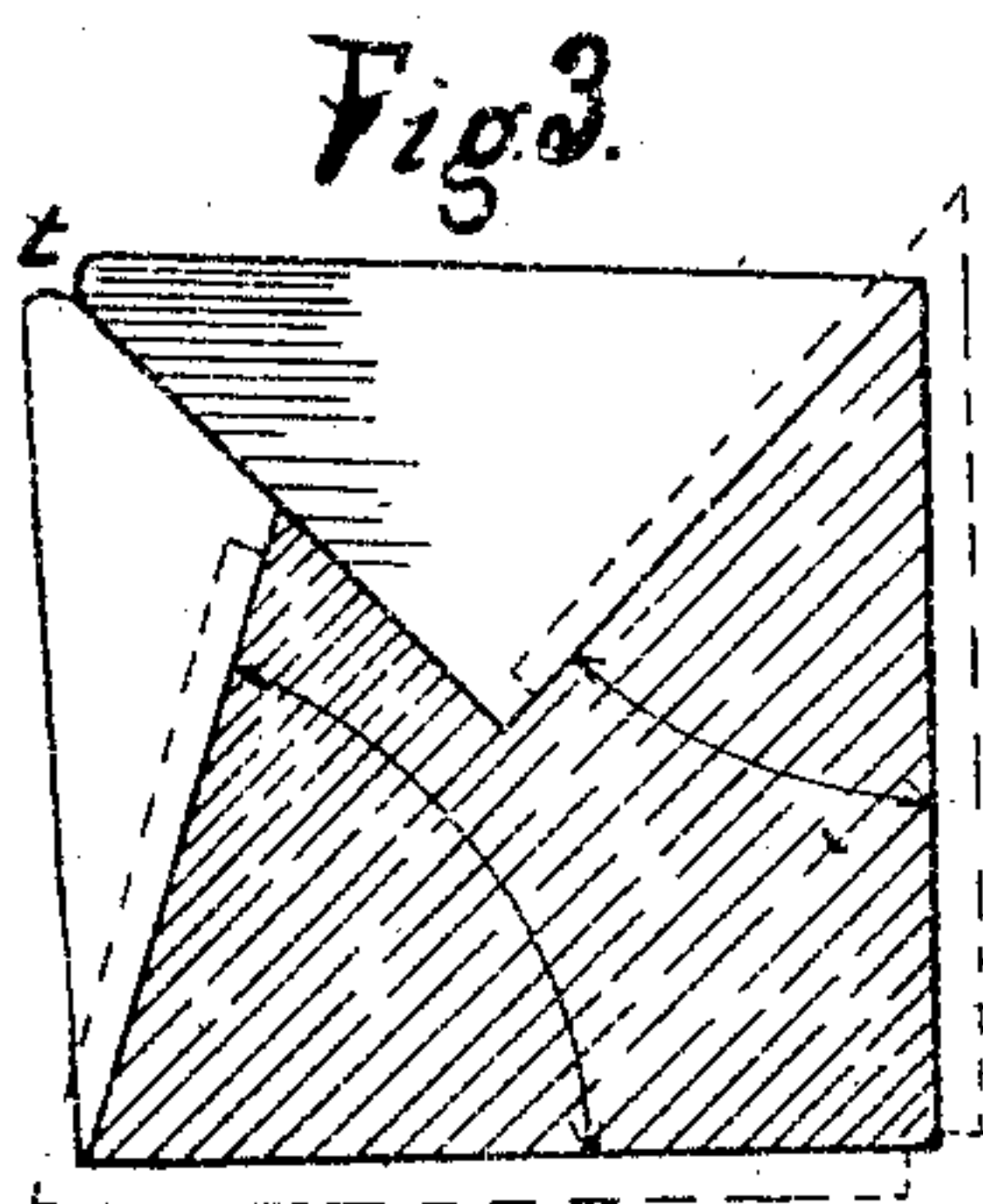
