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: IPR2026-00480
Patent No. 10,492,641

PETITION FOR INTER PARTES REVIEW
OF U.S. PATENT NO. 10,492,641

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37 C.F.R. §42.15 318

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EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent No. 10,492,641 ("the '641 Patent")
1002	Prosecution History of the '641 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")

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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)
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1034	E-mail Collection (IRHS Service Manual Related)
1035	Flame Magazine
1036	Declaration of Natasha Zerbey
1037	Declaration of Arthur Lemley

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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.

Figures annotated throughout unless indicated otherwise.

I. INTRODUCTION

U.S. Patent No. 10,492,641 (the ’641 Patent) pertains to heated food-holding bins (10) for fast-food restaurants. EX1001: Abstract, 1:61-62; EX1003: ¶¶31-32.

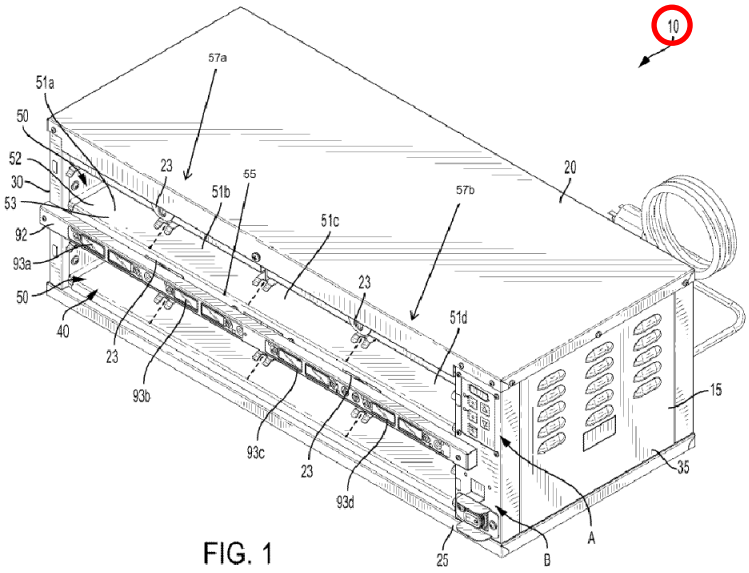


FIG. 1

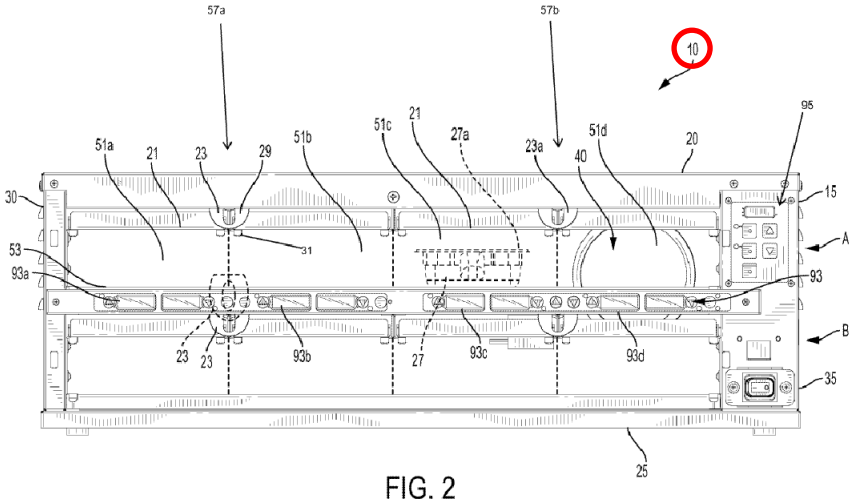


FIG. 2

EX1001.

The ’641 Patent uses known features (2x4 bay configuration, independent temperature control, heating element arrangement, control locations, lids, lid shelves, and lid latches) according to established functions. EX1003: ¶¶33-35.

Duke Manufacturing Co. ("Duke") respectfully requests *inter partes* review of claims 1-24 and 26-34. Two sets of grounds are presented: a first based on related non-patent literature; and a second demonstrating the '641 Patent cobbles together well-known warming cabinet features, like adding common automobile options (heated seats, etc.) to a base automobile.

II. IDENTIFICATION OF CHALLENGE

A. Identification of Prior Art

The '641 Patent's priority date is April 19, 2016.

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

- Fortmann'748
- Jones
- Fortmann'967
- Hartfelder
- Veltrop
- Shei'821
- Shei'155
- Poole
- McMillan
- Shei'099
- Vaseloff
- 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, 693-95 (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, 1067-69 (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: ¶56; *Roku v. Universal Electronics*, No. 2024-1188, 2025 WL 1692663, *1-*3 (Fed. Cir. 2025). IRHS Service Manual was available from Duke and 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: ¶111.

Fortmann'197 is prior art under §102(a)(2) as effectively filed as of the '992 Provisional's filing, before the '641 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: ¶¶1065-1069.

The references pertain to food holding and heating and are in the same field of endeavor with each other and the '641 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; EX1018: 1:5-7; EX1019: 1:9-14; EX1022: ¶[0010]; EX1025: 1:25-26; EX1026: 1:5-7; EX1027: ¶[0001]; EX1003: ¶¶37-117.

B. Statutory Grounds for Challenge

Basis for all grounds is §103.

Ground	References	Claims Challenged
1	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual	1-4, 6-10, 14-21, 24, 26-30, 32-34
2	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Hartfelder, Shei'099	5, 11-13, 22-23
3	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Veltrop, Poole	18
4	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Shei'821, Shei'155	24
5	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Fortmann'967, Fortmann'197	31
6	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Prince Castle, Reese	26
7	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Hartfelder, Shei'099, Veltrop, Poole, Shei'821, Shei'155, Fortmann'967, Fortmann'197, Prince Castle, Reese	1-24, 26-34
8	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Hartfelder, Shei'099, Veltrop, Poole, Shei'821, Shei'155, Fortmann'967, Fortmann'197, Prince Castle, Reese	1-24, 26-34
9	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Hartfelder, Shei'099, Veltrop, Poole, Shei'821, Shei'155,	1-24, 26-34

	Fortmann'967, Fortmann'197, Prince Castle, Reese, Vaseloff, McMillan	
10	Fortmann'748, IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Jones, Fortmann'197, Fortmann'967, McMillan, Vaseloff, Hartfelder, Shei'099	1-17, 19-23, 28-34
11	Fortmann'748, IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Jones, Fortmann'197, Fortmann'967, McMillan, Vaseloff, Hartfelder, Shei'099, Veltrop, Shei'155	18, 27
12	Fortmann'748, IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Jones, Fortmann'197, Fortmann'967, McMillan, Vaseloff, Hartfelder, Shei'099, Shei'821, Shei'155	24
13	Fortmann'748, IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Jones, Fortmann'197, Fortmann'967, McMillan, Vaseloff, Hartfelder, Shei'099, Prince Castle	26

C. POSA

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 1-4, 6-10, 14-21, 24, 26-30, and 32-34 Would Have Been Obvious Over the IRHS Documents

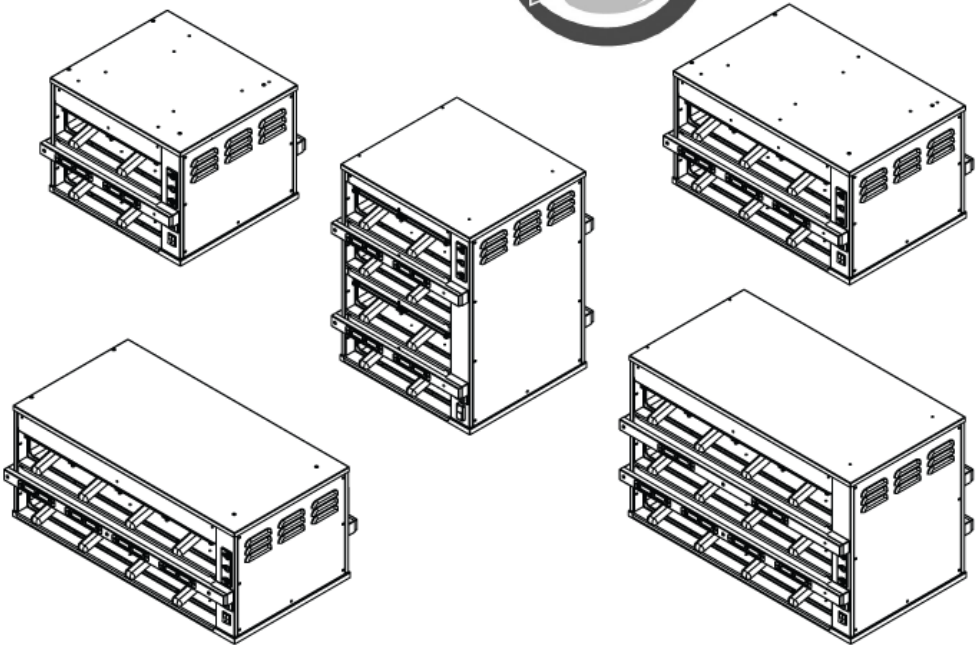
A. Combination of the IRHS Documents

The IRHS Documents describe the same Duke products: Infrared Heatsink Holding Units ("IRHS"). EX1003: ¶¶118-119.

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.

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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.

