

H. H. May,

Making Plow-Irons,

N^o 4,609.

Patented June 27, 1846.

Fig: 1.

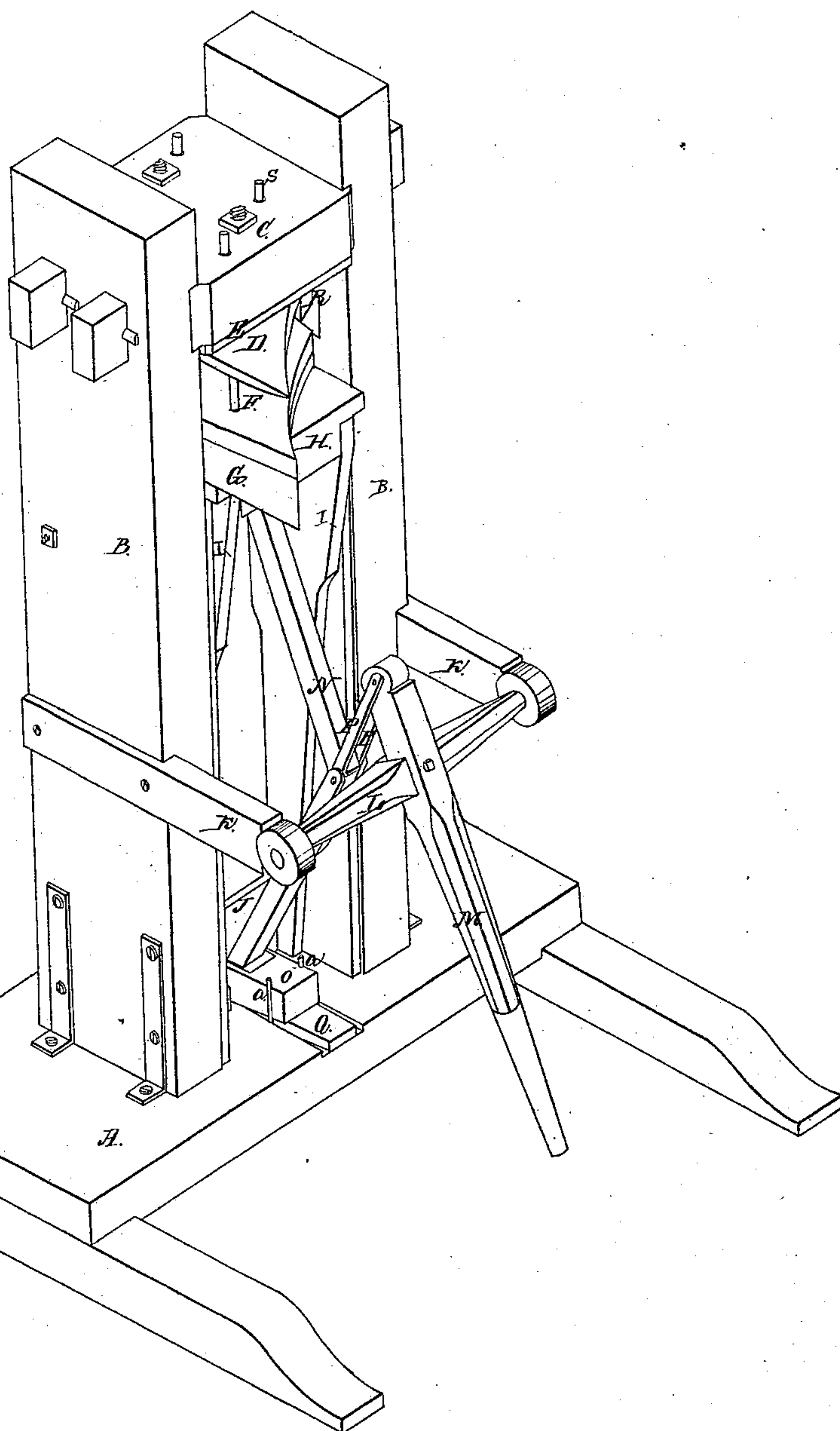
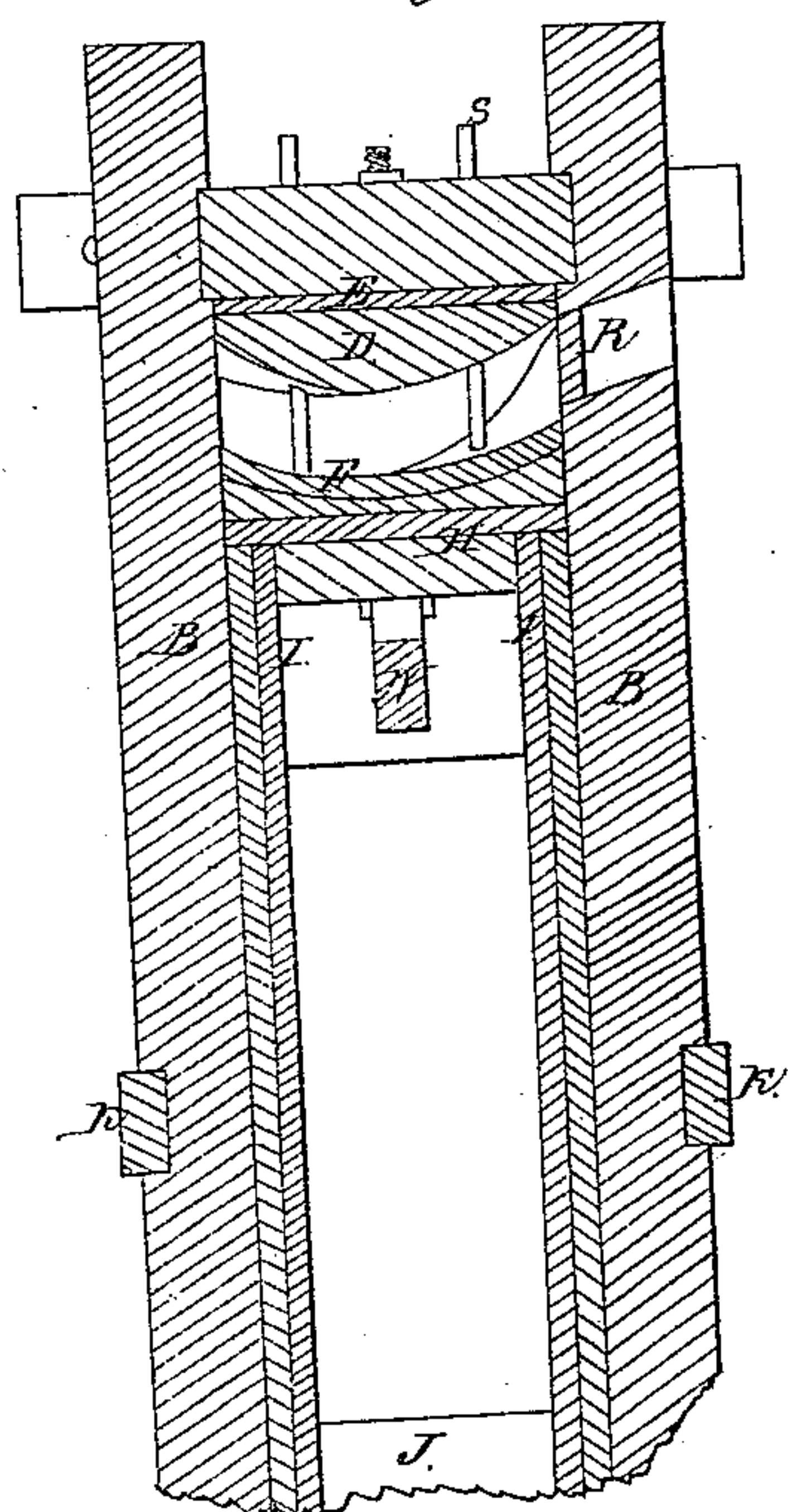


Fig:2.



