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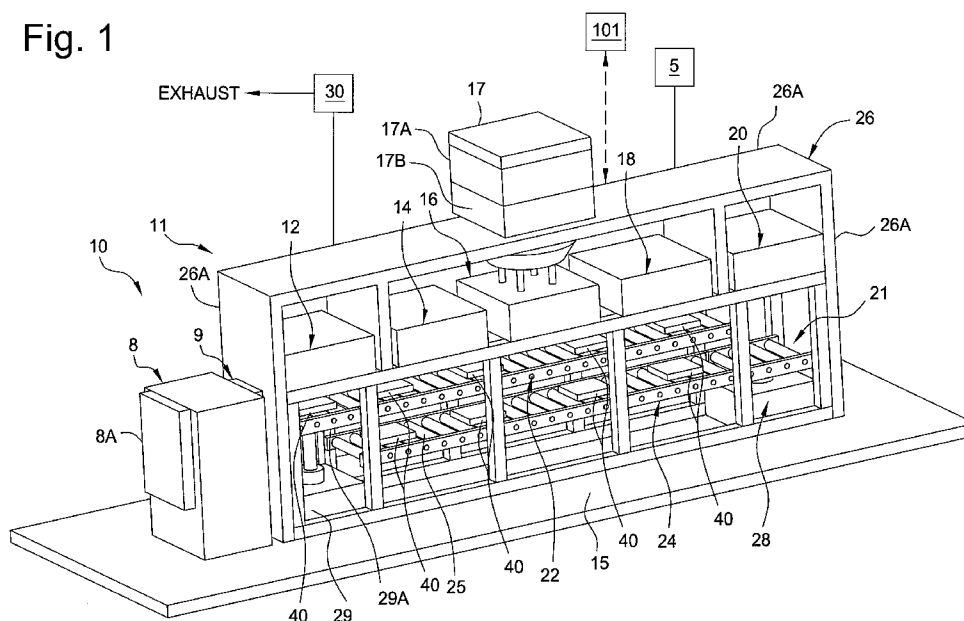
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(54) Title: APPARATUS FOR FABRICATING LARGE-SURFACE AREA POLYCRYSTALLINE SILICON SHEETS FOR SOLAR CELL APPLICATION

Fig. 1



(57) Abstract: A method and apparatus for forming a semiconductor sheet suitable for use as a solar cell by depositing an array of solidified drops of a feed material on a sheet support. The desired properties of the sheet fabricated with the teaching of this invention are: flatness, low residual stress, minority carrier diffusion length greater than 40 microns, and minimum grain dimension at least two times the minority carrier diffusion length. In one embodiment, the deposition chamber is adapted to form and process sheets that have a surface area of about 1,000-2,400 cm<sup>2</sup>.

WO 2007/136420 A3



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**A. CLASSIFICATION OF SUBJECT MATTER**

IPC: **H01L 31/18( 2006.01);C30B 27/02( 2006.01),30/04( 2006.01),11/00( 2006.01)**

USPC: 438/501,68,907,62;117/25,932,200

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**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Google Scholar and STIC Search

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,106,763 A (BATHEY et al) 21 April 1992 (21.04.1992), Figs. 1-2, Cols. 1-9 Lines 1-68.	1-25
A	US 6,284,312 B1 (CHANDRA et al) 4 September 2001 (04.09.2001).	1-25
A	US 6,365,225 B1 (CHANDRA et al.) 02 April 2002 (02.04.2002).	1-25
A	US PG Pub 2007/0158654 A1 (KHOLODENKO et al.) 12 July 2007 (12.07.2001).	1-25
A	US 6,413,313 B1 (YOSHIDA et al) 2 July 2002 (02.07.2002).	1-25
A	US 6,368,403 B1 (SCHMID et al) 9 April 2002 (09.04.2002)	1-25

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See patent family annex.

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"O"	document referring to an oral disclosure, use, exhibition or other means	
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