VRIGARD& CASTRO

PROPE0AD INIELECTUAL

AS: 100.449

CARRERA 7 #71 21 TORRE B - PISO 4
BOGOTA - COLOMBIA
TEL: (571) 744 22 00
FAX: (571) 74222 00 (571) 3214045
www.bc.com.co

SUPERINTENDENCIADE

INDUSTRIAY COMERCO

No. 06-01775..00004-0000
206-01 164341 Dep, 2020 NUECREAC(OM

?TLNE’ Eve: 379 FASENACIONAL11
136

F0110ss 3

Seæores
SUPERINTENDENCIA DE INDUSTRIA V COMERCIO
DIVISION DE NUEVAS CREACIONES
E. S. D.

REF.: Expediente No. 06 017.755 - Solicitud de Patente FASE NACIONAL Corresp. a la Solicitud Internacio.nal PCT/FR2004/001 265.
a nombre de: LAFARGE PLATRES.
Titulada: PLACAS A BASE DE AGLOMERANTE HIDRAULICO CON BORDES ADELGAZADOS, PROCEDIMIENTO DE FABRICACION DE PLACAS A BASE DE AGLOMERANTE HIRAULICO E INSTALACION DE PRODUCCION DE TALES PLACAS, Y PROCEDIMIENTO DE CONSTRUCCION DE OBRAS MENORES.

JUAN PABLO CADENA SARMIENTO, vecino de Bogota, portador de la tarjeta profesional No. 57492 del Consejo Superior de la Judicatura, obrando como
apoderado de!a Sociedad LAFARGE PLATRES, segUn to acredita el documento de
poder presentado en esa DivisiOn, de acuerdo con el ArtIculo 44 de la Decision 486
de la ComisiOn de la Comunidad Andina, me permito solicitar Clue se examine si la
invenciOn contenida en la solicitud en referencia es patentable.

410 De acuerdo con lo anterior, me permito anexar los recibos oficiales de caja No. 07-94,461 y 08-590 por valor de $210.000.

De/Sehorefe atentamente,

JUAN PA 0 CADENA SARMIENTO
C.C. No. 80.41 0.337 de UsaquØn
T.P. No. 57492 del C.S.J.
Cra 7 No. 71-21 Torre B, Piso 4

Bogota, 10 de enero de 2008
CHP/CH/jpg

BRIGARD & CASTRO ABOGADOS S.A. - NIT. 860.047.372-8

IECLBU DE CAIAAI-LIUDU AL EX’ED1ENIE No

- Ac.ioo44i

SUPERINTENBENCIA DE INDUSTRIA V CONERCIO
uSTR YCOMERCfO
NIT 800176089-2
- 00004-0000

*IBO OFICIAL DE CAJA 07 - 94,461 -t

Dep. 2O20NuEcRQ
FECHA NOVIENDRE 21 DE 2007 L OOS 3

tH CONS I SNAC I ON ***

- -

DEPOSITANTE TIPO PASO BANCO CUENTA No. PASO FECHA P60 Vr. PASO --

BRIGARD & CASTRO LTDA CONSISNACION BANCO POPULAR 050-00110-6 49377415 20/1112007 33850000.00

***** CONCEPT 0 ***i*

CANT. RENTISTICO CONCEPTO TOTAL CONCEPTO --

1 50005-01-01 SOLICITUDES 114 PlC CAP-11 EXAMEN DE PATENTIBILID 202.000.00
TOTAL $ 202t000’00

SON: DOSCIENTOS DOS NIL PESOS

RESPONSABLE

SIJPERINTENDENCTh BE INDUSTRIA Y CONERCIO

NIT 300176039-2

RECIBO OFICIAL BE CAJA 08 - 590 FECHA ENERO 3 BE 2808

3

YCOMERC

V IV
- 000

V

V V

Mz

- V

V

V

VVVV

’r) NUECREACON

V

UMCONS I SNAC I ON *****

- -

 SITANTE TIPO PASO BANCO CUENTA No. PAGO FECHA P60 Vr. PASO
- -

BRISARD & CASTRO LTDA CONSISNACION BANCO BE BOGOTA 062754387 2288232 83/01/2008 26,682000.00

U*** C 0 N C E F 1 0 t****

- -

CANT. RENTISTICO CONCEPTO TOTAL CONCERTO --

1 50005-01-89 OTROS SERYICIOS BE PROPIEDAD 1 998 VALOR COMPLENENTO TARIFA A*O ANTR 8?000.00
TOTAL $ 8,880.00

SON. OCHO NIL PESOS

RESPONSABLE

RECIBO BE CAJA APLICADO AL EXPEDIENTE No.

