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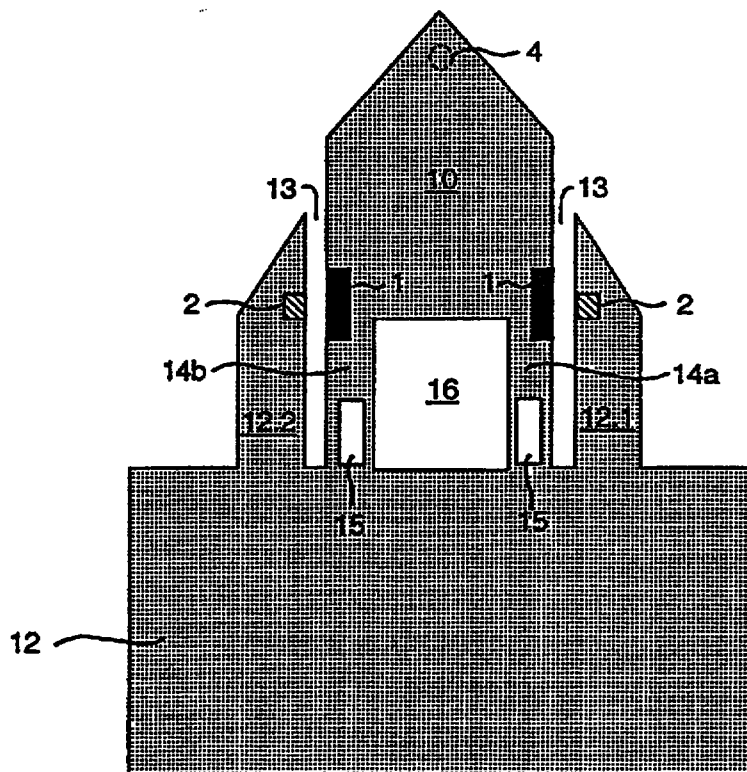
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(54) Title: **MAGNETIC SENSING OF MOTION IN MICROFABRICATED DEVICES**



(57) Abstract: A magnetic sensing unit for measuring displacements on a nanometer scale is disclosed. For that, a moveable part and a fixed part of a microdevice comprises a magnetic element having a magnetic field and a magnetic sensor. The magnetic element being located on the moveable part and the magnetic sensor on the fixed part, or the magnetic sensor being located on the moveable part and the magnetic element on the fixed part, the magnetic sensor and/or the magnetic element being an integral part of the microdevice. The magnetic element and the magnetic sensor being arranged relative to each other such that when the moveable part is displaced the change of the magnetic field at the magnetic sensor is detectable by use of the magnetic sensor. Applications are the deflection detection of the cantilever of a scanning probe microscope or in a flying head of a storage device.



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