

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2018-05-24
	First Named Inventor	Scroggie	
	Art Unit	3677	
	Examiner Name	Delisle, Roberta S.	
	Attorney Docket Number	61823-A	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5173026		1992-12-22	Cordola	
	2	4534530		1985-08-13	Danko	
	3	3249973		1966-05---	Seckerson	
	4	3771275		1973-11---	Seckerson	
	5	4778320		1988-10---	Nakama	
	6	5028187		1991-07---	Sato	
	7	5339491		1994-08---	Sims	
	8	5458365		1995-10---	Rogers	

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
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Application Number		
Filing Date		2018-05-24
First Named Inventor	Scroggie	
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Examiner Name	Delisle, Roberta S.	
Attorney Docket Number		61823-A

9	6715185		2004-04---	Angellotti	
10	6805524		2004-10---	Kanie	
11	3550217		1970-12---	Collyer	
12	3745612		1973-07---	Seckerson	
13	7481474		2009-01---	Higgins	
14	7927050		2011-04---	Koike	
15	3678797		1972-07---	Seckerson	
16	5704753		1998-01---	Ueno	
17	5797714		1998-08---	Oddenino	
18	5865500		1999-02---	Sanada	
19	6572317		2003-06---	Okada	

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Examiner Name	Delisle, Roberta S.	
Attorney Docket Number	61823-A	

	20	7770266		2010-11---	Higgins
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If you wish to add additional U.S. Patent citation information please click the Add button.

Add

U.S.PATENT APPLICATION PUBLICATIONS

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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20060099051		2006-05-11	Moerke	
	2	20100009851		2010-04-22	Raymond	
	3	20110119875		2011-05-26	Iwasaki	
	4	20110243688		2011-10-06	Klein	
	5	20050079033		2005-04---	Benedetti	
	6	20100029376		2010-11---	Koike	

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
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Application Number		
Filing Date		2018-05-24
First Named Inventor	Scroggie	
Art Unit	3677	
Examiner Name	Delisle, Roberta S.	
Attorney Docket Number	61823-A	

1	2913738	FR	2008-09-19	A. Raymond Et Cie Societe En Commandite Simple
2	2009123616	WO	2009-10-08	TS Tech Co.

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	SR and WO for PCT/US2013/073861 mailed March 28, 2014	

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

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STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	2018-05-24
First Named Inventor	Scroggie
Art Unit	3677
Examiner Name	Delisle, Roberta S.
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CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Joseph M. Butscher/	Date (YYYY-MM-DD)	2018-05-24
Name/Print	Joseph M. Butscher	Registration Number	48326

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: Illinois Tool Works Inc.

Application No./Patent No.: _____ Filed/Issue Date: _____

Titled: PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEALIllinois Tool Works Inc., a corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 035849, Frame 0383, or for which a copy thereof is attached.
- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:
1. From: _____ To: _____
- The document was recorded in the United States Patent and Trademark Office at
- Reel _____, Frame _____, or for which a copy thereof is attached.
2. From: _____ To: _____
- The document was recorded in the United States Patent and Trademark Office at
- Reel _____, Frame _____, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Joseph M. Butscher/

Signature

Joseph M. Butscher

Printed or Typed Name

May 24, 2018

Date

48326

Title or Registration Number

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	
Filing Date	May 24, 2018
First Named Inventor	Scroggie
Title	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL
Art Unit	3677
Examiner Name	Delisle, Roberta S.
Attorney Docket Number	61823-US

SIGNATURE of Applicant or Patent Practitioner

Signature	/Joseph M. Butscher/	Date (Optional)	May 24, 2018
Name	Joseph M. Butscher	Registration Number	48326
Title (if Applicant is a juristic entity)	Attorney for Applicant		
Applicant Name (if Applicant is a juristic entity)	Illinois Tool Works Inc.		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☐

*Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number

Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)



I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

151860

OR



I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:



The address associated with the above-mentioned Customer Number

OR



The address associated with Customer Number:

OR

Firm or
Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Illinois Tool Works Inc.



Inventor or Joint Inventor (title not required below)



Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)



Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)



Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature

Date (Optional)

Name

Ernest W. Torain, Jr.

Title

Illinois Tool Works Inc. - Deputy General Counsel - Intellectual Property

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of

forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		
First Named Inventor/Applicant Name:		Derek Scroggie		
Filer:		Dean D. Small/Tricia Bates		
Attorney Docket Number:		61823-A (500-436US2)		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	300	300
UTILITY SEARCH FEE	1111	1	660	660
UTILITY EXAMINATION FEE	1311	1	760	760
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1720

Electronic Acknowledgement Receipt

EFS ID:	32711755
Application Number:	15987986
International Application Number:	
Confirmation Number:	1773
Title of Invention:	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL
First Named Inventor/Applicant Name:	Derek Scroggie
Customer Number:	151860
Filer:	Dean D. Small/Tricia Bates
Filer Authorized By:	Dean D. Small
Attorney Docket Number:	61823-A (500-436US2)
Receipt Date:	24-MAY-2018
Filing Date:	
Time Stamp:	09:45:56
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 1720
RAM confirmation Number	052418INTEFSW09470600
Deposit Account	503858
Authorized User	Dean Small

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)
37 CFR 1.20 (Post Issuance fees)
37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	61823-A-ADS-24MAY2018.pdf	1823356	no	9
			1659fec4b290a5c725e252c096066bb83c737b62		
Warnings:					
Information:					
2		61823-A-Continuation-Application-24MAY2018.pdf	1025144	yes	16
			6fc2be6d6823fe80f9f6667153324650715a716a		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Abstract		16	16	
	Claims		12	15	
	Specification		1	11	
Warnings:					
Information:					
3	Drawings-only black and white line drawings	61823-A-Formal-Drawings-24MAY2018.pdf	96022	no	4
			831eccd60aaf8300e10463998b8b81e29f006660		
Warnings:					
Information:					
4	Oath or Declaration filed	61823-A-Declaration-24MAY2018.pdf	264383	no	3
			09561e6ce1da7a78498341c186577a59adbce04a9		
Warnings:					
Information:					
5	Information Disclosure Statement (IDS) Form (SB08)	61823-A-IDS-24MAY2018.pdf	1035427	no	6
			68438599d7fe73239c7cbafd2786ed03434dcd6f		

Warnings:					
Information:					
6	Miscellaneous Incoming Letter	61823-A-373-Statement-24MAY2018.pdf	118232	no	3
			dd2fbf78b3ef755ccc75553970a59ec641a845cb		
Warnings:					
Information:					
7	Power of Attorney	61823-A-POA-24MAY2018.pdf	538541	no	2
			750105a4e4af36e32359b52d2f6889dd983724dd		
Warnings:					
Information:					
8	Fee Worksheet (SB06)	fee-info.pdf	35142	no	2
			6925a492a3831dee30abd4fc5ff06ffa5f0baa96		
Warnings:					
Information:					
Total Files Size (in bytes):			4936247		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	61823-A (500-436US2)
		Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
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Inventor Information:

Inventor	1				Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Derek		Scroggie		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Macomb	State/Province	MI	Country of Residence	US

Mailing Address of Inventor:

Address 1	c/o: Illinois Tool Works Inc.				
Address 2	155 Harlem Avenue				
City	Glenview	State/Province	IL		
Postal Code	60025	Country	US		

Inventor	2				Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Michelle	E.	Bozinovski		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Oakland Charter Township	State/Province	MI	Country of Residence	US

Mailing Address of Inventor:

Address 1	c/o: Illinois Tool Works Inc.				
Address 2	155 Harlem Avenue				
City	Glenview	State/Province	IL		
Postal Code	60025	Country	US		

Inventor	3				Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Robert	A.	Murawski		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	61823-A (500-436US2)
		Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		

City	Clinton Township	State/Province	MI	Country of Residence	US
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Mailing Address of Inventor:

Address 1	c/o: Illinois Tool Works Inc.				
Address 2	155 Harlem Avenue				
City	Glenview	State/Province	IL		
Postal Code	60025	Country	US		

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button.

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ An Address is being provided for the correspondence information of this application.

Customer Number	151860		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		
Attorney Docket Number	61823-A (500-436US2)	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	4	Suggested Figure for Publication (if any)	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	61823-A (500-436US2)
		Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	151860		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	14652819	2017-06-17
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
14652819	a 371 of international	PCT/US2013/073861	2013-12-09
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
PCT/US2013/073861	Claims benefit of provisional	61739604	2012-12-19
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			Add

Foreign Priority Information:

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	61823-A (500-436US2)
		Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	61823-A (500-436US2)
	Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	61823-A (500-436US2)
		Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant	1	Remove
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section. Clear		
☒ Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.		Person who shows sufficient proprietary interest
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:		
Name of the Deceased or Legally Incapacitated Inventor:		
If the Applicant is an Organization check here. ☒		
Organization Name	Illinois Tool Works Inc.	
Mailing Address Information For Applicant:		
Address 1	155 Harlem Avenue	
Address 2		
City	Glenview	State/Province IL
Country	US	Postal Code 60025
Phone Number		Fax Number
Email Address		
Additional Applicant Data may be generated within this form by selecting the Add button. Add		

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	61823-A (500-436US2)
		Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		

Assignee	1		
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.			
Remove			
If the Assignee or Non-Applicant Assignee is an Organization check here. ☒			
Organization Name	Illinois Tool Works Inc.		
Mailing Address Information For Assignee including Non-Applicant Assignee:			
Address 1	155 Harlem Ave.		
Address 2			
City	Glenview	State/Province	IL
Country i	US	Postal Code	60025
Phone Number		Fax Number	
Email Address			
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add			

Signature:[Remove](#)

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the **INITIAL** filing of the application and either box A or B is **not** checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Joseph M. Butscher/		Date (YYYY-MM-DD)	2018-05-24
First Name	Joseph M.	Last Name	Butscher	Registration Number
				48326
Additional Signature may be generated within this form by selecting the Add button. Add				

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	61823-A (500-436US2)
		Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- 1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
- 2 A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4 A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5 A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6 A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7 A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8 A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
- 9 A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ABSTRACT OF THE DISCLOSURE

A connection assembly adapted to join a surface element to an underlying support structure while maintaining a substantially zero gap abutting relation between the surface element and the support structure. The connection assembly includes a press-in retainer with a circumferential seal having a sealing foot. The sealing foot flexes about a living hinge while maintaining continuous sliding contact with the support panel without interfering with downward movement of the retainer.

What is claimed is:

1. A connection assembly configured to join a surface element to an underlying support structure, the connection assembly comprising:

a press-in retainer configured for insertion into an acceptance opening in the support structure, the retainer including a retainer head and a clip portion projecting from the retainer head, wherein the retainer head includes a first platform and a second platform defining a collar spaced from the first platform, wherein the clip portion comprises a central support extending from the collar and a pair of flexible wings extending in an angled relation away from the central support, the retainer further including a seal disposed at least partially about the collar, the seal having a durometer lower than a durometer of the collar and the seal including a body portion engaging the collar and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from collar and a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the collar, and wherein the sealing foot is configured to flex about a living hinge while remaining outboard from the collar and maintain sliding contact with the support structure in response to applied pressure between the seal and the support structure during use.

2. The connection assembly as recited in Claim 1, wherein the retainer head and the clip portion are molded as a unitary structure.

3. The connection assembly as recited in Claim 1, wherein the collar is oriented substantially perpendicular to an axis defined by the central support and has a stepped construction including an interior portion and a reduced thickness outer annular lip with a step between the interior portion and the outer annular lip.

4. The connection assembly as recited in Claim 3, wherein the seal is formed by over-molding or two-shot molding in fused, overlying relation about the outer annular lip of the lower collar.

5. The connection assembly as recited in Claim 3, wherein the retainer head and the clip portion are molded as a unitary structure from Nylon 6, Nylon 6.6, or acetal resin.

6. The connection assembly as recited in Claim 3, wherein the seal is molded from a thermoplastic elastomer.

7. The connection assembly as recited in Claim 3, wherein the retainer head and the clip portion are molded as a unitary structure from acetal resin, and wherein the seal is molded from a thermoplastic elastomer.

8. The connection assembly as recited in Claim 1, wherein each of the flexible has a dog-leg configuration including a radially inwardly angled segment defining an angled biasing surface disposed between a radially outwardly angled segment and a free end, the angled biasing surface being configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.

9. The connection assembly as recited in Claim 1, wherein the retainer head includes a connective neck structure extending between the first platform and the collar, and wherein the neck structure is adapted to slidingly engage an intermediate doghouse connector operatively joined to the surface element.

10. The connection assembly as recited in Claim 1, wherein the central support is a central stem.

11. A connection assembly comprising:

a press-in retainer including a retainer head and a clip portion projecting from the retainer head, wherein the retainer head includes a first platform and a second platform defining a collar spaced from the first platform, wherein the clip portion comprises a central support extending from the collar and a pair of flexible wings, the retainer further including a seal disposed at least partially about the collar, the seal having a durometer lower than a durometer of the collar and the seal including a body portion engaging the collar and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the collar and a first

surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the collar, and wherein the sealing foot is configured to flex about a living hinge while remaining outboard from the collar.

12. The connection assembly as recited in Claim 11, wherein the retainer head and the clip portion are molded as a unitary structure.

13. The connection assembly as recited in Claim 11, wherein the collar is oriented substantially perpendicular to an axis defined by the central support and has a stepped construction including an interior portion and a reduced thickness outer annular lip with a step between the interior portion and the outer annular lip.

14. The connection assembly as recited in Claim 13, wherein the seal is formed by over-molding or two-shot molding in fused, overlying relation about the outer annular lip of the lower collar.

15. The connection assembly as recited in Claim 13, wherein the retainer head and the clip portion are molded as a unitary structure from acetal resin, and wherein the seal is molded from a thermoplastic elastomer.

16. The connection assembly as recited in Claim 11, wherein each of the flexible has a dog-leg configuration including a radially inwardly angled segment defining an angled biasing surface disposed between a radially outwardly angled segment and a free end, the angled biasing surface being configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.

17. The connection assembly as recited in Claim 11, wherein the retainer head includes a connective neck structure extending between the first platform and the collar, and wherein the neck structure is adapted to slidably engage an intermediate doghouse connector operatively joined to the surface element.

18. The connection assembly as recited in Claim 11, wherein the central support is a central stem.

19. A connection assembly comprising:

a seal disposed at least partially about a collar, the seal having a durometer lower than a durometer of the collar and the seal including a body portion engaging the collar and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the collar and a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the collar.

20. The connection assembly as recited in Claim 19, wherein the sealing foot is configured to flex about a living hinge while remaining outboard from the collar.

PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of United States Patent Application No. 14/652,819 filed June 17, 2017, now United States Patent No. _____, which is a National Phase of International Application Number PCT/US2013/073861 filed December 9, 2013, which claims the benefit of, and priority from, United States Provisional Application No. 61/739,604 filed December 19, 2012, all of which are hereby incorporated by reference in their entireties.

TECHNICAL FIELD

[0002] The present disclosure relates generally to connection assemblies incorporating retainers which may also be referred to as fasteners. More particularly, this disclosure pertains to connections incorporating push-in type retainers having downward biasing wing features which secure the retainer in place after insertion through an aperture and with seals for creating a barrier to the penetration of moisture, dust and noise through the aperture in which the retainer is secured.

BACKGROUND

[0003] Push-in type W-base retainers are used in a variety of connection assemblies to secure components of the assembly. For example, in automobiles such stud-like retainers are used to secure molding or other surface structures to underlying support elements such as body panels, support beams or the like. Such retainers typically include a stem with deflectable wing elements for securing the retainer to the support elements when the stem portion supporting the deflectable wing elements is pushed through an aperture in the support element. Typically, a head attached to the stem is configured for attachment to a doghouse or other complementary receiving element on the underside of the surface structure. In this regard, the head may include an enhanced diameter upper platform radial collar feature and an enhanced diameter lower radial collar feature with a spacing post extending between the upper and lower radial collar features. Thus, the spacing post may slide into a doghouse or other receiving element as will be well

known to those of skill in the art and thereafter be blocked against axial withdrawal by the upper and lower radial collar features.

[0004] During use, as the stem is inserted into the aperture, the deflectable members may be compressed radially inwardly. The deflectable members then may spring outwardly as insertion is completed to lock behind the underside of the support element. Thus, with the head secured to the surface structure, the retainer forms a connection between the surface structure and the underlying support element.

[0005] W-base retainers are typically designed as a component of an overall assembly and work in conjunction with the other components with the goal of establishing and maintaining a “zero gap” condition between the sheet metal panel or other support element and the molding or other surface structure. To promote the desired “zero gap” condition, the W-base retainers typically provide a continuous pull down or clamp load condition. This constant pull down is intended to provide and maintain the desired “zero gap” condition between the support element and the molding or other surface structure. If this pull down force is compromised by a significant force acting in the opposite direction such that the molding or other surface structure does not seat against the sheet metal panel or other support element, an unacceptable gap condition may occur within the final assembled product. Such a gap condition may result in undesired rattling noise as well as in the introduction of dirt and water between the molding or other surface structure and the underlying support structure.

[0006] As much as is reasonably possible, it is generally desirable to limit the generation of squeaks, rattles and objectionable noises that may be created from movement of the retainer relative to the parts to which it is connected. By way of example only, and not limitation, various sealing arrangements for push through retainers are illustrated and described in US Patent 5,173,026 to Cordola et al. and US published application 2006/0099051 to Moerke, the contents of all of which are incorporated herein by reference in their entirety. To minimize corrosion, it is desirable also to prevent moisture from precipitation, carwashes, etc. from seeping past the retainer, and through the aperture in which the retainer is installed.

[0007] A variety of sealing structures have been used to minimize rattles and squeaks and to prevent moisture seepage past the retainer. Independent concave skirts such as described in US published application 2006/0099051 have been used in conjunction with push-in retainers at the base of the head to confront the body panel around the aperture in the panel. Elastomeric and foam seals also have been used to further improve sealing qualities against moisture penetration.

[0008] Although retainers as described incorporating concave skirts and/or seals have been used successfully to limit squeaks and rattles and to inhibit the penetration of moisture past the retainer, further improvements are desirable. Installing the seal as a separate part is cumbersome and awkward, complicating installation of the retainer. If installed on the retainer in advance, the seal can become dislodged, even if properly placed on the retainer. In automated assembly plants, a retainer missing a seal may not be detected and may be installed on the article in which it is used inadvertently. A loose retainer of this type will rattle or squeak, may provide a path for the penetration of moisture and may not adequately secure the second article or item as required. If the seal is adhered to the skirt of the retainer, the seal may not function optimally if the retainer is not seated squarely in the panel. Further, the position of the seal relative to the retainer skirt has limited the range of panel thicknesses with which the retainer can be used effectively to provide a seal against moisture intrusion.

[0009] As will be understood by those of skill in the art, a seal which is held between the retainer head and the support panel may experience a build, stack up condition as compression force is applied which results in a counteracting upward force being applied against the head which may partially offset the pull-down force provided by the deflectable wings. In some cases, the presence of seal elements which are compressed between the retainer head and the support panel may block the lower collar feature of the retainer from getting close enough to the underlying sheet metal panel to establish the desired "zero gap" condition between the sheet metal panel and the overlying molding or other surface structure. That is, the compressed seal in stack-up condition may act in the manner of a spacing shim holding the retainer head further away than intended from the sheet metal panel or other underlying support element. With the retainer head in this elevated condition, the attached molding or other surface element will likewise be held away from the panel or other support element and a gap condition may result.

SUMMARY

[0010] The present disclosure provides advantages and alternatives over the prior art by providing a connection assembly including a push-in type retainer having a functional sealing feature that does not experience a build, stack up condition that may reduce the clamp load force. Thus, the retainer is not blocked from assuming its designed orientation relative to the sheet metal panel or other underlying support element. A “zero gap” condition is thereby established and maintained between the sheet metal panel or other underlying support element and the mating molding substrate or other surface element.

[0011] In accordance with one exemplary feature, the present disclosure provides a connection assembly adapted to join a surface element such as molding or the like to an underlying support structure such as a sheet metal panel or the like while maintaining a substantially zero gap abutting relation between the surface element and the support structure during use. The connection assembly includes a press-in retainer adapted for insertion into an acceptance opening in the support structure to establish operative connecting engagement between the surface element and the support structure. The retainer includes a retainer head and a clip portion of arrowhead configuration projecting outwardly away from the retainer head. The retainer head includes an upper platform and an annular platform defining a lower collar positioned in spaced relation below the upper platform. The clip portion includes a central stem extending downwardly away from the lower collar and a pair of flexible wings extending in upward angled relation away from a central stem. The retainer further includes a seal disposed at least partially about the lower collar. The seal includes a body portion engaging the lower collar and a sealing foot projecting downwardly and radially outwardly away from the body portion to a free edge such that the sealing foot is disposed outboard from the lower collar. The underside of the sealing foot forms an obtuse angle relative to the underside of the lower collar. The sealing foot flexes about a living hinge while remaining outboard from the lower collar and maintains continuous sliding contact with the support panel in response to applied pressure between the seal and the support panel during use.

[0012] Other features and advantages of the present disclosure will become apparent from a description of certain preferred embodiments thereof which are shown in the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] FIG. 1 is an exploded perspective view illustrating an exemplary sealing retainer in accordance with the present disclosure with the seal separated from the retainer body;

[0014] FIG. 2 is an elevation perspective view illustrating an exemplary sealing retainer in accordance with the present disclosure engaging trim molding prior to insertion through a sheet metal support panel;

[0015] FIG. 3 is a cross-sectional view illustrating an exemplary sealing retainer in accordance with the present disclosure in normal operative connecting relation between a doghouse surface connector and an underlying support panel with wing elements in the inserted self-adjusting downward biasing condition;

[0016] FIG. 4 is a cross-sectional view illustrating an exemplary sealing retainer in accordance with the present disclosure engaging trim molding prior to insertion through a sheet metal support panel and with the seal in an unstressed condition; and

[0017] FIG. 5 is a cross-sectional view illustrating an exemplary sealing retainer in accordance with the present disclosure engaging trim molding after full insertion through a sheet metal support panel with a retained “zero gap” condition between the trim molding and the support panel and illustrating the compression action of the seal in an extreme insertion condition.

[0018] Before the embodiments of the disclosure are explained in detail, it is to be understood that the disclosure is not limited in its application to the details of construction and the arrangements of the components set forth in the following description or illustrated in the drawings. The disclosure is capable of other embodiments and of being practiced or being

carried out in various ways. Also, it is understood that the phraseology and terminology used herein are for the purpose of description and should not be regarded as limiting. The use herein of "including", "comprising" and variations thereof is meant to encompass the items listed thereafter and equivalents thereof, as well as additional items and equivalents thereof.

DETAILED DESCRIPTION

[0019] Referring now more specifically to the drawings, and to FIGS. 1 and 2 in particular, it may be seen that the present disclosure provides a retainer 10 adapted to secure a molding 12 or other surface element to a sheet metal support panel 14 or other underlying support element of metal or the like. As shown, in the illustrated exemplary construction, the retainer 10 includes a retainer head 16 and a snap engaging clip portion 18. As will be appreciated, the retainer head 16 and the clip portion 18 may be formed as a monolithic unitary body by injection molding or other suitable molding or fabrication process. The material for retainer 10 can be selected as optimally desirable for its particular installation and use. Accordingly, the retainer 10 may be formed of suitable plastic, such as Nylon, polypropylene, acetal resin and the like as will be well known to those of skill in the art. Acetal resin and Nylon 6.6 may be preferred in some environments of use. Of course, other polymeric and non-polymeric materials including metal and the like and combinations of various polymeric materials also may be used if desired. Likewise, it should be understood that the particular configurations for the retainer head 16 and for the clip portion 18 may be varied in a manner as may be desired for a particular installation.

[0020] By way of example only, and not limitation, in the illustrated exemplary construction for the retainer 10, the retainer head 16 is adapted for sliding receipt and retention within an intermediate connector 20 (FIG. 2) such as a dog house connector or the like disposed in hidden relation at the underside of the molding 12. In this regard, the intermediate connector 20 may be formed integral with the molding 12 as shown or may be a separate attached structure as may be desired.

[0021] As shown, in the illustrated exemplary construction, the retainer head 16 includes a table-like upper platform 22 disposed in opposing relation to a lower collar 24 of substantially

rigid, annular construction. In this regard, while the upper platform 22 is illustrated as having a generally rectangular configuration, it is likewise contemplated that other polygonal or circular geometries may be used if desired. As shown, the lower collar 24 may be in substantially perpendicular non-angled orientation to the travel path of the retainer and may include an interior collar portion 26 and a reduced thickness outer annular lip 28 disposed circumferentially about the interior collar portion such that a step 30 is disposed at the intersection of the interior collar portion 26 and the outer annular lip 28. A neck structure 32 in the form of a reduced diameter post extends between the upper platform 22 and the lower collar 24. As will be understood, the effective outer diameters defined by the upper platform 22 and by the lower collar 24 are preferably greater than the effective outer diameter defined by the neck structure 32.

[0022] In operation, the retainer 10 may be operatively secured to the intermediate connector 20 by sliding the neck structure 32 into a slot in the intermediate connector 20 in a manner as will be well known to those of skill in the art. The intermediate connector may, in turn, be attached to the overlying molding 12 or other surface element. Likewise, the retainer head 16 may be connected directly to an overlying component by techniques such as tape, adhesive bonding, mechanical joining or the like if desired.

[0023] As indicated previously, the retainer 10 further includes a clip portion designated generally as 18 extending away from the underside of the lower collar 24. In the illustrated exemplary construction, the clip portion 18 includes a stem 34 projecting away from the lower collar 24 such that the lower collar is oriented substantially perpendicular to an axis defined by the stem. As illustrated, wing elements 36 extend upwardly in angled relation away from the end of the stem 34. The wing elements 36 are adapted to flex inwardly towards the stem 34 during insertion through an acceptance opening 38 in the support panel 14. As best seen through joint reference to FIGS. 1 and 3, in the illustrated exemplary construction each of the wing elements 36 incorporates an outer face having a dogleg configuration facing generally outwardly away from the stem 34. In this regard, in the illustrated construction, the outer face of each wing element 36 includes a proximal face surface 42 extending in angled relation away from the axis defined by the stem 34. A distal face surface 44 extends away from the proximal face surface in angled relation back towards the axis defined by the stem 34 ultimately terminating at the free tip

of the wing element thereby establishing the outer surface dogleg profile. As shown, the free tips of the wing elements are at an elevation below the lower collar 24.

[0024] As best seen through joint reference to FIGS. 1-3, a monolithic perimeter seal 50 of flexible polymeric material is disposed about the perimeter of the lower collar 24 generally at the intersection between the retainer head 16 and the clip portion 18. As best seen in FIG 3, the inner diameter of the perimeter seal 50 may substantially cover the outer annular lip 28 of the lower collar 24 and may abut the step 30. The perimeter seal 50 may be formed from commercially available moldable materials such as thermoplastic elastomers including, by way of example only, polyolefins, PVC, silicone rubber, PTFE, polyvinylidene fluoride (PVDF), fluorinated ethylene propylene (FEP) and blends thereof. Such materials will preferably be of lower durometer (i.e. are less rigid) than the material forming the retainer head and may be characterized by a useful operating temperature range of about -75 °C to about 175 °C. In accordance with one exemplary construction, the perimeter seal 50 may be formed by over-molding or two-shot molding processes such that during molding the flexible material forming the perimeter seal 50 is integrally fused with the more rigid acetal resin or other material forming the lower collar 24. It is also contemplated that the perimeter seal 50 may be formed separately with a circumferential acceptance slot around the interior for receipt and retention of the annular lip 28 in a stretch-fit relation if desired. In any event, the seal 50 defines a relatively soft, deformable covering at the perimeter edge of the lower collar 24 adapted to provide a seal around the acceptance opening 38 in the support panel 14 during use without the need for any sealing structures oriented below the lower collar.

[0025] As best seen in FIG. 3, the perimeter seal 50 may be substantially annular and may include a main body portion 52 adapted to cover the outer annular lip 28 of the lower collar 24. A hingeable outwardly flared sealing foot 54 extends in angled relation downwardly and radially away from the main body portion 52. As shown, the sealing foot 54 is elongated and relatively thin in cross-section. In an unstressed condition (FIG. 4), the sealing foot 54 extends radially outboard from the main body portion 52 to a free edge such that the sealing foot is disposed entirely outboard from lower collar 24 and the underside of the sealing foot forms an obtuse

angle relative to the underside of the lower collar 24. As shown, no portion of the angled sealing foot 54 is in the zone below the lower collar 24.

[0026] When the sealing foot 54 is pressed against the support panel 14 during normal use, the sealing foot 54 readily flexes upwardly towards a flattened condition about a living hinge 56 substantially at the intersection with the body portion 52. This hinging takes place without confinement of the sealing foot between the support panel 14 and the lower collar 24 while continuously maintaining contacting engagement with the underlying support panel. Thus, the sealing foot 54 may flex from its unstressed condition (FIG. 4) to its fully flexed position (FIG. 5) without experiencing a stack-up condition of seal material between the support panel 14 and the lower collar 24. As the sealing foot 54 flexes during compression, the edge of the sealing foot 54 moves radially outwardly as the sealing foot 54 takes on a more flattened condition. As this flattening takes place, the sealing foot 54 moves out of the way of the travel path for the lower collar 24. This avoids any confinement and stack-up of seal material between the support panel 14 and the lower collar 24 while nonetheless maintaining a sealing condition relative to the support panel 14. Accordingly, the retainer head 16 and the attached molding 12 may be pulled downwardly to a position wherein the molding 12 and the underlying support panel form a substantially flush “zero gap” condition while maintaining a seal around the acceptance opening 38. In this regard, it will be understood that such a zero gap condition occurs when a contact surface 60 on the molding 12 assumes a contacting abutting relation with the underlying support panel 14. As will be appreciated, the elevation and contour of the contact surface 60 may be selected to provide this zero gap condition when the sealing foot 54 is in a flexed condition relative to the support panel 14 and with the lower collar 24 elevated relative to the support panel 14.

[0027] Referring now to FIGS. 2 and 3, it will be seen that in normal operation (FIG. 3), a portion of the sloped distal face surface 44 may be in contacting relationship with the inner perimeter surface of the acceptance opening 38. In the normal operating condition shown in FIG. 3, the retainer 10 is urged downwardly continuously as the flexed wing elements press outwardly against the perimeter surface of the acceptance opening 38. However, downward movement will be limited once the molding 12 comes into contact with the underlying support

panel 14 to establish a zero gap condition. Thus, in the condition shown by FIG. 3, a condition of static equilibrium is established when the molding 12 comes into contact with the underlying support panel 14. Since the retainer 10 is urged continuously downwardly due to the sloped distal face surface 44, the retainer will naturally assume and retain the level at which the molding 12 contacts the underlying support panel 14 and thereby blocks further downward movement.

As shown, in this equilibrium condition, the lower collar 24 remains slightly elevated relative to the support panel 14 and the sealing foot 54 of the perimeter seal 50 is hinged outwardly while maintaining a sealing relationship against the support panel 14. As can be seen, the sealing foot 54 is adapted to flex outwardly in a hinging action as the retainer moves downwardly without blocking further downward movement by the retainer 10.

[0028] As will be appreciated, the equilibrium position of the retainer 10 within the acceptance opening 38 is continuously self-adjusting as the relative positions of the molding 12 and the support panel 14 change during use as a result of vibration or other events. In this regard, the living hinge 56 urges the sealing foot 54 continuously against the underlying support panel 14 as the sealing foot 54 attempts to resume its normal unflexed condition (FIG. 4). Thus, the sealing relationship provided by the sealing foot 54 is maintained by sliding contact as the retainer 10 moves up and down and the sealing foot 54 moves radially in and out during equilibrium adjustment. That is, although the angle between the support panel 14 and the sealing foot 54 may change as the retainer 10 moves up and down, the sealing relation is maintained as the sealing foot 54 moves in sliding relation over the support panel. Moreover, since the sealing foot 54 is not confined between the lower collar 24 and the support panel 14, downward movement of the molding is unobstructed by the sealing element.

[0029] As best seen in FIG. 5, in the event of extreme insertion such that the tips of the wing elements wing elements 36 are within the acceptance opening, in the support panel 14, the sealing foot 54 may assume a substantially flattened condition against the underlying support panel 14 as the molding 12 establishes a “zero gap” condition with the support panel. Even in this extreme insertion condition, the sealing foot is not confined between the lower collar 24 and the support panel 14. Accordingly, no stack-up condition and resultant shim action is created. Thus, the molding 12 may continue to be pulled down to the desired “zero gap” condition over

the full range of operative engagement positions between the wing elements 36 and the support panel 14 with the sloped distal face surface 44 bearing against the support panel.

[0030] The ability to avoid a stack-up condition is promoted by maintaining the free space between the lower collar 24 and the underlying support panel during downward movement such that portions of the seal material do not collect in the free space in a manner which would limit downward movement. This free space below the lower collar is maintained even in the extreme insertion condition shown in FIG. 5. As shown, all portions of the sealing foot 54 are positioned radially outboard from the lower collar 24 and the free edge of the sealing foot 54 is adapted to slide radially outwardly away from the lower collar 24 and the main body portion 52 as the retainer head 16 moves downwardly and the sealing foot 54 hinges outwardly. Thus, the sealing foot 54 flattens by hinging outwardly about the living hinge 56 as it is pressed against an underlying support panel 14. Accordingly, the sealing foot 54 does not interfere with downward movement of the retainer head 16 and the molding 12 may be maintained in a “zero gap” condition with the underlying support panel 14.

[0031] While various spatial and directional terms, such as upper, horizontal, vertical, front and the like may be used to describe embodiments of the present invention, it is understood that such terms are merely used with respect to the orientations shown in the drawings. The orientations may be inverted, rotated, or otherwise changed, such that an upper portion is a lower portion, and vice versa, horizontal becomes vertical, and the like.

[0032] Of course, variations and modifications of the foregoing are within the scope of the present disclosure. It is to be understood that the disclosure disclosed and defined herein extends to all alternative combinations of two or more of the individual features mentioned or evident from the text and/or drawings. All of these different combinations constitute various alternative aspects of the present disclosure. The embodiments described herein explain the best modes known for practicing the disclosure and will enable others skilled in the art to utilize the disclosure. The claims are to be construed to include alternative embodiments to the extent permitted by the prior art.

