

Title (en)
Two-sided flattening apparatus

Title (de)
Doppelseitige Poliervorrichtung

Title (fr)
Appareil de polissage double face

Publication
EP 0967048 A1 19991229 (EN)

Application
EP 99110960 A 19990608

Priority
JP 17492698 A 19980622

Abstract (en)

A two-sided flattening apparatus configured to be able to continuously change the pressing force of an upper platen to the workpiece and thereby able to prevent damage to the workpiece at the time of contact and able to set the pressing force of the upper platen on the workpiece to a desired value, provided with a lower platen (1), an upper platen (2), and an elevator mechanism (3). A main elevator (6) of the elevator mechanism is formed by a cylinder (60), while a sub elevator (5) of the elevator mechanism is formed by air bags (70), hoses (71), and an air pump (72). The air bags (70) are connected to a connecting meter from the upper platen (2). By making the air bags (70) expand to make the piston rods (62) of the cylinders (60) contract, the upper platen (2) is made to descend to a position in close proximity to the workpiece (w). Suitably thereafter, the air bags (70) are made to contract to make the upper platen (2) softly contact the workpiece (w). The air bags (70) are made to further contract to make the pressing force of the upper platen (2) on the workpiece (w) continuously increase. <IMAGE>

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B24B 37/04; B24B 41/06; B24B 49/16

IPC 8 full level
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CPC (source: EP)
B24B 37/08 (2013.01); **B24B 41/067** (2013.01); **B24B 49/16** (2013.01)

Citation (search report)

- [Y] US 4370835 A 19830201 - VON SCHNEIDEMESSER CHRISTIAN [DE], et al
- [Y] EP 0847835 A1 19980617 - WACKER SILTRONIC HALBLEITERMAT [DE]
- [A] US 5681215 A 19971028 - SHERWOOD MICHAEL T [US], et al
- [A] EP 0747167 A2 19961211 - APPLIED MATERIALS INC [US]
- [A] EP 0481936 A2 19920422 - MELCHIORRE OFF MECC [IT]

Cited by
CN116372695A; CN112171392A; CN117086774A; US11801580B1

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