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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
17/235,349	04/20/2021	3633	1820	MLP 7708.USC4	20	3

CONFIRMATION NO. 7112

FILING RECEIPT

321
STINSON LLP
7700 FORSYTH BOULEVARD, SUITE 1100
ST LOUIS, MO 63105



Date Mailed: 04/28/2021

Receipt is acknowledged of this non-provisional utility 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 FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Inventor(s)

Steven Brekke, Lakeville, MN;
Mark R. Rolf, Fredericksburg, VA;

Applicant(s)

Columbia Insurance Company, Omaha, NE;

Power of Attorney: The patent practitioners associated with Customer Number 321

Domestic Priority data as claimed by applicant

This application is a CON of 16/433,799 06/06/2019
which is a CON of 16/225,517 12/19/2018 PAT 10316510
which is a CON of 15/675,409 08/11/2017 PAT 10184242
which is a CON of 14/555,049 11/26/2014 PAT 10024049
which claims benefit of 61/922,531 12/31/2013

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: 04/26/2021

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/235,349**

Projected Publication Date: 08/05/2021

Non-Publication Request: No

Early Publication Request: No
Title

HANGER FOR FIRE SEPARATION WALL

Preliminary Class

052

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.

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 17/235,349	
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		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	320
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	700
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	800
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 480 =	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
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
			TOTAL			TOTAL	1820
* 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	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	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	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	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.							

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.)



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321

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

NE

Zip

68131

Country

Telephone

Email

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

Columbia Insurance Company



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

Brennan S. Neville

Date (Optional)

11/05/2014

Name

Brennan S. Neville

Title

Senior Legal Counsel

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, 1.132, and 1.133. 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.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of
Invention

HANGER FOR FIRE SEPARATION WALL

As the below named inventor, I hereby declare that:

This declaration
is directed to:



The attached application, or



United States application or PCT international 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 five (5) years, or both.

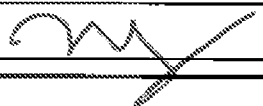
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LEGAL NAME OF INVENTOR

Inventor: Mark R. Rolf

Date (Optional): 11/25/2014

Signature: 

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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 1460, Alexandria, VA 22313-1460. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1460, Alexandria, VA 22313-1460.

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**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76)**

Title of Invention	HANGER FOR FIRE SEPARATION WALL
-------------------------------	--

As the below named inventor, I hereby declare that:

This declaration is directed to: ☒ The attached application, or
☐ United States application or PCT international 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 five (5) years, or both.

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LEGAL NAME OF INVENTOR

Inventor: **Steven Brekke** Date (Optional): 11/12/14

Signature: *Steven Brekke*

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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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Electronic Patent Application Fee Transmittal

Application Number:

Filing Date:

Title of Invention:

HANGER FOR FIRE SEPARATION WALL

First Named Inventor/Applicant Name:

Steven Brekke

Filer:

Steven Nathan Levitt/Sanette White

Attorney Docket Number:

MLP 7708.USC4

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	320	320
UTILITY SEARCH FEE	1111	1	700	700
UTILITY EXAMINATION FEE	1311	1	800	800

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 (\$)				1820

Electronic Acknowledgement Receipt

EFS ID:	42499762
Application Number:	17235349
International Application Number:	
Confirmation Number:	7112
Title of Invention:	HANGER FOR FIRE SEPARATION WALL
First Named Inventor/Applicant Name:	Steven Brekke
Customer Number:	321
Filer:	Steven Nathan Levitt/Sanette White
Filer Authorized By:	Steven Nathan Levitt
Attorney Docket Number:	MLP 7708.USC4
Receipt Date:	20-APR-2021
Filing Date:	
Time Stamp:	15:34:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 1820
RAM confirmation Number	E20214JF34461935
Deposit Account	
Authorized User	

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

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Drawings-only black and white line drawings	Figures_for_MLP_7708_USC4.pdf	839702	no	43
			12a9210165d6bb9d8453e29314710c9069c249b0		
Warnings:					
Information:					
2	Application Data Sheet	ADS_MLP_7708_USC4.pdf	1256512	no	9
			c005bec20a10c2c98fbd0a7bdef88bb2c898897c		
Warnings:					
Information:					
3	Power of Attorney	POA_MLP_7708_USC4.pdf	1034570	no	1
			d8574f5c10f8d57a605f3b1f03c094d2dfdcb5		
Warnings:					
Information:					
4	Oath or Declaration filed	Executed_Declaration_Rolf.pdf	54427	no	1
			be7d5d1c4e41e442eb44fd6ceb398b2a6210dccc		
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
5	Oath or Declaration filed	Executed_Declaration_Brekke.pdf	489685	no	1
			50a783d10ef9b6197da7b3a109263ebda2239744		
Warnings:					
Information:					
6		Continuation_Application_MLP_7708_USC4.pdf	132782	yes	29
			2e788215e308f3d0469f9e4be7f75a6d9946a9ea		

	Multipart Description/PDF files in .zip description								
	Document Description		Start	End					
	Specification		1	24					
	Claims		25	28					
	Abstract		29	29					
Warnings:									
Information:									
7	Fee Worksheet (SB06)	fee-info.pdf	34695	no	2				
			2a388af82f39e7f805276894796bec5c89e06289						
Warnings:									
Information:									
Total Files Size (in bytes):			3842373						
<p>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.</p> <p><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.</p> <p><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.</p> <p><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.</p>									

HANGER FOR FIRE SEPARATION WALL

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Application No. 15/675,409, filed August 11, 2017, which is a continuation of U.S. Application No. 14/555,049, filed November 26, 2014, which claims priority to U.S. Provisional Application No. 61/922,531, filed December 31, 2013, the entirety of which are incorporated herein by reference.

FIELD OF THE INVENTION

[0002] The present invention generally relates to connections for structures, and more specifically, a truss hanger for connecting a truss to a wall including fire retardant sheathing.

BACKGROUND

[0003] The use of fire separation walls in structures, such as in multifamily housing, is commonplace. Often, fire separation is required to be continuous along the walls between adjoining units to prevent fire from spreading between the adjoining units in a multifamily structure. For some types of construction, the building codes also require exterior walls to be fire rated. Typically, gypsum board is used as a fire retardant sheathing along these walls. Floor trusses or joists are attached to or hung from the walls including the gypsum board, but cannot be hung from the gypsum board itself. The trusses or joists must therefore be attached to the wall framing. A cutout for the entire cross section of the truss leaves a large discontinuity in the fire retardant sheathing. However, building codes require that the fire separation wall

maintain a certain fire resistant rating. Thus, the integrity of the fire retardant sheathing should be maintained and interruptions of the sheathing kept to a minimum.

SUMMARY

[0004] In one aspect of the present invention, a hanger for connecting a structural component to a wall having sheathing mounted thereon includes a channel-shaped portion configured to receive the structural component. The channel shaped portion includes a bottom wall, side walls extending from opposite edges of the bottom wall and a back wall. The bottom wall, side walls and back wall are sized and arranged to receive an end of the structural component for supporting the end of the structural component. A connection portion includes a top flange extending away from the back wall of the channel-shaped portion in a direction opposite to the bottom wall of the channel-shaped portion. The top flange is configured for attachment to a top surface of a top plate of the wall. The connection portion further includes a back flange extending from an edge of the top flange in a direction toward the bottom wall of the channel-shaped portion. The back flange of the connection portion faces the back wall of the channel-shaped portion and the back flange and back wall define a space sized to receive the sheathing between the back flange and the back wall. An extension portion extends from the channel-shaped portion to the connection portion and interconnects the channel-shaped portion and the connection portion. The extension portion separates the back wall of the channel-shaped portion from the back flange of the connection portion to define the space sized to receive the sheathing.

[0005] In another aspect pf the present invention a hanger for connecting a structural component to a wall adapted to have sheathing mounted thereon generally comprises a channel-shaped portion configured to receive the structural component. An extension portion extends from the channel-shaped portion and is configured to extend through the sheathing to engage the wall at a first location. The extension portion includes extension flanges extending from the channel-shaped portion forming a bend between each extension flange and the channel-shaped portion. Each of the extension flanges is configured to extend through the sheathing. A connection portion is fixed in position relative to the channel-shaped portion such that that channel-shaped portion does not rotate relative to the connection portion. The connection portion is configured for attachment to the wall at a second location spaced from the first location. The extension flanges define planar surfaces disposed in opposed face-to-face relation between the connection portion and the channel-shaped portion.

[0006] In another aspect of the present invention, a truss hanger for connecting a truss to a wall adapted to have fire resistant sheathing mounted thereon generally comprises a channel-shaped portion configured to receive the truss. The channel-shaped portion includes a base sized and shaped for receiving a truss chord of the truss thereon, side panels extending upward from the base, and a back panel. The back panel extends orthogonally from one of the side panels. An extension portion extends from the channel-shaped portion and is configured to extend through the fire resistant sheathing. The extension portion includes extension flanges. Each of the extension flanges extends away from the base of the channel-shaped portion. A connection portion includes a top flange

extending away from the back panel of the channel-shaped portion in a direction opposite to the base of the channel-shaped portion. The top flange is configured for attachment to a top surface of a top plate of the wall. The connection portion further includes a back flange extending from an edge of the top flange in a direction toward the base of the channel-shaped portion.

[0007] A hanger for connecting a structural component to a wall having sheathing mounted thereon generally comprises a channel-shaped portion configured to receive the structural component. An extension portion is configured to be disposed at least partially in the sheathing. A connection portion is configured for attachment to the wall.

[0008] Other objects and features will be in part apparent and in part pointed out hereinafter.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a fragmentary perspective of adjacent floor trusses connected to a wall having fire retardant sheathing by truss hangers that extend through the sheathing;

[0010] FIG. 2 is a perspective of a truss hanger according to a first embodiment of the present invention;

[0011] FIG. 2A is a rear perspective of the truss hanger;

[0012] FIG. 3 is a front elevation thereof;

[0013] FIG. 4 is a right side elevation thereof;

[0014] FIG. 5 is a left side elevation thereof;

[0015] FIG. 6 is a rear elevation thereof;

[0016] FIG. 7 is a top plan thereof;

[0017] FIG. 8 is a bottom plan thereof;

[0018] FIG. 9 is a perspective of a wall having fire retardant sheathing with a slot cut in the sheathing to receive the truss hanger;

[0019] FIG. 10 is the perspective of Fig. 9, but showing two of the truss hangers mounted thereon;

[0020] FIG. 10A is an enlarged fragmentary perspective of Fig. 10;

[0021] FIG. 11 is a top plan of Fig. 10, illustrating the truss hanger extending through the fire retardant sheathing;

[0022] FIG. 12 is a perspective similar to Fig. 10, but showing a floor truss positioned for mounting in the truss hanger;

[0023] FIG. 13 is a side elevation of Fig. 12;

[0024] FIG. 13A is an enlarged fragmentary perspective of Fig. 13 with a portion of the fire retardant sheathing broken away;

[0025] FIG. 14 is the perspective of Fig. 10, but showing floor trusses mounted in the truss hangers;

[0026] FIG. 14A is an enlarged fragmentary perspective of Fig. 14;

[0027] FIG. 15 is a top view of a stamped metal blank for forming a truss hanger according to the present invention;

[0028] FIG. 16 is a perspective of a slot template for use in cutting the slot in the sheathing to receive the truss hanger;

[0029] FIG. 17 is a rear perspective of the slot template;

[0030] FIG. 18 is a front elevation thereof;

[0031] FIG. 19 is a right side elevation thereof;

[0032] FIG. 20 is a left side elevation thereof;

[0033] FIG. 21 is a rear elevation thereof;

[0034] FIG. 22 is a top plan thereof;

[0035] FIG. 23 is a bottom plan thereof;

[0036] FIG. 24 is a front view of a stamped metal blank for forming the slot template;

[0037] FIG. 25 is a fragmentary perspective of adjacent floor trusses connected at an angle to a wall having fire retardant sheathing by truss hangers of a second embodiment that extend through the sheathing;

[0038] FIG. 26 is a perspective of one of the truss hangers of Fig. 25;

[0039] FIG. 27 is a rear perspective thereof;

[0040] FIG. 28 is a front elevation thereof;

[0041] FIG. 29 is a right side elevation thereof;

[0042] FIG. 30 is a left side elevation thereof;

[0043] FIG. 31 is a rear elevation thereof;

[0044] FIG. 32 is a top plan thereof;

[0045] FIG. 33 is a bottom plan thereof;

[0046] FIG. 34 is a perspective of a wall and the two truss hangers mounted thereon with parts broken away;

[0047] FIG. 35 is an enlarged fragmentary perspective of Fig. 34;

[0048] FIG. 36 is a top plan of Fig. 34, illustrating the truss hangers extending through the fire retardant sheathing;

[0049] FIG. 37 is a side elevation of Fig. 34;

[0050] FIG. 38 is an enlarged fragment of Fig. 37;

[0051] FIG. 39 is a top plan similar to Fig. 36, but showing a floor truss mounted in each truss hanger; and

[0052] FIG. 40 is a front view of a stamped metal blank for forming a truss hanger according to the present invention.

[0053] Corresponding reference characters indicate corresponding parts throughout the drawings.

DETAILED DESCRIPTION

[0054] Referring to Fig. 1, a first embodiment of a connection system for a fire separation wall is shown generally at 10. Floor trusses generally indicated at 12 each include truss members (broadly, "wooden structural members") including a top chord 14, a bottom chord 16, and web members 18 joining the top and bottom chords. Each floor truss also includes end members 20 at each end joining the top and bottom chords 14, 16 (only one end of each truss is shown). The truss members can be joined by nail plates 22 or by any other suitable fastening structure. The number and orientations of the web members 18 and chords 14, 16 may vary from the illustrated embodiment without departing from the scope of the invention, as a truss hanger 26 according to the present invention is readily applicable to other truss configurations (e.g. a roof truss). Moreover, the hanger 26 may be used to connect structural components other than trusses to a wall or other part of a structure. The hanger can be used to support other wood framing members such as solid sawn or structural composite lumber.

[0055] As seen in Fig. 1, a wall 28 includes a top member or plate 30 and support members or studs 32 (only one stud may be seen in Fig. 1). As illustrated, the top plate 30 is formed by two 2x4's in stacked relation. Fire retardant sheathing 34 is mounted on both sides of the wall 28, as illustrated. In one embodiment, the fire retardant sheathing is gypsum board, such as two layers of 5/8" gypsum board mounted on each side of the wall 28 as illustrated, although other configurations of fire retardant sheathing are within the scope of the present invention. Other wall configurations, including different wall constructions and materials, are within the scope of the present invention. For example, the truss hangers 26 can be used with

any wall assembly or fire-rated wall assembly, such as a 2-hour fire-resistive wall assembly. The floor trusses 12 are mounted on the wall 28 adjacent the fire retardant sheathing 34 by the truss hangers 26. The truss hangers 26 extend through a narrow slot in the fire retardant sheathing 34 to maintain the integrity and fire retardant characteristics of the fire separation wall.

[0056] Referring to Figs. 2-8, the truss hanger 26 includes a channel-shaped portion 38, an extension portion 40, and a connection portion 42. The channel-shaped portion 38 is configured to receive the floor truss 12. The channel-shaped portion 38 includes a seat or base 44 and a pair of side panels 46 extending upward from the base. When installed, the base 44 is generally horizontal, and the side panels 46 extend generally vertical from the base. A back panel 48 extends from each of the side panels 46. Each back panel 48 is generally perpendicular to both the side panels 46 and the base 44. When installed, each back panel 48 extends generally parallel to an interior face 50 of the fire retardant sheathing 34. The base 44, side panels 46, and back panels 48 form a channel 52 configured to receive the floor truss 12.

[0057] As seen in Figs. 1 and 12-14A, the floor truss 12 is received in the channel 52 to attach the floor truss to the wall 28. The bottom chord 16 of the floor truss 12 engages and rests upon (i.e., is supported by) the base 44. The end member 20 of the floor truss 12 is positioned against the back panels 48 between the side panels 46. The truss hanger 26 includes fastening structure for attaching the floor truss 12 to the truss hanger. Fastening structure can be of any type known in the art for attaching a connector to a wooden structural member, such as nailing teeth (not shown) struck from the material of

the hanger. In the illustrated embodiment, the fastening structure comprises a hole to allow for insertion of a fastening member. More specifically, in one embodiment the fastening structure comprises nail holes 54 in the side panels 46 of the truss hanger 26, and the fastening member comprises a nail 56 (see Fig. 12). In the illustrated embodiment, nail holes 54 are positioned on each of the side panels 46 so that nails 56 can be inserted into both the bottom chord 16 and the end member 20 of the floor truss 12 to attach the hanger 26 to the floor truss 12.

[0058] Referring again to Figs. 2-8, the extension portion 40 includes two extension flanges 60 configured to extend through the fire retardant sheathing 34. Each flange 60 extends from one of the back panels 48. The flanges 60 are positioned in opposed, face-to-face relation, and preferably engage each other along a juncture. Each flange 60 extends generally perpendicular from the corresponding back panel 48 and generally parallel to the side panels 46. At a bottom edge, each flange 60 includes a driving point 62. Each of the driving points 62 is generally triangular and includes a pointed tip 64. As seen in Figs. 3 and 6, the tips 64 of the driving points 62 are vertically offset from each other. As illustrated, the tip 64a of one flange 60a extends vertically below the tip 64b of the other flange 60b. In one embodiment, the tips 64 are vertically offset from each other about 1/8", although other configurations are within the scope of the present invention, such as tips that are aligned or tips that are offset a smaller or larger amount.

[0059] A back flange 66 extends from each of the extension flanges 60. Each back flange 66 extends generally perpendicular from the extension flange 60 and is oriented generally parallel to the back panels 48. Referring to Fig. 13A, the back flanges

66 engage the wall 28 at a first location L₁, which in the illustrated embodiment is a vertical face of the top plate 30 of the wall. The back panels 48, extension flanges 60, and back flanges 66 form a pair of sheathing channels 68. Each sheathing channel 68 is configured to receive a portion of the fire retardant sheathing 34 to secure the sheathing between the hanger 26 and the wall 28. As seen in Fig. 7, the sheathing channels 68 extend generally perpendicular to the truss-receiving channel 52.

[0060] As seen in Figs. 10A and 11, the extension flanges 60 extend through a slot 72 in the fire retardant sheathing 34. Preferably, the slot has an area less than or equal to 6 square inches, and the gap between the extension flanges 60 and the edge of the slot 72 is less than or equal to 1/8". The driving points 62 extend down into the sheathing 34 to further secure the sheathing between the hanger 26 and the wall 28. A portion of the fire retardant sheathing 34 extends into each sheathing channel 68 and is secured between the back panels 48 and the back flanges 66.

[0061] In one embodiment, the slot 72 in the fire retardant sheathing 34 can be made using a slot template 82 (Figs. 16-24). The slot template 82 includes a vertical panel 84 having a rear face 86 configured to engage the interior face 50 of the fire retardant sheathing 34 and a horizontal panel 88 having a bottom face 90 configured to engage a top face of the sheathing. The horizontal panel 88 extends generally perpendicular from the vertical panel 84. The slot template 82 is configured to be quickly fixed in position on the sheathing 34 for use in cutting the slot 72 to receive the truss hanger 26. Portions of the slot template 82 are configured to be pressed into the sheathing 34 to locate the template on the sheathing and retain the

template in position for cutting the slot 72. In the illustrated embodiment, the horizontal panel includes prongs 92 that are bent downward for insertion into the top face of the sheathing 34. Bottom corners 94 of the vertical panel 84 are bent rearward for insertion into the interior face 50 of the sheathing 34. The prongs 92 and the corners 94 are inserted into the sheathing 34 to retain the template 82 in position for cutting the slot 72. In addition, the vertical panel 84 optionally includes dimples 96 extending toward the rear face 86 of the vertical panel 84. The dimples 96 ensure the vertical panel 84 remains slightly spaced from the interior face 50 of the sheathing 34 so the template 82 can be easily removed from the sheathing after the slot 72 is cut.

[0062] The template 82 includes a guide slot 98 to guide a cutting tool in cutting the slot 72 in the sheathing 34. The guide slot 98 extends from a top edge of the vertical panel 84 to a location spaced from a bottom edge of the vertical panel. As illustrated, the guide slot 98 includes a wide, rectangular portion 98a in the horizontal panel 88 to ease insertion of a cutting tool into the guide slot. A converging portion 98b of the slot 98 in the vertical panel 84 transitions from the wide portion 98a to a narrow lower portion 98c of the slot. This facilitates entry of the cutting tool into the narrow portion 98c. The narrow portion 98c of the guide slot 98 is dimensioned to facilitate cutting the slot 72 in the sheathing 34 to a size configured to receive the extension flanges 60 of the truss hanger 26.

[0063] As seen in Fig. 24, the template 82 described above can be formed as one piece from a metal blank 100 that is stamped from a sheet metal roll and bent into shape. In one embodiment, the template 82 is stamped from 16 gauge steel,

although other thicknesses (e.g., 12-18 gauge) and other suitable materials are within the scope of the present invention.

[0064] In use, the template 82 is placed on the sheathing 34 in a selected location for a slot 72. The template can be used to cut the slot 72 in the sheathing 34 either before or after the sheathing is mounted on the wall 28. The prongs 92 and corners 94 are inserted into the sheathing 34 by tapping with a hand or striking with a hammer or other blunt instrument. Once the template 82 is secured in position on the sheathing 34, a cutting tool (e.g., a drywall cutout tool) is inserted into the guide slot 98 to cut a slot 72 in the sheathing at the location of the guide slot. In one embodiment, a drywall cutout tool with a 1/8" or 1/4" spiral bit is used to cut the slot 72, although other cutting tools are within the scope of the present invention. After the slot 72 is cut in the sheathing 34, the template 82 is removed from the sheathing. The sheathing 34 is then configured to receive the truss hanger 26.

[0065] Referring again to Figs. 2-8, the connection portion of the hanger includes a pair of connector tabs 74 extending from the back flanges 66. Each connector tab 74 extends generally perpendicular from one of the back flanges 66. The connector tabs 74 are generally horizontal when the hanger 26 is installed. The connector tabs 74 are configured to engage an upper surface of the top plate 30 of the wall 28 at a second location L_2 spaced from the first location L_1 . The connector tabs 74 can be used to attach the truss hanger 26 to the wall, thereby hanging the floor trusses 12 from the wall. As seen in Fig. 1, the connector tabs 74 extend over a portion of the top plate 30 of the wall 28. Each connector tab 74 includes fastening structure, such as nail holes 76, for insertion of a

fastening member, such as nails 78 (see Figs. 10 and 10A), to attach the hanger 26 to the wall 28. In the illustrated embodiment, each connector tab 74 includes three nail holes 76. Other configurations are within the scope of the present invention, such as a different number of nail holes, or alternate fastening structure such as nailing teeth or other appropriate structure for fastening the hanger to the wall.

[0066] The base 44 and back flanges 66 of the truss hanger 26 cooperate to stabilize the truss hanger 26 and protect the fire retardant sheathing 34 under the loads transferred from the truss 12 to the wall 28 by way of the hanger. The channel 52 that receives an end portion of the truss 12 is spaced to the interior of the wall 28 and more particularly to the interior of the second location L_2 where the connector tabs 74 are attached to an upper surface of the top plate 30. The vertically downward load of the truss 12 applied to the base 44 of the truss hanger 26 urges the truss hanger 26 to pivot so that the base would move toward the wall 28, which could damage the fire retardant sheathing 34 and pry out the nails 78 connecting the connector tabs 74 to the upper surface of the top plate 30. However, this motion is resisted by the engagement of the back flanges 66 with the interior vertical face of the top plate 30 at the first location L_1 . Thus, there is a force couple between the base 44 of the hanger 26 carrying the vertical load of the truss 12 and the back panels 48 of the hanger (via engagement of the back flanges 66 with the top plate 30) engaging the end face of the truss. Accordingly, the truss hanger 26 and truss 12 are stable with minimal disruption of the fire retardant sheathing 34, even though the truss is held at a distance from the wall 28 by the truss hanger.

