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**Peterson et al.**

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(54) **CHAIR ASSEMBLY WITH UPHOLSTERY COVERING**

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(58) **Field of Classification Search**

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See application file for complete search history.

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(56) **References Cited**

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

U.S. PATENT DOCUMENTS

1,763,001 A 6/1928 Masury  
2,120,036 A 12/1935 Northup  
(Continued)

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OTHER PUBLICATIONS

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Haworth X99 Chair Brochure; Mar. 9, 2009.  
(Continued)

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**Related U.S. Application Data**

(57) **ABSTRACT**

(63) Continuation of application No. 13/837,031, filed on Mar. 15, 2013, now Pat. No. 8,998,339, which is a continuation of application No. 29/432,795, filed on Sep. 20, 2012, now Pat. No. Des. 683,150.

A chair back assembly includes a back shell member comprising a laterally extending top and bottom portions and a pair of longitudinally extending side portions extending between the top and bottom portions and cooperating therewith to define an open space therebetween, a cover having a first surface adapted to support a seated user and a second surface opposite the first surface, wherein the cover is positioned over the back shell member to cover at least a portion of the open space; and a back frame assembly operably supporting the back shell member and moveable between an upright position, and a reclined position, wherein the back frame assembly causes the back shell to flex in a fore-to-aft direction as the back frame assembly is moved between the upright and reclined positions independent of an external force being exerted on the back shell member.

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**28 Claims, 40 Drawing Sheets**

