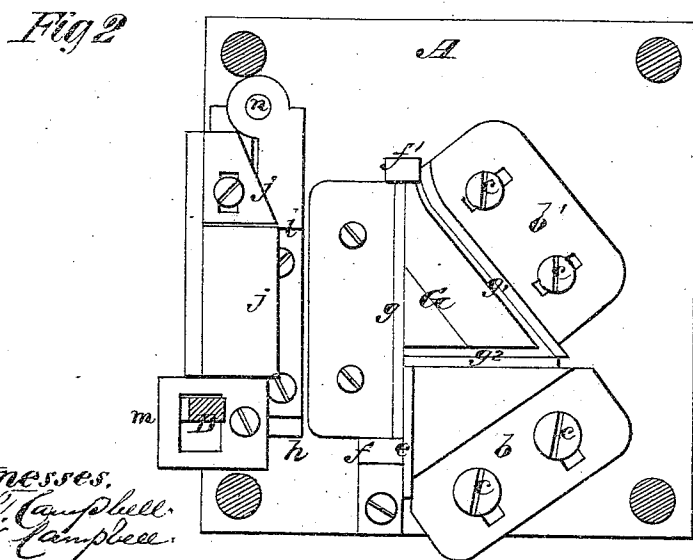
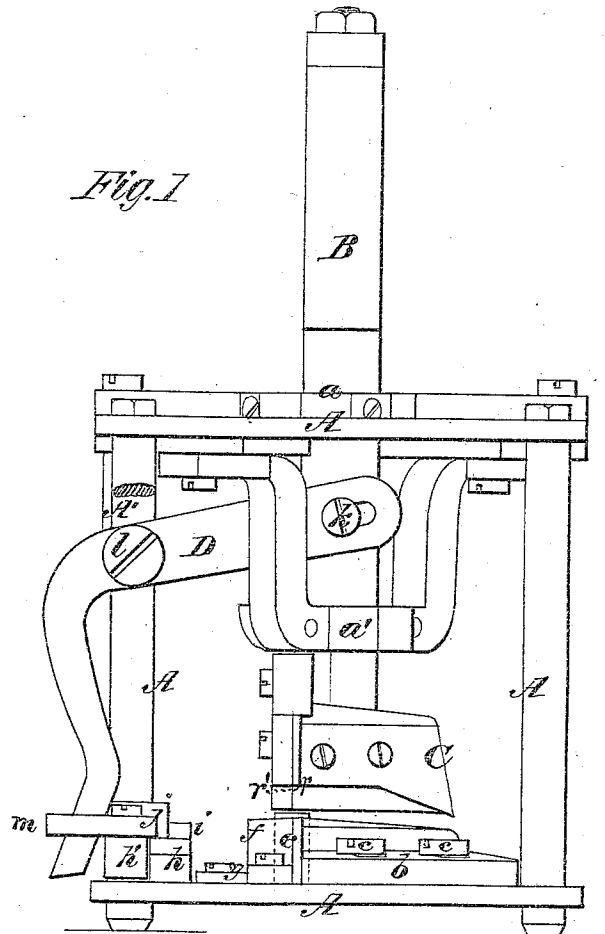


D. H. ROWE.
Improvement in Machines for Manufacturing Plowshares.
No. 125,908.
Patented April 23, 1872.



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Inventor
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Fig 3