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

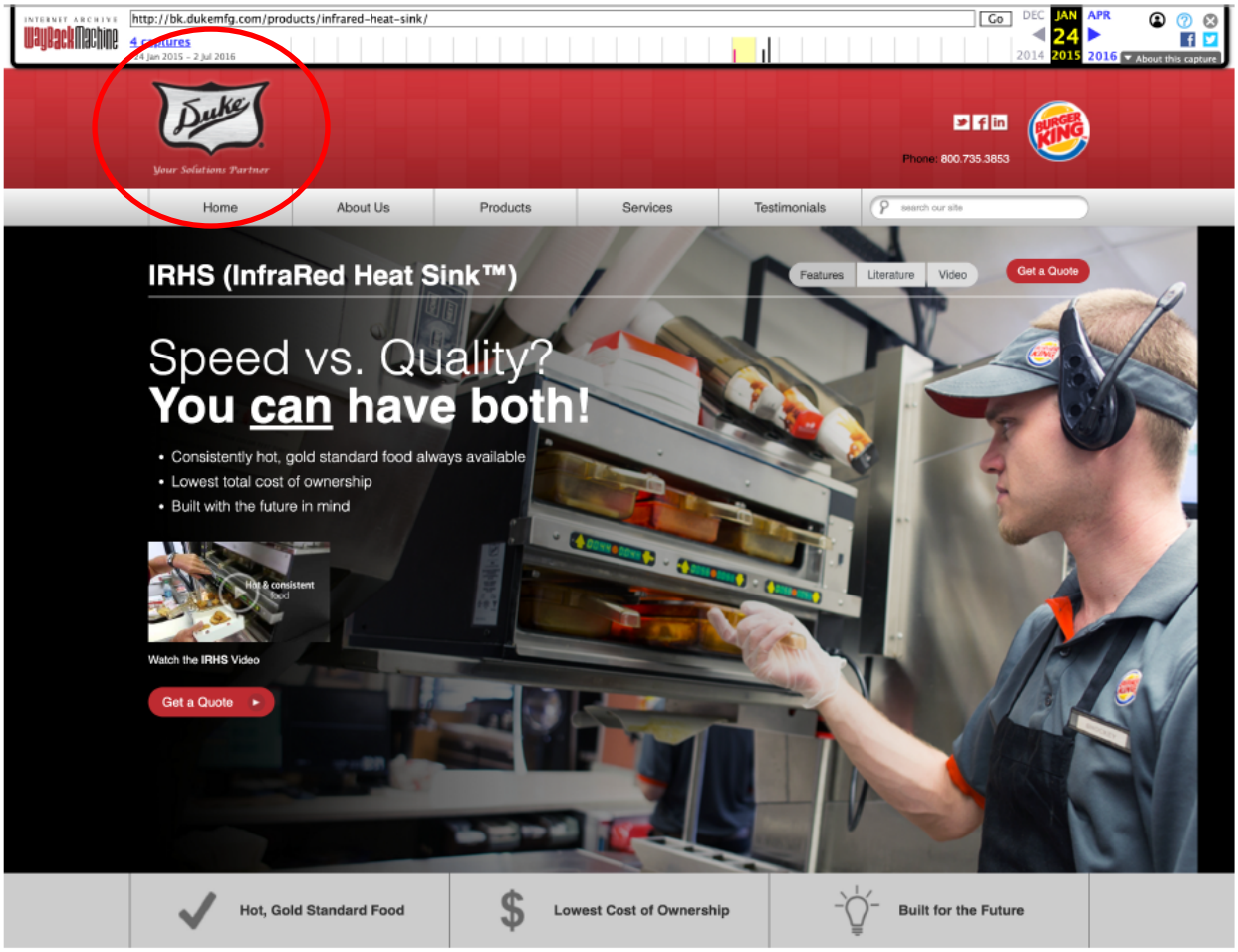
CONTROLS

- 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.


http://bk.dukemfg.com/products/infrared-heat-sink/
Duke
Your Solutions Partner
Phone: 800.735.3853
Home
About Us
Products
Services
Testimonials
IRHS (InfraRed Heat Sink™)
Features
Literature
Video
Get a Quote
Speed vs. Quality?
You can have both!
• Consistently hot, gold standard food always available
• Lowest total cost of ownership
• Built with the future in mind
Watch the IRHS Video
Get a Quote
Hot, Gold Standard Food
Lowest Cost of Ownership
Built for the Future

EX1007: 8.

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.

Service Manual

Your Solutions Partner

INFRARED HEATSINK™ HOLDING UNIT

Includes Standalone, Kitchen Minder and VISOR models

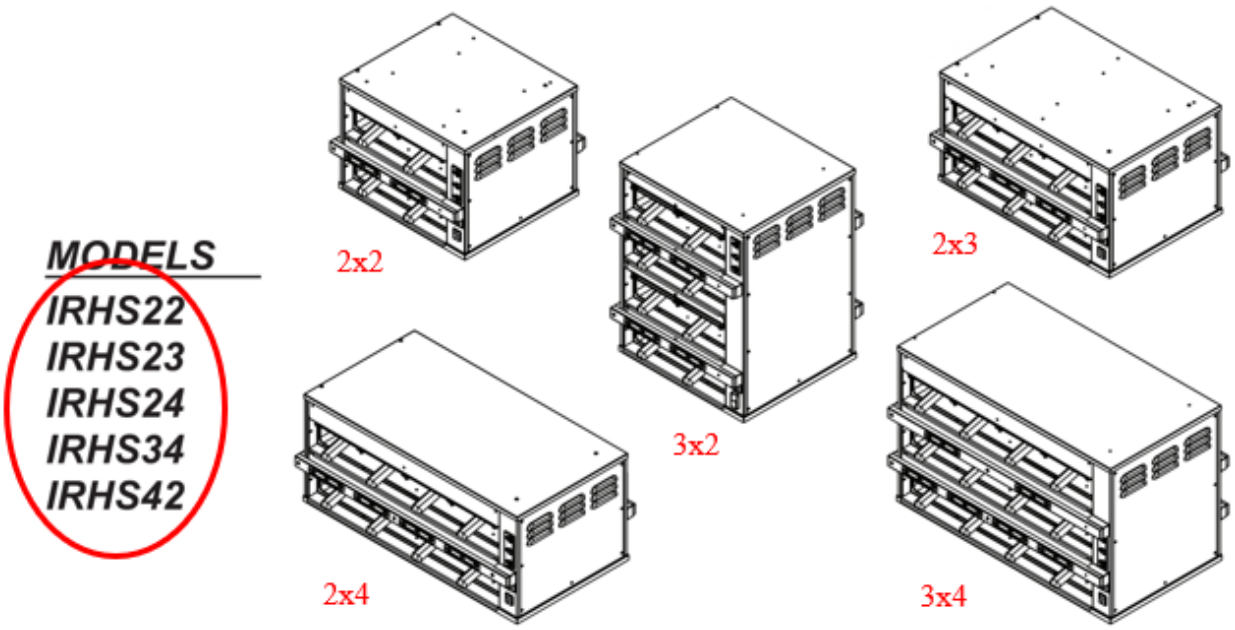
MODELS
IRHS22
IRHS23
IRHS24
IRHS34
IRHS42



EX1008: 1.

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: ¶¶120-121.



EX1005: 1.

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.

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 VISORenabled IRHS – no timer bar unit

EX1007: 56.

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: ¶123. Duke produced all the IRHS Documents, which include Duke trademarks. EX1005: 1; EX1006: 1; EX1007: 26, 54, 57; EX1008: 1; EX1003: ¶122. 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: ¶¶123-124.

It would have been obvious to combine the IRHS Documents' teachings because they describe the same IRHS products. EX1003: ¶125; *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: ¶125.

POSA would view the IRHS Documents together as describing Duke's IRHS features. EX1003: ¶126. POSA would apply or supplement IRHS features taught by one IRHS Document into IRHS products taught by other IRHS

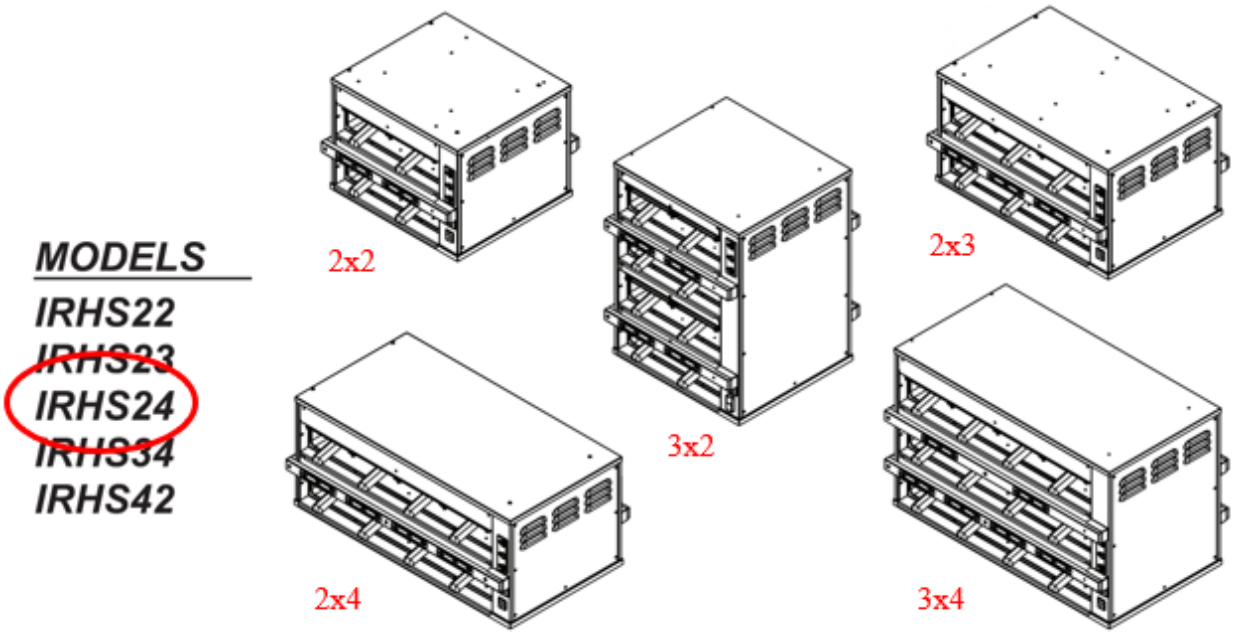
Documents. EX1003: ¶126. If a feature was not clearly described in one IRHS Document, POSA would look to other IRHS Documents. EX1003: ¶126.

There is a reasonable expectation of success because the IRHS Documents describe the same/related products. EX1003: ¶127.

