

UNITED STATES PATENT OFFICE.

GEORGE WATT, OF RICHMOND, VIRGINIA.

PLOW.

SPECIFICATION forming part of Letters Patent No. 224,750, dated February 17, 1880.

Application filed December 20, 1879.

To all whom it may concern:

Be it known that I, GEORGE WATT, of Richmond, in the county of Henrico and State of Virginia, have invented a new and Improved
5 Plow; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to the manner of attaching to the standard of a plow the point
10 and share, the mold-board, (which may be in two detachable parts,) and the sole or wearing-piece of the land-side. The attachment is effected by means of two bolts and by projections or knobs and hooks, or equivalent devices,
15 which are cast solid with or riveted to the several parts, (point, mold-board, and sole,) as hereinafter described, and as shown in the accompanying drawings, in which—

Figure 1 is a perspective view of all the parts
20 of the plow separated from each other. Fig. 2 is a section on line *xx*, Fig. 4. Fig. 3 is a section on line *yy*, Fig. 4. Fig. 4 is a side view of the plow complete.

The standard or stock A of the plow has the
25 general form of such as have been heretofore known and used, but possesses certain peculiarities of construction, as hereinafter described, which adapt it for attachment of the point, mold-board, and sole.

The point and share B may be of the usual
30 shape or pattern, but is provided with knob and ear *a* on its upper side, and with hooks or flanges on its under side and bottom, by which means it is secured to the bed or lower portion
35 of the stock A, on which it rests. The knob *a* is conical, and projects from the under surface of the point as well as from the upper edge thereof, so that when the point is in place
40 said knob *a* lies in a concavity, *c*, of the bed and projects upward beneath the lower edge of the two-part mold-board C C'. The hooks
45 *b b* catch or hook under the beveled lower edge of the stock, and thus, when the mold-board is fastened to the plow standard or bed, the point is secured immovably.

In place of the hooks or flanges *b b* a continuous flange or underlap may be employed, the same extending along the under side of the
50 point B in a right line between the two points (hooks) *b b*.

By such construction and mode of attach-

ment of the point I dispense with such fastenings as a bolt or key and wedge, and avoid
weakening the bed A and shear by forming a
bolt-hole therein, as usual heretofore. The con-
struction is likewise economical, since the
55 respective parts are cast of the proper form or pattern in the first instance, and require little labor to fit them accurately together, and also do not require to be so thick and heavy as heretofore. Another and more important advantage is derived from the increased strength or
60 power of resisting strains possessed by the point B in consequence of the location of the points of leverage, they being separated as widely as possible; whereas in the case of plows
65 of the ordinary construction the bolt-hole formed in the point to receive the fastening-bolt is located in or near the middle of the width of the share's bed.

The body C of the mold-board, or that portion of it which turns the furrow-slice, is shown
70 made separate from the front portion, C', which acts as a colter; but it may be made in one piece. Both parts C C' are, however, detachable from the stock A, being secured by the
75 following-described means: The body C has a hook or ear, *d*, and a knob, *e*, cast on its under side, and when the former is applied to the flange of the standard A the ear *d* hooks over
80 a reduced or beveled portion of the rear edge of said flange in the same manner as the hooks *b* of the point B engage with the lower edge of the same. The part C is then secured by
85 means of a screw-bolt, *f*, which passes through it near the front end thereof. Therefore both the point B and mold-board C are in reality held in place on the stock A by one bolt, which is a stronger and better means of fastening
90 than that usually adopted.

The separate soil-cutting piece C', which is a segment of the mold-board and conforms to its general curvature, has a knob or conical projection, *f'*, cast on its under side and near
95 its upper end, while a hook or half-staple, *g*, projects inward from its lower portion. The projection *f'* enters a corresponding cavity, *h*, in the stock A, while the hook *g* passes through
100 a hole in the same and catches over the edge of the metal, so that by inserting an iron or wooden key or wedge beneath it, as shown in Fig. 3, the colter C' is firmly locked in place.

The hook *g* may be constructed of wrought or cast metal and riveted to or cast to cutter *C'*.

By this construction the cutter *C'* is adapted to be easily detached from the stock *A* for the purpose of grinding, and thereby sharpening, its cutting-edge, so that it may be kept in order for doing its work efficiently.

The sole or wearing-piece *D* is attached to the land-side proper like the mold-board to the stock—namely, by a hook or ear, *k*, which catches over a beveled end of the land-side, and a knob, *l*, which is riveted to or else cast solid with the sole, and fits in a corresponding cavity, *m*, in the land-side, and a screw-bolt, *n*, that passes through the front end of the sole, as shown.

I do not claim, broadly, providing a plow point or share with a lug or hook for engaging the edge of the stock.

What I claim is—

1. The combination of the plow-point having knob or ear *a* and lugs *b* with the plow-stock *A*, having cavity *c*, and the mold-board *C*, as shown and described, said ear being construct-

ed to enter the cavity and project beneath the edge of the mold-board, as specified.

2. The combination of the colter-section *C'*, having hook-bolt *g* and lug *f'*, with plow-stock *A*, having cavity *h* and a hole to receive said bolt, all as shown and described, for the purpose specified.

3. The plow stock or bed *A*, beveled on its lower edge, also on the rear edge of its lateral flange and the land-side at points, and provided with the cavities *c h m*, and holes whereby it is adapted for attachment of the point, mold-board, and sole, as specified.

4. The combination of the stock *A*, constructed as shown and described, and the point *B*, divided mold-board *C C'*, and sole *D*, provided with ears and hooks and the bolts for fastening the same, all constructed and arranged as shown and described, for the purpose of forming an improved plow.

GEORGE WATT.

Witnesses:

MANFRED CALL,
R. A. WILLIAMS.