

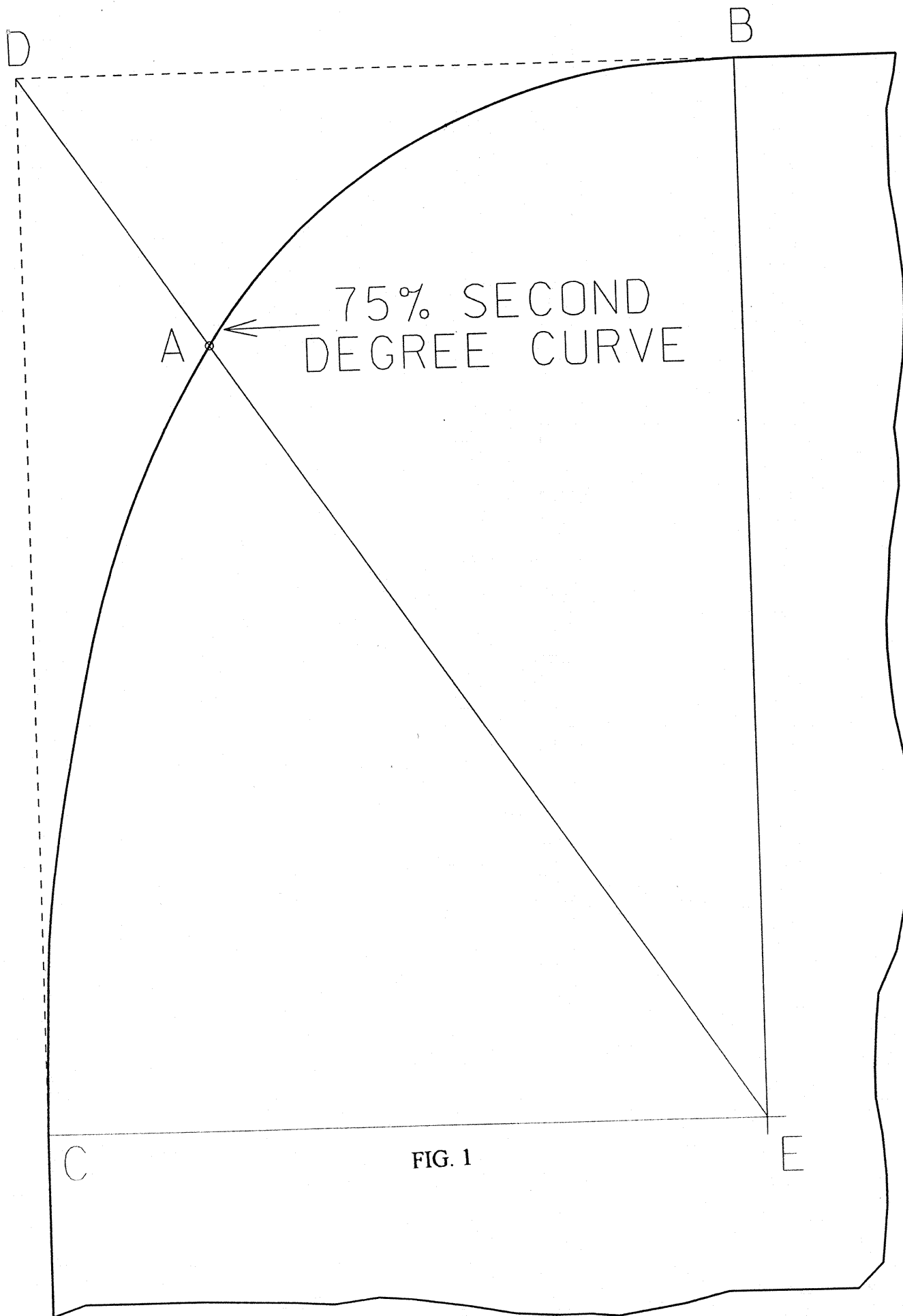
HOW TO LAYOUT A SECOND DEGREE CURVE*

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FOR
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In aircraft construction, second degree curves are often used, and described similar to what is shown in Figure 1. These curves are non circular, and this example shows how to lay them out.

In Figure 1, Points A, B, C, D and E are located from dimensions shown on the plans. A 75% curve is used in this example. This means that the distance between points A and E is equal to 75% of the distance between Points D and E.



Refer to Figure 2.