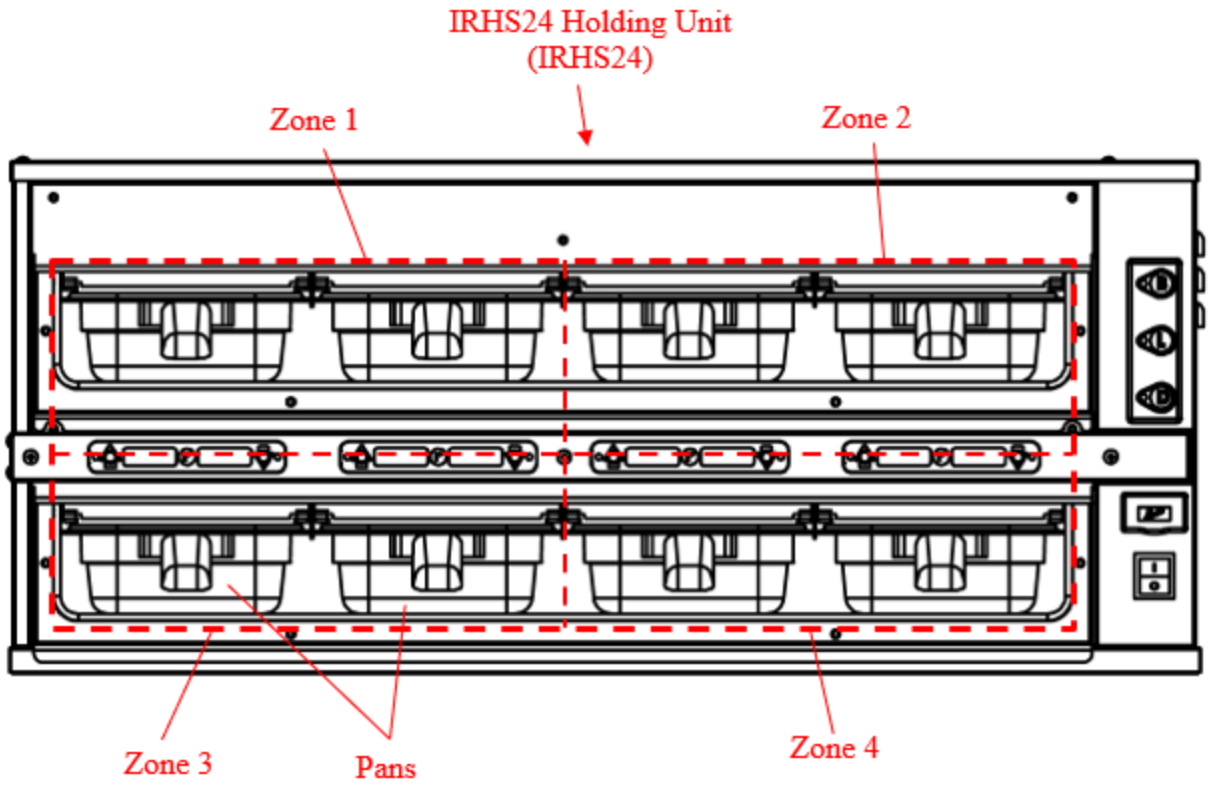
B. Independent Claim 1

1.P

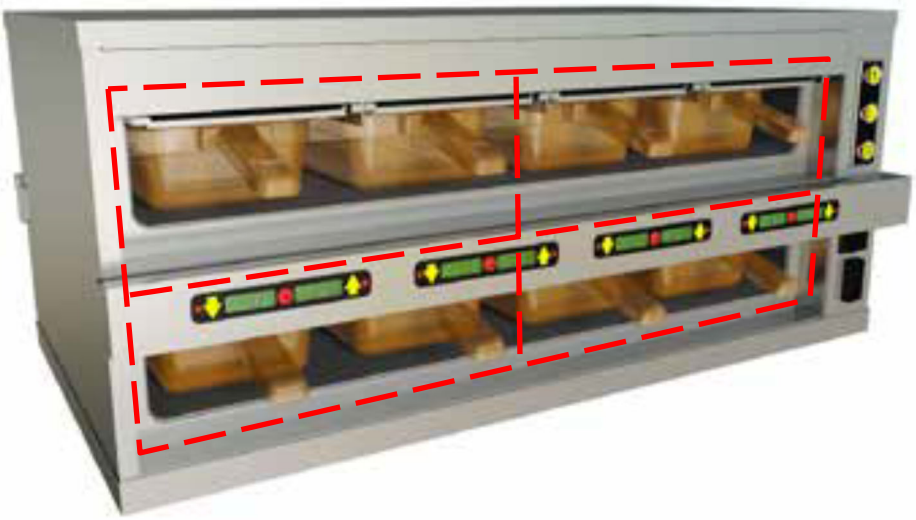
The IRHS Documents disclose a 2x4 IRHS (the "IRHS24")[1] having multiple zones for heating food pans. EX1005: 4, 8; EX1006: 1; EX1007: 51, 56; EX1008: 1; Section IV(B)(1.j.1/1.k.1/1.l.1/1.m.1); EX1003: ¶¶128-129.



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



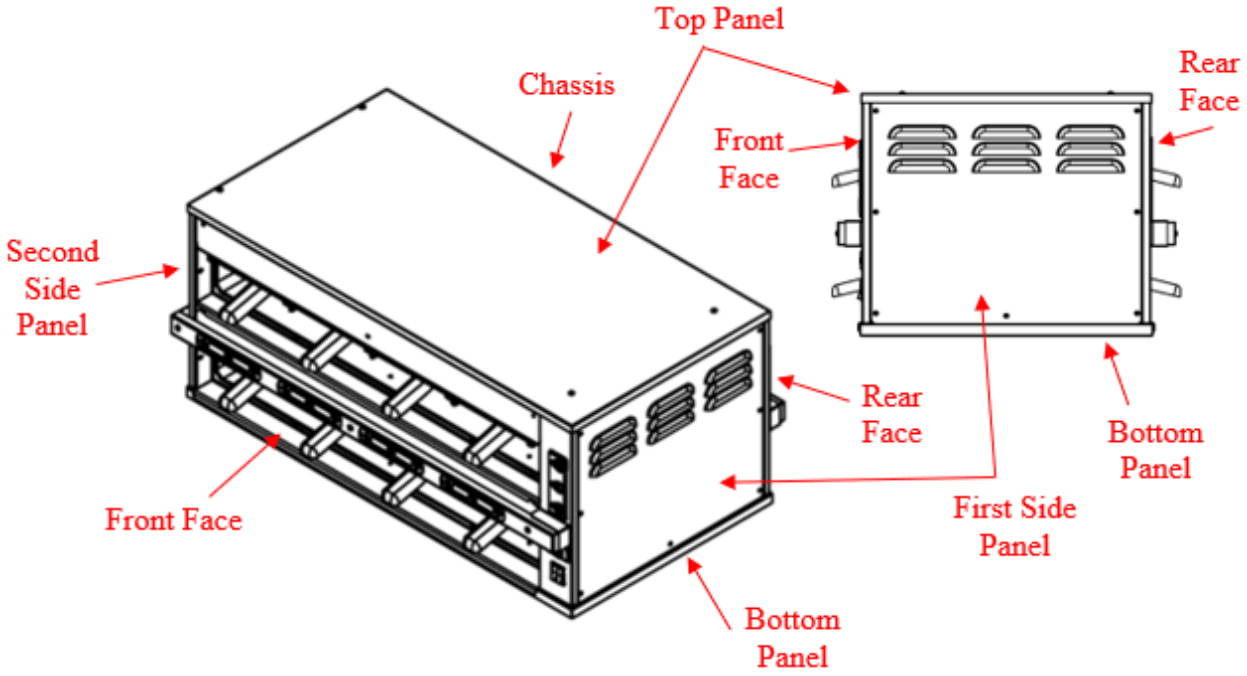
EX1005: 1, 8.

