

Title (en)

Method of joining an object to an article.

Title (de)

Verfahren zum Verbinden eines Gegenstandes mit einem Artikel.

Title (fr)

Procédé de liaison d'un objet et d'un article.

Publication

**EP 0054815 A1 19820630 (EN)**

Application

**EP 81110197 A 19811205**

Priority

US 21902780 A 19801222

Abstract (en)

A method of joining an object (12) to an article (10) is disclosed. In the method, a force accepting shoulder (14) is formed on the object so as to have both a first surface (16) for engaging a surface formed on the article and a second surface (18) spaced away from the first surface (16). A force applying structure is formed on the article so as to have both a first surface for engaging the first surface (16) of the force accepting shoulder of the object and a plurality of deformable tabs (24) extending away from the first surface of the article. The tabs have a length dimension greater than the distance between the first and second surfaces (16, 18) of the object. The tabs (24) also have small deformed areas on at least some of them. The first surfaces of the object and the article are brought into contact with one another and through this action at least an upper portion of the deformable tabs (24) of the article are located in proximity to the second surface (18) of the object. The deformations in some of the plurality of tabs (24) extend out of the plane of the tabs in a direction away from the surface of the article in proximity to which the tabs are located. The upper portion of the deformable tabs are bent into engagement with the second surface (18) of the object in this manner, the article and the object are joined and the tabs of the article which have the small deformed areas therein provide an added degree of rigidity to the joining of the article and the object.

IPC 1-7

**F28F 9/02**

IPC 8 full level

**B21D 39/00** (2006.01); **B21D 53/08** (2006.01); **B23P 15/26** (2006.01); **B23P 21/00** (2006.01); **B29C 55/00** (2006.01); **B29C 65/00** (2006.01);  
**B29C 65/64** (2006.01); **F28F 9/02** (2006.01)

CPC (source: EP)

**F28F 9/0226** (2013.01); **F28F 2275/122** (2013.01)

Citation (search report)

- GB 1434677 A 19760505 - NISSAN MOTOR
- DE 2357992 A1 19750522 - SUEDDEUTSCHE KUEHLER BEHR
- DE 2238493 A1 19730215 - CHAUSSON USINES SA
- FR 2175672 A2 19731026 - CHAUSSON USINES SA [FR]
- FR 2251794 A1 19750613 - SUEDDEUTSCHE KUEHLER BEHR [DE]
- DE 1967052 A1 19761118 - FERODO SA
- FR 2247692 A1 19750509 - CHAUSSON USINES SA [FR]
- FR 2349813 A1 19771125 - CHAUSSON USINES SA [FR]
- FR 2216470 A1 19740830 - NISSAN MOTOR [JP]

Cited by

US7640971B2; CN104034185A; US7954543B2; US4540044A; EP0128806A1; FR2524977A1; US4600051A; FR3055821A1; CN110121627A;  
EP0145574A3; FR2556461A1; US4649628A; CN113441933A; WO2018050977A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

**EP 0054815 A1 19820630**; CA 1192028 A 19850820; JP S5816742 A 19830131

DOCDB simple family (application)

**EP 81110197 A 19811205**; CA 392724 A 19811218; JP 20679581 A 19811221