fig. 11, share and land-bar welded together, the whole being moved forward as the share wears by leaving a row of holes in the land-bar for the main bolt; Fig. 12, share and land-bar welded together and a long mortise in the land-bar for the lower end of the sheth and wedges, instead of holes for the main bolt; Figs. 13 and 14, cap or covering to put over the point of the land-bar to preserve it from wearing.

The iron bar A B, Fig. 1, is made with a slit horizontally through it, as seen at *b b* in Fig. 2, into which the share I, Fig. 5, is inserted, the point *d* entering a socket or a continuation of the slit *b* in the iron bar A B, as represented by dotted lines at *c* in Fig. 1. This bar A B has a projection or wing, *w*, on the side toward the share, with small holes for the bolt that fastens the share I in the slit and socket, one of which holes also admits the main bolt *x*, Fig. 9, that fastens it to the beam of the plow. There is also a notch or rabbet, *a a*, Fig. 1, on the left or land side of the bar cut vertically down from the top until it intersects the slit *b b* for admitting a plate, E, Figs. 3 and 4.

The flange *e e* of plate E, Figs. 3 and 4, is inserted into the slit *b b* of the bar A B, under the share, and the holes in it correspond

with the holes in the projection on wing *w*, Fig. 1, and the holes in the share, Fig. 5.

The plate E, Fig. 3, is let into the notch or rabbet *a a* so as to be flush or even with the left-hand face of the bar A B, leaving a space between it and the mold-board to receive the bottom of the rhomboid cutters, Fig. 6. The fore end of the plate E, Fig. 3, should project forward of the cutter, and is made sharp to supply in part its place.

The rhomboid cutter is secured to the sheth of the plow by means of a plate, K, Fig. 9, which laps over the cutter, said plate being fastened to the sheth by a screw-bolt and by means of bolts passing through the cutter into the sheth. The cutter, however, may be secured to the sheth in any convenient mode.

In moving forward the above-described share (when necessary) the old point which fits the socket *e* must be cut off and a new one formed.

The cutter H, Fig. 6, is made the figure of a rhomboid, having four cutting-edges instead of only two, as heretofore used, reversible at pleasure as they wear away. In securing the cutter to the plow for use the point *h'* or *h''*, Fig. 6, is inserted between the plate E and mold-board M, Fig. 9, and when used in very stony land should be further secured by a bolt passing horizontally through the plate E and the point of the cutter.

The following are several additional improvements that have been made in the construction of plows: The share and land-bar may be riveted together, as represented in Fig. 10, in such manner that as the cutting-edge of the share wears the rivets may be knocked out and the share pushed forward and again secured by riveting. The share and land-bar may also be welded together and the whole moved forward when necessary by having the holes for the main bolt in the land-bar as represented in Fig. 11. An oblong mortise may likewise be formed in the land-bar to admit the lower end of the sheth and wedges, by which the share may be moved forward when required. (Represented in Fig. 12.) A cap or covering may also be formed to put over the point of the land-bar for preserving it from wearing away, as represented in Figs. 13 and 14.

The other parts of this plow—such as the

beam, handles, sheth, &c.—being made similar to those in general use, need not therefore be described.

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

1. The mode of supporting and securing the reversible cutter and share by means of the vertical plate and its horizontal flange, constructed and operating as set forth.

2. The mode in which I construct and arrange the reversible rhomboid cutter so as to

present four instead of two cutting-edges, as above described.

3. Constructing the movable land-bar with a share or wing attached, as set forth, so that both may be advanced together, as before described.

MAHLON SMITH.

Witnesses:

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