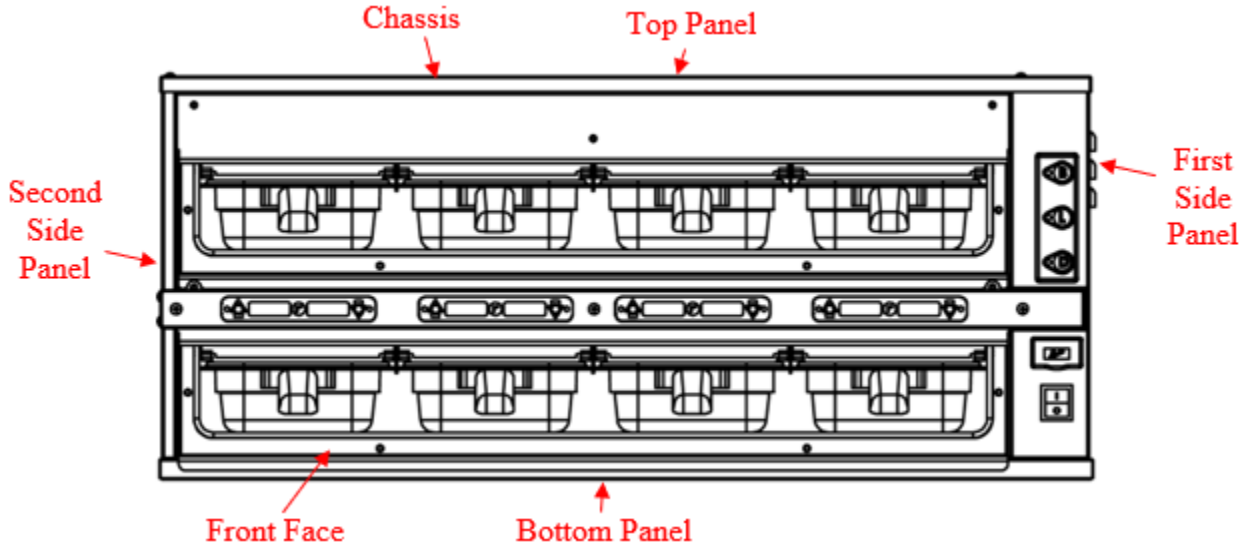


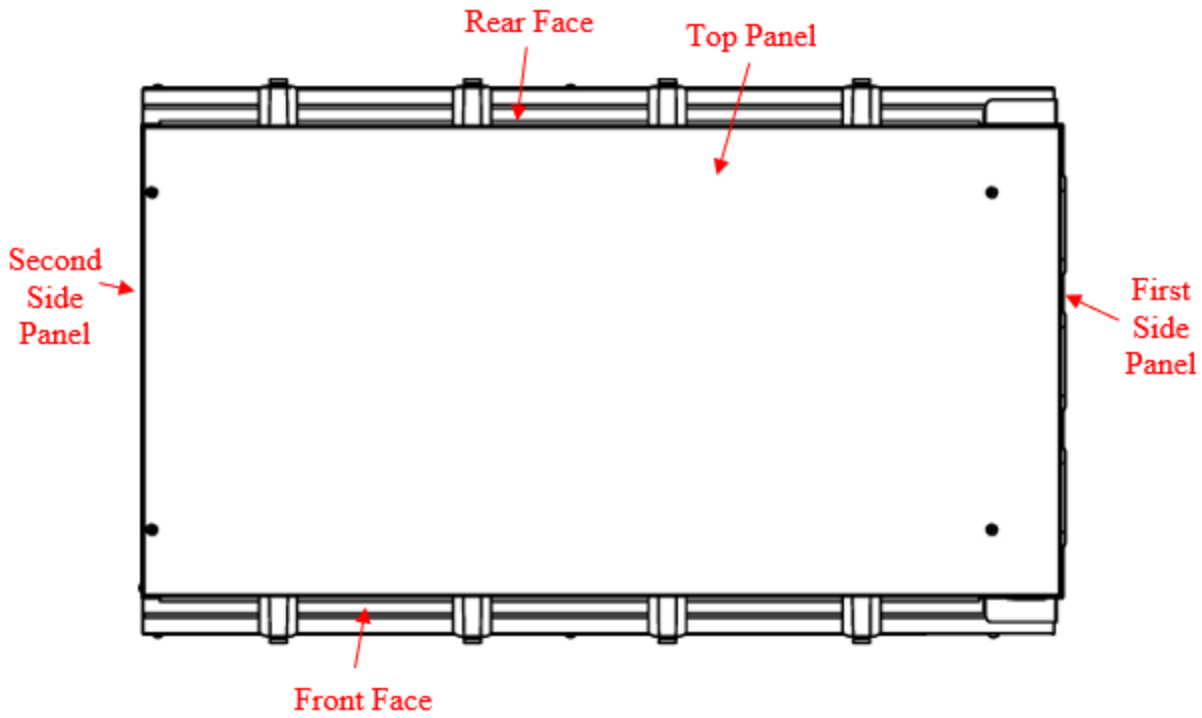
EX1007: 56.

1.a

A chassis has top, first side, second side, and bottom panels, and opposite front and rear faces. EX1006: 1; EX1007: 51; EX1003: ¶¶130-131.



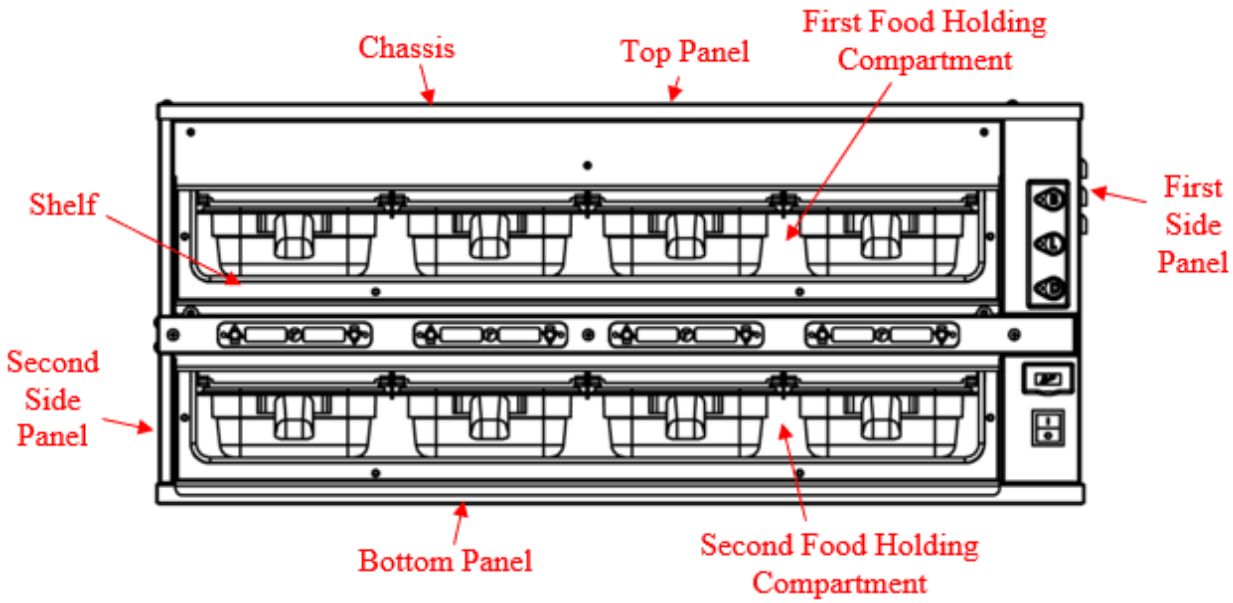




EX1005: 8.

1.b.1/1.c.1

The first and second side panels, top panel, and shelf define an upper/first food holding compartment within the chassis. EX1003: ¶¶132-133. The first and second side panels, bottom panel, and shelf define a second food holding compartment within the chassis below the first compartment. EX1003: ¶¶139-140.

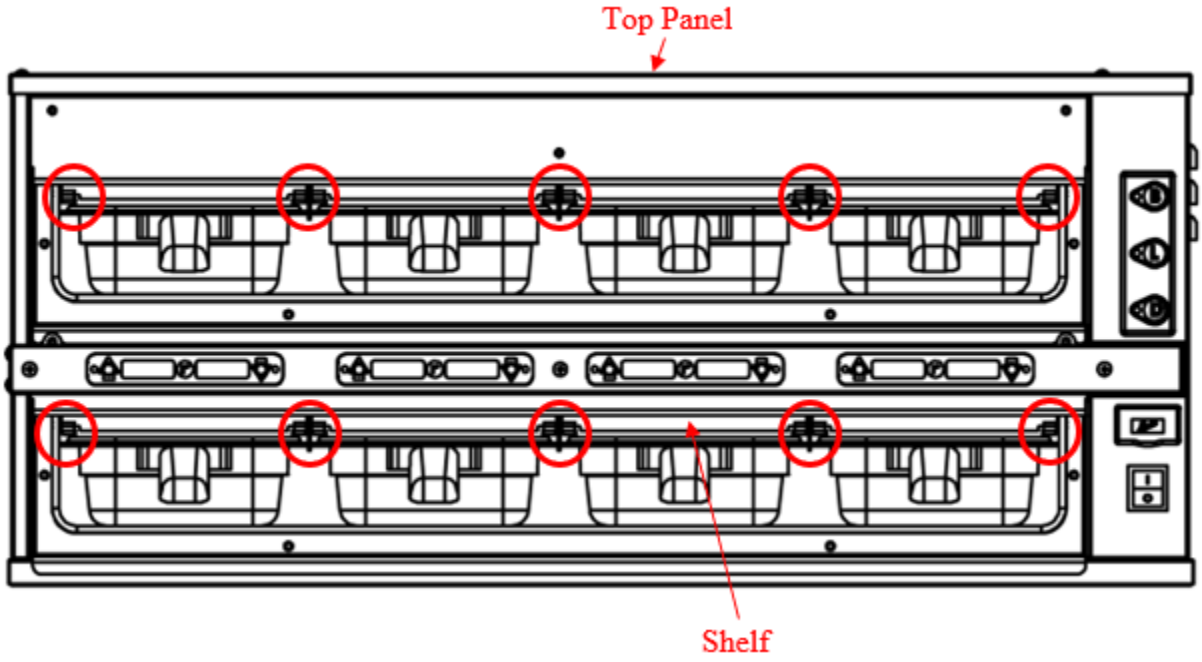


EX1005: 8.

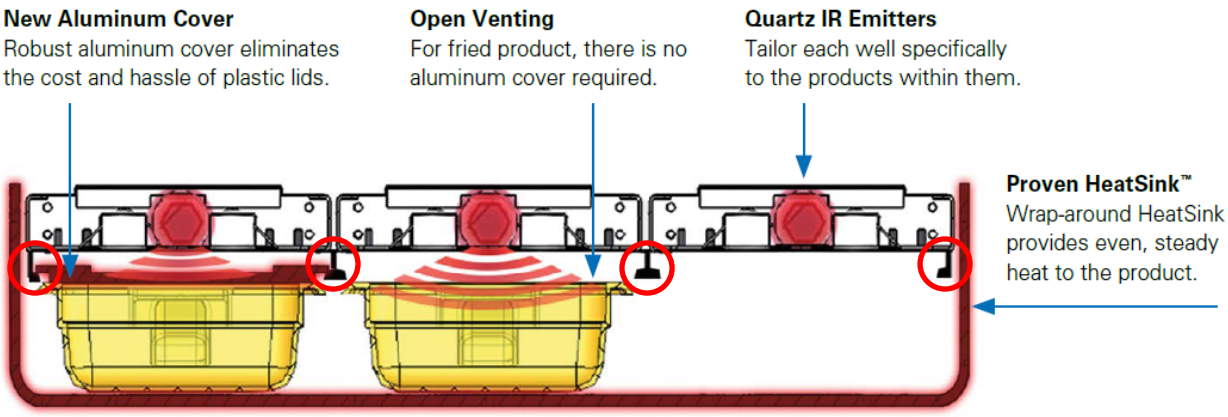
1.b.2/1.c.2

Lid-holding shelves downwardly depend from the top panel and shelf.

