No. 744,488. PATENTED NOV. 17, 1903.

J. CLAYTON.

PLOW.

APPLICATION FILED MAY 25, 1903.

NO MODEL

2 SHEETS—SHEET 1.

Fig. 1.

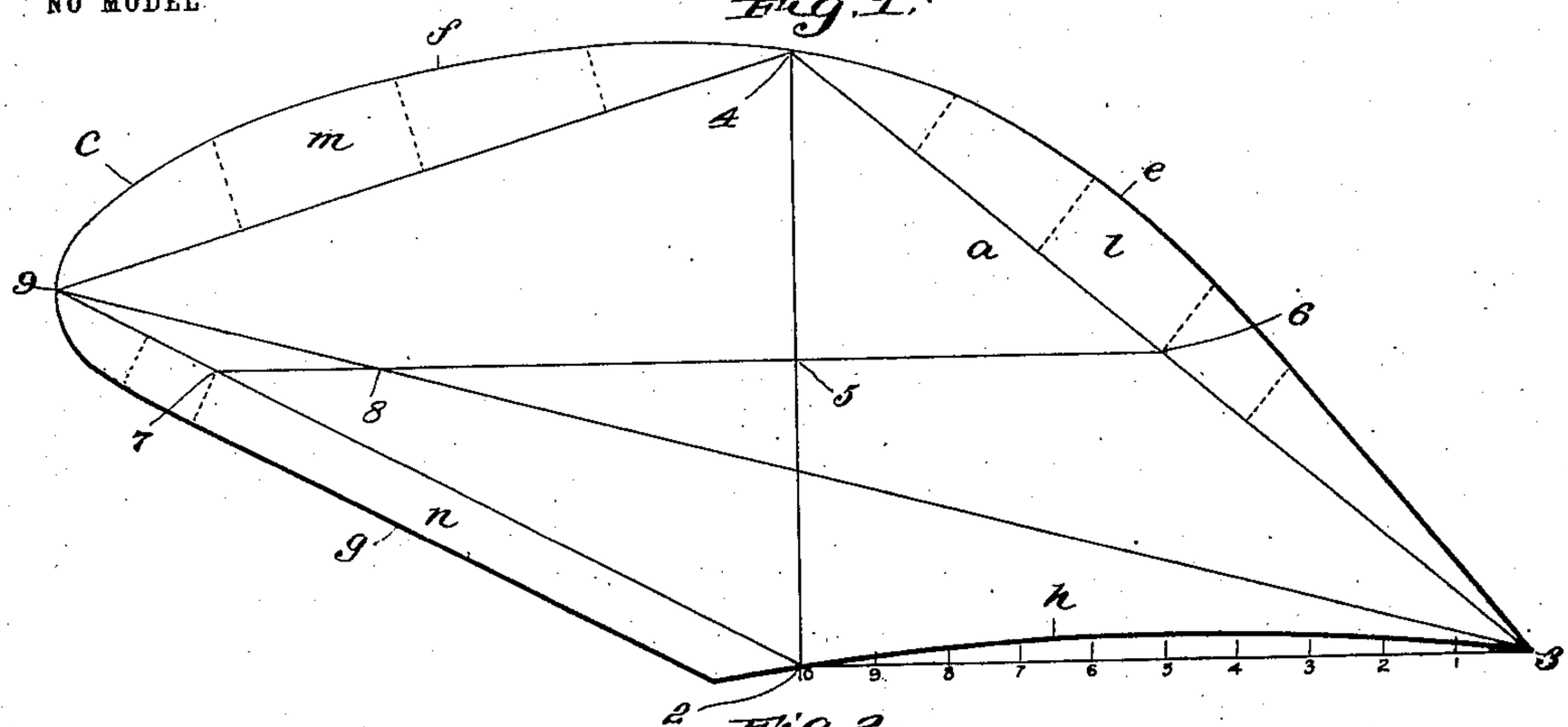


Fig. 2.

