

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

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Date of mailing (day/month/year) <b>25 October 2018 (25.10.2018)</b>
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Applicant's or agent's file reference 1080838	<b>FOR FURTHER ACTION</b> See paragraph 2 below	
International application No. <b>PCT/US2018/038921</b>	International filing date (day/month/year) <b>22 June 2018 (22.06.2018)</b>	Priority date(day/month/year) 29 August 2017 (29.08.2017)
International Patent Classification (IPC) or both national classification and IPC <b>F16B 12/10(2006.01)i, F16B 12/44(2006.01)i, F16B 12/56(2006.01)i, A47B 47/00(2006.01)i, A47C 17/86(2006.01)i</b>		
Applicant <b>ALBANY INDUSTRIES, INC.</b>		

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 and 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 be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that 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 3 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.

Name and mailing address of the ISA/KR International Application Division Korean Intellectual Property Office 189 Cheongsa-ro, Seo-gu, Daejeon, 35208, Republic of Korea Facsimile No. +82-42-481-8578	Date of completion of this opinion  25 October 2018 (25.10.2018)	Authorized officer  HWANG, Chan Yoon  Telephone No. +82-42-481-3347
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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
**PCT/US2018/038921**

**Box No. I Basis of this opinion**

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
  - a translation of the international application into \_\_\_\_\_ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))
2.  This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.I(a))
3.  With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
  - a.  forming part of the international application as filed:
    - in the form of an Annex C/ST.25 text file.
    - on paper or in the form of an image file.
  - b.  furnished together with the international application under PCT Rule 13*ter*.I(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
  - c.  furnished subsequent to the international filing date for the purposes of international search only:
    - in the form of an Annex C/ST.25 text file (Rule 13*ter*.I(a)).
    - on paper or in the form of an image file (Rule 13*ter*.I(b) and Administrative Instructions, Section 713).
4.  In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

**PCT/US2018/038921**

**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**

1. Statement

Novelty (N)	Claims	<u>1-20</u>	YES
	Claims	<u>NONE</u>	NO
Inventive step (IS)	Claims	<u>NONE</u>	YES
	Claims	<u>1-20</u>	NO
Industrial applicability (IA)	Claims	<u>1-20</u>	YES
	Claims	<u>NONE</u>	NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 5709500 A (MIZELLE et al.) 20 January 1998

D2: US 8990979 B1 (CRAVER et al.) 31 March 2015

1. Novelty and Inventive Step

1.1 Independent Claim 1

D1, which is considered to be the closest prior art to the subject matter of claim 1, discloses a furniture comprising: sides (4, 6) including a connector block (14, 16); and a front rail (8) including the connector block (14, 16) locking with the connector block (14, 16) of the sides (4, 6) (see column 1, lines 5-14; column 3, line 65 - column 4, line 24; and figures 1-3). Claim 1 differs from D1 in a foundation component positionable with respect to a first connector and a second connector, the foundation component, the first connector, and the second connector being configured to receive a device for coupling the foundation component, a first component, and a second component together. However, this feature would be easily conceived by a person skilled in the art from the feature of D1 considering that a deck (10) is fastened to the front rail (8) connected to the sides (4, 6), and the sides (4, 6) and the front rail (8) having the deck (10) are locked together with a tapered pin (18) (see column 3, line 65 - column 4, line 24; and figures 1-3). Accordingly, claim 1 would have been obvious over D1. Therefore, claim 1 lacks an inventive step under PCT Article 33(3).

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1.2 Dependent Claims 2-11

1.2.1 Concerning Claim 2

The additional features of claim 2, characterized in that: the article of furniture is a sofa; the first component is a first arm; the second component is a front rail; and the foundation component is a spring foundation component, wherein the first arm includes a third connector defining an area for receiving a second device for coupling the first arm to the spring foundation component, would be easily conceived by a person skilled in the art from the features of D1 considering: the furniture which is a sofa; the sides (4, 6); the front rail (8); the deck (10), wherein sides (4, 6) include the connector block (14, 16) for locking with the front rail (8) having the deck (10) by the tapered pin (18) (see column 3, line 65 - column 4, line 24; and figures 1-3). Accordingly, claim 2 would have been obvious over D1. Therefore, claim 2 lacks an inventive step under PCT Article 33(3).

