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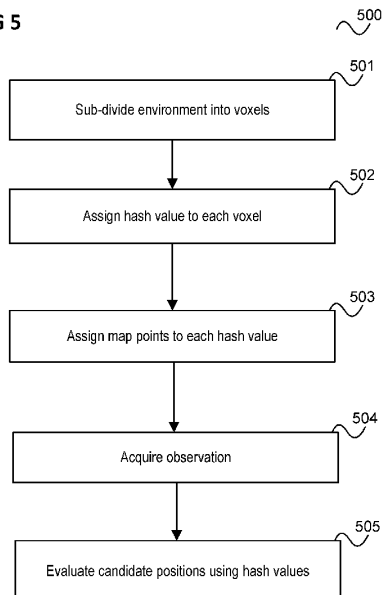
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(54) Title: DEVICE AND METHOD FOR PERFORMING LOCALIZATION OF A ROBOT DEVICE

FIG 5



(57) Abstract: Aspects concern a method for performing localization of a robot device comprising sub-dividing an environment of the robot device into a plurality of voxels and assigning a hash value to each voxel, assigning, to each hash value, a list of map points of a map of the environment of the robot device which are located in the voxel to which the hash value is assigned. The method further comprises, at every iteration of multiple iterations of localization acquiring an observation via a point cloud indicating object surface points in the environment relative to the robot device and evaluating the candidate position using a hash value of the point and the list of map points assigned to the hash value of the point.