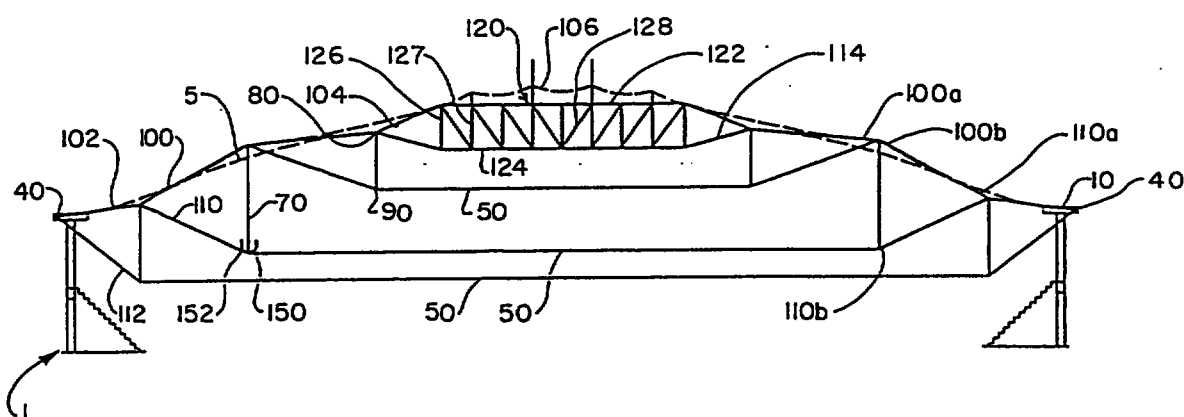




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(54) Title: TRIANGULATED ROOF STRUCTURE



## (57) Abstract

A triangulated roof structure for supporting a roof that projects in plan a substantially closed oval curve having major and minor axes, includes a substantially horizontal outer compression ring (10), a substantially planar cable truss (120) positioned along the major axis of the oval, a plurality of oval tension hoop (50) concentrically arranged within the compression ring at different heights relative to a common reference plane, and a plurality of substantially vertical compression members (70) having upper and lower ends (80, 90) affixed at their lower ends (90) to each of the oval tension hoops (50). The compression members (70) are located so that compression members affixed to a first tension hoop (50) are not radially aligned with compression members affixed to an adjacent tension hoop (50). The structure also includes a plurality of tension elements (100, 101, 110, 111) interconnecting a compression member affixed to the first tension hoop to a proximal pair of compression members affixed to an adjacent tension hoop.