28/02/03
2003017241

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

ACTION

(43) International Publication Date
10 January 2002 (10.01.2002)

PCT

(10) International Publication Number
WO 02/03428 A3

(51) International Patent Classification[7]: H01L 21/00

(21) International Application Number: PCT/US01/20474

(22) International Filing Date: 26 June 2001 (26.06.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/608,557 30 June 2000 (30.06.2000) US
09/608,291 30 June 2000 (30.06.2000) US

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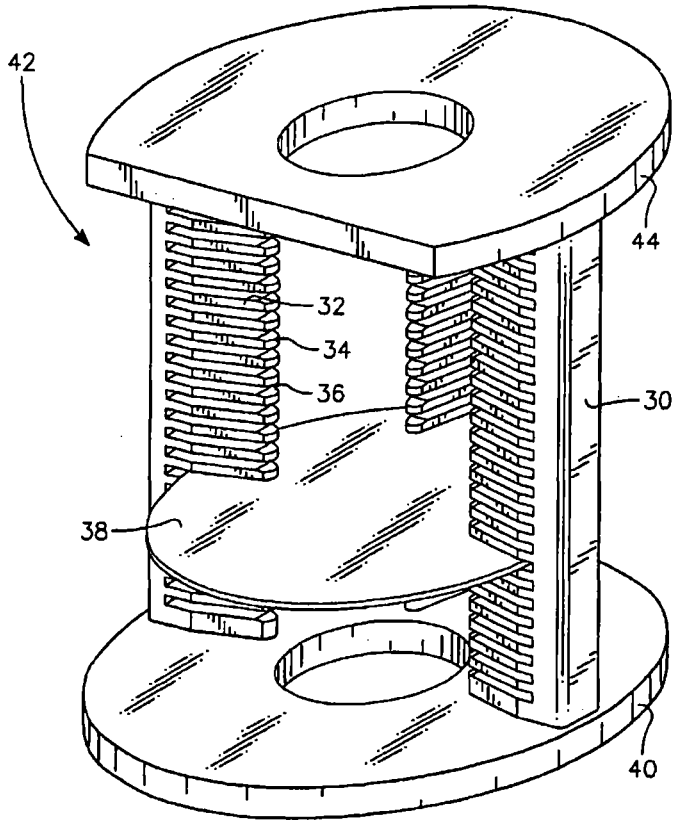
(81) Designated States *(national)*: CN, JP, KR, SG.

(84) Designated States *(regional)*: European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

[Continued on next page]

(54) Title: SILICON FIXTURES FOR SUPPORTING WAFERS DURING THERMAL PROCESSING AND METHOD OF FABRICATION



(57) Abstract: A silicon tower (42) or boat (84) for removably supporting a plurality of silicon wafers (38, 86) during thermal processing. A preferred embodiment of the tower (10) includes four legs (12) secured on their ends to two bases (14). A plurality of slots (16) are cut in the legs allowing slidable insertion of the wafers and support for them. The legs preferably have a rounded wedge shape with a curved front surface of small radius cut with the slots and a back surface that is either flat or curved with a substantially larger radius. Preferably, the legs are machined from virgin polysilicon formed by chemical vapor deposition from silane. The bases may be either virgin poly or monocrystalline silicon and be either integral or composed of multiple parts. Virgin polysilicon is preferably annealed 1025°C before machining. Silicon parts may be joined by applying a spin-on glass between the parts and annealing the assembly. After assembly, the surface of a tower is subjected to sub-surface working.

WO 02/03428 A3

(88) **Date of publication of the international search report:**
11 April 2002

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.