a light source located proximate the first end of the optical fiber; and

a detector, located proximate the second end of the optical fiber.

24. The hinge system of claim 23 wherein said system further comprises a conduit substantially surrounding said at least one optical fiber.

25. The hinge system of claim 24 wherein said conduit is a flexible spring-like sheath extending between the base and the lid.

26. The hinge system of claim 24 wherein said conduit is a rigid tubing extending between the base and the lid.

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