

Title (en)

AUTOMATIC PUNCHING MACHINE FOR PUNCHING CONTAINER CAPS FROM SHEET-METAL PLATES

Publication

EP 0340426 A3 19900523 (DE)

Application

EP 89104388 A 19890313

Priority

DE 3815609 A 19880504

Abstract (en)

[origin: EP0340426A2] In an automatic punching machine for punching container caps from sheet-metal plates (5), with a feed device which pushes sheet-metal plates (5) into the tool and transports them in steps to carry out the successive punching operations, a change in the format of the sheet-metal plates (5) does not require any mechanical adaptation of the feed device and the transport of the sheet-metal plates (5) in the region of the tool is controlled without interruption in all acceleration and retardation processes by a first pair (9) of rolls which is arranged in front of the tool (2) in the feed direction, can be driven by a numerical drive (15) and rests with an upper roll (13) on the upper side and with a lower roll (11) on the lower side of the sheet-metal plate (5), a corresponding second pair (17) of rolls on the opposite side (16) of the tool (2) and by a control device, by means of which the first pair (9) of rolls pulls the sheet-metal plates (5) continuously from a stand-by position into the tool (2) and is then switched over immediately to a stepwise drive, by means of which the stepwise drive is switched over from the first pair (9) of rolls to the second pair (17) of rolls after a predetermined transport path has been travelled in the tool (2), and by means of which the second pair (17) of rolls is switched over to a continuous delivery motion after the stepwise driving, a subsequent sheet-metal plate (5) being pulled in by the first pair (9) of rolls as far as the preceding sheet-metal plate (5) without a gap, while the second pair (17) of rolls is still feeding stepwise, and the second pair (17) of rolls performing the delivery motion during the stepwise feeding by the first pair (9) of rolls. <IMAGE>

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CPC (source: EP)

B21D 43/09 (2013.01); **B21D 43/24** (2013.01); **B21D 43/26** (2013.01)

Citation (search report)

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- [A] DD 219400 A1 19850306 - AMMENDORF WAGGONBAU [DD]
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Designated contracting state (EPC)

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EP 0340426 A2 19891108; **EP 0340426 A3 19900523**; DD 283782 A5 19901024

DOCDB simple family (application)

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