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(12) **United States Patent**
Larson

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(54) **APPARATUS TO INTERFACE A BOARDING BRIDGE AND A LOW DOORSILL AIRPLANE**

USPC 14/69.5, 71.5
See application file for complete search history.

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(65) **Prior Publication Data**

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Related U.S. Application Data

(57) **ABSTRACT**

(63) Continuation of application No. 14/274,270, filed on May 9, 2014, now Pat. No. 9,284,066.

An apparatus to interface a cab section of a boarding bridge having a first deck and an airplane having a second deck. The apparatus includes a lower-frame assembly, upper-frame assembly, bridge gangplank assembly, and airplane gangplank assembly. The lower-frame assembly includes a plurality of wheel assemblies. The upper-frame assembly is connected to the lower-frame assembly at adjustable height and pivoting position, and includes a third deck atop the upper-frame assembly. The bridge gangplank assembly is connected to a first end of the upper-frame assembly, and includes a fourth deck to connect the first deck and the third deck. The airplane gangplank assembly is connected to a second end of the upper-frame assembly, and includes at least a fifth deck to connect the third deck and the second deck.

(60) Provisional application No. 61/830,431, filed on Jun. 3, 2013.

(51) **Int. Cl.**

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|-------------------|-----------|
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(52) **U.S. Cl.**

CPC **B64F 1/3055** (2013.01); **E01D 15/12** (2013.01); **E01D 18/00** (2013.01)

(58) **Field of Classification Search**

CPC B64F 1/3055; E01D 15/12; E01D 18/00

22 Claims, 16 Drawing Sheets