[0067] As seen in Fig. 15, a truss hanger 26 as described above can be formed as one piece from a metal blank 80 that is stamped from a sheet metal roll and bent into shape. In one embodiment, the truss hanger 26 is stamped from 12-14 gauge steel, although other suitable materials are within the scope of the present invention. The configuration of the truss hanger 26 of the present invention allows a lighter gauge metal to be used.

[0068] In use, the truss hanger 26 is positioned in the slot 72 of the fire retardant sheathing 34 mounted on the wall 28. As seen in Figs. 9-14A, one method of using the truss hanger 26 includes cutting the slot 72 in the fire retardant sheathing 34 (either before or after the sheathing is mounted on the wall). In one embodiment, the slot 72 can be cut using the slot template 82 (either before or after the sheathing 34 is mounted to the wall 28). The slot can be any suitable length, and in one embodiment is about 10 inches long. The truss hanger 26 is then positioned against the fire retardant sheathing 34 so that the extension flanges 60 extend through the slot 72. In one embodiment, the hanger 26 is slid downward into place so that the extension flanges 60 extend through the slot 72, the back flanges 66 are positioned adjacent the wall 28, and the fire retardant sheathing 34 is positioned in the sheathing channels 68 between the back flanges and the back panels 48. The hanger connector tabs 74 are fastened to the top plate 30 of the wall 28 by any suitable means, such as by inserting nail 78 through the nail holes 76. Then, a truss member, e.g. truss bottom chord 16, is positioned in the truss channel 52 of the hanger 26 (see Fig. 1), thereby securing the floor truss 12 to the wall 28. The truss hanger 26 is then fastened to the truss 12 by any suitable means, such as by inserting nails 56 through

the nail holes 54 in each side panel 46 of the hanger. The hanger 26 is thus secured to both the truss 12 and the wall 28, with the fire retardant sheathing 34 secured between the hanger and the wall.

[0069] In another embodiment, the truss hangers 26 can be installed without pre-forming the slot 72 in the fire retardant sheathing 34. More particularly, each hanger 26 can be driven into the sheathing 34. The driving point 62 of the hanger 26 is positioned against a top edge of the fire retardant sheathing. The hanger 26 is then driven downward into the sheathing 34, led by the pointed tip 64. The hanger 26 continues to be driven into the gypsum boards until the connector tabs 74 engage the upper surface of the top plate 30. In this way, the hanger 26 forms the slot in the sheathing 34.

[0070] In still another embodiment, the truss hangers 26 can be installed on the wall 28 before the sheathing 34 is mounted on the wall. This simplifies construction by allowing the building to be completely framed and roofed before requiring the sheathing 34 to be installed. Trade workers (e.g., mechanical, electrical) therefore have complete access to the wall cavity to install components without interference from the sheathing 34. The truss hanger 26 is positioned against the wall 28 such that the back flanges 66 engage the wall and the connector tabs 74 engage the top plate 30. The connector tabs 74 are fastened to the top plate 30 of the wall by any suitable means, such as by inserting nails 78 through nail holes 76. Then, a truss 12 is positioned in the truss channel 52 of the hanger 26. The truss hanger is fastened to the truss 12 by any suitable means, such as by inserting nails 56 through the nail holes 54 in each side panel 46 of the hanger 26. The floor truss 12 is thereby secured to the hanger 26 and the wall 28,

and access to the wall cavity remains unhindered by sheathing. Subsequently, the sheathing 34 can be mounted on the wall 28 by moving the sheathing upward into place so that the extension flanges 60 of the hanger 26 extend through the slot 72 of the sheathing and the sheathing is positioned in the sheathing channels 68 between the back flanges 66 and the back panels 48.

[0071] Referring to Figs. 25-40, a second embodiment of a truss hanger 126 for use in mounting the floor truss 12 to the wall 28 is illustrated. The truss hanger 126 is similar to the truss hanger 26 described above, with differences as pointed out herein. Where the truss hanger 26 is configured for mounting the floor truss 12 generally orthogonal to the wall 28, the truss hanger 126 is configured for mounting the floor truss 12 in a skewed position relative to the wall.

[0072] Referring to Figs. 26-33, the truss hanger 126 includes a channel-shaped portion 138, an extension portion 140, and a connection portion 142. The channel-shaped portion 138 is configured to receive the floor truss 12. The channel-shaped portion 138 is configured to support the floor truss 12 at a non-orthogonal angle relative to the wall 28. In this skewed embodiment, the channel-shaped portion 138 is offset from the extension portion 140. The channel-shaped portion 138 includes a seat or base 144 and a pair of side panels 146 extending upward from the base. When installed, the base 144 is generally horizontal, and the side panels 146 extend generally vertical from the base. A back panel 148 extends from one of the side panels 146a toward the opposing side panel 146b. The back panel 148 is generally perpendicular to both the side panels 146 and the base 144. When installed, the back panel 148 extends at a non-orthogonal angle (e.g., about 45 °) to the interior face 50 of the fire retardant sheathing 34. The base 144, side panels

146, and back panel 148 form a channel 152 configured to receive the floor truss 12. Other configurations are within the scope of the present invention. For example, the truss hanger 126 can be configured to support the floor truss 12 at a range of different angles with respect to the wall 28.

[0073] As seen in Figs. 25 and 39, the floor truss 12 is received in the channel 152 to attach the floor truss to the wall 28 at a skewed angle. The bottom chord 16 of the floor truss 12 engages and rests upon (i.e., is supported by) the base 144. The end member 20 of the floor truss 12 is positioned against the back panel 148 between the side panels 146. The truss hanger 126 includes fastening structure for attaching the floor truss 12 to the truss hanger. Fastening structure can be of any type known in the art for attaching a connector to a wooden structural member, such as nailing teeth (not shown) struck from the material of the hanger. In the illustrated embodiment, the fastening structure comprises a hole to allow for insertion of a fastening member. More specifically, in one embodiment the fastening structure comprises nail holes 154 in the side panels 146 of the truss hanger 126 (see, Fig. 26), and the fastening member comprises a nail 156 (see, Fig. 25). In the illustrated embodiment, nail holes 154 are positioned on each of the side panels 146 so that nails 156 can be inserted into both the bottom chord 16 and the end member 20 of the floor truss 12 to attach the hanger 126 to the floor truss.

[0074] Referring again to Figs. 26-33, the extension portion 140 includes two extension flanges 160 configured to extend through the fire retardant sheathing 34. One of the flanges 160a extends from the back panel 148. The other flange 160b extends from the side panel 146b. The flanges 160 are positioned in opposed, face-to-face relation, and preferably

engage each other along a juncture. At a bottom edge, each flange 160 includes a driving point 162. Each of the driving points 162 is generally triangular and includes a pointed tip 164. As seen in Fig. 28, the tips 164 of the driving points 162 are vertically offset from each other. As illustrated, the tip 164a of one flange 160a extends vertically below the tip 164b of the other flange 160b. In one embodiment, the tips 164 are vertically offset from each other about 1/8", although other configurations are within the scope of the present invention, such as tips that are aligned or tips that are offset a smaller or larger amount.

[0075] A back flange 166 extends from the extension flange 160 generally perpendicular from the extension flange. Referring to Fig. 38, the back flange 166 engages the wall 28 at a first location L₁₀, which in the illustrated embodiment is a vertical face of the top plate 30 of the wall behind the fire retardant sheathing 34. The back flange 166 comprises a back flange portion 166a bent from the extension flange 160a and a back flange portion 166b bent from the extension flange 160b. The back panel 148, side panel 146b, extension flanges 160, and back flange 166 form a pair of sheathing channels 168 (see, Fig. 32). Each sheathing channel 168 is configured to receive a portion of the fire retardant sheathing 34.

[0076] As seen in Figs. 34-36, the extension flanges 160 extend through the slot 72 in the fire retardant sheathing 34. Preferably, the slot has an area less than or equal to 6 square inches, and the gap between the extension flanges 60 and the edge of the slot 72 is less than or equal to 1/8". The driving points 162 extend down into the sheathing 34 to engage the sheathing and further secure the sheathing between the hanger 126 and the wall 28. A portion of the fire retardant sheathing

34 extends into each sheathing channel 168 and is secured against the back flange 166.

[0077] Referring again to Figs. 26-33, the connection portion 142 of the hanger 126 includes a pair of connector tabs 174 extending from the back flange portions 166a, 166b. Each connector tab 174 extends generally perpendicular from a respective one of the back flanges 166a, 166b. The connector tabs 174 are generally horizontal when the hanger 126 is installed. The connector tabs 174 are configured to overlie and engage an upper surface of the top plate 30 of the wall 28 at a second location L_{20} spaced from the first location L_{10} (see, Figs. 37 and 38). The connector tabs 174 can be used to attach the truss hanger 126 to the wall 28, thereby hanging the floor trusses 12 from the wall. As seen in Fig. 25, the connector tabs 174 extend over a portion of the top plate 30 of the wall 28. Each connector tab 174 includes fastening structure, such as nail holes 176, for insertion of a fastening member, such as nails 178 (see Figs. 34 and 35), to attach the hanger 126 to the wall 28. In the illustrated embodiment, each connector tab 174 includes three nail holes 176. Other configurations are within the scope of the present invention, such as a different number of nail holes, or alternate fastening structure such as nailing teeth or other appropriate structure for fastening the hanger to the wall.

[0078] The base 144 and back flanges 166 cooperate to stabilize the truss hanger 126 and protect the fire retardant sheathing 34 from exposure to the loads transferred from the truss 12 to the wall 28 by way of the truss hanger 126. The channel 152 that receives an end portion of the truss 12 is spaced to the interior of the wall 28 and more particularly to the interior of the second location L_{20} where the connector tabs

174 are attached to an upper surface of the top plate 30 (see Fig. 38). The vertically downward load of the truss 126 applied to the base 144 of the truss hanger 126 urges the truss hanger to pivot so that the base would move toward the wall 28, which could damage the fire retardant sheathing 34 and pry out the nails 178 connecting the connector tabs 174 to the upper surface of the top plate 30. However, this motion is resisted by the engagement of the back flanges 166 with the interior vertical face of the top plate 30 at the first location L₁₀. Thus, there is a force couple between the base 144 and back panel 148 of the hanger 126 (via engagement of the back flanges 166 with the top plate 30) engaging the end fact of the truss. Accordingly, the truss hanger 126 and truss 12 are stable with minimal disruption of the fire retardant sheathing 34, even though the truss is held at a distance from the wall 28.

[0079] As seen in Fig. 40, a truss hanger 126 as described above can be formed as one piece from a metal blank 180 that is stamped from a sheet metal roll and bent into shape. Parts of the blank 180 are labelled with reference numerals corresponding to the various parts of the formed truss hanger 126. In one embodiment, the truss hanger 126 is stamped from 12-14 gauge steel, although other suitable materials are within the scope of the present invention. The configuration of the truss hanger 126 of the present invention allows a lighter gauge metal to be used.

[0080] The truss hanger 126 is used as described above with reference to the truss hanger 26. In use, the truss hanger 126 is positioned in the slot 72 of the fire retardant sheathing 34 mounted to the wall 28. One method of using the truss hanger 126 includes cutting the slot 72 in the fire retardant sheathing 34 (either before or after the sheathing is mounted on the

wall). In one embodiment, the slot 72 can be cut using the slot template 82 (either before or after the sheathing 34 is mounted to the wall 28). The slot 72 can be any suitable length, and in one embodiment is about 10 inches long. The truss hanger 126 is then positioned against the fire retardant sheathing 34 so that the extension flanges 160 extend through the slot 72. In one embodiment, the hanger 126 is slid downward into place so that the extension flanges 160 extend through the slot 72, the driving point 162 engages the fire retardant sheathing 34, the back flange 166 is positioned adjacent the wall 28, and the fire retardant sheathing is positioned in the sheathing channels 168 of the hanger. The hanger connector tabs 174 are fastened to the top plate 30 of the wall 28 by driving nails 178 through the nail holes 176 into the top plate 30. Then, a truss member, e.g. truss bottom chord 16 is positioned in the truss channel 152 of the hanger 126. Nails 156 are driven through holes 154 in the side panels 146 to secure the floor truss 12 to the wall 28. The hanger 126 is thus secured to both the truss 12 and the wall 28, with the fire retardant sheathing 34 between the hanger and the wall.

[0081] In another embodiment, the truss hangers 126 can be installed without pre-forming the slot 72 in the fire retardant sheathing 34. More particularly, each hanger 126 can be driven into the sheathing 34. The pointed tip 164 of the driving point 162 of the hanger 126 is positioned against a top edge of the fire retardant sheathing 34. The hanger 126 is then driven downward into the sheathing 34, led by the pointed tip 164. The hanger 126 continues to be driven into the gypsum boards until the connector tabs 174 engage the upper surface of the top plate 30. In this way, the hanger 126 forms the slot in the sheathing 34.

[0082] In another embodiment, the truss hangers 126 can be installed on the wall 28 before the sheathing 34 is mounted on the wall. This simplifies construction by allowing the building to be completely framed and roofed before requiring the sheathing 34 to be installed. Trade workers (e.g., mechanical, electrical) therefore have complete access to the wall cavity to install components without interference from the sheathing 34. The truss hanger 126 is positioned against the wall 28 such that the back flange 166 engages the wall and the connector tabs 174 engage the top plate 30. The connector tabs 174 are fastened to the top plate 30 of the wall by any suitable means, such as by inserting nails 178 through nail holes 176. Then, a truss 12 is positioned in the truss channel 152 of the hanger 126. The truss hanger 126 is fastened to the truss 12 by any suitable means, such as by inserting nails 156 through the nail holes 154 in each side panel 146 of the hanger. The floor truss 12 is thereby secured to the hanger 126 and the wall 28, and access to the wall cavity remains unhindered by sheathing. Subsequently, the sheathing 34 can be mounted on the wall 28 by moving the sheathing upward into place so that the extension flanges 160 of the hanger 126 extend through the slot 72 of the sheathing and the sheathing is positioned in the sheathing channels 168 of the hanger.

[0083] The truss hanger 26, 126 permits a floor truss 12 to be secured to a wall 28 through fire retardant sheathing 34 with minimal interruption to the sheathing. Installation of the truss hanger minimally disrupts the continuity of the sheathing and therefore does not reduce the fire resistive rating of a fire rated assembly. The extension flanges 60, 160 extend through the fire retardant sheathing 34 so that the sheathing is interrupted only by the slot 72 required to receive the flanges.

The back flanges 66, 166 engage the wall 28 behind the sheathing 34 to stabilize the hanger 26, 126 and protect the sheathing. The truss hanger 26, 126 can be mounted on a wall already having sheathing mounted thereon, or can be mounted on a wall before the sheathing (i.e., the sheathing does not have to be mounted on the wall before the truss hanger), thereby simplifying construction. The truss hanger 26, 126 can be formed from a metal blank 80, 180, which reduces the number of parts required to hang the floor truss 12 and simplifies the manufacturing process.

[0084] In an independent test performed by an outside firm, the truss hanger was installed as part of a wall assembly including 2x6 wood studs, 24" on center, with two layers of 5/8" Type X gypsum attached to each side. The gypsum board included a slot to accommodate the hanger. The hanger was fixed to the top plate of the wall with six 10d common nails in the connector tabs. The cavities in the wall were filled with mineral wool insulation. The testing was performed per ASTM E814 which subjected the specimen to the time/temperature curve prescribed in ASTM E119 for a period of two hours, followed by a hose stream test. As a result of this testing, the outside firm reported that when installed on one side of a maximum 2 hour fire-rated wall assembly, the penetration of the truss hanger through the gypsum board will not reduce the fire resistive rating of the 2 hour fire resistive assembly.

[0085] Having described the invention in detail, it will be apparent that modifications and variations are possible without departing from the scope of the invention defined in the appended claims.

[0086] When introducing elements of the present invention or the preferred embodiments(s) thereof, the articles "a", "an",

"the" and "said" are intended to mean that there are one or more of the elements. The terms "comprising", "including" and "having" are intended to be inclusive and mean that there may be additional elements other than the listed elements.

[0087] In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

[0088] As various changes could be made in the above products without departing from the scope of the invention, it is intended that all matter contained in the above description and shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

WHAT IS CLAIMED IS:

1. A hanger for connecting a structural component to a wall adapted to have sheathing mounted thereon, the hanger comprising:
 - a channel-shaped portion configured to receive the structural component;
 - an extension portion extending from the channel-shaped portion and configured to extend through the sheathing to engage the wall at a first location; and
 - a connection portion configured for attachment to the wall at a second location spaced from the first location.
2. A hanger as set forth in claim 1, wherein the channel-shaped portion is disposed with respect to the extension portion to mount the structural component generally orthogonal to the wall.
3. A hanger as set forth in claim 1, wherein the channel-shaped portion is disposed with respect to the extension portion to mount the structural component at a non-orthogonal angle relative to the wall.
4. A hanger as set forth in claim 1, wherein the extension portion includes extension flanges extending from the channel-shaped portion, each of the extension flanges being configured to extend through the sheathing.
5. A hanger as set forth in claim 4, wherein the extension flanges are configured to engage each other along a juncture positioned within the sheathing.

6. A hanger as set forth in claim 4, wherein each of the extension flanges includes a driving point configured to be inserted into the sheathing.

7. A hanger as set forth in claim 1, wherein the connection portion includes connector tabs configured to overlie and engage a top plate of the wall.

8. A hanger as set forth in claim 1, wherein the extension portion includes back flanges configured to engage the wall at said first location.

9. A hanger as set forth in claim 1, wherein the channel-shaped portion includes a base sized and shaped for receiving the structural component thereon and side panels extending upward from the base, each of the side panels including fastening structure for use in attaching the hanger to the structural component.

10. A hanger as set forth in claim 9, wherein the channel-shaped portion further includes back panels, each of the back panels extending from a respective one of the side panels.

11. A hanger as set forth in claim 1, wherein the channel-shaped portion, the extension portion, and the connection portion are formed as one piece.

12. A hanger as set forth in claim 1 in combination with a slot template for cutting a slot in the sheathing configured to receive the extension portion of the hanger.

13. A truss hanger for connecting a truss to a wall adapted to have fire resistant sheathing mounted thereon, the truss hanger comprising:

a channel-shaped portion configured to receive the truss, the channel-shaped portion including a base sized and shaped for receiving a truss chord of the truss thereon, side panels extending upward from the base, and a back panel, the back panel extending from one of the side panels;

an extension portion extending from the channel-shaped portion and configured to extend through the fire resistant sheathing, the extension portion including extension flanges and back flanges, each of the extension flanges extending from the channel-shaped portion and each of the back flanges extending from a respective one of the extension flanges.

14. A truss hanger as set forth in claim 13, wherein each of the side panels includes fastening structure for use in attaching the truss hanger to the truss.

15. A truss hanger as set forth in claim 13, wherein each of the extension flanges is configured to extend through a slot in the fire retardant sheathing.

16. A truss hanger as set forth in claim 13, wherein the extension flanges are configured to engage each other along a juncture positioned within the fire resistant sheathing.

17. A truss hanger as set forth in claim 13, wherein each of the extension flanges includes a driving point configured to be inserted into the fire resistant sheathing.

18. A truss hanger as set forth in claim 17, wherein the driving points of the extension flanges are vertically offset from each other.

19. A truss hanger as set forth in claim 13, wherein the channel-shaped portion and the extension portion are formed as one piece of sheet metal.

20. A hanger for connecting a structural component to a wall adapted to have sheathing mounted thereon, the hanger comprising:

- a channel-shaped portion configured to receive the structural component;
- an extension portion configured to be disposed at least partially in the sheathing; and
- a connection portion configured for attachment to the wall.

ABSTRACT

A hanger for connecting a structural component to a wall that can have sheathing mounted thereon either before or after the hanger is connected to the wall. The hanger includes a channel-shaped portion configured to receive the structural component. An extension portion extends from the channel-shaped portion and is configured to extend through the sheathing to engage the wall at a first location. A connection portion is configured for attachment to the wall at a second location spaced from the first location.

