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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
29 January 2009 (29.01.2009)

PCT

(10) International Publication Number
WO 2009/014352 A3

(51) International Patent Classification:
C03C 27/00 (2006.01)

(21) International Application Number:
PCT/KR2008/004212

(22) International Filing Date: 18 July 2008 (18.07.2008)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2007-0074187 24 July 2007 (24.07.2007) KR

(71) Applicant *(for all designated States except US)*: **E-WORLD CO., LTD.** [KR/KR]; 210, Gumi Electronic Industrial, Institute Innovision, 13Block, Korea Industrial Complex No. 4, Bongsan-ri, Sandong-myeon, Gumi-si, Gyeongbuk 730-853 (KR).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **CHOI, Soon-Do** [KR/KR]; 101-602, Park Mansion, 77, Doryang 2-dong, Gumi-si, Gyeongbuk 730-762 (KR). **SON, Ug** [KR/KR]; 2407-1003, Seohae Apt., Hangbokhan Maeul, Sang 2-dong, Wonmi-gu, Bucheon-si, Gyeonggi-do 420-758 (KR).

(74) Agent: **LEE, Keon-Cheol**; Jeong, Kim & Lee Intellectual Property Law Firm, 607, Kolon Science Valley 1cha, 187-10, Guro-dong, Guro-gu, Seoul 152-050 (KR).

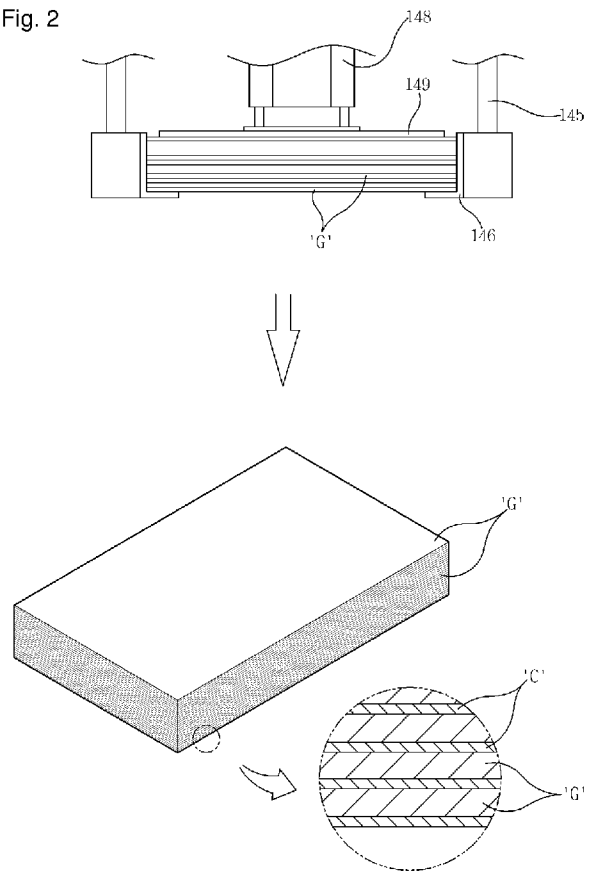
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: MANUFACTURING METHOD OF THIN GLASS BY STACK-ADHESION TYPE AND MANUFACTURE APPARATUS THEREOF

Fig. 2



(57) Abstract: A method and apparatus for manufacturing thin sheets of glass using stack and adhesion. Several sheets of mother glass are stacked and adhered using an adhesive providing easy adhesion and separation, and then the adhered sheets of mother glass are cut to desired size and then are subjected to surface grinding, etc., so that productivity is increased, while a fraction defective is decreased. Particularly, the productivity of tempered glass can be increased, and the fraction defective of the tempered glass can be reduced. Further, when small electronic products such as mobile phones are produced, the thickness of each electronic product can be reduced, and simultaneously the tempered glass can be efficiently manufactured due to the thickness reduction. Thus, the thin, small electronic products can be produced at a minimum manufacturing cost.

WO 2009/014352 A3

European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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*

(88) Date of publication of the international search report:
19 March 2009

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2008/004212

A. CLASSIFICATION OF SUBJECT MATTER

C03C 27/00(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 8 C03C 27/00, C03C 27/12, C03B 33/00, C03B 33/02

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

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and applications for Utility models since 1975

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

eKIPASS (KIPO Internal)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-2006-0103493 A (KOREA NANO GLASS CO., LTD.) 02 OCTOBER 2006 See the whole document	1-25
A	JP55-070808 A (FUJI PHOTO FILM CO., LTD.) 28 MAY 1980 See the whole document	1-25
A	JP02-064044 A (NATIONAL HOUSE INDUSTRY CO., LTD.) 05 MARCH 1990 See the whole document	1-25
A	JP2006-124255 A (FUJIWARA KOGYO KABUSHIKI KAISHA) 18 MAY 2006 See the whole document	1-25

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

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

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents,such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
13 JANUARY 2009 (13.01.2009)	**13 JANUARY 2009 (13.01.2009)**

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

KIM, Bum Su

Telephone No. 82-42-481-8450

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2008/004212

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 20060103493 A	02.10.2006	None	
JP 55-070808	28.05.1980	JP 55-070808 A	28.05.1980
JP 02-064044	05.03.1990	JP 02-064044 JP 2064044 A	05.03.1990 05.03.1990
JP 2006-124255	18.05.2006	JP 2006-124255 JP 2006-124255 A	18.05.2006 18.05.2006