IV

10,

Industria y Comercio
S U P E R I N T E N D E N C I A

DIVISION DE NUEVAS CREACIONES

RADICACION EXPEDIENTE No. 06-17755

EL EXTRACTO DE LA PRESENTE SOLICITUD DE PATENTE DE INVENCION

FUE PUBLICADO EN LA GACETA DE PROPIEDAD INDUSTRIAL No 578 DE

FECHA 31 DE JULIO DE 2007 EL TERMINO HABIL SEI1ALADO POR LA LEY

EXPIRA EL 26 DE OCTUBRE DE 2007

NOTA: Dentro del plazo de los seis (6) meses siguientes a partir de la fecha de publicaciôn en la gaceta de Propiedad Industrial, deberÆ solicitar y cancelar el examen de patentabilidad so pena de que la solicitud caiga en abandono, de acuerdo con lo establecido en el ArtIculo 44 de la Decision 486/2000.

SE PRESENTARON OPOSICIONES POR PARTE DE TERCEROS.

SI NO X

United States Patent [19]
Parker

(54] DRYWALL BOARD CONSTRUCTION

(76] Inventor: Robert F. Parker, Rt. 5, Box 350,
Wilmington, N.C. 28401

(211 AppI. No.: 229,312

(22] Filed: Jan. 29, 1981

(51] Cl...E04.0 1/36 (52] U.S. Cl... 52/100 [58] Field of Search...................52/98,417,418,420, 52/534,100, 428/33, 53, 34, 55, 60, 61, 763

[56) References Cited
U.S. PATENT DOCUMENTS

1,672,099 6/1928 Schumacher.........................52/361 2,305,247 12/1942 Fisher....................................52/417
2,314,523 3/1943 Speer.....................................52/417
3,576,091 4/1971 Shun.....................................52/417
4,237,669 12/1980 Hunter..................................52/417

FOREIGN PATENT DOCUMENTS

1287947 2/1962 France..................................52/417

429084 6/1935 United Kingdom

Fimary Examiner.Reinaldo P. Machado

[II] 4,3979123

[45] Aug. 9, 1983

Assistant ExaminerAlvin Chin-Shue
Attorney, Agent, or FirmB. B. Olive

(57] ABSTRACT

An improved construction for a horizontally installed drywall board incorporates widthwise extending tear-off strips on the back side of each butt end. When the butt ends of two boards are mated for nailing to a stud, the strips are removed which allows the butt ends to bend at the join line to form a depression for receiving the finishing joint cement. A pair of relatively short lengthwise extending tapered tear strips are also pro-vided on opposite corners adjacent one edge of the board and which are also removed to facilitate continu-ation of the depression along the join line when the board edges are nailed to a stud plate adjacent the ceil-ing or floor of the room being covered by the wall-board. An alternative embodiment utilizes a tapered construction on the butt ends on the back face of the board and a convention tapered construction on the outer face of the board along its long edges.

5 Claims, 18 Drawing Figures

U.S. Patent

fl

Aug. 9, 1983 Sheet 1 of 4 4,397,123

U.S. Patent Aug. 9, 1983 Sheet 2 of 4 413979123

Ti 30

FIG.314

25 10

FTC,. R

6 __ 10

51) 66
IQ - I

4,397,123 3 4
FIG. 9 is a plan view taken generally in the direction are torn off and removed, each butt end of board 10 is
of Irne 9-9 of FIG. 8 illustrating a pair of the modified provided on the back face with the indicated notch 35
board butt ends of the invention as they are typically which enables a vertical cement receiving recess to be
positioned before removal of the tear strips. formed along each vertical join line as later described.

FIG 10 is a view similar to FIG. 9 illustrating the 5 As previously mentioned, modified board 10 also in- pair of modified butt ends of the invention with the eludes a pair of short tapered tear-off strips 25, 26 with

widthwise tear strips removed, with the tapered tear strip 25 being shown and described by way of example strips in place and with the butt ends nailed in place to in reference to FIGS. 3-7. Strip 25 is triangular in cross form a depression for receiving the finishing cement section as depicted in FIG. 6 and is formed of paper along the vertical join line. 10 cover 40 glued to the back face paper liner of board 10

FIG. 11 is similar to FIG. 10 but showing the finish- and surrounds drywall board core material 41. Dimen-
ing cement applied to the vertical depression along the sions W2, T2, H and L are selected such that strip 25
vertical join line, substantially fills tapered notch 45 in place prior to
FIG. 12 illustrates the type of ceiling and floor fram- being torn off. As later explained, the short tapered
ing construction to which drywall boards are typically 15 strips 25 and 26 are only removed when the board 10 is
secured at the floor and ceiling, employed adjacent a floor or ceiling such that tapered