FIG. 1

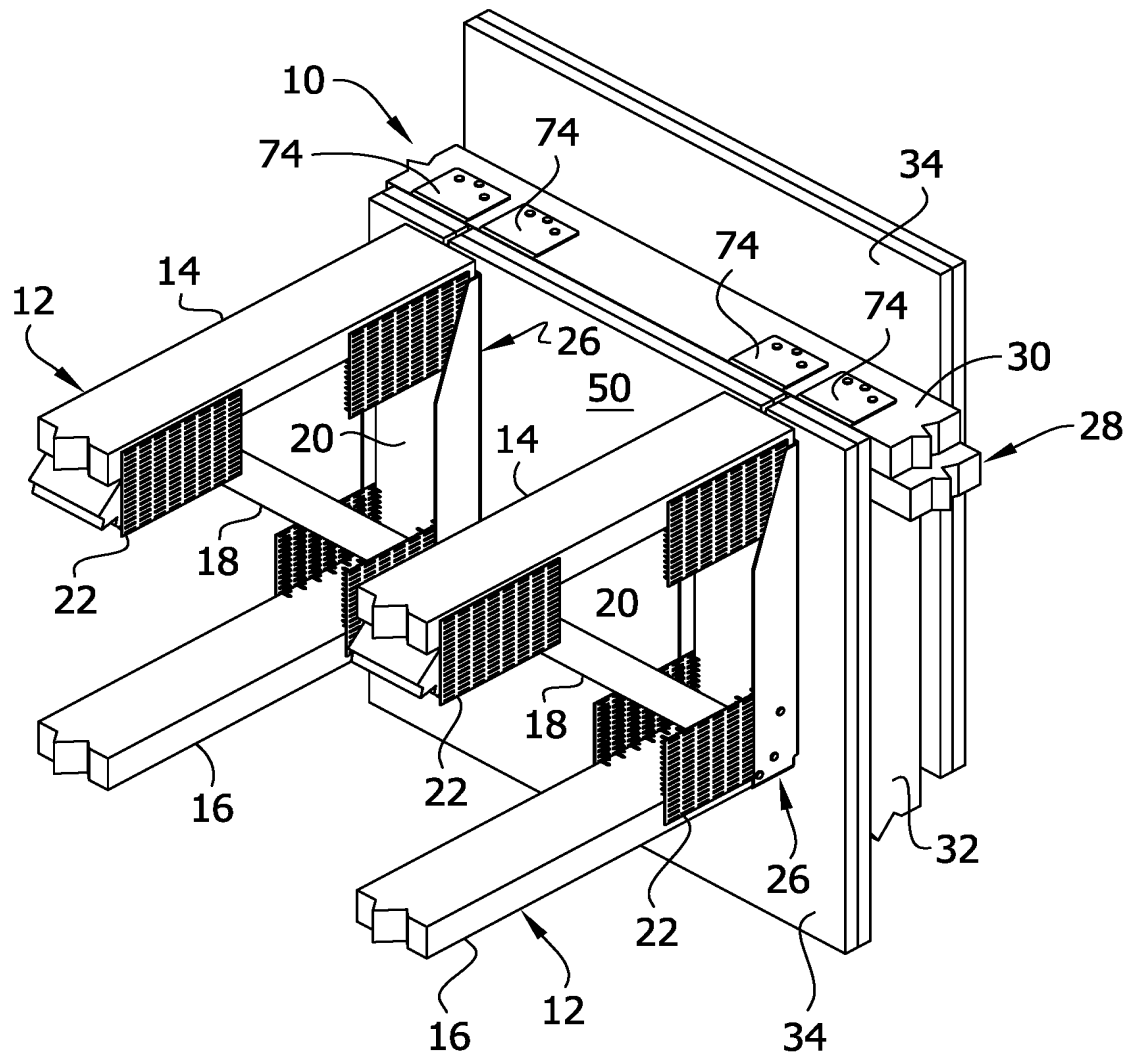
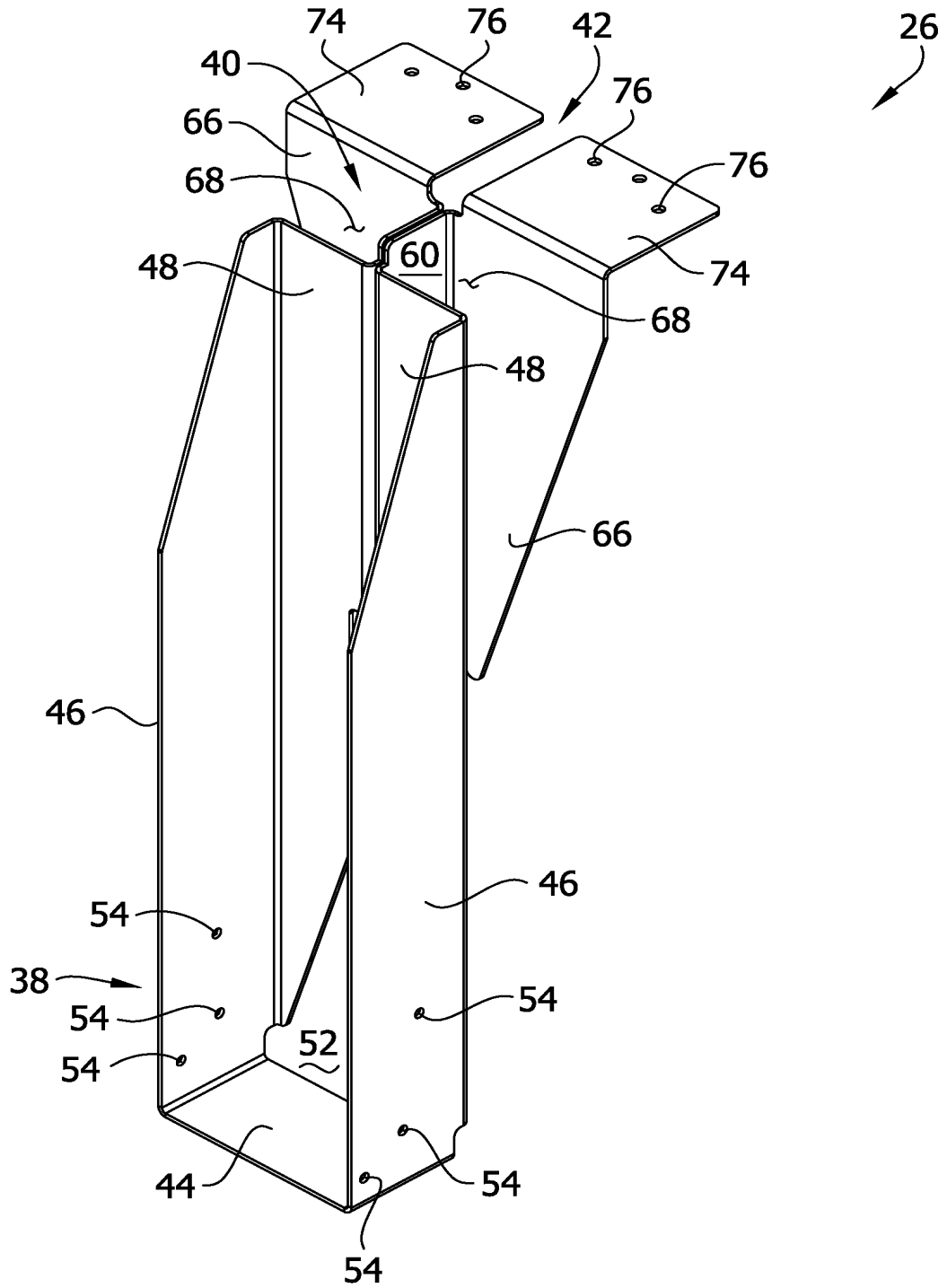


FIG. 2



0045

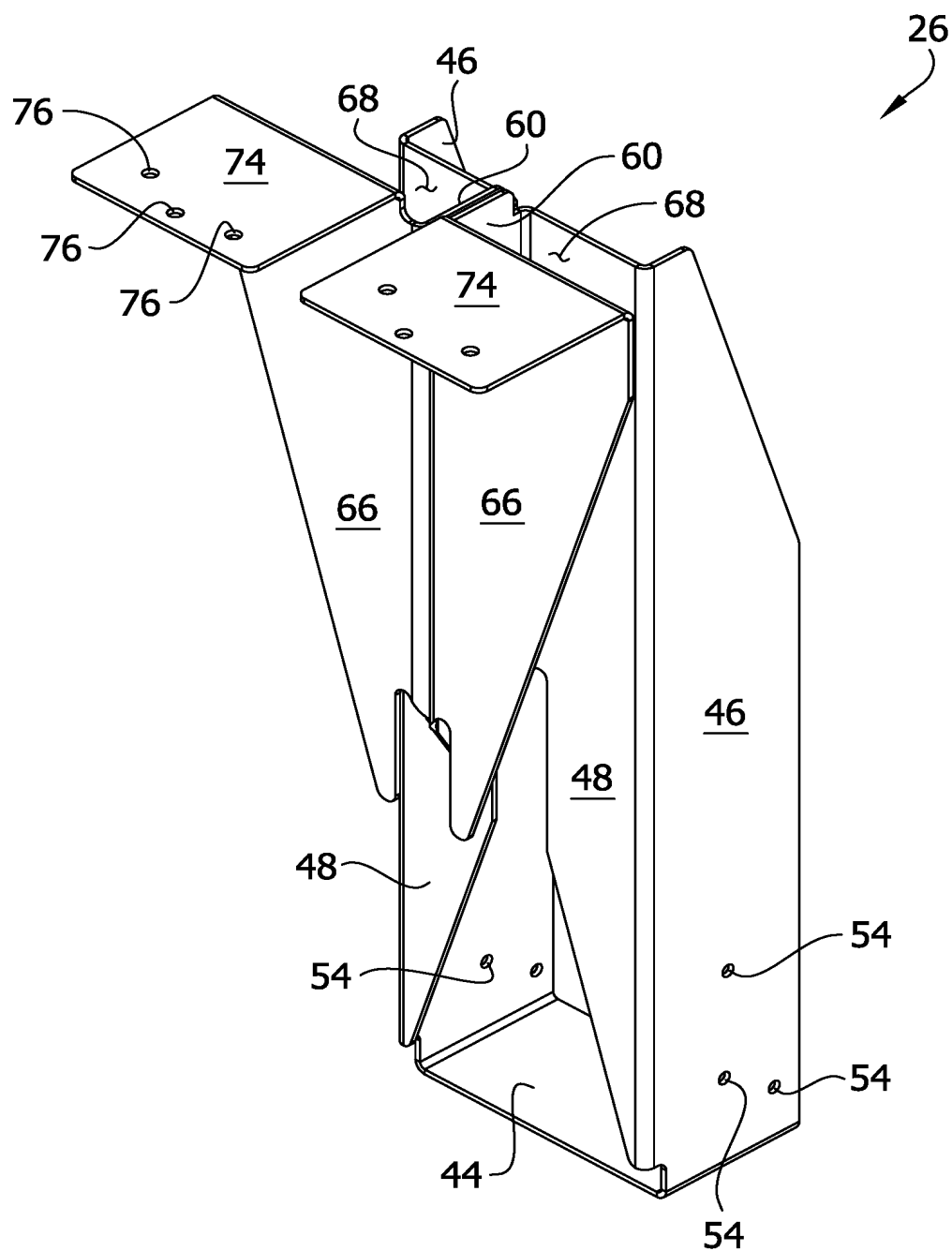


FIG. 3

26
↙

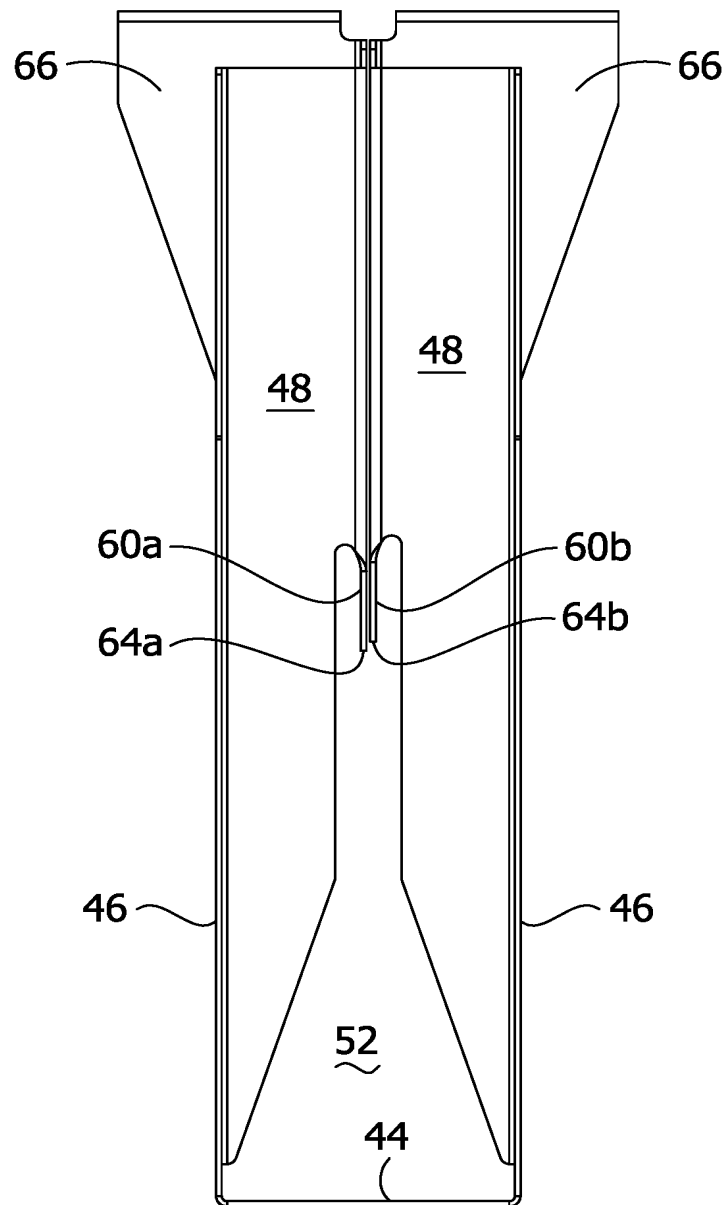


FIG. 4

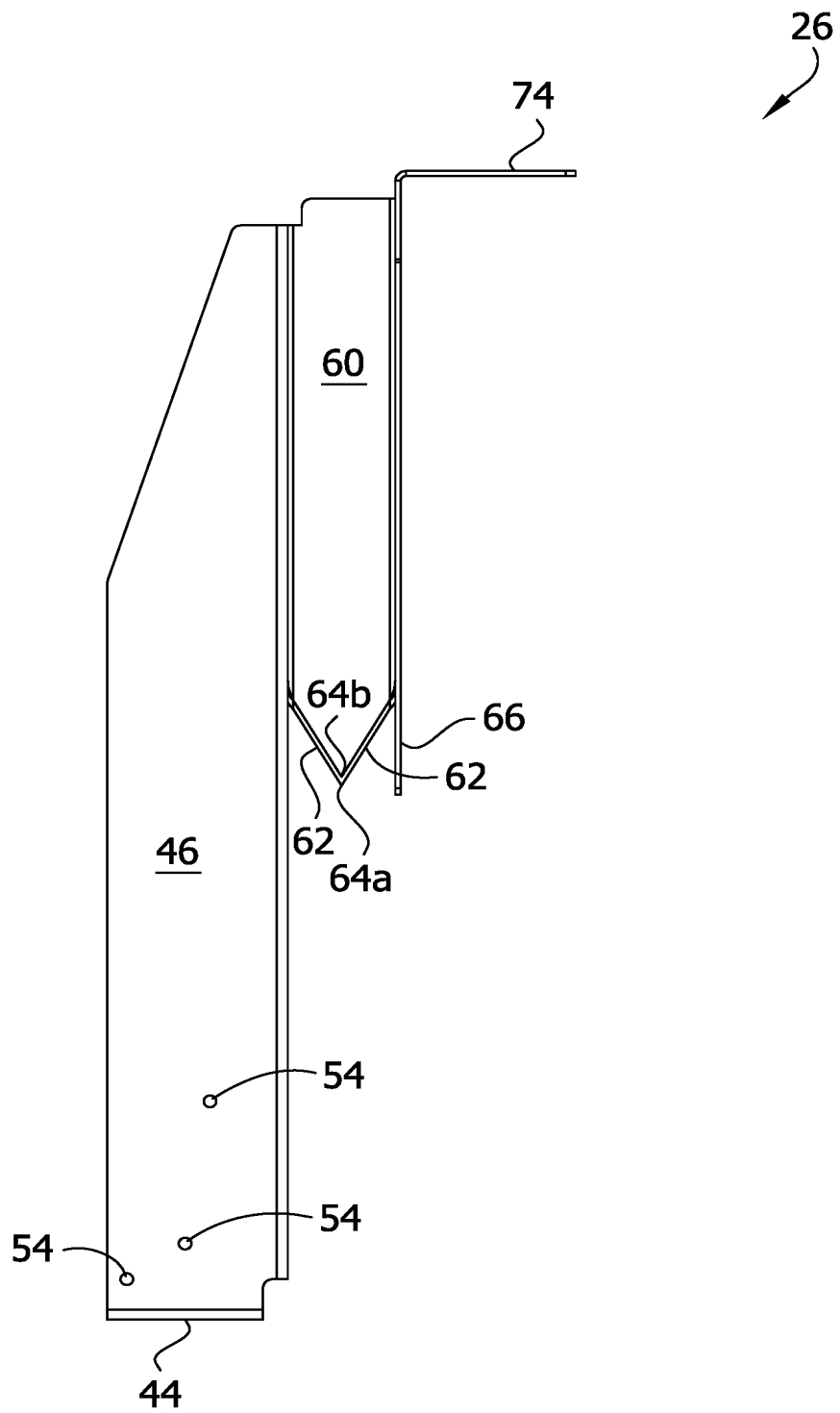


FIG. 5

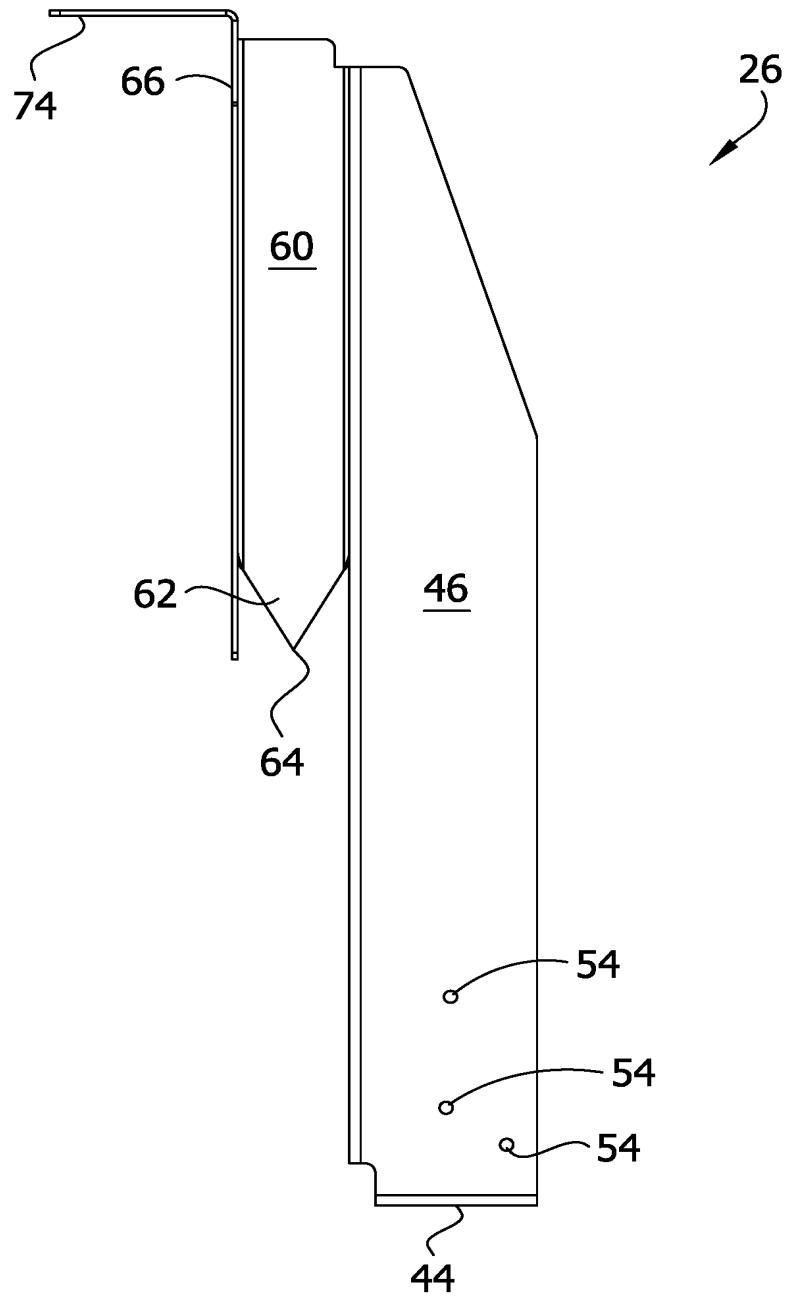


FIG. 6

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↙

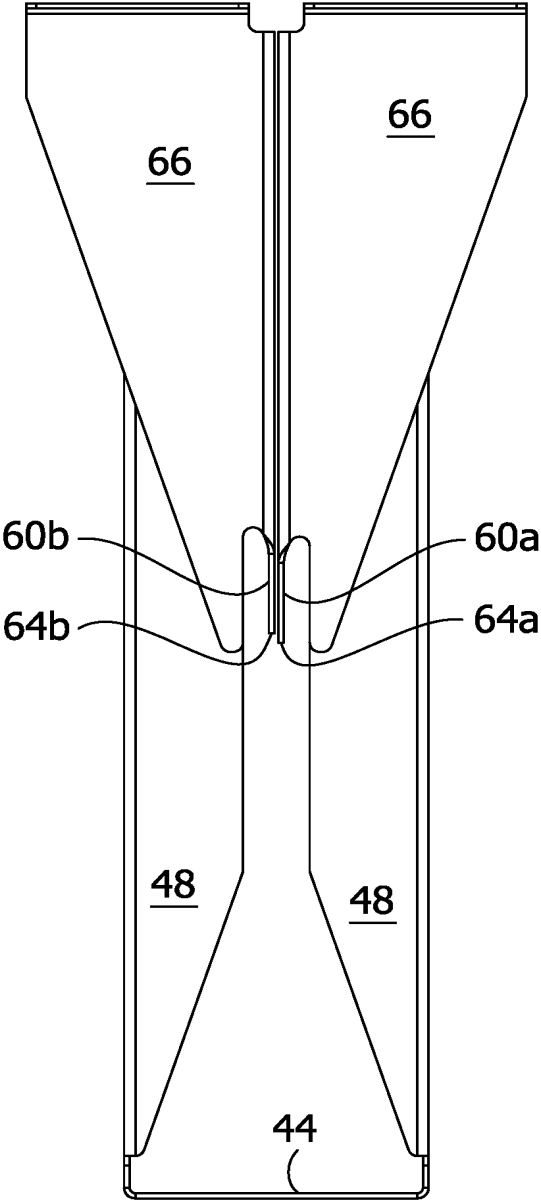


FIG. 7

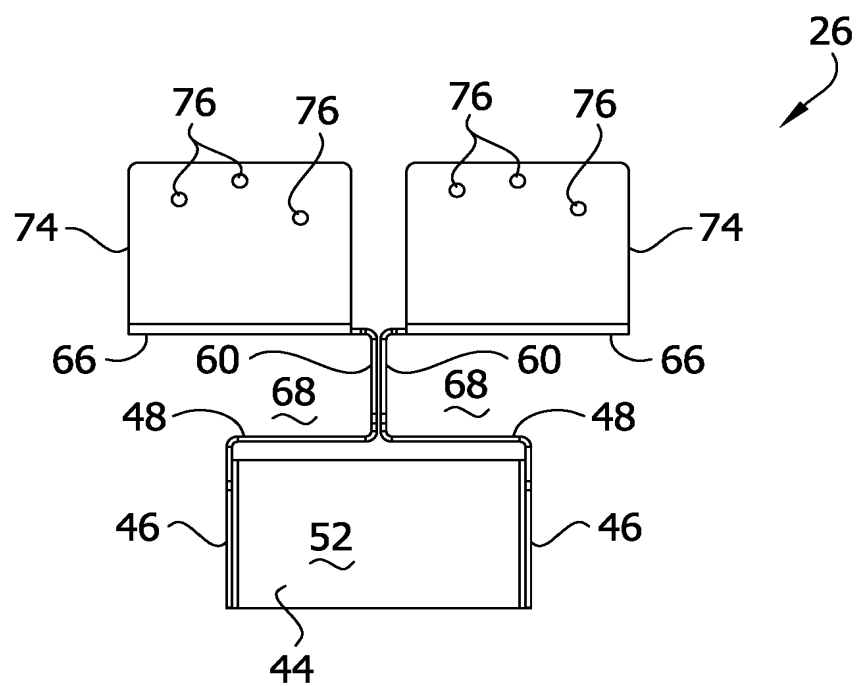
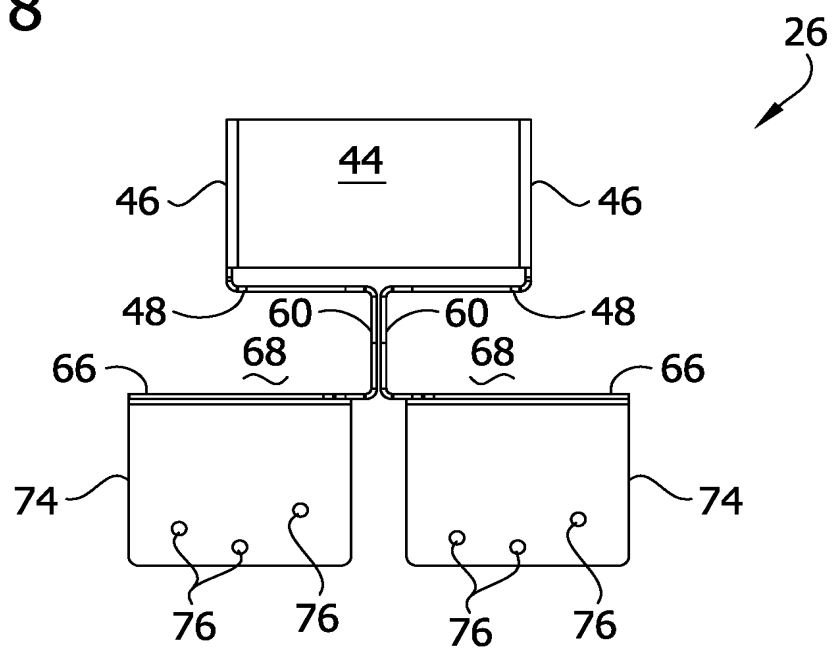


