

Title (en)
Pneumatically operable working machine

Title (de)
Pneumatisch betreibbares Arbeitsgerät

Title (fr)
Appareil à entraînement pneumatique

Publication
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Application
EP 14164124 A 20140410

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Abstract (en)
[origin: WO2015140288A1] The invention relates to a pneumatically operable work tool (1) for use in the manufacture of vehicle bodies in the motor vehicle industry, comprising a cylinder (3) which has a cylinder housing (4), a piston (6) that can be moved in the cylinder housing, and a piston rod (7) that is connected to the piston, can be moved linearly, and is guided out of the cylinder housing (4) and comprising a head housing (5) which is connected to the cylinder housing (4). A piston rod (7) region which protrudes into the head housing (5) interacts with at least one toggle lever (8) for pivoting an arm (2) paired with the toggle lever (8), in particular a gripping arm or clamping arm. The arm (2) is mounted in the head housing (5) and can be pivoted between a closed position and an open position. The piston rod (7) receives a bearing element (15) for the toggle lever (8) in the region of the piston rod end which protrudes into the head housing (5). The bearing element (15) is guided in a guide (27) of the head housing open (5) in the direction of the longitudinal axis (13) of the piston rod (7), and the bearing element (15) has a receiving area (28) for pivotally supporting a hinge connector (29) at a radial distance to the longitudinal axis (13) of the piston rod (7), said hinge connector being connected to the arm (2) at a distance to a pivot axis (9) of the arm (2) in the region of a face facing away from the bearing element (15), wherein the end-face pivot axes (30/31) of the hinge connector (29) and the pivot axis (9) of the arm (29) are parallel to one another.

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Opponent : DESTACO Europe GmbH
• US 4576367 A 19860318 - HORN EDWARD R [US], et al
• US 3347542 A 19671017 - MERICLE JR BOYD
• GB 709285 A 19540519 - JAMES ARTHUR HOLT
• DE 29615157 U1 19961107 - TUENKERS MASCHINENBAU GMBH [DE]
• DE 102004040606 B3 20060112 - TUENKERS MASCHINENBAU GMBH [DE]
• EP 2241402 A1 20101020 - VEP AUTOMATION SRL [IT]
• US RE41223 E 20100413 - DELLACH JEFFREY J [US]
• EP 2548700 A1 20130123 - UNIVER SPA [IT]

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