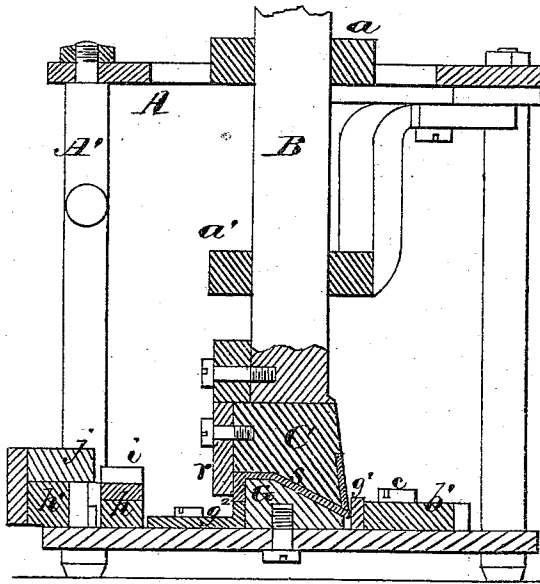


Fig. 4

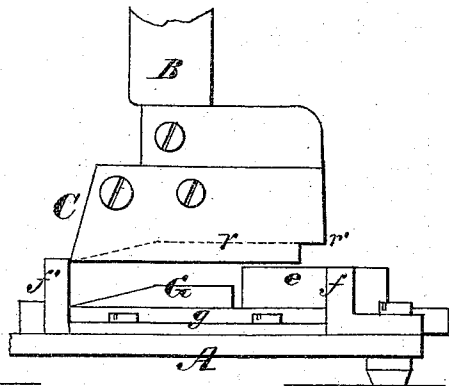


Fig. 8

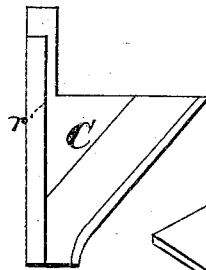


Fig 5

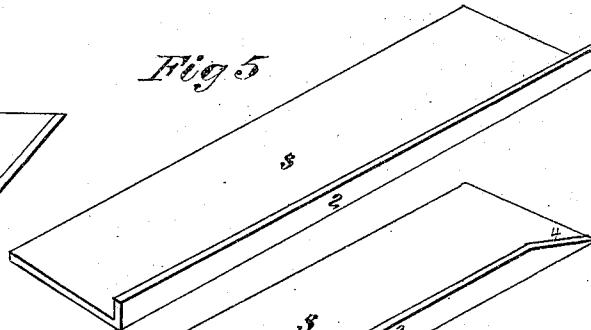


Fig 6

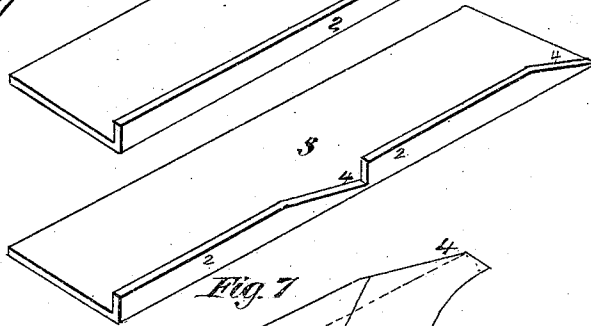
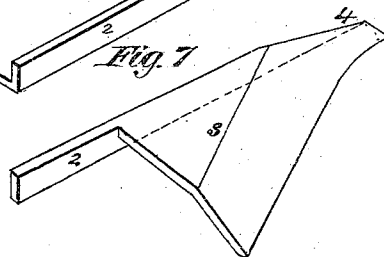


Fig. 7



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UNITED STATES PATENT OFFICE.

DANIEL H. ROWE, OF MARTINSVILLE, ILLINOIS.

IMPROVEMENT IN MACHINES FOR MANUFACTURING PLOWSHARES.

Specification forming part of Letters Patent No. 125,908, dated April 23, 1872.

A

To all whom it may concern:

Be it known that I, DANIEL H. ROWE, of Martinsville, in the county of Clark and State of Illinois, have invented a new and Improved Machine for Producing Plowshares; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1, Plate 1, is a front elevation of the shears and the swaging-machine. Fig. 2, Plate 1, is a top view of the bed of the machine, as seen by making a horizontal section through the posts of the frame. Fig. 3, Plate 2, is a section taken vertically and transversely through the machine. Fig. 4, Plate 2, is a view in detail of the two dies as seen from one side. Fig. 5 is a perspective view, showing a section of a rolled blank. Fig. 6 shows the blank after it is notched. Fig. 7 shows the completed share. Fig. 8 is a bottom view of the upper movable die.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to produce at one blow of a swaging cutting-die a perfectly-shaped plowshare, with land-side bar and point complete, as will be hereinafter explained.

The following description will enable others skilled in the art to understand my invention.