FIG. 8



0051

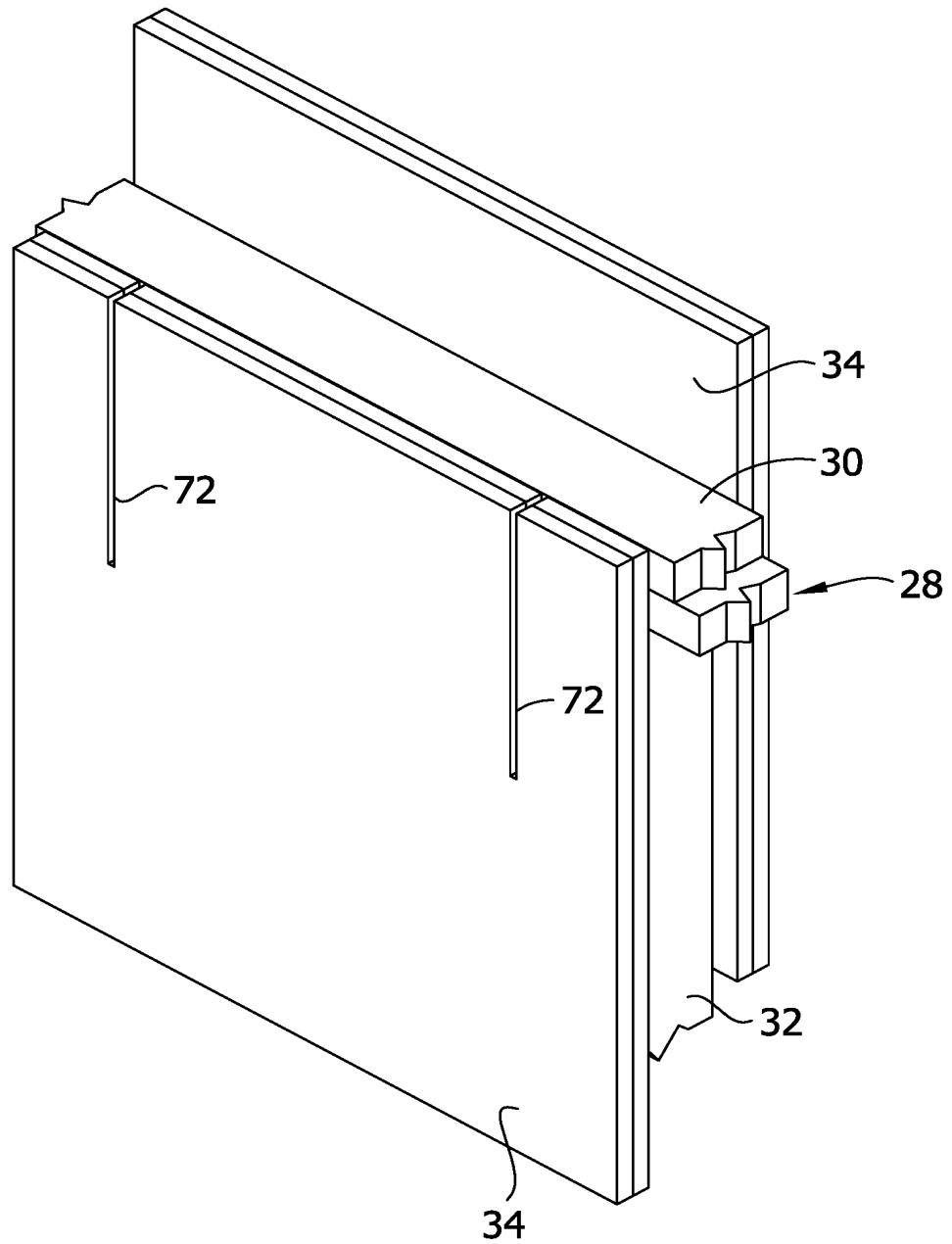


FIG. 10

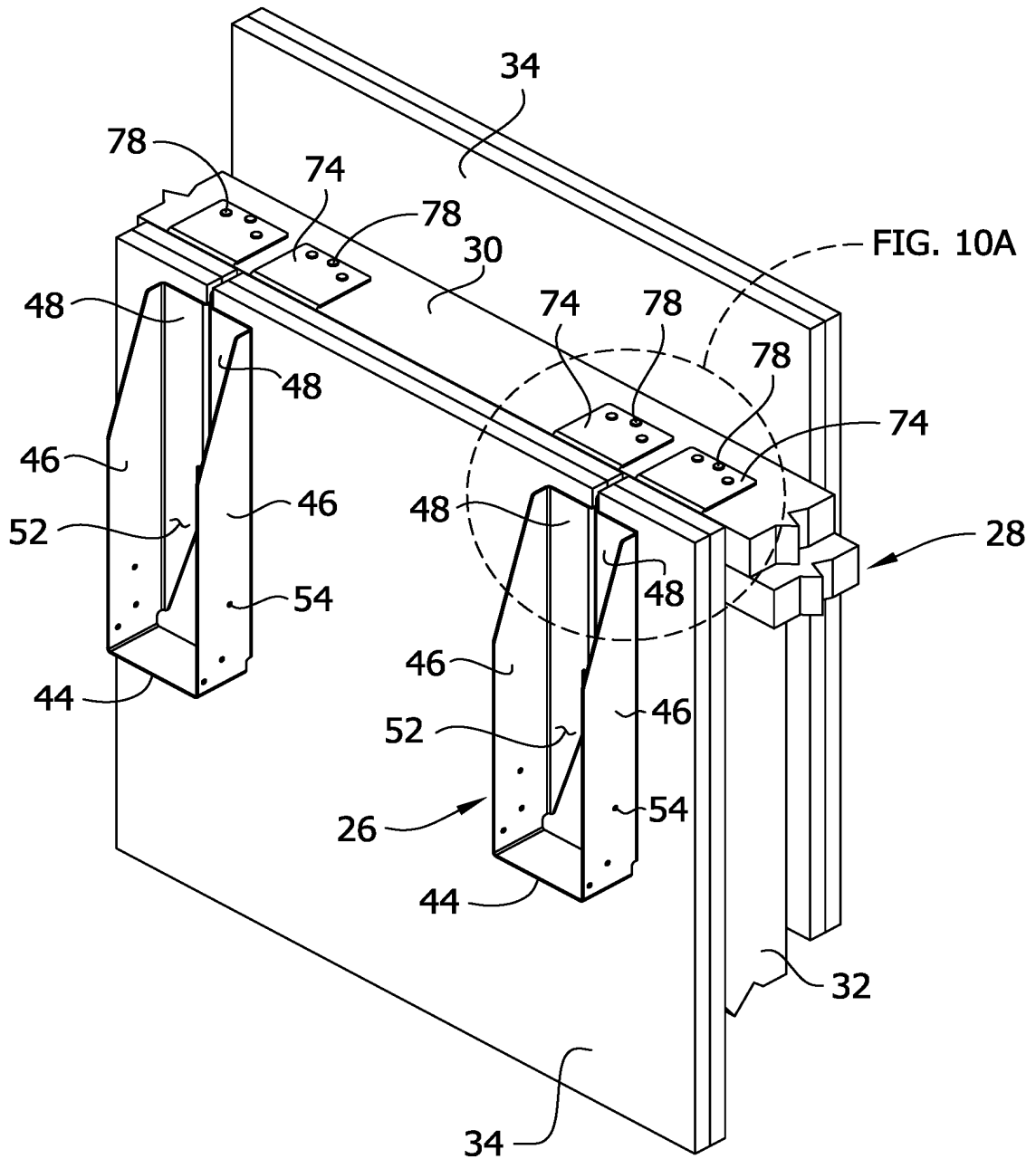


FIG. 10A

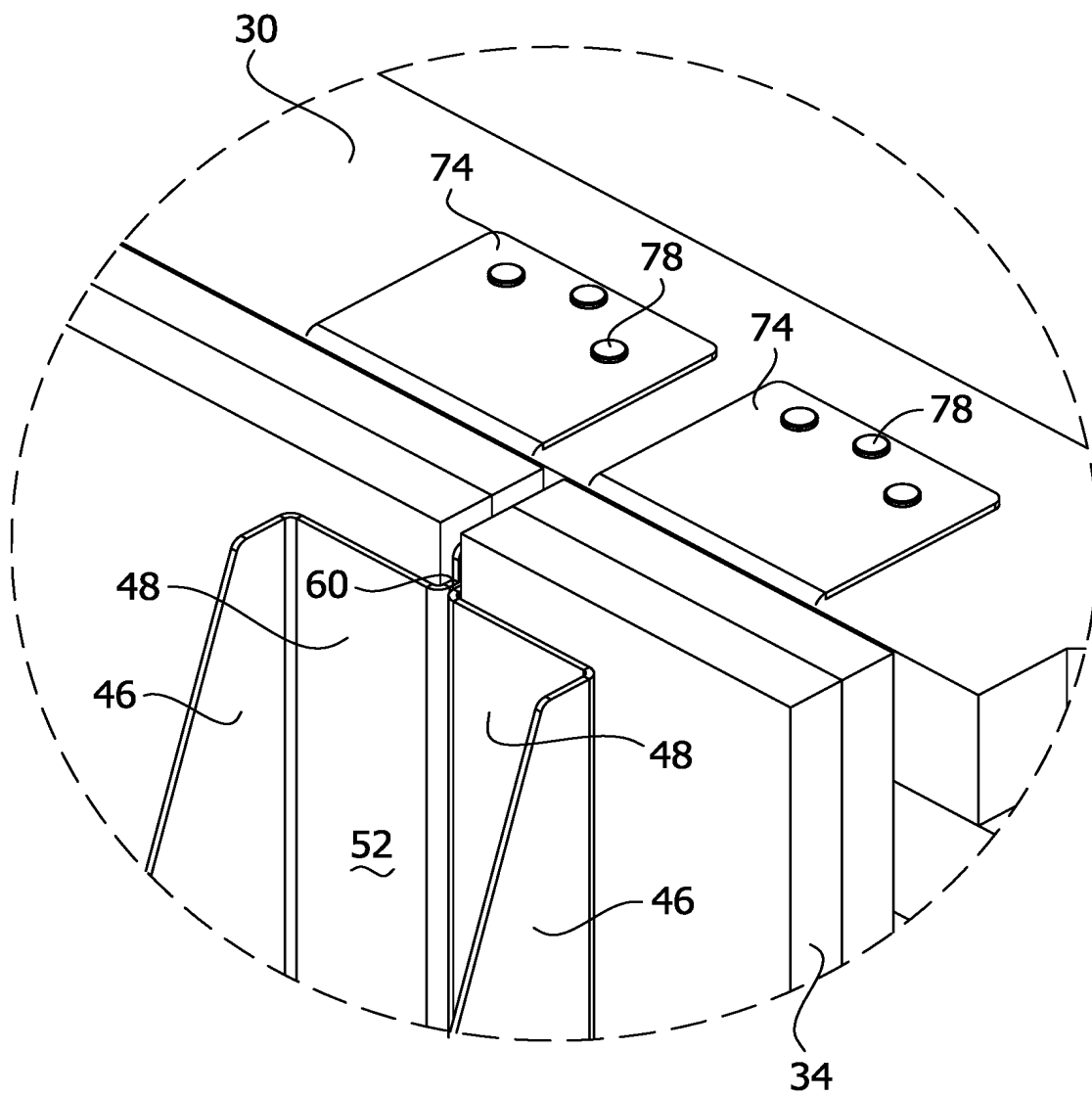


FIG. 11

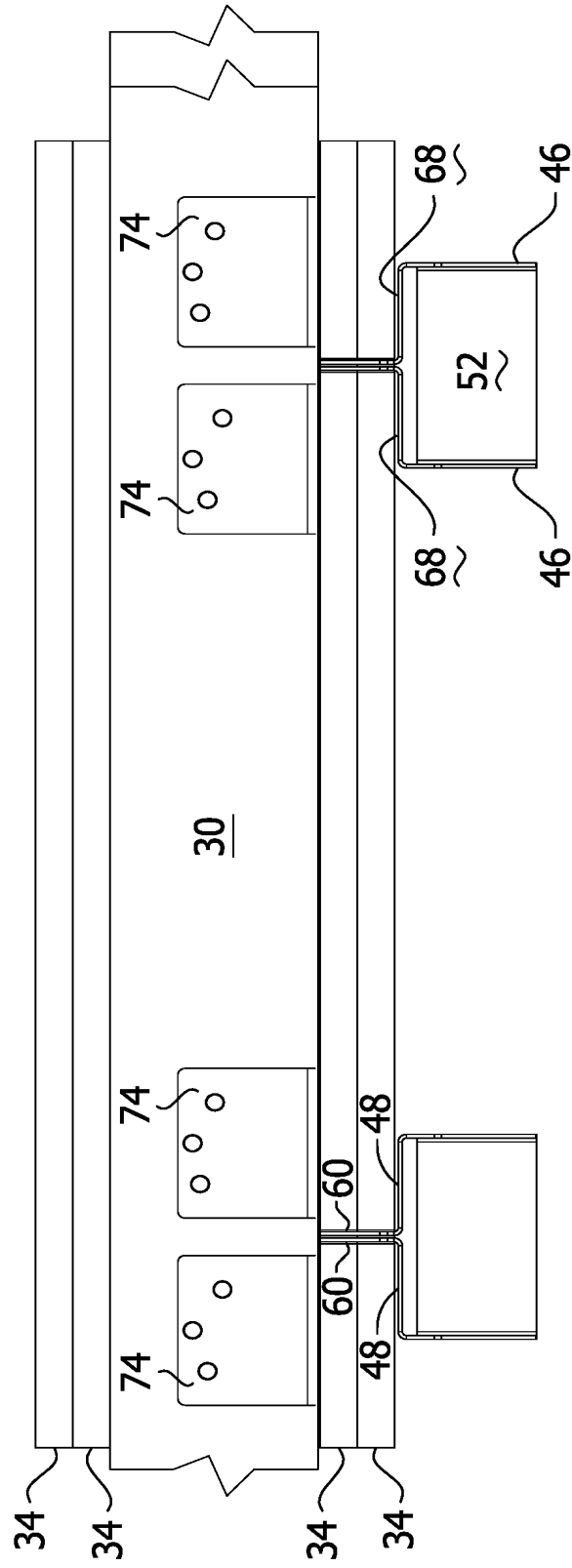


FIG. 12

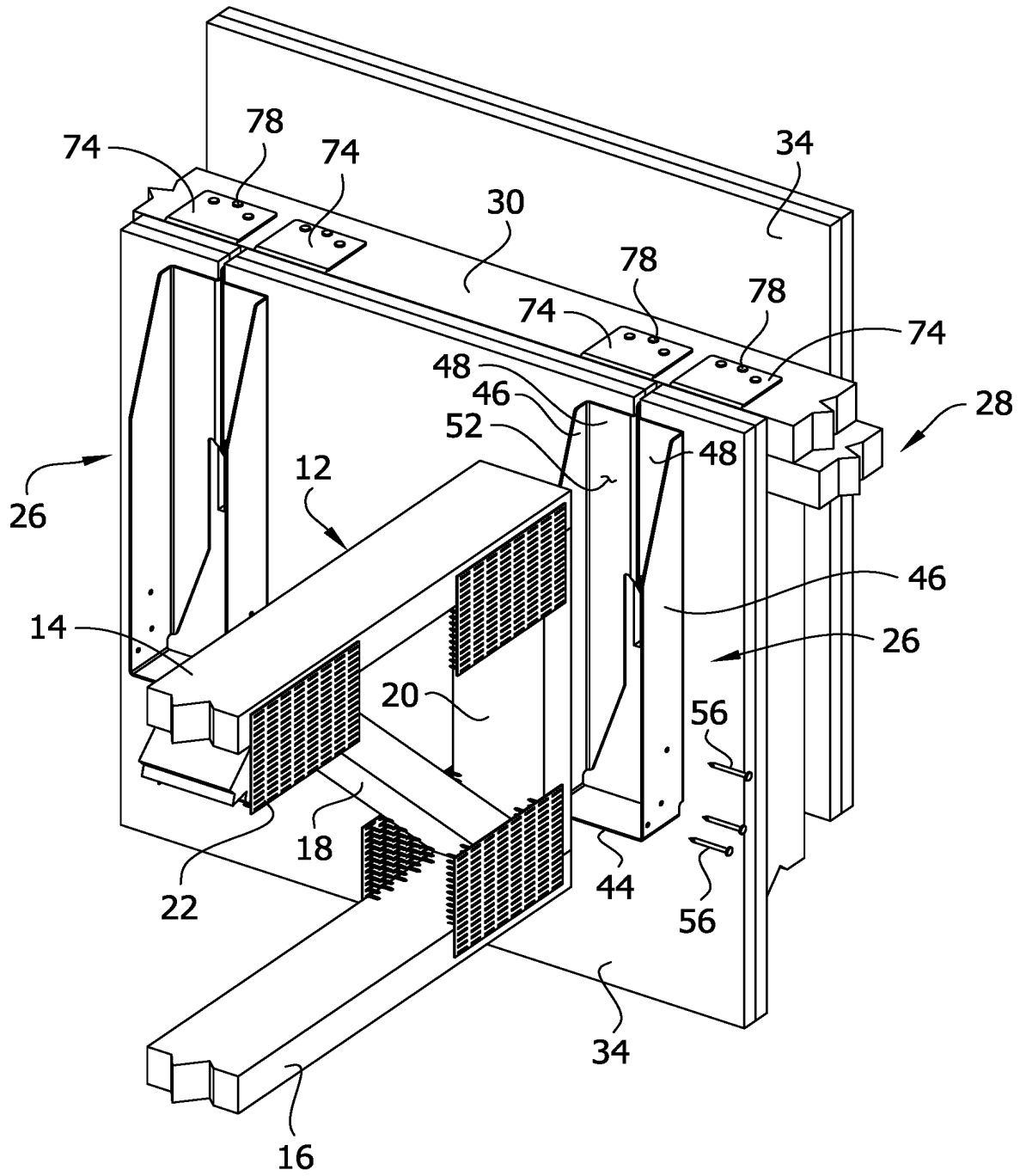


FIG. 13

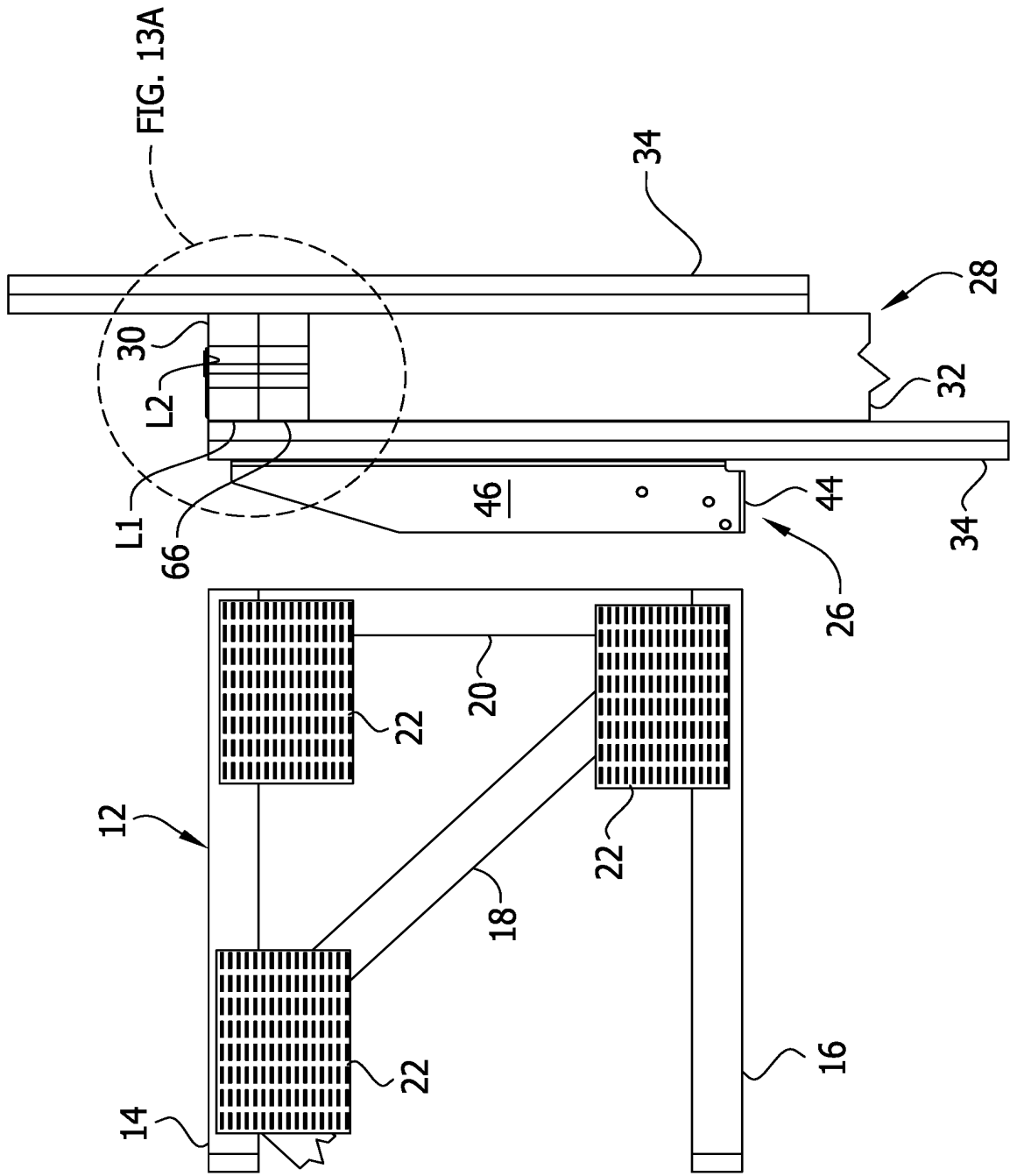


FIG. 13A

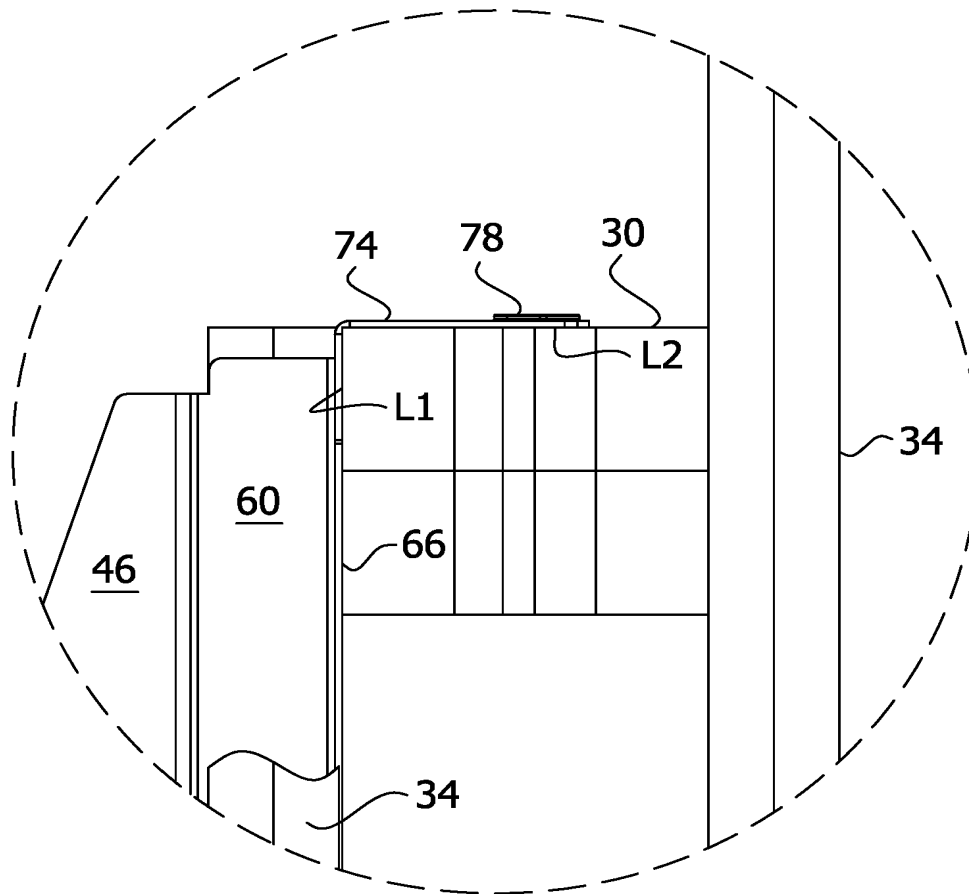


FIG. 14

