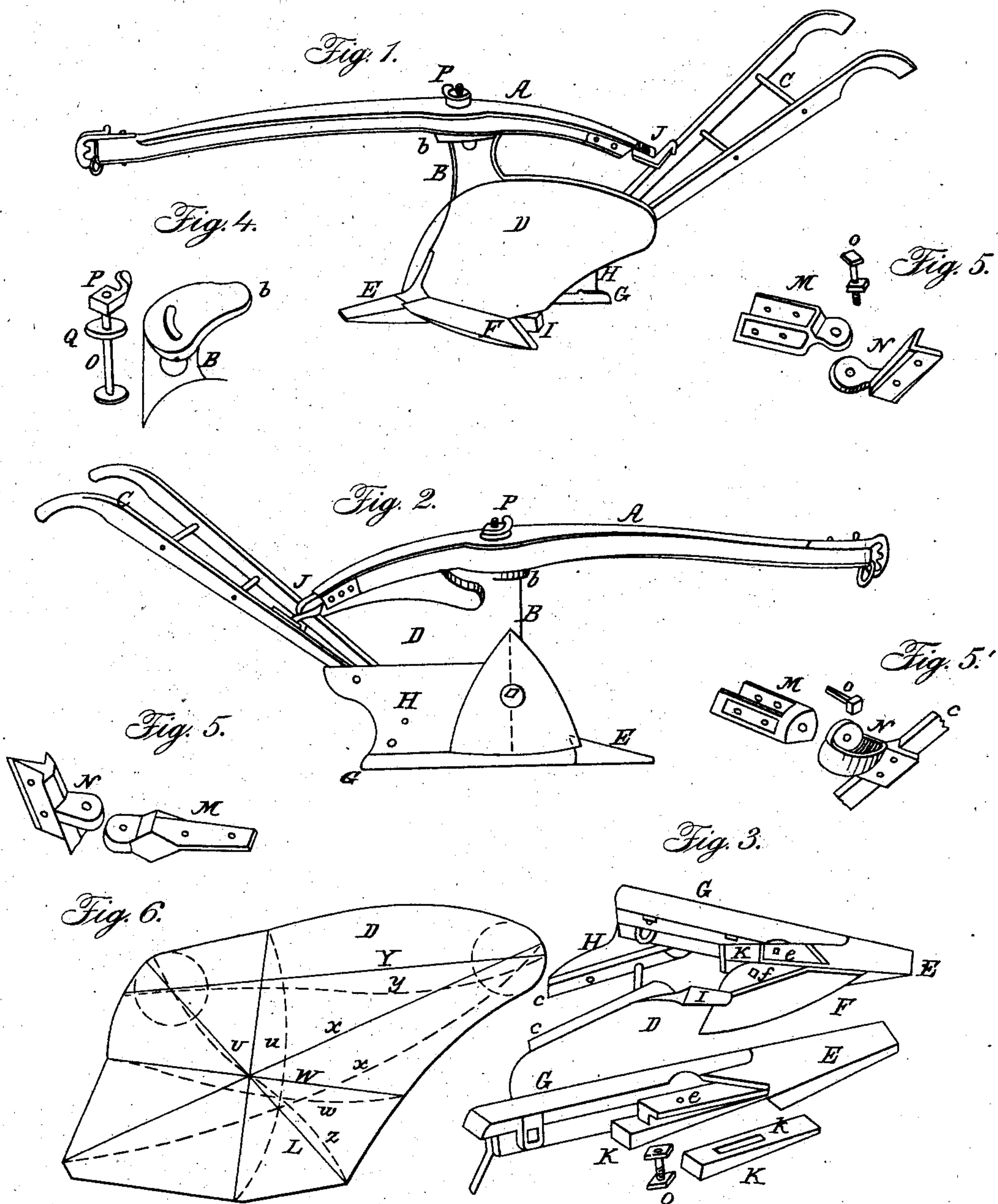


G. SPIEHLMAN.

Plow.

No. 69,943.

Patented Oct. 15, 1867.



Witnesses:

Joseph B. Smith
Jacob H. Hildebrand

Inventor:

George Spiehlman

United States Patent Office.

GEORGE SPIEHLMAN, OF STRASBURG, PENNSYLVANIA.

Letters Patent No. 69,943, dated October 15, 1867.

IMPROVEMENT IN PLOUGHS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE SPIEHLMAN, of Strasburg, in the county of Lancaster, and State of Pennsylvania, have invented a combination of certain new and useful Improvements on the Common Plough; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of one side of the plough, and

Figure 2 the land-side of the same, or its opposite side.