In the accompanying drawing, A represents the frame of the machine, which consists of two horizontal plates united by strong upright posts. In the center of this frame A is a vertically-movable shaft, B, which is guided by means of bearings *a a'* and held so that it will neither turn to the right or left. The upper end of this shaft B is bifurcated, and provided with a cross-bar, so that power can be conveniently applied to it. The lower end of this shaft has rigidly secured to it a die-head, C, of triangular form, and with a concavity in its bottom corresponding precisely to the shape of the upper surfaces of the share, sole, and point of the article to be produced. Those edges of the die C, which correspond to the back and oblique edges of the plowshare are cutting-edges, and perform their cutting against two shear-blades, *g¹ g²*, which are secured to two adjustable blocks, *b b'*, on the bed-plate of the frame A, as shown in Fig. 2.

These blocks *b b'* are secured upon the bed-plate by means of screws *c c*, which pass through slots, and allow the blocks to be adjusted toward or from each other. Directly beneath the die C is a former, G, the shape of which corresponds to the bottom surface of the plowshare and its sole. This former or counter-die G is secured fast upon the bed-plate with its perpendicular land-side in the same plane with a shear-blade, *e*, which is secured to the angular block *b*, at right angles to the shear-cutters *g²*, as shown in Fig. 2. This shear-blade *e* operates in conjunction with a shearing-edge, *r*, which is secured to an extension of the die C, and leaves on the finished plowshare the rear extension of the land-side. The raised lip of an adjustable plate, *g*, is set up in close contact with the shear-blade *e* and land-side of the counter-die G, and affords a support for the land-side portion of the blanks while they are being operated on. At one extremity of this rest *g* is a perpendicular elevation, *f*, which serves, in connection with a cutting-edge, *r'*, at the rear of the cutter *r*, for cutting off the land-side portions of the blanks.

I will now describe the manner of preparing the blanks for the dies: A plate of metal, *s*, of proper width and thickness is passed between rollers suitably constructed to form a narrow lip or flange, 2, on one edge, as shown in Fig. 5, which is thicker than the other part of the plate. This first blank is then applied between shears, hereinafter explained, which form notches 4, Fig. 6, into the said thick flange 2, at regular intervals apart. The plate thus prepared is heated and introduced between the dies, which, at one blow of the upper die, produces the article shown in Fig. 7. The notched blank is applied between the dies so that its wide portion covers the lower die, and its flange 2 lies in contact with the perpendicular surfaces of the die G and shear-blade *e*. The pointed end of the flange 2 will abut against a stop, *f'*, at the beveled end of die G. The upper die is then brought down, and after cutting out the piece to form the share, presses it into shape. The shears which notch the flanges 2 of the blanks consists of two bars, *h h'*, which are hinged together at *n*. The bar *h* is secured fast upon the bed-plate of the machine at a suitable distance from the dies, and

the bar *h'* is free to swing about its hinge, and is moved by means of the shaft B, acting through the medium of a bent lever, D. This lever is pivoted at *k* to shaft B, at *l* to a bracket, A', on frame A, and its lower end plays through an eye-piece, *m*, which is secured to the free end of the bar *h'*. When the shaft B is depressed the bar *h'* will be separated from bar *h*, and when the shaft B is raised the notching can be performed. The cutting is performed by the edge of an angular elevation, *i*, on bar *h*, and a shear-blade, *j*, on the bar *h'*.

Under this application for Letters Patent I do not claim the blank shown in Fig. 6, as I have filed another application bearing even date with this, and marked "case B," wherein the article which is produced by the machine herein explained is claimed.

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

1. The movable cutting-die C, presenting

cutting-edges on two sides, and provided with rear extended cutting-edges *r r'*, in combination with a fixed counter-die, G, and cutting-edges corresponding to those on said movable die, substantially as and for the purposes described.

2. The land-side support *g*, arranged between the portions *f f'*, and in the relation shown to the dies C G, and cutter *e*, substantially as described.

3. The notching-shears *h h'*, *i*, and *j*, combined with lever D and shaft B, substantially as described.

4. The improved machine, herein described, for making from a prepared blank, Figs. 5 and 6, the attachment for a plow, shown in Figs. 7 and 8.

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Witnesses:

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