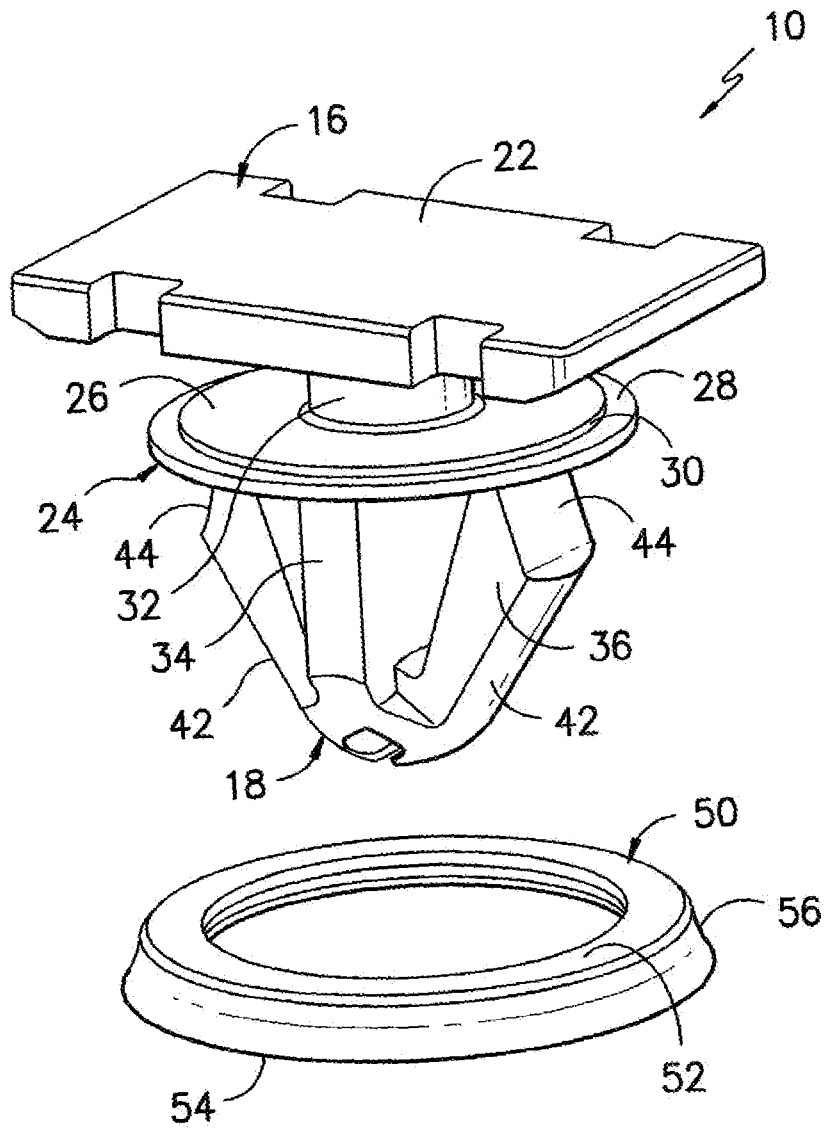


FIG. -1-

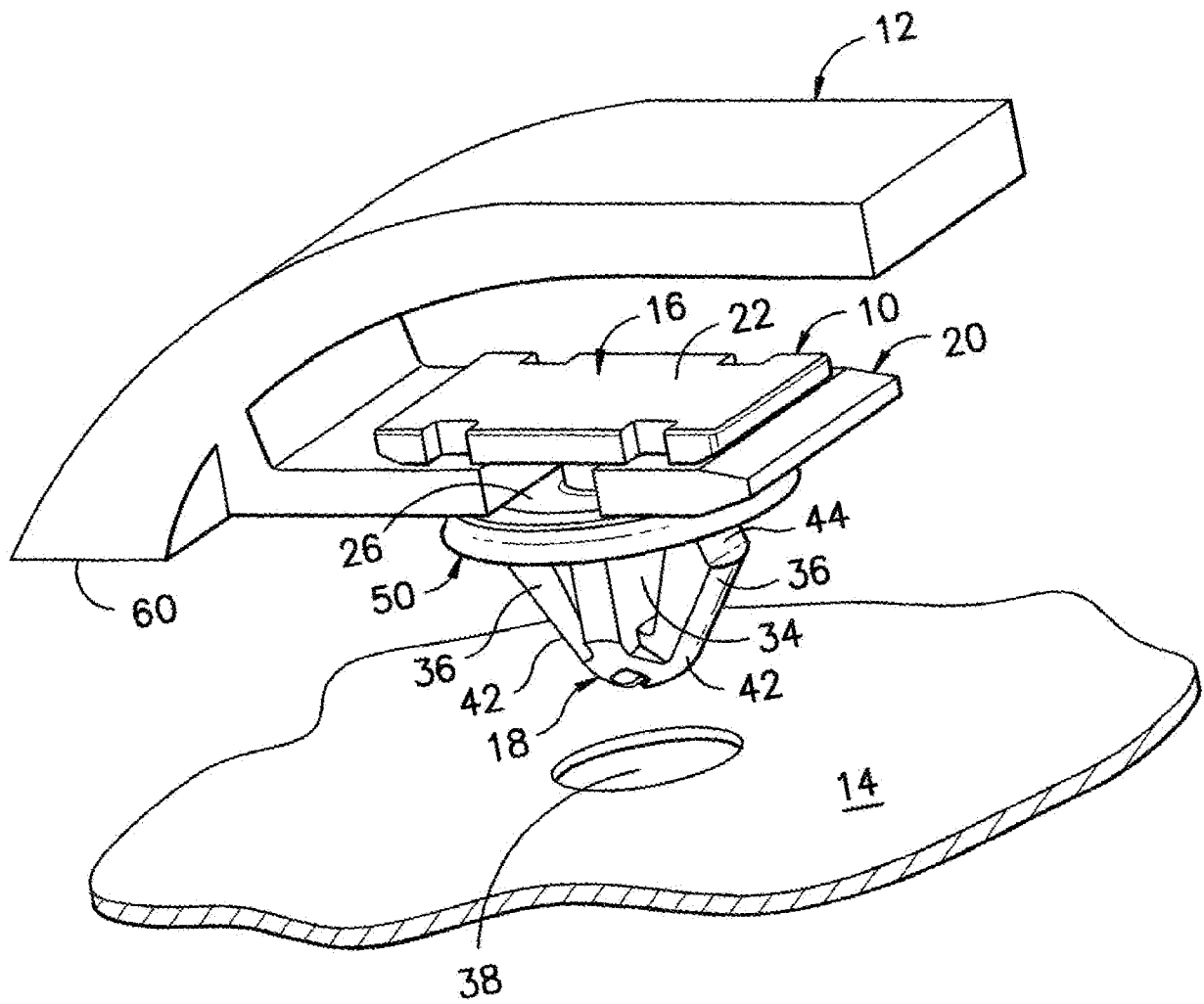


FIG. -2-

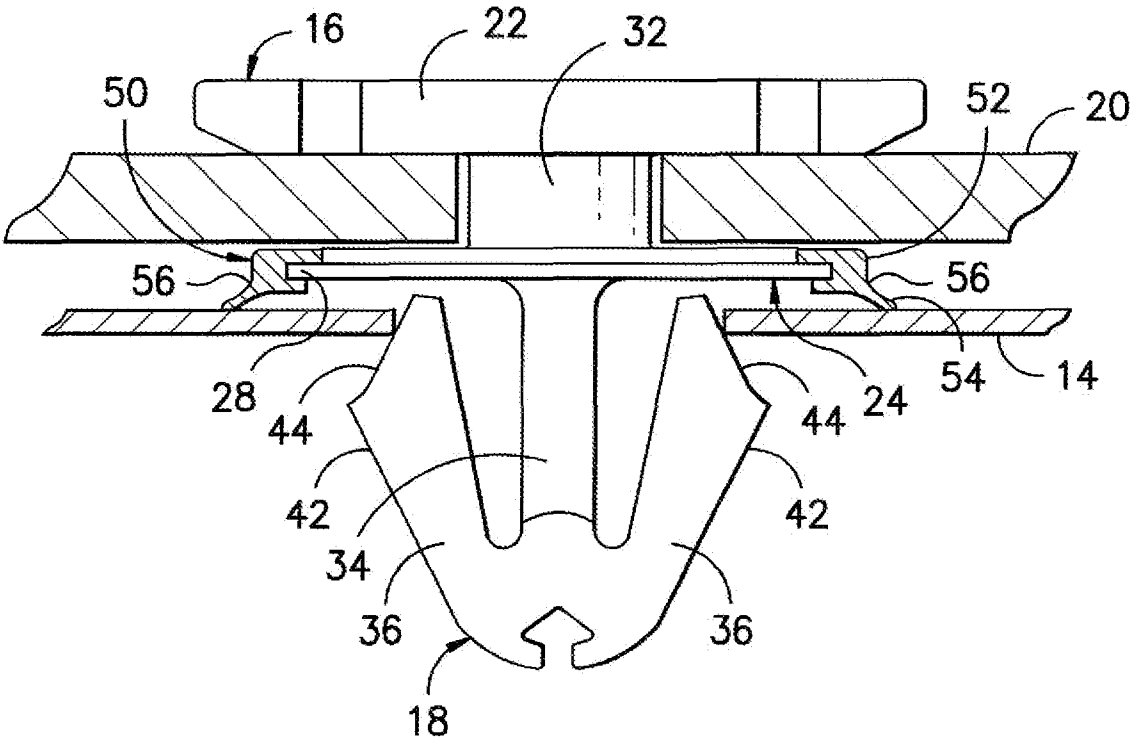


FIG. -3-

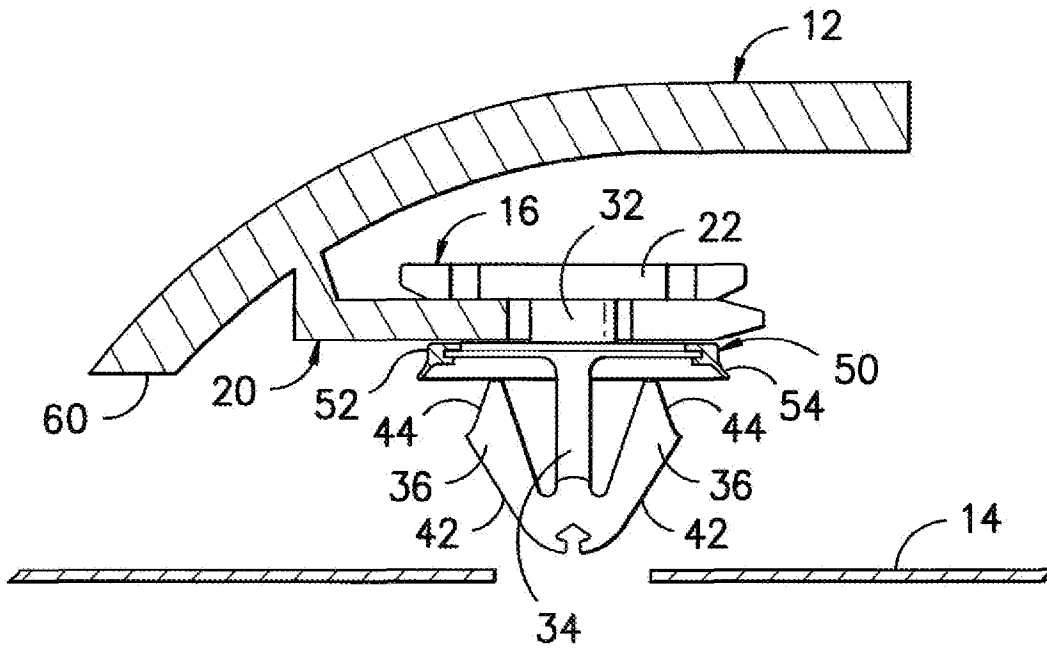


FIG. -4-

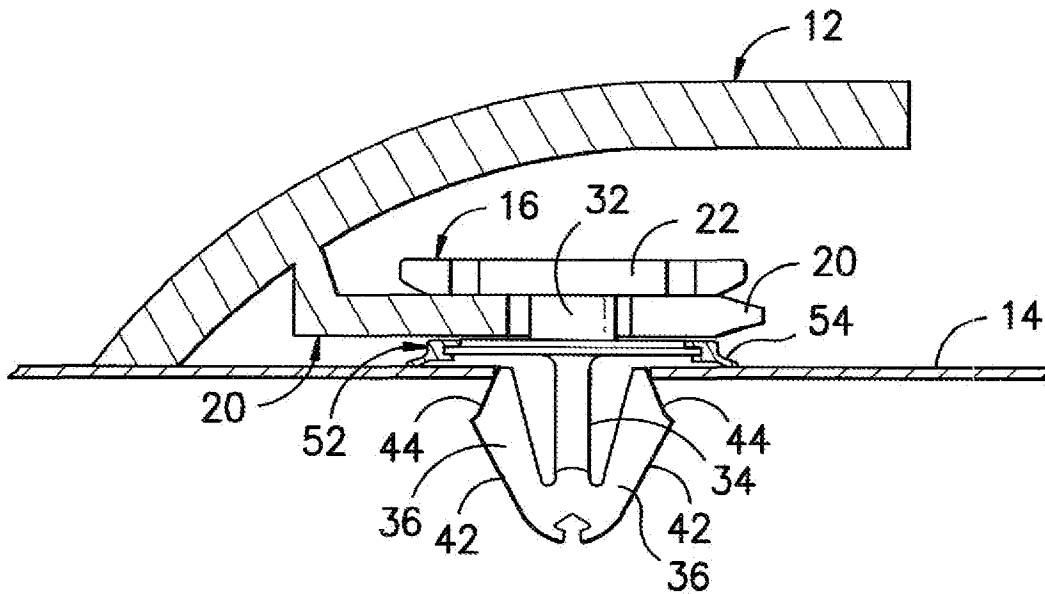


FIG. -5-

AIA Declaration**PATENT**

Named Inventor: Derek Scroggie

Attorney Docket No.: 61823

Title: PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL

DECLARATION (37 C.F.R. §1.63) FOR US UTILITY OR DESIGN APPLICATION

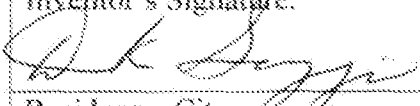
As the below named inventor, I hereby declare that:

This declaration is directed to either the attached application, or United States application or PCT international application or _____ application number - _____ filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than (5) years, or both.

Legal Name of Inventor: (e.g., Given name (First and middle or initial (if any) and Family Name or Surname))			
Derek Scroggie			
Inventor's Signature: 		Date: 11-26-13	Citizenship: US
Residence: City Macomb	State / Province / Territory MI	Country US	
Mailing address: C/O: Illinois Tool Works Inc., 3600 West Lake Avenue			
City Glenview	State Illinois	Zip 60026	Country USA

I execute this Declaration for application acknowledging that I have reviewed and understand the contents of the application, and I am aware of the duty to disclose to the Office all information known to me to be material to patentability as explained in 37 C.F.R. §1.56. I further acknowledge that I understand English.

Note - Whenever an individual making an oath or declaration cannot understand English, the oath or declaration must be in a language that such individual can understand and shall state that such individual understands the content of any documents to which the oath or declaration relates.

Named Inventor: Michelle E. Bozinovski

Attorney Docket No.: 61823

Title: PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL

DECLARATION (37 C.F.R. §1.63) FOR US UTILITY OR DESIGN APPLICATION

As the below named inventor, I hereby declare that:

This declaration is directed to either the attached application, or United States application or PCT international application or _____ application number _____ filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than (5) years, or both.

Legal Name of Inventor:			
(e.g., Given name (First and middle or initial (if any) and Family Name or Surname))			
Michelle E. Bozinovski			
Inventor's Signature: 		Date: 11-20-13	Citizenship: US
Residence: City	State / Province / Territory	Country	
Oakland Charter Township	MI	US	
Mailing address:			
C/O: Illinois Tool Works Inc., 3600 West Lake Avenue			
City	State	Zip	Country
Glenview	Illinois	60026	USA

I execute this Declaration for application acknowledging that I have reviewed and understand the contents of the application, and I am aware of the duty to disclose to the Office all information known to me to be material to patentability as explained in 37 C.F.R. §1.56. I further acknowledge that I understand English.

Note - Whenever an individual making an oath or declaration cannot understand English, the oath or declaration must be in a language that such individual can understand and shall state that such individual understands the content of any documents to which the oath or declaration relates.

Named Inventor: Robert A. Murawski

Attorney Docket No.: 61823

Title: PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL

DECLARATION (37 C.F.R. §1.63) FOR US UTILITY OR DESIGN APPLICATION

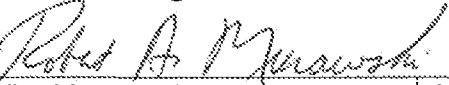
As the below named inventor, I hereby declare that:

This declaration is directed to either the attached application, or United States application or PCT international application or _____ application number _____ filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

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Legal Name of Inventor:			
(e.g., Given name (First and middle or initial (if any) and Family Name or Surname))			
Robert A. Murawski			
Inventor's Signature:		Date:	Citizenship:
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Residence: City	State / Province / Territory	Country	
Clinton Township	MI	US	
Mailing address:			
C/O: Illinois Tool Works Inc., 3600 West Lake Avenue			
City	State	Zip	Country
Glenview	Illinois	60026	USA

I execute this Declaration for application acknowledging that I have reviewed and understand the contents of the application, and I am aware of the duty to disclose to the Office all information known to me to be material to patentability as explained in 37 C.F.R. §1.56. I further acknowledge that I understand English.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
15/987,986	05/24/2018	3643	1720	61823-A (500-436US2)	20	3

CONFIRMATION NO. 1773

FILING RECEIPT



0000000100292309

151860
The Small Patent Law Group, LLC
225 S. Meramec Ave.
Suite 725
St. Louis, MO 63105

Date Mailed: 06/15/2018

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

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Assignment For Published Patent Application

Illinois Tool Works Inc., Glenview, IL

Power of Attorney: The patent practitioners associated with Customer Number 151860

Domestic Priority data as claimed by applicant

This application is a CON of 14/652,819 06/17/2015 PAT 9982694 *
which is a 371 of PCT/US2013/073861 12/09/2013
which claims benefit of 61/739,604 12/19/2012

(*)Data provided by applicant is not consistent with PTO records.

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 06/14/2018

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/987,986**

Projected Publication Date: 09/20/2018

Non-Publication Request: No

Early Publication Request: No
Title

PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL

Preliminary Class

043

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 15/987,986				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	300			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	660			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760			
TOTAL CLAIMS (37 CFR 1.16(j))	20	minus 20 = *			OR	x 100 =	0.00			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *				x 460 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s)) If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							0.00			
							0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00			
			TOTAL			TOTAL	1720			
* If the difference in column 1 is less than zero, enter "0" in column 2.										
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.										

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	61823-A (500-436US2)
		Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--------------------------	---

Inventor Information:

Inventor 1					Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Derek		Scroggie			
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service						
City	Macomb	State/Province	MI	Country of Residence	US	

Mailing Address of Inventor:

Address 1	c/o: Illinois Tool Works Inc.					
Address 2	155 Harlem Avenue					
City	Glenview	State/Province	IL			
Postal Code	60025	Country i	US			

Inventor 2					Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Michelle	E.	Bozinovski			
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service						
City	Oakland Charter Township	State/Province	MI	Country of Residence	US	

Mailing Address of Inventor:

Address 1	c/o: Illinois Tool Works Inc.					
Address 2	155 Harlem Avenue					
City	Glenview	State/Province	IL			
Postal Code	60025	Country i	US			

Inventor 3					Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Robert	A.	Murawski			
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service						

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	61823-A (500-436US2)	
		Application Number		
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL			

City	Clinton Township	State/Province	MI	Country of Residence	US
------	------------------	----------------	----	----------------------	----

Mailing Address of Inventor:

Address 1	c/o: Illinois Tool Works Inc.				
Address 2	155 Harlem Avenue				
City	Glenview	State/Province	IL		
Postal Code	60025	Country	US		
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.					

Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence Information of this application.			
Customer Number	151860		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		
Attorney Docket Number	61823-A (500-436US2)	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	4	Suggested Figure for Publication (if any)	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐ Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	61823-A (500-436US2)
		Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	151860		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	14652819	~~2017-06-17~~ 2015-06-17
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
14652819	a 371 of international	PCT/US2013/073861	2013-12-09
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
PCT/US2013/073861	Claims benefit of provisional	61739604	2012-12-19
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			

Foreign Priority Information:

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	61823-A (500-436US2)
		Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

		Remove	
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the Add button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. ☐ NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.
--

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	61823-A (500-436US2)
	Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	61823-A (500-436US2)
	Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.			
Applicant 1			
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.			
Clear			
☒ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor	
☐ Person to whom the inventor is obligated to assign.		☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
Name of the Deceased or Legally Incapacitated Inventor:			
If the Applicant is an Organization check here. ☒			
Organization Name	Illinois Tool Works Inc.		
Mailing Address Information For Applicant:			
Address 1	155 Harlem Avenue		
Address 2			
City	Glenview	State/Province	IL
Country	US	Postal Code	60025
Phone Number		Fax Number	
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button.			

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	61823-A (500-436US2)
		Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL		

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ☒

Organization Name Illinois Tool Works Inc.

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1		155 Harlem Ave.	
Address 2			
City	Glenview	State/Province	IL
Country ⁱ	US	Postal Code	60025
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).

This Application Data Sheet must be signed by a patent practitioner if one or more of the applicants is a juristic entity (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, all joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of all joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Joseph M. Butscher/		Date (YYYY-MM-DD)	2018-05-24
First Name	Joseph M.	Last Name	Butscher	Registration Number
48326				

Additional Signature may be generated within this form by selecting the Add button.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	61823-A (500-436US2)
	Application Number	
Title of Invention	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Electronic Patent Application Fee Transmittal

Application Number:	15987986			
Filing Date:	24-May-2018			
Title of Invention:	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL			
First Named Inventor/Applicant Name:	Derek Scroggie			
Filer:	Dean D. Small/Tricia Bates			
Attorney Docket Number:	61823-A (500-436US2)			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	1202	1	100	100
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				100

Electronic Acknowledgement Receipt

EFS ID:	33474671
Application Number:	15987986
International Application Number:	
Confirmation Number:	1773
Title of Invention:	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL
First Named Inventor/Applicant Name:	Derek Scroggie
Customer Number:	151860
Filer:	Dean D. Small/Tricia Bates
Filer Authorized By:	Dean D. Small
Attorney Docket Number:	61823-A (500-436US2)
Receipt Date:	21-AUG-2018
Filing Date:	24-MAY-2018
Time Stamp:	07:39:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 100
RAM confirmation Number	082118INTEFSW07403500
Deposit Account	503858
Authorized User	Dean Small

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)
37 CFR 1.20 (Post Issuance fees)
37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Preliminary Amendment	61823-A-Preliminary-Amendment-21AUG2018.pdf	307146	no	8
			072c1e51eaa0d66203d5656adf30fcb8b57a0fe2		

Warnings:

Information:

2	Application Data Sheet	61823-A-Revised-ADS-16AUG2018.pdf	541610	no	8
			9cd6d39df701475fef5e9bf0fd39fcf06d7aaecf		

Warnings:

Information:

This is not an USPTO supplied ADS fillable form

3	Fee Worksheet (SB06)	fee-info.pdf	30560	no	2
			bfe0923af116bd930e294ae9cb11fd7c7eb41ed6		

Warnings:

Information:

Total Files Size (in bytes):	879316
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Scroggie	:
	: Art Unit: 3643
App. No.: 15/987,986	:
	: Examiner: To be assigned
	:
Filed: May 24, 2018	: Confirmation No. To be assigned
	:
For: PUSH THROUGH RETAINER	: Electronically Filed on
CONNECTION WITH INTEGRATED	: August 20, 2018
HINGING SEAL	:
	:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL

1. Transmitted herewith is:

Amendment Transmittal (1 pg.)
Preliminary Amendment (7 pages)
Revised ADS (8 pages)

2. The Commissioner is also authorized to charge the Firm Credit Card in the amount of \$100.00 for ONE (1) additional claim. If any underpayment of necessary fees, the Commissioner is authorized to charge Deposit Account No. 50-3858.

Date: August 21, 2018

/Joseph M. Butscher/
Joseph M. Butscher, Reg. No. 48326
The Small Patent Law Group LLC
225 S. Meramec, Ste. 725
St. Louis, MO 63105
314/584.4083

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No. 61823-A

Inventor: Scroggie	:
	: Art Unit: 3643
App. No.: 15/987,986	:
	: Examiner: To be assigned
	:
Filed: May 24, 2018	: Confirmation No. To be assigned
	:
For: PUSH THROUGH RETAINER	: Electronically Filed on
CONNECTION WITH INTEGRATED	: August 21, 2018
HINGING SEAL	:
	:

PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Prior to examination, please amend the present application as follows:

THE SPECIFICATION

At ¶ [0001]:

This application is a continuation of United States Patent Application No. 14/652,819 filed June 17, 2015 [[2017]], now United States Patent No. 9,982,694, [[_____]] which is a National Phase of International Application Number PCT/US2013/073861 filed December 9, 2013, which claims the benefit of, and priority from, United States Provisional Application No. 61/739,604 filed December 19, 2012, all of which are hereby incorporated by reference in their entireties.

THE CLAIMS

1-20. (Canceled)

21.(New) A connection assembly configured to join a surface element to an underlying support structure, the connection assembly comprising:

a press-in retainer configured for insertion into an acceptance opening in the support structure, the retainer including a retainer head and a clip portion projecting from the retainer head, wherein the retainer head includes a first platform and a second platform spaced from the first platform, the retainer further including a seal disposed at least partially about the second platform, the seal having a durometer lower than a durometer of the collar and the seal including a body portion engaging the second platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the second platform and a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the second platform, and wherein the sealing foot is configured to flex about a living hinge while remaining outboard from the second platform and maintain sliding contact with the support structure in response to applied pressure between the seal and the support structure during use.

22.(New) The connection assembly as recited in Claim 21, wherein the retainer head and the clip portion are molded as a unitary structure.

23. (New) The connection assembly as recited in Claim 21, wherein the clip portion comprises a central support extending from the second platform and the second platform is oriented substantially perpendicular to an axis defined by the central support and has a stepped construction including an interior portion and a reduced thickness outer lip with a step between the interior portion and the outer lip.

24. (New) The connection assembly as recited in Claim 23, wherein the seal is formed by over-molding or two-shot molding in fused, overlying relation about the outer lip of the second platform.

25. (New) The connection assembly as recited in Claim 23, wherein the retainer head and the clip portion are molded as a unitary structure from Nylon 6, Nylon 6.6, or acetal resin.

26. (New) The connection assembly as recited in Claim 23, wherein the seal is molded from a thermoplastic elastomer.

27. (New) The connection assembly as recited in Claim 23, wherein the retainer head and the clip portion are molded as a unitary structure from acetal resin, and wherein the seal is molded from a thermoplastic elastomer.

28. (New) The connection assembly as recited in Claim 21, wherein the clip portion comprises a pair of flexible wings extending in an angled relation away from a central support and each of the flexible wings has a dog-leg configuration including a radially inwardly angled segment defining an angled biasing surface disposed between a radially outwardly angled segment and a free end, the angled biasing surface being configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.

29. (New) The connection assembly as recited in Claim 21, wherein the retainer head includes a connective neck structure extending between the first platform and the second platform, and wherein the neck structure is adapted to slidingly engage an intermediate doghouse connector operatively joined to the surface element.

30. (New) The connection assembly as recited in Claim 21, wherein the second platform is annular.

31. (New) A connection assembly comprising:

a press-in retainer including a retainer head and a clip portion projecting from the retainer head, wherein the retainer head includes a first platform and a second platform spaced from the first platform, the retainer further including a seal disposed at least partially about the second platform, the seal having a durometer lower than a durometer of the second platform and the seal including a body portion engaging the second platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the second platform and a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the second platform, and wherein the sealing foot is configured to flex about a living hinge while remaining outboard from the second platform.

32. (New) The connection assembly as recited in Claim 31, wherein the retainer head and the clip portion are molded as a unitary structure.

33. (New) The connection assembly as recited in Claim 31, wherein the clip portion comprises a central support extending from the second platform and the second platform is oriented substantially perpendicular to an axis defined by the central support and has a stepped construction including an interior portion and a reduced thickness outer lip with a step between the interior portion and the outer lip.

34. (New) The connection assembly as recited in Claim 33, wherein the seal is formed by over-molding or two-shot molding in fused, overlying relation about the outer lip of second platform.

35. (New) The connection assembly as recited in Claim 33, wherein the retainer head and the clip portion are molded as a unitary structure from acetal resin, and wherein the seal is molded from a thermoplastic elastomer.

36. (New) The connection assembly as recited in Claim 31, wherein the clip portion comprises a pair of flexible wings extending in an angled relation away from a central support and each of the flexible wings has a dog-leg configuration including a radially inwardly angled segment defining an angled biasing surface disposed between a radially outwardly angled segment and a free end, the angled biasing surface being configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.

37. (New) The connection assembly as recited in Claim 31, wherein the retainer head includes a connective neck structure extending between the first platform and the second platform, and wherein the neck structure is adapted to slidingly engage an intermediate doghouse connector operatively joined to the surface element.

38. (New) The connection assembly as recited in Claim 31, wherein the second platform is annular.

39. (New) A connection assembly comprising:
a seal disposed at least partially about a platform, the seal having a durometer lower than a durometer of the platform and the seal including a body portion engaging the platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the platform and a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the platform.

40. (New) The connection assembly as recited in Claim 39, wherein the sealing foot is configured to flex about a living hinge while remaining outboard from the platform.

41. (New) The connection assembly as recited in Claim 39, wherein the platform is annular.

REMARKS

The present application included claims 1-20. The specification has been amended to indicate that United States Patent Application No. 14/652,819 was filed June 17, 2015, and issue as United States Patent No. 9,982,694. Claims 1-20 have been canceled without prejudice or disclaimer. New claims 21-41 have been added.

The fee for the new claims is \$100 (1 additional pending claim in excess of 20, and 0 pending independent claims in excess of 3).

If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited to contact the undersigned attorney.

Date: August 21, 2018

Respectfully Submitted,

/Joseph M. Butscher/

Joseph M. Butscher

Reg. No 48,326

THE SMALL PATENT LAW GROUP, LLC

225 S. Meramec, Ste. 725

St. Louis, Missouri 63105

(314) 584-4083

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/987,986	Filing Date 05/24/2018	☐ To be Mailed
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ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	08/21/2018	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 21	Minus	** 20	= 1	X \$100 =	100
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	X \$460 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
TOTAL ADD'L FEE							100

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
TOTAL ADD'L FEE						

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SLIE
MARIDOL GARCIA JOY

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/987,986	05/24/2018	Derek Scroggie	61823-A (500-436US2)

CONFIRMATION NO. 1773

PUBLICATION NOTICE



OC000000102466886

151860
The Small Patent Law Group, LLC
225 S. Meramec Ave.
Suite 725
St. Louis, MO 63105

Title:PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL

Publication No.US-2018-0266460-A1

Publication Date:09/20/2018

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The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

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Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	15987986
	Filing Date	2018-05-24
	First Named Inventor	Scroggie
	Art Unit	3677
	Examiner Name	Delisle, Roberta S.
	Attorney Docket Number	61823-A

U.S.PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
	1	8561265		2013-10-22	Benedetti			
	2	8883059		2014-11-11	Lewis			
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		15987986
	Filing Date		2018-05-24
	First Named Inventor	Scroggie	
	Art Unit	3677	
	Examiner Name	Delisle, Roberta S.	
	Attorney Docket Number	61823-A	

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
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EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	15987986
Filing Date	2018-05-24
First Named Inventor	Scroggie
Art Unit	3677
Examiner Name	Delisle, Roberta S.
Attorney Docket Number	61823-A

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Joseph M. Butscher/	Date (YYYY-MM-DD)	2019-01-02
Name/Print	Joseph M. Butscher	Registration Number	48326

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	34739390
Application Number:	15987986
International Application Number:	
Confirmation Number:	1773
Title of Invention:	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL
First Named Inventor/Applicant Name:	Derek Scroggie
Customer Number:	151860
Filer:	Dean D. Small
Filer Authorized By:	
Attorney Docket Number:	61823-A (500-436US2)
Receipt Date:	02-JAN-2019
Filing Date:	24-MAY-2018
Time Stamp:	15:31:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	61823-A-Supplemental-IDS-01022018.pdf	1034503 e19df128fe7f4c7a80d0fa4412e7411bcca38927	no	4

Warnings:

Information:	
Total Files Size (in bytes):	1034503
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	

Electronic Acknowledgement Receipt

EFS ID:	34980057
Application Number:	15987986
International Application Number:	
Confirmation Number:	1773
Title of Invention:	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL
First Named Inventor/Applicant Name:	Derek Scroggie
Customer Number:	151860
Filer:	Dean D. Small
Filer Authorized By:	
Attorney Docket Number:	61823-A (500-436US2)
Receipt Date:	28-JAN-2019
Filing Date:	24-MAY-2018
Time Stamp:	15:46:13
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Preliminary Amendment	61823-A-Second-Preliminary-Amendment-28JAN2019.pdf	414917	no	7
			70ee3ef41e8d5d5a88c14b2d39c1d4480824b4cc		

Warnings:

Information:	
Total Files Size (in bytes):	414917
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No. 61823-A

Inventor: Scroggie	:	
	:	Art Unit: 3643
App. No.: 15/987,986	:	
	:	Examiner: To be assigned
	:	
Filed: May 24, 2018	:	Confirmation No. To be assigned
	:	
For: PUSH THROUGH RETAINER	:	Electronically Filed on
CONNECTION WITH INTEGRATED	:	January 28, 2019
HINGING SEAL	:	
	:	

SECOND PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Prior to examination, please amend the present application as follows:

THE CLAIMS

1-20. (Canceled)

21. (Currently Amended) A connection assembly configured to join a surface element to an underlying support structure while maintaining a substantially zero gap, abutting relation between the surface element and the support structure, the connection assembly comprising:

a press-in retainer configured for insertion into an acceptance opening in the support structure, the retainer including a retainer head and a clip portion projecting from the retainer head, wherein the retainer head includes a first platform and a second platform spaced from the first platform, the retainer further including a seal disposed at least partially about the second platform, the seal having a durometer lower than a durometer of the collar and the seal including a body portion engaging the second platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the second platform and a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the second platform, and wherein the press-in retainer is configured to be slid into a channel within the surface element, the retainer head is configured to be pushed into the acceptance opening in the support structure, and the sealing foot is configured to flex about a living hinge while remaining outboard from the second platform and maintain sliding contact with the support structure in response to applied pressure between the seal and the support structure during use in order to create the substantially zero gap between the surface element and the support structure.

22. (Previously Presented) The connection assembly as recited in Claim 21, wherein the retainer head and the clip portion are molded as a unitary structure.

23. (Previously Presented) The connection assembly as recited in Claim 21, wherein the clip portion comprises a central support extending from the second platform and the second platform is oriented substantially perpendicular to an axis defined by the central support and has a stepped construction including an interior portion and a reduced thickness outer lip with a step between the interior portion and the outer lip.

24. (Previously Presented) The connection assembly as recited in Claim 23, wherein the seal is formed by over-molding or two-shot molding in fused, overlying relation about the outer lip of the second platform.

25. (Previously Presented) The connection assembly as recited in Claim 23, wherein the retainer head and the clip portion are molded as a unitary structure from Nylon 6, Nylon 6.6, or acetal resin.

26. (Previously Presented) The connection assembly as recited in Claim 23, wherein the seal is molded from a thermoplastic elastomer.

27. (Previously Presented) The connection assembly as recited in Claim 23, wherein the retainer head and the clip portion are molded as a unitary structure from acetal resin, and wherein the seal is molded from a thermoplastic elastomer.

28. (Previously Presented) The connection assembly as recited in Claim 21, wherein the clip portion comprises a pair of flexible wings extending in an angled relation away from a central support and each of the flexible wings has a dog-leg configuration including a radially inwardly angled segment defining an angled biasing surface disposed between a radially outwardly angled segment and a free end, the angled biasing surface being configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.

29. (Previously Presented) The connection assembly as recited in Claim 21, wherein the retainer head includes a connective neck structure extending between the first platform and the second platform, and wherein the neck structure is adapted to slidingly engage an intermediate doghouse connector operatively joined to the surface element.

30. (Previously Presented) The connection assembly as recited in Claim 21, wherein the second platform is annular.

31. (Currently Amended) A connection assembly comprising:
a press-in retainer including a retainer head and a clip portion projecting from the retainer head, wherein the retainer head includes a first platform and a second platform spaced from the first platform, the retainer further including a seal disposed at least partially about the second platform, the seal having a durometer lower than a durometer of the second platform and the seal including a body portion engaging the second platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the second platform and a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the second platform, and wherein the sealing foot is configured to flex toward a substantially flattened condition about a living hinge while remaining outboard from the second platform.

32. (Previously Presented) The connection assembly as recited in Claim 31, wherein the retainer head and the clip portion are molded as a unitary structure.

33. (Previously Presented) The connection assembly as recited in Claim 31, wherein the clip portion comprises a central support extending from the second platform and the second platform is oriented substantially perpendicular to an axis defined by the central support and has a stepped construction including an interior portion and a reduced thickness outer lip with a step between the interior portion and the outer lip.

