UNITED STATES PATENT AND TRADEMARK OFFICE

_____

BEFORE THE PATENT TRIAL AND APPEAL BOARD

_____

DUKE MANUFACTURING CO.
Petitioner

v.

MARMON FOODSERVICE TECHNOLOGIES, INC.
Patent Owner

_____

Case: IPR2026-00481
Patent No. 9,980,322

PETITION FOR INTER PARTES REVIEW
OF U.S. PATENT NO. 9,980,322

TABLE OF CONTENTS

I. INTRODUCTION 1

II. IDENTIFICATION OF CHALLENGE 2

A. Identification of Prior Art 2

B. Statutory Grounds for Challenge 6

C. Level of Ordinary Skill 7

III. CLAIM CONSTRUCTION 7

IV. GROUND 1: Claims 1-5 and 7-10 Would Have Been Obvious Over the IRHS Documents 7

A. Combination of the IRHS Documents 7

B. Independent Claim 1 15

1.P 15
1.a 17
1.b.1 18
1.b.2 19
1.c.1 21
1.c.2 22
1.c.3 25
1.d.1/1.e.1 27
1.d.2/1.e.2 28
1.f 39
1.g.1 39
1.g.2 40
1.h.1 48
1.h.2 51

C. Claim 2 54

2.a.1 54
2.a.2 54
2.b.1 56
2.b.2 58
2.b.3 61
2.c 62

D. Claim 3 64

E. Claim 4 70
F. Claim 5 71
G. Claim 7 76
H. Claim 8 78
I. Independent Claim 9 81
9.P 81
9.a.1 83
9.a.2 83
9.a.3 85
9.a.4 87
9.a.5 87
9.a.6 87
9.b/9.c 88
9.d 92
J. Claim 10 92
V. GROUND 2: Claim 6 Would Have Been Obvious Over the IRHS Documents in view of Hartfelder and/or Shei'099 94
A. Modification of the IRHS Documents based on Hartfelder and/or Shei'099 94
B. Claim 6: 100
6.a.1 100
6.a.2 103
6.a.3 107
VI. GROUND 3: Claim 8 Would Have Been Obvious Over the IRHS Documents in view of Veltrop and Poole (If Necessary) 110
VII. GROUND 4: Claims 4 and 10 Would Have Been Obvious Over the IRHS Documents in view of Prince Castle and/or Reese (If Necessary) 114
VIII. GROUND 5: Claims 1-10 Would Have Been Obvious Over the IRHS Documents in view of Hartfelder, Shei'099, Veltrop, Poole, Shei'155, Prince Castle, and Reese (If Necessary) 117

IX. GROUND 6: Claims 1-10 Would Have Been Obvious Over the IRHS Documents in view of Hartfelder, Shei'099, Veltrop, Poole, Shei'155, Prince Castle, Reese, and McMillan (If Necessary) 122

X. GROUND 7: Claims 1-3 and 5-9 Would Have Been Obvious Over Fortmann'748 in view of the IRHS Documents, Jones, Fortmann'197, McMillan, Hartfelder, Shei'099, Veltrop, and/or Shei'155 126

A. Modifications of Fortmann'748 126

1. 2x4 Configuration 126
2. Multiple Temperature Zones per Compartment 132
3. Independently Controllable Top and Bottom Heaters per Zone 142
4. Discrete Lids for Each Bay 145
5. Latches 155
6. Aluminum 161
7. Electrically-Resistive Heating Wire 164

B. Independent Claim 1 166

1.P 166
1.a 168
1.b.1 171
1.b.2 172
1.c.1 174
1.c.2 176
1.c.3 178
1.d.1/1.e.1 179
1.d.2/1.e.2 181
1.f 183
1.g.1 184
1.g.2 186
1.h.1 191
1.h.2 192

C. Claim 2 192

2.a.1 192
2.a.2 194
2.b.1 196
2.b.2 199
2.b.3 200

2.c 202
D. Claim 3 203
E. Claim 5 205
F. Claim 6: 209
6.a.1 209
6.a.2 212
6.a.3 216
G. Claim 7 219
H. Claim 8 226
I. Independent Claim 9 228
9.P 228
9.a.1 230
9.a.2 231
9.a.3 233
9.a.4 234
9.a.5 234
9.a.6 234
9.b/9.c 235
9.d 240
XI. GROUND 8: Claims 4 and 10 Would Have Been Obvious Over Fortmann'748 in view of the IRHS Documents, Jones, Fortmann'197, McMillan, Hartfelder, Shei'099, Veltrop, Shei'155, and Prince Castle 241
XII. MANDATORY NOTICES UNDER 37 C.F.R. §42.8 244
A. Real Parties-In-Interest under 37 C.F.R. §42.8(b)(1) 244
B. Related Matters under 37 C.F.R. §42.8(b)(2) 244
C. Designation of Lead and Back-Up Counsel under 37 C.F.R. §42.8(b)(3) 245
D. Service Information (37 C.F.R. §42.8(b)(4)): 246
E. Payment Information Under 37 C.F.R. §§42.15(a) and 42.103(a) 246
XIII. GROUNDS FOR STANDING 246
XIV. CONCLUSION 246

TABLE OF AUTHORITIES

Cases **Page(s)**

GoPro, Inc. v. Contour IP Holding LLC,
908 F.3d 690 (Fed. Cir. 2018) 3

Haliburton Energy Servs., Inc. v. Dynamic 3D Geosolutions LLC,
IPR2014-01186, Paper 13 (P.T.A.B. Jan. 12, 2015) 14

In re Harza,
274 F.2d 669 (C.C.P.A. 1960) 140, 151

Penumbra, Inc. v. Rapidpulse Inc.,
IPR2021-01466, Paper 34 (P.T.A.B. Mar. 10, 2023) 5

Roku v. Universal Electronics,
No. 2024-1188, 2025 WL 1692663 (Fed. Cir. 2025) 3

Uber Techs., Inc. v. X One, Inc.,
957 F.3d 1334 (Fed. Cir. 2020) 129, 242

Weber, Inc. v. Provisur Technologies, Inc.,
92 F.4th 1059 (Fed. Cir. 2024) 3

Other Authorities

37 C.F.R. §42.8 244-246

37 C.F.R. §42.10 245

37 C.F.R. §42.15 246

37 C.F.R. §42.103 246

EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent No. 9,980,322 ("the '322 Patent")
1002	Prosecution History of the '322 Patent
1003	Declaration of Glenn Vallee
1004	*Curriculum Vitae* of Glenn Vallee
1005	Infrared Heatsink Holding Unit Operators Manual ("IRHS Manual")
1006	Infra Red Heat Sink Specifications ("IRHS Specifications")
1007	bk.dukemfg.com ("Duke Website")
1008	Infrared Heatsink Holding Unit Service Manual ("IRHS Service Manual")
1009	Prince Castle Holding Bins ("Prince Castle")
1010	U.S. Patent Publication No. 2010/0288748 ("Fortmann'748")
1011	U.S. Patent Publication No. 2016/0073821 ("Shei'821")
1012	U.S. Patent Publication No. 2007/0108178 ("Jones")
1013	U.S. Patent Publication No. 2009/0126580 ("Hartfelder")
1014	U.S. Patent No. 10,258,197 ("Fortmann'197")
1015	U.S. Patent Publication No. 2008/0302778
1016	U.S. Patent Publication No. 2004/0069155 ("Shei'155")
1017	U.S. Patent No. 6,175,099 ("Shei'099")
1018	U.S. Patent No. 5,852,967 ("Fortmann'967")

Exhibit No.	Description
1019	U.S. Patent No. 6,658,994 (“McMillan”)
1020	U.S. Patent Publication No. 2011/0114618
1021	U.S. Patent Publication No. 2011/0114624
1022	U.S. Patent Publication No. 2011/0252813 (“Veltrop”)
1023	U.S. Provisional Patent Application No. 62/193,992 (“the ’992 Provisional”)
1024	U.S. Patent No. 6,119,587
1025	U.S. Patent No. 3,461,275 (“Poole”)
1026	U.S. Patent No. 7,258,064 (“Vaseloff”)
1027	U.S. Patent Publication No. 2014/0130684 (“Reese”)
1028	Merco Holding Cabinets
1029	U.S. Patent No. 6,011,243
1030	Declaration of Kathryn Veder
1031	E-mail Collection (Trade Show Related)
1032	E-mail Collection (IRHS Manual Related)
1033	E-mail Collection (IRHS Specifications Related)
1034	E-mail Collection (IRHS Service Manual Related)
1035	Flame Magazine
1036	Declaration of Natasha Zerbey
1037	Declaration of Arthur Lemley

Exhibit No.	Description
1038	Declaration of Sheldon Coach
1039	IRHS Sales Spreadsheet
1040	Proposed Protective Order - Clean
1041	Proposed Protective Order - Marked-Up

Emphasis added throughout unless indicated otherwise.

I. INTRODUCTION

U.S. Patent No. 9,980,322 (the '322 Patent) pertains to multi-zone food-holding bins (10) for keeping food warm in fast-food restaurants. EX1001: Abstract, 1:55-56; EX1003: ¶¶31-32.

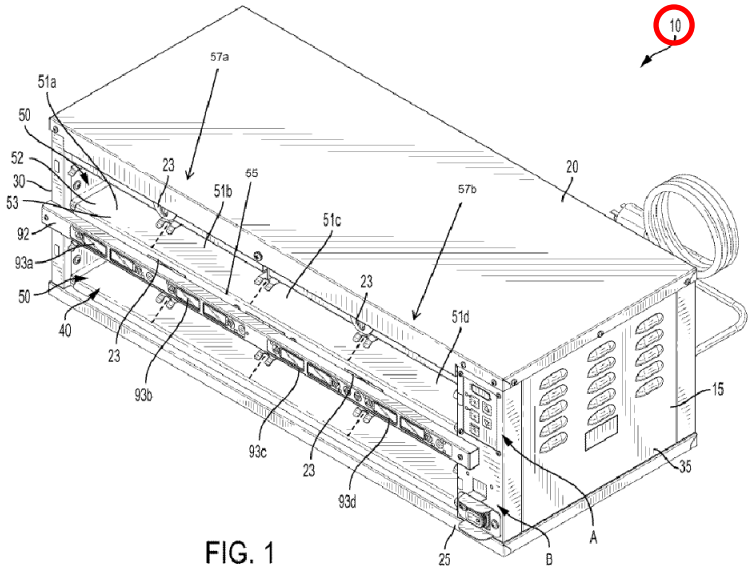


FIG. 1

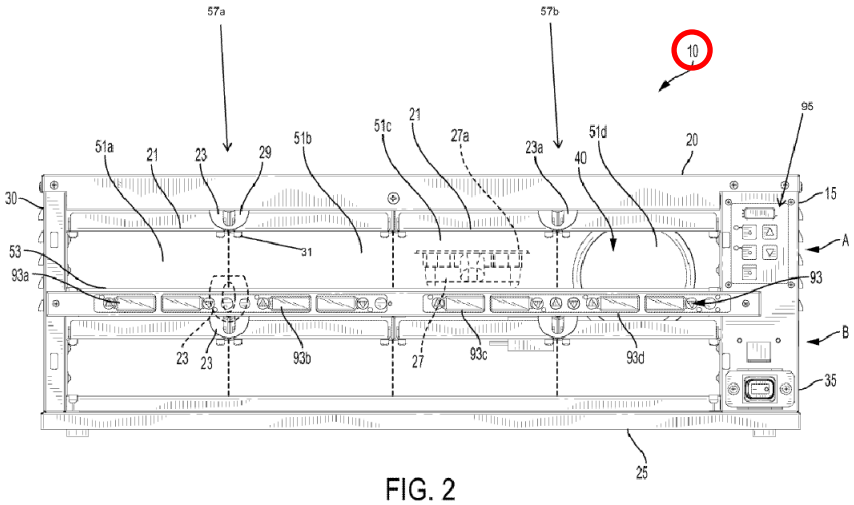


FIG. 2

EX1001: Figs. 1, 2.

Notably, the limitations in the '322 Patent's claims mix and match independent features well known in the art (e.g., food holding compartments,

heating element arrangement, lids, lid shelves, lid latches, and independent temperature control) according to their established functions to yield predictable results. EX1003: ¶¶33-35.

Duke Manufacturing Co. ("Petitioner" or "Duke") respectfully requests *inter partes* review of claims 1-10 of the '322 Patent. Two sets of grounds are presented. The first set is based on related non-patent literature. The second set demonstrates the '322 Patent cobbles together well-known features, like adding common options (heated seats, etc.) to a base automobile.

II. IDENTIFICATION OF CHALLENGE

A. Identification of Prior Art

The '322 Patent's priority date is April 19, 2016.

The following references are prior art under §102(a)(1):

- Fortmann'748
- Jones
- Hartfelder
- Veltrop
- Shei'155
- Poole
- McMillan
- Shei'099
- Reese
- IRHS Manual
- IRHS Specifications

- Duke Website
- IRHS Service Manual
- Prince Castle

The IRHS Manual, IRHS Specifications, Duke Website, and IRHS Service Manual (collectively "IRHS Documents", each an "IRHS Document") are printed publications as publicly accessible to the interested public prior to April 19, 2016. *GoPro, Inc. v. Contour IP Holding LLC*, 908 F.3d 690 (Fed. Cir. 2018) (focusing on interested (not general) public). IRHS products were marketed and commercially successful, which drove attention to associated printed publications. EX1030: ¶¶19-36; EX1031. IRHS Manual was publicly disseminated (shipped with 360+ units to customers from February 18, 2014 to September 3, 2014). EX1030: ¶¶33, 37-39; EX1032; EX1036; EX1037; EX1038; EX1039; *Weber, Inc. v. Provisur Technologies, Inc.*, 92 F.4th 1059 (Fed. Cir. 2024) (finding operating manuals publicly accessible). IRHS Specifications was publicly disseminated (available for trade shows, emailed to 20+ organizations (customers, manufacturer's representatives)). EX1030: ¶¶44-44; EX1033. Duke Website was publicly accessible and advertised (industry publications, tradeshow). EX1030: ¶¶27-29; EX1007: 1-2; EX1035: 5; EX1003: ¶64; *Roku v. Universal Electronics*, No. 2024-1188, 2025 WL 1692663 (Fed. Cir. 2025). IRHS Service Manual was available from Duke and was emailed to 6+ organizations (service providers, Whataburger, Burger King franchisee). EX1030: ¶¶34, 45-48; EX1034.



For the past 12 years, Duke has a proven record in approximately 80% of all BURGER KING® restaurants worldwide. Now we introduce our best effort yet – our new **InfraRed HeatSink™** holding unit, designed to provide you with hot quality food **all day long.** The IRHS gives restaurant owners the flexibility to hold prepared food items at the ideal flavor, texture, and temperature, ready and waiting to serve customers quickly. Experience the Duke difference...

DUKE INFRARED HEATSINK™ (IRHS):

Duke heavyweight construction, **built to last**
Dual heat technology: Top - **sealed solid state InfraRed**; Bottom - **HeatSink™**
No hot air and **no moving parts, no fans**
Fully sealed, **easily cleaned** top compartments
Unlimited IR settings for **complete product recipe flexibility**
Fully independent pans for flexible product location
Smooth corners **easy to clean**
Robust Duke timer bar **for long life**; full **Kitchen Minder® compatibility available**
Thick, durable HeatSink™ **aluminum pan cover** for broiled products
Power management & idle mode for **energy conservation**

EX1035: 5.

Prince Castle is a printed publication as a publicly accessible website maintained by Patent Owner prior to April 19, 2016. EX1030: ¶¶15-17; EX1009: 1-2; EX1003: ¶107.

Fortmann'197 is prior art under §102(a)(2) as effectively filed as of filing of the '992 Provisional, before the '322 Patent. The "ministerial requirements" of §120 were met and the provisional "'describe[d] the subject matter' relied upon." *Penumbra, Inc. v. Rapidpulse Inc.*, IPR2021-01466, Paper 34 at 32 (P.T.A.B. Mar. 10, 2023) (precedential). Fortmann'197 meets the "ministerial requirements" by claiming benefit of (EX1014: 1:6-8), being co-pending with (EX1014: (22)), and sharing common inventors with the '992 Provisional (EX1014: (72); EX1023: 1). The '992 Provisional describes the subject matter in Fortmann'197 forming this Petition's grounds because Fortmann'197's and the '992 Provisional's specifications and figures are essentially identical (compare EX1014: 1:13-10:9 with EX1023: ¶¶[0001]-[0055], and compare EX1014: Figs. 1-10 with EX1023: Figs. 1-10); EX1003: ¶¶715-719.

The prior art references in this petition each pertain to food holding and heating and are in the same field of endeavor with each other and with the '322 Patent. EX1001: 1:61-2:15; EX1005: 1; EX1006: 1; EX1007: 8, 21-22, 26; EX1008: 1; EX1009: 7, 19, 36; EX1010: ¶[0002]; EX1011: ¶[0002]; EX1012: ¶[0003]; EX1013: ¶[0002]; EX1014: 1:13-21; EX1016: ¶[0002]; EX1017: 1:13-15;

EX1019: 1:9-14; EX1022: ¶[0010]; EX1025: 1:25-26; EX1027: ¶[0001]; EX1003: ¶¶45-112.

B. Statutory Grounds for Challenge

The basis for all grounds is §103.

Ground	References	Claims Challenged
1	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual	1-5, 7-10
2	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Hartfelder, Shei'099	6
3	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Veltrop, Poole	8
4	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Prince Castle, Reese	4, 10
5	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Hartfelder, Shei'099, Veltrop, Poole, Shei'155, Prince Castle, Reese	1-10
6	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Hartfelder, Shei'099, Veltrop, Poole, Shei'155, Prince Castle, Reese, McMillan	1-10
7	Fortmann'748, IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Jones, Fortmann'197, McMillan, Hartfelder, Shei'099, Veltrop, Shei'155	1-3, 5-9
8	Fortmann'748, IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Jones, Fortmann'197, McMillan, Hartfelder, Shei'099, Veltrop, Shei'155, Prince Castle	4, 10

C. Level of Ordinary Skill

The person having ordinary skill in the art ("POSA") would have an engineering degree and/or 4 years' experience in design and/or manufacture of food service equipment. POSA would be familiar with existing food service equipment in 2016—including food holding cabinets—and would know how to modify food service equipment based on various design criteria. EX1003: ¶¶1-30.

III. CLAIM CONSTRUCTION

Plain and ordinary meaning is applied.

IV. GROUND 1: Claims 1-5 and 7-10 Would Have Been Obvious Over the IRHS Documents

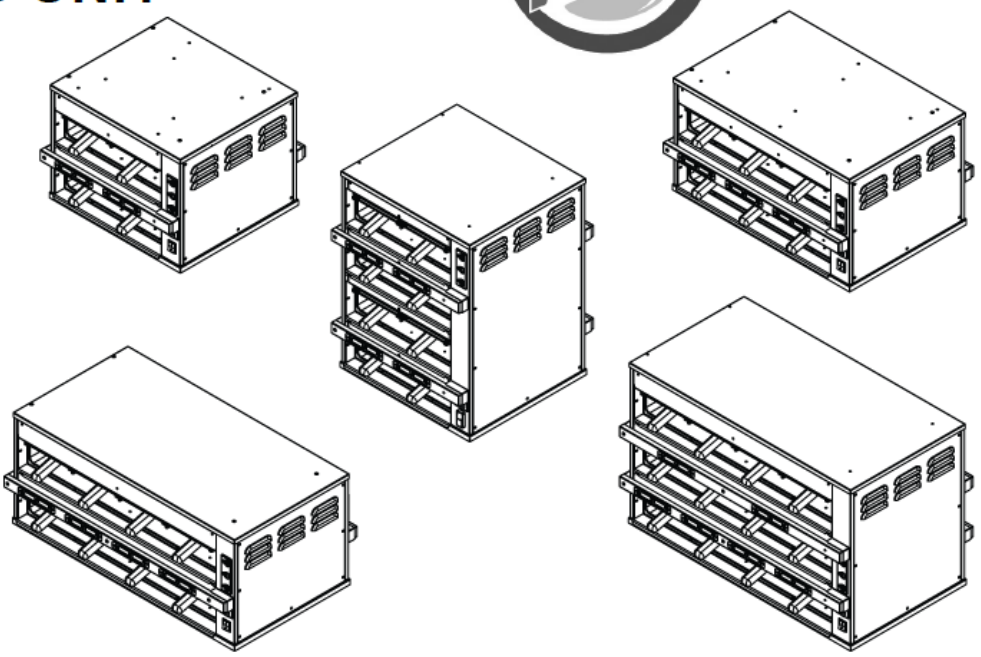
A. Combination of the IRHS Documents

The IRHS Documents describe the same Duke products: Infrared Heatsink Holding Units ("IRHS"). EX1003: ¶¶113-114.

Your Solutions Partner

OPERATORS MANUAL

INFRARED HEATSINK ™ HOLDING UNIT



MODELS

IRHS22
IRHS23
IRHS24
IRHS34
IRHS42

IMPORTANT INFORMATION, READ BEFORE USE.
PLEASE SAVE THESE INSTRUCTIONS.

This manual is Copyright © 2014 Duke Manufacturing Company. All rights reserved. Reproduction without written permission is prohibited. Duke is a registered trademark of the Duke Manufacturing Company.

Duke Manufacturing Company

2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 1-800-735-3853
Fax: 314-231-5074
www.dukemfg.com

P/N 229945D
02/18/14

EX1005: 1 (annotated).

Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

AGENCY LISTING:

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

800.735.3853 Toll Free
314.231.5074 Fax
www.dukemfg.com

Approval Stamp(s):

PRODUCT INFORMATION:

PROJECT: _____
ITEM: _____
QUANTITY: _____

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
- Zoned bottom heat to provide additional holding environment customization
- IR Turbo Boost for instant shot of IR energy

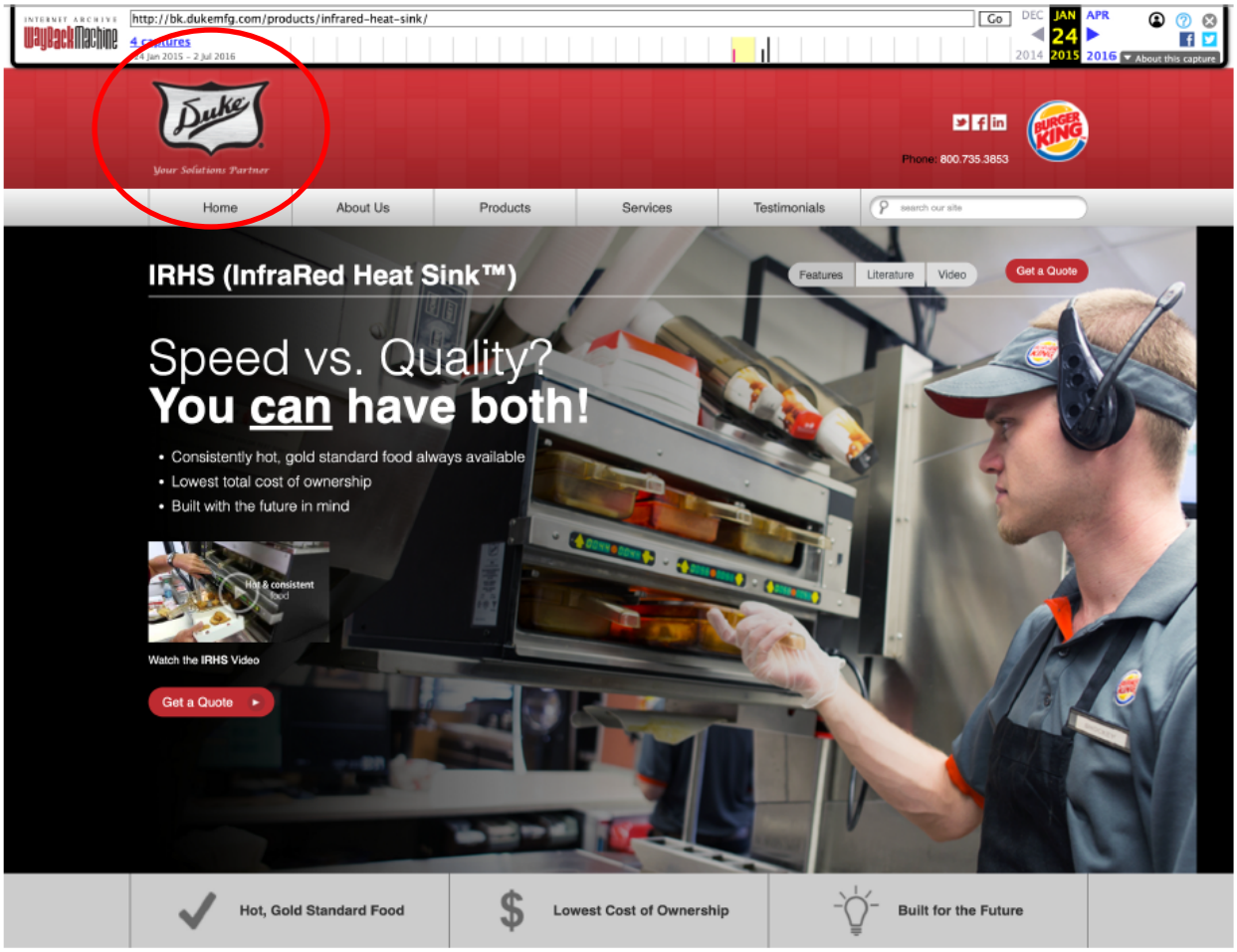
CONTROLS

- Automatic pan linking to ensure FIFO
- Custom heat settings for food product
- Each compartment individually controlled
- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

SHORT FORM SPECIFICATIONS:

Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

EX1006: 1 (annotated).



EX1007: 8 (annotated).

IRHS InfaRed HeatSink® Product Holding Units

- Consistently hot, gold standard food is always available
- Lowest cost of ownership solution
- Built with the future in mind



1. Metal HeatSink cover to eliminate plastic lids. Cover only required for broiled foods.
2. No more plastic faceplates! Stainless steel faceplate protects internal components.
3. Rolled edges and completley sealed construction prevent grease seepage to internal components.
4. Ensure quick and accurate fixes with more advanced diagnostics and a more robust Duke timer bar.

By combining the technologies of InfraRed and HeatSink, we are able to hold food with superior flavor and temperature consistency. Previous generations of the Duke holding units contained only HeatSink, heating from below and wrapping around the sides of each pan. By adding the top-down InfraRed heat, we have been able to deliver a consistently hot pan of product, from top to bottom. This also allows unlimited menu flexibility as each food product has tailored settings to control the thermal path of the food, leading to optimal quality, consistency and extended hold.

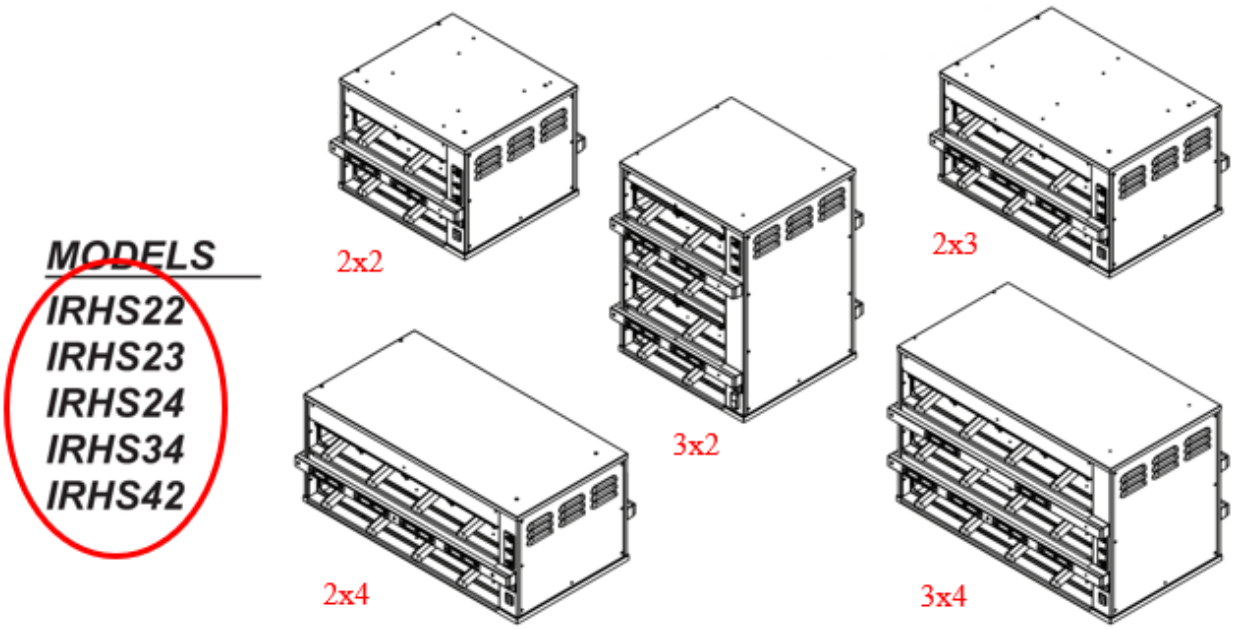
EX1007: 51 (annotated).



EX1008: 1 (annotated).

The IRHS Documents use the same model numbers (e.g., IRHS24).

EX1005: 1, 6-10; EX1006: 1-2; EX1007: 54-57; EX1008: 1, 5-9; EX1003: ¶¶115-116.



EX1005: 1 (annotated).

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across
IRHS-42	4 down, 2 across

EX1006: 1 (annotated).

Part #'s	Controls	Stand-Alone/ Master/Satellite	Electrical Requirements			
			Voltage	Hz	Amps	NEMA
IRHS24-**XXX**4T1	Single	Stand-Alone	208 / 230 / 240	50/60	12	6-15P (208V/240V)
IRHS24-**XXX**4T2R	Double	Stand-Alone	208 / 230 / 240	50/60	12	6-15P (208V/240V)
IRHS24-**XXX**4T1S	Single	Satellite	208 / 230 / 240	50/60	12	6-15P (208V/240V)
IRHS24-**XXX**4T1M	Single	Master	208 / 230 / 240	50/60	12	6-15P (208V/240V)
IRHS24-**XXX**4T2S	Double	Satellite	208 / 230 / 240	50/60	12	6-15P (208V/240V)
IRHS24-**XXX**4T2M	Double	Master	208 / 230 / 240	50/60	12	6-15P (208V/240V)

Notes
1. Replace "XXX" in the part # with the respective power supply
2. 230V Unit Electrical Requirements: IEC 60309 PIN & SLEEVE PLUG, 16 AMP

WARRANTY:
3 year parts and 1 year labor for timer bar IRHS
3 year parts and 2 year labor for VISOEnabled IRHS – no timer bar unit

EX1007: 56 (annotated).

POSA understands the IRHS Documents describe the same Duke IRHS products. EX1005: 6-10; EX1006: 1-2; EX1007: 55-57; EX1008: 1, 5-9; EX1003: ¶118. Duke produced all the IRHS Documents, which include Duke trademarks. EX1005: 1; EX1006: 1; EX1007: 26, 54, 57; EX1008: 1; EX1003: ¶117. The IRHS Documents describe the same IRHS product lines, using similar images, specifications, and descriptions (model numbers, name ("InfraRed HeatSink"), etc.). EX1005: 6-10; EX1006: 1-2; EX1007: 55-57; EX1008: 5-9; EX1003: ¶¶118-119.

It would have been obvious to combine the IRHS Documents' teachings because they describe the same IRHS products. EX1003: ¶120; *Haliburton Energy Servs., Inc. v. Dynamic 3D Geosolutions LLC*, IPR2014-01186, Paper 13 at 19-20 (P.T.A.B. Jan. 12, 2015). POSA would combine the IRHS Documents' teachings to form IRHS products having all features described by the IRHS Documents, meeting customer demands, increasing diverse food holding capacity, and providing customized/improved holding environments. EX1007: 17; EX1019: 1:35-49; EX1003: ¶120.

POSA would view the IRHS Documents together as describing Duke's IRHS features. EX1003: ¶121. POSA would apply or supplement IRHS features taught by one IRHS Document into IRHS products taught by other IRHS

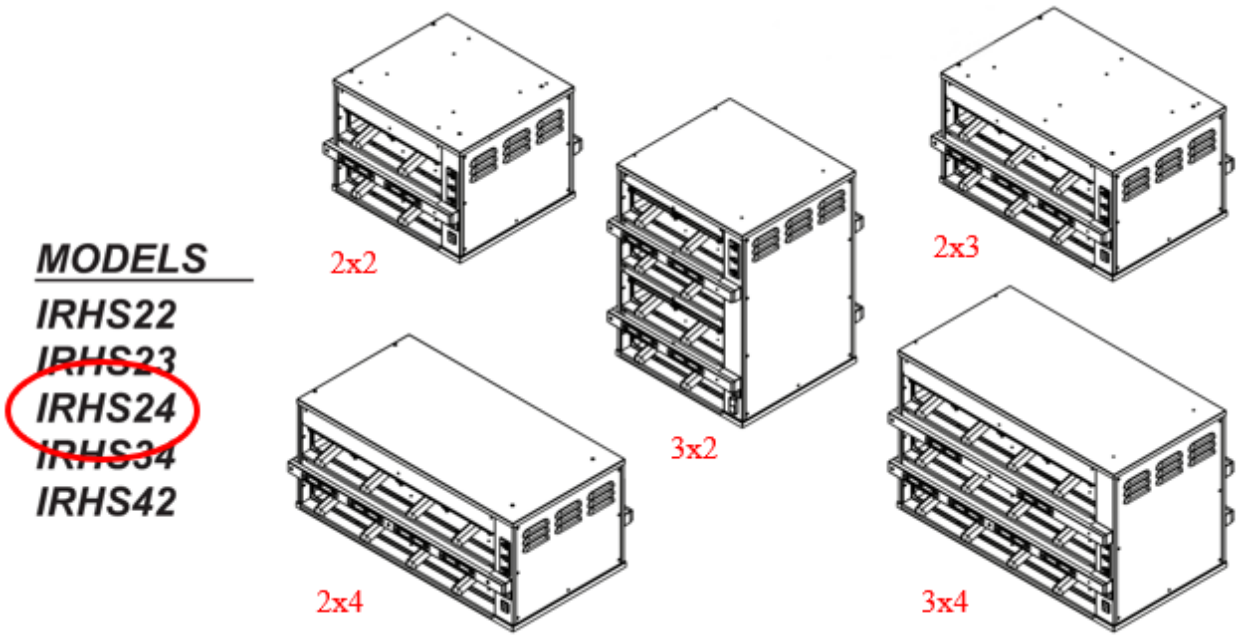
Documents. EX1003: ¶121. If a feature was not clearly described in one IRHS Document, POSA would look to other IRHS Documents. EX1003: ¶121.

There is a reasonable expectation of success because the IRHS Documents describe the same/related products. EX1003: ¶122.

B. Independent Claim 1

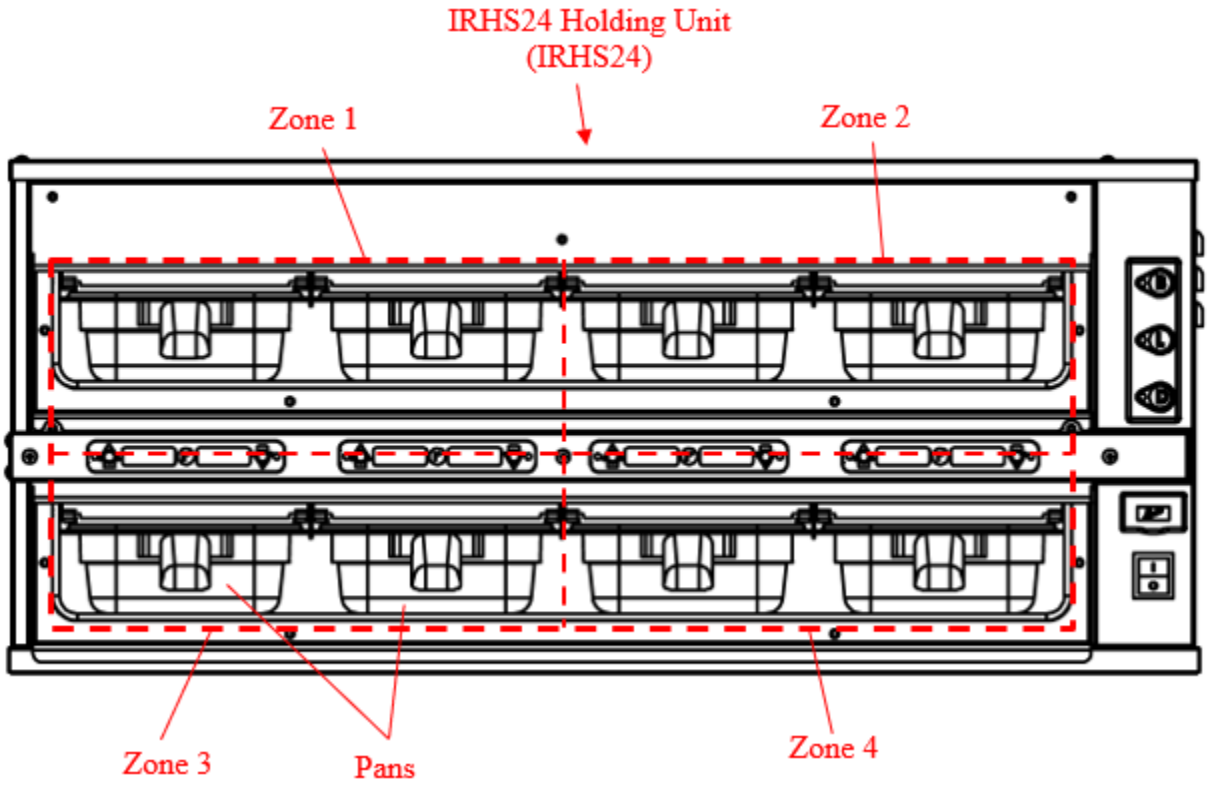
1.P

The IRHS Documents disclose a 2x4 IRHS (the "IRHS24")[1] having multiple zones for heating food pans. EX1005: 4, 8; EX1006: 1; EX1007: 51, 56; EX1008: 1; Section IV(B)(1.d.1/1.e.1); EX1003: ¶¶123-124.



EX1005: 1 (annotated).

[1] "IRHS24" refers to IRHS Documents' disclosure not a commercial product.



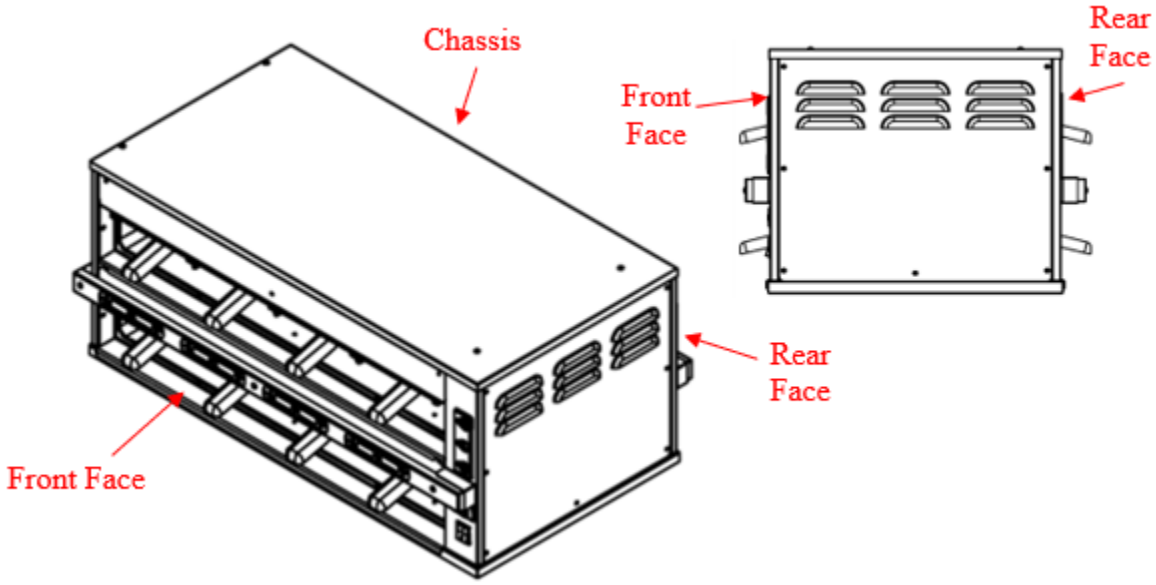
EX1005: 8 (annotated).



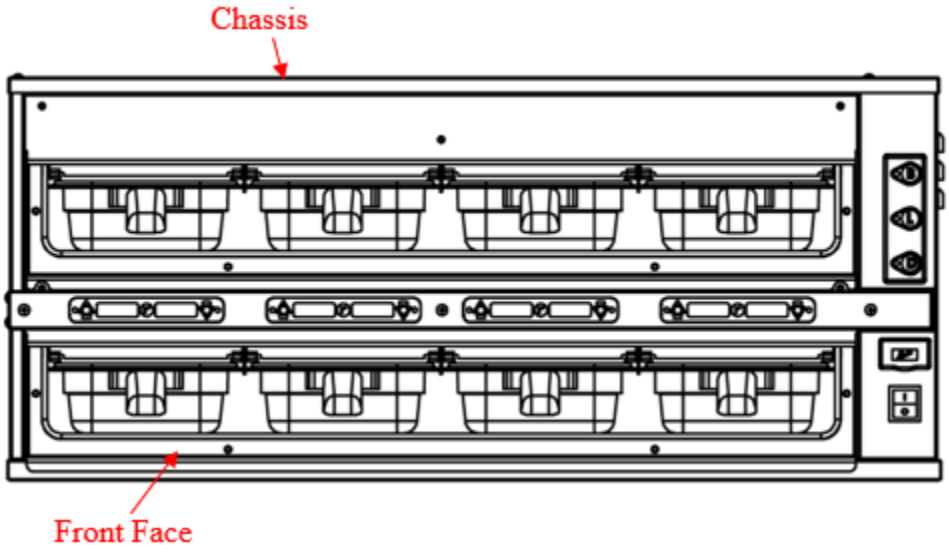
EX1007: 56.

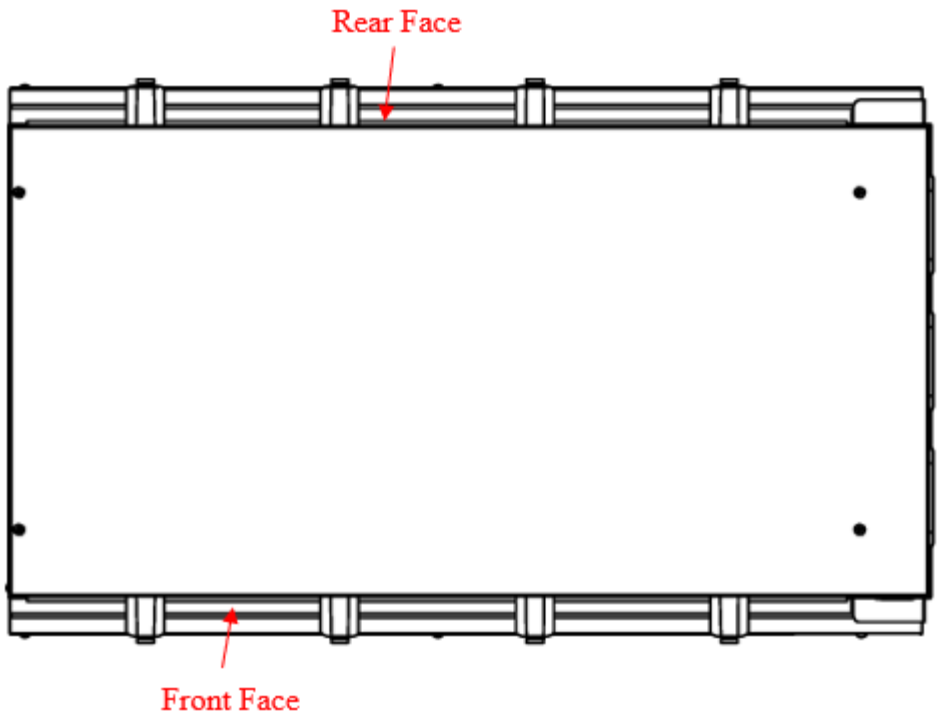
1.a

A chassis has opposite front and rear faces. EX1006: 1; EX1007: 51; EX1003: ¶¶125-126.



EX1005: 8 (annotated).

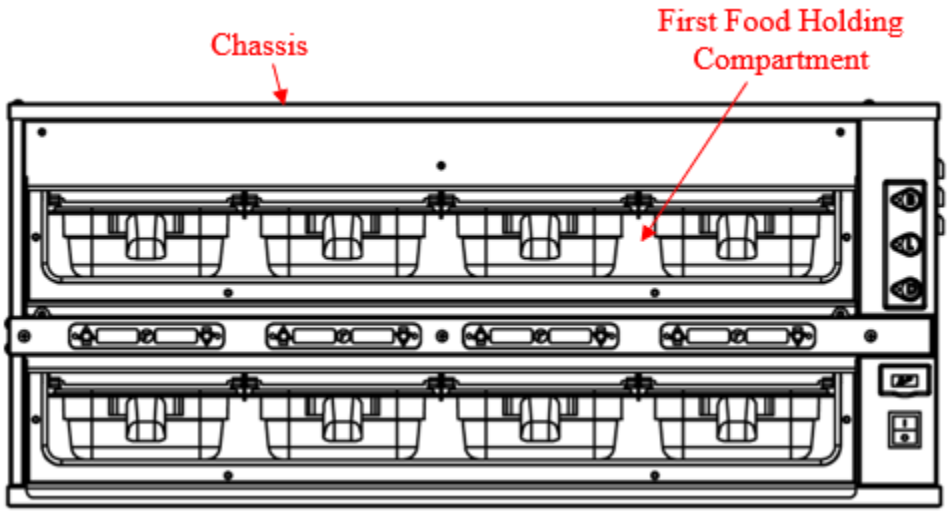




EX1005: 8 (annotated).

1.b.1

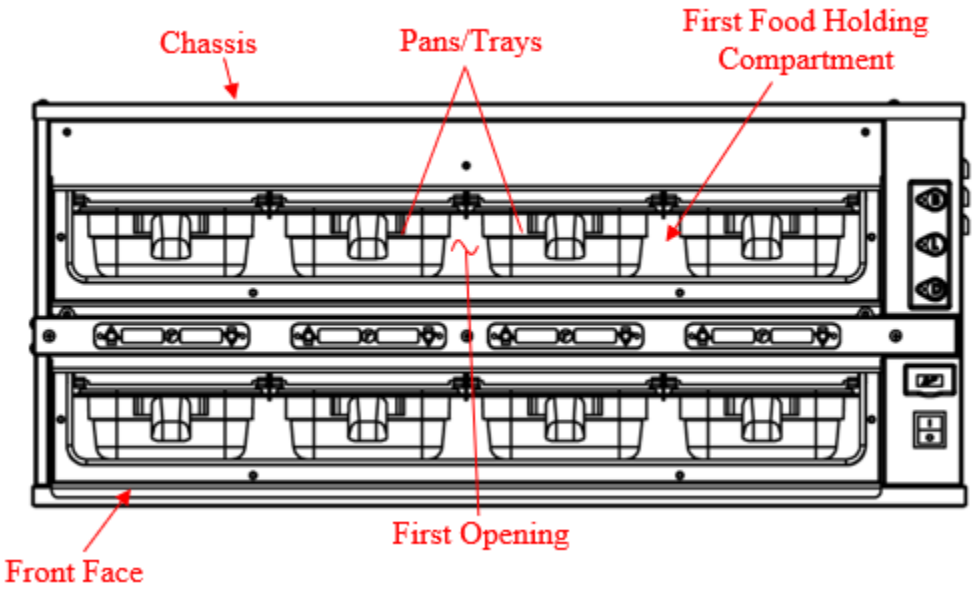
A first food holding compartment is within the chassis. EX1003: ¶¶127-128.



EX1005: 8 (annotated).

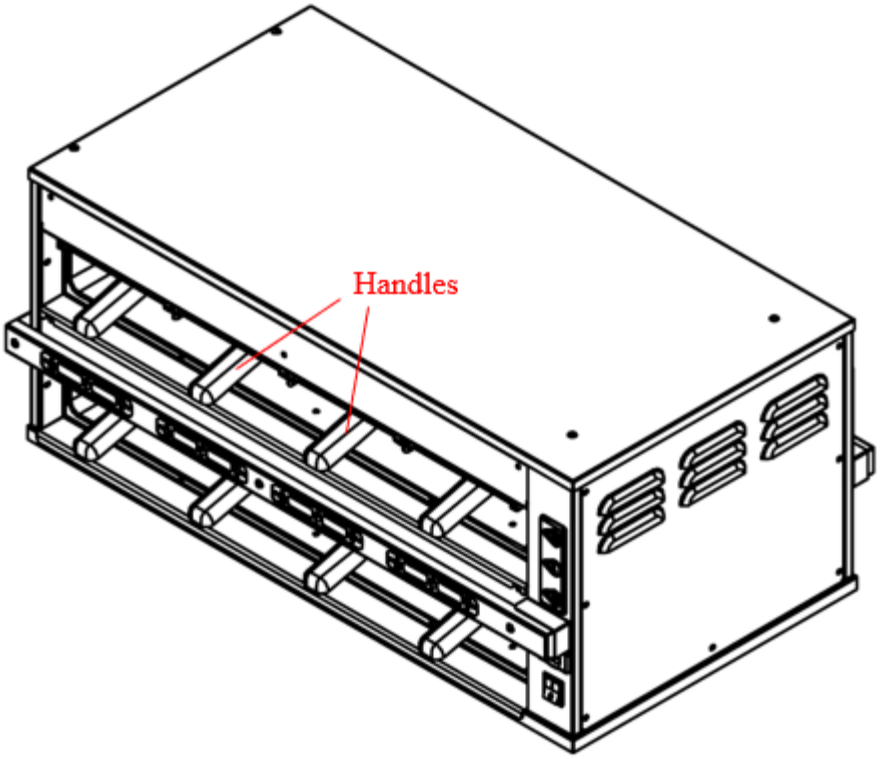
1.b.2

The first compartment has a first opening that is open, uncovered, and located at the front face of the chassis. EX1003: ¶¶129-131. The first opening allows the food pans to be placed into and removed from the first compartment. EX1003: ¶131.



EX1005: 8 (annotated).

Pan handles protrude from the first opening for pan insertion and removal therethrough. EX1007: 52; EX1003: ¶132.



EX1005: 8 (annotated).



EX1007: 58 (annotated).

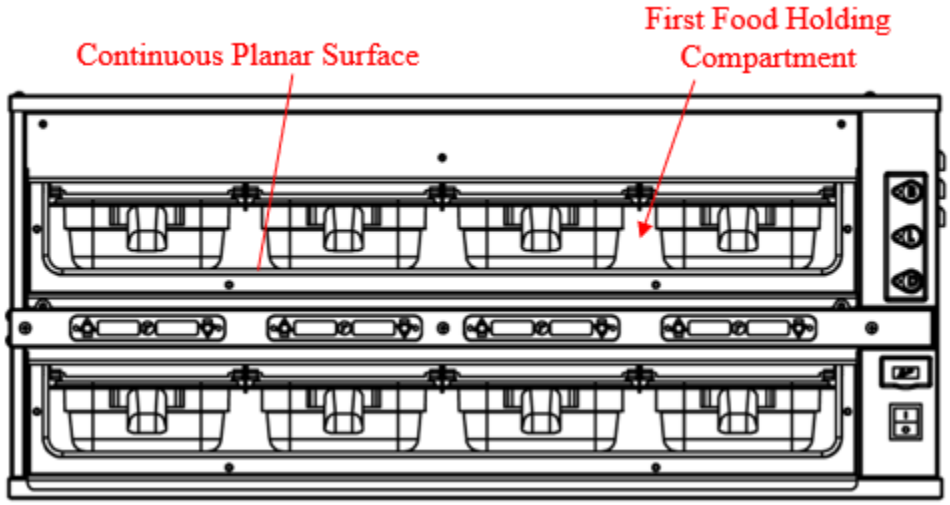


EX1007: 52.

1.c.1

A continuous and planar surface forms the bottom of the first compartment.

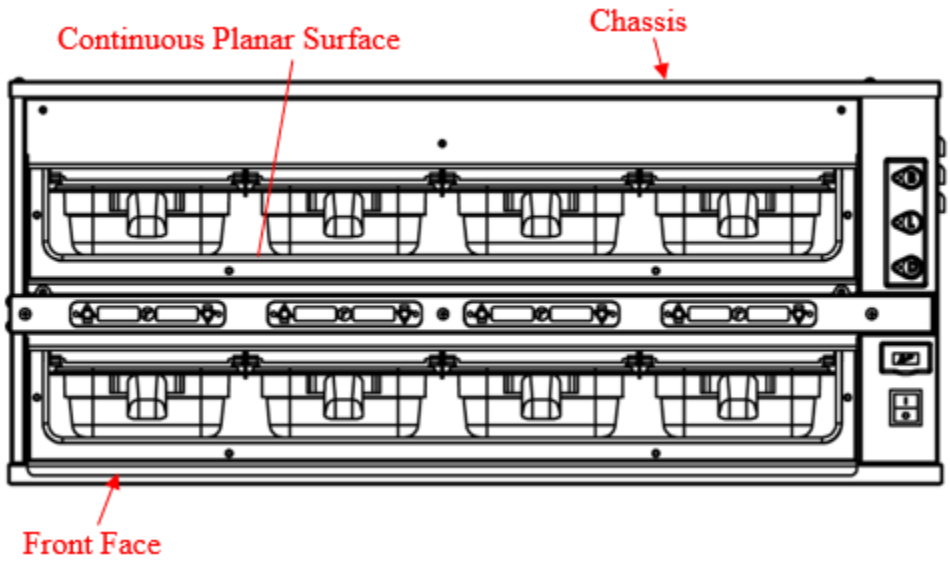
EX1003: ¶133.



EX1005: 8 (annotated).

1.c.2

The continuous and planar surface extends completely to the front face of the chassis. EX1003: ¶134.



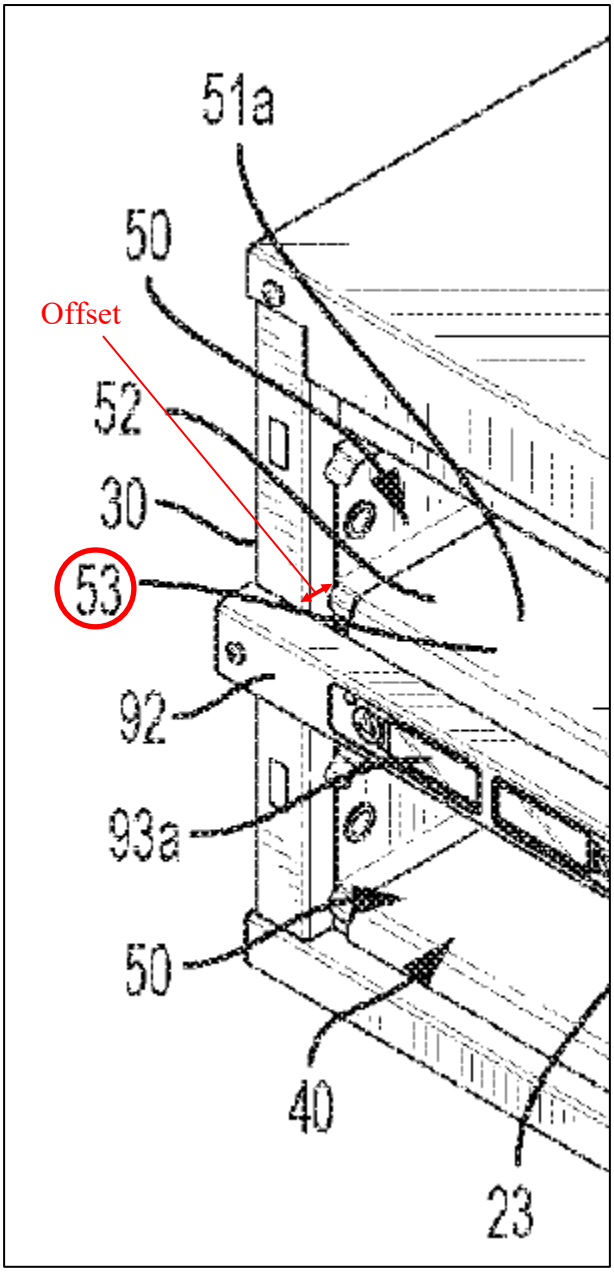
EX1005: 8 (annotated).



EX1007: 52, 56 (annotated).

The IRHS24's continuous and planar surface extending completely to the front face of the chassis is consistent with the '322 Patent and its prosecution

history. EX1003: ¶135. With respect to this limitation, the front chassis face (like the face of a human) need not be uniform and can include portions that are offset rearward or recessed from the front-most portion of the chassis. EX1003: ¶135. In prosecution, the Patent Owner identified a surface offset rearward as extending completely to the front face of the chassis when describing to the Examiner the "multi-zone food holding bin 10 includes a first food holding compartment 50 that includes ***a continuous and planar bottom surface 53 that extends completely to a front face 40 of a chassis 15*** that forms the first food holding compartment 50, ***as illustrated in FIG. 1***." EX1002: 97; EX1003: ¶¶38, 135. As shown below in Fig. 1 of the '322 Patent, the continuous and planar bottom surface (53) is offset rearward from the front-most portion of the chassis. EX1003: ¶135.

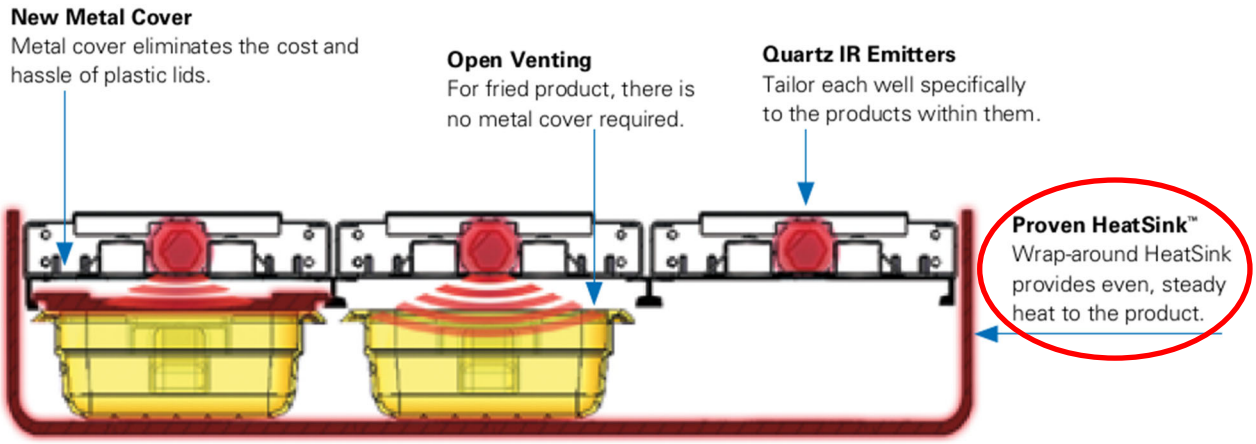


EX1001: Fig. 1 (enlarged, annotated).

1.c.3

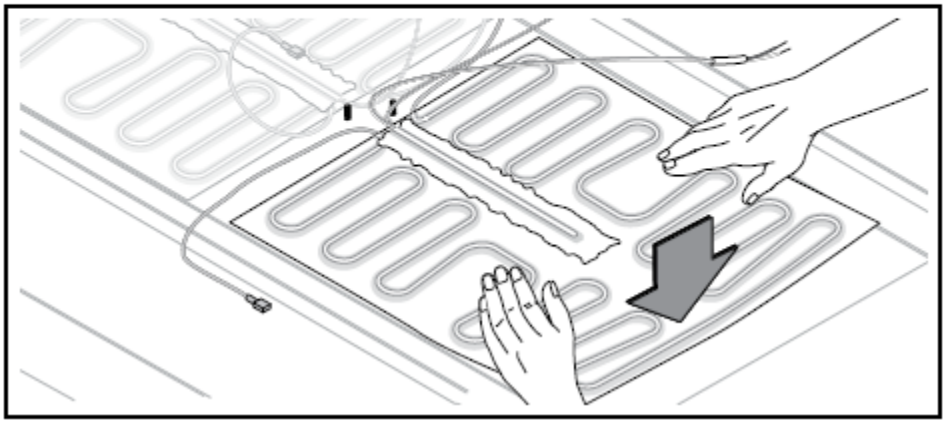
The continuous and planar surface is composed of aluminum. EX1006: 1 ("[a]nodized aluminum HeatSink"); EX1003: ¶¶136-137. The planar surface is

part of the HeatSink, which is made of aluminum. EX1007: 51; EX1005: 16; EX1003: ¶137.



EX1007: 53 (annotated).

14. Peel the adhesive tape cover off the replacement Heat Element and press in place on the heat sink, ensuring all air bubbles are smoothed out.



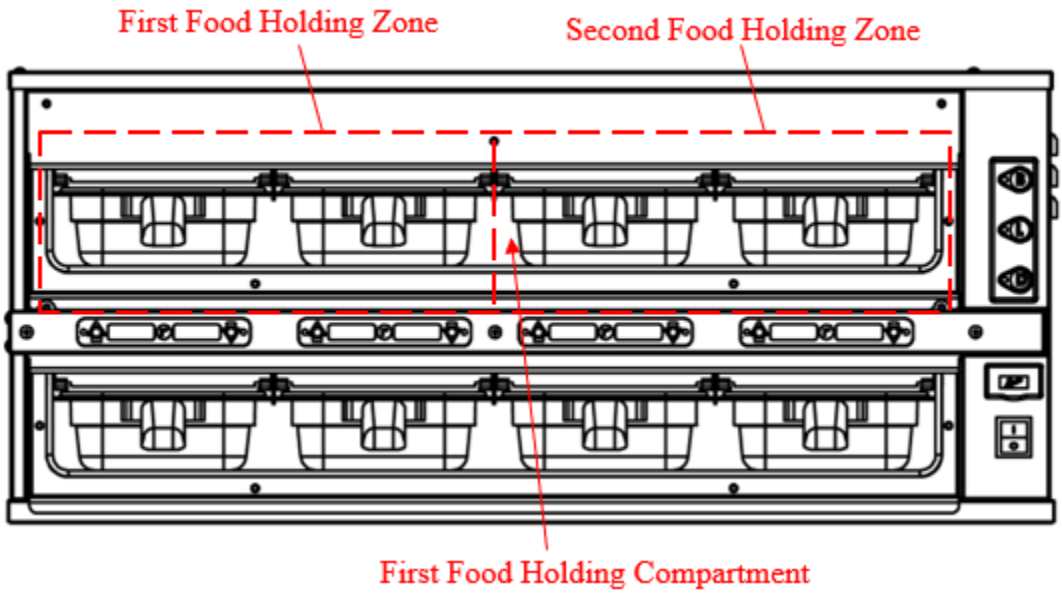
EX1008: 23.

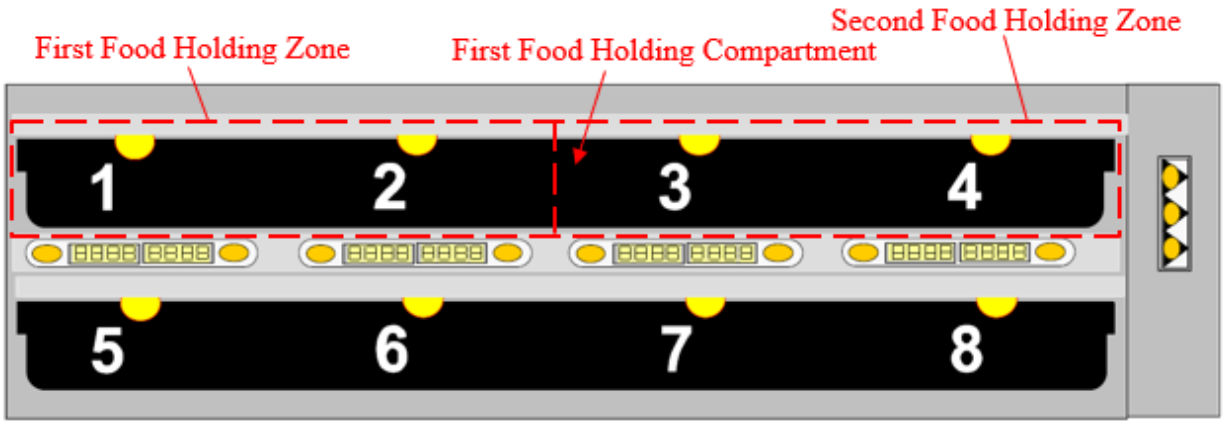
If necessary, it would have been obvious to make the IRHS heatsinks/planar surface from aluminum, like aluminum pan covers/lids, for durability and good heat transfer, with reasonable expectation of success (known suitability for

zoned/heated shelves). EX1005: 4, 8, 20-21; EX1007: 53, 58; EX1020: ¶¶[0021]-[0023] ; EX1003: ¶¶138-141.

1.d.1/1.e.1

First and second food holding zones are in the first compartment. EX1003: ¶¶142, 177.

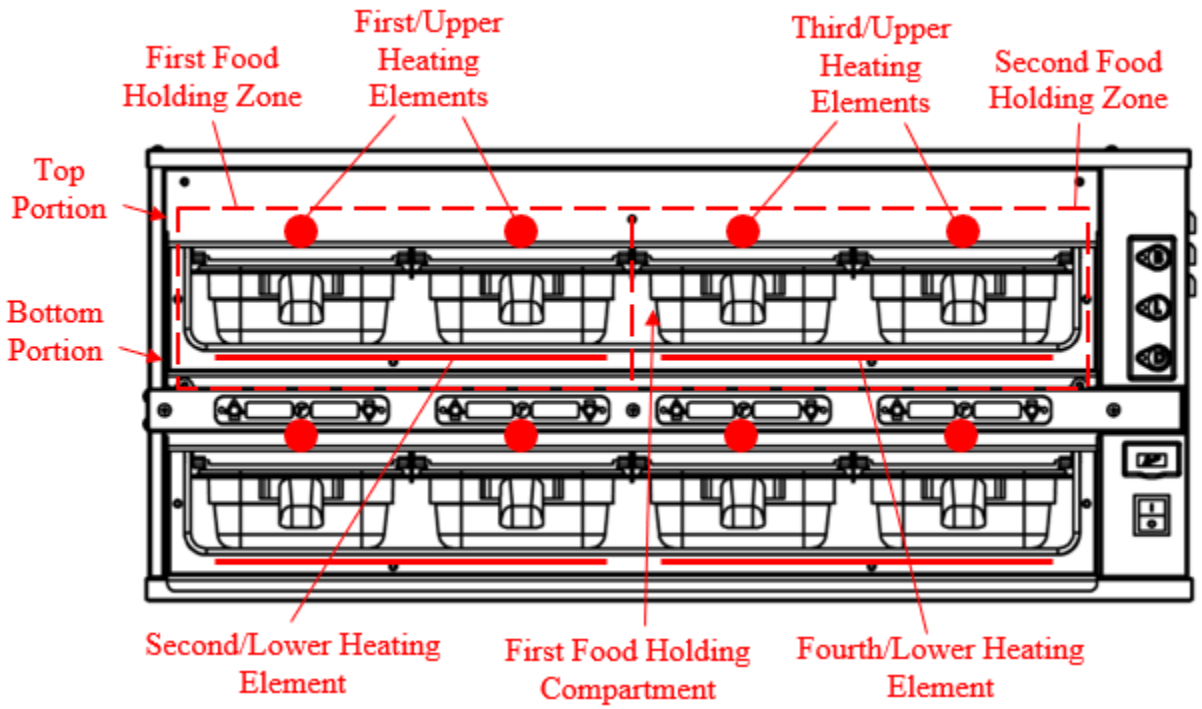


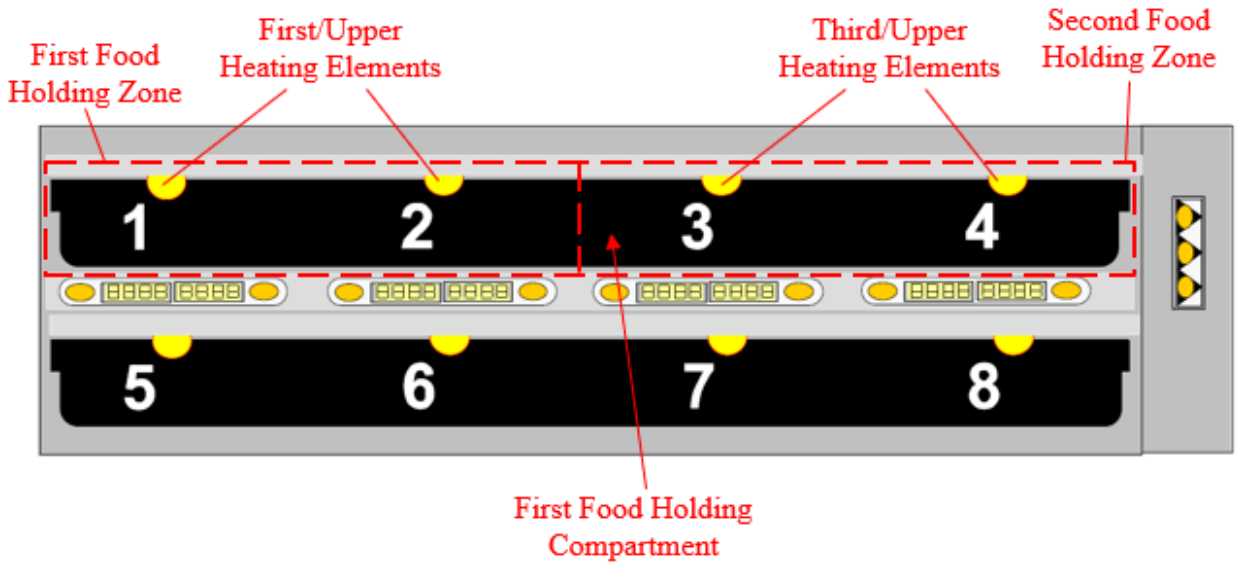


EX1005: 8, 25 (annotated).

1.d.2/1.e.2

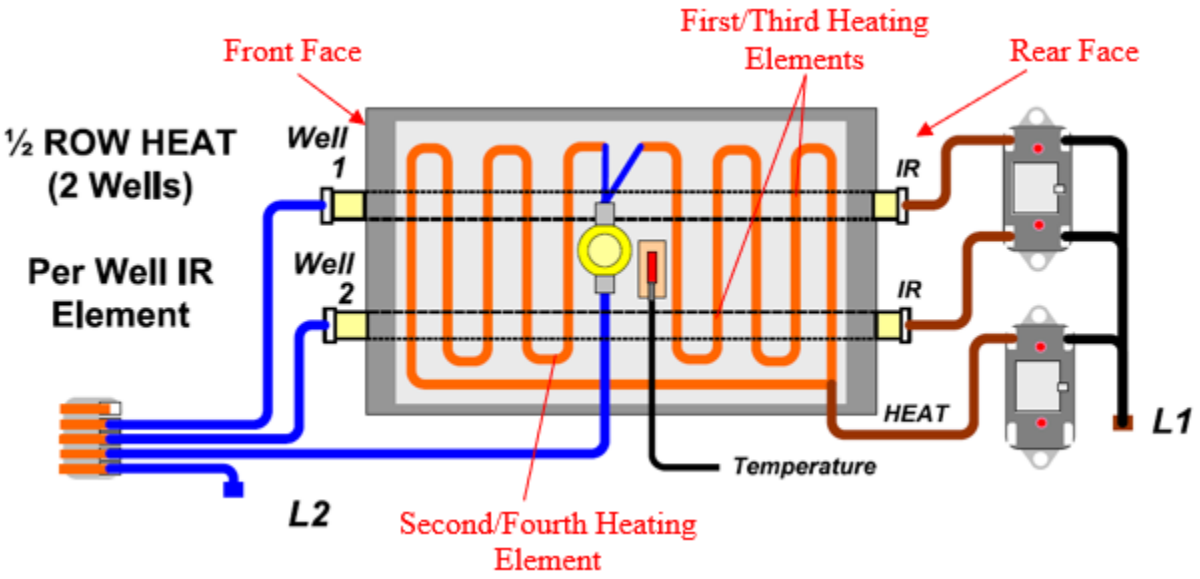
The first and second zones each have an independently controllable radiant heating element (IR bulb) (e.g., first and third heating elements) and an independently controllable conductive heating element (electrical heating element) (e.g., second and fourth heating elements) at respective top and bottom portions of the first food holding compartment. EX1003: ¶¶143-144, 178-179.





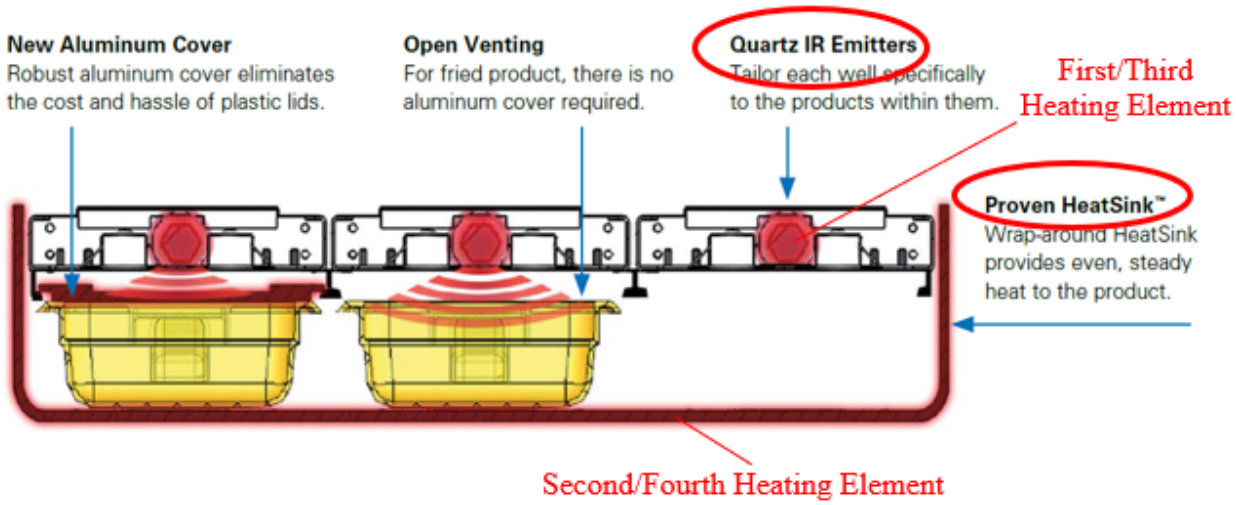
EX1005: 8, 25 (annotated).

IRHS24 has four food holding zones. EX1003: ¶145. The schematic below shows the upper and lower heating elements for *one* zone. EX1005: 21, 25; EX1007: 53; EX1003: ¶145.

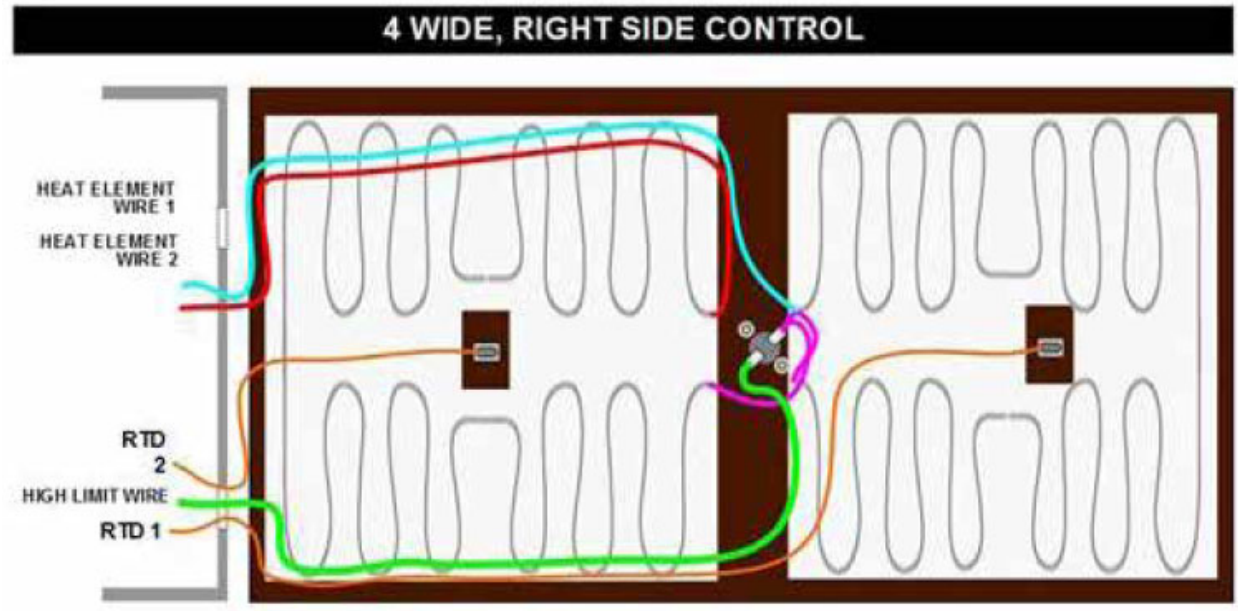


EX1005: 25 (annotated).

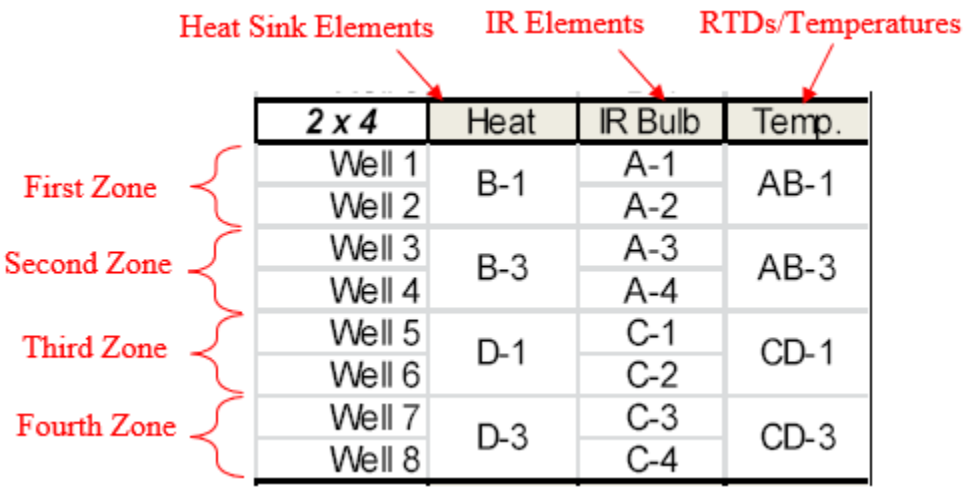
IRHS24 has two IR upper elements per zone (one per bay/well), and a single lower heating element per zone. EX1003: ¶¶146, 148-149. The IR upper heating elements are at a top portion of the respective compartments, and the lower heating elements are at a bottom portion of the respective compartments. EX1006: 1 ("Upper IR emitters" and "Bottom zoned heat element"); EX1007: 53; EX1003: ¶147.



EX1007: 53 (annotated).



EX1008: 58.



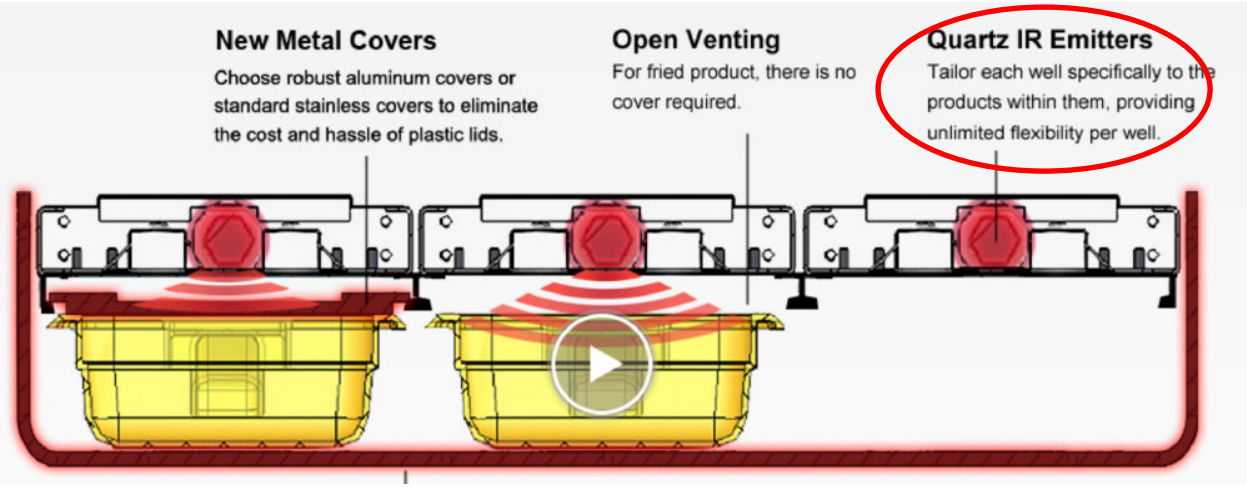
2 x 4	Heat	IR Bulb	Temp.
Well 1	B-1	A-1	AB-1
Well 2		A-2	
Well 3	B-3	A-3	AB-3
Well 4		A-4	
Well 5	D-1	C-1	CD-1
Well 6		C-2	
Well 7	D-3	C-3	CD-3
Well 8		C-4	

EX1008: 64 (annotated).

Each zone's upper and lower heating elements are independently controllable from each other and other zones' heating elements. EX1005: 16 ("[t]his new technology allows you to precisely control the environment in each pan, allowing customized settings for each food product" and "each food product

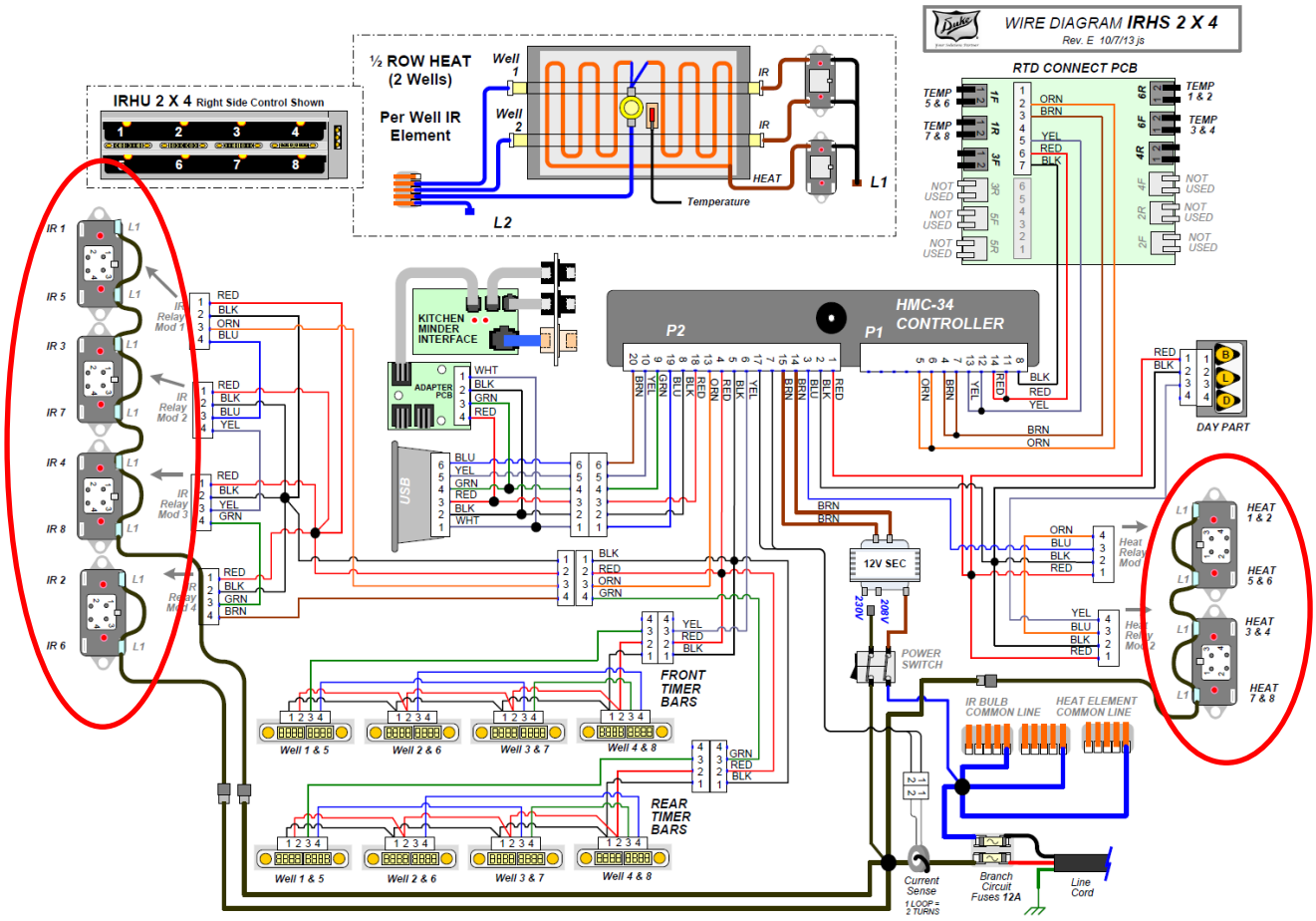
has a tailored HeatSink temperature and InfraRed pulse rate"), 25; EX1006: 1 ("[z]oned bottom heat" and "individually controlled IR emitters" for top heat); EX1007: 53 ("Precise holding for each product in an optimized environment tailored to that product" and "Total well independence allows freedom in product placement in the IRHS"); EX1003: ¶¶150, 180.

IRHS24 has "[z]oned bottom heat" ("1/2 ROW HEAT (2 Wells)") for "holding environment customization" and "individually controlled IR emitters" that "pulse on and off for optimum … energy … to the food." EX1006: 1; EX1007: 10, 53; EX1005: 15, 25-26; EX1003: ¶151. The IR bulbs operate independently of the lower heating elements via "IR Turbo Boost" for an "instant shot of IR energy." EX1006: 1; EX1007: 22 ("Utilize 'Turbo Boost" for a quick shot of heat to the product"), 53 ("IR is pulsed only when needed, leading to drastic energy savings"); EX1003: ¶152.



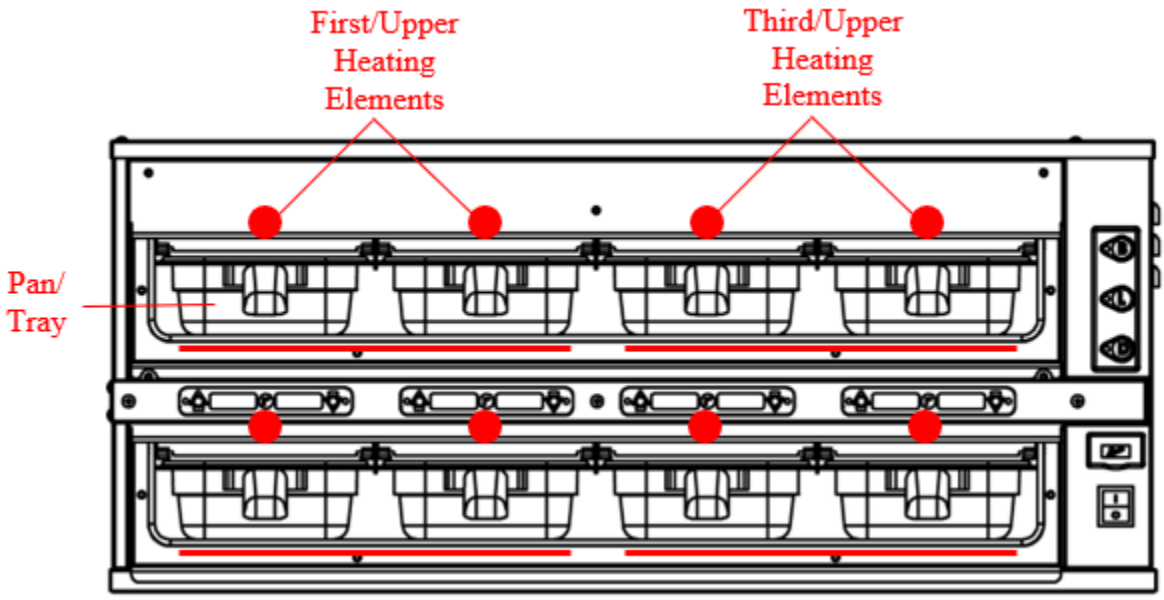
EX1007: 10 (annotated).

The wiring diagram shows independent control for every heating element via the controller independently operating each heating element's relay. EX1003: ¶¶153, 159-166.

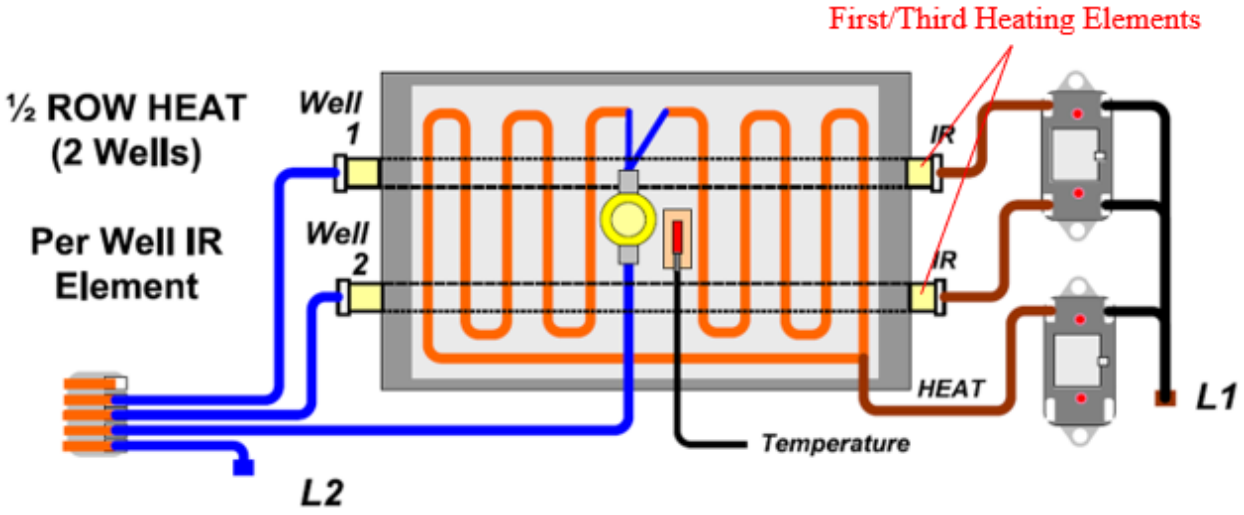


EX1005: 25 (annotated).