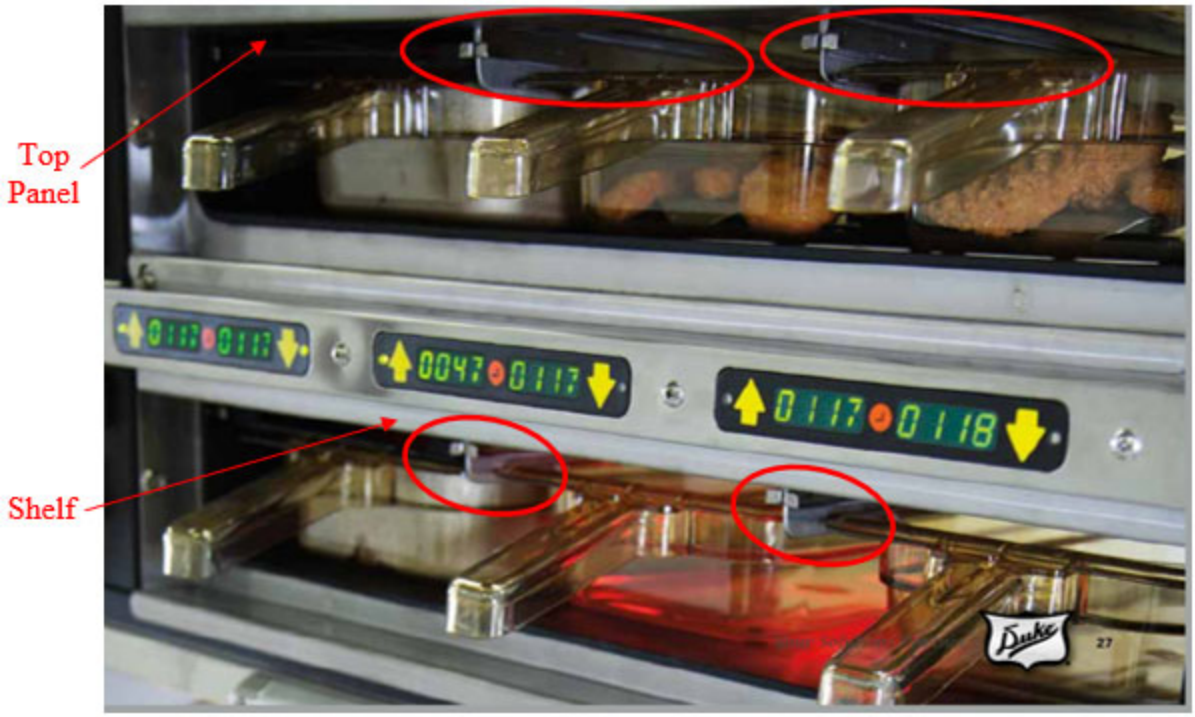
EX1005: 4, 8, 20-21; EX1007: 53, 56, 58; EX1003: ¶¶134-136, 141-143.



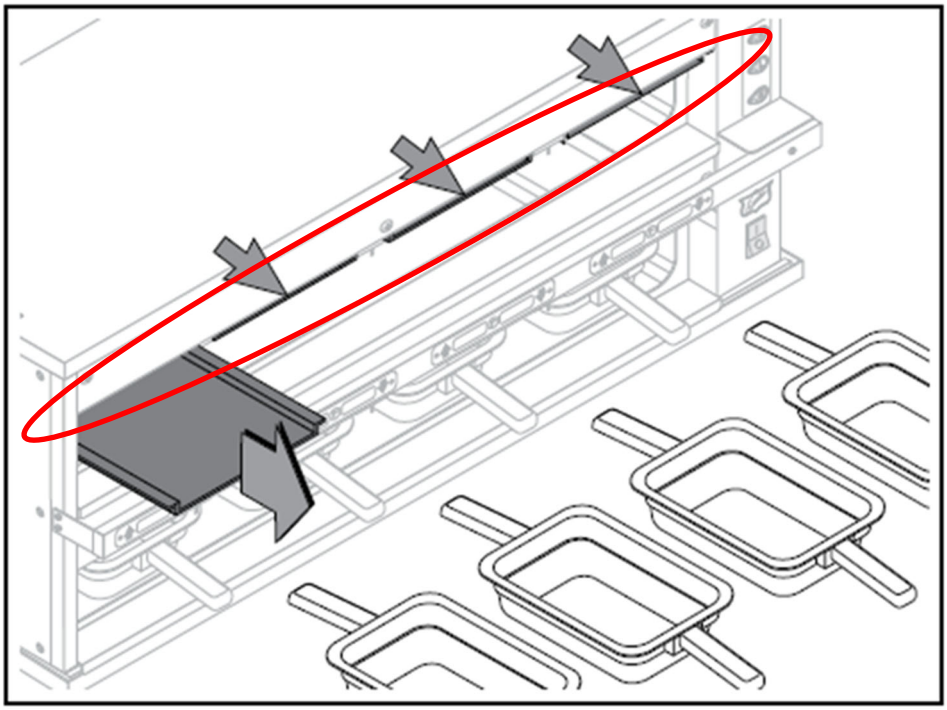
EX1005: 8.


New Aluminum Cover
Robust aluminum cover eliminates the cost and hassle of plastic lids.
Open Venting
For fried product, there is no aluminum cover required.
Quartz IR Emitters
Tailor each well specifically to the products within them.
Proven HeatSink™
Wrap-around HeatSink provides even, steady heat to the product.


Top Panel
Shelf



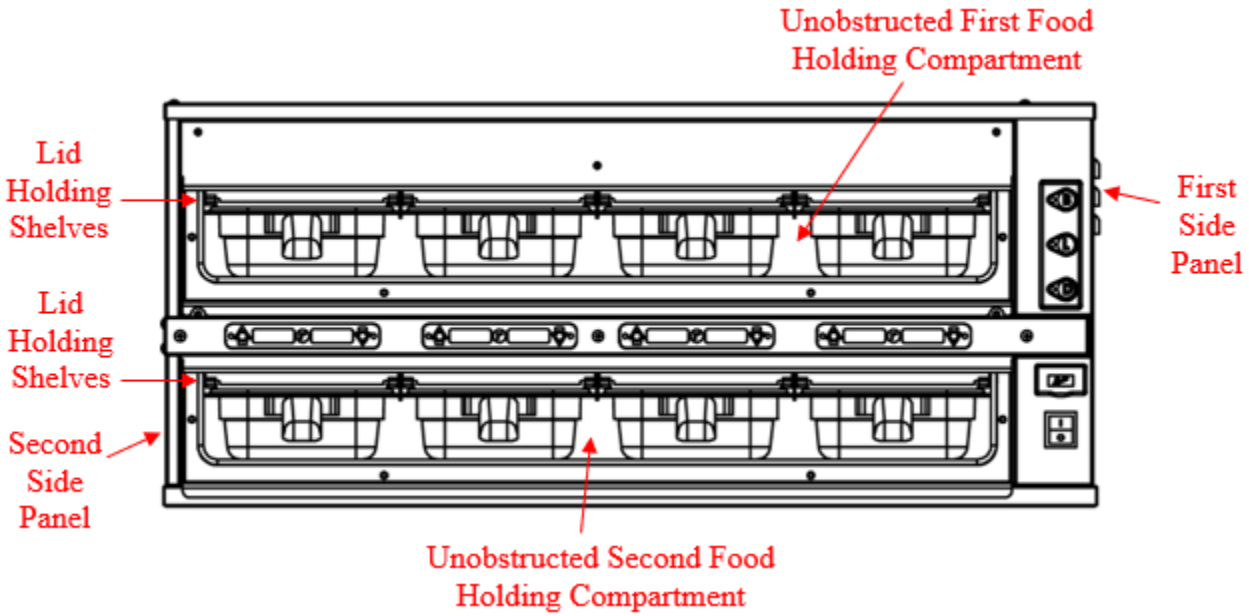
EX1007: 53, 36, 52.



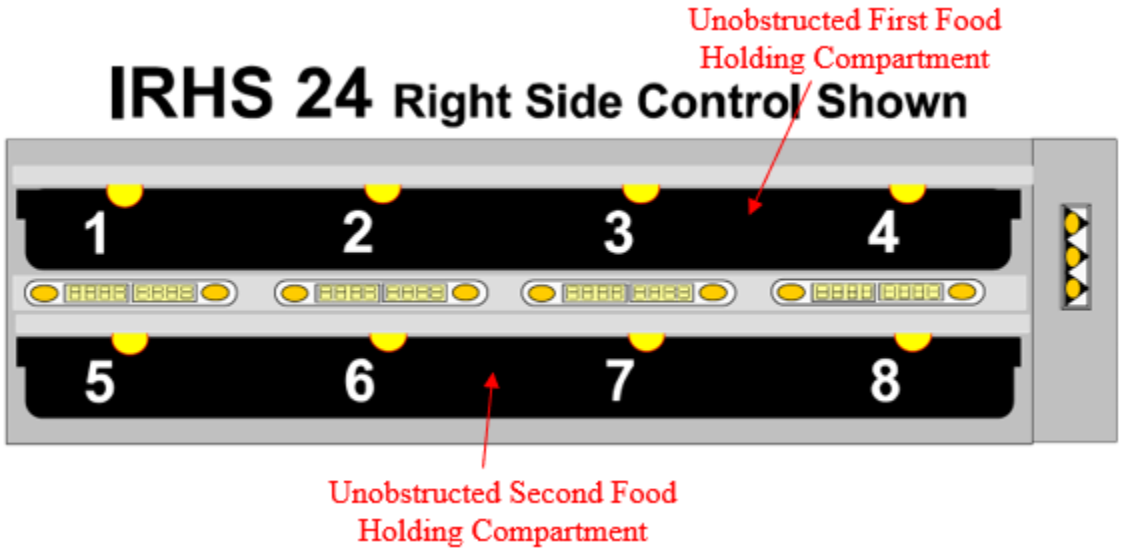
EX1008: 16.

