

Title (en)  
APPARATUS FOR RECEIVING HOLLOW BODIES THEREIN

Title (de)  
VORRICHTUNG ZUR INNENAUFNAHME VON HOHLKÖRPERN

Title (fr)  
DISPOSITIF DE SAISIE INTÉRIEURE DE CORPS CREUX

Publication  
**EP 2419338 B1 20140507 (DE)**

Application  
**EP 10718852 A 20100415**

Priority  
• DE 2010000422 W 20100415  
• DE 102009017683 A 20090416

Abstract (en)  
[origin: WO2010118734A1] The invention relates to an apparatus (10) for non-positively receiving hollow bodies therein, having a cylinder-piston unit (20) which comprises a pressure chamber (21) delimited by a cylinder (31) and a piston (61), and having a rod (81), which extends in the axial direction (11) of the apparatus (10) and carries an elastically deformable annular bellows (110) that is supported in two receiving elements (141, 146), which can be moved relative to each other at least in the axial direction (11), wherein the cylinder (31) and the piston (61) can be displaced relative to each other by pressurizing the pressure chamber (21), moving the receiving elements (141, 146) toward each other to deform the annular bellows (110), and wherein the pressure chamber (21) can be compressed by means of a return spring (120) that guides the cylinder (31) and the piston (61) relative to each other. For this purpose, the rod (81) penetrates the cylinder (31) in the axial direction (11). The receiving elements (141, 146) are floatingly mounted. In addition, the compression of the pressure chamber (21) enables the straightening of the annular bellows (110). With the present invention, an apparatus has been developed which allows workpieces having position errors to be received and secure detachment of the annular bellows.

IPC 8 full level  
**B65B 21/18** (2006.01); **B65G 47/90** (2006.01); **B66C 1/46** (2006.01)

CPC (source: EP)  
**B65B 21/186** (2013.01); **B66C 1/54** (2013.01)

Citation (examination)  
WO 2008000108 A1 20080103 - NETSTAL AG MASCHF GIESSEREI [CH], et al

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)  
**DE 102009017683 B3 20100708**; EP 2419338 A1 20120222; EP 2419338 B1 20140507; ES 2480420 T3 20140728;  
WO 2010118734 A1 20101021

DOCDB simple family (application)  
**DE 102009017683 A 20090416**; DE 2010000422 W 20100415; EP 10718852 A 20100415; ES 10718852 T 20100415