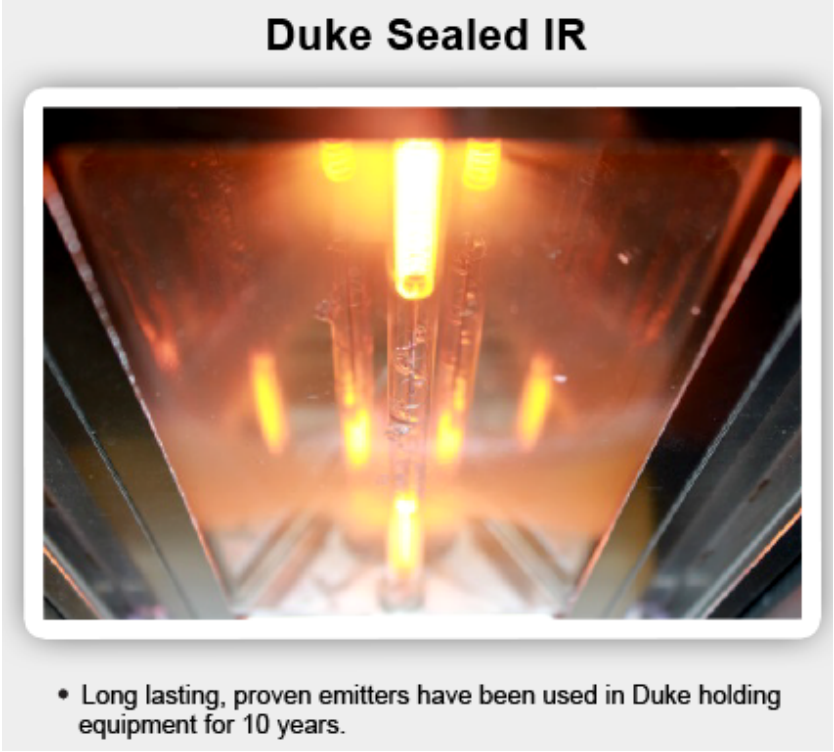
The first and third heating elements are IR bulbs (radiant heating elements) that provide infrared radiant heat to the food pans/trays from above. EX1005: 20 (ref. no. 17 – "BULB – IR"); EX1007: 51 ("top-down InfraRed heat"). EX1003: ¶¶171-172, 181.



EX1005: 8 (annotated).

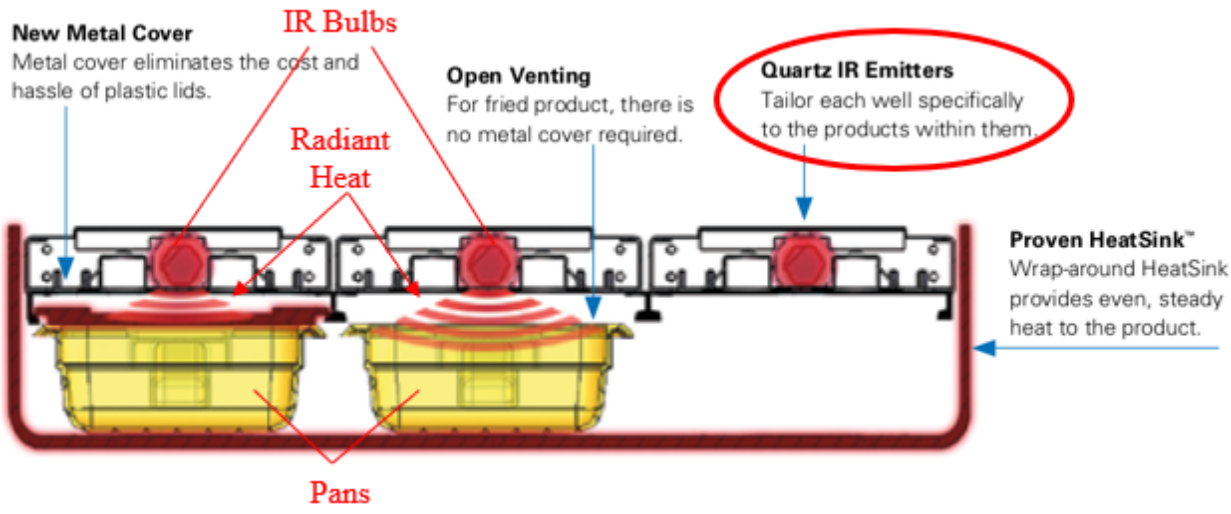


EX1005: 25 (annotated).


Duke Sealed IR
• Long lasting, proven emitters have been used in Duke holding equipment for 10 years.

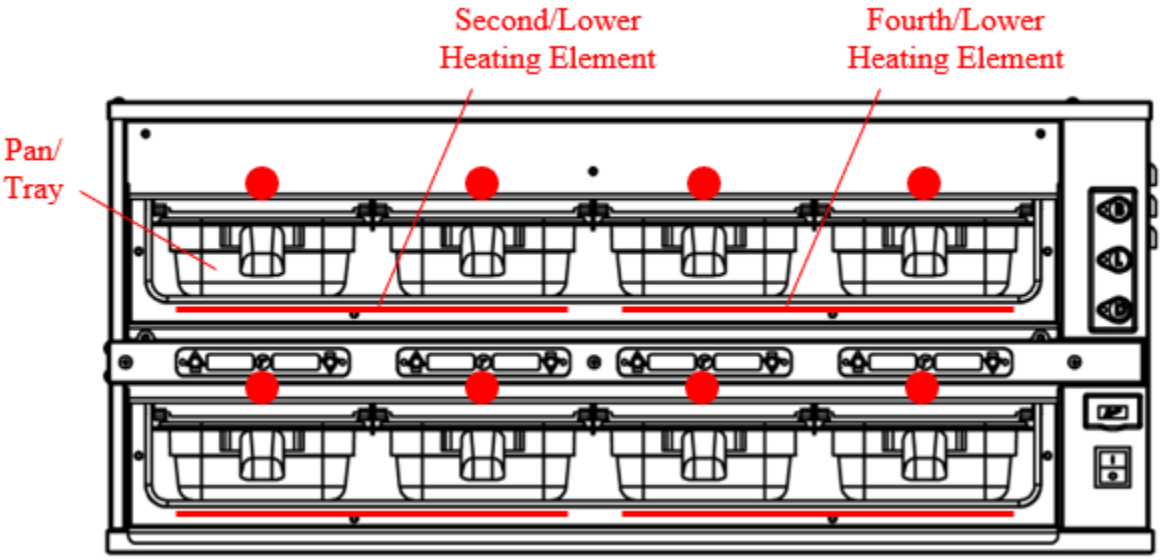

0052 0050
0031 0049
HU66 HU66

EX1007: 11, 36.



EX1007: 53 (annotated).

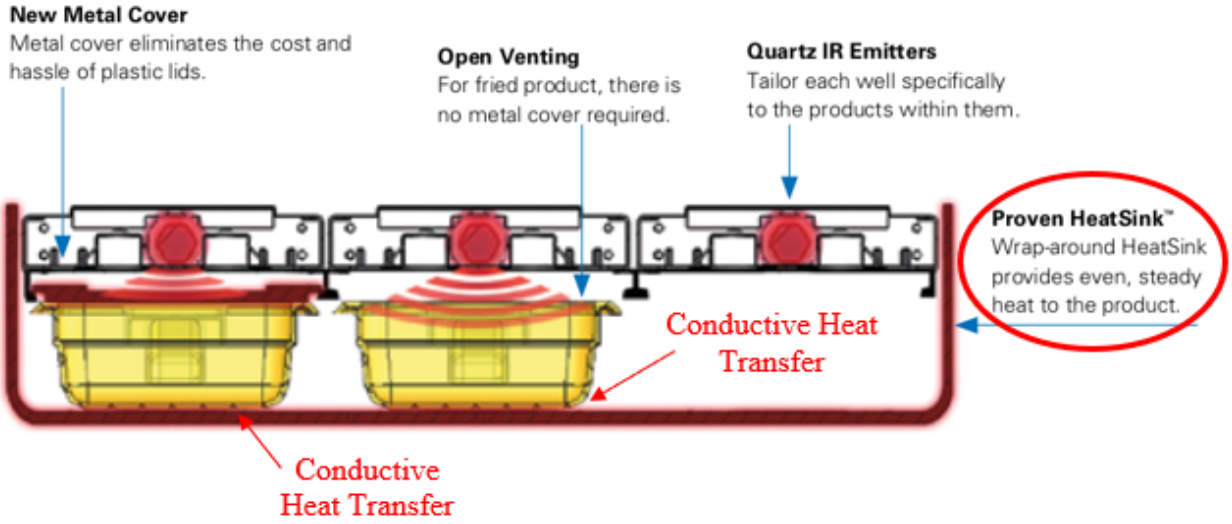
The second and fourth heating elements provide heat to the food pans/trays conductively through the continuous and planar surface, on which the pans rest. EX1003: ¶¶173-174.



EX1005: 8 (annotated).

The second and fourth heating elements are part of the HeatSink associated with the first compartment that provides heat to the pans from underneath the pans

(from below). EX1007: 51 ("[p]revious generations of the Duke holding units contained only HeatSink, heating from below"); EX1003: ¶175.



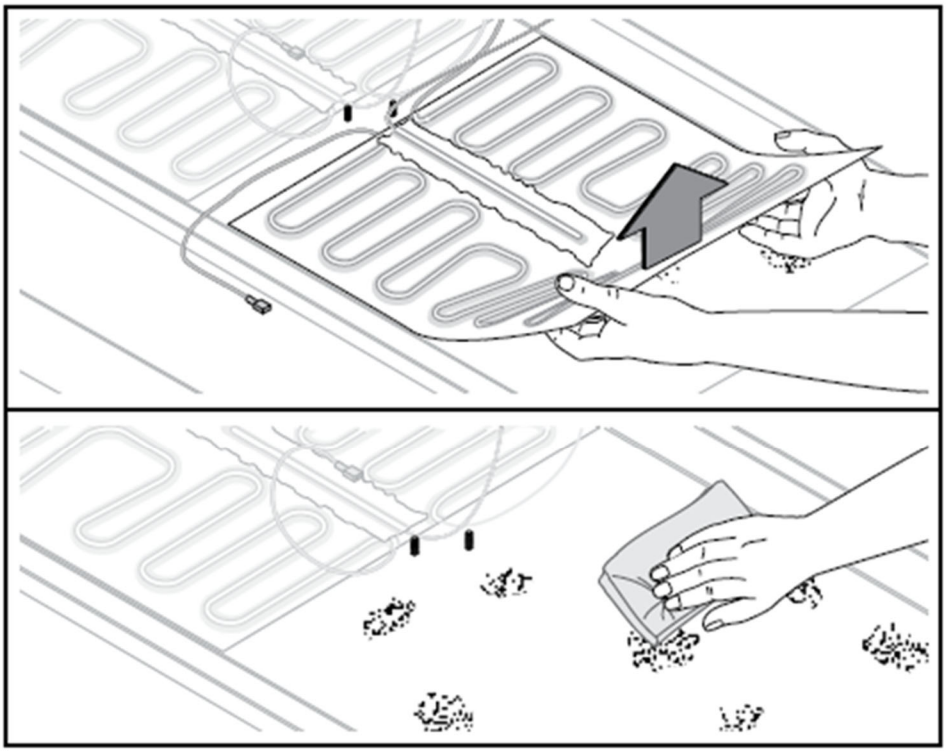
EX1007: 53 (annotated).

HEAT ELEMENTS

The Heat Elements provide the heating required to keep the heating wells at proper operating temperatures. The quantity varies depending on model and are affixed to the bottom of each Heat Sink.

EX1008: 21.

13. Remove the affected Heat Element by peeling off from the heat sink. Ensure any excess tape and/ or adhesive is removed.

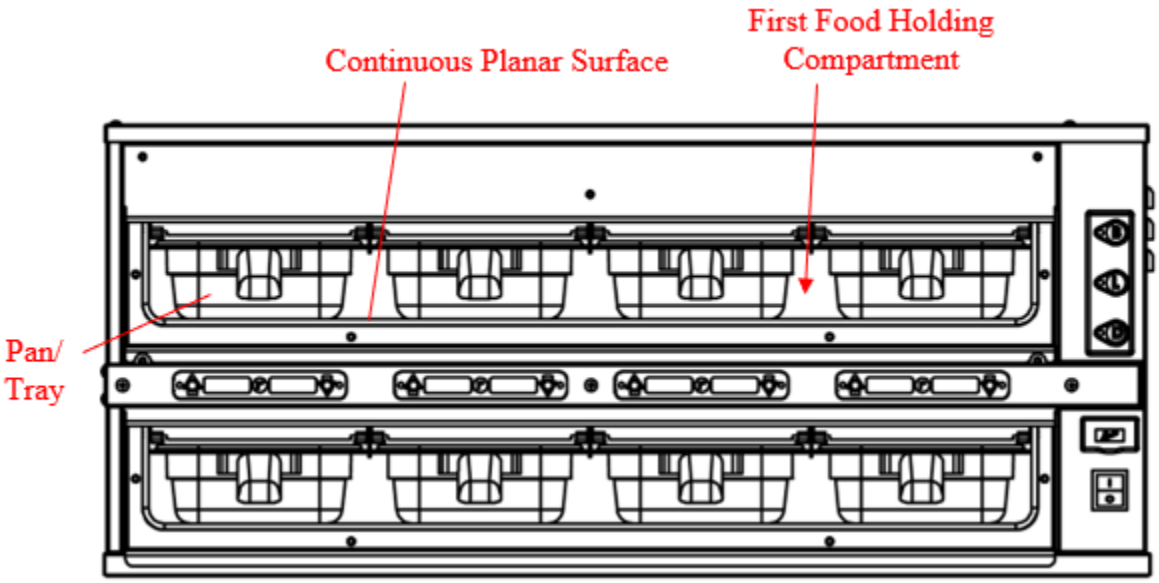


EX1008: 22.

Because the second and fourth heating elements are affixed to the underside of the HeatSink's plate the food pans rest on (the planar surface thereof), the second and fourth heating elements are conductive heating elements that conductively transfer heat to the food pans. EX1003: ¶¶176, 181. This is how heat sinks, like the IRHS's HeatSink, conduct heat to food pans. EX1016: Fig. 2, ¶[0039]; EX1017: Fig. 3, 4:51-53; EX1003: ¶176.

1.f

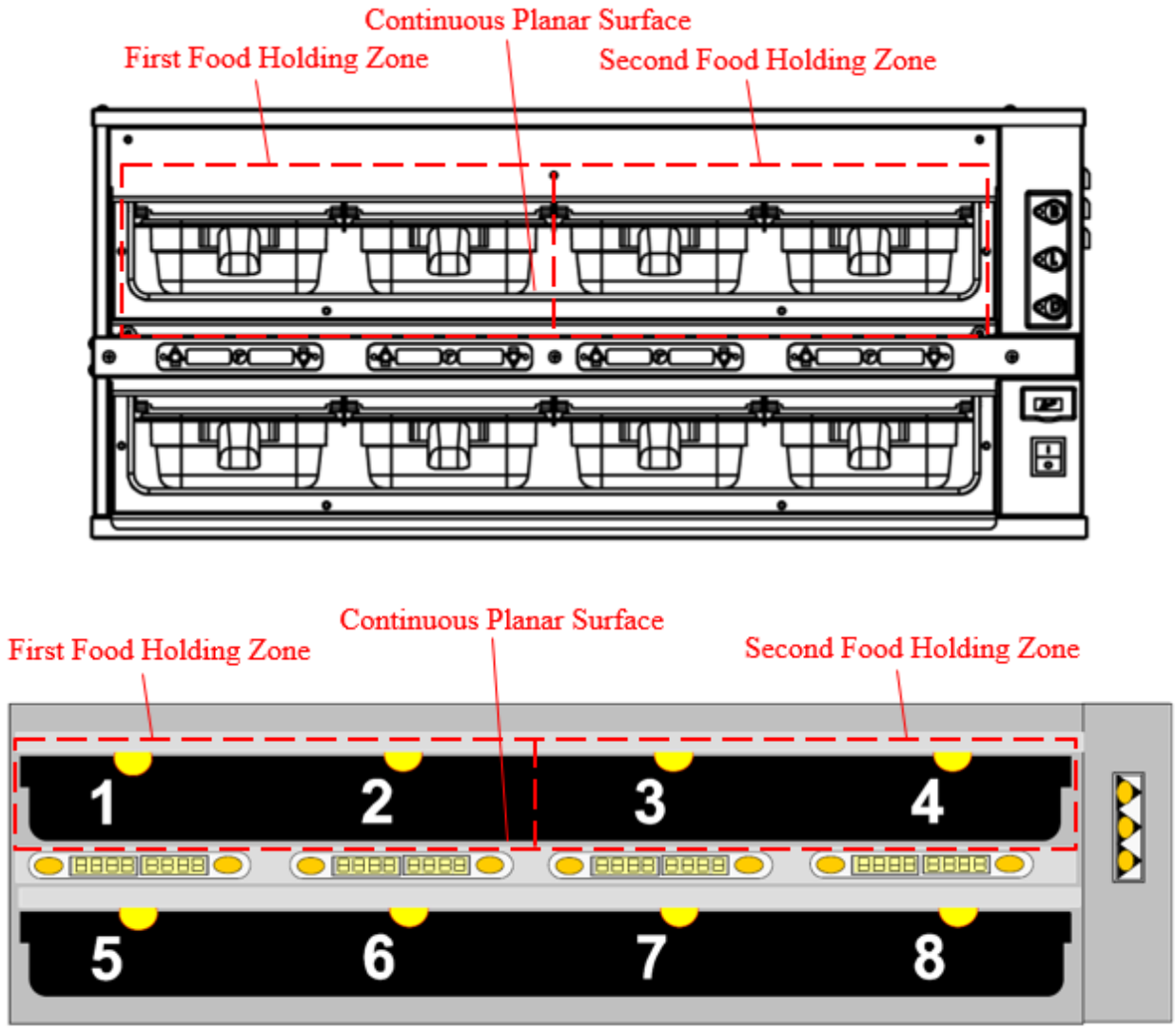
A food pan/tray in the first compartment rests on the continuous and planar surface. EX1003: ¶182.



EX1005: 8 (annotated).

1.g.1

The first and second zones are adjacent across the continuous planar surface. EX1003: ¶183.

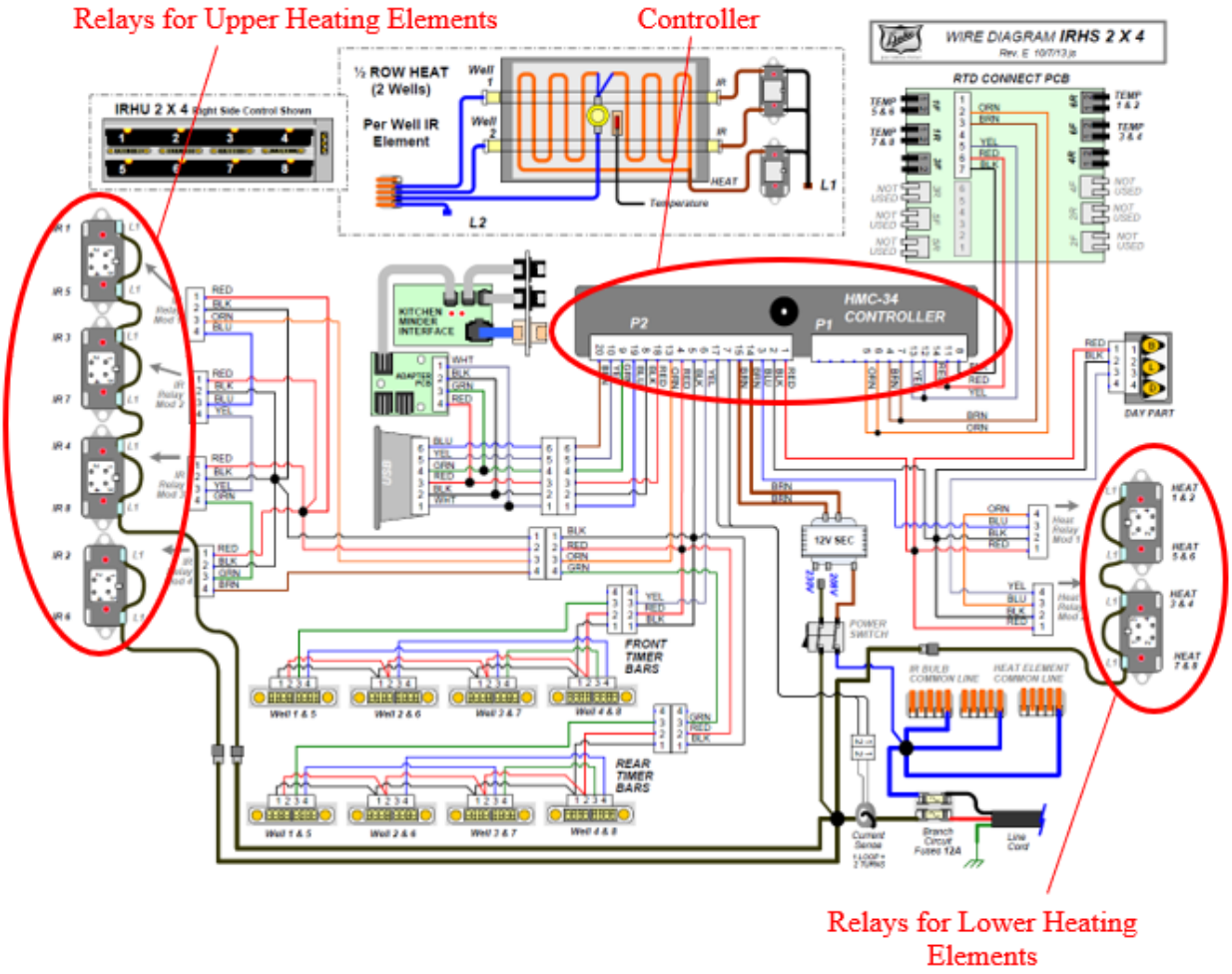


EX1005: 8, 25 (annotated).

1.g.2

Per Sections IV(B)(1.d.2/1.e.2), the heating elements of each zone are independently controllable from other zone's heating elements. EX1003: ¶¶184-185. The controller operates the heating elements of the different zones independently, so each zone has an independently controlled and maintained temperature (e.g., first temperature, second temperature). EX1005: 16 ("[t]his new

technology allows you to precisely control the environment in each pan, allowing customized settings for each food product"); EX1006: 1 ("[a]lphanumeric control with independent well flexibility," "[z]oned bottom heat" and "individually controlled IR emitters" for top heat); EX1007: 53 ("[t]otal well independence allows freedom in product placement in the IRHS" and "[t]ailor each well specifically to the products within them"); EX1003: ¶186. Per the wiring diagram, the controller is connected to each heating element, enabling the controller to independently operate each heating element. EX1003: ¶187. Thus, the temperatures of each zone are capable of being different. EX1003: ¶187.



EX1005: 25 (annotated).

CONTROLLER

The Controller is used to control the Relays and RTD Sensors. It is located inside the control compartment.

EX1008: 30.

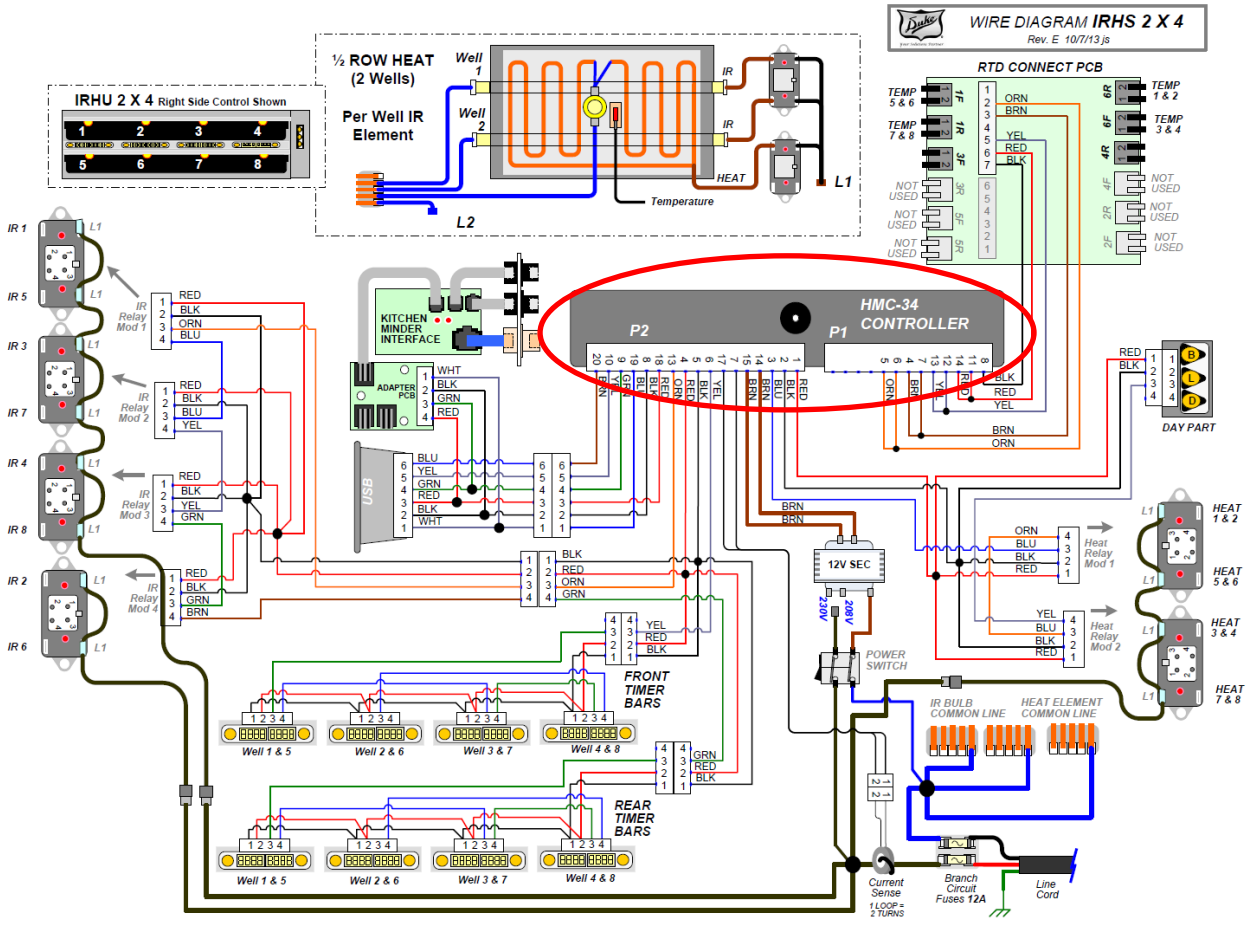
The controller individually controls the IR emitters to "pulse on and off for controlling optimum amount of energy being applied to the food." EX1006: 1; EX1007: 10 ("Quartz IR Emitters" that "[t]ailor each well specifically to the

products within them, providing unlimited flexibility per well"); EX1003: ¶188. The bottom heat is zoned "to provide additional holding environment customization." EX1006: 1; EX1005: 25 ("1/2 Row Heat (2 Wells)"); Section [1.d.2]; EX1003: ¶188.

The controller operates the heating elements of each zone based on the specific food product type(s) assigned to the pan locations in the zones. EX1006: 1 ("[c]ustom heat settings for food product"); EX1005: 4 ("[t]his new technology allows you to precisely control the environment in each pan, allowing customized settings for each food product"), 16 ("each food product has a tailored HeatSink temperature and InfraRed pulse rate"), 25; EX1007: 51 ("each food product has tailored settings to control the thermal path of the food, leading to optimal quality, consistency and extended hold"); EX1003: ¶189. Based on the food product types assigned to the pan locations in the different zones, the controller controls each of the zones to provide a different food holding temperature corresponding to the food product held in the respective zone. EX1003: ¶190.

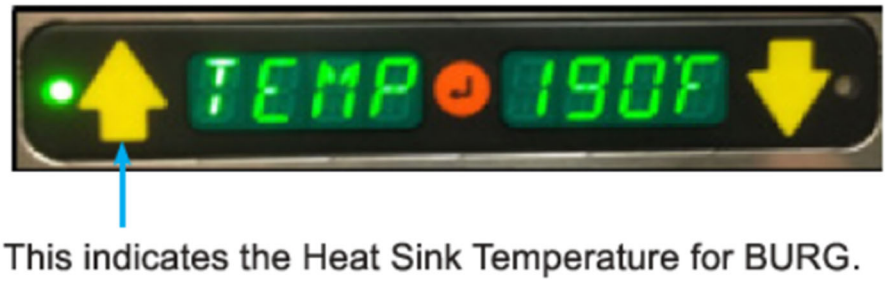
The first and second zones each have a maintainable food holding temperature. EX1006: 1 ("[c]ustom heat settings for food product," "[e]ach compartment individually controlled"); EX1005: 4 ("[t]his new technology allows you to precisely control the environment in each pan, allowing customized settings for each food product"), 16 ("each food product has a tailored HeatSink

temperature and InfraRed pulse rate"); EX1007: 10 ("Quartz IR Emitters" that "[t]ailor each well specifically to the products within them, providing unlimited flexibility per well"), 53 ("[p]recise holding for each product in an optimized environment tailored to that product" and "Total well independence allows freedom in product placement in the IRHS"); EX1003: ¶191. The controller independently operates the heating elements to control each zone's vertical temperature profile. EX1006: 1 ("[d]ual technology heating to reduce temperature variance from top to bottom"); EX1007: 51 ("deliver a consistently hot pan of product, from top to bottom"); EX1005: 16, 25; EX1003: ¶¶192-193.



EX1005: 25 (annotated).

For example, a maintainable food holding temperature for each zone is based on sensor feedback and food type temperature setting. EX1005: 16 ("each food product has a tailored HeatSink temperature"), 25; EX1006: 1; EX1007: 53 ("Precise holding for each product in an optimized environment tailored to that product"); EX1003: ¶194.



EX1005: 17.

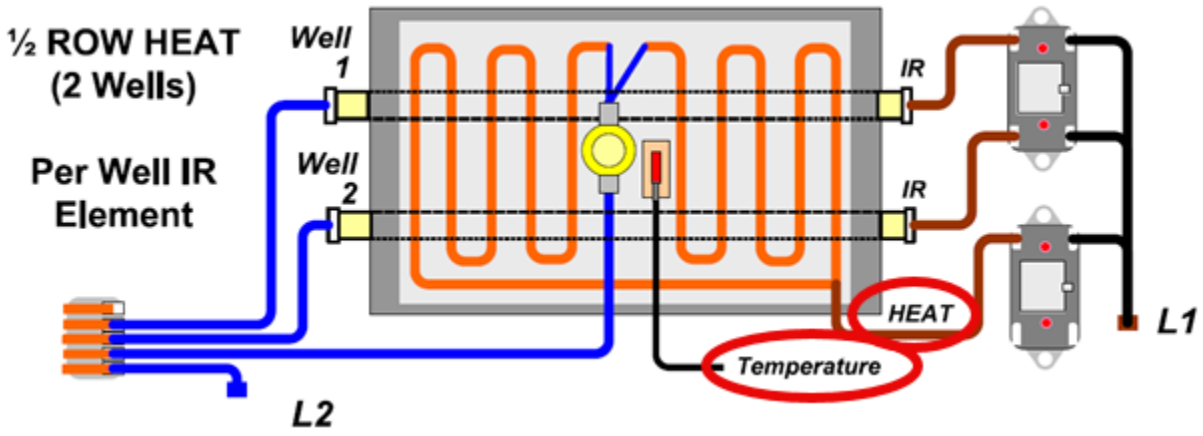
SENS – SENSOR FAULT

- May indicate the unit has been programmed improperly (i.e. loading a 2x4 product configuration file into a 2x2 unit). An attempt to properly reprogram the unit should be made.
- May indicate a fault with a heat sink temperature sensor. The affected pan location is not available for timing product and a qualified service technician should be contacted to identify the cause of the fault

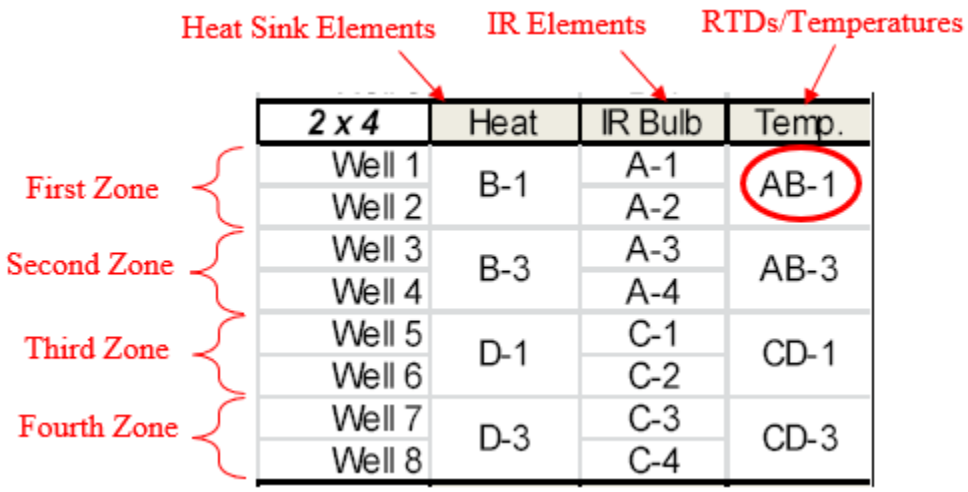
TEMPERATURE CHECK PROCEDURE

1. A digital temperature meter that has been calibrated must be used to get an accurate temperature reading. Use a thermocouple surface temperature probe to measure temperatures.
2. **No pans should be in wells during the pre-heat and temperature check.** Pre-heat the warmer for 30 minutes before taking any temperature readings. Do not take readings unless the cavity has been empty for 30 minutes. This will allow the temperature to stabilize and will prevent false readings.
3. The warmer cavity should be cleaned and empty before the temperature is checked. Avoid any air drafts that might flow through the cavity.
4. Locate the surface temperature probe on the bottom of the first cavity as shown for the cabinet size.
5. All temperature controls exhibit a swing in temperature as the control cycles on and off while regulating to the set point. The correct calibration temperature is the average of several readings taken over a period of 20 minutes after the warmer has been pre-heated. The average temperature should be ± 5°F from the set point.

EX1005: 15 (annotated).



EX1005: 25 (annotated).



2 x 4	Heat	IR Bulb	Temp.
Well 1	B-1	A-1	AB-1
Well 2		A-2	
Well 3	B-3	A-3	AB-3
Well 4		A-4	
Well 5	D-1	C-1	CD-1
Well 6		C-2	
Well 7	D-3	C-3	CD-3
Well 8		C-4	

EX1008: 64 (annotated).

Still further, the IRHS Documents teach customized temperature settings by food type and zones having different food types. EX1006: 1 ("[c]ustom heat settings for food product"); EX1005: 4 ("[t]his new technology allows you to precisely control the environment in each pan, allowing customized settings for each food product"), 16 ("each food product has a tailored HeatSink temperature and InfraRed pulse rate"); EX1007: 51 ("each food product has tailored settings to control the thermal path of the food, leading to optimal quality, consistency and extended hold"), 53 ("[p]recise holding for each product in an optimized environment tailored to that product"); EX1003: ¶195. Temperature settings for each zone are independent of food types in other zones. EX1005: 25 ("1/2 ROW HEAT (2 Wells)"); EX1006: 1 ("independent well flexibility"); EX1007: 53

("[t]otal well independence allows freedom in product placement in the IRHS" and "[t]ailor each well specifically to the products within them"); EX1003: ¶195.

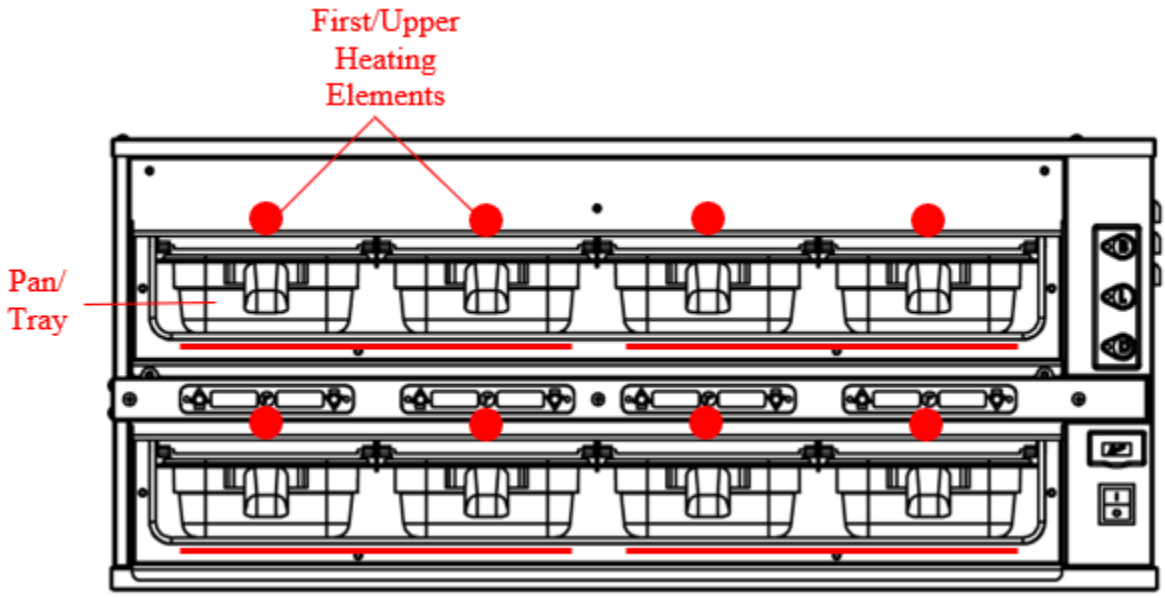


EX1007: 12.

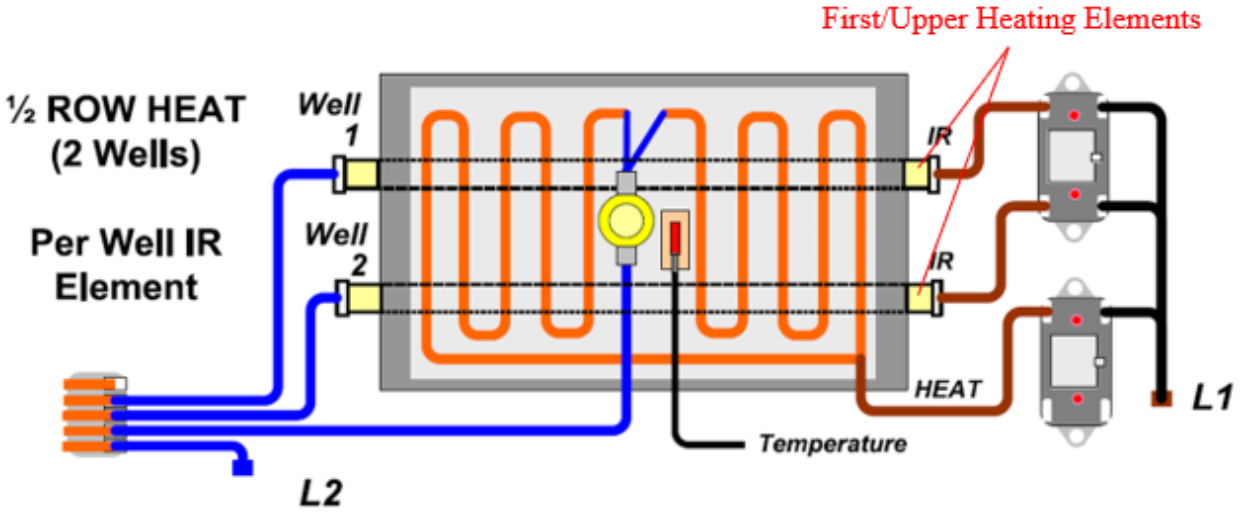
It would have been obvious per the IRHS Documents to heat the zones to different temperatures for customized heat settings for different food types in each zone and to hold more/different food types to meet customer demands, with reasonable expectation of success (IRHS Documents' teachings and known suitability of heated multi-zone food cabinet shelves). EX1028: 30, 14, 39; EX1019: 1:17-45, 4:36-59; EX1010: ¶[0024]; EX1020: ¶¶[0021]-[0023]; EX1012: ¶¶[0069], [0072], [0096]; EX1003: ¶196.

1.h.1

The first/upper heating elements are IR bulbs that provide infrared radiant heat to the pans/trays from above. EX1005: 20; EX1007: 51; EX1003: ¶197.

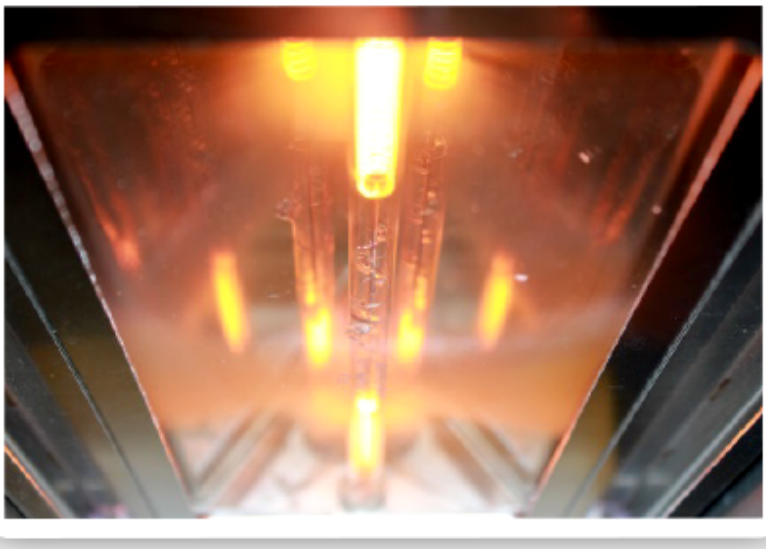


EX1005: 8 (annotated).



EX1005: 25 (annotated).

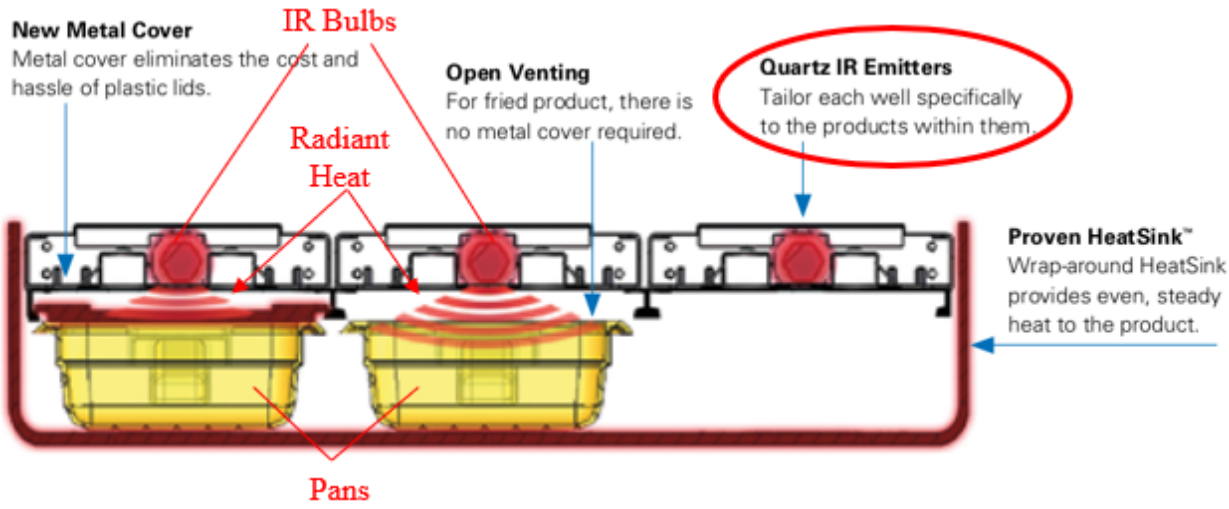
Duke Sealed IR



- Long lasting, proven emitters have been used in Duke holding equipment for 10 years.



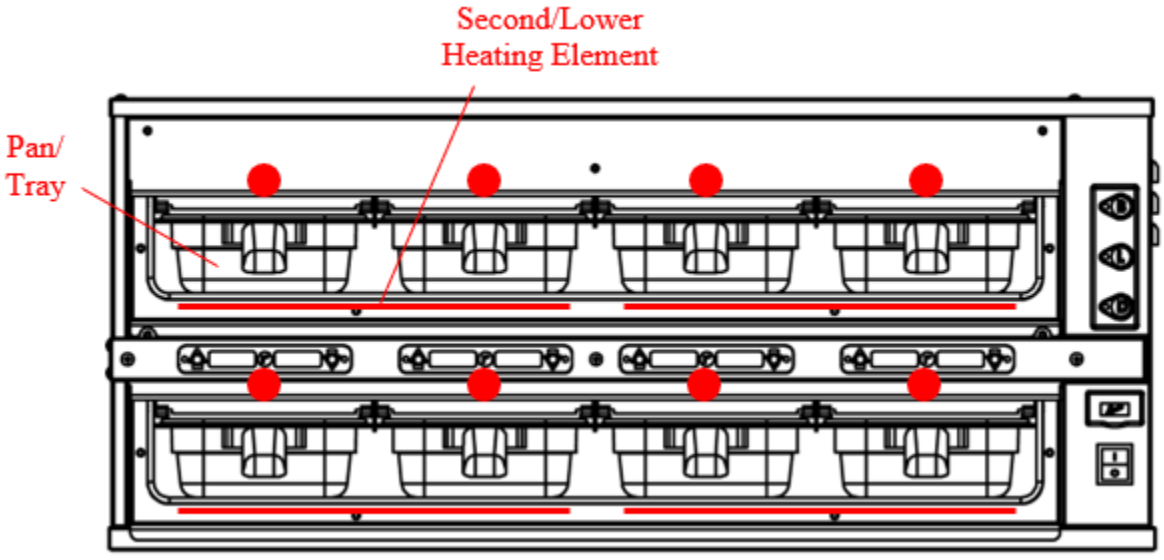
EX1007: 11, 36.



EX1007: 53 (annotated).

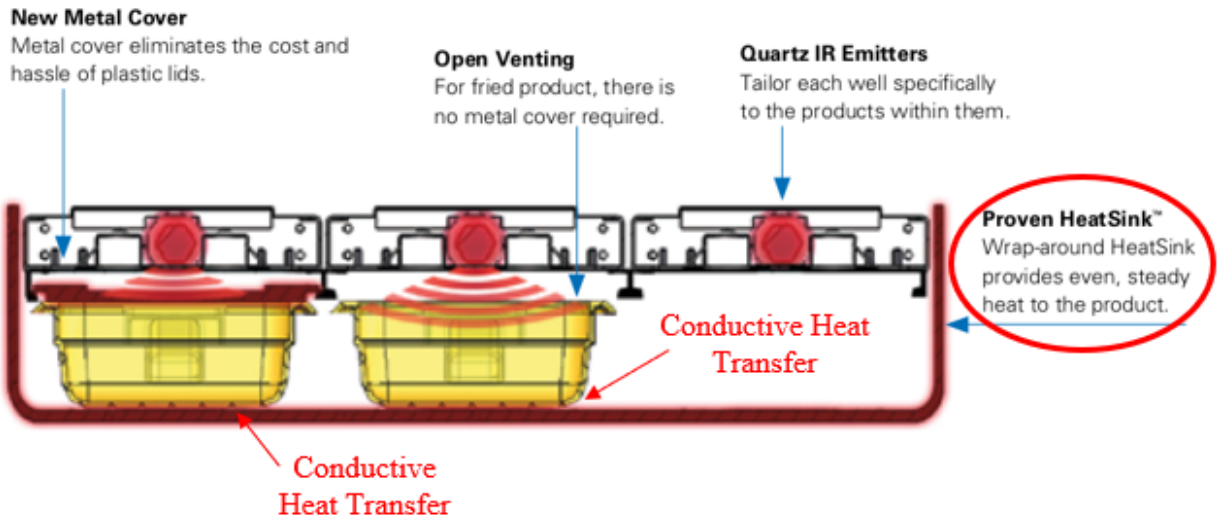
1.h.2

The second/lower heating element heats the pans/trays conductively from below. EX1003: ¶198.



EX1005: 8 (annotated).

The second/lower heating element is part of the HeatSink that provides heat to the pans from underneath. EX1007: 51; EX1003: ¶199.



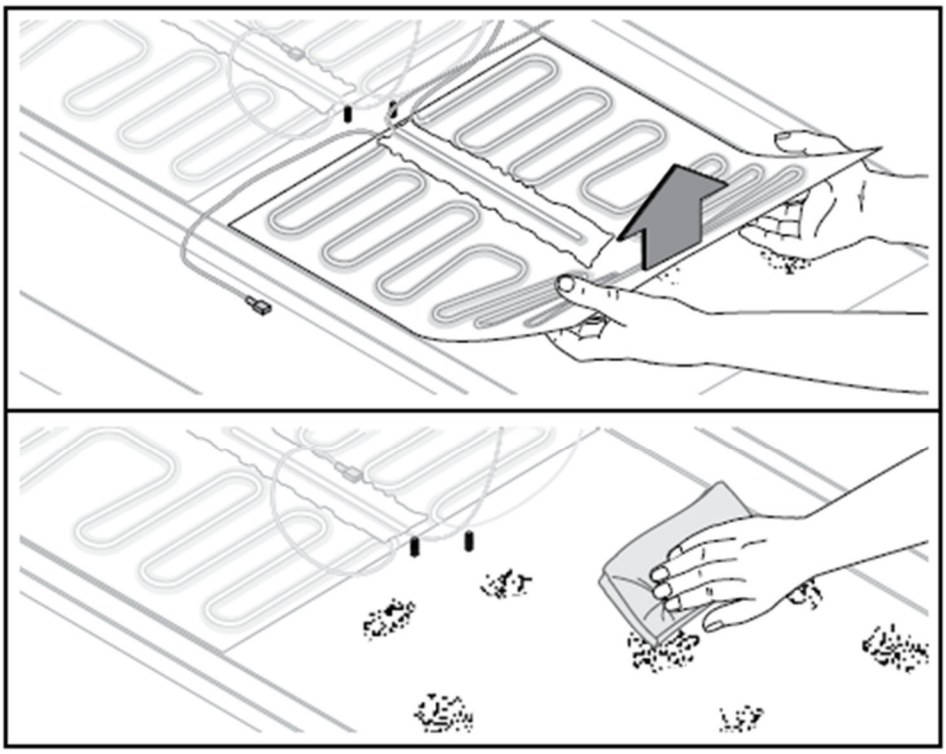
EX1007: 53 (annotated).

HEAT ELEMENTS

The Heat Elements provide the heating required to keep the heating wells at proper operating temperatures. The quantity varies depending on model and are affixed to the bottom of each Heat Sink.

EX1008: 21.

13. Remove the affected Heat Element by peeling off from the heat sink. Ensure any excess tape and/ or adhesive is removed.



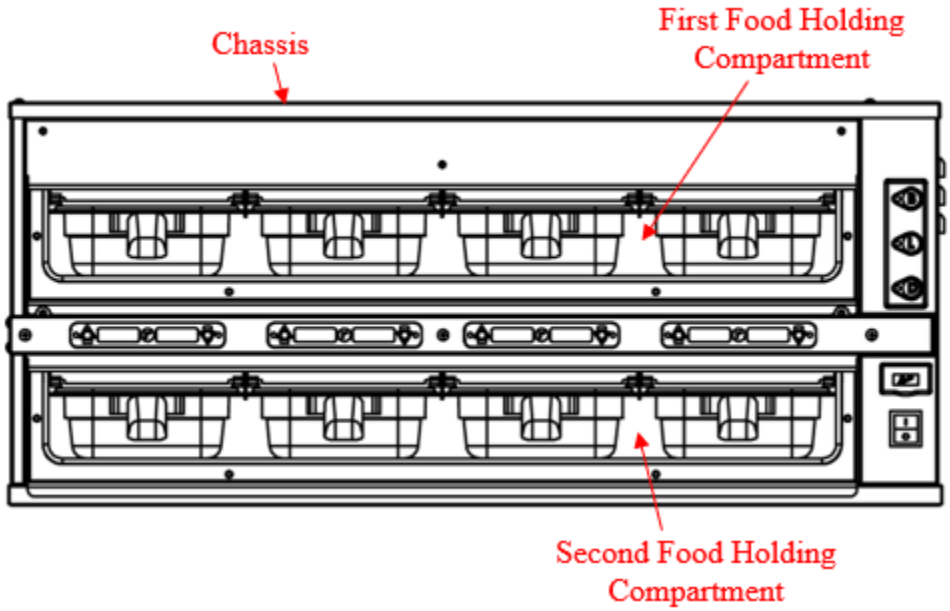
EX1008: 22.

Because the second heating element is affixed to the underside of the HeatSink's plate (forming the planar surface) the food pans rest on, the second/lower heating element conductively heats the food pans. This is how heat sinks, like the IRHS's HeatSink, conduct heat to food pans. EX1016: Fig. 2, ¶[0039]; EX1017: Fig. 3, 4:51-53; EX1003: ¶¶200-201.

C. Claim 2

2.a.1

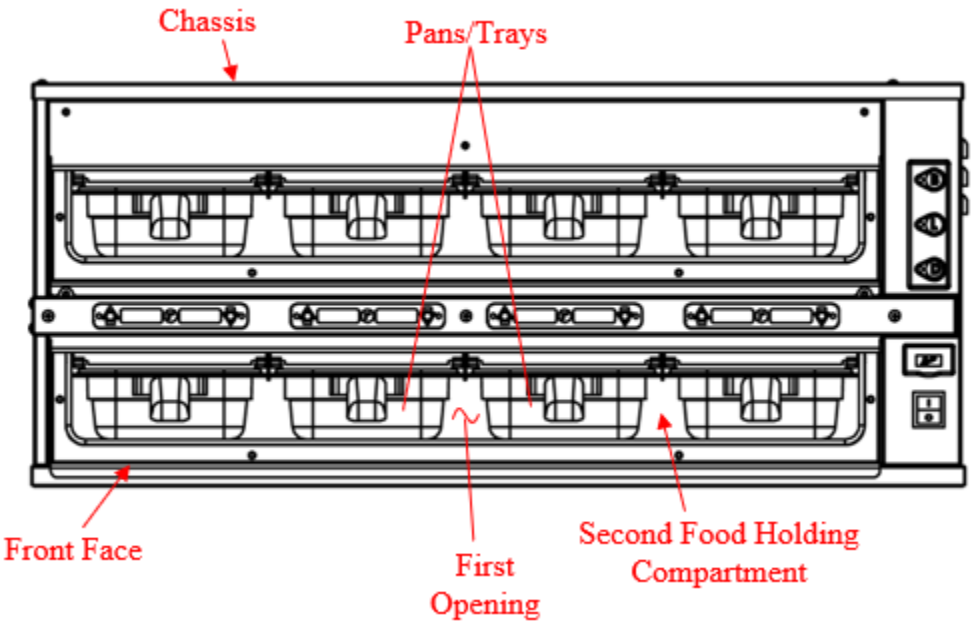
A second food holding compartment is below the first food holding compartment within the chassis. EX1003: ¶¶202-203.



EX1005: 8 (annotated).

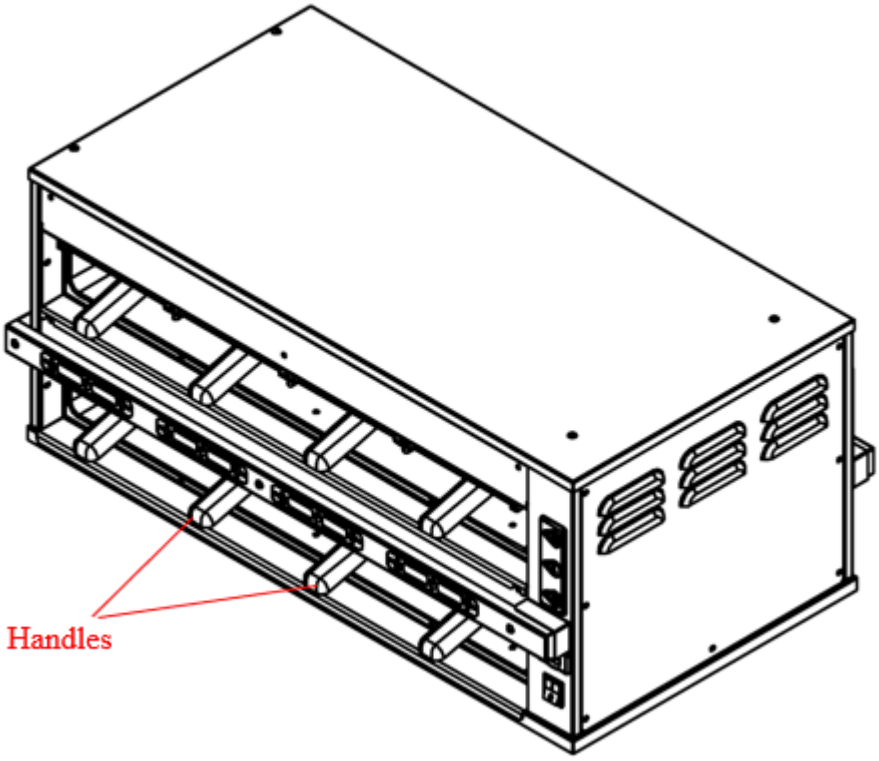
2.a.2

The second compartment has a first opening that is open, uncovered, and located at the front face of the chassis. EX1003: ¶¶204-205. The first opening allows the food pans to be placed into and removed from the second compartment. EX1003: ¶205.



EX1005: 8 (annotated).

Pan handles protrude from the first opening for pan insertion and removal therethrough. EX1007: 52; EX1003: ¶206.



EX1005: 8 (annotated).



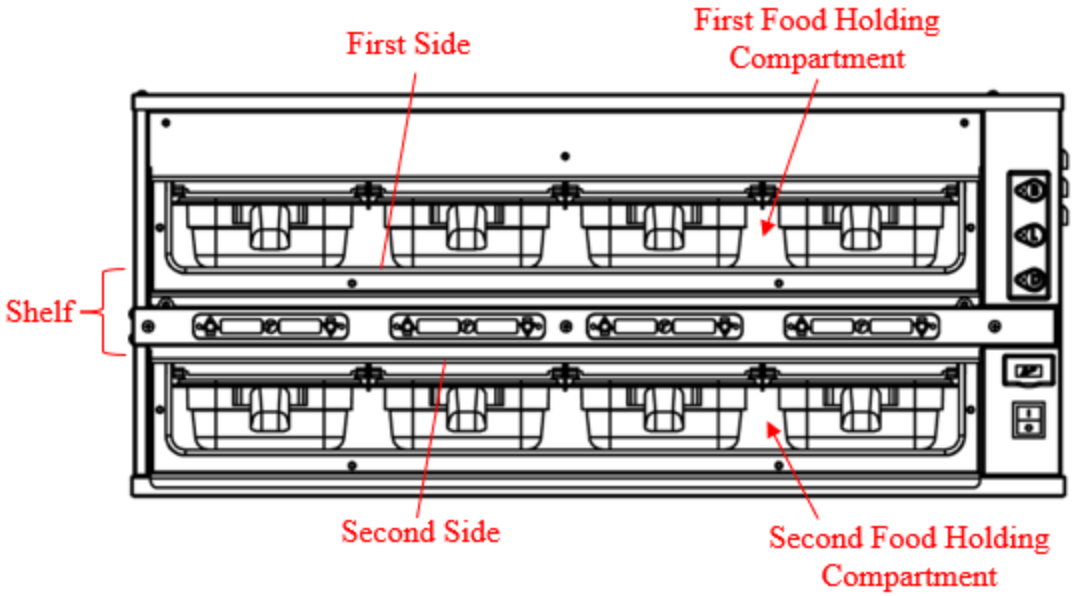
EX1007: 58 (annotated).

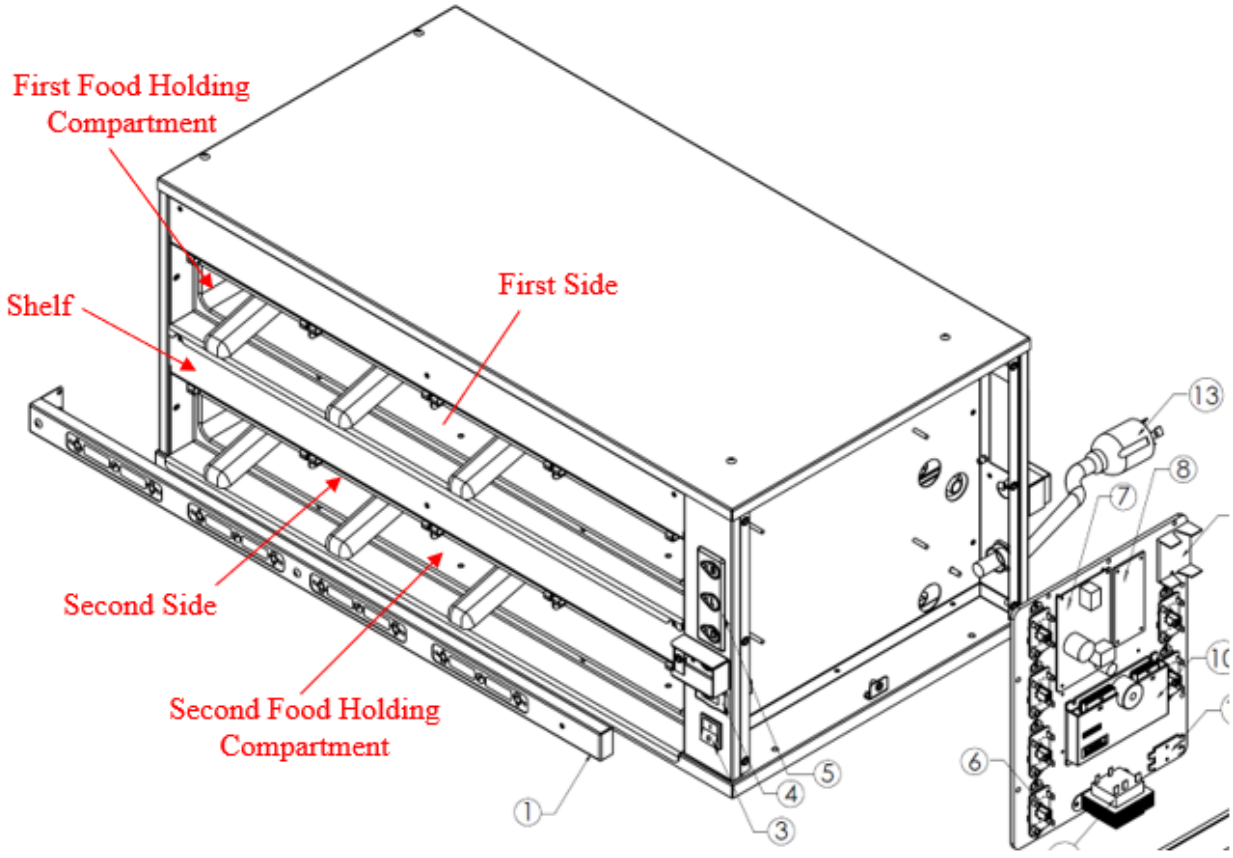


EX1007: 52.

2.b.1

A shelf is located between the first and second compartments. EX1003: ¶¶207-208. The shelf has a first side facing into the first compartment and a second side facing into the second compartment. EX1003: ¶208.

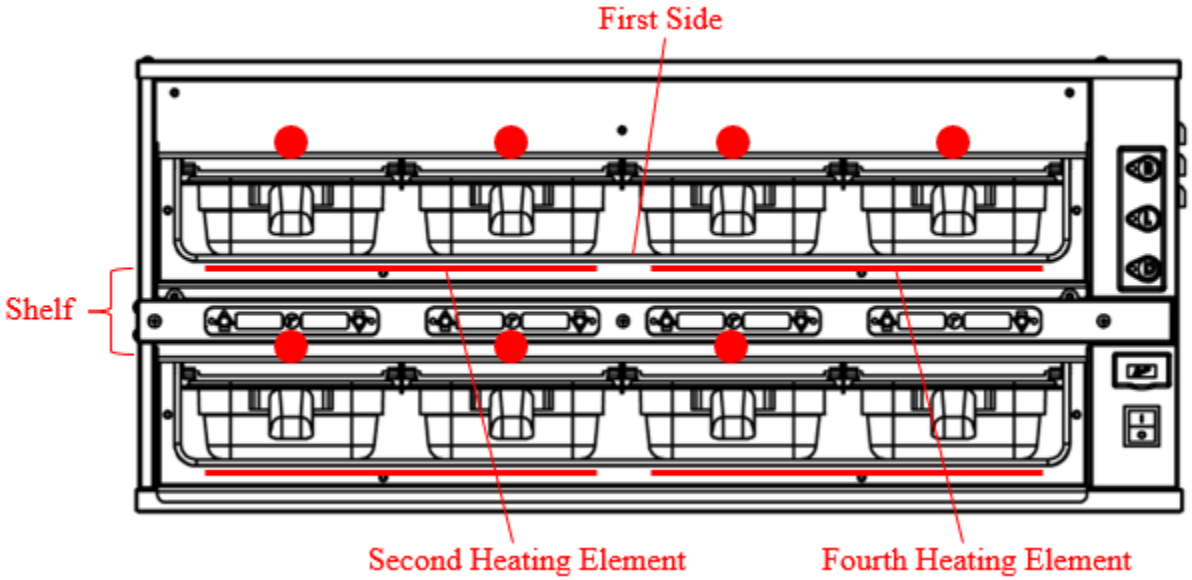




EX1005: 8, 20 (annotated).

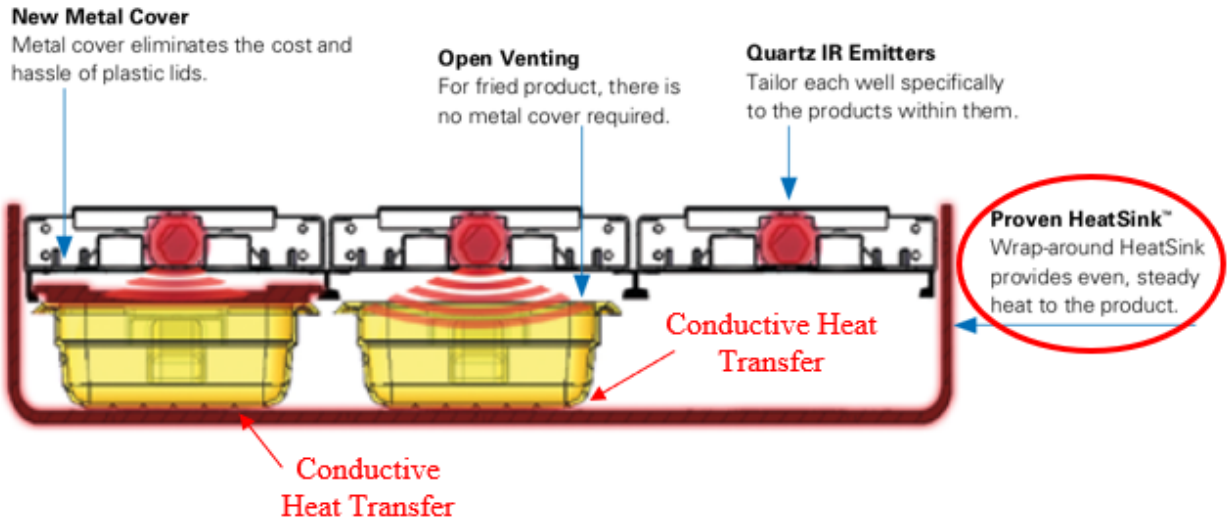
2.b.2

The second and fourth heating elements are disposed in the shelf. EX1016: Fig. 2, ¶[0039]; EX1017: Fig. 3, 4:51-53; EX1003: ¶¶209-210.



EX1005: 8 (annotated).

The second and fourth heating elements are part of the HeatSink for the first compartment. EX1007: 51; EX1003: ¶211. The second and fourth heating elements are affixed to the underside of the heatsink plate forming the planar surface/first side, and, thus, are in the shelf and in thermal communication with the first side. EX1016: Fig. 2, ¶[0039]; EX1017: Fig. 3, 4:51-53; EX1003: ¶¶211-212.



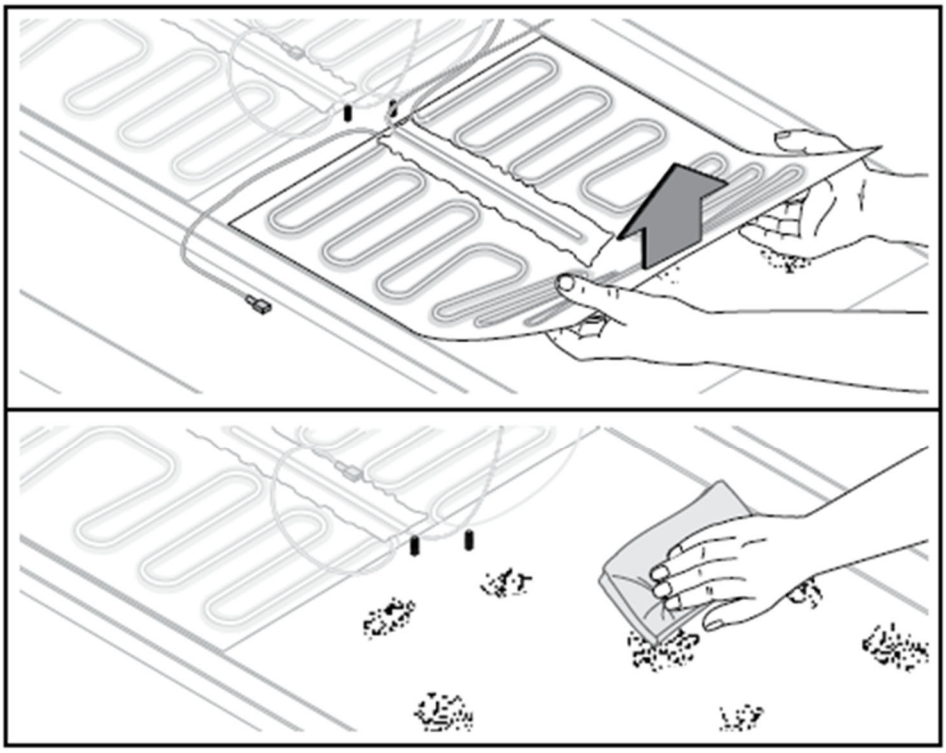
EX1007: 53 (annotated).

HEAT ELEMENTS

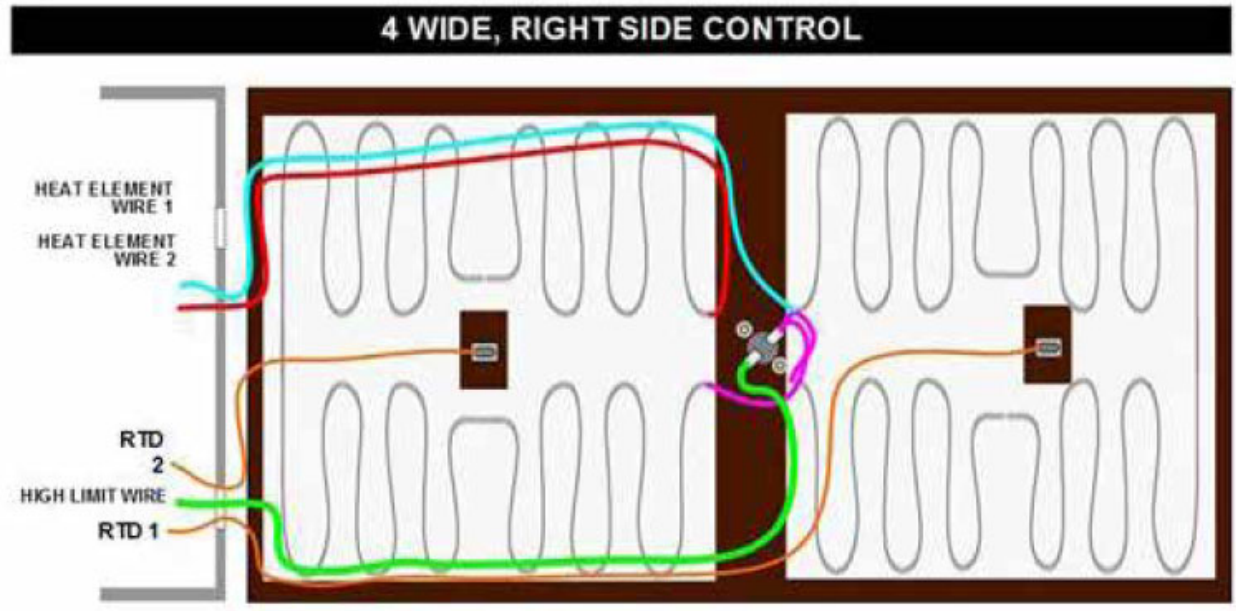
The Heat Elements provide the heating required to keep the heating wells at proper operating temperatures. The quantity varies depending on model and are affixed to the bottom of each Heat Sink.

EX1008: 21.

13. Remove the affected Heat Element by peeling off from the heat sink. Ensure any excess tape and/ or adhesive is removed.



EX1008: 22.



EX1008: 58.

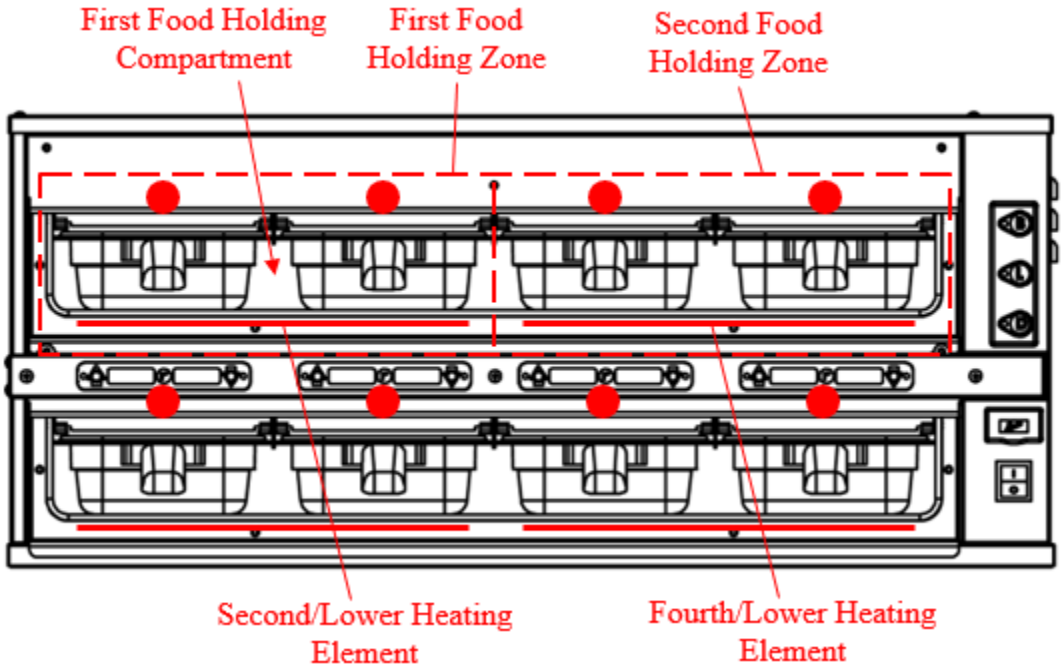
2.b.3

As explained in Sections IV(B)(1.d.2/1.e.2), IV(B)(1.g.2), the second and fourth heating elements are independently controllable via the controller. EX1005: 16, 25; EX1006: 1; EX1007: 53; EX1003: ¶¶213-214.

The second and fourth lower heating elements are capable of providing different amounts of heat energy into the first and second zones. EX1003: ¶¶215, 219. The controller operates the second and fourth heating elements of the respective first and second zones to heat the zones to different temperatures based on the different heat settings for different food types in the food holding zones. Section IV(B)(1.g.2); EX1003: ¶216. The IRHS Documents teach to customize temperature settings by food type and teach holding zones having different food types. EX1006: 1; EX1005: 4, 16; EX1007: 51, 53; EX1003: ¶217. The temperature settings for each zone are independent of the other food product types being held in the other zones. EX1005: 25; EX1007: 53; EX1003: ¶218.



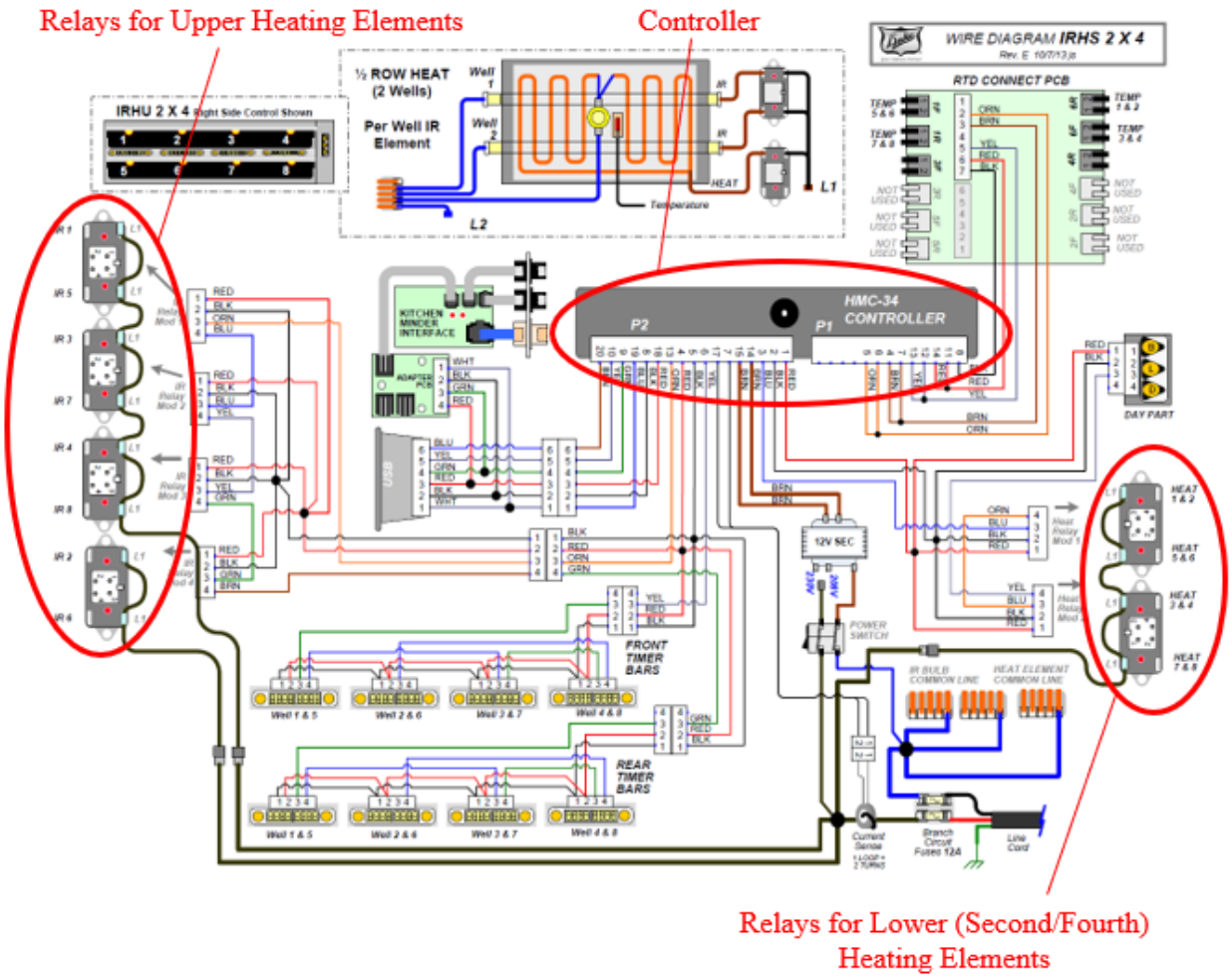
EX1007: 12.



EX1005: 8 (annotated).

2.c

A controller is operatively connected to the second and fourth heating elements. EX1005: 25; EX1003: ¶¶220-221.



EX1005: 25 (annotated).

CONTROLLER

The Controller is used to control the Relays and RTD Sensors. It is located inside the control compartment.

EX1008: 30.

Per Section IV(B)(1.d.2/1.e.2), the second and fourth heating elements are independently controllable. EX1003: ¶222. The controller operates the heating elements of the different food holding zones independently, so each food holding

zone has an independently controlled food holding temperature. EX1005: 16; EX1006: 1; EX1007: 53; EX1003: ¶223. As shown in the wiring diagram, the controller is connected to each heating element, enabling the controller to independently operate each heating element. EX1003: ¶224.

The controller operates the heating elements of each food holding zone based on the specific food product type(s) assigned to the pan locations in the food holding zones. EX1006: 1; EX1005: 4, 16, 25; EX1007: 51; EX1003: ¶225. Based on the food product types assigned to the pan locations in the different zones, the controller independently controls the second and fourth heating elements to achieve the zone's set temperature. EX1003: ¶¶226-228.

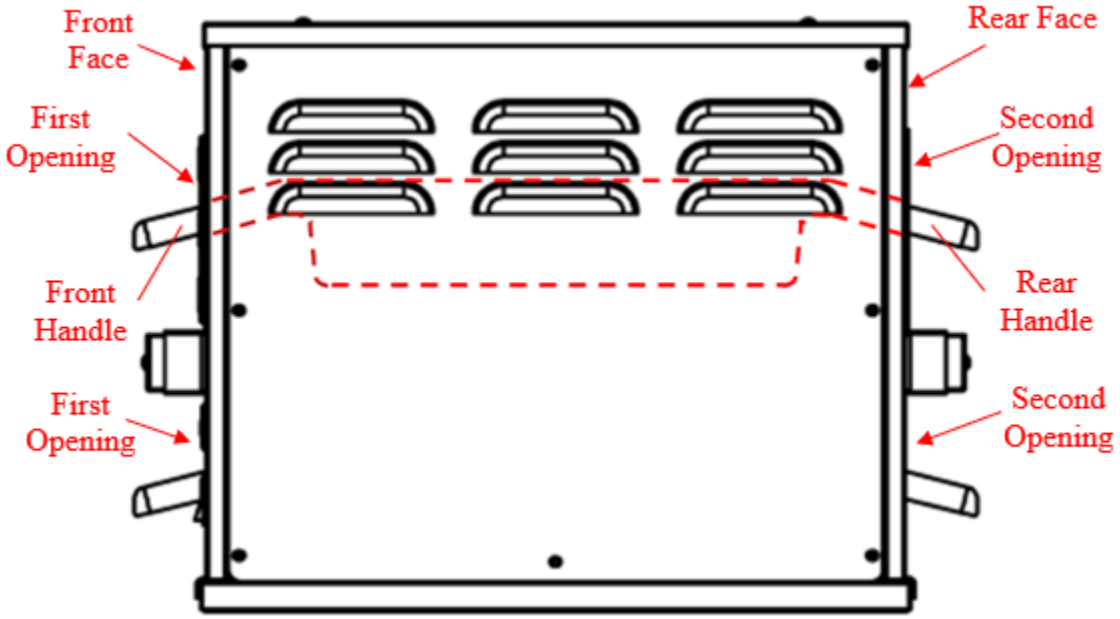
D. Claim 3

POSA understands the IRHS24's front and rear are generally mirror images. EX1008: 12; EX1003: ¶¶229-231.

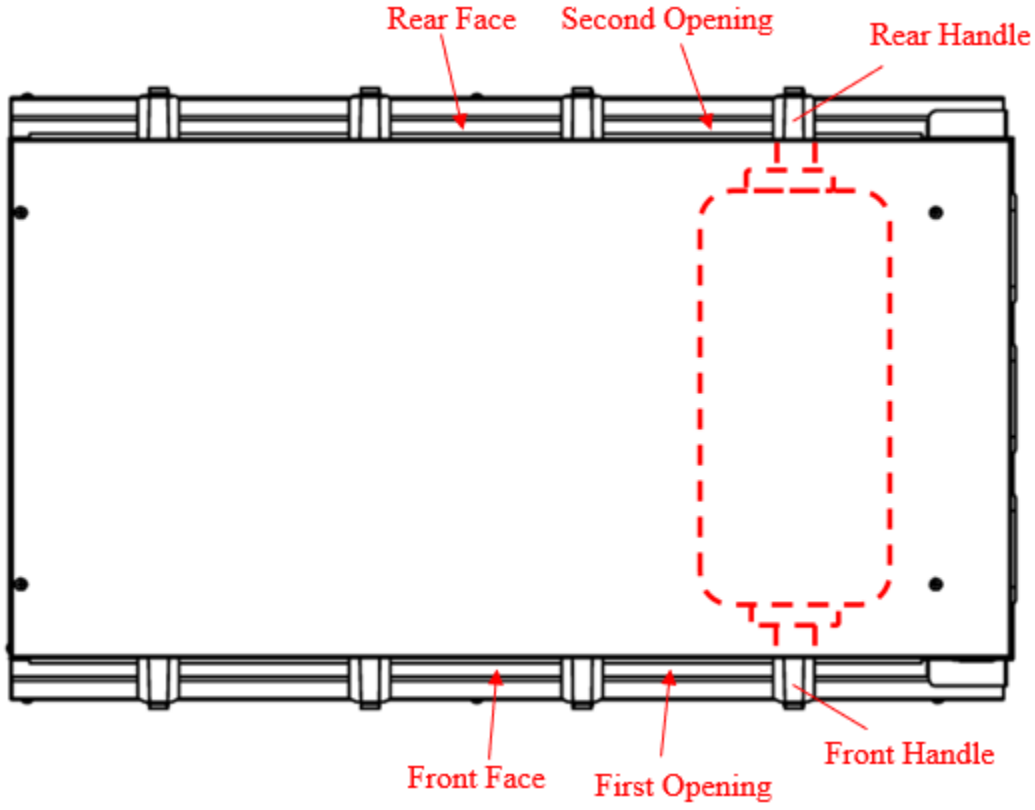
Pan handles extend out the front and rear faces. EX1003: ¶236.



EX1007: 58 (annotated).



EX1005: 8 (annotated).



EX1005: 8 (annotated).

The chassis has second openings along the rear face (like the first openings) through which the handles extend. EX1003: ¶¶237-238.

This makes IRHS24 a pass-through unit allowing front/rear access. EX1007: 67; EX1003: ¶235. POSA understands the second openings are similar to the first openings. EX1010: Figs. 1, 6, ¶[0014]; EX1011: Figs. 1-2; EX1014: Figs. 5, 8; EX1003: ¶239.

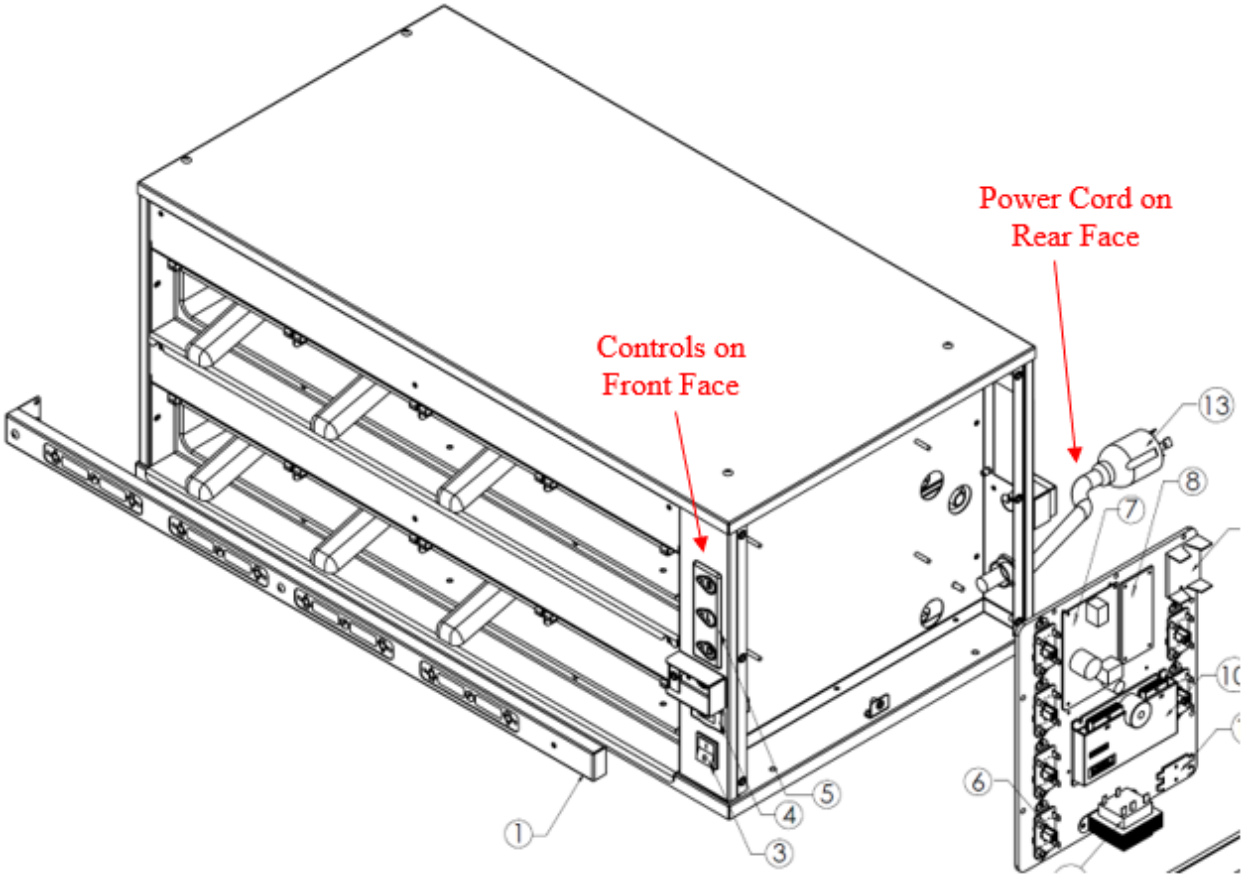
Moreover, the IRHS Documents illustrate the front and rear faces as generally mirror images (front including side panel controls, rear including a power cord). EX1003: ¶¶232-234.





