

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SIMPSON STRONG-TIE COMPANY INC.,
Petitioner

v.

COLUMBIA INSURANCE COMPANY,
Patent Owner

Case PGR2024-00050
U.S. Patent No. 11,920,339

**PETITIONER SIMPSON STRONG-TIE COMPANY INC.'S OPPOSITION
TO PATENT OWNER'S REVISED CONTINGENT MOTION TO AMEND**

Mail Stop "PATENT BOARD"
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	GROUND 1: CLAIMS 32-51 LACK §112(a) WRITTEN SUPPORT.	1
A.	Claims 32-51: “cutting an <i>opening</i> .”	1
B.	Claims 32-51: “inserting” and “moving”/“arranging” steps.....	2
C.	Claim 46: “only ... extend through the opening.”	2
III.	GROUND 2: CLAIMS 32-51 ARE INDEFINITE UNDER § 112(b).....	2
A.	Claims 32-51: “opening outwardly.”	2
B.	Claims 44 and 48-49: “a 2-hour fire resistance rating as determined per ASTM E814 and ASTM E119.”	3
IV.	SUBSTITUTE CLAIMS 32-33, 38-39, 42, AND 44-49 SHOULD BE FOUND UNPATENTABLE AS OBVIOUS UNDER 35 U.S.C. §103.....	3
A.	Claim Construction.	3
B.	Summary of Prior Art Grounds.....	3
C.	Ground 3: Claims 32-33, 38, 42, and 45-47 would have been obvious over Kanai in view of Bundy and Allan.....	4
1.	Independent Claims 32, 42, 45, 46, 47	4
2.	Claim 33	13
3.	Claim 38	13
D.	Ground 4: Claims 44 and 48-49 would have been obvious over Kanai, Bundy, and Allan, further in view of GypMan and IBC.....	15
1.	Claims 44, 48	16
2.	Claim 49	18
E.	Ground 5: Claims 32, 39, and 47 would have been obvious over Tsukamoto in view of Bundy and Allan.	18
1.	Independent Claims 32 and 47.....	18
2.	Dependent Claim 39	22
F.	Ground 6: Claims 44, 48-49 would have been obvious over Tsukamoto, Bundy, and Allan, further in view of GypMan and IBC.	23
	APPENDIX	I

I. INTRODUCTION

Patent Owner's ("PO's") substitute claims fail to meet 35 U.S.C. §§112(a), (b) and 103(a). The Contingent Motion to Amend ("MTA") should thus be denied.

II. GROUND 1: CLAIMS 32-51 LACK §112(a) WRITTEN SUPPORT.

A. Claims 32-51: "cutting an *opening*."

"[C]laims may be no broader than the supporting disclosure, and ... a narrow disclosure will limit claim breadth." *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1480 (Fed. Cir. 1998)¹. Claims 32, 42, 45, 46, and 47 recite "cutting an *opening* into an exterior perimeter edge of the fire retardant sheathing" **but do not limit the size** of the opening. MTA, Appx., 25, 29, 31, 33, 35. There is a difference between a narrow "slot," which is all the '339 patent discloses ("[T]russ 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.*" EX1001, 4:34-36), and the claimed "opening" of indiscriminate size. The '339 patent thus fails to describe the *full scope* of the broadly recited "opening," because the purpose of the described invention is to allow "the sheathing [to be] interrupted *only by the slot* 72 required to receive the flanges." EX1001, 11:38-51.

The '339 patent specification never uses the term "opening," only the term "slot," to distinguish from the prior practice of cutting a "cutout for the entire cross

¹ Emphasis added unless otherwise noted.

section of the truss.” EX1001, 1:41-42. PO’s experts support this distinction: Mr. Tucker admitted that “not all openings would be slots;” Mr. Kaczkowski noted a POSA “would recognize that an opening in this case is simply this narrow slot that is being taught by the specification;” Mr. Church noted that the simplicity of cutting a slot, rather than a larger opening, was key to the claimed method. EX1055, 62:13-18; EX1052, 52:1-13; EX1057, 51:8-53:8. Cutting an “opening” larger than a fire-rated slot falls outside the scope of the disclosed invention. EX1068, ¶¶174-179. Thus, PO was not in possession of the full breadth of the broadly recited “opening” and claims 32-51 are unpatentable under §112(a).

B. Claims 32-51: “inserting” and “moving”/“arranging” steps

For the same reasons as claims 1 and 27, claims 32, 42, 45, 46, 47 lack written description for separate “inserting” and “moving”/“arranging” steps. Pet., 10-11; Pet. Reply, 30-31; EX1068, ¶180.

C. Claim 46: “only ... extend through the opening.”

Claim 46 recites “only the first and second planar extension plates ... extend through the opening,” while the patent’s figures shows the extension portion’s bent ends through the opening. Pet., 13-14; Pet. Reply, 32; EX1068, ¶181.

III. GROUND 2: CLAIMS 32-51 ARE INDEFINITE UNDER § 112(b).

A. Claims 32-51: “opening outwardly.”

Claims 32, 42, 45, 46, and 47 recite an “opening ... *opening* outwardly from the exterior perimeter edge.” MTA, Appx., 25-35. PO’s attempt to differentiate a

“perimeter” versus another “exterior” edge does not cure Petitioner’s indefiniteness challenge. EX1068, ¶183. Accordingly, claims 32-51 are unpatentable under §112(b) for the reasons previously provided. Pet., 16.

B. Claims 44 and 48-49: “a 2-hour fire resistance rating as determined per ASTM E814 and ASTM E119.”

ASTM E814/E119 as recited in claims 44 and 48-49 are test standards developed by ASTM International to evaluate the fire resistance of various building assemblies and materials. EX1034, 40. Compliance with these standards is dependent on numerous context-specific facts beyond claims 44 and 48-49, including installation inconsistencies, deviations from manufacturer specification, and testing irregularities. EX1068, ¶184. Further, ASTM standards are subject to revision. Thus, claims 44 and 48-49 fail to inform claim scope with reasonable certainty.

IV. SUBSTITUTE CLAIMS 32-33, 38-39, 42, AND 44-49 SHOULD BE FOUND UNPATENTABLE AS OBVIOUS UNDER 35 U.S.C. §103.

A. Claim Construction.

Other than the exceptions noted in the Petition, the terms of the substitute claims are construed based on their plain and ordinary meaning as would have been understood by a POSA. EX1068, ¶¶186.

B. Summary of Prior Art Grounds.

Gd.	References	Basis	Substitute Claims Challenged
3	Kanai-Bundy-Allan	§103	32-33, 38, 42, 45-47

4	Kanai-Bundy-Allan-GypMan-IBC	§103	44, 48-49
5	Tsukamoto-Bundy-Allan	§103	32, 39, 47
6	Tsukamoto-Bundy-Allan-GypMan-IBC	§103	44, 48-49

JP Patent No. D1226744 to Kanai (EX1071, “Kanai”) published Dec. 27, 2004, is prior art under §102(a). “Fire Resistance Design Manual, 20th Ed.,” Gypsum Association (EX1017, “GypMan”) published in June 2012 is prior art under 35 U.S.C. §102(a). “2012 International Building Code”, International Code Council (EX1034, “IBC”) published in 2011 is prior art under §102(a). JP Application No. 19991014482 to Tsukamoto (EX1008) published on October 16, 1987 is prior art under §102(a). EX1068, ¶¶185-195.

In the following prior art combinations, each claim element is identified with the identifier shown in the Claims Appendix attached hereto. Figures are provided with an identifier; “ * ” identifies when a figure has been modified and annotated.

C. Ground 3: Claims 32-33, 38, 42, and 45-47 would have been obvious over Kanai in view of Bundy and Allan.

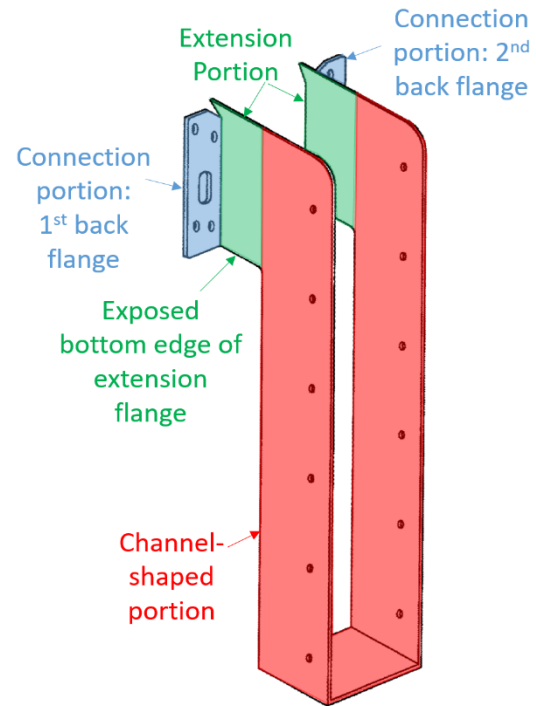
1. Independent Claims 32, 42, 45, 46, 47

A POSA would have found it obvious to adapt Kanai’s joist hanger to be installed in conjunction with one or more layers of drywall on a frame wall, as taught by Bundy. A POSA would have also found it obvious to install the modified

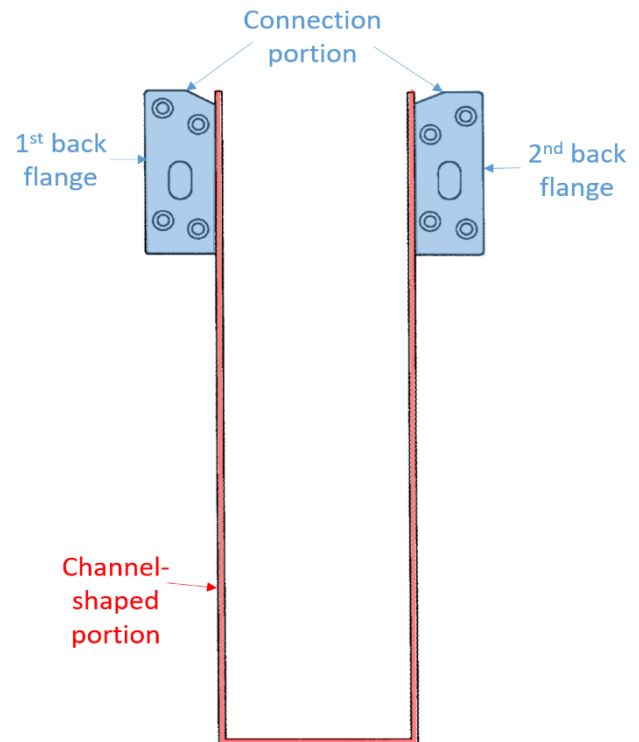
hanger and drywall in the manner claimed, as taught by the combination of Kanai, Bundy, and Allan. EX1003, ¶¶237-261.

Motivation to Combine (“MTC”):

Kanai’s hanger defines a space between its back flange and channel-shaped portion corresponding to the length of its extension portion (annotated in Figures C1-C4). As explained in Petition §VII.A, Bundy teaches advantages of installing a joist hanger with fire-retardant sheathing on a frame wall for fire-resistivity. A POSA would have been motivated to install dry-wall between Kanai’s channel-shaped portion and connection portion on a frame wall, as taught by Bundy, to shield the frame wall from fire. EX1068, ¶¶197-198. Adapting Kanai’s hanger to received dry-wall would have been nothing more than applying a known technique to a similar device to obtain the predictable result of a

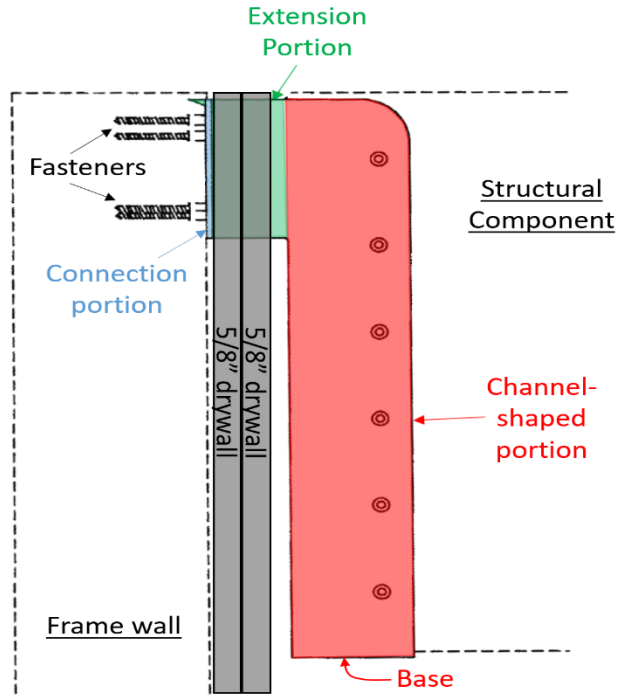


(C1): EX1071, Plan View



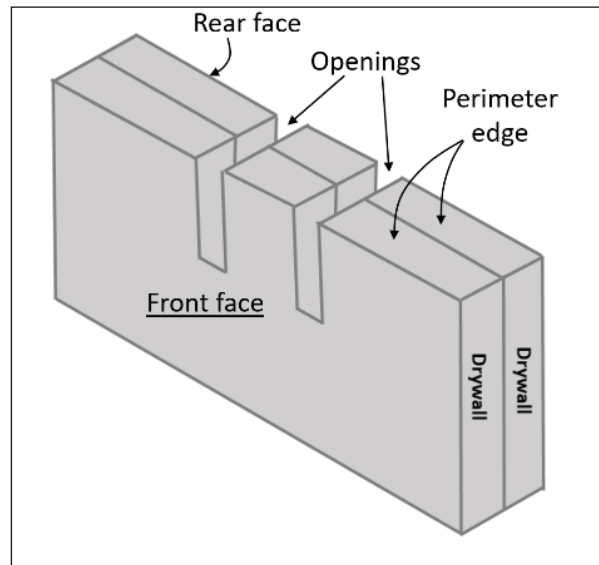
(C2): EX1071, Front View

hanger having flanges long enough to receive drywall between the channel-shaped portion and wall frame. A POSA would have had a reasonable expectation of success because doing so would still allow Kanai's hanger to perform its intended function of securing a joist to a wall. EX1068, ¶¶199-200; EX1005, 4:46-53; EX1071, 1.