1.b.3/1.c.3

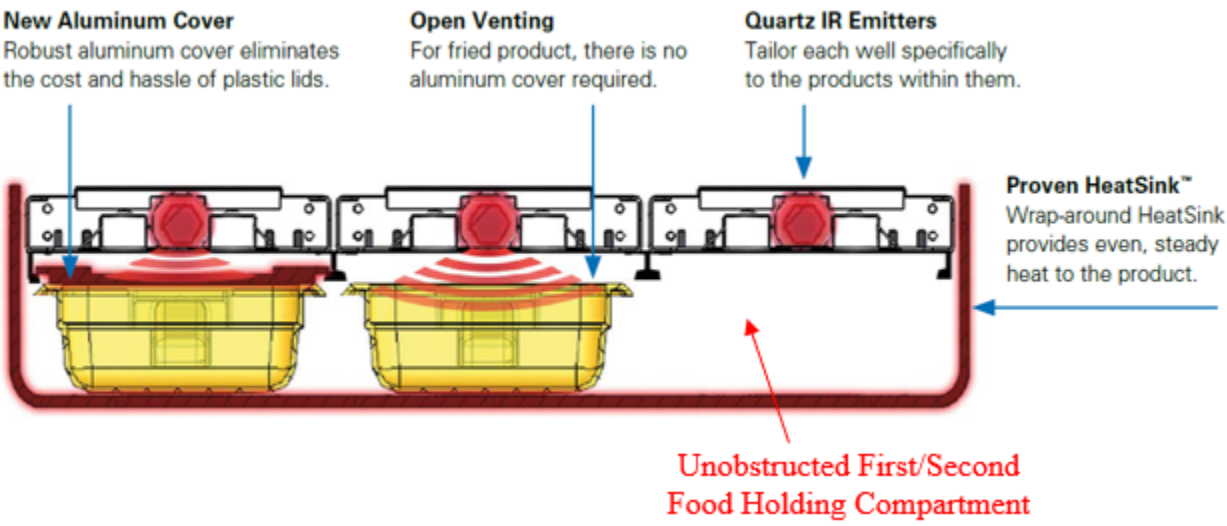
First and second compartments are substantially unobstructed between the first and second side panels below the lid-holding shelves. EX1003: ¶¶137-138, 144-145.



EX1005: 8.



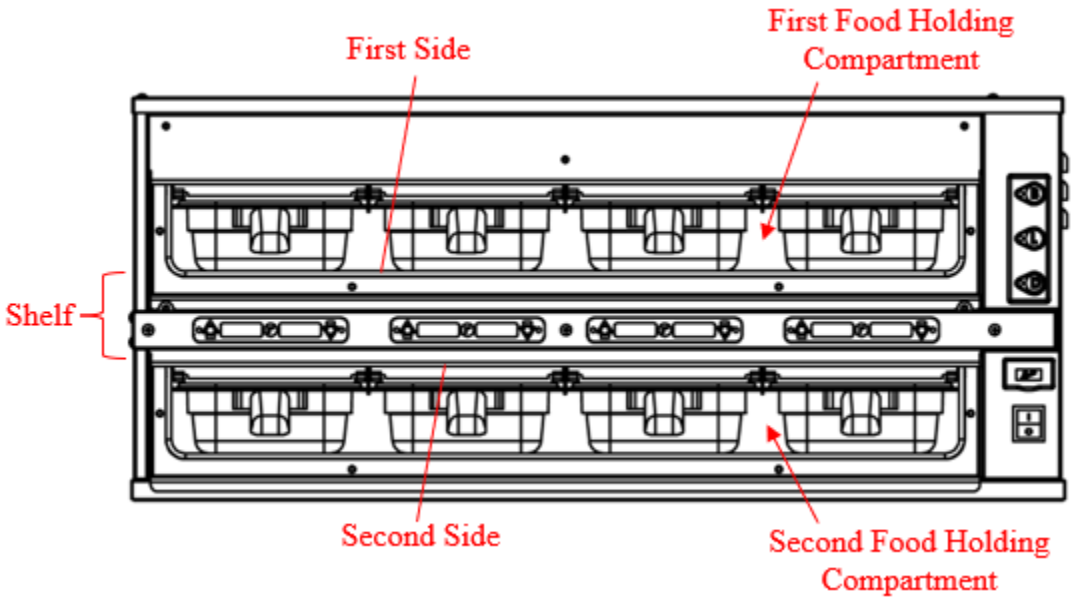
EX1005: 25.

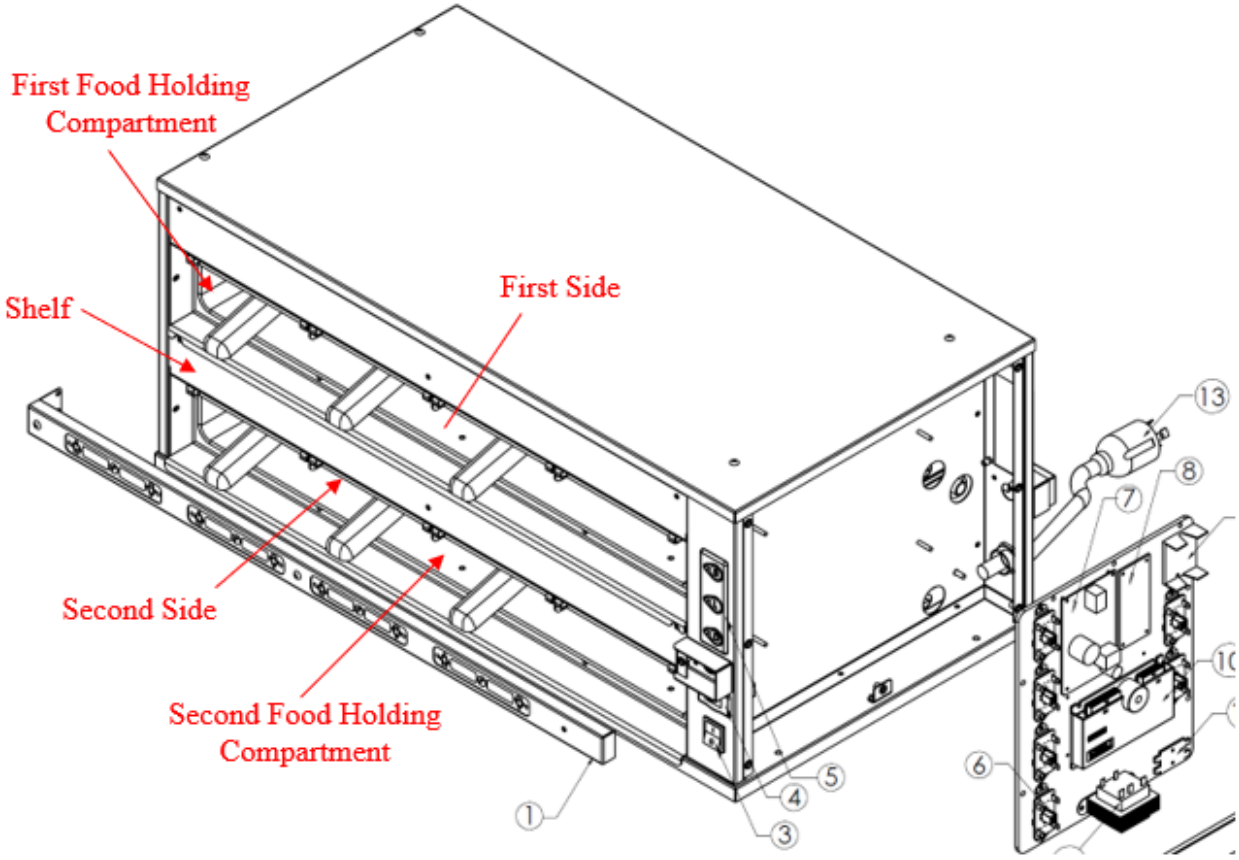


EX1007: 53.

1.d.1

The shelf is between the first and second compartments, with first and second sides facing into the first and second compartments, respectively. EX1003: ¶¶146-147.

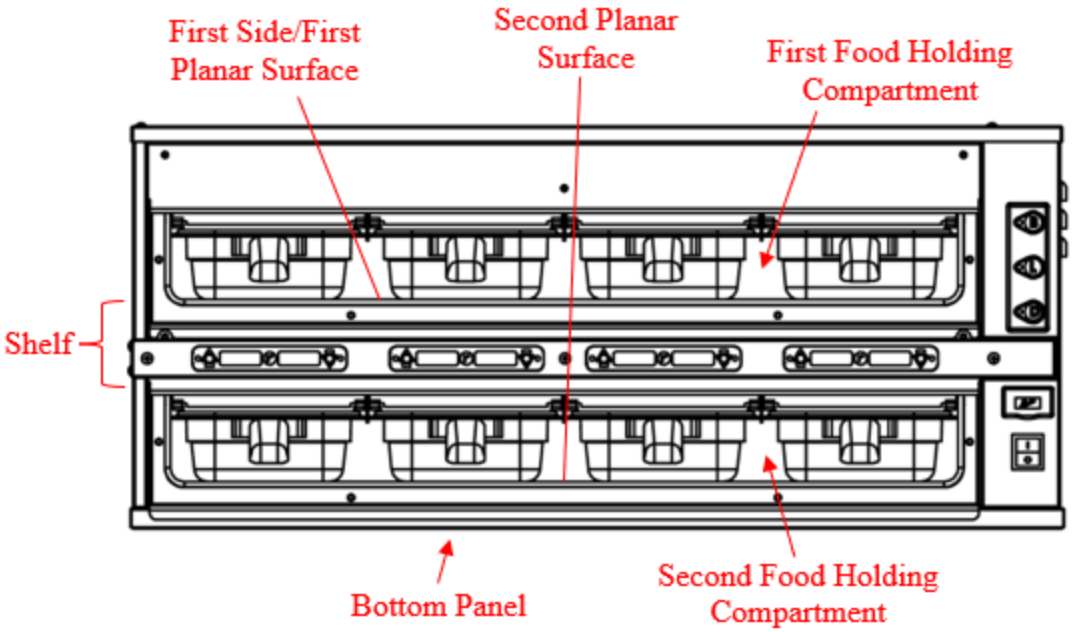




EX1005: 8, 20.

