

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 16240.M309PC	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/US2005/014964	International filing date ( <i>day/month/year</i> ) 29 April 2005 (29.04.2005)	Priority date ( <i>day/month/year</i> ) 29 April 2004 (29.04.2004)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant MASONITE CORPORATION			

<p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</p> <p>2. This REPORT consists of a total of 11 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																								
<p>3. This report contains indications relating to the following items:</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</p>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input checked="" type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input checked="" type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application	<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application
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	Date of issuance of this report 01 November 2006 (01.11.2006)
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# PATENT COOPERATION TREATY

REC'D 09 DEC 2005
WIPO <span style="float: right;">PCT</span>

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

## PCT

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/US2005/014964

International filing date (day/month/year)  
29.04.2005

Priority date (day/month/year)  
29.04.2004

International Patent Classification (IPC) or both national classification and IPC  
B27N3/08, B29C43/00, B29C43/58, B29C35/02

Applicant  
MASONITE CORPORATION

**1. This opinion contains indications relating to the following items:**

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA:

European Patent Office  
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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - a sequence listing
    - table(s) related to the sequence listing
  - b. format of material:
    - in written format
    - in computer readable form
  - c. time of filing/furnishing:
    - contained in the international application as filed.
    - filed together with the international application in computer readable form.
    - furnished subsequently to this Authority for the purposes of search.
3.  In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- the entire international application,
- claims Nos. 40,41

because:

- the said international application, or the said claims Nos.     relate to the following subject matter which does not require an international preliminary examination (*specify*):
- the description, claims or drawings (*indicate particular elements below*) or said claims Nos.     are so unclear that no meaningful opinion could be formed (*specify*):
- the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- no international search report has been established for the whole application or for said claims Nos. 40,41
- the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
  - the written form                    has not been furnished
  - does not comply with the standard
  - the computer readable form      has not been furnished
  - does not comply with the standard
- the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
- See separate sheet for further details

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
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**Box No. IV Lack of unity of invention**

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1.  In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
- paid additional fees.
  - paid additional fees under protest.
  - not paid additional fees.
2.  This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- complied with
  - not complied with for the following reasons:  
**see separate sheet**
4. Consequently, this report has been established in respect of the following parts of the international application:
- all parts.
  - the parts relating to claims Nos. 1-39

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	2-16,18-31,33-35,37-39
	No: Claims	1,17,32,36
Inventive step (IS)	Yes: Claims	
	No: Claims	2-16,18-31,33-35,37-39
Industrial applicability (IA)	Yes: Claims	1-39
	No: Claims	

2. Citations and explanations

**see separate sheet**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2005/014964

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**Box No. VII Certain defects in the international application**

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The following defects in the form or contents of the international application have been noted:

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**Re Item IV**

1. This Authority considers that there are three inventions covered by the claims indicated as follows:  
I: Claims 1-39 directed to compression moulding thermoset articles  
II: Claim 40 directed to a sensor  
III: Claim 41 directed to a door skin  
The reasons for which the inventions are not so linked as to form a single general inventive concept, as required by Rule 13.1 PCT, are as follows.
2. The prior art has been identified as document US-A-4 773 021 (D1) and discloses a method for compression moulding thermoset articles comprising all the features disclosed in present claim 1.
3. It follows that there are no technical features of claim 1 making a contribution over the prior art as defined in Rule 13.2 PCT.
4. The following technical features of claim 40 make a contribution over the prior art and can be considered as special technical features within the meaning of Rule 13.2 PCT:
  - a sensor assembly comprising a sensor mounted in a moulding tool
  - the sensor being releasably coupled to a bore
  - a locknut for releasably coupling the sensor
5. The problem to be solved by the second invention is thus identified as how to releasably mount a sensor in a moulding tool.
6. The following technical features of claim 41 make a contribution over the prior art and can be considered as special technical features within the meaning of Rule 13.2 PCT:
  - a door skin having
  - the skin having at least one indentation
7. The problem to be solved by the third invention is thus identified as how to provide a

door skin having an indentation.

8. In conclusion, since the problems are different and the features which solve these problems are different, there are no corresponding special technical features; therefore the groups of claims define three different inventions not linked by a single general inventive concept.
9. The application, hence does not meet the requirements of unity of invention as defined in Rules 13.1 and 13.2 PCT.

