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Bastian, II

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- (54) **AUTOMATED CASE FLOW BUFFER**
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- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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See application file for complete search history.

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(57) **ABSTRACT**

An automated flow buffer system includes infeed and discharge shuttle systems. A buffering system is disposed between the infeed shuttle system and the discharge shuttle system. The buffering system includes buffer conveyors arranged in an array to buffer one or more items. The infeed shuttle system and the discharge shuttle system each include a shuttle frame disposed proximal to an end of the buffering system and one or more shuttles independently moveable along the shuttle frame. Each of the shuttles include a drive system configured to move the shuttle in horizontal and vertical directions along the shuttle frame so that the shuttle is able to service the conveyors in the buffering system. The shuttle includes a conveyance mechanism upon which one or more of the items are transported. The conveyance mechanism is configured to convey the items to and/or from the buffer conveyors of the buffering system.

46 Claims, 11 Drawing Sheets

