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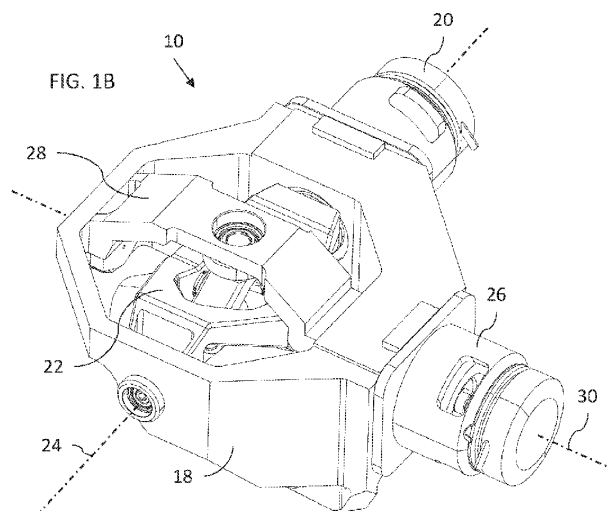
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(54) Title: TWO-AXIS MOTOR-DRIVEN SPHERICAL ORIENTING MECHANISM



(57) Abstract: A mechanism for orienting a payload support includes first and second transversely deployed drive assemblies, each having a motor that drives a drive arm. The payload support is directly pivotally mounted to a first drive arm. Connection between the second drive arm and the payload support is via a coupling linked to the second drive arm via a coupling rotary joint, and to the payload support via a support rotary joint. Both the first drive arm and the second drive arm are supported relative to the frame by sets of two bearing assemblies located on opposite sides of the center of rotation. Each of the bearing assemblies is preferably implemented as a loaded duplex bearing assembly, and most preferably with a back-to-back loaded duplex bearing assembly on each axis.

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