FIG. 13 is a top plan view of two modified butt ends edge 11 is positioned for nailing against floor or plate of the invention as they appear with both sets of tear members as shown in the typical framing construction

strips removed and with the butt ends nailed to the illustrated in FIG. 12.
ceiling plate members enabling the vertical depression 20 Simply by way of example, the invention has been
along the join line to extend to the ceiling, applied to drywall board of one-half inch thickness and

FIG. 14 is a plan view of the back face of a drywall in this application the dimension W of tear strip 15 was board according to a second embodiment. two and one-half inches and the dimension T was three- FIG. 15 is a plan view of the outer face of a drywall sixteenths inch. In the same application, the dimensions

board according to the second embodiment. 25 W2, T2, H and L of tear strip 25 were respectively four
FIG. 16 is an elevation view taken in the direction of inches, three-sixteenths inch, two and nine-sixteenths
line 16-16 of FIG. 15. inches, and two and one-half inches.

FIG. 17 is an end view taken in the direction of line Drywall board is typically positioned horizontally as 17-17 in FIG, 15, depicted in FIG. 8 with the beveled outer side edges on
FIG. 18 is similar to FIG. 11 illustrating how the 30 the outer face of adjoining boards, such as edges 50, 51
board of the second embodiment is applied to a stud. being abutted to form shallow lengthwise running re-

BEST MODE FOR CARRYING OUT THE cesses along each horizontal joint 52 for receiving the conven- INVENTION tional practices. Also, the drywall boards are typically

Referring to the drawings, FIG. I illustrates in a first 35 secured to vertical studs at the vertical join lines and are
preferred embodiment a perspective view of the front furthermore secured to the top and bottom structural
face of a drywall board 10 modified according to the plates at the ceiling and floor with FIG, 12 illustrating
invention. Board 10 includes conventional beveled typical construction framing for this purpose. In this
edges 11, 12 running lengthwise and on the front face of regard, it should be noted that the modified board con-
the board. Beveled edges 11, 12 facilitate the finishing of 40 struction of the present invention is primarily con-
horizontal joints or seam lines by providing a shallow cerned with the board construction which facilitates the
cement receiving recess along each horizontal join line forming of the vertical joints and seams as distinct from
for receiving the finishing cement and tape according to the board construction relating to forming the horizon-
conventional practices. tal joints and seams which may be of conventional prac-
FIG. 2 is a perspective view of the back side of the 45 tice.
board 10 modified according to the invention so as to In making up vertical joints and seams using the mod.
have a pair of widthwise tear-off strips 15, 16 on the if board 10 ofthe invention, the modified butt ends of
respective butt ends 20, 21. The modified board 10 also two boards to be mated have their respective tear strips,
includes another pair of short tapered tear-off strips 25, such as tear strips 15 or 16, removed after which they
26 on the back face of board 10 within the boundaries of 50 are positioned and nailed to a stud 66 at the join as, for
tear-off strips 15, 16 and extending lengthwise along example, on sixteen inch centers. Thus, when a pair of
tapered edge 11. While economic considerations would the illustrated abutting widthwise tear strips are re-
dictate the employment of only a pair of the short ta- moved and the back faces of adjoining board butt ends
pered tear-off strips 25, 26, the invention contemplates are nailed to a stud 66 as in FIG. 10, a vertical extending
that four such short tapered tear-off strips, one at each 55 recess is provided for filling with cement 60 as seen in
butt end corner, could be employed, if desired. FIG. 11. That is, by removing the respective tear strips,
Referring next to FIGS. 3-5 and using tear strips 15 the mated abutting butt ends are made somewhat thin-
and 25 by way of example, it would be noted that the ncr than normal and thus are enabled to effectively bend
widthwise tear strip 15 is made up of a tear-off paper and form a vertical extending recess such as recess 61
strip 30 wrapped over a drywall board core material 31. 60 for receiving the finish cement 62 and tape.
Strip 30 is glued to the back face paper liner of board 10 When the boards 10 of the invention are installed at
and core material 31 of width W (FIG. 3) and thickness some position intermediate the ceiling and floor as illus-
Ti is shaped such that strip 15 before removal substan- trated in FIG. H, only the widthwise tear strips will be
tially fills in the notch space 35 running widthwise of removed at the vertical join lines formed on the respec-
board 10 on each butt end. Thus, when the widthwise 65 tive studs 66. However, when the boards 10.are in-
tear-off strips 15, 16 are in place, the respective butt stalled adjacent either the ceiling or the floor and are
ends 20, 21 exhibit their normal substantially uniform required to be nailed either to floor plates 65 or ceiling
thickness characteristic. However, when strips 15, 16 plates 67, it is necessary that the respective boards 10 be

liii 0111111 111111110111111111111111111111111111111111111111111111111 Ill

US 20010044016A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2001/0044016 Al
Watras (43) Pub. Date: Nov. 22, 2001

(54) CONTINUOUS METHOD OF MAKING
FOUR-TAPERED EDGE GYPSUM BOARD
AND THE GYPSUM BOARD MADE
THEREFROM

(76) Inventor: Edward W. Watras, Huntington, NY
(US)

Correspondence Address:
James W. Badic, Esq.
Stoll, Miskin, Hoffman & Badie
The Empire State Building
350 Fifth Avenue, Suite 6110
New York, NY 10118 (US)

(21) AppI. No.: 09/882,726

(22) Filed: Jun. 15, 2001

ZA

Related U.S. Application Data

(63) Non-provisional of provisional application No. 60/271,020, filed on Feb. 22, 2001.

