

Title (en)

APPARATUS FOR THE RIVET-LIKE JOINING TOGETHER OF SHEET METALS

Publication

EP 0272376 B1 19920513 (DE)

Application

EP 87111919 A 19870818

Priority

DE 3640896 A 19861129

Abstract (en)

[origin: US4835850A] An apparatus for joining two or more sheets by means of drawn and extruded material portions comprising a punch, a die and an anvil. The punch is driven to first cooperate with the die in a drawing step, then to transport the work piece to the anvil and to perform in cooperation with the latter an extrusion step. Preferably, a plurality of punches is driven to rotate and to cooperate with a die-and-anvil assembly common to all punches.

IPC 1-7

B21D 39/03

IPC 8 full level

B21D 39/03 (2006.01)

CPC (source: EP US)

B21D 39/031 (2013.01 - EP US); **Y10T 29/49915** (2015.01 - EP US); **Y10T 29/49936** (2015.01 - EP US); **Y10T 29/49943** (2015.01 - EP US); **Y10T 29/53765** (2015.01 - EP US)

Cited by

AU639055B2; DE19747267A1; DE19747267C2; AT403444B

Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 0272376 A2 19880629; **EP 0272376 A3 19891206**; **EP 0272376 B1 19920513**; AT E75976 T1 19920515; CA 1289347 C 19910924; DE 3640896 A1 19880616; DE 3779073 D1 19920617; ES 2031858 T3 19930101; SU 1642949 A3 19910415; US 4835850 A 19890606

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EP 87111919 A 19870818; AT 87111919 T 19870818; CA 546976 A 19870916; DE 3640896 A 19861129; DE 3779073 T 19870818; ES 87111919 T 19870818; SU 4203683 A 19871120; US 12458587 A 19871124