

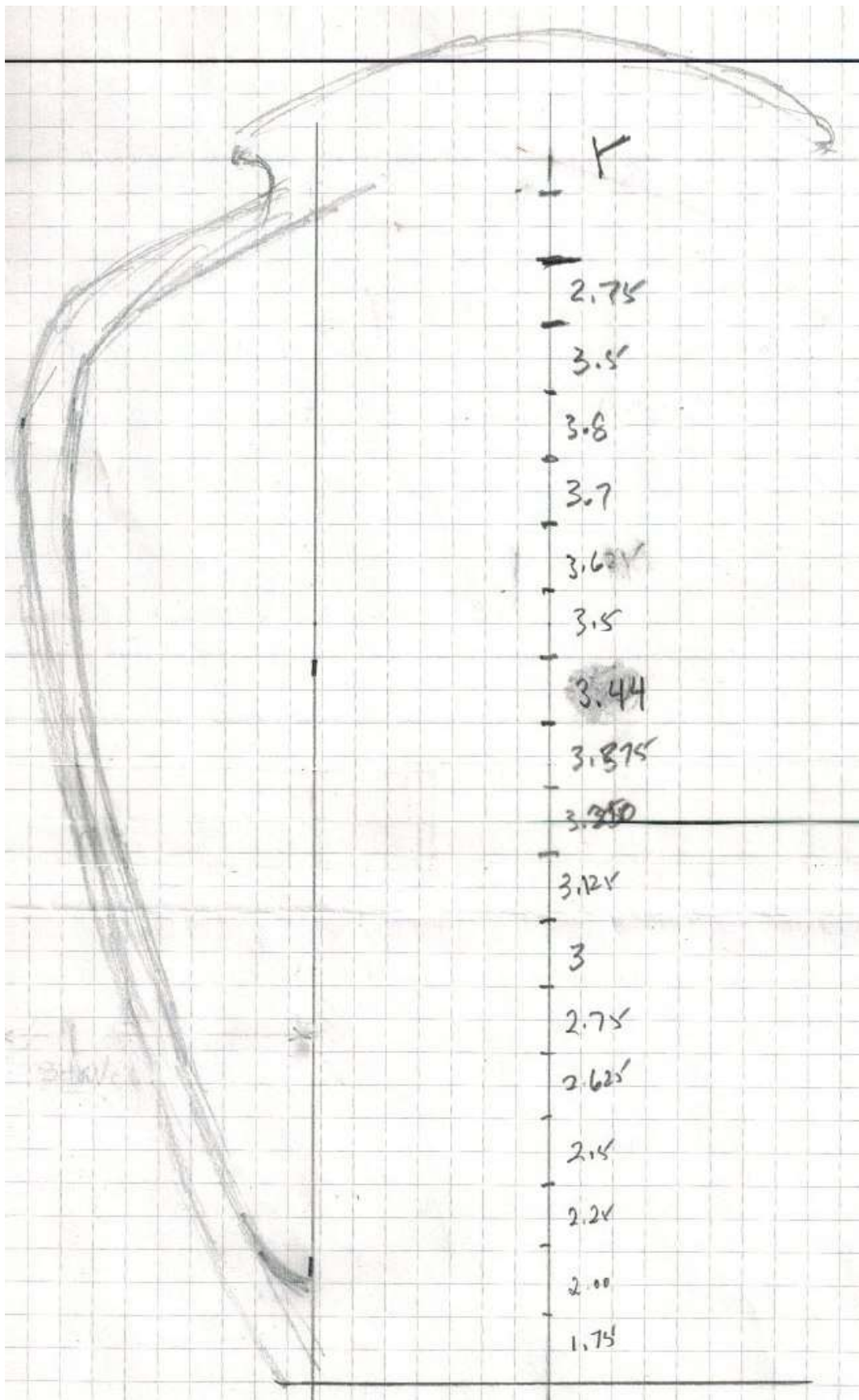
Planning for a Cremation Urn

A couple of years ago, my very much alive, but 10 years older sister asked if I would make her urn for when it is needed. I started thinking about making a staved urn as I did not have a suitable blank. Since then, I happened on to some 12" beautiful walnut with no reaction wood and have it roughed out and dried. 17 years ago I made an Honey Locust urn for my mother's ashes in a rush with 5 days until the funeral service.

I made a somewhat generic sketch on $\frac{1}{4}$ " graph paper with inside diameter measurements spaced $\frac{1}{2}$ " apart from top to bottom and assumed a $\frac{3}{8}$ " final wall thickness. I took the radius to be the midpoint of each $\frac{1}{2}$ " segment. Each segment can be thought of as a cylinder. The volume of a cylinder is the area x height or $\text{Pi} \times r^2 \times H$. The total volume is the sum of all the individual segment cylinders. There are some errors of course but this will give sufficient accuracy for estimation and actual volume can be measured after turning with some rice or pellets, whatever is handy. I set up a simple spreadsheet for the total calculation. It really helps to visualize what is needed when doing a first urn.

By adding height in the design stage and of course adjusting the form somewhat, at or near the widest portion, every inch will add something in the order of 30 cu.in. Alternatively, adding to the overall diameter an equal amount the volume will increase significantly. This urn which is internally 8.5" tall and just under 7" wide produces a volume of 244 cu.in. which is easily sufficient for most average people, based on 1 Cu.in. per pound.

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Cremation Urn Calculations
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Dist from top	Radius	Volume	= Pi*r squared*.5"
0	2.75	11.9	
1	3.5	19.2	
1.5	3.8	22.7	
2	3.7	21.5	
2.5	3.6	20.4	
3	3.5	19.2	
3.5	3.44	18.6	
4	3.375	17.9	
4.5	3.25	16.6	
5	3.125	15.3	
5.5	3	14.1	
6	2.75	11.9	
6.5	2.625	10.8	
7	2.5	9.8	
7.5	2.25	8.0	
8	2	6.3	
8.5		0.0	
9		0.0	
9.5		0.0	
10		0.0	
10.5		0.0	
11		0.0	
Total Volume Cu. In.		244	