Publication Classification

(51) Int. CI.’..........................B32B 23/02; 13328 3114;
DO4H 1/00

(52) U.S. Cl.......................... 428/292.1; 428/192; 156,45

(57) ABSTRACT
A method is provided for continuous production of gypsum boards which comprises forming a laminate of gypsum slurry between a facing paper and a backing paper and continuously forming a longitudinal recess along the side edges of the laminate surface, and a lateral recess at spaced intervals on the laminate surface thereby producing a four-tapered edge gypsum board which is uniquely suitable as a material of construction in the building industry.

US 2001/0044016 Al

2

use in construction of walls and ceilings in the building industry. The method comprises a method for continuous production of four-tapered edge gypsum hoard comprising (a) advancing a face paper toward a continuous moving belt;(h) introducing a first stream of gypsum slurry onto said advancing face paper; (c) introducing a second stream of gypsum slurry onto said advancing first stream and advanc-ing said face paper coated with the combined first and second gypsum streams; (d) introducing a third stream of gypsum slurry onto said face paper coated with said com-bined first and second gypsum streams followed by advanc-ing a hacking paper thereby forming a laminate of said combined first, second and third streams of gypsum slurry, between said face paper and said backing paper; (e) con-tinuously advancing a tape strip in contact with the surface of said face paper to thereby form a recess on said face paper along each longitudinal edge thereof; (I) forming a lateral recess at spaced intervals on the surface of said face paper; (g) continuing to advance the gypsum slurry sandwiched between said face paper and said backing paper with the longitudinal recesses and lateral recesses formed thereon until the gypsum slurry is cured to a hard sheet of gypsum hoard, and (h) cutting individual pieces of gypsum boards at predetermined distance intervals as said sheet advances along said conveyor belt.

[0014] The four-tapered gypsum hoard is uniquely suited
for forming walls and ceilings with smooth monolithic finished appearance without unsightly ridges at the joints.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] In the drawings, wherein like reference numerals
are used to designate like parts:

[0016] FIG. 1 is a schematic, partly perspective view of
the method of continuous production of four-tapered edge gypsum hoard according to the present invention;

[0017] 11G. 2 is a top, partly perspective view of a
gypsum hoard having four-tapered edges formed according to the present invention;

[0018] FIG. 3 is a sectional view taken along the line 3.3
in FIG. 2,

[0019] FIG. 4 is a schematic, partly perspective view of
the taper forming portion of the conveyor belt used in carrying out the method of this invention;

[0020] FIG. 5 is a sectional view taken along the line 5-5
in FIG. 4;

[0021] FIG. 6 is a sectional view taken along the line 6-6
of FIG. 5; and

[0022] FIG. 7 is a view of a part of the four-tapered edge
gypsum hoard showing the 45 -degree angle of tapers of the longitudinal as well as lateral edges of the board;

[0023] FIG. 8 is a schematic view of the tapered edges of
adjacent gypsum boards made according to the present invention, with reinforciqg tape and joint compound; and

[0024] FIG. 9 is a view similar to FIG. 8 showing
standard prior art gypsum board with a butt joints finish,

DETAILED DESCRIPTION OF THE
INVENTION

[0025] The method of this invention maybe described by
reference to FIG. 1 which shows the equipment used to

Nov. 22, 2001

carry out the method. A sheet of the face paper 111 is unwound from the master roll 113 which may be driven by a motor (not shown) as the facing paper advances in the direction of the arrow A. A first stream of gypsum slurry is introduced via conduit 115 onto the facing paper 111 (see arrow B) and is spread thereover by the spread roller 117 thereby forming a thin layer of gypsum slurry over the face paper. This initial stream is preferably uniform and smooth in texture so as form a uniform smooth surface in contact

with the face paper after the gypsum slurry is subsequently cured. As the face paper further advances in the direction of arrow B, a second stream of gypsum slurry which constitutes the bulk of the slurry is introduced onto the first stream via conduit 119, followed by a third stream of gypsum slurry which is introduced via conduit 121 onto a second spreading roller 123 and spread over the combined first and second streams of gypsum slurries. The gypsum slurry streams introduced via conduits 115 and 121 are denser than the gypsum slurry introduced via conduit 119. Backing paper 125 is continuously unwound from the hacking paper master roll 127 and advanced in the direction of the arrow C, thus resulting in the formation of a laminate of gypsum slurry, still in uncured state, between the face paper 111 and backing paper 125.