34. (Previously Presented) The connection assembly as recited in Claim 33, wherein the seal is formed by over-molding or two-shot molding in fused, overlying relation about the outer lip of second platform.

35. (Previously Presented) The connection assembly as recited in Claim 33, wherein the retainer head and the clip portion are molded as a unitary structure from acetal resin, and wherein the seal is molded from a thermoplastic elastomer.

36. (Previously Presented) The connection assembly as recited in Claim 31, wherein the clip portion comprises a pair of flexible wings extending in an angled relation away from a central support and each of the flexible wings has a dog-leg configuration including a radially inwardly angled segment defining an angled biasing surface disposed between a radially outwardly angled segment and a free end, the angled biasing surface being configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.

37. (Previously Presented) The connection assembly as recited in Claim 31, wherein the retainer head includes a connective neck structure extending between the first platform and the second platform, and wherein the neck structure is adapted to slidably engage an intermediate doghouse connector operatively joined to the surface element.

38. (Previously Presented) The connection assembly as recited in Claim 31, wherein the second platform is annular.

39. (Currently Amended) A connection assembly configured to join a surface element to an underlying support structure while maintaining a substantially zero gap, abutting relation between the surface element and the support structure comprising:

a surface element;

a support structure; and

a fastener comprising first and second spaced platforms, a head extending away from the second platform, and a seal disposed at least partially about [[a]] the second platform, the seal having a durometer lower than a durometer of the platform and the seal including a body portion engaging the platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the platform and a first surface of the sealing

foot forms an obtuse angle relative to a plane of a second surface of the platform, wherein the fastener is configured to be slid into a channel within the surface element, the retainer head is configured to be pushed into an acceptance opening in the support structure, and the sealing foot is configured to flex about a living hinge toward a substantially flattened condition against the support structure in order to create a substantially zero gap between the surface element and the support structure.

40. (Canceled)

41. (Previously Presented) The connection assembly as recited in Claim 39, wherein the platform is annular.

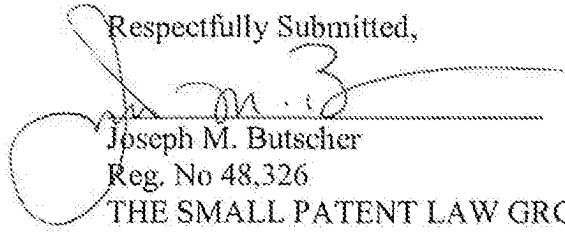
REMARKS

The present application included claims 21-41. Claims 21, 31, and 39 have been amended. Claim 40 has been canceled without prejudice or disclaimer.

If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited to contact the undersigned attorney.

Date: January 28, 2019

Respectfully Submitted,



Joseph M. Butscher

Reg. No 48,326

THE SMALL PATENT LAW GROUP, LLC

225 S. Meramec, Ste. 725

St. Louis, Missouri 63105

(314) 584-4083

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 15/987,986		Filing Date 05/24/2018		☐ To be Mailed				
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO												
APPLICATION AS FILED - PART I												
		(Column 1)	(Column 2)									
FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)		FEE (\$)					
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A	N/A		N/A							
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A	N/A		N/A							
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A		N/A							
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 = *		x \$100 =								
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 = *		x \$460 =								
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).										
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))												
* If the difference in column 1 is less than zero, enter "0" in column 2.					TOTAL							
APPLICATION AS AMENDED - PART II												
		(Column 1)		(Column 2)	(Column 3)							
AMENDMENT	01/28/2019	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)				
	Total (37 CFR 1.16(i))	* 20	Minus	** 21	= 0	x \$100 =		0				
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	x \$460 =		0				
	☐ Application Size Fee (37 CFR 1.16(s))											
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))											
								TOTAL ADD'L FEE		0		
		(Column 1)		(Column 2)	(Column 3)							
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)				
	Total (37 CFR 1.16(i))	*	Minus	**	=	x \$0 =						
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x \$0 =						
	☐ Application Size Fee (37 CFR 1.16(s))											
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))											
								TOTAL ADD'L FEE				
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						SLIE						
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/SHARON M WEST/						
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".												
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.												

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	15987986
Filing Date	2018-05-24
First Named Inventor	Derek Scroggie
Title	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL
Art Unit	3677
Examiner Name	Roberta S. Delisle
Attorney Docket Number	480805.00251(61823-US-A)

SIGNATURE of Applicant or Patent Practitioner

Signature	/NPSchmidbauer/	Date (Optional)	2019-02-06
Name	Nicholas P. Schmidbauer	Registration Number	56,610
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.



*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number

Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)



I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

26711

OR



I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:



The address associated with the above-mentioned Customer Number

OR



The address associated with Customer Number:

OR



Firm or
Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

ILLINOIS TOOL WORKS INC.



Inventor or Joint Inventor (title not required below)



Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)



Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)



Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature

Date (Optional)

Name

Ernest W. Torain

Title

Deputy General Counsel, Intellectual Property

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.



Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	35078978
Application Number:	15987986
International Application Number:	
Confirmation Number:	1773
Title of Invention:	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL
First Named Inventor/Applicant Name:	Derek Scroggie
Customer Number:	151860
Filer:	Nicholas P. Schmidbauer./RoseAnn White
Filer Authorized By:	Nicholas P. Schmidbauer.
Attorney Docket Number:	61823-A (500-436US2)
Receipt Date:	06-FEB-2019
Filing Date:	24-MAY-2018
Time Stamp:	16:39:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	480805_00251_ITW-POA.pdf	321557	no	2
			2f4ead6d8d9a2c5fdeb973ea3f469fccc6284d08		

Warnings:

Information:	
Total Files Size (in bytes):	321557
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/987,986	05/24/2018	Derek Scroggie	480805.00251(61823-US-A)

CONFIRMATION NO. 1773

POA ACCEPTANCE LETTER



26711
QUARLES & BRADY LLP (CHI)
Attn: IP Docket
411 E. WISCONSIN AVE.
SUITE 2350
MILWAUKEE, WI 53202-4426

Date Mailed: 02/12/2019

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/06/2019.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/ytdemisse/



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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/987,986	05/24/2018	Derek Scroggie	61823-A (500-436US2)

CONFIRMATION NO. 1773

POWER OF ATTORNEY NOTICE



151860
The Small Patent Law Group, LLC
225 S. Meramec Ave.
Suite 725
St. Louis, MO 63105

Date Mailed: 02/12/2019

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/06/2019.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/ytdemisse/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	15987986
	Filing Date	2018-05-24
	First Named Inventor	Scroggie
	Art Unit	3677
	Examiner Name	Delisle, Roberta S.
	Attorney Docket Number	480805.00251(61823-US-A)

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5419606		1995-05-30	Hull, et al.	

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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20100098515	A1	2010-04-22	Raymond	

If you wish to add additional U.S. Published Application citation information please click the Add button.

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	1							

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	15987986
Filing Date	2018-05-24
First Named Inventor	Scroggie
Art Unit	3677
Examiner Name	Delisle, Roberta S.
Attorney Docket Number	480805.00251(61823-US-A)

1	
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EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	15987986
Filing Date	2018-05-24
First Named Inventor	Scroggie
Art Unit	3677
Examiner Name	Delisle, Roberta S.
Attorney Docket Number	480805.00251(61823-US-A)

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/NPSchmidbauer/	Date (YYYY-MM-DD)	2019-04-10
Name/Print	Nicholas P. Schmidbauer	Registration Number	56,610

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	35665701
Application Number:	15987986
International Application Number:	
Confirmation Number:	1773
Title of Invention:	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL
First Named Inventor/Applicant Name:	Derek Scroggie
Customer Number:	26711
Filer:	Nicholas P. Schmidbauer./Cyndy Marcello
Filer Authorized By:	Nicholas P. Schmidbauer.
Attorney Docket Number:	480805.00251(61823-US-A)
Receipt Date:	10-APR-2019
Filing Date:	24-MAY-2018
Time Stamp:	09:18:28
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	61823-US-A-IDStrans-10APR19.pdf	96761 6e697db5839e3e9f6c0d1ae42e42bb5f76c c9aad	no	1

Warnings:

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	61823-US-A-IDS-10APR19.pdf	1034328	no	4
			3f6f9fdeddfe1d201931972f07a99818e45cd64f		
Warnings:					
Information:					
Total Files Size (in bytes):			1131089		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Scroggie, et al.	)	CERTIFICATE OF EFS FILING
Serial No.:	15/987,986	)	
Filed:	May 24, 2018	)	I hereby certify that this correspondence is being
For:	Push Through Retainer	)	electronically transmitted to the United States
	Connection with Integrated	)	Patent and Trademark Office, Commissioner for
	Hinging Seal	)	Patents, on the date below.
Group Art Unit:	3677	)	April 10, 2019
Confirmation		)	
Number:	1773	)	<u>/Cyndy Marcello/</u>
Examiner:	Roberta S. Delisle	)	Cyndy Marcello

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The patents and/or publications listed on the enclosed Form PTO/SB/08a are being brought to the attention of the Examiner pursuant to 37 CFR §§ 1.56, 1.97, and 1.98. Copies of any foreign publications or other documents are enclosed as necessary.

This Information Disclosure Statement is being filed, to the best of the undersigned's knowledge, before issuance of a first Office action. In accordance with 37 CFR §1.97(b), no certification or fee is required.

The identification of any document in the attached Form PTO/SB/08a is not an admission that such document is in fact prior art or is material to patentability relative to the instant application.

An early and favorable action on the merits is respectfully requested.

Respectfully submitted,

QUARLES & BRADY LLP
300 N. LaSalle Street, Suite 4000
Chicago, Illinois 60654
312.715.5000

April 10, 2019

By: /NPSchmidbauer/
Nicholas P. Schmidbauer
Reg. No. 56,610



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/987,986	05/24/2018	Derek Scroggie	480805.00251(61823-US-A)	1773
26711	7590	11/08/2019	EXAMINER	
QUARLES & BRADY LLP (CHI)			DELISLE, ROBERTA S	
ATT: IP DOCKET			ART UNIT	PAPER NUMBER
411 E. WISCONSIN AVE.			3677	
SUITE 2350			NOTIFICATION DATE	DELIVERY MODE
MILWAUKEE, WI 53202-4426			11/08/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pat-dept@quarles.com

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

2. Claim Status:

- a. Claims 21-39 and 41 Pending
- b. Claims 1-20 and 40 Cancelled

3. Prior Art Reference:

- c. Benedetti et al. USPAP 2005/0079033 A1

Claim Objections

4. Claim 1 is objected to because of the following informalities: line 9, claim states, "...durometer of the **collar**...", Examiner believes it should state, "...durometer of the ~~collar~~ second platform...", to remain consistent with the rest of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 21-39 and 41 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Benedetti (USPAP 2005/0079033 A1).**

Regarding claim 21, Benedetti discloses a connection assembly (abstract) configured to join a surface element (610) to an underlying support structure (604) while maintaining a substantially zero gap (fig. 6C), abutting relation between the surface element (610) and the support structure (604), the connection assembly comprising:

a press-in retainer (400) configured for insertion into an acceptance opening (602) in the support structure (604), the retainer (400) including a retainer head (436) and a clip portion (424A-B) projecting from the retainer head (436), wherein the retainer head (436) includes a first platform (fig. 4) and a second platform (fig. 4) spaced from the first platform (fig. 4), the retainer (400) further including a seal (438) disposed at least partially about the second platform (fig. 4), **except for** [the seal (438) having a durometer lower than a durometer of the collar] and the seal (438) including a body portion (fig. 4) engaging the second platform (fig. 4) and a sealing foot (442) projecting from the body portion (fig. 4) to a free edge such that the sealing foot (442) is disposed outboard from the second platform (fig. 4) and a first surface of the sealing foot (442) forms an obtuse angle (fig. 4) relative to a plane of a second surface of the second platform (fig. 4), and wherein the press-in retainer (400) is configured to be slid into a channel within the surface element (610), the retainer head (436) is configured to be pushed into the acceptance opening (602) in the support structure (604), and the sealing foot (442) is configured to flex about a living hinge (fig. 4) while remaining outboard from the second

platform (fig. 4) and maintain sliding contact (fig. 6C) with the support structure (604) in response to applied pressure between the seal (438) and the support structure (604) during use in order to create the substantially zero gap (fig. 6C) between the surface element (610) and the support structure (604).

Examiner notes that Benedetti does not explicitly disclose the seal having a durometer lower than a durometer of the collar. However, it would have been obvious to one having ordinary skill in the art at the time of the invention was made for the seal [having] to have a durometer lower than a durometer of the collar, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. It is also common knowledge to choose a material that has sufficient strength, durability, flexibility, hardness, etc. for the application and intended use of that material.

Regarding claim 22, Benedetti discloses the connection assembly as recited in claim 21, wherein the retainer head (436) and the clip portion (424A-B) are molded as a unitary structure (fig. 4, ¶ [0041]).

Examiner notes that this claim is considered to be a product-by-process claim due to the limitation of “are molded”. The patentability of the product does not depend on its method of production. Determination of patentability is based on the product itself. See MPEP 2113. If the product in the product-by-process claim is the same as or obvious from a product of prior art, the claim is unpatentable even though the prior

product was made by a different process. In *re Thorpe*, 227 USPQ 964,966 (Fed. Cir. 1985).

Regarding claim 23, Benedetti discloses the connection assembly as recited in claim 21, wherein the clip portion (424A-B) comprises a central support (402) extending from the second platform (fig. 4) and the second platform (fig. 4) is oriented substantially perpendicular (fig. 4) to an axis defined by the central support (402) and has a stepped construction including an interior portion (fig. 4) and a reduced thickness outer lip (fig. 4) with a step between the interior portion (fig. 4) and the outer lip (fig. 4).

Regarding claim 24, Benedetti discloses the connection assembly as recited in claim 23, wherein the seal (438) is formed by over-molding or two-shot molding in fused (¶ [0041]), overlying relation about the outer lip of the second platform (fig. 4).

Examiner notes that this claim is considered to be a product-by-process claim due to the limitation of “is formed by over-molding or two-shot molding”. The patentability of the product does not depend on its method of production. Determination of patentability is based on the product itself. See MPEP 2113. If the product in the product-by-process claim is the same as or obvious from a product of prior art, the claim is unpatentable even though the prior product was made by a different process. In *re Thorpe*, 227 USPQ 964,966 (Fed. Cir. 1985).

Regarding claim 25, Benedetti discloses the connection assembly as recited in claim 23, wherein the retainer head (436) and the clip portion (424A-B) are molded as a unitary structure (fig. 4) from Nylon 6, Nylon 6.6, or acetal resin (§ [0041]).

Examiner notes that this claim is considered to be a product-by-process claim due to the limitation of “are molded”. The patentability of the product does not depend on its method of production. Determination of patentability is based on the product itself. See MPEP 2113. If the product in the product-by-process claim is the same as or obvious from a product of prior art, the claim is unpatentable even though the prior product was made by a different process. In *re Thorpe*, 227 USPQ 964,966 (Fed. Cir. 1985).

Examiner also notes that Benedetti does not explicitly disclose Nylon 6, Nylon 6.6, or acetal resin. However, it would have been obvious to one having ordinary skill in the art at the time of the invention was made from Nylon 6, Nylon 6.6, or acetal resin, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In *re Leshin*, 125 USPQ 416. It is also common knowledge to choose a material that has sufficient strength, durability, flexibility, hardness, etc. for the application and intended use of that material.

Regarding claim 26, Benedetti discloses the connection assembly as recited in claim 23, wherein the seal (438) is molded from a thermoplastic elastomer (§ [0041]).

Examiner notes that this claim is considered to be a product-by-process claim due to the limitation of “is molded”. The patentability of the product does not depend on

its method of production. Determination of patentability is based on the product itself.

See MPEP 2113. If the product in the product-by-process claim is the same as or obvious from a product of prior art, the claim is unpatentable even though the prior product was made by a different process. In *re Thorpe*, 227 USPQ 964,966 (Fed. Cir. 1985).

Examiner also notes that Benedetti does not explicitly disclose wherein the seal is molded from a thermoplastic elastomer. However, it would have been obvious to one having ordinary skill in the art at the time of the invention was made wherein the seal is molded from a thermoplastic elastomer, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In *re Leshin*, 125 USPQ 416. It is also common knowledge to choose a material that has sufficient strength, durability, flexibility, hardness, etc. for the application and intended use of that material.

Regarding claim 27, Benedetti discloses the connection assembly as recited in claim 23, wherein the retainer head (436) and the clip portion (424A-B) are molded as a unitary structure (fig. 4) from acetal resin (§ [0041]), and wherein the seal (438) is molded from a thermoplastic elastomer (§ [0041]).

Examiner notes that this claim is considered to be a product-by-process claim due to the limitation of “are molded”. The patentability of the product does not depend on its method of production. Determination of patentability is based on the product itself. See MPEP 2113. If the product in the product-by-process claim is the same as or obvious from a product of prior art, the claim is unpatentable even though the prior

product was made by a different process. In *re Thorpe*, 227 USPQ 964,966 (Fed. Cir. 1985).

Examiner also notes that Benedetti does not explicitly disclose wherein the seal is molded from a thermoplastic elastomer. However, it would have been obvious to one having ordinary skill in the art at the time of the invention was made wherein the seal is molded from a thermoplastic elastomer, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In *re Leshin*, 125 USPQ 416. It is also common knowledge to choose a material that has sufficient strength, durability, flexibility, hardness, etc. for the application and intended use of that material.

Regarding claim 28, Benedetti discloses the connection assembly as recited in claim 21, wherein the clip portion (424A-B) comprises a pair of flexible wings (410) extending in an angled relation away from a central support (402) and each of the flexible wings (410) has a dog-leg configuration including a radially inwardly angled segment defining an angled biasing surface (fig. 4) disposed between a radially outwardly angled segment and a free end (fig. 4), the angled biasing surface (fig. 4) being configured to press against an interior surface of the acceptance opening (602) to urge the retainer (400) downwardly into the acceptance opening (602).

Regarding claim 29, Benedetti discloses the connection assembly as recited in claim 21, wherein the retainer head (436) includes a connective neck structure (fig. 4) extending between the first platform (fig. 4) and the second platform (fig. 4), and

wherein the neck structure (fig. 4) is *[adapted to slidingly engage an intermediate doghouse connector operatively joined to the surface element (610)]*.

Examiner's note*: the above statement in brackets is an example of intended use failing to limit the structure of the claimed invention. The prior art must only be capable of performing said functional recitations to be applicable and in the instant case, the prior art of Benedetti is indeed capable. Note that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Regarding claim 30, Benedetti discloses the connection assembly as recited in claim 21, wherein the second platform (fig. 4) is annular.

Regarding claim 31, Benedetti discloses a connection assembly (abstract) comprising:

a press-in retainer (400) including a retainer head (436) and a clip portion (424A-B) projecting from the retainer head (436), wherein the retainer head (436) includes a first platform (fig. 4) and a second platform (fig. 4) spaced from the first platform (fig. 4), the retainer (400) further including a seal (438) disposed at least partially about the second platform (fig. 4), **except for** [the seal (438) having a durometer lower than a durometer of the second platform (fig. 4)] and the seal (438) including a body portion (fig. 4) engaging the second platform (fig. 4) and a sealing foot (442) projecting from the body portion (fig. 4) to a free edge such that the sealing foot (442) is disposed outboard from the second platform (fig. 4) and a first surface of the sealing foot (442)

forms an obtuse angle (fig. 4) relative to a plane of a second surface of the second platform (fig. 4), and wherein the sealing foot (442) is configured to flex toward a substantially flattened condition about a living hinge (fig. 4) while remaining outboard from the second platform (fig. 4).

Examiner notes that Benedetti does not explicitly disclose the seal having a durometer lower than a durometer of the second platform. However, it would have been obvious to one having ordinary skill in the art at the time of the invention was made for the seal having a durometer lower than a durometer of the second platform, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. It is also common knowledge to choose a material that has sufficient strength, durability, flexibility, hardness, etc. for the application and intended use of that material.

Regarding claim 32, Benedetti discloses the connection assembly as recited in claim 31, wherein the retainer head (436) and the clip portion (424A-B) are molded as a unitary structure (fig. 4).

Examiner notes that this claim is considered to be a product-by-process claim due to the limitation of “are molded”. The patentability of the product does not depend on its method of production. Determination of patentability is based on the product itself. See MPEP 2113. If the product in the product-by-process claim is the same as or obvious from a product of prior art, the claim is unpatentable even though the prior

product was made by a different process. In *re Thorpe*, 227 USPQ 964,966 (Fed. Cir. 1985).

Regarding claim 33, Benedetti discloses the connection assembly as recited in claim 31, wherein the clip portion (424A-B) comprises a central support (402) extending from the second platform (fig. 4) and the second platform (fig. 4) is oriented substantially perpendicular to an axis defined by the central support (402) and has a stepped construction including an interior portion and a reduced thickness outer lip with a step between the interior portion and the outer lip (fig. 4).

Regarding claim 34, Benedetti discloses the connection assembly as recited in claim 33, wherein the seal (438) is formed by over-molding or two-shot molding in fused (¶ [0041]), overlying relation about the outer lip of second platform (fig. 4).

Examiner notes that this claim is considered to be a product-by-process claim due to the limitation of “is formed by over-molding or two-shot molding”. The patentability of the product does not depend on its method of production. Determination of patentability is based on the product itself. See MPEP 2113. If the product in the product-by-process claim is the same as or obvious from a product of prior art, the claim is unpatentable even though the prior product was made by a different process. In *re Thorpe*, 227 USPQ 964,966 (Fed. Cir. 1985).

Regarding claim 35, Benedetti discloses the connection assembly as recited in claim 33, wherein the retainer head (436) and the clip portion (424A-B) are molded as a

unitary structure (fig. 4) from acetal resin (§ [0041]), and wherein the seal (438) is molded from a thermoplastic elastomer (§ [0041]).

Examiner notes that this claim is considered to be a product-by-process claim due to the limitation of “are molded”. The patentability of the product does not depend on its method of production. Determination of patentability is based on the product itself. See MPEP 2113. If the product in the product-by-process claim is the same as or obvious from a product of prior art, the claim is unpatentable even though the prior product was made by a different process. In *re Thorpe*, 227 USPQ 964,966 (Fed. Cir. 1985).

Examiner also notes that Benedetti does not explicitly disclose wherein the seal is molded from a thermoplastic elastomer. However, it would have been obvious to one having ordinary skill in the art at the time of the invention was made wherein the seal is molded from a thermoplastic elastomer, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In *re Leshin*, 125 USPQ 416. It is also common knowledge to choose a material that has sufficient strength, durability, flexibility, hardness, etc. for the application and intended use of that material.

Regarding claim 36, Benedetti discloses the connection assembly as recited in claim 31, wherein the clip portion (424A-B) comprises a pair of flexible wings (410) extending in an angled relation away from a central support (402) and each of the flexible wings (410) has a dog-leg configuration including a radially inwardly angled segment defining an angled biasing surface (fig. 4) disposed between a radially outwardly angled

segment and a free end, the angled biasing surface (fig. 4) being configured to press against an interior surface of the acceptance opening (602) to urge the retainer (400) downwardly into the acceptance opening (602).

Regarding claim 37, Benedetti discloses the connection assembly as recited in claim 31, wherein the retainer head (436) includes a connective neck structure (fig. 4) extending between the first platform (fig. 4) and the second platform (fig. 4), and wherein the neck structure (fig. 4) is *[adapted to slidably engage an intermediate doghouse connector operatively joined to the surface element (610)]*.

Examiner's note*: the above statement in brackets is an example of intended use failing to limit the structure of the claimed invention. The prior art must only be capable of performing said functional recitations to be applicable and in the instant case, the prior art of Benedetti is indeed capable. Note that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Regarding claim 38, Benedetti discloses the connection assembly as recited in claim 31, wherein the second platform (fig. 4) is annular.

Regarding claim 39, Benedetti discloses a connection assembly (abstract) configured to join a surface element (610) to an underlying support structure (604) while

maintaining a substantially zero gap (fig. 6C), abutting relation between the surface element (610) and the support structure (604) comprising:

a surface element (610);

a support structure (604); and

a fastener (400) comprising first and second spaced platforms (fig. 4), a head (436) extending away from the second platform (fig. 4), and a seal (438) disposed at least partially about the second platform (fig. 4), **except for** [the seal (438) having a durometer lower than a durometer of the platform (fig. 4)] and the seal (438) including a body portion (fig. 4) engaging the platform (fig. 4) and a sealing foot (442) projecting from the body portion (fig. 4) to a free edge such that the sealing foot (442) is disposed outboard from the platform (fig. 4) and a first surface of the sealing foot (442) forms an obtuse angle (fig. 4) relative to a plane of a second surface of the platform (fig. 4), wherein the fastener (400) is configured to be slid into a channel within the surface element (610), the retainer head (436) is configured to be pushed into an acceptance opening (602) in the support structure (604), and the sealing foot (442) is configured to flex about a living hinge (fig. 4) toward a substantially flattened condition against the support structure (604) in order to create a substantially zero gap (fig. 6C) between the surface element (610) and the support structure (604).

Examiner notes that Benedetti does not explicitly disclose the seal having a durometer lower than a durometer of the collar. However, it would have been obvious to one having ordinary skill in the art at the time of the invention was made for the seal having a durometer lower than a durometer of the collar, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of

its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. It is also common knowledge to choose a material that has sufficient strength, durability, flexibility, hardness, etc. for the application and intended use of that material.

Regarding claim 41, Benedetti discloses the connection assembly as recited in claim 39, wherein the platform (fig. 4) is annular.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERTA S DELISLE ("Bobbi") whose telephone number is (571)270-3746. The examiner can normally be reached on M-F: 7 am - 4 pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Victor D Batson can be reached on 571-272-6987. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERTA S DELISLE/
Primary Examiner, Art Unit 3677

rsd

<i>Notice of References Cited</i>	Application/Control No. 15/987,986		Applicant(s)/Patent Under Reexamination Scroggie et al.	
	Examiner ROBERTA S DELISLE		Art Unit 3677	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-3577603-A	05-1971	Seckerson; Clifford Alexander	F16B5/065	411/510
*	B	US-3988808-A	11-1976	Poe; L. Richard	F16B21/02	24/326
*	C	US-5393185-A	02-1995	Duffy, Jr.; William J.	F16B21/084	411/510
*	D	US-20130129450-A1	05-2013	Aoki; Ryou	B29C45/44	411/509
*	E	US-7017239-B2	03-2006	Kurily; Brett	B60R13/0206	24/297
*	F	US-6974292-B2	12-2005	Hansen; Wayne M.	F16B21/086	24/458
*	G	US-20060086765-A1	04-2006	Harberts; John H.	F16J15/025	224/309
*	H	US-8511631-B2	08-2013	Kato; Kouichi	B60R13/0206	24/297
*	I	US-5319839-A	06-1994	Shimajiri; Naohiro	F16B21/086	24/297
*	J	US-5573362-A	11-1996	Asami; Goro	F16B21/086	411/509
*	K	US-6305055-B1	10-2001	Castro; Dominique	F16B21/086	24/458
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Search Notes</i> 	Application/Control No. 15/987,986	Applicant(s)/Patent Under Reexamination Scroggie et al.
	Examiner ROBERTA S DELISLE	Art Unit 3677

CPC - Searched*		
Symbol	Date	Examiner
F16B 2/22; 5/0084, 0607, 0657; 19/00, 008; 21/086; 2005/0678	10/08/2019	rsd
Y10T 24/44026; 29/49828	10/08/2019	rsd

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
411	508, 509, 510	10/08/2019	rsd

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
EAST (see search history)	10/08/2019	rsd
Inventors name search	10/08/2019	rsd
Forward / backward citation searching	10/08/2019	rsd

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

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<i>Index of Claims</i> 	Application/Control No. 15/987,986	Applicant(s)/Patent Under Reexamination Scroggie et al.
	Examiner ROBERTA S DELISLE	Art Unit 3677

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	10/08/2019								
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	2	-								
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	35	✓								
	36	✓								
	37	✓								
	38	✓								
	39	✓								
	40	-								
	41	✓								

Doc code: IDS

PTO/SB/08a (02-18)

Doc description: Information Disclosure Statement (IDS) Filed

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)

Application Number	15987986
Filing Date	2018-05-24
First Named Inventor	Scroggie
Art Unit	3677
Examiner Name	Delisle, Roberta S.
Attorney Docket Number	480805.00251(61823-US-A)

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5419606		1995-05-30	Hull, et al.	

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	1	20100098515	A1	2010-04-22	Raymond	

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Examiner Signature	/ROBERTA S DELISLE/	Date Considered	10/08/2019
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OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/NPSchmidbauer/	Date (YYYY-MM-DD)	2019-04-10
Name/Print	Nicholas P. Schmidbauer	Registration Number	56,610

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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L8	16	("2006/0099051").URPN.	USPAT	OR	ON	2019/10/11 09:30
L9	49	("3309955" "3810279" "3860999" "4393551" "4810147" "5011162" "5035560").PN. OR ("5173026").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/10/11 09:30
L10	24	("20040083583" "20080298890" "4568215" "5217337" "5319839" "5531499" "5689863" "5704753" "6514024" "6565116" "6572317" "6594870" "6772484" "6796760" "7114221" "7178855" "7927050").PN. OR ("8511631").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/10/11 09:31
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S2	619	(411/509-510).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/10/08 12:25
S3	25	scroggie-derek.in.	US-PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:25
S4	7	bozinovski-michelle-e.in.	US-PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:26
S5	7	murawski-robert-a.in.	US-PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:26
S6	2	("20100098515" "5419606").PN.	US-PGPUB; USPAT	OR	ON	2019/10/08 12:27
S7	2	("8561265" "8883059").PN.	US-	OR	ON	2019/10/08

			PGPUB; USPAT			12:27
S8	26	("20050079033" "20060099051" "20100009851" "20100029376" "20110119875" "20110243688" "3249973" "3550217" "3678797" "3745612" "3771275" "4534530" "4778320" "5028187" "5173026" "5339491" "5458365" "5704753" "5797714" "5865500" "6572317" "6715185" "6805524" "7481474" "7770266" "7927050").PN.	US- PGPUB; USPAT	OR	ON	2019/10/08 12:27
S9	102	f16b5/0084.cpc.	US- PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:28
S10	165	f16b5/0607.cpc.	US- PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:28
S11	632	f16b5/0657.cpc.	US- PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:28
S12	938	f16b2/22.cpc.	US- PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:28
S13	313	f16b19/00.cpc.	US- PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:29
S14	211	f16b19/008.cpc.	US- PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:30
S15	1231	f16b21/086.cpc.	US- PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:30
S16	61	f16b2005/0678.cpc.	US- PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:31
S17	1503	y10t24/44026.cpc.	US- PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:31
S18	2240	y10t29/49828.cpc.	US- PGPUB; USPAT; USOCR	OR	ON	2019/10/08 12:32

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Doc description: Information Disclosure Statement (IDS) Filed

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First Named Inventor	Scroggie
Art Unit	3677
Examiner Name	Delisle, Roberta S.
Attorney Docket Number	61823-A

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
	1	8561265		2013-10-22	Benedetti			
	2	8883059		2014-11-11	Lewis			
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Attorney Docket Number	61823-A

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
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Signature	/Joseph M. Butscher/	Date (YYYY-MM-DD)	2019-01-02
Name/Print	Joseph M. Butscher	Registration Number	48326

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	1	5173026		1992-12-22	Cordola	
	2	4534530		1985-08-13	Danko	
	3	3249973		1966-05---	Seckerson	
	4	3771275		1973-11---	Seckerson	
	5	4778320		1988-10---	Nakama	
	6	5028187		1991-07---	Sato	
	7	5339491		1994-08---	Sims	
	8	5458365		1995-10---	Rogers	

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9	6715185		2004-04---	Angellotti	
10	6805524		2004-10---	Kanie	
11	3550217		1970-12---	Collyer	
12	3745612		1973-07---	Seckerson	
13	7481474		2009-01---	Higgins	
14	7927050		2011-04---	Koike	
15	3678797		1972-07---	Seckerson	
16	5704753		1998-01---	Ueno	
17	5797714		1998-08---	Oddenino	
18	5865500		1999-02---	Sanada	
19	6572317		2003-06---	Okada	

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20	7770266	2010-11---	Higgins
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	1	20060099051		2006-05-11	Moerke	
	2	20100009851		2010-04-22	Raymond	
	3	20110119875		2011-05-26	Iwasaki	
	4	20110243688		2011-10-06	Klein	
	5	20050079033		2005-04---	Benedetti	
	6	20100029376		2010-11---	Koike	

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2018-05-24
First Named Inventor	Scroggie	
Art Unit	3677	
Examiner Name	Delisle, Roberta S.	
Attorney Docket Number	61823-A	

1	2913738	FR	2008-09-19	A. Raymond Et Cie Societe En Commandite Simple
2	2009123616	WO	2009-10-08	TS Tech Co.

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	SR and WO for PCT/US2013/073861 mailed March 28, 2014	

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/ROBERTA S DELISLE/	Date Considered	10/08/2019
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2018-05-24
First Named Inventor	Scroggie	
Art Unit	3677	
Examiner Name	Delisle, Roberta S.	
Attorney Docket Number	61823-A	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Joseph M. Butscher/	Date (YYYY-MM-DD)	2018-05-24
Name/Print	Joseph M. Butscher	Registration Number	48326

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /R.S.D/

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 15/987,986		Filing Date 05/24/2018		☐ To be Mailed	
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO									
APPLICATION AS FILED - PART I									
		(Column 1)	(Column 2)						
FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)		FEE (\$)		
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A	N/A		N/A				
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A	N/A		N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A		N/A				
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 = *		x \$100 =					
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 = *		x \$460 =					
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.					TOTAL				
APPLICATION AS AMENDED - PART II									
		(Column 1)		(Column 2)	(Column 3)				
AMENDMENT	01/21/2020	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	x \$100 =		0	
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	x \$460 =		0	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE		0	
		(Column 1)		(Column 2)	(Column 3)				
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	x \$0 =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x \$0 =			
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						SLIE			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/KAREN L VESTAL/			
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".									
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Illinois Tool Works Inc.	)	CERTIFICATE OF EFS FILING
		)	
Serial No.:	15/987,986	)	I hereby certify that this correspondence is
		)	being electronically transmitted to the
Filed:	May 24, 2018	)	United States Patent and Trademark
		)	Office, Commissioner for Patents, via the
For:	PUSH THROUGH	)	EFS on the date below.
	RETAINER CONNECTION	)	
	WITH INTEGRATED	)	January 21, 2020
	HINGING SEAL	)	<u>/Cyndy Marcello/</u>
		)	Cyndy Marcello
Group Art Unit:	3677	)	
		)	
Confirmation No.	1773	)	
		)	
Examiner:	Roberta S. Delisle	)	
		)	

AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In response to the non-final Office action dated November 8, 2019, ("Office action"), please consider the following:

Amendments to the Claims begin on page 2 of this paper; and

Remarks/Arguments begin on page 8 of this paper.

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the present application:

1-20. (Canceled)

21. (Currently Amended) A connection assembly configured to join a surface element to an underlying support structure while maintaining a substantially zero gap, abutting relation between the surface element and the support structure, the connection assembly comprising:

a press-in retainer configured for insertion into an acceptance opening in the support structure, the retainer including a retainer head and a clip portion projecting from the retainer head,

wherein the retainer head includes a first platform and a second platform spaced from the first platform, the retainer further including a seal disposed at least partially about the second platform, the seal having a durometer lower than a durometer of the ~~collar~~ second platform, and the seal including a body portion engaging the second platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the second platform, and a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the second platform, wherein the ~~press-in retainer head~~ head is configured to be slid into a channel ~~within defined by the surface element, and the retainer head clip portion~~ is configured to be pushed into the acceptance opening in the support structure,

wherein the clip portion is configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening,

wherein ~~and~~ the sealing foot is configured to flex about a living hinge provided between the body portion and the sealing foot from an unstressed condition to a fully flexed condition while remaining outboard from the second platform and maintain sliding contact with the support structure in response to applied pressure between the seal and the support structure during use, wherein in the unstressed condition, the sealing foot forms the obtuse angle relative to the plane of the second surface of the second platform, and wherein in the fully flexed condition,

the free edge of the sealing foot is moved radially outwardly until the sealing foot and the second surface of the second platform define a flat surface, and wherein the sealing foot is configured to flex from the unstressed condition toward the fully flexed condition in order to create the substantially zero gap between the surface element and the support structure in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.