(C3): EX1071, Usage View*

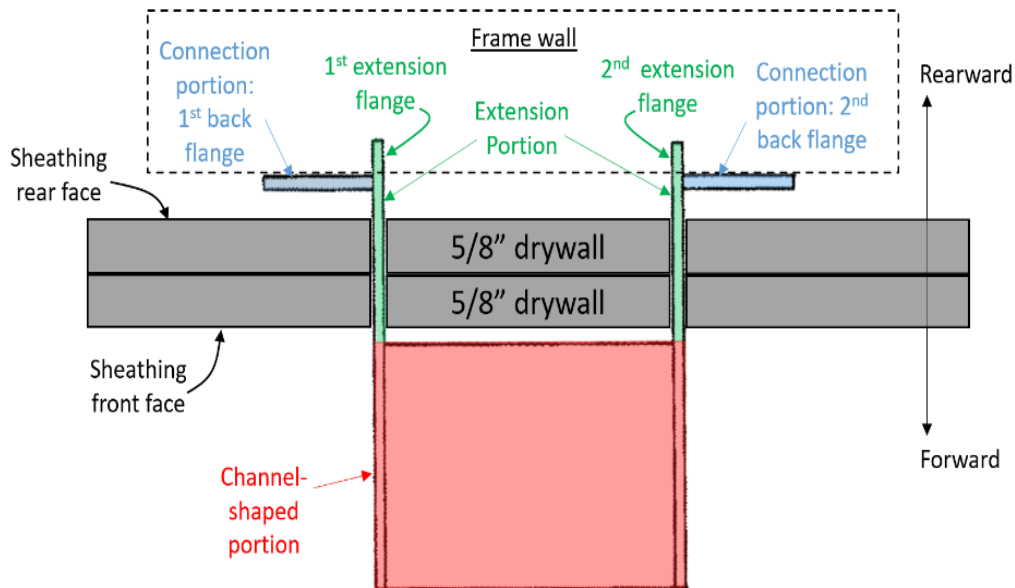
As explained in Petition §VII.A, cutting openings in drywall to accommodate structural connectors like hangers was well-known, as evidenced by Allan. EX1006, 4:1-14. A POSA would have been motivated to mount Kanai's hanger to the wall before installing drywall, because Kanai's face-mount fasteners would



(C5): Corresponding Cutouts

need to be accessible at the time the hanger was installed. Because the hanger would be mounted at the top of a frame wall, a POSA would then move the cut drywall upwards relative to the hanger so that Kanai's extension portion extended

through the drywall as taught by Allan. A POSA would have found this obvious as merely choosing from a finite number of identified, predictable solutions in the same field with a reasonable expectation of success. EX1068, ¶¶201-203.



(C4): EX1071, Plan View*

[32.P], [42.P], [45.P], [46.P], [47.P]: A POSA would have understood Kanai's hanger as applicable to a fire separation wall with sheathing mounted on a frame wall, as suggested by Bundy. EX1005, 2:36-41, 5:10-22. EX1068, ¶204.

[32.a.1-2], [42.a.1-2], [45.a.1-2], [46.a.1-2], [47.a.1-2]: Bundy discloses these elements for the same reasons as discussed for element [1.A] in the Petition. *See* Pet., §VII.B.2. EX1068, ¶143. A POSA would have found it obvious to mount Kanai's hanger to Bundy's wall assembly using Kanai's fasteners, as discussed above (Figure C3). EX1068, ¶¶205-206.

[32.a.3], [42.a.3], [45.a.3], [46.a.3], [47.a.3]: Shown in Figs. C1-C4, Kanai

discloses the “channel-shaped portion” (red) sized and shaped to receive a structural component (“beam”), “connection portion” (blue) configured for attachment to the frame wall via the fasteners, and interconnecting “extension portion” (green) spacing the channel-shaped portion from the connection portion. EX1068, ¶207.

[32.a.4], [42.a.4], [45.a.4], [46.a.4], [47.a.4]: Given that Kanai’s channel-shaped portion is spaced from the connection portion, when the combined hanger is secured to the top plate of Bundy’s frame wall via fasteners, the channel-shaped portion is also spaced from the frame wall, as shown above. EX1068, ¶208.

[32.b.1-4], [42.b.1-4], [45.b.1-4], [46.b.1-4], [47.b.1-4]: A POSA would have understood from Allan to cut, into the recited exterior perimeter edge, at least one opening that extends through the front and rear faces of the sheathing to enable the sheathing to fit around the hanger’s extension portion, as shown in Figure C5 above. EX1006, 4:1-14. The openings shown in Figure C5 match the slots described and shown in the ’339 patent, and thus open outwardly from the exterior perimeter edge to the same extent as the patent. EX1068, ¶209.

[32.c.1], [42.c.1], [45.c.1], [46.c.1], [47.c.1]: As explained for MTC, a POSA would have found it obvious to install drywall after cutting the drywall and after mounting Kanai’s hanger to the wall frame, so that the fasteners could be accessed before being blocked by the drywall. Further, Allan teaches installing drywall around a mounted structural connector. EX1006, 3:27-42, 4:1-14. As shown

above in Figures C4 and C5, the rear face of the fire retardant sheathing faces rearward toward the studs of the frame wall and the front face of the fire retardant sheathing faces forward away from the studs of the frame wall,. EX1068, ¶210.

[32.c.2], [42.c.2], [45.c.2], [46.c.2], [47.c.2]: Because the hanger is installed at the top plate prior to installing the sheathing and Allan teaches inserting sheathing around connectors (EX1006, 3:27-42, 4:1-14.), a POSA would have known to insert the sheathing (having openings cut therein) up around the extension portion between the channel-shaped portion and the connection portion. EX1068, ¶211.

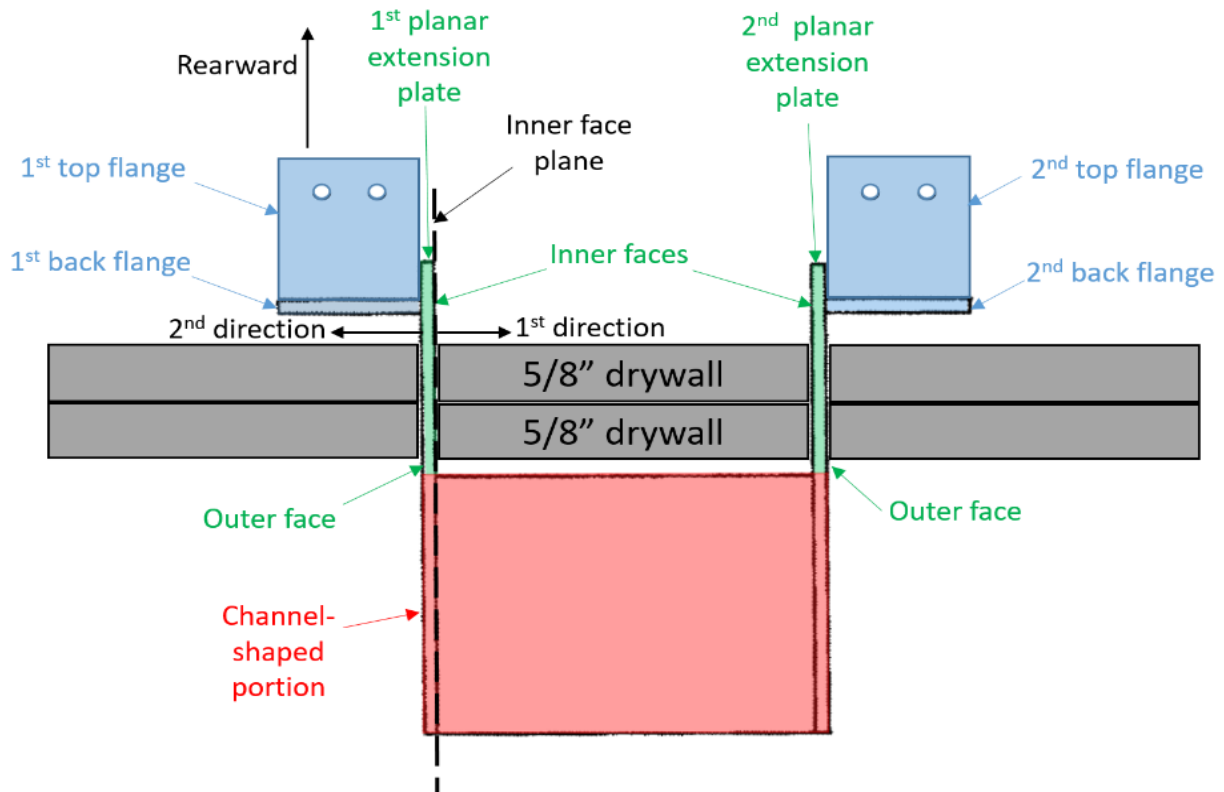
[32.c.3], [42.c.3], [45.c.3], [46.c.3], [47.c.3]: As explained above for MTC, when installing sheathing after mounting the hanger, a POSA would have found it obvious to slide (i.e., move alongside) the sheathing relative to the mounted hanger so the opening's edge slides beside and aligns with the extension portion and an extension flange of the combined hanger's extension portion extends through and is received by the opening in the sheathing. EX1006, 4:1-14; EX1068, ¶212.

[42.d.1]: As illustrated in Figure C4 above, when the sheathing is moved into place relative to the fire wall hanger, only the extension portion (shown in green) extends through the sheathing. EX1068, ¶213.

[42.d.2], [45.d.3], [46.d.2]: Kanai's extension includes first and second planar extension plates extending parallel to one another from the channel-shaped portion to the connection portion (see Figure C6, below at [42.e.2]). EX1068, ¶214.

[42.d.3-4], [46.d.3-4]: As illustrated in Figure C6 below, the Kanai-Bundy-Allan hanger renders obvious these elements arranged as recited. EX1068, ¶215.