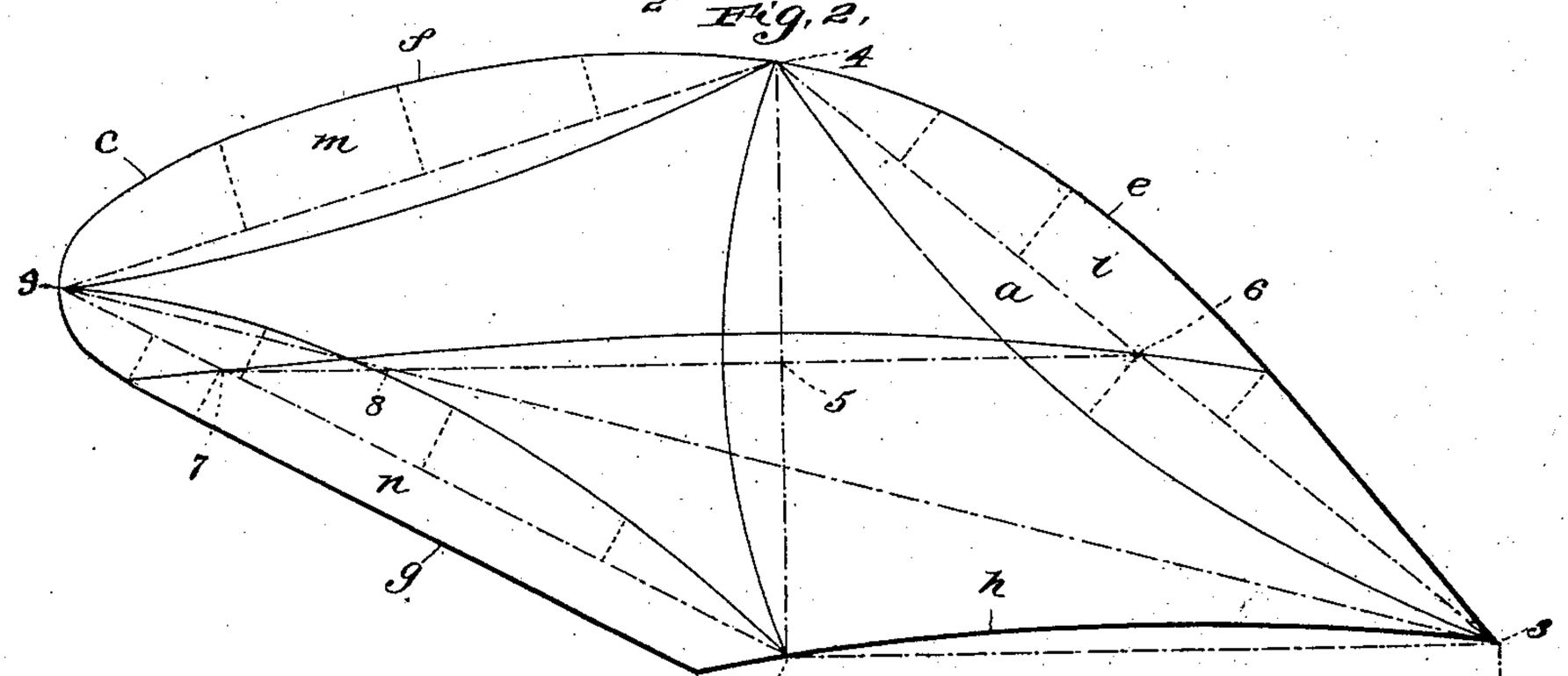