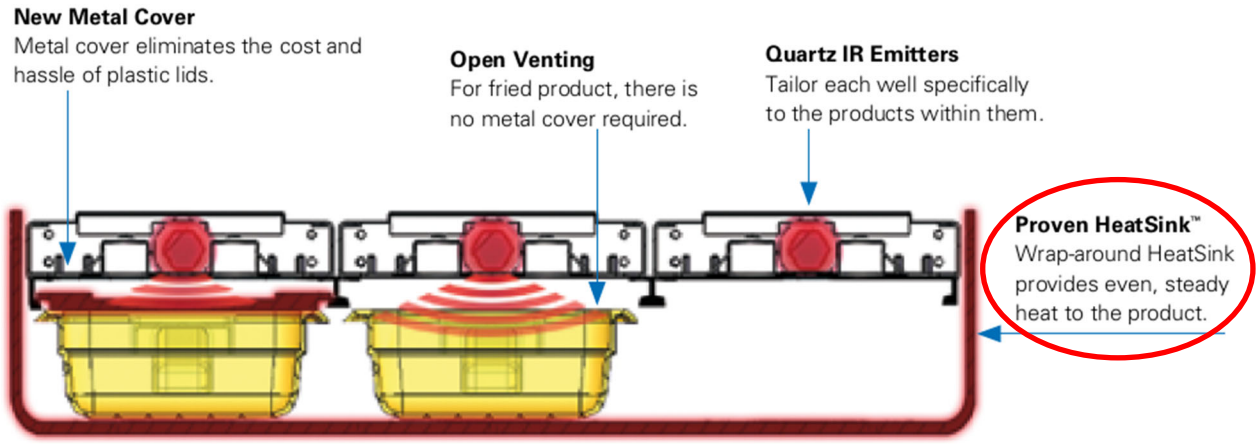
1.d.2/1.e.1

The shelf's first side defines a first substantially planar surface forming its top surface and the first compartment's bottom surface. EX1003: ¶¶148-149. The bottom panel has a second substantially planar surface forming the second compartment's bottom surface. EX1003: ¶¶155-156.



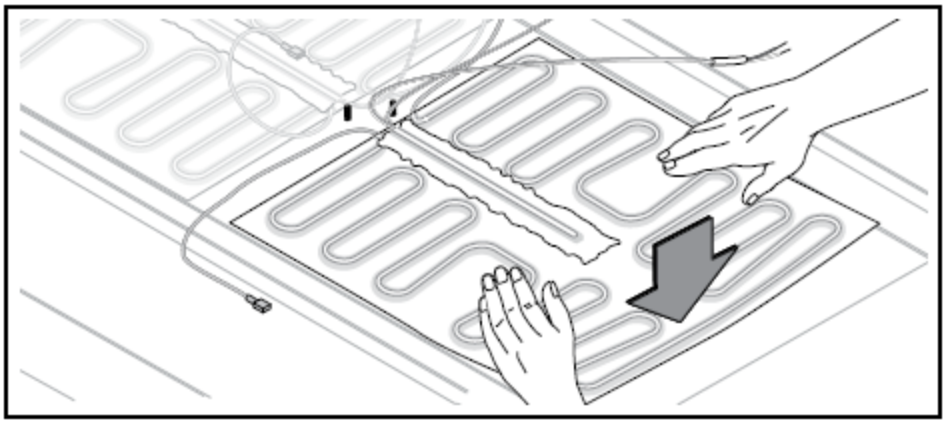
EX1005: 8.

Each planar surface is part of a HeatSink and is made of thermally conductive aluminum. EX1006: 1 ("[a]nodized aluminum HeatSink"); EX1007: 51; EX1005: 16; EX1003: ¶¶150-151, 157-158.



EX1007: 53.

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.

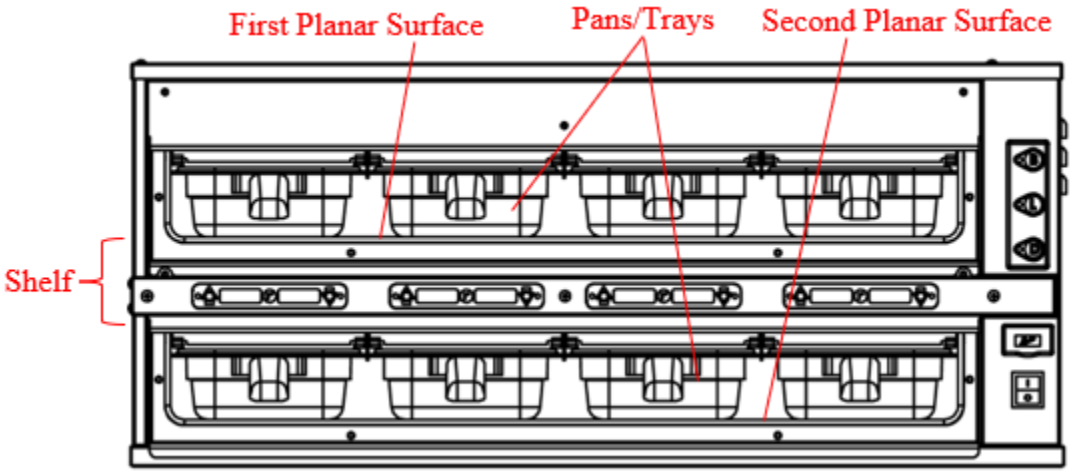


EX1008: 23.

Moreover, it would have been obvious to make the heatsink plates/planar surfaces 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: ¶¶152, 159.

1.d.3/1.e.2

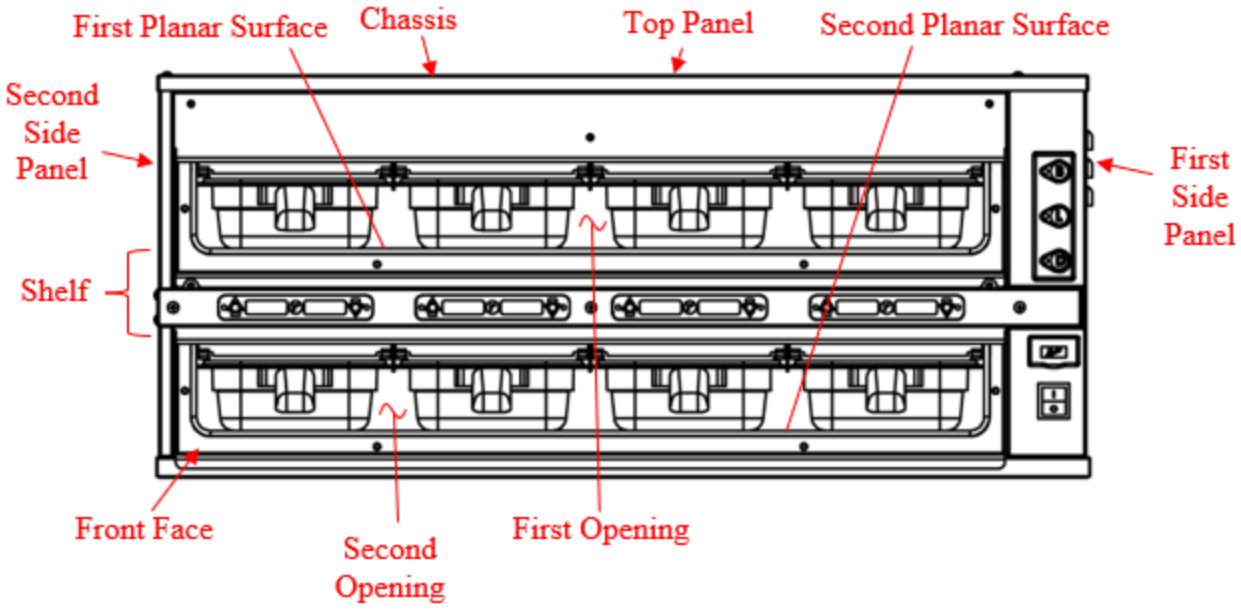
The first and second planar surfaces receive food pans. EX1005: 16; EX1006: 1; EX1007: 51, 56; EX1003: ¶¶153-154, 160-161.



EX1005: 8.

1.f.1/1.g.1

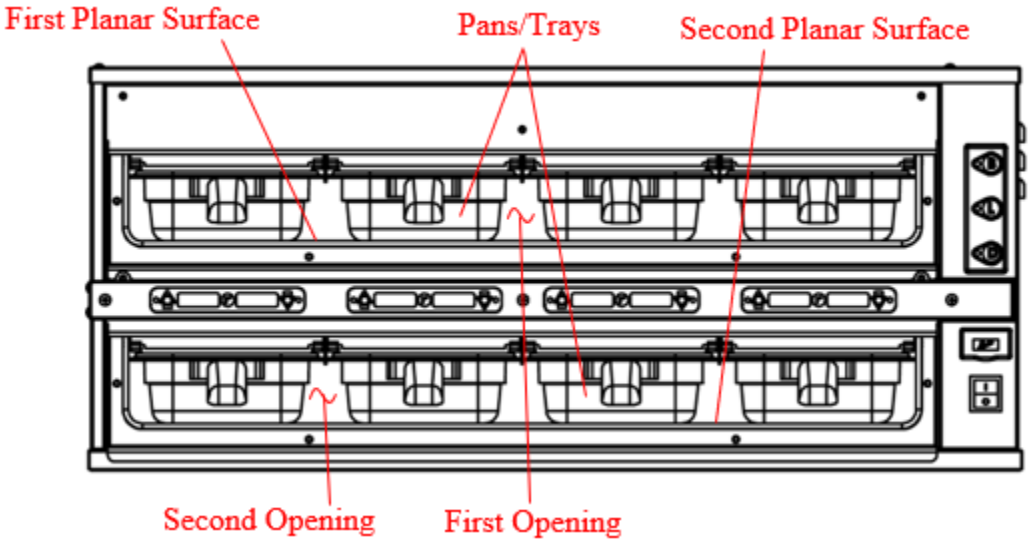
The first and second side panels, top panel, and first planar surface define a first opening in the chassis' front face. EX1003: ¶¶162-163. The first and second side panels, shelf, and second planar surface define a second opening in the chassis' front face. EX1003: ¶¶167-168.



