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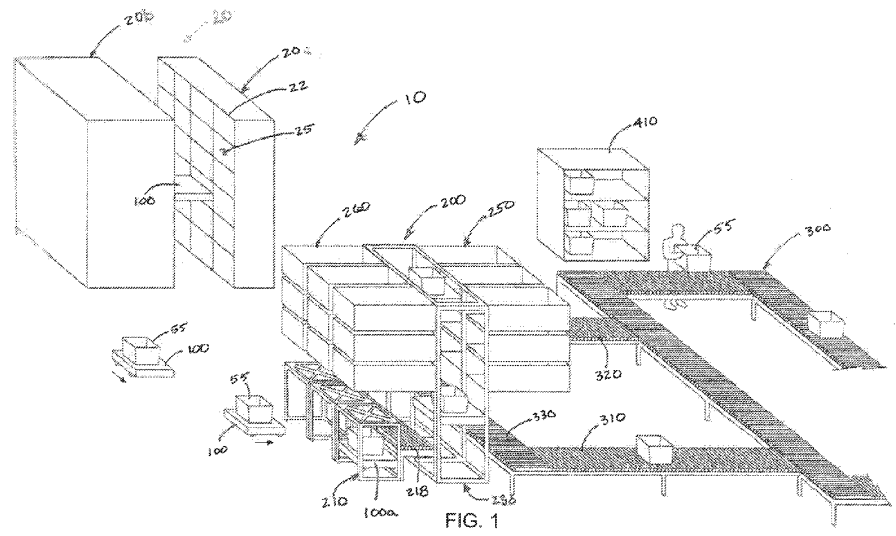
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(54) Title: SYSTEMS AND METHODS FOR EXCHANGING AND SELECTIVELY BUFFERING CONTAINERS OF ITEMS IN A MATERIAL HANDLING APPARATUS



(57) Abstract: A container exchange station for a material handling system. The system may include a plurality of vehicles for retrieving items from a first plurality of storage locations located in one or more racks. In an embodiment, the container exchange station is configured to accommodate the vehicles so that the vehicles drive into the container exchange station and drive upwardly along a track in the container exchange station. A transfer mechanism on the vehicle cooperates with a transfer mechanism on the container exchange station to displace an item from the vehicle to a conveyor. In an embodiment, the container exchange station includes an elevator having a plurality of elevator platforms movable vertically within columns and a plurality of elevated buffer storage locations to and from which items are inserted and retrieved by a transfer mechanism of each elevator platform, for release of containers from storage to a

[Continued on next page]

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