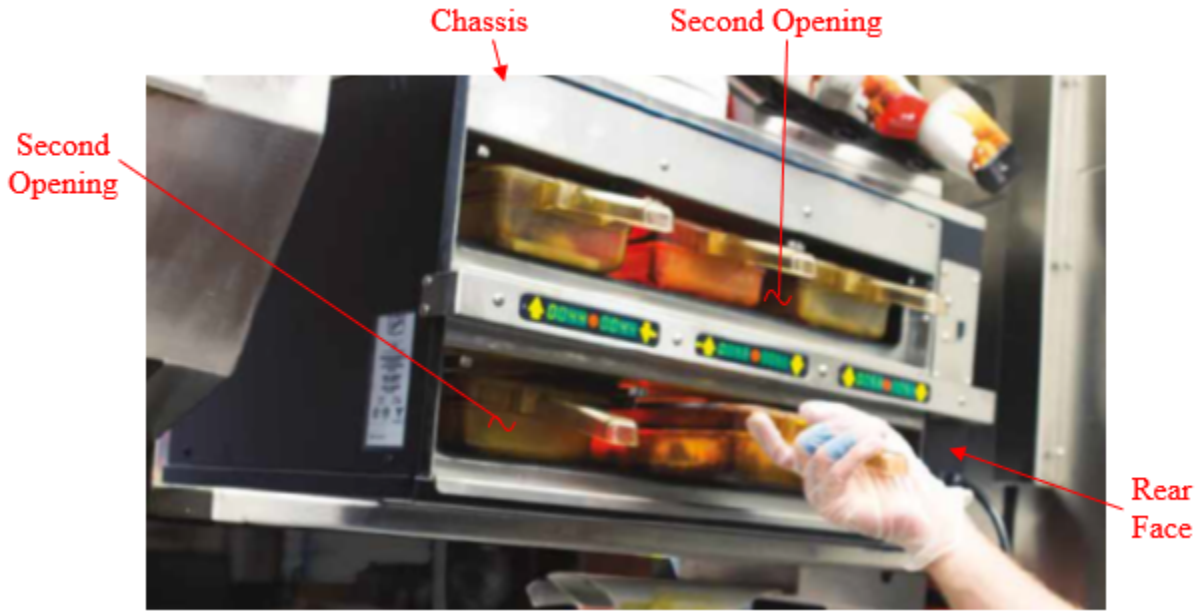


EX1007: 28, 51, 52 (annotated).



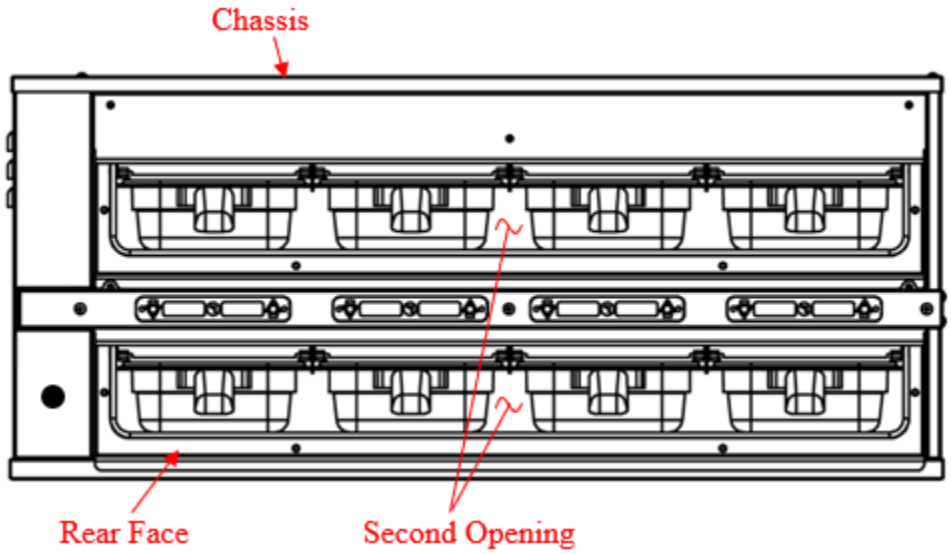
EX1005: 19 (annotated).

The illustrated rear face of the chassis has uncovered second (rear) openings for each compartment. EX1003: ¶240.



EX1007: 52 (annotated).

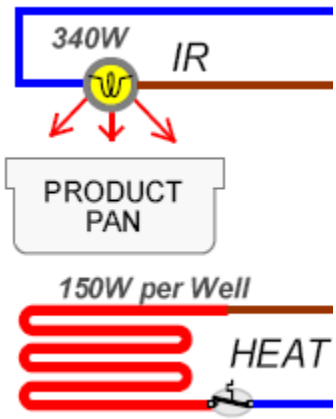
POSA understands this construction applies to the IRHS24, a representative rear elevation of which below shows the first and second compartments each having an uncovered second opening at the rear face of the chassis. EX1003: ¶¶241-242.



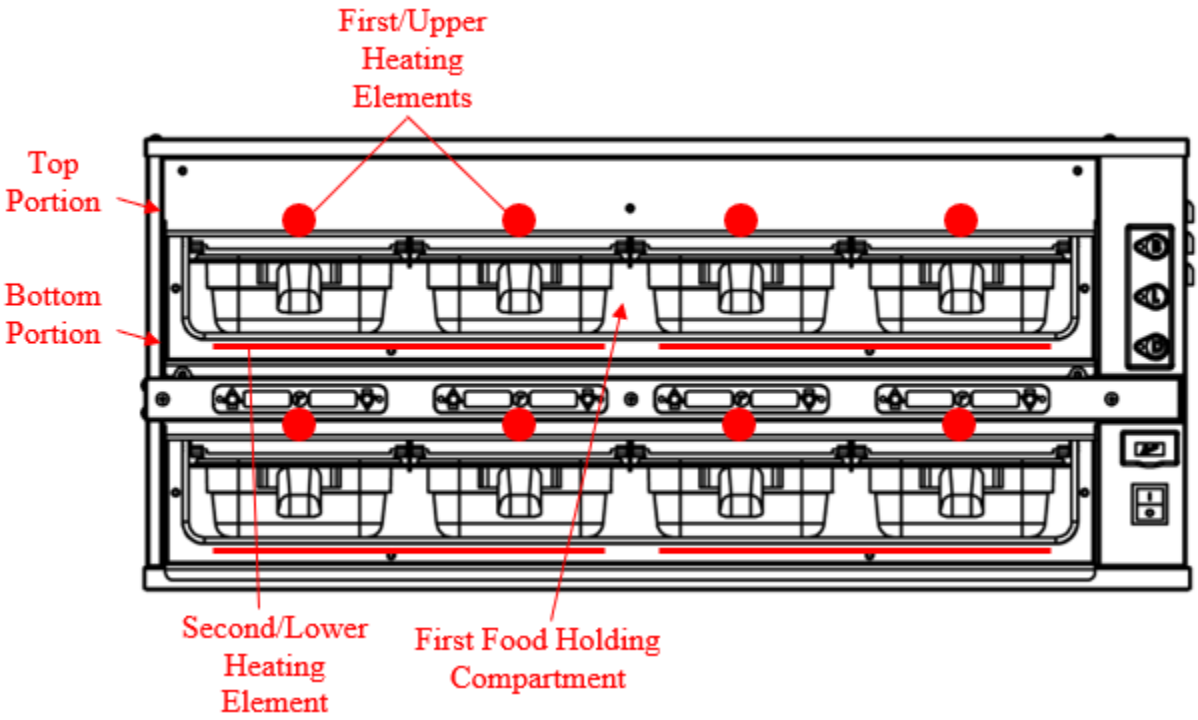
EX1005: 8 (modified to represent rear elevation).

E. Claim 4

Per Sections IV(B)(1.d.2/1.e.2), IV(B)(1.g.2), the first and second heating elements are independently controllable. EX1003: ¶¶243-245. The IR first/upper heating elements are controllable via controller (adapted) to output more heat energy than the second heating element. EX1003: ¶245. Moreover, each first/upper heating element is rated (adapted) for more wattage (340W) than the second/lower heating element (300W). EX1008: 64; EX1003: ¶246. Further, the first/upper elements perform "IR Turbo Boost for [an] instant shot of IR energy," while the second/lower element "provides ***gentle*** heat." EX1006: 1; EX1007: 22; EX1003: ¶247. The first/upper elements output more heat energy than the "gentle" second/lower element at least during IR Turbo Boost. EX1003: ¶¶247-248.



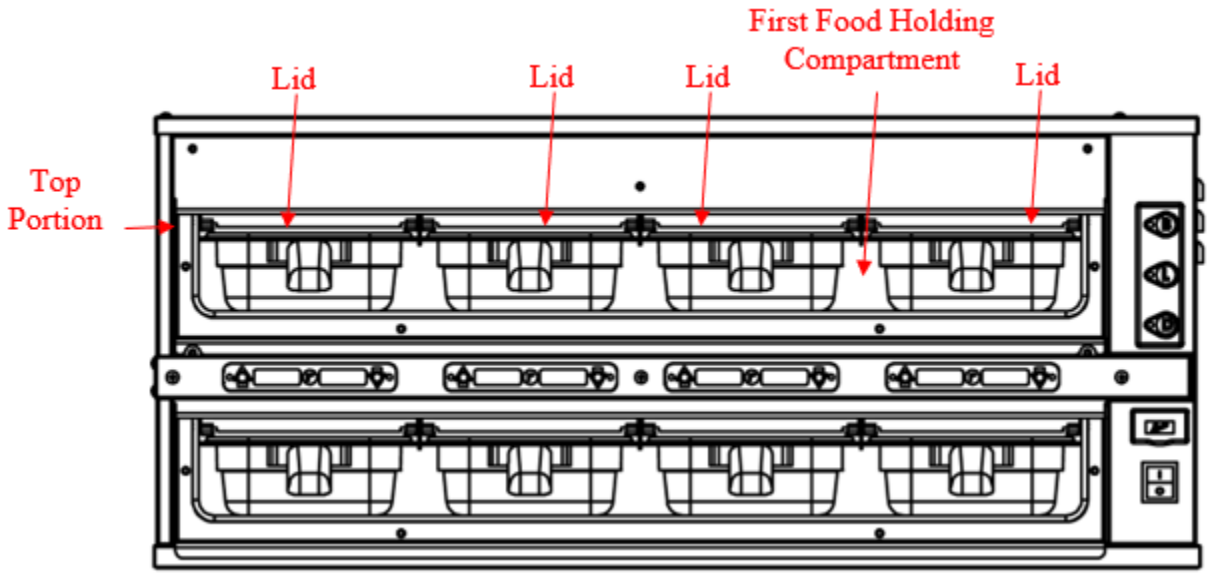
EX1008: 64.



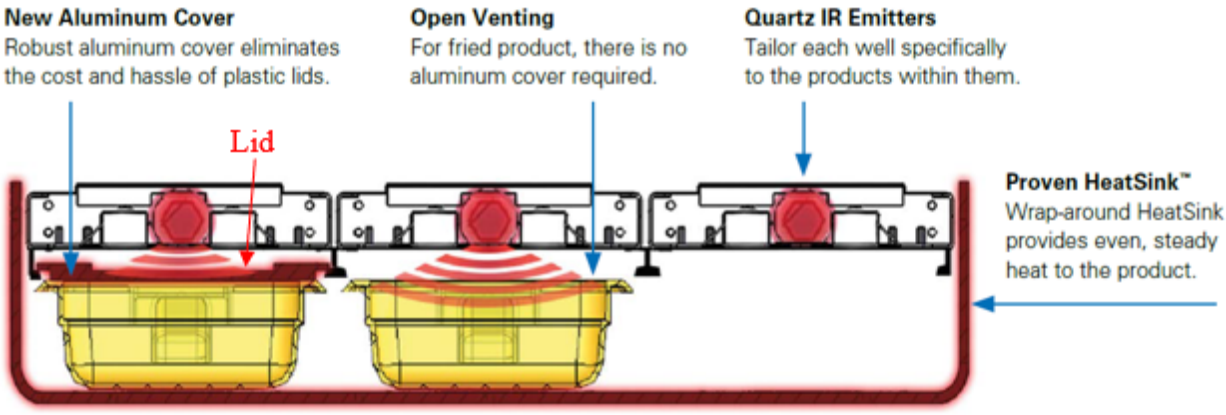
EX1005: 8 (annotated).

F. Claim 5

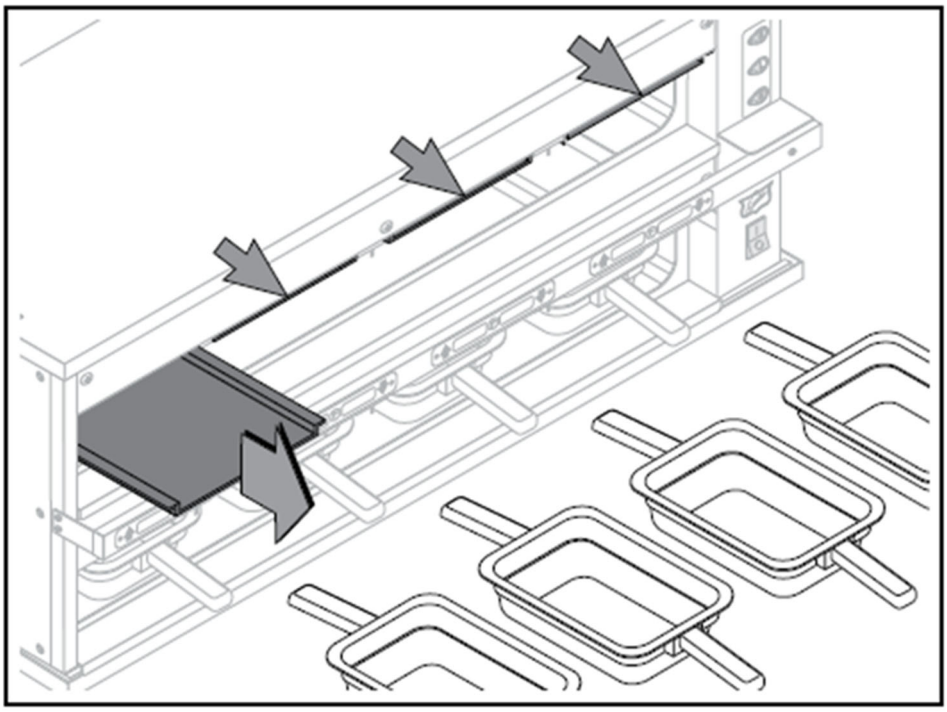
The IRHS24 includes covers or lids in the top portion of the first compartment for each pan. EX1005: 4, 8, 20-21; EX1007: 53, 56, 58; EX1003: ¶¶249-252.



EX1005: 8 (annotated).

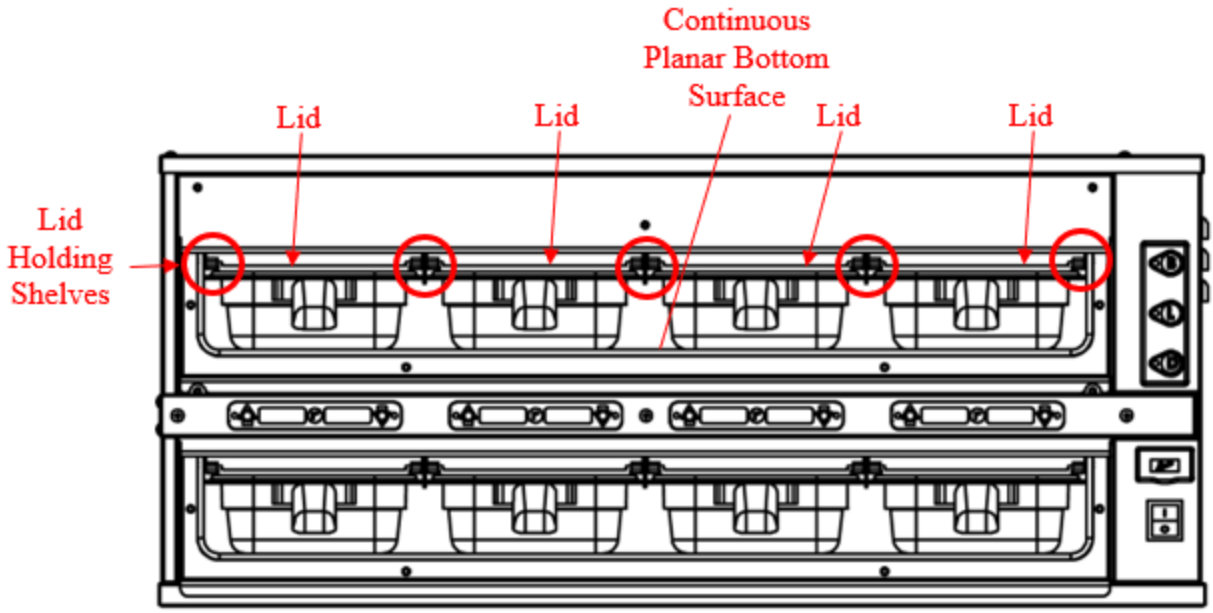


EX1007: 53 (annotated).

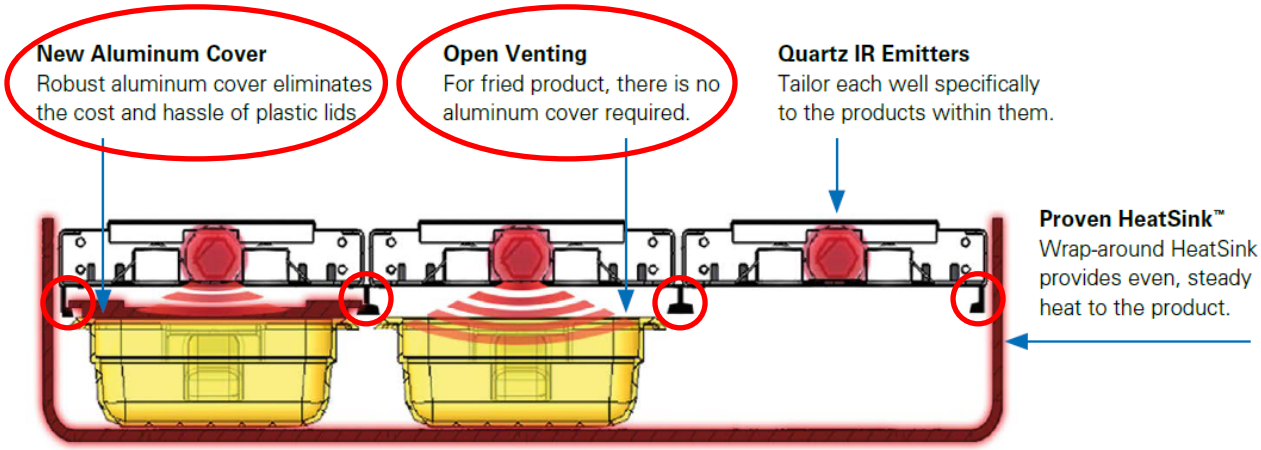


EX1008: 16.

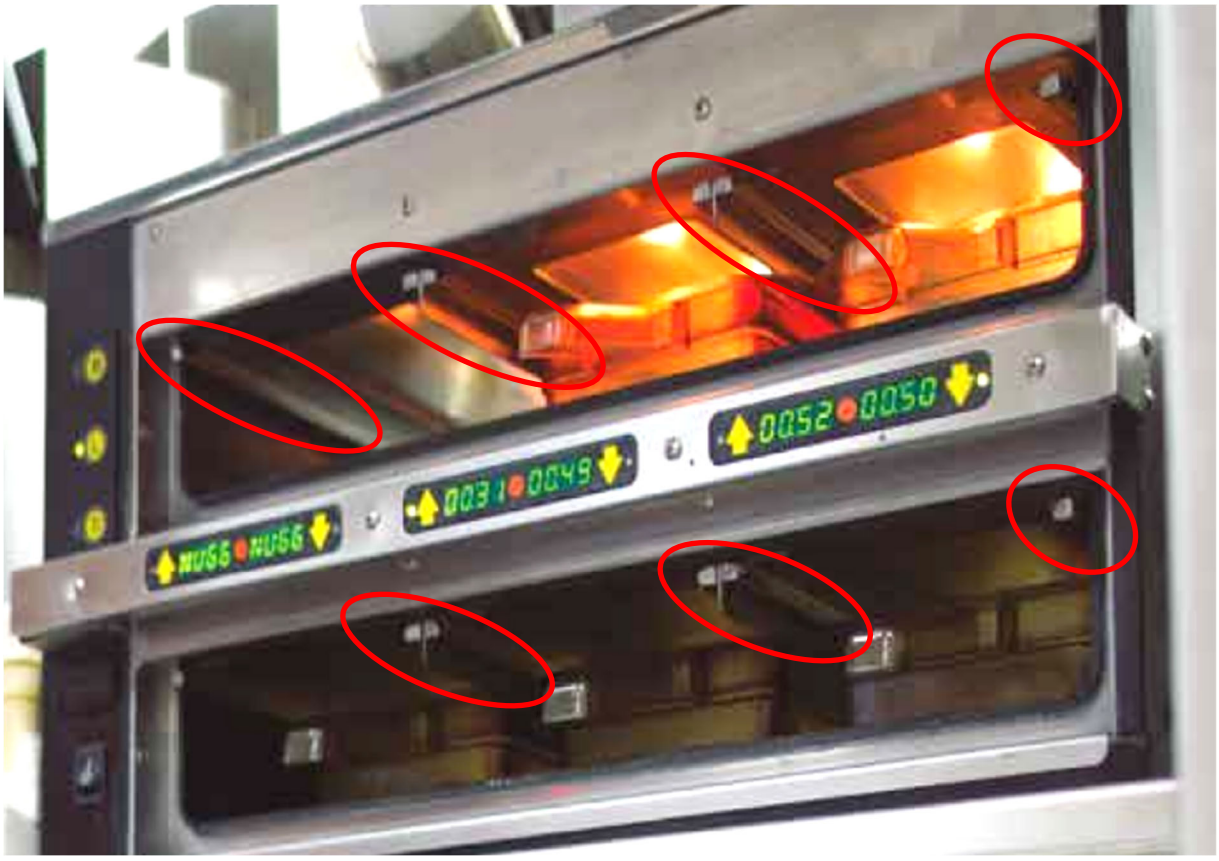
Lid-holding shelves receive the lids in the first compartment. EX1003: ¶253. The lid-holding shelves, and the lids held thereby, are elevated above the continuous and planar bottom surface. EX1003: ¶254. The lids are insertable into the shelves. EX1005: 4, 14, 16; EX1006: 1; EX1007: 51, 58; EX1008: 16; EX1003: ¶255.



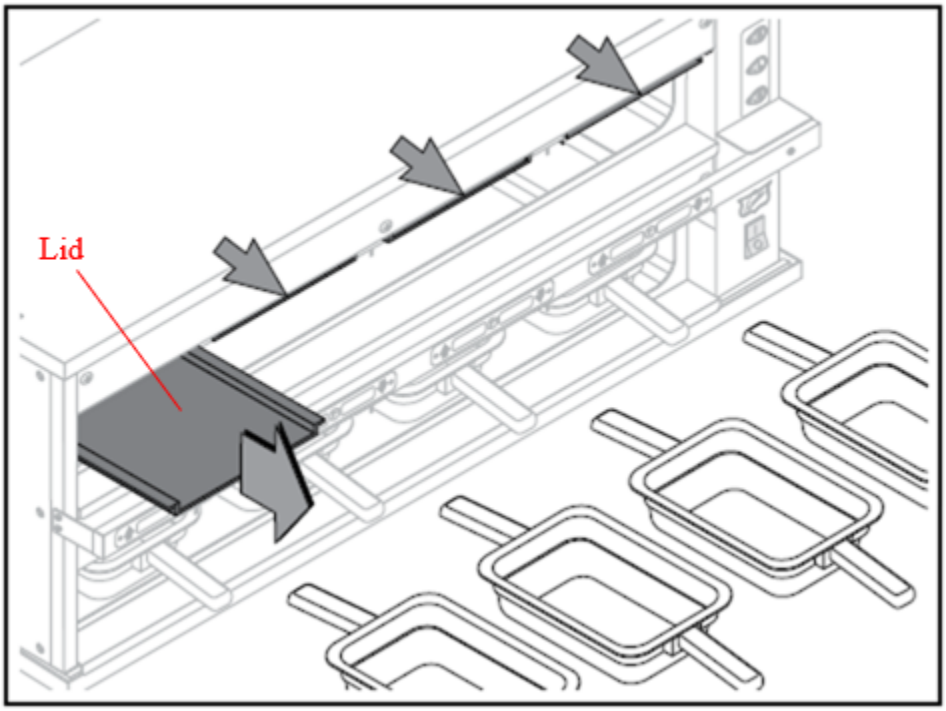
EX1005: 8 (annotated).



EX1007: 53 (annotated).



EX1007: 36 (annotated).

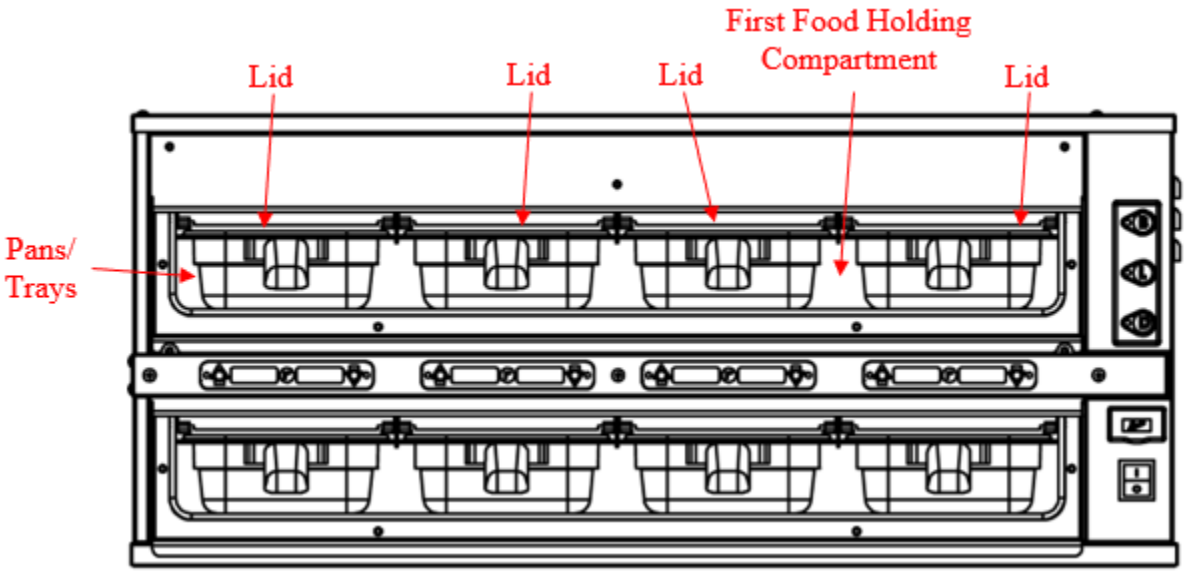


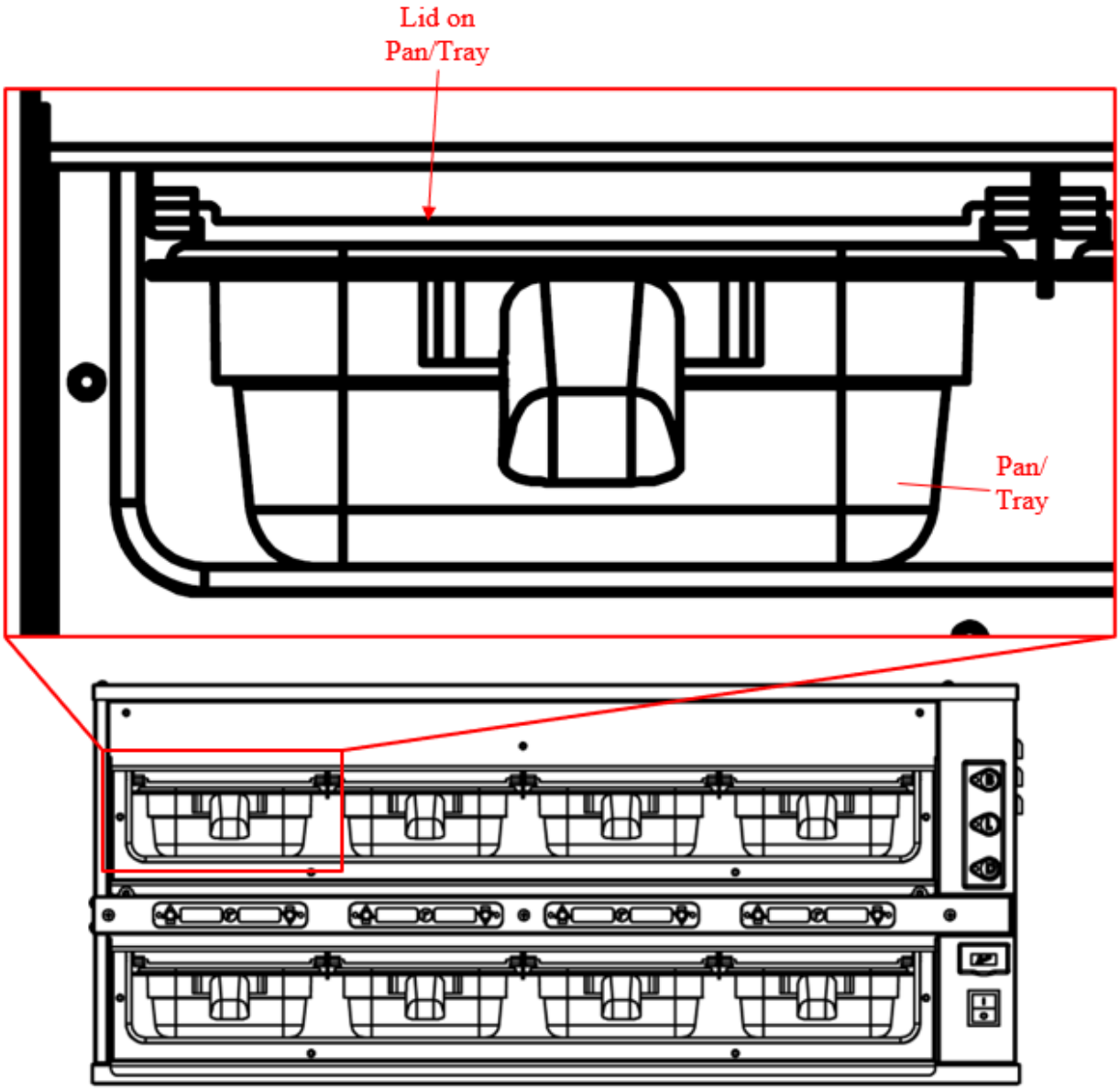
EX1008: 16 (annotated).

Although the above image shows the lid being removed, insertion would occur in the reverse direction. EX1003: ¶¶256-257.

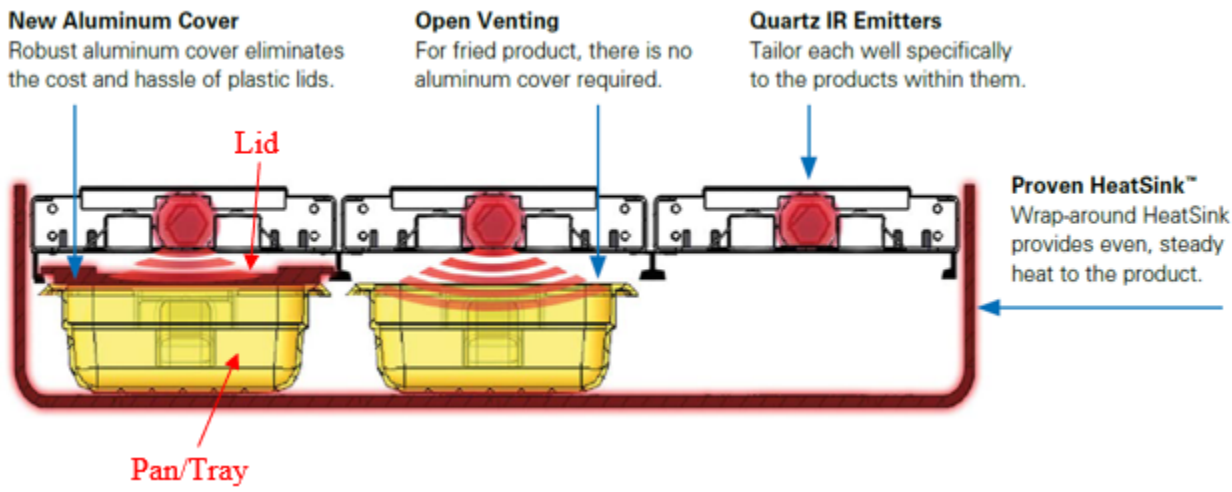
G. Claim 7

Shown below, the lids rest on their corresponding food pan/tray. EX1005: 4, 8, 20-21; EX1007: 53, 56, 58; EX1003: ¶¶258-263.





EX1005: 8 (annotated).

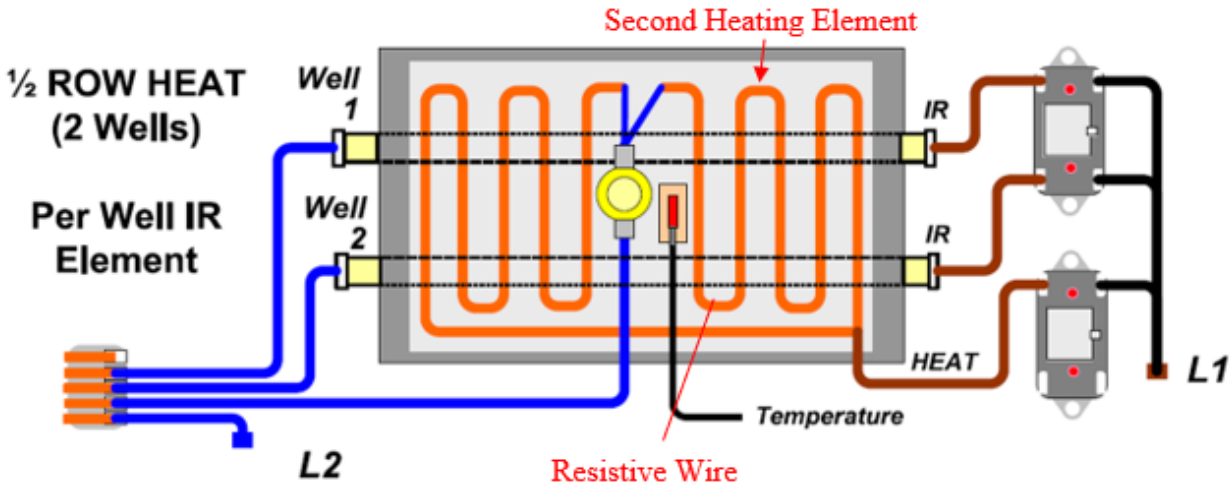


EX1007: 53 (annotated).

H. Claim 8

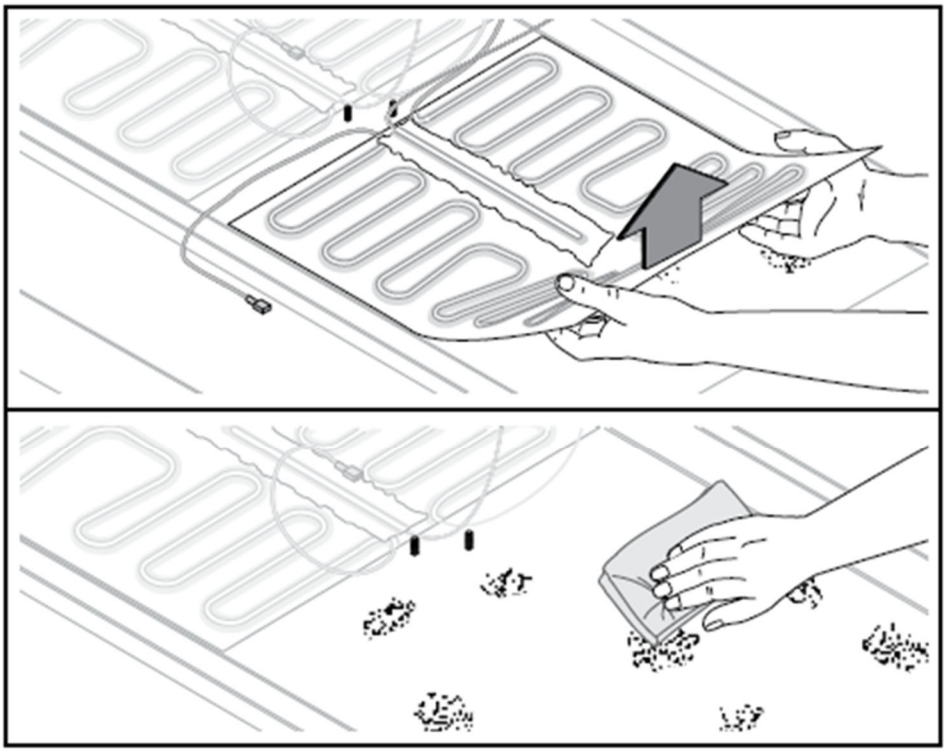
The second heating element is an electrically resistive heating wire.

EX1003: ¶¶264-267.



EX1005: 25 (annotated).

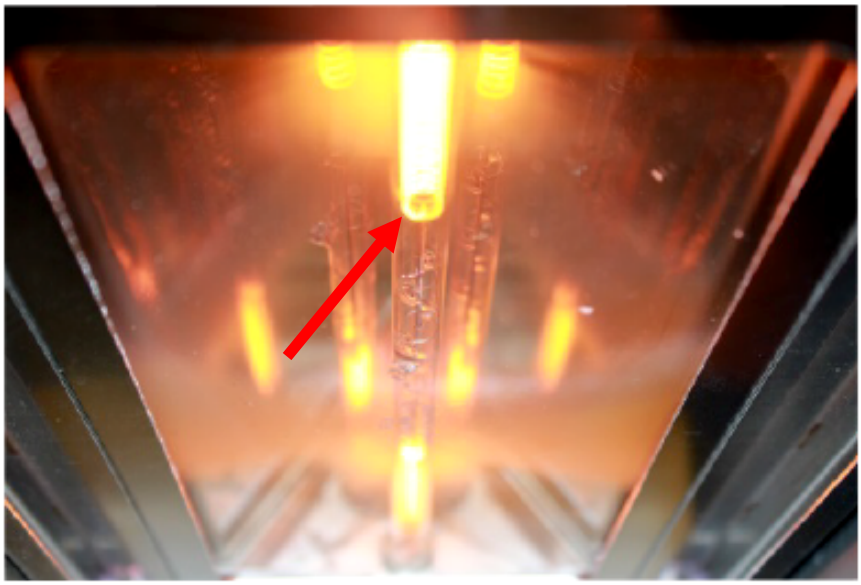
13. Remove the affected Heat Element by peeling off from the heat sink. Ensure any excess tape and/ or adhesive is removed.



EX1008: 22 (showing the resistive wire is flexible).

The first heating elements are Quartz IR Bulbs having a coiled resistive wire (glowing/hot). EX1007: 53; EX1025: 1:29-30; EX1003: ¶¶268-269.

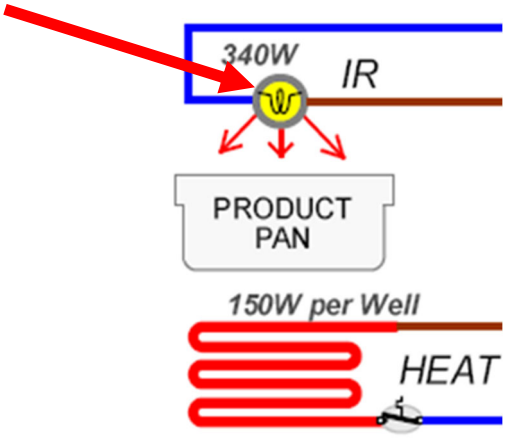
Duke Sealed IR



- Long lasting, proven emitters have been used in Duke holding equipment for 10 years.



EX1007: 11, 36 (annotated).

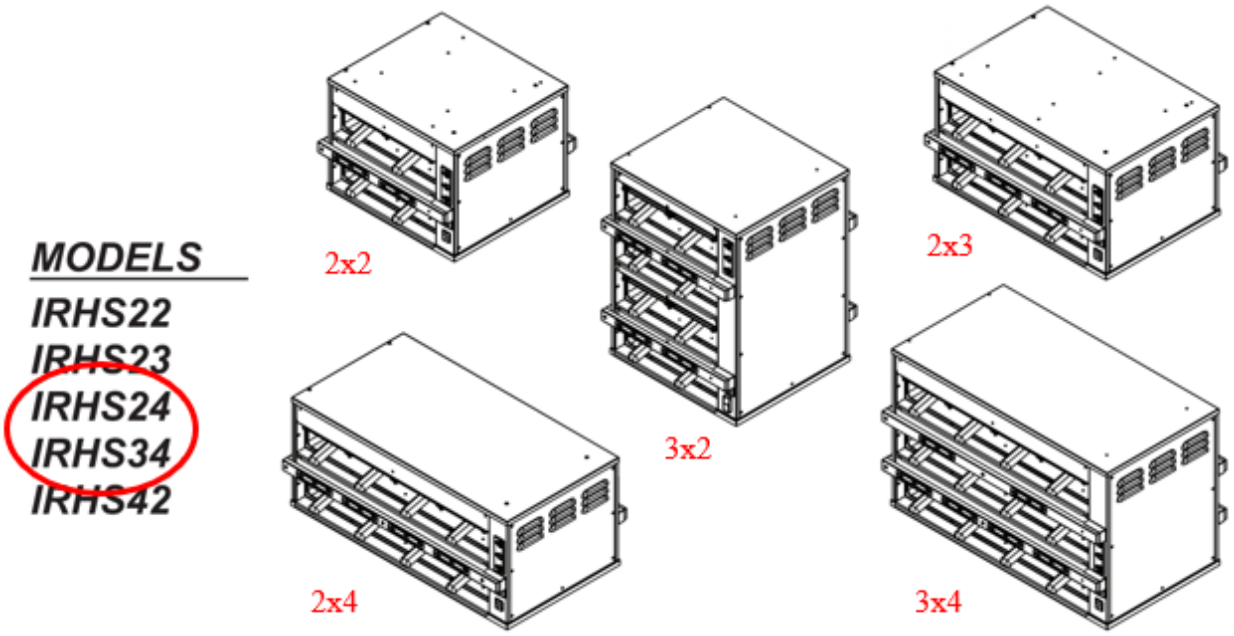


EX1008: 64 (showing schematic coiled resistive wire).

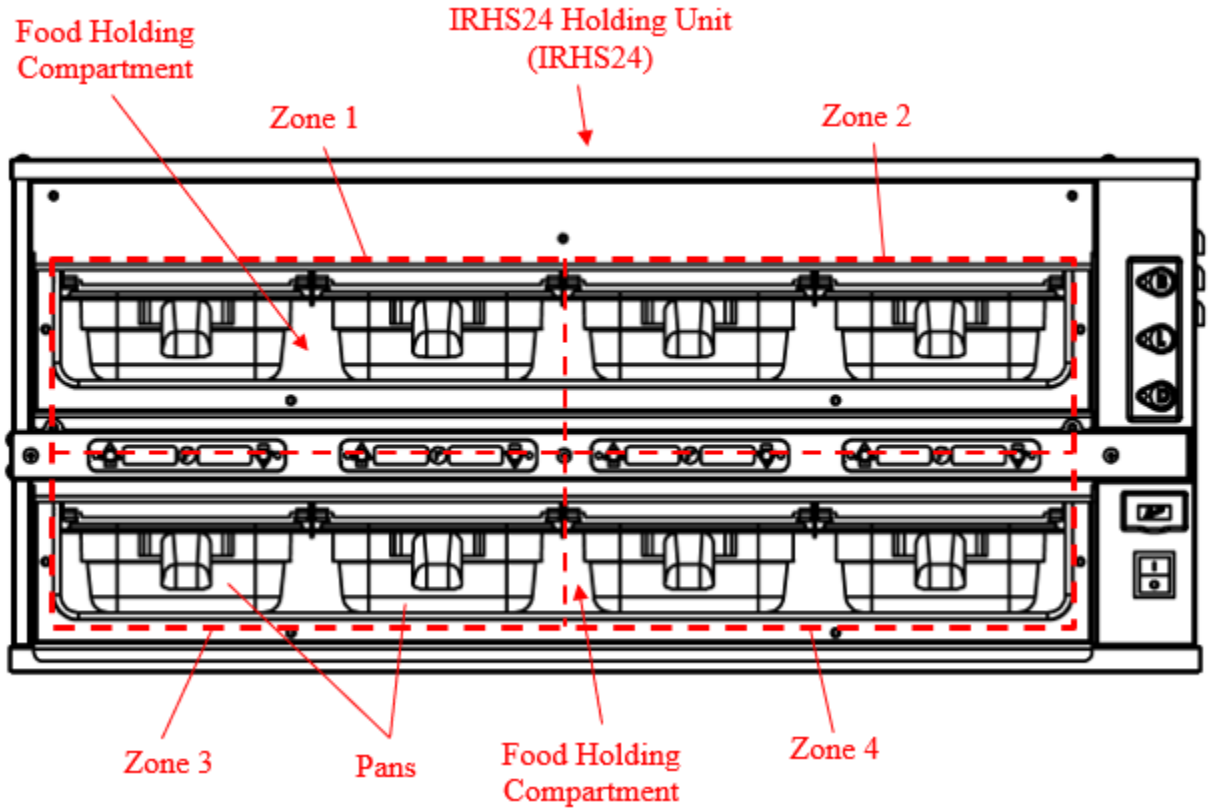
I. Independent Claim 9

9.P

The IRHS Documents disclose multi-zone food holding bins having food holding compartments with multiple zones for maintaining different temperatures. EX1005: 4, 6, 9; EX1006: 1; EX1007: 51, 56; EX1008: 1; Sections IV(B)(1.d.1/1.e.1), IV(B)(1.g.2); EX1003: ¶¶270-271.



EX1005: 1 (annotated).



EX1005: 8 (annotated).



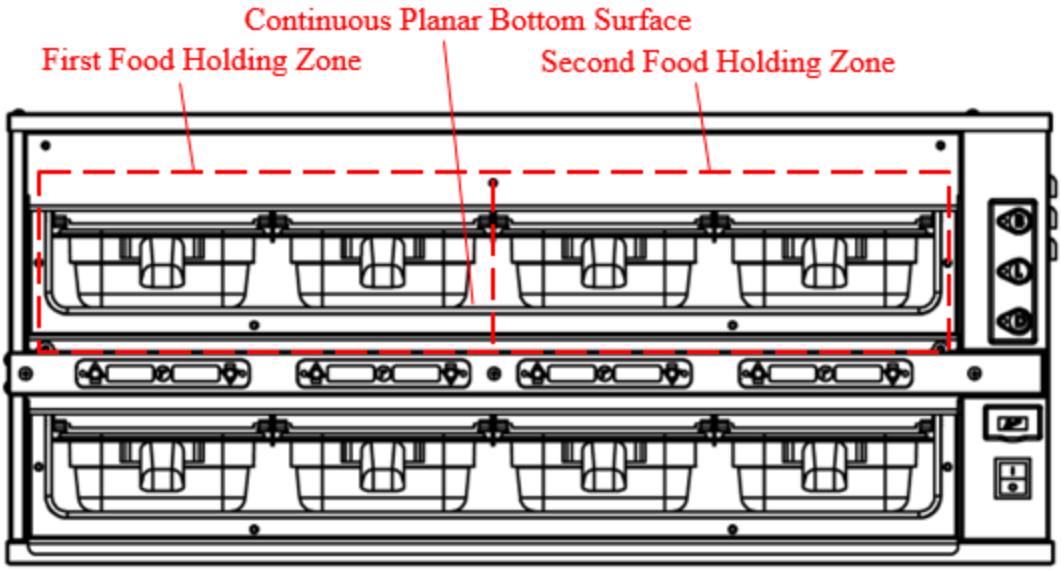
EX1007: 56.

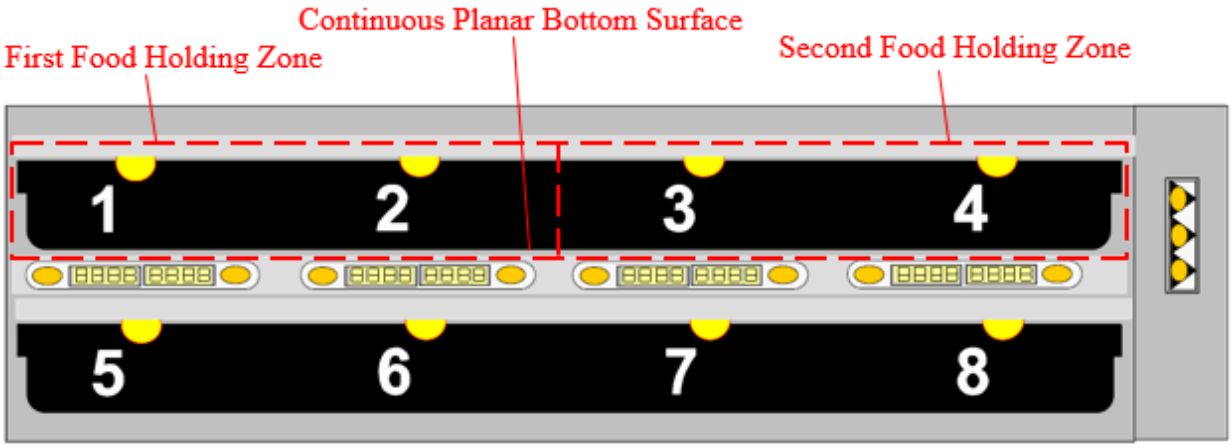
9.a.1

Met per Sections IV(B)(1.b.1), IV(B)(1.d.1/1.e.1), IV(B)(1.g.1). EX1003: ¶272.

9.a.2

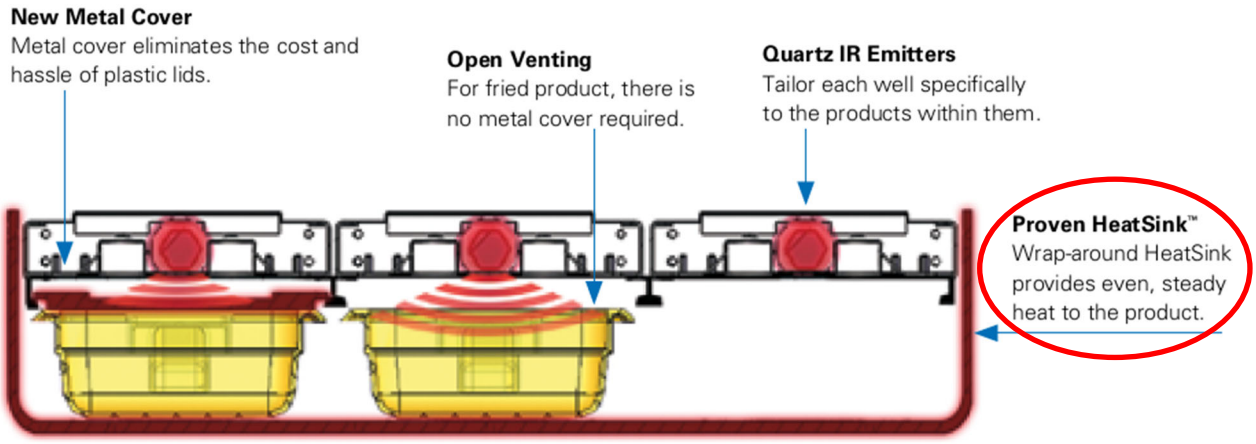
The first and second zones share an uninterrupted continuous planar bottom surface. EX1003: ¶273.





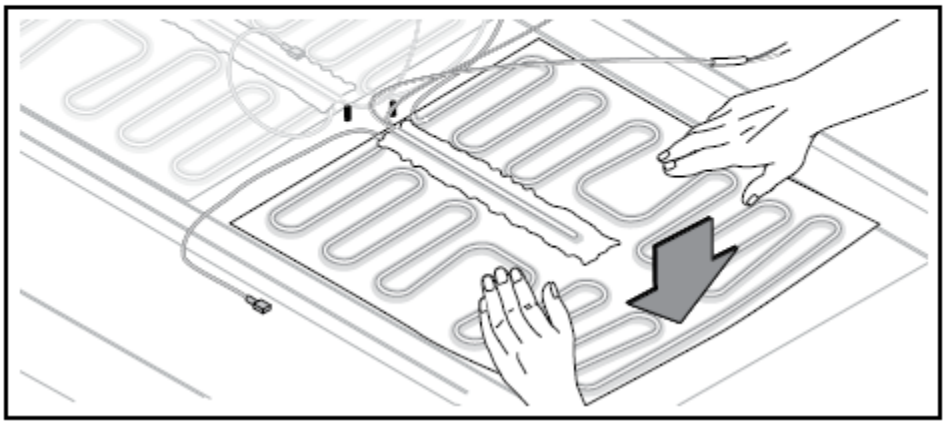
EX1005: 8, 25 (annotated).

The continuous planar surface comprises aluminum. EX1006: 1 ("[a]nodized aluminum HeatSink"); EX1003: ¶¶274-275. The planar surface is part of the HeatSink, which is made of aluminum. EX1007: 51; EX1005: 16; EX1003: ¶¶274-275. Moreover, it would have been obvious for the planar surface to comprise aluminum per Section IV(B)(1.c.3). EX1003: ¶¶276-277.



EX1007: 53 (annotated).

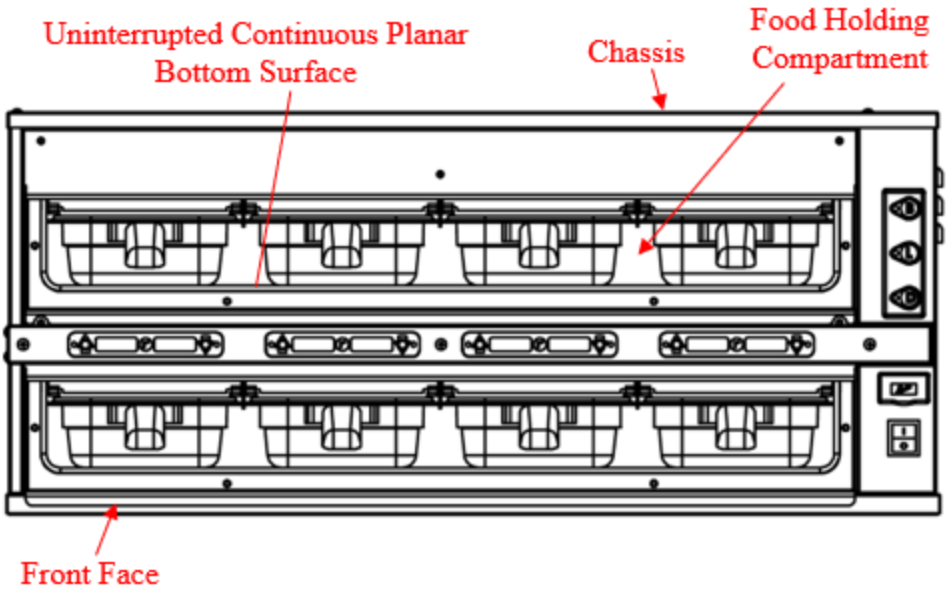
14. Peel the adhesive tape cover off the replacement Heat Element and press in place on the heat sink, ensuring all air bubbles are smoothed out.



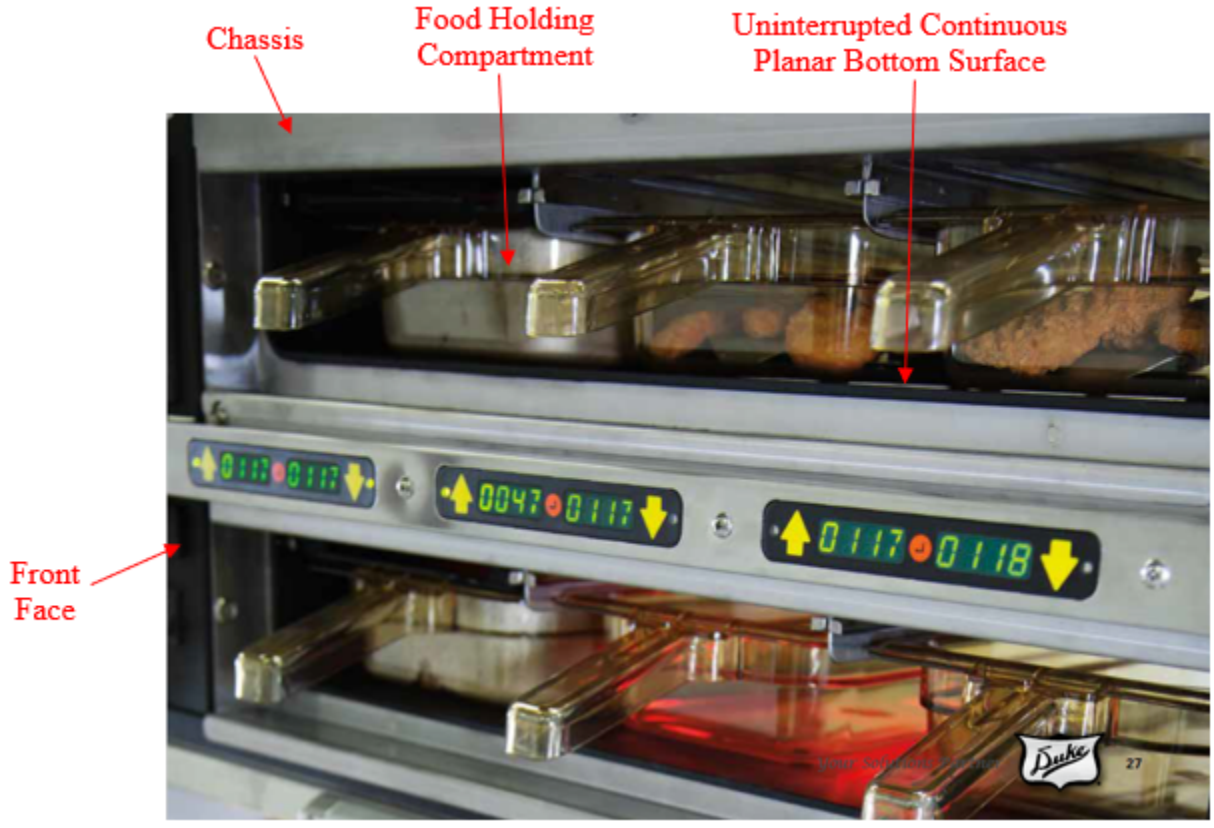
EX1008: 23.

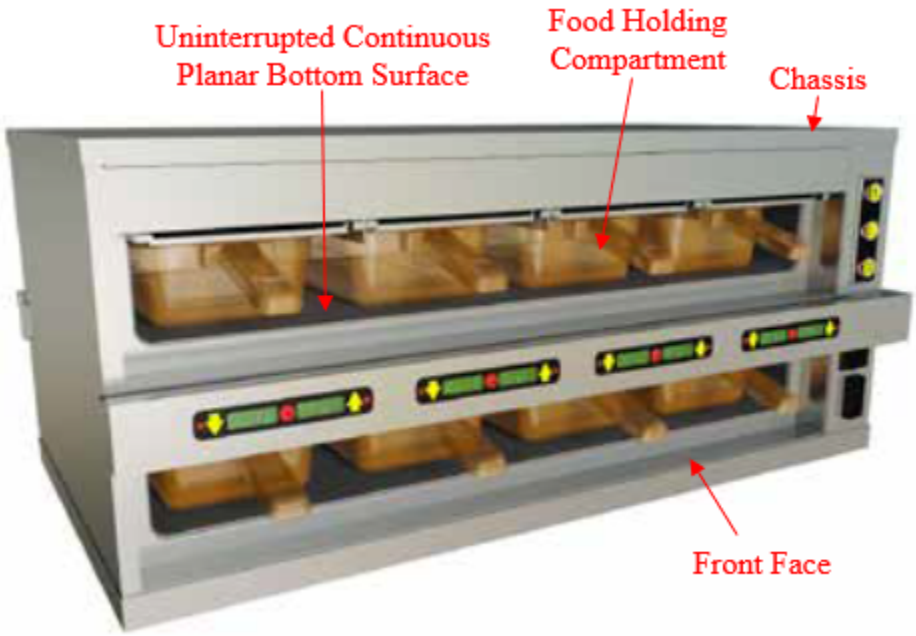
9.a.3

The uninterrupted continuous planar bottom surface extends to the front face of the chassis that forms the compartment. EX1003: ¶278. Moreover, the continuous planar bottom surface extends to the front face for the same prosecution history reasons explained in Section IV(B)(1.c.2). EX1003: ¶278.



EX1005: 8 (annotated).





EX1007: 52, 56 (annotated).

9.a.4

Met per Section IV(B)(1.f). EX1003: ¶279.

9.a.5

Met per Sections IV(B)(1.d.2/1.e.2), IV(B)(1.h.1)-(1.h.2). EX1003: ¶280.

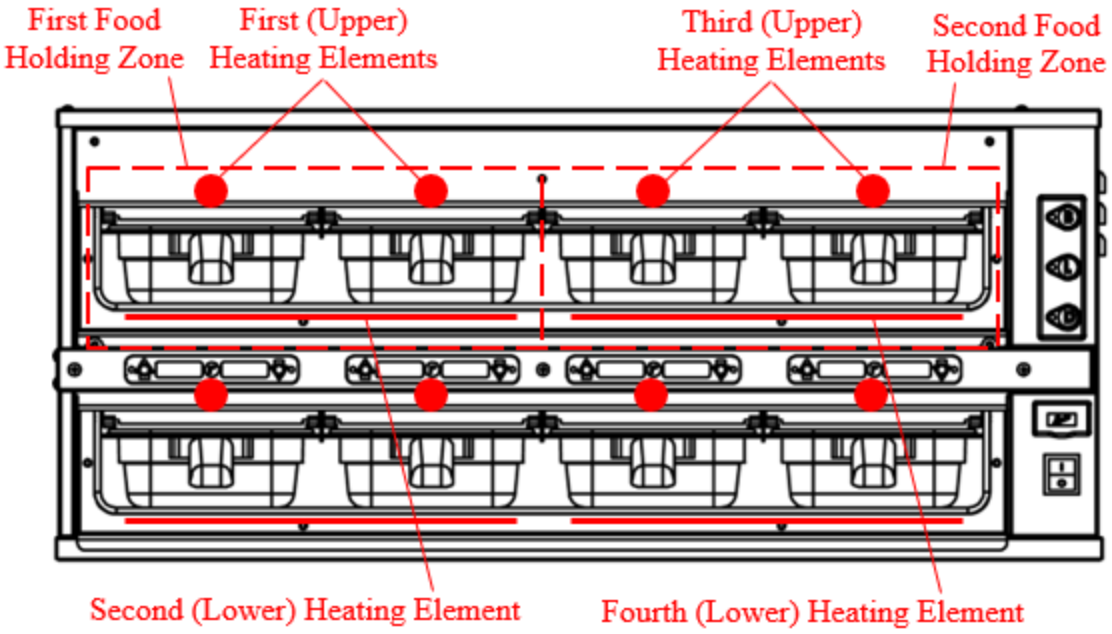
9.a.6

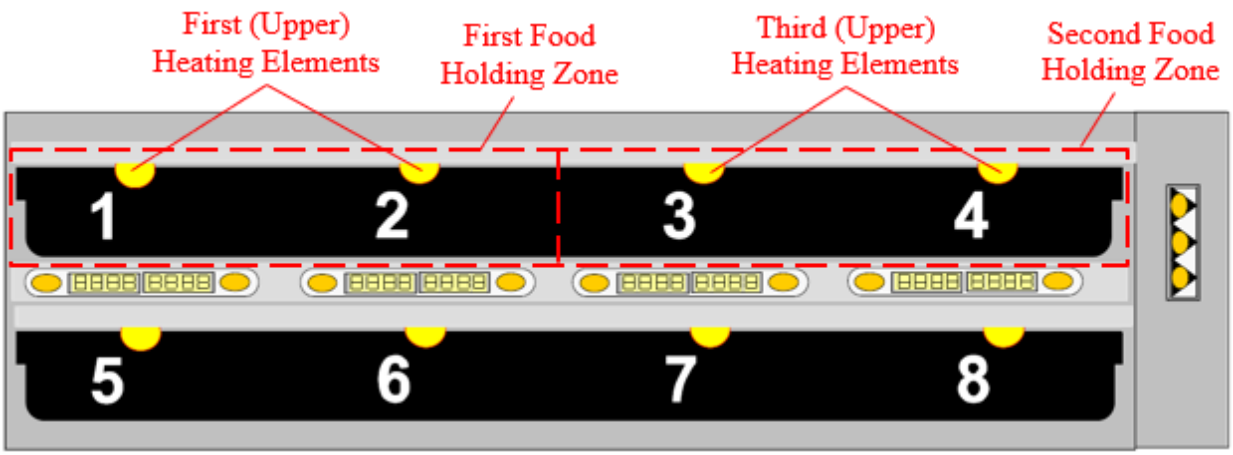
Met per Sections IV(B)(1.d.2/1.e.2), IV(B)(1.h.1)-(1.h.2). EX1003: ¶281.

The third radiant heating element heats radiantly from above as explained with respect to or for the same reasons as the first radiant heating element. Section IV(B)(1.h.1); EX1003: ¶282. The fourth conductive heating element heats conductively from below as explained with respect to or for the same reasons as the second conductive heating element. Section IV(B)(1.h.2); EX1003: ¶283.

9.b/9.c

Per Sections IV(I)(9.a.5)-(9.a.6), the first and second heating elements heat the first zone and the third and fourth heating elements heat the second zone. EX1003: ¶¶284, 292. Per Section IV(B)(1.g.2), the first and second heating elements are operated by the controller to maintain a temperature of the first zone and the third and fourth heating elements are operated by the controller to maintain a temperature of the second zone. EX1003: ¶¶285, 293.





EX1005: 8, 25 (annotated).

The IRHS holds a diverse menu of food products, identifying more than 16 different food types including fried and broiled foods spanning breakfast (eggs, French toast sticks, sausage patties) and lunch/dinner menus (e.g., burger patty, tendercrisp (fried chicken), fish, tendergrill (broiled chicken), rib patty, turkey burger, stuffed burger patty), including products of different proteins (e.g., beef, chicken, fish, pork, turkey), fat contents, surface textures/coatings, and recipes, with such products benefitting from different holding conditions. EX1007: 9, 12; EX1003: ¶¶286-287.

The IRHS24 solves the "menu proliferation" pain point by providing "[u]nlimited flexibility for future menu and operational changes." EX1007: 31, 33, 53; EX1003: ¶288.

Menu Item	Hold Time Increase with New IRHS (%)	Hold Time Increase with New IRHS (min)
EXPEDITE - FRIED		
Chicken Strips	200%	40 min
Nuggets	100%	30 min
MAIN BOARD - FRIED		
Chick'n Crisp	100%	30 min
OCS	500%	30 min
Tendercrisp	150%	45 min
Fish	50%	15 min
MAIN BOARD - BROILED		
Whopper Jr.	78%	45 min
Tendergrill	25%	30 min
1.7 burger	100%	45 min
Whopper	100%	45 min
Turkey Burger	100%	45 min
Stuffed Burger	100%	45 min
Rib Patty	100%	45 min
BKFST		
Eggs	100%	45 min
Sausage Patty	50%	30 min
French Toast Sticks	33%	15 min

EX1007: 9.

The IRHS holds diverse food products simultaneously and in different precise/customized holding environments for "freedom in product placement" and "optimal quality, consistency and extended hold." EX1007: 51 ("each food product has tailored settings to control the thermal path of the food, leading to optimal quality, consistency and extended hold"), 53 ("Total well independence allows freedom in product placement in the IRHS," "Tailor each well specifically

to the products within them," and "Unlimited flexibility for future menu and operational changes"); EX1005: 16 ("This new technology allows you to precisely control the environment in each pan, allowing customized settings for each food product"); EX1003: ¶289.



EX1007: 12.

Given the diverse menu, the food location flexibility, and the teachings to tailor temperature settings per food product, it would have been obvious to hold different food products in different zones (e.g., including a first type of food product, such as burger patties, in the first zone and a second type of food product, such as broiled chicken (tendergrill), in the second zone), and therefore different temperatures in different zones. EX1007: 12; EX1005: 16 ("[t]his new technology allows you to precisely control the environment in each pan, allowing customized

settings for each food product"); EX1006: 1 ("independent well flexibility"); EX1007: 12 (chart with different food types), 53 ("[t]otal well independence allows freedom in product placement in the IRHS" and "[t]ailor each well specifically to the products within them"); EX1003: ¶¶290, 294.

It would have been obvious for the IRHS controller to independently set first and second temperatures in the respective first and second zones—based on the tailored food type temperature settings assigned to the respective zone—by operating the independently controllable upper (first/third) heating elements and operating the independently controllable lower (second/fourth) heating elements associated with the respective zone, with reasonable expectation of success (demonstrated by IRHS Documents and enabled by configuration/controls of IRHS). EX1005: 16 ("each food product has a tailored HeatSink temperature and InfraRed pulse rate"); EX1008: 16 ("RTD Sensors monitor the temperature of the heating wells"), 21 ("Heat Elements provide the heating required to keep the heating wells at proper operating temperatures)"); EX1003: ¶¶291, 295.

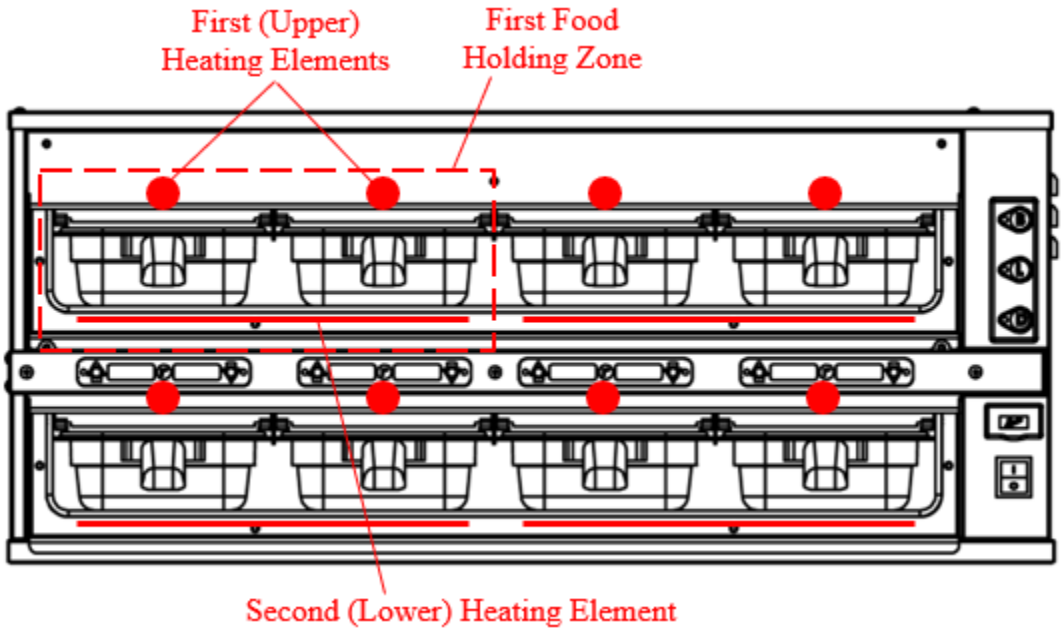
9.d

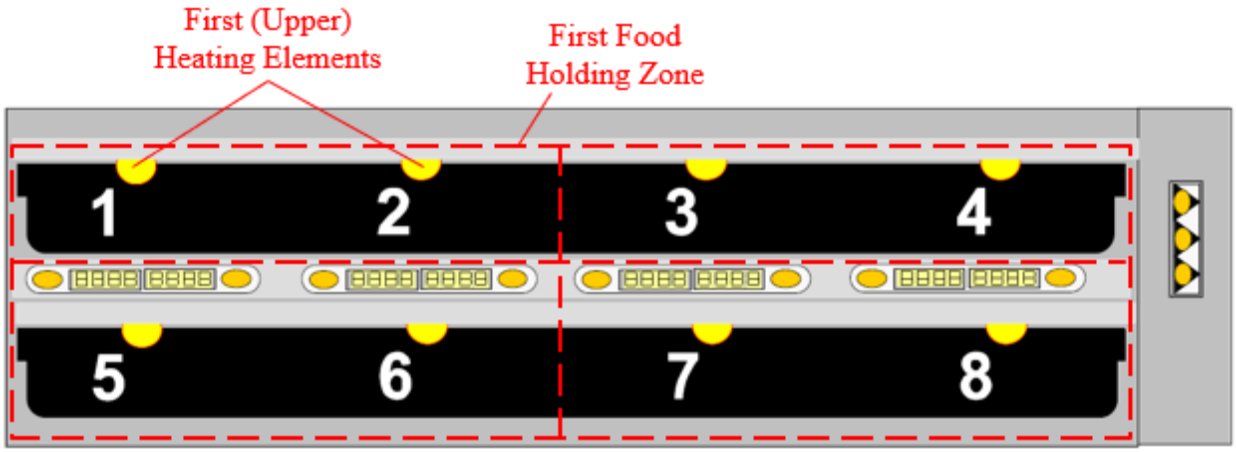
Met per Sections IV(B)(1.g.2). EX1003: ¶¶296-298.

J. Claim 10

Per Section IV(B)(1.d.2/1.e.2), IV(B)(1.g.2), the first and second heating elements are independently controllable. EX1003: ¶¶299-301. The controller

operates the IR first heating element to output more heat than the second heating element. EX1003: ¶301.

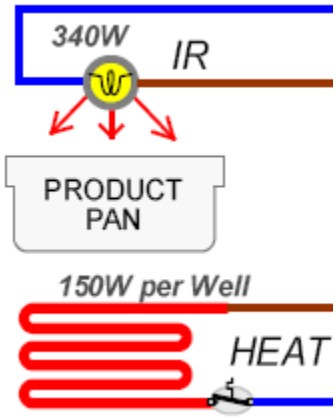




EX1005: 8, 25 (annotated).

The second heating element outputs 300 Watts and each IR first heating element outputs 340 Watts (more heat energy). EX1008: 64; EX1003: ¶302. Further, the upper elements perform "IR Turbo Boost for [an] instant shot of IR

energy," while the lower elements "provide[] ***gentle*** heat." EX1006: 1; EX1007: 22; EX1003: ¶303. The upper elements output more heat energy than the "gentle" lower elements at least during IR Turbo Boost. EX1003: ¶¶304-305.

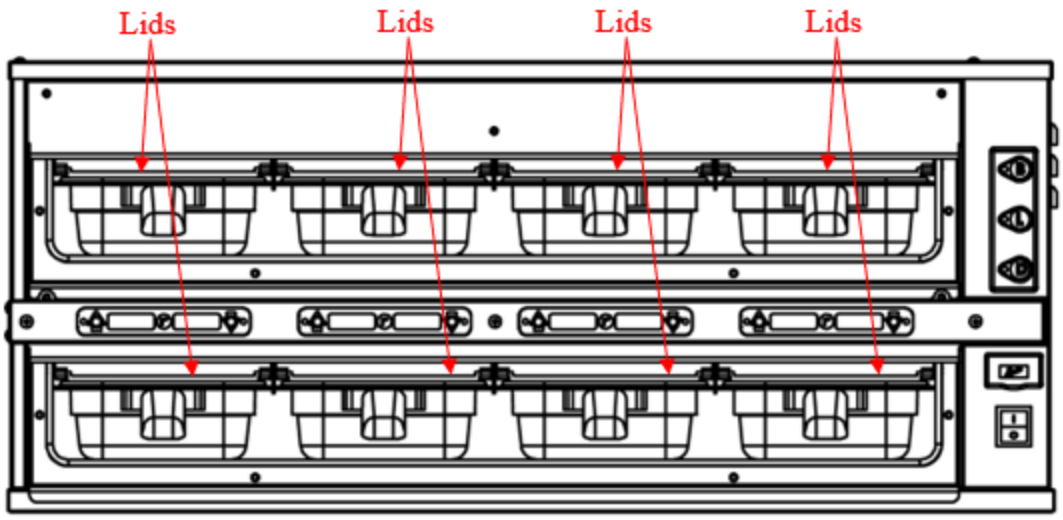


EX1008: 64

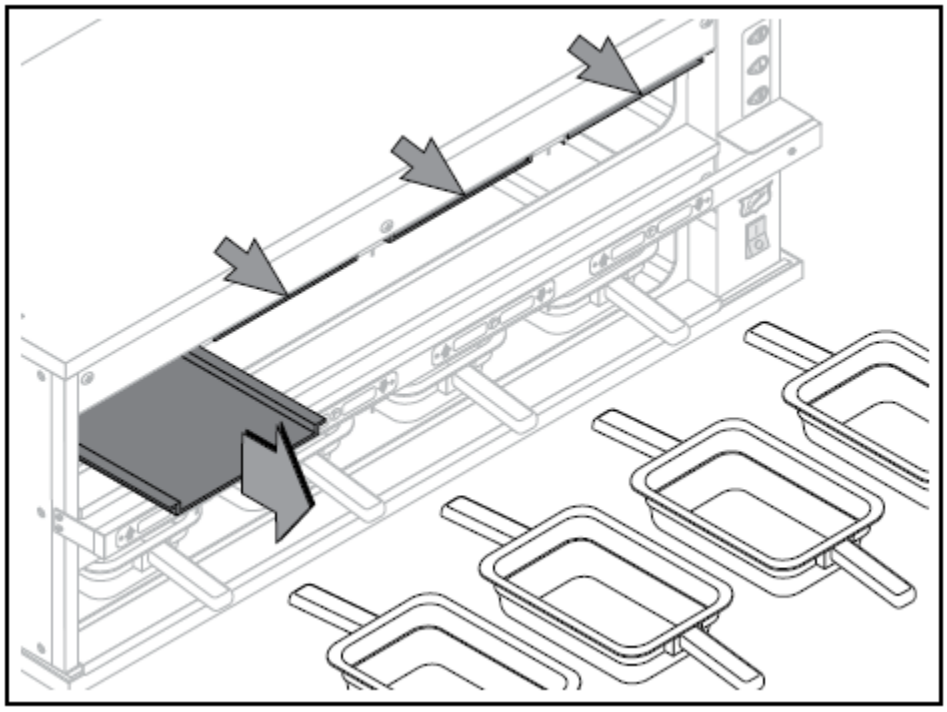
V. GROUND 2: Claim 6 Would Have Been Obvious Over the IRHS Documents in view of Hartfelder and/or Shei'099

A. Modification of the IRHS Documents based on Hartfelder and/or Shei'099

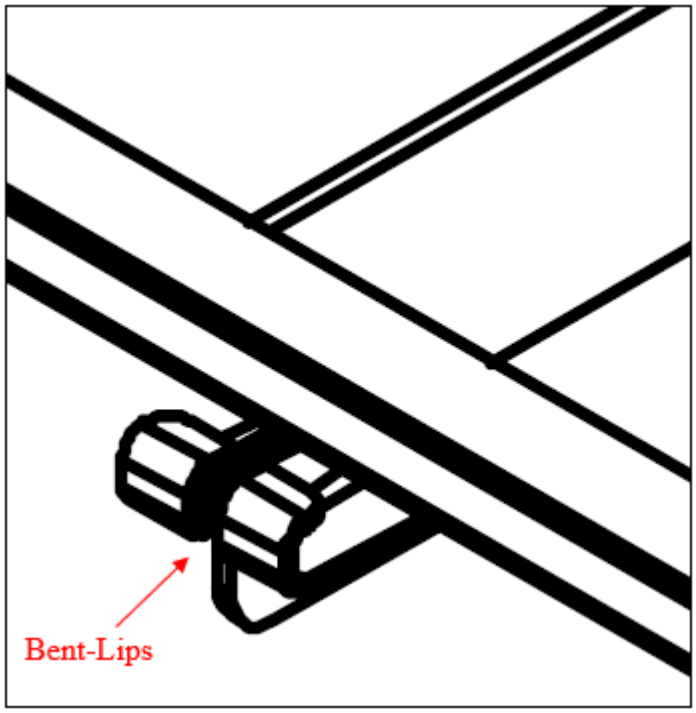
IRHS24 includes lids above each pan/bay and bent-lip lid retainers. EX1005: 4, 8, 20-21; EX1007: 53, 56, 58; EX1003: ¶¶306-310.



EX1005: 8 (annotated).



EX1008: 16.



EX1005: 19 (enlarged).

Hartfelder and Shei'099 disclose stops (61)/(88) for retaining lids (44, 46, 80). EX1013: ¶[0058]; EX1017: 6:9-32; EX1003: ¶¶311-313.

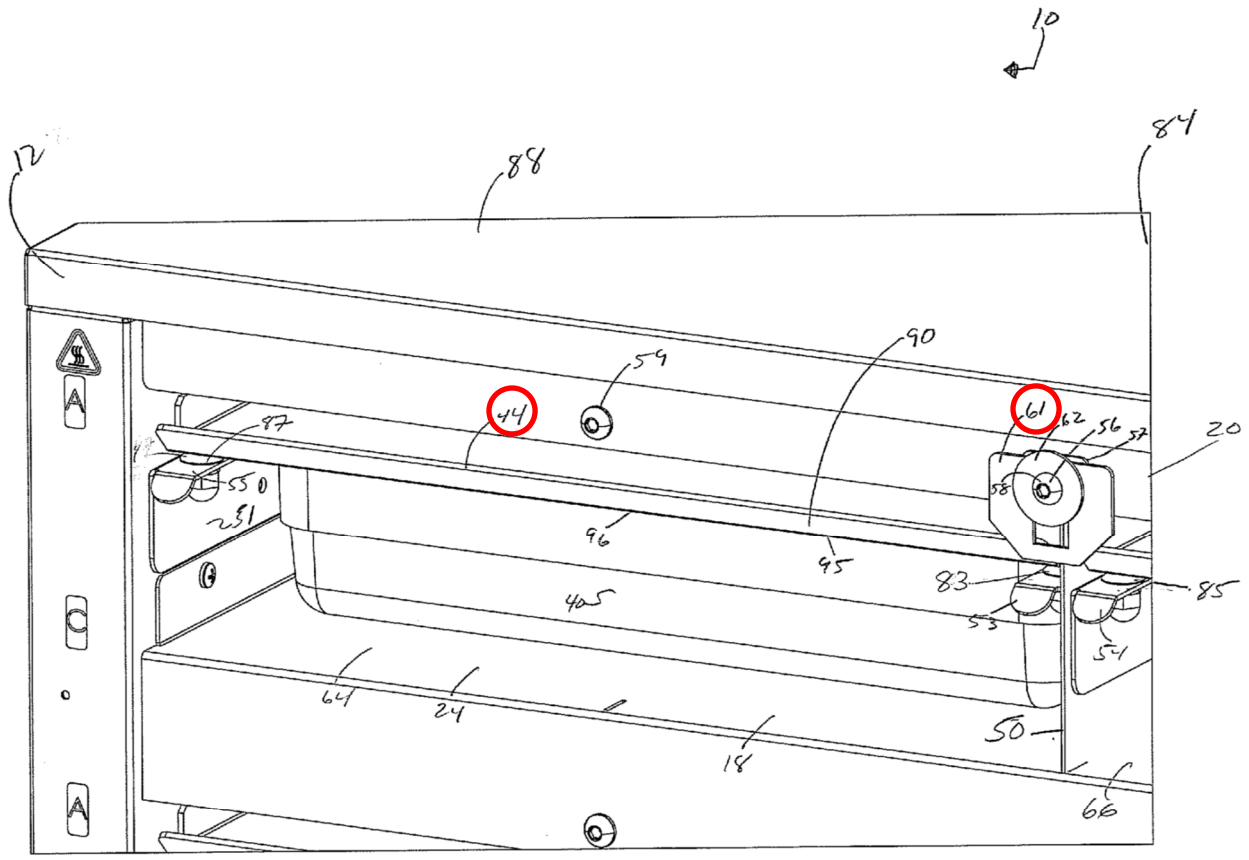


FIGURE 9

EX1013: Fig. 9 (annotated).

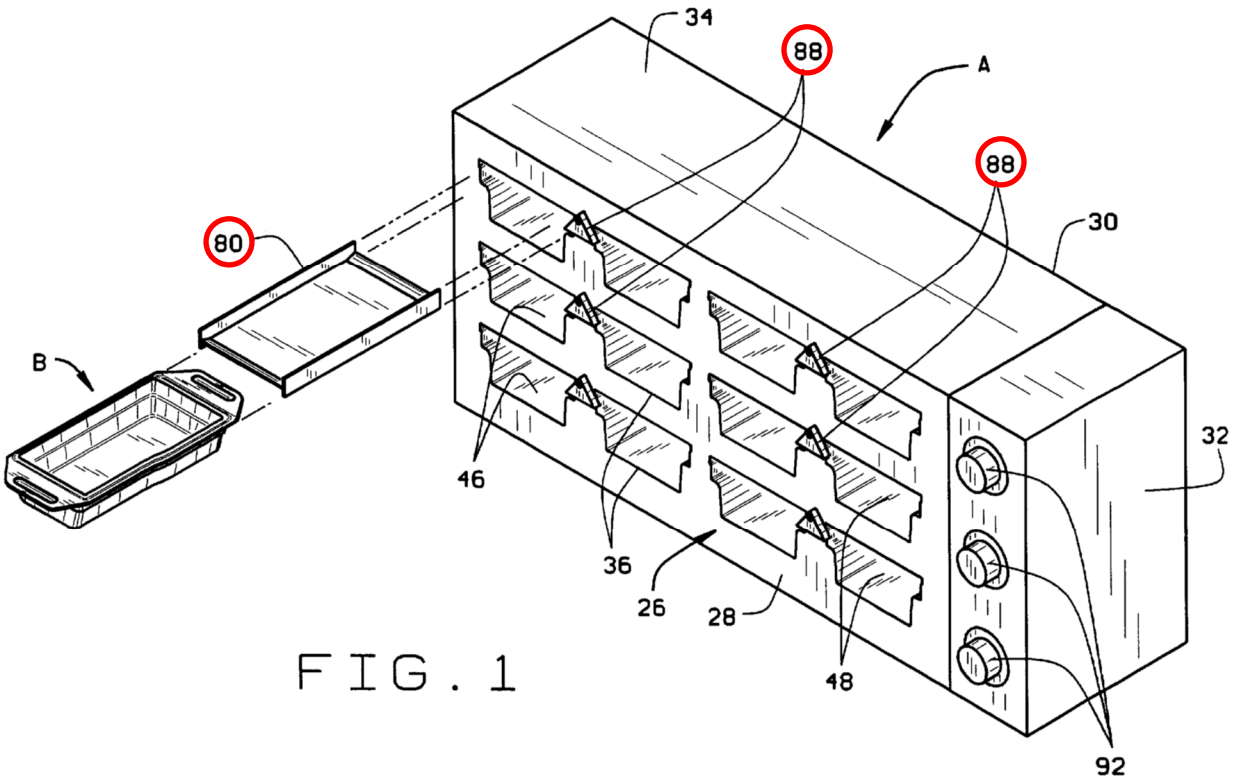


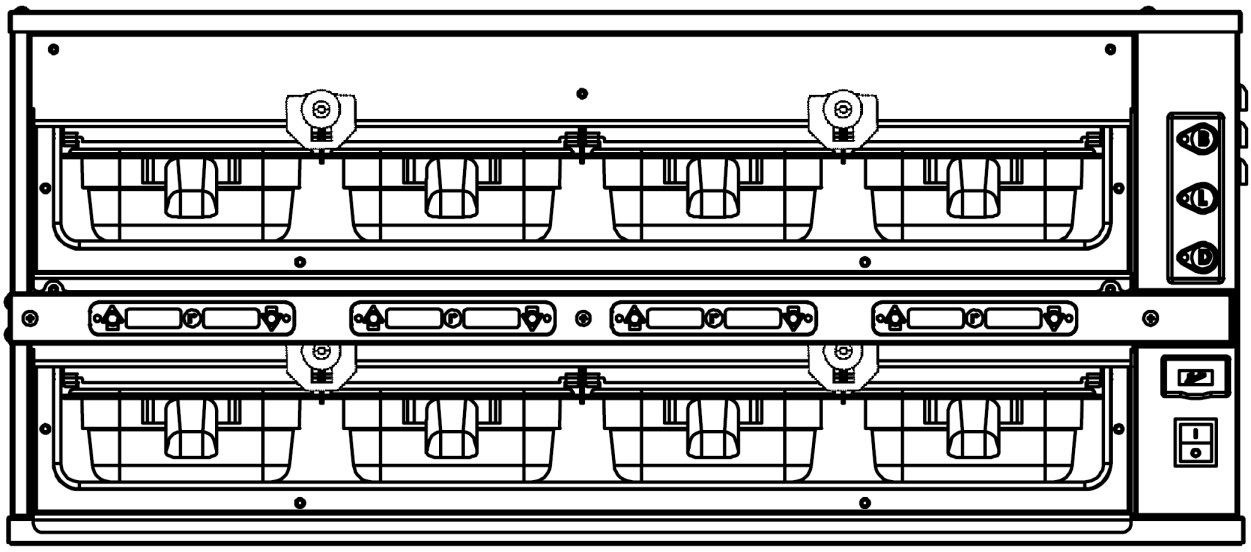
FIG. 1

EX1017: Fig. 1 (annotated).