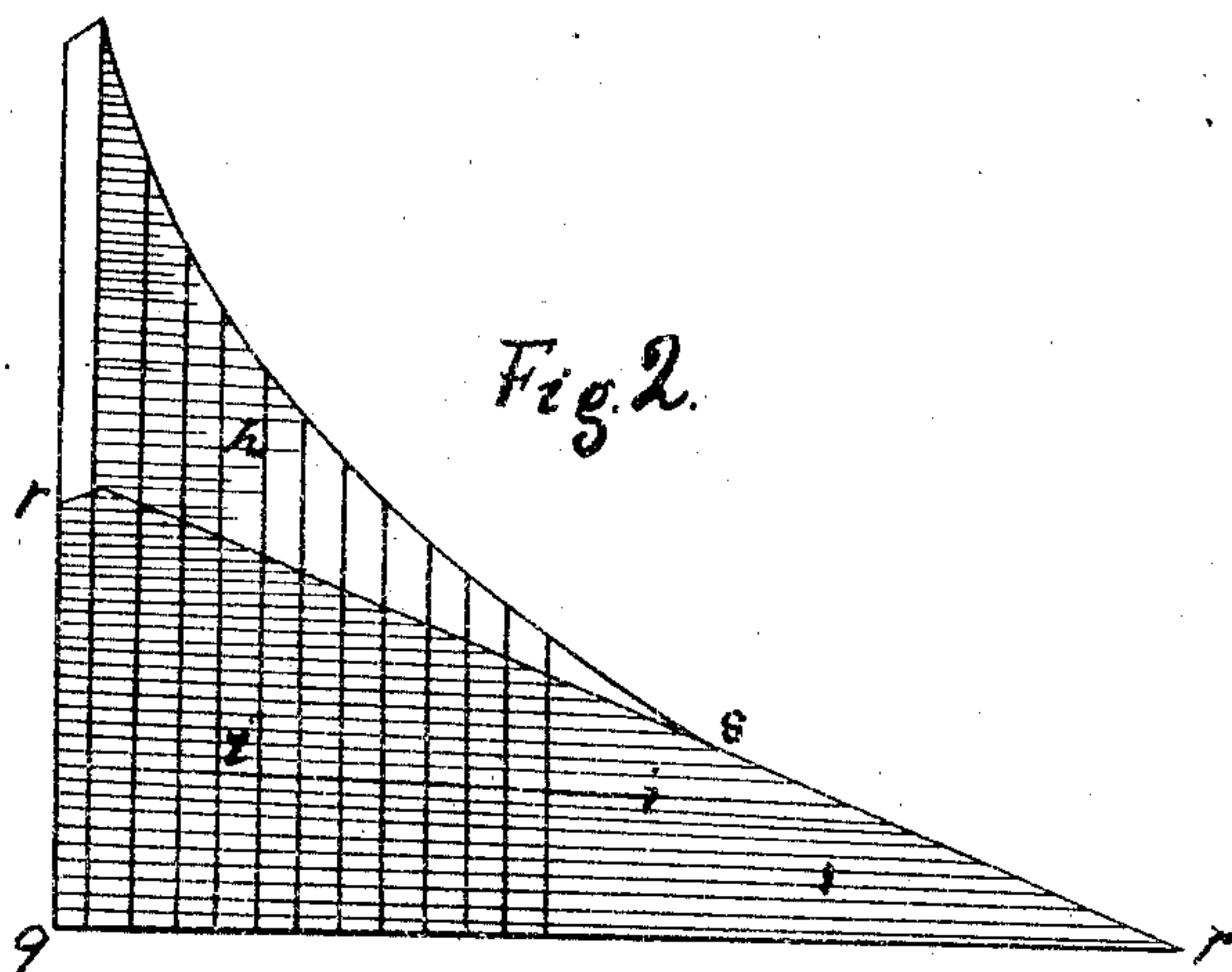