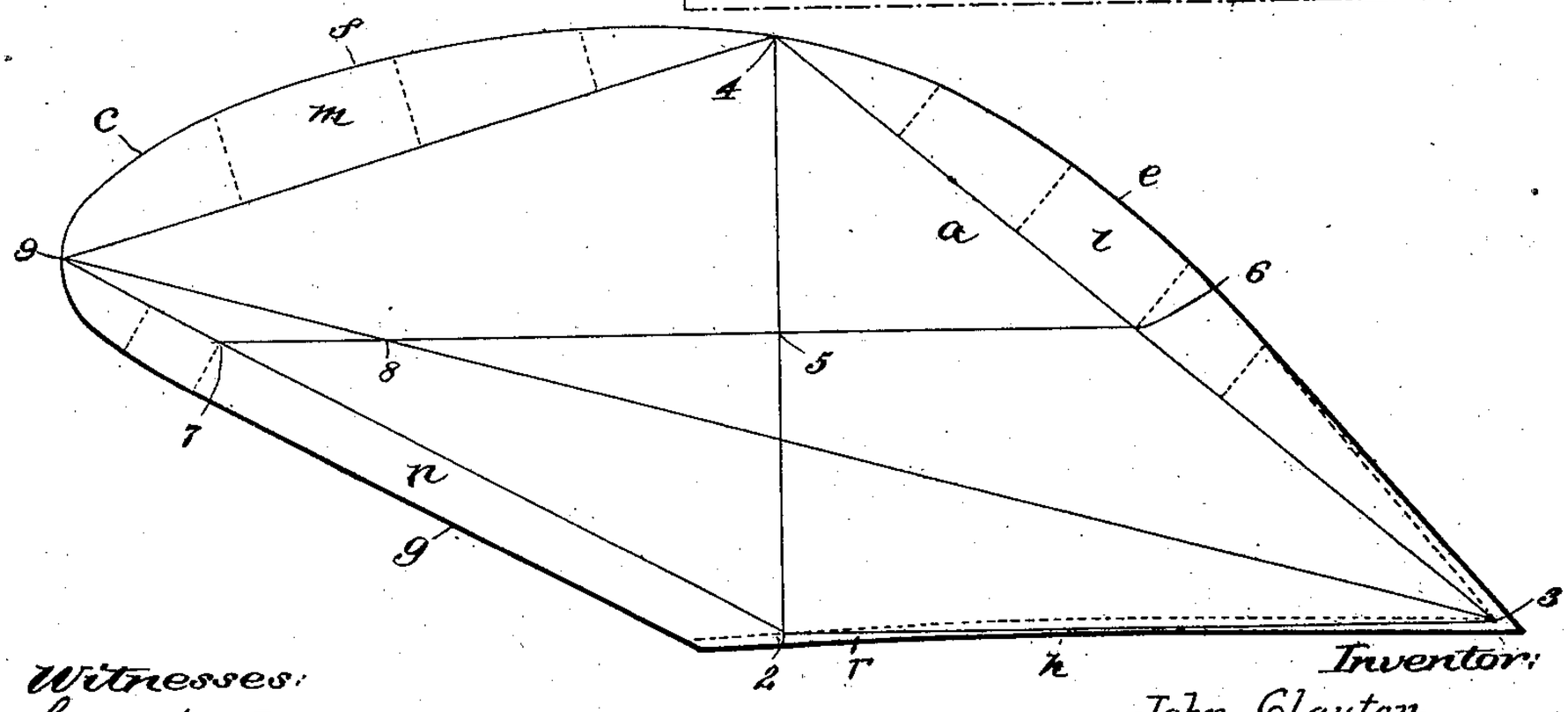