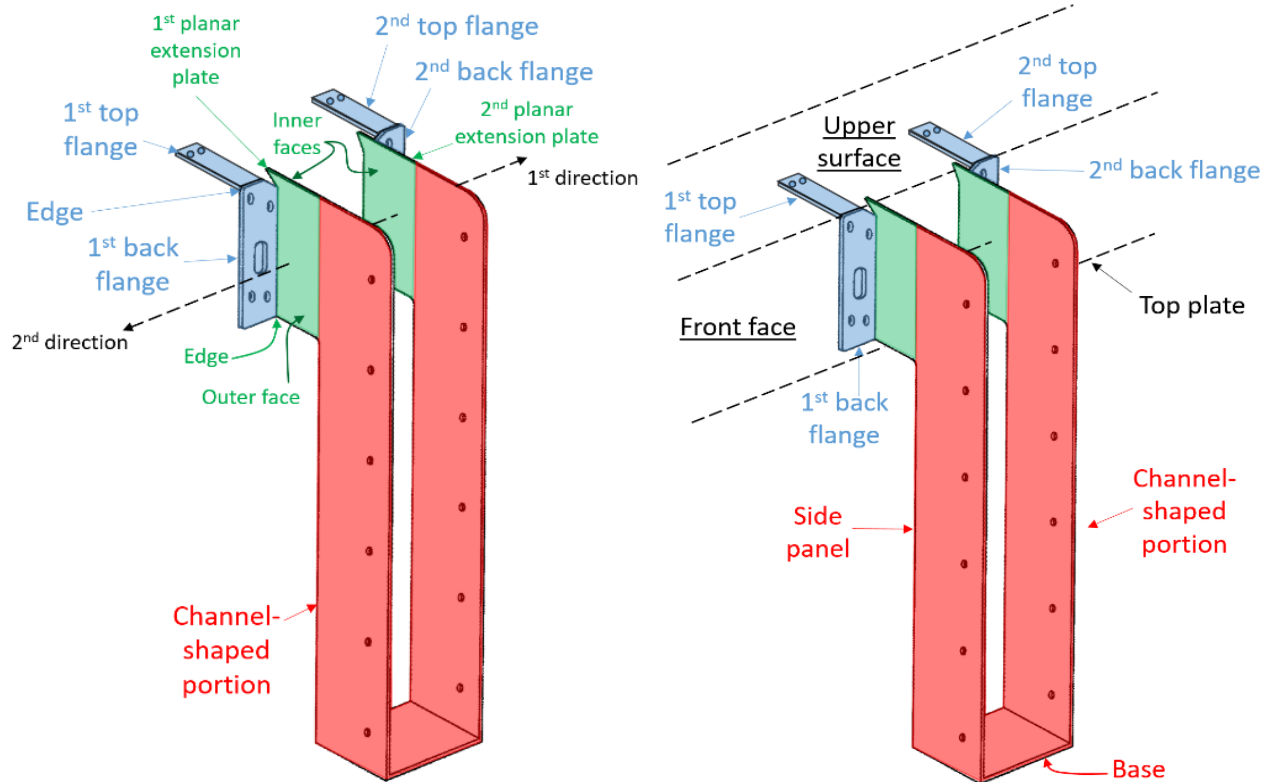
[42.e.1], [45.d.1], [46.d.1]: Showing no moving elements, Kanai's hanger is a "joist bracket" "fixed to a cross beam." EX1071, 1. A POSA would have recognized that the hanger would be made from a metal commonly used for joist brackets, such as sheet metal, thus rigidly fixing the connection portion and the channel-shaped portion of the combined hanger with respect to one another. EX1068, ¶216.



(C6): EX1071, Plan View*

[42.e.2], [45.d.2], [46.d.5]: Kanai's connection portion has a back flange (Figures C6 above, C7). While Kanai does not show a top flange, a POSA would have found it obvious to add a top flange to Kanai's hanger, as taught by Bundy. In

the same field, Bundy discloses adding first and second top flanges 15 to respective first and second flanges 9 at angular joint 49, with the top flanges being fastened to the top face 17 of the frame wall. EX1005, 1:52-55; 5:39-52.



(C7): EX1071, Persp. View*

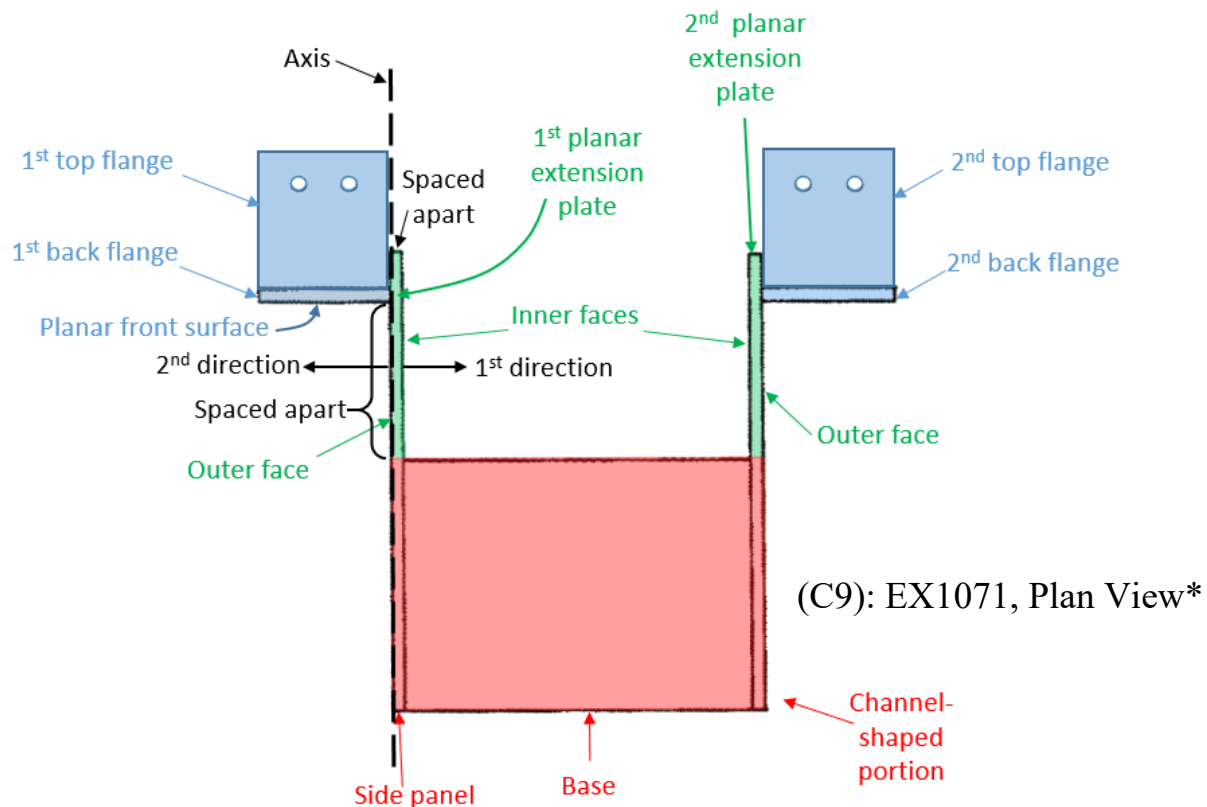
(C8): EX1071, Persp. View*

A POSA would have been motivated to add Bundy's top flange to Kanai's face mount hanger (Figure C6 above) to improve the connectivity and ease of installation of Kanai's hanger. EX1068, ¶¶217-218. A POSA would have had a reasonable expectation of success in doing so because Kanai's and Bundy's hangers are used for similar purposes (hanging a structural object on a wall). EX1068, ¶218. As shown above, the first top flange of the combined hanger extends from an edge of the first back flange ([42.e.2], [46.d.5]). Similarly, the first back flange has

a planar front surface extending from a front edge of the first top flange, with the first top flange extending rearward from its front edge ([45.d.2]). The first back flange extends from an edge of the first planar extension plate in the second direction, such that the first top flange and first back flange are entirely disposed outward, in the second direction, of the inner face plane ([42.e.2], [46.d.5]).

[42.f], [45.e], [46.e]: As illustrated in Figure C8 above, the combined hanger's back flange engages a front face of the top plate and the top flange engages an upper surface of the top plate. EX1068, ¶219.

[42.g], [46.f]: As shown in Figure C6, the first planar extension plate is disposed in the sheathing opening. Only the first and second planar extension plates of the extension portion extend through the opening. EX1068, ¶220.



[45.d.4-7]: As illustrated in Figures C8 and C9 above, the combined hanger renders these elements and recited orientations obvious. EX1068, ¶¶221-223.

2. Claim 33

[33.a.1-2]: Kanai-Bundy-Allan's connection portion includes spaced-apart first and second back flanges which engage the front face of the frame wall, as shown in Figure C2 above. EX1068, ¶224.

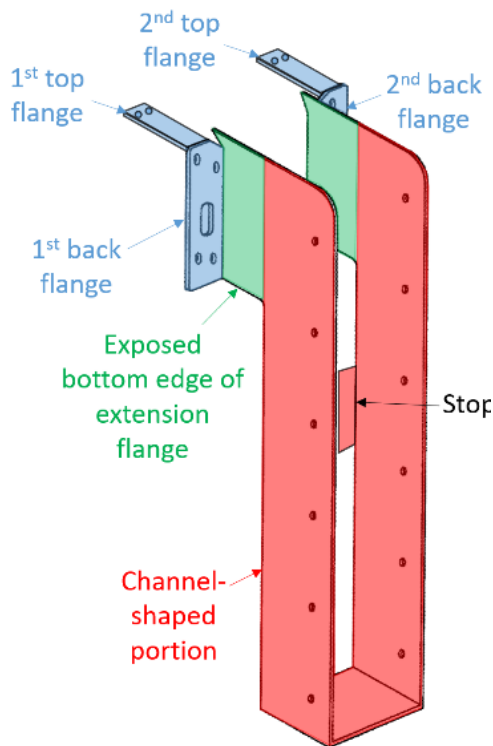
[33.a.3]: *See supra* [42.f]. EX1068, ¶225.

[33.b]: Because the back flanges are engaged with the frame wall, inserting the sheathing between the combined hanger and the frame wall includes positioning the sheathing over and in front of the front faces of each back flange of the hanger, as shown in Figures C3 and C4 above. EX1068, ¶226.

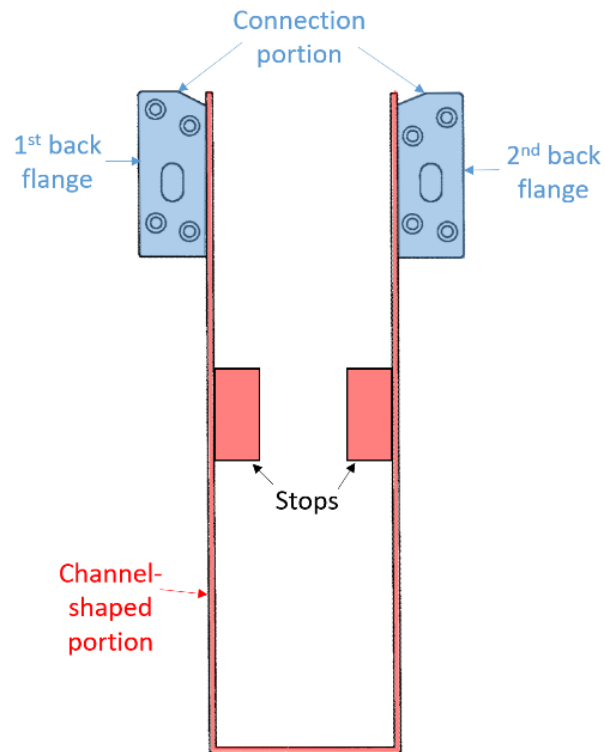
3. Claim 38

Because the Kanai-Bundy-Allan hanger is mounted to the frame wall prior to installing sheathing as discussed above, a POSA would have further found it obvious to install the joist on the upper surface of Kanai's base before installing the sheathing so as to complete framing, illustrated in Kanai's Usage View (holding joist with no sheathing) and Figure C3 above. EX1068, ¶227. Further, although Kanai does not explicitly disclose a stop, Bundy teaches an analogous hanger having a stop (back plate members 9 bent inward) engaging the end of the structural component and spacing the end of the structural component from the back flange

plane by this distance. EX1005, 4:39-46. In combining the teachings of Bundy with Kanai, a POSA would have been motivated to provide Kanai's hanger with a stop (Figures C10-C11 below) to engage the joist's end, as taught by Bundy, to ensure that the joist's end does not impede or press against sheathing installed into the space defined between Kanai's connection portion and channel-shaped portion.



(C10): EX1071, Persp. View*



(C11): EX1071, Front View*

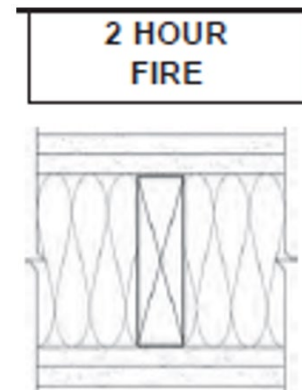
EX1068, ¶228.

Such a modification would have been a simple substitution of one known element (Bundy's channel-shaped portion having stops bent inwards to face each other) for another (tabs on Kanai's channel-shaped portion) to obtain the predictable result of providing a stop at the end of a joist. A POSA would have had a rea-

sonable expectation of success because doing so was well within the level of ordinary skill in the art. EX1005, 4:39-46. For example, as shown above, a POSA would have understood to add a tab to the hanger blank when cutting and bending the tab inward from the channel-shaped portion to form a stop. EX1068, ¶229. In combining the teachings of Kanai, Bundy, and Allan where Kanai's hanger illustrates the component installed first, it would have been obvious that inserting the sheathing between the channel-shaped portion and the frame would include inserting the sheathing between the structural component and the frame. EX1068, ¶230.

D. Ground 4: Claims 44 and 48-49 would have been obvious over Kanai, Bundy, and Allan, further in view of GypMan and IBC.

MTC: The Kanai-Bundy-Allan combination does not explicitly disclose filling the frame wall with mineral wool insulation and disposing the frame wall between the sheathing and additional sheathing such that its assembly has a 2-hour fire resistance rating. But adding these features to a fire wall assembly was well known, as evidenced by GypMan and the IBC. GypMan discloses a “wood framed” wall assembly



EX1017, 88.