1.2.2 Concerning Claim 3

The additional feature of claim 3 is identical to the feature of D1 in that the connector blocks (14, 16) are multilayer connectors (see figures 2-3). Accordingly, claim 3 would have been obvious over D1. Therefore, claim 3 lacks an inventive step under PCT Article 33(3).

1.2.3 Concerning Claim 4

The additional feature of claim 4 is identical to the feature of D1 in that the furniture is a sofa (see figure 1). Accordingly, claim 4 would have been obvious over D1. Therefore, claim 4 lacks an inventive step under PCT Article 33(3).

1.2.4 Concerning Claim 5

The additional features of claim 5, characterized in that: the device is a pin with a top portion and an extended portion on an opposite end of the pin from the top portion, the

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extended portion extending radially from a base of the pin; and each of the first connector and the second connector defines a primary channel and a secondary channel, wherein the primary channel is sized to allow the base of the pin to be received therein, wherein the secondary channel is sized to allow the extended portion to be received therein, and wherein the pin is rotatable to rotate the extended portion with respect to the secondary channel to prevent the pin from decoupling from the first connector, the second connector, and the foundation component, are not disclosed in D1. However, these features would be easily conceived by a person skilled in the art from the features of D2 considering that: a pin (110) includes a top portion and a flange (112); and a corner block (68, 70) defines a lumen (182, 282) and a keyway (183, 283), wherein the lumen (182, 282) receives the pin (110), wherein the keyway (183, 283) receives the flange (112) of the pin (110), and wherein the pin (110) holds the corner block (68, 70) (see column 3, lines 30-59; claim 1; and figures 8-10). Accordingly, it would be obvious to combine the features of D1 and D2 to arrive at an article of furniture of claim 5. Therefore, claim 5 lacks an inventive step under PCT Article 33(3).

1.2.5 Concerning Claim 6

The additional feature of claim 6 is identical to the feature of D1 in that the tapered pin (18) has a head (68) (see column 5, lines 25-32; and figure 3). Accordingly, claim 6 would have been obvious over D1 in view of D2. Therefore, claim 6 lacks an inventive step under PCT Article 33(3).

1.2.6 Concerning Claims 7-9

The additional features of claims 7-9 are merely matters of design option when the general knowledge in relevant field of the art is used. Accordingly, claims 7-9 would have been obvious over D1 in view of D2. Therefore, claims 7-9 lack an inventive step under PCT Article 33(3).

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1.2.7 Concerning Claims 10-11

The additional features of claims 10-11 are the general knowledge in relevant field of the art, so they can be easily derived by a person skilled in the art. Accordingly, claims 10-11 would have been obvious over D1 in view of D2. Therefore, claims 10-11 lack an inventive step under PCT Article 33(3).

1.3 Independent Claim 12

D1, which is considered to be the closest prior art to the subject matter of claim 12, discloses a method comprising the steps of: meshing connector block (14, 16) to form a meshed connector, the connector block (14, 16) coupled to different furniture components of a furniture, the meshed connector defining an opening (64) for receiving a tapered pin (18); and inserting the tapered pin (18) to the opening (64) to lock sides (4, 6) and a front rail (8) having a deck (10) (see column 1, lines 32-40; column 3, line 65 - column 4, line 24; and figures 1-3, 10-11). Claim 12 differs from D1 in positioning a foundation component with respect to meshed connectors. However, this feature would be easily conceived by a person skilled in the art from the feature of D1 considering the deck (10) fastened to the front rail (8) including the connector block (14, 16) (see column 3, line 65 - column 4, line 24; and figures 1-3). Accordingly, claim 12 would have been obvious over D1. Therefore, claim 12 lacks an inventive step under PCT Article 33(3).

