

Title (en)  
MULTISTAGE METAL-FORMING MACHINE

Publication  
**EP 0041690 B1 19840328 (DE)**

Application  
**EP 81104252 A 19810603**

Priority  
DE 3021695 A 19800610

Abstract (en)  
[origin: US4430882A] A blank (17), which has been sheared off from a coil of wire or from a rod, is rotated through 90 DEG , this rotation being required in connection with the forging of this blank. The gripping-jaws (19, 20), serving for the purpose of transport from one station to the adjacent metal-working station, are attached, for this purpose, to rotating devices (9c, 9d), which are mounted in a manner permitting rotation and are located, on the one hand, on a guide part (7a, 7b) which is driven to reciprocate (A) and to oscillate about an axis (93), and, on the other hand, are anchored to the stationary die-holder (3) via a guiding mechanism (23a, 23b). The guiding mechanism can be regarded as a spatial double-link mechanism, possessing a connecting rod (24), a coupling link (25), a stationary pin-joint (28), a ball-joint (30), and a pin-joint (29a, 29b) which travels with the rotation device (9c, 9d). The components are arranged in such a way that the greatest part of the intended 90 DEG rotation of the blank takes place in the first half of the translational transport movement.

IPC 1-7  
**B21D 43/10**; **B21J 13/10**; **B21K 27/04**

IPC 8 full level  
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CPC (source: EP US)  
**B21J 13/08** (2013.01 - EP US); **B21K 27/00** (2013.01 - EP US); **B21K 27/04** (2013.01 - EP US)

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