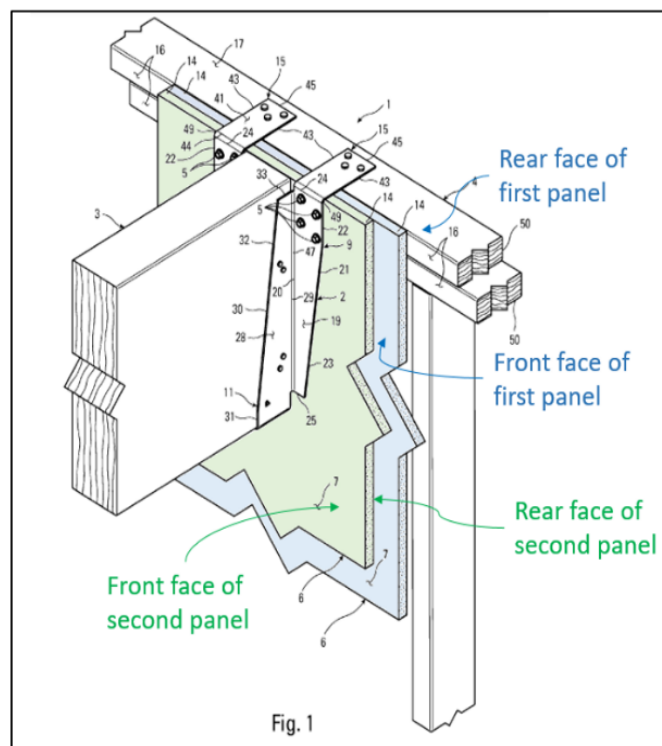
that includes “gypsum wallboard, wood studs, [and] mineral fiber insulation” to achieve a “2 Hour Fire” rating. EX1017, 88. As shown here, GypMan applies a “[b]ase layer” and “[f]ace layer [of] 5/8” type X gypsum wall wallboard.” *Id.* GypMan fills the “stud space” with “mineral fiber insulation.” *Id.*

A POSA would have been motivated to fill the frame wall in the Kanai-Bundy-Allan combination with mineral wool and dispose the frame wall between the sheathing and additional sheathing, as taught by GypMan, so that the wall assembly would satisfy the two-hour fire-resistance rating in accordance with known ASTM standards as instructed by IBC. EX1017, 13-14; EX1034, 40-41; EX1068, ¶¶231-233. IBC was a well-known building code used in many jurisdictions in 2013, and identified ASTM standards to follow for through-penetration firestop systems. EX1068, ¶233. A POSA would have had a reasonable expectation of success doing so because these additions to the wall assembly—mineral wool and additional sheathing—were standard practices subject to standard testing, not changing the operability of Kanai-Bundy-Allan’s wall assembly. EX1068, ¶233.

1. Claims 44, 48

Claims 44, 48 would have been obvious over Kanai, Bundy, and Allan, for the reasons discussed above for claims 32, 47, further in view of GypMan-IBC.

[44.a.1-3]: Bundy teaches two 5/8 inch-thick gypsum drywall layers having the recited faces and



EX1005, FIG. 1.

orientations between its channel-shaped portion (12) and the front face (6) of the wall's support member (4). EX1005, 3:60-67, 5:10-22. Two such layers of Type X gypsum are commonly used for a fire separation wall. EX1017, 88. A POSA would have found it obvious to modify Kanai's hanger to incorporate such layers for the reasons above. EX1068, ¶234.

[44.b], [48.c]: As discussed above for MTC, GypMan discloses this as filling the “stud space” with “mineral fiber insulation.” EX1017, 88. EX1068, ¶235.

[44.c], [48.d]: As discussed above, GypMan discloses this as applying a “[b]ase layer [of] 5/8” type X gypsum wall board at right angles to *each side* of 2x6 wood studs” and a “[f]ace layer [of] 5/8” type X gypsum wall wallboard at applied at right angles to *each side*” of the base layers. EX1017, 88. EX1068, ¶236.

[44.d], [48.e]: GypMan discloses the recited wall assembly having a 2-hour rating determined per ASTM E119 test. EX1017, 13-14. A POSA would have understood that such a wall assembly would typically be governed by the IBC, which required such fire resistance wall assemblies with through penetrations to additionally satisfy both ASTM E119 and E814. EX1034, 40. EX1068, ¶237.

[48.a.1-3]: *See supra* [33.a.1-3]; EX2068, ¶238.

[48.b]: When inserting sheathing upward relative to the combined hanger disposed at the top of a wall, an exposed bottom edge of the extension flange—free of direct attachment to any other component—would be the hanger's first part

moved into the sheathing's opening, shown in Figure C10 above. EX1068, ¶239.

2. Claim 49

[49.a-b] *See supra* [33.b]. Bundy discloses that the back face 8 of drywall panel 6 interfaces with the front face 16 of its frame wall. EX1005, 4:24-28. Thus, in combining the teachings of Bundy's drywall placement with Kanai-Allan, a POSA would have found it obvious to position the sheathing tightly against the frame wall's front face during the inserting and installing, thus also pushing the sheathing against the front face of the back flange. EX1068, ¶240.

E. Ground 5: Claims 32, 39, and 47 would have been obvious over Tsukamoto in view of Bundy and Allan.

1. Independent Claims 32 and 47

A POSA would have found it obvious to adapt Tsukamoto's joist hanger to be installed in conjunction with one or more layers of drywall, as taught by Bundy. A POSA would have also found it obvious to install the modified hanger and drywall in the manner claimed, as taught by the combination of Tsukamoto, Bundy, and Allan. EX1003, ¶¶237-261; EX1068, ¶241.

MTC: Tsukamoto's hanger defines a space between its back flange and channel-shaped portion corresponding to the length of its extension portion (see Figures E1-E3). As explained in Petition §VII.A, Bundy teaches advantages of installing a joist hanger with fire-retardant sheathing for fire-resistivity. A POSA would have been motivated to install drywall between Tsukamoto's channel-

shaped portion and connection portion, as taught by Bundy, to enable the drywall

to shield the frame wall from fire

as Bundy taught. EX1068,

¶¶242-244. A POSA would have

had a reasonable expectation of

success in doing so because Tsu-

kamoto's and Bundy's hangers

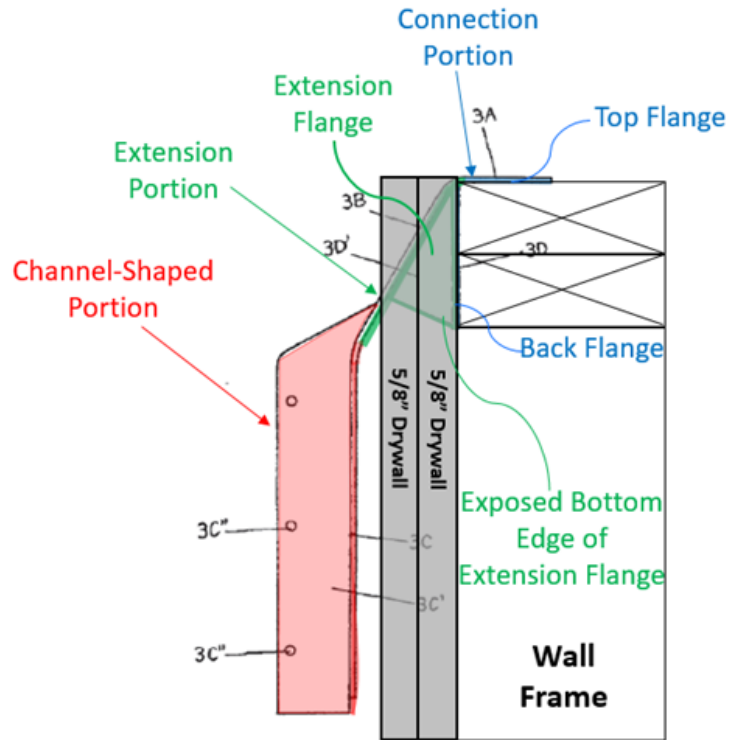
are used for similar purposes

(e.g., hanging a structural mem-

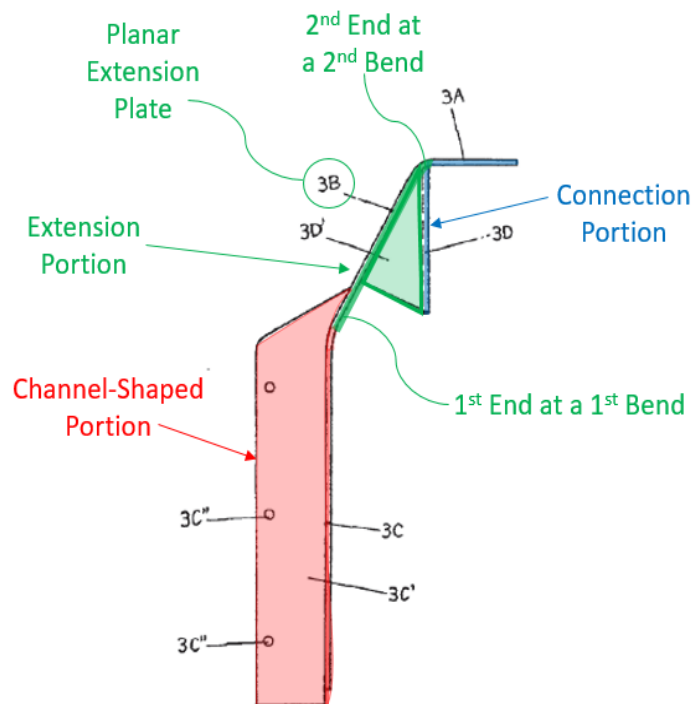
ber to a wall). EX1068, ¶244;

EX1005, 4:46-53; EX1008, 2-3.

As explained in Petition §VII.A.2, cutting openings in drywall to accommodate structural elements like hangers was well-known, as evidenced by Allan. In installing the hanger and the drywall in this manner, a POSA would have been motivated to mount Tsukamoto's



(E1): EX1008, FIG. 3*



(E2): EX1008, FIG. 3*

hanger to the wall prior to installing sheathing, as Tsukamoto FIG. 5 illustrates a mounted hanger bearing a structural member offset from the wall. A POSA would have known to then slide the drywall upwards relative to the hanger so that the extension portion extended

through the drywall, as

taught by Allan. A

POSA would have found

this obvious as merely

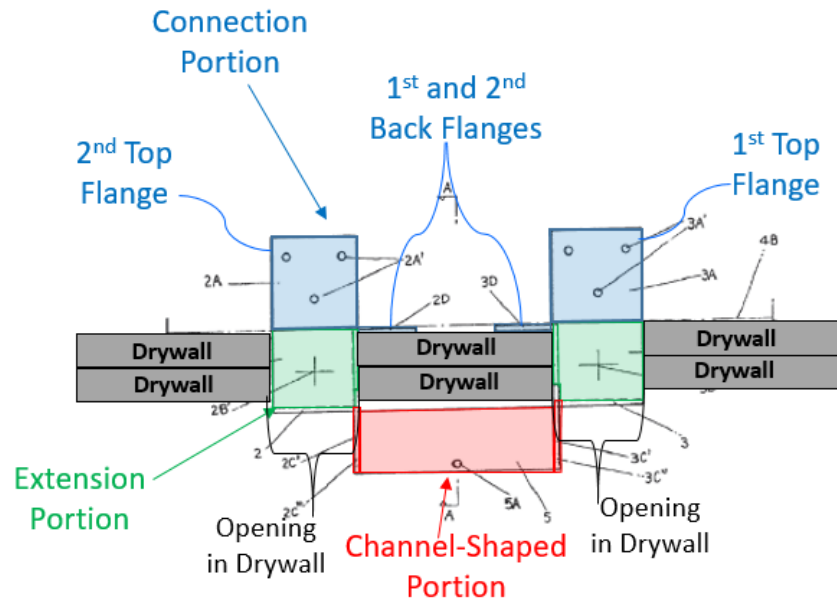
choosing from a finite

number of identified,

predictable solutions

with a reasonable expectation of

success. EX1068, ¶245.



(E3): EX1008, FIG. 4*

[32.P], [47.P]: As modified by Bundy above, Tsukamoto's hanger would be applicable to a fire separation wall having sheathing mounted on a frame wall.

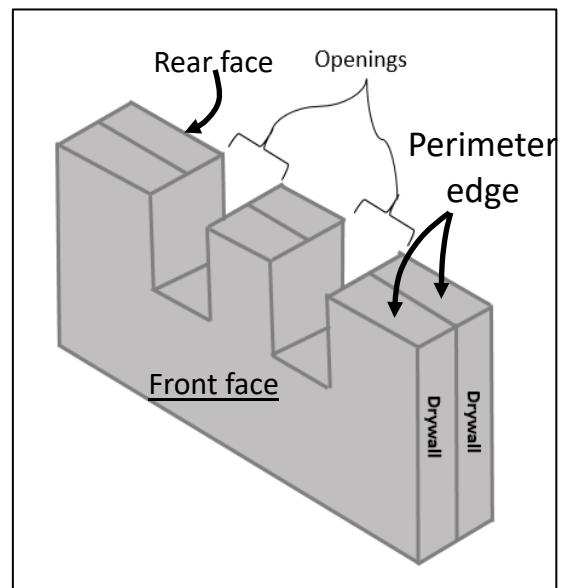
EX1005, 2:36-41, 5:10-22. EX1068, ¶246.

