as brass, Al and Cu contract by 0.4%. Both factors work together to result in decreased string tension. In the support module of this invention, this is countered by the use of a metal having a lower coefficient of shrinkage for the member having the outer attachment points so that the relatively greater shrinkage of the inner member tensions the strings. Titanium, which contracts by only 0.15%, is a suitable metal.

Since there are three members of the support module, the difference in metal shrinkage can best be exploited by using the lower shrinkage metal on the center member, the guard member, which has Kevlar connections to both the base member and the ground member, and having the attachment points on the guard member offset from the center to a distance greater than either the base member or ground member connection points. The base member and the ground member are of metals having greater shrinkage than the guard member, preferably copper and aluminum, respectively. As shown in FIG. **5***a–b,* by placing the guard member attachment points on radial arms, they extend beyond the base and ground member attachment points, and relatively greater contraction by the base and ground members upon cooling increases the tension on the Kevlar strings.

The two pill assembly and the support module have been illustrated with specific embodiments which are illustrative but not limiting. Many variations and applications will be obvious to those skilled in the art, and fall within the range and scope of this invention. For example, the two-pill assembly has been illustrated with one connector rod attached to each pill. Multiple rods can be used. Cylinders or other shaped supports can be used instead of rods. The base axial connector has been illustrated connected to the center of the base pill. It can be connected to the side and can go around rather than through the guard pill. The support structure has been illustrated with four planar support modules attached to crossed connector rods. Fewer than four modules can be used. The crossing connector rods can cross at angles other than 90°. The support structure has been illustrated with planar modules. A single, or multiple, three dimensional module can be used. Independent pre-assembled modules have been illustrated. The two pill assembly can alternatively be assembled and aligned as a unit, rather than having separately assembled modules. The assembly and the support module have been illustrated with two pills. The design principles taught herein can be extended to assemblies having three or more pills.

The planar modules have been illustrated in a particular embodiment having circularly shaped nesting members. Other shapes can be used and they can fit together in other ways. The number and placement of features such as clearance holes, screw holes and attachment points can be changed. The attachment points have been illustrated with rotatable capstans. Other connectors can be used, as can other stringing configurations. An assembly jig is useful for aligning and tensioning the members, but is not required.

Material choices which give long term stability throughout the temperature cycle have been given. Other materials can be used which follow the expansion compensation teaching of this invention. Depending on the required lifetime and the alignment tolerance, non-compensating materials can be used.

I claim:

1. A two pill assembly adapted to position at least two pills within the bore of a magnet, said assembly requiring access to and utilizing only one bore aperture, said bore having a front aperture and back aperture, the volume of said bore having a front portion adjacent to said front aperture and extending into the magnet, and a back portion adjacent to said back aperture and extending into the magnet and abutted on said front portion, said assembly comprising:

a support structure adapted to be positioned outside of and proximate to said front aperture;

a guard pill adapted to be positioned in said front portion;

an axial guard connector attached to said guard pill and attached to said support structure;

a base pill adapted to be positioned in said back portion;

an axial base connector attached to said base pill, traversing said guard pill and attached to said support structure.

2. The two pill assembly of claim **1** wherein said support structure comprises a base member attached to said axial base connector, a guard member attached to said axial guard connector, and a first low thermal conductivity material connecting said base member to said guard member.

3. The two pill assembly of claim **2** wherein said support structure further comprises a ground member adapted to be attached to thermal ground, and a second low thermal conductivity material connecting said ground member to said guard member.

4. The two pill assembly of claim **3** wherein said ground, guard and base members form a first planar support module.

5. The two pill assembly of claim **4** wherein said support structure comprises a plurality of planar support modules.

6. The two pill assembly of claim **4** wherein said support structure further comprises a second planar support module attached to said axial base and guard connectors.

7. The two pill assembly of claim **6** wherein said support structure further includes a cross base connector attached to said axial base connector, a cross guard connector attached to said axial guard connector, and a third planar support module attached to both said cross base connector and said cross guard connector.

8. A low temperature support module comprising:

a base, a guard, and a ground member;

said base member adapted to be in thermal contact with a heat reservoir at base temperature;

said guard member adapted to be in thermal contact with a heat reservoir at guard temperature;

said ground member adapted to be in thermal contact with the thermal ground at ground temperature;

said base and guard members adapted to be connected by a first low thermal conductivity material; and

said guard and ground members adapted to be connected by a second low thermal conductivity material.

9. The support module of claim **8** wherein said support module is a planar support module.

10. The support module of claim **9** wherein said base member nests inside said guard member and said guard member nests inside said ground member.

11. The support module of claim **8** wherein said base member comprises a base member clamp for connecting to said base temperature reservoir and wherein said guard member comprises a guard member clamp for connecting to said guard temperature reservoir.

12. The support module of claim **8** wherein said base and guard members each comprise a plurality of attachment points for connecting with said first low conductivity material and wherein said ground and guard members each comprise a plurality of attachment points for connecting with said first low conductivity material.