It would have been obvious to modify IRHS24 to include Hartfelder's or Shei'099's stops for retaining IRHS24's lids on the lid-holding shelves. EX1013: ¶[0058]; EX1003: ¶314. The stops would prevent the lids from moving (inadvertent lid removal/displacement) with pans being inserted and removed. EX1013: ¶[0058]; EX1017: 6:19-22; EX1003: ¶315. This would maintain lid position for covering pans. EX1003: ¶315. The stops would replace IRHS's existing bent-lips (easier to clean, manufacture, and/or replace) or be added as backup for them. EX1005: 19, 13-14; EX1017: 7:30-35; EX1011: ¶¶[0035]-[0037], Figs. 9-14; EX1003: ¶¶316-318.

This uses a known technique/alternative (stops to retain lids) to improve a similar device (IRHS24) in the same way with predictable results (retaining lids in place while inserting/removing pans) with reasonable expectation of success (stops performing the same lid retention function in similar units). EX1013: ¶[0058]; EX1003: ¶¶319-320.

Each stop would be on the face of the chassis/shelf between two lids as in Hartfelder and Shei'099. EX1003: ¶321. A representative illustration of IRHS24 including Hartfelder's stops is below. EX1003: ¶322. A modification implementing Shei'099's stops would be similar but with Shei'099's stops. EX1003: ¶322.

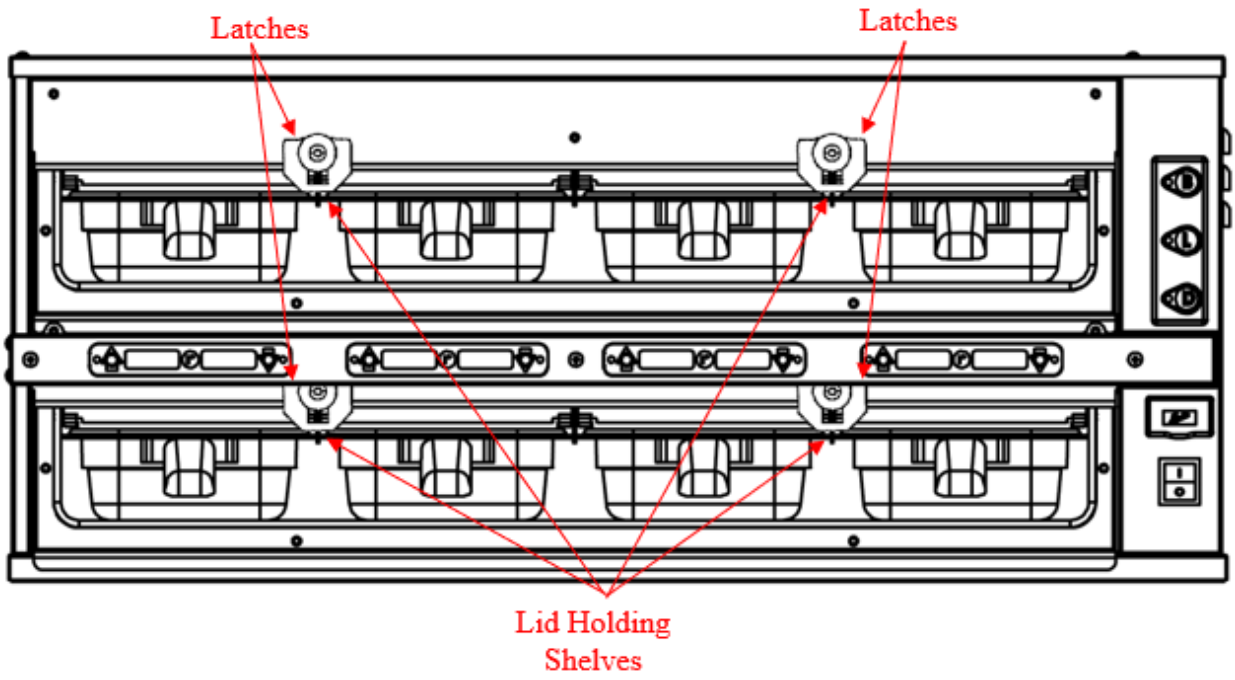


EX1005: 8 (modified).

B. Claim 6:

6.a.1

Hartfelder and Shei'099 disclose latches for retaining lids such that it would have been obvious to modify IRHS24 to have latches for retaining lids per Section V(A). EX1013: ¶[0058], Figs. 1, 9; EX1017: 6:9-32, Fig. 1; EX1003: ¶¶323-324.



EX1005: 8 (modified, annotated).

It would have been obvious to position the latches adjacent to the lid holding shelves per Hartfelder and/or Shei'099—positioned adjacent the lids, and thus to engage and retain the lids. EX1013: Figs. 1, 9; EX1017: Fig. 1; EX1003: ¶325.

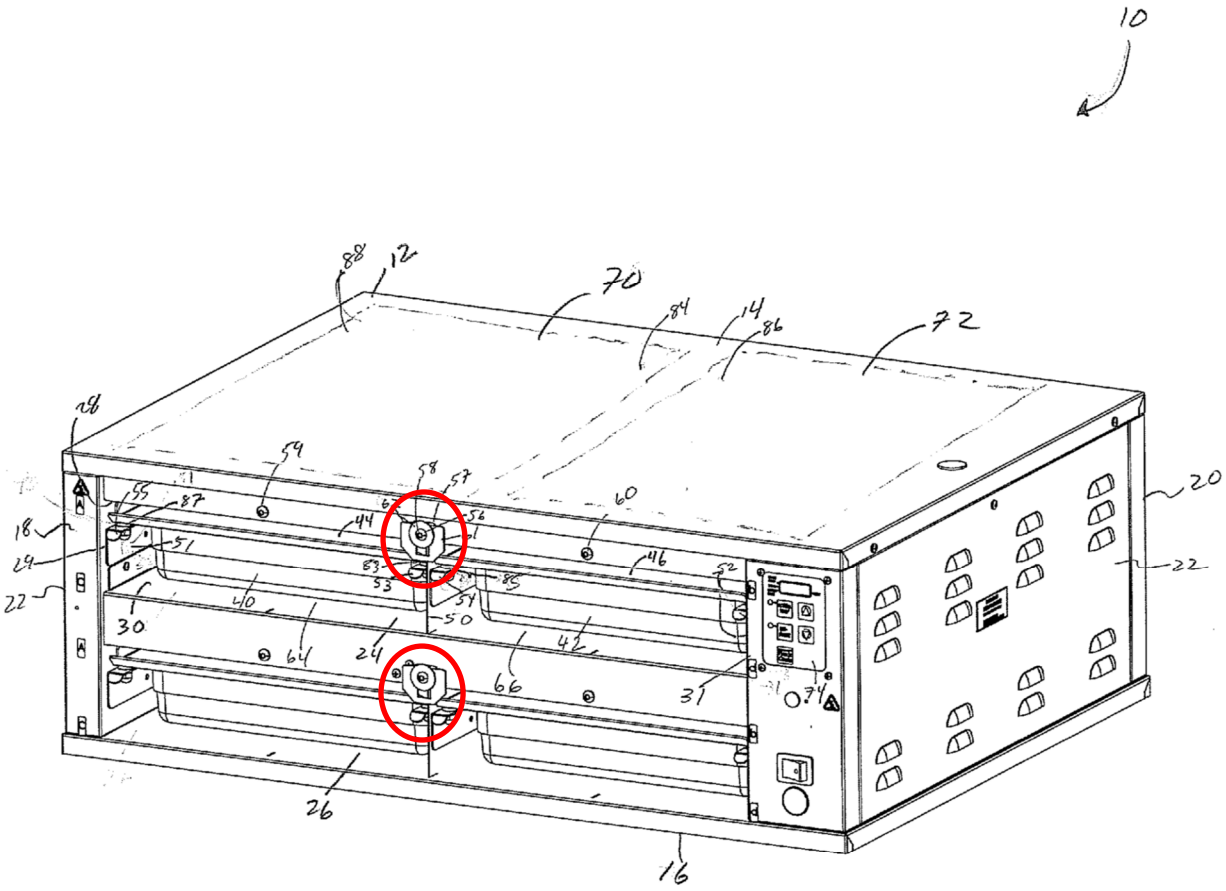

10
88
12
70
84
14
86
72
18
20
22
24
30
40
42
44
46
50
51
52
53
54
55
56
57
58
60
64
66
74
87
26
16

FIGURE 1

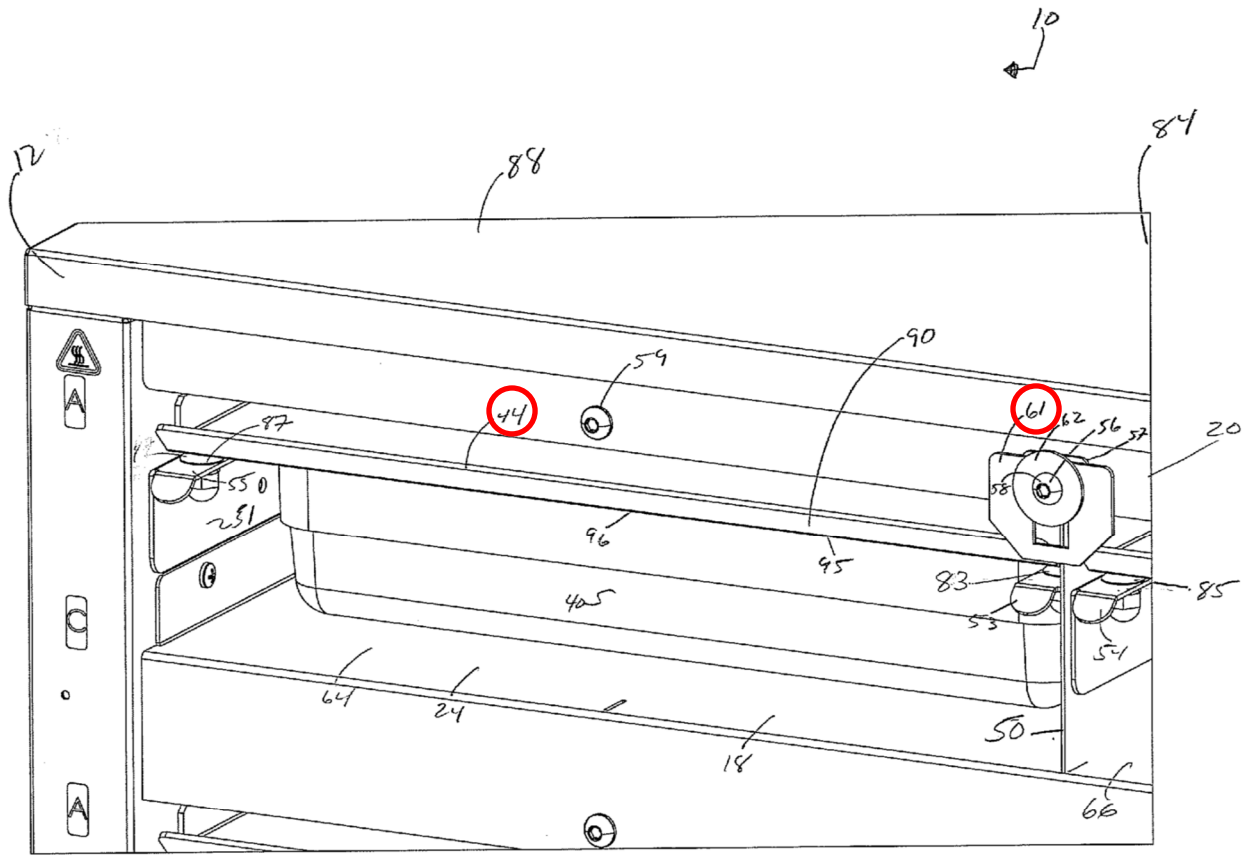


FIGURE 9

EX1013: Figs. 1, 9 (annotated).

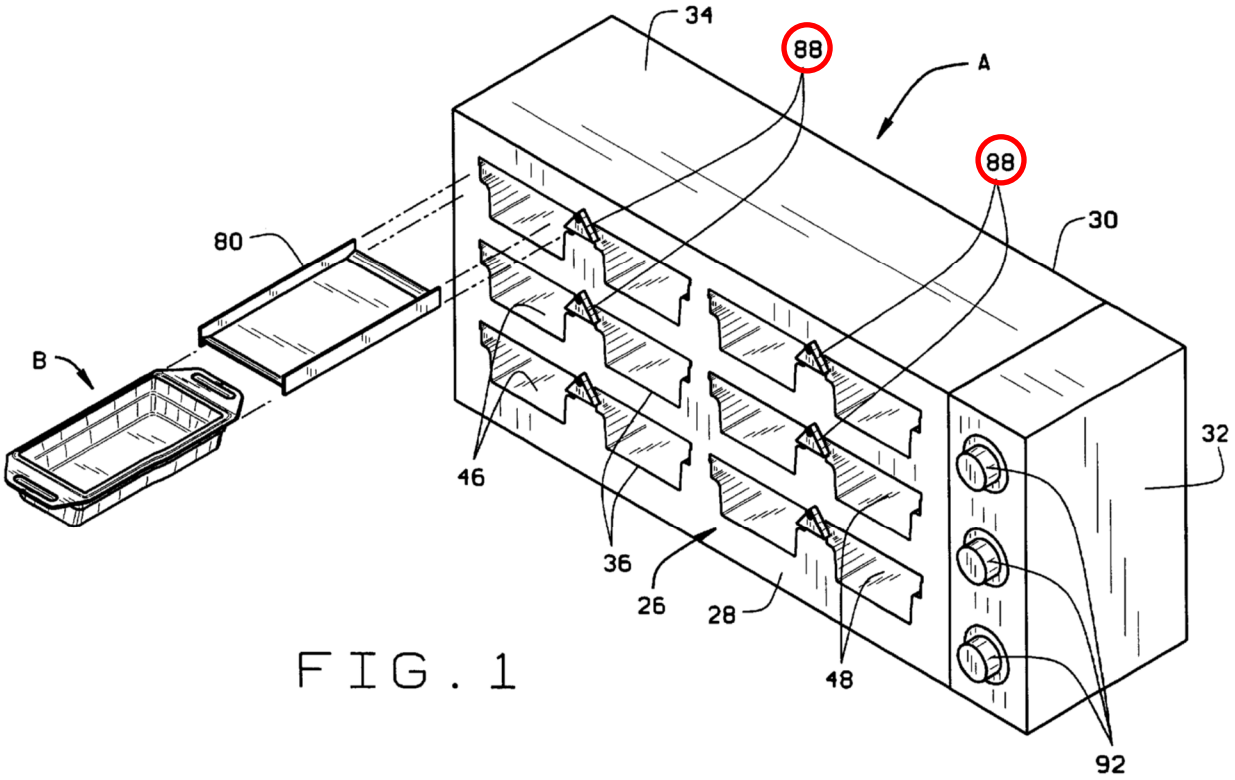


FIG. 1

EX1017: Fig. 1 (annotated).

Therefore, a latch adjacent lid holding shelves would have been obvious. EX1003: ¶325.

6.a.2

Hartfelder's latches each have a body with an open center portion. EX1013: ¶[0035]; EX1003: ¶326.

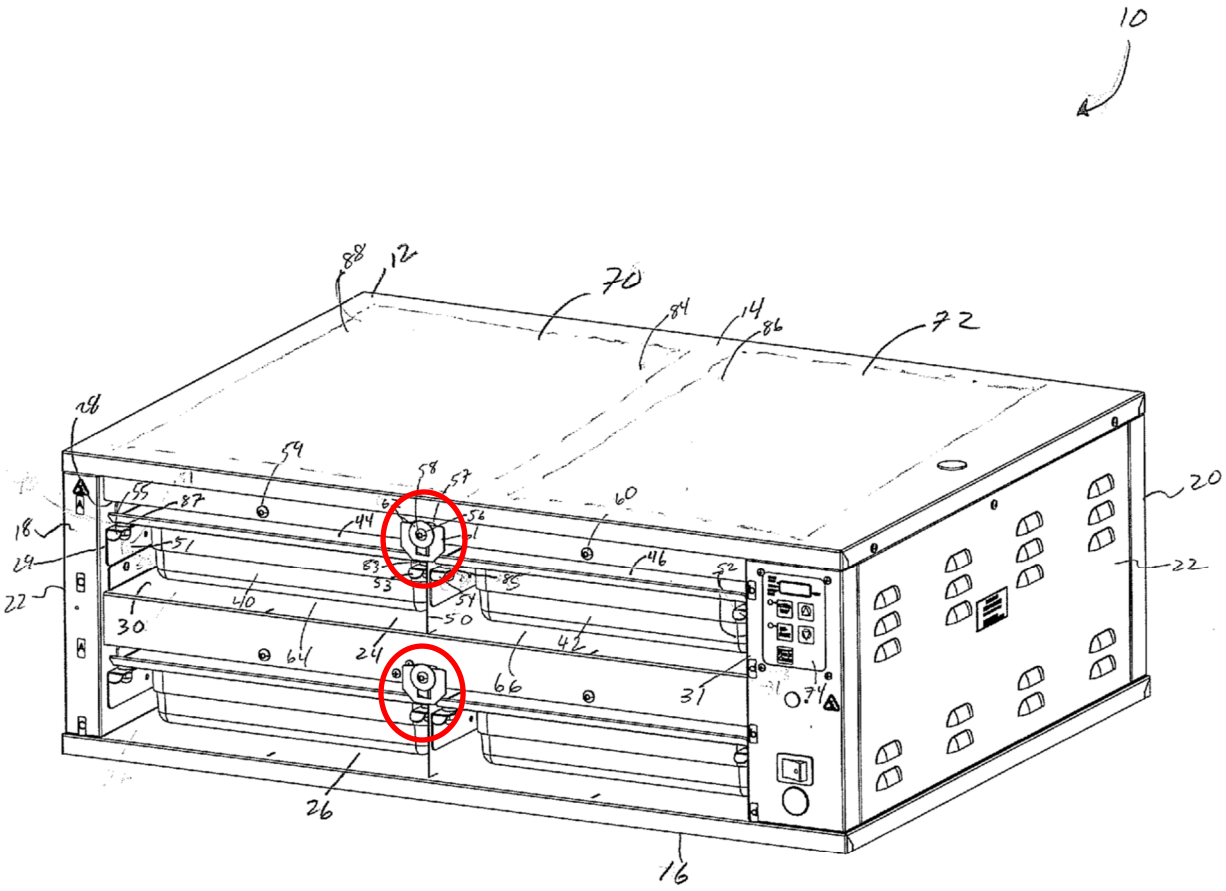


FIGURE 1

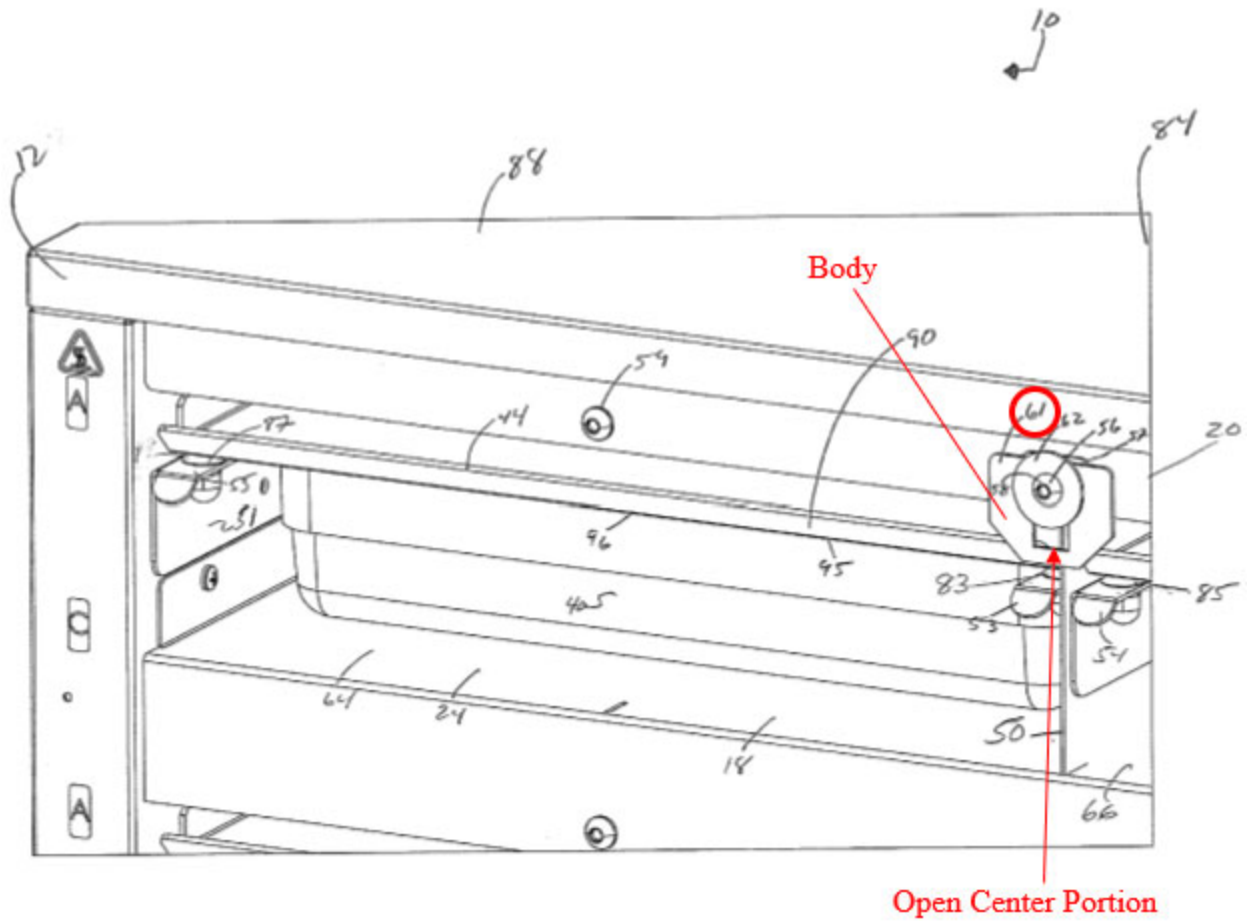
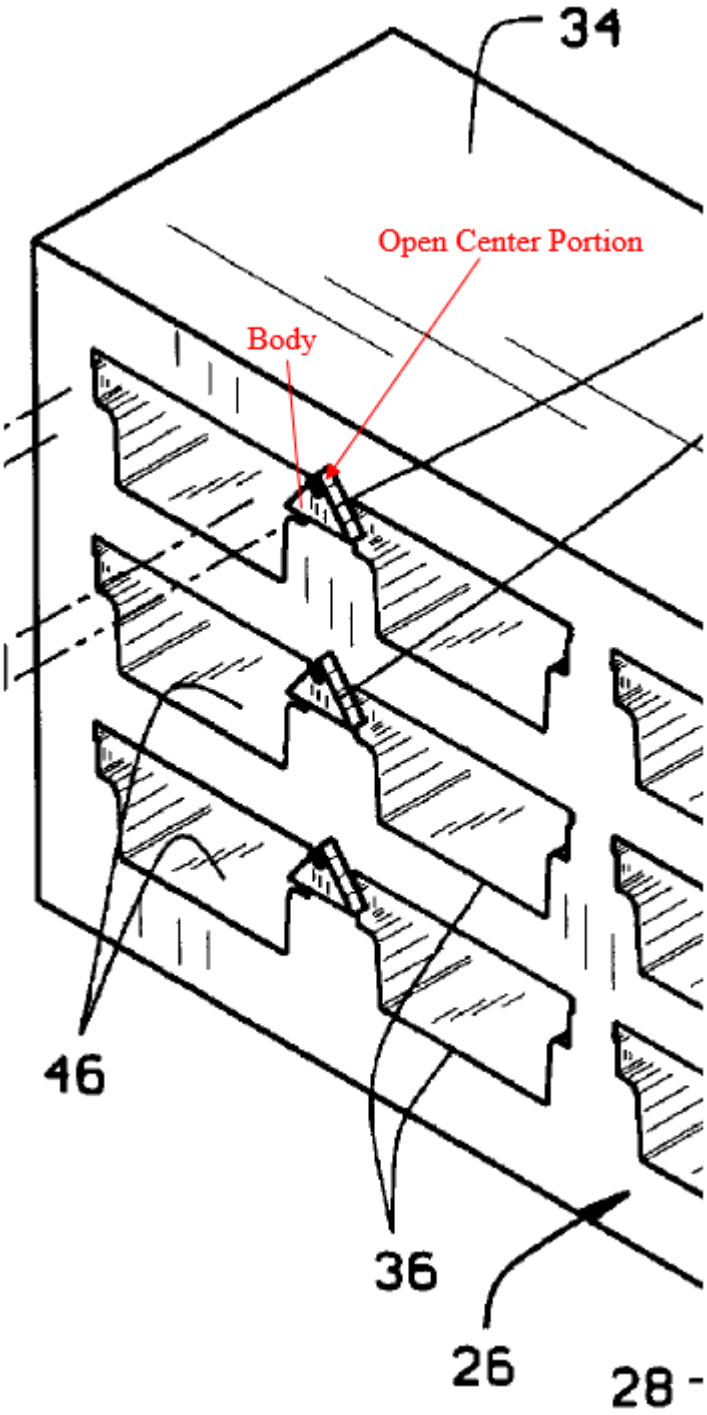


FIGURE 9

EX1013: Figs. 1, 9 (annotated).

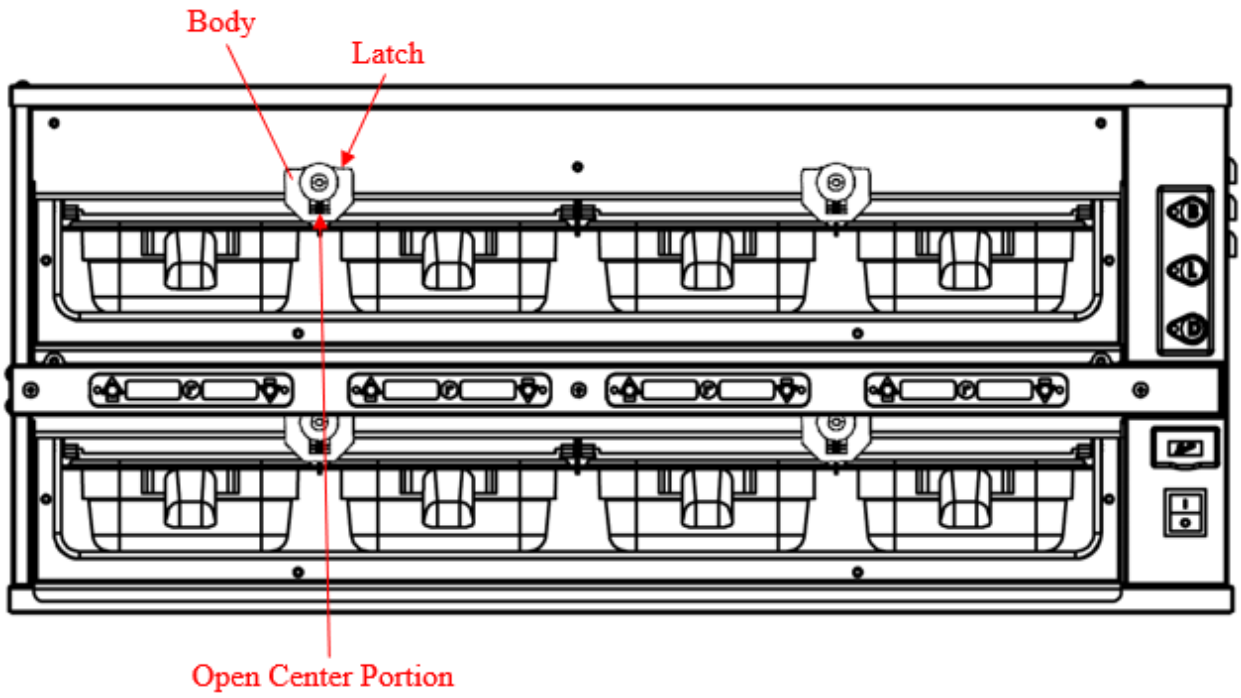
Likewise, each latch of Shei'099 has a body with an open center portion. EX1017: Fig. 1; EX1003: ¶327. The open center portion includes the opening the fastener (forming the pivot connection) extends through to attach the latch to the cabinet (26). EX1017: Fig. 1, 6:9-14; EX1003: ¶327.



EX1017: Fig. 1 (enlarged, annotated).

When added to the IRHS24, Hartfelder's and Shei'099's latches would have maintained their bodies and open center portions. EX1003: ¶328. Thus, it would

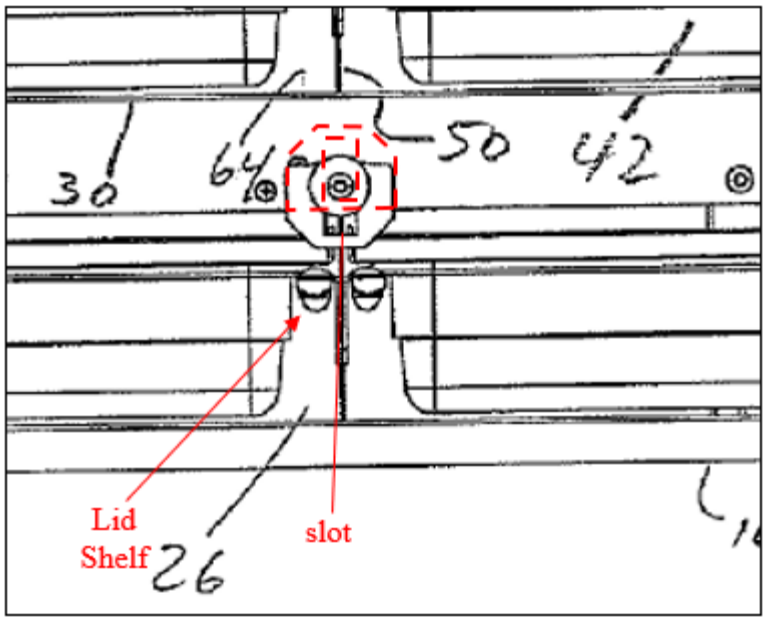
have been obvious for the latch to have a body with an open center portion. EX1003: ¶328.



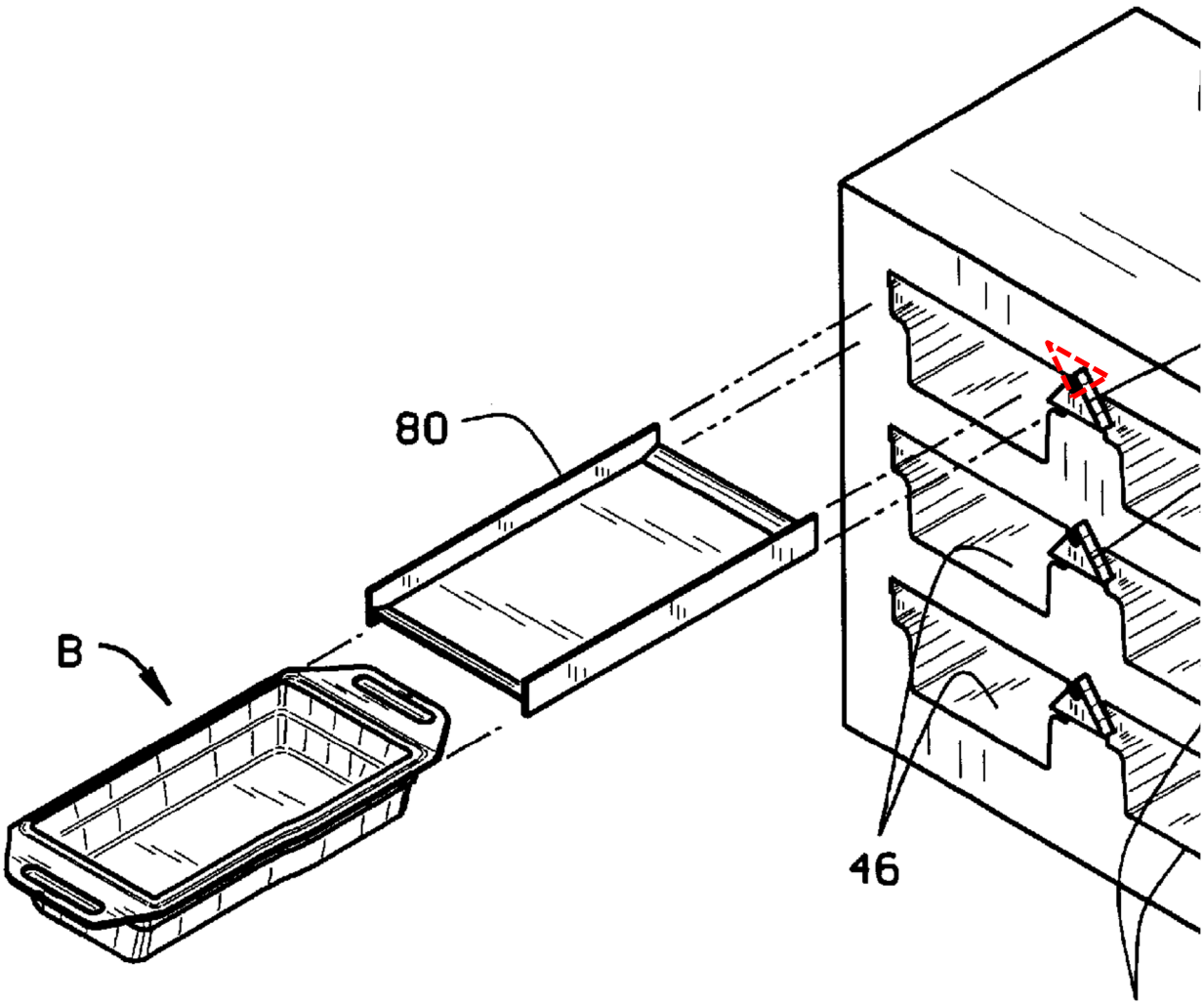
EX1005: 8 (modified, annotated).

6.a.3

Hartfelder's and Shei'099's latches (61)/(88) are rotatable relative to the lid shelves between locked and unlocked positions. EX1013: Fig. 2; EX1017: 6:9-32, Fig. 1; EX1016: ¶[0043], Fig. 1; EX1003: ¶¶329-332.

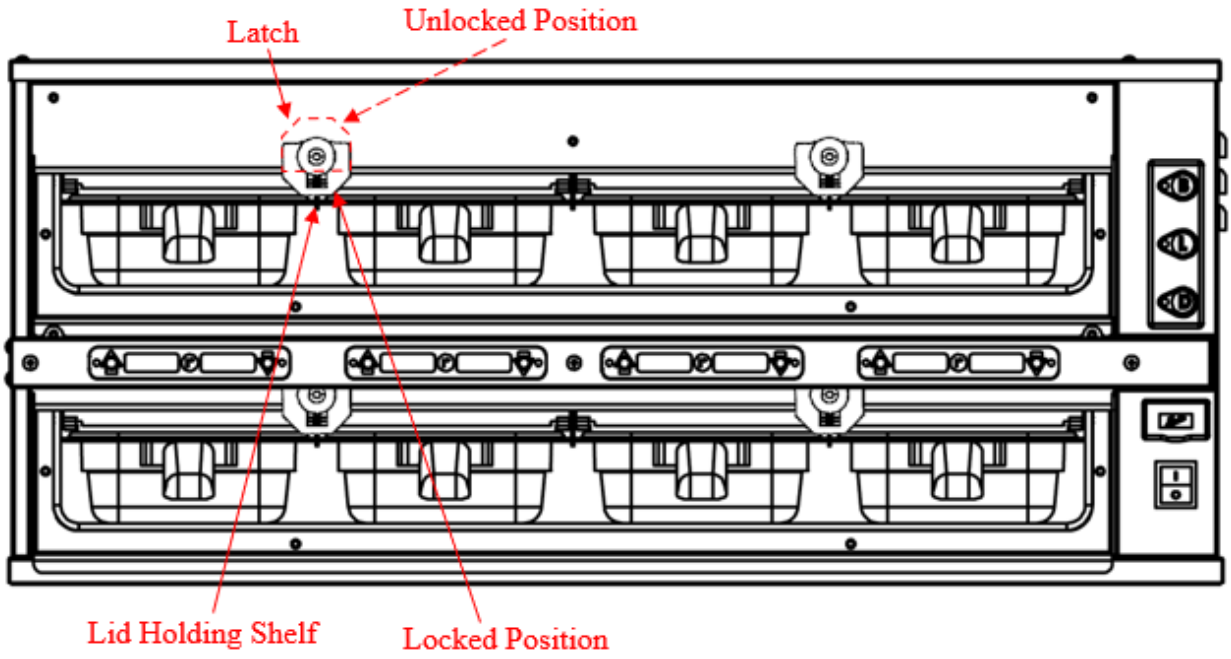


EX1013: Fig. 2 (enlarged, annotated).



EX1017: Fig. 1 (enlarged, annotated).

When added to the IRHS24, Hartfelder's and Shei'099's latches would have maintained rotatability relative to a shelf between locked and unlocked positions. EX1003: ¶333. Thus, it would have been obvious for the latch to be rotatable relative to the lid holding shelf between locked position and unlocked position (shown in broken lines). EX1003: ¶¶333-334.



EX1005: 8 (modified, annotated).

VI. GROUND 3: Claim 8 Would Have Been Obvious Over the IRHS Documents in view of Veltrop and Poole (If Necessary)

If it is determined that IRHS24's heating elements are not electrically resistive heating wires (Ground 1: Claim 8), such a configuration would have been obvious. EX1003: ¶335. In this ground, claims 1 and 8 are obvious as addressed in Grounds 1, 5, and 6, with claim 8 being further obvious as explained below.

Veltrop's cabinet has electrically-resistive heater wires (67). EX1022: ¶¶[0010], [0025], Fig. 2; EX1003: ¶336.

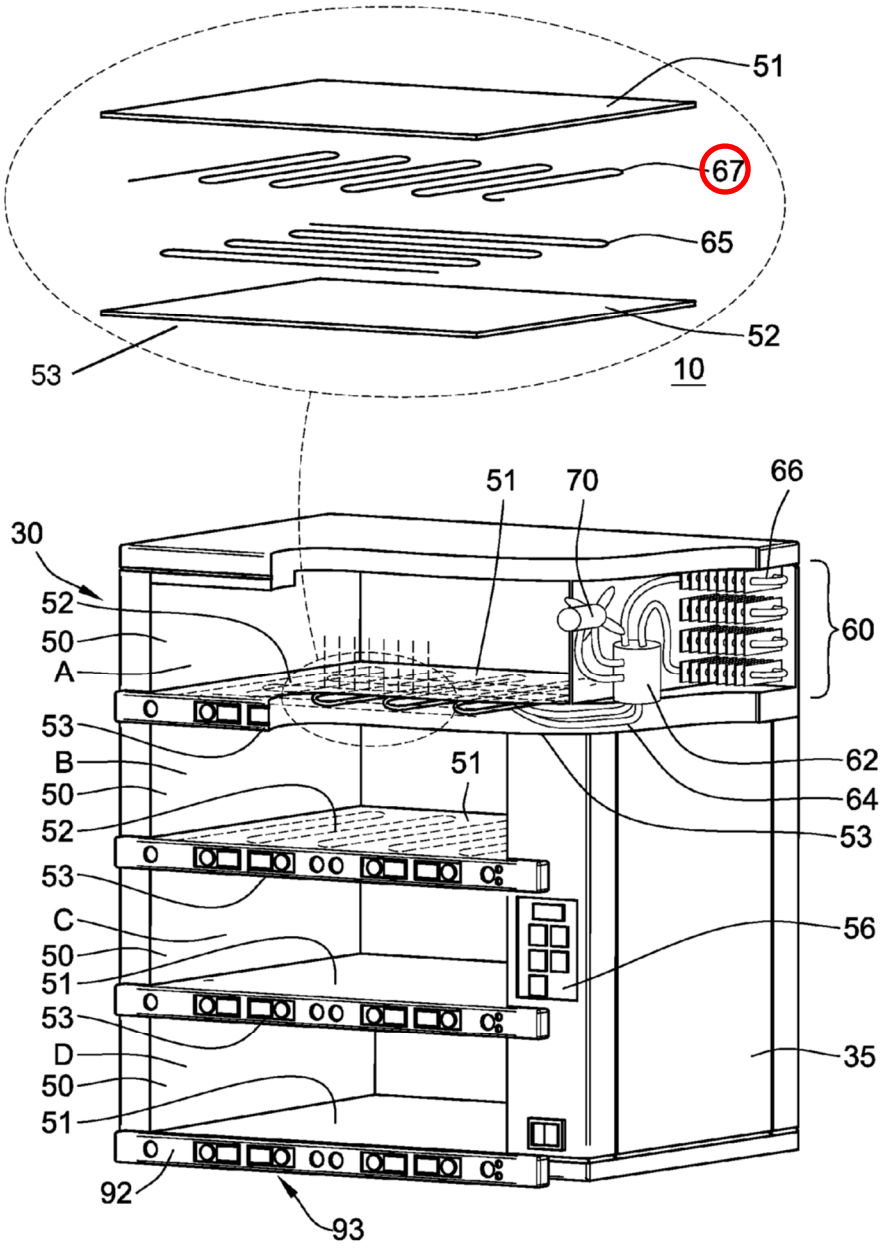
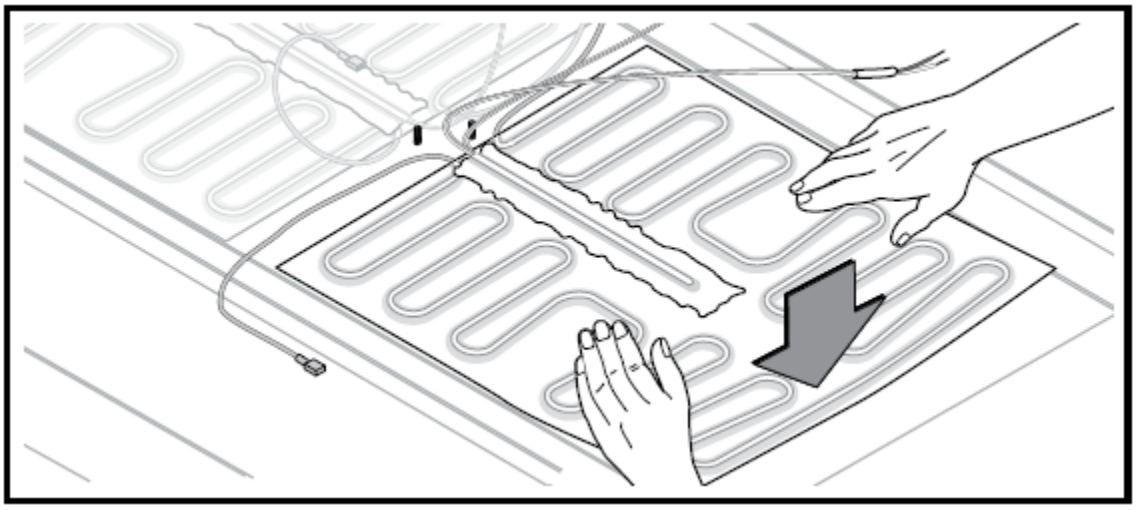


FIG. 2

EX1022: Fig. 2 (annotated).

Per Veltrop, it would have been obvious for IRHS24's second heating element to be an electrically-resistive heater wire to generate heat. EX1003: ¶337.

IRHS24 teach electrical heating elements. EX1003: ¶338. POSA would understand an electrically-resistive wire is a suitable heat source for IRHS24. EX1022: ¶[0025]; EX1003: ¶¶338-339.

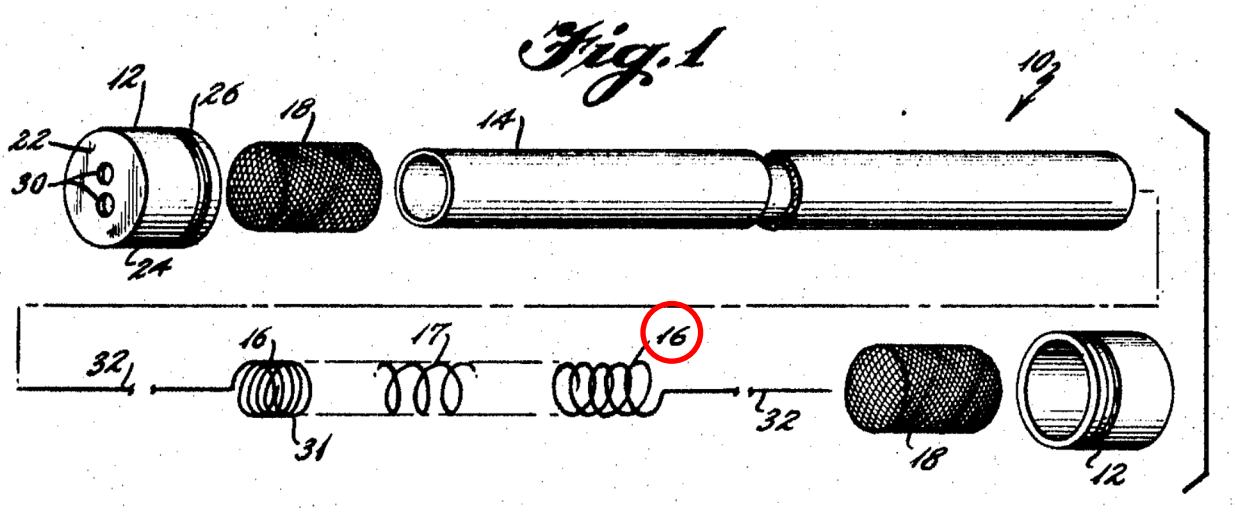


EX1008: 23.

This uses a known technique (electrically-resistive heater wire) to improve a similar device (IRHS24's lower heating elements) in the same way (electrically-resistive heater wire to heat compartment/food) with reasonable expectation of success (electrically controlled heating elements in food warming cabinets). EX1022: ¶[0025]; EX1003: ¶¶340-341.

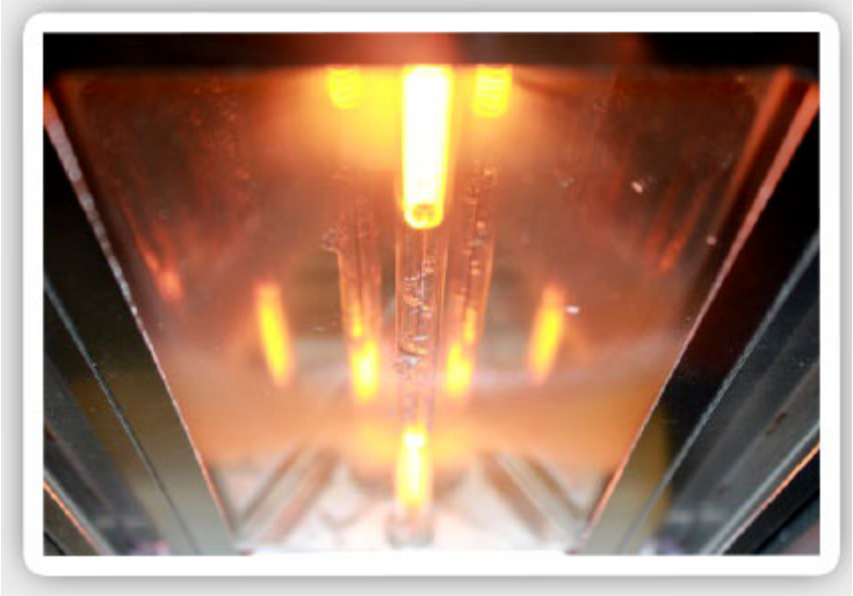
This renders obvious the second heating element being an electrically-resistive heating wire. EX1003: ¶342.

Poole teaches an "infrared quartz heater" with a resistance wire (16). EX1025: Title, 1:29-30, 2:6-7; EX1003: ¶343.



EX1025: Fig. 1 (annotated).

Per Poole, it would have been obvious to use infrared quartz heaters including resistive wires as the IR bulbs (first heating elements) to generate IR heat. EX1003: ¶344. Infrared quartz heaters have a "long operating life" with a "low failure rate" and lower cost. EX1025: 1:49-50, 3:1, 3:4; EX1003: ¶344. IRHS24 disclose using quartz IR bulbs and Poole discloses suitable quartz IR bulbs. EX1003: ¶345.



EX1007: 11.

This substitutes one known element (infrared quartz heater) for another (IRHS24's IR bulbs) to obtain predictable results (IR food heating) with reasonable expectation of success (IRHS24 disclose quartz IR heaters). EX1007: 53; EX1003: ¶346.

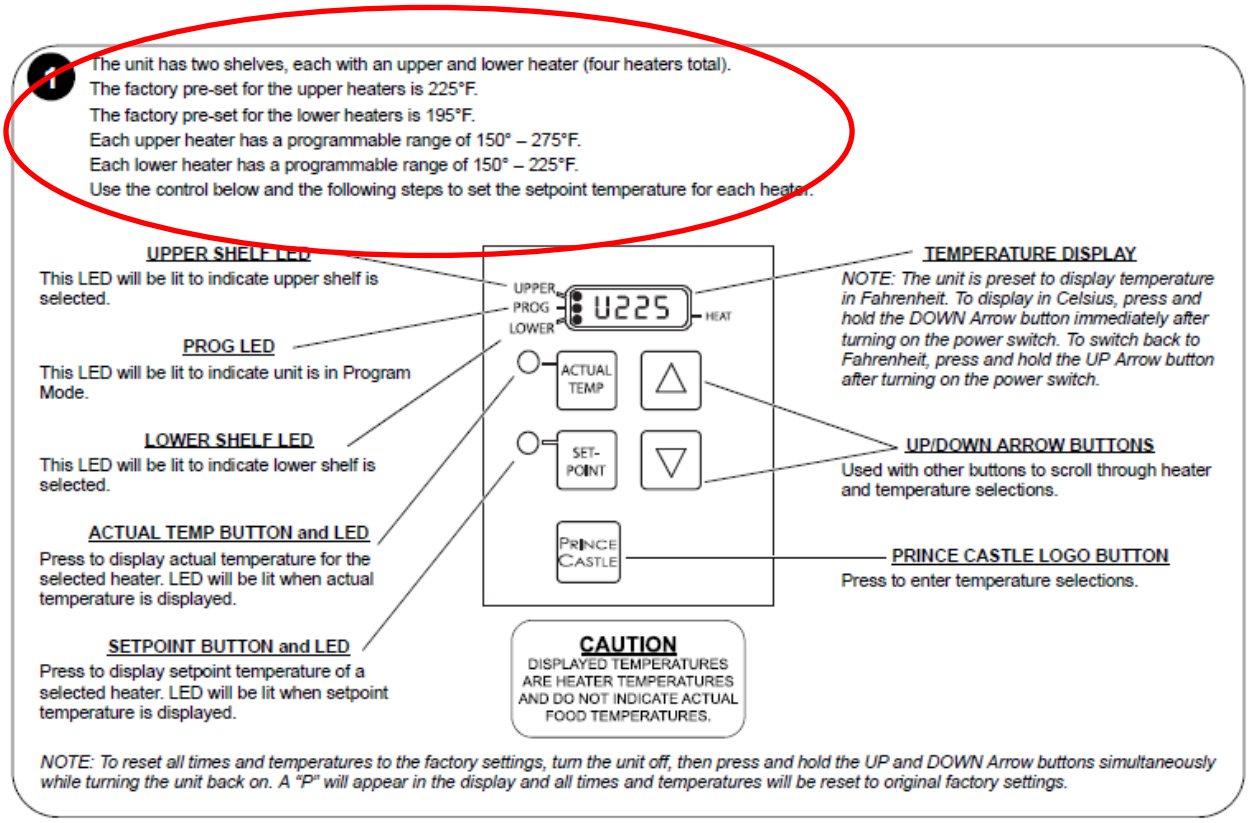
This renders obvious the first heating element being an electrically-resistive heating wire. EX1003: ¶¶347-348.

VII. GROUND 4: Claims 4 and 10 Would Have Been Obvious Over the IRHS Documents in view of Prince Castle and/or Reese (If Necessary)

If it is determined that IRHS24's first heating element does not provide (is not adapted to output) more heat energy than the second heating element (Ground 1: Claims 4 and 10), such a relationship would have been obvious. EX1003: ¶349.

In this ground, claims 1, 4, 9, and 10 are obvious as addressed in Grounds 1, 5, and 6, with claims 4 and 10 being further obvious as explained below.

Prince Castle teaches default presets 225°F for upper heaters (275°F maximum) and 195°F for lower heaters (225°F maximum). EX1009: 22, 40; EX1003: ¶¶350-352.



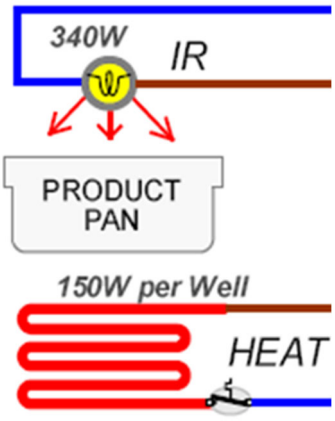
EX1009: 40 (annotated).

Reese teaches turbo boost functions for upper IR. EX1027: ¶¶[0001], [0019], [0021], [0025]; EX1003: ¶¶353-355.

Per Prince Castle, IRHS Documents, and/or Reese, it would have been obvious to adapt each upper IR element to output more heat energy than the

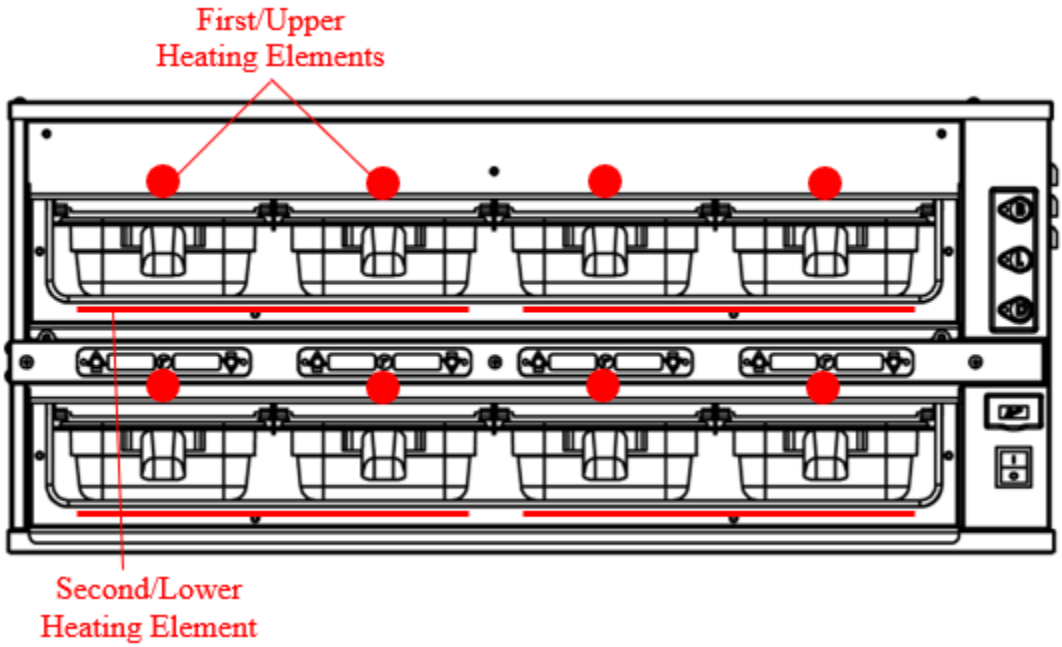
respective lower heating element (higher target temperature, turbo boost heat, and/or higher wattage rating (EX1008: 64)) to overcome distance between the upper IR element and food, counteract evaporative cooling, maintain food surface temperature/texture, compensate for upper IR energy radiating in all directions, and/or permit the cook "to re-crisp [fried] food," "melt cheese," and/or "brown [food]" with the IR element. EX1027: ¶[0021]; EX1006: 1; EX1003: ¶¶356-361. This would help "provide optimum environment" and "minimize temperature distribution from top to bottom." EX1006: 1; EX1007: 51; EX1003: ¶362.

This applies a known technique (upper heaters outputting more heat than lower heaters) to improve a similar device (IRHS24) in the same way (higher setpoint temperatures for upper heating elements than lower heating elements) with reasonable expectation of success (independent operation of IR upper elements that can pulse on/off as need and are higher wattage (340W) than the lower elements (300W)). EX1006: 1; EX1003: ¶¶363-364.



EX1008: 64.

This renders obvious the first heating element providing (e.g., being adapted to output) more heat energy than the second heating element via having a higher target temperature, turbo boost functionality, and/or higher wattage rating. EX1003: ¶¶365-368.



EX1005: 8 (annotated).

VIII. GROUND 5: Claims 1-10 Would Have Been Obvious Over the IRHS Documents in view of Hartfelder, Shei'099, Veltrop, Poole, Shei'155, Prince Castle, and Reese (If Necessary)

It would have been obvious to conductively couple IRHS24's lower heating elements to aluminum heatsink plates/planar surfaces (if such construction is determined not to be met). EX1003: ¶¶369-370.

Veltrop and Shei'155 teach conductively coupling heating elements (67, 39) to an aluminum upper plate or aluminum heatsink (51, 29). EX1022: ¶¶[0023], [0025], [0050]; EX1016: ¶[0039]; EX1003: ¶¶369-372, 377-378.

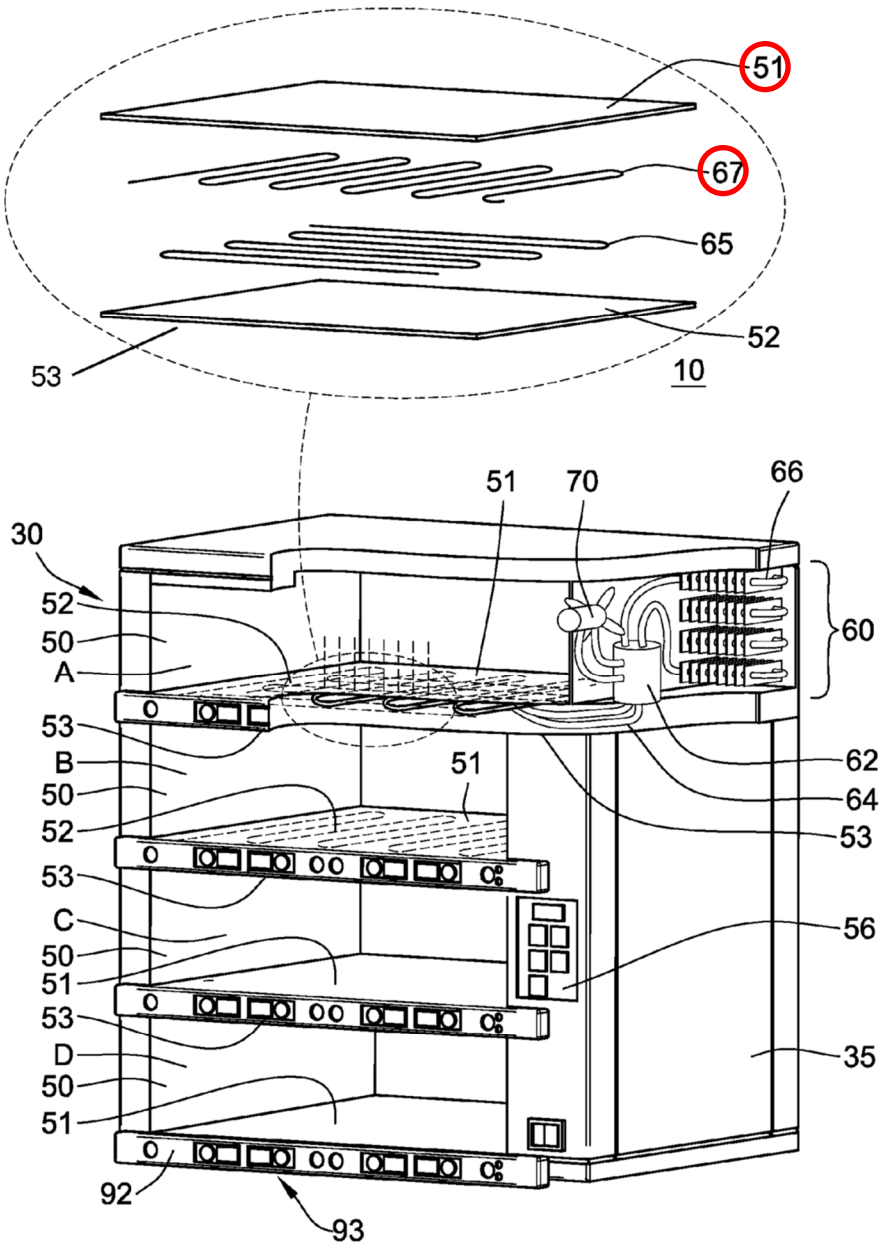
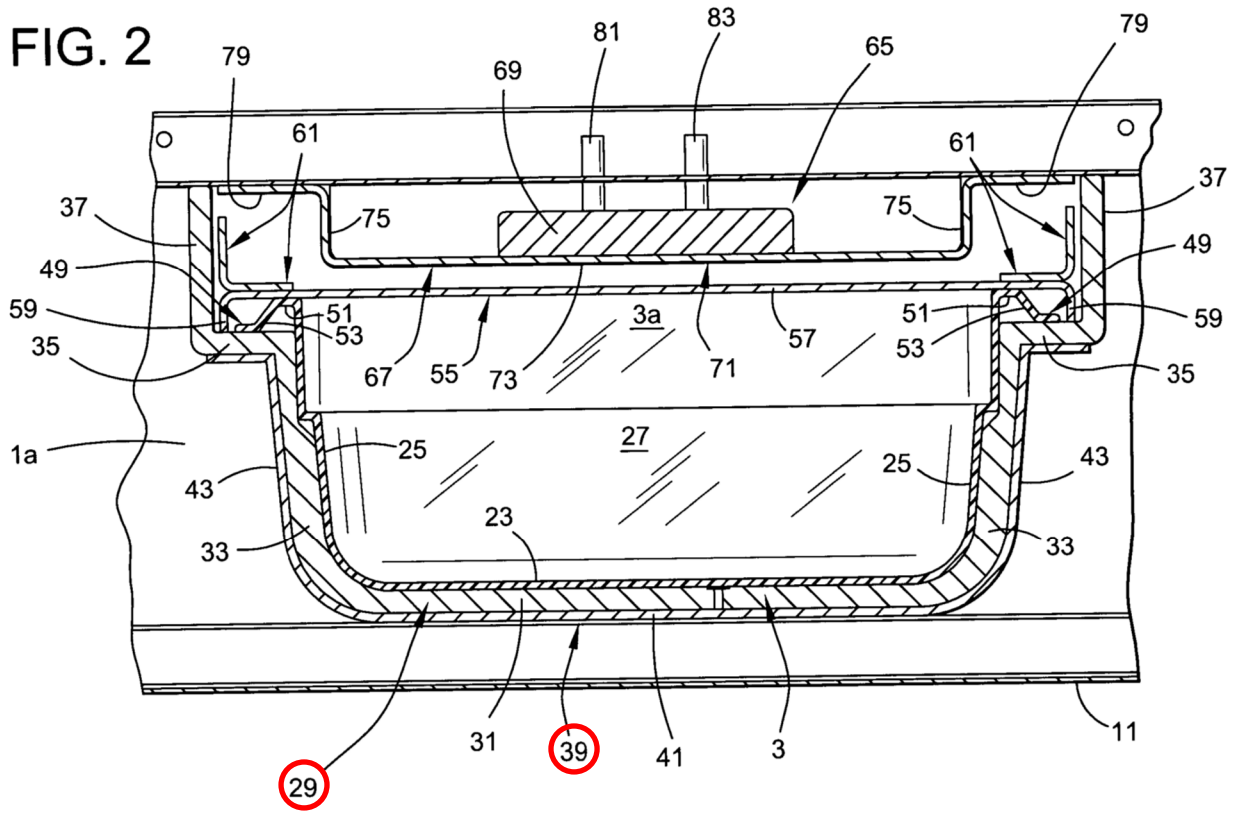


FIG. 2

EX1022: Fig. 2 (annotated).



EX1016: Fig. 2 (annotated).

Per Veltrop and/or Shei'155, it would have been obvious for the lower heating elements to be conductively coupled to the heatsink plates because conduction effectively and efficiently transfers heat to heatsinks and pans. EX1010: ¶[0020]; EX1016: Fig. 2, ¶[0039]; EX1017: Fig. 3, 4:51-53; EX1022: ¶[0050]; EX1003: ¶373.

This uses a known technique (Veltrop's and Shei'155's construction) to improve a similar device (IRHS24's heatsink) in the same way (conductive heat transfer from heating elements to heatsink and food) with reasonable expectation

of success (conduction heating being well-known). EX1010: ¶[0020]; EX1016: Fig. 2, ¶[0039]; EX1017: Fig. 3, 4:51-53; EX1020: ¶[0020]; EX1022: ¶[0050]; EX1003: ¶¶374-375.

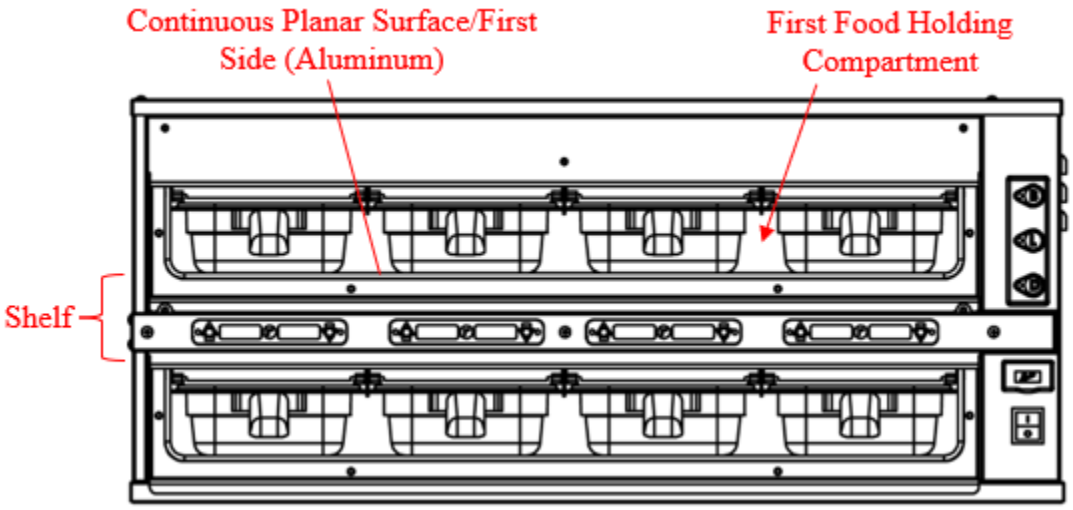
This renders obvious the second and fourth heating elements being conductive heating elements heating the food pans through conduction. EX1003: ¶376.

Moreover, per Veltrop and/or Shei'155, it would have been obvious to make IRHS24's heatsink plates from aluminum as preferred material that "conducts heat well." EX1017: 3:32-33; EX1022: ¶[0023]; EX1020: ¶¶[0021]-[0023]; EX1021: ¶¶[0020]-[0022]; EX1003: ¶379. Aluminum is relatively lightweight (easier to ship) and inexpensive. EX1003: ¶380.

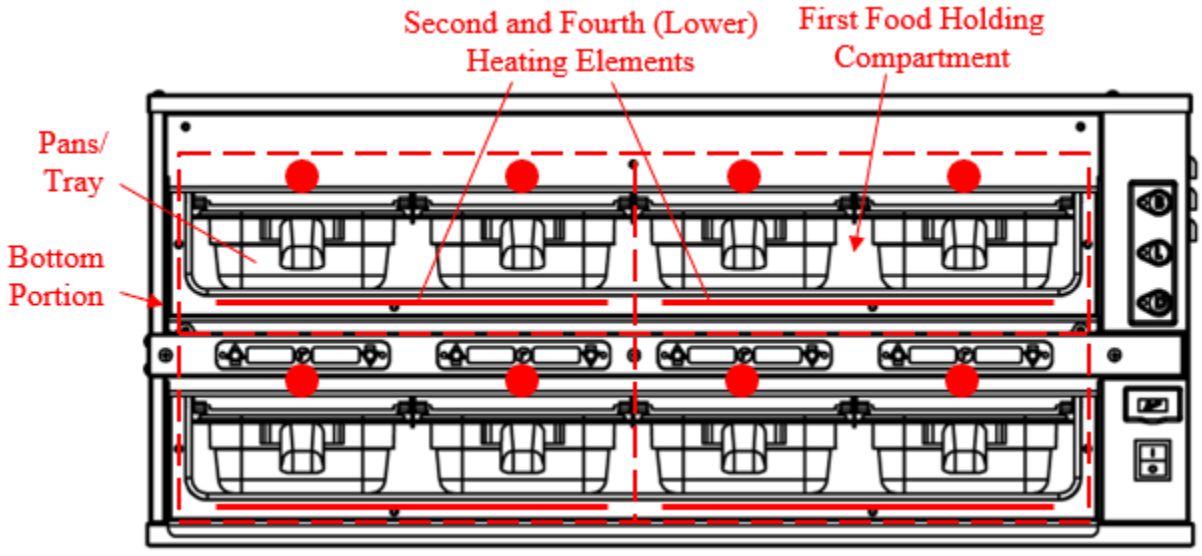
This uses a known technique (aluminum) to improve a similar device (IRHS24's heatsink) in the same way (aluminum surfaces supporting pans for localized heating) with reasonable expectation of success (known suitability of aluminum shelves having multiple zones in warming cabinets). EX1016: ¶[0039]; EX1020: ¶¶[0021]-[0023]; EX1021: ¶¶[0020]-[0022]; EX1022: ¶[0023]; EX1003: ¶¶381-384.

This renders obvious the continuous and planar surface (formed by IRHS24's heatsink) comprising aluminum. EX1003: ¶385.

In this ground, claims 1-10 are obvious for at least the reasons explained in Grounds 1-4 and 6, with at least limitations 1.c.3, 1.d.2, 1.e.2, 1.h.2, 2.b.2, 9.a.2, 9.a.5, and 9.a.6 further being obvious as described above and demonstrated below. EX1003: ¶386.



EX1005: 8 (annotated).



EX1005: 8 (annotated).

IX. GROUND 6: Claims 1-10 Would Have Been Obvious Over the IRHS Documents in view of Hartfelder, Shei'099, Veltrop, Poole, Shei'155, Prince Castle, Reese, and McMillan (If Necessary)

If it is determined that IRHS24's continuous and planar surfaces do not extend completely to the chassis' front face, such a configuration would have been obvious. EX1003: ¶¶387-389.

Veltrop's cabinet has shelves (52) having flat heatsinks/plates (51) with continuous and planar surfaces. EX1022: Fig. 1, ¶¶[0016], [0022], [0025]; EX1003: ¶390. The front edges of the heatsinks/plates (e.g., continuous and planar surfaces) are at the front face of the cabinet. EX1022: Fig. 1; EX1003: ¶391.

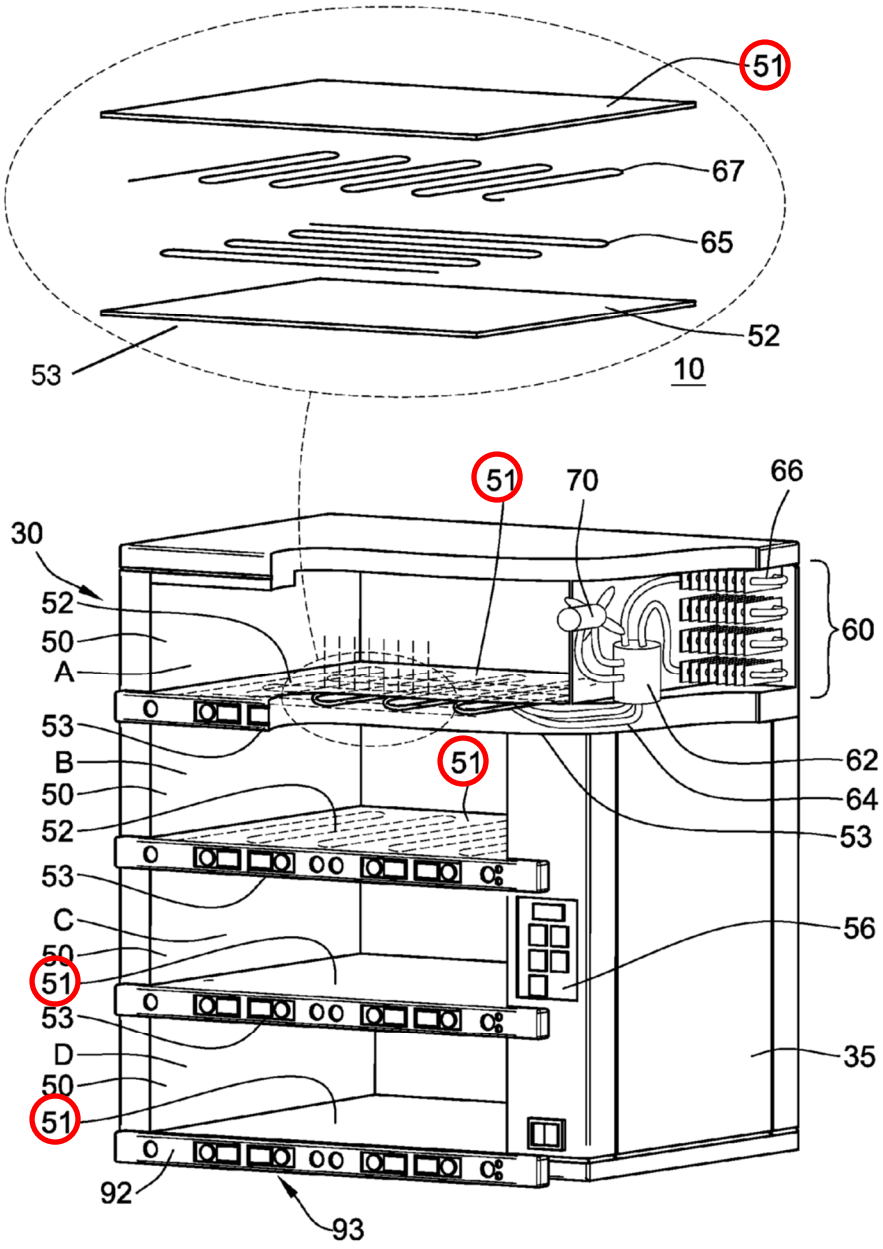
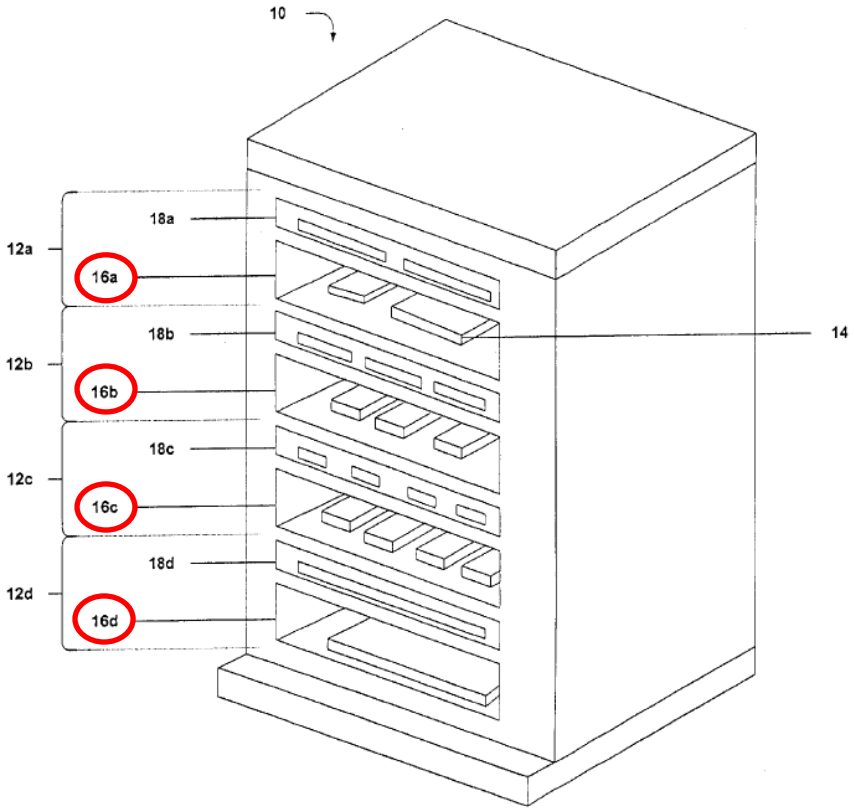


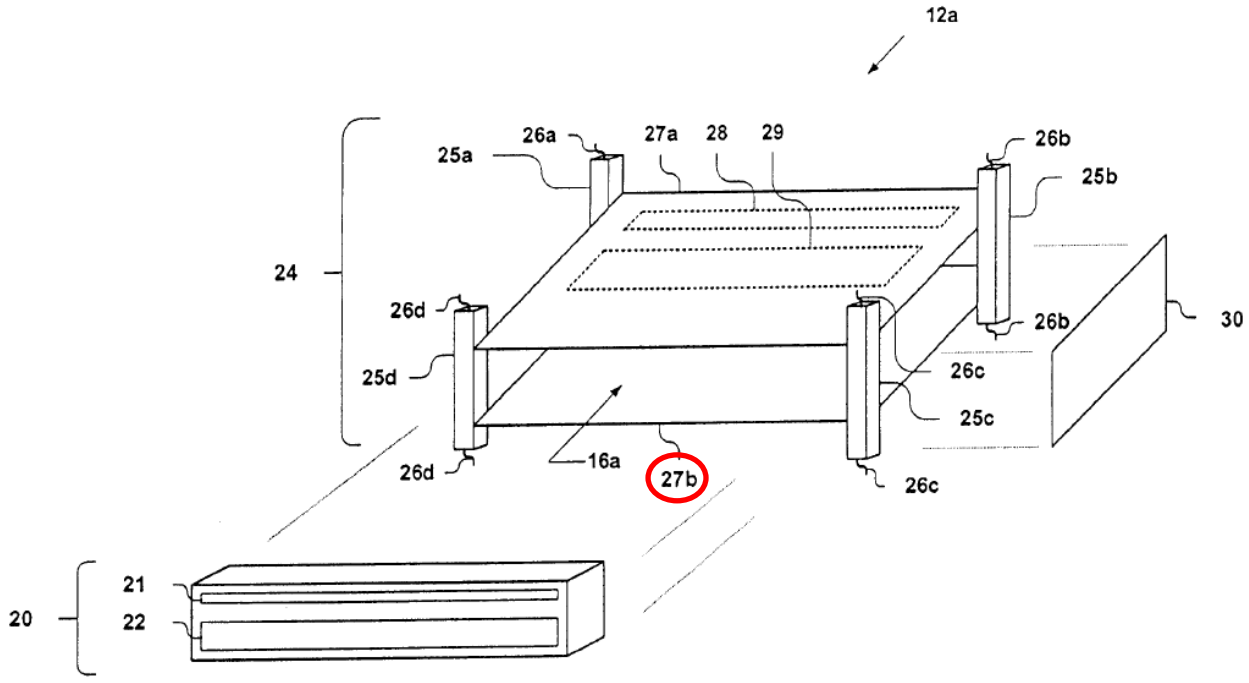
FIG. 2

EX1022: Fig. 2 (annotated).

Similarly, McMillan's cabinet has lower heater plates (27b) that form continuous and planar surfaces. EX1019: 4:36-52, Fig. 1; EX1003: ¶¶392-393.

The front edges of the heater plates (e.g., continuous and planar surfaces) are at the front face of the cabinet. EX1019: Fig. 1; EX1003: ¶393.





EX1019: Figs. 1-2 (annotated).

Per Veltrop and/or McMillan, it would have been obvious to reduce the front-to-back depth of the IRHS24's chassis until the chassis' front face is at the front edge of the IRHS24's heatsinks. EX1003: ¶394. This would make the front (first) openings of the compartments (first compartment) easier to access for insertion and removal of pans/trays through the front of the compartments. EX1022: ¶[0016]; EX1019: 3:5-7; EX1003: ¶395.

This modification would reduce the IRHS24's depth, furthering the IRHS24's small footprint goal. EX1007: 53; EX1003: ¶396. This would also make the IRHS24 cheaper to manufacture (less material, simpler construction) and

ship (smaller package, less weight) than the existing configurations, reducing overall cost. EX1003: ¶396.

This applies a known technique (McMillan's/Veltrop's heatsink configuration) to improve a similar device (IRHS24) in the same way (front edges of the heatsinks at the chassis' front face) with reasonable expectation of success (minor reconfiguration of parts, prior art demonstrates it was possible). EX1019: Fig. 1; EX1022: Fig. 2; EX1020: ¶¶[0021]-[0023]; EX1003: ¶397.

With the front edges of the heatsinks at the chassis' front face, this modification results in the IRHS24's heatsinks (e.g., planar surfaces thereof) extending completely to the chassis' front face. EX1003: ¶398. Therefore, the continuous and planar bottom surface extending completely to the chassis' front face would have been obvious. EX1003: ¶398.

In this ground, claims 1-10 are obvious for at least the reasons explained in Grounds 1-5, with at least limitations 1.c.2 and 9.a.3 further being obvious as described above. EX1003: ¶399.

X. GROUND 7: Claims 1-3 and 5-9 Would Have Been Obvious Over Fortmann'748 in view of the IRHS Documents, Jones, Fortmann'197, McMillan, Hartfelder, Shei'099, Veltrop, and/or Shei'155

A. Modifications of Fortmann'748

1. 2x4 Configuration

Fortmann'748 teaches a warming cabinet (10) for warming food trays (100). EX1010: ¶¶[0002], [0014]-[0015]; EX1003: ¶¶400-402.

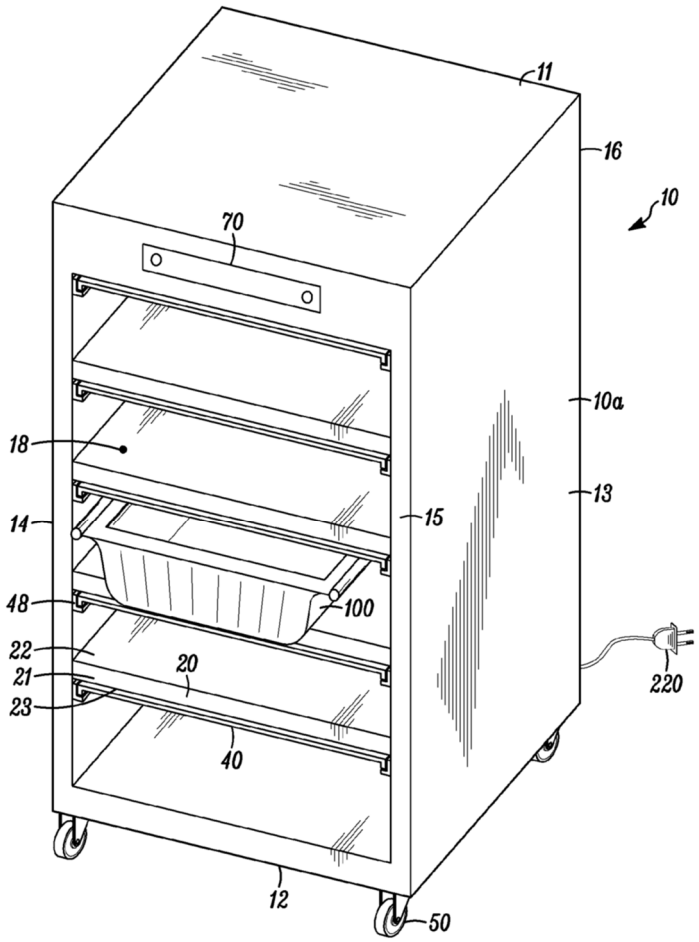


FIG. 1

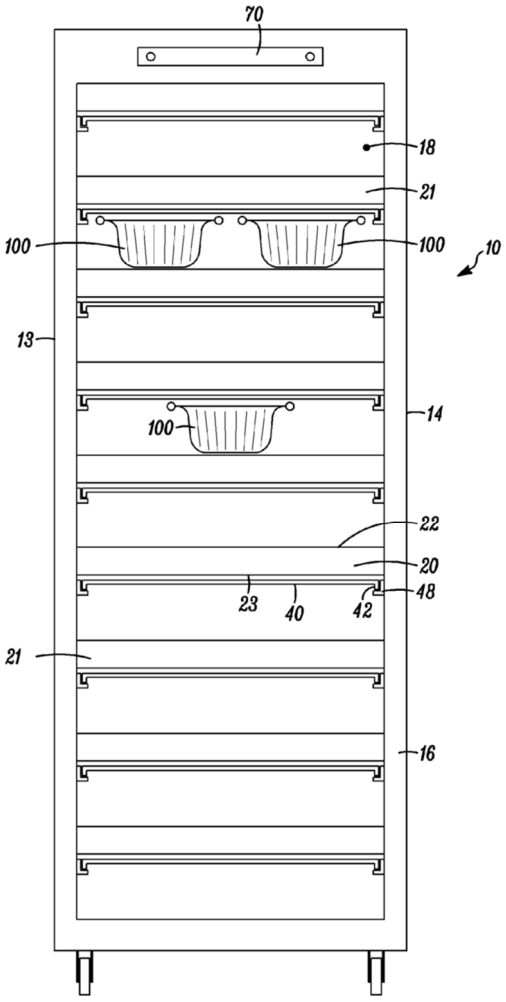
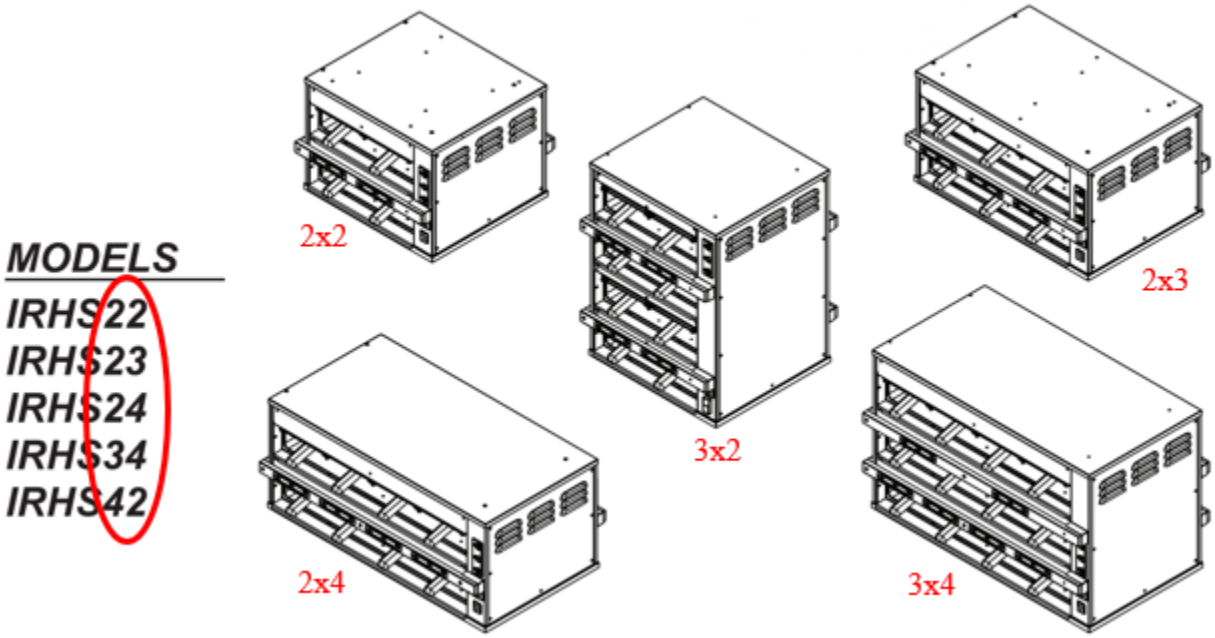


FIG. 6

EX1010: Figs. 1, 6.

The cabinet "may be 5-6 feet tall" or "only about 1-2 feet tall … to rest upon a table." EX1010: ¶[0014]; EX1003: ¶¶403-404. The cabinet may contain any number of compartments/shelves having "sufficient width to accept ***two or more*** standard 12 inch wide restaurant warming pans." EX1010: ¶¶[0014]-[0016]; EX1003: ¶¶405-406.

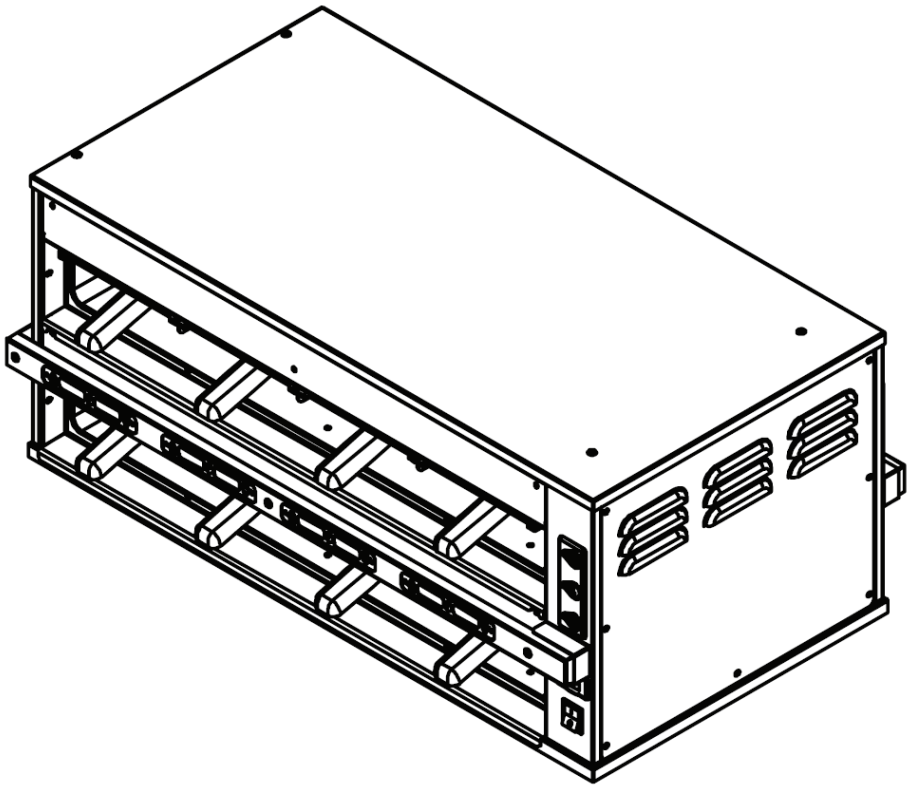
The IRHS Documents teach a cabinet having a 2x4 bay configuration. EX1005: 1; EX1006: 1; EX1007: 55-57; EX1003: ¶407.