[32.a.1-2], [47.a.1-2]: Bundy discloses these elements for the reasons discussed with respect to [1.A] in the Petition. *See* Pet., §VII.B.2. A POSA would have found it obvious to mount Tsukamoto's hanger to Bundy's frame wall assembly, as discussed above for MTC. EX1068, ¶¶247-248.

[32.a.3], [47.a.3]: As shown in Figures E1-E3 above, Tsukamoto discloses the recited “fire wall hanger” including a “channel-shaped portion” (beam receiving plate 5, side plates 2/3C’, and vertical portions 2/3C), a “connection portion” (horizontal portions 2/3A, vertical plates 2/3D), and an “extension portion” (inclined portion 2/3B, connection plates 2/3D’). EX1068, ¶249.

[32.a.4], [47.a.4]: Tsukamoto-Bundy-Allan’s hanger is arranged such that, when the hanger is secured to the top plate of the frame wall, the channel-shaped portion is spaced from the wall (Figure E1). EX1008, FIG. 3; EX1068, ¶250.

[32.b.1-4], [47.b.1-4]: As explained above for MTC, cutting sheathing to fit around obstructions was a known method of installing sheathing, as evidenced by Allan. EX1006, 4:1-14. A POSA would have understood from Allan to cut an opening into an exterior perimeter edge of the sheathing that extends from the front face of the sheathing to the rear face of the sheathing to enable the sheathing to fit



(E4): Corresponding Cutout

around Tsukamoto’s extension portion, as shown in E1-E4. EX1068, ¶¶251-252.

[32.c.1], [47.c.1]: As explained above for MTC, a POSA would have found it obvious to install drywall after mounting Tsukamoto’s hanger to the wall frame.

EX1006, 4:1-14. In doing so, the sheathing's rear face faces rearward toward the wall frame's studs and the sheathing's front face faces forward away from the frame wall's studs. EX1068, ¶¶253-254.

[32.c.2], [47.c.2]: As explained above, Tsukamoto-Bundy-Allan teaches cutting openings into an exterior perimeter edge of the sheathing layer(s). Given that the hanger is initially installed at the top plate (EX1008, FIG. 5) and it was known to insert sheathing around obstructions, a POSA would have known to insert the sheathing up between the channel-shaped portion and the connection portion such that its openings lined up with the extension portion. EX1068, ¶255.

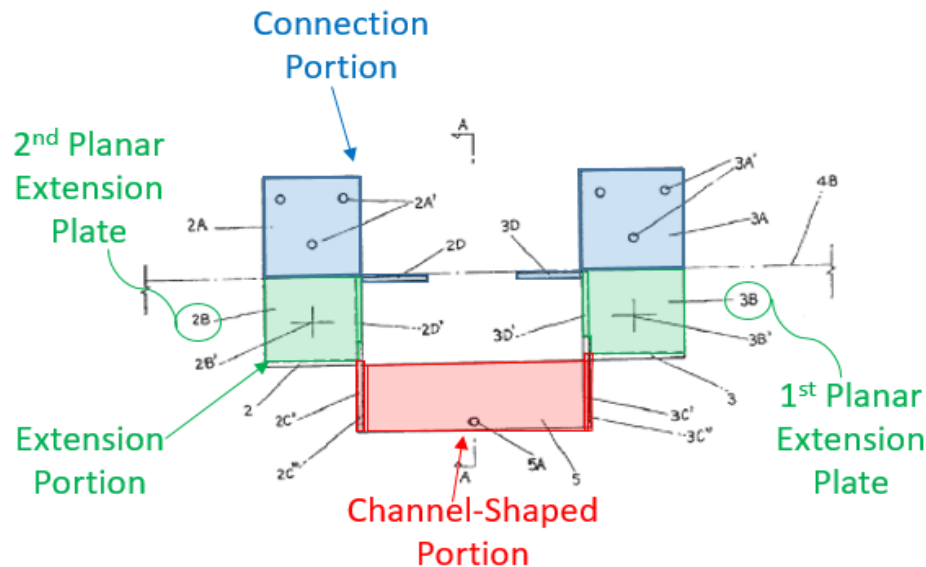
[32.c.3], [47.c.3]: As explained above, when installing the sheathing after mounting the hanger, a POSA would have found it obvious to move the sheathing relative to the mounted hanger such that the sheathing openings move along and align with the extension portion and an extension flange (2/3D') of Tsukamoto's extension portion extends through the sheathing opening. EX1068, ¶¶256-257.

2. Dependent Claim 39

[39.a]: As explained above, Tsukamoto-Bundy-Allan teaches cutting narrow openings in the sheathing to accommodate Tsukamoto's extension portion, which is commensurate with Allan's teaching of cutting narrow openings in drywall to fit a hanger structure. EX1006, 4:1-14, FIG. 3. As shown above in Figure E4 above, each opening has an area less than the area of an end of the structural component,

taken at and parallel to the sheathing front face. EX1068, ¶258.

[39.b]: Tsukamoto's extension portion includes first and second planar extension plates (2/3B) that each include opposite first and second ends. The first end of Tsukamoto's extension plates (2/3B) is connected to the channel-shaped portion by a bend, and the second end of Tsukamoto's extension plates (2/3B) is connected to the connection portion (top flange) by a bend. *See* Figs E2, E5. EX1068, ¶259.



(E5): EX1008, FIG. 4*

F. Ground 6: Claims 44, 48-49 would have been obvious over Tsukamoto, Bundy, and Allan, further in view of GypMan and IBC.

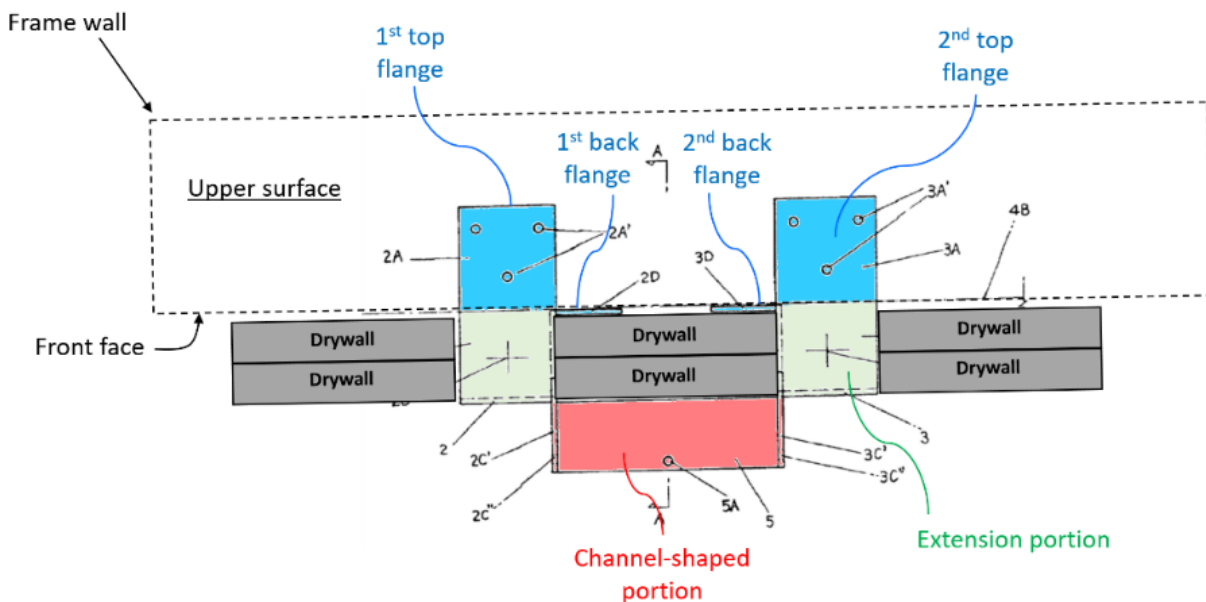
MTC: A POSA would have been motivated to modify Tsukamoto-Bundy-Allan as taught by GypMan and IBC in the same manner and for the reasons described in §IV.D for Kanai-Bundy-Allan. Claims 44, 48-49 thus would have been obvious over Tsukamoto-Bundy-Allan as discussed above for claim 47, further in view of GypMan and IBC. EX1044, ¶260.

[44.a.1-3]: Based on the same disclosures in Bundy and GypMan identified in §IV.D.1, a POSA would have found it obvious to modify Tsukamoto's hanger to incorporate two 5/8 inch-thick layers of type X gypsum, arranged as recited, for the same reasons provided above. EX1068, ¶261.

[44.b-c], [48.c-d]: *See supra* §IV.D.1. EX1017, 88. EX1068, ¶¶262-263.

[44.d], [48.e]: GypMan discloses a 2-hour rating determined per ASTM E119 test. EX1017, 13-14. A POSA would have understood that such a wall assembly would be governed by the IBC, which required such fire resistance wall assemblies to satisfy both E119/E814. EX1034, 40. EX1068, ¶264.

[48.a.1-3]: The connection portion of Tsukamoto-Bundy-Allan's hanger includes spaced-apart first and second back flanges (2/3D). EX1011, FIG. 5. This



(E6): EX1008, FIG. 4*

hanger is mounted to Bundy's frame wall by engaging the first/second back

flanges (2/3D) with the frame wall's front face and engaging the top plate's upper surface with a top flange (2/3A), as shown in Figure E6 below. EX1011, 4:28-31, FIGS 2, 5. When inserting the sheathing, the sheathing is positioned over and in front of the front faces of the hanger's first/second back flanges. EX1068, ¶265.

[48.b]: When inserting sheathing upward, an exposed bottom edge of the extension flange—free of direct attachment to any other component—would be the first part moved into the sheathing's opening (Figure E1 above). EX1068, ¶266.

[48.c]-[48.e]: GypMan discloses elements [48.c]-[48.e]. *See supra* §IV.D. As discussed above for MTC, it would have been obvious to fill Tsukamoto-Bundy-Allan's frame wall with mineral wool and dispose this frame wall between the sheathing and additional sheathing to achieve a 2-hour rating. EX1068, ¶¶263-265; EX1008, FIG. 6.

Claim 49: Bundy discloses that the back face 8 of drywall panel 6 interfaces with the front face 16 of its frame wall. EX1005, 4:24-28. Thus, in combining the teachings of Bundy's drywall placement with Tsukamoto-Allan, a POSA would have found it obvious to position the sheathing tightly against the frame wall's front face during the step of installing. See Figure E6 above. EX1068, ¶267.

Date: August 18, 2025

Respectfully submitted,

/Michelle K. Holoubek, Reg. # 54,179/

Michelle K. Holoubek, Registration No. 54,179
Attorney for Petitioner

CERTIFICATION OF SERVICE (37 C.F.R. § 42.6(e))

The undersigned hereby certifies that on August 18, 2025, a true and correct copy of the foregoing **PETITIONER SIMPSON STRONG-TIE COMPANY INC.'S OPPOSITION TO PATENT OWNER'S CONTINGENT MOTION TO AMEND** was served electronically via e-mail in its entirety on the following counsel for Patent Owner:

Kurt F. James (Lead Counsel)	kurt.james@stinson.com
John R. Schroeder (Back-up Counsel)	john.schroeder@stinson.com
B. Scott Eidson (Back-up Counsel)	scott.eidson@stinson.com
Steven Levitt (Back-up Counsel)	steven.levitt@stinson.com
Timothy D. Krieger (Back-up Counsel)	tim.krieger@stinson.com

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

/Michelle K. Holoubek, Reg. # 54,179/

Michelle K. Holoubek
Registration No. 54,179
Attorney for Petitioner
Simpson Strong-Tie Company Inc.