Draw Line 1 from Point B thru Point A, and Line 2 from Point C thru Point A.

Draw Line 3A, which is a random line, from Point B.

Draw Line 4A from Point D thru the intersection point of Line 2 and Line 3A.

Draw Line 5A from Point C to the intersection of Line 1 and Line 4A. If necessary extend this line to intersect Line 3A. The intersection of Line 3A and Line 5A is a point on the curve, so place an "X" or other suitable mark at this point

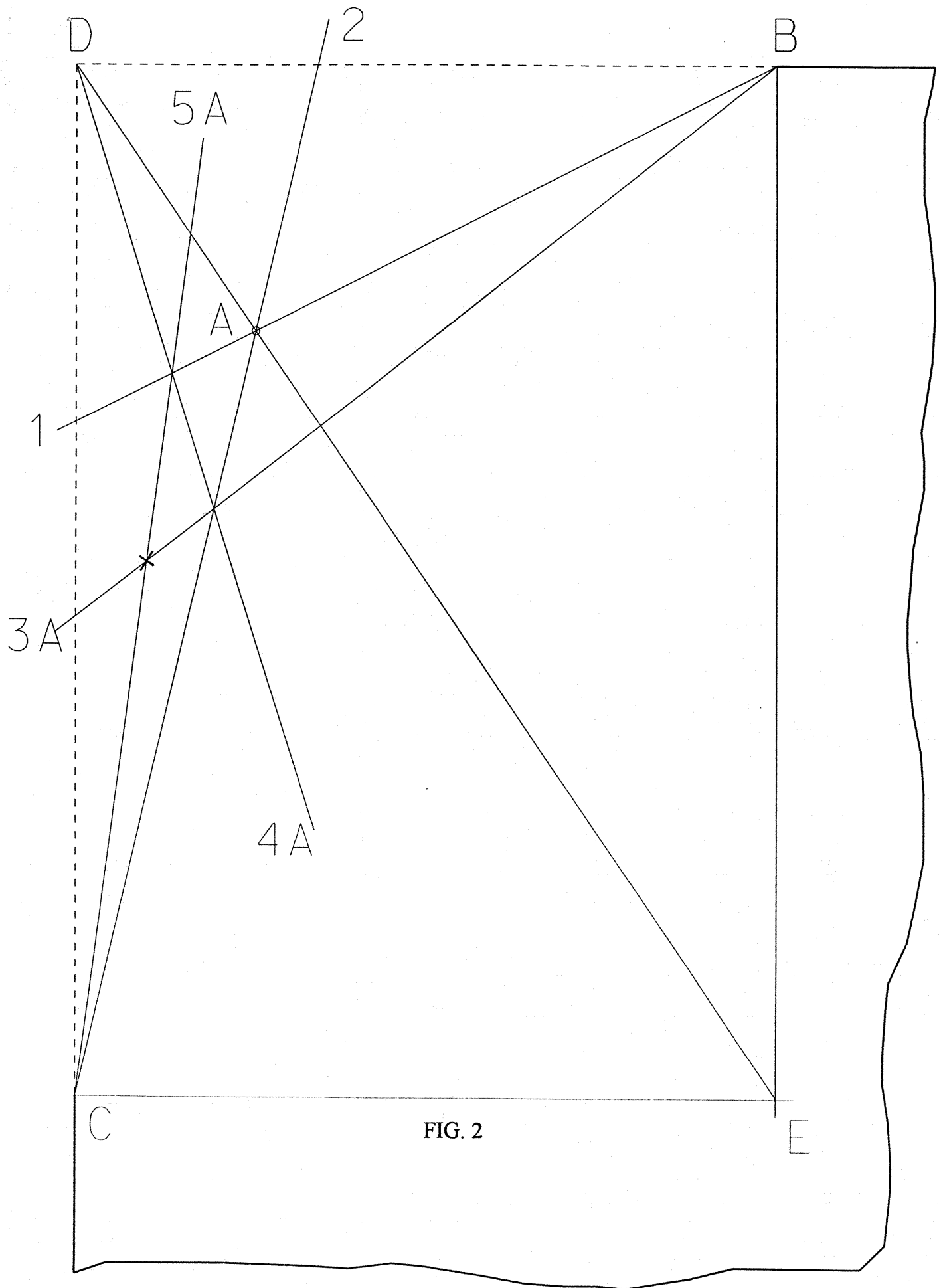


FIG. 2

Refer to Figure 3

Use Line 1 and Line 2 as previously drawn.

