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# United States Patent [19]

**Berkey et al.**

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[54] **LIFT FOR PHYSICALLY-CHALLENGED PASSENGERS AND METHOD OF OPERATION**

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[58] **Field of Search** ..... 254/2 R, 10 R, 254/10 B, 10 C; 187/222, 234; 182/141, 144; 414/495, 921, 546, 572, 539, 540, 537, 917; 244/137.1, 137.2

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[57] **ABSTRACT**

A passenger lift (**10**) is provided for loading a passenger (**12**) into and out of an aircraft (**14**). Lift (**10**) includes a chassis (**38**) having a front (**34**) end and a back (**36**) end. A plurality of wheels (**62** and **63**) are attached to the chassis (**38**) providing devices for moving the lift (**10**). The lift (**10**) also includes an electrical energy source (**70**) for providing electrical energy, and an energy converter (**104**) for translating the electrical energy from the electrical energy source (**70**) to mechanical energy. The lift (**10**) includes a rear support (**40**) generally perpendicular to the chassis (**38**) and attached to the back end of the chassis (**38**). The lift (**10**) has a basket (**48**) for holding the passenger (**12**) while the passenger is raised and lowered with the lift (**10**) and (**48**) is located at the front end of the chassis (**38**). The lift (**10**) includes a pair of lift arms (**44**) for lifting the basket (**48**), and a pair of stabilizing arms (**42**) for providing stability to the basket (**48**). The lift (**10**) also has a pair of lifting devices (**46**) using the mechanical energy from the energy converter (**104**) for displacing the lifting arms (**44**) relative to the chassis (**38**) so as to raise and lower the basket (**48**).

**7 Claims, 12 Drawing Sheets**