

Title (en)
Connections to make foldable structures

Title (de)
Verbindungen zur Herstellung von faltbaren Strukturen

Title (fr)
Connexions pour assembler des structures repliables

Publication
EP 1219754 A1 20020703 (EN)

Application
EP 01300695 A 20010126

Priority
• US 25867700 P 20001228
• US 76624201 A 20010119

Abstract (en)
A new hub element is disclosed for building reversible expandable three-dimensional truss structures. The hub element can directly connect a pin joint towards the center of a scissor linkage to a pivot located near the extremity of another out-of-plane scissor linkage. It has the advantages of being more compact than previously known hub elements and can be used to create foldable structures that are more structurally sound than previously possible. The use of this novel hub element can also reduce the number of pieces required for a given foldable structure, thereby reducing manufacturing and assembly costs. <IMAGE>

IPC 1-7
E04B 1/344; **A63F 9/08**

IPC 8 full level
A63F 9/08 (2006.01); **E04B 1/344** (2006.01)

CPC (source: EP US)
A63F 9/088 (2013.01 - EP US); **E04B 1/3441** (2013.01 - EP US)

Citation (applicant)
• US 4942700 A 19900724 - HOBBERMAN CHARLES [US]
• US 5024031 A 19910618 - HOBBERMAN CHARLES [US]

Citation (search report)
• [DX] US 5024031 A 19910618 - HOBBERMAN CHARLES [US]
• [XA] US 5657584 A 19970819 - HAMLIN GREGORY J [US]
• [X] FR 2256994 A1 19750801 - AUBERT J [FR]
• [A] WO 9727369 A1 19970731 - UNIV CAMBRIDGE TECH [GB], et al

Cited by
JP2011121416A; CN106426277A; CN106426271A; EP2558661A4; GB2459826A; GB2459826B; US7896088B2; US8733453B2; WO2004057134A1; US11890751B2; US7832488B2; WO2008117074A3; US8291781B2; US9169634B2; WO2004092640A3; WO2019076417A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
EP 1219754 A1 20020703; US 2002083675 A1 20020704

DOCDB simple family (application)
EP 01300695 A 20010126; US 76624201 A 20010119