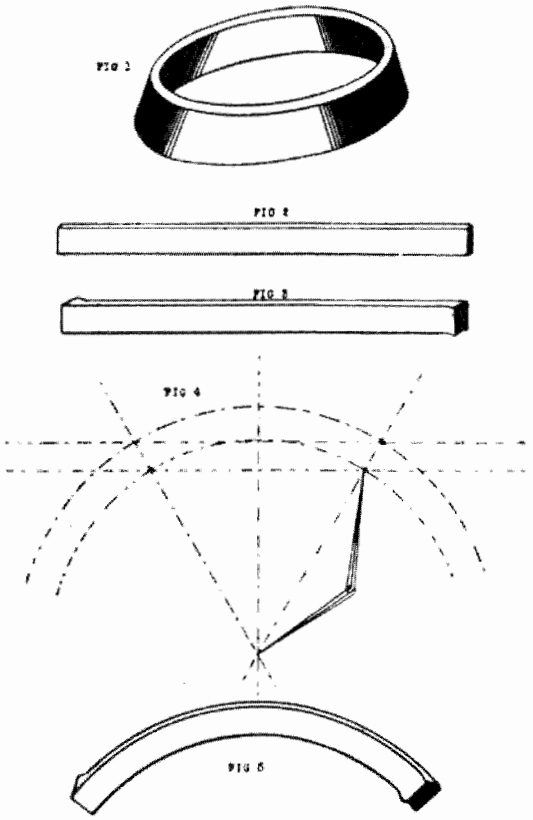
Mark Finn Demonstration – Camp Verde

by Len Ledet

At our Camp Verde demonstration, Mark showed a number of useful and interesting techniques. Included was the forging of a *CONED HOOP* which was used as an element for a flower pot hanger. Key was the development of the estimated length of material required for the hoop and the development of the edgeways radius the material *must* first be bent to. After bending edgeways, the material is bent on the flat.

The technique used is outlined in an excellent book titled "Blacksmith's Manual Illustrated" by J.W. Lillico. The 7th edition was published in 1991. The following is found on pages 78 & 79.



ESTIMATION OF LENGTHS OF MATERIAL. PLATE 38

CONED HOOPS

PLATE 38: FIG. 1 shows a cone-shaped hoop, made from a 2-inch by ½-inch bar having a top inside diameter of 16 ins. and a bottom inside diameter of 18 ins.

The required length of the material (circumference) can be found by adding the two inside diameters together and dividing by 2 (mean diameter). The result (17) is then multiplied by 3·1416 which gives 53·4072 ins. To this figure should be added three times the thickness of the hoop (1½ in.) plus ½ in. for welding, making the answer 55·4072.

FIG. 2 shows the bar cut to the required length.

FIG. 3 shows the same scarfed.

The smith should remember that when making cone-shaped hoops, the material must always be bent edgeways to a given radius.

FIG. 4 shows the method of obtaining the necessary radius before bending. Lay two parallel lines the width of the bar apart with a centre line running at right angles. On the parallel lines mark off from the centre line half the diameters of the hoop, i.e. 8 ins. and 9 ins. is shown. Draw two diagonal lines through these points to touch the centre line. This gives the centre point for the compasses to draw in the inner and outer circumferences as shown. Next bend the bar to the given radius.

FIG. 5 shows the bar cambered right for making the hoop.