Draw Line 3B, which is a random line, from Point B.

Draw Line 4B, from Point D thru the intersection point of Line 2 and Line 3B.

Draw Line 5B from Point C to the intersection of Line 1 and Line 4B. If necessary extend this line to intersect Line 3B. The intersection of Line 3B and Line 5B is another point on the curve, so place an "X" or other suitable mark at this point

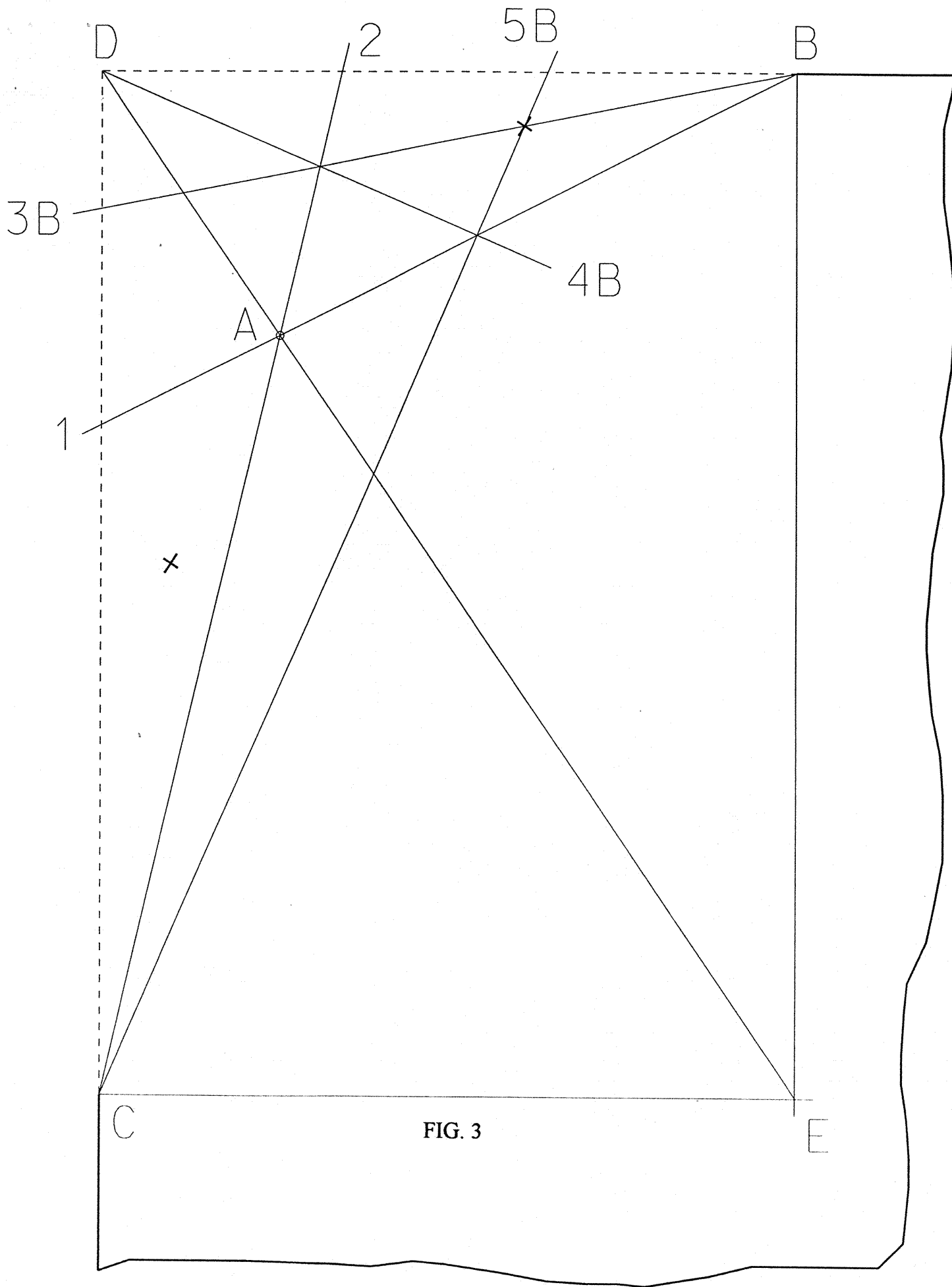


FIG. 3

Refer to Figure 4

Use Line 1 and Line 2 as previously drawn.