22. (Previously Presented) The connection assembly as recited in Claim 21, wherein the retainer head and the clip portion are molded as a unitary structure.

23. (Previously Presented) The connection assembly as recited in Claim 21, wherein the clip portion comprises a central support extending from the second platform and the second platform is oriented substantially perpendicular to an axis defined by the central support and has a stepped construction including an interior portion and a reduced thickness outer lip with a step between the interior portion and the outer lip.

24. (Previously Presented) The connection assembly as recited in Claim 23, wherein the seal is formed by over-molding or two-shot molding in fused, overlying relation about the outer lip of the second platform.

25. (Previously Presented) The connection assembly as recited in Claim 23, wherein the retainer head and the clip portion are molded as a unitary structure from Nylon 6, Nylon 6.6, or acetal resin.

26. (Previously Presented) The connection assembly as recited in Claim 23, wherein the seal is molded from a thermoplastic elastomer.

27. (Previously Presented) The connection assembly as recited in Claim 23, wherein the retainer head and the clip portion are molded as a unitary structure from acetal resin, and wherein the seal is molded from a thermoplastic elastomer.

28. (Currently Amended) The connection assembly as recited in Claim 21, wherein the clip portion comprises a pair of flexible wings extending in an angled relation away from a central support and each of the flexible wings has a dog-leg configuration including a radially inwardly angled segment defining an angled biasing surface disposed between a radially outwardly angled segment and a free end, and wherein the angled biasing surface ~~is being~~ configured to press against ~~the~~ interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.

29. (Previously Presented) The connection assembly as recited in Claim 21, wherein the retainer head includes a connective neck structure extending between the first platform and the second platform, and wherein the neck structure is adapted to slidingly engage an intermediate doghouse connector operatively joined to the surface element.

30. (Previously Presented) The connection assembly as recited in Claim 21, wherein the second platform is annular.

31. (Currently Amended) A connection assembly comprising:
a press-in retainer including a retainer head and a clip portion projecting from the retainer head, wherein the retainer head includes a first platform, ~~and~~ a second platform spaced from the first platform, ~~the retainer further including and~~ a seal disposed at least partially about the second platform, the seal having a durometer lower than a durometer of the second platform ~~and, wherein~~ the seal ~~including~~ includes a body portion engaging the second platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the second platform ~~and, wherein~~ a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the second platform, and wherein the sealing foot is configured to flex readily from the obtuse angle toward a substantially flattened condition about a living hinge while remaining outboard from the second platform.

32. (Previously Presented) The connection assembly as recited in Claim 31, wherein the retainer head and the clip portion are molded as a unitary structure.

33. (Currently Amended) The connection assembly as recited in Claim 31, wherein the clip portion comprises a central support extending from the second platform, and the second platform is oriented substantially perpendicular to an axis defined by the central support and ~~has~~ defines a stepped construction including an interior portion and a reduced thickness outer lip with a step between the interior portion and the outer lip.

34. (Currently Amended) The connection assembly as recited in Claim 33, wherein the seal is formed by over-molding or two-shot molding in fused, overlying relation about the outer lip of the second platform.

35. (Previously Presented) The connection assembly as recited in Claim 33, wherein the retainer head and the clip portion are molded as a unitary structure from acetal resin, and wherein the seal is molded from a thermoplastic elastomer.

36. (Currently Amended) The connection assembly as recited in Claim 31 further comprising a support structure and a surface element, wherein the retainer is configured for insertion into an acceptance opening in the support structure to join the surface element to the support structure while maintaining a substantially zero gap, abutting relation between the surface element and the support structure, wherein the clip portion comprises a pair of flexible wings extending in an angled relation away from a central support, and each of the flexible wings has a dog-leg configuration including a radially inwardly angled segment defining an angled biasing surface disposed between a radially outwardly angled segment and a free end, the angled biasing surface being configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening, and the seal is configured to flex from the obtuse angle toward the substantially flat condition until the surface element and the support structure define the substantially zero gap, abutting relationship.

37. (Currently Amended) The connection assembly as recited in Claim 31 further comprising a surface element, wherein the retainer head includes a connective neck structure extending between the first platform and the second platform, and wherein the neck structure is

adapted to slidingly engage an intermediate doghouse connector operatively joined to the surface element.

38. (Previously Presented) The connection assembly as recited in Claim 31, wherein the second platform is annular.

39. (Currently Amended) A connection assembly configured to join a surface element to an underlying support structure while maintaining a substantially zero gap, abutting relation between the surface element and the support structure comprising:

a surface element;

a support structure; and

a fastener comprising a first platform, a second platform spaced from the first platform~~first and second spaced platforms~~, a retainer head extending away from the second platform, and a seal disposed at least partially about the second platform, wherein the second platform is a planar platform and defines a stepped construction that includes an interior portion and a reduced thickness outer lip with a step between the interior portion and the outer lip, and wherein the seal at least partially covers the outer lip of the second platform and abuts the step, the seal having a durometer lower than a durometer of the second platform~~and, wherein the seal including includes~~ a body portion engaging the outer lip of the second platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the second platform~~and, wherein~~ a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the second platform, wherein the fastener is configured to be slid into a channel ~~within~~ defined by the surface element, the retainer head is configured to be pushed into an acceptance opening in the support structure, and the sealing foot is configured to flex about a living hinge toward a substantially flattened condition against the support structure in order to create a substantially zero gap between the surface element and the support structure.

40. (Canceled)

41. (Currently Amended) The connection assembly as recited in Claim 39, wherein the second platform is annular.

REMARKS

Claims 21-39 and 41 are pending and at issue in the present application, with 21, 28, 31, 33, 34, 36, 37, 39, and 41 having been presently amended, and claims 1-20 and 40 having been previously canceled. Support for the amendments to the claims can be found in at least paragraphs [0021], [0024], [0025], and [0026], and FIGS. 3-5 of the as-filed application. No new matter has been added.

Claim 21 stands objected to because of informalities. Claims 21-39 and 41 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. Pub. No. 2005/0079033 to Benedetti ("Benedetti").

Applicant respectfully traverses all of the objections and rejections outlined in the Office action, and requests reconsideration and allowance of the claims. If any issues remain outstanding, the Examiner is invited to call the undersigned. No new matter has been added by way of these amendments.

Objections to the Claims

Claim 21 stands objected to because of informalities. *See Office action*, p. 2. To expedite prosecution, Applicant has amended claim 21 accordingly to render the objection moot. As such, Applicant respectfully requests that the objection to the claim be withdrawn.

Rejections under 35 U.S.C. § 103

Independent Claim 21

Independent claim 21 recites a connection assembly configured to join a surface element to an underlying support structure while maintaining a substantially zero gap, abutting relation between the surface element and the support structure. The connection assembly comprises a press-in retainer configured for insertion into an acceptance opening in the support structure. The retainer includes a retainer head and a clip portion projecting from the retainer head. The retainer head includes a first platform, a second platform spaced from the first platform, and a seal disposed at least partially about the second platform. The seal includes a body portion engaging the second platform and a sealing foot projecting from the body portion to a free edge such that the sealing

foot is disposed outboard from the second platform, and a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the second platform. The retainer head is configured to be slid into a channel defined by the surface element, and the clip portion is configured to be pushed into the acceptance opening in the support structure.

Independent claim 21 further recites the clip portion is configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening. Furthermore, the sealing foot is configured to flex about a living hinge provided between the body portion and the sealing foot from an unstressed condition to a fully flexed condition while remaining outboard from the second platform and maintaining sliding contact with the support structure. In the unstressed condition, the sealing foot forms the obtuse angle relative to the plane of the second surface of the second platform, and in the fully flexed condition, the free edge of the sealing foot is moved radially outwardly until the sealing foot and the second surface of the second platform define a flat surface. The sealing foot is configured to flex from the unstressed condition toward the fully flexed condition in order to create the substantially zero gap between the surface element and the support structure in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.

Benedetti fails to disclose or suggest a connection assembly comprising a press-in retainer and a seal, wherein the retainer comprises a retainer head and a clip portion, and wherein the seal is configured to flex about a living hinge provided between a body portion and a sealing foot thereof from an unstressed condition toward a fully flexed condition as the clip portion urges the retainer downwardly into an acceptance opening in order to create a substantially zero gap, abutting relation between the surface element and the support structure. To support a *prima facie* case of obviousness under 35 U.S.C. §103(a), an examiner must establish “a finding that the prior art included each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference.” MPEP § 2143(A), *citing KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007).

Referring to FIG. 4 of Benedetti shown to the right, Benedetti only discloses a winged fastener (400) comprising a center post (402), a base (406), and wings (410). *See Benedetti*, ¶ [0020]. The fastener (400) further includes a head arrangement (436) and an umbrella surface (438) that defines a void (440). *Id.*, ¶ [0025]. While the Office alleges that the umbrella

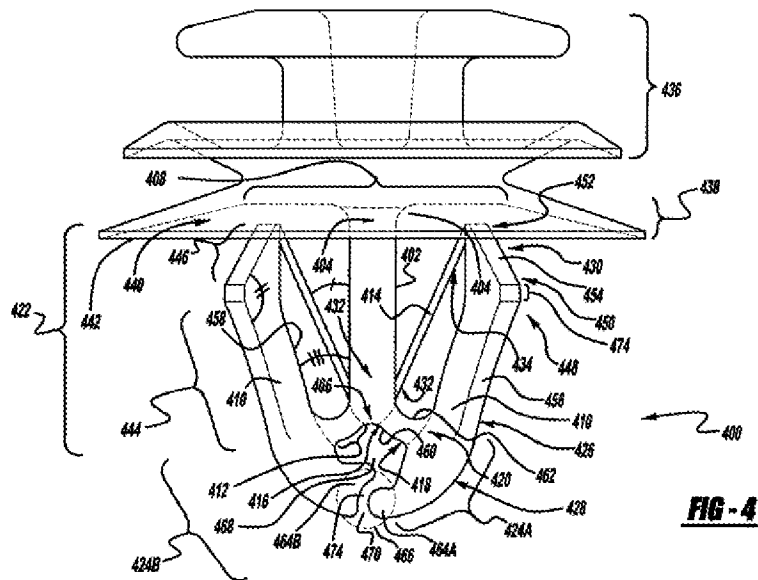


FIG - 4

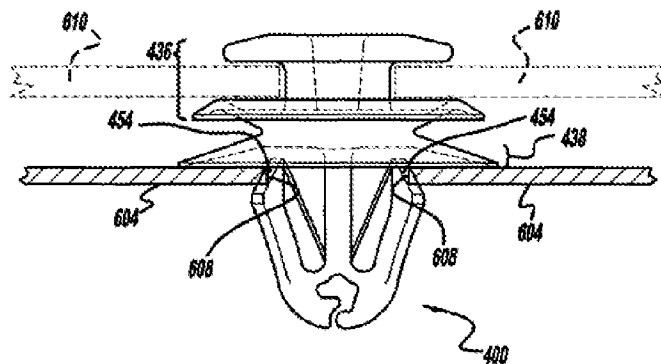


FIG - 6C

surface (438) of Benedetti is akin to the seal of claim 21, Applicant notes that Benedetti fails to disclose or suggest that the umbrella surface (438) is configured to flex from an unstressed condition to a fully flexed condition, wherein in the unstressed condition, a first surface of a sealing foot forms an obtuse angle relative to a plane of a second surface of a second platform, and wherein in the fully flexed condition, a free edge of the sealing foot is moved radially outwardly until the sealing foot and the second surface of the second platform define a flat surface. Rather, referring to FIG. 6C of Benedetti to the left, the umbrella surface (438) is configured so that an edge (442) thereof bears against a panel to provide a seal, which suggests that the umbrella surface (438) is not configured to flex from an

unstressed condition toward a fully flexed condition in order to create a substantially zero gap, abutting relation between a surface element and a support structure. *Id.* ¶ [0039]. For at least this reason, Benedetti does not disclose each and every element of independent claim 21.

Independent Claim 31

Independent claim 31 recites a connection assembly comprising a press-in retainer including a retainer head and a clip portion projecting from the retainer head. The retainer head includes a first platform, a second platform spaced from the first platform, and a seal disposed at least partially about the second platform. The seal includes a body portion engaging the second platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the second platform and a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the second platform. Further, the sealing foot is configured to flex readily from the obtuse angle toward a substantially flattened condition about a living hinge while remaining outboard from the second platform.

As discussed above with respect to claim 21, Benedetti fails to disclose or suggest a seal comprising a sealing foot that is configured to flex readily from an obtuse angle to a substantially flattened condition about a living hinge while remaining outboard from the second platform. For at least this reason, Benedetti does not disclose each and every element of independent claim 31.

Independent Claim 39

Independent claim 39 recites, in part, a connection assembly comprising a surface element, a support structure, and a fastener. The fastener comprises a first platform, a second platform spaced from the first platform, a retainer head extending away from the second platform, and a seal. The second platform is an annular, planar platform and defines a stepped construction that includes an interior portion and a reduced thickness outer lip with a step between the interior portion and the outer lip. Further, the seal at least partially covers the outer lip of the second platform and abuts the step.

Benedetti fails to disclose or suggest a second platform that defines a stepped construction that includes an interior portion and a reduced thickness outer lip with a step therebetween. Further, while the Office alleges that the umbrella surface (438) of Benedetti is akin to the seal of claim 39, Applicant notes that that Benedetti fails to disclose or suggest that the umbrella surface (438) at least partially covers an outer lip of a second platform and abuts a step. For at least this reason, Benedetti does not disclose each and every element of independent claim 39.

Since Benedetti fails to disclose or suggest each and every element of independent claims 21, 31, and 39, Applicant respectfully submits that claims 21, 31, and 39 are allowable over the cited art. Thus, Applicant respectfully requests reconsideration and allowance of independent claims 21, 31, and 39 and claims 22-30, 32-38, and 41 respectively dependent therefrom.

CONCLUSION

In view of the above, Applicant respectfully requests withdrawal of the rejections and objections of claims 21-39 and 41 and allowance of all pending claims. If there are any issues remaining that can be resolved by telephone, the examiner is invited to call the undersigned attorney.

Deposit Account Authorization

No fees are believed to be due with this communication. However, the Commissioner is hereby authorized to charge any deficiency in fees paid or any additional fees, except issue fees, which may be required under 37 C.F.R. §§ 1.16 or 1.17, to Deposit Account No. 17-0055.

Respectfully submitted,
QUARLES & BRADY LLP
300 N. LaSalle Street, Suite 4000
Chicago, Illinois 60654
(312) 715-5072

January 21, 2020

By: /NPSchmidbauer/
Nicholas P. Schmidbauer
Registration No. 56,610

Electronic Acknowledgement Receipt

EFS ID:	38347686
Application Number:	15987986
International Application Number:	
Confirmation Number:	1773
Title of Invention:	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL
First Named Inventor/Applicant Name:	Derek Scroggie
Customer Number:	26711
Filer:	Nicholas P. Schmidbauer./Cyndy Marcello
Filer Authorized By:	Nicholas P. Schmidbauer.
Attorney Docket Number:	480805.00251(61823-US-A)
Receipt Date:	21-JAN-2020
Filing Date:	24-MAY-2018
Time Stamp:	14:10:30
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		61823-US-A-Resp-to- NFOA-21JAN20.pdf	278297	yes	12
			d7953ef631a36584f28fbc965d2252728947e4b5		

Multipart Description/PDF files in .zip description			
Document Description	Start	End	
Amendment/Req. Reconsideration-After Non-Final Reject	1	1	
Claims	2	7	
Applicant Arguments/Remarks Made in an Amendment	8	12	

Warnings:

Information:

Total Files Size (in bytes):	278297
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

26711 7590 02/12/2020
QUARLES & BRADY LLP (CHI)
ATT: IP DOCKET
411 E. WISCONSIN AVE.
SUITE 2350
MILWAUKEE, WI 53202-4426

EXAMINER

DELISLE, ROBERTA S

ART UNIT

PAPER NUMBER

3677

DATE MAILED: 02/12/2020

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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15/987,986

05/24/2018

Derek Scroggie

480805.00251(61823-
US-A)

1773

TITLE OF INVENTION: PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional

UNDISCOUNTED

\$1000

\$0.00

\$0.00

\$1000

05/12/2020

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

26711 7590 02/12/2020
QUARLES & BRADY LLP (CHI)
ATT: IP DOCKET
411 E. WISCONSIN AVE.
SUITE 2350
MILWAUKEE, WI 53202-4426

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/987.986	05/24/2018	Derek Scroggie	480805.00251(61823-US-A)	1773

TITLE OF INVENTION: PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1000	\$0.00	\$0.00	\$1000	05/12/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
DELISLE, ROBERTA S	3677	411-508000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

1 _____

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/987,986	05/24/2018	Derek Scroggie	480805.00251(61823- US A)	1773
26711 7590 02/12/2020 QUARLES & BRADY LLP (CHI) ATT: IP DOCKET 411 E. WISCONSIN AVE. SUITE 2350 MILWAUKEE, WI 53202-4426			EXAMINER DELISLE, ROBERTA S	
			ART UNIT 3677	PAPER NUMBER
DATE MAILED: 02/12/2020				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/987,986	Applicant(s) Scroggie et al.	
	Examiner ROBERTA S DELISLE	Art Unit 3677	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Remarks filed 1/21/2020.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 21-39 and 41. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some *c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892) 2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____. 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____. 4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	5. ☐ Examiner's Amendment/Comment 6. ☐ Examiner's Statement of Reasons for Allowance 7. ☐ Other _____.
--	---

/ROBERTA S DELISLE/
Primary Examiner, Art Unit 3677

<i>Index of Claims</i> 	Application/Control No. 15/987,986	Applicant(s)/Patent Under Reexamination Scroggie et al.
	Examiner ROBERTA S DELISLE	Art Unit 3677

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	10/08/2019	01/24/2020							
	1	-	-							
	2	-	-							
	3	-	-							
	4	-	-							
	5	-	-							
	6	-	-							
	7	-	-							
	8	-	-							
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	14	-	-							
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	16	-	-							
	17	-	-							
	18	-	-							
	19	-	-							
	20	-	-							
1	21	✓	=							
2	22	✓	=							
3	23	✓	=							
4	24	✓	=							
5	25	✓	=							
6	26	✓	=							
7	27	✓	=							
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13	33	✓	=							
14	34	✓	=							
15	35	✓	=							
16	36	✓	=							
17	37	✓	=							
18	38	✓	=							
19	39	✓	=							
	40	-	-							
20	41	✓	=							

Issue Classification 	Application/Control No. 15/987,986	Applicant(s)/Patent Under Reexamination Scroggie et al.
	Examiner ROBERTA S DELISLE	Art Unit 3677

CPC						
Symbol					Type	Version
F16B	/	5	/	0084	F	2013-01-01
F16B	/	5	/	0607	I	2013-01-01
F16B	/	2	/	22	I	2013-01-01
F16B	/	19	/	00	I	2013-01-01
F16B	/	19	/	008	I	2013-01-01
F16B	/	21	/	086	I	2013-01-01
F16B	/	2005	/	0678	A	2013-01-01
Y10T	/	24	/	44026	A	2015-01-15
Y10T	/	29	/	49828	A	2015-01-15
F16B	/	5	/	0657	A	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version
/				

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 20	
/ROBERTA S DELISLE/ Primary Examiner, Art Unit 3677 (Primary Examiner) _____ (Date) _____		O.G. Print Claim(s) 1	O.G. Print Figure 1

Issue Classification 	Application/Control No. 15/987,986	Applicant(s)/Patent Under Reexamination Scroggie et al.
	Examiner ROBERTA S DELISLE	Art Unit 3677

INTERNATIONAL CLASSIFICATION			
CLAIMED			
F16B	/	19	/ 00
NON-CLAIMED			
	/		/

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
411	508

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/ROBERTA S DELISLE/ Primary Examiner, Art Unit 3677	24 January 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification 	Application/Control No. 15/987,986	Applicant(s)/Patent Under Reexamination Scroggie et al.
	Examiner ROBERTA S DELISLE	Art Unit 3677

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		10		19	8	28	17	37						
	2		11		20	9	29	18	38						
	3		12	1	21	10	30	19	39						
	4		13	2	22	11	31		40						
	5		14	3	23	12	32	20	41						
	6		15	4	24	13	33								
	7		16	5	25	14	34								
	8		17	6	26	15	35								
	9		18	7	27	16	36								

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 20	
/ROBERTA S DELISLE/ Primary Examiner, Art Unit 3677 (Primary Examiner) _____ (Date) _____		24 January 2020 (Date)	O.G. Print Claim(s) 1 O.G. Print Figure 1

<i>Search Notes</i> 	Application/Control No. 15/987,986	Applicant(s)/Patent Under Reexamination Scroggie et al.
	Examiner ROBERTA S DELISLE	Art Unit 3677

CPC - Searched*		
Symbol	Date	Examiner
F16B 2/22; 5/0084, 0607, 0657; 19/00, 008; 21/086; 2005/0678	10/08/2019	rsd
Y10T 24/44026; 29/49828	10/08/2019	rsd
F16B 19/00	01/24/2020	rsd

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
411	508, 509, 510	10/08/2019	rsd
411	508	01/24/2020	rsd

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
EAST (see search history)	10/08/2019	rsd
Inventors name search	10/08/2019	rsd
Forward / backward citation searching	10/08/2019	rsd
EAST (see search history)	01/24/2020	rsd
Reviewed cited prior art of record	01/24/2020	rsd
Forward / backward citation searching	01/24/2020	rsd

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<i>Search Notes</i> 	Application/Control No. 15/987,986	Applicant(s)/Patent Under Reexamination Scroggie et al.
	Examiner ROBERTA S DELISLE	Art Unit 3677

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
F16B	19/00	01/24/2020	rsd
411	508	01/24/2020	rsd

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BIB DATA SHEET

CONFIRMATION NO. 1773

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
15/987,986	05/24/2018	411	3677 480	0805.00251(61823-US-A)		
APPLICANTS Illinois Tool Works Inc., Glenview, IL; INVENTORS Derek Scroggie, Macomb, MI; Michelle E. Bozinovski, Oakland Charter Township, MI; Robert A. Murawski, Clinton Township, MI; ** CONTINUING DATA ***** This application is a CON of 14/652,819 06/17/2015 PAT 9982694 * which is a 371 of PCT/US2013/073861 12/09/2013 which claims benefit of 61/739,604 12/19/2012 (*)Data provided by applicant is not consistent with PTO records. ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 06/14/2018						
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /ROBERTA S DELISLE/ Acknowledged Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY MI	SHEETS DRAWINGS 4	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 3
ADDRESS QUARLES & BRADY LLP (CHI) ATT: IP DOCKET 411 E. WISCONSIN AVE. SUITE 2350 MILWAUKEE, WI 53202-4426 UNITED STATES						
TITLE PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL						
FILING FEE RECEIVED 1820	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L16	966	(411/508).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/01/24 13:47
L17	316	f16b19/00.cpc.	US-PGPUB; USPAT; USOCR	OR	ON	2020/01/24 13:47
L20	43	("8883059" "3988808" "5393185" "20050079033" "4778320" "5797714" "6805524" "5419606" "20110119875" "3771275" "3550217" "4534530" "5458365" "6715185" "7481474" "20100009851" "20100098515" "20130129450" "5573362" "8511631" "20100029376" "20110243688" "3678797" "3745612" "5339491" "5865500" "6572317" "7770266" "8561265" "7017239" "5028187" "7927050" "5319839" "20060099051" "3249973" "5173026" "5704753" "20060086765" "3577603" "6305055" "6974292").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/01/24 13:48
L21	11	("2005/0079033").URPN.	USPAT	OR	ON	2020/01/24 14:06
L22	112	("2006/0086765" "2006/0099051" "2010/0009851" "2010/0029376" "2010/0098515" "2011/0119875" "2011/0243688" "2013/0129450").URPN.	USPAT	OR	ON	2020/01/24 14:16
L23	439	("1904077" "2028992" "2239798" "2379595" "2424757" "2626772" "2788047" "2826388" "2882780" "2896897" "2926409" "2943373" "2946612" "2951674" "3037596" "3093874" "3118644" "3126185" "3179367" "3181411" "3200694" "3230592" "3234612" "3238686" "3249973" "3269680" "3302913" "3309955" "3327581" "3341228" "3393431" "3417438" "3423055" "3444018" "3483787" "3485133" "3491820" "3550217" "3577603" "3659320" "3701302" "3737128" "3745612" "3776092" "3776580" "3810279" "3836703" "3860999" "4050120" "4122583" "4140235" "4176428" "4186645" "4202463" "4261243" "4312614" "4318208" "4377358" "4393551" "4408372" "4472918" "4489465" "4571134" "4579493" "4715095" "4716633" "4726722" "4728238" "4782564"	US-PGPUB; USPAT; USOCR	OR	ON	2020/01/24 14:17

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"D390776"	"D456699"	"RE27085").PN.	OR			
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"5704753"	"5797714"	"5865500"				
"6305055"	"6572317"	"6715185"				
"6805524"	"6974292"	"7017239"				
"7481474"	"7927050"	"8511631"				
"8561265"	"8883059").URPN.					

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L18	276	f16b19/00.cpc.	US-PGPUB; USPAT	OR	ON	2020/01/24 13:47
L19	853	(411/508).CCLS.	US-PGPUB; USPAT	OR	OFF	2020/01/24 13:47

1/ 24/ 2020 2:35:07 PM
C:\ Users\ rdelisle\ Documents\ EAST\ Workspaces\ Default EAST Workspace (Flat Panel LANDSCAPE).wsp

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
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P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

26711 7590 02/12/2020
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ATT: IP DOCKET
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SUITE 2350
MILWAUKEE, WI 53202-4426

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

Cyndy Marcello	(Typed or printed name)
/Cyndy Marcello/	(Signature)
May 12, 2020	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/987.986	05/24/2018	Derek Scroggie	480805.00251(61823-US-A)	1773

TITLE OF INVENTION: PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1000	\$0.00	\$0.00	\$1000	05/12/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
DELISLE, ROBERTA S	3677	411-508000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Quarles & Brady LLP

2

3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Illinois Tool Works Inc.

Glenview, Illinois

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☒ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 170055

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /NPSchmidbauer/

Date 2020-05-12

Typed or printed name Nicholas P. Schmidbauer

Registration No. 56610

Electronic Patent Application Fee Transmittal

Application Number:	15987986			
Filing Date:	24-May-2018			
Title of Invention:	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL			
First Named Inventor/Applicant Name:	Derek Scroggie			
Filer:	Nicholas P. Schmidbauer./Cyndy Marcello			
Attorney Docket Number:	480805.00251(61823-US-A)			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	1000	1000

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1000

Electronic Acknowledgement Receipt

EFS ID:	39414028
Application Number:	15987986
International Application Number:	
Confirmation Number:	1773
Title of Invention:	PUSH THROUGH RETAINER CONNECTION WITH INTEGRATED HINGING SEAL
First Named Inventor/Applicant Name:	Derek Scroggie
Customer Number:	26711
Filer:	Nicholas P. Schmidbauer./Cyndy Marcello
Filer Authorized By:	Nicholas P. Schmidbauer.
Attorney Docket Number:	480805.00251(61823-US-A)
Receipt Date:	12-MAY-2020
Filing Date:	24-MAY-2018
Time Stamp:	11:40:01
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 1000
RAM confirmation Number	E20205BB40355345
Deposit Account	170055
Authorized User	Cyndy Marcello

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)
 37 CFR 1.20 (Post Issuance fees)
 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	61823-US-A-Issue-Fee-Trans. pdf	168254	no	1
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Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30671	no	2
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Warnings:

Information:

Total Files Size (in bytes):			198925
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2018-05-24
First Named Inventor	Scroggie	
Art Unit	3677	
Examiner Name	Delisle, Roberta S.	
Attorney Docket Number	61823-A	

	20	7770266		2010-11---	Higgins
--	----	---------	--	------------	---------

If you wish to add additional U.S. Patent citation information please click the Add button.

Add

U.S.PATENT APPLICATION PUBLICATIONS

Remove

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20060099051		2006-05-11	Moerke	
	2	20100009851		2010-04-22	Raymond	
	3	20110119875		2011-05-26	Iwasaki	
	4	20110243688		2011-10-06	Klein	
	5	20050079033		2005-04---	Benedetti	
Change(s) applied to document 6, /G.R.P./	6	20100029376		02-2010 ~~2010-11---~~	Hardy et al. ~~Koike~~	

If you wish to add additional U.S. Published Application citation information please click the Add button.

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FOREIGN PATENT DOCUMENTS

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/987,986	06/16/2020	10683882	480805.00251(61823-US-A)	1773

26711 7590 05/27/2020

QUARLES & BRADY LLP (CHI)
ATT: IP DOCKET
411 E. WISCONSIN AVE.
SUITE 2350
MILWAUKEE, WI 53202-4426

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 107 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Derek Scroggie, Macomb, MI;
Illinois Tool Works Inc., Glenview, IL;
Michelle E. Bozinovski, Oakland Charter Township, MI;
Robert A. Murawski, Clinton Township, MI;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Northern District of Illinois, Eastern Division on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 20-CV-5416	DATE FILED 9/11/2020	U.S. DISTRICT COURT Northern District of Illinois, Eastern Division
PLAINTIFF Illinois Tool Works Inc.		DEFENDANT Termax LLC et al
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 10,683,882 B2	6/16/2020	Illinois Tool Works Inc.
2		
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK Thomas G. Bruton	(BY) DEPUTY CLERK S. Bodnarchuk	DATE 9/14/2020
---------------------------	------------------------------------	-------------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TERMAX LLC,
Petitioner,

v.

ILLINOIS TOOL WORKS INC.,
Patent Owner.

IPR2021-00724
Patent 10,683,882 B2

Before JAMES A. TARTAL, KEVIN W. CHERRY, and
RICHARD H. MARSCHALL, *Administrative Patent Judges*.

MARSCHALL, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314, 37 C.F.R. § 42.4

INTRODUCTION

Termax LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–20 of U.S. Patent No. 10,683,882 B2 (“the ’882 patent”) (Ex. 1001). Pet. 1. Illinois Tool Works Inc. (“Patent Owner”) filed a Preliminary Response (Paper 12, “Prelim. Resp.”). With our authorization, Petitioner filed a Preliminary Reply (Paper 13, “Prelim. Reply”) and Patent Owner filed a Preliminary Sur-reply (Paper 14, “Prelim. Sur-reply”).

We have authority, acting under the designation of the Director, to determine whether to institute an *inter partes* review. 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). We may not authorize an *inter partes* review to be instituted “unless . . . the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a).

Upon consideration of the arguments and evidence presented by both parties, we determine Petitioner has demonstrated a reasonable likelihood that it would prevail with respect to at least one of the claims challenged in the Petition. Accordingly, we institute an *inter partes* review of all challenged claims of the ’882 patent.¹

¹ See *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1354, 1359–60 (2018); PTAB Rules of Practice for Instituting on All Challenged Patent Claims and All Grounds and Eliminating the Presumption at Institution Favoring Petitioner as to Testimonial Evidence (“PTAB Rules”), 85 Fed. Reg. 79,120, 79,120 (Dec. 9, 2020) (to be codified at 37 C.F.R. pt. 42) (“[T]he Board will either institute review on all of the challenged claims and grounds of unpatentability presented in the petition or deny the petition.”).

BACKGROUND

A. Real Parties in Interest

Petitioner identifies itself, Termax Company, and LISI Holding North America as its real parties in interest. Pet. 1; Paper 11 (Petitioner's Updated Mandatory Notices), 2.

Patent Owner identifies itself as the real party in interest. Paper 6 (Patent Owner's Mandatory Notices), 1.

B. Related Matters

Petitioner and Patent Owner identify the following related matter involving the '882 patent: *Illinois Tool Works Inc. v. Termax LLC*, Case No. 1-20-cv-05416 (N.D. Ill.) (filed September 11, 2020). Pet. 1; Paper 6, 1.

C. The '882 Patent

The '882 patent relates to “connections incorporating push-in type retainers having downward biasing wing features which secure the retainer in place after insertion through an aperture.” Ex. 1001, 1:21–23. The connections include “seals for creating a barrier to the penetration of moisture, dust and noise through the aperture in which the retainer is secured.” *Id.* at 1:24–26. Automobiles often include such connections to secure molding or other surface structures to underlying body panels or support beams. *Id.* at 1:32–34. According to the '882 patent, the overall connection assembly typically works in conjunction with other components to establish a “zero gap” condition between the underlying sheet metal panel and outer molding. *Id.* at 1:57–61. The existence of a gap may lead to undesirable rattling noises as well as the introduction of dirt and water between the underlying support panel and the molding. *Id.* at 2:3–8. Prior

art efforts address the gap problem by incorporating various sealing structures, which the '882 patent seeks to improve upon. *See id.* at 2:13–3:3.

Figure 1 of the '882 patent is reproduced below.

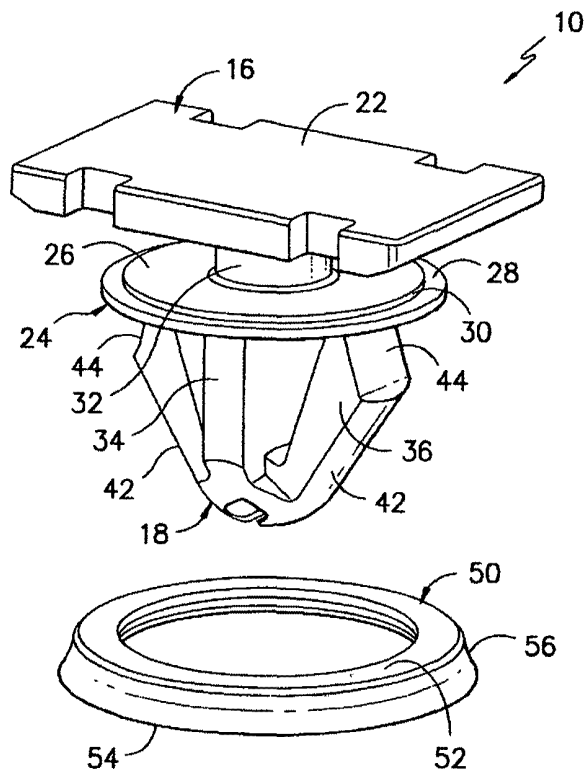


Figure 1 shows retainer 10, which includes retainer head 16 and snap engaging clip portion 18. Ex. 1001, 4:35–36. Figure 1 also depicts lower collar 24 and perimeter seal 50, which includes seal body portion 52, flared sealing foot 54, and living hinge 56 at the intersection of body portion 52 and sealing foot 54. *Id.* at 4:61–64, 5:47–48, 6:10–15, 6:24–27.

Figure 3 of the '882 patent is reproduced below.