EX1005: 1 (annotated).

Per the IRHS Documents, it would have been obvious to configure Fortmann'748's cabinet to have only two compartments each having four narrower pan bays (2x4 bay configuration). EX1003: ¶408. This would make Fortmann'748's cabinet "only about 1-2 feet tall" and suitable to "rest upon a [kitchen] table." EX1010: ¶[0014]; EX1007: 53; EX1003: ¶409. This configuration would also be cheaper to manufacture (less material, fewer parts) and cheaper to ship (smaller package, less weight) than Fortmann'748's larger/taller configurations. EX1003: ¶410.

Configuring Fortmann'748 to have a 2x4 configuration—common in the art—would be an obvious design choice. *Uber Techs., Inc. v. X One, Inc.*, 957 F.3d 1334, 1341 (Fed. Cir. 2020) ("[POSA] would have faced a simple design choice between [known, finite solutions]"); EX1013: ¶¶[0028], [0030]; EX1015: ¶¶[0024], [0026]; EX1003: ¶411.

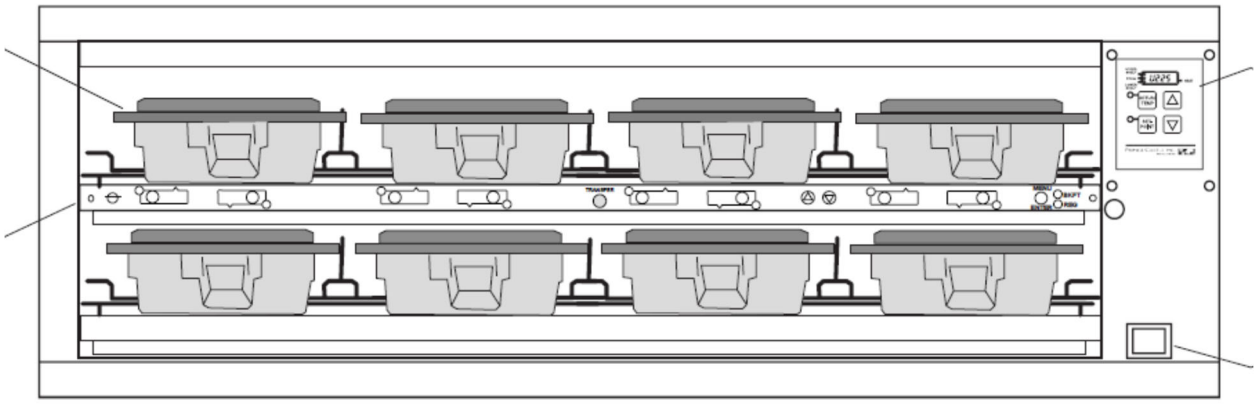


EX1005: 1.



EX1007: 56.

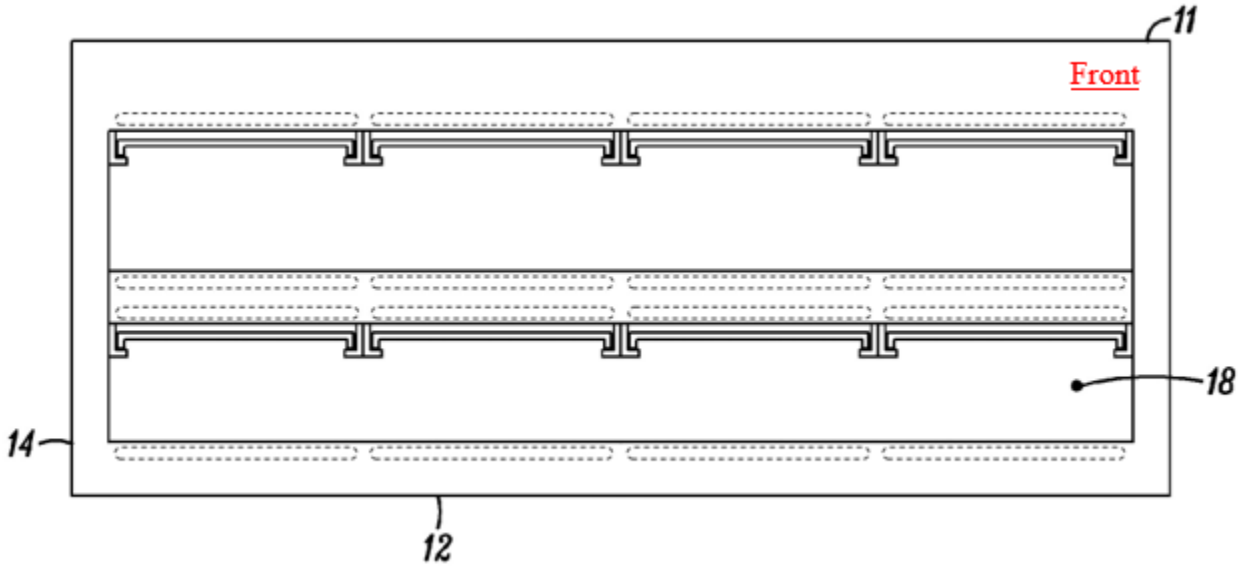




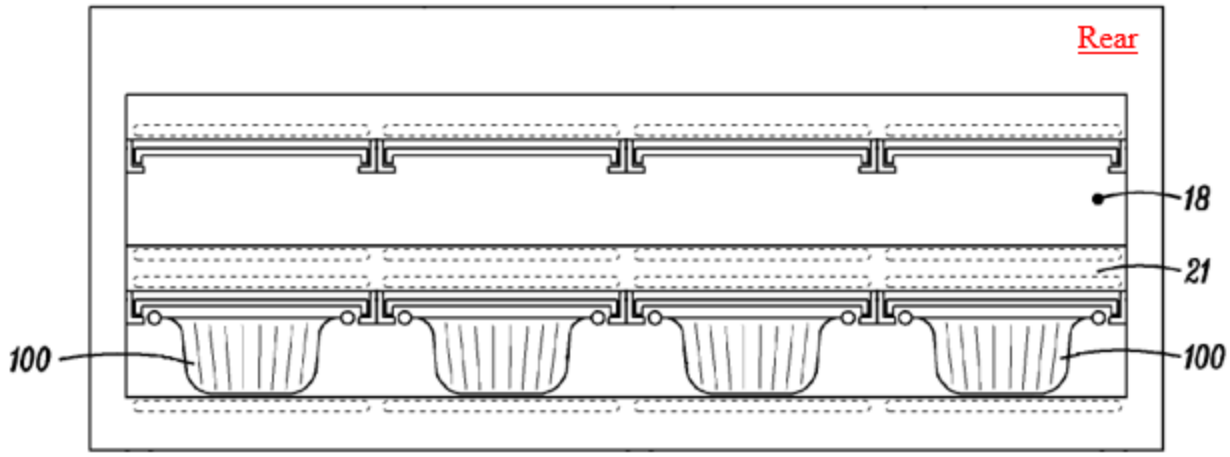
EX1009: 11, 19.

This applies a known technique (2x4 bay configuration) to improve a similar device (Fortmann'748's cabinet) in the same way (Fortmann'748's cabinet with eight bays), with reasonable expectation of success (simply removing components and/or changing their size). EX1005: 1; EX1006: 1; EX1007: 55-57; EX1010: ¶[0014]; EX1003: ¶¶412-413.

This modification is represented below.[2] EX1003: ¶414.



[2] Further modifications explained below.



EX1010: Figs. 2, 6 (modified, annotated).

2. Multiple Temperature Zones per Compartment

Each Fortmann'748 shelf (21) includes "one or more heaters (60)" to establish multiple temperature zones. EX1010: ¶¶[0019], [0021], [0024], [0027]; EX1003: ¶¶415-419.

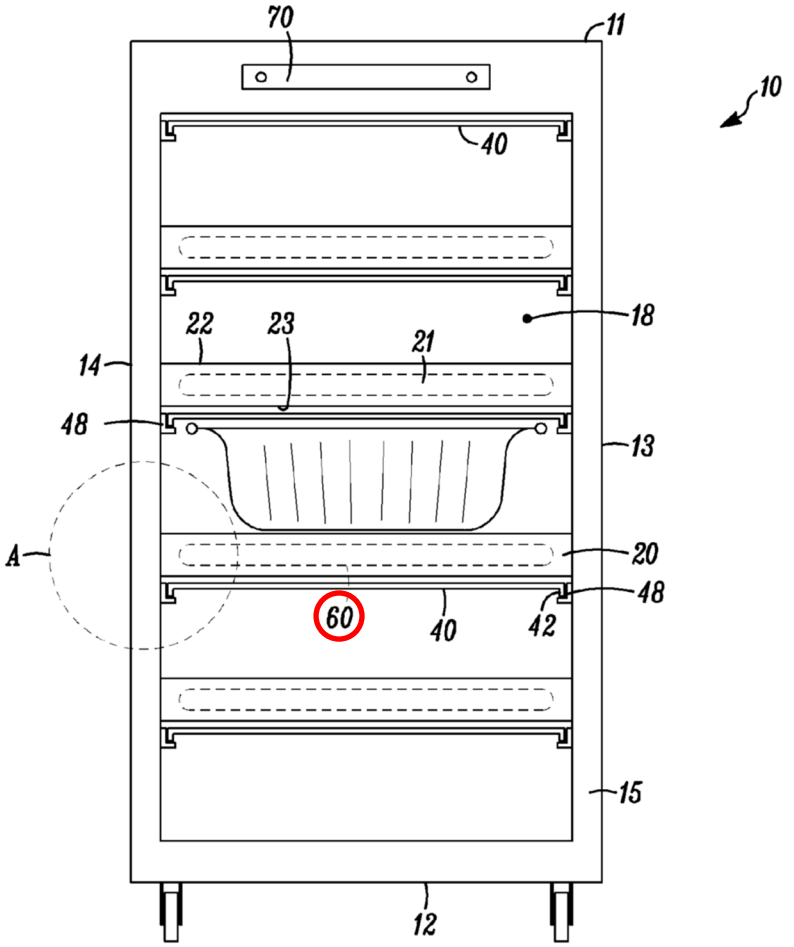


FIG. 2

EX1010: Fig. 2 (annotated).

Jones teaches compartments (UHC, LHC) having multiple bays (ULTL, URTL, LLTL, LRTL), each bay forming a temperature zone with respective upper and lower heaters. EX1012: ¶¶[0069], [0072], [0096]; EX1003: ¶¶420-427.

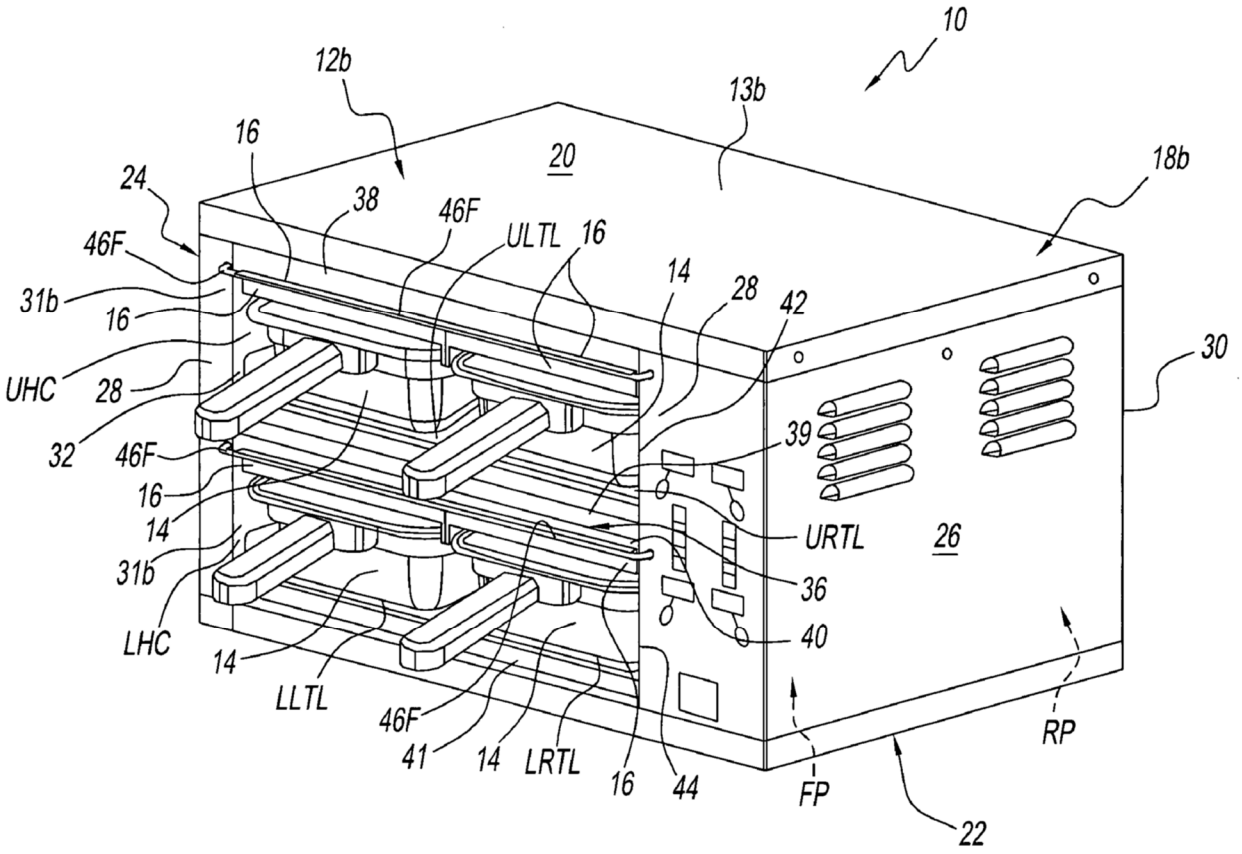

10
12b
13b
16
20
18b
24
38
46F
ULTL
16
46F
14
28
42
31b
16
30
UHC
28
32
46F
39
16
14
URTL
26
31b
36
LHC
40
14
LLTL
46F
41
14
LRTL
16
44
FP
RP
22

Fig. 1B

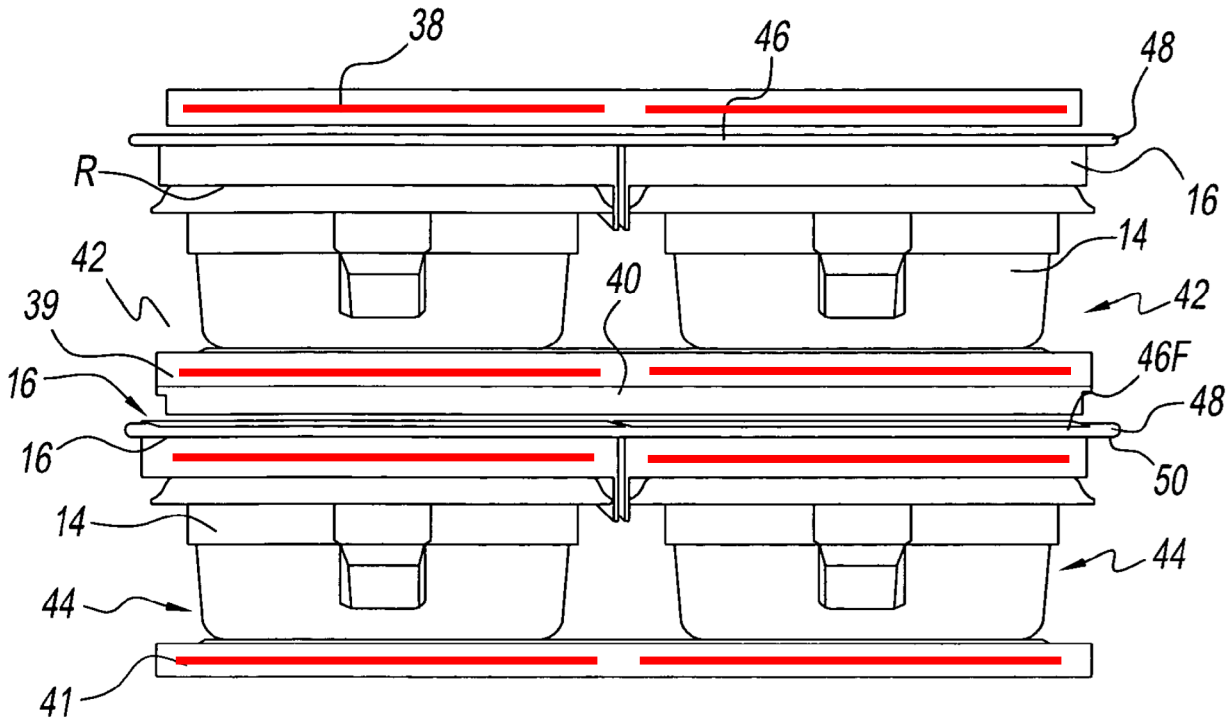


Fig. 1G

EX1012: Fig. 1B, 1G.

Fortmann'197 teaches compartments with discrete zones/bays having independently controllable upper and lower heaters (521)-(524), (501). EX1014: 3:6-27, 8:63-9:19, 9:50-65; EX1003: ¶¶428-429.

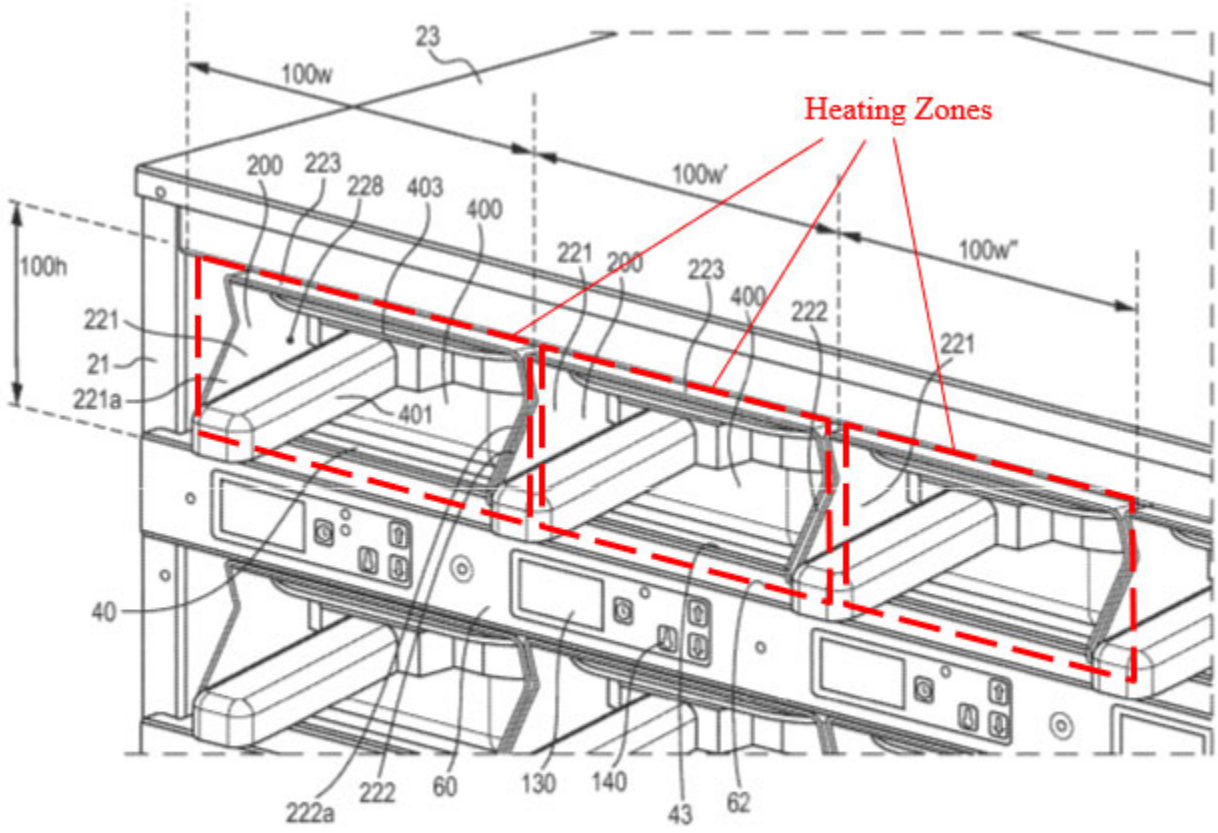

23
100w
Heating Zones
100w'
100w"
200
223
228
403
400
221
200
223
400
222
221
100h
221
21
221a
401
40
222a
222
60
130
140
43
62

FIG. 2

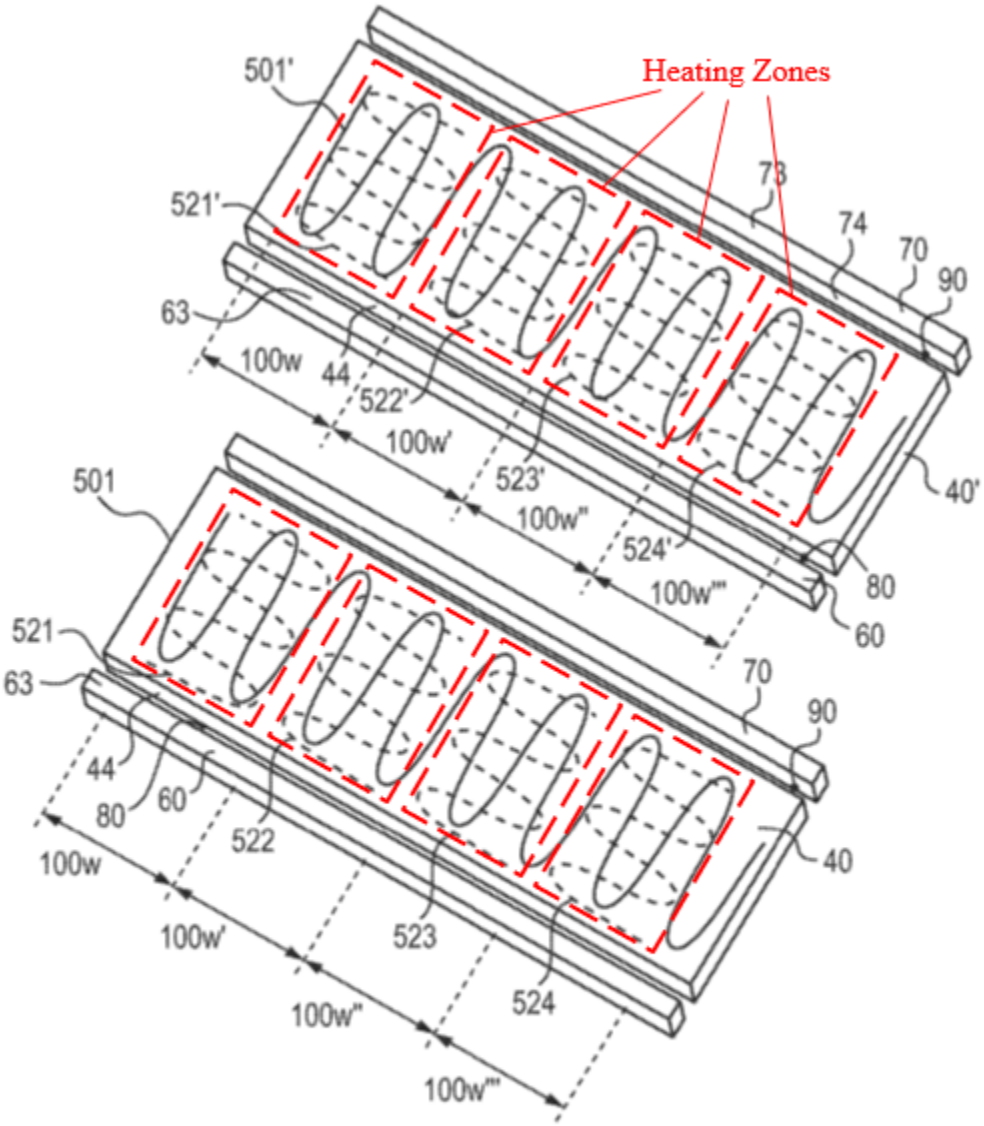
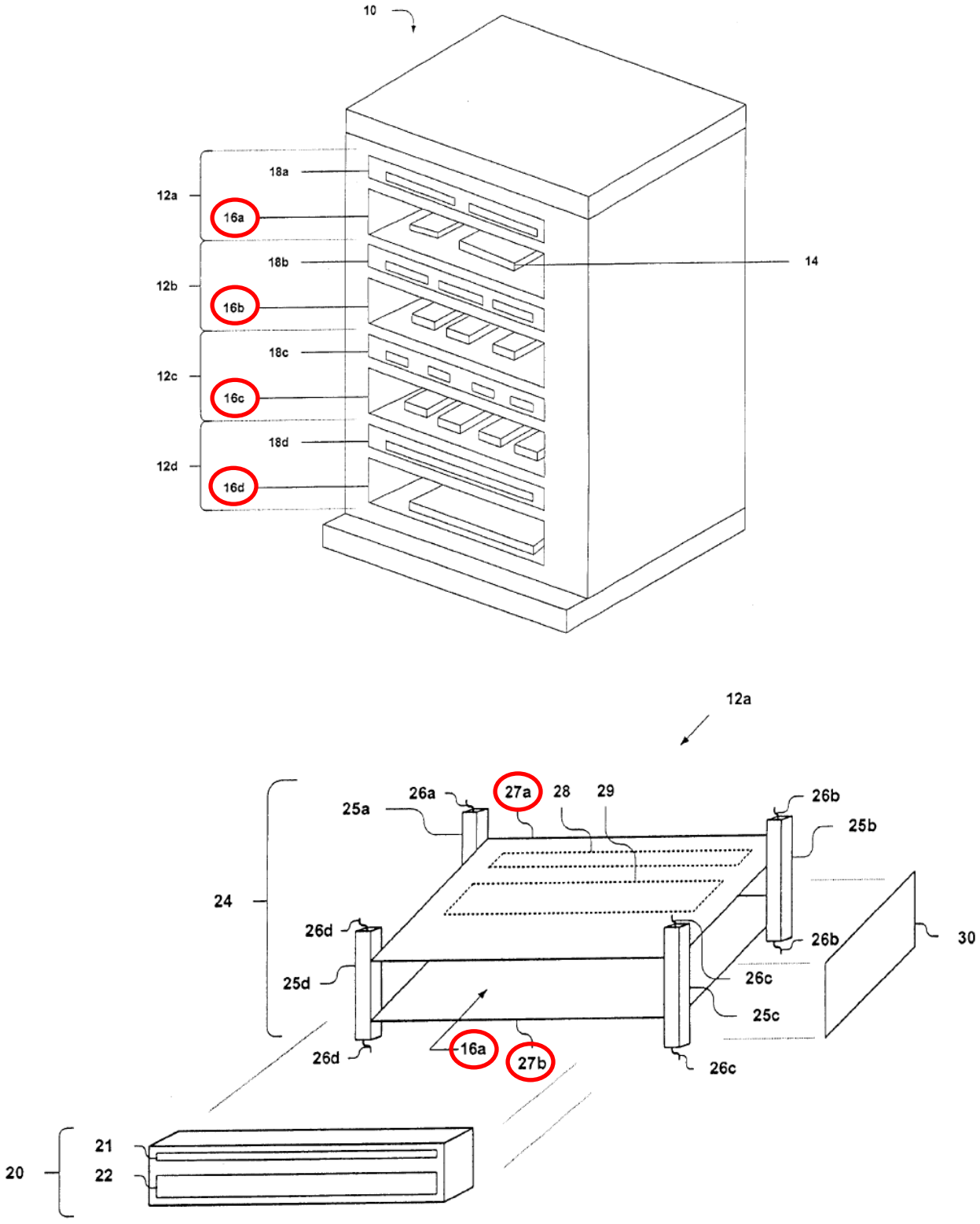


FIG. 10

EX1014: Figs. 2, 10 (annotated).

McMillan teaches upper and lower heater plates (27a, 27b) having multiple heating elements for different temperatures/zones across compartments (16a-d). EX1019: 4:36-59; EX1003: ¶430.



EX1019: Figs. 1-2 (annotated).

It would have been obvious to modify Fortmann'748 to provide independently controlled heating zones across each compartment, per Jones, Fortmann'197, and/or McMillan. EX1003: ¶431. This would further Fortmann'748's goal of providing "zones" for "food products [requiring] different warming temperatures". EX1010: ¶[0024]; EX1019: 1:36-45, 1:46-48, 4:45-52; EX1003: ¶¶432-433.

This would increase temperature zones (same cabinet size) and enable each compartment to receive pans requiring different temperatures, increasing flexibility and enabling holding more food types at one time. EX1007: 51, 53; EX1019: 1:38-40; EX1003: ¶434.

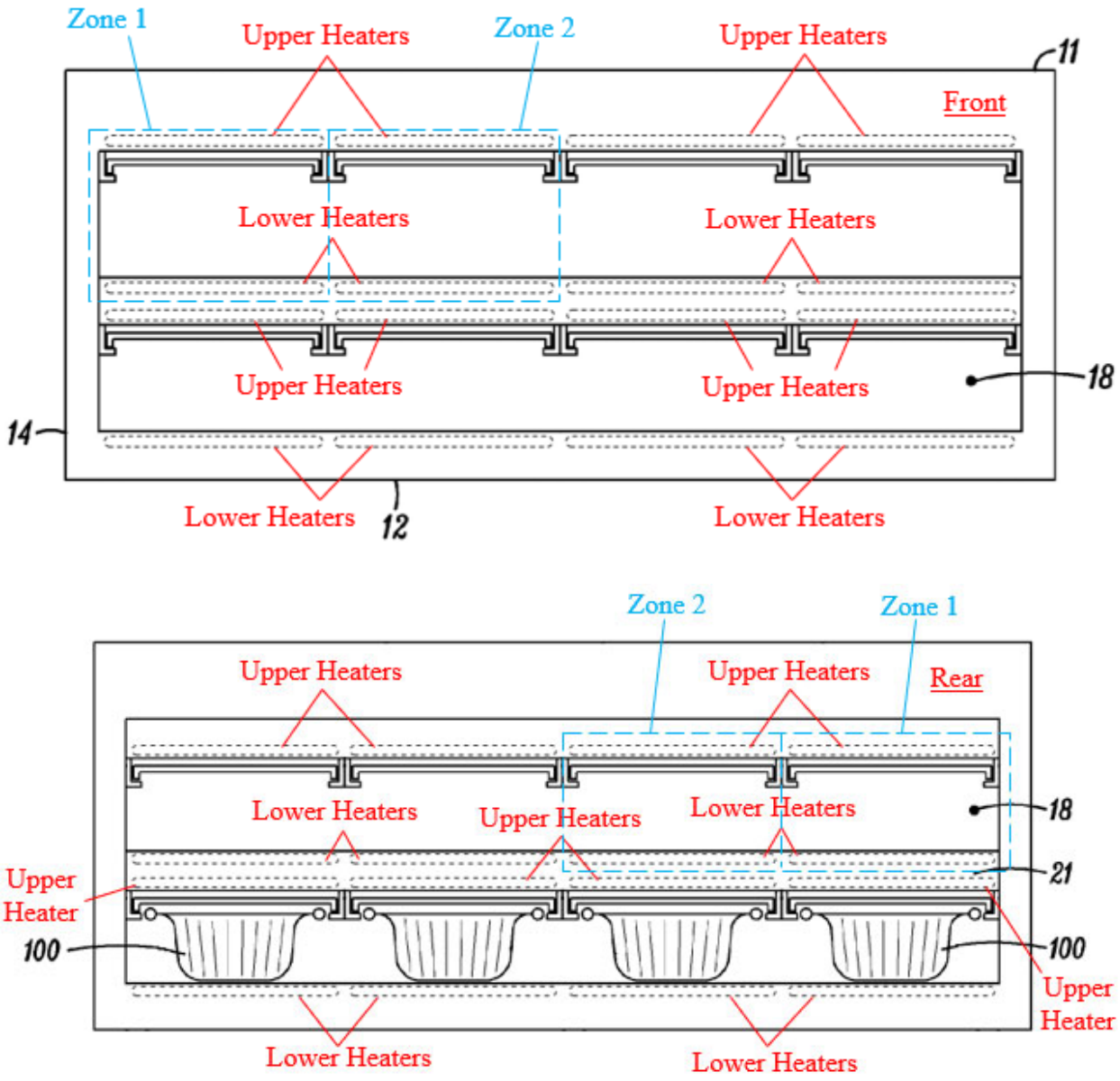
This would "provide improved temperature separation between tray or bin locations" and "more accurate temperature control between products." EX1012: ¶[0096]; EX1003: ¶435. Users could "precisely control the environment in each pan, allowing for customized settings for each food product." EX1005: 16; EX1003: ¶436.

To the extent Fortmann'748's top compartment lacks upper heaters and bottom compartment lacks lower heaters, this modification would add such heaters for more uniform heating, better food quality, and extended hold time for the top and bottom compartments. EX1006: 1; EX1005: 4; EX1007: 53; EX1003: ¶437.

This would merely require duplicating and resizing Fortmann'748's existing heaters around the compartments so each zone includes dedicated upper and lower heaters. *In re Harza*, 274 F.2d 669, 671 (C.C.P.A. 1960) ("mere duplication of parts has no patentable significance"); EX1003: ¶438.

This applies a known technique (upper and lower heating elements per zone) to improve a similar device (Fortmann'748's cabinet) in the same way (independent temperature control of heating zones across compartments) with reasonable expectation of success (Fortmann'748 already heating from above and below and having a zone-capable control system, and prior art demonstrating independent heating of adjacent compartment zones). EX1010: ¶[0027]; EX1020: ¶¶[0021]-[0023]; EX1003: ¶¶439-442.

Per Jones/Fortmann'197/McMillan, POSA would duplicate Fortmann'748's heaters so each pan/bay has distinct upper and lower heaters independently controllable from heaters of other pans/bays. EX1012: ¶[0096]; EX1014: 3:19-27, 8:63-67, 9:1-19; EX1019: 4:36-52; EX1003: ¶¶443-444.



EX1010: Figs. 2, 6 (modified, annotated).

Insulation can be added to minimize the impact adjacent heaters may have on one another and direct the heat into the compartments. EX1018: 4:33-38, Fig. 2; EX1014: 9:32-37, Fig. 10; EX1003: ¶445.

3. Independently Controllable Top and Bottom Heaters per Zone

Fortmann'748's heaters (60) are independently controllable. EX1010: ¶¶[0021], [0027]; EX1003: ¶446.

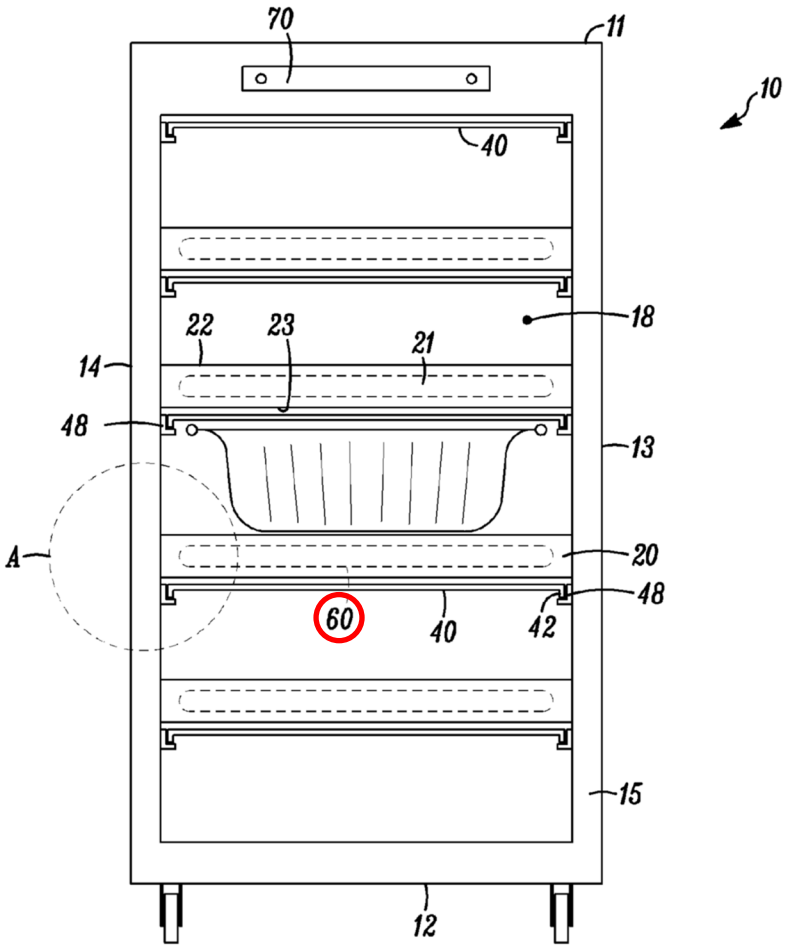


FIG. 2

EX1010: Fig. 2 (annotated).

Jones, Fortmann'197, IRHS Documents, and McMillan teach upper and lower heaters being independently controllable for each zone. EX1012: ¶¶[0098],

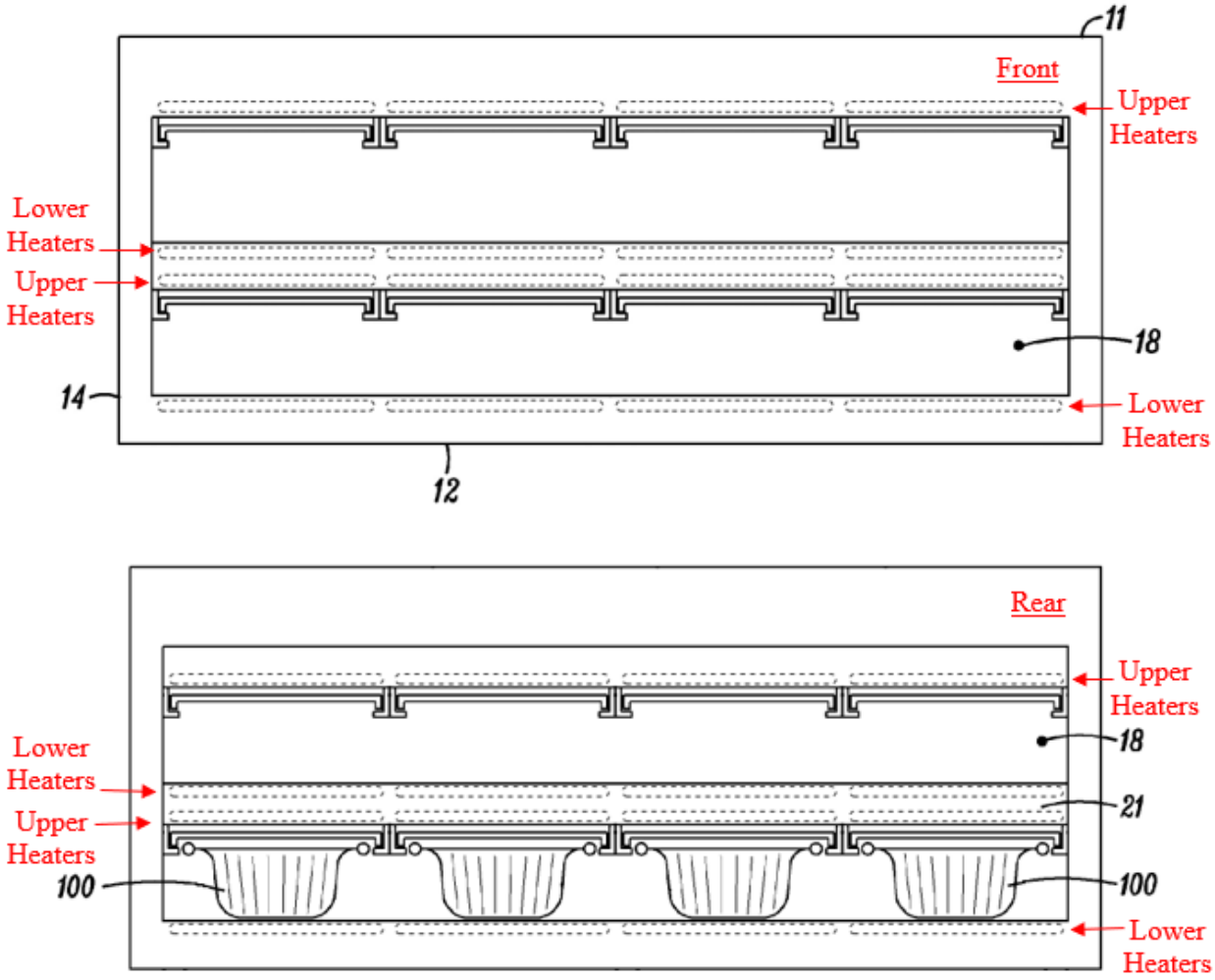
[0130]; EX1014: 8:63-67, 9:50-52, 9:59-65; Section X(B)(1.d.2/1.e.2); EX1019: 4:40-42; EX1003: ¶¶447-453.

Per Jones, Fortmann'197, IRHS Documents, and/or McMillan, it would have been obvious to make the upper and lower heaters of each zone independently controllable. EX1003: ¶454. This would provide "more accurate temperature control between products" and "limit temperature bleed over between [zones]" (EX1012: ¶[0096]), enable "precise[] control [of each pan] environment, allowing customized [food product] settings" (EX1005: 4), "maintain gold standard sensory attributes at drastically extended hold times while delivering hotter food" (EX1005: 4), and would "minimize temperature distribution from top to bottom of [the] pan" to improve temperature consistency. EX1006: 1; EX1007: 53; EX1003: ¶¶455-457.

The modification would "offer maximum flexibility in setting the precise food holding temperatures." EX1009: 16; EX1003: ¶458. It would enable setting each zone's upper and lower heaters to different temperatures for food (e.g., eggs) requiring such settings. EX1028: 39; EX1003: ¶458.

This applies a known technique (independently controllable upper and lower heaters) to improve a similar device (Fortmann'748's cabinet) in the same way (independent zone temperature control) with reasonable expectation of success (Fortmann'748 including a zone-capable control system; prior art demonstrating

independent control of heaters). EX1010: ¶[0027]; EX1005: 16; EX1006: 1; EX1007: 53; EX1012: ¶[0096]; EX1014: 8:63-67, 9:50-65; EX1019: 4:36-59; EX1003: ¶¶459-460.



EX1010: Figs. 2, 6 (modified, annotated).

Fortmann'748 teaches a controller controlling "the one or more heaters 60 disposed within each zone to control the temperature of the zone." EX1010: ¶[0027]; EX1003: ¶461.

When modifying Fortmann'748's cabinet to have multiple heating zones per compartment (Section X(A)(2)) and making upper and lower heaters independently controllable (Section X(A)(3)), POSA would have operatively coupled the heaters to Fortmann'748's controller (making any minor programming changes as needed). EX1010: ¶[0027]; EX1014: 9:65-10:2; EX1003: ¶¶462, 464-465. Fortmann'748's controller already operates heaters independently in different zones and would operate the additional heaters independently. EX1010: ¶¶[0021], [0024], [0027]; EX1003: ¶463.

4. Discrete Lids for Each Bay

Fortmann'748 has removeable lids (40). EX1010: ¶[0017]; EX1003: ¶¶466-468.

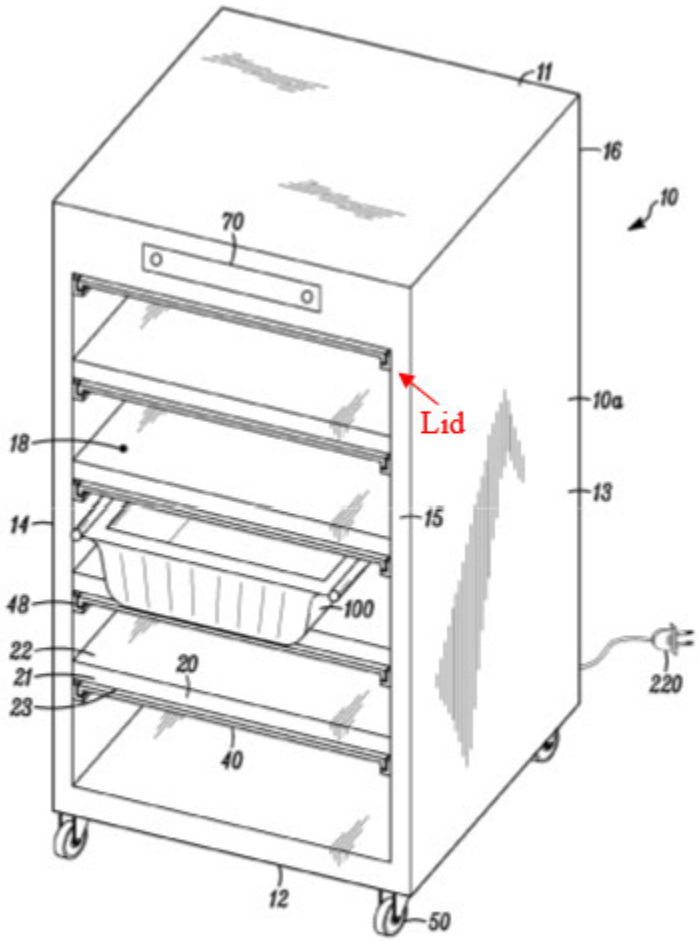


FIG. 1

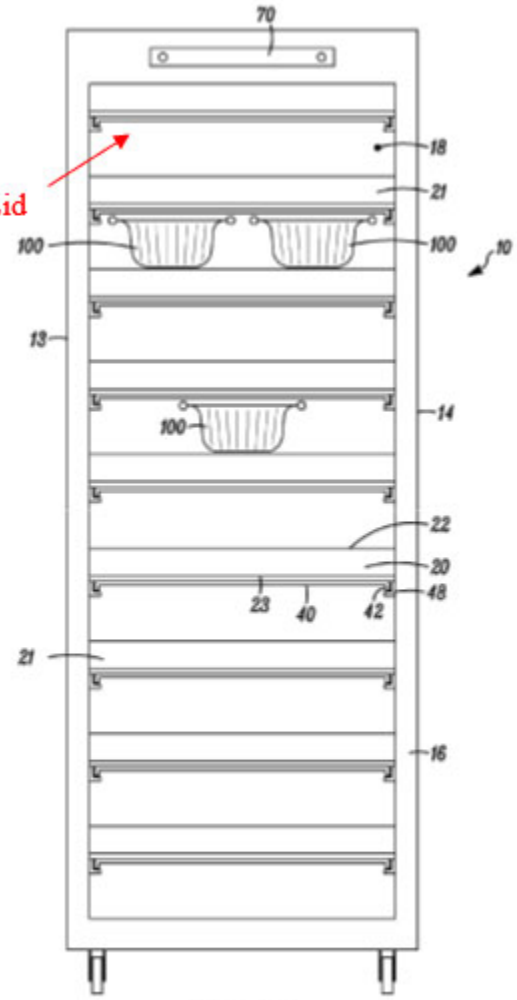


FIG. 6

EX1010: Figs. 1, 6 (annotated).

Jones, Fortmann'197, and IRHS Documents disclose a discrete lid for each pan/bay. EX1012: ¶[0072], Fig. 1B; EX1014: 4:50-53, Figs. 1-4; EX1005: 8; EX1006: 1-2; EX1007: 53, 58; EX1014: 7:31-32; EX1003: ¶469.

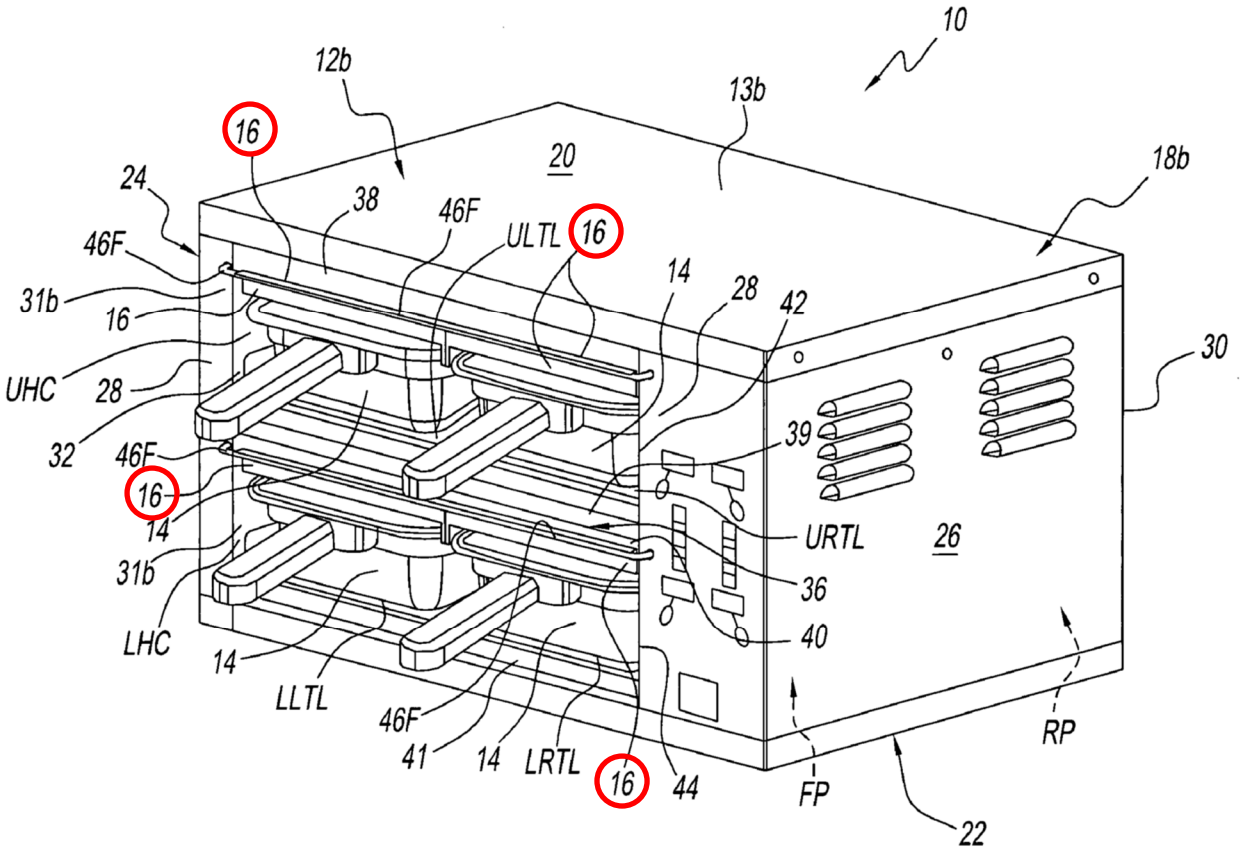


Fig. 1B

EX1012: Fig. 1B (annotated).

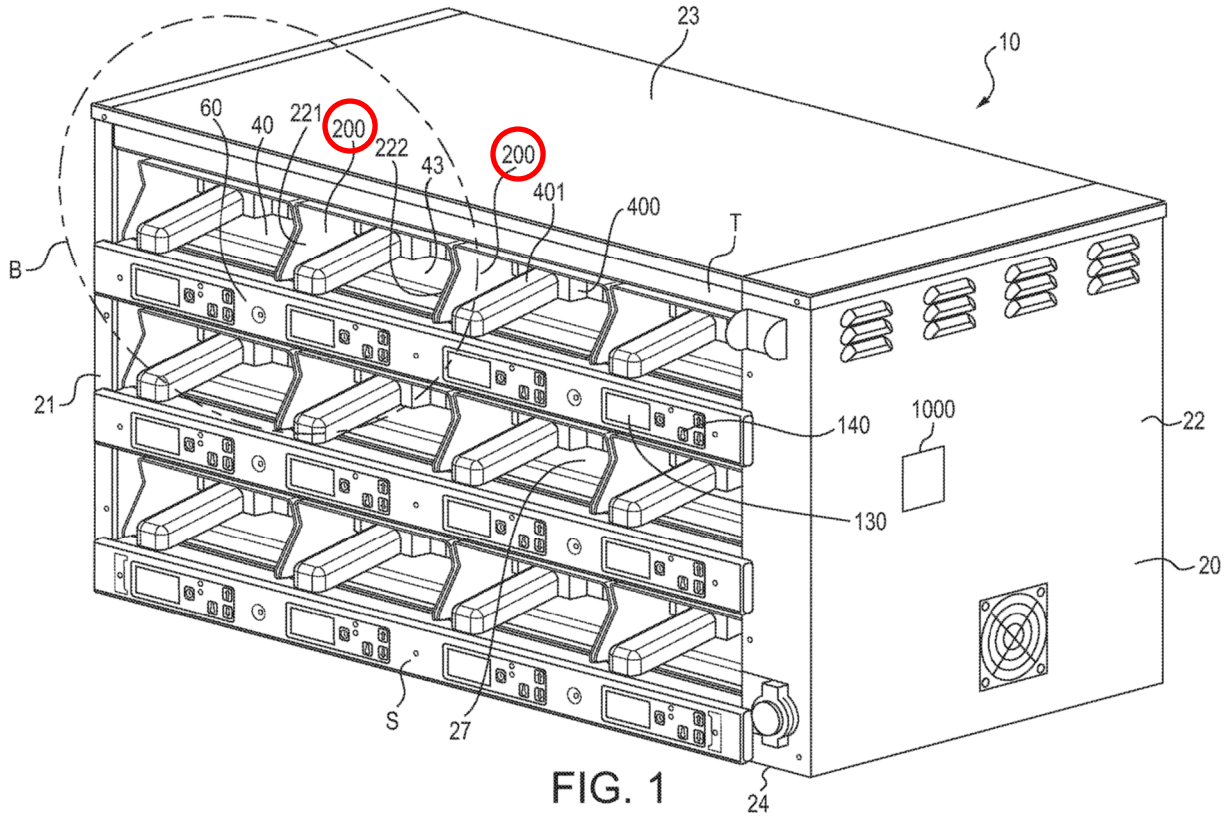
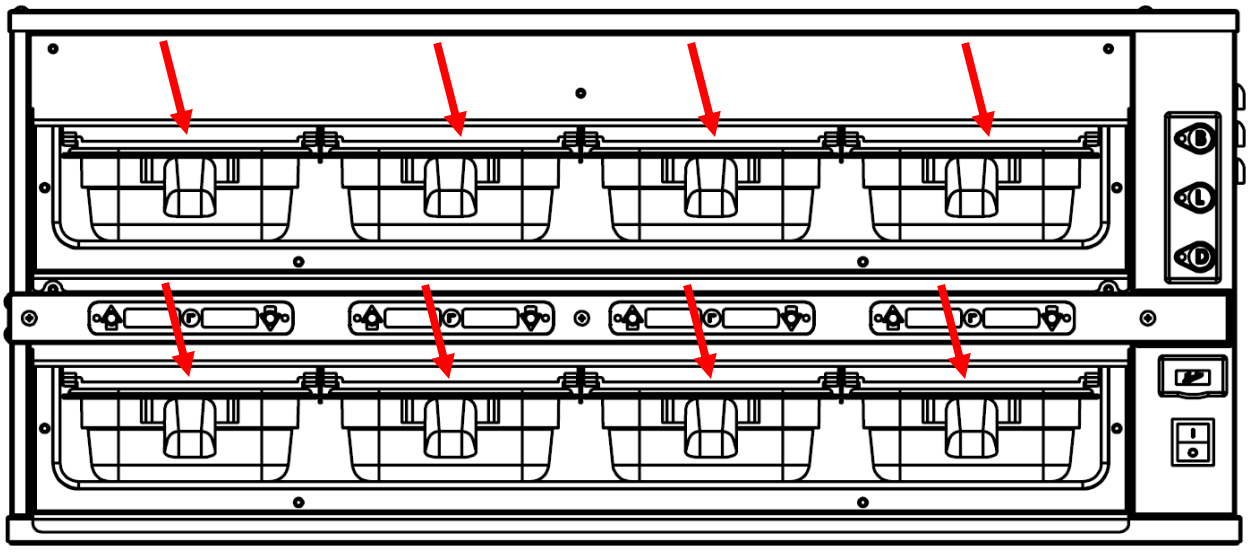


FIG. 1

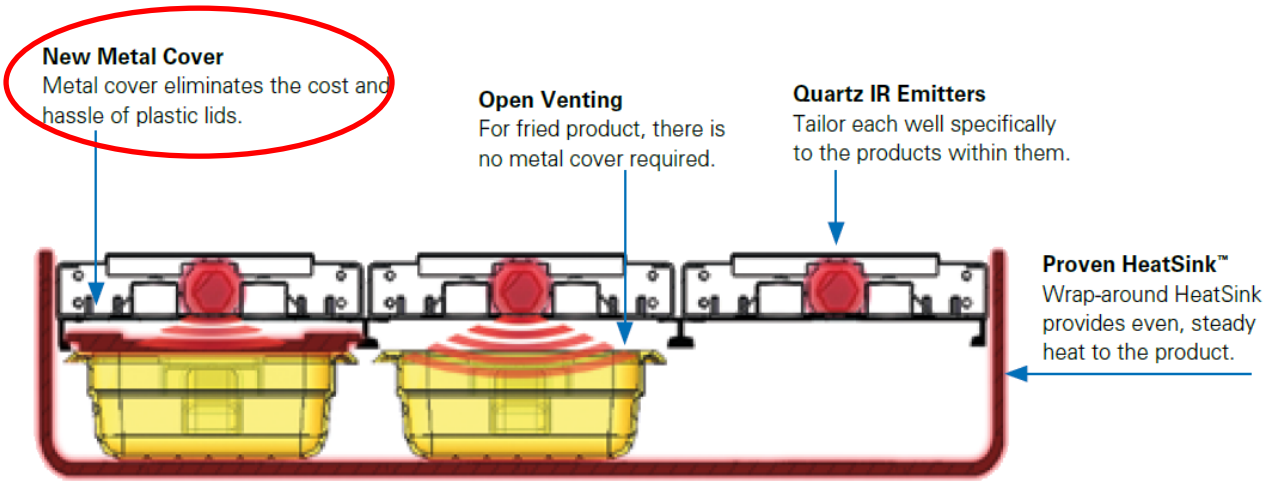
EX1014: Fig. 1 (annotated).



EX1005: 8 (annotated).



EX1006: 2 (annotated).

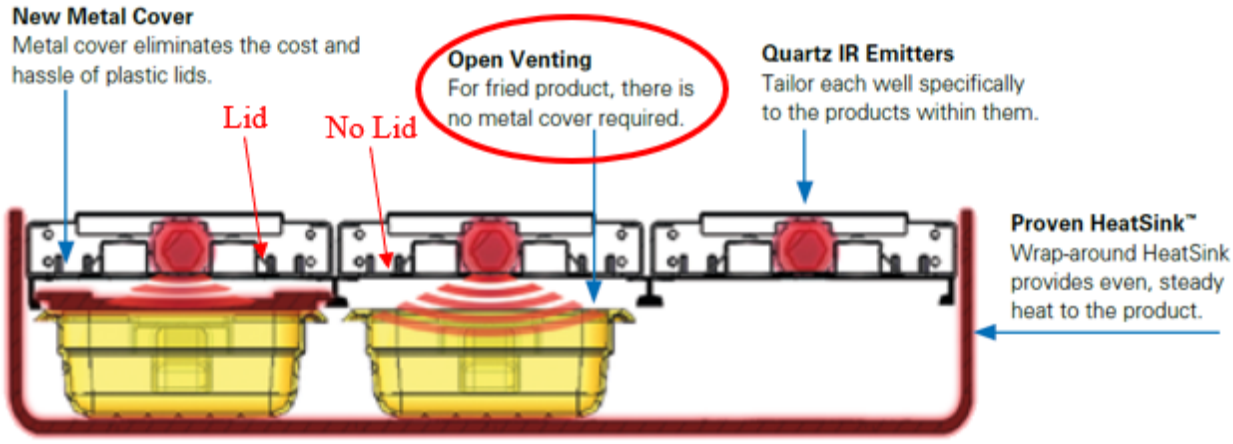


EX1007: 53 (annotated).

Per Jones, Fortmann'197, and/or IRHS Documents, it would have been obvious to modify Fortmann'748's cabinet to have discrete lids for each bay. EX1003: ¶470.

This would further Fortmann'748's goal of "zones" for different food types by allowing selective use/removal of individual lids, increasing flexibility for each compartment to hold more food types (more temperature/moisture combinations) at one time. EX1010: ¶[0024]; EX1003: ¶471. For example, installed lids would hold moisture in pans for non-fried foods and removed lids would permit moisture venting for fried foods. EX1007: 53; EX1013: ¶[0044]; EX1014: 7:50-67; EX1016: ¶[0003]; EX1017: 6:45-48; EX1003: ¶¶472-473.

This would provide more food placement flexibility, better venting/sealing control, and increased holding capacity for different combinations (temperature/sealing/venting). EX1007: 53; EX1019: 1:36-39, 1:43-45; EX1003: ¶¶474-475.

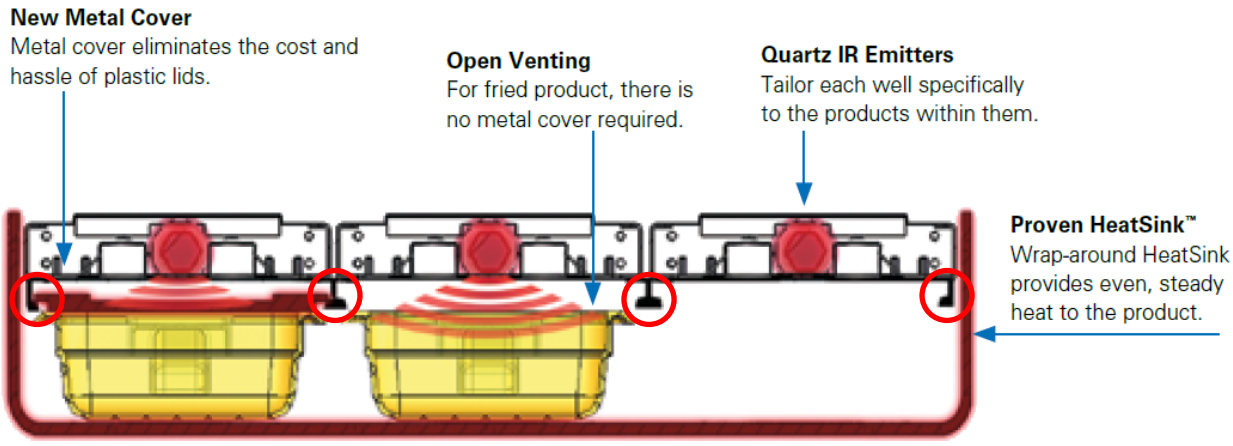


EX1007: 53 (annotated).

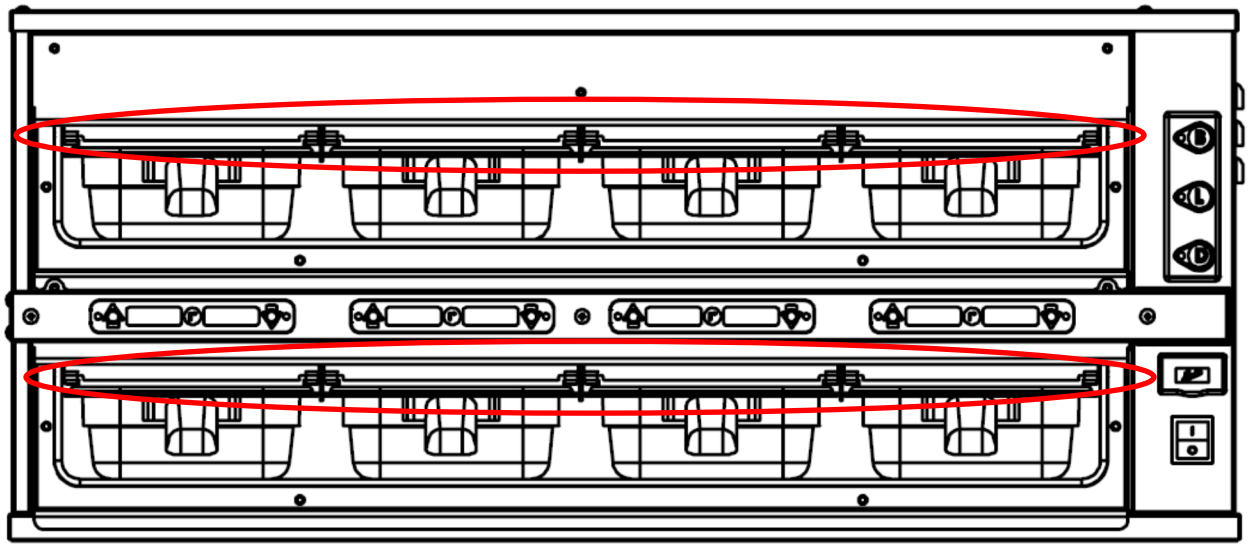
Discrete lids would be smaller, easier to move and clean, and improve pan sealing to retain moisture. EX1007: 10, 21 ("covers for individual control"), 58; EX1003: ¶¶476-477.

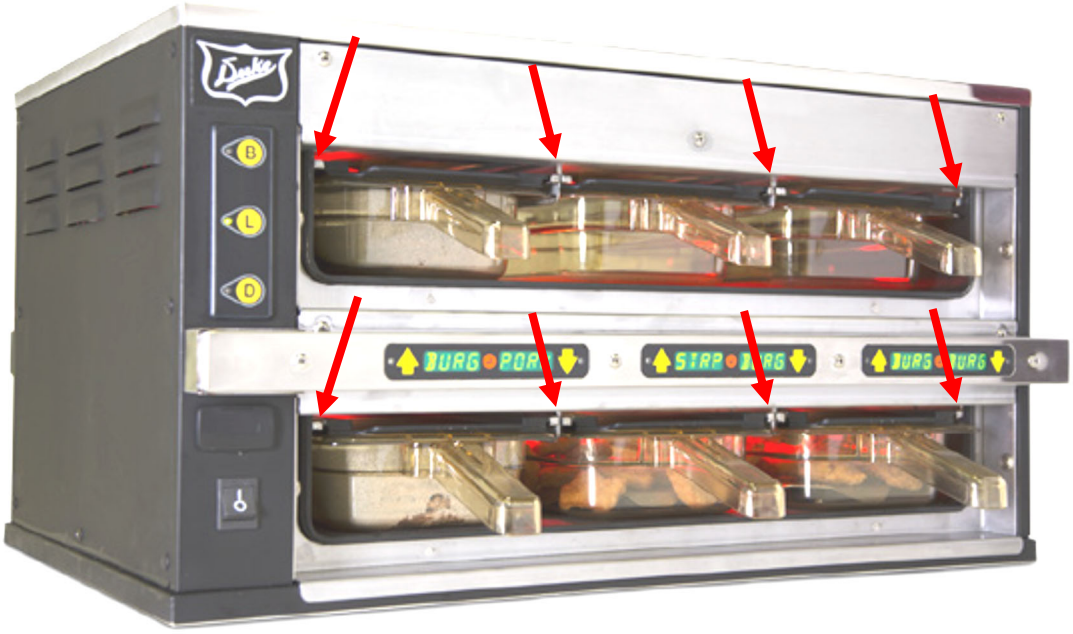
This modification would merely require duplicating and resizing Fortmann'748's lids to cover one pan and duplicating Fortmann'748's tracks to hold the additional lids. *In re Harza*, 274 F.2d 669, 671 (C.C.P.A. 1960) ("mere duplication of parts has no patentable significance"); EX1003: ¶478.

Per the IRHS Documents, POSA would duplicate Fortmann'748's tracks across the compartments to support individual lids. EX1005: 4, 8, 20-21; EX1007: 53, 56, 58; EX1003: ¶480. In duplicating the tracks, it would have been obvious to secure them to the overlying structure, per Fortmann'748 and/or IRHS Documents. EX1010: ¶[0018]; EX1003: ¶¶479, 481, 484-487.

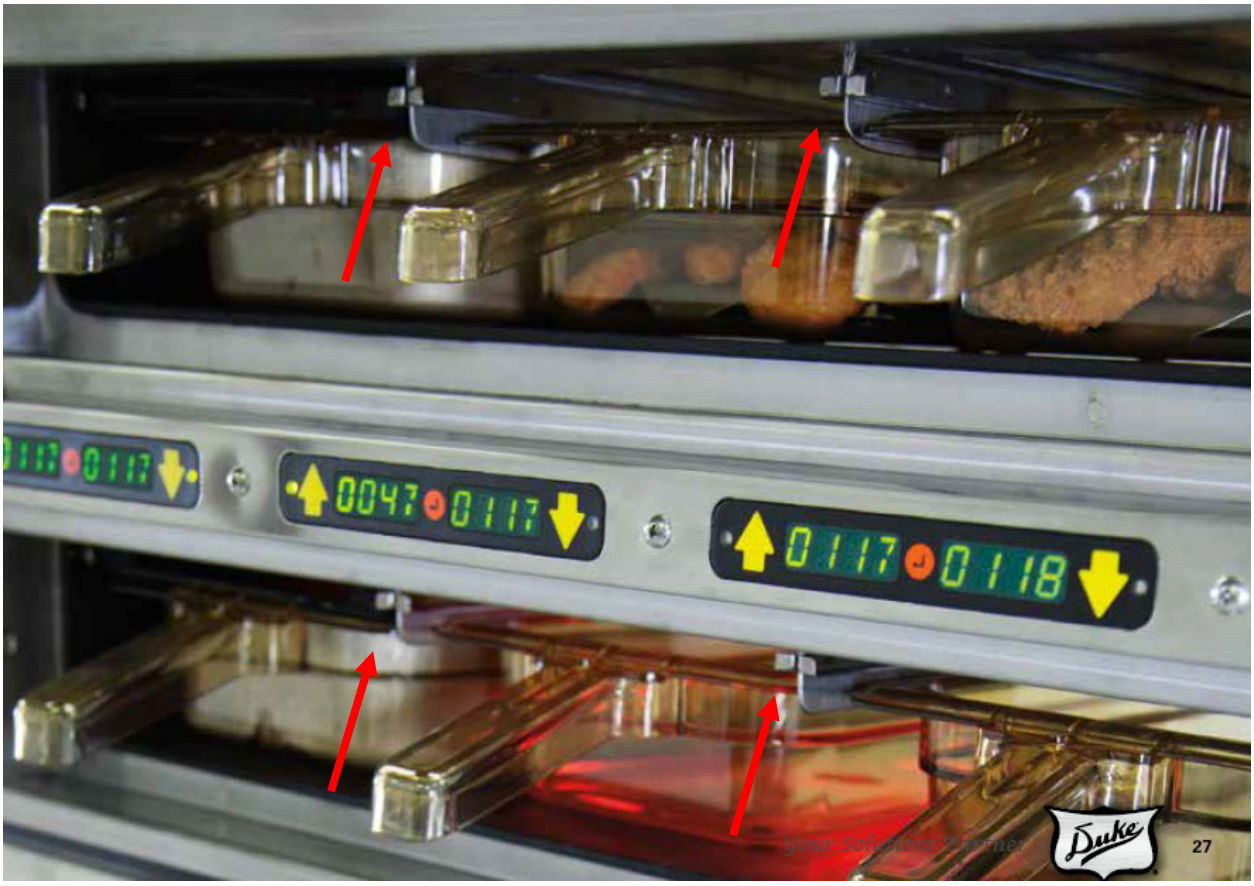


EX1007: 53 (annotated).

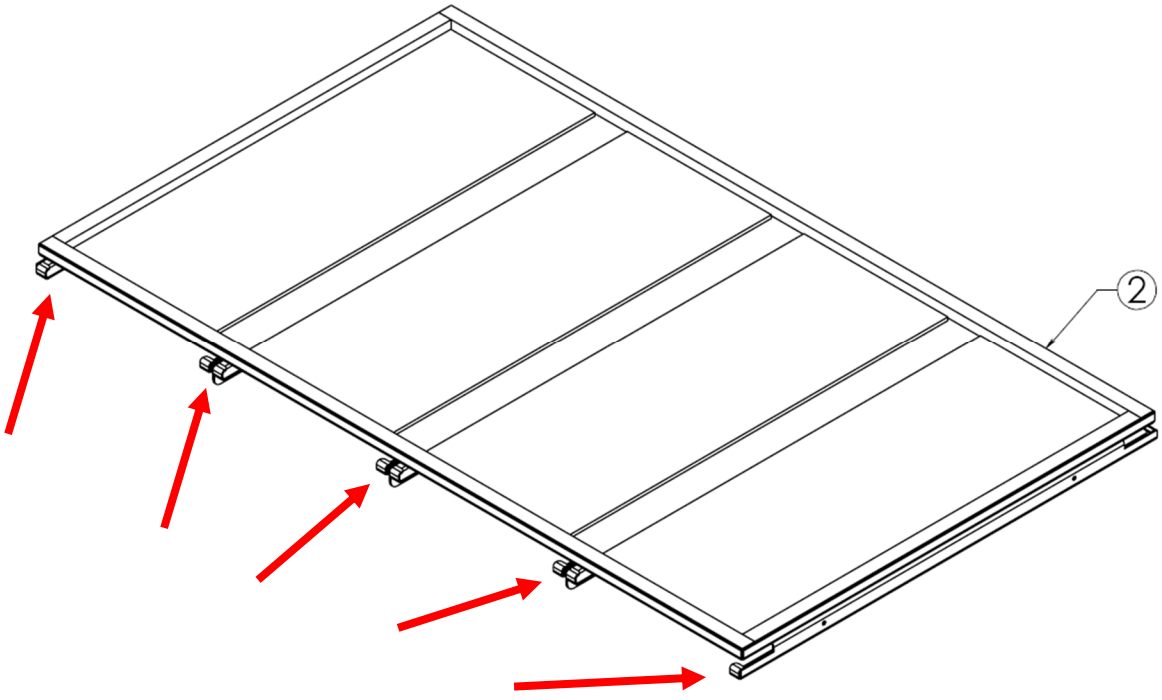




EX1006: 2 (annotated).



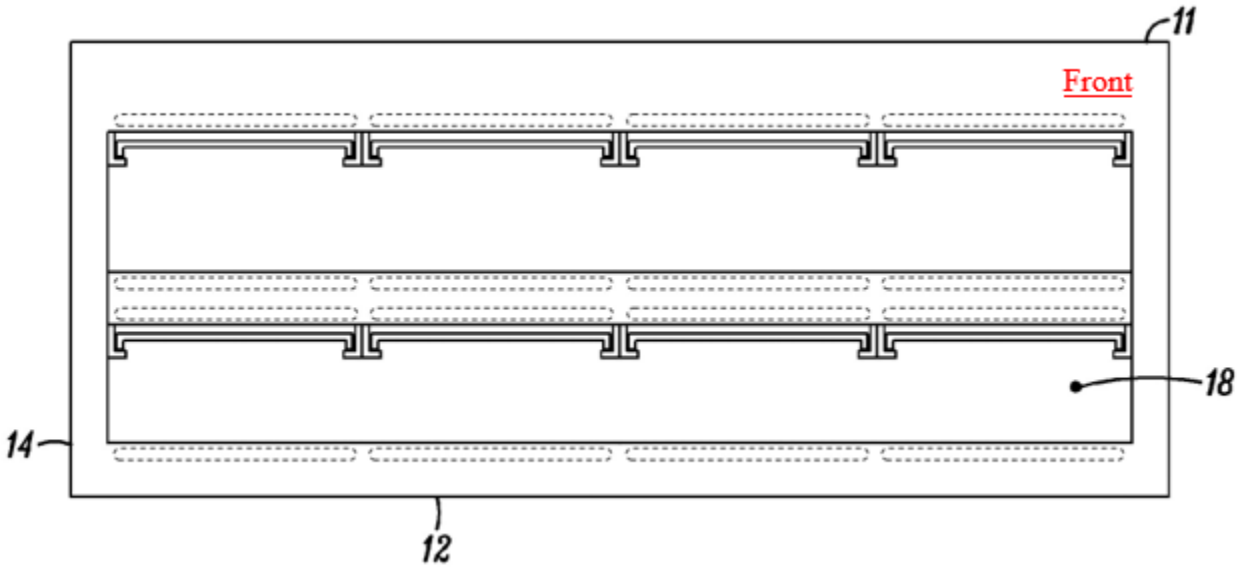
EX1007: 52 (annotated).

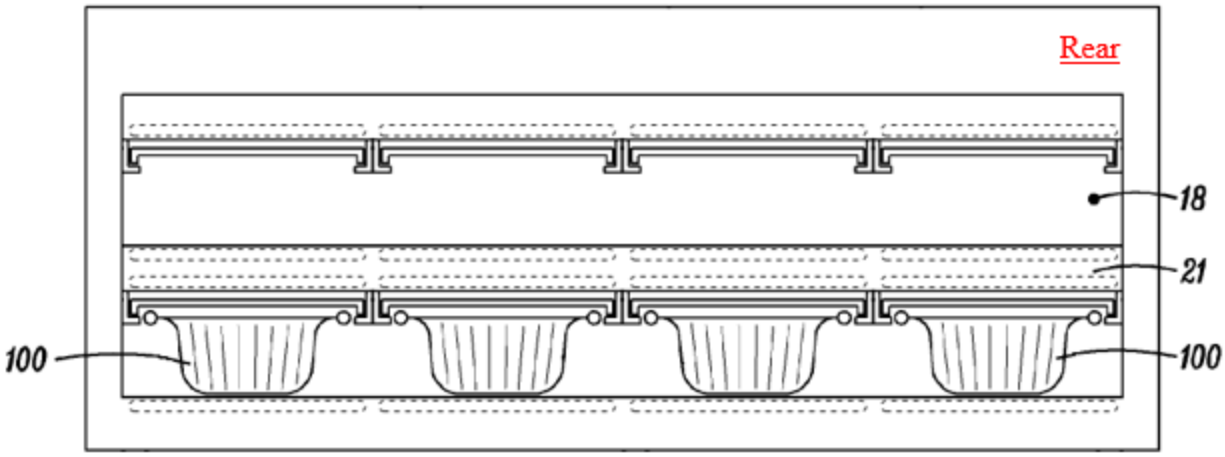


EX1005: 19 (annotated).

This applies a known technique (plurality of lids and lid-holding shelves) to improve a similar device (Fortmann'748's cabinet) in the same way (independent lids supported by discrete lid supporting shelves secured to overhead structure) with reasonable expectation of success (purpose of lid-holding shelves not changing). EX1012: ¶[0072], Fig. 1B; EX1014: 4:50-53, 7:31-32, Figs. 1-4; EX1005: 8; EX1006: 1-2; EX1007: 53, 58; EX1003: ¶¶482-483.

This modification is represented below. EX1003: ¶488.





EX1010: Figs. 2, 6 (modified, annotated).

5. Latches

Fortmann'748's lids (40) are removable. EX1010: ¶[0017]; EX1003: ¶¶489-490.

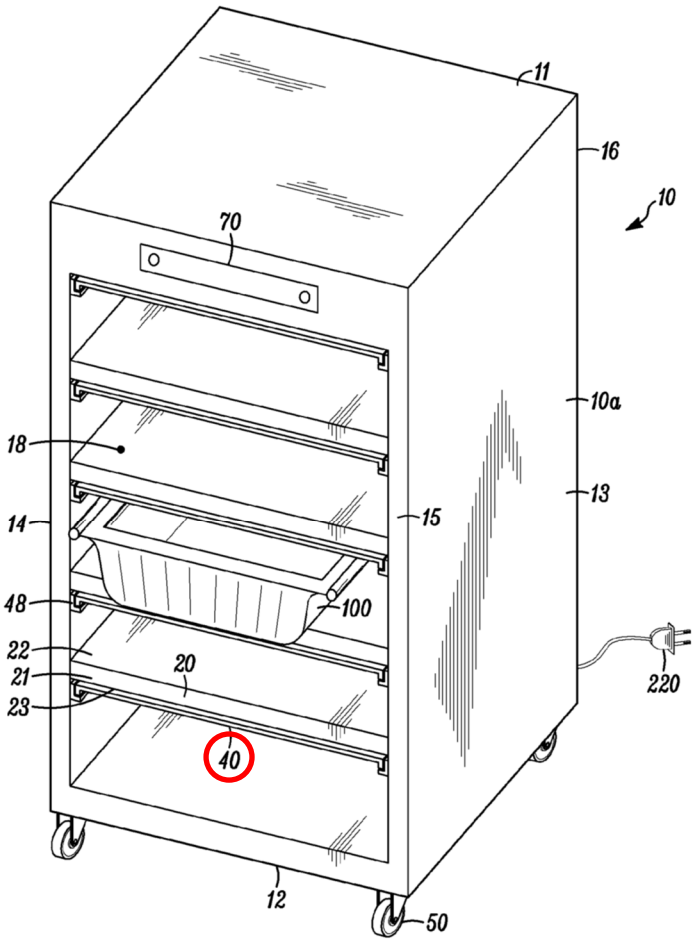


FIG. 1

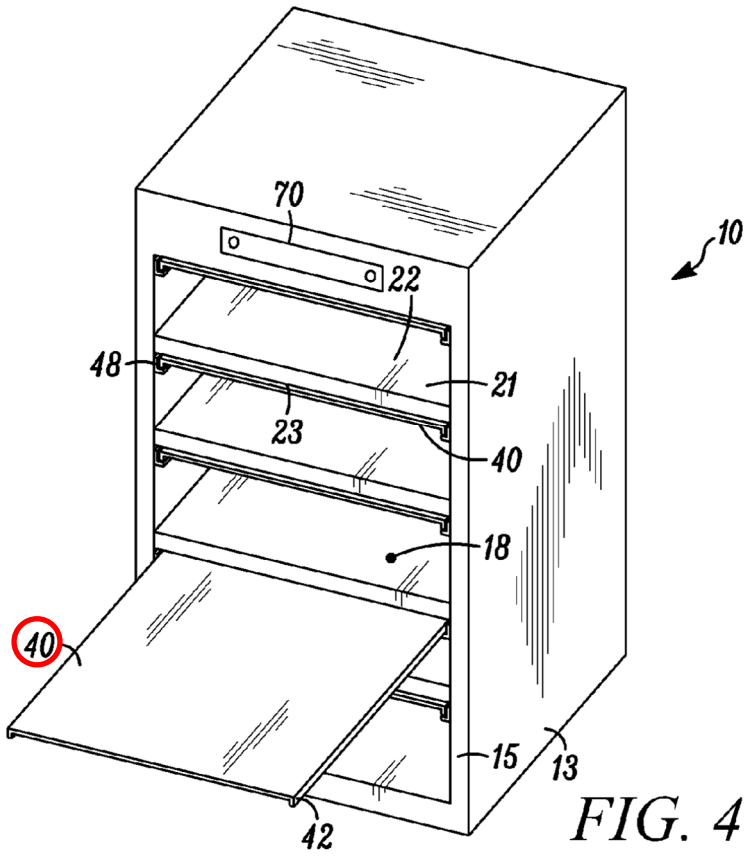


FIG. 4

EX1010: Figs. 1, 4 (annotated).

Hartfelder's and Shei'099's stops (61)/(88) retain lids (44, 46, 80). EX1013: ¶[0058]; EX1017: 6:9-32; EX1003: ¶¶491-494.

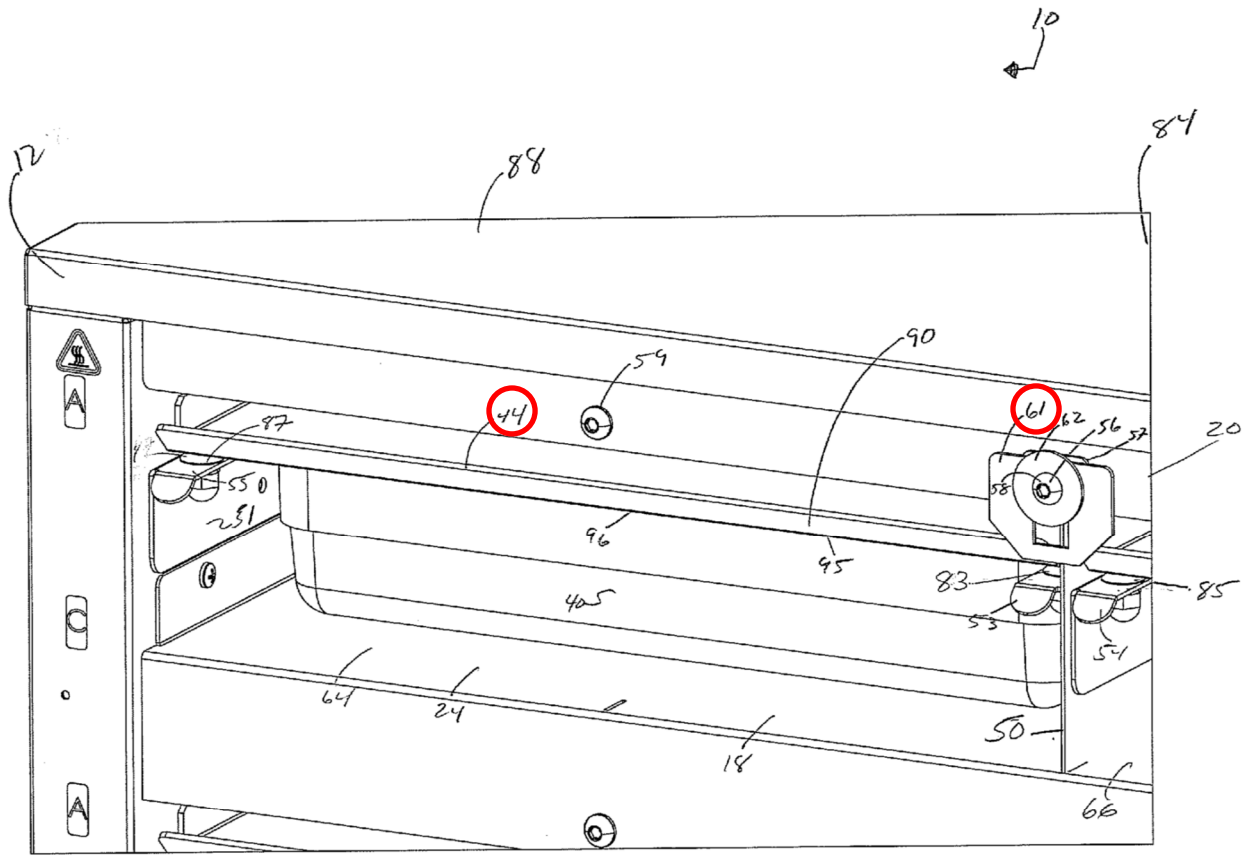


FIGURE 9

EX1013: Fig. 9 (annotated).