[0026] In operation, and as matter of common experience,
sometimes there may be a tendency for the combined first and second stream of the gypsum slurry to build up or hack up near the point where the third stream is introduced. Therefore, in order to control the thickness and/or quantity of flow of the gypsum slurry and avoid slurry backup at this point, means is provided which can sense the undesired slurry hack-up by detecting the thickness of coating of the slurry and automatically adjusting this thickness to facilitate the flow and advance of the gypsum slurry. The sensing means used herein is preferably a laser 129, hut may he any other similar means designed to monitor the thickness and/or build up of the gypsum slurry.

[0027] The quantity of the third slurry stream, as well as
the consistency, texture and smoothness of this stream are selected with a view to forming a uniform and smooth layer in contact with the backing paper 125 after the gypsum board is cured. In this manner, the resulting gypsum board, which is a laminate of gypsum after curing, will have uniformly smooth surfaces in contact with the face paper as well as the backing paper. Such smooth surfaces enhance the appearance of the walls and ceilings made with such gypsum boards.

[0028] Referring back to FIG. 1, after third stream of
gypsum slurry has been introduced, the combined slurry, which is sandwiched between the face paper 111 and the backing paper 125 is passed over a conveyor belt 131 moving in direction of the arrow D. The slurry laminate sandwiched between the face paper 111 and backing paper 125 is then contacted gently by a compressor bar 133 disposed above the laminate and activated, preferably by sufficient weight but may be electrically activated, against the surface of the laminate to a predetermined desired thickness. Also shown in FIG. 1, is a continuous strip of tape 135 passing under the laminated slurry, in the longitudinal direction along both edges of the laminate, pressed gently against the face paper such as to form longitudinal recesses, i.e., tapers along the longitudinal edges of the laminate. The conveyor belt 131 is also provided with a plurality of spaced

US 2001/0044016 Al

3

apart cross bars 137, spaced at different intervals, preferably at equal predetermined distances, adapted to contact the moving slurry laminate thus exerting slight pressure and forming a lateral taper, at given intervals along the length of the conveyor belt 131. As the laminate of the gypsum slurry advances further, the slurry will cure and harden, i.e., it sets after a predetermined time, thus forming a gypsum board having the desired four-tapered edge construction.

[0029] In carrying the method of this invention the type of
gypsum used, such as calcined gypsum, the amount of water in the gypsum slurry, i.e., its degree of hydration, the time required to dry the gypsum slurry before it Sets and the length of the conveyor belt are significant parameters which are discussed extensively in the prior art. The aforemen-tioned Ali patent and Roos patent are typical of such prior art patents to which reference may he made for guidance in selecting these parameters. It must he emphasized, however, that the method of this invention it is intended to form a

four-tapered edge gypsum board with mating angular edges and smooth textured surfaces which enhance the appearance and finish of walls and ceilings using such gypsum hoards.

[0030] A finished gypsum board 200 with tour-tapered
mating edges is shown in FIG. 2 having board surface 201, longitudinal edge 203 and lateral edge 205 wherein these edges are tapered identically in all relevant dimensions (e.g., angle of taper, depth of taper, width of taper) such that they meet at a 45-degree angle as shown in 207.

[0031] FIG. 3 shows the gypsum slurry sandwiched
between the facing paper 111 and backing paper 125. As in the prior art methods, the gypsum board is made face down and before starting the method, the face paper is folded up along the two longitudinal edges and folded over on top of the slurry along these edges.

[0032] the formation of the longitudinal tapers as well as
the lateral (transverse) tapers are further illustrated in FIGS. 4-6. Referring to these drawings, as the gypsum hoard 200 travels along the conveyor belt 131, it is contacted by the continuous strip of tape 135 which forms the longitudinal recess or taper 203. The lateral or transverse recesses or tapers are formed on the surface of the advancing board by the use of a series of equidistantly spaced cross bars such as the cross bar 137. Each cross bar is secured to the conveyor belt 131 hv means of a pin 141 although any other suitable means may be used to secure the cross bar to the conveyor belt The tapers on the longitudinal and lateral edges of the gypsum board are formed at 45-degree angles relative to the direction of travel of the conveyor belt. Thus each piece of gypsum hoard 200 is formed with mating longitudinal and lateral edges, having a 45 degree mating angle as shown in FIG. 7.

