CLAIMS

What is claimed is:

1. A ~~workstation for material handling system having a plurality of independently operable vehicles~~ method for delivering items~~, comprising:~~

~~a housing having a first opening configured to accommodate vehicles entering the workstation, wherein the opening is configured to permit the vehicles to pass through the opening while the vehicles carry containers;~~

~~a track positioned within the housing so that vehicles driving through the opening in the housing drive into operative engagement with the track, wherein the track is configured to guide vehicles vertically upwardly and wherein the track comprises:~~

~~a lower section having a curved profile to tilt the vehicle to a predetermined angle relative to the horizon;~~

~~an upper section having a substantially linear profile to lift the vehicle vertically at the tilted angle.~~

~~2. The workstation of claim 1 comprising a monitor for identifying the items to be removed~~ from ~~the container delivered by the vehicle to the~~ a storage system to a pick station~~.~~

~~3. The workstation of claim 1 or 2 wherein the lower section and the upper section each comprise a plurality of vertical tracks.~~

~~4. The workstation of any of claims 1 -3 wherein the track comprises a plurality of teeth.~~

~~5. The workstation of claim 4 wherein the lower section of the track comprises a first track element having a first tooth pitch and a second track element having a second tooth pitch.~~

, comprising6. The workstation of claim 5 wherein the first track element opposes the second track element.

7. The workstation of claim 5 or 6 wherein the upper section comprises a first track element integrally formed with the first track element of the lower section and a second track element integrally formed with the second track element of the lower section.

8. The workstation of claim 7 wherein the first and second track elements of the upper section have the first tooth pitch.

9. The workstation of claim 8 wherein the delivery vehicles comprise vertical drive elements and the workstation comprises a transfer gear cooperable with the vertical drive elements and the track.

10. The workstation of claim 9 wherein the transfer gear comprises a first section having a first tooth pitch for cooperating with the first tooth pitch of the second track element of the upper track and a second tooth pitch for cooperating with the second tooth pitch of the second track element of the lower section.

11. A method for presenting items to an operator at a workstation for a material handling system having a plurality of delivery vehicles operable to retrieve containers from a rack of storage locations, wherein each delivery vehicle comprises a vertical drive, wherein the method comprises the steps of:

driving one of the delivery vehicles to a workstation while the delivery a vehicle carries one of the containershaving a container to a pick station;

driving the vertical drive of the delivery vehicle at the workstation in a first direction to lift the vehicle upwardly, wherein the step of driving the vertical drive comprises:

driving the vertical drive for a first period of time at the pick station to an upper position to lift the vehicle upwardly and tiltdisplace the container at an angle relativeelevated position to the horizon;

driving the vertical drive for a second period of time to lift the vehicle upwardly while maintainingpresent the container at the angle relative to the horizon.operator;

releasably retaining the container in the elevated position;

driving the vehicle downwardly away from the upper position while the container is retained in the elevated position, whereby driving the vehicle downwardly while the container is retained in the elevated position operates to detach the vehicle from the container;

driving one or more subsequent vehicles to the pick station to deliver items to be placed in the container while the container is retained in the elevated position.

2. The 12method of claim 1 comprising the steps of:

driving a retrieval vehicle upwardly at the pick station to the upper position into operative engagement with the container while the container is retained in the elevated position; and

releasing the container.

3. The method of claim 113 comprising the step of driving the retrieval vehicle downwardly with the released container.

4. The method of claim 3 comprising the step of driving the vertical drive of the deliveryretrieval vehicle in a second direction to lower the delivery vehicle.

13. The method of claim 12 comprising the step of driving the delivery vehiclehorizontally away from the workstationpick station after the step of driving the vertical drive in a second directionvehicle downwardly.

14. The method of any of claims 11-135. A material handling system workstation operable in connection with a first delivery vehicle operable to convey a first container and a second delivery vehicle operable to convey the first container, wherein the first delivery vehicle and the second delivery vehicle each comprise a vertical drive element, and wherein the workstation comprises:

a frame;

a track ~~having a plurality of first drive teeth and a plurality of second drive teeth configured differently than the first drive teeth, wherein the step of driving the vertical drive for a first period of time drives~~connected with the ~~vehicle along the first drive teeth and~~ frame, wherein the ~~step of driving~~ track is configured to cooperate with the vertical drive ~~for a second period~~element of ~~time drives~~ the ~~vehicle along the~~first and second vehicles to facilitate vertical displacement of the first and second vehicles to a raised position so that items may be transferred into or retrieved from the first container;

a retainer operable between a first and second position wherein in the first position the retainer retains the first container in an upper position when the first vehicle is lowered from the raised position and wherein in the second position the retainer releases the first container from the upper position;

a controller configured to selectively actuate the retainer from the second position to the first position after the first vehicle is displaced into the raised position; wherein the controller is configured to selectively actuate the retainer from the first position to the second position after a second vehicle is displaced into the raised position so that the container is released onto the second vehicle to allow the second vehicle to transfer the container away from the workstation.

6. The workstation of claim 5 comprising a second track adjacent the track wherein the second track is configured to cooperate with the vertical drive element of the first and second vehicles to facilitate vertical displacement of the first and second vehicles to the raised position so that items may be transferred into or retrieved from a second container carried by the first or second vehicle.

7. The workstation of claim 5 wherein the retainer comprises a pivotable arm.

8. The workstation of claim 5 wherein the frame is configured to facilitate the first and second vehicles driving into engagement with the track while transporting the first container.

9. The workstation of claim 8 wherein the frame is configured to facilitate the first and second vehicle driving into engagement with the second track while transporting the second container.

10. ~~drive teeth~~The workstation of claim 8 or 9 comprising a housing having a first opening configured to cooperate with the first container, wherein the housing has second opening configured to allow passage of the first or second vehicles while carrying the first container.