Date: August 18, 2025

1101 K Street NW
10th Floor
Washington, DC 20005
(202) 371-2600

Appendix

Substitute Claims	Original Claims
Claim 32 A method of constructing a fire-resistive wall assembly, the method comprising:	[1.P] A method of constructing a fire-resistive wall assembly, the method comprising:
32.a.1-2 mounting a fire wall hanger on a frame wall, the frame wall including a top plate and a plurality of studs extending down from the top plate, and	[1.A] mounting a fire wall hanger on a frame wall, the frame wall including a top plate and a plurality of studs extending down from the top plate,
32.a.3 the fire wall hanger including a channel-shaped portion sized and shaped to receive a structural component, a connection portion configured for attachment to the frame wall and an extension portion interconnecting the channel-shaped portion and the connection portion and spacing the channel-shaped portion from the connection portion,	[1.B] the fire wall hanger including a channel-shaped portion sized and shaped to receive a structural component, a connection portion configured for attachment to the frame wall and an extension portion interconnecting the channel-shaped portion and the connection portion and spacing the channel-shaped portion from the connection portion,
32.a.4 said step of mounting the fire wall hanger includes securing the connection portion of the fire wall hanger to the top plate of the frame wall so that the channel-shaped portion is spaced from the frame wall,	[1.C] said step of mounting the fire wall hanger includes securing the connection portion of the fire wall hanger to the top plate of the frame wall so that the channel-shaped portion is spaced from the frame wall;
32.b.1-3 cutting an opening into an exterior <u>perimeter</u> edge of fire retardant sheathing, the opening extending through a front face of the fire retardant sheathing and through a rear face of the	[1.D] cutting an opening into an exterior edge of fire retardant sheathing, the opening extending through a front face of the fire retardant sheathing and through a rear face of the fire retardant sheathing and opening outwardly from the exterior edge of the fire retardant

Substitute Claims	Original Claims
fire retardant sheathing and [the opening] opening outwardly from the exterior <u>perimeter</u> edge of the fire retardant sheathing,	sheathing; and
32.b.4 <u>the exterior perimeter edge extending from the front face of the fire retardant sheathing to the rear face of the fire retardant sheathing; and</u>	
32.c.1 after mounting the fire wall hanger on the frame wall and after cutting the opening into the exterior <u>perimeter</u> edge of the fire retardant sheathing, installing the fire retardant sheathing with respect to the frame wall so the rear face of the fire retardant sheathing faces <u>rearward</u> toward the studs of the frame wall <u>and the front face of the fire retardant sheathing faces forward away from the studs of the frame wall</u> , said step of installing the fire retardant sheathing includes:	[1.E] after mounting the fire wall hanger on the frame wall and after cutting the opening into the exterior edge of the fire retardant sheathing, installing the fire retardant sheathing with respect to the frame wall so the rear face of the fire retardant sheathing faces toward the studs of the frame wall,
32.c.2 inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall; and	[1.F] said step of installing the fire retardant sheathing includes: inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall; and
32.c.3 moving the fire retardant sheathing relative to the fire wall hanger mounted on the frame wall so that an edge of the fire retardant sheathing bounding the opening moves alongside the extension portion and the fire wall hanger extends through the opening in	[1.G] moving the fire retardant sheathing relative to the fire wall hanger mounted on the frame wall so that an edge of the fire retardant sheathing bounding the opening moves alongside the extension portion and the fire wall hanger extends through the opening in the fire retardant sheathing.

Substitute Claims	Original Claims
the fire retardant sheathing.	
33.a.1 The method of claim <u>32</u> , wherein said step of mounting the fire wall hanger includes: engaging a front face of the frame wall with a <u>first back flange of the connection portion of the fire wall hanger</u> ;	Claim 2: wherein said step of mounting the fire wall hanger includes engaging a front face of the frame wall with a back flange of the connection portion of the fire wall hanger.
33.a.1 <u>engaging the front face of the frame wall with a second back flange of the connection portion of the fire wall hanger,</u>	
33.a.2 <u>the second back flange being spaced apart from the first back flange; and</u>	
33.a.3 <u>engaging an upper surface of the top plate with a top flange of the connection portion of the fire wall hanger; and</u>	Claim 3: wherein the step of mounting the fire wall hanger further includes engaging an upper surface of the top plate with a top flange of the connection portion of the fire wall hanger
33.b <u>wherein said step of inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall includes positioning the fire retardant sheathing over and in front of a first front face of the first back flange of the connection portion of the fire wall hanger and over.</u>	Claim 4: wherein said step of inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall includes positioning the fire retardant sheathing over and in front of a front face of the back flange of the connection portion of the fire wall hanger
33.b [positioning the fire retardant sheathing] <u>in front of a second front face of the second back flange of the</u>	

Substitute Claims	Original Claims
<u>connection portion of the fire wall hanger</u>	
Claim 34.a <u>The method of claim 33, wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing so that a first extension flange and a second extension flange of the extension portion of the fire wall hanger extend through the fire retardant sheathing.</u>	Claim 15: wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing so that a first extension flange of the extension portion of the fire wall hanger extends through the opening in the fire retardant sheathing. Claim 16: wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing so that a second extension flange of the extension portion of the fire wall hanger extends through the fire retardant sheathing.
34.b <u>wherein the fire wall hanger is formed as one-piece of sheet metal,</u>	
34.c <u>the first extension flange being directly connected to the channel-shaped portion by a single generally 90-degree sheet metal first bend formed by the first extension flange and the channel-shaped portion, the second extension flange being directly connected to the channel-shaped portion by a single generally 90-degree sheet metal second bend formed by the second extension flange and the channel-shaped portion.</u>	

Substitute Claims	Original Claims
35.a <u>The method of claim 34, wherein the channel-shaped portion includes a base arranged to receive an end portion of the structural component thereon to support the structural component, the base having an upper surface arranged to contact the structural component, the upper surface lying in a base plane,</u>	[25.D] wherein the channel-shaped portion of the fire wall hanger includes a base configured to receive an end portion of the structural component thereon to support the structural component,
35.b <u>the base comprising a one-piece sheet metal panel, the one-piece sheet metal panel forming the upper surface,</u>	
35.c <u>the channel-shaped portion including first and second side panels extending from the one-piece sheet metal panel in an upward direction,</u>	
35.d <u>wherein the first and second bends each have an upper-most end and a lower-most end, the first bend extending from the upper-most end of the first bend to the lower-most end of the first bend in a first direction, the first direction being perpendicular to the base plane, the second bend extending from the upper-most end of the second bend to the lower-most end of the second bend in the first direction.</u>	
36.a The method of claim 35, wherein said step of installing the fire retardant sheathing includes placing the rear face of the fire retardant sheathing against	Claim 5: wherein said step of installing the fire retardant sheathing includes placing the rear face of the fire retardant sheathing against the front face of the frame wall.

Substitute Claims	Original Claims
the front face of the frame wall,	
36.b <u>wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes moving the fire retardant sheathing upward relative to the fire wall hanger so that an exposed bottom edge of the second extension flange is a first part of the fire wall hanger to move into the opening in the fire retardant sheathing, the bottom edge being free of direct attachment to any other component.</u>	
37.a The method of claim <u>36</u>, wherein said step of placing the rear face of the fire retardant sheathing against the front face of the frame wall includes engaging the rear face of the fire retardant sheathing with the top plate and the plurality of studs, the top plate and the plurality of studs forming the front face of the frame wall,	Claim 6: wherein said step of placing the rear face of the fire retardant sheathing against the front face of the frame wall includes engaging the rear face of the fire retardant sheathing with the top plate and the plurality of studs, the top plate and the plurality of studs forming the front face of the frame wall.
37.b <u>wherein the fire wall hanger is free of welding.</u>	
38 The method of claim <u>32</u>, further comprising positioning the structural component on an upper surface of a base of the channel-shaped portion of the fire wall hanger before said step of installing the fire retardant sheathing, said step of positioning the structural component including engaging the structural component with a stop of the	Claim 8: The method of claim 1, further comprising positioning the structural component on an upper surface of a base of the channel-shaped portion of the fire wall hanger before said step of installing the fire retardant sheathing, said step of positioning the structural component including engaging the structural component with a stop of the fire wall hanger to space an

Substitute Claims	Original Claims
fire wall hanger to space an end of the structural component from the frame wall to permit the fire retardant sheathing to be received between the end of the structural component and the frame wall, and wherein said step of inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall includes inserting the fire retardant sheathing between the end of the structural component and the frame wall.	end of the structural component from the frame wall to permit the fire retardant sheathing to be received between the end of the structural component and the frame wall, and wherein said step of inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall includes inserting the fire retardant sheathing between the end of the structural component and the frame wall.
39.a The method of claim <u>32</u>, wherein said step of cutting the opening into the exterior <u>perimeter</u> edge of the fire retardant sheathing includes cutting the opening to have an area less than an area of an end of the structural component facing toward the frame wall, the area of the opening being taken at and parallel to the front face of the fire retardant sheathing,	Claim 9: The method of claim 1, wherein said step of cutting the opening into the exterior edge of the fire retardant sheathing includes cutting the opening to have an area less than an area of an end of the structural component facing toward the frame wall, the area of the opening being taken at and parallel to the front face of the fire retardant sheathing.
39.b <u>wherein the extension portion includes first and second planar extension plates, the first and second planar extension plates each include opposite first and second ends, the first end of the first planar extension plate being connected to the channel-shaped portion by a first bend, the second end of the first planar extension plate being connected to the connection portion by a second bend, the first end of the second planar extension plate being connected to the channel-shaped portion by a third bend,</u>	Claim 23: wherein the first and second planar extension plates each include opposite first and second ends, the first end of the first planar extension plate being connected to the channel-shaped portion by a first bend, the second end of the first planar extension plate being connected to the connection portion by a second bend, the first end of the second planar extension plate being connected to the channel-shaped portion by a third bend, and the second end of the second planar extension plate being connected to

Substitute Claims	Original Claims
<u>and the second end of the second planar extension plate being connected to the connection portion by a fourth bend.</u>	the connection portion by a fourth bend.
40.a The method of claim <u>35</u> , wherein said step of cutting the opening into the exterior perimeter edge of the fire retardant sheathing includes cutting the opening to have: an area less than an area of an end of the structural component facing toward the frame wall, the area of the opening being taken at and parallel to the front face of the fire retardant sheathing;	Claim 9: The method of claim 1, wherein said step of cutting the opening into the exterior edge of the fire retardant sheathing includes cutting the opening to have an area less than an area of an end of the structural component facing toward the frame wall, the area of the opening being taken at and parallel to the front face of the fire retardant sheathing.
40.b a height less than a height <u>of a channel</u> of the channel-shaped portion of the fire wall hanger, <u>the channel configured to receive the structural component</u> ; and a width less than a width <u>of the channel of the channel-shaped portion of the fire wall hanger</u> .	Claim 10: wherein said step of cutting the opening into the exterior edge of the fire retardant sheathing includes cutting the opening to have a height less than a height of the channel-shaped portion of the fire wall hanger. Claim 11: wherein said step of cutting the opening into the exterior edge of the fire retardant sheathing includes cutting the opening to have a width less than a width of the channel-shaped portion of the fire wall hanger.
41 The method of claim <u>35</u> , wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing so that first <u>and second</u> extension <u>flanges</u> of the extension portion of the fire wall hanger extends through the opening in the fire retardant sheathing.	Claim 15: wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing so that a first extension flange of the extension portion of the fire wall hanger extends through the opening in the fire retardant sheathing.

Substitute Claims	Original Claims
	Claim 16: wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing so that a second extension flange of the extension portion of the fire wall hanger extends through the fire retardant sheathing.
42P. <u>A method of constructing a fire-resistant wall assembly, the method comprising:</u>	[1.P] A method of constructing a fire-resistant wall assembly, the method comprising:
42.a.1-2 <u>mounting a fire wall hanger on a frame wall, the frame wall including a top plate and a plurality of studs extending down from the top plate, and</u>	[1.A] mounting a fire wall hanger on a frame wall, the frame wall including a top plate and a plurality of studs extending down from the top plate,
42.a.3 <u>the fire wall hanger including a channel-shaped portion sized and shaped to receive a structural component, a connection portion configured for attachment to the frame wall and an extension portion interconnecting the channel-shaped portion and the connection portion and spacing the channel-shaped portion from the connection portion,</u>	[1.B] the fire wall hanger including a channel-shaped portion sized and shaped to receive a structural component, a connection portion configured for attachment to the frame wall and an extension portion interconnecting the channel-shaped portion and the connection portion and spacing the channel-shaped portion from the connection portion,
42.a.4 <u>said step of mounting the fire wall hanger includes securing the connection portion of the fire wall hanger to the top plate of the frame wall so that the channel-shaped portion is spaced from the frame wall;</u>	[1.C] said step of mounting the fire wall hanger includes securing the connection portion of the fire wall hanger to the top plate of the frame wall so that the channel-shaped portion is spaced from the frame wall;

Substitute Claims	Original Claims
42.b.1-3 <u>cutting an opening into an exterior perimeter edge of fire retardant sheathing, the opening extending through a front face of the fire retardant sheathing and through a rear face of the fire retardant sheathing and opening outwardly from the exterior perimeter edge of the fire retardant sheathing,</u>	[1.D] cutting an opening into an exterior edge of fire retardant sheathing, the opening extending through a front face of the fire retardant sheathing and through a rear face of the fire retardant sheathing and opening outwardly from the exterior edge of the fire retardant sheathing; and
42.b.4 <u>the exterior perimeter edge extending from the front face of the fire retardant sheathing to the rear face of the fire retardant sheathing; and</u>	
42.c.1 <u>after mounting the fire wall hanger on the frame wall and after cutting the opening into the exterior perimeter edge of the fire retardant sheathing, installing the fire retardant sheathing with respect to the frame wall so the rear face of the fire retardant sheathing faces rearward toward the studs of the frame wall and the front face of the fire retardant sheathing faces forward away from the studs of the frame wall, said step of installing the fire retardant sheathing includes:</u>	[1.E] after mounting the fire wall hanger on the frame wall and after cutting the opening into the exterior edge of the fire retardant sheathing, installing the fire retardant sheathing with respect to the frame wall so the rear face of the fire retardant sheathing faces toward the studs of the frame wall,
42.c.2 <u>inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall; and</u>	[1.F] said step of installing the fire retardant sheathing includes: inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall; and
42.c.3 <u>moving the fire retardant sheathing relative to the fire wall hanger</u>	[1.G] moving the fire retardant sheathing relative to the fire wall hanger mounted on the frame wall so that an