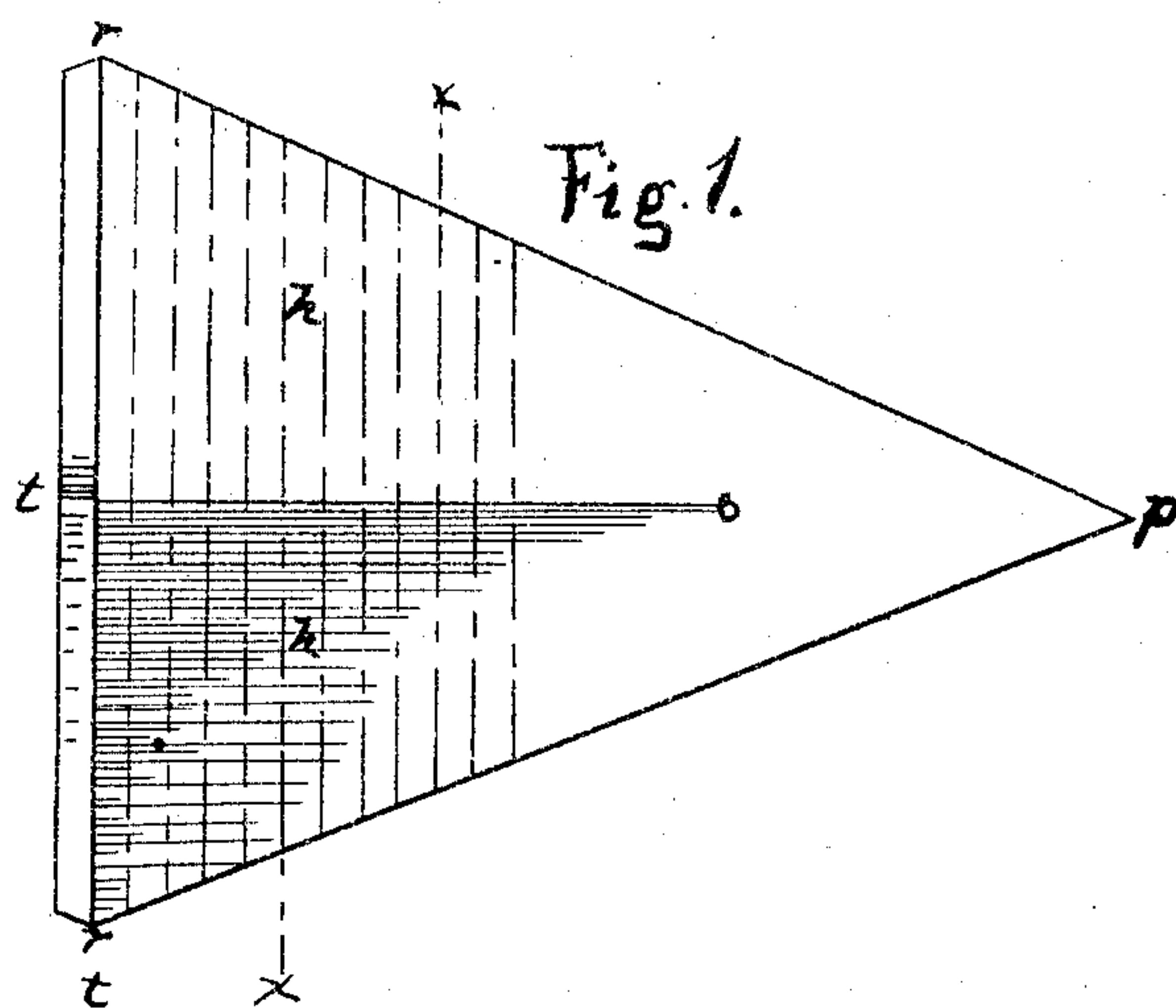