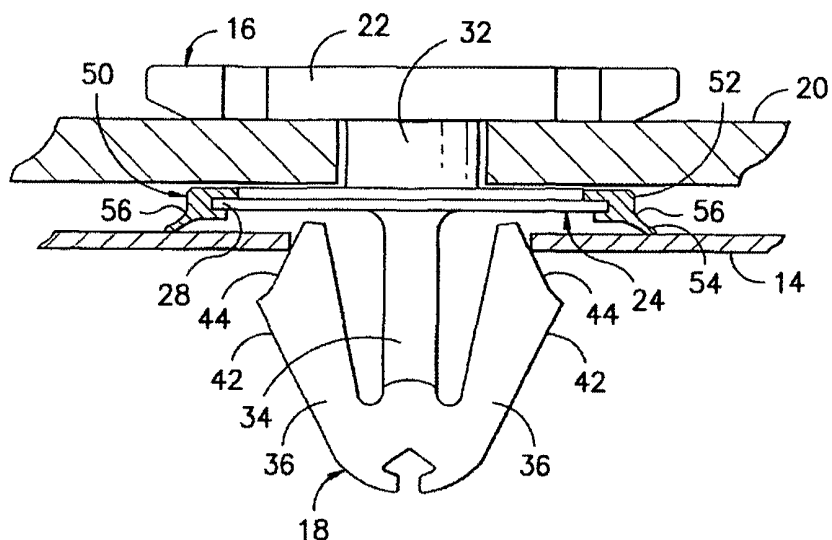


Figure 3 shows perimeter seal 50 disposed about the perimeter of lower collar 24, with sealing foot 54 in contact with support panel 14. Ex. 1001, 5:47–50, 6:24–25. In operation, neck structure 32 of retainer 10 slides into a slot in intermediate connector 20, which in turn may be attached to an overlying molding. *Id.* at 5:14–19. Clip portion 18 secures retainer 10 to panel 14 by use of wing elements 36 that flex inward during insertion of clip portion 18 through opening 38 in panel 14. *Id.* at 5:23–33. Distal face surface 44 abuts opening 38 of panel 14 after insertion of clip portion 18, urging retainer 10 downward toward panel 14. *Id.* at 5:34–44, 6:56–63. Downward movement will continue until “molding 12 comes into contact with the underlying support panel 14 to establish a zero gap condition.” *Id.* at 6:63–66. As “sealing foot 54 is pressed against the support panel 14 during normal use, the sealing foot 54 readily flexes upwardly towards a flattened condition about a living hinge 56.” *Id.* at 6:24–27.

D. Challenged Claims

Petitioner challenges claims 1–20 of the '882 patent. Pet. 1.

Claims 1, 11, and 19 are independent, and we reproduce claim 1 below.

1. A connection assembly configured to join a surface element to an underlying support structure while maintaining a substantially zero gap, abutting relation between the surface element and the support structure, the connection assembly comprising:

- a press-in retainer configured for insertion into an acceptance opening in the support structure, the retainer including a retainer head and a clip portion projecting from the retainer head,

- wherein the retainer head includes a first platform and a second platform spaced from the first platform, the retainer further including a seal disposed at least partially about the second platform, the seal having a durometer lower than a durometer of the second platform, and the seal including a body portion engaging the second platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the second platform, and a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the second platform, wherein the retainer head is configured to be slid into a channel defined by the surface element, and the clip portion is configured to be pushed into the acceptance opening in the support structure,

- wherein the clip portion is configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening,

- wherein the sealing foot is configured to flex about a living hinge provided between the body portion and the sealing foot from an unstressed condition to a fully flexed condition while remaining outboard from the second platform and maintain sliding contact with the support structure, wherein in the unstressed condition, the sealing

foot forms the obtuse angle relative to the plane of the second surface of the second platform, and wherein in the fully flexed condition, the free edge of the sealing foot is moved radially outwardly until the sealing foot and the second surface of the second platform define a flat surface, and wherein the sealing foot is configured to flex from the unstressed condition toward the fully flexed condition in order to create the substantially zero gap between the surface element and the support structure in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.

Ex. 1001, 8:22–67.

E. Asserted Grounds and Evidence

Petitioner contends that the challenged claims are unpatentable based on the following grounds:

Claims Challenged	35 U.S.C. § ²	References
1–20	103	Sawaya, ³ Pue, ⁴ Iwasaki ⁵

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended certain sections of this statute, including § 103, and the effective date of the relevant amendment is March 16, 2013. The ’882 patent issued from an application filed on May 24, 2018, and claims priority to several applications, the earliest of which is a provisional application filed on December 19, 2012. Ex. 1001, codes (22), (63), (60). The filing date of the ’882 patent is after the effective date of the AIA amendment to the statute, but the ’882 patent claims priority to an application filed before the effective date. Petitioner asserts that the pre-AIA version of §103 applies here due the claim of priority, and Patent Owner does not dispute this assertion. Pet. 2. The applicable version of the statute, however, does not affect the outcome of this Decision. The parties may address this issue further, if necessary, during trial.

³ Japanese Patent No. 4,252,827, issued April 8, 2009 (Ex. 1009, Ex. 1008 (certified translation)) (collectively, “Sawaya”).

⁴ US 2005/0189775 A1, published Sept. 1, 2005 (Ex. 1013) (“Pue”).

⁵ US 2011/0119875 A1, published May 26, 2011 (Ex. 1010) (“Iwasaki”).

Claims Challenged	35 U.S.C. § ²	References
1–20	103	Benedetti, ⁶ Pue, Iwasaki

Pet. 27–28. In support of these grounds, Petitioner submits a Declaration of Robert Wheelock (Ex. 1005) and a Second Declaration of Robert Wheelock (Ex. 1014).

ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner contends a person of ordinary skill in the art (“POSITA”) would have “at least a Bachelor’s degree in Mechanical Engineering and 3 years’ experience in push-in fastener engineering—specifically sealing fasteners and related injection molding manufacturing processes and materials.” Pet. 13 (citing Ex. 1005 ¶ 21). At this stage of the proceeding, Patent Owner does not refute Petitioner’s proposed level of ordinary skill in the art or propose a different level of ordinary skill in the art.

We find Petitioner’s proposal is consistent with the level of skill reflected in the ’882 patent and the asserted references. For purposes of this Decision, we apply Petitioner’s proffered level of ordinary skill in the art.

B. Claim Construction

We interpret a claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b) (2019). Under this standard, we construe the claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.* Furthermore, at this stage in the proceeding, we expressly construe the claims to the extent necessary to

⁶ US 8,561,265 B2, filed April 12, 2011 (Ex. 1012) (“Benedetti”).

determine whether to institute *inter partes* review. See *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

Petitioner proposes constructions for “living hinge” and “abutting/abut.” Pet. 13–15. Patent Owner argues that “there is no need to construe these terms” or any of the remaining terms in the challenged claims. Prelim. Resp. 15. On the current record, we determine that no claim term requires an express construction for the purpose of determining whether to institute *inter partes* review.

C. Obviousness Based on Sawaya, Pue, and Iwasaki

Petitioner challenges claims 1–20 under 35 U.S.C. § 103, contending that the claimed subject matter would have been obvious over “Sawaya [a]lone and/or in light of Pue, or in further view of Iwasaki.” Pet. 28–61. Patent Owner argues that Petitioner has failed to show a reasonable likelihood that the asserted references render the claimed subject matter obvious. Prelim. Resp. 19–34. We first summarize the legal standard and relevant aspects of the prior art, and then turn to the parties’ arguments.

1. Legal Standard for Obviousness

In *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness under § 103 that requires consideration of four factors: (1) the “level of ordinary skill in the pertinent art,” (2) the “scope and content of the prior art,” (3) the “differences between the prior art and the claims at issue,” and (4) “secondary considerations” of nonobviousness such as “commercial

success, long felt but unsolved needs, failure of others, etc.” *Id.* at 17–18; *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007).

2. Sawaya

Sawaya relates “to a resin clip used for securing a member to be attached such as an automobile interior component or the like to a panel.” Ex. 1008 ¶ 1. Sawaya’s resin clip includes a “sealing pad” to prevent the flow of moisture and air and “to seal a gap in the hole of the panel and to isolate the inside and outside of the panel.” *Id.* at ¶ 4.

Sawaya's Figure 2 is reproduced below.

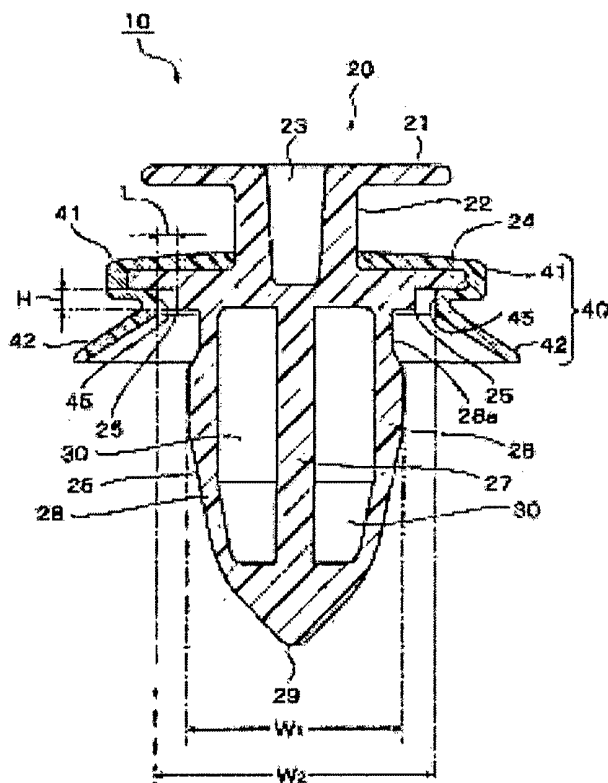


Figure 2 shows a cross-sectional view of Sawaya's resin clip 10, which includes head part 21, leg part 26, and flange part 24. Ex. 1008 ¶ 55. Figure 2 also depicts sealing pad 40, which includes attaching part 41, skirt part 42, and folded back part 45. *Id.* Attaching part 41 of sealing pad 40

covers an upper surface and a portion of a lower surface of flange part 24, and skirt part 42 extends obliquely and outward from the inner circumference of attaching part 41. *Id.* at ¶ 28.

Sawaya's Figure 6 is reproduced below.

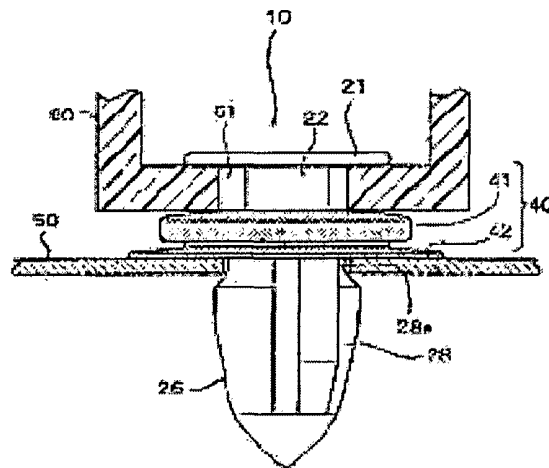


Figure 6 shows member to be attached 60 and panel 50 connected to one another using resin clip 10. Ex. 1008 ¶ 55. Figure 6 also depicts head part 21 of resin clip 10 engaging hole 61 of member 60 and leg part 26 of resin clip 10 inserted through a locking hole in panel 50. *Id.* at ¶¶ 51, 52, 55. As member 60 approaches panel 50, the lower surface of skirt part 42 of sealing pad 40 contacts the top of panel 50 and extends outwardly such that it “is closely sealed to the surface” of panel 50. *Id.* at ¶¶ 52, 54.

3. Pue

Pue relates “to trim panels for vehicles and, more particularly, to gaps between trim panels and a vehicle body.” Ex. 1013 ¶ 1. Pue describes numerous disadvantages of gaps between trim panels and the vehicle body. *Id.* at ¶ 13. For example, Pue states that gaps detract from the visual appearance of the vehicle, allow ingress of air and moisture into the

passenger compartment, and exacerbate vibrations that generate noises such as squeaks and rattles. *Id.*

4. Iwasaki

Iwasaki relates “to a clip-mounting seat which is used to mount a clip on an inner surface side of a vehicle interior component,” such that the clip fixes the vehicle body panel to the vehicle interior component. Ex. 1010 ¶ 1.

Iwasaki’s Figure 2 is reproduced below.

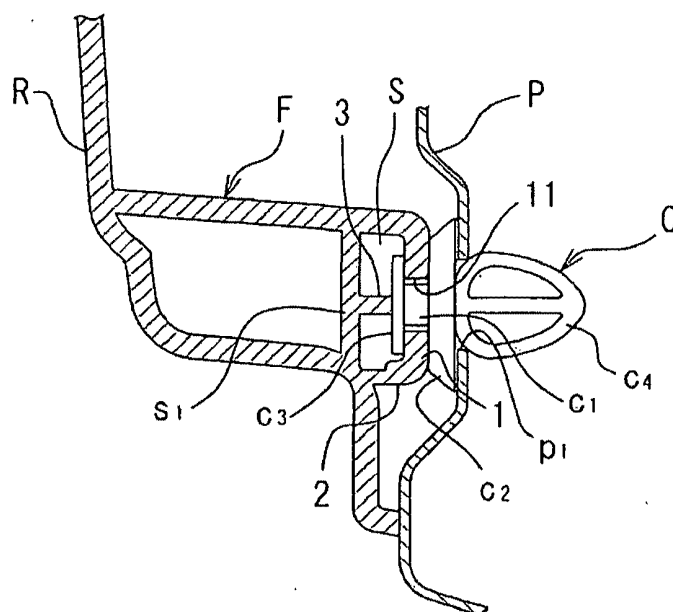


Figure 2 shows vehicle internal component R, such as a door lining, clip-mounting seat F, door panel P, and clip C. Ex. 1010 ¶¶ 28–29. Figure 2 also depicts a flared flange portion c2 of clip C in the space between panel P and mounting seat F. *Id.* at ¶ 30. The bottom of Figure 2 shows internal component R abutting door panel P.

5. Discussion of Claim 1

Petitioner contends that “Sawaya explicitly discloses all but one element of independent Claim 1 . . . the maintenance of a substantially zero

gap” between the surface element and support structure and that the zero gap would have been obvious to one of ordinary skill in the art based on Sawaya alone and further in view of Pue and/or Iwasaki. *Id.* at 28. To support its arguments, Petitioner identifies certain passages and figures in Sawaya and explains the significance of those disclosures with respect to the corresponding claim limitation. *Id.* at 28–44. Petitioner also articulates reasons to modify the relied-upon aspects of Sawaya based on Pue and Iwasaki, with an alleged reasonable expectation of success. *Id.* at 29–33. Patent Owner argues that the claim requires a specific solution to the gap condition that none of the prior art discloses. Prelim. Resp. 19–28. Patent Owner also argues that none of the prior art discloses a “sealing foot disposed outboard from the second platform” as required by claim 1. *Id.* at 30–34.

We have reviewed Petitioner’s contentions with respect to claim 1, and for the reasons below, we determine that the Petition shows a reasonable likelihood that Petitioner would prevail in demonstrating that claim 1 would have been obvious based on Sawaya, Pue, and Iwasaki.⁷ Pet. 28–44. We address in turn below each of Patent Owner’s arguments.

a. “substantially zero gap”

The preamble and body of claim 1 each refer to creating and maintaining “a substantially zero gap” between the surface element and support structure. Pet. 28, 42. Petitioner contends that a POSITA “would have known to avoid intrusion of unwanted dirt and water between trim and

⁷ We need not reach whether the Petition shows a reasonable likelihood that claim 1 would have been obvious based on Sawaya alone, or a combination of Sawaya and Pue or Sawaya and Iwasaki, but we institute on those challenges as well. The parties may further address these issues during trial.

vehicle body by maintaining a substantially zero gap abutting relation between them.” *Id.* at 29 (citing Ex. 1005 ¶ 64). Petitioner also contends that a POSITA would have known that maintaining a zero gap would avoid unwanted rattling noises and improve the aesthetic appearance of the vehicle. *Id.* Petitioner relies on Pue’s explicit acknowledgement of these concerns, and argues that “[s]uch knowledge would have motivated [POSITAs] to dimension Sawaya’s clip, surface element and support structure, to maintain such a substantially zero gap abutting relation.” *Id.* at 30–31 (citing Ex. 1005 ¶ 66; Ex. 1013 ¶ 3). Petitioner also relies on Iwasaki’s depiction of a substantially zero gap between its surface element (R) and support structure (P), as shown in Iwasaki’s Figure 2 in our overview of Iwasaki above. *Id.* at 31 (citing Ex. 1010, Fig. 2). Petitioner argues that these disclosures would have motivated a POSITA to dimension Sawaya’s clip, surface element, and support structure to maintain a substantially zero gap, and that it would have been a routine matter to adjust the height of the head part of Sawaya’s clip above its support panel 50, as well as its connector, “to ensure contact between [Sawaya’s] surface element and support structure.” *Id.* at 32 (citing Ex. 1005 ¶ 70).

Patent Owner argues that Petitioner fails to provide any reason, other than hindsight, to support its modification of Sawaya to create the claimed “substantially zero gap” condition. Prelim. Resp. 20–23. Patent Owner contends that Pue and Iwasaki fail to provide a sound basis for the modification because the references solve the gap problem in different ways from that claimed in the ’882 patent. *Id.* at 21, 23–26. As to Iwasaki, Patent Owner also contends that Petitioner improperly assumes that no gap exists

and that “Iwasaki’s drawing does not disclose a ‘zero gap’ between the trim and body panel.” *Id.* at 26–27.

As an initial matter, whether we agree with Patent Owner that neither Pue nor Iwasaki disclose the claimed manner of creating a substantially zero gap by flexing a sealing foot does not impact the outcome here, as the Petition does not rely on these references in that manner. *See* Pet. 29–32. Instead, the Petition relies on Pue for its teaching of the negative consequences of trim panel gaps and relies on Iwasaki as disclosing a substantially zero gap between its surface element and support structure. *See id.* at 30–31. Patent Owner contends that an undisclosed gap may exist between Iwasaki’s surface element and support structure, but we decline to read in such a disclosure when Iwasaki’s figure shows no gap and supports Petitioner’s position that a substantially zero gap exists. *See* Ex. 1010, Fig. 2; Pet. 31 (citing Ex. 1005 ¶ 68); Prelim. Resp. 26–27. At this stage, Patent Owner does not directly dispute that a POSITA would have at least been motivated to eliminate any gap between Sawaya’s molding 12 and panel 14. *See* Prelim. Resp. 19 (“[A]t best, Petitioner only shows that other different and irrelevant solutions to the gap condition would have been obvious—not the specifically claimed solution to the ’882 patent.”). That motivation, coupled with Petitioner’s supported assertion that one of ordinary skill in the art would have had a reasonable expectation of success in modifying Sawaya’s structure to create the substantially zero gap, adequately supports Petitioner’s position as to the “substantially zero gap” limitation at this stage. *See* Pet. 29–33; Ex. 1005 ¶¶ 64–71.

b. *“the sealing foot is disposed outboard from the second platform”*

Claim 1 requires a “seal including a body portion engaging the second platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the second platform.” Petitioner contends that Sawaya’s flange 24 discloses the claimed second platform and Sawaya’s sealing pad 40 discloses the claimed seal. Pet. 34–35 (citing Ex. 1005 ¶¶ 75–76; Ex. 1008 ¶¶ 18, 27–29, Fig. 2). Petitioner also contends that Sawaya’s skirt portion 42 of sealing pad 40 discloses a sealing foot “disposed outboard from the second platform” and provides an annotated version of Sawaya’s Figure 2 identifying the sealing foot adjacent the living hinge. *Id.* at 35–36 (citing Ex. 1005 ¶¶ 77–78, 82; Ex. 1008 ¶ 28, Fig. 2).

Patent Owner argues that “the ‘*sealing foot*’ starts at where the ‘body portion’ of the seal engages the retainer body” and that the ’882 patent specification emphasizes that no portion of the sealing foot is below lower collar 24 (corresponding to the claimed second platform). Prelim. Resp. 30–32 (citing Ex. 1001, 6:17–23, Figs. 1, 3). Patent Owner contends that “Petitioner agrees” that the sealing foot must include more than the end of the seal. *Id.* at 31 (citing Pet. 14, 35). Patent Owner further argues that Petitioner’s identification of the sealing foot on this issue lacks sufficient explanation, and that “Sawaya’s sealing foot is not disposed ‘outboard’ from the second platform” because Sawaya’s sealing foot starts “underneath the second platform.” *Id.* at 32–33 (citing Pet. 34–35; Ex. 1008, Figs. 2, 5(a)–(c)).

In its Preliminary Reply, Petitioner argues that Patent Owner improperly adds a claim requirement by suggesting that the sealing foot

must be entirely outboard the second platform. Prelim. Reply 1. Petitioner contends that the claims do not include the term “entirely” and the prosecution history makes clear that “entirely” was removed from the claims and should not be added now. *Id.* at 1–2 (citing Ex. 1003, 13–17, 50–54). Petitioner also argues that even if the claim were as narrow as Patent Owner suggests, it sufficiently identified a sealing foot entirely outboard of a second platform in Sawaya’s Figure 2. *Id.* at 2–3 (citing Pet. 35–36, 39–42; Ex. 1009, Fig. 2). Patent Owner contends that Petitioner knew from the related district court litigation that the “sealing foot . . . disposed outboard” limitation was in dispute and should have done more to address it in the Petition. Prelim. Sur-reply 2. Patent Owner further argues that its approach does not alter the meaning of “disposed outboard” and remains consistent with its use in the ’882 patent specification. *Id.* at 3.

We find a formal claim construction of “disposed outboard” is unwarranted at this stage of the proceeding when neither party did so in its initial briefing, Patent Owner continues to maintain that it merely applies the “plain and ordinary meaning” of the term, and Patent Owner does not respond to Petitioner’s reliance on the prosecution history, which could impact any formal claim construction. *See* Prelim. Sur-reply 2–3. Moreover, we need not formally construe “disposed outboard” in order to resolve the disputes as to this limitation. Even if the limitation requires an *entire* sealing foot outboard of the second platform, Petitioner identifies a sealing foot entirely outboard of Sawaya’s flange 24 corresponding to the claimed second platform. *See* Pet. 35–36 (citing Ex. 1005 ¶¶ 77, 82; Ex. 1009, Fig. 2) (identifying a portion of Sawaya’s skirt part 42 corresponding to the sealing foot entirely outboard of flange 24).

As to Patent Owner's argument that "Petitioner agrees" that the sealing foot must include more than the tip or end of the seal, we are not persuaded that Petitioner made any such concession in the Petition. *See* Prelim. Resp. 31. Patent Owner's argument also lacks support because (a) Petitioner specifically identifies the sealing foot in an annotated figure that includes only the end portion of Sawaya's skirt part 42 rather than the entire skirt part 42; and (b) the claim term "foot" suggests that an extremity of the seal made up of something less than the entire structure extending from the seal body may be sufficient to satisfy the limitation.

Based on the current record at this stage of the proceeding, Petitioner establishes adequately that Sawaya discloses a "sealing foot . . . disposed outboard" of the second platform. During trial, the parties may further address the construction of "disposed outboard" as well as the structure Petitioner relies upon in Sawaya to allegedly teach the limitation.

c. Remaining Limitations and Conclusion as to Claim 1

Patent Owner does not offer any arguments specifically addressing the remaining limitations of claim 1 or further arguments as to Petitioner's reasons to modify Sawaya as Petitioner proposes. *See* Prelim. Resp. 19–33; Prelim. Sur-reply 1–3. We have reviewed these aspects of Petitioner's contentions, and determine that the Petition provides a sufficient showing, at this stage of the proceeding, that the combination of Sawaya, Pue, and Iwasaki discloses each limitation of claim 1 and that one of ordinary skill in the art would have had reason to modify Sawaya as Petitioner proposes.

For the reasons above, we determine, based on the current record, that the Petition shows a reasonable likelihood that Petitioner would prevail in demonstrating that claim 1 would have been obvious based on Sawaya, Pue, and Iwasaki.

6. *Remaining Claims*

Petitioner also contends that claims 2–20 are unpatentable based on Sawaya, Pue, and Iwasaki. Pet. 44–61. Patent Owner does not present any arguments specifically addressing claims 2–20 beyond those we address above in the context of claim 1.⁸ See Prelim. Resp. 19–34; Prelim. Sur-reply 1–3. We include claims 2–20 in the context of this asserted ground in the instituted *inter partes* review. See *SAS*, 138 S. Ct. at 1354, 1359–60; PTAB Rules, 85 Fed. Reg. at 79,120 (“[T]he Board will either institute review on all of the challenged claims and grounds of unpatentability presented in the petition or deny the petition.”).

D. *Obviousness Based on Benedetti, Pue, and Iwasaki*

Petitioner challenges claims 1–20 under 35 U.S.C. § 103, contending that the claimed subject matter would have been obvious over Benedetti alone or in light of Pue and Iwasaki. Pet. 61–91. Patent Owner argues that

⁸ Patent Owner argues that if it prevails in its argument as to the “substantially zero gap” limitation in claim 1, it should also prevail as to independent claim 11 and dependent claims 12–15, 17, and 18, even though the “substantially zero gap” limitation does not appear in those claims. Prelim. Resp. 28–30. Patent Owner bases this argument on Petitioner’s grouping of claims 1–20 together and an alleged reliance on its “substantially zero gap” analysis for claim 11. See *id.* We disagree. Claims 11–15, 17, and 18 do not include the “substantially zero gap” limitation and we will not treat them as if they do merely because they are grouped with other claims. In addition, Petitioner expressly acknowledges the failure of Sawaya to disclose the limitation in the context of claim 1, but does not include a similar statement for claim 11 or rely on the analysis of the zero gap limitation as part of its analysis of claim 11. See Pet. 28, 54–55 (referring back to some portions of the analysis of claim 1 for support, but not the portions of claim 1 addressing the “substantially zero gap” limitation).

Petitioner fails to show a reasonable likelihood that the asserted references render the claimed subject matter obvious. Prelim. Resp. 34–49.

1. Benedetti

Benedetti “relates to automobile vehicle trim fasteners.” Ex. 1012, 1:5–6. Benedetti’s fastener 10 includes a component engagement head 16, first resilient seal member 22, and second resilient seal member 32. *Id.* at 3:28–46. “First resilient seal member 22 . . . can include any of a curved, an umbrella or a concave shape collectively referred to as a concave seal surface 44 directed away from component engagement head 16.” *Id.* at 4:15–18. Fastener 10 can be used to connect panel 100 to trim member 110. *Id.* at 6:57–60. When used in this manner, a seal is created between first resilient seal member 22 and first panel face 102 of panel 100. *Id.* at 7:2–7.

2. Discussion of Claim 1

We already determined that Petitioner met its burden in showing a reasonable likelihood of showing claim 1 would have been obvious based on Sawaya, Pue, and Iwasaki, and we therefore institute as to all challenged claims and all grounds presented in the Petition, including this one. We briefly address this challenge to provide input to the parties during trial.

Petitioner contends that “Benedetti explicitly discloses all but one element of independent Claim 1 . . . maintenance of a substantially zero gap” and that the zero gap would have been obvious to one of ordinary skill in the art based on Benedetti alone and further in view of Pue and Iwasaki. Pet. 61–63. To support its arguments, Petitioner identifies certain passages and figures in Benedetti and explains the significance of those disclosures with respect to the corresponding claim limitation. *Id.* at 63–74. Petitioner

also articulates reasons to modify the relied-upon aspects of Benedetti based on Pue and Iwasaki, with an alleged reasonable expectation of success. *Id.* at 62–63. As to the “substantially zero gap” limitation, Petitioner relies in part on similar arguments based on Sawaya. *Id.* at 62.

Patent Owner raises two arguments as to Petitioner’s challenge based on Benedetti, Pue, and Iwasaki. Prelim. Resp. 34–49. First, Patent Owner again argues that the claim requires a specific solution to the zero gap condition that none of the prior art discloses. *Id.* at 34–42. Because the parties’ arguments as to the “substantially zero gap” limitation largely track those made above in the context of the challenge based on Sawaya, Pue, and Iwasaki, we find that Petitioner establishes sufficiently that the combination of Benedetti, Pue, and Iwasaki discloses the “substantially zero gap” limitation, for the same reasons discussed above.

Patent Owner also argues that none of the prior art discloses a sealing foot configured to flex “towards the fully flexed condition” and that “in the fully flexed condition . . . the sealing foot and the second surface of the second platform define a flat surface” as required by claim 1. Prelim. Resp. 43–49. In the Petition, Petitioner relies on the skirt portion of Benedetti’s resilient seal 22 as disclosing the “sealing foot.” Pet. 67, 71. Petitioner argues that “[w]hen fully flexed, the free edge of Benedetti’s skirt portion moves radially outwardly until it defines a flat surface in [the] manner described in the ’882 Patent.” *Id.* at 72 (citing Ex. 1001, Fig. 5; Ex. 1014 ¶ 82; Ex. 1012, Fig. 8). Petitioner also argues that a POSITA “would have appreciated that skirt portion of resilient seal 22, when fully flexed, would form a flattened surface with the second platform were it used with a panel 100 having greater thickness than shown.” *Id.* at 72–73 (citing

Ex. 1014 ¶ 83). Patent Owner argues that “Benedetti’s seal is specifically and intentionally configured so that its sealing foot is unable to flex towards a fully flexed or substantially flattened condition.” Prelim. Resp. 46. Patent Owner supports this argument by relying on Benedetti’s second resilient seal 32, and argues that “the bottom seal (32) prevents the top seal (22) from fully flexing” because if seal 22 flexed fully, flange 50 of seal 32 would no longer provide a seal. *Id.* at 46–48 (citing Ex. 1012, 2:64–67, 5:3–5, 6:41–46, 7:2–7, Figs. 7, 8, 10).

Patent Owner’s argument, on the current record, does not show a deficiency in the position set forth by Petitioner. Petitioner adequately supports its position that Benedetti would move toward a more flattened orientation upon further flexing with analysis of Benedetti and support from its declarant. *See* Pet. 72–73; Ex. 1014 ¶¶ 82–83. Patent Owner’s argument appears to be premised on the assumption that Benedetti already shows its seal 22 near its maximum flexed position such that further flexing toward a flattened position would undermine the functionality of flange 50 and seal 32. *See* Prelim. Resp. 46–48. Such an interpretation of Benedetti goes beyond the express disclosure of Benedetti and lacks support beyond mere attorney argument. *See id.* We view such disputes over the interpretation of Benedetti’s disclosure, and how its seals may or may not interact with one another upon further flexing, as best resolved during trial on a full record. Based on the current record, Petitioner supports sufficiently its position as to this limitation.

Patent Owner does not offer any arguments specifically addressing the remaining limitations of claim 1 or further arguments as to Petitioner’s reasons to modify Benedetti as Petitioner proposes. *See* Prelim. Resp. 34–

49; Prelim. Sur-reply 3–4. We have reviewed these aspects of Petitioner’s contentions, and determine that the Petition provides a sufficient showing, at this stage of the proceeding, that the combination of Benedetti, Pue, and Iwasaki satisfies each limitation of claim 1 and that one of ordinary skill in the art would have had reason to modify Benedetti as Petitioner proposes.

For the reasons above, we determine, based on the current record, that the Petition shows a reasonable likelihood that Petitioner would prevail in demonstrating that claim 1 would have been obvious based on Benedetti, Pue, and Iwasaki.

3. Remaining Claims

Petitioner also contends that claims 2–20 are unpatentable based on Benedetti, Pue, and Iwasaki. Pet. 74–91. Patent Owner does not present any arguments specifically addressing claims 2–20 beyond those we address above in the context of claim 1. *See* Prelim. Resp. 34–49; Prelim. Sur-reply 3–5. We include claims 2–20 in the context of this asserted ground in the instituted *inter partes* review. *See SAS*, 138 S. Ct. at 1354, 1359–60; PTAB Rules, 85 Fed. Reg. at 79,120.

CONCLUSION

For the reasons set forth above, Petitioner demonstrates a reasonable likelihood of prevailing with respect to at least one of the challenged claims, and we institute an *inter partes* review based on all of the asserted grounds of unpatentability set forth in the Petition for all challenged claims. At this stage of the proceeding, we have not made a final determination as to the patentability of any challenged claim or any underlying factual or legal issue.

ORDER

In consideration of the foregoing, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.4, an *inter partes* review of the '882 patent is hereby instituted with respect to claims 1–20 on all challenges presented in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), notice is hereby given of the institution of a trial, which will commence on the entry date of this Decision.

IPR2021-00724
Patent 10,683,882 B2

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TERMAX LLC
Petitioner,

v.

ILLINOIS TOOL WORKS INC.,
Patent Owner.

IPR2021-00724
Patent 10,683,882 B2

Before JAMES A. TARTAL, KEVIN W. CHERRY, and
RICHARD H. MARSCHALL, *Administrative Patent Judges*.

MARSCHALL, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)
Dismissing Patent Owner's Motion to Exclude
37 C.F.R. § 42.64

Termax LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–20 of U.S. Patent No. 10,683,882 B2 (“the ’882 patent”) (Ex. 1001). Pet. 1. Illinois Tool Works Inc. (“Patent Owner”) filed a Preliminary Response (Paper 12, “Prelim. Resp.”). With our authorization, Petitioner filed a Preliminary Reply (Paper 13) and Patent Owner filed a Preliminary Sur-reply (Paper 14). Pursuant to 35 U.S.C. § 314, we instituted an *inter partes* review of claims 1–20 of the ’882 patent on all presented challenges. Paper 15 (“Inst. Dec.”).

After institution, Patent Owner filed a Response (Paper 19, “PO Resp.”), Petitioner filed a Reply (Paper 26, “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 30, “PO Sur-reply”). In addition, Patent Owner filed a Motion to Exclude (Paper 33), Petitioner filed an Opposition to that Motion (Paper 35), and Patent Owner filed a Reply (Paper 36). An oral hearing in this proceeding was held on June 22, 2022, and a transcript of the hearing is included in the record (Paper 39, “Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) (2018) and 37 C.F.R. § 42.73 (2019). For the reasons set forth below, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–20 of the ’882 patent are unpatentable.

BACKGROUND

A. *Real Parties in Interest*

Petitioner identifies itself, Termax Company, and LISI Holding North America as its real parties in interest. Pet. 1; Paper 11 (Petitioner’s Updated Mandatory Notices), 2.

Patent Owner identifies itself as the real party in interest. Paper 6 (Patent Owner's Mandatory Notices), 1.

B. Related Matters

Petitioner and Patent Owner identify the following related matter involving the '882 patent: *Illinois Tool Works Inc. v. Termax LLC*, Case No.1-20-cv-05416 (N.D. Ill.) (filed September 11, 2020). Pet. 1; Paper 6, 1.

C. The '882 Patent

The '882 patent relates to “connections incorporating push-in type retainers having downward biasing wing features which secure the retainer in place after insertion through an aperture.” Ex. 1001, 1:21–23. The connections include “seals for creating a barrier to the penetration of moisture, dust and noise through the aperture in which the retainer is secured.” *Id.* at 1:24–26. Automobiles often include such connections to secure molding or other surface structures to underlying body panels or support beams. *Id.* at 1:32–34. According to the '882 patent, the overall connection assembly typically works in conjunction with other components to establish a “zero gap” condition between the underlying sheet metal panel and outer molding. *Id.* at 1:57–61. The existence of a gap may lead to undesirable rattling noises as well as the introduction of dirt and water between the underlying support panel and the molding. *Id.* at 2:3–8. Prior art efforts address the gap problem by incorporating various sealing structures, which the '882 patent seeks to improve upon. *See id.* at 2:13–3:3.

Figure 1 of the '882 patent is reproduced below.

