

Title (en)
LIFTING DEVICE

Title (de)
HUBVORRICHTUNG

Title (fr)
DISPOSITIF DE LEVAGE

Publication
EP 3138807 A1 20170308 (DE)

Application
EP 15183810 A 20150904

Priority
EP 15183810 A 20150904

Abstract (en)
[origin: WO2017037085A1] The invention relates to a lifting apparatus suitable for an industrial processing station, in particular a lifting table suitable for conveying a body shell in the series production of motor vehicles, wherein the lifting apparatus is designed to convey a workpiece on a top frame (8) moved in a purely vertical direction. In this case, the lifting apparatus has, as first vertical guide, at least one isosceles slider-crank mechanism (1, 2, 3, 4, 5) actuated by a motorized drive element (13+6, 7, 9, 12) In this case, the isosceles slider-crank mechanism, which consists of a fixed-bearing swing arm (6) with the swing-arm bearing (4) thereof, a control arm (3) with the control-arm guide (5) thereof, a control-arm central joint (2) and a fixed-bearing joint (1) connected to the top frame (8), is configured such that it is moved by the actuation of the tie rod (9) acting on the fixed-bearing swing arm (6). In particular the use of an isosceles slider-crank mechanism, which is also known in the literature as a "Scott-Russel mechanism", provides a simple and effective variant of a vertical guide system which allows low overall heights with minimum production outlay.

Abstract (de)
Die Erfindung betrifft eine Hubvorrichtung für eine industrielle Bearbeitungsstation, insbesondere ein Hubtisch für die Förderung einer Rohkarosse in der Kraftfahrzeug-Serienfertigung, wobei die Hubvorrichtung zur Förderung eines Werkstücks auf einem in rein vertikaler Richtung bewegten Oberrahmen [8] ausgestaltet ist. Dabei weist die Hubvorrichtung zumindest eine mit einem motorischen Antriebsselement [13 + 6, 7, 9, 12] betätigte gleichschenklige Geradschubkurbel [1, 2, 3, 4, 5] als erste Vertikalführung auf. Insbesondere durch den Einsatz einer gleichschenkligen Geradschubkurbel, die in der Literatur auch als "Scott-Russel-Mechanismus" bekannt ist, ist eine einfache und effektive Variante eines vertikalen Führungssystems gegeben, welche geringe Bauhöhen bei minimalem Fertigungsaufwand ermöglicht.

IPC 8 full level
B66F 7/06 (2006.01)

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B66F 7/065 (2013.01 - US); **B66F 7/0658** (2013.01 - US); **B66F 7/0691** (2013.01 - EP US)

Citation (applicant)
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