

Title (en)

Radical expansion/retraction truss structures.

Title (de)

Gründliche erweiterbare-einziehbare Fachwerkträger.

Title (fr)

Structures radicales en treillis extensibles-rétractables.

Publication

**EP 0455850 A1 19911113 (EN)**

Application

**EP 90108694 A 19900509**

Priority

EP 90108694 A 19900509

Abstract (en)

A loop-assembly is disclosed which is comprised of at least three scissors-pairs (210),(220),(230), at least two of the pairs comprising: two essentially identical rigid angulated strut elements (211),(212), each having a central and two terminal pivot points (213) which do not lie in a straight line, each strut being pivotally joined to the other of its pair by their central pivot points, each pair being pivotally joined by two terminal pivot points (213),(214) to two terminal pivot points (223),(224) of another pair such that both scissors pairs lie essentially in the same plane, or each pair being pivotally joined by two terminal pivot points (213),(214) to two terminal pivot points (223),(224) of another pair in that the terminal points of a scissors-pair are each pivotally joined to a hub element (240),(245), and these hub elements are in turn joined to the terminal pivot points of another scissors-pair, whereby a closed loop-assembly (200) is thus formed of scissors pairs, and this loop-assembly can fold and unfold, and a line (270) that intersects and is perpendicular to the axes of any two terminal pivot points is non-parallel with at least two other similarly formed lines (280), (290) in the assembly, the angles formed between said lines remaining constant as the loop assembly is folded and unfolded. <IMAGE> <IMAGE>

IPC 1-7

**E04B 1/32; E04B 1/344**

IPC 8 full level

**E04B 1/32** (2006.01); **E04B 1/344** (2006.01)

CPC (source: EP)

**E04B 1/3211** (2013.01); **E04B 1/3441** (2013.01); **E04B 2001/3241** (2013.01); **E04B 2001/3252** (2013.01); **E04B 2001/3294** (2013.01)

Citation (search report)

- [A] US 3496687 A 19700224 - GREENBERG HARRY S, et al
- [A] US 4253284 A 19810303 - BLISS ROBERT L
- [A] US 4587775 A 19860513 - LEWIS ROGER E [US], et al
- [A] US 4290244 A 19810922 - ZEIGLER THEODORE R
- [A] FR 2290542 A1 19760604 - ZEIGLER THEODORE [US]
- [E] US 4942700 A 19900724 - HOBERMAN CHARLES [US]

Cited by

NL1036358C2; CN112555371A; CN102172840A; CN106151429A; EP0744575A4; US8733453B2; DE202012008293U1; US7896088B2; EP3909658A1; CN113669615A; US8291781B2; US9169634B2; US7832488B2; US11884099B2

Designated contracting state (EPC)

DE ES FR GB IT

DOCDB simple family (publication)

**EP 0455850 A1 19911113; EP 0455850 B1 19950531**; DE 69019818 D1 19950706; DE 69019818 T2 19960229

DOCDB simple family (application)

**EP 90108694 A 19900509**; DE 69019818 T 19900509