

Title (en)  
IMPROVED FLEXIBLE MANDREL FOR BENDING HOLLOW ARTICLES

Publication  
**EP 0195408 A3 19870429 (EN)**

Application  
**EP 86103646 A 19860318**

Priority  
US 71436385 A 19850321

Abstract (en)  
[origin: EP0195408A2] The invention comprises a flexible mandrel for insertion into and removal from a hollow member, said mandrel being adapted to provide support for the walls of the hollow member in the process of bending the member, the mandrel comprising a plurality of elongated individual hoses disposed together in a side-by-side manner to form a unitary, elongated mandrel structure, said hoses being capable of expanding in cross section when a fluid is directed to them under pressure at a predetermined pressure value and contracting in cross section when the pressure value is lowered to or below a predetermined value, the cross-sectional expansion and contraction of the hoses being effective to expand and contract the cross-sectional area of the mandrel structure.

IPC 1-7  
**B21D 9/01**

IPC 8 full level  
**B21D 9/01** (2006.01)

CPC (source: EP)  
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Citation (search report)  
• [AD] US 3922134 A 19751125 - KUPFRIAN WILBUR J  
• [AD] US 1555895 A 19251006 - JOHN WEBER  
• [X] US 3851519 A 19741203 - CALVIN E, et al  
• [A] DE 1552862 A1 19690911 - BANNING AG MASCHINENFABRIK J  
• [A] DE 2449221 A1 19750424 - PNEUMATIQUES CAOUTCHOUC MFG

Cited by  
GB2200062A; GB2200062B

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DE FR GB IT NL SE

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**EP 0195408 A2 19860924; EP 0195408 A3 19870429; JP S61253126 A 19861111**

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