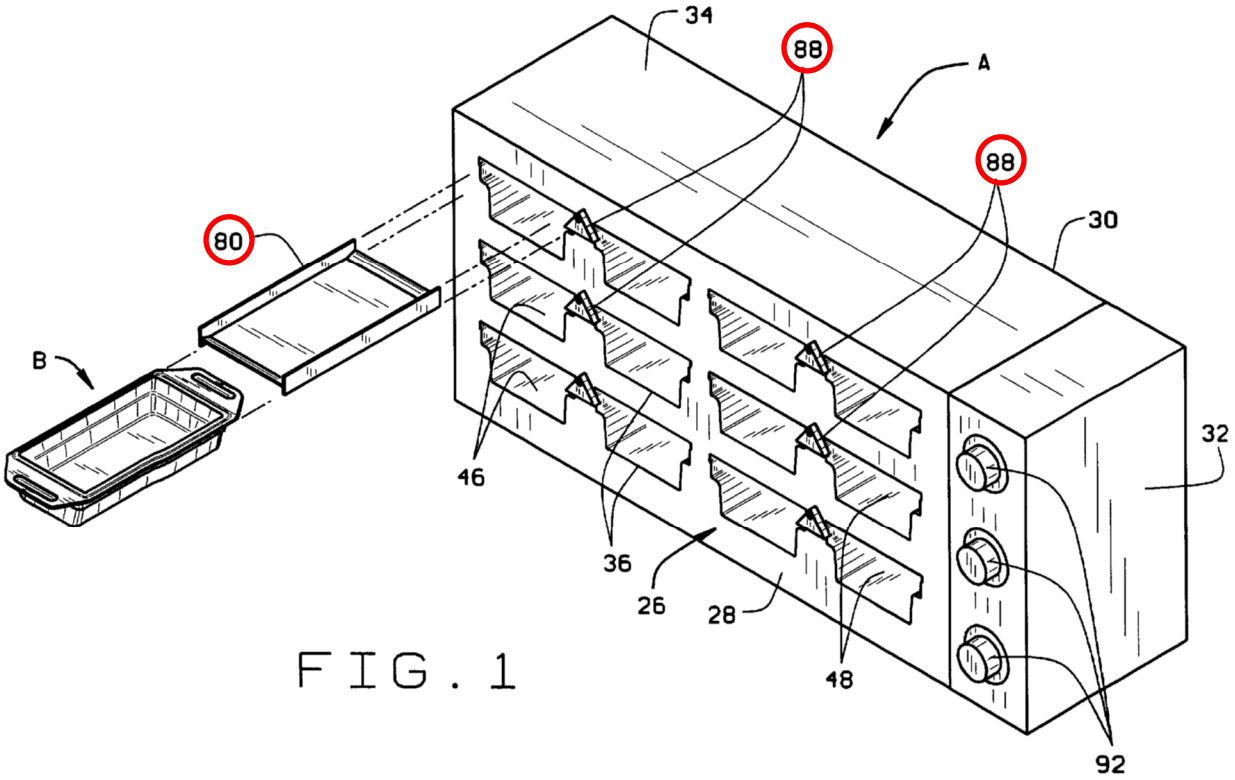


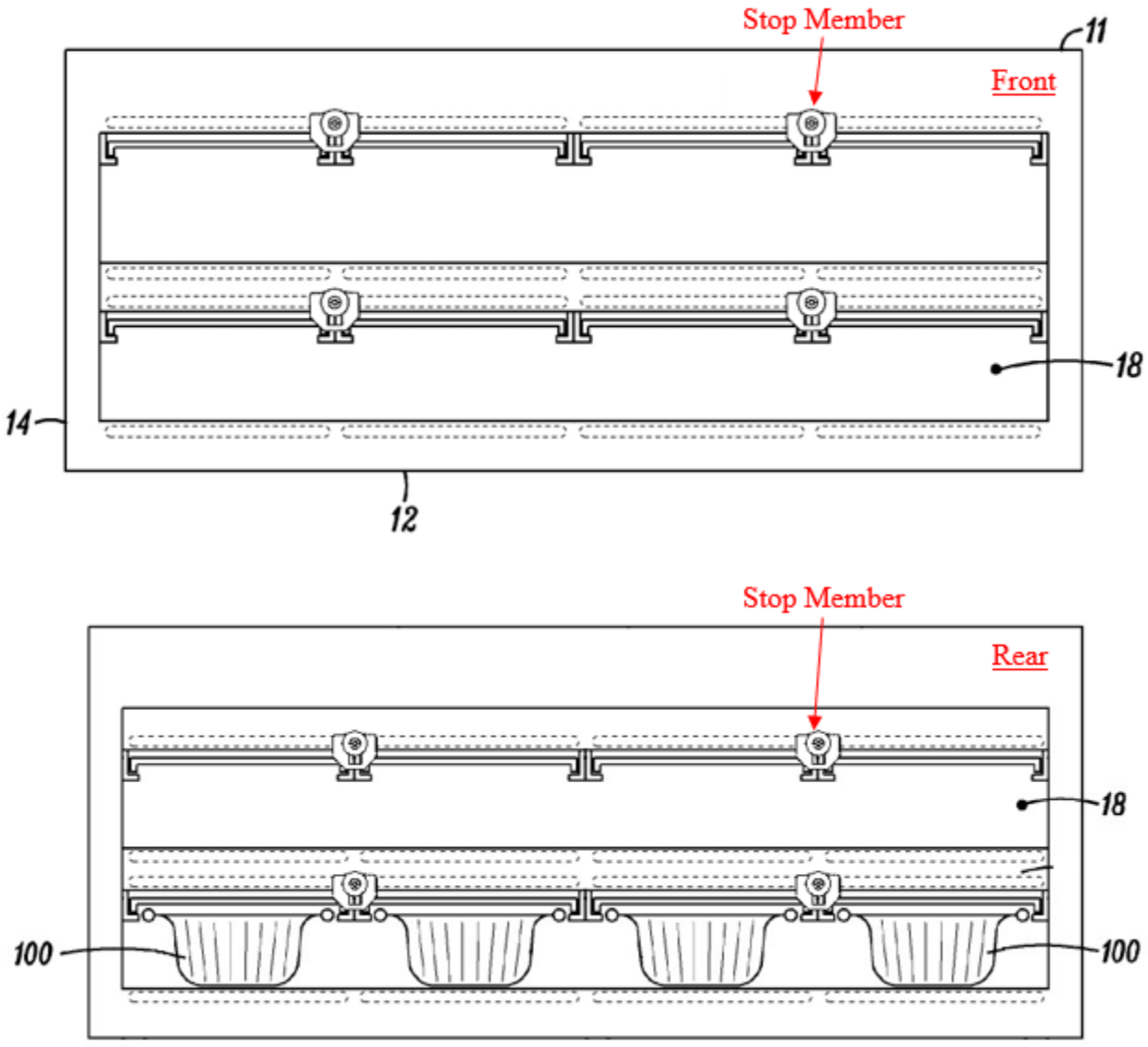
FIG. 1

EX1017: Fig. 1 (annotated).

It would have been obvious to modify Fortmann'748 to include Hartfelder's or Shei'099's stops for retaining lids on the lid-holding shelves. EX1013: ¶[0058]; EX1003: ¶495. Stops would prevent lids from moving (inadvertent lid removal/displacement) during pan insertion and removal, ensuring proper position for covering pans. EX1013: ¶[0058]; EX1017: 6:19-22; EX1003: ¶496.

This uses a known technique (lid retaining stops) to improve a similar device (Fortmann'748's cabinet with lids) in the same way (retaining lids while inserting/removing pans) with reasonable expectation of success (stops performing same function in same way). EX1013: ¶[0058]; EX1003: ¶¶497-498.

Each stop would be on the chassis'/shelf's face between two lids per Hartfelder and Shei'099. EX1003: ¶499. Representative illustrations below show Hartfelder's stops. EX1003: ¶500. A modification implementing Shei'099's stops would be similar but with Shei'099's stops. EX1003: ¶500.



EX1010: Figs. 2, 6 (modified, annotated).

6. Aluminum

Fortmann'748 uses stainless steel. EX1010: ¶[0019]; EX1003: ¶501.

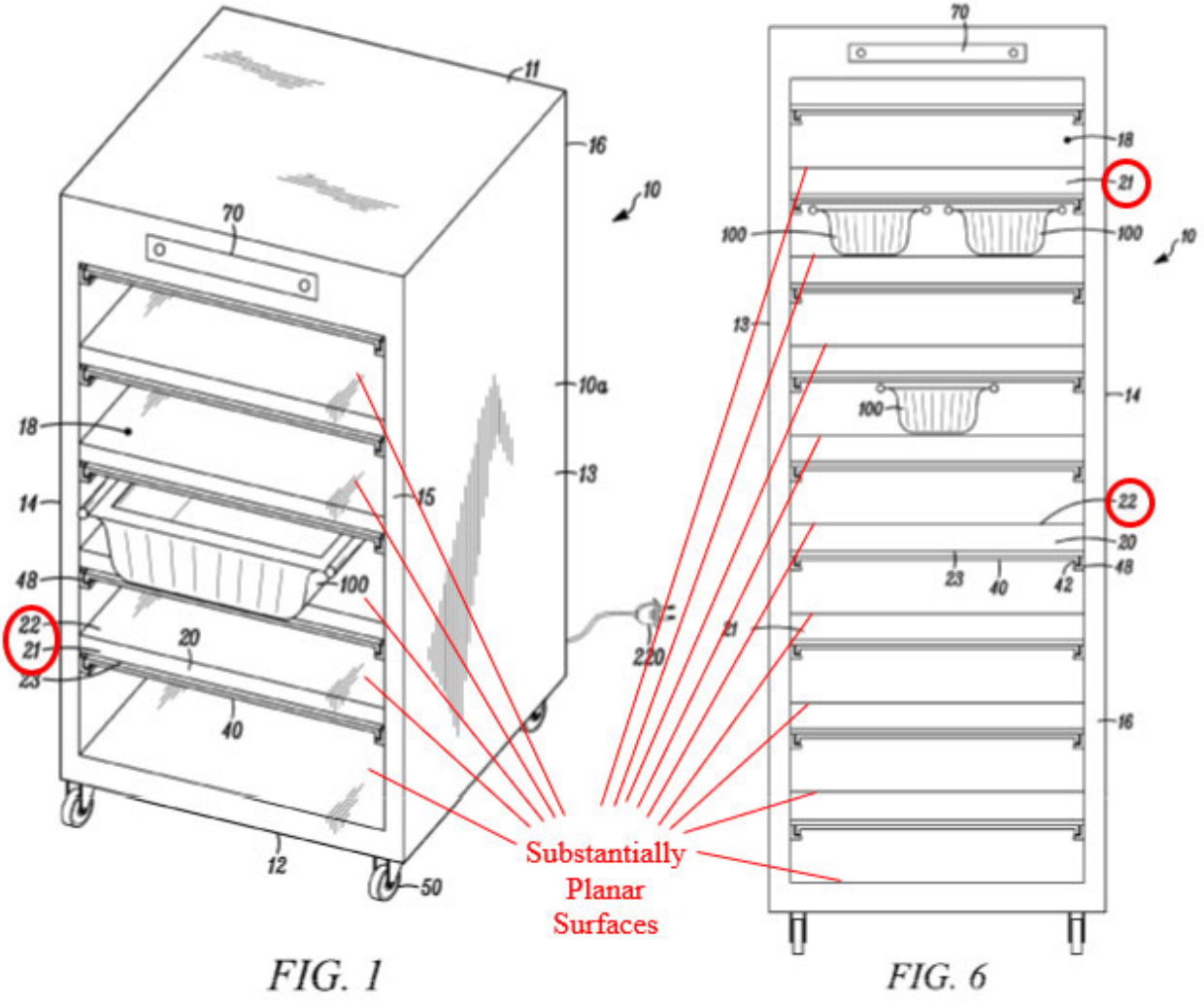


FIG. 1 FIG. 6

EX1010: Figs. 1, 6 (annotated).

Veltrop and Shei'155 teach aluminum for upper plates (51) or heatsink (29). EX1022: ¶[0023]; EX1016: ¶[0039]; EX1003: ¶¶502-504.

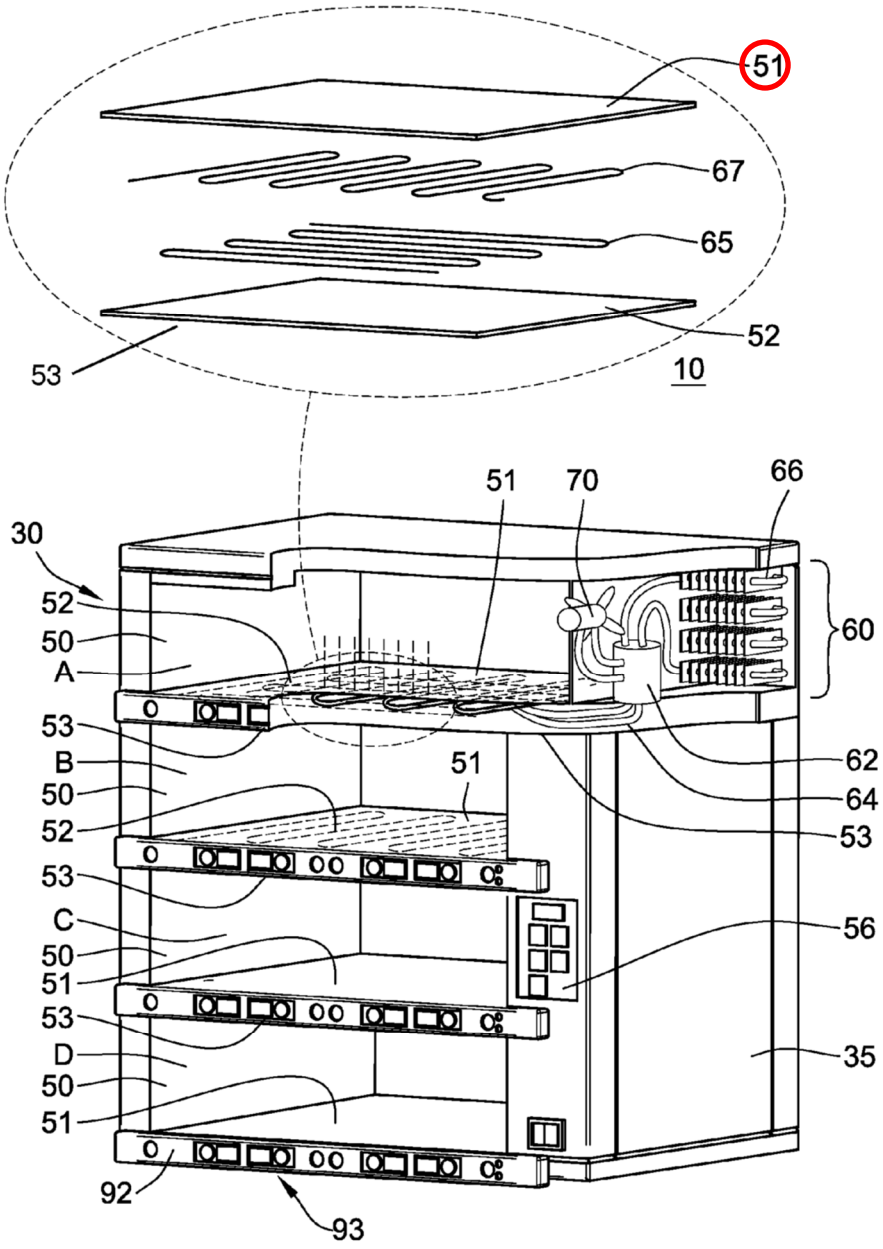
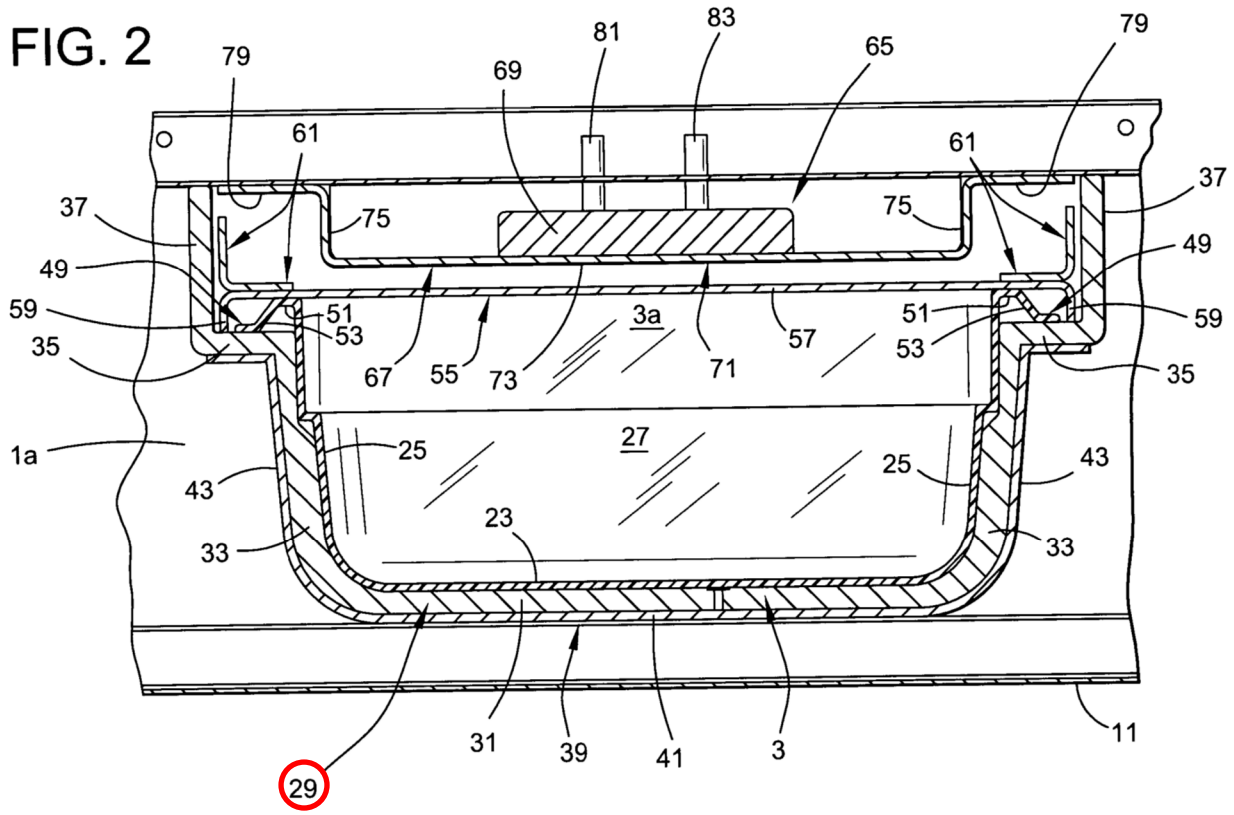


FIG. 2

EX1022: Fig. 2 (annotated).



EX1016: Fig. 2 (annotated).

Per Veltrop and/or Shei'155, it would have been obvious to make the upper plates of Fortmann'748's shelf and bottom panel from aluminum as a preferred material that "conducts heat well." EX1017: 3:32-33; EX1022: ¶[0023]; EX1020: ¶¶[0021]-[0023]; EX1021: ¶¶[0020]-[0022]; EX1003: ¶¶505-506. Aluminum is relatively lightweight (easier to ship) and inexpensive. EX1003: ¶505.

This uses a known technique (aluminum) to improve a similar device (Fortmann'748's cabinet) in the same way (aluminum surfaces supporting food pans for localized heating) with reasonable expectation of success (known suitability of aluminum shelves having multiple zones in warming cabinets).

EX1006: 1; EX1007: 53; EX1016: ¶[0039]; EX1020: ¶[0021]; EX1021: ¶[0020]; EX1022: ¶[0023]; EX1003: ¶¶507-508.

7. Electrically-Resistive Heating Wire

Fortmann'748 does not describe how its heaters generate heat but Veltrop teaches electrically-resistive heater wires (67). EX1022: ¶[0025]; EX1003: ¶¶509-511.

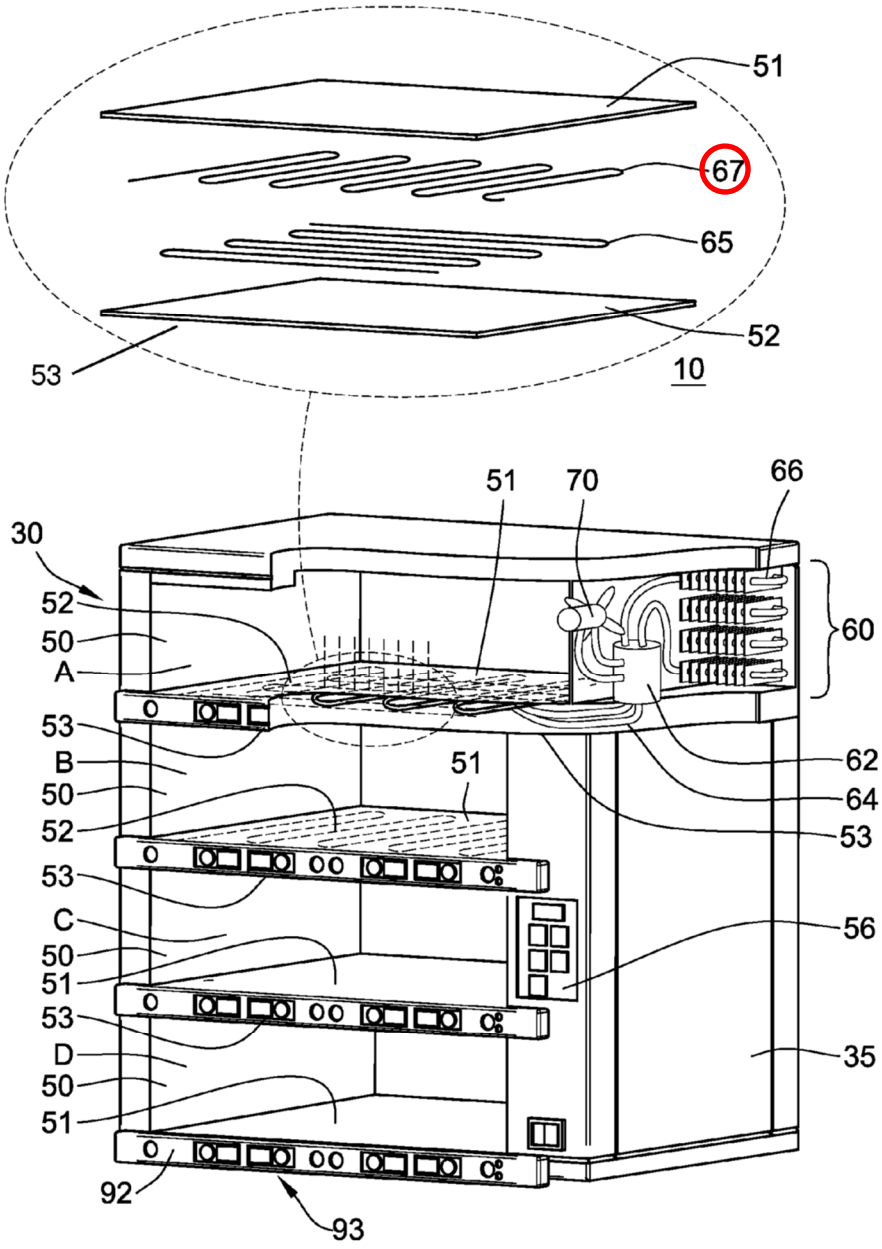


FIG. 2

EX1022: Fig. 2 (annotated).

Per Veltrop, it would have been obvious for Fortmann'748's heaters to each comprise electrically-resistive heater wire to generate heat. EX1003: ¶512. POSA

would understand Veltrop's electrically-resistive wire is a suitable heat source for Fortmann'748's heaters. EX1022: ¶[0025]; EX1003: ¶¶513-514.

This uses a known technique (electrically-resistive heater wire) to improve a similar device (Fortmann'748's heaters) in the same way (electrically-resistive heater wire to heat compartment/food) with reasonable expectation of success (electrically controlled and demonstrated suitability). EX1022: ¶[0025]; EX1003: ¶¶515-516.

B. Independent Claim 1

1.P

Fortmann'748's cabinet (10) includes multiple zones for food pans. EX1010: ¶¶[0014], [0024], [0027]; Section X(B)(1.d.1/1.e.1); EX1003: ¶¶517-519.

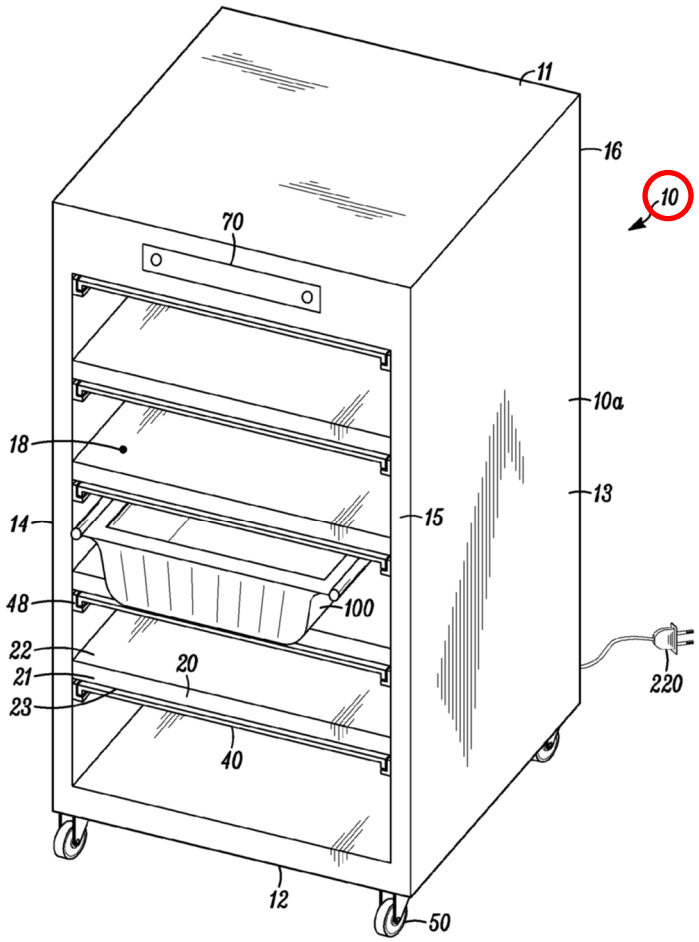


FIG. 1

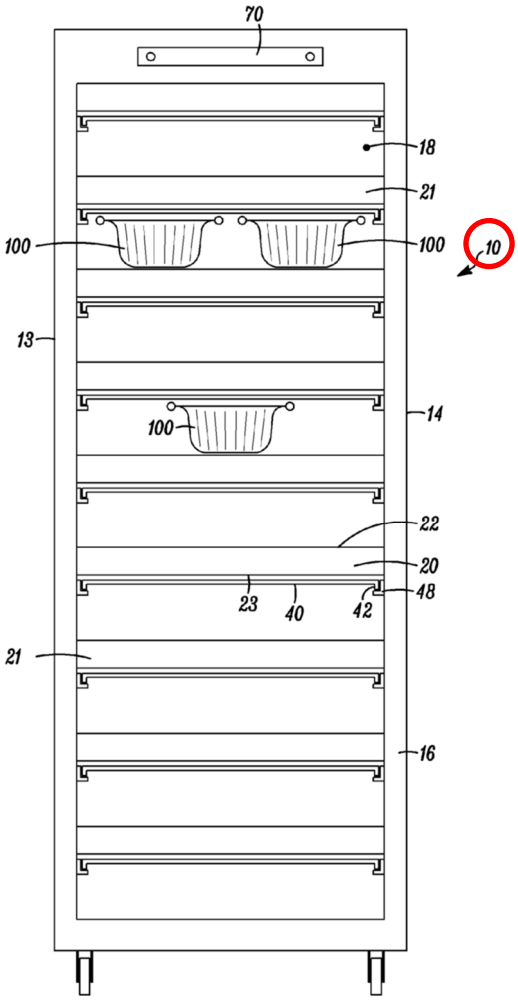
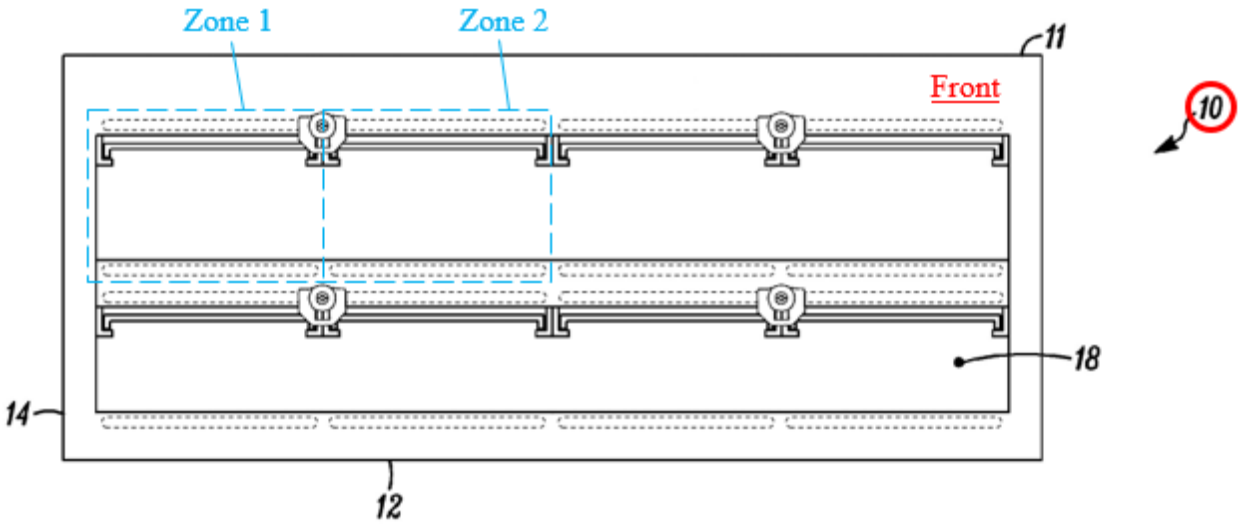
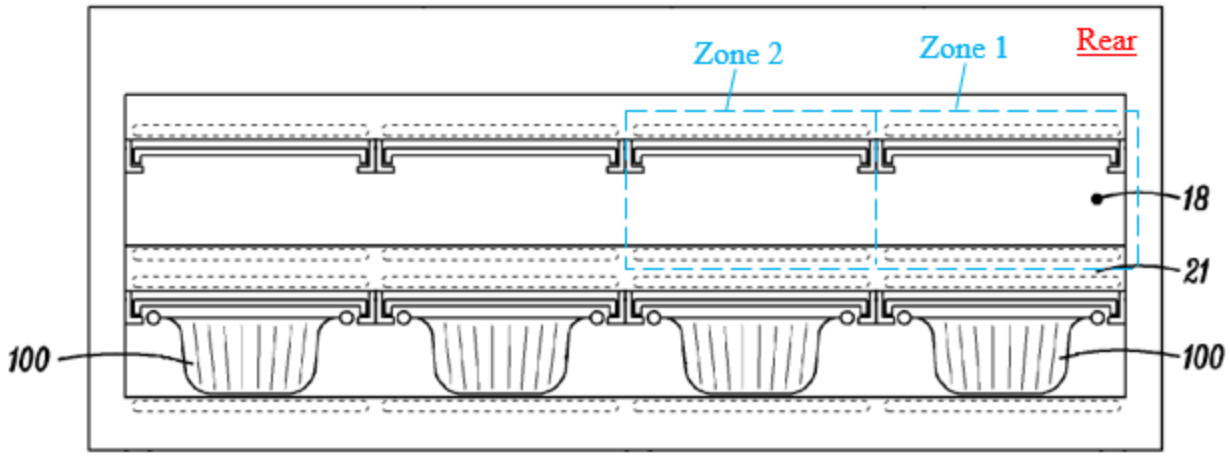


FIG. 6

EX1010: Figs. 1, 6 (annotated).

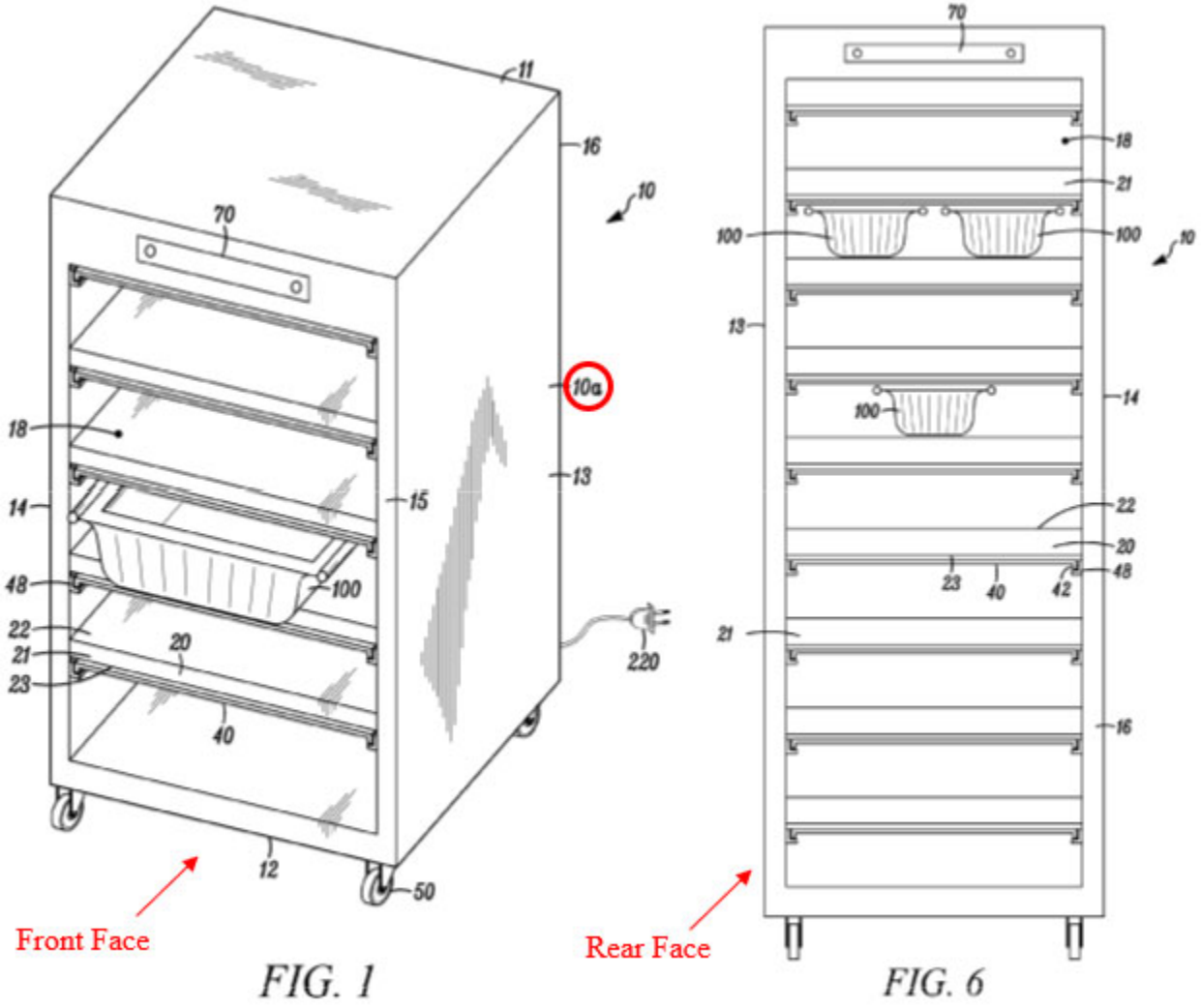




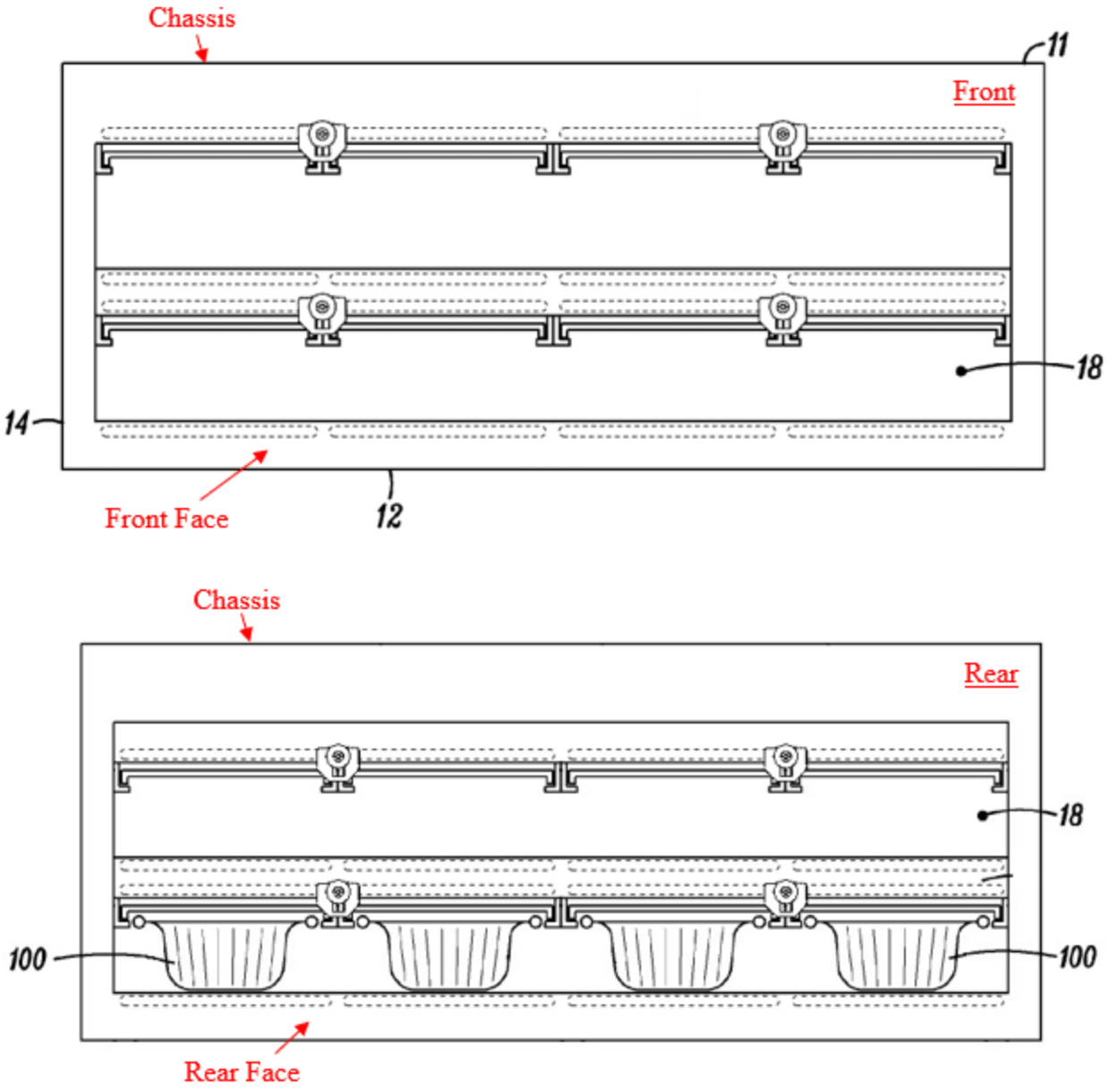
EX1010: Figs. 2, 6 (modified, annotated).

1.a

A chassis (10a) has opposite front and rear faces. EX1010: ¶[0014]; EX1003: ¶¶520-523.



EX1010: Figs. 1, 6 (annotated).



EX1010: Figs. 2, 6 (modified[3], annotated).

[3] Modified figures through Grounds 7 and 8 represent modifications from Section X(A).

1.b.1

Fortmann'748's shelves (21) separate compartments. EX1010: ¶¶[0014]-[0015]; EX1003: ¶¶524-526.

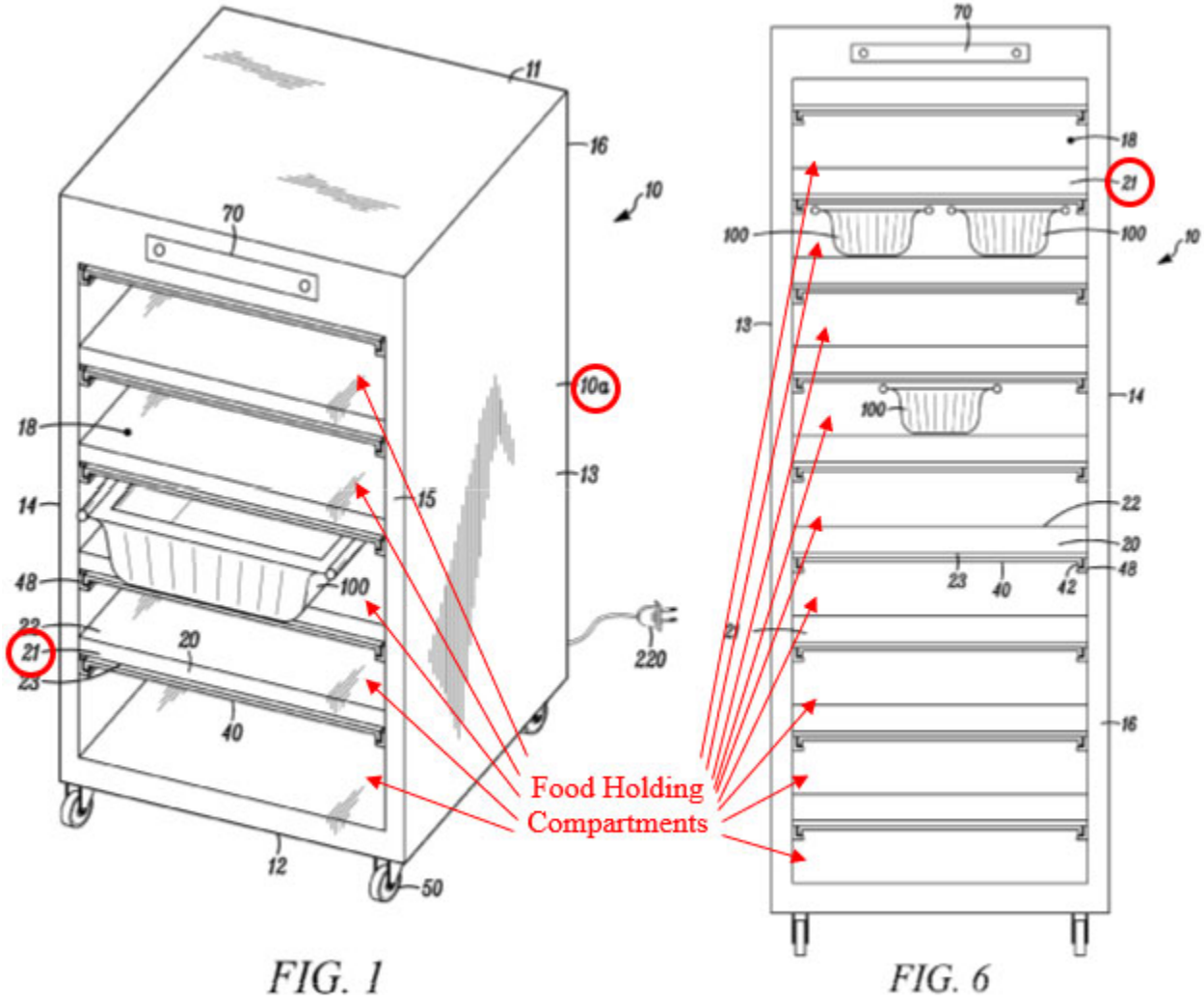
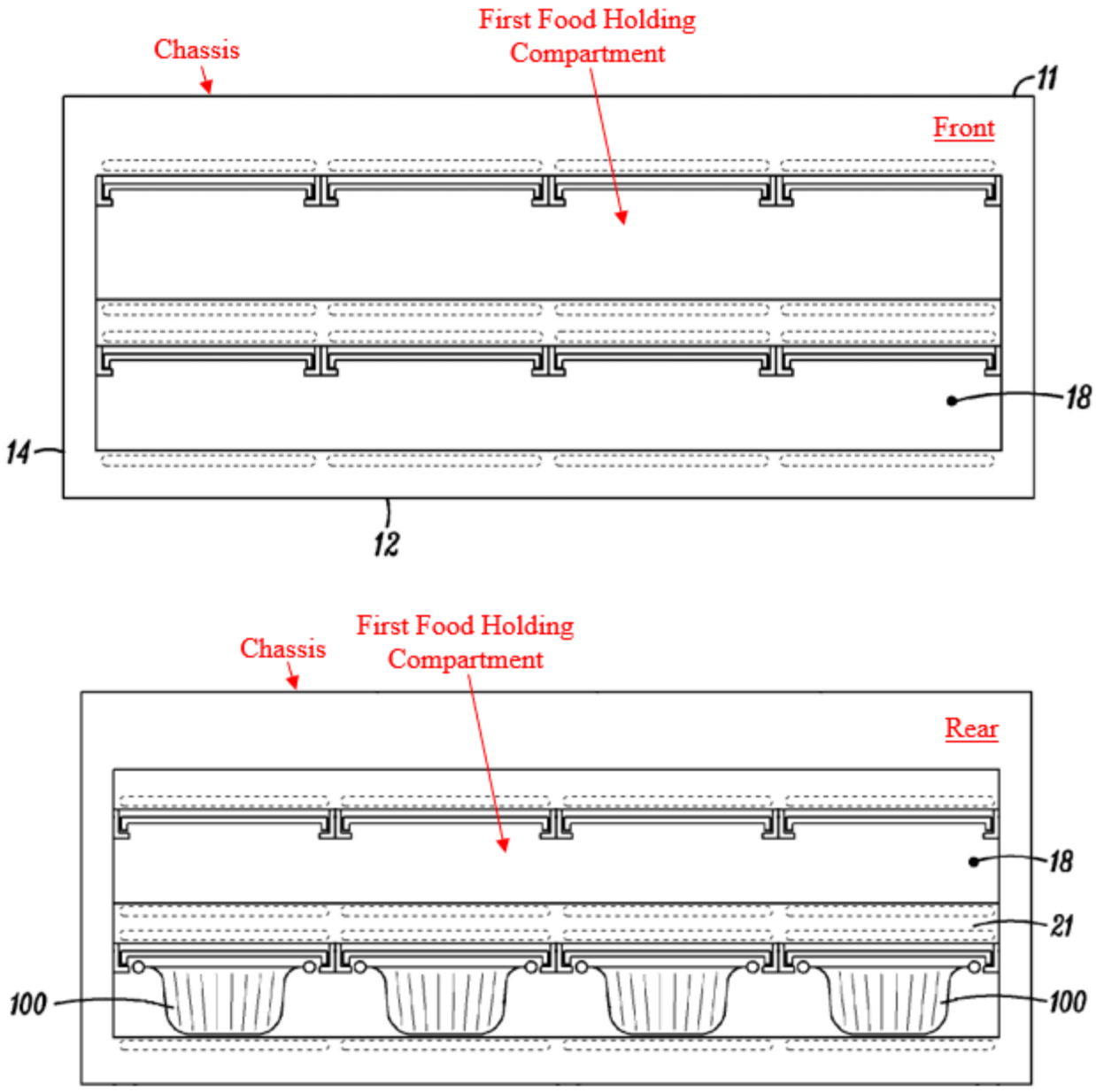


FIG. 1 FIG. 6

EX1010: Figs. 1, 6 (annotated).

Fortmann'748 has a first food holding compartment within the chassis (10a). Section X(A)(1); EX1003: ¶527.



EX1010: Figs. 2, 6 (modified, annotated).

1.b.2

The first compartment has a first opening that is open, uncovered, and located at the chassis' (10a) front face. EX1010: ¶[0014]; EX1003: ¶¶528-529.

The first opening allows food pans to be placed into and removed from the first compartment. EX1010: ¶[0014], ¶[0015], ¶[0017], ¶[0024]; EX1003: ¶¶530-531.

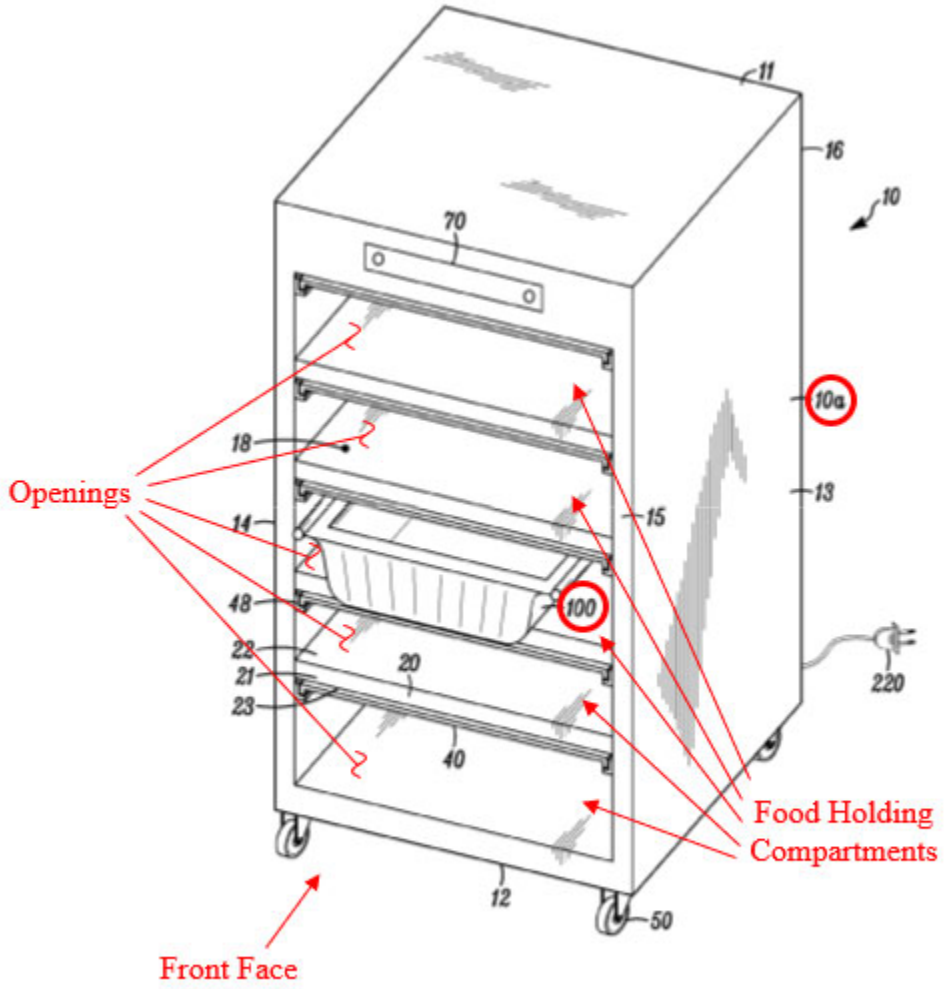
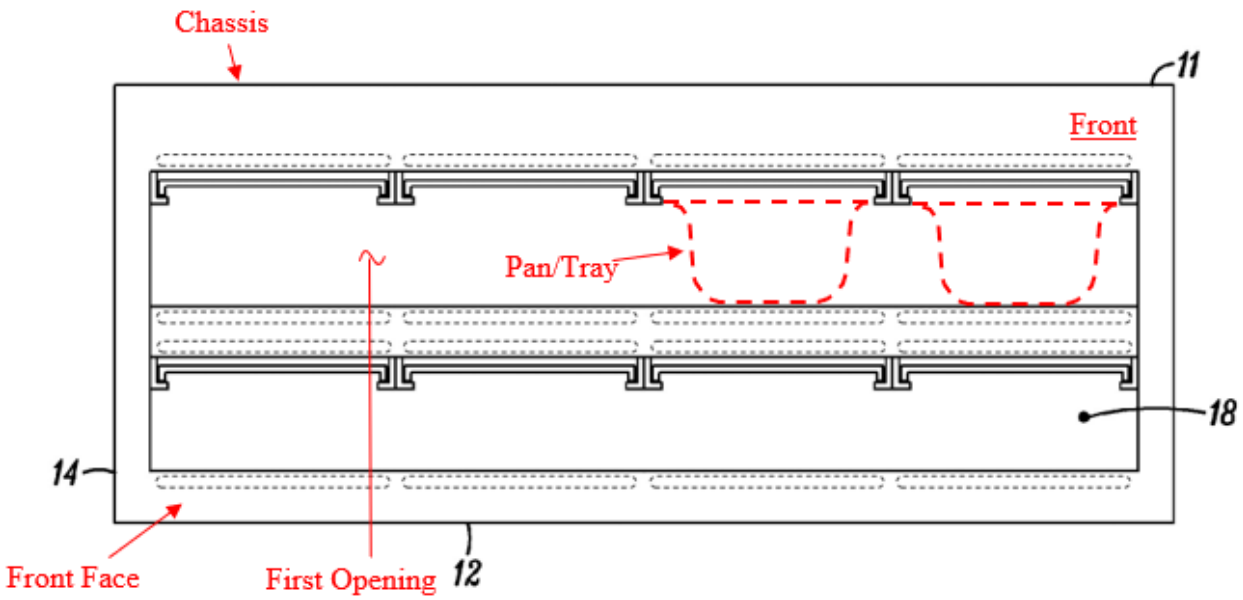


FIG. 1

EX1010: Fig. 1 (annotated).



EX1010: Fig. 2 (modified, annotated).

1.c.1

A continuous and planar surface forms the bottom of the first compartment.

EX1010: ¶[0015]; EX1003: ¶¶532-533.

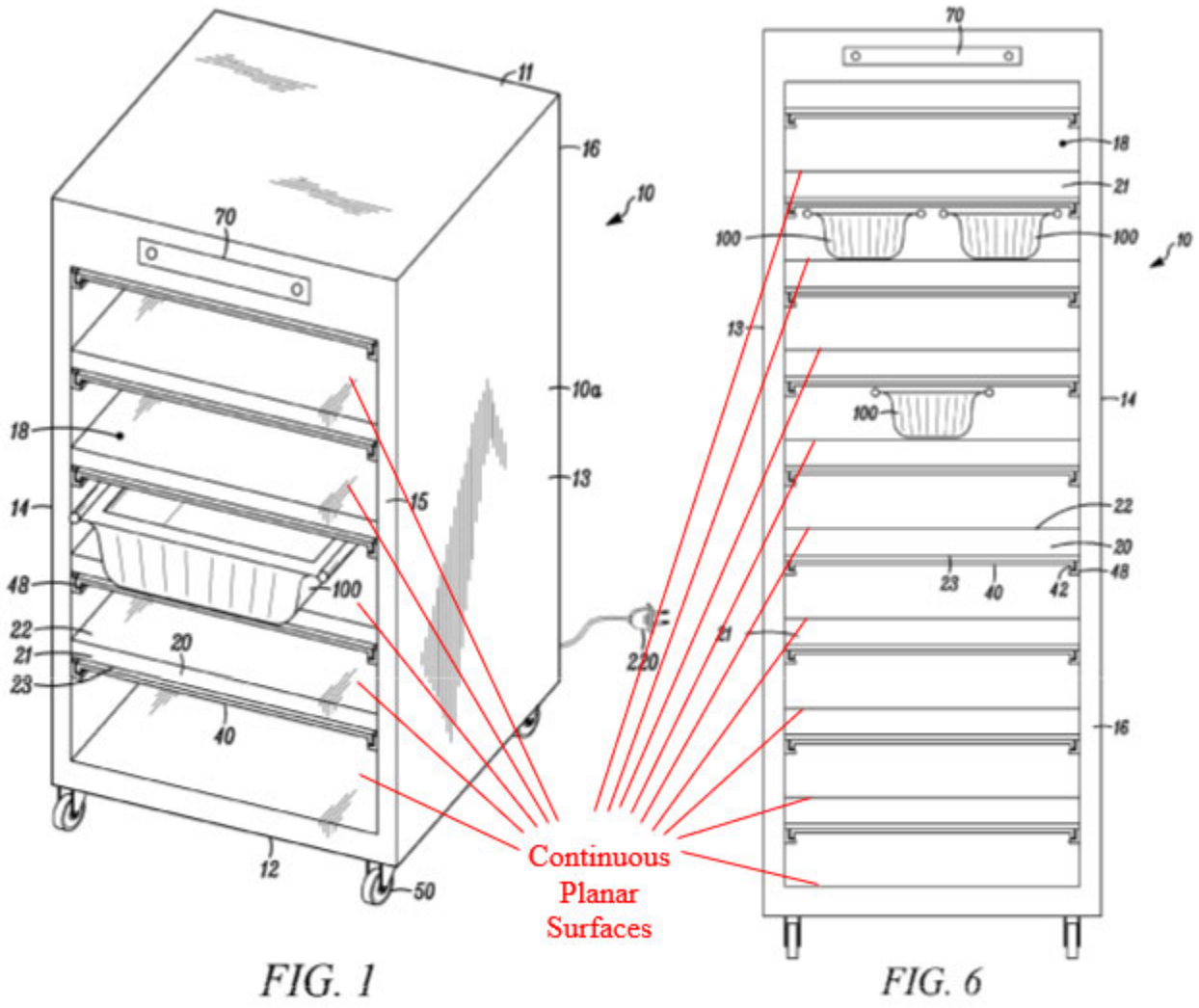
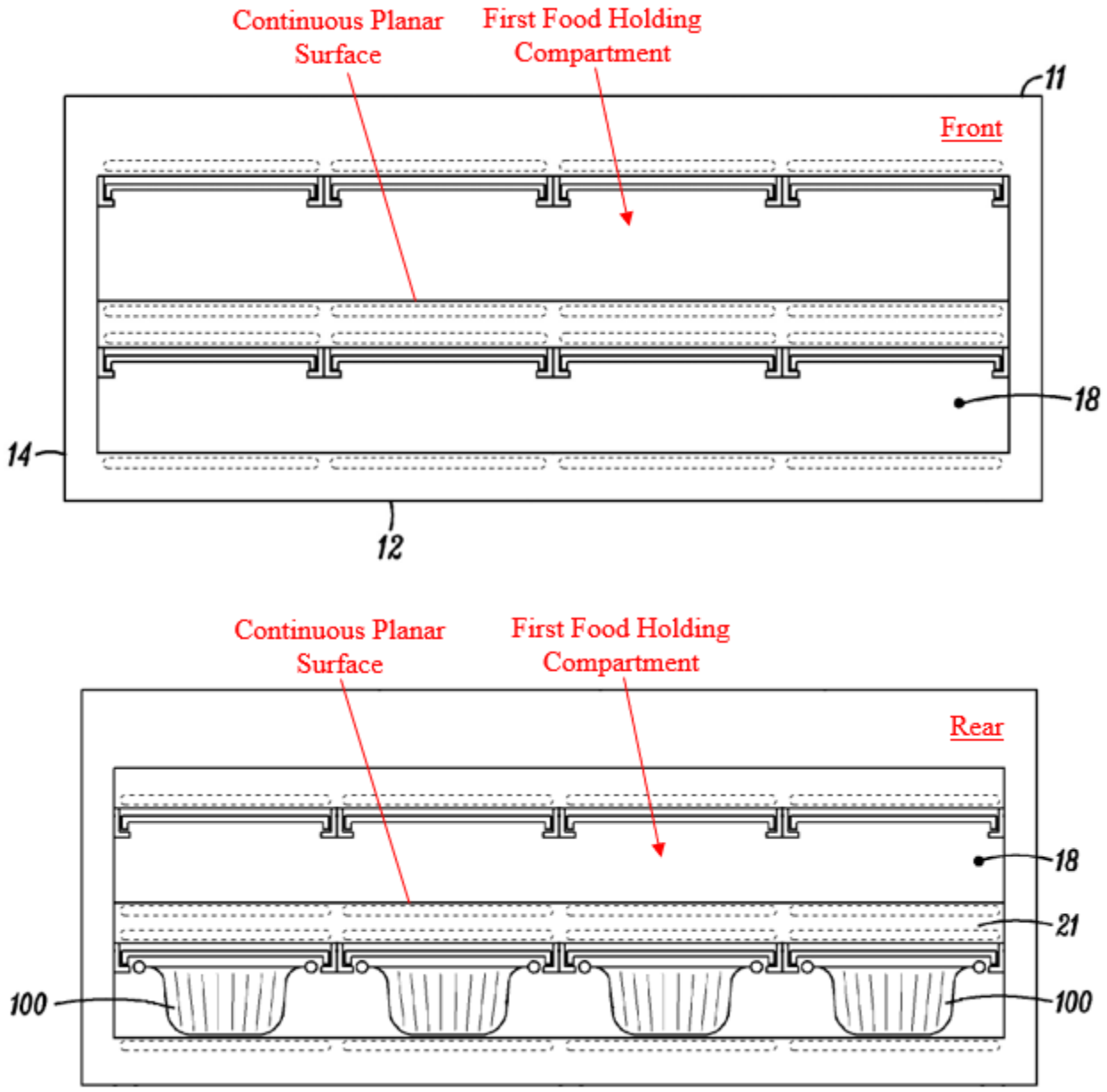


FIG. 1 FIG. 6

EX1010: Figs. 1, 6 (annotated).



EX1010: Figs. 2, 6 (modified, annotated).

1.c.2

The continuous and planar surface extends completely to the chassis' (10a) front face. EX1003: ¶¶534-535.

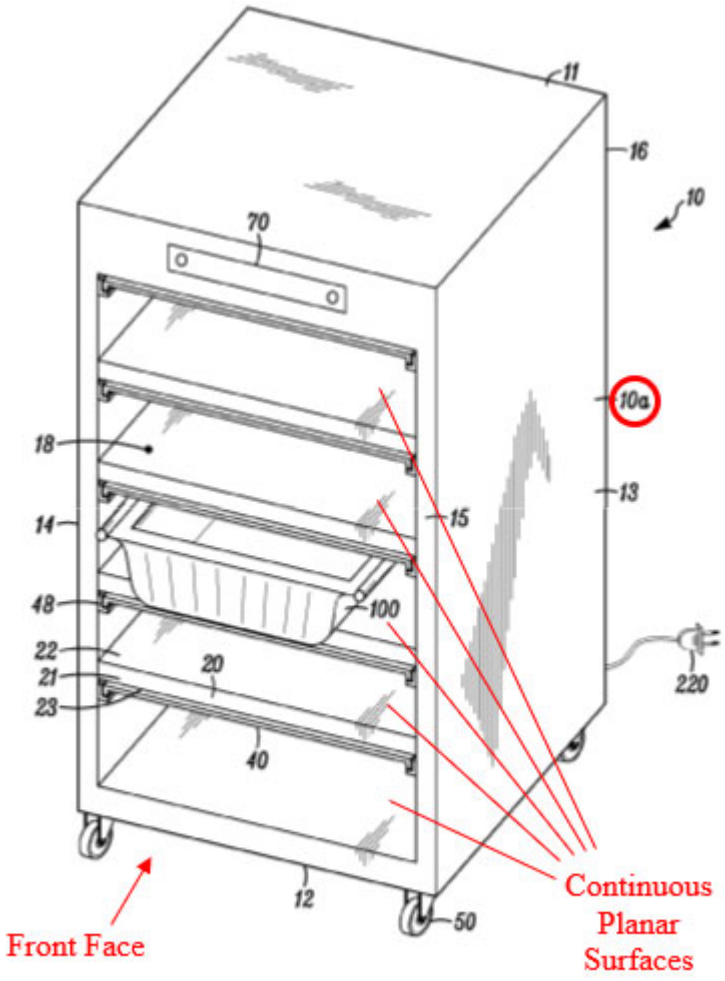
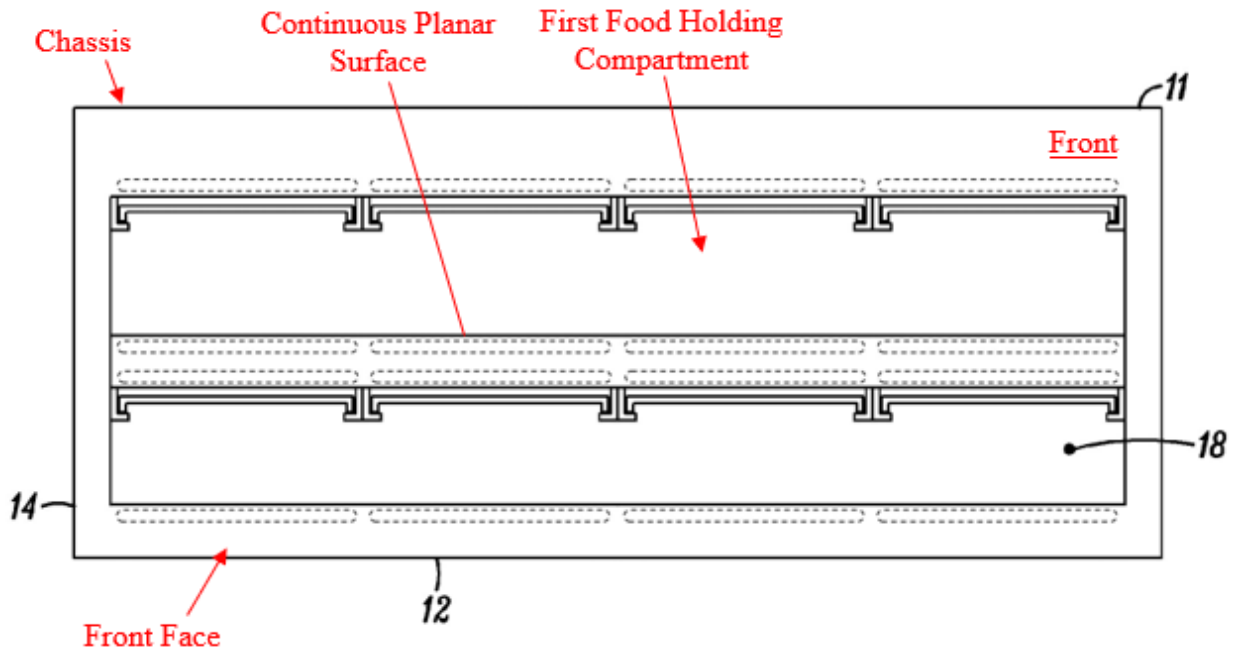


FIG. 1

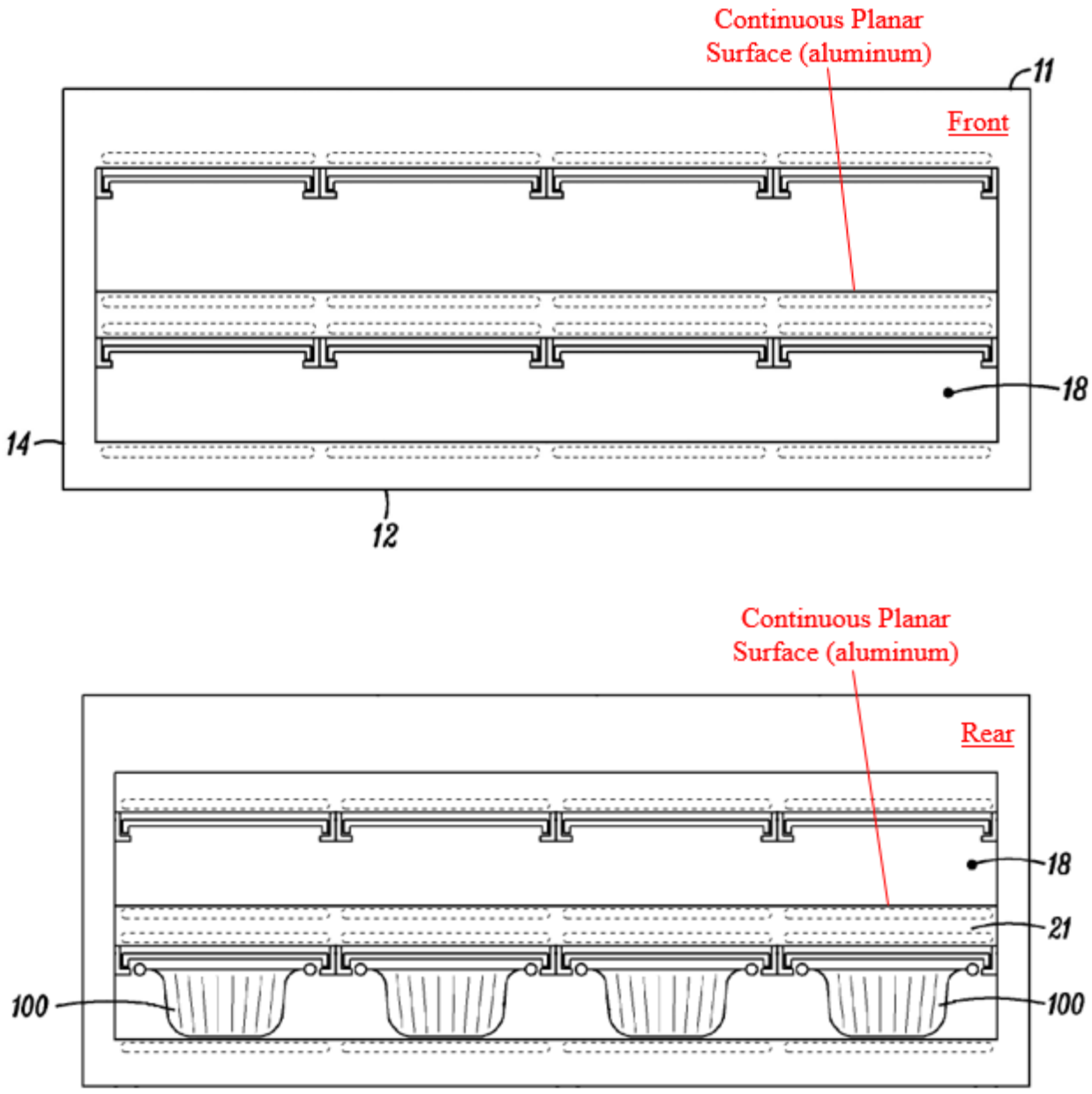
EX1010: Fig. 1 (annotated).



EX1010: Fig. 2 (modified, annotated).

1.c.3

Veltrop and Shei'155 each teach the planar surface (formed by upper plates/heatsinks) comprising aluminum such that it would have been obvious for Fortmann'748's continuous and planar surface to comprise aluminum per Section X(A)(6). EX1022: ¶[0023]; EX1016: ¶[0039]; EX1003: ¶¶536-538.

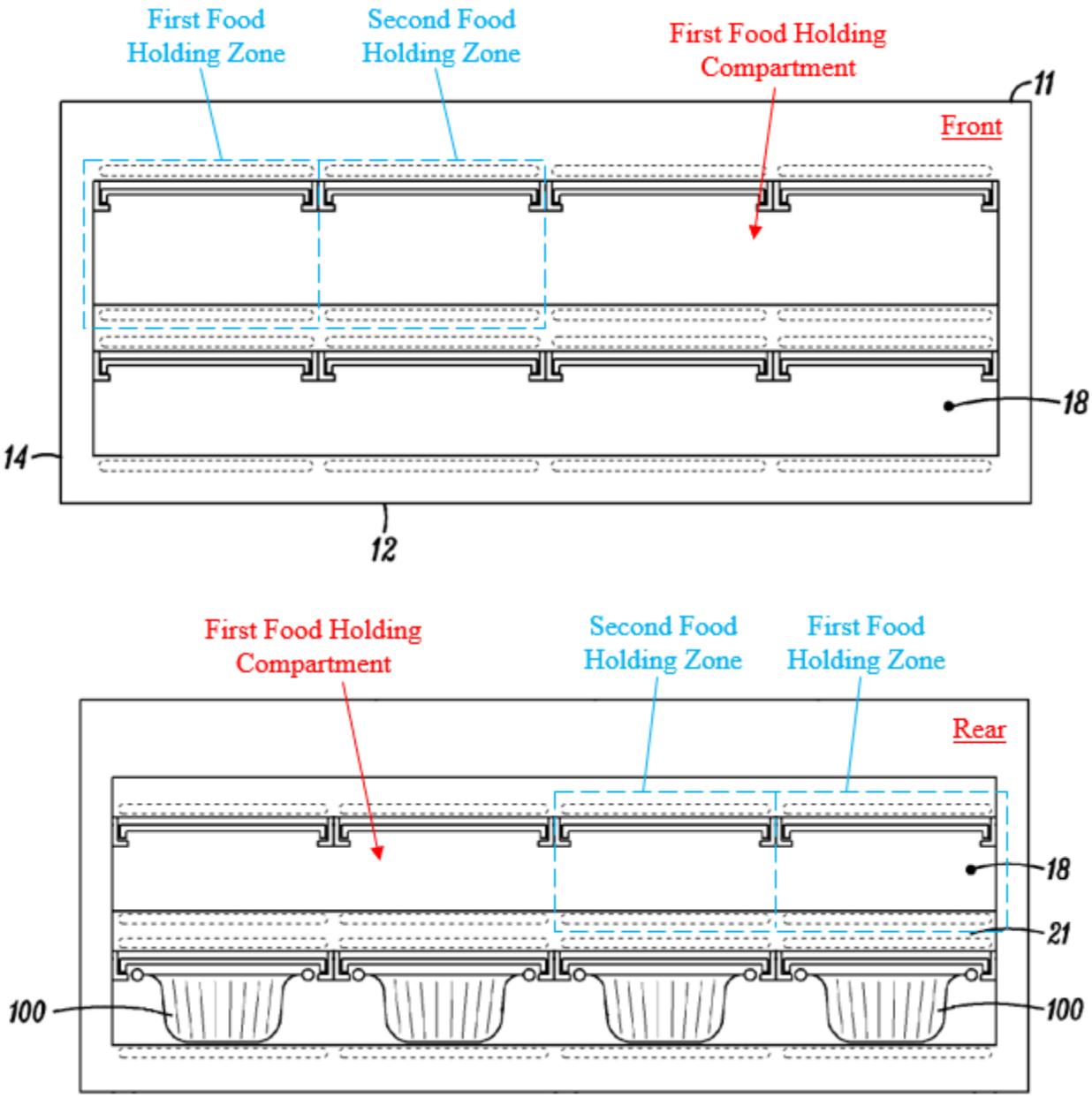


EX1010: Figs. 2, 6 (modified, annotated).

1.d.1/1.e.1

Jones, Fortmann'197, and McMillan each disclose food holding zones per each pan bay such that it would have been obvious to modify Fortmann'748 to have first and second food holding zones in the first compartment per Section

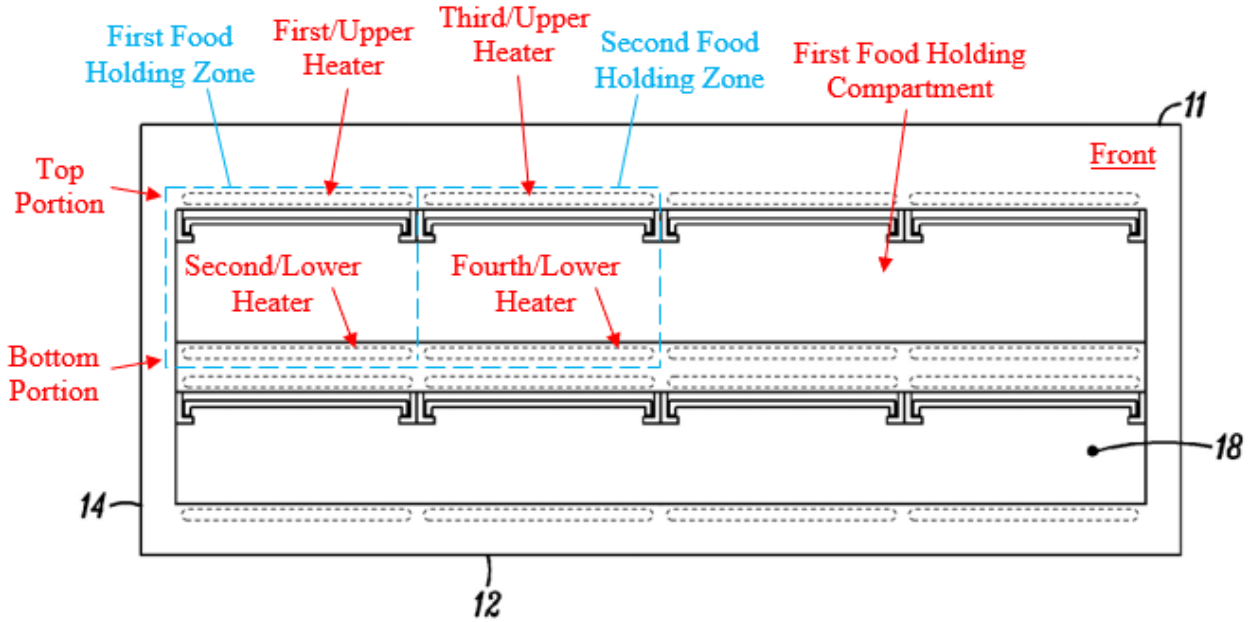
X(A)(2). EX1012: ¶¶[0069], [0072], [0096]; EX1014: 3:6-27, 8:63-9:19, 9:50-65; EX1019: 4:36-59; EX1003: ¶¶539-542, 553-555.

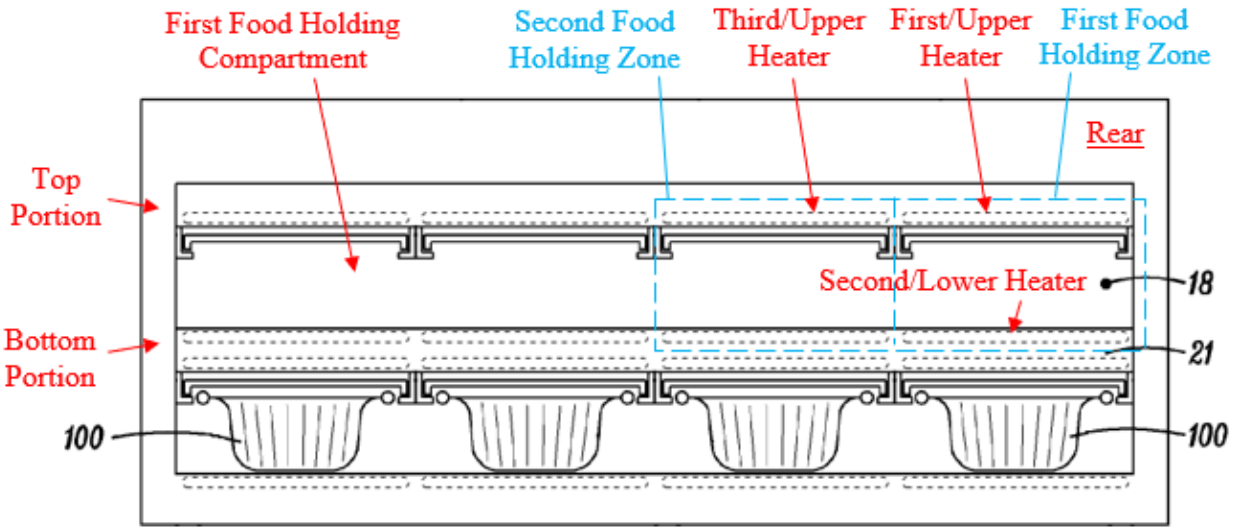


EX1010: Figs. 2, 6 (modified, annotated).

1.d.2/1.e.2

Jones, Fortmann'197, and/or McMillan disclose upper and lower heating elements for each zone and Jones, Fortmann'197, IRHS Documents, and McMillan disclose heating elements of each zone being independently controllable from one another and other zones' heating elements such that it would have been obvious to modify Fortmann'748 such that each zone has an independently controllable upper (first/third) heater and an independently controllable lower (second/fourth) heater (heating elements) at respective top and bottom portions of the first compartment per Sections X(A)(2)-(3)). EX1005: 16, 20, 25, 26; EX1006: 1; EX1007: 53; EX1010: ¶¶[0021], [0027]; EX1012: ¶¶[0072]-[0073], [0096], [0098], [0130]; EX1014: 3:6-27, 8:63-9:19, 9:50-65; EX1019: 4:36-59; EX1003: ¶¶543-544, 556-557.





EX1010: Figs. 2, 6 (modified, annotated).

When duplicating Fortmann'748's heaters, POSA would maintain independent heater control per Jones, Fortmann'197, IRHS Documents, and/or McMillan via Fortmann'748's controller. Section X(A)(2)-(3); EX1003: ¶¶545-547, 558-559.

Fortmann'748's heaters overlying the compartments transfer heat by radiation. EX1010: ¶¶[0019]-[0020]; EX1003: ¶548. When modifying Fortmann'748's heaters, POSA would follow Fortmann'748 by arranging the first and third heaters to heat trays/pans by radiation from above, and therefore would be radiant heating elements. EX1010: ¶¶[0019]-[0020]; EX1003: ¶¶549-550, 560.

Fortmann'748's heaters conductively contact sheets the pans/trays rest on. EX1010: ¶¶[0019]-[0020]; EX1003: ¶551. When modifying Fortmann'748's heaters, POSA would follow Fortmann'748 by arranging the second and fourth

heaters to contact the sheet/planar surface to conductively heat the trays/pans from below, and therefore would be conductive heating elements. EX1010: ¶¶[0019]-[0020]; EX1003: ¶¶552, 560.

1.f

Food pans (100) rest on the continuous and planar surface within the first compartment. EX1010: ¶¶[0015], [0017]; EX1003: ¶¶561-563.

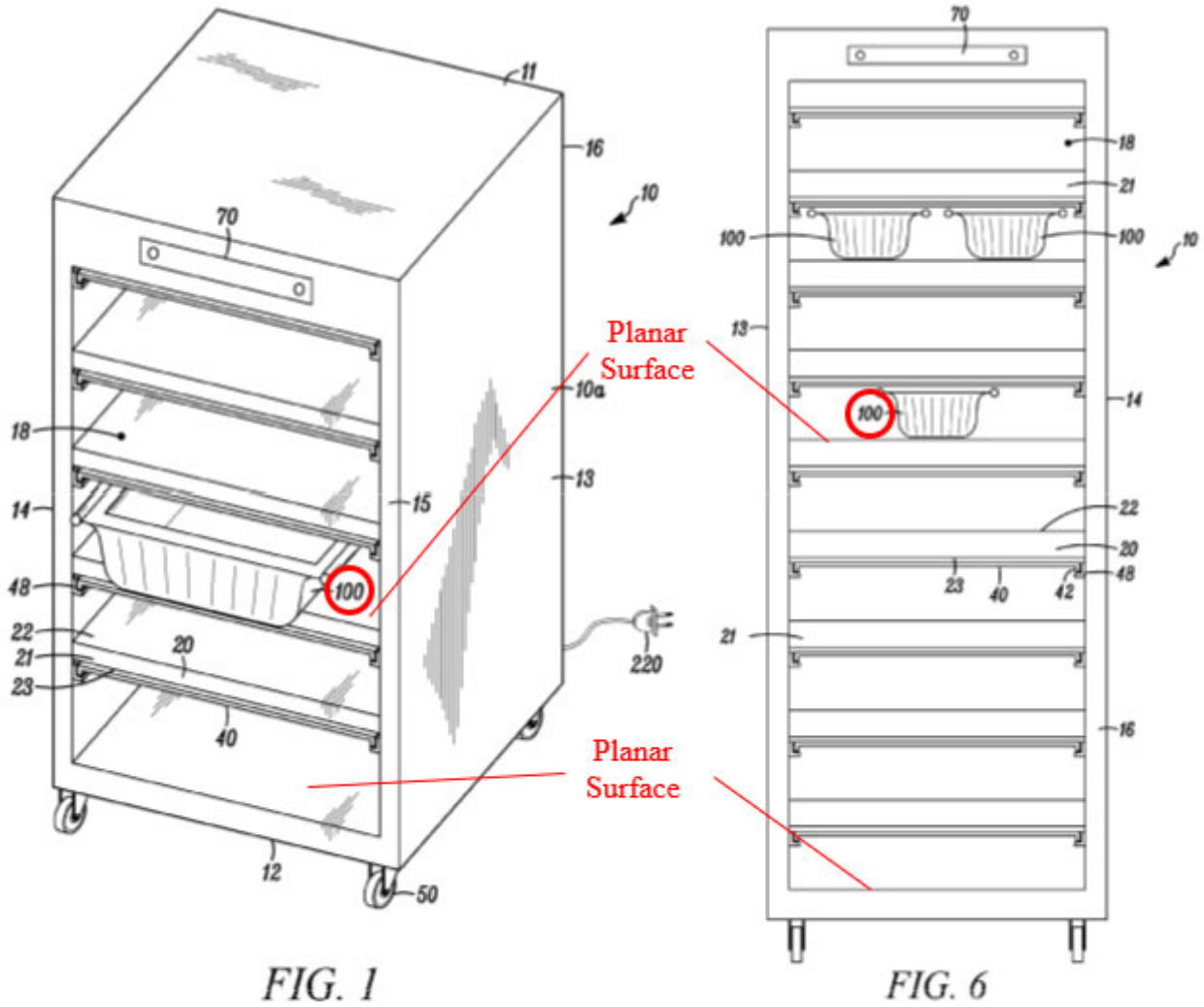
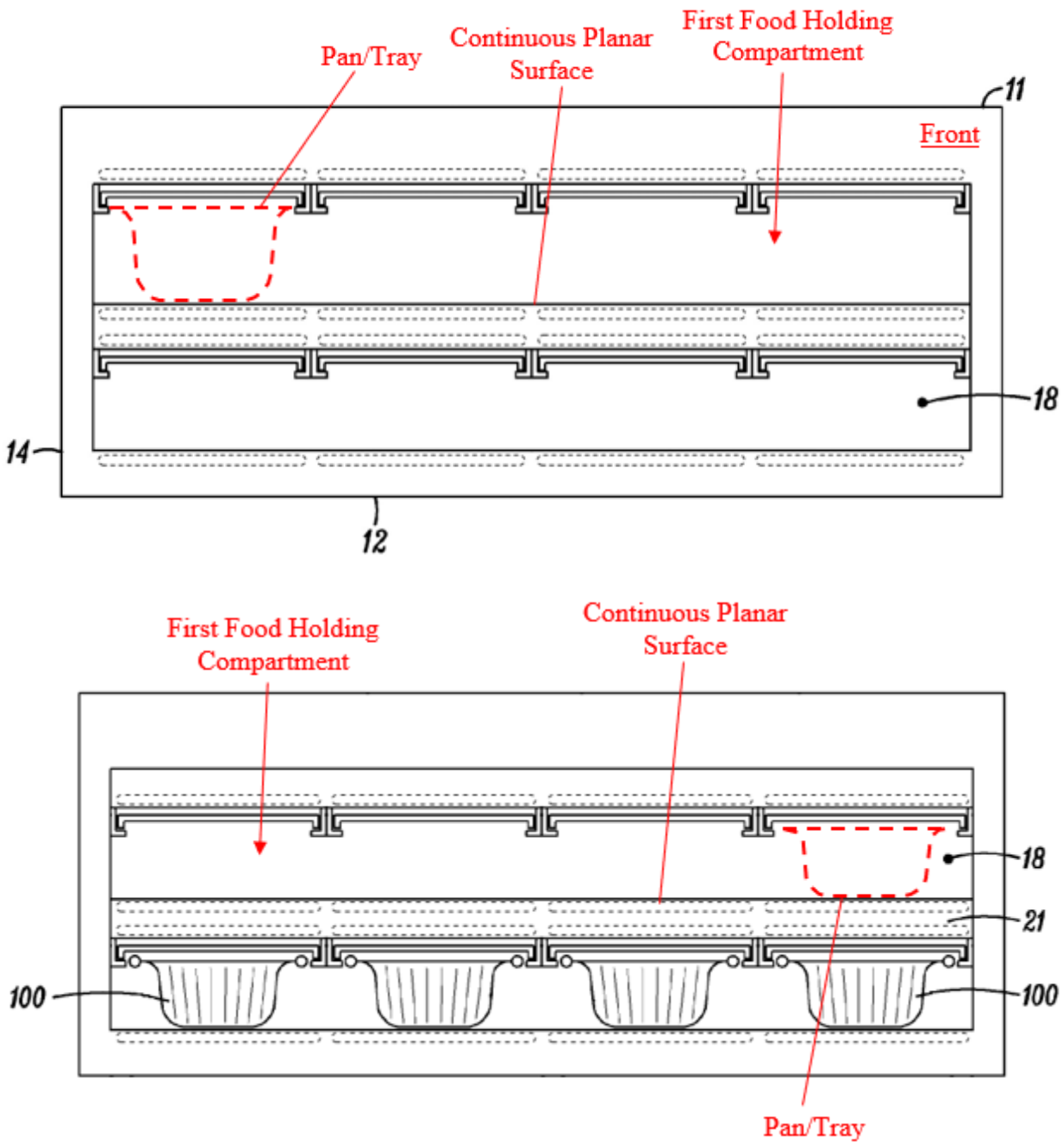


FIG. 1 FIG. 6

EX1010: Figs. 1, 6 (annotated).



EX1010: Figs. 2, 6 (modified, annotated).

1.g.1

Per Sections X(A)(2), X(B)(1.d.1/1.e.1), the first and second zones are adjacent across the continuous planar surface. EX1003: ¶564.

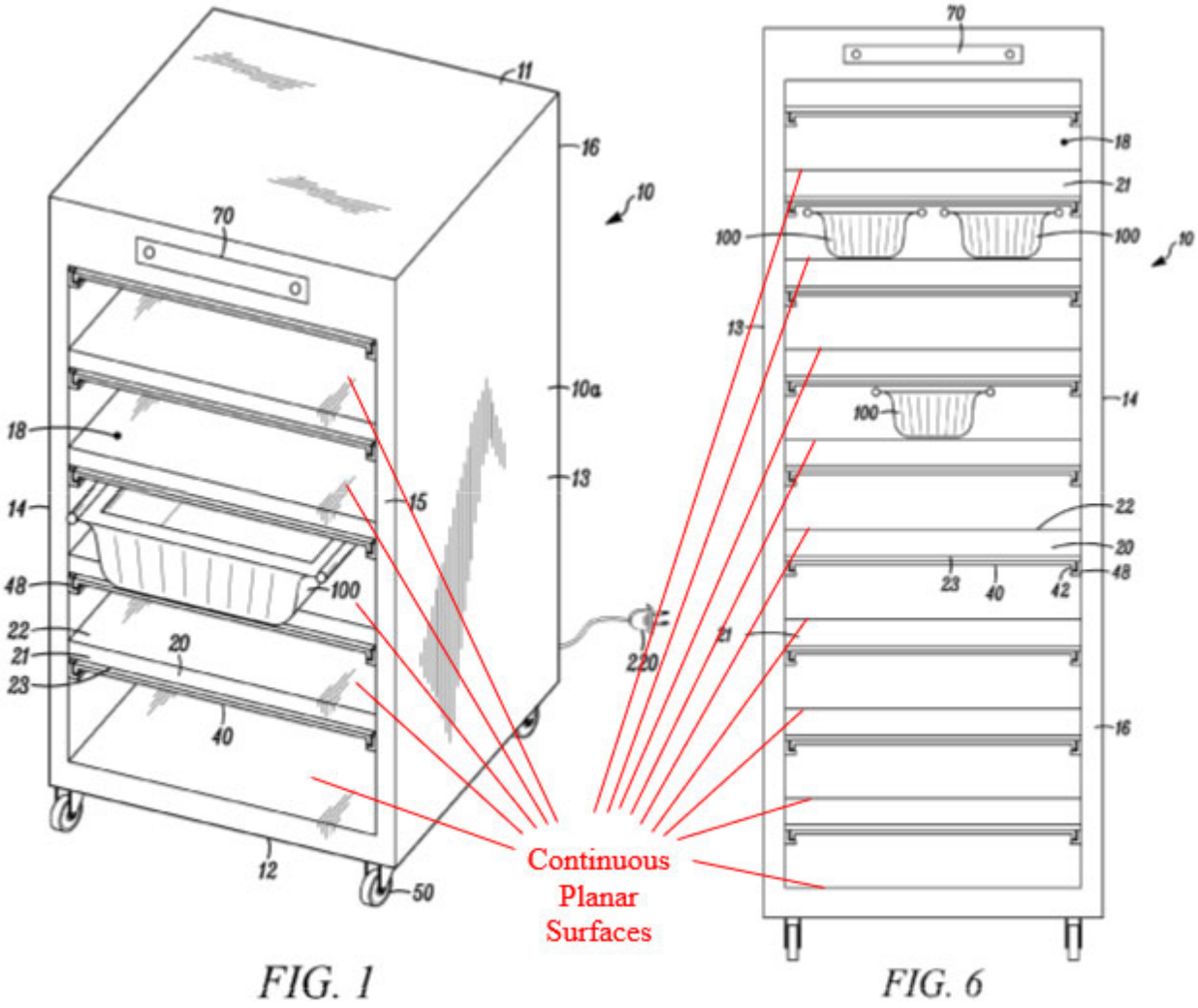
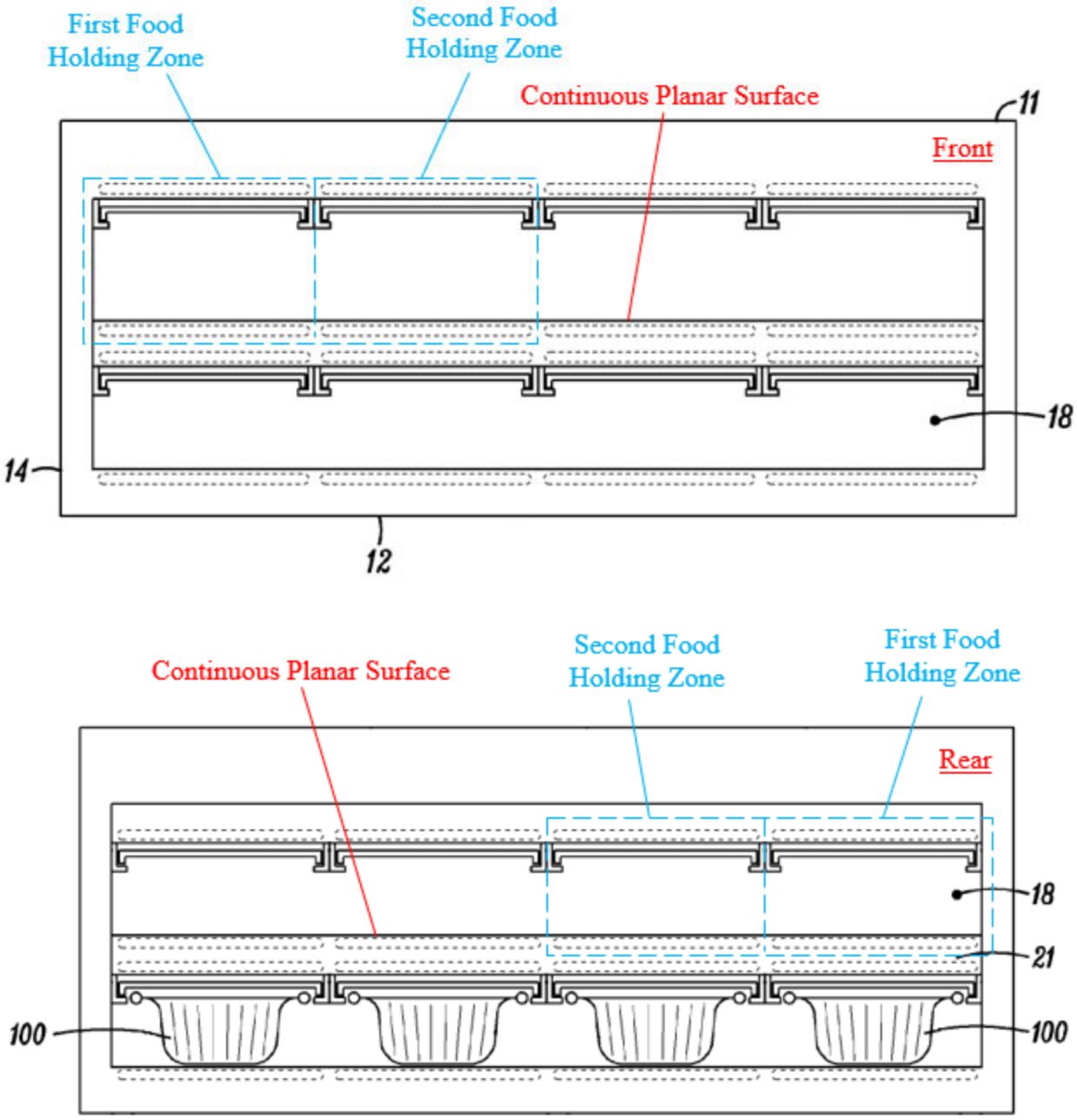


FIG. 1 FIG. 6

EX1010: Figs. 1, 6 (annotated).