*J. Seymour,
Mould-Board.*

Nº 75,987

Patented Mar. 24. 1868.



Witnesses.

Wm. C. Green.

D. E. Gardner.

Inventor

*Josiah Seymour.
by Attorney
J. B. Woodruff & Son.*

United States Patent Office.

JOSIAH SEYMOUR, OF COVENTRY, NEW YORK.

Letters Patent No. 75,987, dated March 24, 1868.

IMPROVEMENT IN MOULD-BOARDS FOR 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, JOSIAH SEYMOUR, of the town of Coventry, county of Chenango, and State of New York, have invented a new and useful Improvement in the Mode of Forming Mould-Boards for Ploughs; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters marked thereon, in which—

Figure 1 shows a plan or top view of my invention.

Figure 2 a side elevation of the same, and

Figure 3 a vertical cross-section on the broken line $x x$, fig. 1.

My invention relates to an improvement in the mode of constructing mould-boards for ploughs, especially that class known as reversible or side-hill ploughs, by which there is less resistance in passing through the soil, and consequently an easier draught. The surfaces of the mould-boards are made with greater accuracy, and are formed in such a manner that they are portions of the blade of a screw, the peculiar curve given to them being such as to insure the least possible resistance, while no part presents any irregularities which may cause it to wear away faster than others. This result is attained by the means used to lay out the pattern from which the mould-board is to be made; and it consists in laying out the pattern into a series of vertical sections, by planes perpendicular to its axis, and making the lines bounding these sections straight.

In order that others may understand the construction and operation of my invention, I will proceed to particularly describe it.

A line, $p-q$, fig. 2, is taken as the axis of the block or pattern, p being at the point, and q at the rear of the plough. This block, of which the line $p-q$ forms one corner, is about square in cross-section, or the two surfaces which meet on the said line form an angle of about ninety degrees. They should meet at about this line for a reversible or side-hill plough, as each face is to form the base and land-side alternately, and it is not desired to have the plough turn through a greater arc than a quarter of a circle. After determining the length of this line or axis of the plough, which may be as long as desired, I lay off, from the rear end, any number of equal divisions, which may be near together, or further apart, as greater or less accuracy in constructing the mould-board is desired—the nearer the divisions are, the more perfect being the form of the mould-board—and then, with an ordinary square, I draw lines upon the two surfaces $i i$, which meet at the axis, thus dividing the block into sections at right angles to its axis. Then, from the point p , I produce the lines $p-r$, on each side i , which is to form the edge of the land-side and base-surfaces, and from the point p cut away so much of the block as lies above a line joining these two lines, $p-r$ and $p-r$, until I reach the point s , so that this forward portion of the block is a triangular pyramid, having one of its angles ninety degrees, while each of the others is forty-five degrees, the apex being the forward point of the plough or block. As there is, after we reach the point s , to be an increase in the angle formed by the junction of the mould-board with its land-side or base for each section, until we reach the rear one and last, which may be equal to one hundred and ten degrees, or even greater, I use a gauge-square, as indicated in fig. 3, to get the angles of the remaining sections, and having a graduated circle, from which to obtain the requisite angles. I apply the square set at the proper angle, and connect the section-lines on the base and land-side with other straight lines, which meet each other on the line $s-t$, and by cutting away the block down to said lines, I arrive at a surface, $h h$, which, it is believed, is best adapted to the required purpose. By proportioning the number of degrees between forty-five degrees and the angle formed by the lines of the rear section, and allowing them to increase by a constant equal difference, I obtain a regular surface for a mould-board, similar to that of a blade of a screw; or, if it is desired, the difference between the angles may be increased regularly, and a surface would be obtained which would be a part of a “gaining”-screw, which would be better adapted to some soils. Whatever plan may be adopted, the lines bounding the sections will be perfectly straight, and the surfaces thus formed will be best adapted for the purposes required.

The manner of applying the gauge-square to obtain the desired surface, and the difference between the angles of two different sections, are plainly shown in fig. 3, and it will be readily seen, also, that this manner of constructing mould-boards may be varied, so as to form ploughs of any desired size or kind, as the angle may

be varied at pleasure, to produce different results, and that in forming single ploughs, a pattern of one-half the size of such a one as referred to above, would be sufficient.

Having thus described my invention, its mode of construction and operation, what I claim as new, is—

The forming of a mould-board for ploughs, either single or reversible, in such a manner that the lines bounding the vertical sections of said mould-boards shall be straight, substantially as herein described and set forth.

JOSIAH SEYMOUR.

Witnesses:

E. A. PHILLIPS,
A. J. HOYT.