[0033] The cross bar 137 is shaped with a raised crown
portion 137a having a width WI and a width W2 from the top of the crown portion to the tapered end 13713 which terminates at the surface of the conveyor belt 131, with W3 defining the width between the top surface of the conveyor belt at point A to the the point B at the end of the crown portion. These dimensions are designed so that the cross bar 137 can produce a lateral recess on the gypsum board upon minimal contact and pressure on the board’s surface.

[0034] The advantages of the method of this invention
may be further realized by reference to FIGS. 8 and 9

Nov. 22, 2001

comparing how the joints of the gypsum board are joined together during construction of a wall or a ceiling. In FIG. 9, which represents a standard finish, the standard square cut butt ends 200A and 20013 of the gypsum boards are rein-forced with a paper reinforcing tape 301 using a joint compoiund C resulting in the formation of an unsightly ridge or bulge 303. By contrast, when the ends 200C, 200D of tapered gypsum boards, formed in accordance with the method of this invention, are aligned, reinfornced by the tape and joint compound C, the finish is smooth and fiat as in 403 without unsightly ridges thus resulting in a smooth monolithic wall.

[0035] Although the present invention has been described with certain degrees of particularity, it is apparent to one skilled in the art that several changes or modifications may be made in this method which are obvious from the fore-going detailed description and the drawings.

I. A method for continuous production of four-tapered edge gypsum board comprising:

(a) advancing a face paper toward a continuous moving belt,

(b) introducing a first stream of gypsum slurry onto said advancing face paper,

(c) introducing a second stream of gypsum slurry onto said advancing first stream and advancing said face paper coated with the combined first and second gyp-sum streams,

(d) advancing backing paper in the same direction as of said face paper and introducing a third stream of gypsum slurry to combine with said first and second gypsum streams thereby forming a laminate of said combined first, second and third streams of gypsum slurry, between said face paper and said backing paper,

(e) continuously advancing a tape strip in contact with the surface of said face paper to thereby form a recess on said face paper along each longitudinal edge thereof,

(1) forming a lateral recess at spaced intervals on the surface of said face paper,

(g) continuing to advance the gypsum slurry sandwiched between said face paper and said backing paper with the longitudinal recesses and lateral recesses formed thereon until the gypsum slurry is cured to a hard sheet
of gypsum board, and

(h) cutting individual pieces of gypsum boards at prede-termined distance intervals as said sheet advances along said conveyor belt,
2. A method as in claim 1 wherein each lateral recess is formed by a crossbar disposed below said moving gypsum hoard.
3. A method as in claim 2 wherein each crossbar com-prises a pin member secured to said moving belt.
4. A method as in claim 3 wherein a plurality of crossbars are secured at substantially equal distance above said mov-ing belt.
5. A method as in claim 1 wherein each of said longitu-dinal recesses and each of said lateral recesses are formed at about 45 degrees relative to direction of travel of the conveyor belt.

ski

199
SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO DIRECCION DE NUEVAS CREACIONES

202084

Bogota, D.C.

Abogado
JUAN PABLO CADENA SARMIENTO Apoderado

ASUNTO Radicaciôn
TrÆmite
Evento
Actuación
Oficio
Folios

Patente de lnvenciOn Fx?

Via Nacional F7

Via PCT (fase nacional) 7X

No. Sol. lnternacional

06-17755
011
379
519

013

Patente de Modelo de Utilidad

Cap, I Cap. II X]

PCT/FR2004/001 265

Fecha de Presentación Internacional 21/05/2004

Como resultado del examen de fondo, realizado con fundamento en el artIculo 45 de la DecisiOn 486 de la ComisiOn de la Corn unidad Andina, se le comunica:

1. Documentos estudiados

1.1. DescripciOn: Folios 40 a 80

1,2. Reivindicaciones: Folios 81 a 92

1.3. Dibuos: Folios 94 a 109

1.4. Prioridad: Folios 5 a 39 (EP20030292089 20030825
EP20040290493 20040224
EP20040290495 20040224)

2. Objeto de la invención

Titulo de la solicitud: "PLACAS A BASE DE AGLOMERANTE HIDRAULICO CON BORDES ADELGAZADOS, PROCEDIMIENTO DE FABRICACION DE PLACAS A BASE DE AGLOMERANTE HIDRAULICO E INSTALACION DE PRODUCCION DE TALES PLACAS, Y PROCEDIMIENTO DE CONSTRUCCION DE OBRAS MENORES".

0
200

El problema planteado en esta solicitud se refiere a la realización de huellas en una preforma, ofreciendo a la vez la posibilidad de cambiar fÆcil y rÆpidamente su dimension y forma. TambiØn poder realizar las huellas segün el procedimiento general para poder realizar extremos adelgazados o bordes adelgazados transversales.

