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(54) Title: AUTOMATED CRYOGENIC STORAGE AND RETRIEVAL SYSTEM

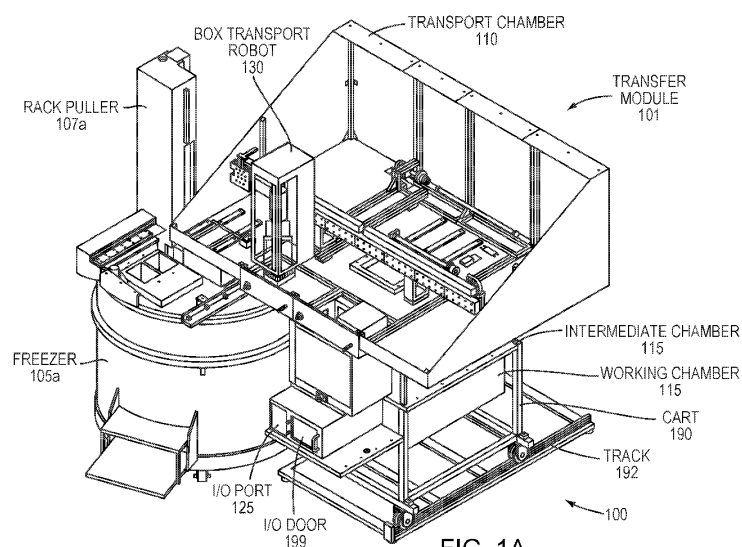


FIG. 1A

(57) Abstract: A cryogenic storage system (100) includes a transfer module (101) configured to service one or more cryogenic storage freezers (105a). The transfer module (101) includes a working chamber (120) that maintains a cryogenic environment for the transfer of sample tubes between different sample boxes. One or more freezer ports (108a) enable the transfer module (101) to receive a sample box extracted from a respective freezer (105a). An input/output (I/O) port (125) enables external access to samples. A box transport robot (130) operates to transport sample boxes between the freezer ports (108a), the working chamber (120), and the I/O port (125). A picker robot (140) operates to transfer sample tubes between sample boxes within the working chamber (120).

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