EX1010: Figs. 2, 6 (modified, annotated).

1.g.2

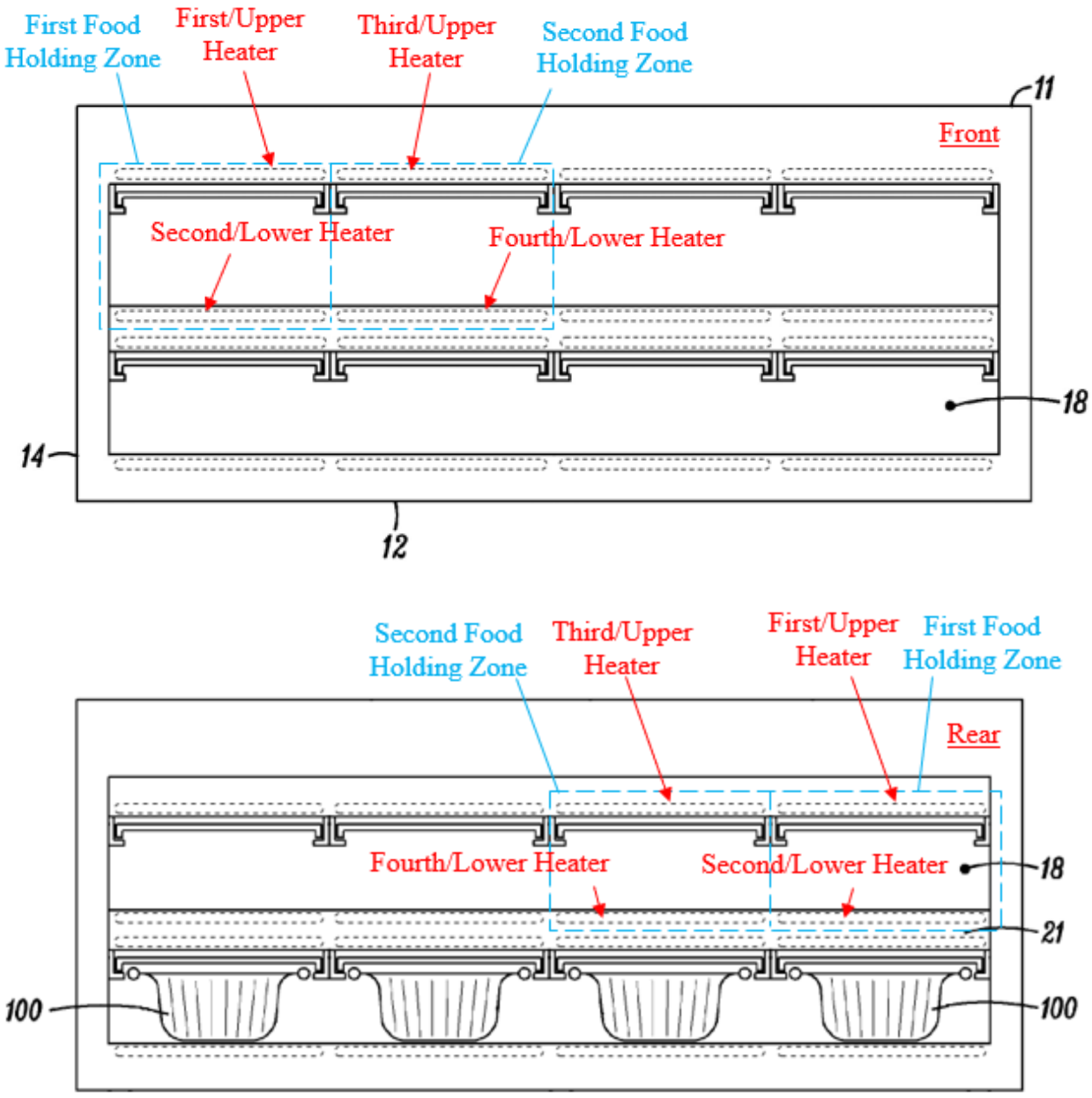
Fortmann'748 teaches heating zones to different temperatures. EX1010: ¶¶[0019], [0021], [0024], [0027]; EX1003: ¶¶565. Moreover, Jones, Fortmann'197, the IRHS Documents, and McMillan all disclose heating zones to

different temperatures. EX1005: 16, 20, 25; EX1006: 1; EX1007: 53; EX1010: ¶¶[0021], [0024], [0027]; EX1012: ¶¶[0098], [0130]; EX1014: 3:6-27, 8:63-9:19, 9:50-65; EX1019: 4:36-59; EX1003: ¶566.

Per the modifications of Sections X(B)(1.d.1/1.e.1)-(1.d.2/1.e.2), the first and second zones have controllable/maintainable first and second temperatures, respectively. EX1003: ¶¶567-568.

Fortmann'748's heaters are independently controllable "to establish two or more heat zones of differing temperatures within the warming volume [18]." EX1010: ¶¶[0019], [0021], [0024]; EX1003: ¶569. Fortmann'748's controller operates the heaters "to control [zone] temperature." EX1010: ¶[0027]; EX1003: ¶569. Per Sections X(A)(2)-(3)), it would have been obvious for Fortmann'748's controller to operate each zone's heaters to control/maintain its independent temperature. EX1003: ¶570.

And because the heating elements are independently controllable (Section X(B)(1.d.2/1.e.2), the temperatures of each zone are capable of being different from one another. EX1003: ¶571. Fortmann'748's controller would have independently operated each zone's heaters to independently control the zone's temperature and heat the zones to different temperatures based on different heat settings for different food types in the zones. Section X(A)(2)-(3); EX1003: ¶572.



EX1010: Figs. 2, 6 (modified, annotated).

Moreover, it would have been obvious for the temperatures of the zones to be different. EX1003: ¶573.

Jones and IRHS Documents teach customized temperature settings for each food type and different food types (thus different temperatures) in each zone.

EX1012: ¶[0098] (“assigns the holding parameters, top and bottom temperature … to the product name, so wherever the product name is displayed, the holding parameters follow”, and “temperature settings for the top and bottom heater that are set to the product name and no matter how many locations have the same product name displayed [1 location up to all locations]”), Fig. 19 (“Select Product Name to be held in Display Location. Each display may have the same Product Name, or all different Product Names … Heating system maintains Top and Bottom Preset Temps for Product Names”); EX1005: 4 (“[t]his new technology allows you to precisely control the environment in each pan, allowing customized settings for each food product”), 16 (“each food product has a tailored HeatSink temperature and InfraRed pulse rate”), 25; EX1006: 1 (“[c]ustom heat settings for food product” and “independent well flexibility”); EX1007: 28, 51 (“each food product has tailored settings to control the thermal path of the food, leading to optimal quality, consistency and extended hold”), 53 (“[t]otal well independence allows freedom in product placement in the IRHS” and “[t]ailor each well specifically to the products within them”); EX1003: ¶¶574-575.



EX1007: 12.

McMillan and Fortmann'748 teach heating zones to different temperatures. EX1010: ¶[0024] ("[i]n embodiments with multiple heat zones, the two or more infinite switches 210 may be calibrated to establish two or more heat zones of differing temperatures within the warming volume, to allow food products that require different warming temperatures to be simultaneously disposed within the cart"); EX1019: 4:45-52 ("each of the heater plates 27a, 27b may include customizable heating elements arranged such that different portions of the passageway 16a may be set to different temperatures. In this way, the temperature of each passageway may be maintained according to the number and types of food product to be stored. For example, the passageway 16a may be set to store four different types of food products at four different temperatures"); EX1003: ¶¶576-577.

Per Jones, Fortmann'748, IRHS Documents, and/or McMillan, it would have been obvious to heat zones to different temperatures to accommodate customized heat settings for different food types in each zone and to increase holding capacity for different food types to meet customer demands. EX1028: 30, 14, 39; EX1019: 1:17-45; EX1010: ¶[0024]; EX1006: 1; EX1003: ¶¶578-579.

This uses a known technique (heating compartment zones to different temperatures) to improve a similar device (Fortmann'748) in the same way (independently heating compartment zones to different temperatures) with reasonable expectation of success (independently controllable heaters). Section X(A)(2)-(3); EX1003: ¶¶580-581.

This renders obvious the zones being capable of maintaining different temperatures, and actually doing so. EX1003: ¶582.

1.h.1

Fortmann'748's heaters overlying the compartments transfer heat by radiation. EX1010: ¶¶[0019]-[0020]; EX1003: ¶583. When modifying Fortmann'748's heaters, POSA would follow Fortmann'748 by arranging the first heater to heat trays/pans from above by radiation. EX1010: ¶¶[0019]-[0020]; EX1003: ¶¶584-585.

1.h.2

Fortmann'748's heaters conductively heat sheets the pans/trays rest on. EX1010: ¶¶[0019]-[0020]; EX1003: ¶586. When modifying Fortmann'748's heaters, POSA would follow Fortmann'748 by arranging the second heater to contact the sheet/planar surface to conductively heat the trays/pans from below. EX1010: ¶¶[0019]-[0020]; EX1003: ¶¶587-588.

C. Claim 2

2.a.1

Fortmann'748's shelves (21) separate compartments. EX1010: ¶¶[0014]-[0015]; EX1003: ¶¶589-592.

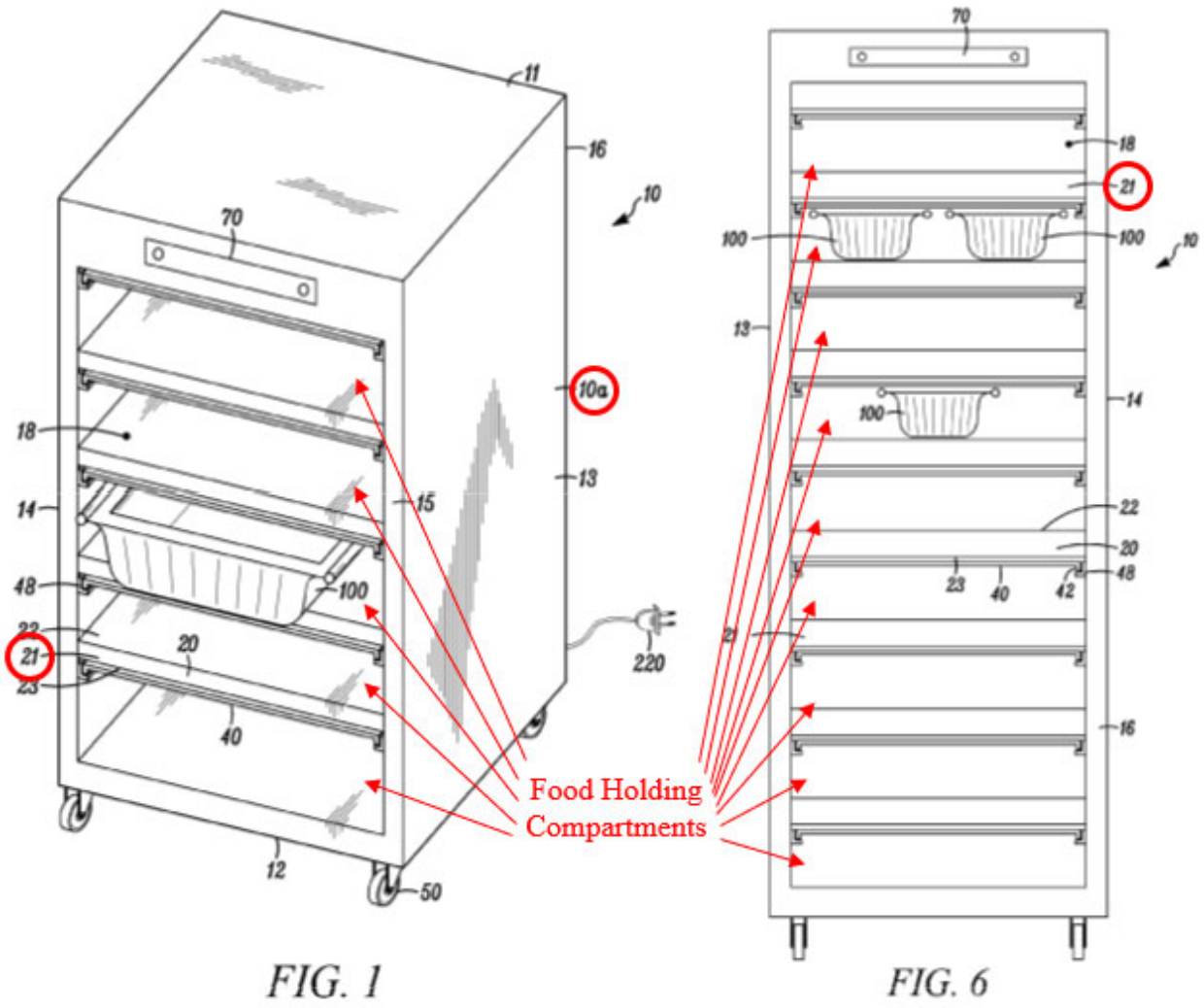
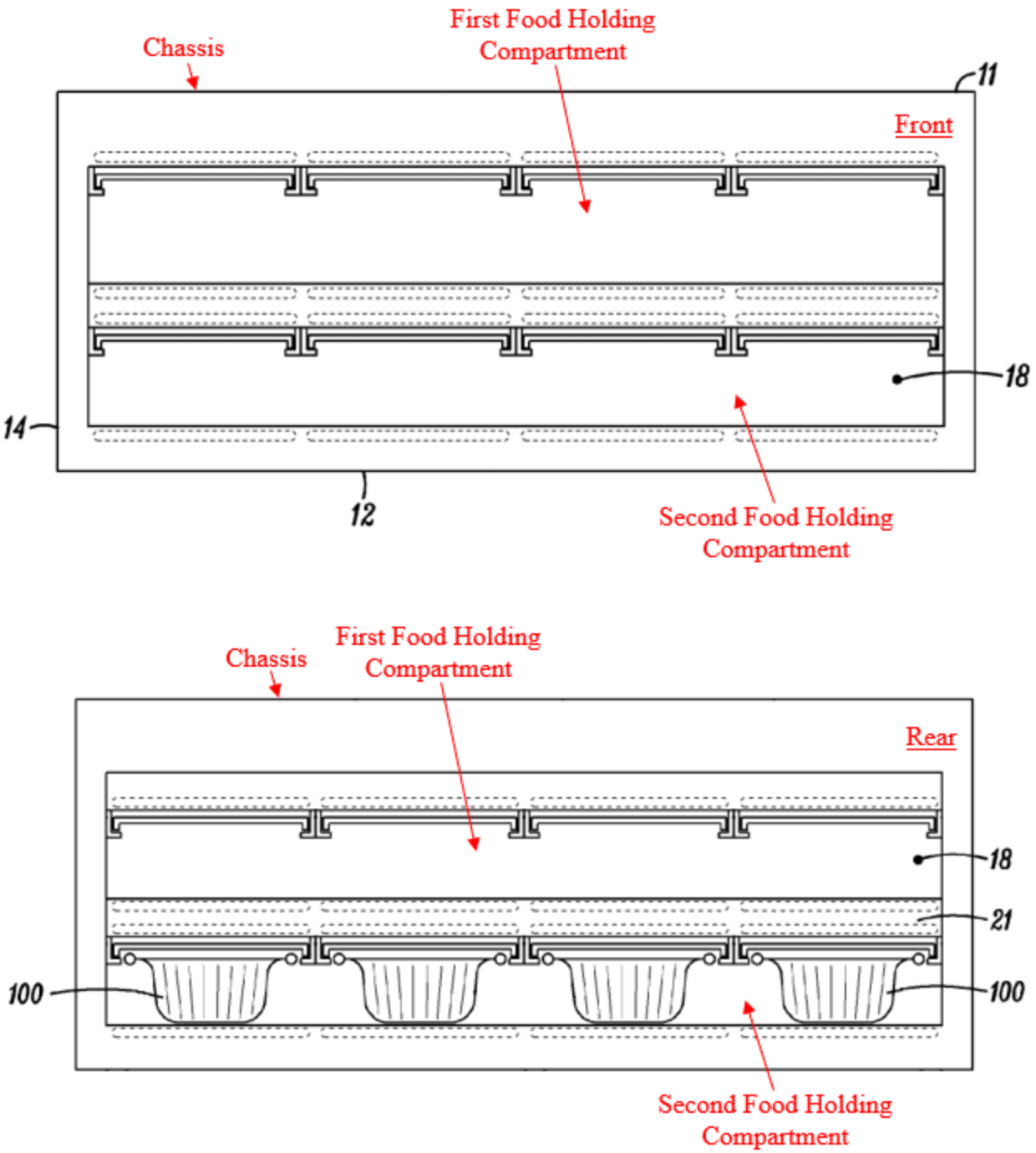


FIG. 1 FIG. 6

EX1010: Figs. 1, 6 (annotated).

Fortmann'748 has a second food holding compartment within the chassis (10a) disposed below the first compartment. Section X(A)(1); EX1003: ¶593.



EX1010: Figs. 2, 6 (modified, annotated).

2.a.2

The second compartment has a first opening that is open, uncovered, and located at the chassis' (10a) front face. EX1010: ¶[0014]; EX1003: ¶¶594-595.

The first opening allows food pans to be placed into and removed from the second compartment. EX1010: ¶[0014], ¶[0015], ¶[0017], ¶[0024]; EX1003: ¶¶596-597.

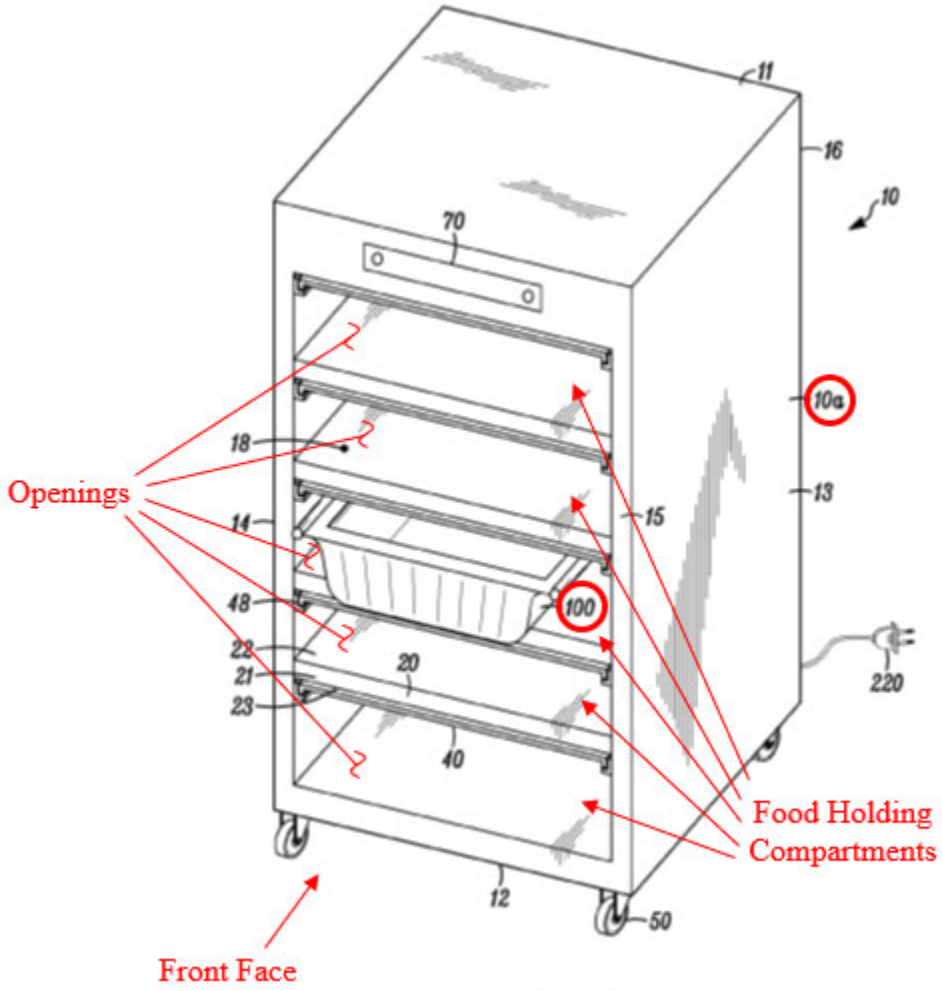
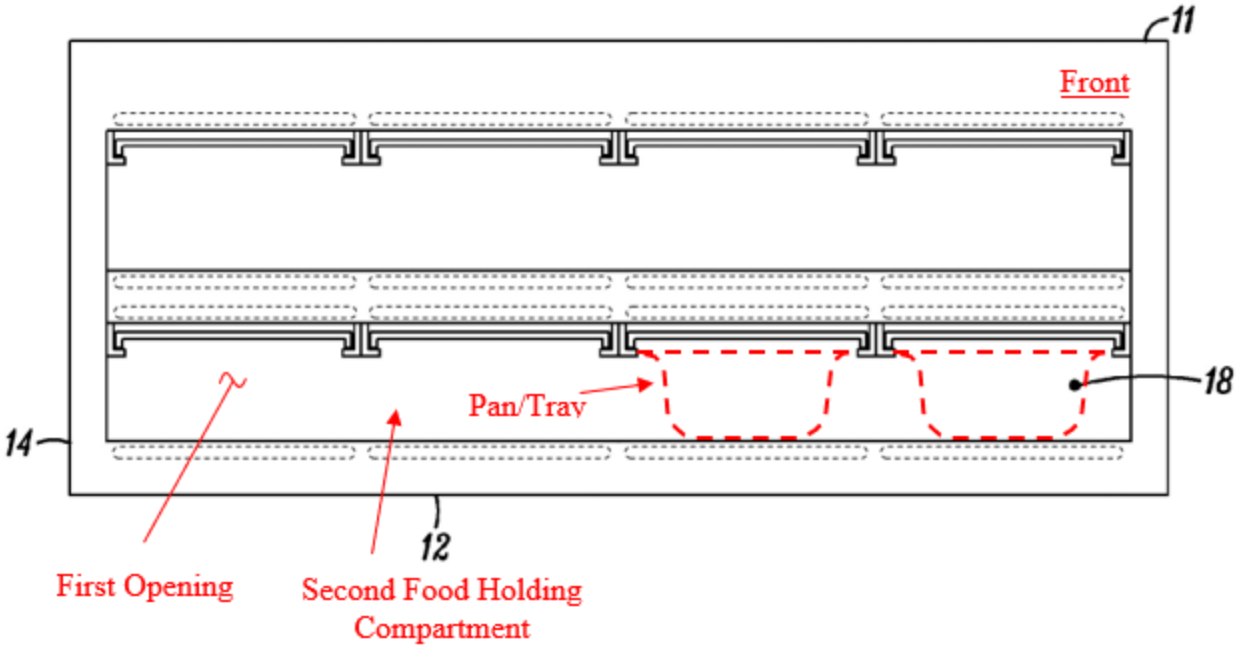


FIG. 1

EX1010: Fig. 1 (annotated).



EX1010: Fig. 2 (modified, annotated).

2.b.1

Fortmann'748's shelves (21) are located between compartments, each shelf having a top/first side (22) facing upward into an overlying compartment and a bottom side (23) facing downward into an underlying compartment. EX1010: ¶[0015]; EX1003: ¶¶598-601.

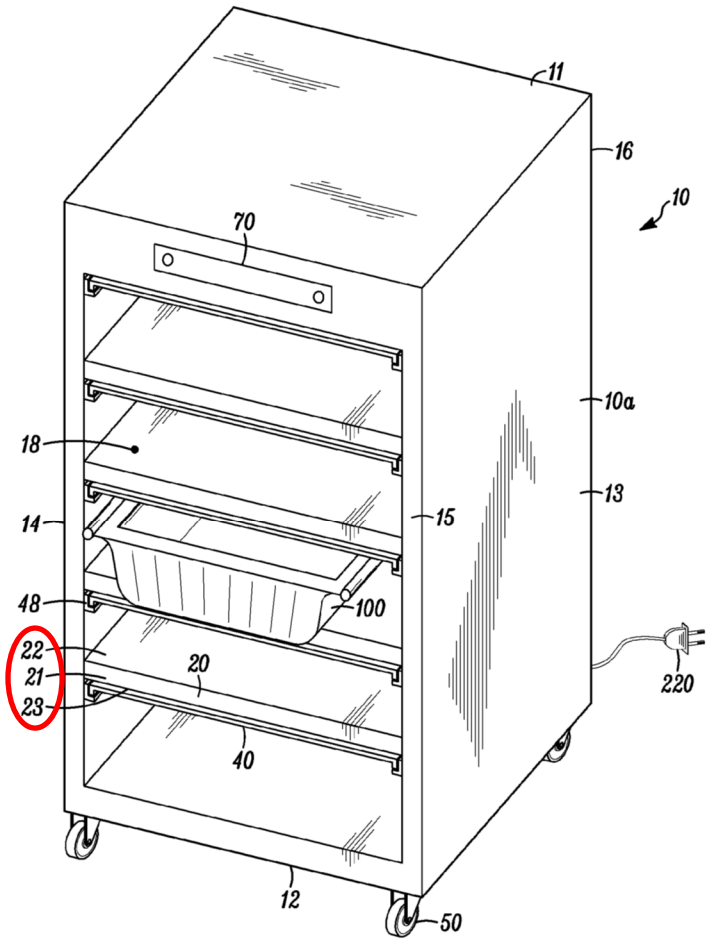


FIG. 1

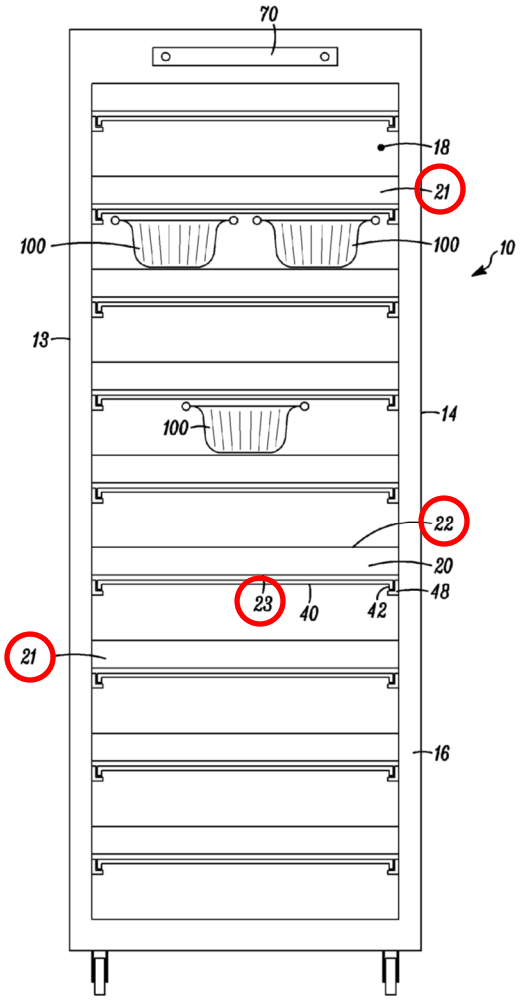
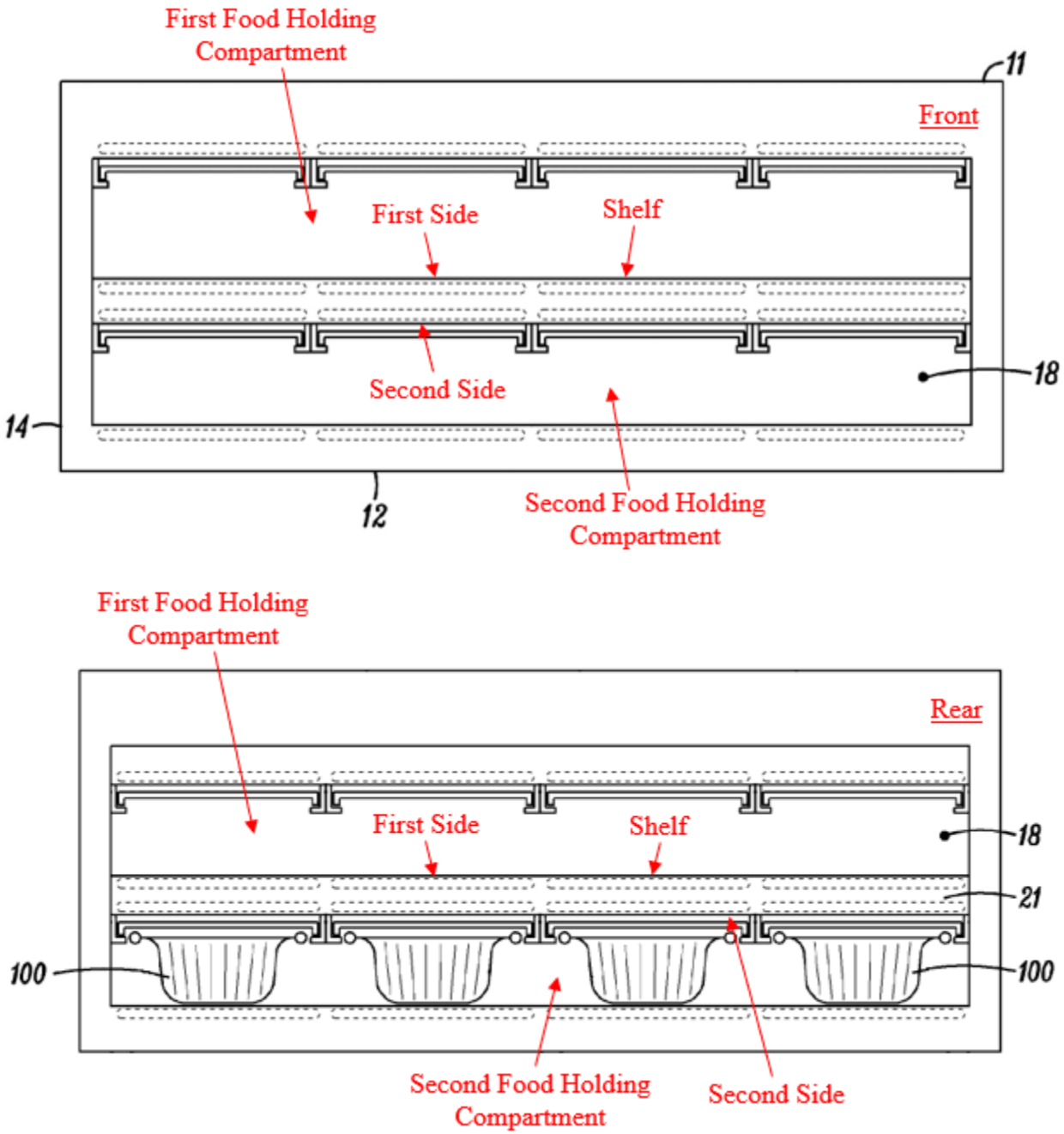


FIG. 6

EX1010: Figs. 1, 6 (annotated).

The shelf (21) is between the first and second compartments and includes a first side facing the first compartment and a second side facing the second compartment. Section X(A)(1); EX1010: ¶[0015]; EX1003: ¶602.



EX1010: Figs. 2, 6 (modified, annotated).

2.b.2

Fortmann'748's heaters (60) are between the two planar sheets (22, 23) in the shelf (21) and are in contact for conduction (thermal communication) with the upper sheet (22) forming the first side. EX1010: ¶[0019]; EX1003: ¶¶603-604.

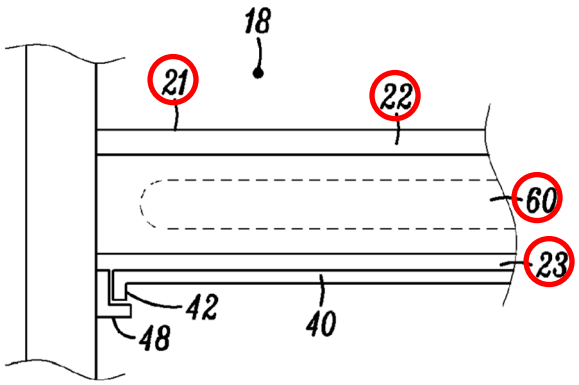
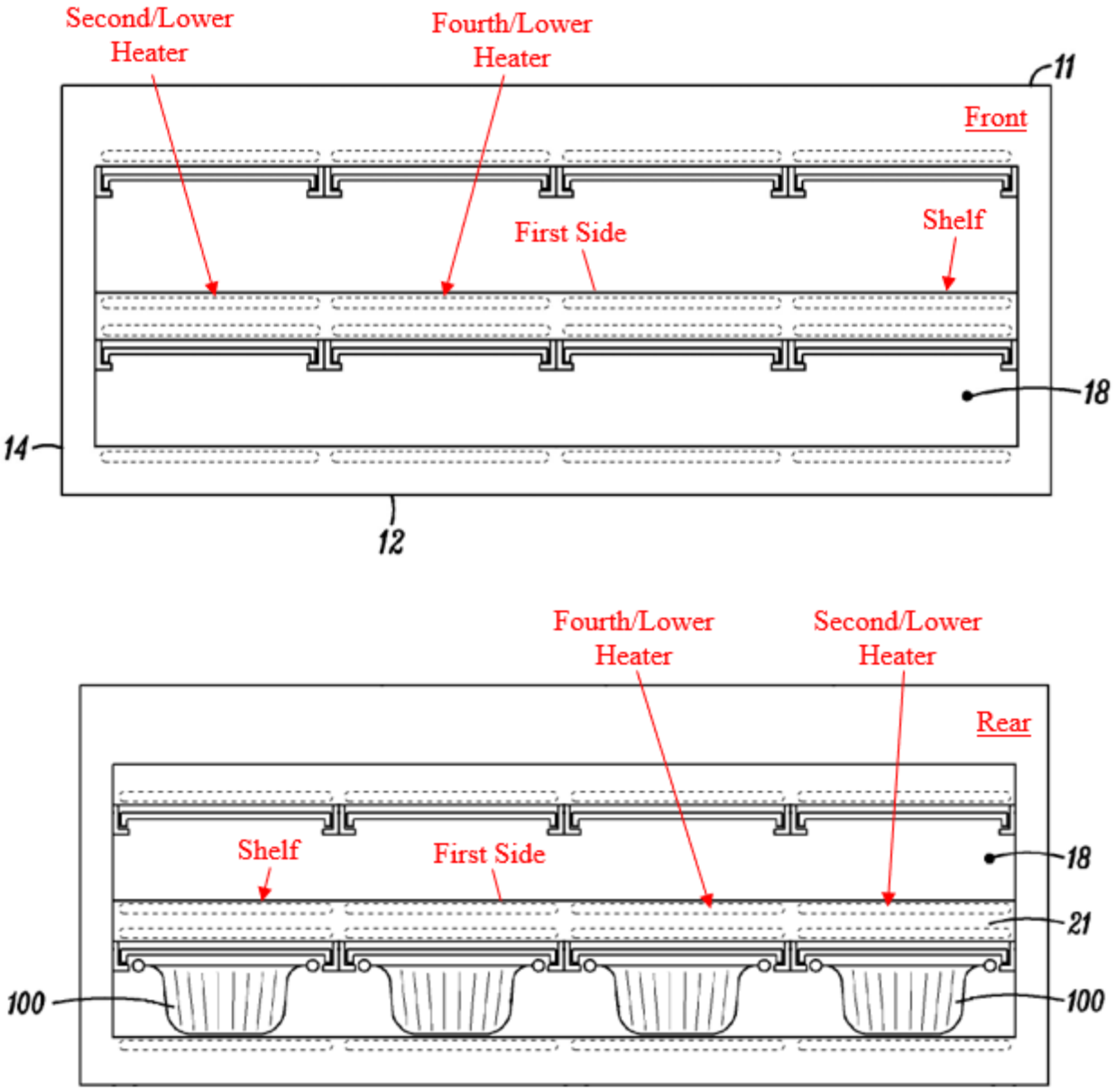


FIG. 3

EX1010: Fig. 3 (annotated).

When modifying Fortmann'748's heaters per Sections X(A)(2), X(B)(1.d.2/1.e.2), POSA would follow Fortmann'748 by arranging the lower heaters (e.g., second and fourth heaters) in the shelf to contact the upper sheet/first side for conductively heating (thermal communication) the upper sheet/first side. EX1010: ¶¶[0019]-[0020]; EX1003: ¶605.

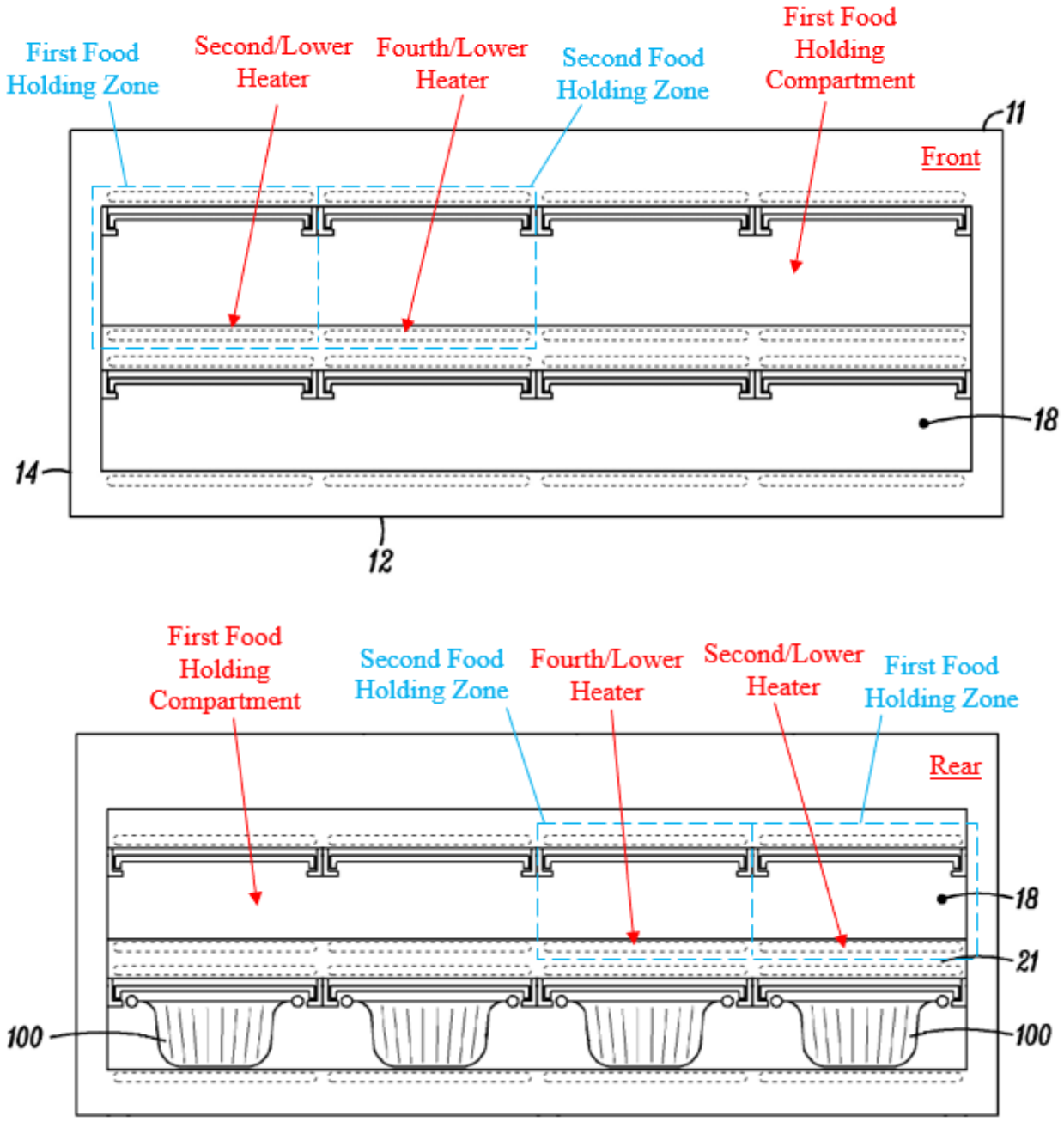


EX1010: Figs. 2, 6 (modified, annotated).

2.b.3

Sections X(B)(1.d.2/1.e.2), X(B)(1.g.2), X(A)(2)-(3) render obvious the second and fourth heaters being independently controllable via Fortmann'748's controller. EX1003: ¶606. The second and fourth heaters would be capable of

providing different amounts of heat energy into the first and second zones to maintain different setpoint temperatures per Section X(B)(1.g.2). EX1003: ¶¶607-609.

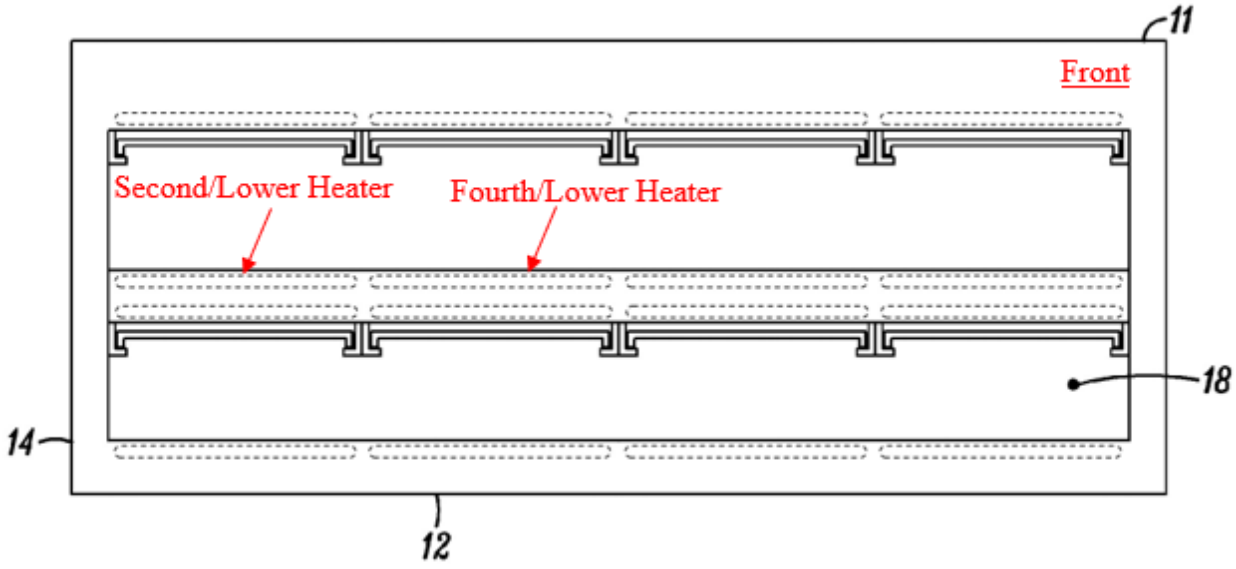


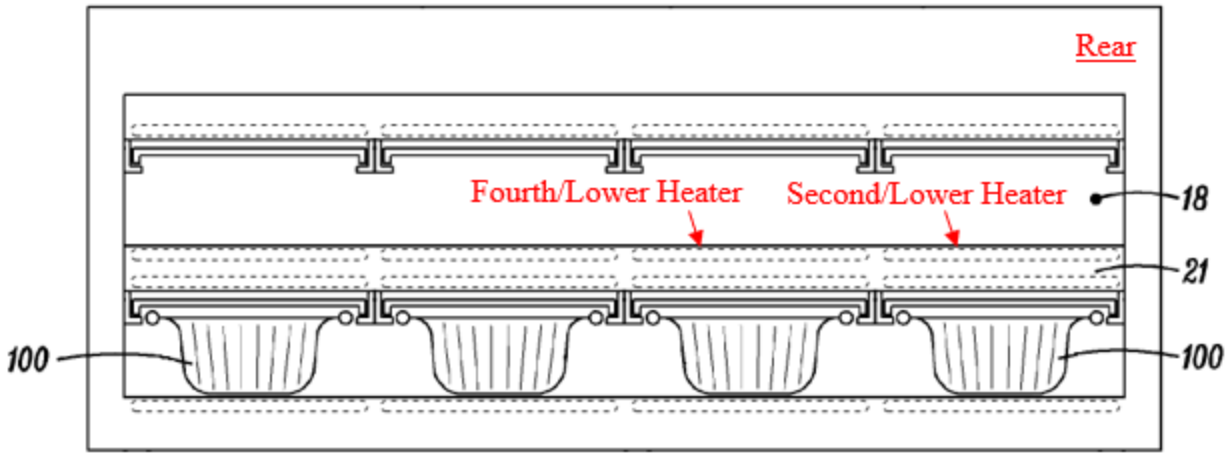
EX1010: Figs. 2, 6 (modified, annotated).

2.c

Fortmann'748's "controller [] selectively provide[s] … current to the [] heaters 60 … to control [zone] temperature." EX1010: ¶[0027]; EX1003: ¶610.

Per Sections X(A)(2)-(3), it would have been obvious to operatively couple Fortmann's controller to each heater (second and fourth heaters). EX1010: ¶[0027]; EX1026: 2:17-20; EX1019: 6:15-19; EX1003: ¶611. Fortmann'748's controller would have independently operated each heater to independently control the temperature associated with each zone. Section X(A)(2)-(3); EX1003: ¶612. Per Sections X(A)(2)-(3), X(B)(1.d.2/1.e.2), X(B)(1.g.2), Fortmann'748's controller would be operatively coupled to and independently operate the second and fourth heaters to control temperature. EX1003: ¶¶613-614.





EX1010: Figs. 2, 6 (modified, annotated).

D. Claim 3

Fortmann'748 has an open back side (16) to allow pans (100) to pass into and out of the compartments. EX1010: ¶[0014]; EX1003: ¶¶615-617.

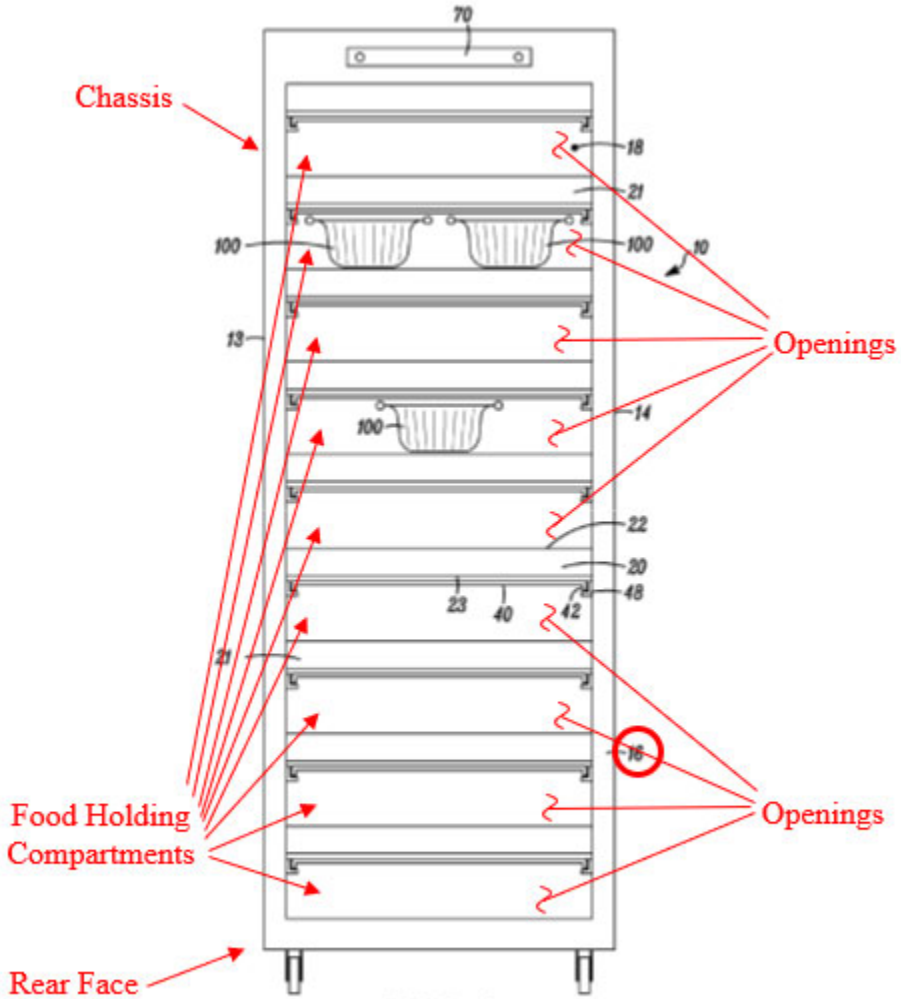
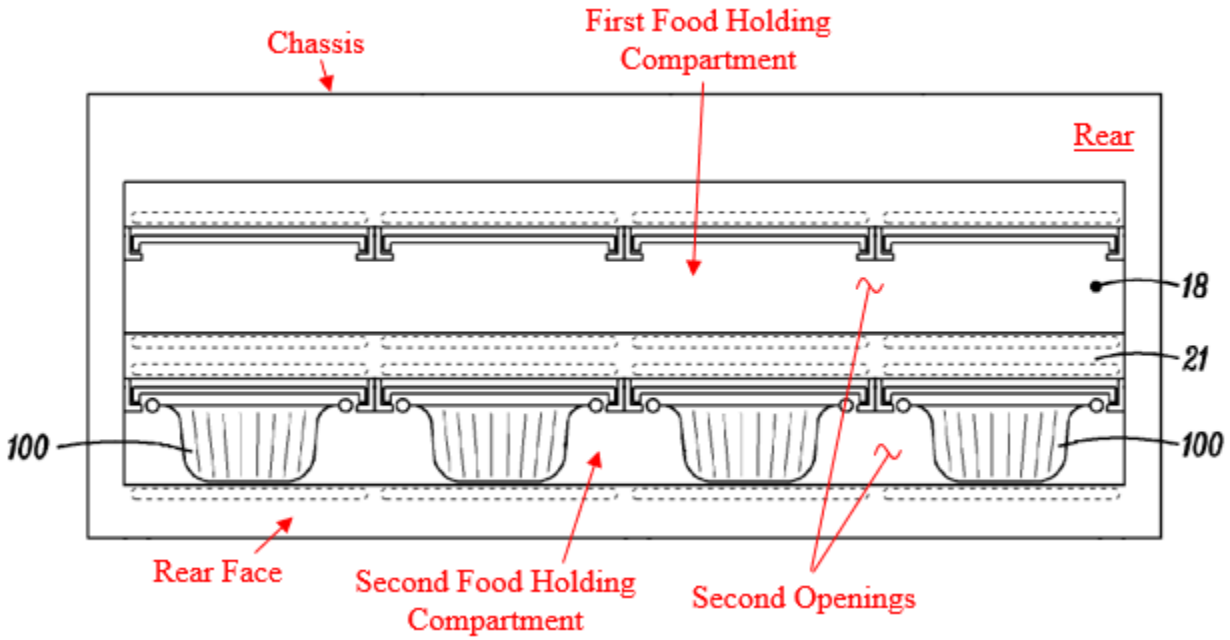


FIG. 6

EX1010: Fig. 6 (annotated).

The first and second compartments each have an uncovered second opening located at the chassis' rear face. EX1003: ¶¶618-619.



EX1010: Fig. 6 (modified, annotated).

E. Claim 5

Fortmann'748's compartments have lids resting/sliding on tracks (48) (lid-holding shelves) above the planar surfaces for pans/trays. EX1010: ¶¶[0017]-[0018]; EX1003: ¶¶620-624. The lids (40) are insertable into and removeable from the tracks. EX1010: ¶[0018]; EX1003: ¶623.

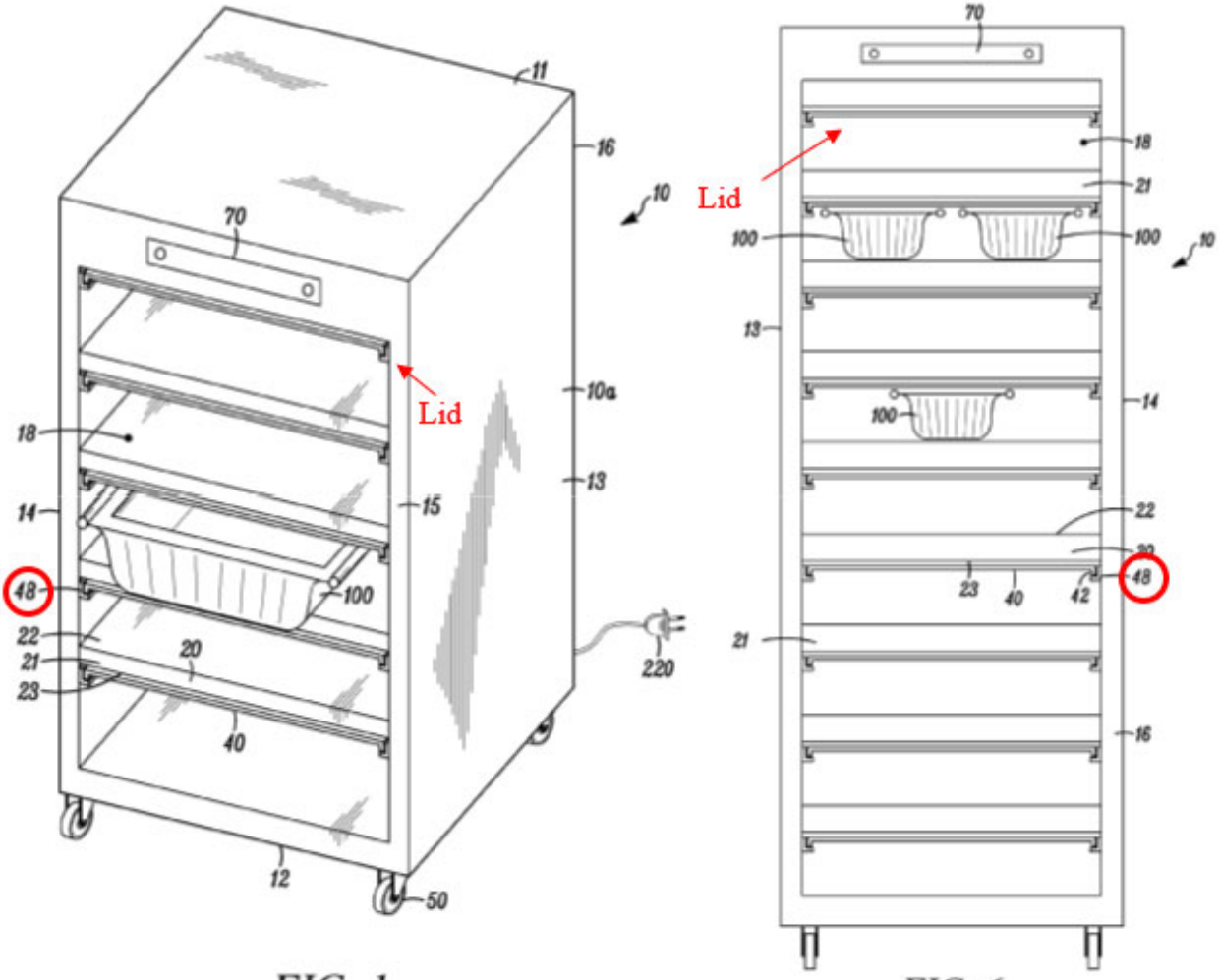


FIG. 1 FIG. 6

EX1010: Figs. 1, 6 (annotated).

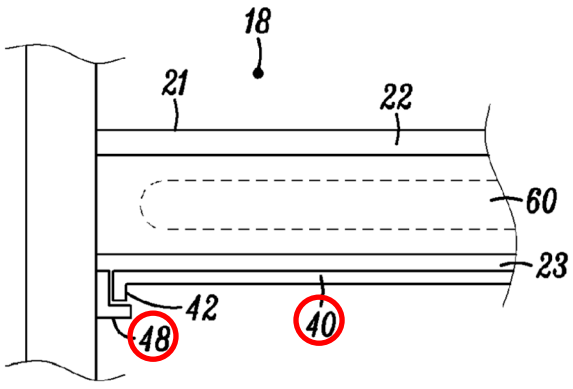


FIG. 3

EX1010: Fig. 3 (annotated).

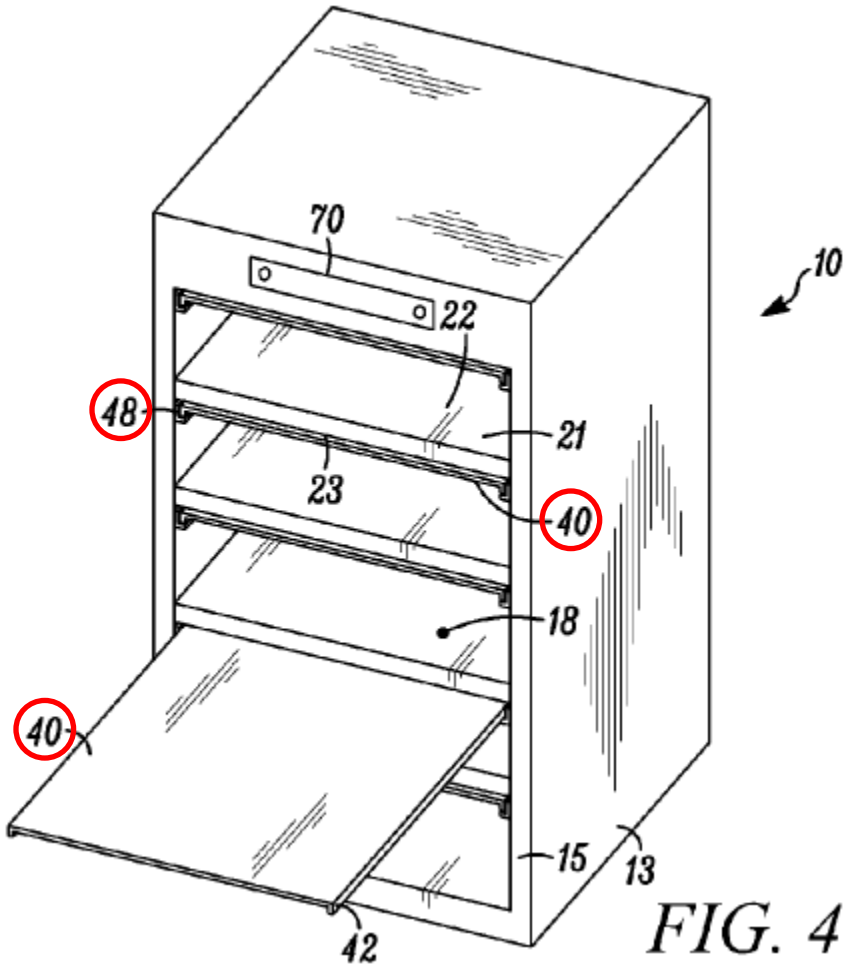
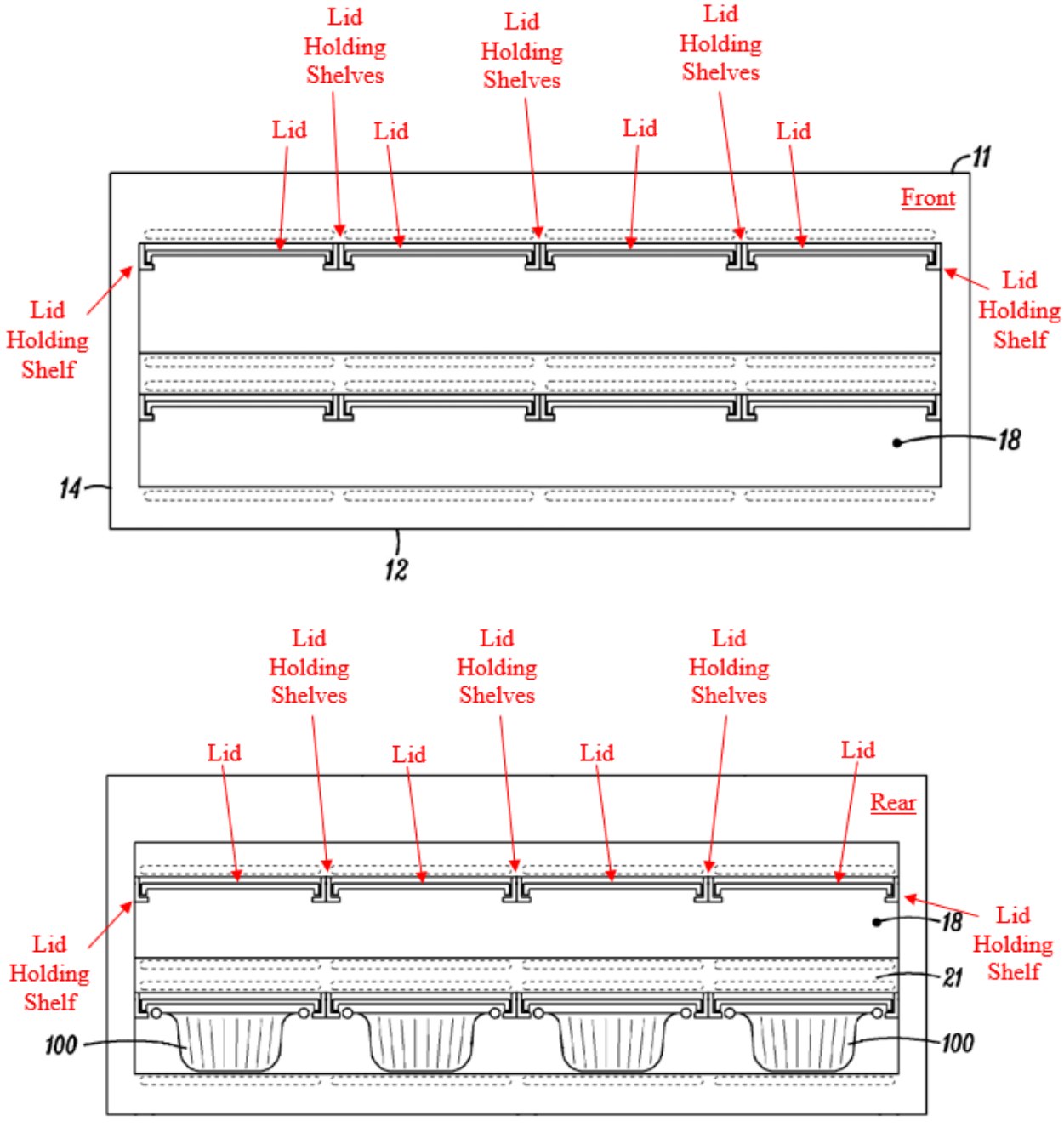


FIG. 4

EX1010: Fig. 4 (annotated).

Jones, Fortmann'197, and IRHS Documents disclose each bay of the compartment receiving an associated discrete lid. EX1012: ¶[0072], Fig. 1B; EX1014: 4:50-53, 7:31-32, Figs. 1-4; EX1005: 8; EX1006: 1-2; EX1007: 53, 58; EX1003: ¶625. Per Section X(A)(4), it would have been obvious for Fortmann'748 to have lids, held on tracks (lid holding shelves), in the top portion of the first compartment. EX1003: ¶626. As modified, the lids would maintain

their ability to insert into the lid holding shelves above the continuous and planar surface. EX1010: ¶[0018]; EX1003: ¶¶627-628.

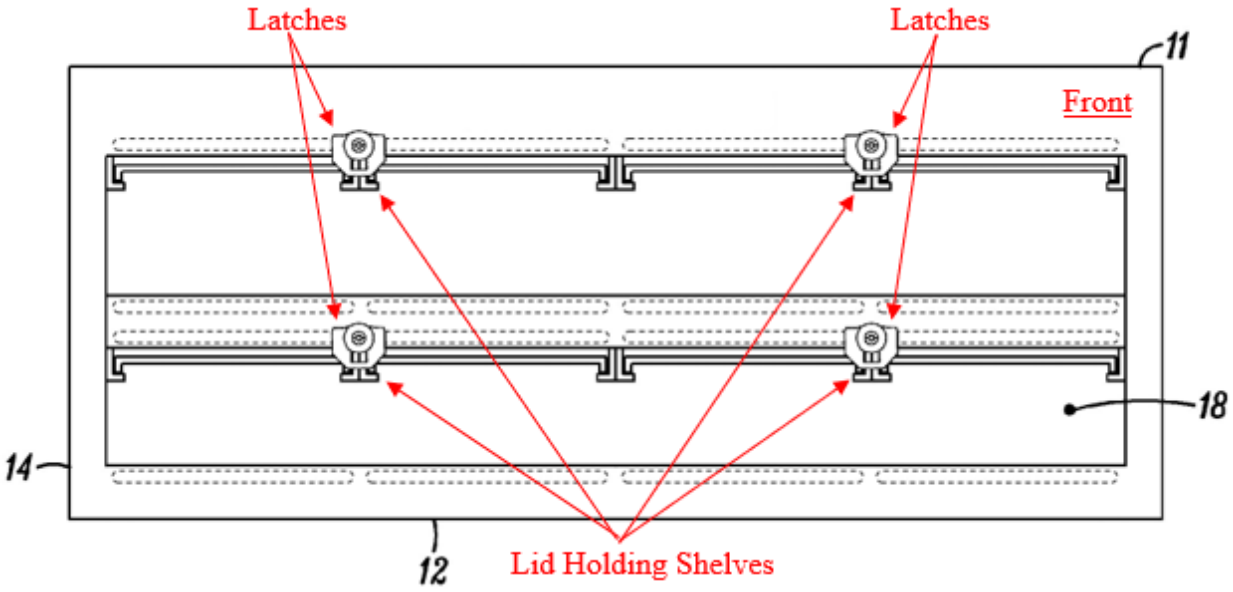


EX1010: Figs. 2, 6 (modified, annotated).

F. Claim 6:

6.a.1

Hartfelder and Shei'099 disclose latches for retaining lids such that it would have been obvious to modify Fortmann'748 to have latches per Section X(A)(5). EX1013: ¶[0058], Figs. 1, 9; EX1017: 6:9-32, Fig. 1; EX1003: ¶¶629-630.



EX1010: Fig. 2 (modified, annotated).

It would have been obvious to position the latches adjacent to the lid holding shelves per Hartfelder and/or Shei'099—positioned adjacent the lids and thus to engage and retain the lids. EX1013: Figs. 1, 9; EX1017: Fig. 1; EX1003: ¶631.

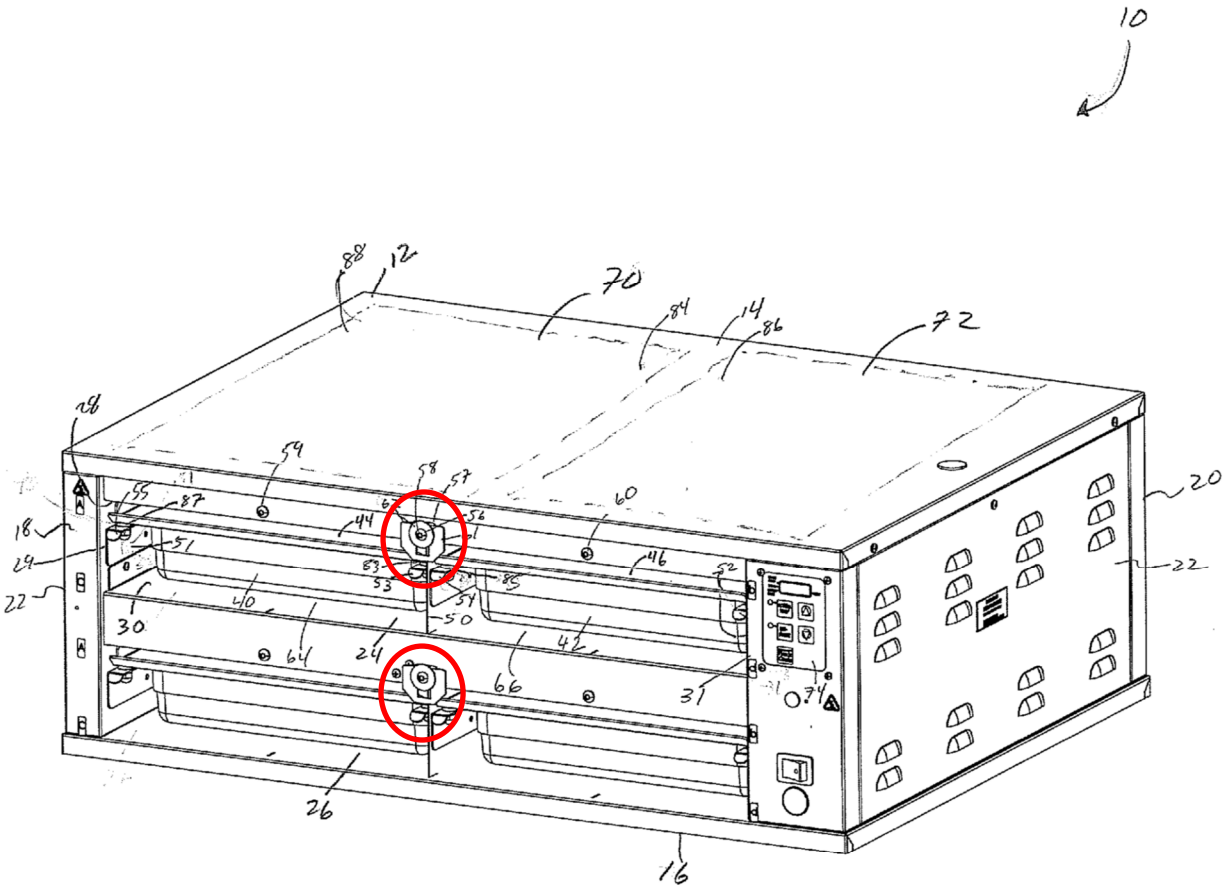


FIGURE 1

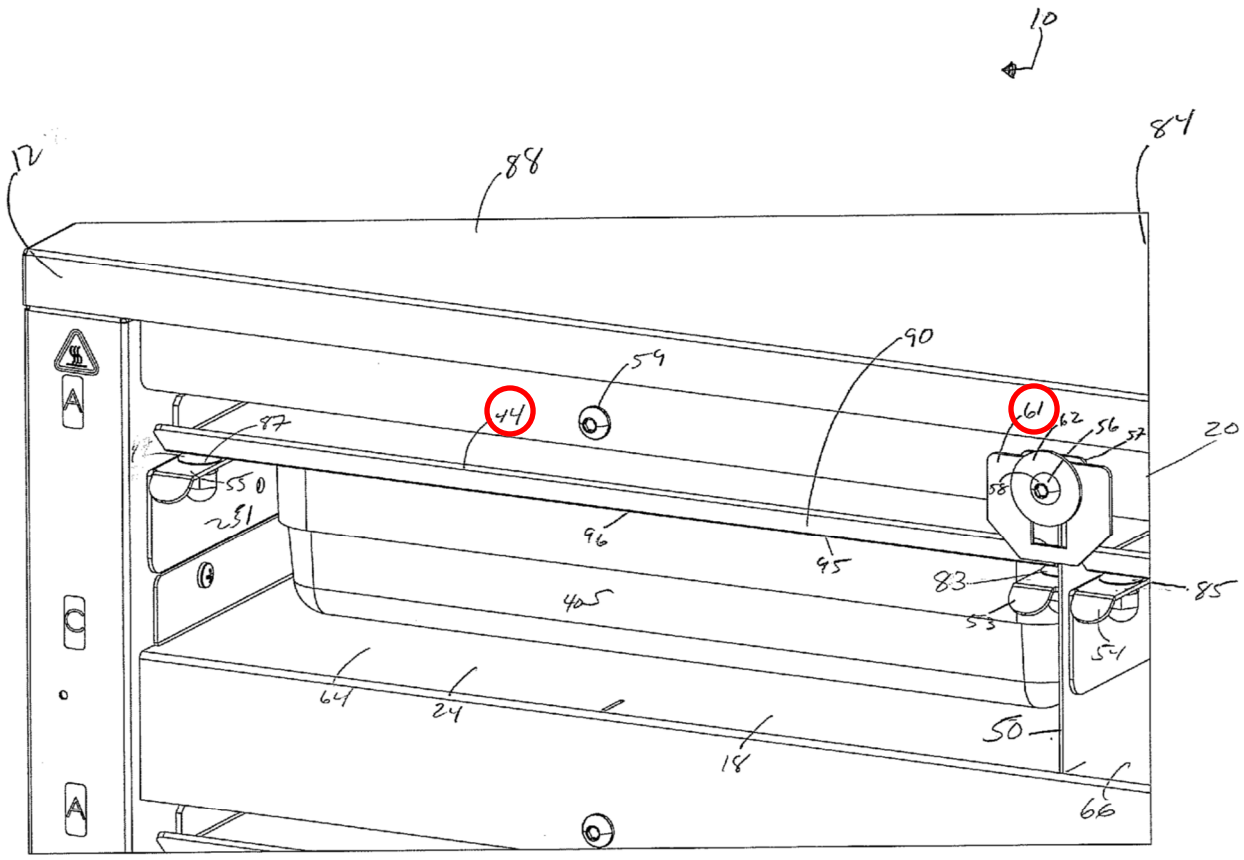


FIGURE 9

EX1013: Figs. 1, 9 (annotated).

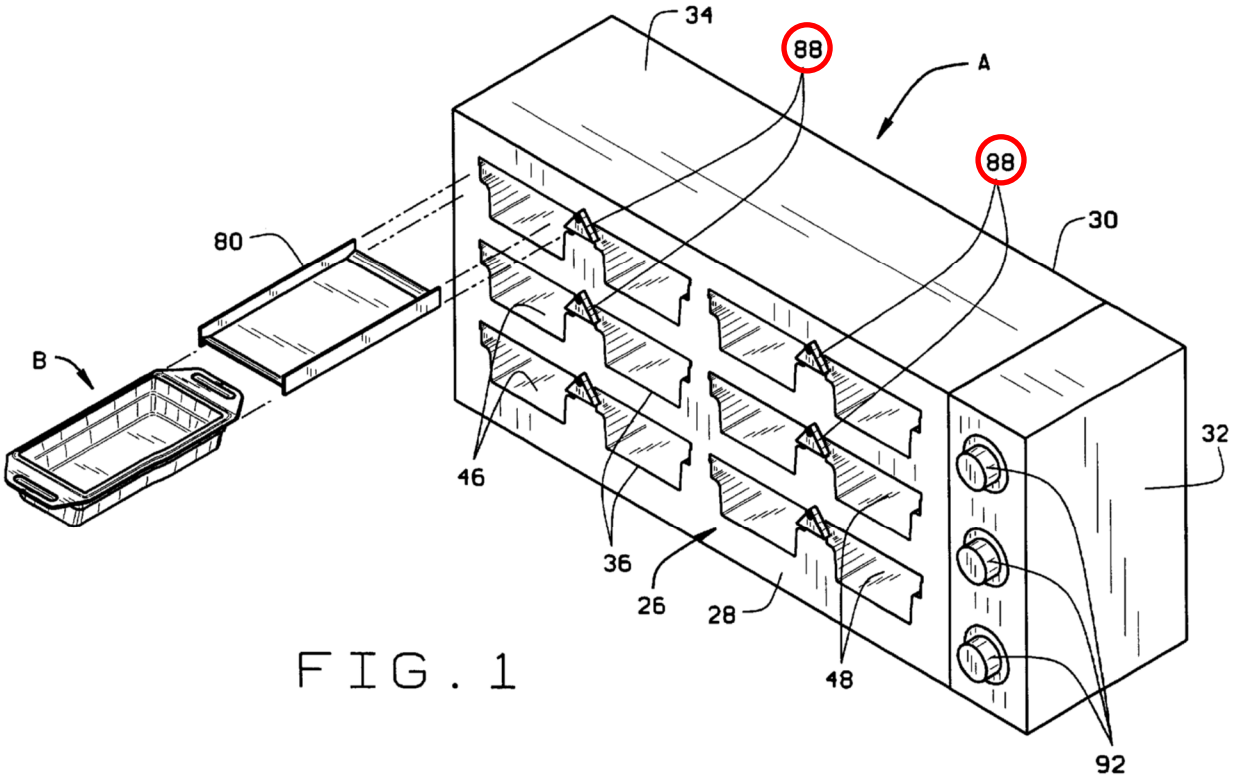


FIG. 1

EX1017: Fig. 1 (annotated).

Therefore, a latch adjacent a lid holding shelf would have been obvious. EX1003: ¶632.

6.a.2

Hartfelder's latches each have a body with an open center portion. EX1013: ¶[0035]; EX1003: ¶633.

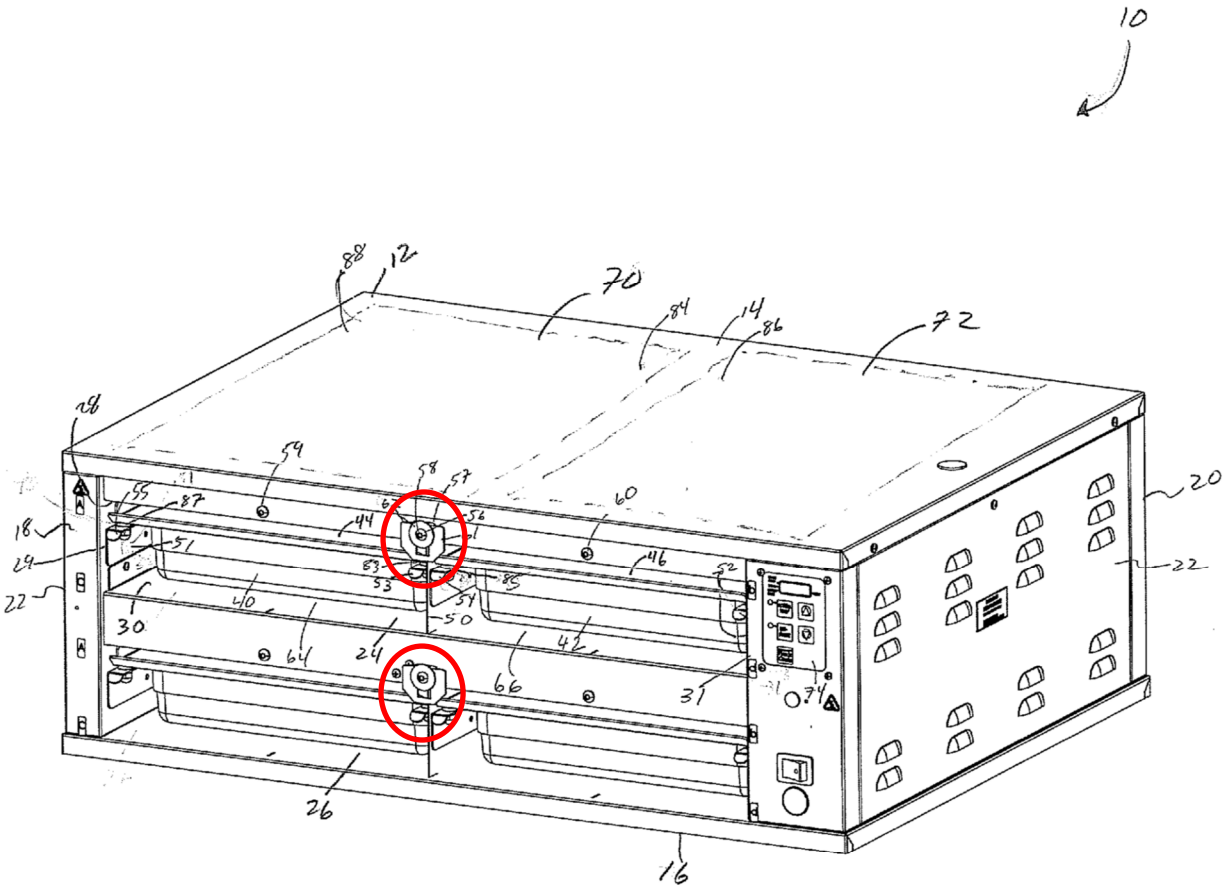

10
88
12
70
84
14
86
72
18
20
22
24
30
40
42
44
46
50
51
52
53
54
55
56
57
58
60
64
66
74
87
26
16

FIGURE 1

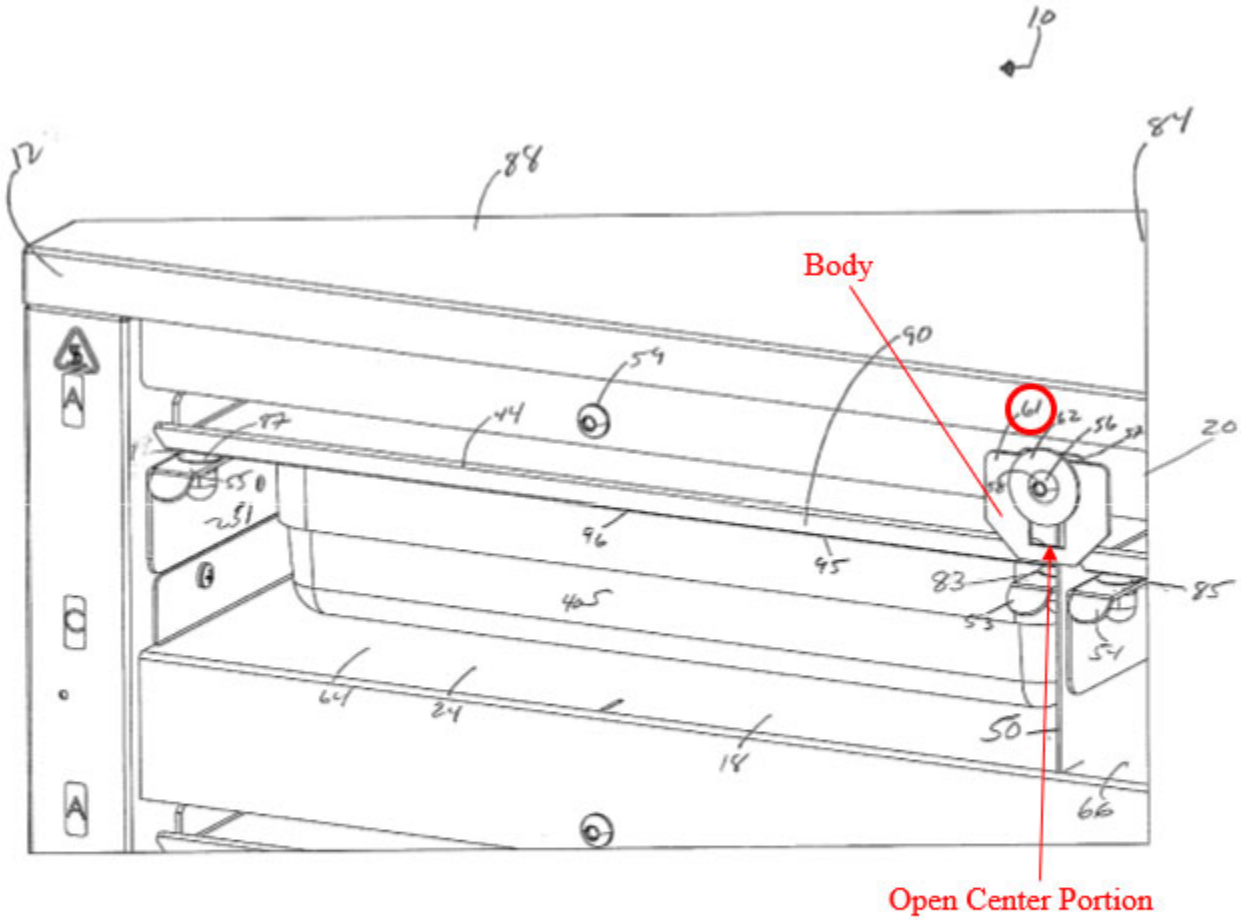
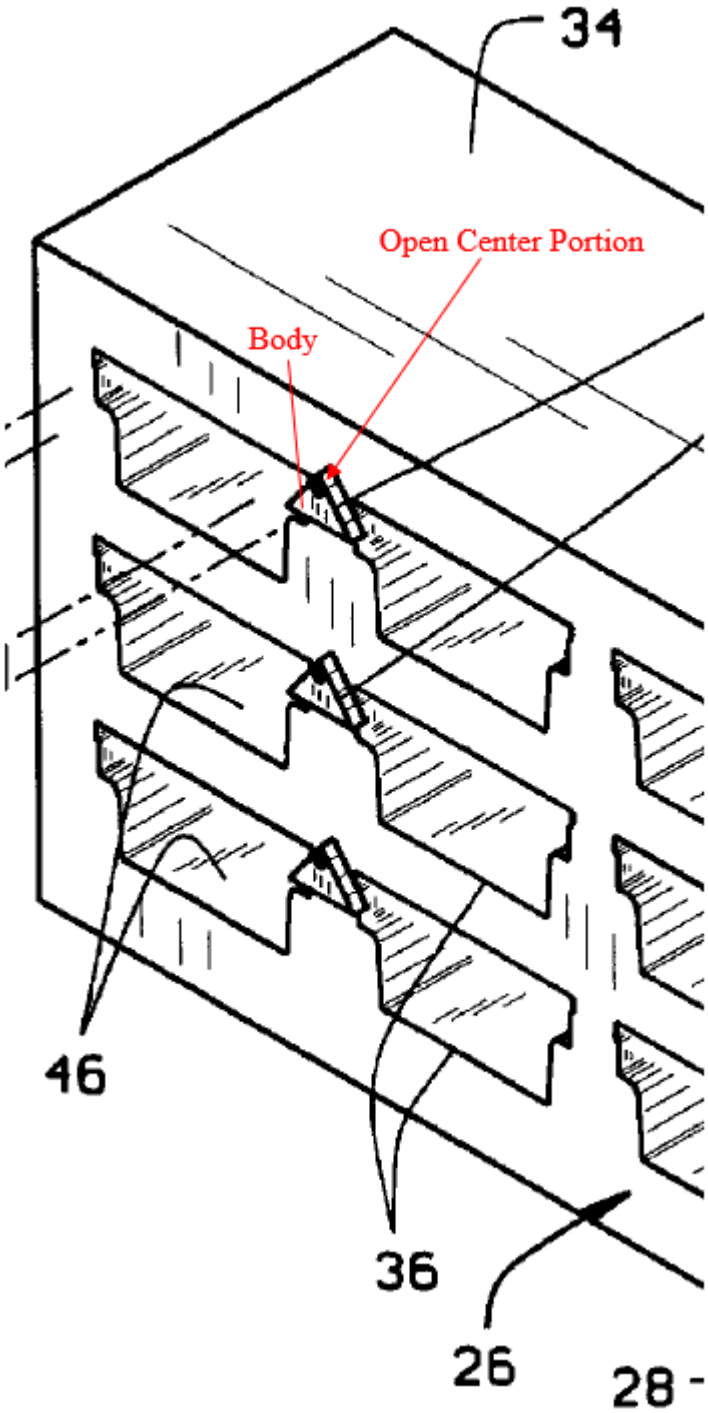


FIGURE 9

EX1013: Figs. 1, 9 (annotated).