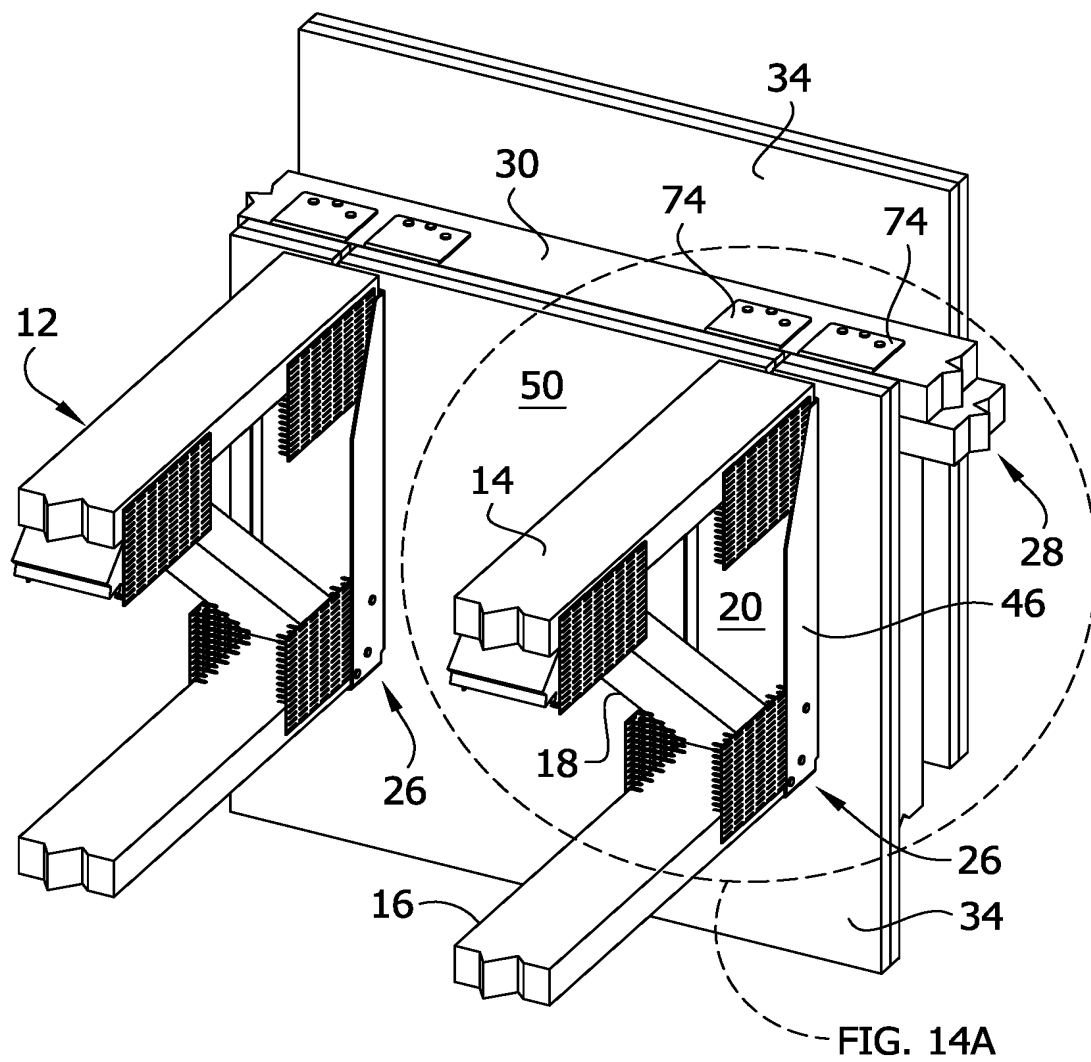


FIG. 14A

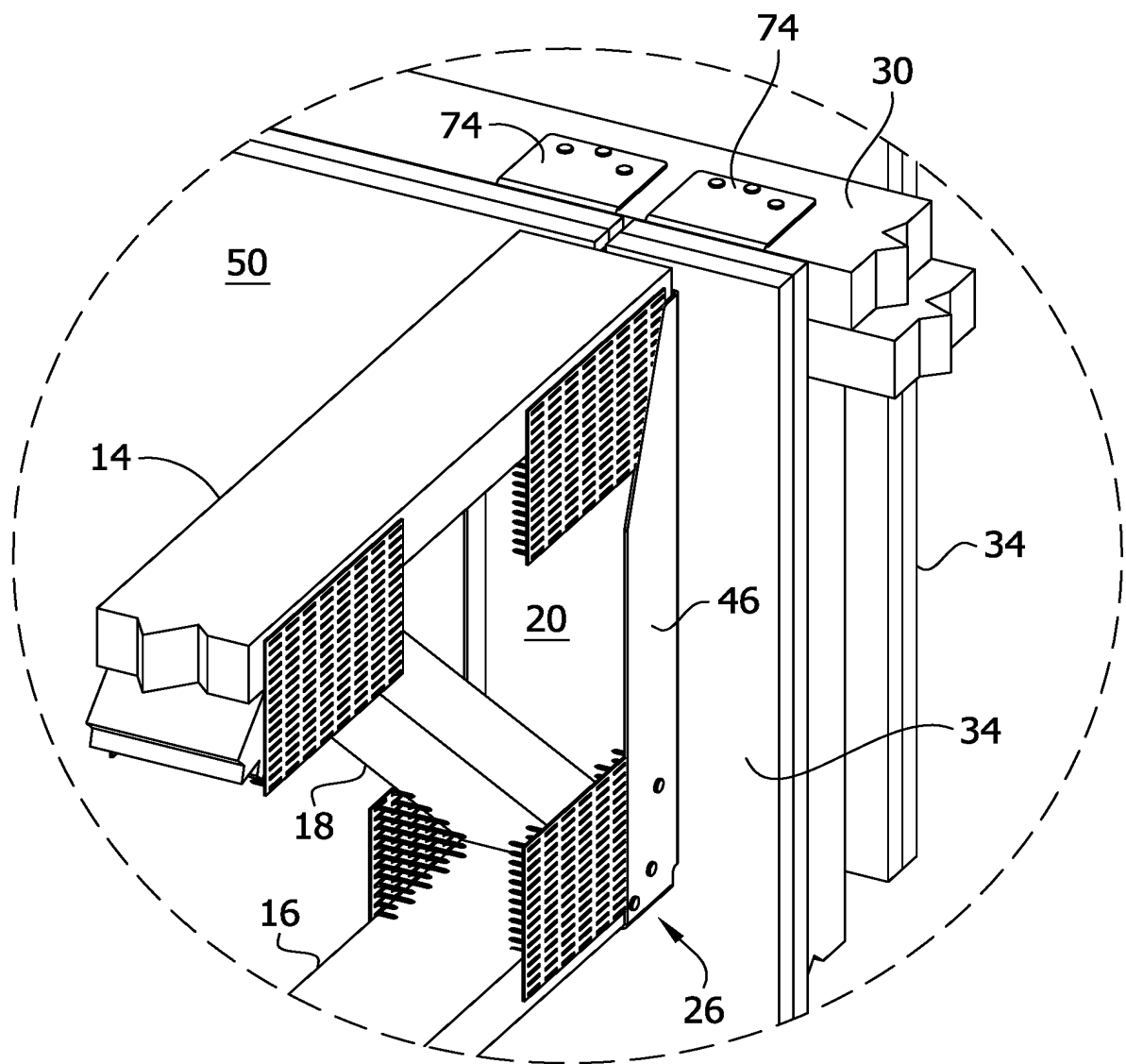


FIG. 15

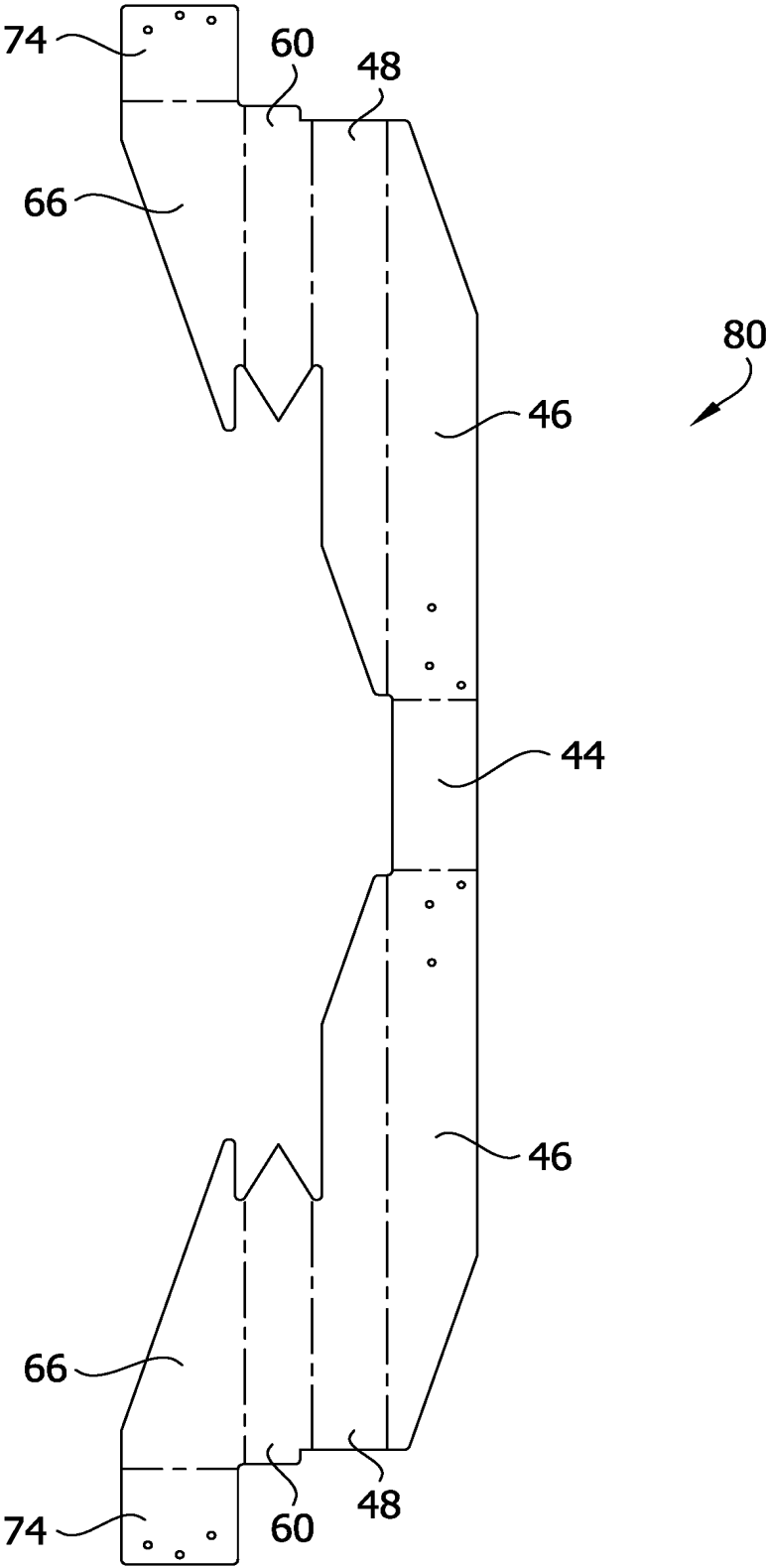




FIG. 17

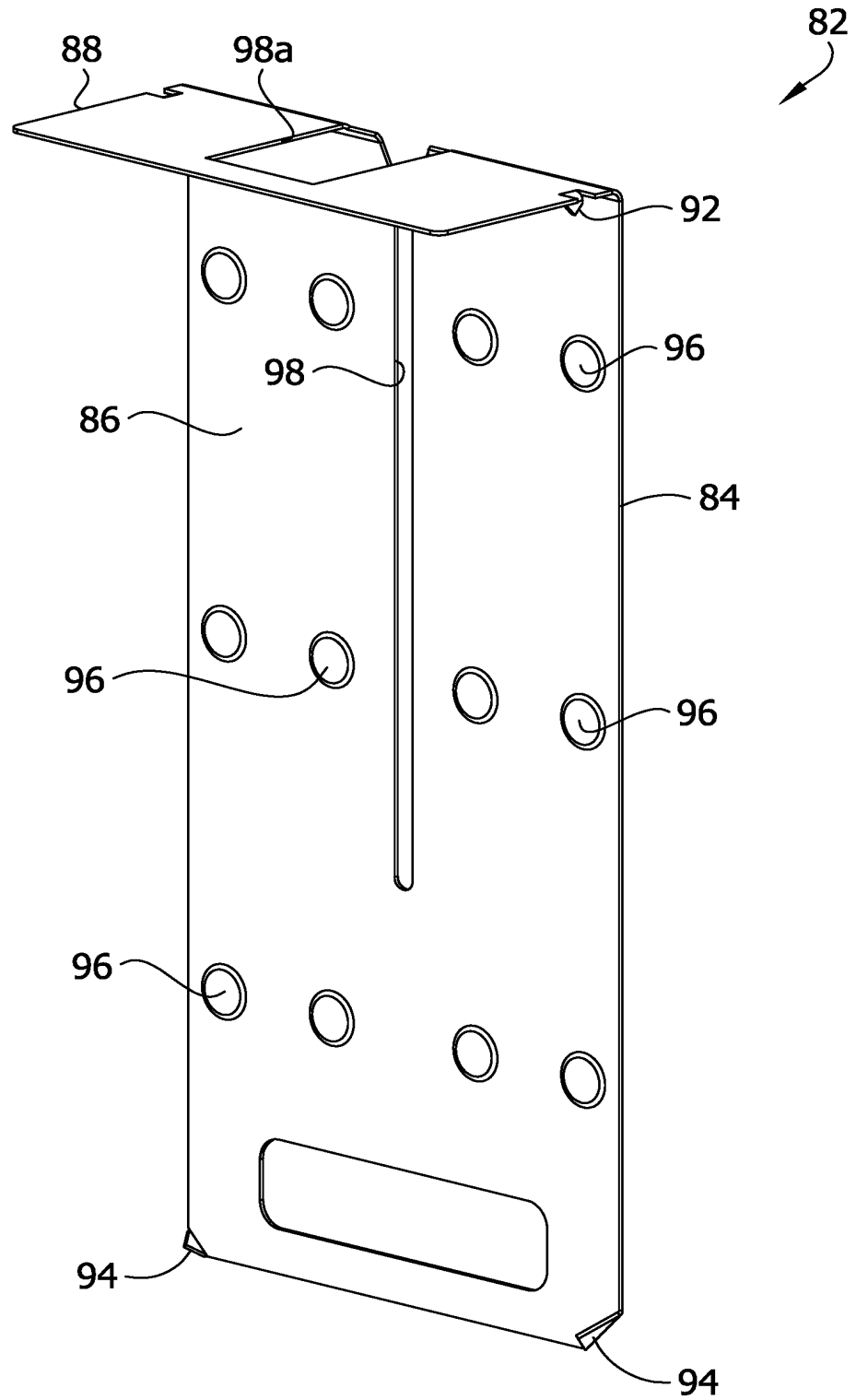




FIG. 19

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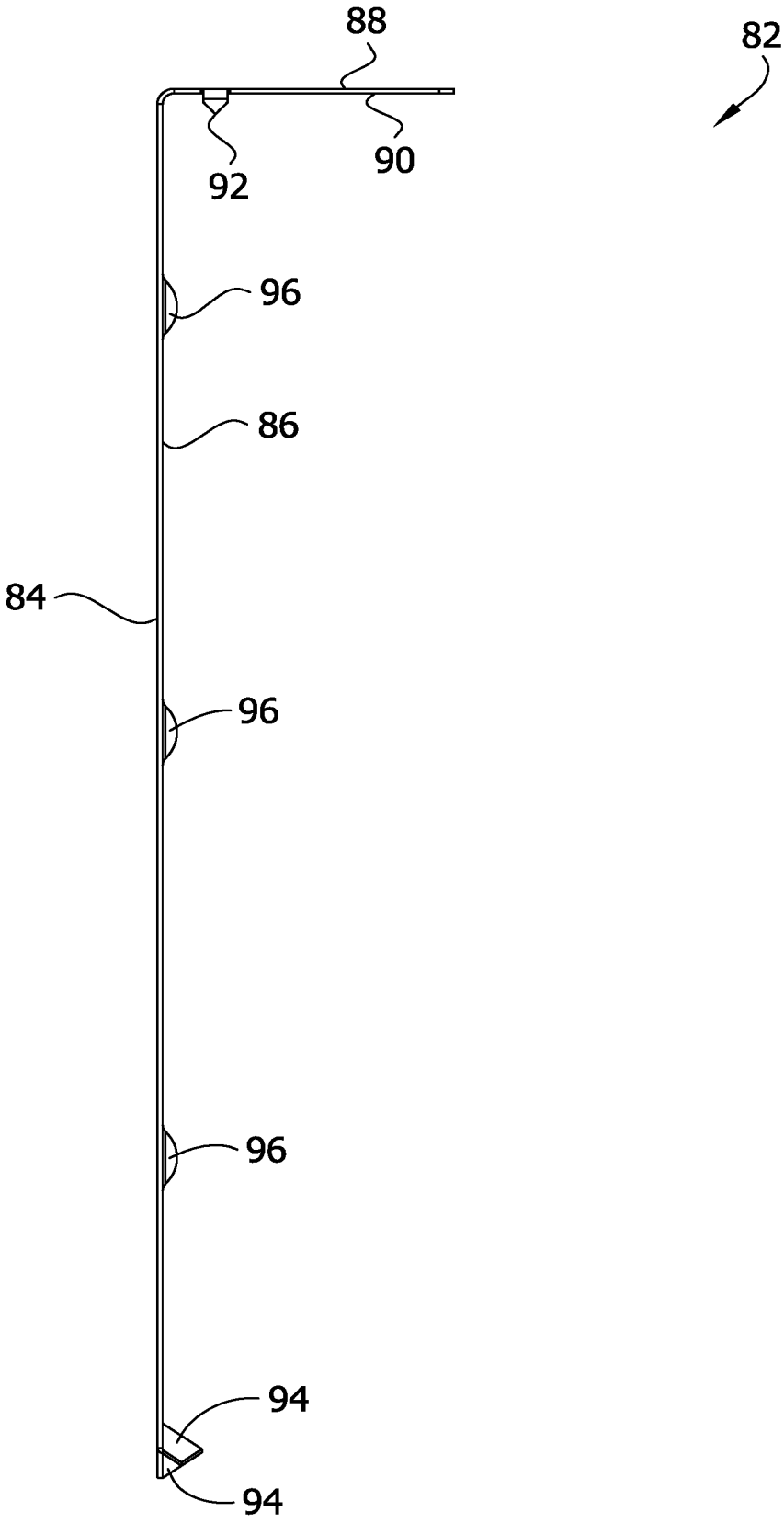


FIG. 20

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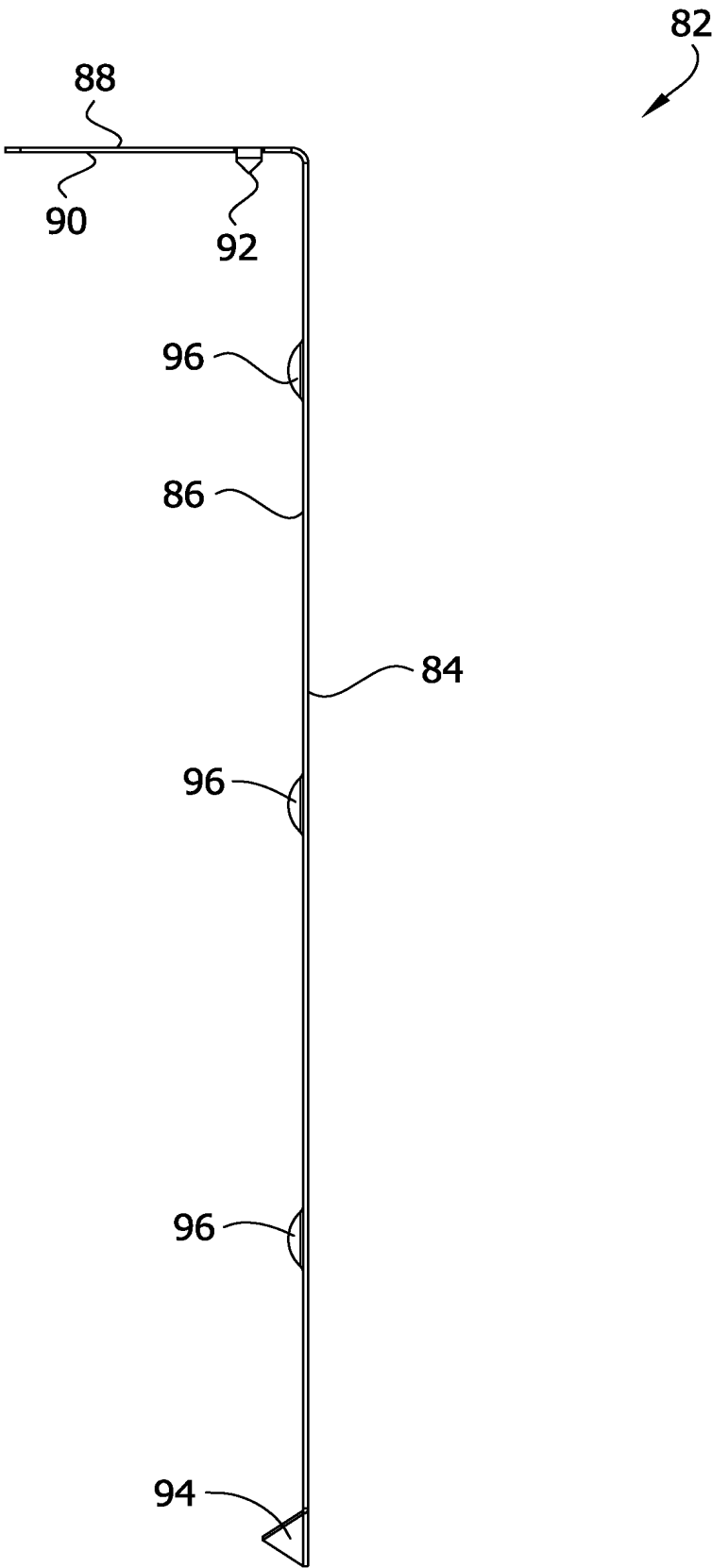