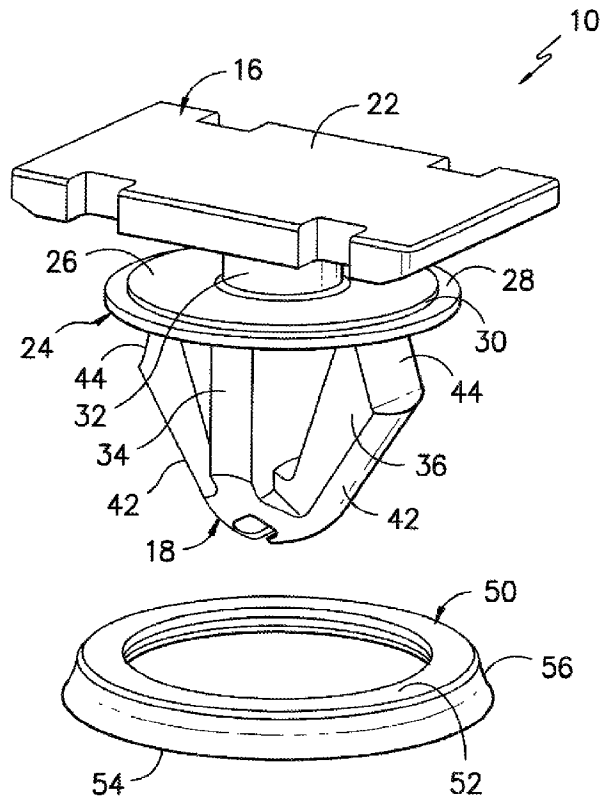


Figure 1 shows retainer 10, which includes retainer head 16 and snap engaging clip portion 18. Ex. 1001, 4:35–36. Figure 1 also depicts lower collar 24 and perimeter seal 50, which includes seal body portion 52, flared sealing foot 54, and living hinge 56 at the intersection of body portion 52 and sealing foot 54. *Id.* at 4:61–64, 5:47–48, 6:10–15, 6:24–27.

D. Challenged Claims

Petitioner challenges claims 1–20 of the '882 patent. Pet. 1.

Claims 1, 11, and 19 are independent, and we reproduce claim 1 below.

1. A connection assembly configured to join a surface element to an underlying support structure while maintaining a substantially zero gap, abutting relation between the surface element and the support structure, the connection assembly comprising:

- a press-in retainer configured for insertion into an acceptance opening in the support structure, the retainer including a retainer head and a clip portion projecting from the retainer head,

- wherein the retainer head includes a first platform and a second platform spaced from the first platform, the retainer further including a seal disposed at least partially about the second platform, the seal having a durometer lower than a durometer of the second platform, and the seal including a body portion engaging the second platform and a sealing foot projecting from the body portion to a free edge such that the sealing foot is disposed outboard from the second platform, and a first surface of the sealing foot forms an obtuse angle relative to a plane of a second surface of the second platform, wherein the retainer head is configured to be slid into a channel defined by the surface element, and the clip portion is configured to be pushed into the acceptance opening in the support structure,

- wherein the clip portion is configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening,

- wherein the sealing foot is configured to flex about a living hinge provided between the body portion and the sealing foot from an unstressed condition to a fully flexed condition while remaining outboard from the second platform and maintain sliding contact with the support structure, wherein in the unstressed condition, the sealing

foot forms the obtuse angle relative to the plane of the second surface of the second platform, and wherein in the fully flexed condition, the free edge of the sealing foot is moved radially outwardly until the sealing foot and the second surface of the second platform define a flat surface, and wherein the sealing foot is configured to flex from the unstressed condition toward the fully flexed condition in order to create the substantially zero gap between the surface element and the support structure in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.

Ex. 1001, 8:22–67.

E. Asserted Grounds and Evidence

Petitioner contends that the challenged claims are unpatentable based on the following grounds:

Claims Challenged	35 U.S.C. § ¹	References
1–20	103	Sawaya, ² Pue, ³ Iwasaki ⁴

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended certain sections of this statute, including § 103, and the effective date of the relevant amendment is March 16, 2013. The ’882 patent issued from an application filed on May 24, 2018, and claims priority to several applications, the earliest of which is a provisional application filed on December 19, 2012. Ex. 1001, codes (22), (63), (60). The filing date of the ’882 patent is after the effective date of the AIA amendment to the statute, but the ’882 patent claims priority to an application filed before the effective date. Petitioner asserts that the pre-AIA version of §103 applies here due the claim of priority, and Patent Owner does not dispute this assertion. Pet. 2. No issue turns on the applicable version of the statute, however, and the outcome of this Decision would be the same regardless of which version of the statute applies.

² Japanese Patent No. 4,252,827, issued April 8, 2009 (Ex. 1009, Ex. 1008 (certified translation)) (collectively, “Sawaya”).

³ US 2005/0189775 A1, published Sept. 1, 2005 (Ex. 1013) (“Pue”).

⁴ US 2011/0119875 A1, published May 26, 2011 (Ex. 1010) (“Iwasaki”).

Claims Challenged	35 U.S.C. § ¹	References
1–20	103	Benedetti, ⁵ Pue, Iwasaki

Pet. 27–28. Petitioner relies on three Declarations of Robert Wheelock. Exs. 1005, 1014, 1016. Patent Owner relies on the Declaration of Dr. John Pratt. Ex. 2008.

ANALYSIS

A. *Legal Standards*

To prevail in its challenges, Petitioner must prove unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). “In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burdens of proof in an *inter partes* review).

Petitioner relies on obviousness in its challenges to the claims that we address below. A claim is unpatentable as obvious under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of

⁵ US 8,561,265 B2, filed April 12, 2011 (Ex. 1012) (“Benedetti”).

underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, so-called secondary considerations. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

The level of skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). “The person of ordinary skill in the art is a hypothetical person who is presumed to know the relevant prior art” at the time of the invention. *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). Factors that may be considered in determining the level of ordinary skill in the art include, but are not limited to, the types of problems encountered in the art, the sophistication of the technology, and educational level of active workers in the field. *Id.* In a given case, one or more factors may predominate. *Id.*

Petitioner contends a person of ordinary skill in the art (“POSITA”) would have “at least a Bachelor’s degree in Mechanical Engineering and 3 years’ experience in push-in fastener engineering—specifically sealing fasteners and related injection molding manufacturing processes and materials.” Pet. 13 (citing Ex. 1005 ¶ 21). Patent Owner does not refute

Petitioner's proposed level of ordinary skill in the art or propose a different level of ordinary skill in the art.⁶

We find Petitioner's proposal is consistent with the level of skill reflected in the '882 patent and the asserted references. Accordingly, we apply Petitioner's proffered level of ordinary skill in the art.

C. Claim Construction

In *inter partes* reviews, we interpret claims in the same manner used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b); *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc) (setting forth claim construction approach in district court cases). Under that standard, we generally give claim terms their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1313–14. Although extrinsic evidence, when available, may also be useful when construing claim terms under this standard, extrinsic evidence is generally “less reliable” than the intrinsic record. *See id.* at 1318–19. We need only construe terms in controversy, and then only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’”)

⁶ Patent Owner's declarant Dr. Pratt takes issue with certain aspects of Petitioner's proposal, but Patent Owner does not raise any of those issues in its briefing. *See* Ex. 2008 ¶ 24; Paper 16, 8 (“Patent Owner is cautioned that any arguments not raised in the response may be deemed waived.”). The outcome of this Decision would not have changed if we applied a level of ordinary of skill in the art that accounted for Dr. Pratt's criticisms of Petitioner's proposal.

(quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))). The parties raise three claim construction issues, which we address in turn below.

1. abut/abutting

Petitioner proposes a construction for “abutting/abut,” while Patent Owner argues that we need not construe the term. Pet. 15 (“[T]he word ‘abut’ or ‘abutting’ means next to or beside.”); PO Resp. 4 (arguing that terms other than “living hinge” and “disposed outboard” do not require construction because the ordinary meaning is “not genuinely disputed and/or not at issue”). We agree with Patent Owner that we need not construe “abutting/abut” in order to resolve the issues in this Decision.

2. living hinge

Petitioner argues that we should construe “living hinge” to mean “an area integral to the hinged part at which the part will readily bend or flex.” Pet. 13–14. Patent Owner agrees with Petitioner’s construction of “living hinge” but argues that Petitioner does not apply the construction correctly to the prior art. PO Resp. 13–14. We adopt the parties’ agreed construction of “living hinge” and we will address the parties’ arguments as to whether the prior art discloses the limitation in the context of our analysis of those arguments below. Accordingly, we construe “living hinge” to mean “an area integral to the hinged part at which the part will readily bend or flex.”

3. “sealing foot . . . disposed outboard from the second platform”

The parties dispute the scope of the phrase “sealing foot . . . disposed outboard from the second platform” that appears in all three independent claims of the ’882 patent. Ex. 1001, 8:38–39, 9:52–53, 10:59–60. Petitioner argues that we should give the limitation its ordinary meaning. Pet. 13.

Patent Owner also argues in favor of giving the limitation its ordinary meaning, which Patent Owner interprets as “the skirt portion of the seal is located to the side of the second platform.” PO Resp. 4. Although both parties argue in favor of the ordinary meaning, they interpret the ordinary meaning differently, with Patent Owner effectively seeking a construction that requires a sealing foot located entirely beyond the second platform, or as the specification describes it, “disposed entirely outboard” the second platform, while Petitioner disagrees with such a narrow construction. *See* Ex. 1001, 6:16–20; PO Resp. 4–13 (arguing against construction where only a part of the sealing foot must be disposed outboard); Pet. Reply 2–5 (arguing against Patent Owner’s construction where all of the sealing foot must be entirely outboard from the second platform).

Patent Owner contends that the claim language supports its interpretation by referring to “the sealing foot” disposed outboard rather than a mere portion of the sealing foot. PO Resp. 9.⁷ Patent Owner relies on a hypothetical where a person would not be “considered ‘outboard’ of a boat simply because their arm is sticking out the side of the boat, i.e., while the person’s arm may be outboard, the person is still inside the boat.” *Id.* (citing Ex. 2008 ¶¶ 57–70; Ex. 2011, 71–72). Patent Owner also argues that the specification supports its position by describing sealing foot 54 “disposed

⁷ Patent Owner also argues for a construction of “sealing foot” that refers to a sealing foot projecting from a seal body portion to a free edge, with a living hinge between the sealing foot and the body portion. *See id.* at 5–8. Petitioner does not dispute this position and we do not take issue with it, but it does not address the core claim construction dispute between the parties. *See id.* at 9 (“The real dispute over this claim term, therefore, is not over the meaning of ‘sealing foot.’ Rather, the dispute turns on what it means to be “disposed outboard.”).

entirely outboard” from the collar of the second platform and stressing the importance of avoiding a “stack up” condition that can result by placing “any part” of the sealing foot under the second platform. *Id.* at 10–11 (citing Ex. 1001, 2:51–55, 6:17–23, 7:53–65; Ex. 2008 ¶¶ 63–65, 69–70; Ex. 2011, 48–51); *see also* PO Sur-reply 12–13. As to the prosecution history, Patent Owner acknowledges that claims in the parent application included the word “entirely” within the phrase “disposed entirely outboard,” but argues that the applicant never argued that “disposed outboard” or “disposed entirely outboard” had different meanings and the prosecution history does not “effect[] any clear disclaimer in this regard.” PO Resp. 12.

Petitioner argues that we should not construe “disposed outboard” to mean located entirely beyond, such that “*all* of the foot [must] be *entirely* outboard the lower platform.” Pet. Reply 2–5. Petitioner contends that Patent Owner wrongly presumes that “the ordinary meaning of ‘outboard’ requires a first structure to be wholly outside the second.” *Id.* at 2.

According to Petitioner, the applicant knew how to emphasize when one structure was entirely outboard another by using the word “entirely” both in the specification and when prosecuting claims in the parent application. *Id.* at 2–3 (citing Ex. 1001, code (63), 6:16–22; Ex. 1003-1, 13–17, 50–54; Ex. 1004, 27–30). As to Patent Owner’s “boat-passenger analogy,” Petitioner argues that it supports Petitioner’s position because a person extending an arm over the side of a boat has an arm disposed outboard the boat “even though portions adjacent the person’s shoulder are within the boat’s perimeter.” *Id.* at 2. As to the claim language’s reference to “the sealing foot,” Petitioner argues that the use of “the” “merely denotes an antecedent relationship” and “does not connote a particular *quantity* of

sealing foot” or “alter the plain and ordinary meaning of ‘outboard’ to mean *entirely* outboard.” *Id.* at 3. As to the specification, Petitioner argues that a single embodiment showing and describing a sealing foot “entirely” outboard a second platform does not limit the claims and that avoiding the stack up problem may be accomplished by providing a free space below the second platform even when portions of the sealing foot remain beneath that platform. *Id.* at 3–5 (citing Ex. 1001, 3:49–51, 6:15–23, 7:47–52; Ex. 1017, 105:2–8). Petitioner further contends that a portion of the prosecution history supports its argument because the Examiner found the “disposed outboard” limitation met by prior art that showed only a portion of the sealing foot extending outboard of the second platform. *Id.* at 4–5 (citing Ex. 1003, 227; Ex. 2008 ¶¶ 65, 68).

Based on our review of the arguments and evidence, we do not agree with Patent Owner that “disposed outboard” means “located entirely beyond” or “disposed entirely outboard” in the challenged claims.⁸ First, as to the claim language, the claims do not include the word “entirely” or any other language that suggests they are limited to structures that lie entirely outboard of the second platform. Patent Owner stresses that “the sealing foot” must be disposed outboard of the second platform according to the

⁸ As noted above, Patent Owner argues in favor of the plain and ordinary meaning for the limitation that requires a sealing foot “to the side” of the second platform, but Patent Owner views its construction as not broad enough to cover a sealing foot located only partly beyond, or outboard, of the second platform, and effectively seeks a construction requiring a sealing foot located entirely beyond or disposed entirely outboard the second platform. *See* PO Resp. 4 (arguing in favor of plain and ordinary meaning that requires a “skirt portion of the seal is located to the side of the second platform”), 5–6 (disagreeing with Petitioner’s argument that the limitation covers a sealing foot “‘partially’ disposed outboard”).

claim language, which suggests that the entire sealing foot must be disposed outboard, but we agree with Petitioner that use of the term “the” before sealing foot does not specify how much of the sealing foot must be disposed outboard the second platform. *See* PO Resp. 9; Pet. Reply 3. In addition, although the parties’ dueling boat hypotheticals as to the ordinary meaning of “disposed outboard” are not determinative, we find Petitioner’s more persuasive—i.e., that a passenger’s arm hanging out of a boat may be described as an arm “disposed outboard” of the boat even if the upper parts of the arm remain inside the boat. *See* Pet. Reply 2. Following that same logic, the ordinary meaning of a sealing foot disposed outboard of a second platform would encompass a sealing foot that overlaps somewhat with the second platform, as long as a portion of the sealing foot remains outboard of the platform. Accordingly, the claim language standing alone supports Petitioner’s position and does not mandate the construction Patent Owner proposes.

As to the specification, we generally agree with Patent Owner that it describes and depicts a sealing foot located entirely beyond or disposed entirely outboard of the second platform and describes one of the advantages of such a design as avoiding a “stack-up” problem. *See* PO Resp. 10–11 (citing Ex. 1001, 2:51–55, 6:17–23, 7:53–65; Ex. 2008 ¶¶ 63–65, 69–70; Ex. 2011, 48–51); PO Sur-reply 12–13. But merely describing a preferred embodiment as having a sealing foot “disposed entirely outboard” the second platform does not suggest a clear disavowal of claim scope sufficient to warrant reading “entirely” into the claim. *See Info-Hold, Inc. v. Applied Media Tech.*, 783 F. 3d 1262, 1266–68 (Fed. Cir. 2015). In addition, while the specification notes the advantage of lessening the chance of stack-up

problems with a sealing foot disposed entirely outboard of the second platform, the claimed invention need not achieve every objective or advantage listed in the specification. *See Phillips*, 415 F.3d at 1326–27. Moreover, the specification does not address the situation where only a portion of a sealing foot extends under the second platform or state that such an arrangement would cause unworkable stack-up problems by distinguishing the claimed invention over such an approach. *See also* Ex. 1003, 134, 136 (drawings filed in parent application describing prior art stacking problem as associated with foam compression seals). The specification also uses the phrase “entirely outboard” to describe this configuration, which suggests that “outboard” alone is broader than Patent Owner suggests. *See* Ex. 1001, 6:16–20. At best, we view the specification as neutral toward Patent Owner’s position and does not show a clear disavowal of claim scope such that the specification mandates reading “disposed outboard” as “disposed entirely outboard” in the challenged claims.

As to the prosecution history, we agree with Petitioner that it supports its position rather than Patent Owner’s narrower construction. As Petitioner notes, during prosecution of the parent application,⁹ the applicant sought and obtained claims that included the “disposed outboard” limitation as well as the “disposed entirely outboard” limitation. *See* Pet. Reply 2–3; Ex. 1003, 16, 18, 20, 49, 51, 53. Patent Owner removed “entirely” from all of the claims prior to the issuance of the ’882 patent. Ex. 1004, 27–30. While the existence of earlier claims containing the word “entirely” may not mandate

⁹ The ’882 patent claims priority to an application that led to the issuance of US 9,982,692. Ex. 1001, code (63).

the conclusion we reach here, the applicant's deliberate use of the word "entirely" in some but not all of the claims during prosecution shows that the applicant knew how to deliberately narrow the claims to include a "disposed entirely outboard" limitation when it sought to do so, and leave the word "entirely" out of the claims when it sought broader scope. *See Unwired Planet, LLC v. Apple, Inc.*, 829 F.3d 1353, 1359 (Fed. Cir. 2016) ("If the patentee intended to restrict the claims-at issue . . . it could have included that same limitation[.]"). Further, if Patent Owner's position had merit, and "disposed outboard" already meant "disposed entirely outboard," there would have been no need to use the word "entirely" at all in the claims.¹⁰ The prosecution history supports Petitioner's position that "disposed outwardly" does not mean "disposed entirely outwardly."

Based on our review of the claim language, specification, and prosecution history, as well as the parties' arguments and evidence, we conclude that "sealing foot . . . disposed outboard from the second platform" does not require a sealing foot located entirely beyond or disposed entirely outboard from the second platform, as Patent Owner argues. Consistent with

¹⁰ Although not necessary to our conclusion on claim construction, we also agree with Petitioner that the Examiner took a broad view of "disposed outboard" when applying the prior art to that limitation. *See* Pet. Reply 4–5 (citing Ex. 1003, 227; Ex. 2008 ¶¶ 65, 68). The Examiner found that a prior art reference discloses the limitation even though the reference's sealing foot extended beneath the second platform (the "lower collar" in that reference) and not entirely outboard the second platform. *See* Ex. 1003, 225–227. Patent Owner's declarant attempts to read this same rejection as supporting Patent Owner's position, but in doing so relies on a "second platform" in the prior art that the Examiner did not rely on in the rejection. *See* Ex. 2008 ¶ 65 (indicating that "base 208" corresponds to the second platform); Ex. 1003, 227 (indicating that a wider "lower collar" about the sealing foot corresponds to the second platform).

Petitioner's arguments, we give the terms their plain and ordinary meaning, which encompasses a retainer having a portion of a sealing foot located beyond the second platform.

D. Obviousness Based on Sawaya, Pue, and Iwasaki

Petitioner challenges claims 1–20 under 35 U.S.C. § 103, contending that the claimed subject matter would have been obvious over “Sawaya [a]lone and/or in light of Pue, or in further view of Iwasaki.” Pet. 28–61.¹¹ Patent Owner argues that Petitioner fails to show that the asserted references render the claimed subject matter obvious. PO Resp. 15–36. We first provide an overview of relevant aspects of the prior art, and then turn to the parties' arguments.

1. Sawaya

Sawaya relates “to a resin clip used for securing a member to be attached such as an automobile interior component or the like to a panel.” Ex. 1008 ¶ 1. Sawaya's resin clip includes a “sealing pad” to prevent the flow of moisture and air and “to seal a gap in the hole of the panel and to isolate the inside and outside of the panel.” *Id.* at ¶ 4.

Sawaya's Figure 2 is reproduced below.

¹¹ We focus on the challenge based on Sawaya, Pue, and Iwasaki, and need not reach challenges based on Sawaya alone, or a combination of Sawaya and Pue or Sawaya and Iwasaki.

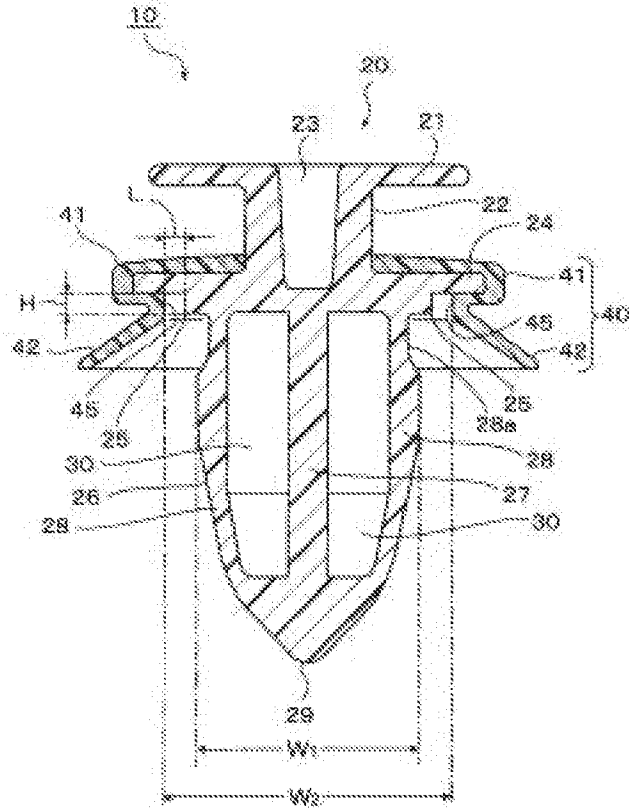


Figure 2 shows a cross-sectional view of Sawaya's resin clip 10, which includes head part 21, leg part 26, and flange part 24. Ex. 1008 ¶ 55.

Figure 2 also depicts sealing pad 40, which includes attaching part 41, skirt part 42, and folded back part 45. *Id.* Attaching part 41 of sealing pad 40 covers an upper surface and a portion of a lower surface of flange part 24, and skirt part 42 extends obliquely and outward from the inner circumference of attaching part 41. *Id.* at ¶ 28.

Sawaya's Figure 6 is reproduced below.

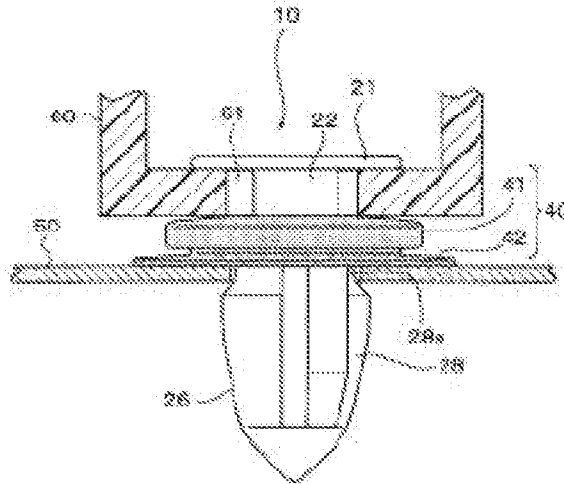


Figure 6 shows member 60 to be attached to panel 50 and connected to one another using resin clip 10. Ex. 1008 ¶¶ 55. Figure 6 also depicts head part 21 of resin clip 10 engaging hole 61 of member 60 and leg part 26 of resin clip 10 inserted through a locking hole in panel 50. *Id.* at ¶¶ 51, 52, 55. As member 60 approaches panel 50, the lower surface of skirt part 42 of sealing pad 40 contacts the top of panel 50 and extends outwardly such that it “is closely sealed to the surface” of panel 50. *Id.* at ¶¶ 52, 54.

2. Pue

Pue relates “to trim panels for vehicles and, more particularly, to gaps between trim panels and a vehicle body.” Ex. 1013 ¶ 1. Pue describes numerous disadvantages of gaps between trim panels and the vehicle body. *Id.* at ¶ 13. For example, Pue states that gaps detract from the visual appearance of the vehicle, allow ingress of air and moisture into the passenger compartment, and exacerbate vibrations that generate noises such as squeaks and rattles. *Id.*

3. *Iwasaki*

Iwasaki relates “to a clip-mounting seat which is used to mount a clip on an inner surface side of a vehicle interior component,” such that the clip fixes the vehicle body panel to the vehicle interior component. Ex. 1010 ¶ 1.

Iwasaki’s Figure 2 is reproduced below.

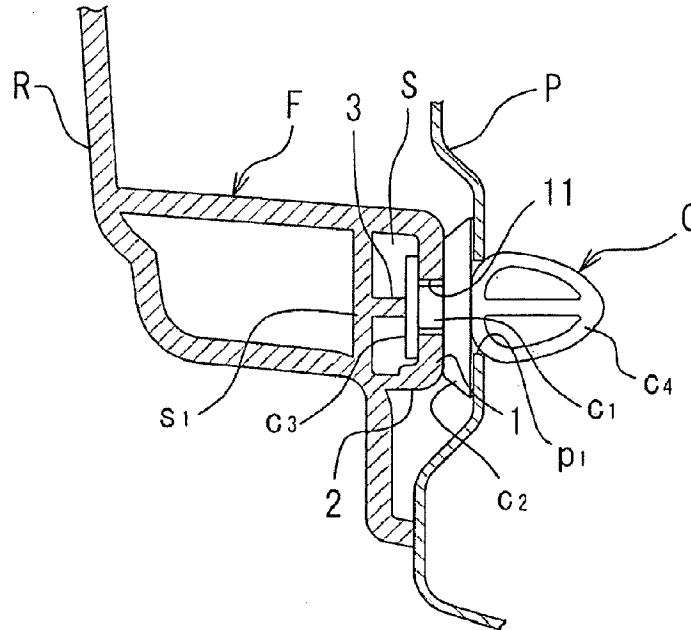


Figure 2 shows vehicle internal component R, such as a door lining, clip-mounting seat F, door panel P, and clip C. Ex. 1010 ¶¶ 28–29. Figure 2 also depicts a flared flange portion c2 of clip C in the space between panel P and mounting seat F. *Id.* at ¶ 30. The bottom of Figure 2 shows internal component R abutting door panel P.

4. *Discussion*

Petitioner asserts that the combination of Sawaya, Pue, and Iwasaki discloses all of the limitations of the challenged claims. Pet. 28–61. Petitioner provides analysis of each limitation of the claims, with citations to the references that correspond to each of the claim limitations. *Id.*

Petitioner also cites to the relevant supporting declarant testimony. *Id.* (citing various portions of Ex. 1005).

Patent Owner argues that Petitioner fails to (1) provide a sufficient reason to modify Sawaya (applicable to all claims); (2) establish that the combination provides a “zero gap” condition in response to a downward urging of the retainer (applicable to claims 1–10 and 16); and (3) establish that the combination discloses a sealing foot disposed outboard from the second platform (applicable to all claims). PO Resp. 15–36. We address each of Patent Owner’s arguments in turn below. Because all of Patent Owner’s arguments apply to claim 1, and Patent Owner addresses the claims subject to each argument as a group, we will focus on the limitations in claim 1 in our discussion, with an understanding that the same analysis applies to the other claims in that group. *See id.*

a. Motivation to Modify Sawaya

Petitioner contends that “Sawaya explicitly discloses all but one element of independent Claim 1 . . . the maintenance of a substantially zero gap” between the surface element and support structure and that maintenance of the zero gap would have been obvious to one of ordinary skill in the art based on Sawaya alone and further in view of Pue and/or Iwasaki. *Id.* at 28. Petitioner also articulates reasons to modify aspects of Sawaya based on Pue and Iwasaki, with an alleged reasonable expectation of success. *Id.* at 29–33. More specifically, Petitioner argues that a POSITA “would have known to avoid intrusion of unwanted dirt and water between trim and vehicle body by maintaining a substantially zero gap abutting relation between them.” Pet. 29 (citing Ex. 1005 ¶ 64). Petitioner also contends that a POSITA would have known that maintaining a zero gap would avoid unwanted rattling noises and improve the aesthetic appearance

of the vehicle. *Id.* Petitioner relies on Pue’s explicit acknowledgement of these concerns, and argues that “[s]uch knowledge would have motivated [POSITAs] to dimension Sawaya’s clip, surface element and support structure, to maintain such a substantially zero gap abutting relation.” *Id.* at 30–31 (citing Ex. 1005 ¶ 66; Ex. 1013 ¶ 3). Petitioner also relies on Iwasaki’s depiction of a substantially zero gap between its surface element (R) and support structure (P), as shown in Iwasaki’s Figure 2 in our overview of Iwasaki above. *Id.* at 31 (citing Ex. 1010, Fig. 2). Petitioner argues that these disclosures would have motivated a POSITA to dimension Sawaya’s clip, surface element, and support structure to maintain a substantially zero gap. *Id.* at 32 (citing Ex. 1005 ¶¶ 69–71). As part of its expectation of success argument, Petitioner argues that it would have been a routine matter to adjust the height of the head part of Sawaya’s clip above its support panel 50, as well as its connector, “to ensure contact between [Sawaya’s] surface element and support structure.” *Id.* at 32 (citing Ex. 1005 ¶ 70).

Patent Owner argues that the claim requires a specific solution to the zero gap condition and that Petitioner fails to provide a reason or motivation to modify Sawaya to implement that specific solution. PO Resp. 15–16. For example, Patent Owner asserts that claims 1–10, 16, and 19–20 all require maintaining a substantially zero gap in a specific way, either by urging the retainer downwardly (claims 1–10 and 16) or by using a sealing foot configured to flex about a living hinge toward a flattened condition. *Id.* at 16–17. Patent Owner contends that none of the prior art disclose these claimed solutions to the zero gap problem and Petitioner’s proposed method of adjusting heights and dimensions of various components fails to provide

the claimed solution. *Id.* at 18–19, 21 (citing Ex. 1005 ¶ 70; Ex. 2011, 90–91, 93–94). As to Iwasaki, Patent Owner states that although its Figure 2 shows no gap, a gap may still exist, and given the hard plastic skirt Iwasaki uses it could not achieve a zero gap condition. *Id.* at 19–20 (citing Ex. 2008 ¶¶ 44–51; Ex. 2011, 28–31, 79, 83–84, 87). Patent Owner also argues that Petitioner fails to provide an adequate reason to (1) “configure Sawaya to provide the right amount of pulldown force,” (2) configure Sawaya’s seal to avoid stack-up, and (3) dimension the fastener components to maintain the zero-gap condition. *Id.* at 21. According to Patent Owner, “simply knowing the prior art problem would not have suggested the ‘882 patent’s very specific claimed solution” and that other solutions to the gap problem exist in the field. *Id.* at 21–22 (citing Ex. 2008 ¶¶ 76–80; Ex. 2011, 55, 60). As to claims 11–15, 17, and 18, Patent Owner acknowledges that the claims lack the “zero gap” limitation, but argues that Petitioner nevertheless fails to articulate why the claims would have been obvious. *Id.* at 22–23.

Petitioner replies that Patent Owner and its expert concede that a POSITA would seek to create a zero gap and Petitioner’s prior art recognizes the importance of ensuring zero gaps. Pet. Reply 6 (citing Ex. 1010, Fig. 2; Ex. 1013, ¶ 3, Fig. 1; Ex. 2008 ¶ 28). Petitioner also asserts that Patent Owner’s argument that Iwasaki does not disclose a zero gap lacks merit because it shows no gap. *Id.* at 6–7. Petitioner argues that a POSITA “would have been motivated to employ Sawaya’s fastener in a zero gap assembly” because Sawaya discloses a “push-in type W-base retainer” that the ’882 patent acknowledges that such W-base retainers work in conjunction with other components to establish and maintain a zero gap condition. *Id.* at 7 (citing Ex. 1001, 1:57–61).

In response, Patent Owner argues that Petitioner’s reliance on Sawaya’s W-type fastener and the ’882 patent’s description of them amounts to an improper new argument, and that the ’882 patent merely acknowledges the “motivation to solve a generalized gap problem, not to implement the specific claimed solution of the ’882 patent.” PO Sur-reply 4 (citing Pet. Reply 7; PO Resp. 15–16, 21–22, 38–40). Patent Owner also argues that “even if it would have been obvious to change the dimensions of the *panel and trim*, that does not mean that the *fastener* was ‘configured’ to provide the zero gap condition.” *Id.* at 5.¹²

Based on our review of the arguments and evidence, Petitioner establishes sufficiently that a POSITA would have been motivated to dimension the clip Sawaya discloses, along with the surface element and support structure, to create and maintain a substantially zero gap condition between the surface element and support structure, for the reasons provided by Petitioner. *See* Pet. 29–33; Pet. Reply 6–7; Ex. 1005 ¶¶ 64–71. Petitioner persuasively argues, with credible declarant support, that a POSITA would have known that creating and maintaining a zero gap would provide several benefits, including (1) avoiding intrusion of unwanted dirt and water between trim and vehicle body; (2) avoiding unwanted rattling noises; and (3) improving the aesthetic appearance of the vehicle. Pet. 29

¹² Patent Owner makes this argument as part of a response to Petitioner’s argument that the dimensions of claimed and unclaimed components primarily determine whether a zero gap condition exists. *See* PO Sur-reply 4–6; Pet. Reply 7–12. We view Petitioner’s argument as going to whether the combination discloses the zero gap limitation, not the motivation to modify Sawaya argument that we address here. *See* Pet. Reply 8 (addressing Patent Owner’s inherency argument raised in relation to whether Sawaya discloses a zero gap condition).

(citing Ex. 1005 ¶ 64). Pue itself expressly teaches the desirability of maintaining a zero gap to achieve these benefits. Ex. 1013 ¶ 3; Ex. 1005 ¶ 66. Petitioner also correctly notes that the '882 patent itself expressly acknowledges that the retainers used in this field already seek to achieve “the goal of establishing and maintaining a ‘zero gap’ condition between the sheet metal panel and other support element and the molding or other surface structure.” Pet. Reply 7 (quoting Ex. 1001, 1:57–61).¹³ All of this evidence more than adequately supports a finding that one of ordinary skill in the art would have been motivated to modify Sawaya to create and maintain a zero gap condition.

We also find that Petitioner establishes a reasonable expectation of success that the modification of Sawaya would result in the creation and maintenance of a substantially zero gap. *See* Pet. 32–33; Ex. 1005 ¶¶ 70–71. Petitioner’s declarant credibly asserts that it would have been a routine matter to adjust the height of the head part of Sawaya’s clip above the panel and dimension the connector to ensure contact between the surface element and support structure. Ex. 1005 ¶ 70.

Patent Owner’s arguments and evidence do not undermine Petitioner’s showing on this issue. Patent Owner and its declarant largely concedes the central thrust of Petitioner’s motivation argument—that those with ordinary skill in the art knew of the desire to create and maintain a zero gap

¹³ Patent Owner argues that this argument by Petitioner and several others are “new” and untimely. *See, e.g.*, PO Sur-reply 2–4, 6, 8, 10, 16–17. We do not view Petitioner’s arguments as so new that we should not consider them, and instead view the arguments as either expanding on arguments made in the Petition or directly responsive to arguments Patent Owner made in its Patent Owner Response.

condition. *See, e.g.*, Ex. 2008 ¶ 28 (referring to “unacceptable gap condition” that may occur); PO Sur-reply (acknowledging that ’882 patent provides “a motivation to solve a generalized gap problem”). Rather than attack Petitioner’s stated reasons for the modification of Sawaya directly, Patent Owner argues that Petitioner’s generalized motivation arguments miss the point and fail to show a motivation to implement the specific *claimed* solution. *See, e.g.*, PO Resp. 15–16; PO Sur-reply 4. While we agree with Patent Owner to the extent that it argues that the resulting combination or modification must meet all of the limitations of the claims, we disagree with Patent Owner’s implicit argument that the *motivation itself* must track the language of the claims. The motivation “may be found explicitly or implicitly in market forces; design incentives; the ‘interrelated teachings of multiple patents’; ‘any need or problem known in the field of endeavor at the time of invention and addressed by the patent’; and the background knowledge, creativity, and common sense of the person of ordinary skill.” *Zup v. Nash Mfg.*, 896 F.3d 1365, 1371 (Fed. Cir. 2018) (quoting *Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1354 (Fed. Cir. 2013)). Patent Owner provides inadequate support for the argument that motivations derived from such diverse sources, including implicit market forces, must track the claim language. Patent Owner’s arguments are more appropriately viewed as supporting its separate argument going to whether Petitioner’s proposed modifications to Sawaya result in a structure that meets the language of the claims, issues we address in the next section. *See, e.g.*, PO Resp. 23–31 (arguing that proposed modification fails to meet the claimed “zero gap” condition).