Fig. 3.



Witnesses:
George M. Clubson
A. G. Sidney

Inventor:
John Clayton
by E. W. Anderson
his attorney

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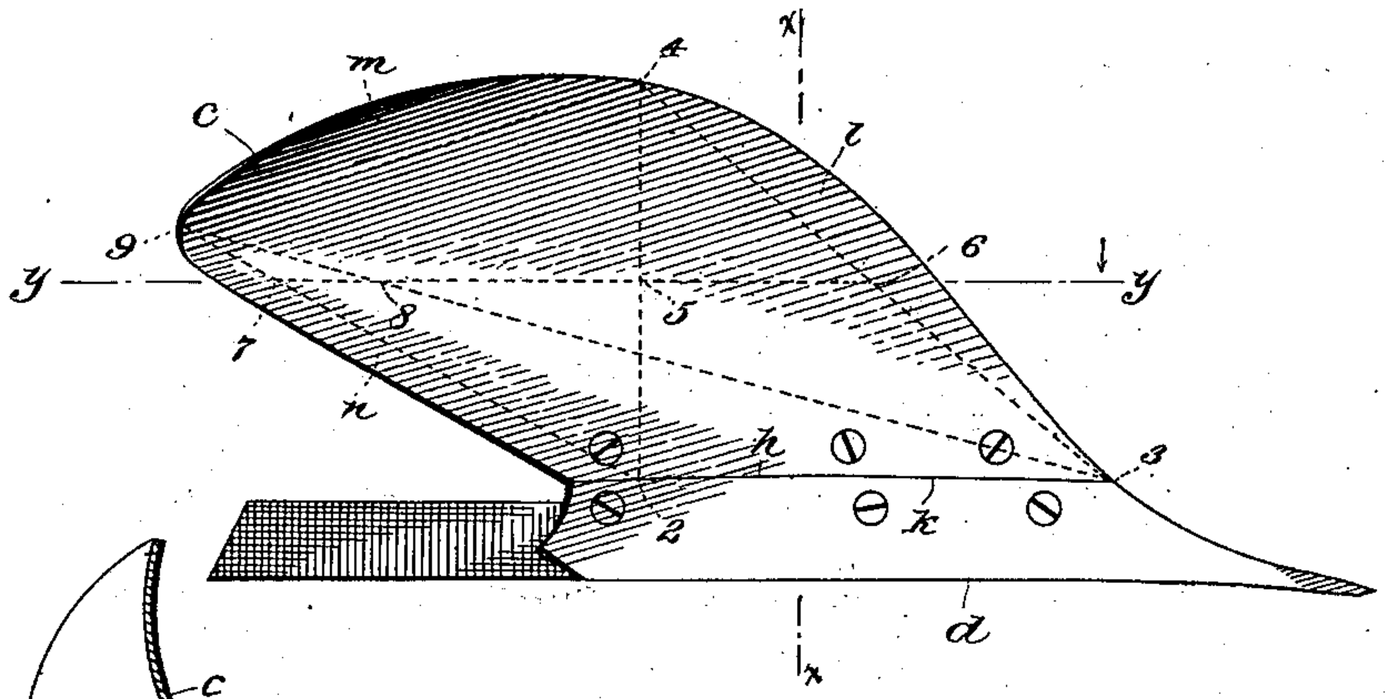
NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.



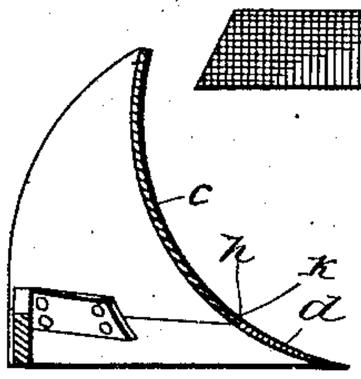


Fig. 7.

Fig. 5.

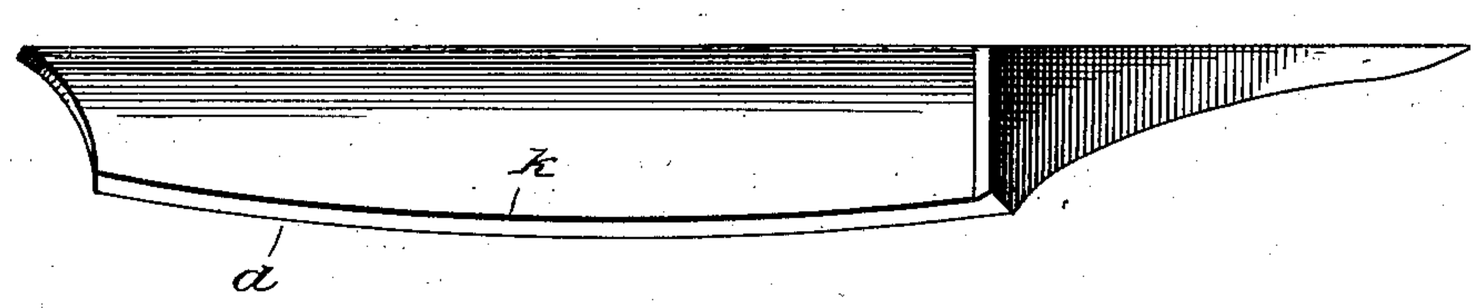


Fig. 6.