FIG. 21

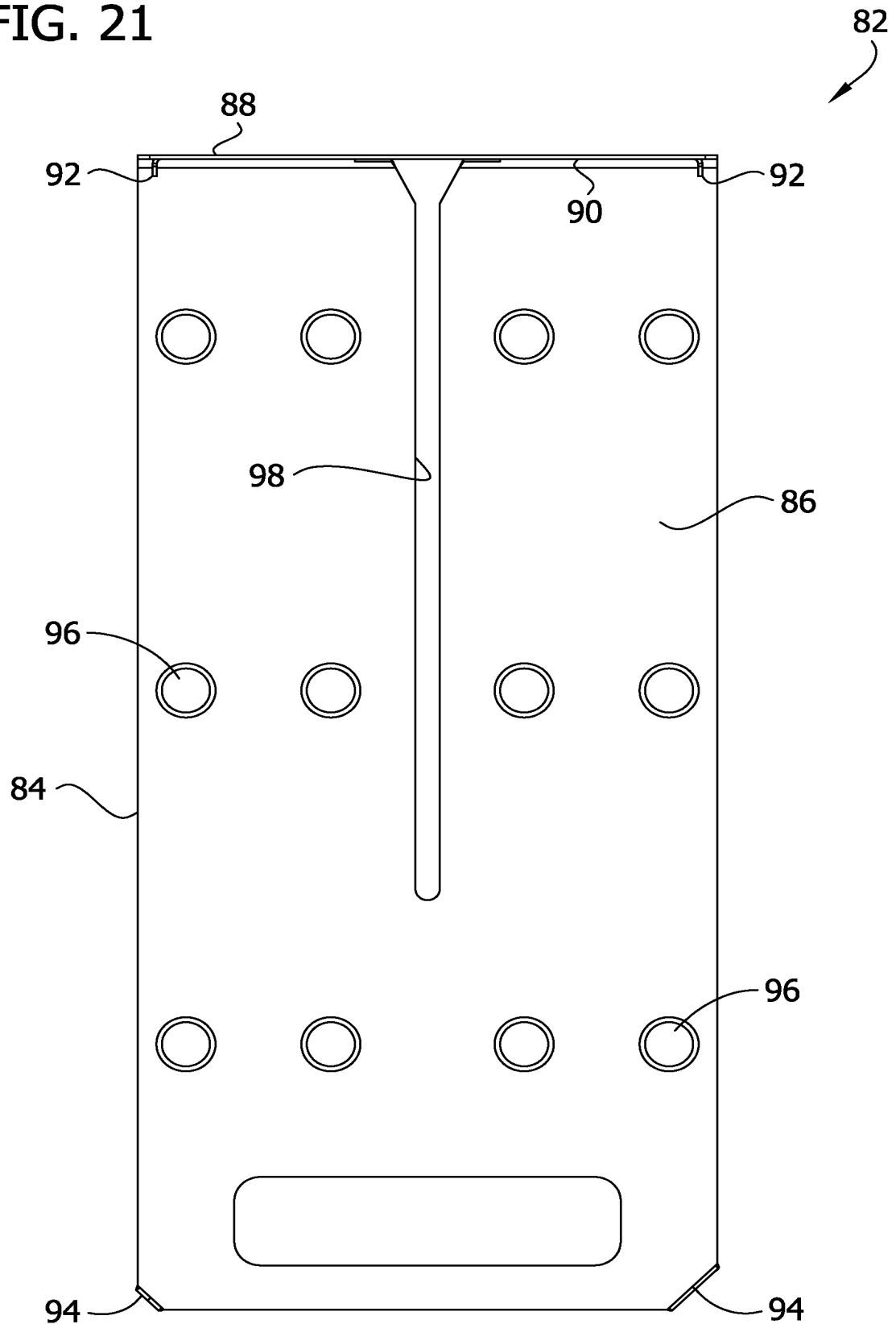


FIG. 22

82

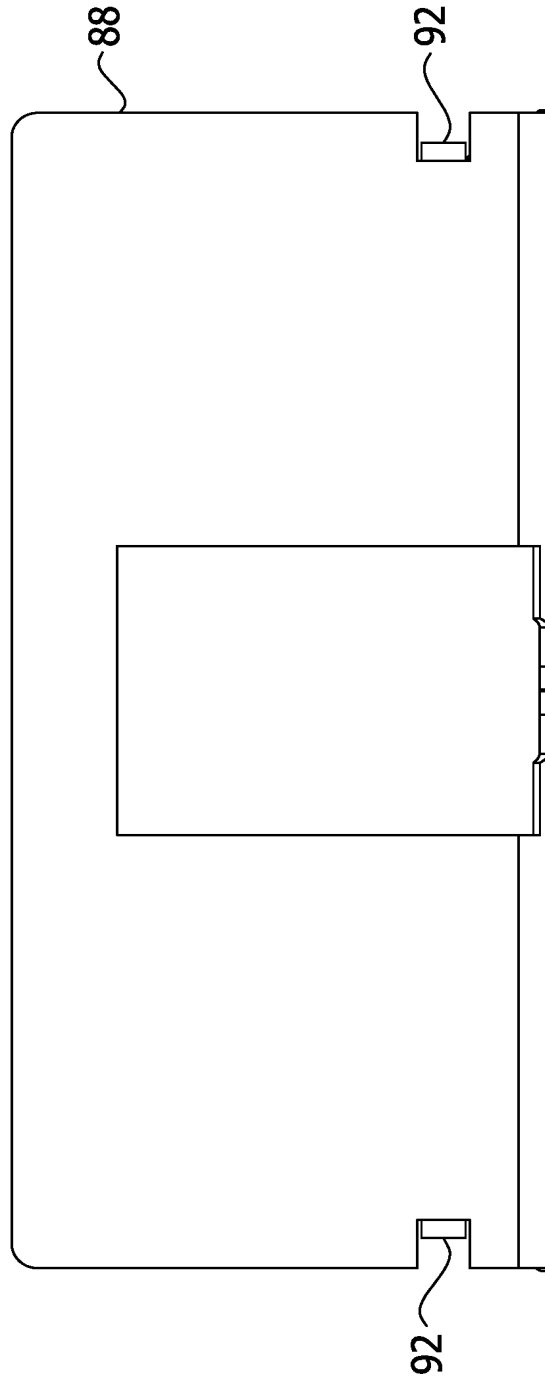


FIG. 23

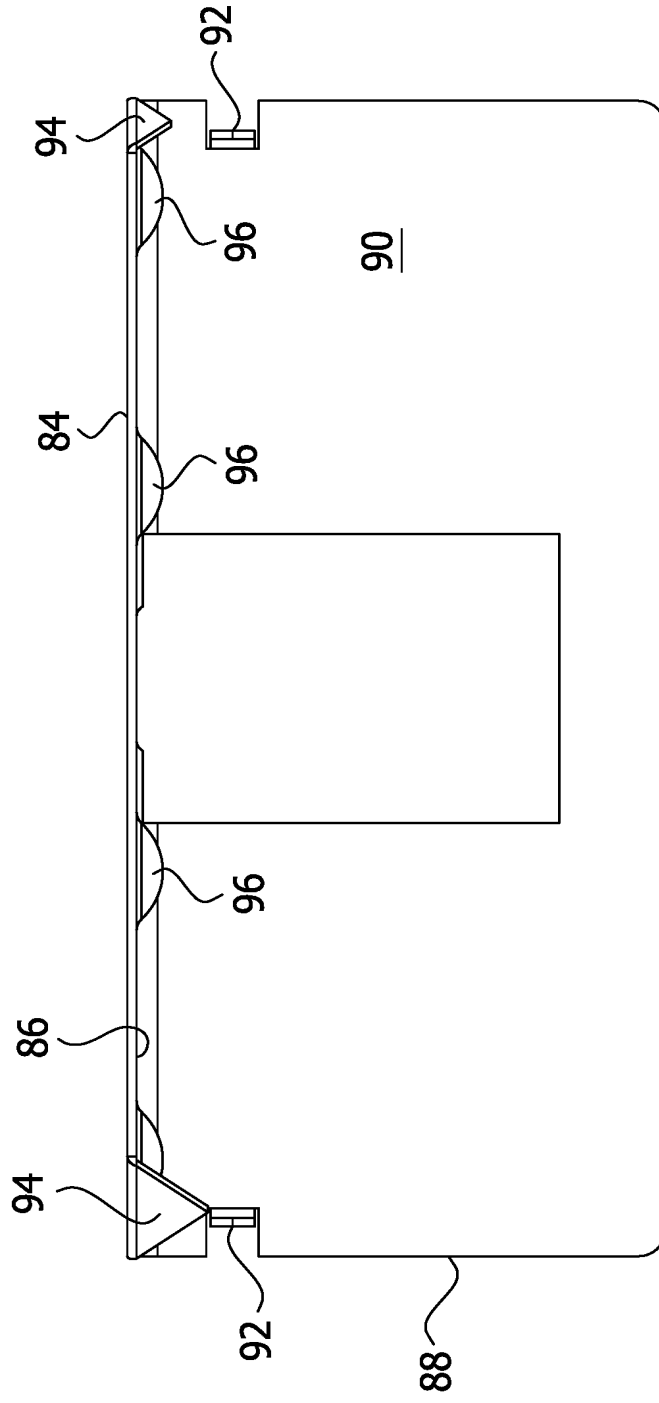


FIG. 24

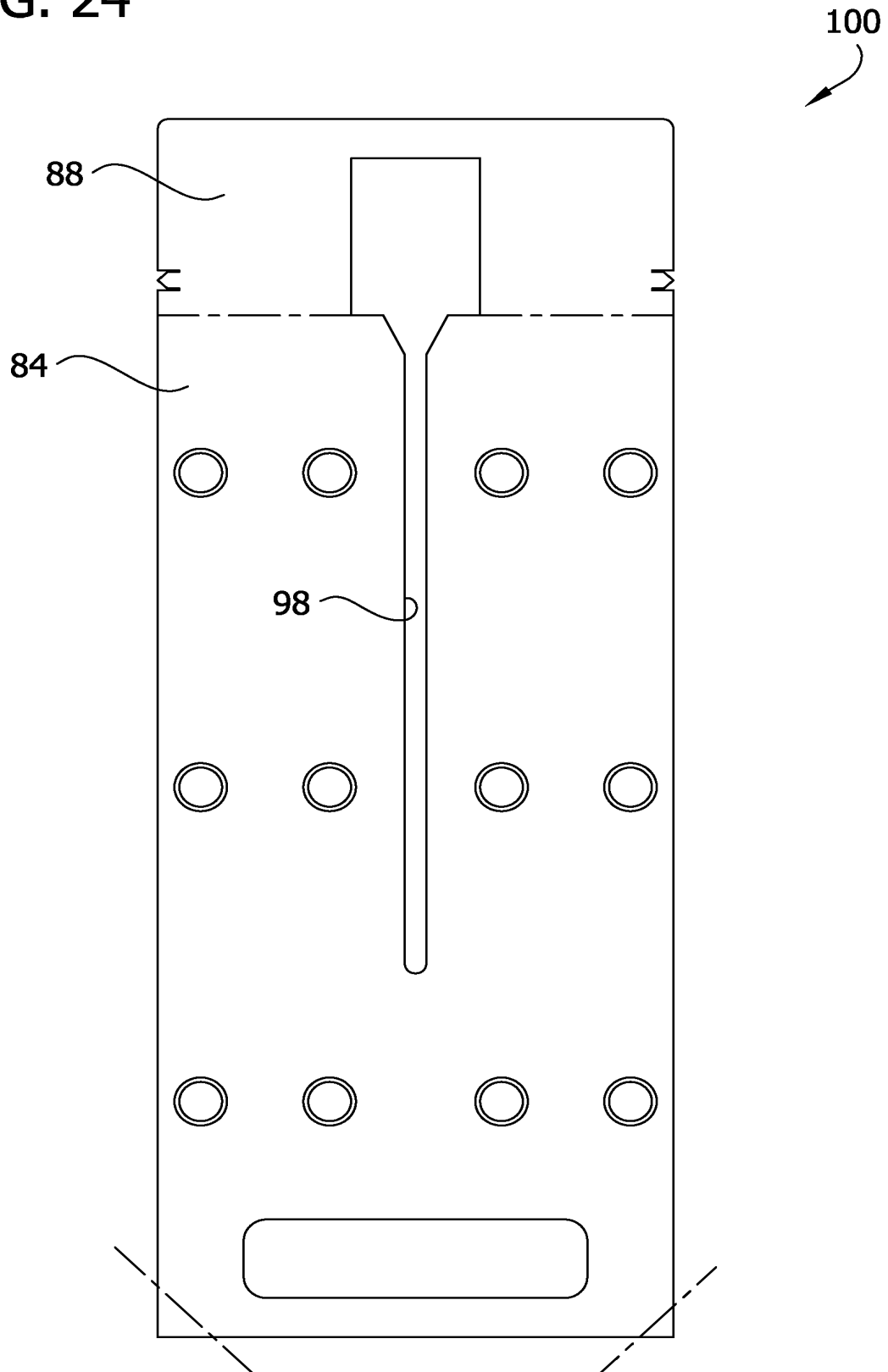


FIG. 25

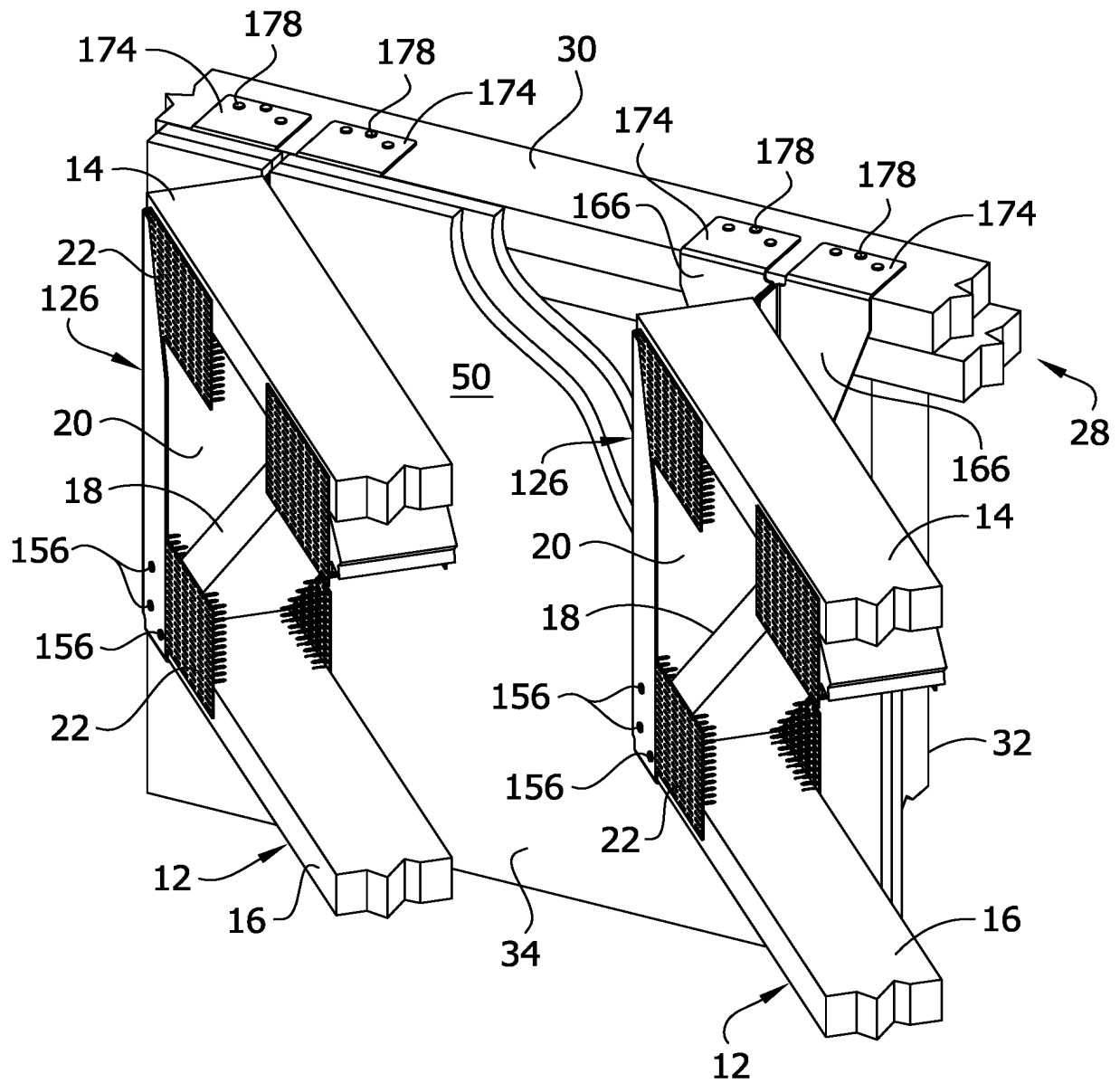


FIG. 26

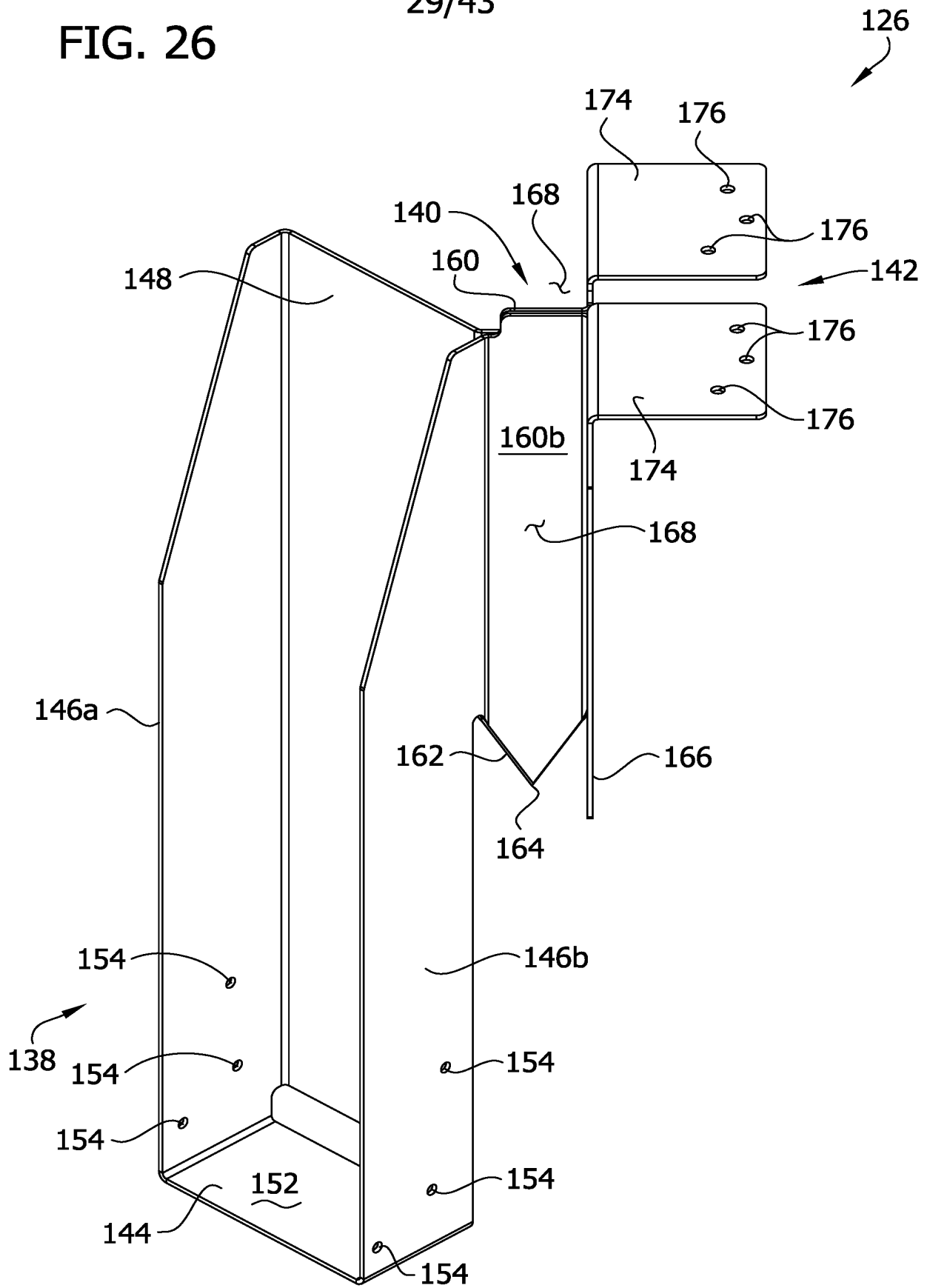


FIG. 27

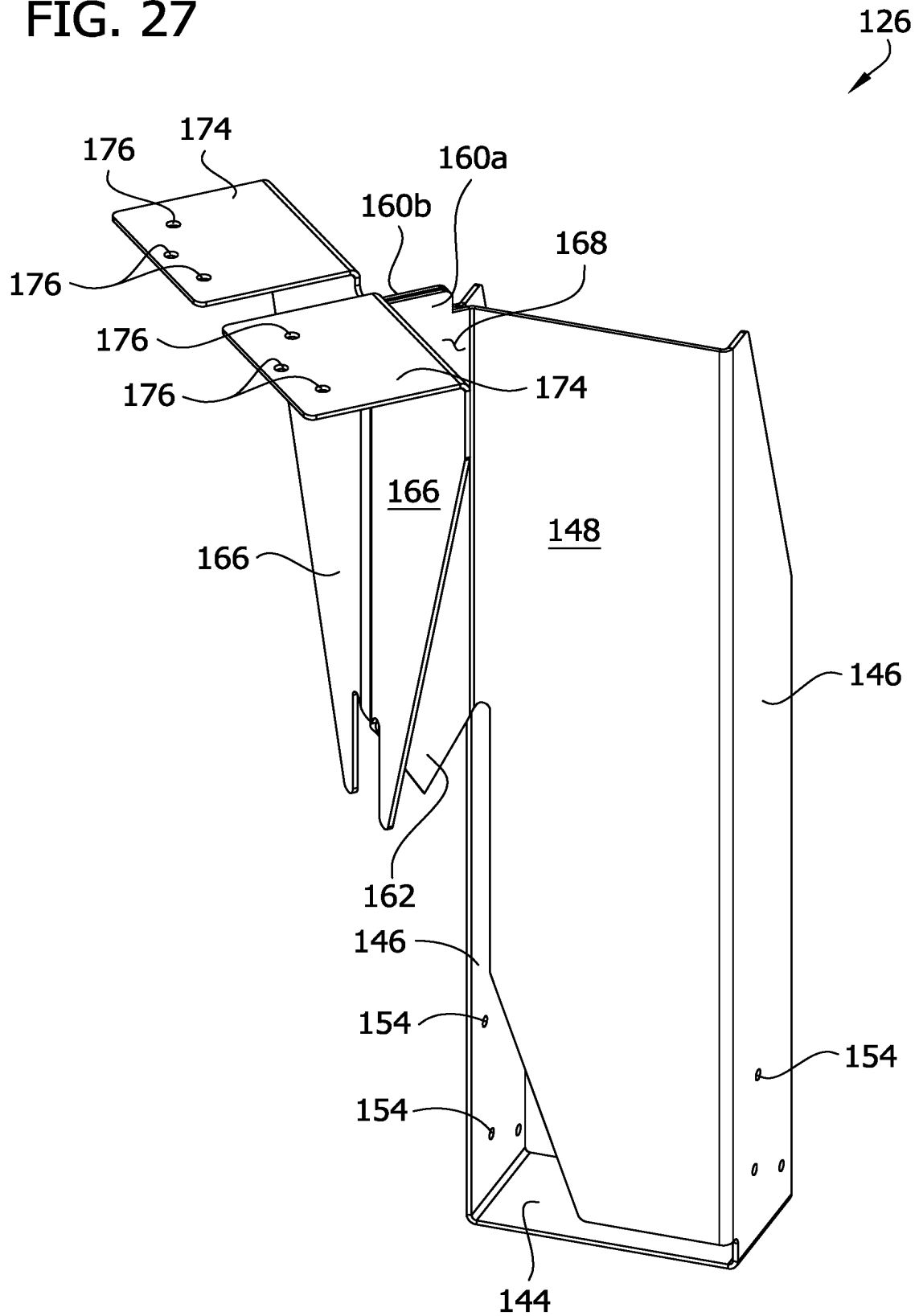


FIG. 28

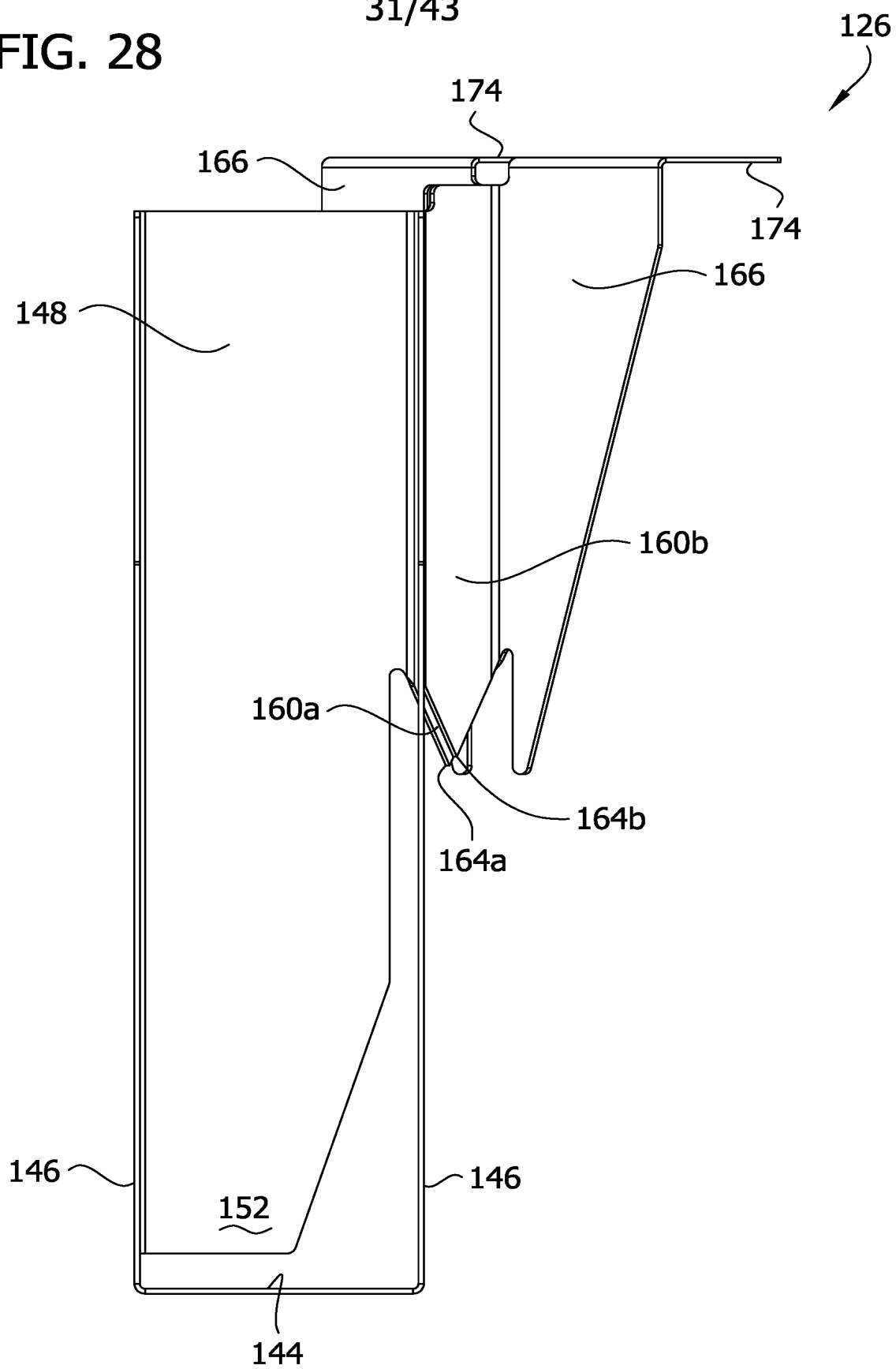


FIG. 29

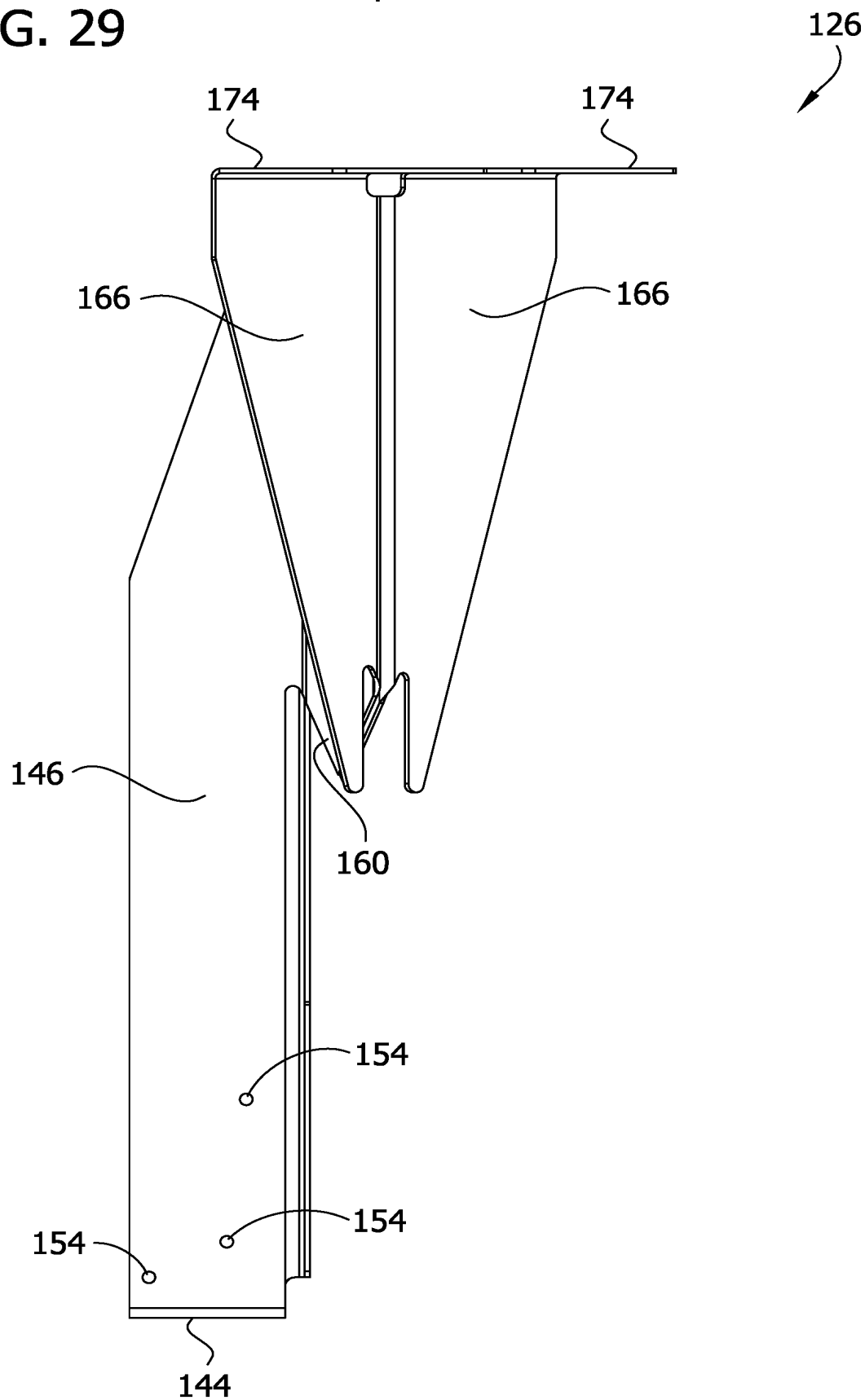


FIG. 30

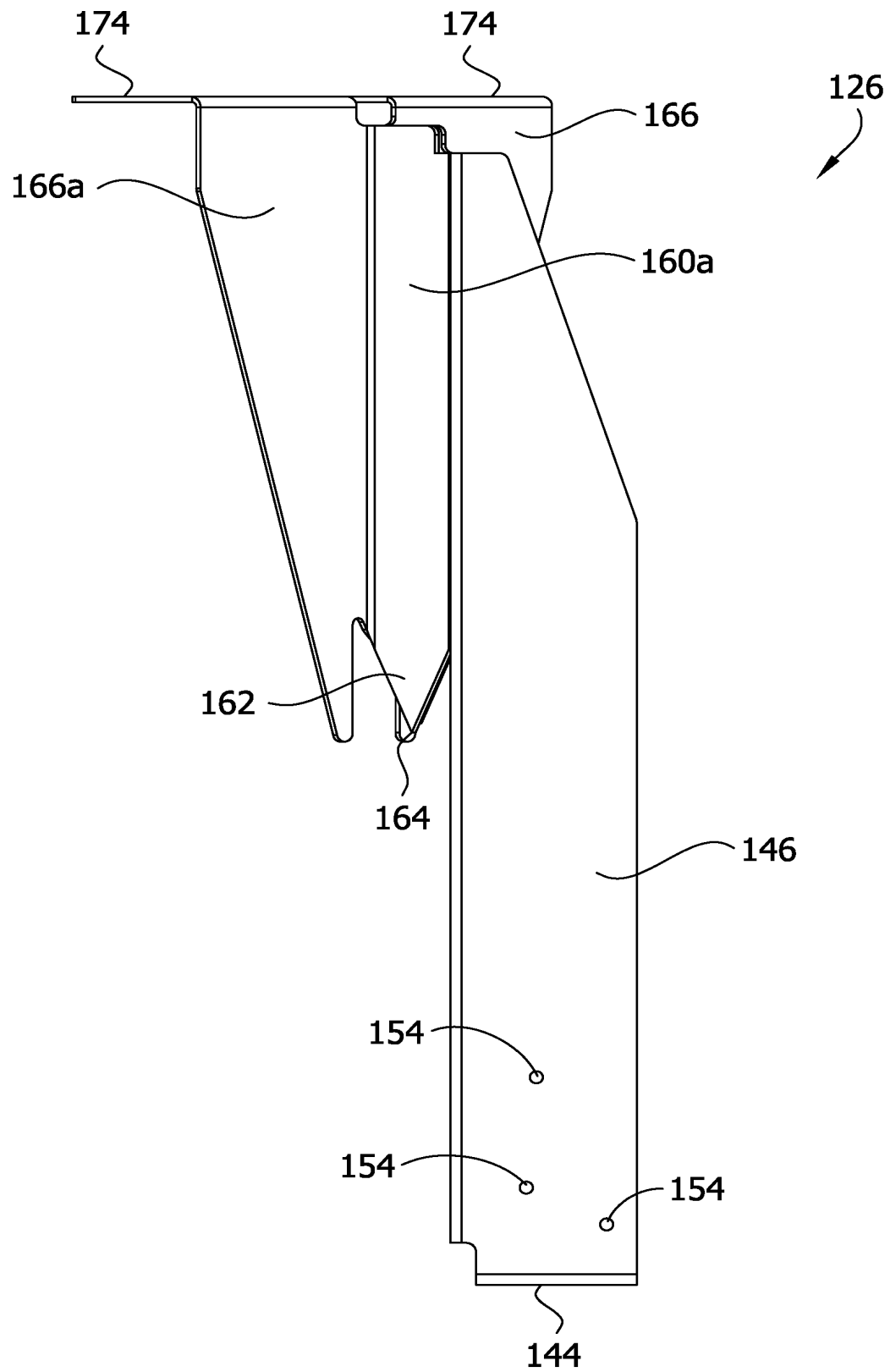


FIG. 31

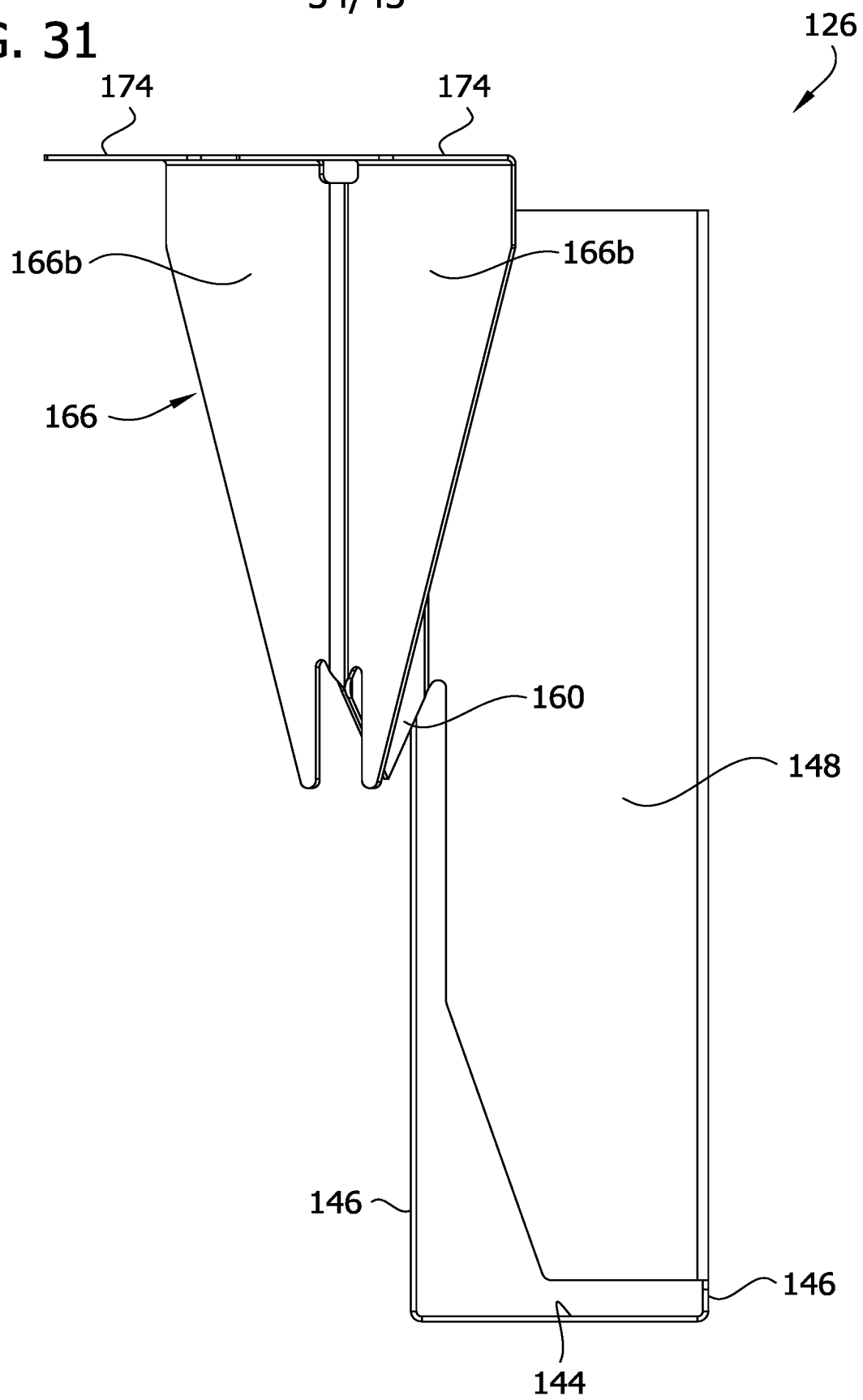


FIG. 33

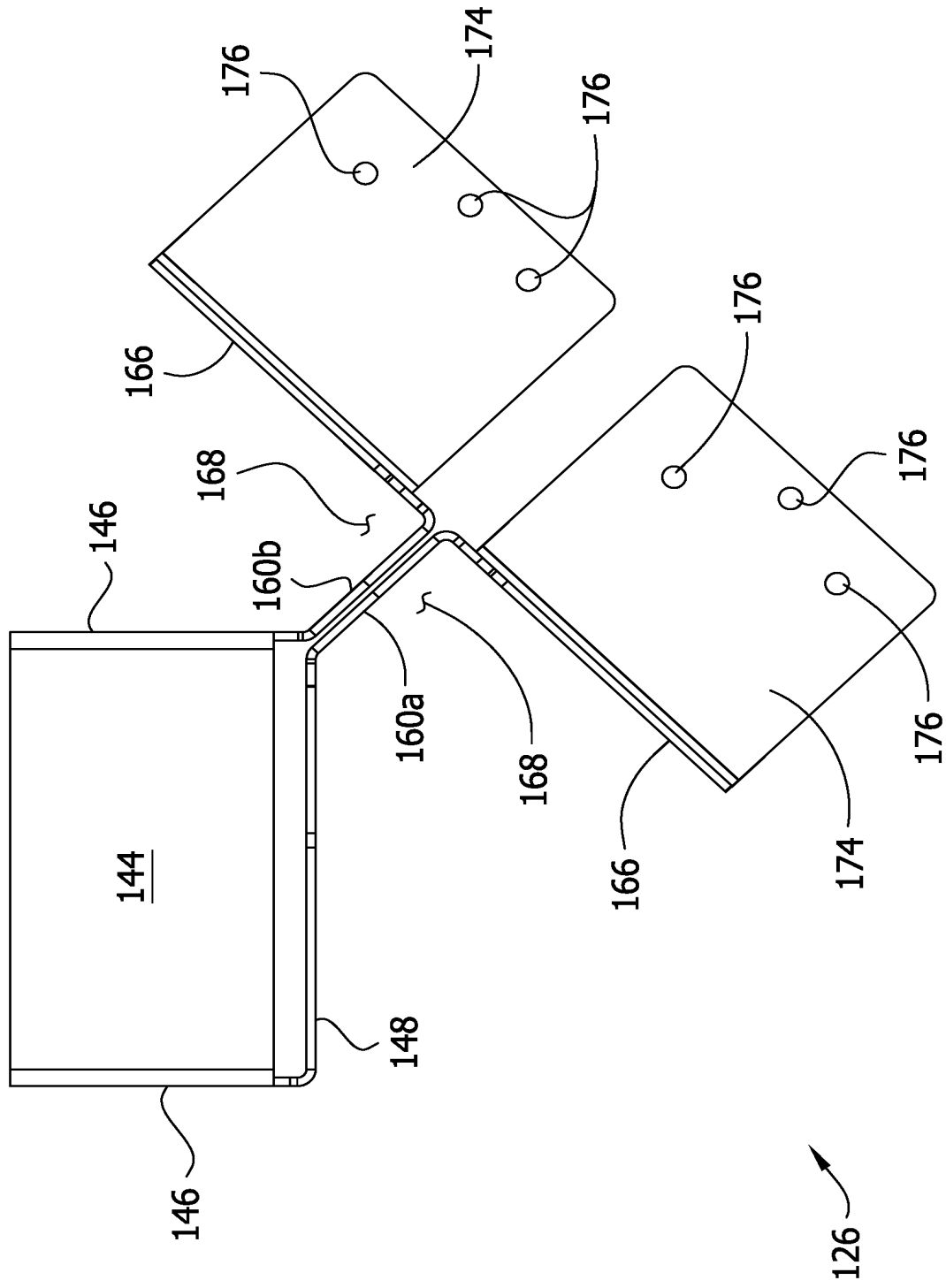


FIG. 34

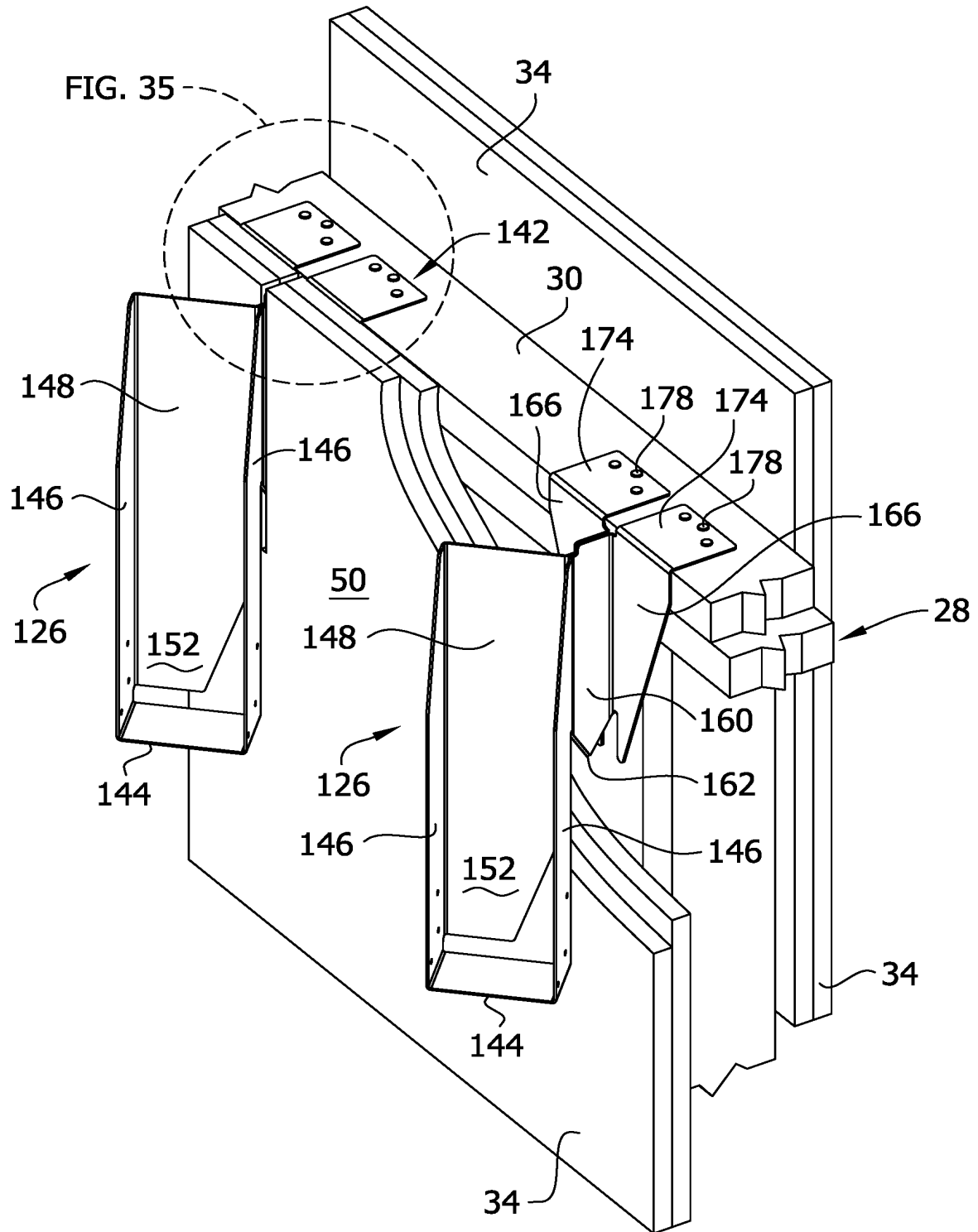


FIG. 35

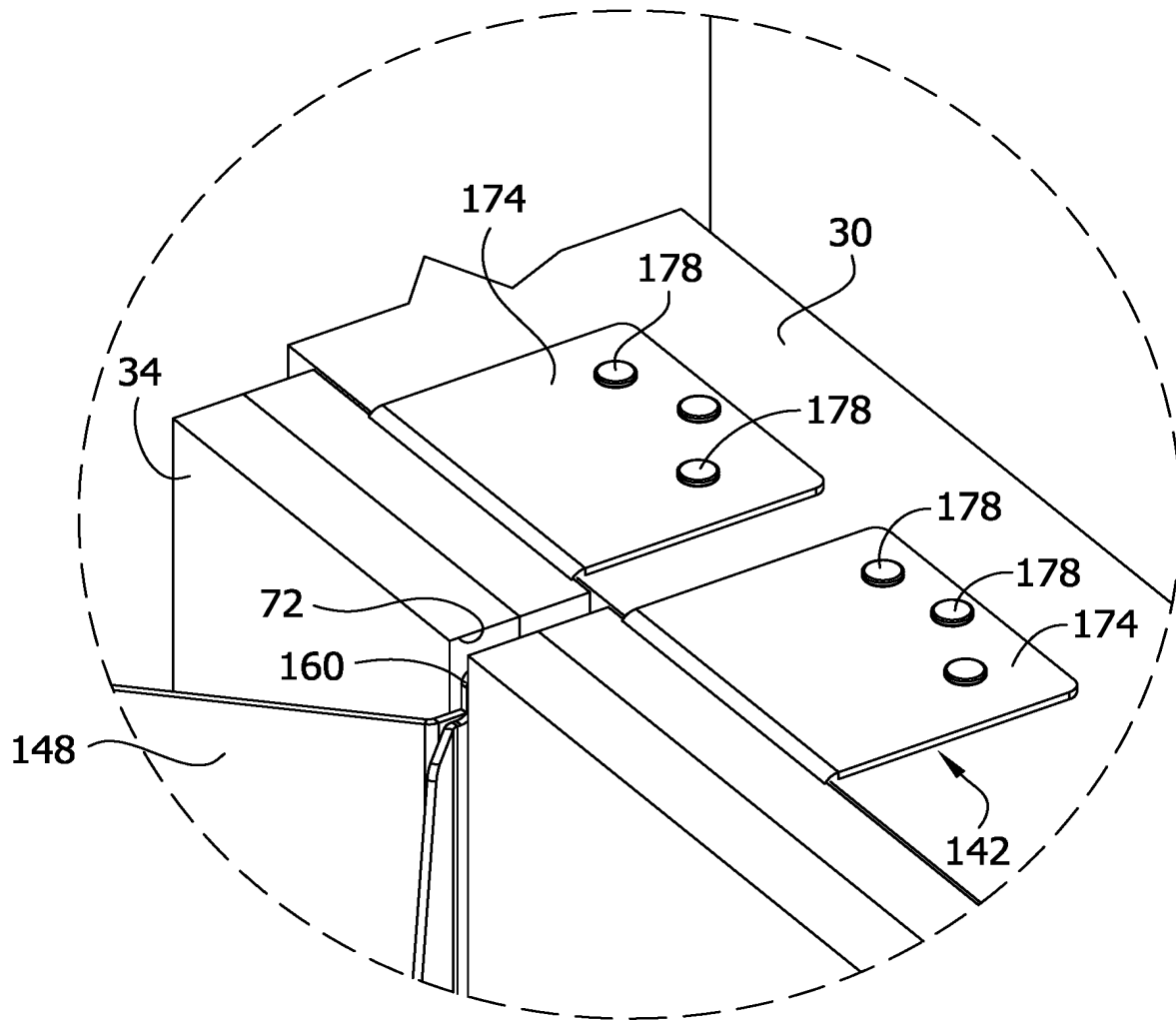


FIG. 36

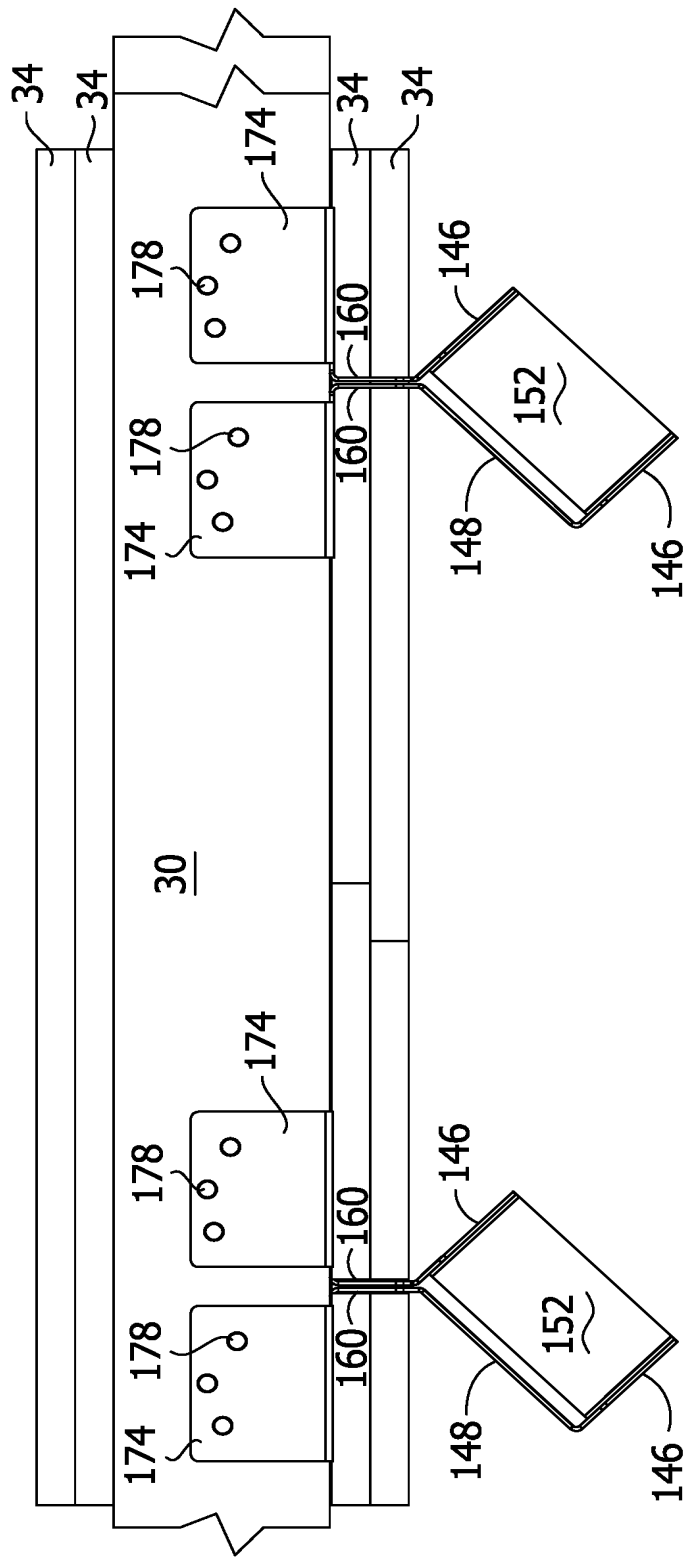


FIG. 37

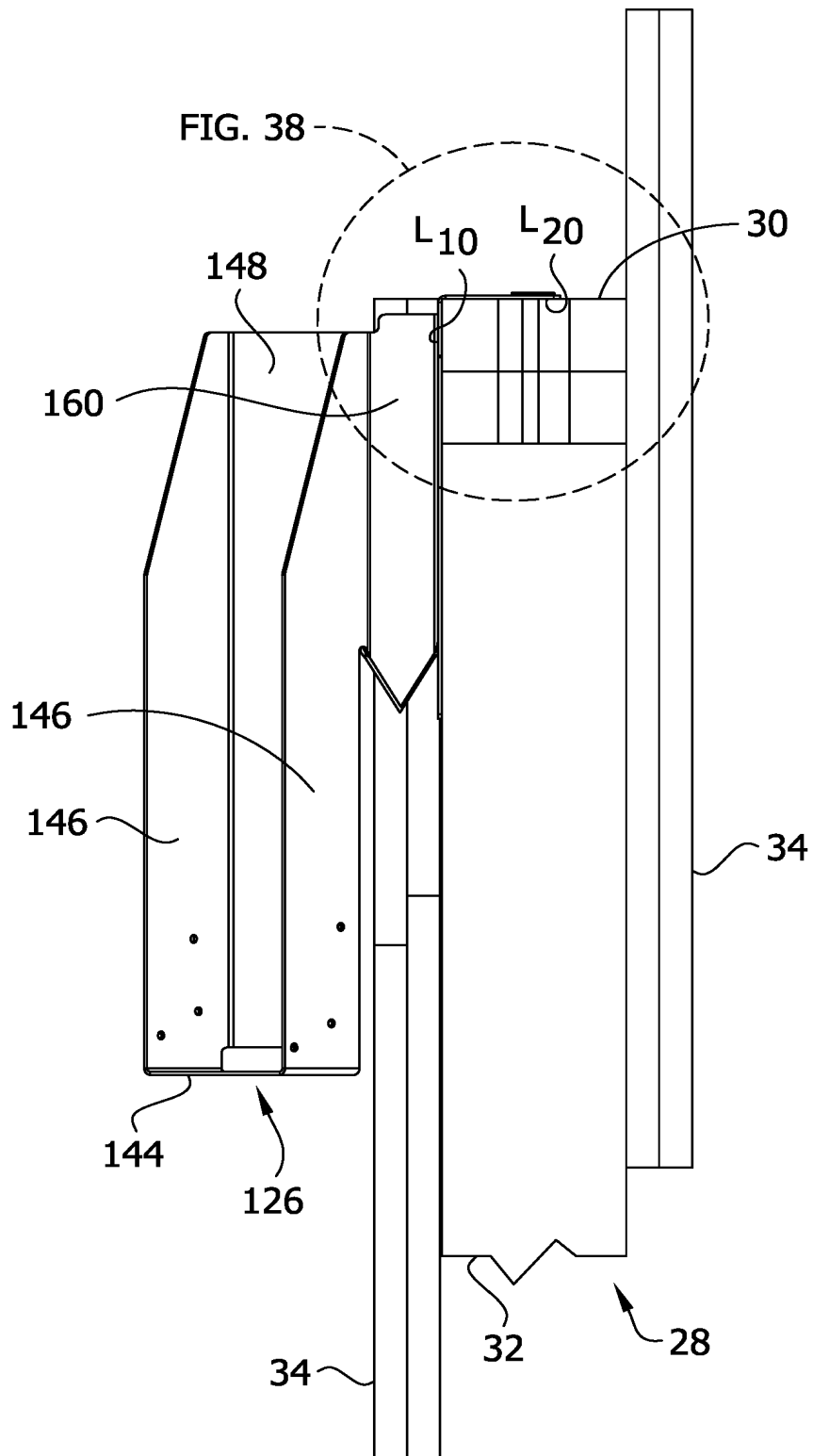


FIG. 38

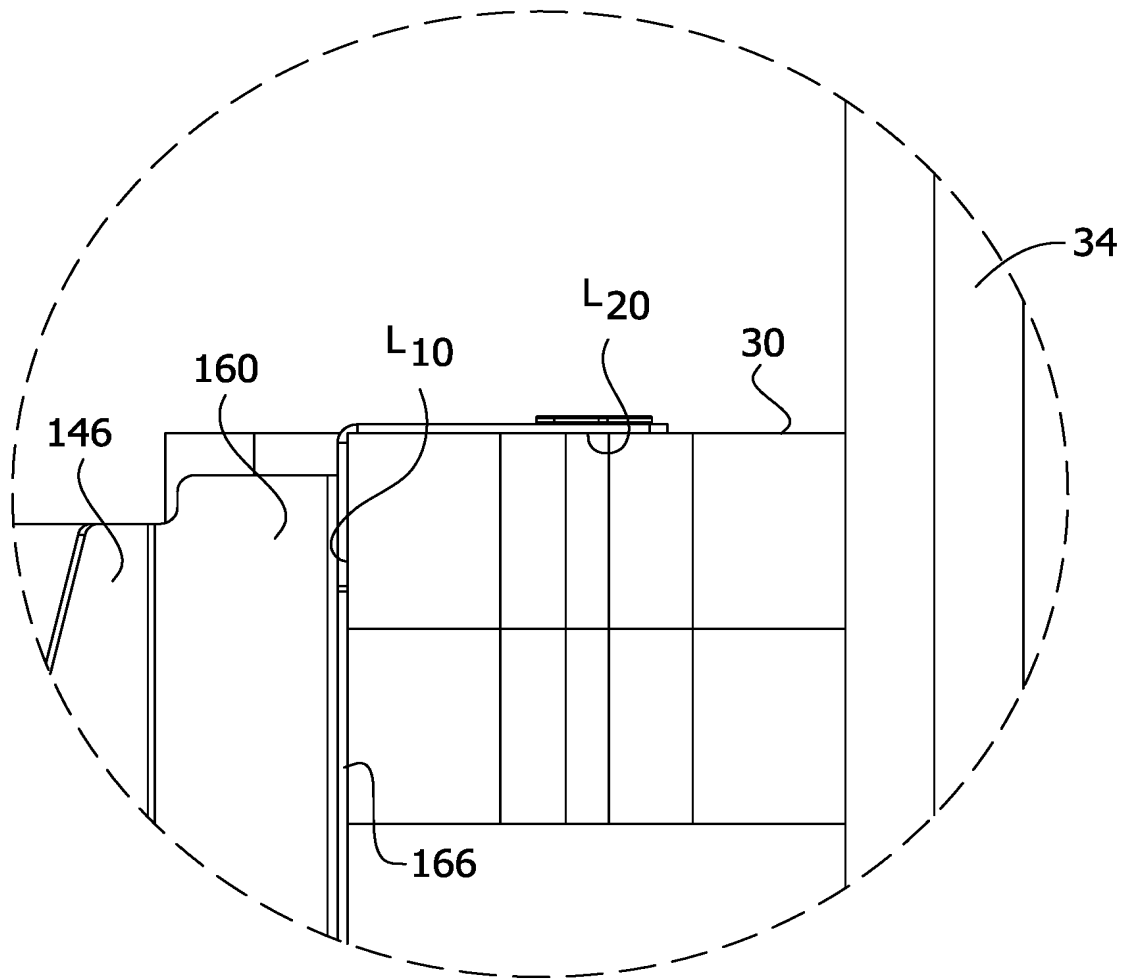


FIG. 39

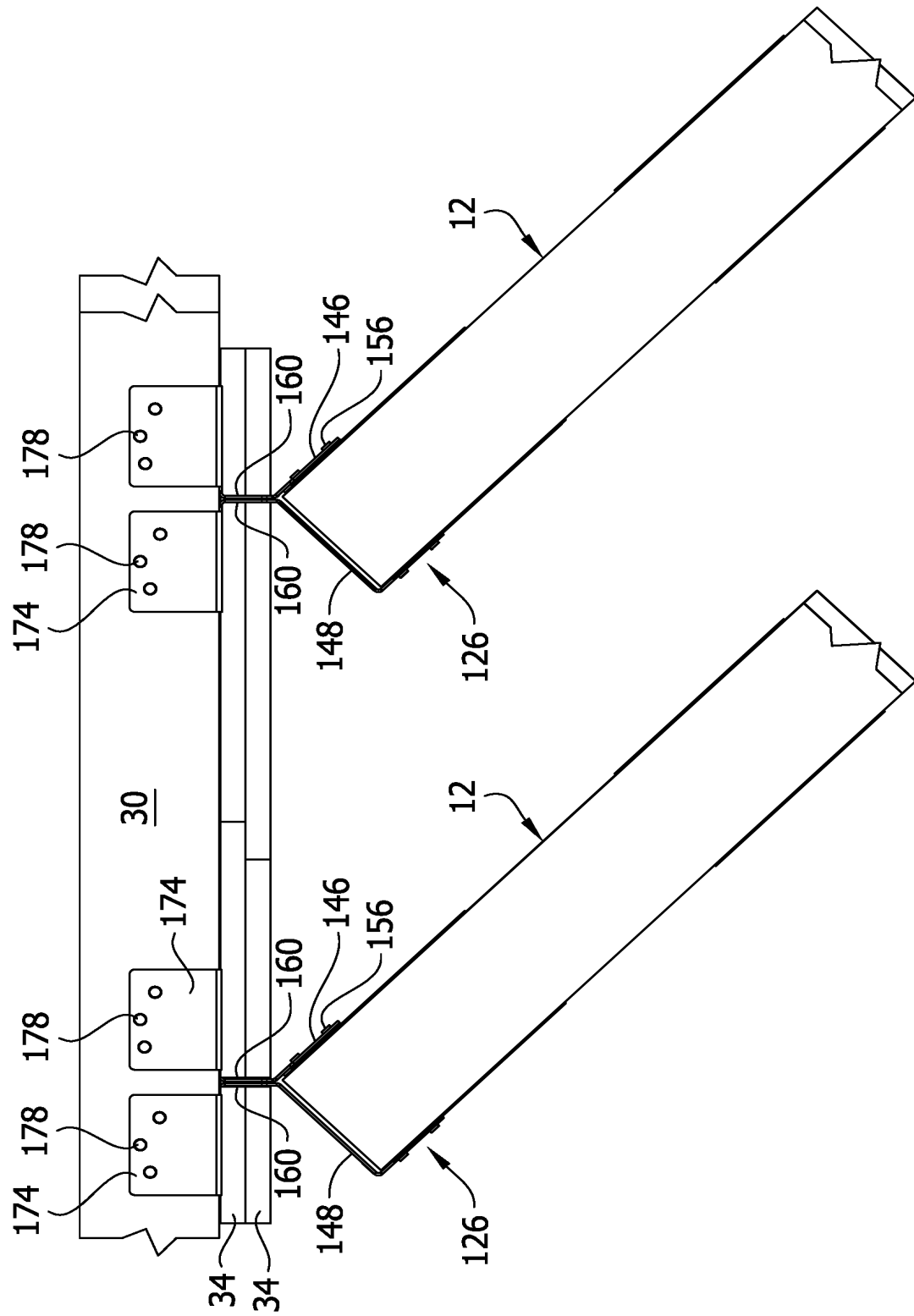
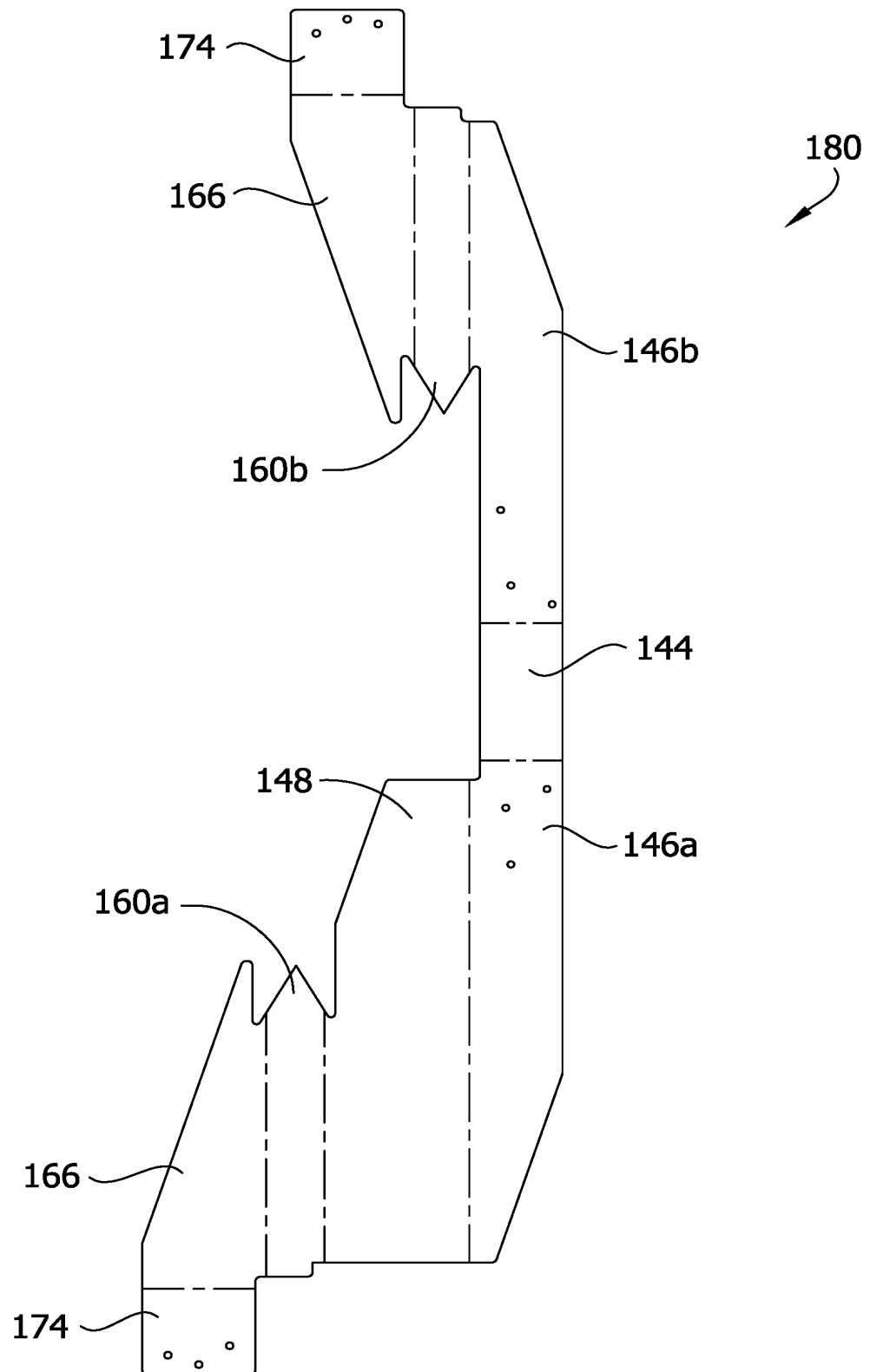


FIG. 40



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	MLP 7708.USC4
		Application Number	
Title of Invention	HANGER FOR FIRE SEPARATION WALL		
<p>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.</p> <p>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.</p>			

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		
	Steven		Brekke			
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service						
City	Lakeville	State/Province	MN	Country of Residence	US	

Mailing Address of Inventor:

Address 1	20880 Laredo Path					
Address 2						
City	Lakeville	State/Province	MN			
Postal Code	55306	Country	US			

Inventor	2				Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Mark	R.	Rolf			
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service						
City	Fredericksburg	State/Province	VA	Country of Residence	US	

Mailing Address of Inventor:

Address 1	1911 Artillery Ridge Road					
Address 2						
City	Fredericksburg	State/Province	VA			