Para solucionar este problema tØcnico la solicitud en estudio proporciona una nueva placa de aglomerante hidrÆulico con un revestimiento en cadauna de sus caras, con bordes adelgazados, procedimiento de fabricaciOn de placas a base de aglomerante hidrÆulico e instalaciôn de producciOn de tales placas, y procedimiento de construcciôn de obras menores.

El objeto de la presente invenciOn se Ileva acabo de acuerdo con las caracterIsticas reivindicadas, en las reivindicaciones 1, 9, 13, 24, 26, 32, 35 y43 (ver folios 81 a 92).

El objeto de la solicitud definida anteriormente se encuentra en la Clasificaciôn Internacional de Patentes (IPC), 1328131 1/08, 1328131 1/14, B28131 1/16, B28B1 9/00, E04C2/04.

3. De la solicitud de Patente

3.1 Reivindicaciones (artIculo 30 D 486)

Los siguientes grupos de reivindicaciones presentan un problema de concision, debido a que repiten las mismas caracterIsticas tØcnicas en cada una de sus categorias.
Portal razón se sugiere fusionar las siguientes reivindicaciones independientes y a su vez sus dependientes 1, 9, 13, 43 ya que caracterizan la placa e instalaciOn de producciOn de las mismas, siendo todas de la misma categoria.
De igual forma las reivindicaciones independientes y a su vez sus dependientes 24, 26, 35 y 43 ya que caracterizan el mismo procedimiento, siendo todas de la misma categoria. Con la eliminaciOn de estas repeticiones, se procura tener un capitulo reivindicatorio mÆs conciso, en donde se logre identificar claramente que es 10 novedoso de la invenciOn.

TamblØn se aconseja que la reivindicaciOn independiente, mencione todas las caracteristicas conocidas en el estado de la tØcnica, en el preÆmbulo,y seguido del tØrmino "CARACTERIZADO POR" se muestren las caracterIsticas tØcnicas novedosas propias de Ia solicitud, y que la diferenciarlan del estado de la tØcnica.

Con 10 anterior se busca que la reivindicaciOn independiente de mayor claridad y delimite mejor la invenciOn, para reflejar el verdadero alcance de la protecciOn.

La reivindicaciOn 30 presenta una falsa dependencia con respecto a las reivindicaciones 21 y 22 ya que la primera menciona un "procedimiento" y las dos siguientes tratan acerca da la placa.

4. DeterminaciOn del Estado de la TØcnica

Se buscaron documentos del estado de la tØcnica relacionados, con fecha de publicación anterior a 2003-08-25, que pueden afectar la patentabilidad del objeto de la presente solicitud, encontrÆndose:

201

N° Documento Titulo Fecha de

PublicaciOn

DI US4397123 Drywall board construction 1983-08-09

Continuous method of making four-
D2 US2001044016 tapered edge gypsum board and the 2001-11-22
gypsum board made therefrom

"Dl US4397123 El Documento estÆ relacionado con (a construcciOnde los extremos del drywall y particularmente a una construcciOn modificada de los bordes en los extremos del talOn quo permite una aplicaciOn eficaz con un mejor acabado del cemento a to largo do las Ilneas de uniones."

"D2 US2001044016 Se refiere a un mØtodo quo se proporciona pare la producciOn continua de placas de yeso que abarca la formación do una lÆminado pasta de yeso entre un revestimiento de papel y una lamina de respaido con una hendidura longitudinal a lo largo de los bordes laterales de la superficie del laminado, y una hendidura lateral en los intea’valos espaciados en el laminado de la superficie to que produce un tablero de yeso de cuatro borde afilado que so presta perfectamente como material en el sector de la construcciOn."

5. AnÆlisis depatentabilidad (artIculo 14 D 486)

5.1. Novedad (artIculo 16 D 486)

Teniendo en cuenta que el documento US4397123 (mencionado de ahora en adelante como Dl), que se refiere a: un "Drywall board construction" y al comparar elemento por etemento de la invenciôn tat como estÆ definido en las siguientes reivindicaciones con el documento Dl, vemos que el dicho documento contiene las siguientes caracteristicas tØcnicas, como son:

Reivindicación 1:

Placa de aglomerante hjdrÆulico con un revestimiento en cada una desus caras, que comprende en una cara dos primeros bordes adelgazados paralelos (11,12) y en la otra cara otros dos segundos bordes adelgazados paralelos (35), perpendiculares a los primeros. Ver DI columnas 3 y 4; Figuras 1 a 7.

Reatizada la comparaciOn del documento Dl con las reivindicación independiente 1 de la solicitud de patente de invención, se observa que dicho documento contiene todas las caracterIsticas tØcnicas; con to cual quedarla desvirtuada la novedad de
esta.