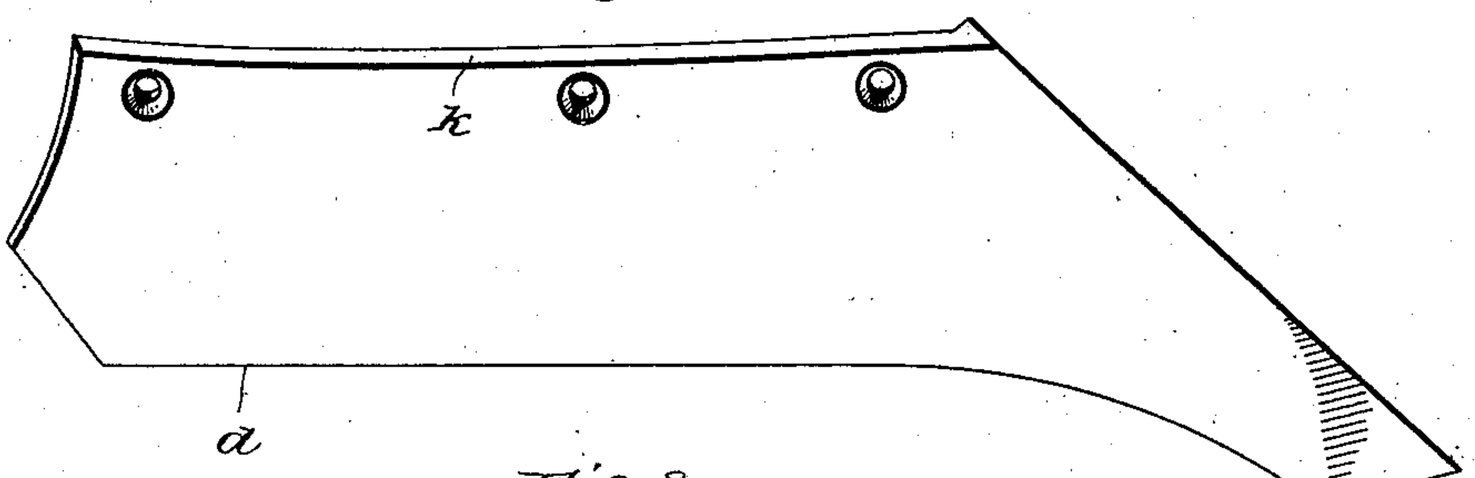
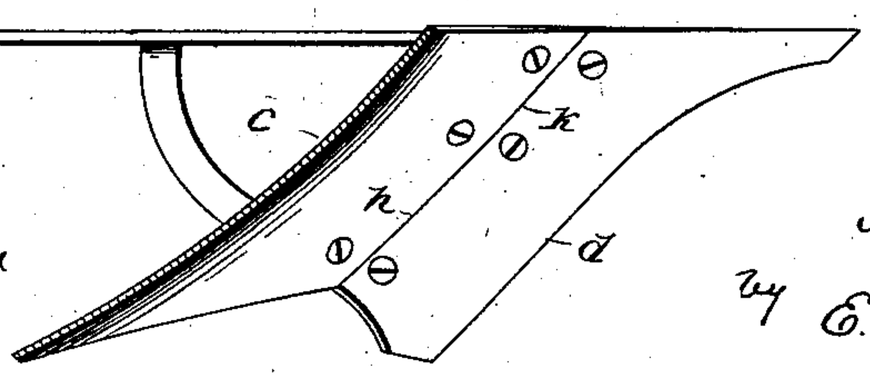


Fig. 8.



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by E. W. Anderson
his attorney —

No. 744,488. Patented November 17, 1903.

UNITED STATES PATENT OFFICE.

JOHN CLAYTON, OF MINNEAPOLIS, MINNESOTA.

PLOW.

SPECIFICATION forming part of Letters Patent No. 744,488, dated November 17, 1903.

Application filed May 25, 1903. Serial No. 158,686. (No model.)

