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(71) Applicant: **INTERNATIONAL BUSINESS MACHINES CORPORATION** [US/US]; New Orchard Road, Armonk, New York 10504 (US).

(71) Applicant (for MG only): **IBM (CHINA) CO., LIMITED** [CN/CN]; 7F, Bldg 10, Zhangjiang Innovation Park, 399 Keyuan Road, Zhangjiang High-Tech Campus, Pudong New Area, Shanghai 201203 (CN).

(72) Inventors: **DENNES, Albert**; 9000 S Rita Rd, Tucson, Arizona 85744 (US). **XU, Junfeng**; 9000 S Rita Rd, Tucson, Arizona 85744 (US). **MULLENBACH, Adam**; 9000 S Rita Rd, Tucson, Arizona 85744 (US). **KETTERER, Gregory Michael**; 9000 S Rita Rd, Tucson, Arizona 85744 (US).

(74) Agent: **CCPIT PATENT AND TRADEMARK LAW OFFICE**; 10/F, Ocean Plaza, 158 Fuxingmennei Street, Beijing 100031 (CN).

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(54) Title: LOCK HOUSING DEVICE AND KEY STRUCTURE

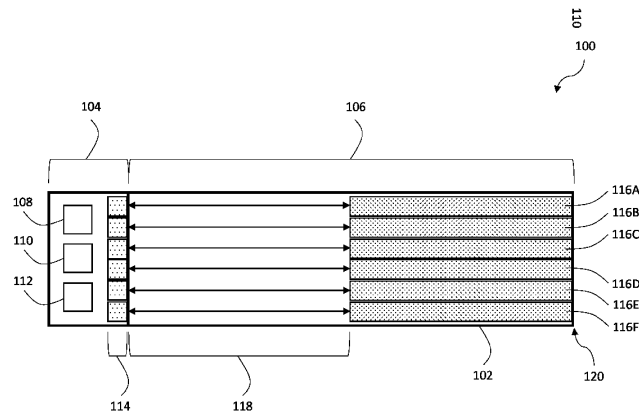


FIG. 1

(57) Abstract: An apparatus includes an enclosure (104,106), a central processing unit (108), a power source (112), a first distance measuring device (114), a first compressible member (118), and a first housing pin (116A-116F), where the central processing unit (108) is electrically coupled to the power source (112) and the first distance measuring device (114). A first end of the first compressible member (118) is mechanically coupled to a first end of the first housing pin (116A-116F) and a second end of the first compressible member (118) is mechanically coupled to an inner surface of the enclosure (104,106). The first distance measuring device (114) positioned at the second end of the first compressible member (118), where the first distance measuring device (114) is configured to measure a first distance to the first end of the first housing pin (116A-116F). A first key pin (204A-204F) of a key structure (200) disposed in the enclosure (104,106), where the first key pin (204A-204F) is configured to compress the first compressible member (118) the first distance.

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