Draw Line 3C, which is a random line, from Point B.

Draw Line 4C, from Point D thru the intersection point of Line 2 and Line 3C.

Draw Line 5C from Point C to the intersection of Line 1 and Line 4C. If necessary extend this line to intersect Line 3C. The intersection of Line 3C and Line 5C is another point on the curve, so place an "X" or other suitable mark at this point.

Continue repeating this procedure, until you feel that you have a sufficient number of points to draw a smooth curve.

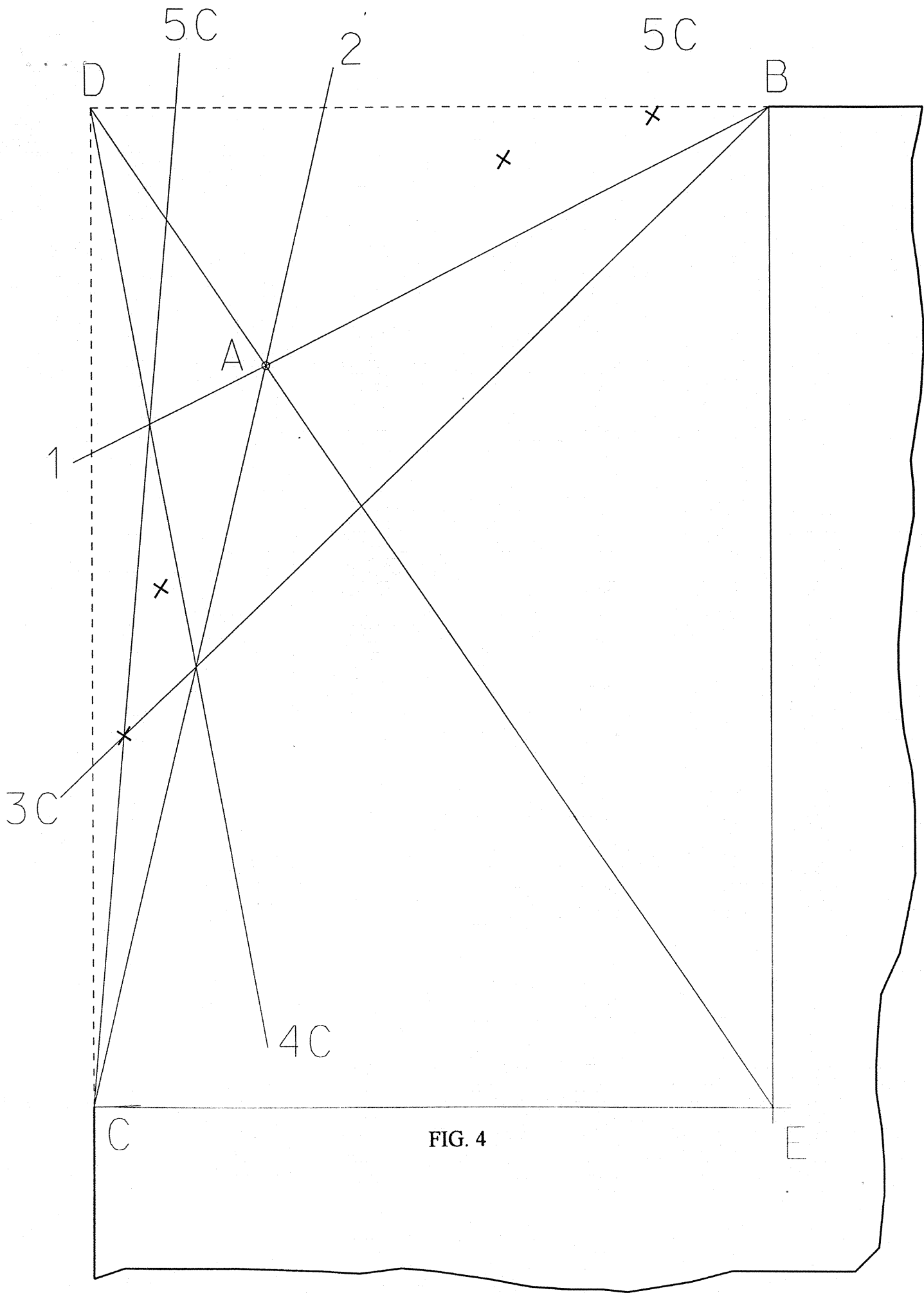


FIG. 4

Refer to Figure 5.