To all whom it may concern:

Be it known that I, JOHN CLAYTON, a citizen of the United States, and a resident of Minneapolis, in the county of Hennepin and State of Minnesota, have made a certain new and useful Invention in Plows; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 is a chart of the moldboard-blank with the edges thereof upset or thickened for share and point. Fig. 2 is a chart of the moldboard-blank, showing curvatures. Fig. 3 is a chart of the full blank with increments for upsetting. Fig. 4 is a side elevation of the plow. Fig. 5 is a reverse or inverted detail side view of the share from the land side. Fig. 6 is a detail plan view of the same. Fig. 7 is a section on the line x x, Fig. 4, on a somewhat smaller scale. Fig. 8 is a section on the line y y, Fig. 4, on a somewhat smaller scale.

The invention relates to plows, and particularly to the moldboard and share or furrow-forming plates; and it consists in the novel construction and combinations of parts, as hereinafter set forth.

In this invention it is intended to provide for the purposes in view plates of novel yet determinate character, which are designed to operate in an efficient manner.

In the accompanying drawings are shown the blank a, the moldboard c, and share d, which are provided by bending the plates to proper curvatures.

The letter a designates the blank for the moldboard. In shaping this blank or a pattern therefor the right-angle triangle 2 3 4 is formed in the front part, the base 2 3 being equal to the cut of the plow, usually about fourteen inches. The base constitutes the scale-line, it being divided into tenths and the tenth into eighths, sixteenths, and thirty-seconds. Set off the vertical line 2 4 of the triangle eight and one-half tenths of the base or cut to give the depth of the moldboard and the point 4. In this manner the line 3 4 is determined. Divide the line 2 4 into two equal parts at 5 and through the point 5, which is about the center of the share, draw the line parallel to the base, such line terminating in the points 6 7. Set off from 5 on this line six-tenths to the point 8, through which produce a line from 3. Set off on the line 2 8 twenty-one tenths from the point 3, which will give the point 9. From 2 to 9 and from 9 to 4 draw the lines 2 9 and 9 4. The line 5 8, cutting the line 3 4, gives the point 6. In this manner is outlined the trapezium 2 3 4 9, of which the part or triangle 2 3 4 is a right-angle triangle. This trapezium forms the skeleton of the pattern filled out by the edge segments l m n and extension r, which are outlined by the convex-curved outlines e f and the substantially straight outline g and the concave joint-line h. It will be perceived that the joint-line h and the curved line e meet a little beyond the point 3 and that the line h extends beyond the point 2 to meet the line g a short distance. A small depth extension of the moldboard-blank is thus provided in order to allow for the concave vertical curvature and the convex lateral oblique curvature of the moldboard, said curvatures giving the proper warped or double-curved friction-surface for the board. The outline e f g h indicates the shearing-line for cutting out the stock. The small amount five thirty-seconds added on the depth is absorbed in forming the superficially-convex joint portion, and the extra length at the point 3 is provided to enable the workman to thicken up the plate at this point. This is only necessary to a small extent, as the convex curvature of the friction-surface of the moldboard protects the shin from wear by lifting the earth in the center, and thus relieving the pressure on the shin.

The height of the moldboard at 9 is regulated by the point 8, the distance from 5 to 8 being made longer or shorter to depress or elevate the moldboard at this point, as may be required, or the length of the moldboard may be regulated in accordance with the distance set off on the line 3 8 9 to suit different requirements.

The share b is made in a manner usual in the trade, but with a convex curvature at k to meet the curvature of the moldboard along the joint edge h.

Having described this invention, what I

claim, and desire to secure by Letters Patent, is—

1. The moldboard of general diamond form, having its surface concave from base to top and convex from front to rear, and provided with a convex forward edge and a convex top edge, substantially as specified.

2. The moldboard of general diamond form, having its surface concave from base to top, and convex from front to rear, and provided with a convex forward edge, a convex top edge and a concave lower edge, substantially as specified.

3. The combination with the moldboard of general diamond form having a convex forward edge, a convex top edge and the base-joint edge superficially concave from base to top, and convex from front to rear, of the share having the correspondingly superficially convex joint edge engaging the base-joint edge of the moldboard, substantially as specified.

4. The moldboard-blank of general diamond form having a convex forward edge, a convex top edge, and a concave base, said blank including a small depth extension which is taken up in bending the moldboard into form, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN CLAYTON.

Witnesses:
A. D. SMITH,
S. A. RICE.