UNITED STATES PATENT OFFICE.

HARVEY H. MAY, OF GALESBURG, ILLINOIS.

IMPROVEMENT IN MACHINERY FOR SWAGING MOLD-BOARDS, &c., FOR PLOWS.

Specification forming part of Letters Patent No. 4,609, dated June 27, 1846.

To all whom it may concern:

Be it known that I, HARVEY H. MAY, of Galesburg, in the county of Knox and State of Illinois, have invented a new and useful Mode of Manufacturing Plows by Means of a Press, which I call the "Plow-Maker;" and I do hereby declare the following to be a full and exact description.

The nature of my invention consists in forming mold-boards, shares, ties, (to connect the mold-board and share,) and plow posts or standards by means of a press having dies or swages, (one set for right-hand and one for left-hand plows,) and in which the mold-board, the share, the ties, and the post have their place and are adjusted by perpendicular rods while being formed to facilitate the fitting and putting together the plow. I make the upper die stationary in the press, while the lower die is movable and is elevated with great force, causing the part of the plow in the press to conform to the upper die. The upper die I call the "mold," and the lower one I call the "follower."

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation, reference being had to the annexed drawings, making a part of this specification.

A represents the sill, B B the posts, and C the girth or beam connecting the posts near the top, thus forming the frame of the press.

D represents the mold, made of cast or wrought iron, with a convex face (see the vertical cross-section, Fig. 2) of the desired form of the mold-board and share of the plow, and is firmly fastened (with the convex face downward) to the girth C. The space between the girth and mold is filled with a solid block of wood, E.

F represents the follower, made of cast or wrought iron.

G represents a block of wood fitted to follower F.

H represents the cap of the gate or follower that moves when the machine is operated.

F, G, and H are firmly bolted together, the concave face of the follower F being upward to match the mold D. The cap H, gate-sides I I, and girth J form the frame-work of the

gate. The ends of the girth J and ends of a cross-piece under the cap pass through the sides of the gate and slide in perpendicular grooves in the posts B B.

K K represent arms firmly bolted to the posts B B, and sustain the axle or fulcrum L, to which fulcrum is attached the hand-lever M.

N represents a toggle-joint or progressive lever, the lower end connected by a joint to a block or stepping, O, and the upper end connected by a joint to the cap H, and the middle or toggle joint is attached by bars or links P P to the short arm of the hand-lever M. When the long arm of the lever M is raised the toggle-joint is drawn up the fulcrum L by the links P P, and the gate on which the follower F rests is forced up perpendicularly between the posts B B, and when the long arm of the lever M is moved down the toggle-joint or progressive lever is drawn in the position represented in the drawings, Fig. 1, and the gate bearing the follower is drawn down.

Q represents a wedge between sill A and stepping O, to regulate the space between the mold and follower to correspond with the thickness of the metal to be formed in the press. The stepping, when raised or lowered, is kept to its place by means of perpendicular pins or guides a a.

R represents an aperture in the post B, through which to adjust the plow-post in the press to be formed, this aperture being reversed for a left-hand plow.

S S represent perpendicular rods or projections passing or sliding through the mold and resting on the follower, or attached to mold and passing through the follower and attached to the mold, to regulate and keep in their proper places the mold-board, the share, the tie, and the plow-post in the press while being formed, also to indicate where each piece is to be placed in the press. More rods may be used, or these may be moved to other holes in the press, as may be necessary in forming different parts of the plow.

In operating the press the parts of a plow—such as mold-boards &c.,—to be formed are placed to their positions on the follower F in the press. The long arm of the lever is carried downward to a horizontal position, ele-

vating with great power the gate, with the follower F and the part of the plow in the press made to conform to the mold D.

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

The method of forming mold-boards, shares, ties, plow posts or standards of wrought plows by means of dies or swages, (mold and fol-

lower,) in combination with rods or projections to determine the appropriate position of each piece in the press while being formed, as herein described.

HARVEY H. MAY.

Witnesses:

ERASTUS A. STRONG,
PARDON SIGRON.