#### **Re Item V**

1. The following document (D) are referred to in this report:  
D1 US-A-4773021      D2 US-A-2002129718  
D3 JP-A-60 038 117      D4 JP-A-60 224 052      D5 JP-A-9 267 347

#### **Claim 1**

2. From D1 (see column 3, line 20 to column 4, line 62, figures) there is known a method of compression moulding a thermoset article comprising (applying the wording of claim 1):
  - a) providing a mould apparatus comprising a first mould die 18 and a second mould die 19 movable relative to one another between open and closed states (see fig. 3),
  - b) the first and second mould dies respectively having first and second surfaces facing one another to provide a mould cavity therebetween (see column 4, line 18, fig. 3),
  - c) placing a thermosettable workpiece 20 on the first mould die 18,
  - d) heating the thermosettable workpiece 20 on the first mould die to gel the thermosettable workpiece 20 (see column 4, line 22: "heated platen")
  - e) moving at least one of the first and second mould dies 18,19 toward the other at a first closing velocity to compress the thermosettable workpiece between the first and the second surfaces (implicitly),
  - f) closing the mould cavity and applying a first mould clamp pressure to the thermosettable workpiece at a predetermined yet variable pressurisation time. (see



"press control interface 14"),

g) curing the thermosettable workpiece 20 into a thermoset article,

h) measuring an electrical property of the thermosettable workpiece 20 on the first mould die as a function of time (see fig. 1, column 4, line 30: "electrical conductivity"),

i) detecting a gelation period during which the measured electrical property changes in value until reaching a turning point corresponding to a gelation peak value (see column 3, line 46: "pronounced maximum", column 4, line 58: "conductivity maximum"), and

j) determining a gelation peak time of the thermosettable workpiece 20, the gelation peak time coinciding in time with the gelation peak value (implicitly).

3. Thus it appears that the method of claim 1 is not new as required by Article 33(2) PCT.

#### **Independent Claims 17,32,36**

4. The same objections as raised against claim 1 apply accordingly.

#### **Dependent Claims 2 to 16,18 to 31,33 to 39**

5. The features of these claims do not seem to be of inventive relevance as they relate to details known from the prior art or seem to be conventional to a person skilled in the art.

#### **Industrial Application**

6. The subject-matter of claims 1-39 is considered as susceptible of industrial application according to Article 33(4) PCT.

#### **Re Item VIII.**

1. The claims are not drafted in the two-part form as required by Rule 6.3 PCT.
2. Reference numerals are not added after the technical features of the claims (rule 6.2

PCT).

3. The description is not consistent with the claims (see Rule 5.1(a) (ii), (iii) PCT). Documents D1-D5 reflecting the most relevant prior art, are not cited by number followed by a brief summary of the relevant contents.

**Re Item VIII.**

1. Although independent method claims 1,17 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought. The aforementioned claims therefore lack conciseness. The same objection apply for the independent apparatus claims 32,36.
2. According to the requirements of clarity of Article 6 PCT all of the essential features needed to define the invention should be specified in an independent claim in such a way that a person skilled in the art would have no difficulty in arriving at the subject-matter or method according to the claim.
3. Claim 1 of the present application does not meet this requirement of Article 6 as relevant features relating to the result of the steps concerning "measuring an electrical property", "detecting a gelation period" and "determining a gelation time" are missing. The features above merely relate to monitoring the process. Correction steps in order to achieve the objective of the invention (see description "constant process conditions") are missing. This objection also apply for the independent claims 17,32,36.
4. Claims 1,17,36 of the present application do not meet the requirement of Article 6 as the feature "measuring an electrical property" is not clear. In order for the skilled person to be able to perform the invention it should be defined which "electrical property" should be measured.
5. Claim 1 of the present application does not meet the requirement of Article 6 as the features "a first closing velocity" and "a first mould clamp pressure" are not clear as a

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

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"a second closing velocity" and a "a second mould clamp pressure" are not defined.

6. Claim 32 of the present application does not meet the requirement of Article 6 as the essential feature concerning "measuring an electrical property" is missing.