Substitute Claims	Original Claims
<u>mounted on the frame wall so that an edge of the fire retardant sheathing bounding the opening moves alongside the extension portion and the fire wall hanger extends through the opening in the fire retardant sheathing;</u>	edge of the fire retardant sheathing bounding the opening moves alongside the extension portion and the fire wall hanger extends through the opening in the fire retardant sheathing.
42.d.1 wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing relative to the extension portion of the fire wall hanger so that only the extension portion of the fire wall hanger extends through the fire retardant sheathing,	Claim 18: wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing relative to the extension portion of the fire wall hanger so that only the extension portion of the fire wall hanger extends through the fire retardant sheathing.
42.d.2 <u>the extension portion including first and second planar extension plates, the first and second planar extension plates being parallel to one another,</u>	[26.B] wherein the extension portion of the fire wall hanger includes first and second planar extension plates, the first and second planar extension plates being parallel to one another,
42.d.3-4 <u>each of the first and second planar extension plates including an inner face and an outer face, the inner faces of the first and second planar extension plates facing one another, the inner face of the first planar extension plate facing in a first direction toward the inner face of the second planar extension plate and the outer face of the first planar extension plate facing in a second direction that is opposite the first direction, the inner face of the first planar extension plate lying in an inner face plane;</u>	[26.C] each of the first and second planar extension plates including an inner face and an outer face, the inner faces of the first and second planar extension plates facing one another, the inner face of the first planar extension plate facing in a first direction toward the inner face of the second planar extension plate and the outer face of the first planar extension plate facing in a second direction that is opposite the first direction, the inner face of the first planar extension plate lying in an inner face plane,

Substitute Claims	Original Claims
42.e.1 <u>wherein the connection portion and the channel-shaped portion are rigidly fixed with respect to one another, and</u>	[26.A] wherein the connection portion and the channel-shaped portion are rigidly fixed with respect to one another,
42.e.2 <u>wherein the connection portion includes a back flange and a top flange, the top flange extending from an edge of the back flange, the back flange extending from an edge of the first planar extension plate in the second direction, the back flange and the top flange being entirely disposed outward, in the second direction, of the inner face plane;</u>	[26.D] wherein the connection portion includes a back flange and a top flange, the top flange extending from an edge of the back flange, the back flange extending from an edge of the first planar extension plate in the second direction, the back flange and the top flange being entirely disposed outward, in the second direction, of the inner face plane;
42.f <u>wherein said step of mounting the fire wall hanger includes engaging a front face of the top plate with the back flange of the connection portion of the fire wall hanger and includes engaging an upper surface of the top plate with the top flange of the connection portion of the fire wall hanger; and</u>	[26.E] wherein said step of mounting the fire wall hanger includes engaging a front face of the top plate with the back flange of the connection portion of the fire wall hanger and includes engaging an upper surface of the top plate with the top flange of the connection portion of the fire wall hanger; and
42.g <u>wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing relative to the extension portion of the fire wall hanger so that the first planar extension plate of the extension portion of the fire wall hanger is disposed in the opening in the fire retardant sheathing.</u>	[26.F] wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing relative to the extension portion of the fire wall hanger so that only the first and second planar extension plates of the extension portion of the fire wall hanger extend through the opening in the fire retardant sheathing.
43 The method of claim <u>35</u>, wherein	Claim 19: The method of claim 1, wherein said step of moving the fire

Substitute Claims	Original Claims
said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing relative to the extension portion of the fire wall hanger so that only first and second extension flanges of the extension portion of the fire wall hanger extend through the fire retardant sheathing.	retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing relative to the extension portion of the fire wall hanger so that only first and second extension flanges of the extension portion of the fire wall hanger extend through the fire retardant sheathing.
44.a The method of claim <u>32</u>, wherein said step of installing the fire retardant sheathing comprises positioning first and second Type X gypsum panels of the fire retardant sheathing, the first and second Type X gypsum panels each being 5/8-inch-thick, the first Type X gypsum panel having a front face and an opposite rear face, the second Type X gypsum panel having a front face and an opposite rear face, the rear face of the first Type X gypsum panel forming the rear face of the fire retardant sheathing and the front face of the second Type X gypsum panel forming a front face of the fire retardant sheathing, the rear face of the second Type X panel being in contact with the front face of the first Type X gypsum panel,	Claim 24: The method of claim 1, wherein said step of installing the fire retardant sheathing comprises positioning first and second Type X gypsum panels of the fire retardant sheathing, the first and second Type X gypsum panels each being 5/8-inch-thick, the first Type X gypsum panel having a front face and an opposite rear face, the second Type X gypsum panel having a front face and an opposite rear face, the rear face of the first Type X gypsum panel forming the rear face of the fire retardant sheathing and the front face of the second Type X gypsum panel forming a front face of the fire retardant sheathing, the rear face of the second Type X panel being in contact with the front face of the first Type X gypsum panel.
44.b <u>wherein the method further comprises: filling the frame wall with mineral wool insulation; and</u>	
44.c <u>installing additional fire retardant sheathing with respect to the frame wall</u>	

Substitute Claims	Original Claims
<u>so that the frame wall is disposed between the fire retardant sheathing and the additional fire retardant sheathing;</u>	
44.d <u>wherein the constructed fire-resistive wall assembly has a 2-hour fire resistance rating as determined per ASTM E814 and ASTM E119.</u>	
45.P <u>A method of constructing a fire-resistive wall assembly, the method comprising:</u>	[1.P] A method of constructing a fire-resistive wall assembly, the method comprising:
45.a.1-2 <u>mounting a fire wall hanger on a frame wall, the frame wall including a top plate and a plurality of studs extending down from the top plate, and</u>	[1.A] mounting a fire wall hanger on a frame wall, the frame wall including a top plate and a plurality of studs extending down from the top plate,
45.a.3 <u>the fire wall hanger including a channel-shaped portion sized and shaped to receive a structural component, a connection portion configured for attachment to the frame wall and an extension portion interconnecting the channel-shaped portion and the connection portion and spacing the channel-shaped portion from the connection portion,</u>	[1.B] the fire wall hanger including a channel-shaped portion sized and shaped to receive a structural component, a connection portion configured for attachment to the frame wall and an extension portion interconnecting the channel-shaped portion and the connection portion and spacing the channel-shaped portion from the connection portion,
45.a.4 <u>said step of mounting the fire wall hanger includes securing the connection portion of the fire wall hanger to the top plate of the frame wall so that the channel-shaped portion is spaced from the frame wall;</u>	[1.C] said step of mounting the fire wall hanger includes securing the connection portion of the fire wall hanger to the top plate of the frame wall so that the channel-shaped portion is spaced from the frame wall;

Substitute Claims	Original Claims
45.b.1-3 <u>cutting an opening into an exterior perimeter edge of fire retardant sheathing, the opening extending through a front face of the fire retardant sheathing and through a rear face of the fire retardant sheathing and opening outwardly from the exterior perimeter edge of the fire retardant sheathing,</u>	[1.D] cutting an opening into an exterior edge of fire retardant sheathing, the opening extending through a front face of the fire retardant sheathing and through a rear face of the fire retardant sheathing and opening outwardly from the exterior edge of the fire retardant sheathing; and
45.b.4 <u>the exterior perimeter edge extending from the front face of the fire retardant sheathing to the rear face of the fire retardant sheathing; and</u>	
45.c.1 <u>after mounting the fire wall hanger on the frame wall and after cutting the opening into the exterior perimeter edge of the fire retardant sheathing, installing the fire retardant sheathing with respect to the frame wall so the rear face of the fire retardant sheathing faces rearward toward the studs of the frame wall and the front face of the fire retardant sheathing faces forward away from the studs of the frame wall, said step of installing the fire retardant sheathing includes:</u>	[1.E] after mounting the fire wall hanger on the frame wall and after cutting the opening into the exterior edge of the fire retardant sheathing, installing the fire retardant sheathing with respect to the frame wall so the rear face of the fire retardant sheathing faces toward the studs of the frame wall,
45.c.2 inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall; and	[1.F] said step of installing the fire retardant sheathing includes: inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall; and
45.c.3 moving the fire retardant sheathing relative to the fire wall hanger	[1.G] moving the fire retardant sheathing relative to the fire wall hanger mounted on the frame wall so that an

Substitute Claims	Original Claims
mounted on the frame wall so that an edge of the fire retardant sheathing bounding the opening moves alongside the extension portion and the fire wall hanger extends through the opening in the fire retardant sheathing;	edge of the fire retardant sheathing bounding the opening moves alongside the extension portion and the fire wall hanger extends through the opening in the fire retardant sheathing.
45.d.1 wherein the connection portion and the channel-shaped portion are rigidly fixed with respect to one another,	[25.A] wherein the connection portion and the channel-shaped portion are rigidly fixed with respect to one another,
45.d.2 wherein the connection portion includes a back flange and a top flange, the back flange extending from a front edge of the top flange, the top flange extending rearward from the front edge of the top flange, the back flange having a planar front surface,	[25.B] wherein the connection portion includes a back flange and a top flange, the back flange extending from an edge of the top flange, the back flange having a planar front surface,
45.d.3 wherein the extension portion includes first and second planar extension plates extending from the channel-shaped portion to the connection portion, the first and second planar extension plates being parallel to one another, and	[25.C] wherein the extension portion includes first and second planar extension plates extending from the channel-shaped portion to the connection portion, the first and second planar extension plates being parallel to one another
45.d.4 wherein the channel-shaped portion of the fire wall hanger includes a base configured to receive an end portion of the structural component thereon to support the structural component,	[25.D] wherein the channel-shaped portion of the fire wall hanger includes a base configured to receive an end portion of the structural component thereon to support the structural component,
45.d.5 the channel-shaped portion of the fire wall hanger including a side panel	[25.E] the channel-shaped portion of the fire wall hanger including a side panel extending upward from the base

Substitute Claims	Original Claims
extending upward from the base of the channel-shaped portion,	of the channel-shaped portion,
45.d.6 the side panel being spaced apart from the planar front surface of the back flange of the connection portion along an axis that is normal to the planar front surface of the back flange of the connection portion, the axis intersecting the side panel of the channel-shaped portion and the planar front surface of the back flange of the connection portion,	[25.F] the side panel being spaced apart from the planar front surface of the back flange of the connection portion along an axis that is normal to the planar front surface of the back flange of the connection portion, the axis intersecting the side panel of the channel-shaped portion and the planar front surface of the back flange of the connection portion; and
45.d.7 <u>each of the first and second planar extension plates including an inner face and an outer face, the inner faces of the first and second planar extension plates facing one another, the inner face of the first planar extension plate facing in a first direction toward the inner face of the second planar extension plate and the outer face of the first planar extension plate facing in a second direction that is opposite the first direction, the axis being spaced apart in the second direction from the inner face of the first planar extension plate; and</u>	[26.C] each of the first and second planar extension plates including an inner face and an outer face, the inner faces of the first and second planar extension plates facing one another, the inner face of the first planar extension plate facing in a first direction toward the inner face of the second planar extension plate and the outer face of the first planar extension plate facing in a second direction that is opposite the first direction, the inner face of the first planar extension plate lying in an inner face plane,
45.e wherein said step of mounting the fire wall hanger includes engaging a front face of the top plate with the back flange of the connection portion of the fire wall hanger and includes engaging an upper surface of the top plate with the top flange of the connection portion of the fire wall hanger.	[25.G] wherein said step of mounting the fire wall hanger includes engaging a front face of the top plate with the back flange of the connection portion of the fire wall hanger and includes engaging an upper surface of the top plate with the top flange of the connection portion of the fire wall hanger.