1.4 Dependent Claims 13-18

1.4.1 Concerning Claim 13

The additional features of claim 13, characterized in that: the meshed connectors include a secondary channel; the device is a pin having an extended portion extending radially from a base of the pin, wherein inserting the device through the foundation component and the primary channel includes inserting the extended portion through the secondary channel; and the method comprises rotating the pin inserted into the foundation component and the primary

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channel, are not disclosed in D1. However, these features would be easily conceived by a person skilled in the art from the features of D2 considering that: a corner block (68, 70) defines a keyway (183, 283); a pin (110) has a flange (112), wherein the keyway (183, 283) receives the flange (112) of the pin (110), and wherein the pin (110) holds the corner block (68, 70) (see column 3, lines 30-59; claim 1; and figures 8-10). Accordingly, it would be obvious to combine the features of D1 and D2 to arrive at a method of claim 13. Therefore, claim 13 lacks an inventive step under PCT Article 33(3).

1.4.2 Concerning Claim 14

The additional feature of claim 14, characterized in that rotating the pin inserted into the foundation component and the primary channel includes rotating a top portion of the pin such that the extended portion is misaligned with the secondary channel, would be easily conceived by a person skilled in the art from the feature of D2 considering the pin (110) holding the corner block (68, 70) (see claim 1; and figures 8-10). Accordingly, claim 14 would have been obvious over D1 in view of D2. Therefore, claim 14 lacks an inventive step under PCT Article 33(3).

1.4.3 Concerning Claim 15

The additional feature of claim 15 is merely a matter of design option when the general knowledge in relevant field of the art is used. Accordingly, claim 15 would have been obvious over D1 in view of D2. Therefore, claim 15 lacks an inventive step under PCT Article 33(3).

1.4.4 Concerning Claim 16

The additional feature of claim 16 is the general knowledge in relevant field of the art, so it can be easily derived by a person skilled in the art. Accordingly, claim 16 would have been obvious over D1 in view of D2. Therefore, claim 16 lacks an inventive step under PCT Article 33(3).

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1.4.5 Concerning Claim 17

The additional feature of claim 17 is identical to the feature of D1 in that the furniture is a sofa (see figure 1). Accordingly, claim 17 would have been obvious over D1. Therefore, claim 17 lacks an inventive step under PCT Article 33(3).

1.4.6 Concerning Claim 18

The additional feature of claim 18 is identical to the feature of D1 in that the connector block (14, 16) are multilayer connectors (see column 3, line 65 - column 4, line 24; and figures 1-3). Accordingly, claim 18 would have been obvious over D1. Therefore, claim 18 lacks an inventive step under PCT Article 33(3).

1.5 Independent Claim 19

D1, which is considered to be the closest prior art to the subject matter of claim 19, discloses an assembly for connecting parts of furniture, the assembly comprising a connector block (14, 16) coupled to sides (4, 6) and a front rail (8) (see column 3, line 65 - column 4, line 24; claim 1; and figure 1). Claim 19 differs from D1 in that a first connector and a second connector are configured to be meshed together to define a primary channel and a secondary channel therethrough, wherein the primary channel is sized to receive a pin to couple the first connector, the second connector, and a foundation component of an article of furniture together, and the secondary channel is sized to receive an extended portion of the pin. However, this feature would be easily conceived by a person skilled in the art from the feature of D2 considering that a corner block (68, 70) is meshed together and defines a lumen (182, 282) and a keyway (183, 283), wherein the lumen (182, 282) receives the pin (110), and the keyway (183, 283) receives the flange (112) of the pin (110) (see column 3, lines 30-59; and figures 8-10). Accordingly, it would be obvious to combine the features of D1 and D2 to arrive at an assembly of claim 19. Therefore, claim 19 lacks an inventive step under PCT Article 33(3).

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1.6 Dependent Claim 20

The additional feature of claim 20 is identical to the feature of D1 in that the connector blocks (14, 16) are multilayer connectors (see figures 2-3). Accordingly, claim 20 would have been obvious over D1 in view of D2. Therefore, claim 20 lacks an inventive step under PCT Article 33(3).

2. Industrial Applicability

Claims 1-20 are industrially applicable under PCT Article 33(4).