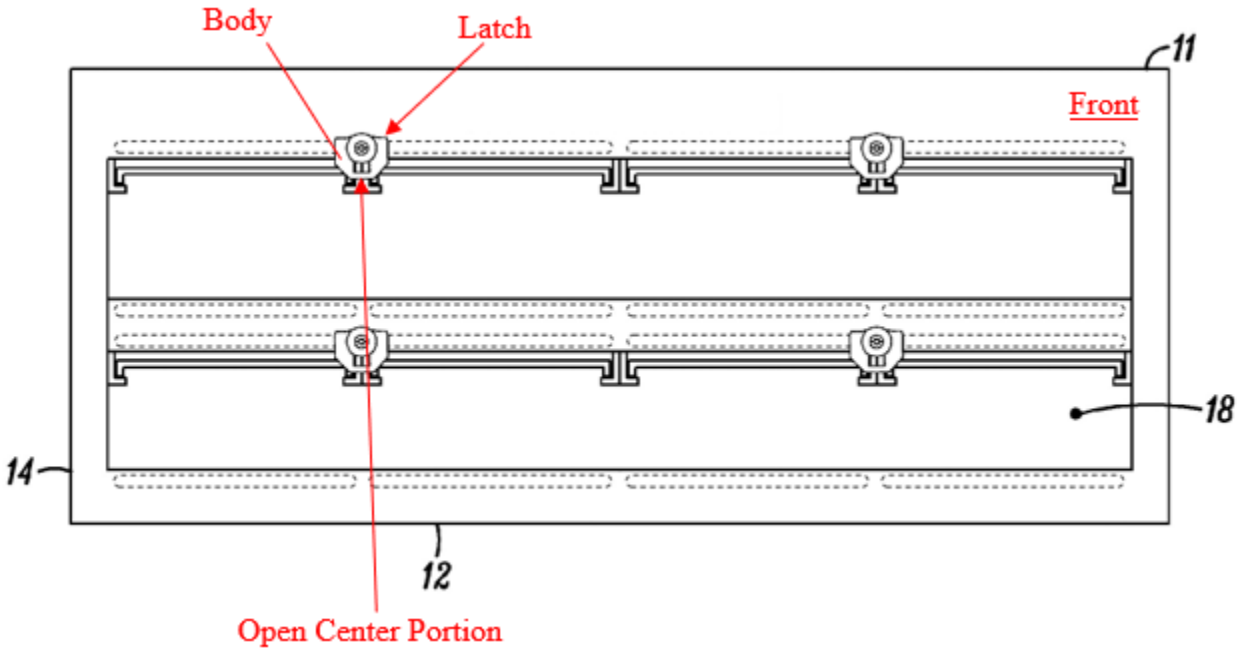
Likewise, each latch of Shei'099 has a body with an open center portion. EX1017: Fig. 1; EX1003: ¶634. The open center portion includes the opening the fastener (forming the pivot connection) extends through to attach the latch to the cabinet (26). EX1017: Fig. 1, 6:9-14; EX1003: ¶634.



EX1017: Fig. 1 (enlarged, annotated).

When added to Fortmann'748, Hartfelder's and Shei'099's latches would have maintained their bodies and open center portions. EX1003: ¶635. Thus, it

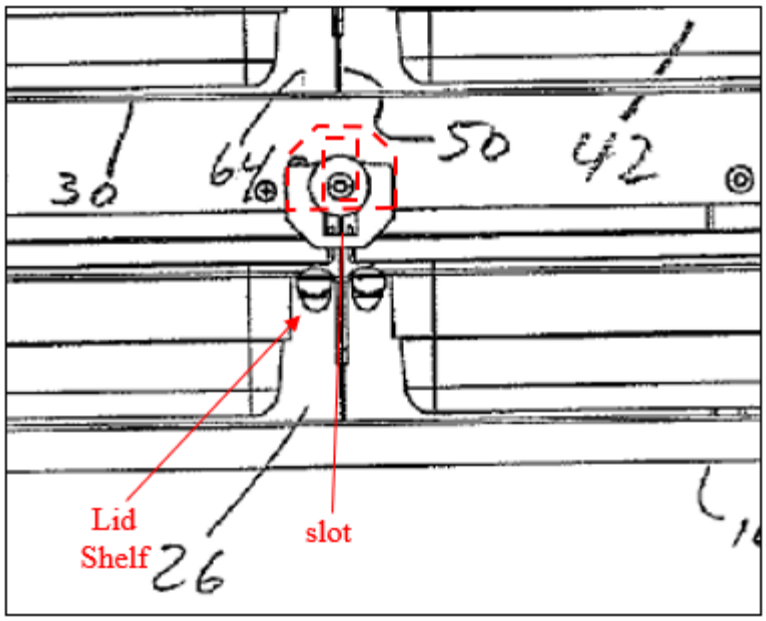
would have been obvious for the latch to have a body with an open center portion. EX1003: ¶635.



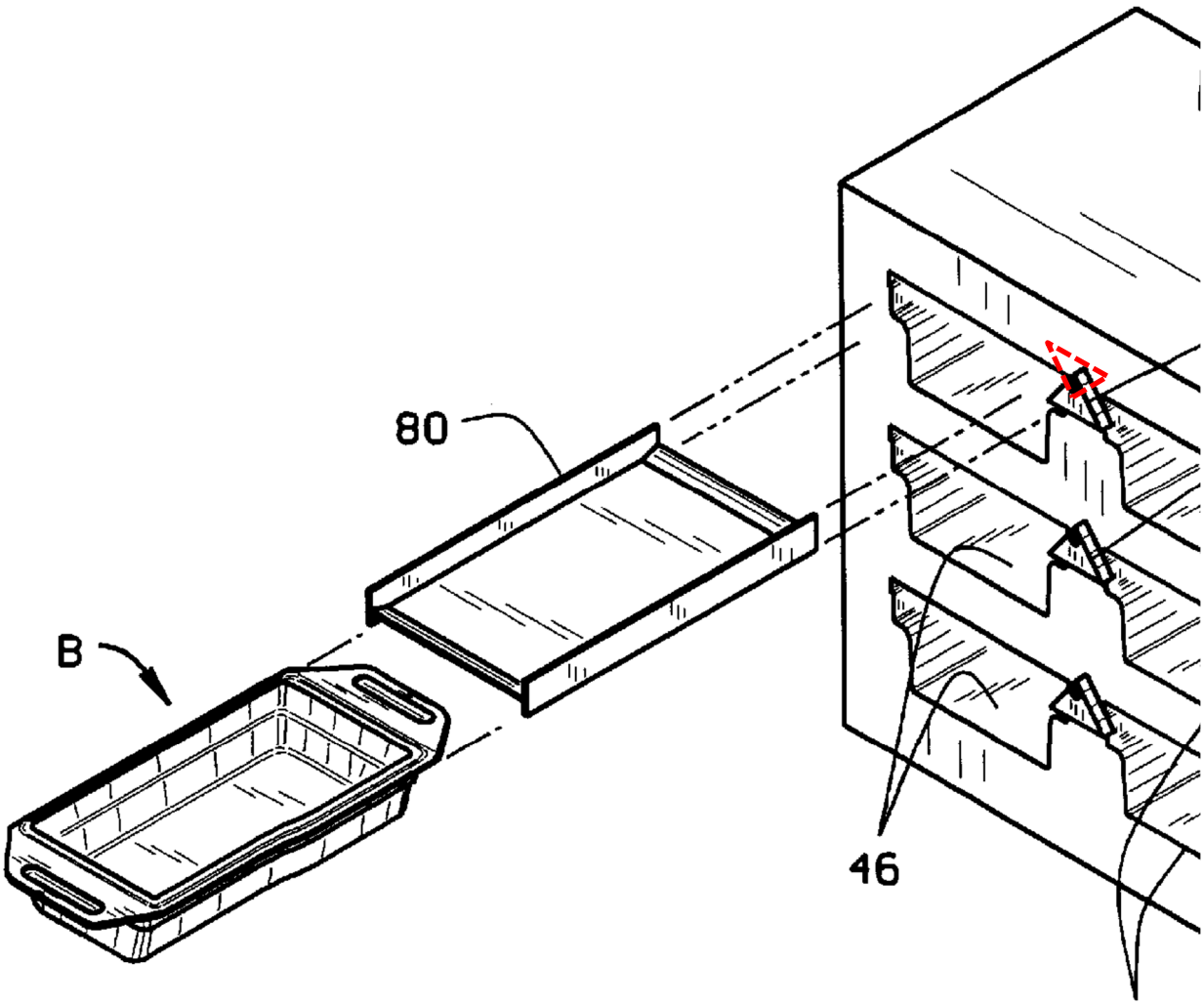
EX1010: Fig. 2 (modified, annotated).

6.a.3

Hartfelder's and Shei'099's latches (61)/(88) are rotatable relative to the lid shelves between locked and unlocked positions. EX1013: Fig. 2; EX1017: 6:9-32, Fig. 1; EX1016: ¶[0043], Fig. 1; EX1003: ¶¶636-639.

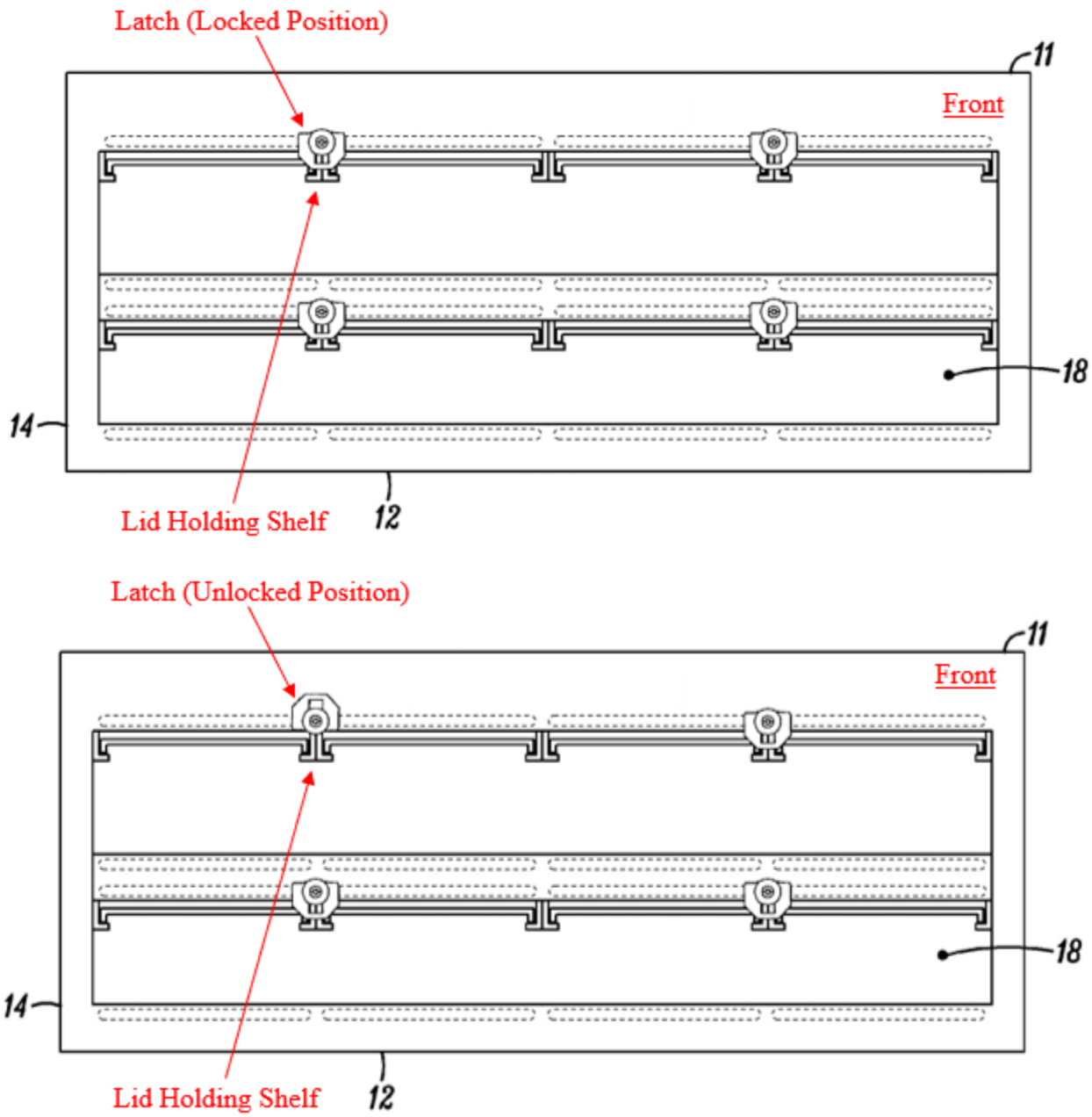


EX1013: Fig. 2 (enlarged, annotated).



EX1017: Fig. 1 (enlarged, annotated).

When added to Fortmann'748, Hartfelder's and Shei'099's latches would have maintained rotatability relative to a shelf between locked and unlocked positions. EX1003: ¶640. Thus, it would have been obvious for the latch to be rotatable relative to the shelf between locked and unlocked positions. EX1003: ¶¶640-641.

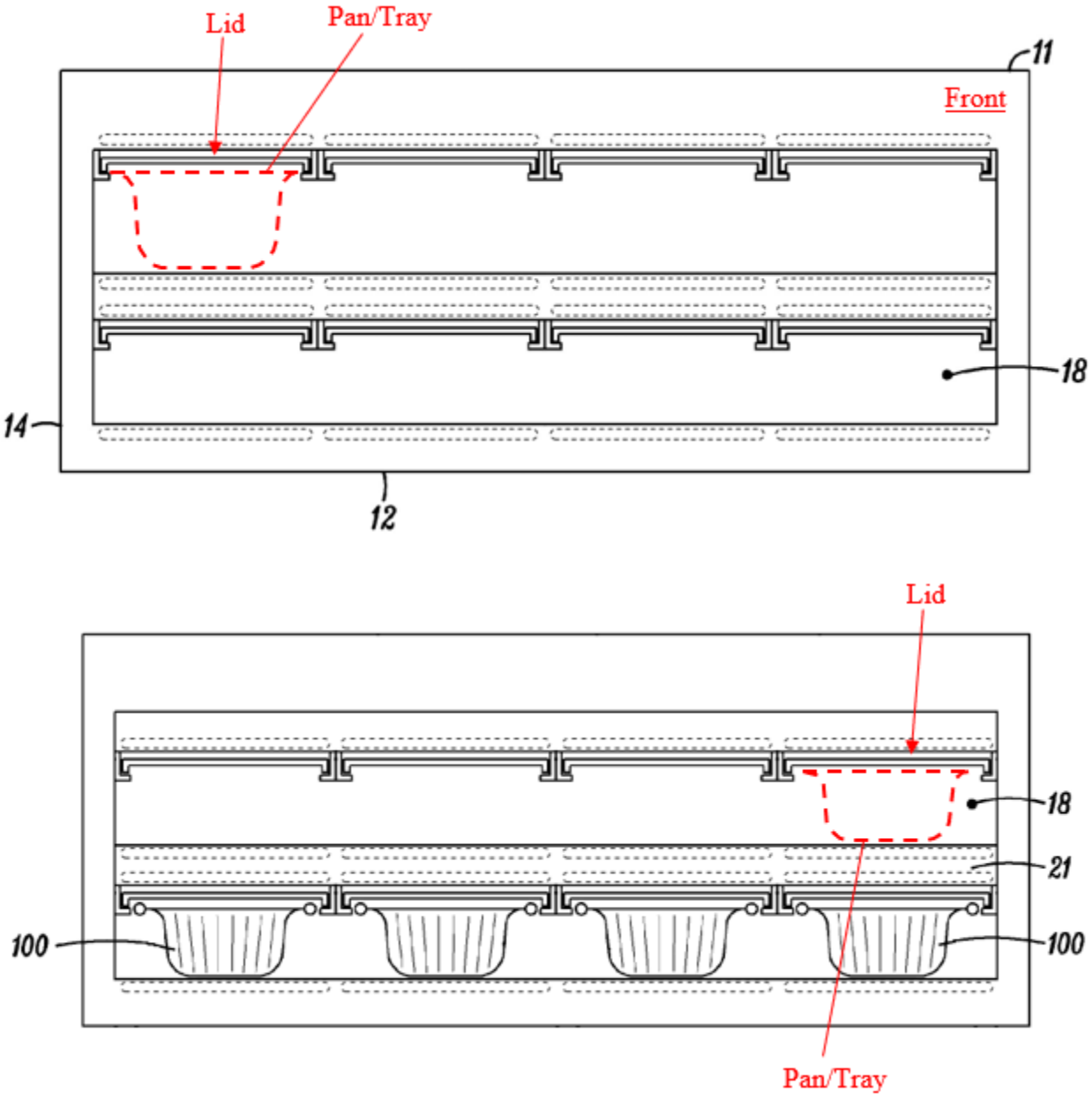


EX1010: Fig. 2 (modified, annotated).

G. Claim 7

Fortmann'748 explains its lids (40) are on the pans/trays (100). EX1010: ¶¶[0017]-[0018]; EX1003: ¶¶642-645.

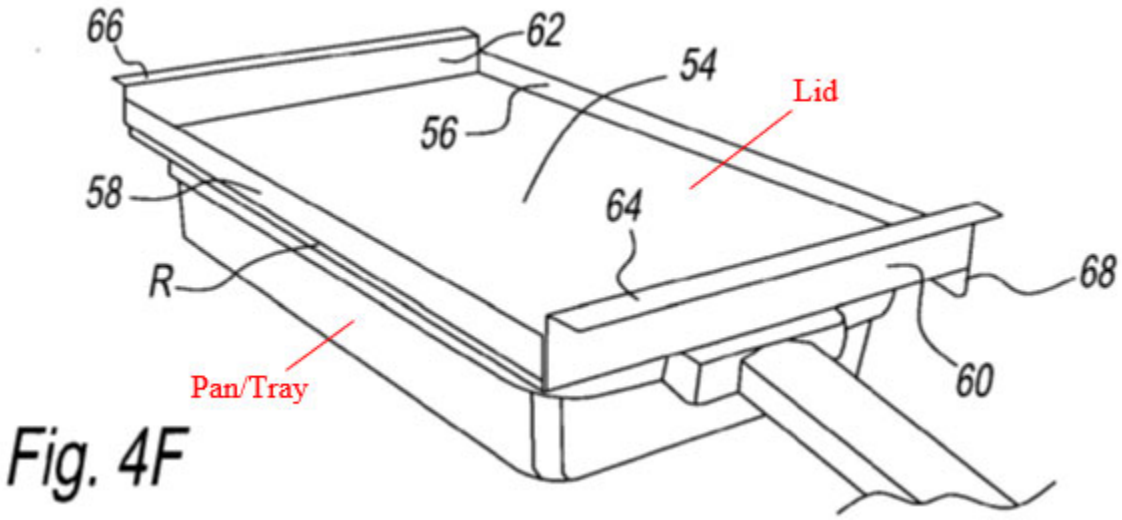
When modifying Fortmann'748 to have a discrete lid for each pan/bay per Section X(A)(4)), POSA would have maintained the ability for the discrete lids to rest on the pans/trays as taught by Fortmann'748. EX1010: ¶¶[0017]-[0018]; EX1003: ¶646.



EX1010: Figs. 2, 6 (modified, annotated).

Moreover, it would have been obvious for the discrete lids to be on the pans/trays. EX1003: ¶647.

Jones teaches that its lids (16) rest on the food pans/trays (14). EX1012: ¶[0070], ¶[0079], ¶[0081], ¶[0084]; EX1003: ¶648.



EX1012: Fig. 4F (annotated).

Fortmann'197 teaches that its lids (200) rest on the food pans/trays (400). EX1014: 6:27-32, 7:58-60; EX1003: ¶649.

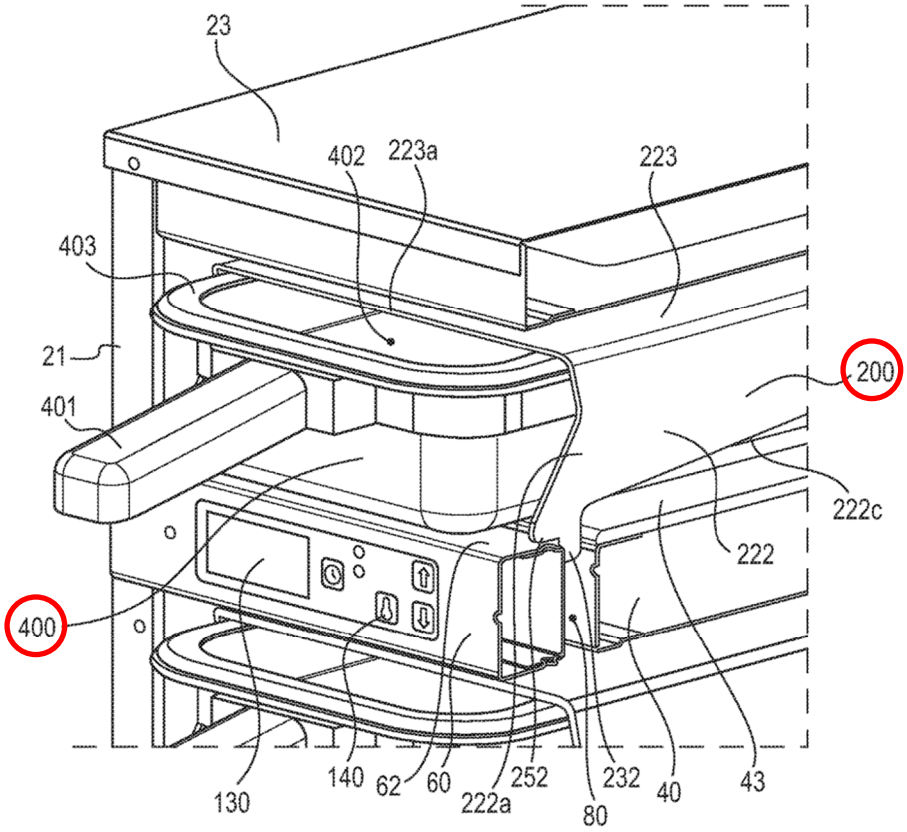
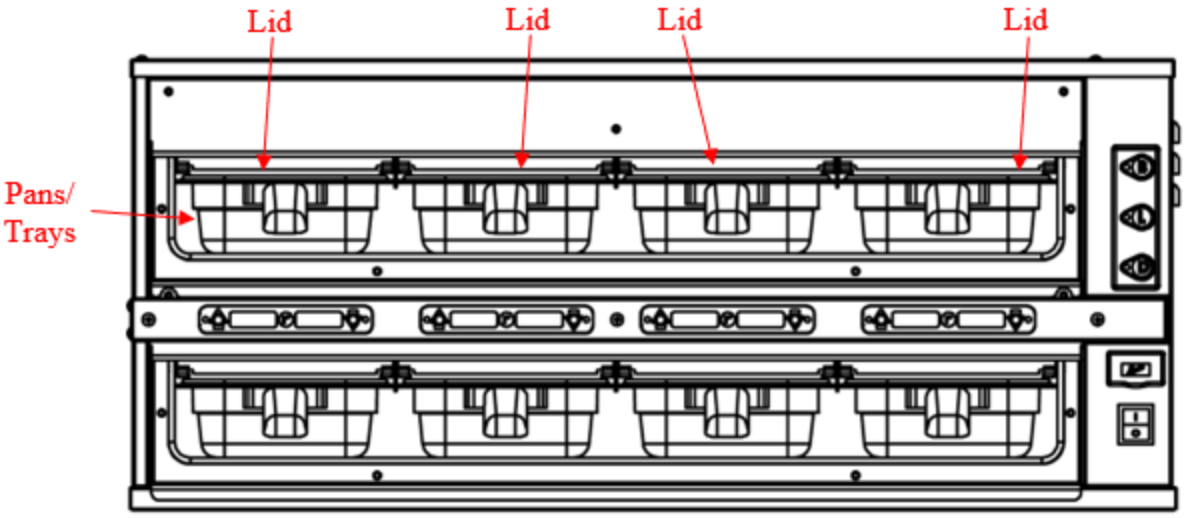
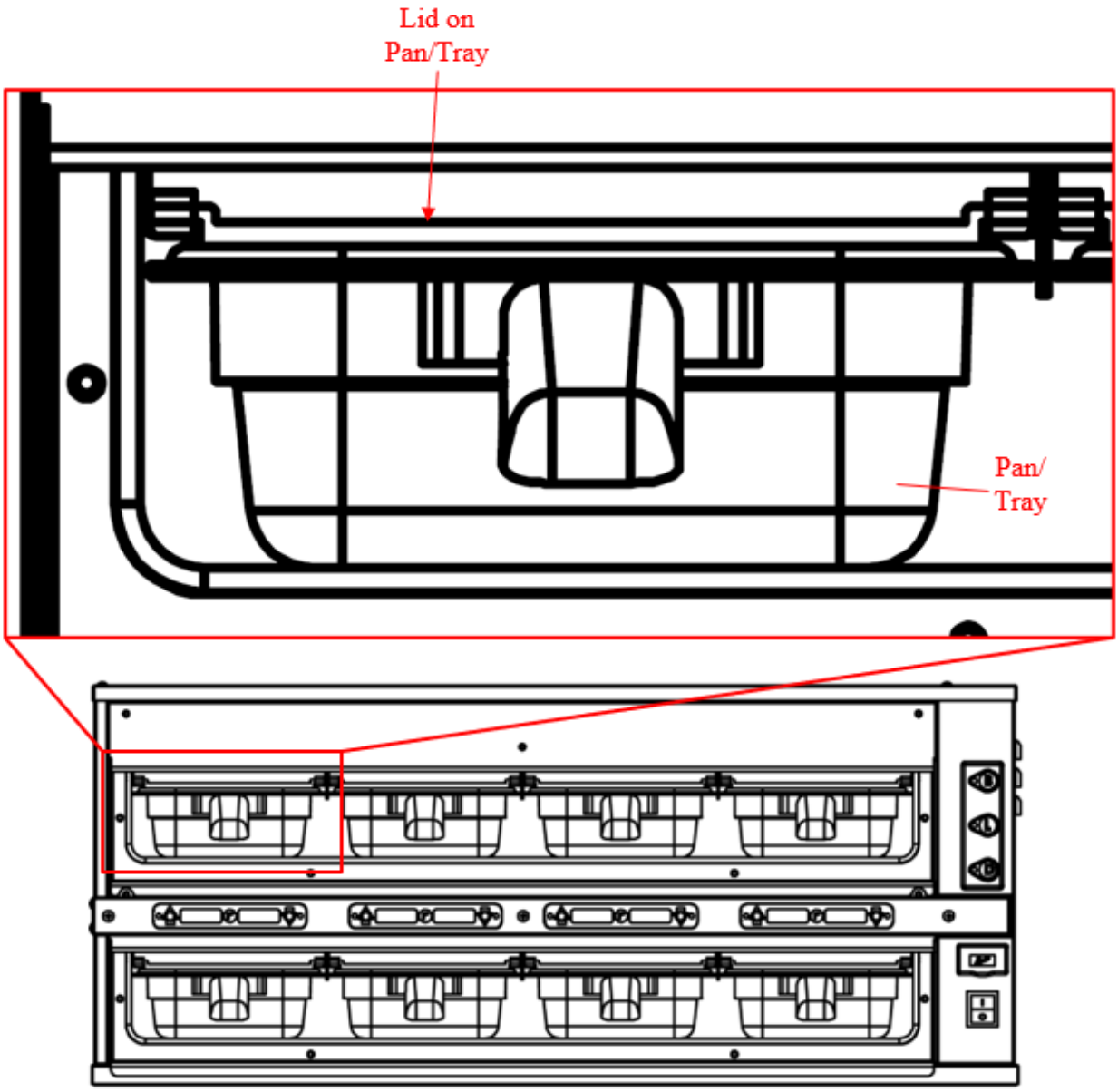


FIG. 4

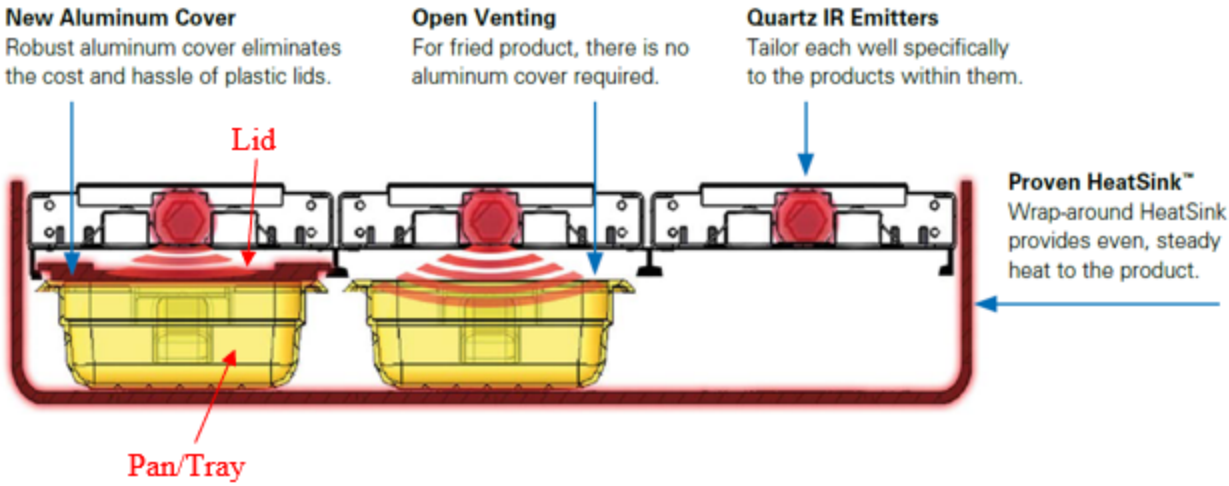
EX1014: Fig. 4 (annotated).

Likewise, the IRHS Documents teach lids resting on the food pans/trays. EX1005: 4, 8, 20-21; EX1007: 53, 56, 58; EX1003: ¶650.


Lid
Lid
Lid
Lid
Pans/
Trays



EX1005: 8 (annotated).



EX1007: 53 (annotated).

Per Jones, Fortmann'197, and/or IRHS Documents, it would have been obvious to have the lids rest on the pans/trays in Fortmann'748 to retain moisture in the pans (keeping the food moist and preventing food from drying out). EX1005: 16; EX1013: ¶[0006]; EX1014: 7:45-67; EX1017: 6:45-53; EX1003: ¶651.

This applies a known technique (lids resting on pans/trays) to improve a similar device (Fortmann'748) in the same way (covering the pans to retain moisture) with reasonable expectation of success (lids are able to rest on pans/trays and demonstrated suitability in the art). EX1010: Fig. 3, ¶[0018]; EX1012: ¶¶[0070], [0079], [0081], [0084]; EX1014: 6:27-32, 7:58-60; EX1005: 4, 8, 20-21; EX1007: 53, 56, 58; EX1003: ¶¶652-653.

This further renders obvious a lid on the pan/tray. EX1003: ¶654.

H. Claim 8

Veltrop teaches heaters in the form of electrically-resistive heater wires (67) such that it would have been obvious to modify Fortmann'748's first and second heaters to be electrically-resistive heater wires per Section X(A)(7). EX1022: ¶¶[0010], [0025]; EX1003: ¶¶655-658.

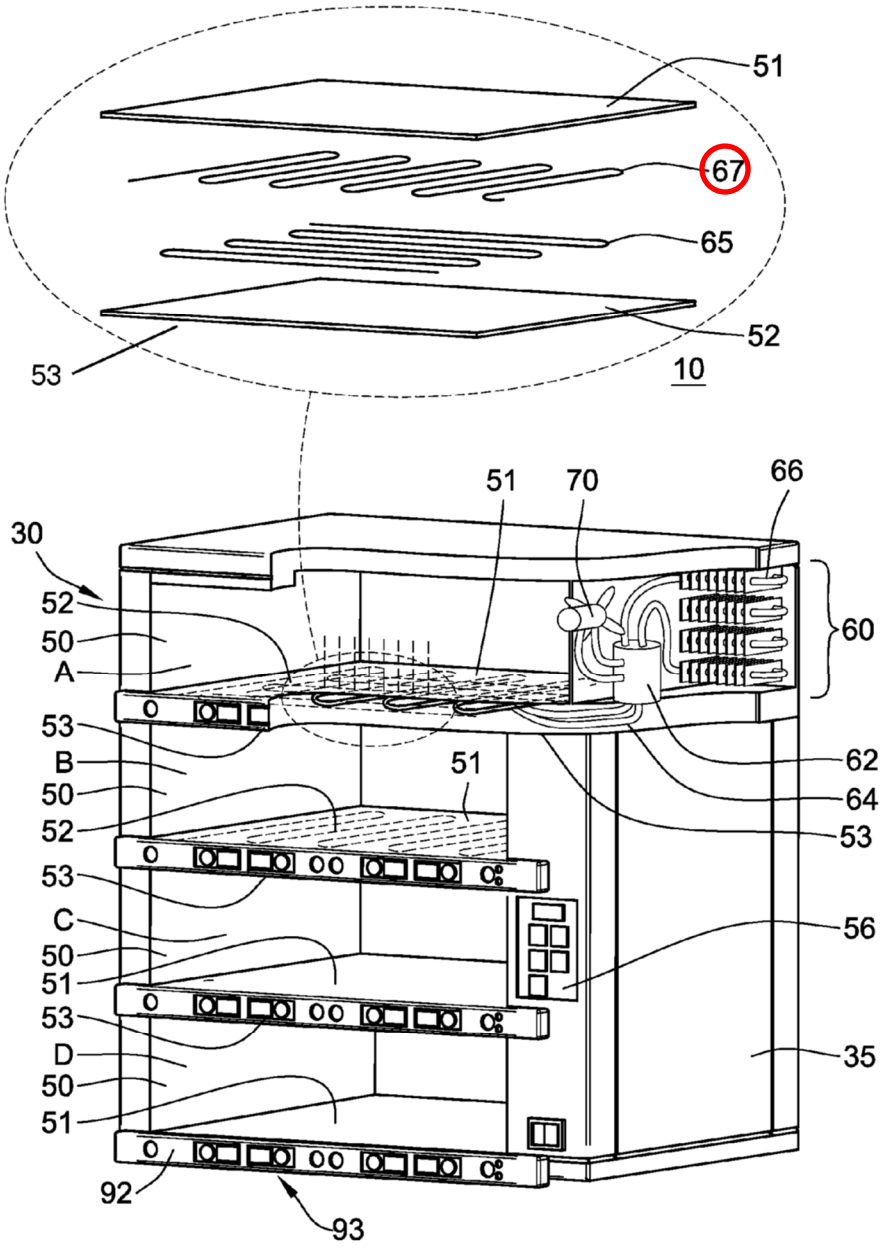


FIG. 2

EX1022: Fig. 2 (annotated).

I. Independent Claim 9

9.P

Fortmann'748's food holding bin/warming cabinet (10) has multiple compartments and zones of different temperatures. EX1010: ¶¶[0002], [0014], [0024], [0027]; EX1003: ¶¶659-660.

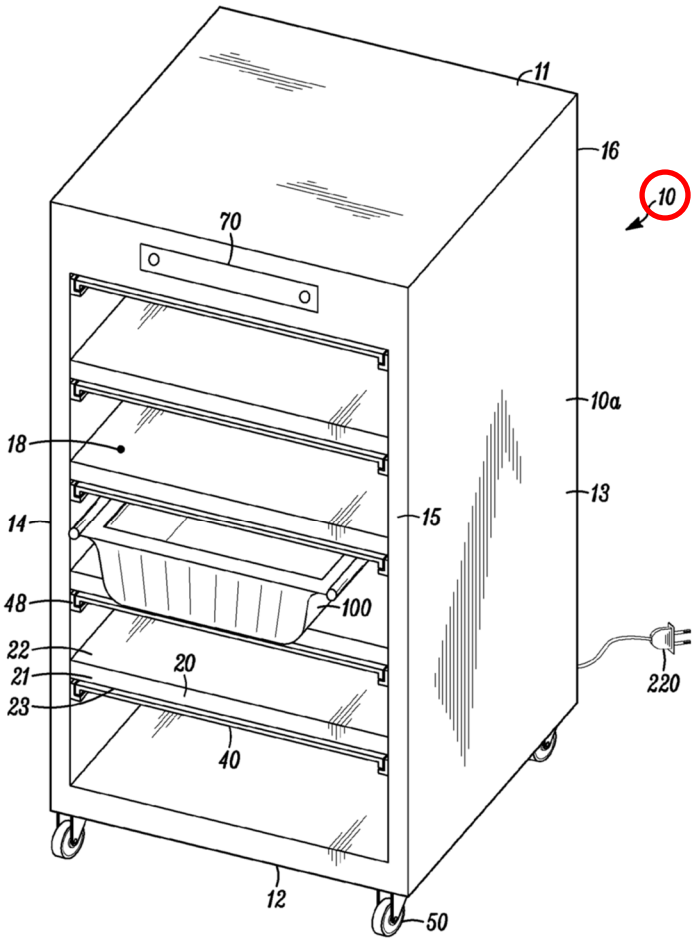


FIG. 1

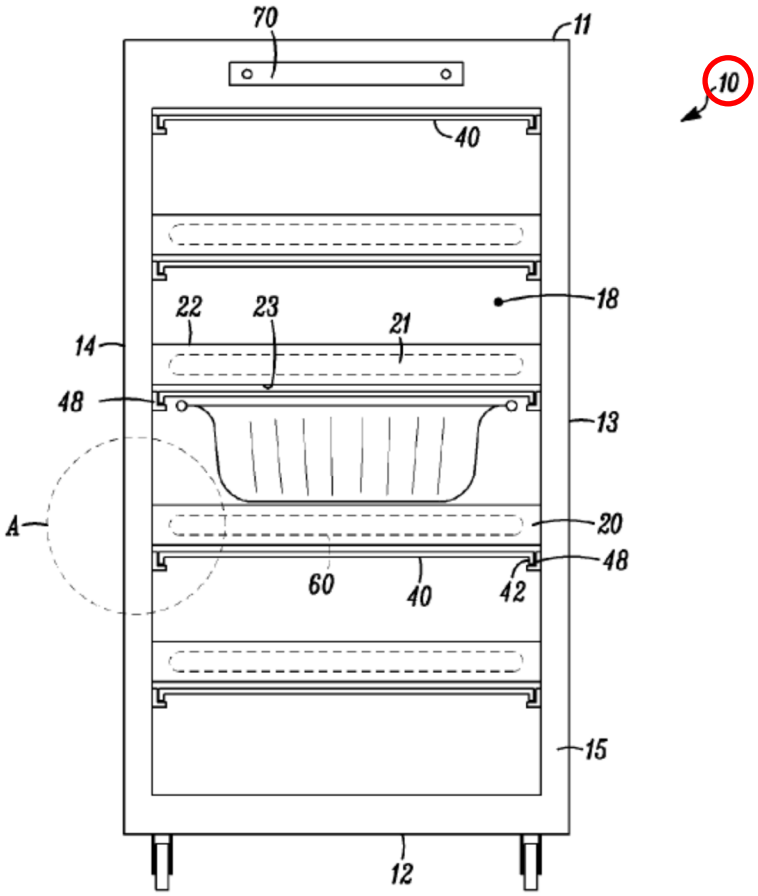
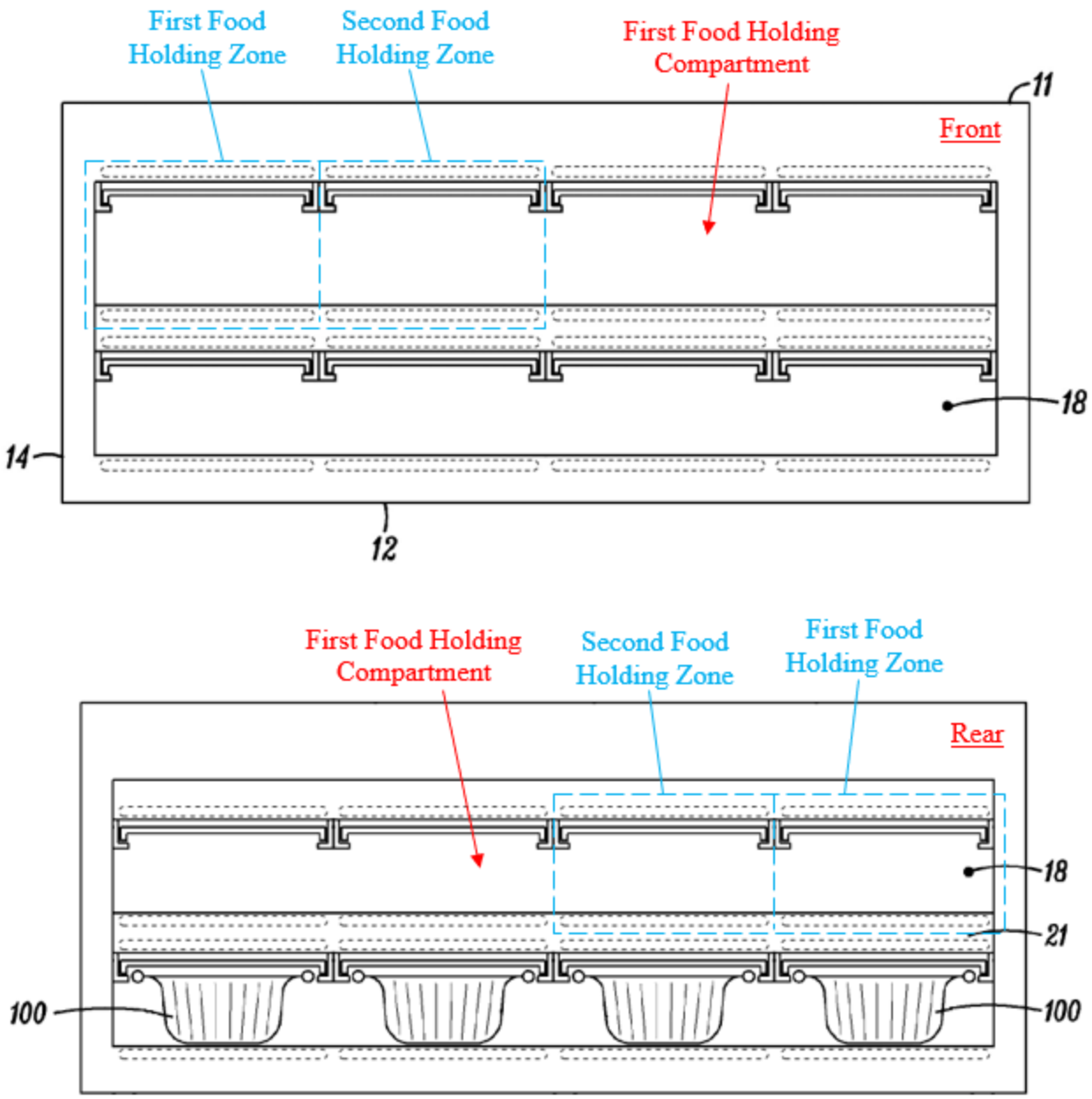


FIG. 2

EX1010: Figs. 1-2 (annotated).

Jones, Fortmann'197, and McMillan each disclose multiple zones within the same compartment at different temperatures such that it would have been obvious to modify Fortmann'748 to have multiple zones within the same compartment maintained at different temperatures, per Sections X(A)(2)-(3)). EX1010: ¶¶[0024], [0027]; EX1012: ¶¶[0096], [0130]; EX1014: 3:6-27, 8:63-9:19, 9:50-65; EX1005: 25, 26; EX1006: 1; EX1007:53; EX1019: 4:45-52; EX1003: ¶¶661-662.



EX1010: Figs. 2, 6 (modified, annotated).

9.a.1

Met per Sections X(B)(1.b.1), X(B)(1.d.1/1.e.1), X(B)(1.g.1). EX1003: ¶663.

9.a.2

Fortmann'748 has uninterrupted continuous planar bottom surfaces forming the bottoms of the compartments. EX1010: ¶[0015]; EX1003: ¶664.

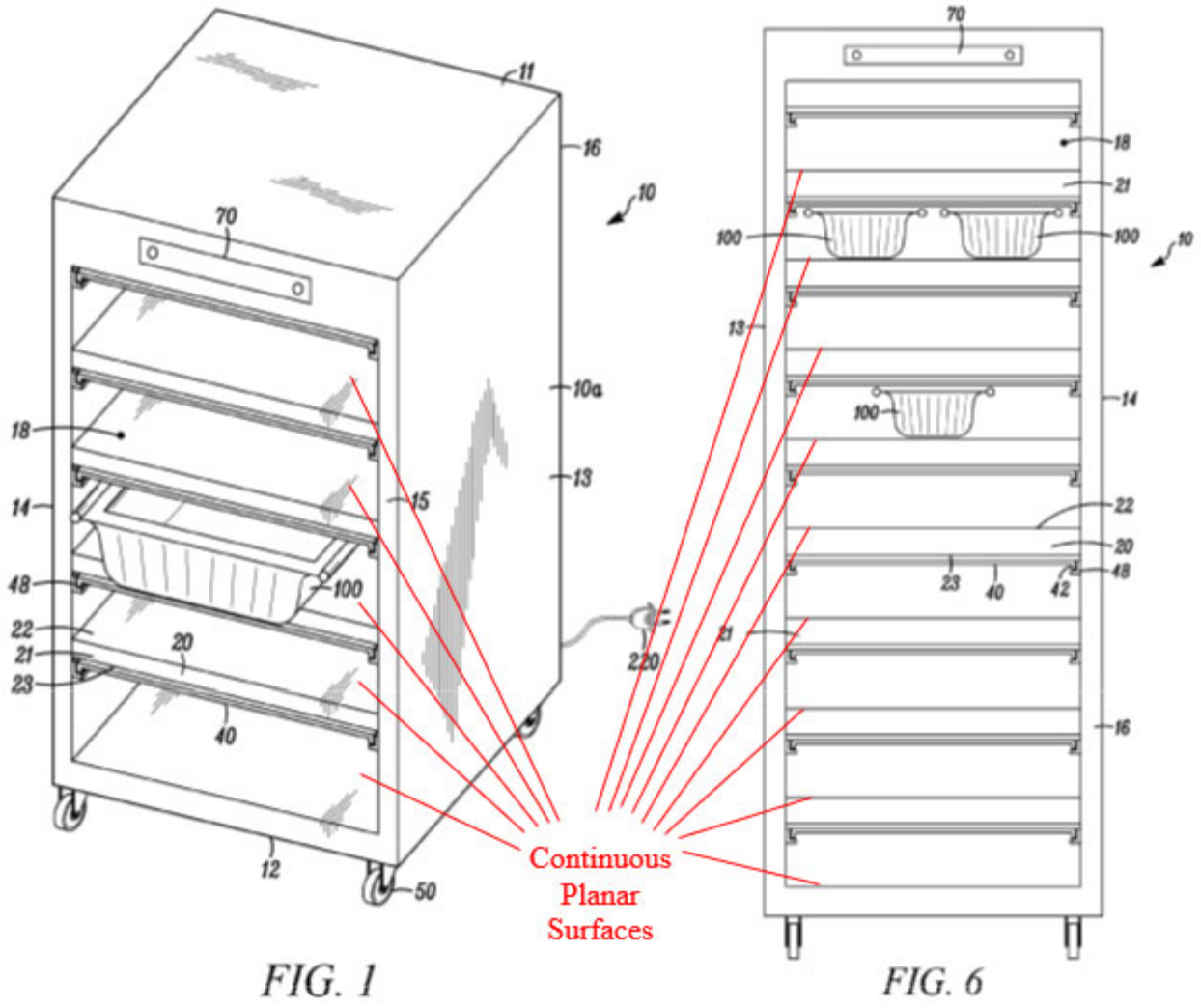


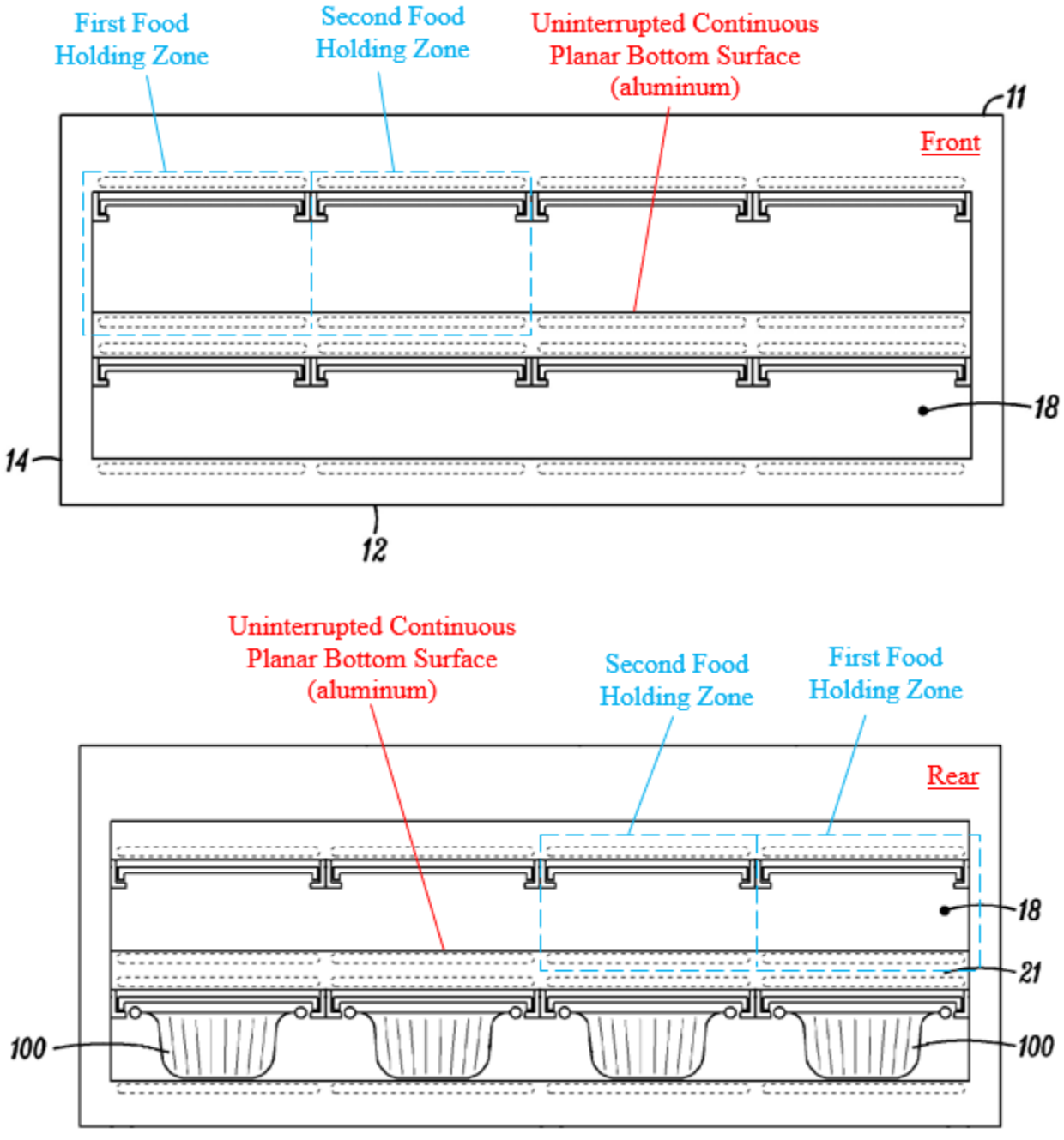
FIG. 1 FIG. 6

EX1010: Figs. 1, 6 (annotated).

Per Sections X(A)(2), X(B)(1.d.1/1.e.1), the first and second zones share the uninterrupted continuous planar bottom surface. EX1003: ¶665.

Veltrop and Shei'155 each teach the planar bottom surface (formed by upper plates/heatsinks) comprising aluminum such that it would have been obvious for

Fortmann'748's uninterrupted continuous planar bottom surface to comprise aluminum per Section X(A)(6). EX1022: ¶[0023]; EX1016: ¶[0039]; EX1003: ¶666.



EX1010: Figs. 2, 6 (modified, annotated).

9.a.3

The uninterrupted continuous planar surface extends completely to the chassis' (10a) front face. EX1010: Fig. 1; EX1003: ¶668. The chassis forms the food holding compartment. EX1010: ¶[0014], ¶[0015]; EX1010: Fig. 1; EX1003: ¶667.

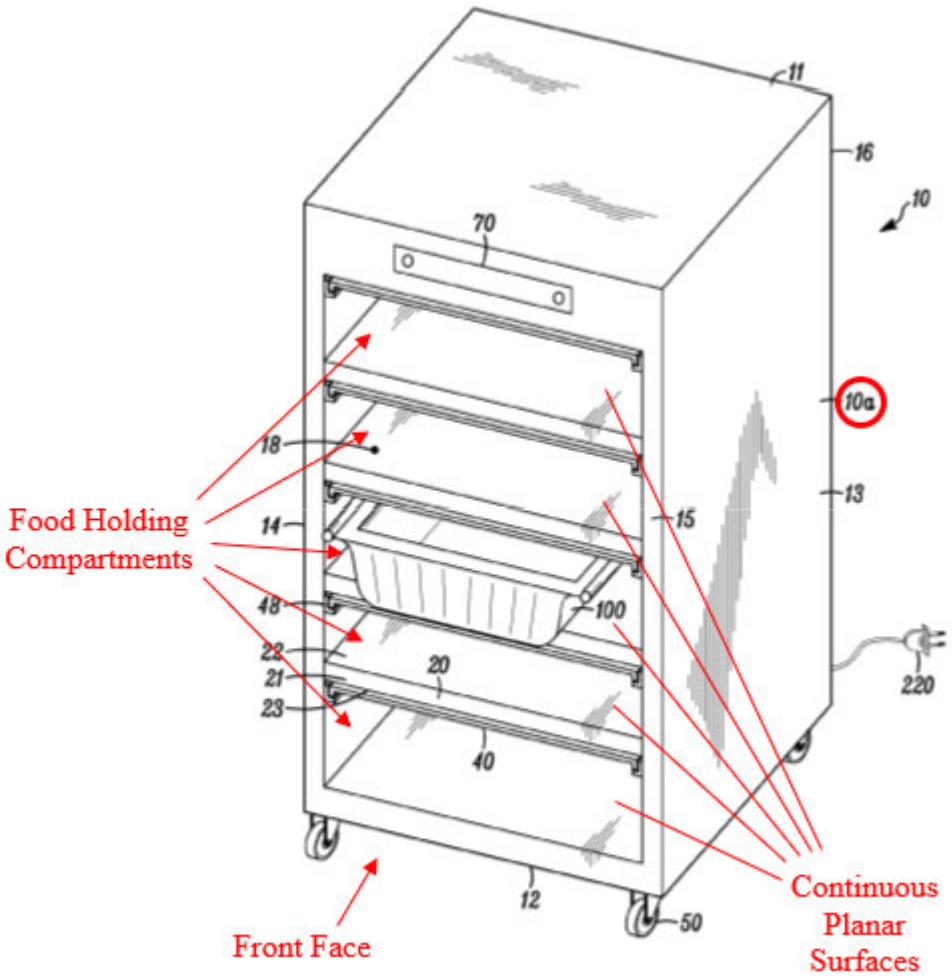
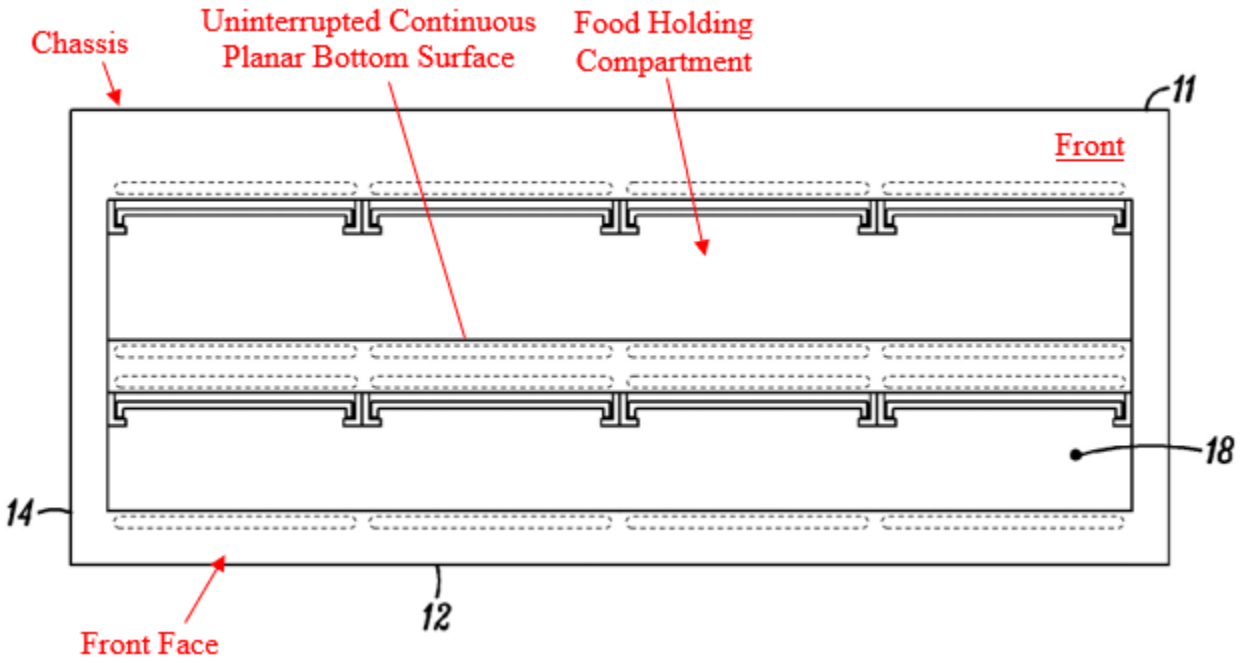


FIG. 1

EX1010: Fig. 1 (annotated).



EX1010: Fig. 2 (modified, annotated).

9.a.4

Met per Section X(B)(1.f). EX1003: ¶669.

9.a.5

Met per Sections X(B)(1.d.2/1.e.2), X(B)(1.h.1)-(1.h.2). EX1003: ¶670.

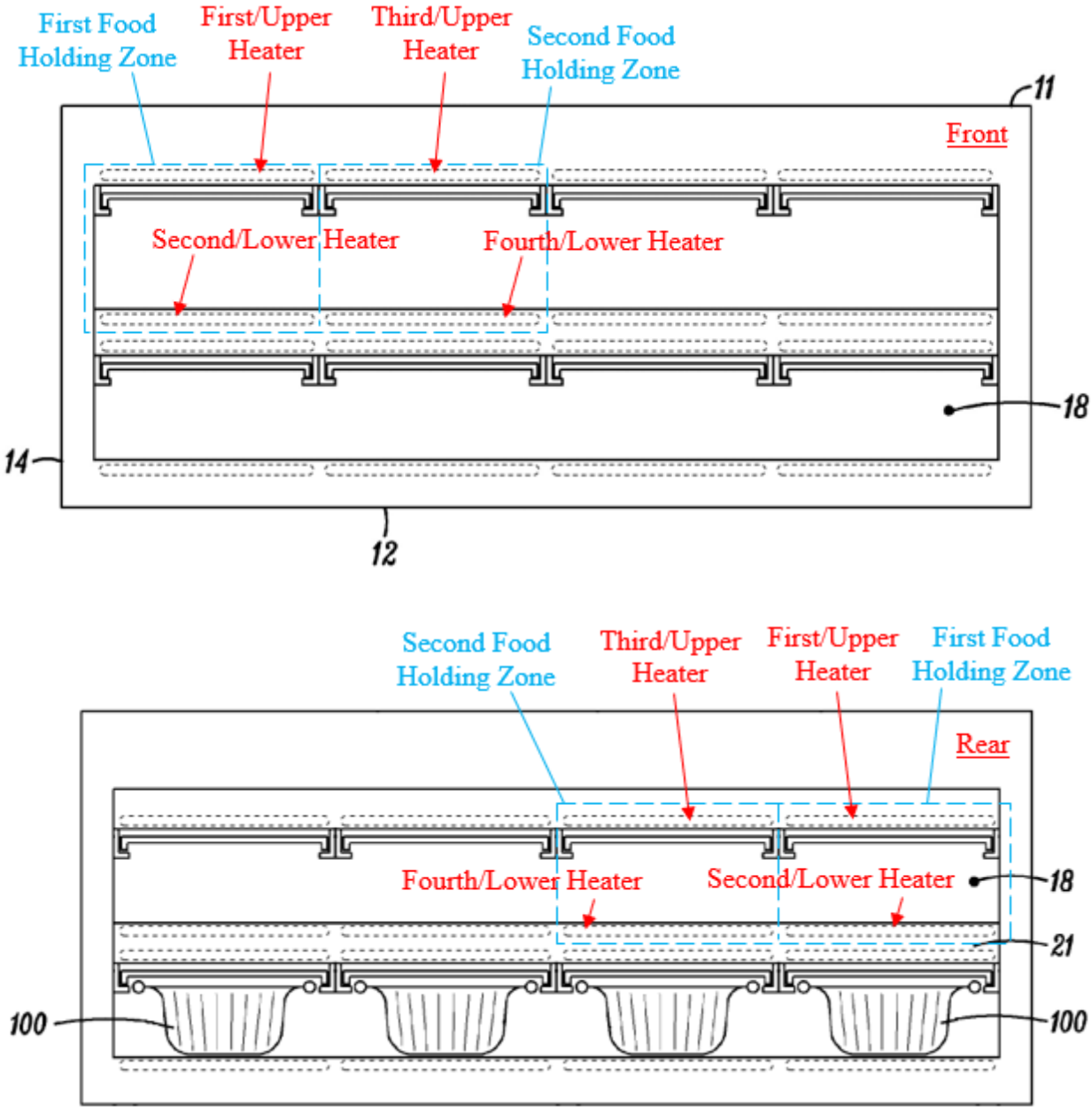
9.a.6

Met per Sections X(B)(1.d.2/1.e.2), X(B)(1.h.1)-(1.h.2). EX1003: ¶671.

The third radiant heating element heats radiantly from above as explained with respect to or for the same reasons as the first radiant heating element. Section X(B)(1.h.1); EX1003: ¶672. The fourth conductive heating element heats conductively from below as explained with respect to or for the same reasons as the second conductive heating element. Section X(B)(1.h.2); EX1003: ¶673.

9.b/9.c

Per Sections X(I)(9.a.5)-(9.a.6), it would have been obvious for the first and second zones to each have independently controllable upper and lower (first-fourth) heaters. Sections X(A)(2)-(3)). EX1003: ¶¶674-675, 690-691.



EX1010: Figs. 2, 6 (modified, annotated).

The upper heater and lower heater in each zone are independently controllable from one another and from the upper and lower heaters of the other zones. EX1003: ¶¶676-678. When duplicating Fortmann'748's heaters per Jones, Fortmann'197, and/or McMillan, POSA would have maintained the independent control of the heaters per Jones, Fortmann'197, IRHS Documents, and/or McMillan. Section X(A)(2)-(3)); EX1003: ¶677. Per Section X(A)(2)-(3), Fortmann'748's controller would independently operate the upper and lower heaters in one zone from one another and from the upper and lower heaters in other zones. EX1003: ¶679.

In addition, Fortmann'748's control system has "one [or] more sensors disposed in each heating zone," "an input device for the user to select the desired temperature [] within the heating zone" and a "controller [that] selectively provide[s] or secure[s] current to the one or more heaters 60 disposed within each zone to control the temperature of the zone" and "adjusts the heat output within each zone to achieve the desired temperature." EX1010: ¶[0027]; EX1003: ¶680. Thus, the first and second zones can each be set to their own temperature (first temperature, second temperature). EX1003: ¶680.

The prior art teaches each zone having its own temperature. EX1003: ¶681. For example, Jones teaches customized temperature settings for each food type, and the temperature in the tray locations (zones) can be different based on the

temperature presets for the particular types of food held in each location. EX1012: ¶[0098] ("assigns the holding parameters, top and bottom temperature … to the product name, so wherever the product name is displayed, the holding parameters follow", and "temperature settings for the top and bottom heater that are set to the product name and no matter how many locations have the same product name displayed [1 location up to all locations]"), Fig. 19 ("Select Product Name to be held in Display Location. Each display may have the same Product Name, or all different Product Names … Heating system maintains Top and Bottom Preset Temps for Product Names"); EX1003: ¶683.

The IRHS Documents teach to customize temperature settings for each holding zone based on the different food types being held. EX1006: 1 ("[c]ustom heat settings for food product"); EX1005: 4 ("[t]his new technology allows you to precisely control the environment in each pan, allowing customized settings for each food product"), 16 ("each food product has a tailored HeatSink temperature and InfraRed pulse rate"); EX1007: 51 ("each food product has tailored settings to control the thermal path of the food, leading to optimal quality, consistency and extended hold"), 53 ("[p]recise holding for each product in an optimized environment tailored to that product"); EX1003: ¶684. The temperature settings for each pan location/zone are independent of the other food product types being held in the other pan locations/zones. EX1005: 25 ("1/2 ROW HEAT (2 Wells)");

EX1006: 1 ("independent well flexibility"); EX1007: 53 ("[t]otal well independence allows freedom in product placement in the IRHS" and "[t]ailor each well specifically to the products within them"); EX1003: ¶684.



EX1007: 12.

Likewise, McMillan teaches heating different zones to different temperatures. EX1019: 4:45-52 ("each of the heater plates 27a, 27b may include customizable heating elements arranged such that different portions of the passageway 16a may be set to different temperatures. In this way, the temperature of each passageway may be maintained according to the number and types of food product to be stored. For example, the passageway 16 a may be set to store four different types of food products at four different temperatures"); EX1003: ¶685.

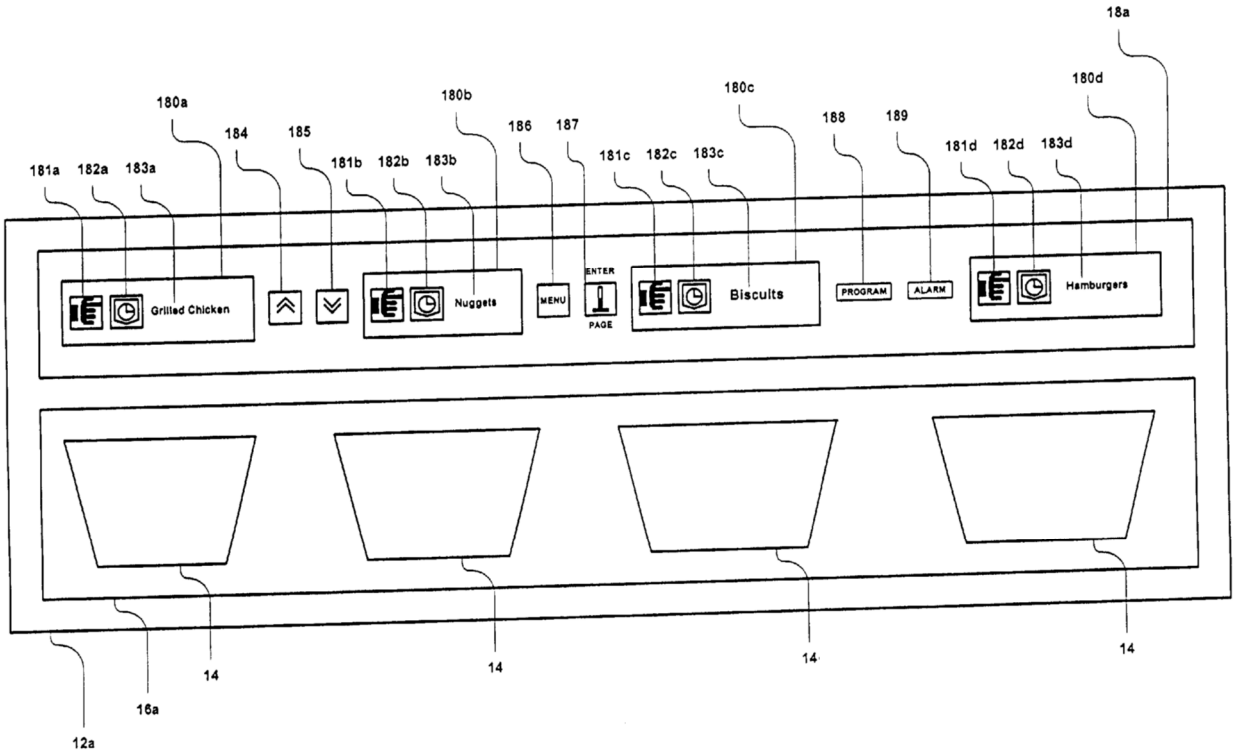


Fig. 5a

EX1019: Fig. 5a.

Also, Fortmann'748 teaches heating different zones to different temperatures. EX1010: ¶[0024] ("[i]n embodiments with multiple heat zones, the two or more infinite switches 210 may be calibrated to establish two or more heat zones of differing temperatures within the warming volume, to allow food products that require different warming temperatures to be simultaneously disposed within the cart"); EX1003: ¶682.

Per Jones, Fortmann'748, IRHS Documents, and/or McMillan, it would have been obvious to independently set the temperature (first temperature, second temperature) of each zone (first and second zones) by operating the upper and

lower (first-fourth) heaters associated with the respective zone to accommodate customized heat settings for different food types received in each zone (the first and second zones receive respective different first and second food types) and to increase holding capacity for different food types to meet customer demands. EX1028: 30, 39; EX1019: 1:17-45; EX1010: ¶[0024]; EX1006: 1; EX1003: ¶686.

This uses a known technique (heating zones to different temperatures) to improve a similar device (Fortmann'748) in the same way (independently operate the heaters of each zone to heat the zones to different temperatures) with reasonable expectation of success (heaters of the Fortmann'748 modified cabinet are independently controllable, Fortmann'748 has a zone-capable control system). Section X(A)(2)-(3); EX1003: ¶¶687-688.

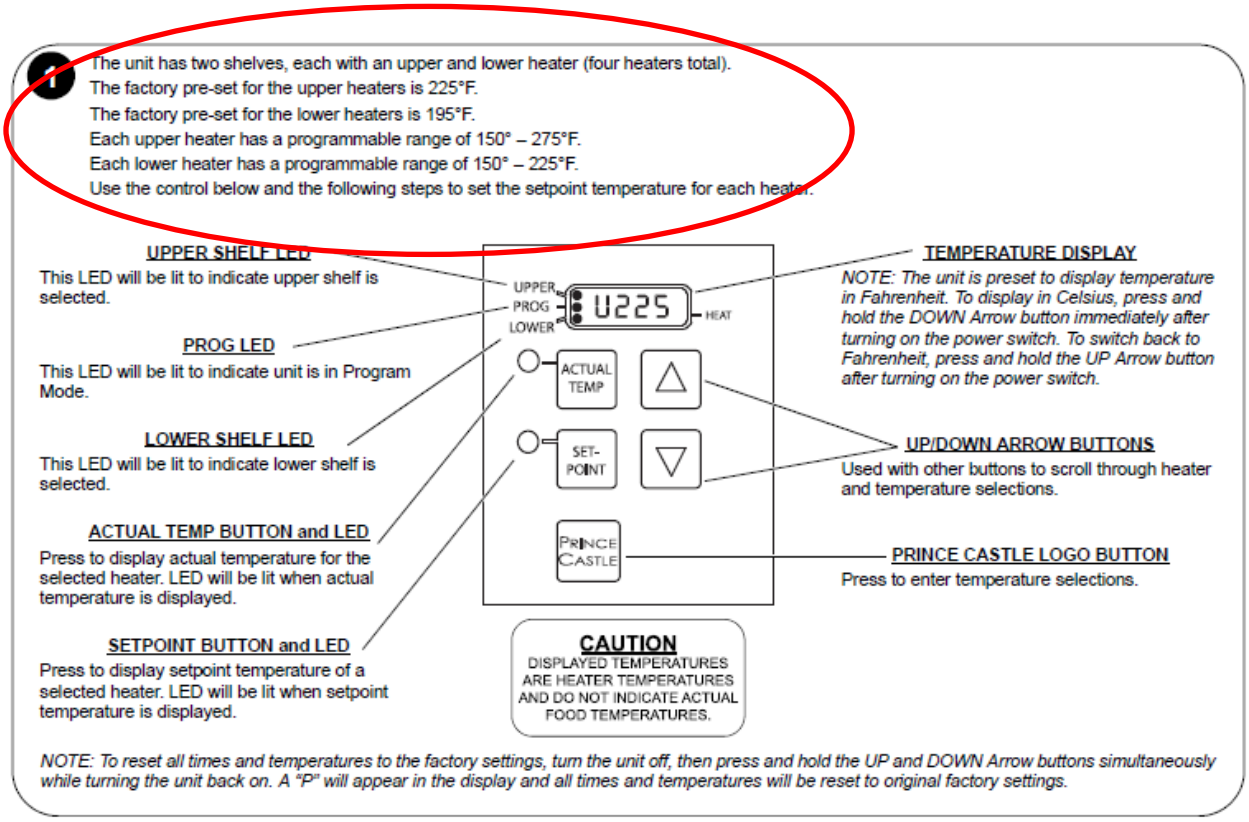
Thus, it would have been obvious for Fortmann'748's controller to independently set first and second temperatures in the respective first and second zones—based on the specific food type temperature settings assigned to the zones—by operating the independently controllable upper (first/third) heater and operating the independently controllable lower (second/fourth) heater of each zone. EX1003: ¶¶689, 692.

9.d

Met per Section X(B)(1.g.2). EX1003: ¶¶693-694.

XI. GROUND 8: Claims 4 and 10 Would Have Been Obvious Over Fortmann'748 in view of the IRHS Documents, Jones, Fortmann'197, McMillan, Hartfelder, Shei'099, Veltrop, Shei'155, and Prince Castle

Prince Castle teaches default presets 225°F for upper heaters (275°F maximum) and 195°F for lower heaters (225°F maximum). EX1009: 22, 40; EX1003: ¶¶695-700.



EX1009: 40 (annotated).

Per Prince Castle, it would have been obvious for each upper (first) heater of Fortmann'748's modified cabinet to provide (be adapted to output) more heat energy than the respective lower (second) heater (higher setpoint temperature, higher maximum temperature setting, and/or higher wattage rating). EX1003:

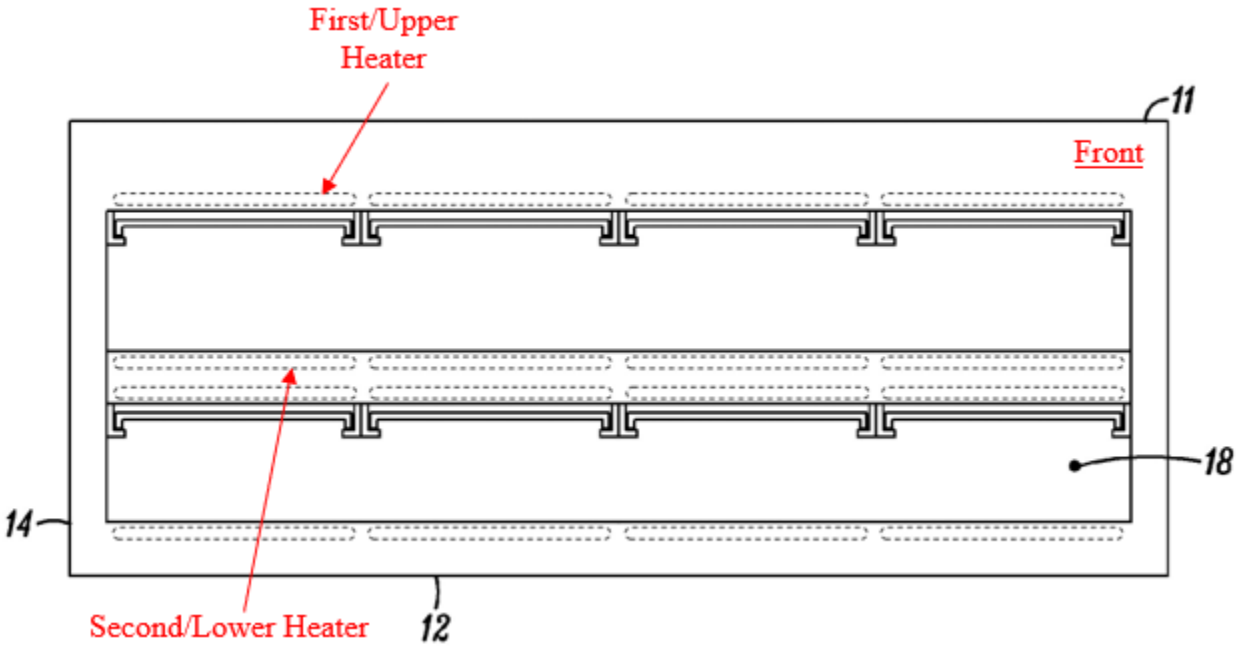
¶701. Moreover, as the upper and lower heaters of each zone are independently controllable and it was taught to customize upper and lower heating per food product (Section X(A)(3)), adapting (e.g., setting) upper heating elements to output more heat energy than lower heating elements is an obvious design choice from a set of finite solutions (upper heat greater than, equal to, or less than lower heat). *Uber Techs., Inc. v. X One, Inc.*, 957 F.3d 1334, 1341 (Fed. Cir. 2020) ("[POSA] would have faced a simple design choice between [known, finite solutions]"); EX1003: ¶702. Prince Castle teaches upper heaters outputting more heat energy was well known. EX1009: 22, 40; EX1003: ¶702.

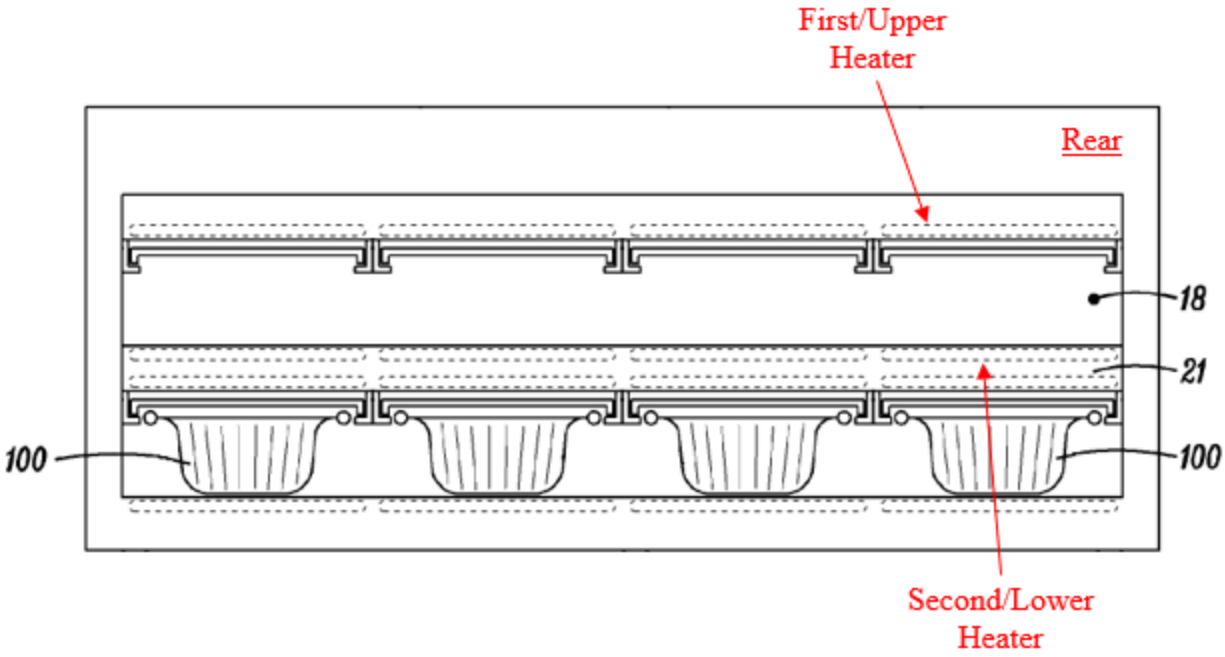
POSA would adapt the upper heaters to output more heat energy than respective lower heaters to overcome distance between upper heaters and food, counteract evaporative cooling, maintain food surface temperature and texture, compensate for upper radiant heat radiating in all directions, and/or "to re-crisp breaded (fried) food, to melt cheese …, to brown [] food products" with the upper heaters. EX1027: ¶[0021]; EX1006: 1; EX1003: ¶¶703-708. This helps "provide optimum environment" and "minimize temperature distribution from top to bottom." EX1006: 1; EX1007: 10, 51; EX1003: ¶703.

This applies a known technique (upper heaters outputting more heat than lower heaters) to improve a similar device (Fortmann'748's cabinet) in the same way (higher setpoint temperatures for upper heaters than lower heaters) with

reasonable expectation of success (heaters operate independently). Section X(A)(3); EX1003: ¶¶709-710.

This renders obvious the first heater providing (e.g., being adapted to output) more heat energy than the second heater, via having a higher setpoint temperature, higher maximum temperature setting, and/or higher wattage rating. EX1003: ¶¶711-714.





EX1010: Figs. 2, 6 (modified, annotated).

XII. MANDATORY NOTICES UNDER 37 C.F.R. §42.8

A. Real Parties-In-Interest under 37 C.F.R. §42.8(b)(1)

Duke Manufacturing Co. is the real party-in-interest for this Petition.

B. Related Matters under 37 C.F.R. §42.8(b)(2)

The ’322 Patent is involved in civil action *Marmon Foodservice Technologies, Inc. v. Duke Manufacturing Co.*, 4:25-cv-01491, currently pending in the United States District Court for the Eastern District of Missouri.

The ’322 Patent recites very similar subject matter to the claims of U.S. Patent No. 10,852,002, which is currently subject of an Inter Partes Review (IPR2026-00406).

U.S. Patent Nos. 10,492,641 and 10,841,981 claim priority to the ’322 Patent. U.S. Patent Nos. 10,492,641 and 10,841,981 are each currently the subject of an Inter Partes Review (IPR2026-00480 and IPR2026-00479).

The ’322 Patent recites very similar subject matter to the claims of U.S. Patent Nos. 11,771,264, 10,512,363, and 9,976,750, which will each soon be the subject of an Inter Partes Review (IPR2026-00482, IPR2026-00483, and IPR2026-00484).

C. Designation of Lead and Back-Up Counsel under 37 C.F.R. §42.8(b)(3)

Pursuant to 37 C.F.R. §§42.8(b)(3) and 42.10(a), Duke Manufacturing Co. provides the following designation of counsel:

LEAD COUNSEL	BACK-UP COUNSEL
William R. Everding, Reg. No. 67,087 STINSON LLP 7700 Forsyth Boulevard, Suite 1100 St. Louis, MO 63105 T: 314-345-7016; F: 314-863-9388 Email: william.everding@stinson.com	Steven Levitt, Reg. No. 76,498 STINSON LLP 7700 Forsyth Boulevard, Suite 1100 St. Louis, MO 63105 T: 314-345-7016; F: 314-863-9388 Email: steven.levitt@stinson.com
BACK-UP COUNSEL	**BACK-UP COUNSEL**
John R. Schroeder, Reg. No. 63,573 STINSON LLP 7700 Forsyth Boulevard, Suite 1100 St. Louis, MO 63105 T: 314-345-7023; F: 314-863-9388 Email: john.schroeder@stinson.com	Phil Hof, Reg. No. 72,606 STINSON LLP 7700 Forsyth Boulevard, Suite 1100 St. Louis, MO 63105 T: 314-345-7620; F: 314-863-9388 Email: phil.hof@stinson.com

D. Service Information (37 C.F.R. §42.8(b)(4)):

Duke Manufacturing Co. consents to service by email to lead and backup counsel, using the email addresses above.

E. Payment Information Under 37 C.F.R. §§42.15(a) and 42.103(a)

The *inter partes* review fees have been submitted herewith pursuant to 37 C.F.R. §§42.103(a) and 42.15(a).

XIII. GROUNDS FOR STANDING

The ’322 Patent is eligible for *inter partes* review. Petitioner is not barred or estopped from petitioning for *inter partes* review and was not served with a complaint alleging infringement of the ’322 Patent more than one year before the filing of this Petition.

XIV. CONCLUSION

For these reasons, *inter partes* review of the ’322 Patent is requested.

Dated: September 30, 2026

Respectfully submitted,
/William R. Everding/
William R. Everding, Reg. No. 67,087
Counsel for Petitioner

CERTIFICATE OF SERVICE

Under 37 C.F.R. § 42.6(e), the undersigned certifies that on September 30, 2026, a copy of the PETITION FOR INTER-PARTES REVIEW OF U.S. PATENT NO. 9,980,322 and associated exhibits were served via FedEx pursuant to 37 C.F.R. § 42.105 on the following attorneys of record for Patent Owner:

26753 – Andrus Intellectual Property Law, LLP
Attn: Christopher Liro & Aaron Olegniczak
790 North Water Street
Suite 2200
Milwaukee, WI 53202
Patent Owner's Correspondence Address of Record for U.S. Patent 9,980,322

THOMPSON COBURN LLP
Attn: Alan H. Norman, Matthew Braunel, & Alex Widner
One US Bank Plaza
St. Louis, MO 63101
Additional Address Known to Petitioner as Likely to Effect Service

By: /*William R. Everding*/
William R. Everding
Reg. No. 67,087
Lead Counsel for Petitioner

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME REQUIREMENTS UNDER 37 C.F.R. §42.24

Under 37 C.F.R. § 42.24(d), the undersigned certifies that this Petition for *Inter Partes* Review complies with the type-volume limitation of 37 C.F.R. § 42.24(a)(1) because it contains 13,476 words, excluding the parts of the Petition exempted by 37 C.F.R. §42.24(a).

This paper also complies with the typeface requirements of 37 C.F.R. § 42.6(a)(2)(ii) and the type style requirements of 37 C.F.R. § 42.6(a)(2)(iii) and (iv).

/William R. Everding/
William R. Everding, Reg. No. 67,087
Lead Counsel for Petitioner

Claims Appendix – U.S. Patent No. 9,980,322

The following claim listing shows the claims of the ’322 Patent with reference identifiers (“Ref. ID”) corresponding to claim limitations.

Ref. ID	Claim Limitation
1.P	A multi-zone food holding bin comprising:
1.a	a chassis having a front face and an opposing rear face;
1.b.1	a first food holding compartment within the chassis,
1.b.2	the first food holding compartment having at least a first opening, the first opening being open, uncovered and located at the front face of the chassis, the first opening being configured to allow food items to be placed into and removed from the first food holding compartment;
1.c.1	a continuous and planar surface forming a bottom of the first food holding compartment,
1.c.2	the continuous and planar surface extending completely to the front face of the chassis,
1.c.3	the continuous and planar surface comprising Aluminum;
1.d.1	a first food holding zone formed in the first food holding compartment,
1.d.2	the first food holding zone having an independently controllable radiant first heating element disposed at a top portion of the first food holding compartment, and an independently controllable conductive second heating element disposed at a bottom portion of the first food holding compartment;
1.e.1	a second food holding zone formed in the first food holding compartment,
1.e.2	the second food holding zone having an independently controllable radiant third heating element disposed at the top

Ref. ID	Claim Limitation
	portion of the first food holding compartment and an independently controllable conductive fourth heating element disposed at the bottom portion of the first food holding compartment; and
1.f	a food holding tray disposed in the first food holding compartment, the food holding tray resting on the continuous and planar surface,
1.g.1	wherein the first food holding zone and the second food holding zone are adjacent one another across the continuous planar surface and
1.g.2	the first food holding zone is configured to maintain a first temperature and the second food holding zone is configured to maintain a second temperature, the first temperature and the second temperature capable of being different than one another, and
1.h.1	wherein the first independently controllable heating element heats the food holding tray radiantly from above and
1.h.2	the second independently controllable heating element heats the food holding tray conductively from below.
2.a.1	The food holding bin of claim 1, further comprising: a second food holding compartment disposed below the first food holding compartment within the chassis,
2.a.2	the second food holding compartment having at least a first opening, the first opening being open, uncovered and located at the front face of the chassis, the first opening being configured to allow food items to be placed into and removed from the food holding compartment; and
2.b.1	a shelf located between the first and second food holding compartments, the shelf comprising a first side and a second side, the first side facing into the first food holding compartment,

Ref. ID	Claim Limitation
	the second side facing into the second food holding compartment,
2.b.2	the second and fourth heating elements being disposed in the shelf and in thermal communication with the first side,
2.b.3	the second and fourth heating elements being capable of providing different amounts of heat energy into the first and second food holding zones of the first food holding compartment; and
2.c	a controller operatively coupled to the second heating element and to the fourth heating element, the controller being configured to independently operate the second heating element and the fourth heating element.
3	The food holding bin of claim 1, wherein the first and second food holding compartments each have a second opening, uncovered and located at the rear face of the chassis.
4	The food holding bin of claim 1, wherein the first heating element is adapted to output more heat energy than the second heating element.
5	The food handling bin of claim 1, further comprising a lid located in a top portion of the first food holding compartment, the lid capable of being inserted into a shelf above the continuous and planar bottom surface.
6.a.1	The food holding bin of claim 5, further comprising a latch located adjacent to the shelf,
6.a.2	the latch having a body including an open center portion,
6.a.3	the latch being rotatable or translatable relative to the shelf between a locked position and an unlocked position.
7	The food holding bin of claim 1, further comprising a lid on the food holding tray.

Ref. ID	Claim Limitation
8	The food holding bin of claim 1, wherein at least one of the first heating element and the second heating element is an electrically resistive heating wire.
9.P	A method of maintaining different temperatures in a food holding compartment of a food holding bin, the method comprising:
9.a.1	providing a food holding compartment with a first food holding zone and a second food holding zone adjacent to one another,
9.a.2	the first and second food holding zones sharing an uninterrupted continuous planar bottom surface comprising Aluminum,
9.a.3	the uninterrupted continuous planar bottom surface extending to a front face of a chassis forming the food holding compartment, and
9.a.4	a food holding tray disposed in the food holding compartment, the food holding tray resting on the uninterrupted continuous planar bottom surface,
9.a.5	the first food holding zone including a first independently controllable radiant heating element that heats radiantly from above and also includes a second independently controllable conductive heating element that heats conductively from below, and
9.a.6	the second food holding zone includes a third independently controllable radiant heating element that heats radiantly from above and also includes a fourth independently controllable conductive heating element that heats conductively from below;
9.b	independently setting a first temperature in the first food holding zone by operating the first independently controllable heating element and by operating the second independently controllable heating element; and
9.c	independently setting a second temperature in the second food holding zone by operating the third independently controllable

Ref. ID	Claim Limitation
	heating element and by operating the fourth independently controllable heating element,
9.d	wherein the first temperature is different from the second temperature.
10	The method of claim 9, further comprising providing more heat energy from the first heating element than from the second heating element.