Postal Code	22408	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).

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	MLP 7708.USC4
		Application Number	
Title of Invention	HANGER FOR FIRE SEPARATION WALL		

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

Customer Number	00321		
Email Address	stl.uspatents@stinson.com	<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>

Application Information:

Title of the Invention	HANGER FOR FIRE SEPARATION WALL		
Attorney Docket Number	MLP 7708.USC4	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	43	Suggested Figure for Publication (if any)	2

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.

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	00321		

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	MLP 7708.USC4
		Application Number	
Title of Invention	HANGER FOR FIRE SEPARATION WALL		

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	16433799	2019-06-06		
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16433799	Continuation of	16225517	2018-12-19	10316510	2019-06-11
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16225517	Continuation of	15675409	2017-08-11	10184242	2019-01-22
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15675409	Continuation of	14555049	2014-11-26	10024049	2018-07-17
Prior Application Status	Expired		Remove		
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
14555049	Claims benefit of provisional	61922531	2013-12-31		
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					
Add					

Foreign Priority Information:

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 ^j (if applicable)
		0088	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	MLP 7708.USC4
		Application Number	
Title of Invention	HANGER FOR FIRE SEPARATION WALL		

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

Add

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	MLP 7708.USC4
		Application Number	
Title of Invention	HANGER FOR FIRE SEPARATION WALL		

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.

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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
<p>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.</p> <p style="text-align: right;">Clear</p>		
☒ 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:		
<div style="border: 1px solid black; height: 20px; width: 100%;"></div>		
Name of the Deceased or Legally Incapacitated Inventor: <div style="border: 1px solid black; height: 20px; width: 100%;"></div>		
If the Applicant is an Organization check here. ☒		
Organization Name	Columbia Insurance Company	
Mailing Address Information For Applicant:		
Address 1	3024 Harney Street	
Address 2		
City	Omaha	State/Province NE
Country	US	Postal Code 68131
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.

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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.				
				<input type="button" value="Remove"/>
If the Assignee or Non-Applicant Assignee is an Organization check here.				☐
Prefix	Given Name	Middle Name	Family Name	Suffix
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1		<input type="text"/>		
Address 2		<input type="text"/>		
City	<input type="text"/>	State/Province	<input type="text"/>	
Country ⁱ	<input type="text"/>	Postal Code	<input type="text"/>	
Phone Number	<input type="text"/>	Fax Number	<input type="text"/>	
Email Address	<input type="text"/>			
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

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	/Steven N. Levitt/		Date (YYYY-MM-DD)	2021-04-20
First Name	Steven	Last Name	Levitt	Registration Number
				76498
Additional Signature may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

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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.