Figure 3 shows the bottom of the plough and combined parts.

Figure 4, the head of the standard, with its slot and thumb-screw, bolt, and washer.

Figure 5, the jointed connection pieces for the beam and handle.

Figure 6, a diagram of the mould-board, illustrating the curves in the lines of direction.

The object of my invention is to perfect the kind of ploughs mostly in favor, and having devoted special attention to this branch of business, as my father before me, I have, as I verily believe, obviated former defects and added new and important improvements, some of which, in kind, may be found on other ploughs, but of a different construction and arrangement, and not meeting the object I have in view,

To enable others skilled in the art to make and use my invention, I will proceed to describe the construction and operation of the parts.

The plough-beam A has a graceful curve, and rests upon an enlarged standard, B, with a flattened head, *b*, in which there is a slot, curved to the radius of the hinged pivot that unites the beam to the handle, for the purpose of adjusting the draught to give the plough more or less land, held in place by a bolt, O, with a washer, Q, and thumb-screw P. The beam is terminated by a plate or cap, M, having a flat side for a bolt. Its counterpart N is affixed to the handle of the plough on the land-side, forming the joint connection J of the united pieces, held by a headed bolt and screw, *o*. The bottom of the land-side has a separate sole, G, which is held by screw-bolts, and can be replaced when worn out. The toe or point E has a flange under the share F, which has a corresponding shoulder, against which the flange slides. There is also a slotted wedge, K, beneath the inner prolonged end of the toe-piece or point E, which has this portion depressed, and a hole for a headed bolt, *e*, which enters the slot *k* in the wedge K, and is held by a nut, so that when the point is worn, or in order to depress the point, the slotted wedge gives a facility to adjust the same from time to time. I also apply a separate heel-piece, I, beneath the rear lower corner of the mould-board, where the friction is the greatest, so that when worn out it can also be replaced.

As regards the peculiar make and curve of the mould-board D, fig. 6, I may be allowed to state the fact that I only obtained it after having nine separate castings made from improved models—made by successive trials on the plough—marking the points where the friction indicated the resistance of the soil, until the shape and curves were such as to turn the soil with the greatest ease, thereby lightening the draught on the horse and lessening the wear of the mould-board fifty per cent., and brought to a degree of perfection never before attained. The diagram shows the relative curvatures by the dotted lines traced with blue in the direction across the same at various points, shown by the straight lines Y, U, V, W, and X. The curves are shown by *y*, *u*, *v*, *w*, and *x*. Nor can I, by words, make the matter any clearer than the actual proportions, given by exact measurement, reduced as shown.

Taking all the improvements connectedly, I am satisfied that they conduce to greater perfection in this useful implement than any hitherto in use; but I am also aware of the immense number of improvements made and patented, in which the beam is made adjustable vertically and laterally, extra pieces to the mould-board and land-side, claims of superiority in the construction and form of the mould-board, so that, while I also know that they differ, in their construction and arrangement, from my device or devices, to overcome the difficulty in so wording my claims as to show the distinctive feature by the claim is not so easy, as the actual utility of the change is manifestly substantially different in effect. I am not aware, however, that a slotted wedge was ever used so as to depress the point in the manner specified, nor of a heel-piece below the mould-board, nor my mode of hinging the beam and manner of adjusting it on the slotted standard, nor a sole-piece applied to the base of the land-side, in the manner shown. I also deem the shape and curvature of my mould-board of the greatest utility, and novel in its form and construction.

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

1. The construction of the flattened and enlarged head *b*, with its curved slot; of the standard *B*, in combination with the application and arrangement of the hinge pieces *M N*, forming the joint *J* of the beam and handle, when all made in the manner and for the purpose specified.

2. I claim the slotted wedge *K*, in combination with the flanged and sunken tail-piece of the point *E*, constructed in the manner and for the purpose set forth.

3. I also claim the mode of constructing and applying the sole-piece *G*, by ears and bolts, to the base of the land-side, arranged as shown, for the purpose specified.

4. I also claim the extra heel-piece *I*, in combination with the mould-board *D*, when made and arranged in the manner set forth.

5. I claim the combination and arrangement of the hinged beam *A*, with the handle *c*, the sole-piece *G*, heel *I*, wedge *K*, flanged point *E*, and mould-board *D*, when all are made and arranged in the manner shown, for the purpose specified.

GEORGE SPIEHLMAN.

Witnesses:

JOSEPH B. SMITH,
JACOB HILDEBRAND.