Reivindicación 32:

Teniendo en cuenta que el documento US2001044016 (mencionado de ahora en adelante como 02), que se refiere a: un "Continuous method of making four-tapered edge gypsum board and the gypsum board made therefrom "y at comparar elemento por elemento de la invenciOn tal como estÆ definido en la reivindicación 32, con el documento D2, vemos que el dicho documento contiene todas las caracteristicas tØcnicas, como son:

202

lnstalación de producciOn de placas, con dos bandas de conformaciôn (131-133) provistas de cintas longitudinales (no se encuentra en D2); comprendiendo esta instalaciOn, ademÆs, un dispositivo que realiza una huella (no se encuentra en D2); en la preforma antes de la primera banda de conformaciOn, llevÆndosea cabo esta huella en la parte superior de la preforma. Ver D2 capitulo descriptivo, pagina 2 y 3 pÆrrafo 28a 37 y Figuras 1, 8 y 9

Realizada la comparación del documento D2 con las reivindicación independiente 32 de la solicitud de patente de invenciOn, se observa que dicho documento no contiene todas las caracterIsticas tØcnicas.

Se puede concluir de la anterioridad que en la solicitud las caracterIsticas de: "El procodimiento do construcciOn de obras menores que comprende las etapas siguientes:
a) las placas apoyadas a tope al fivel do los bordes adelgazados
b) se fijan las placas sobre la armadura al nivel do los bordes adelgazados
C) se ensamblan las placas entre el/as con al menos un enlucido do obturaciOn de obturaciOn.

Sd) Terminar las juntas con un enlucido complementario de acabado

Y el hecho de poder rea/izar hue/las de dimensiones diferentes en las placas de yeso, sin toner que desmontar las lIneas do producciOn"

Correspondiente a las reivindicaciones independientes 24 y 32 no se encuentran contenidas en el Dl y D2 de manera idØntica, por lo quo permitirÆ afirmar quo la solicitud cumplirla con lo estipulado en el articulo 16 de la Decision 486 de la Comunidad And ma de Naciones.

5.2. Nivel inventivo (artIculo18 D486)

BasÆndonosen el estudlo de la invenciOn y del estado de la tØcnica, se realizo el siguiente anÆlisis:

Reivindicación 24:

El documento mÆscercano en el estado de la tØcnica es Dl, debido a que contiene todos los elementos caracterIsticos de la placa de aglomerante; y como el problema tØcnico tambiØn radica en poder realizar las huellas segün el procedimiento general en los extremos adelgazados o bordes adelgazados transversales.
La diferencia existente con la solicitud en estudlo es que no contiene "El procedimiento de construcciOn de obras menores quo comprende las etapas siguientes:
a) las placas apoyadas a tope al nivel de los bordes adelgazados
b) se fijan las placas sobro la armadura al nivel do los bordes adelgazados
c) so ensamblan las placas entre el/as con al menos un enlucido do obturaciOn do obturaciOn.

d) Terminar lasjuntas con un enlucido complementario do acabado"

Por tal razOn un tØcnico medlo en la materia con el documento US2001044016 (mencionado de ahora en adelante como D2), que se refiere a: un "Continuous method of making four-tapered edge gypsum board and the gypsum board made therefrom", como lo menciona el capitulo descriptivo, pagina 2 pÆrrafo 25y26 y Figuras 8 y 9; IograrIa utilizar las placas para una obra menor de construcciOn; por tal razôn no implicaria una actividad inventiva y por ende no se satisface el criterio establecido en el Articulo 33(3) PCT.

203

En consecuencia se afirma, que los documentos Dl y D2 presentados como anterioridades afectan el requisito de nivel inventivo de la presente solicitud, definido en el artIculo 18 de la DecisiOn 486 de la ComisiOn de la Comunidad Andina

6. Conclusion:

Los requisitos de patentabilidad de la presente solicitud se encuentran afectados as[:

NO Documento NO Reivindicaciones Afectadas Requisito que Afecta

Dl US4397123 I a 23, 26-31, 35-48 Novedad

D2 US2001044016 24,32 Nivelinventivo

En cumptimiento del artIculo 45 de la DecisiOn 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del tØrmino de sesenta dIas contados a partir de la fecha de notificaciOn de la presente comunicaciOn. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesiOn, se denegarÆ lapatente.

Notifiquese el presente oficio conforme a 10 dispuesto en el numeral 5.2, literal e), del capItulo quinto del titulo primero de la Circular LJnica No 10 de 2001.

ALIX CARMENZ49(ESPEDES DE VERGEL
Directora de Nu vas Creaciones (C)

El anterior requerimiento fue notificado por fijaciOn en lista, de fecha

CONCEPTO TECNICO No. 3250 EXAMINADOR TECNICO
Côdigo No. 84