When you feel that you have a sufficient number of points plotted, use a bendable batten or other suitable device to draw a smooth curve through all of the previously plotted points and Point A.

When this is completed, stand back and admire your work. Congratulations, you have just laid out a second degree curve.

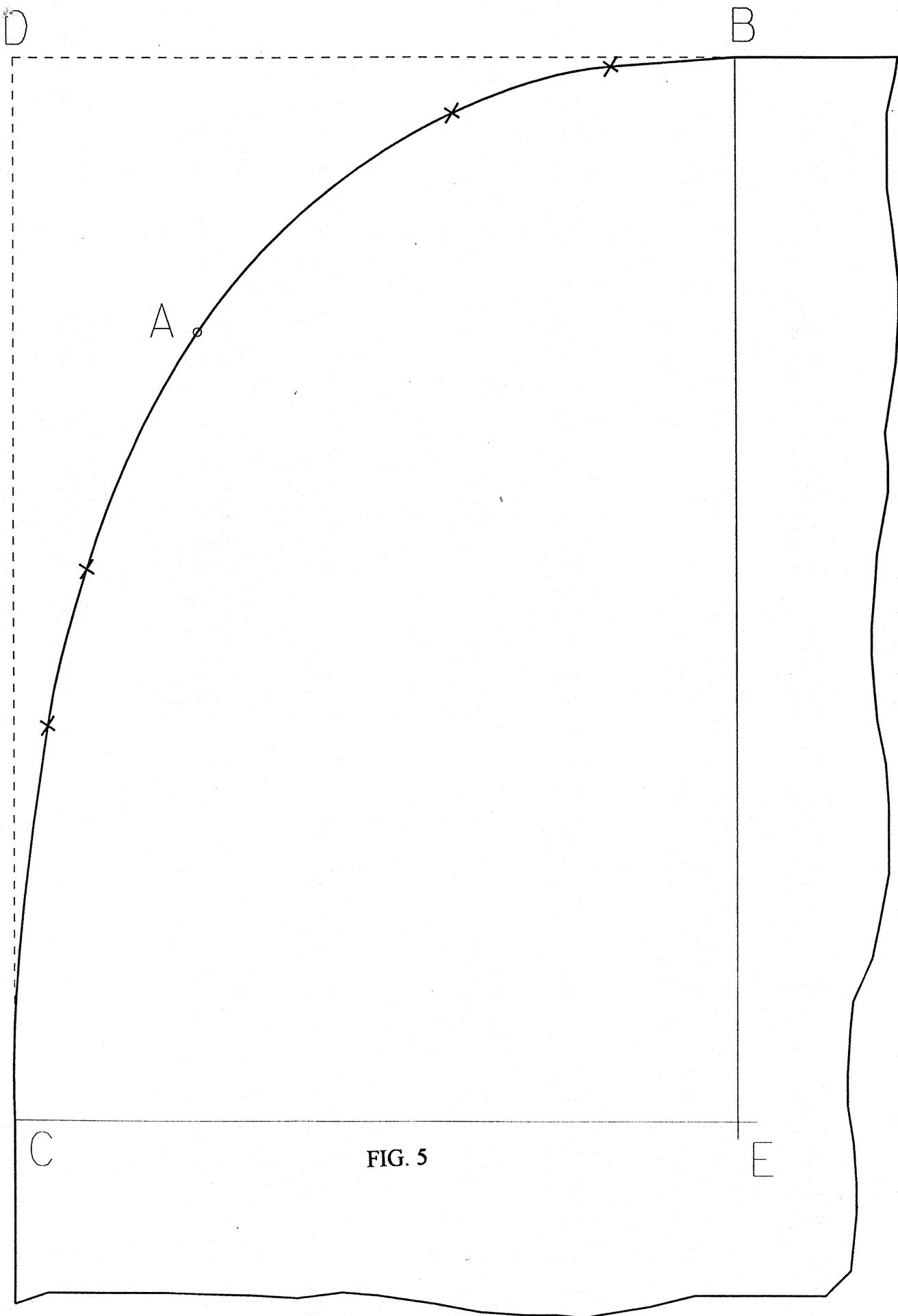


FIG. 5