To the extent that Patent Owner argues that Petitioner merely identifies a generalized motivation or goal to create a zero gap condition without any teaching in the art to achieve that goal, we also disagree. *See* PO Resp. 16 (arguing that a generalized motivation to solve a problem “is legally insufficient”). Petitioner persuasively argues that Iwasaki’s Figure 2 discloses a “substantially zero gap” relationship that meets the requirements of that limitation in the claims. Pet. 31 (citing Ex. 1005 ¶ 68; Ex. 1010, Fig. 2). Patent Owner contends that an undisclosed gap may exist between Iwasaki’s surface element and support structure, but we decline to read in such a disclosure when Iwasaki’s figure shows no gap and supports Petitioner’s position that a substantially zero gap exists. *See* Ex. 1010, Fig. 2; Pet. 31; Ex. 1005 ¶ 68; PO Resp. 19 (Patent Owner acknowledging that Iwasaki’s Figure 2 shows no gap); *see also* Ex. 1001, 1:57–2:8 (describing prior art retainers as part of an assembly that sought to create and maintain zero gap condition). This evidence refutes Patent Owner’s argument that Petitioner merely identifies a general, unfulfilled goal in the art to achieve a zero gap condition. The goal of achieving a zero gap condition was not only well known in the industry but actually achieved, as shown by Iwasaki.

Based on the foregoing, Petitioner establishes adequately that one of ordinary skill in the art would have been motivated to modify Sawaya to implement a zero gap condition.¹⁴

¹⁴ Patent Owner groups claims 11–15, 17, and 18 with this argument, but acknowledges that none of these claims require a zero gap condition. *See* PO Resp. 22, 40. We therefore do not treat this argument as if it applies to claims 11–15, 17, and 18, even though Petitioner grouped these claims with other claims in its obviousness analysis. *See* Pet. 28–58. Patent Owner

b. “*substantially zero gap . . . in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly*”

1) *The Parties’ Positions*

Claim 1 requires a sealing foot “configured to flex . . . in order to create the *substantially zero gap* between the surface element and the support *structure in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly* into the acceptance opening.” Ex. 1001, 8:60–67 (emphases added).¹⁵ Dependent claim 16 requires “a pair of flexible wings . . . [including] an angled biasing surface . . . the angled biasing surface being *configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening*” such that the seal flexes “toward the substantially flat condition until the surface element and the support structure define the *substantially zero gap*.” *Id.* at 10:19–30 (emphases added).

suggests, in a single sentence, that Petitioner’s obviousness argument as to claims 11–15, 17, and 18 lacks an adequate basis because Petitioner did not need to rely on the obviousness analysis that applies to claim 1 due to the absence of the “zero gap” limitation in claims 11–15, 17, and 18. PO Resp. 23 (citing cases). We decline to find that Petitioner fails to meet its burden as to these claims based solely on this undeveloped argument.

¹⁵ Claim 1 includes two limitations that bear on Patent Owner’s arguments. First, claim 1 requires a “clip portion . . . configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.” Ex. 1001, 8:46–48. Second, claim 1 requires a “sealing foot . . . configured to flex from the unstressed condition toward the fully flexed condition in order to create the substantially zero gap between the surface element and the support structure in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.” *Id.* at 8:60–67.

Petitioner argues that Sawaya discloses a clip portion “configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.” Pet. 38 (citing Ex. 1005 ¶ 81) (addressing limitation requiring “the clip portion is configured to press against an interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening”). According to Petitioner, when inserting Sawaya’s leg portion 26 of resin clip 10 into a hole in panel 50, the leg is “elastically locked to a hole edge of a rear surface of the panel, such that the member to be attached and the panel are secured.” *Id.* (citing Ex. 1005 ¶ 81; Ex. 1008 ¶ 3). Petitioner further alleges that Sawaya’s “[e]lastic locking part 28 locks against the interior surface of the acceptance opening at reduced diameter part 28a.” *Id.* (citing Ex. 1005 ¶ 81; Ex. 1008 ¶¶ 53, 54). Petitioner argues that “[l]ocking part 28 urges Sawaya’s retainer downward such that the flange part 24 is ‘pressed against’ the surface of the panel.” *Id.* at 38–39 (citing Ex. 1005 ¶ 81; Ex. 1008 ¶¶ 3, 54); *see also id.* at 43 (citing Ex. 1005 ¶ 87; Ex. 1008 ¶¶ 3, 53, 54). According to Petitioner, when these aspects of Sawaya are combined with the flexing seal shown in Sawaya’s Figure 6, Sawaya “teaches that the sealing foot is configured to create a substantially zero gap between the surface element and the support structure in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.” *Id.* at 43 (citing Ex. 1005 ¶ 87). Petitioner also references its arguments with respect to dependent claim 8 in the context of claim 1, with claim 8’s relevant limitations largely mirroring those of dependent claim 16. *See* Pet. 39, 43, 49–52, 56–57 (incorporating arguments as to claims 1 and 8 into analysis of claim 16). As to claim 16’s

limitation requiring an “angled biasing surface configured to press against the interior surface of the acceptance opening to urge the retainer downwardly,” Petitioner argues that Sawaya’s Figure 6 shows an inwardly angled biasing surface configured to press against the interior surface of the acceptance opening and secures member 60 to panel 50 by exerting downward force on the retainer. Pet. 51–52 (citing Ex. 1005 ¶ 104; Ex. 1008 ¶¶ 3, 53, 54, Fig. 6).

Patent Owner argues that Petitioner fails to show that its proposed modification “would have actually worked to provide the zero-gap condition” required by these claim limitations. PO Resp. 23–24. Patent Owner argues that the claims require (1) a clip portion that exerts a downward force strong enough to achieve the zero-gap condition “in response” to that force; and (2) “the clip portion must do so by pressing against an “interior surface of the acceptance opening’ in the body panel.” *Id.* at 24. As to the exerting a downward force aspect of the limitation, Patent Owner argues that because “Petitioner cites no evidence of Sawaya expressly saying its clip exerts any ‘downwardly’ force,” Petitioner “must show that Sawaya inherently discloses this property.” *Id.* at 24–26 (citing Ex. 1005 ¶ 81; Ex. 1008 ¶¶ 3, 53, 54). Patent Owner asserts that its declarant Dr. Pratt provides a more compelling explanation of Sawaya, and argues that “Sawaya’s clip wings do not provide any dynamic forces” and merely “contract to fit into the opening of the panel and then expand on the other side of the opening to ‘lock’ the fastener in place,” much like a drywall anchor. *Id.* at 26–28 (citing Ex. 1008, Fig. 2; Ex. 2008 ¶¶ 82–97). According to Patent Owner, “Sawaya’s skirt 24 is simply squeezed between the two static surfaces that are locked in place, i.e., the fastener platform and

the panel,” which cannot move and “do not exert any ‘downward’ or upward pull.” *Id.* at 28 (citing Ex. 2008 ¶¶ 85–93). Patent Owner argues that this analysis defeats any inherency argument, and even if Sawaya discloses some small amount of force, Petitioner fails to show that Sawaya’s clip exerts enough force to create the zero gap condition. *Id.* at 29 (citing Ex. 2008 ¶ 96; Ex. 2011, 38–39).

As to the pressing against the interior surface of the opening aspect of the limitation, Patent Owner argues that Sawaya states that its wings lock to an edge of a rear surface of the panel rather than pressing against the interior surface of the hole. *Id.* at 29–30 (citing Ex. 1008 ¶ 3; Ex. 2008 ¶ 94). According to Patent Owner, in Sawaya the clip wings are pushed all the way through the opening and lock on the other side, unlike the claimed configuration shown in the ’882 patent, which shows the wings remain partially inserted in the opening and exert a force on the interior surface of the opening. *Id.* at 30–31 (citing Ex. 1008 ¶¶ 3, 53; Ex. 2008 ¶¶ 85–95).

Petitioner replies that Patent Owner’s insistence that Petitioner must rely on inherency misses the mark because the claims merely require a structure “configured to” create a substantially zero gap under certain conditions and Petitioner shows that these limitations are met without relying on inherency. Pet. Reply 7–8. According to Petitioner, “[c]onfigured to” means ‘made to,’ ‘designed to,’ or ‘adapted to,’ or, more broadly, ‘capable of’ or ‘suitable for.’” *Id.* at 8 (quoting *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1349 (Fed. Cir. 2012)).¹⁶

¹⁶ At the oral hearing, counsel for Petitioner stated that whether “configured to” means “capable of” or “designed to,” Sawaya discloses the limitation because it is designed to have inwardly angled surfaces pressing against the

Petitioner also argues that the '882 patent explains that the “[u]ltimate responsibility for zero gaps falls upon unrecited dimensions of unclaimed automotive trim molding (12) and supporting sheet metal panel (14)” and that the downward forces created by the angled biasing surfaces “have a much smaller impact on the creation of the zero gap condition than the critically important dimensions of trim and frame.” *Id.* at 8–11 (citing Ex. 1001, 5:33–43, 6:43–7:14, Fig. 5; Ex. 1016, ¶¶ 17, 20–21; Ex. 1017, 124:9–125:11, 154:23–155:15). Petitioner contends that Sawaya’s wings have inwardly angled ends that are radially compressed when positioned within an acceptance opening, with the outward spring force pressing against the opening’s edge, urging the clip downwardly due to the inwardly angled surfaces. *Id.* at 12 (citing Ex. 1016 ¶¶ 24–29). Petitioner argues that the lack of explicit text describing the “urging downwardly” in Sawaya does not undermine Petitioner’s position that a POSITA “would appreciate Sawaya’s configuration urges the fastener downwardly.” *Id.* Petitioner asserts that the Examiner took a similar approach to interpreting the prior art during prosecution by finding that angled surfaces abutting the inner edge of an opening in a prior art reference satisfies the limitation, without any argument against the finding from the applicant. *See id.* at 13–14 (citing Ex. 1003, 230–231; Ex. 1004, 151; Ex. 2012, Fig. 4).

Petitioner further contends, with reference to annotated figures, that Sawaya’s angled biasing surfaces press against the opening’s interior edge to urge the clip downward. Pet. Reply 14–16 (citing Ex. 1005 ¶ 103; Ex. 1009, Fig. 6; Ex. 1008 ¶ 26; Ex. 1016 ¶ 24). Petitioner also argues that similarities

interior of an opening in order to force the structure downward. Tr. 27:5–24. We interpret “configured to” as “designed to” for purposes of this Decision.

between Sawaya's clip and that in a prior art patent that the '882 patent incorporates by reference support Petitioner's position because the prior art describes its elastic wings as tending to draw the clip into the opening. *Id.* at 16–17 (citing Ex. 1001, 2:13–19; Ex. 1006, 3:29–33, Fig. 6). Further, according to Petitioner, even assuming that “Sawaya's clip as shown was not presently pressing outward to urge retainer downwardly,” the “clip would still be configured to do so” because any vibrations or other forces pulling upward on the clip would further engage the elastic inwardly angled surfaces in such a way that the clip would be urged downward to maintain the substantially zero gap. *Id.* at 17 (citing Ex. 1016 ¶ 28; Ex. 1017, 158:5–160:15). As to Patent Owner's argument that Petitioner must show a particular amount of force to create a zero gap condition, Petitioner argues that the claims do not specify any particular amount of force. *Id.* at 18 (citing Ex. 1017, 120:11–121:12). Finally, Petitioner argues that Sawaya does not function like a drywall anchor “perpendicularly engaging the support frame's underside surface via a non-deflectable structure,” and instead engages “the support frame at the edge of an opening via an inclined surface of an inwardly deflectable structure.” *Id.* (citing Ex. 1017, 165:11–24).

In its Sur-reply, Patent Owner first addresses Petitioner's reliance on the dimensions of the panel and trim to create a zero gap condition, and argues that even if it would have been obvious to change those dimensions, that does not mean that the claimed fastener was configured to provide the zero gap condition. PO Sur-reply 4–5. As to the downward urging issue, Patent Owner repeats its argument that “Sawaya's clip wings do not provide any dynamic forces,” and instead “are an interference mechanism that

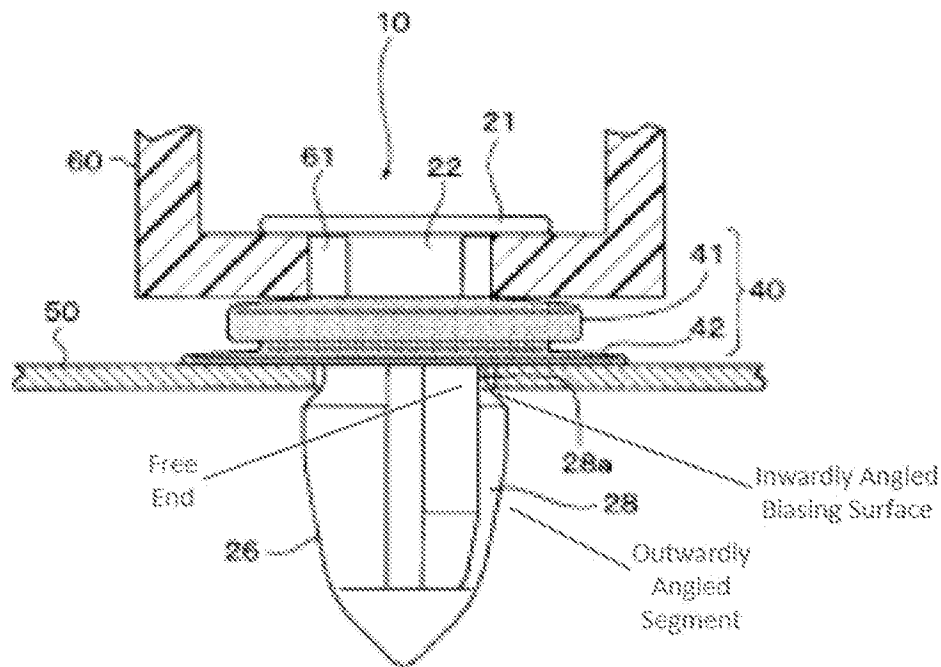
prevents the fastener from being pulled back out of the hole.” *Id.* at 6–7. Patent Owner also stresses that Sawaya describes its wings as extending entirely through the opening in the panel and secured on the rear side. *Id.* at 7 (citing PO Resp. 27–28; Ex. 2008 ¶¶ 85–93). According to Patent Owner, Sawaya’s text distinguishes it from the reference before the Examiner that met the limitation. *Id.* at 7–8 (citing Pet. Reply 13; Ex. 2012).

2) Discussion

Based on our review of the arguments and evidence, we find that Petitioner establishes sufficiently that the proposed combination discloses a sealing foot “configured to flex . . . in order to create the substantially zero gap between the surface element and the support structure in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening” as required by claim 1, and the similar requirements in claim 16. *See* Pet. 38–39, 42–44; Pet. Reply 7–19. Petitioner supports its interpretation of Sawaya with credible declarant testimony and Sawaya’s disclosures. *See* Ex. 1005 ¶¶ 81, 86–87, 101–104, 121–123; Ex. 1016 ¶¶ 14–29; Ex. 1008 ¶¶ 3, 53–54, Figs. 2, 6.

Sawaya discloses resin clip 10 having leg portion 26 inserted in a hole of panel 50. Ex. 1008, Fig. 6, ¶¶ 3, 25, 53. Leg portion 26 includes two sets of elastic locking parts 28, 28. *Id.* ¶ 25. Petitioner relies on annotated versions of Sawaya’s figures to illustrate its interpretations, and we reproduce Petitioner’s annotated version of Sawaya’s Figure 6 below. *See* Pet. Reply 15.

FIG. 6



The annotated version of Figure 6 shows leg portion 26 having elastic locking parts 28 and reduced diameter part 28a within a hole in panel 50. Ex. 1008, Fig. 6, ¶ 53. Petitioner labels the top of one of the elastic locking parts 28 a “Free End” and labels an outer surface at the top of the locking part 28 an “Inwardly Angled Biasing Surface,” with a lower portion of part 28 labeled an “Outwardly Angled Segment.” Pet. Reply 15. According to Sawaya, “[w]hen the leg part of the resin clip is inserted into a hole of a panel . . . the leg part is elastically locked to a hole edge of a rear surface of the panel, such that the member to be attached and the panel are secured.” Ex. 1008 ¶ 3.

Petitioner persuasively argues, with credible declarant support, that Sawaya discloses elastic parts 28 pressing against the interior surface of the opening in panel 50 as required by the claim limitation. *See* Pet. 38–39, 43; Pet. Reply 12–19; Ex. 1005 ¶¶ 81, 87; Ex. 1016 ¶¶ 24–29. Sawaya directly

supports this position by showing its elastic parts in direct contact with the interior of the opening. *See* Ex. 1008, Figs. 2, 6. Sawaya also describes the leg part as “elastically locked to the hole edge,” which suggests that the elastic parts 28 are “elastically” deformed within the hole and therefore pressing outward to engage a “hole edge,” which supports Petitioner’s position that the elastic parts press against a portion of the interior surface of the opening. *See id.* ¶ 3 (emphasis added). Petitioner also persuasively argues, with credible declarant support, that when the angled surface of elastic parts 28 press against the opening, they urge the retainer downwardly into the opening. *See* Pet. 38–39, 43; Pet. Reply 12–19; Ex. 1005 ¶¶ 81, 87; Ex. 1016 ¶¶ 22–29. Sawaya also directly supports this position by describing the retainer as “elastically locked to a hole edge,” which suggests it resists removal due to the pressing action of the angled surfaces of the elastic parts 28 against the opening. Ex. 1008 ¶ 3, Fig. 6. Petitioner further persuasively argues that its proposed modification of Sawaya results in a zero gap condition created at least partially “in response to”¹⁷ the clip portion pressing against the interior surface of the opening to urge the retainer downwardly. *See* Pet. 43; Pet. Reply 12–19; Ex. 1005 ¶ 87; Ex. 1016 ¶¶ 28–29.

¹⁷ We do not read the claim as requiring creation of a zero gap condition solely in response to the pressing and downward urging of the clip in the opening, and Patent Owner does not argue for such a construction. We also agree with Petitioner that the relatively small movements of the retainer play a limited role in determining whether a zero gap condition exists when compared to other factors, such that it would not be possible for the downward urging of the retainer in the opening alone to create a zero gap. *See* Pet. Reply 7–11.

We are also persuaded by Petitioner’s alternative argument that assumes Sawaya’s clip as shown in Figure 6 did not exert any force against the opening or urge the retainer downwardly as Patent Owner contends. *See* Pet. Reply 17. In that situation, Petitioner persuasively argues that the clip would still be configured to, or designed to press against the opening and urge the clip downward as claimed in response to any forces tending to pull the retainer upward in the opening, such as vibrations. *See id.* (citing Ex. 1016 ¶ 28; Ex. 1017, 158:5–160:15). We agree. Based on the elastic inwardly angled surfaces on Sawaya’s elastic parts 28, any upward force would tend to deflect parts 28 inward, causing the angled surfaces to press against the interior surface of the opening, urging the clip downward and tending to flex the seal, which in turn will contribute to creating and maintaining a zero gap condition. *See* Ex. 1005 ¶¶ 28–29.

While not necessary to support our conclusion that Petitioner made its case here, other evidence in the record supports Petitioner’s interpretation of Sawaya. *See* Pet. Reply 7, 13, 16–18. First, the ’882 patent acknowledges that “W-base” retainers in the prior art, generally similar to Sawaya, “are typically designed as a component of an overall assembly and work in conjunction with the other components with the goal of establishing and maintaining a ‘zero gap’ condition” and that they do so by providing continuous pull down forces. Ex. 1001, 1:57–67; Pet. 7. This statement at least suggests that Sawaya’s similarly shaped retainer may also provide the necessary downward urging of the retainer to provide a zero gap condition. Second, during prosecution of the parent application, the Examiner found that a prior art reference showing a retainer having biased angled surfaces were adapted to press against an interior surface of the opening to urge the

retainer downwardly. Ex. 1003, 230–231; Ex. 2012, Fig. 4; Pet. Reply 13–14. While Patent Owner now argues that other aspects of Sawaya differ from that reference, Patent Owner does not dispute that as a general matter biased angled surfaces perform in that manner. *See* PO Sur-reply 7–8. Third, the ’882 patent incorporates by reference a patent with a retainer having generally similar angled surfaces to that shown in Sawaya, and the patent states that the slope of those surfaces “tends to draw the foot 3 into the orifice 20.” Ex. 1006 (US 5,173,026), 3:29–33, Fig. 6; Pet. Reply 16–17; *see also* Ex. 1001, 2:13–19 (incorporating US 5,173,026 by reference). This additional evidence supports Petitioner’s interpretation of Sawaya’s biased, angled surfaces and the downward forces they produce when elastically deformed within an opening.

We have considered the arguments that Patent Owner and its declarant raise, but find those arguments unpersuasive and less credible than Petitioner’s arguments and evidence. *See* PO Resp. 23–31; PO Sur-reply 6–11; Ex. 2008 ¶¶ 82–97. For example, Patent Owner premises many of its arguments on its interpretation of Sawaya as showing a retainer pushed all the way through the opening in the panel such that the elastic parts 28 merely touch the panel opening and exert no dynamic force on it at all. *See* PO Resp. 23–30. If true, according to Patent Owner, Sawaya fails to press against the interior surface of the opening and urge the retainer downward in the opening. *See id.* Patent Owner appears to rely primarily on Sawaya’s statement that its “leg part is elastically locked to a hole edge of a rear surface of the panel, such that the member to be attached and the panel are secured.” PO Resp. 25, 29–31 (quoting Ex. 1008 ¶ 3).

Patent Owner’s interpretation of Sawaya lacks support for several reasons. First, Sawaya does not describe its resin clip as pushed all the way through the panel as Patent Owner asserts; Sawaya states that “the resin clip is inserted *into* a hole of a panel.” Ex. 1008 ¶ 3 (emphasis added). Second, although the quoted language refers to a “rear surface of the panel,” it does so in the context of describing a “hole edge of a rear surface of the panel,” suggesting, as Sawaya’s Figure 6 shows, that the angled surfaces engage the edge of the hole defined by the interior surface of the opening and the rear panel surface, which supports Petitioner’s position because a hole edge forms part of the hole. *See id.* The ’882 patent depicts essentially the same contact between the angled surfaces and the hole edge as Sawaya, further supporting Petitioner’s interpretation. *See* Ex. 1001, Fig. 3. Third, Patent Owner fails to give sufficient weight to the fact that Sawaya describes its clip as “*elastically* locked,” supporting Petitioner’s position that, as shown in Figure 6, elastic parts 28 are elastically deflected within the hole, which causes them to press against the interior surface of the opening and urge the clip downward. Ex. 1008 ¶ 3 (emphasis added). Further, Patent Owner does not address adequately Petitioner’s argument that even if Sawaya does not show a clip portion that currently presses against the opening and urges the clip downward, it nevertheless is configured to do so whenever forces tend to pull the clip upward. *See* PO Sur-reply 8–9 (arguing that Petitioner improperly employs a “capable of” construction of the claims without addressing the substance of Petitioner’s argument). We view Petitioner’s interpretation of Sawaya and its related declarant testimony as more persuasive and credible on these points.

Patent Owner also argues that even if Sawaya's clip exerts some downward force, it does not disclose enough downward force such that a zero gap condition results "in response to" this force. PO Resp. 29. This argument lacks adequate support because the claims do not require any specific amount of force or require the zero gap condition to result from this downward force alone, rather than other factors such as the arrangement and dimensions of the panels. The claim language requires a sealing foot "configured to flex . . . toward a fully flexed condition in order to create the substantially zero gap . . . in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly." Ex. 1001, 8:60–67. In other words, the clip portion must be configured to be urged downwardly enough to flex the seal,¹⁸ which in turn helps create the zero gap condition. Petitioner relies on Sawaya, which shows a clip portion exerting sufficient downward force to flex seal 42 (*see* Ex. 1008, Fig. 6), and a proposed modification based on Iwasaki and Pue that would create a substantially zero gap while Sawaya's clip portion and seal were in this condition, using appropriate sizing and dimensions of the surrounding parts. *See* Pet. 29–33 (motivation to modify to create zero gap), 43 (motivation to modify Sawaya's clip to maintain zero gap); Ex. 1005 ¶¶ 64–71, 86–87. Petitioner's proposal and explanation shows sufficiently that its modifications to Sawaya combined with Sawaya's existing structures satisfy the "in response to" claim requirement.

¹⁸ We do not read the claim as requiring the downward urging of the clip portion *alone* must move the seal from an unstressed to a fully flexed position, and Patent Owner does not argue for such a construction. Any downward urging that tends to cause the seal to flex and in turn help create a zero gap condition suffices.

We also disagree with Patent Owner’s argument that Petitioner must rely on inherency because the text of Sawaya fails to explicitly teach the claim requirements. *See* PO Resp. 24–25. Petitioner argues that it need not resort to inherency, at least when Patent Owner seems to invoke the doctrine to demand that Petitioner show that the “configured to” function in the claims must actually be performed. Pet. Reply 8. We agree with Petitioner that it need not show that Sawaya actually creates and maintains a zero gap condition or urges the retainer downwardly; “configured to” merely requires an apparatus designed to perform the claimed functions not a method step requiring completed performance of those functions. *See Aspex Eyewear*, 672 F.3d at 1349; PO Sur-reply 9 (arguing that “configured to” means more than “capable of”); Tr. 27:5–24 (counsel for Petitioner arguing that it meets “designed to” construction). Based on review of Petitioner’s arguments and evidence, it need not resort to inherency to carry its burden. Petitioner and its declarant rely on Sawaya’s express text and figures, which on their face adequately support Petitioner’s arguments. For example, Petitioner’s declarant relies on text stating that Sawaya’s clip, when inserted into an opening, becomes “elastically locked to a hole edge,” and Figure 6 shows the angled surface of elastic parts 28 pressed up against the edge of the hole urge the retainer downwardly. *See, e.g.*, Ex. 1005 ¶¶ 81, 87. Those express disclosures support Petitioner’s positions. *See id.*

Even if Petitioner must resort to inherency to show that Sawaya’s arrangement discloses the claim requirements, as Patent Owner argues, Petitioner has provided sufficient argument and evidence to satisfy that burden. *See* PO Resp. 24; Pet. Reply 12, 14–18; Ex. 1016 ¶¶ 22–29. As Petitioner’s declarant puts it, “a downwardly angled force is applied to the

clip whenever an inwardly angled surface of a compressed deflector member is deflected by the interior surface of the acceptance opening,” and Sawaya’s compressed deflector member with inwardly angled surfaces operates in this same way. Ex. 1016 ¶¶ 23–25. Patent Owner’s argument against inherency rests on the argument that the angled surfaces of Sawaya’s elastic parts 28 merely touch the hole edge without exerting any force at all on the hole edge, which conflicts with the text of Sawaya stating that after insertion in the opening Sawaya’s clip is “*elastically locked*” in place. See Ex. 1008 ¶ 3 (emphasis added); PO Resp. 27; PO Sur-reply 6–7; Tr. 38:16–39:15 (counsel for Patent Owner arguing that “[I]f the clips are not in compression then there’s no force. They’re just sitting there. It’s just a contact surface and that’s the case in Sawaya.”). In other words, when operating from the proper premise that Sawaya discloses elastic parts 28 in compression and its angled surfaces pushing against the opening, Petitioner’s argument that the structures must produce some amount of downward urging naturally follows and lacks any persuasive argument in rebuttal.

Based on the foregoing, Petitioner establishes sufficiently that the combination of Sawaya, Pue, and Iwasaki disclose a sealing foot “configured to flex . . . in order to create the substantially zero gap between the surface element and the support structure in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening” and the similar language in claim 16.

c. “the sealing foot is disposed outboard from the second platform”

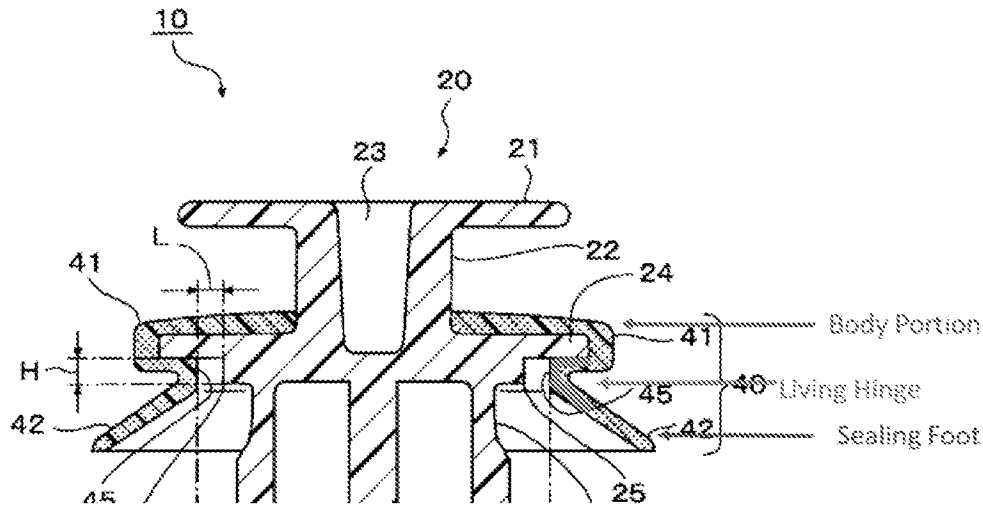
Claim 1 requires a “seal including a body portion engaging the second platform and a sealing foot projecting from the body portion to a free edge

such that the sealing foot is disposed outboard from the second platform.” Based on our claim construction above, this limitation does not require a sealing foot located entirely beyond or disposed *entirely* outboard from the second platform.

Petitioner contends that Sawaya’s flange 24 discloses the claimed second platform and Sawaya’s sealing pad 40 discloses the claimed seal. Pet. 34–35 (citing Ex. 1005 ¶¶ 75–76; Ex. 1008 ¶¶ 18, 27–29, Fig. 2). Petitioner also contends that Sawaya’s skirt portion 42 of sealing pad 40 discloses a sealing foot “disposed outboard from the second platform” and provides an annotated version of Sawaya’s Figure 2 identifying the sealing foot adjacent the living hinge. *Id.* at 35–36 (citing Ex. 1005 ¶¶ 77–78, 82; Ex. 1008 ¶ 28, Fig. 2).

Patent Owner argues that Sawaya does not disclose a sealing foot disposed outboard from the second platform, but bases its argument on its proposed claim construction, which we decline to adopt. *See* PO Resp. 31–36; Sur-reply 11 (“Under the correct constructions, Sawaya does not satisfy this limitation.”). Patent Owner does not argue that Sawaya fails to disclose this limitation if we decline to adopt Patent Owner’s construction. *See id.*

Based on our review of the arguments and evidence, Petitioner establishes sufficiently that Sawaya discloses a sealing foot disposed outboard from the second platform. Petitioner adequately supports its position by reference to Sawaya, which shows its sealing foot outboard of its second platform. To help illustrate Petitioner’s position, we reproduce Petitioner’s annotated version of Sawaya’s Figure 2 below (Pet. 36).



The annotated version of Sawaya’s Figure 2 shows resin clip 10 having flange part 24 and sealing pad 40, which includes attaching part 41, skirt part 42, and folded back part 45. Ex. 1008 ¶ 55. Attaching part 41 of sealing pad 40 covers an upper surface and a portion of a lower surface of flange part 24, and skirt part 42 extends obliquely and outward from the inner circumference of attaching part 41. *Id.* at ¶ 28. Petitioner relies on flange part 24 as the claimed “second platform,” and the annotated version of Figure 2 shows the portions of sealing pad 40 that Petitioner relies on for the claimed body portion, living hinge, and sealing foot of the seal, with the sealing foot corresponding to Sawaya’s skirt 42. *See* Pet. 34–36. Petitioner supports its interpretation of Sawaya with credible expert testimony. *See id.* (citing Ex. 1005); Ex. 1005 ¶¶ 74–78, 82. As Sawaya’s Figure 2 makes clear, Sawaya’s skirt 42, i.e., the sealing foot, extends well beyond the flange part 24, i.e., the second platform.

Based on the foregoing, Petitioner establishes adequately that Sawaya discloses a sealing foot “disposed outboard from the second platform.”

d. Remaining Limitations and Claims

Other than the arguments addressed above, Patent Owner does not offer any arguments specifically addressing the remaining limitations of claims 1 or 16, or the remaining challenged claims. *See* PO Resp. 15–36. We have reviewed these aspects of Petitioner’s contentions, and determine that the Petition provides a sufficient showing that the combination of Sawaya, Pue, and Iwasaki discloses each limitation of claims 1–20 and that one of ordinary skill in the art would have had reason to combine the teachings of Sawaya, Pue, and Iwasaki as Petitioner proposes. We need not set forth formal findings as to the undisputed assertions by Petitioner.¹⁹ We adopt Petitioner’s arguments and evidence as to these claims and limitations as our own. *See* Pet. 28–61.

e. Conclusion as to Claims 1–20

“Once all relevant facts are found, the ultimate legal determination [of obviousness] involves the weighing of the fact findings to conclude whether the claimed combination would have been obvious to an ordinary artisan.” *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1361 (Fed. Cir. 2017). Above, based on the full record before us, we provide our factual findings regarding (1) the level of ordinary skill in the art, (2) the

¹⁹ *See In re NuVasive, Inc.*, 841 F.3d 966, 974 (Fed. Cir. 2016) (“Although the Board did not make findings as to whether any of the other claim limitations (such as fusion apertures or anti-migration teeth) are disclosed in the prior art, it did not have to: NuVasive did not present arguments about those limitations to the Board. . . . The Board, having found the only disputed limitations together in one reference, was not required to address undisputed matters.”); Paper 8, 7 (emphasizing that “any arguments for patentability not raised in the response may be deemed waived”).

scope and content of the prior art, (3) any differences between the claimed subject matter and the prior art; and (4) objective indicia of nonobviousness.

In particular, we find that (1) Petitioner’s proposed level of ordinary skill in the art is consistent with the art of record; (2) Petitioner’s proposed combination of Sawaya, Pue, and Iwasaki discloses all the limitations of claims 1–20; (3) one of ordinary skill in the art would have been motivated to modify Sawaya in light of Pue and Iwasaki’s teachings as Petitioner proposes; and (4) the parties do not introduce or rely upon any objective indicia of nonobviousness. Weighing these underlying factual determinations, Petitioner has shown, by a preponderance of the evidence, that claims 1–20 of the ’882 patent are unpatentable as obvious over the combination of Sawaya, Pue, and Iwasaki.

E. Obviousness Based on Benedetti, Pue, and Iwasaki

Petitioner challenges claims 1–20 under 35 U.S.C. § 103, contending that the claimed subject matter would have been obvious over “Benedetti [a]lone and/or in light of Pue, or further in view of Iwasaki.” Pet. 61–91.²⁰ Patent Owner argues that Petitioner fails to show that the asserted references render the claimed subject matter obvious. PO Resp. 36–57. We first provide an overview of relevant aspects of Benedetti, and then turn to the parties’ arguments.

