

CLAIMS

1. A vessel and support beam assembly, comprising:
a vessel having a cylindrical wall defining an interior chamber having a generally circular shape of diameter D in plan view; and
a support assembly disposed within the interior chamber, the support assembly comprising an inner hub defining an open central region, the support assembly further comprising a plurality of spokes extending radially from the inner hub, each spoke aligned radially with the cylindrical wall of the vessel and joined thereto, wherein at least one open outer region is defined between circumferentially adjacent spokes, wherein at least one of the plurality of spokes extends across the diameter D of the interior chamber to divide the open central region into a plurality of central region portions, whereby a portion of the open region is located on one side of the one spoke and another portion of the open region is located on an opposing side of the one spoke.
2. The assembly of claim 1, wherein the inner hub has a polygonal shape in plan view.
3. The assembly of claim 2, wherein the polygonal shape of the inner hub is a symmetrical, hexagonal shape.
4. The assembly of claim 1, wherein the one or more open outer regions have a substantially uniform size and shape.
5. The assembly of claim 1, wherein each spoke is joined to the cylindrical wall by a threaded fastener.
6. The assembly of claim 1, wherein each spoke extends from a corner of the inner hub toward the cylindrical wall.
7. The assembly of claim 1, wherein the plurality of spokes are spaced equally about a central axis of the cylindrical wall.

8. The assembly of claim 1, wherein the support assembly defines an upper support plane to support an upper load thereon.
9. The assembly of claim 1, wherein the support assembly is sized to support one or more lower loads secured thereto.
10. A vessel and support beam assembly, comprising:
 - a vessel having a cylindrical wall defining an interior chamber having a generally circular shape of diameter D in plan view; and
 - a support assembly disposed within the interior chamber, the support assembly comprising an inner hub defining an open central region, the support assembly further comprising a plurality of spokes extending radially from the inner hub each spoke aligned radially with the cylindrical wall of the vessel and joined thereto, wherein at least one open outer region is defined between circumferentially adjacent spokes,
 - wherein each side of the inner hub is formed of a beam having a height, a width, a first end and a second end.
11. The assembly of claim 10, wherein the height of at least one beam tapers from a first height at the first end toward a second height at the second end.
12. The assembly of claim 10, wherein the first end is joined to a spoke extending across the diameter of the inner chamber.
13. The assembly of claim 10, wherein the first end is joined to a spoke having a substantially similar height as the first end, and the second end is joined to a spoke having a substantially similar height as the second end.
14. The assembly of claim 10, wherein the inner hub has a polygonal shape in plan view.
15. The assembly of claim 14, wherein the polygonal shape of the inner hub is a symmetrical, hexagonal shape.

16. The assembly of claim 10, wherein each spoke is joined to the cylindrical wall by a threaded fastener.
17. The assembly of claim 10, wherein each spoke extends from a corner of the inner hub toward the cylindrical wall.
18. The assembly of claim 10, wherein the support assembly defines an upper support plane to support an upper load thereon.
19. The assembly of claim 10, wherein the support assembly is sized to support one or more lower loads secured thereto.