Substitute Claims	Original Claims
46.P <u>A method of constructing a fire-resistant wall assembly, the method comprising:</u>	[1.P] A method of constructing a fire-resistant wall assembly, the method comprising:
46.a.1-2 <u>mounting a fire wall hanger on a frame wall, the frame wall including a top plate and a plurality of studs extending down from the top plate, and</u>	[1.A] mounting a fire wall hanger on a frame wall, the frame wall including a top plate and a plurality of studs extending down from the top plate,
46.a.3 <u>the fire wall hanger including a channel-shaped portion sized and shaped to receive a structural component, a connection portion configured for attachment to the frame wall and an extension portion interconnecting the channel-shaped portion and the connection portion and spacing the channel-shaped portion from the connection portion,</u>	[1.B] the fire wall hanger including a channel-shaped portion sized and shaped to receive a structural component, a connection portion configured for attachment to the frame wall and an extension portion interconnecting the channel-shaped portion and the connection portion and spacing the channel-shaped portion from the connection portion,
46.a.4 <u>said step of mounting the fire wall hanger includes securing the connection portion of the fire wall hanger to the top plate of the frame wall so that the channel-shaped portion is spaced from the frame wall;</u>	[1.C] said step of mounting the fire wall hanger includes securing the connection portion of the fire wall hanger to the top plate of the frame wall so that the channel-shaped portion is spaced from the frame wall;
46.b.1-3 <u>cutting an opening into an exterior perimeter edge of fire retardant sheathing, the opening extending through a front face of the fire retardant sheathing and through a rear face of the fire retardant sheathing and opening outwardly from the exterior perimeter</u>	[1.D] cutting an opening into an exterior edge of fire retardant sheathing, the opening extending through a front face of the fire retardant sheathing and through a rear face of the fire retardant sheathing and opening outwardly from the exterior edge of the fire retardant sheathing; and

Substitute Claims	Original Claims
<u>edge of the fire retardant sheathing,</u>	
46.b.4 <u>the exterior perimeter edge extending from the front face of the fire retardant sheathing to the rear face of the fire retardant sheathing; and</u>	
46.c.1 <u>after mounting the fire wall hanger on the frame wall and after cutting the opening into the exterior perimeter edge of the fire retardant sheathing, installing the fire retardant sheathing with respect to the frame wall so the rear face of the fire retardant sheathing faces rearward toward the studs of the frame wall and the front face of the fire retardant sheathing faces forward away from the studs of the frame wall, said step of installing the fire retardant sheathing includes:</u>	[1.E] after mounting the fire wall hanger on the frame wall and after cutting the opening into the exterior edge of the fire retardant sheathing, installing the fire retardant sheathing with respect to the frame wall so the rear face of the fire retardant sheathing faces toward the studs of the frame wall,
46.c.2 <u>inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall; and</u>	[1.F] said step of installing the fire retardant sheathing includes: inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall; and
46.c.3 <u>moving the fire retardant sheathing relative to the fire wall hanger mounted on the frame wall so that an edge of the fire retardant sheathing bounding the opening moves alongside the extension portion and the fire wall hanger extends through the opening in the fire retardant sheathing;</u>	[1.G] moving the fire retardant sheathing relative to the fire wall hanger mounted on the frame wall so that an edge of the fire retardant sheathing bounding the opening moves alongside the extension portion and the fire wall hanger extends through the opening in the fire retardant sheathing.

Substitute Claims	Original Claims
46.d.1 wherein the connection portion and the channel-shaped portion are rigidly fixed with respect to one another,	[26.A] wherein the connection portion and the channel-shaped portion are rigidly fixed with respect to one another,
46.d.2 wherein the extension portion of the fire wall hanger includes first and second planar extension plates, the first and second planar extension plates being parallel to one another,	[26.B] wherein the extension portion of the fire wall hanger includes first and second planar extension plates, the first and second planar extension plates being parallel to one another,
46.d.3-4 each of the first and second planar extension plates including an inner face and an outer face, the inner faces of the first and second planar extension plates facing one another, the inner face of the first planar extension plate facing in a first direction toward the inner face of the second planar extension plate and the outer face of the first planar extension plate facing in a second direction that is opposite the first direction, the inner face of the first planar extension plate lying in an inner face plane, and	[26.C] each of the first and second planar extension plates including an inner face and an outer face, the inner faces of the first and second planar extension plates facing one another, the inner face of the first planar extension plate facing in a first direction toward the inner face of the second planar extension plate and the outer face of the first planar extension plate facing in a second direction that is opposite the first direction, the inner face of the first planar extension plate lying in an inner face plane,
46.d.5 wherein the connection portion includes a back flange and a top flange, the top flange extending from an edge of the back flange, the back flange extending from an edge of the first planar extension plate in the second direction, the back flange and the top flange being entirely disposed outward, in the second direction, of the inner face plane;	[26.D] wherein the connection portion includes a back flange and a top flange, the top flange extending from an edge of the back flange, the back flange extending from an edge of the first planar extension plate in the second direction, the back flange and the top flange being entirely disposed outward, in the second direction, of the inner face plane;

Substitute Claims	Original Claims
46.e wherein said step of mounting the fire wall hanger includes engaging a front face of the top plate with the back flange of the connection portion of the fire wall hanger and includes engaging an upper surface of the top plate with the top flange of the connection portion of the fire wall hanger; and	[26.E] wherein said step of mounting the fire wall hanger includes engaging a front face of the top plate with the back flange of the connection portion of the fire wall hanger and includes engaging an upper surface of the top plate with the top flange of the connection portion of the fire wall hanger; and
46.f wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing relative to the extension portion of the fire wall hanger so that only the first and second planar extension plates of the extension portion of the fire wall hanger extend through the opening in the fire retardant sheathing.	[26.F] wherein said step of moving the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing relative to the extension portion of the fire wall hanger so that only the first and second planar extension plates of the extension portion of the fire wall hanger extend through the opening in the fire retardant sheathing.
47.P A method of constructing a fire-resistive wall assembly, the method comprising:	[27.P] A method of constructing a fire-resistive wall assembly, the method comprising:
47.a.1-2 mounting a fire wall hanger on a frame wall, the frame wall including a top plate and a plurality of studs extending down from the top plate, and	[27.A] mounting a fire wall hanger on a frame wall, the frame wall including a top plate and a plurality of studs extending down from the top plate, and
47.a.3 the fire wall hanger including a channel-shaped portion sized and shaped to receive a structural component, a connection portion configured for attachment to the frame wall and an extension portion interconnecting the	[27.B] the fire wall hanger including a channel-shaped portion sized and shaped to receive a structural component, a connection portion configured for attachment to the frame wall and an extension portion interconnecting the channel-shaped portion and the

Substitute Claims	Original Claims
channel-shaped portion and the connection portion and spacing the channel-shaped portion from the connection portion,	connection portion and spacing the channel-shaped portion from the connection portion,
47.a.4 said step of mounting the fire wall hanger includes securing the connection portion of the fire wall hanger to the top plate of the frame wall so that the channel-shaped portion is spaced from the frame wall;	[27.C] said step of mounting the fire wall hanger includes securing the connection portion of the fire wall hanger to the top plate of the frame wall so that the channel-shaped portion is spaced from the frame wall;
47.b.1-3 cutting an opening into an <u>exterior perimeter</u> edge of fire retardant sheathing, the opening extending through a front face of the fire retardant sheathing and through a rear face of the fire retardant sheathing and having an open top opening outwardly from the <u>exterior perimeter</u> edge of the fire retardant sheathing,	[27.D] cutting an opening into an edge of fire retardant sheathing, the opening extending through a front face of the fire retardant sheathing and through a rear face of the fire retardant sheathing and having an open top opening outwardly from the edge of the fire retardant sheathing; and
47.b.4 <u>the exterior perimeter edge extending from the front face of the fire retardant sheathing to the rear face of the fire retardant sheathing;</u>	
47.c.1 after mounting the fire wall hanger on the frame wall and after cutting the opening into the <u>exterior perimeter</u> edge of the fire retardant sheathing, installing the fire retardant sheathing with respect to the frame wall so the rear face of the fire retardant sheathing faces <u>rearward</u> toward the studs of the frame wall <u>and the front face of the fire</u>	[27.E] after mounting the fire wall hanger on the frame wall and after cutting the opening into the edge of the fire retardant sheathing, installing the fire retardant sheathing with respect to the frame wall so the rear face of the fire retardant sheathing faces toward the studs of the frame wall,

Substitute Claims	Original Claims
<u>retardant sheathing faces forward away from the studs of the frame wall</u> , said step of installing the fire retardant sheathing includes:	
47.c.2 inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall; and	[27.F] said step of installing the fire retardant sheathing includes: inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall; and
47.c.3 arranging the fire retardant sheathing relative to the fire wall hanger so that the fire wall hanger extends through the opening in the fire retardant sheathing and <u>an extension flange</u> of the extension portion of the fire wall hanger is received in the opening in the fire retardant sheathing.	[27.G] arranging the fire retardant sheathing relative to the fire wall hanger so that the fire wall hanger extends through the opening in the fire retardant sheathing and part of the extension portion of the fire wall hanger is received in the opening in the fire retardant sheathing.
48.a.1 The method of claim <u>47</u> , wherein said step of mounting the fire wall hanger includes: <u>engaging a front face of the frame wall with a first back flange of the connection portion of the fire wall hanger</u> ; <u>engaging the front face of the frame wall with a second back flange of the connection portion of the fire wall hanger</u> ,	Claim 29: wherein said step of mounting the fire wall hanger includes: engaging a front face of the frame wall with a back flange of the connection portion of the fire wall hanger;
48.a.2 <u>the second back flange being spaced apart from the first back flange</u> ; and	
48.a.3 <u>engaging an upper surface of the</u>	Claim 29: engaging an upper surface of the top plate with a top flange of the connection portion of the fire wall

Substitute Claims	Original Claims
<u>top plate with a top flange of the connection portion of the fire wall hanger; and</u>	hanger
48.b wherein said step of arranging the fire retardant sheathing relative to the fire wall hanger includes moving the fire retardant sheathing <u>upward</u> relative to the fire wall hanger so that <u>an exposed bottom edge of the extension flange of the extension portion is a first part of the fire wall hanger to move into the opening in the fire retardant sheathing via the open top of the opening in the fire retardant sheathing, the bottom edge being free of direct attachment to any other component; and</u>	Claim 28: wherein said step of arranging the fire retardant sheathing relative to the fire wall hanger includes moving the fire retardant sheathing relative to the fire wall hanger so that said part of the extension portion moves into the opening in the fire retardant sheathing via the open top of the opening in the fire retardant sheathing.
48.c wherein the method further comprises: <u>filling the frame wall with mineral wool insulation; and</u>	
48.d <u>installing additional fire retardant sheathing with respect to the frame wall so that the frame wall is disposed between the fire retardant sheathing and the additional fire retardant sheathing; and</u>	
48.e <u>wherein the constructed fire-resistant wall assembly has a 2-hour fire resistance rating as determined per ASTM E814 and ASTM E119.</u>	
49.a The method of claim <u>48, wherein</u>	Claim 30: wherein said step of insert-

Substitute Claims	Original Claims
<u>said step of inserting the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall includes positioning the fire retardant sheathing against a first front face of the first back flange of the connection portion of the fire wall hanger and against a second front face of the second back flange of the connection portion of the fire wall hanger, and</u>	ing the fire retardant sheathing between the channel-shaped portion of the fire wall hanger and the frame wall includes positioning the fire retardant sheathing against a front face of the back flange of the connection portion of the fire wall hanger.
49.b <u>wherein said step of installing the fire retardant sheathing includes placing the rear face of the fire retardant sheathing against the front face of the frame wall.</u>	Claim 30: wherein said step of installing the fire retardant sheathing includes placing the rear face of the fire retardant sheathing against the front face of the frame wall.
50.a <u>The method of claim 49, wherein the fire wall hanger is formed as one-piece of sheet metal,</u>	
50.b <u>wherein the channel-shaped portion includes a base arranged to receive an end portion of the structural component thereon to support the structural component, the base having an upper surface arranged to contact the structural component, the upper surface lying in a base plane,</u>	[25.D] wherein the channel-shaped portion of the fire wall hanger includes a base configured to receive an end portion of the structural component thereon to support the structural component,
50.c <u>the extension flange being directly connected to the channel-shaped portion by a generally 90-degree sheet metal bend formed by the extension flange and the channel-shaped portion,</u>	

Substitute Claims	Original Claims
50.d <u>the generally 90-degree sheet metal bend having an upper-most end and a lower-most end, the generally 90-degree sheet metal bend extending from the upper-most end to the lower-most end in a first direction, the first direction being perpendicular to the base plane,</u>	
50.e <u>the upper-most end of generally 90-degree sheet metal bend being at a top of the channel-shaped portion.</u>	
51.a The method of claim 50, <u>wherein the extension flange is a first extension flange,</u> wherein said step of arranging the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing so that the first extension flange of the extension portion of the fire wall hanger extends through the opening in the fire retardant sheathing and a second extension flange of the extension portion of the fire wall hanger extends through the fire retardant sheathing,	Claim 31: wherein said step of arranging the fire retardant sheathing relative to the fire wall hanger includes positioning the fire retardant sheathing so that a first extension flange of the extension portion of the fire wall hanger extends through the opening in the fire retardant sheathing and a second extension flange of the extension portion of the fire wall hanger extends through the fire retardant sheathing.
51.b <u>wherein the first and second extension flanges are each free of any openings.</u>	