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(54) **FLEXIBLE PROCESSING MODULE FOR USE IN ORDER FULFILLMENT CENTERS**

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See application file for complete search history.

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(57) **ABSTRACT**

Methods and apparatus for material handling in an order fulfillment center. Embodiments may include one or more flexible, modular processing modules that may be configured to receive one or more inventory items that are to be processed for shipment. The received inventory items may correspond to single-item customer orders, or to multi-item customer orders. A pre-packaging station of the processing module may be configured to receive the one or more inventory items and to perform pre-packaging operations to produce a pre-packaged unit. The pre-packaged unit may include the one or more inventory items and a pre-packaging substrate. The processing module may also include an inspection station configured to automatically verifying one or more dimensions of the pre-packaged unit. The processing module may further include a packaging station configured to perform packaging operations to produce a packaged unit.

**19 Claims, 13 Drawing Sheets**

