

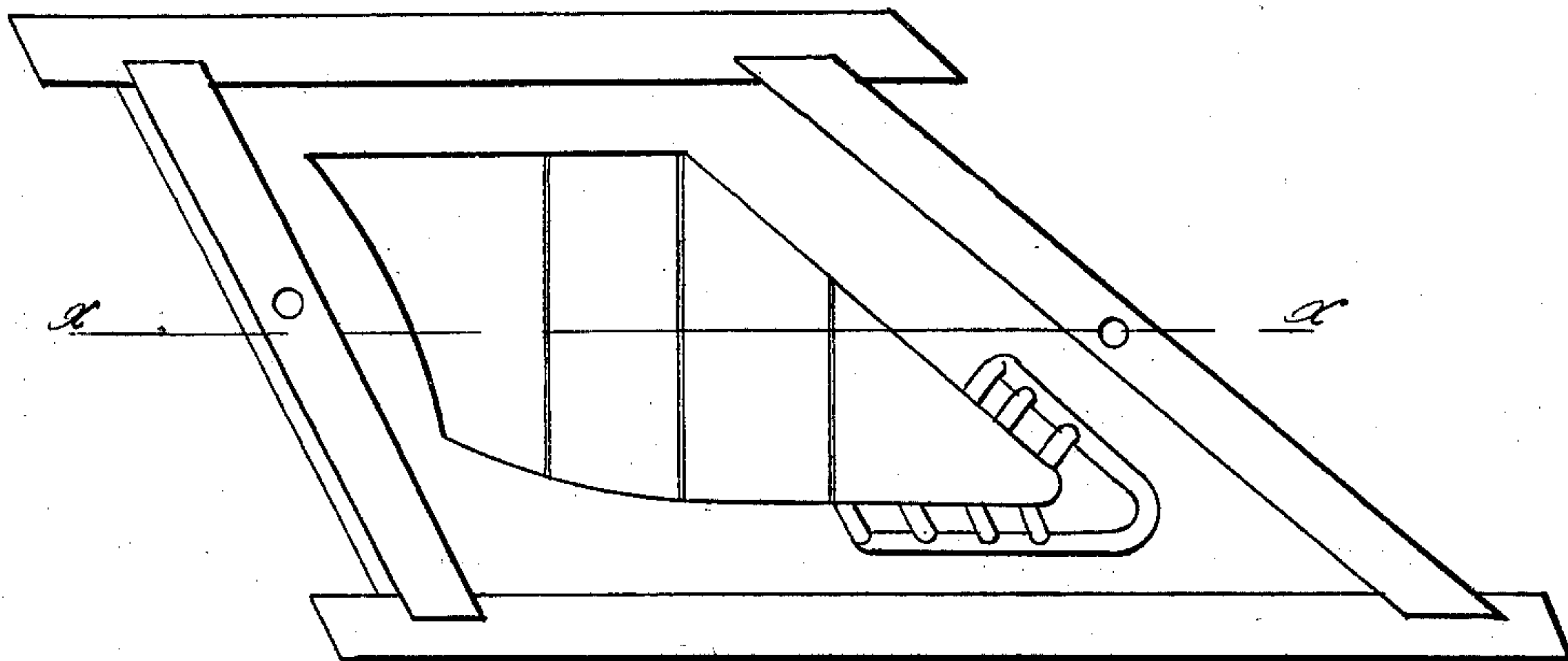
*J. Oliver.*

*Casting Mould Boards.*

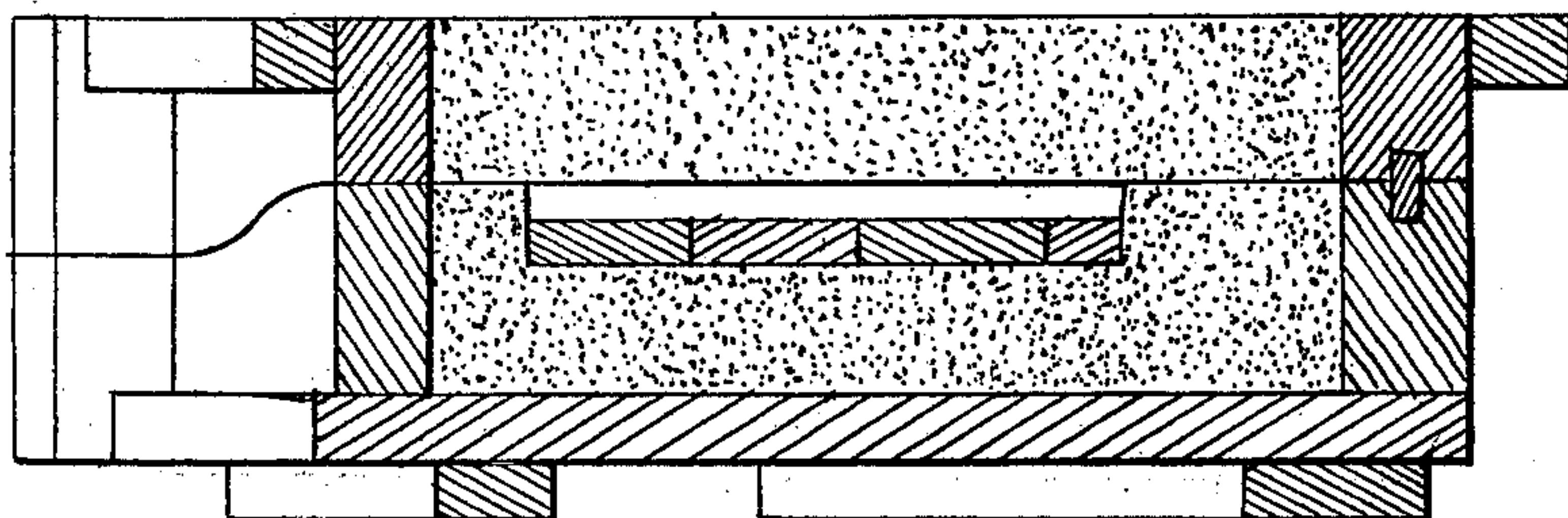
*N<sup>o</sup> 86,579.*

*Patented Feb. 2, 1869.*

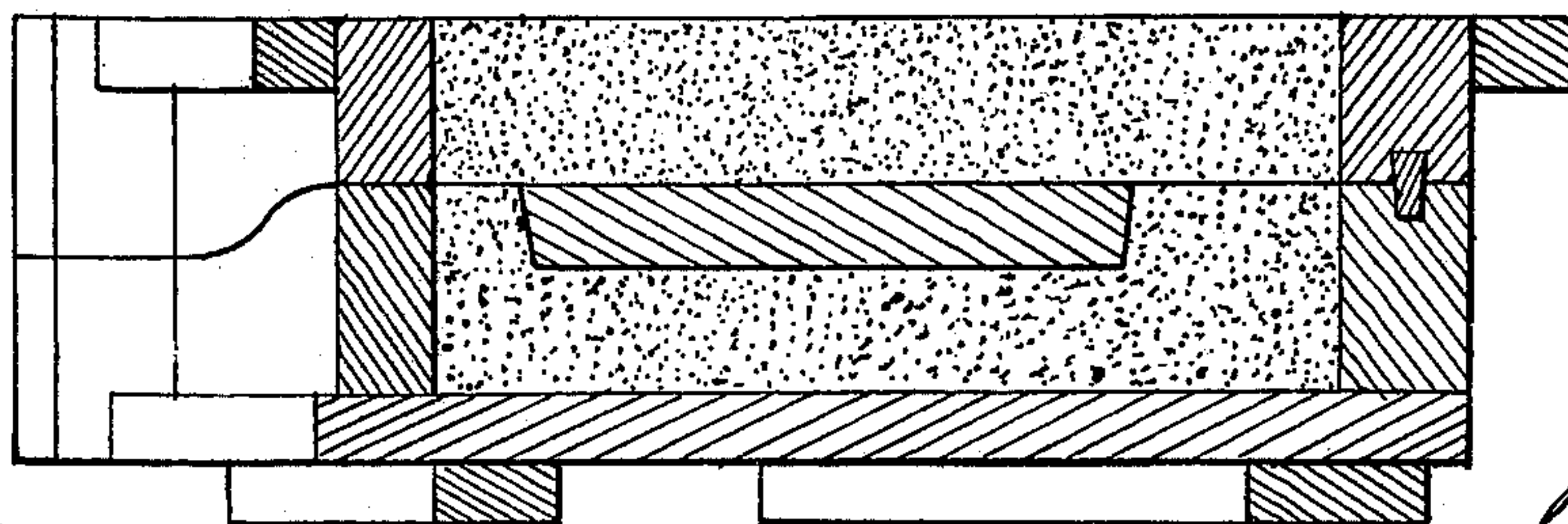
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*  
*J. G. Robinson.*  
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# UNITED STATES PATENT OFFICE.

JAMES OLIVER, OF SOUTH BEND, INDIANA.

## IMPROVEMENT IN CHILL FOR CASTING MOLD-BOARDS.

Specification forming part of Letters Patent No. **86,579**, dated February 2, 1869.

*To all whom it may concern:*

Be it known that I, JAMES OLIVER, of South Bend, in the county of St. Joseph and State of Indiana, have invented a new and useful Mode of Casting Mold-Boards for Plows; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of the chill and lower portion of the mold. Fig. 2 is a vertical section of the same, taken in the line *xx* of Fig. 1; and Fig. 3 is a vertical section of the mold and pattern.

The nature of my invention consists in a new arrangement of mold-board pattern and chill for plows, overcoming difficulties which have heretofore prevented the perfect and equal chilling of mold-boards, by a lack of opportunity for the escape of the gas which collects on the surface between the molten metal and the chill, thereby causing a part to be imperfectly chilled; and, further, by using a full-sized chill, the hot iron striking one part of

it warps and twists the same more or less, which is overcome by using a chill made up of sections.

The mold-board and chill-pattern are united in one, and it is molded in the usual manner. The pattern is then removed, and, having the chill hot, each section is placed in its proper place, and the molten metal poured in.

The advantages of a sectional chill are, that it vents the gas through the seams, prevents warping the mold-board, and should any one of the sections be injured by contact with the melted iron, it can be replaced at much less expense than a whole chill.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The chill for casting mold-boards for plows, when constructed and arranged as shown and described.

JAMES OLIVER.

Witnesses:

W. G. GEORGE,  
GEO. PFLEGERP.