

Title (en)
PROCESSING UNIT AND PROCESSING MACHINE FOR PROCESSING A WORKPIECE ON A WORKPIECE WALL AND METHOD FOR PRODUCING A PROCESSING UNIT OF THE STATED TYPE

Title (de)
BEARBEITUNGSEINHEIT UND BEARBEITUNGSMASCHINE ZUR BEARBEITUNG EINES WERKSTÜCKS AN EINER WERKSTÜCKWAND SOWIE VERFAHREN ZUR HERSTELLUNG EINER BEARBEITUNGSEINHEIT DER GENANNTEN ART

Title (fr)
UNITÉ D'USINAGE ET MACHINE D'USINAGE SERVANT À USINER UNE PIÈCE SUR UNE PAROI DE PIÈCE, ET PROCÉDÉ DE FABRICATION D'UNE UNITÉ D'USINAGE DU TYPE MENTIONNÉ

Publication
EP 3969199 B1 20230607 (DE)

Application
EP 20722307 A 20200428

Priority
• DE 102019112547 A 20190514
• EP 2020061676 W 20200428

Abstract (en)
[origin: CA3139785A1] A processing unit (1) for processing a workpiece (7) on a workpiece wall has a processing tool (3), a tool abutment (4) and also a clamping device (5). In the processing of the workpiece, the processing unit (1) performs along a working axis (8) a forward stroke in a forward-stroke direction (9) and a return stroke in a return-stroke direction (10) with respect to a workpiece (7) to be processed. The processing tool (3) is supported in the forward stroke on an abutment-side forward-stroke supporting surface (11) of the tool abutment (4) and in the return stroke on an abutment-side return-stroke supporting surface (13) of the tool abutment (4) along the working axis (8). The abutment-side return-stroke supporting surface (13) is kept at a distance from the abutment-side forward-stroke supporting surface (11) in the return-stroke direction (10) and is facing away from the abutment-side forward-stroke supporting surface (11). The clamping device (5) comprises a tensioning element (14), which is structurally separate from the tool abutment (4) and, along the working axis (8), on one side is connected to the processing tool (3) and on the other side has an adjusting thread (19), with which an adjusting element (15) of the clamping device (5) is in threaded engagement. The tensioning element (14) of the clamping device (5) can be pretensioned along the working axis. With the tensioning element (14) pretensioned, the processing tool (3) is clamped against the abutment-side forward-stroke supporting surface (11) and against the abutment-side return-stroke supporting surface (13) by means of the tensioning element (14) and by means of the adjusting element (15) acting on the abutment-side return-stroke supporting surface (13) along the working axis (8) in the direction of the processing tool (3). A processing machine has a processing unit (1) of the aforementioned type. A processing unit (1) of the aforementioned type is produced by the tensioning element (14) of the processing unit (1) being pretensioned by means of a tensioning apparatus.

IPC 8 full level
B21J 5/12 (2006.01)

CPC (source: EP KR US)
B21J 5/12 (2013.01 - EP KR US); **B21J 7/02** (2013.01 - KR); **B21K 1/76** (2013.01 - KR)

Designated contracting state (EPC)
AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)
DE 102019112547 A1 20201119; CA 3139785 A1 20201119; CN 113825574 A 20211221; CN 113825574 B 20240109; EP 3969199 A1 20220323; EP 3969199 B1 20230607; EP 3969199 C0 20230607; ES 2959810 T3 20240228; JP 2022540740 A 20220920; JP 7413402 B2 20240115; KR 20220007635 A 20220118; US 2022184688 A1 20220616; WO 2020229156 A1 20201119

DOCDB simple family (application)
DE 102019112547 A 20190514; CA 3139785 A 20200428; CN 202080035492 A 20200428; EP 2020061676 W 20200428; EP 20722307 A 20200428; ES 20722307 T 20200428; JP 2021562009 A 20200428; KR 20217039991 A 20200428; US 202017602914 A 20200428