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- (54) **OPTICAL REFERENCE CAVITY**
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H01S 3/13 (2006.01)
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- (52) **U.S. Cl.**
CPC **H01S 3/1303** (2013.01); **G02F 1/00** (2013.01); **H01S 3/005** (2013.01); **H01S 3/1305** (2013.01); **H01S 2301/02** (2013.01)
- (58) **Field of Classification Search**
CPC H01S 3/1303; H01S 3/1305; H01S 3/005; H01S 2301/02; G02F 1/00
See application file for complete search history.

- (56) **References Cited**

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- (57) **ABSTRACT**
An optical reference cavity includes: a cell that includes: a cylindrical body; end faces; an optical canal having an interior cylindrical geometry; and an exterior surface having an exterior cylindrical geometry; mirrors disposed on the end faces; an aspect ratio that is less than 1; a compression clamp that holds the cell through compression and includes compression platens disposed on the end faces so that the compression platens exert a compressive force to the end faces at a radius from a central axis of the cell so that the cell is compressed by the compression clamp, and a length of the optical canal is unperturbed to first order with a magnitude of the compressive force; and a compression intermediary interposed between the compression platens and end faces, wherein the length of the optical canal is insensitive to vibration coupled to the cell by the compression clamp and compression intermediaries.

20 Claims, 37 Drawing Sheets

