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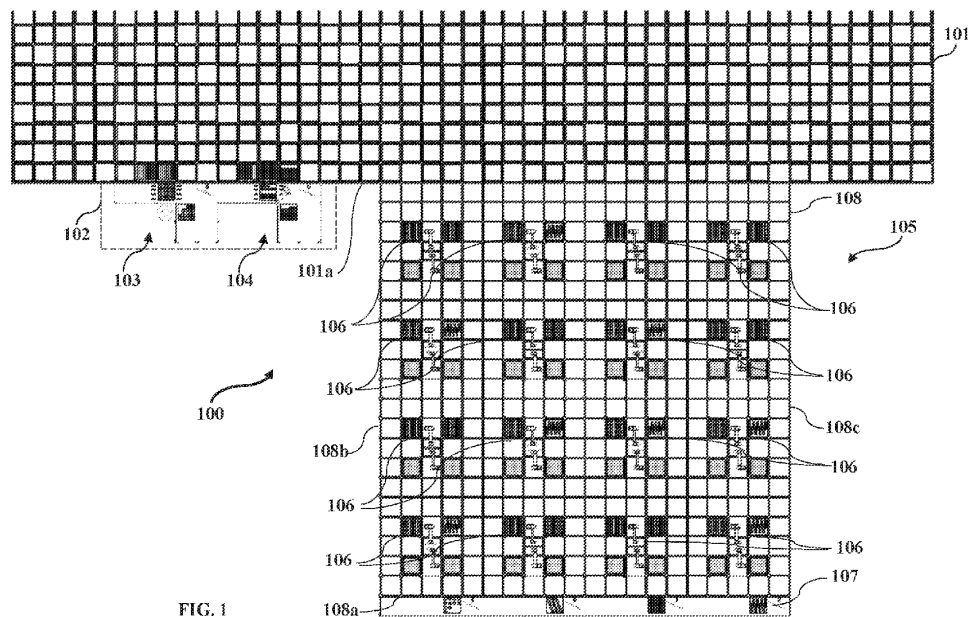


FIG. 1

(57) Abstract: A manufacturing system including an automated storage and retrieval system (ASRS) structure with a three-dimensional array of storage locations distributed throughout a two-dimensional footprint of the ASRS structure at multiple storage levels; workpieces stored within the storage locations of the ASRS structure; robotic storage/retrieval vehicles (RSRVs) navigable within the ASRS structure in three dimensions to access the storage locations, and multiple manufacturing cells positioned outside the ASRS structure, is provided. The manufacturing system includes a track structure attached to the ASRS structure and defining one or more travel paths traversable by the RSRVs from the ASRS structure. The same fleet of RSRVs that is navigable within the ASRS structure is operable to deliver the workpieces to the manufacturing cells. One or more of the manufacturing cells are positioned along the track structure, there-

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