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5. The mechanism of claim 1 wherein said object contains a corner cube serving as a mirror of a Michelson interferometer.

6. The mechanism of claim 1 wherein said cam further has interior and exterior surfaces, said first cam surface having a lip extending interiorly therefrom and rollingly engaged with connection means extending from said carriage. 5

7. The mechanism of claim 1 wherein said second cam surface has a lip extending exteriorly therefrom and rollingly engaged with connection means extending from a compensating mass whereby said compensating mass is displaced in

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a direction opposite said object to cancel out weight changes produced by said object during free fall.

8. The mechanism of claim 7 wherein said compensating mass has at least a pair of cylindrical bearings extending therefrom, said cylindrical bearings slidably disposed about a corresponding pair of vertical support members secured to and extending from said base whereby said compensating mass is constrained to move in a vertical path.

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