1. Benedetti

Benedetti “relates to automobile vehicle trim fasteners.” Ex. 1012, 1:5–6. Benedetti’s fastener includes a post and first and second elastically

²⁰ We focus on the challenge based on Benedetti, Pue, and Iwasaki, and need not reach challenges based on Benedetti alone, or a combination of Benedetti and Pue or Benedetti and Iwasaki.

deflectable wings that deflect toward the post. *Id.* at code (57). Benedetti also discloses two seal members. *Id.*

We reproduce Benedetti's Figure 4 below.

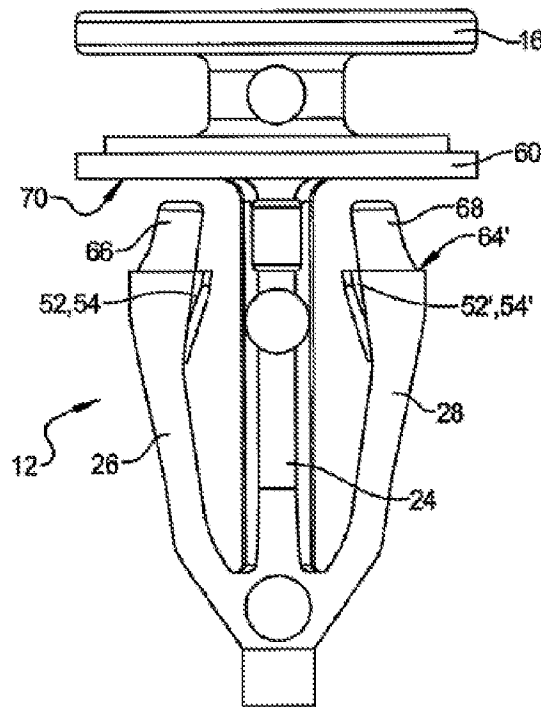


FIG 4

Figure 4 shows a front elevational view of Benedetti's fastener. Ex. 1012, 2:58–59. Figure 4 depicts Benedetti's fastener 10 having a first fastener portion 12, component engagement head 16, central post 24, and first and second deflecting wings 26, 28 that deflect toward post 24. *Id.* at 3:12–13, 3:28–29, 3:57–60.

Other figures of Benedetti, discussed in more detail below, depict first resilient seal member 22 and second resilient seal member 32. *Id.* at 3:28–46, Figs. 5–8, 10. “First resilient seal member 22 . . . can include any of a curved, an umbrella or a concave shape collectively referred to as a concave seal surface 44 directed away from component engagement head 16.” *Id.* at 4:15–18. Fastener 10 can be used to connect panel 100 to trim

member 110. *Id.* at 6:57–60. When used in this manner, a seal is created between first resilient seal member 22 and first panel face 102 of panel 100. *Id.* at 7:2–7.

2. Discussion

Petitioner asserts that the combination of Benedetti, Pue, and Iwasaki discloses all of the limitations of the challenged claims. Pet. 61–91. Petitioner provides analysis of each limitation of the claims, with citations to the references that correspond to each of the claim limitations. *Id.* Petitioner also cites to the relevant declarant testimony. *Id.* (citing various portions of Ex. 1014).

Patent Owner argues that Petitioner fails to (1) provide a sufficient reason to modify Benedetti (applicable to all claims); (2) establish that the combination provides a “zero gap” condition in response to a downward urging of the retainer (applicable to claims 1–10 and 16); (3) establish that the combination discloses a sealing foot disposed outboard from the second platform (applicable to all claims); (4) establish that Benedetti discloses the claimed “living hinge” (applicable to all claims); and (5) establish that the combination discloses an angled biasing surface configured to press against the interior surface of the opening (applicable to claims 8 and 16). PO Resp. 15–36. We address each of Patent Owner’s arguments in turn below. Because Patent Owner’s first four arguments apply to claim 1, and Patent Owner addresses the claims subject to each of those arguments as a group, we will focus on the limitations in claim 1 in our discussion with an understanding that the same analysis applies to the other claims in that group. *See id.*

a. Motivation to Modify Benedetti

Petitioner contends that “Benedetti explicitly discloses all but one element of independent Claim 1 . . . maintenance of a substantially zero gap” and that the zero gap would have been obvious to one of ordinary skill in the art based on Benedetti alone and further in view of Pue and Iwasaki.

Pet. 61–63. Petitioner also articulates reasons to modify the relied-upon aspects of Benedetti based on Pue and Iwasaki, with an alleged reasonable expectation of success. *Id.* at 62–63. As to the motivation to modify Benedetti to maintain a “substantially zero gap” and the expectation of success in doing so, Petitioner relies arguments that are the same as or very similar to those Petitioner relies on in the context of Sawaya discussed above. *Id.* at 62 (citing Pet. 29–33; Ex. 1014 ¶¶ 62–67) (incorporating arguments made in context of Sawaya for motivation to combine), 62–63 (citing Ex. 1014 ¶¶ 68–69) (arguing that a POSITA would have expected success in modifying Benedetti because it would have been a routine matter to adjust the sizes and dimensions of Benedetti’s fastener to result in a zero gap condition). In its Reply, Petitioner simply incorporates its arguments and evidence as to Sawaya into its arguments as to Benedetti. *See* Pet. Reply 22.

Patent Owner’s arguments as to the motivation to modify Benedetti are nearly identical to those Patent Owner raises as to the motivation to modify Sawaya that we addressed above. *See* PO Resp. 36–40 (“Petitioner’s Ground 2 regarding Benedetti suffers at the outset from the same deficiencies as its Ground 1 regarding Sawaya.”); PO Sur-reply 17 (“Petitioner’s Benedetti-based Ground 2 arguments fail for the same reasons the Sawaya-based Ground 1 arguments fail.”). For example, Patent Owner argues that “reciting a generalized motivation to solve a problem is not

enough to establish obviousness,” Petitioner fails to provide an adequate reason to modify Benedetti in the specific manner required by the claims, and Petitioner’s stated basis for how it would implement the modification to Benedetti does not track the claimed solution. *See* PO Resp. 36–40.

Because the parties rely on the same arguments here as they did above in the context of the discussion of the motivation to modify Sawaya, for the same reasons we discussed above we find Petitioner’s arguments and evidence persuasive and Patent Owner’s arguments unpersuasive. Petitioner has made a sufficient showing that one of ordinary skill in the art would have been motivated to dimension the fastener Benedetti discloses, along with the surface element and support structure, to create and maintain a substantially zero gap condition between the surface element and support structure, for the reasons provided by Petitioner. *See* Pet. 29–33, 62–63; Ex. 1014 ¶¶ 62–69.

b. “substantially zero gap . . . in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly”

1) The Parties’ Positions

The parties’ positions as to the disputes surrounding the “substantially zero gap” limitation are similar to those made above in the context of the challenge based on Sawaya. *See* Pet. 69–70, 73–74; Pet. Reply 22–29; PO Resp. 41–48; PO Sur-reply 17–22. For example, as to the claim limitation requiring a clip portion configured to press against the interior surface of the opening and urge the clip downward, Petitioner relies on Benedetti’s deflecting wings 26, 28 inserted in hole 100 (the claimed opening), with the wings springing elastically once inserted such that the inwardly angled surfaces of deflecting wings press against opening 100 and urge the fastener

downward. *See* Pet. 69–70 (citing Ex. 1012, 2:37–39, 6:53–56, 7:39–52, 8:18–20, Figs. 4, 10; Ex. 1014 ¶ 78). As to the limitation requiring a sealing foot configured to flex in response to the pressing and urging of the clip, Petitioner relies on this same structure and arrangement in Benedetti and argues that this disclosure, when combined with the embodiment in Benedetti’s Figure 8 (showing a flexed seal), “teaches that the sealing foot is configured to create a substantially zero gap between the surface element and the support structure in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly.” *Id.* at 73–74 (citing Ex. 1012, 2:37–39, 6:53–56, 7:39–52, 8:18–20, Figs. 4, 10; Ex. 1014 ¶ 85).

Patent Owner raises arguments against Petitioner’s assertions that are similar to those we reviewed above. *See* PO Resp. 41–48; PO Sur-reply 17–22. For example, Patent Owner argues that “Petitioner fails to show Benedetti provides this claimed ‘downwardly’ force” and must rely on inherency, which Petitioner cannot do because Benedetti merely describes inwardly deflecting wings without mentioning downward forces. *See* PO Resp. 41–43 (citing Ex. 1012 at 8:18–20; Ex. 1014 at ¶ 78). According to Patent Owner, Benedetti describes its clip wings as fully expanded on the other side of the panel such that they no longer exert elastic forces on the opening. *Id.* at 43–44 (citing Ex. 1012, 7:43–52, 8:13–18; Ex. 2008 ¶¶ 123–133; Ex. 2011, 131); *see also* PO Sur-reply 18). Patent Owner characterizes the portion of Benedetti that Petitioner relies upon as merely describing “a small amount of inward deflection” that simply makes “the fastener tight by increasing the friction of the fastener against the opening, i.e., the wings are pressing in, not down.” PO Resp. 44 (citing Ex. 2008 ¶¶ 125–126). Patent

Owner also argues that Benedetti discloses a gap between the fastener and a surface element in one of its figures, suggesting that Benedetti does not exert a downward force on the fastener. *Id.* at 45–46 (citing Ex. 1012, Fig. 10; Ex. 2008 ¶ 127; Ex. 2011, 56–57). Patent Owner also relies on Benedetti’s seal 32 locating between its wings and the opening (unlike Sawaya’s wings, which contact the opening directly), and argues that the seal material would compress and “prevent any downward force.” *Id.* at 46–48 (citing Ex. 1012, Fig. 10; Ex. 2008 ¶¶ 128–133; Ex. 2011, 136–137).

Petitioner replies that “Benedetti’s deflecting wings include inwardly angled biasing surfaces that operate under compression, and therefore, urge the clip downwardly.” Pet. Reply 22–24 (citing Ex. 1012, 3:40–43, 7:22–38, 8:18–20, Figs. 1, 4; Ex. 1014 ¶ 53; Ex. 1016 ¶¶ 40–42). As to Patent Owner’s argument that Benedetti’s deflecting wings merely assist in fastener retention, Petitioner argues that Patent Owner “points to nothing requiring this downward urging be the sole or even primary means of maintain a zero gap relation” and the claims do not require any particular amount of urging downwardly. *Id.* at 24. As to the small gap shown in Benedetti’s Figure 10, Petitioner argues that the figures illustrate a fastener with wings under compression with angled surfaces pressing against the opening urging it downward, and this “definitive description outweighs any purported ambiguity in the Figures” that conflict with the way a fastener would be used in the art. *Id.* at 24–25 (citing Ex. 1012, 2:48–51; Ex. 1016 ¶¶ 40–44; Ex. 1017, 172:9–174:9). As to the presence of seal member 32, Petitioner argues that it “is irrelevant to whether or not Benedetti’s ‘clip portion’ has the claimed configuration (*i.e.*, deflecting wings having inwardly angled distal ends).” *Id.* at 25–26. As to whether seal 32 impedes downward

movement as Patent Owner alleges, Petitioner argues that the claims do not require actual movement in all circumstances, and only require a clip portion configured to urge the retainer downwardly, and Benedetti discloses a configuration that results in downward forces as a result of forces applied to the angled surfaces of Benedetti's clip. *Id.* at 27–28 (citing Ex. 1016 ¶¶ 40–42).

In its Sur-reply, Patent Owner argues that (1) Petitioner cannot rely on one sentence in Benedetti disclosing inward deflection to establish downward force; (2) the gap shown in Benedetti's Figure 10 shows the lack of any downward force; (3) the claims do require a particular amount of force—"enough to result in the 'zero gap condition,'" and (4) Petitioner fails to adequately rebut Dr. Pratt's assertion that seal member 32 prevents forces from urging the fastener downward. PO Sur-reply 17–22.

2) Discussion

Based on our review of the arguments and evidence, we find that Petitioner establishes sufficiently that the proposed combination discloses a sealing foot "configured to flex . . . in order to create the substantially zero gap between the surface element and the support structure in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening" as required by claim 1. *See* Pet. 69–70, 73–74; Pet. Reply 22–29. Petitioner supports its interpretation of Benedetti with credible declarant testimony and Benedetti disclosures. *See* Ex. 1014 ¶¶ 53, 78, 85; Ex. 1016 ¶¶ 40–44; Ex. 1012, 2:37–39, 3:40–43, 6:10–15, 6:37–41, 6:53–65, 7:22–52, 8:18–20, Figs. 4, 10.

Benedetti discloses central fastener 10 having post 24 and first and second deflecting wings 26, 28 that deflect toward post 24. *Id.* at 3:12–13,

3:28–29, 3:57–60. Benedetti states that the “tendency of each of the first and second deflecting wings 26, 28 to resist deflection also enhances the ability of fastener 10 to resist pull out.” *Id.* at 6:54–56. Benedetti further states that a “limited inward deflection of first and second deflecting wings 26, 28 can also be retained in the fastener installed position to further assist in fastener retention.” *Id.* at 8:18–20. Benedetti’s figures also show deflecting wings with ends that have inwardly angled surfaces that contact the interior surface of the opening upon insertion. *Id.* at Figs. 4, 8, 10. All of these express teachings of Benedetti directly support Petitioner’s argument that Benedetti’s deflecting wings with inwardly angled surfaces are configured to press against the interior of the opening and urge Benedetti’s fastener downwardly and maintain a zero gap condition. *See* Pet. 69–70, 73–74; Pet. Reply 22–29; Ex. 1014 ¶¶ 53, 78, 85; Ex. 1016 ¶¶ 40–44. Given these express teachings, we do not agree with Patent Owner that Petitioner must resort to inherency. In addition, for the reasons stated above addressing the Sawaya-based ground, the ’882 patent, the Examiner’s approach to the prior art in the prosecution history and other related patents all support the notion that when inwardly angled surfaces of an elastic wing push against an opening, the resulting forces urge the retainer downwardly.

Patent Owner’s arguments against Petitioner’s interpretation of Benedetti are unpersuasive. First, Patent Owner argues that the “principal way in which Benedetti’s fastener is retained is through the use of clip wings that expand on the other side of the panel and lock it in place,” but that interpretation ignores the express text of Benedetti that the wings are, in at least one embodiment, inwardly deflected to assist in fastener retention. PO

Resp. 43; Ex. 1001, 8:18–20. As we (and Petitioner) read Benedetti, Benedetti may disclose an embodiment with its wings fully extended and not in compression, but it also discloses an alternative option where the wings are compressed and therefore biased outwards toward the interior surface of the opening: “A limited inward deflection of first and second deflecting wings 26, 28 *can also be retained* in the fastener installed position to further assist in fastener retention.” *Id.* at 8:18–20 (emphasis added). Patent Owner eventually acknowledges that Benedetti discloses this additional embodiment with inwardly deflected wings, and the fact that Benedetti’s “principal” focus may be another embodiment does not undermine Petitioner’s argument. *See* PO Resp. 43–44 (“By having Benedetti’s wings exert a small amount of inward deflection . . .”).

Second, Patent Owner’s argument that the presence of seal 32 between the clip wings and the opening prevents any downward force lacks adequate support. *See* PO Resp. 46 (citing Ex. 2008 ¶¶ 128–133). The cited declarant testimony does not make clear whether it addresses the “principal way” Benedetti operates without any inward deflection, which Patent Owner focuses on, or the alternative embodiment Petitioner relies upon, as noted directly above. *See* Ex. 2008 ¶¶ 128–133. It may be true that the seal prevents downward force when the clip wings are fully extended, but not when in compression. In addition, the declarant testimony stresses that the seal helps prevent certain downward movement but the claims do not require any specific amount of downward urging or movement. *See id.*; Pet. Reply 27. Petitioner more persuasively argues, with declarant support, that seal 32 running parallel to the inwardly angled surfaces would not eliminate the

pressure applied to the inwardly angled surfaces in a manner that removes any downward forces. Pet. Reply 27–28; Ex. 1016 ¶¶ 40–42.

Third, Patent Owner relies on a gap in Figure 10 as indicative of a lack of downward force in Benedetti's design, but that one aspect of one figure does not override the clear text of Benedetti stating that the clip wings are deflected inwardly in one embodiment. *See* PO Resp. 45; Pet Reply 25. In addition, Benedetti's Figure 10 may not illustrate the moment when the clip wings urging the clip downwardly. Either way, as Petitioner notes, any ambiguity in one figure does not fatally undermine Petitioner's interpretation of Benedetti and its explicit text.

Fourth, Patent Owner argues that even if Benedetti discloses some downward force due to inward deflection of its wings, it lacks sufficient downward force to maintain a zero gap condition in response to the force, but this argument reads the limitation too narrowly. *See* PO Resp. 44; PO Sur-reply 20. As we noted in the context of a very similar argument in the context of the Sawaya challenge, the claims do not require a specific amount of downward force or require the zero gap condition to result from this downward force alone, rather than other factors such as the arrangement and dimensions of the panels. The claim language requires a clip portion configured to be urged downwardly enough to flex the seal, which in turn helps create the zero gap condition. Petitioner relies on Benedetti, which shows a clip portion exerting sufficient downward force to flex Benedetti's seal (first resilient member 22, shown flexed in Figures 8 and 10), and a proposed modification based on Iwasaki and Pue that would create a substantially zero gap while Benedetti's clip portion and seal are in this condition, using appropriate sizing and dimensions of the surrounding parts.

See Pet. 29–33 (motivation to modify to create zero gap), 62–63 (motivation to modify Benedetti’s clip to maintain zero gap), 73–74 (describing combination of desire to maintain zero gap and Benedetti’s downward urging teachings with Figure 8 teaches creation of zero gap condition in response to downward urging); Ex. 1005 ¶¶ 64–71; Ex. 1014 ¶¶ 84–85. Petitioner’s proposal and explanation shows sufficiently that its modifications to Benedetti combined with Benedetti’s existing structures satisfy the “in response to” claim requirement.

Based on the foregoing, Petitioner establishes sufficiently that the combination of Benedetti, Pue, and Iwasaki disclose a sealing foot “configured to flex . . . in order to create the substantially zero gap between the surface element and the support structure in response to the clip portion pressing against the interior surface of the acceptance opening to urge the retainer downwardly into the acceptance opening.”

c. “the sealing foot is disposed outboard from the second platform”

Based on our claim construction above, the “disposed outboard” limitation does not require a sealing foot disposed *entirely* outboard from the second platform. Petitioner contends that the skirt portion of Benedetti’s resilient seal member 22 discloses the claimed “sealing foot” projecting from the seal’s body to a free edge (perimeter edge 48) “disposed outboard” from the second platform. Pet. 67 (citing Ex. 2012, Figs. 2, 8; Ex. 1014 ¶ 75); *see also id.* at 64 (identifying seal member connection disk 56 as disclosing the claimed “second platform”). Patent Owner argues that Benedetti does not disclose a sealing foot disposed outboard from the second platform, but bases its argument on its proposed claim construction, which we decline to adopt. *See* PO Resp. 54–57. Patent Owner does not argue that

Sawaya fails to disclose this limitation if we decline to adopt Patent Owner's construction. *See id.*

Based on our review of the arguments and evidence, Petitioner establishes sufficiently that Benedetti discloses a sealing foot disposed outboard from the second platform. Petitioner adequately supports its position by reference to Benedetti, which shows its sealing foot outboard of its second platform. *See* Ex. 1012, Figs. 2, 8. The figures show the skirt portion of first resilient member 22 disposed outboard of the second platform. *See id.*²¹

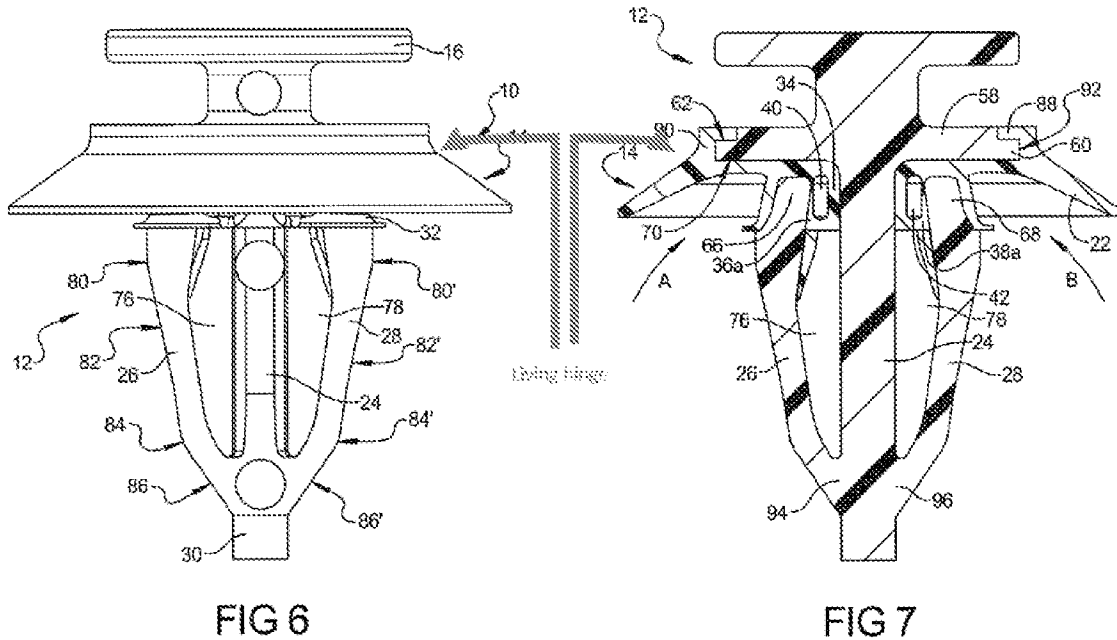
Based on the foregoing, Petitioner establishes adequately that Benedetti discloses a sealing foot “disposed outboard from the second platform.”

d. living hinge

Claim 1 requires a “sealing foot configured to flex about a living hinge provided between the body portion and the sealing foot.” Ex. 1001, 8:49–50. Independent claims 11 and 19 also require a “living hinge.” *Id.* at 9:58, 10:67. As noted above, based on the parties' agreement, we construe “living hinge” to mean “an area integral to the hinged part at which the part will readily bend or flex.”

²¹ Because the skirt portion of Benedetti's resilient seal member 22 lies entirely outboard of the second platform, Benedetti discloses the “disposed outboard” limitation even if we adopted Patent Owner's proposed construction of “disposed outboard.” *See* Ex. 2012, Figs. 2, 8. Patent Owner argues that the sealing foot starts at a point underneath the second platform, but the claims make clear that the sealing foot extends from the seal body, and the portion of the seal Patent Owner relies upon forms part of the seal body that wraps around the second platform, not the sealing foot. *See* PO Resp. 56; Ex. 1001, Fig. 3 (showing seal body portion 52 wrapped around second platform 24).

Petitioner argues that Benedetti's sealing foot, the skirt portion of resilient seal 22, flexes about a living hinge at the point where the sealing foot joins the seal body. Pet. 70. Petitioner relies on annotated versions of Benedetti's Figures 6 and 7 to support its argument, and we produce those annotated figures below (Pet. 71).



Annotated figures 6 and 7 show the skirt portion of resilient seal 22 and red arrows labeled "Living hinge" pointing to a change in the slope of the skirt portion where it meets the main body of the seal. Pet. 71 (citing Ex. 1014 ¶ 79).

Patent Owner argues that Benedetti fails to disclose a living hinge because "there is no point where the seal foot in Benedetti joins the seal body." PO Resp. 51 (citing Ex. 2008 ¶¶ 131–141). Patent Owner faults Petitioner for pointing to only the top of the seal for the living hinge and argues that the seal does not bend or flex at that location. *Id.* at 52 (citing Ex. 2008 ¶¶ 131–141). According to Patent Owner, Benedetti's "sealing foot does not flex or bend about any 'living hinge' 'area' or 'point,' but

rather flexes throughout the entire length of the sealing foot.” *Id.* at 53 (citing Ex. 2008 ¶¶ 137–139); *see also* PO Sur-reply 23–24 (arguing that some flexing throughout its length does not satisfy the claim construction requiring an area where the seal “readily flexes”).

Petitioner replies that Patent Owner improperly relies on alleged failures to point out the location of the hinge, but the claims do not specify which surface of the seal includes the living hinge, and the agreed claim construction of “living hinge” does not require any “‘scored,’ ‘thinned,’ ‘bent’ or ‘angled’” language that would require Petitioner to identify such areas, as Patent Owner suggests. *Id.* Petitioner also argues that if the sealing foot flexes about its entire length as Patent Owner argues, that would include a flexing living hinge. *Id.*

Based on our review of the arguments and evidence, Petitioner establishes sufficiently that Benedetti discloses a “living hinge.” *See* Pet. 70–71 (citing Ex. 1012, Figs. 6-8; Ex. 1014 ¶¶ 79–81). Petitioner points to an area on the top of resilient seal in Benedetti’s Figures 6 and 7 where the sealing foot meets the seal body. *Id.* at 71. When comparing Benedetti’s Figure 7 showing sealing foot in an unstressed condition and Figure 8 in a stressed condition, the sealing foot pivots around the area Petitioner identifies as the living hinge, supporting Petitioner’s position. *See id.*; Ex. 1012, Figs. 6–8.

Patent Owner’s arguments are unpersuasive because they do not adequately track the claim construction Patent Owner agreed to, which does not require identifying a specific point, line, scored area, or surface on the seal that discloses the living hinge. The agreed construction merely requires identification of “an area” that “will readily bend or flex.” Further, we

disagree with Patent Owner's assertion that the seal flexes about its entire length (*see* Figures 7 and 8, showing the seal pivot about the area identified by Petitioner), and even if it did so, the point at which the seal most "readily" flexes appears to correspond to the area identified by Petitioner.

We find that Petitioner establishes sufficiently that Benedetti discloses the claimed "living hinge."

e. angled biasing surface configured to press against the interior surface of the opening (Claims 8 and 16)

Dependent claims 8 and 16 each require an "angled biasing surface . . . configured to press against" an "interior surface of the acceptance opening." Ex. 1001, 9:30–32, 10:24–25. Petitioner argues that Benedetti discloses this limitation because its angled biasing surfaces press against the interior surface of the opening. Pet. 81 (citing Ex. 1014 ¶ 101), 87 (citing Ex. 1014 ¶ 119). Patent Owner argues that the claim language requires two surfaces that press against and contact each other. PO Resp. 49. Patent Owner further argues that seal 32, located between the angled biasing surfaces and the opening, prevents direct contact between the two surfaces. *Id.* at 50–51; PO Sur-reply 22 ("No 'surface' of Benedetti's clip presses against any 'surface' of the acceptance opening due to the seal between those two surfaces."). Petitioner replies that the "claims do not recite these segments are in contact with the acceptance opening, merely that they press against one another at these surfaces" and that the specification uses different language to denote surfaces that touch one another. Pet. Reply 28 (citing Ex. 1001, 6:56–59). Petitioner further contends that the claims do not exclude additional structures and that the use of the term "surface" in the claims does not require contact. *Id.* at 29.

The parties appear to agree on Benedetti's relevant structure because Petitioner does not contest Patent Owner's argument that Benedetti's seal 32 prevents direct contact between the angled biasing surface and the interior surface of the opening. Accordingly, the dispute turns on claim scope, and whether the claims require contact between the two claimed surfaces. We agree with Patent Owner that the most natural reading of the claim language requiring one surface to "press against" another surface requires contact between the two surfaces. *See* PO Resp. 49. The '882 patent's specification consistently shows exactly that in the figures, where the clip's angled biasing surface (44) directly contacts the interior surface of the opening. *See* Ex. 1001, Figs. 3, 5. The fact that the specification may also use other terms to describe direct contact between surfaces, as Petitioner alleges, does not mandate a broader construction. Because we interpret the relevant claim language to require contact between the angled biasing surface and the interior surface of the opening, and Petitioner does not assert that Benedetti discloses any such contact, Petitioner does not establish adequately that Benedetti discloses this limitation.

Based on our review of the arguments and evidence, Petitioner does not establish adequately that Benedetti discloses an "angled biasing surface . . . configured to press against" an "interior surface of the acceptance opening."

f. Remaining Limitations and Claims

Other than the arguments addressed above, Patent Owner does not offer any arguments specifically addressing the remaining limitations of claim 1 or the remaining challenged claims 2–7, 9–15, and 17–20. *See* PO Resp. 36–57. We have reviewed these aspects of Petitioner's contentions, and determine that the Petition provides a sufficient showing that the

combination of Benedetti, Pue, and Iwasaki discloses each limitation of claims 1–7, 9–15, and 17–20 and that one of ordinary skill in the art would have had reason to combine the teachings of Benedetti, Pue, and Iwasaki as Petitioner proposes. We need not set forth formal findings as to the undisputed assertions by Petitioner.²² We adopt Petitioner’s arguments and evidence as to these claims and limitations as our own.

g. Conclusion as to Claims 1–20

“Once all relevant facts are found, the ultimate legal determination [of obviousness] involves the weighing of the fact findings to conclude whether the claimed combination would have been obvious to an ordinary artisan.” *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1361 (Fed. Cir. 2017). Above, based on the full record before us, we provide our factual findings regarding (1) the level of ordinary skill in the art, (2) the scope and content of the prior art, (3) any differences between the claimed subject matter and the prior art; and (4) objective indicia of nonobviousness.

In particular, we find that (1) Petitioner’s proposed level of ordinary skill in the art is consistent with the art of record; (2) Petitioner’s proposed combination of Benedetti, Pue, and Iwasaki discloses all the limitations of claims 1–7, 9–15, 17–20, but not claims 8 and 16; (3) one of ordinary skill in the art would have been motivated to modify Benedetti in light of Pue and Iwasaki’s teachings as Petitioner proposes; and (4) the parties do not introduce or rely upon any objective indicia of nonobviousness. Weighing these underlying factual determinations, Petitioner has shown, by a preponderance of the evidence, that claims 1–7, 9–15, 17–20 of the ’882

²² See *In re NuVasive, Inc.*, 841 F.3d at 974; Paper 8, 7 (emphasizing that “any arguments for patentability not raised in the response may be deemed waived”).

patent are unpatentable as obvious over the combination of Benedetti, Pue, and Iwasaki. Petitioner has not shown, by a preponderance of the evidence, that claims 8 or 16 are unpatentable as obvious based on Benedetti, Pue, and Iwasaki. *See supra* II.E.2.e.

F. Patent Owner's Motion to Exclude

Patent Owner moves to exclude Petitioner's Exhibit 1018. *See* Paper 33, 1. Exhibit 1018 is an exhibit of David Baldwin, the translator that provided the original translation of Sawaya. *See* Ex. 1008, 1. Ex. 1018 provides further information regarding a disputed term in Sawaya. Ex. 1018. Patent Owner argues that the new declaration provides improper technical expert testimony. Paper 33, 1–2. Petitioner opposes the motion, and argues that the translator does not provide technical expert testimony but instead merely clarifies the meaning of a term in response to Patent Owner's attempt to distort that meaning. Paper 35, 1.

We need not reach the merits of Patent Owner's Motion to Exclude because we do not rely on Exhibit 1018 as a basis for any of our findings in this Decision. Accordingly, we dismiss Patent Owner's Motion to Exclude as moot.

CONCLUSION²³

A summary of our conclusions appears in the chart below:

²³ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–20	103	Sawaya, Pue, Iwasaki	1–20	
1–20	103	Benedetti, Pue, Iwasaki	1–7, 9–15, 17–20	8, 16
Overall Outcome			1–20	

ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–20 of U.S. Patent 10,683,882 B2 have been shown, by a preponderance of the evidence, to be unpatentable;

FURTHER ORDERED that Patent Owner’s Motion to Exclude (Paper 33) is *dismissed* as moot; and

FURTHER ORDERED that, because this is a Final Written Decision, the parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2021-00724
Patent 10,683,882 B2

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NOTE: This order is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

ILLINOIS TOOL WORKS, INC.,
Appellant

v.

TERMAX COMPANY,
Cross-Appellant

2023-1252, 2023-1254

Appeals from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. IPR2021-
00724.

ON MOTION

Before DYK, REYNA, and CHEN, *Circuit Judges*.
DYK, *Circuit Judge*.

O R D E R

Illinois Tool Works, Inc. moves to voluntarily dismiss its appeal, No. 2023-1252, and to dismiss Termax Company's cross-appeal, No. 2023-1254. Termax opposes dismissal of its cross-appeal. We grant both motions.

Termax appeals from the Patent Trial and Appeal Board's final written decision in this *inter partes* review, which agreed with Termax that all challenged claims of Illinois Tool Works' U.S. Patent No. 10,683,882 are unpatentable. We have employed the familiar rule that "the prevailing party in a lower tribunal cannot ordinarily seek relief in the appellate court" to appeals from the Board. *SkyHawke Techs., LLC v. Deca Int'l Corp.*, 828 F.3d 1373, 1375 (Fed. Cir. 2016) (citation omitted). We see nothing that warrants departing from that rule here.

In opposing dismissal, Termax contends that the Board erred in its construction of certain claim limitations that have also been incorporated into Illinois Tool Works' new patent. Termax hopes that a favorable decision on its claim construction arguments here will collaterally estop Illinois Tool Works from asserting those newly issued claims. But in *SkyHawke*, we rejected a similar attempt to appeal from a Board's claim construction when the appellant did "not seek to alter the judgment of the Board." *Id.* There, as here, Termax "is merely trying to preempt an unfavorable outcome" as to some other potential proceeding regarding Illinois Tool Works' new patent "that may or may not arise in the future," and, if such an outcome does arise, Termax may appeal "at that time." *Id.* at 1377.

Accordingly,

IT IS ORDERED THAT:

- (1) The motions are granted, and the appeals are dismissed.

ILLINOIS TOOL WORKS, INC. v. TERMAX CO.

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(2) Each side shall bear its own costs.

FOR THE COURT

March 8, 2023
Date

/s/ Peter R. Marksteiner
Peter R. Marksteiner
Clerk of Court

ISSUED AS A MANDATE (as to Appeal No. 2023-1252
only): March 8, 2023

United States Court of Appeals for the Federal Circuit

TERMAX CO.,
Appellant

v.

ILLINOIS TOOL WORKS, INC.,
Appellee

2023-1254

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. IPR2021-
00724.

MANDATE

In accordance with the judgment of this Court, entered
March 8, 2023, and pursuant to Rule 41 of the Federal
Rules of Appellate Procedure, the formal mandate is
hereby issued.

FOR THE COURT

April 14, 2023
Date

/s/ Peter R. Marksteiner
Peter R. Marksteiner
Clerk of Court

(12) **INTER PARTES REVIEW CERTIFICATE** (3117th)

United States Patent
Scroggie et al.

(10) **Number:** **US 10,683,882 K1**
(45) **Certificate Issued:** **May 4, 2023**

(54) **PUSH THROUGH RETAINER
CONNECTION WITH INTEGRATED
HINGING SEAL**

(71) **Applicants:** **Derek Scroggie; Michelle E.
Bozinovski; Robert A. Murawski**

(72) **Inventors:** **Derek Scroggie; Michelle E.
Bozinovski; Robert A. Murawski**

(73) **Assignee:** **ILLINOIS TOOL WORKS INC.**

Trial Number:

IPR2021-00724 filed Mar. 25, 2001

Inter Partes Review Certificate for:

Patent No.: 10,683,882
Issued: Jun. 16, 2020
Appl. No.: 15/987,986
Filed: May 24, 2018

The results of IPR2021-00724 are reflected in this inter partes review certificate under 35 U.S.C. 318(b).

INTER PARTES REVIEW CERTIFICATE
U.S. Patent 10,683,882 K1
Trial No. IPR2021-00724
Certificate Issued May 4, 2023

1

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AS A RESULT OF THE INTER PARTES
REVIEW PROCEEDING, IT HAS BEEN
DETERMINED THAT:

Claims 1-20 are cancelled.

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