EX1005: 8.

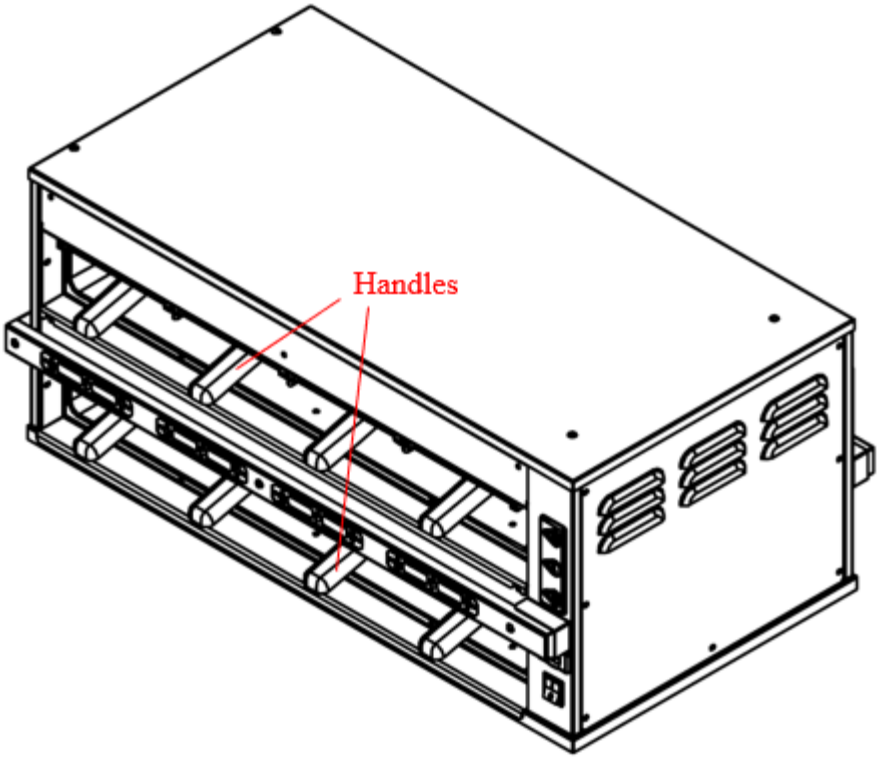
1.f.2/1.g.2

The first and second openings allow food pans to pass therethrough onto the respective planar surfaces. EX1003: ¶¶164-165, 169-170.



EX1005: 8.

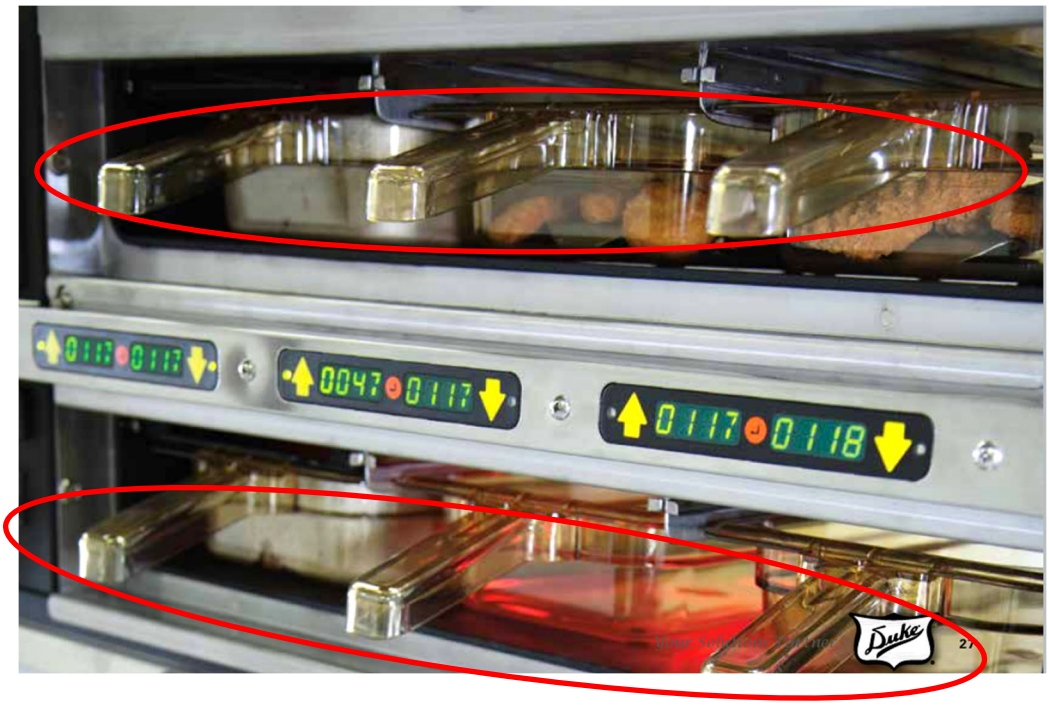
Pan handles protrude from the first and second openings for pan insertion and removal. EX1007: 52; EX1003: ¶¶166, 171.



EX1005: 8.



EX1007: 58.



EX1007: 52.

1.h.1/1.i.1

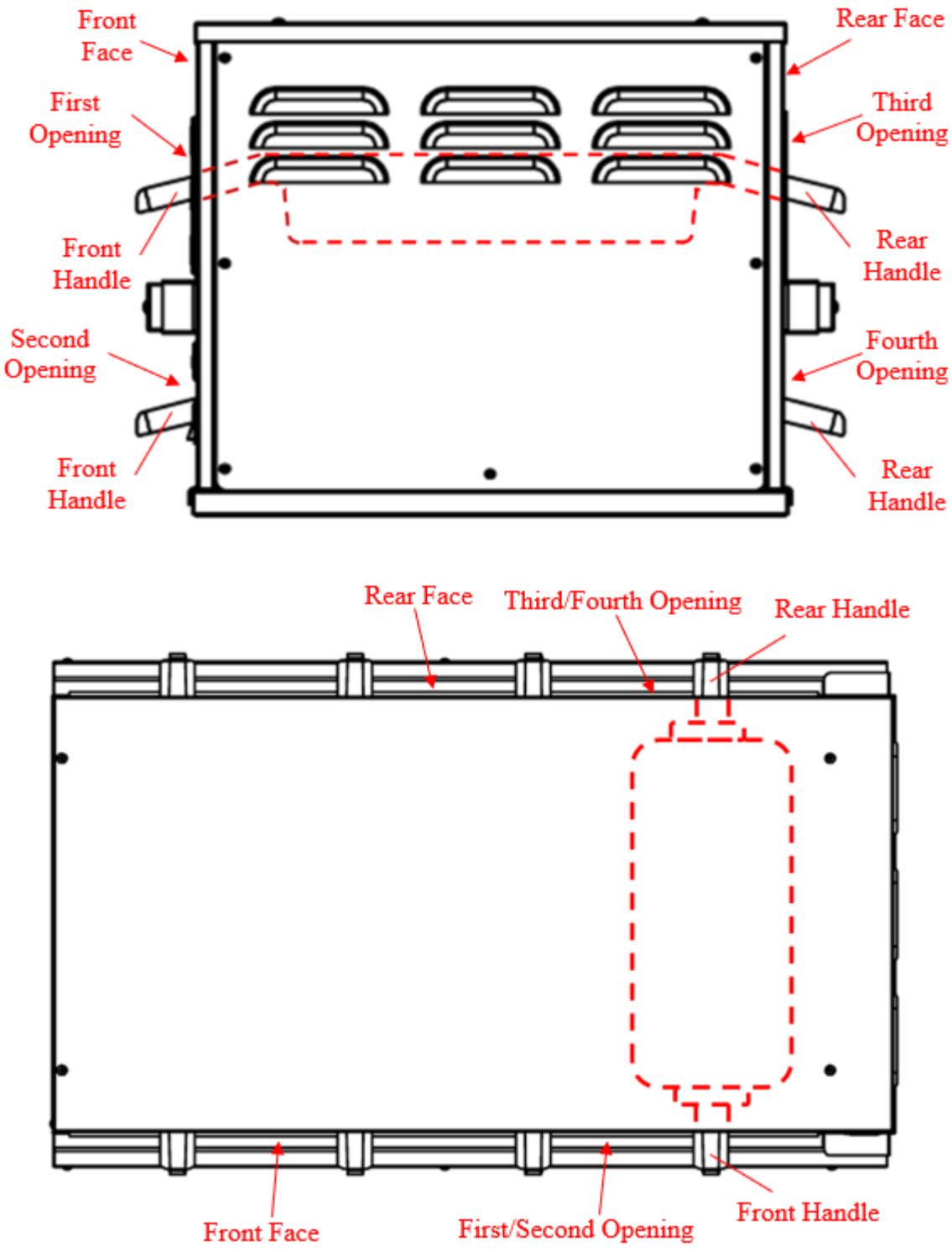
POSA understands the IRHS24's front and rear are generally mirror images.

EX1008: 12; EX1003: ¶¶172-173, 185-186.

Pan handles extend out the front and rear faces. EX1003: ¶¶174, 187.



EX1007: 58.


Front Face
Rear Face
First Opening
Third Opening
Front Handle
Rear Handle
Second Opening
Fourth Opening
Front Handle
Rear Handle
Rear Face
Third/Fourth Opening
Rear Handle
Front Face
First/Second Opening
Front Handle

EX1005: 8.

The chassis has third and fourth openings along the rear face (like the first and second openings) through which the handles extend. EX1003: ¶¶175-176, 188.

This makes IRHS24 a pass-through unit allowing front/rear access. EX1007: 67; EX1003: ¶177. POSA understands the third/fourth openings are similar to the first/second openings. EX1010: Figs. 1, 6, ¶[0014]; EX1011: Figs. 1-2; EX1014: Figs. 5, 8; EX1003: ¶177.

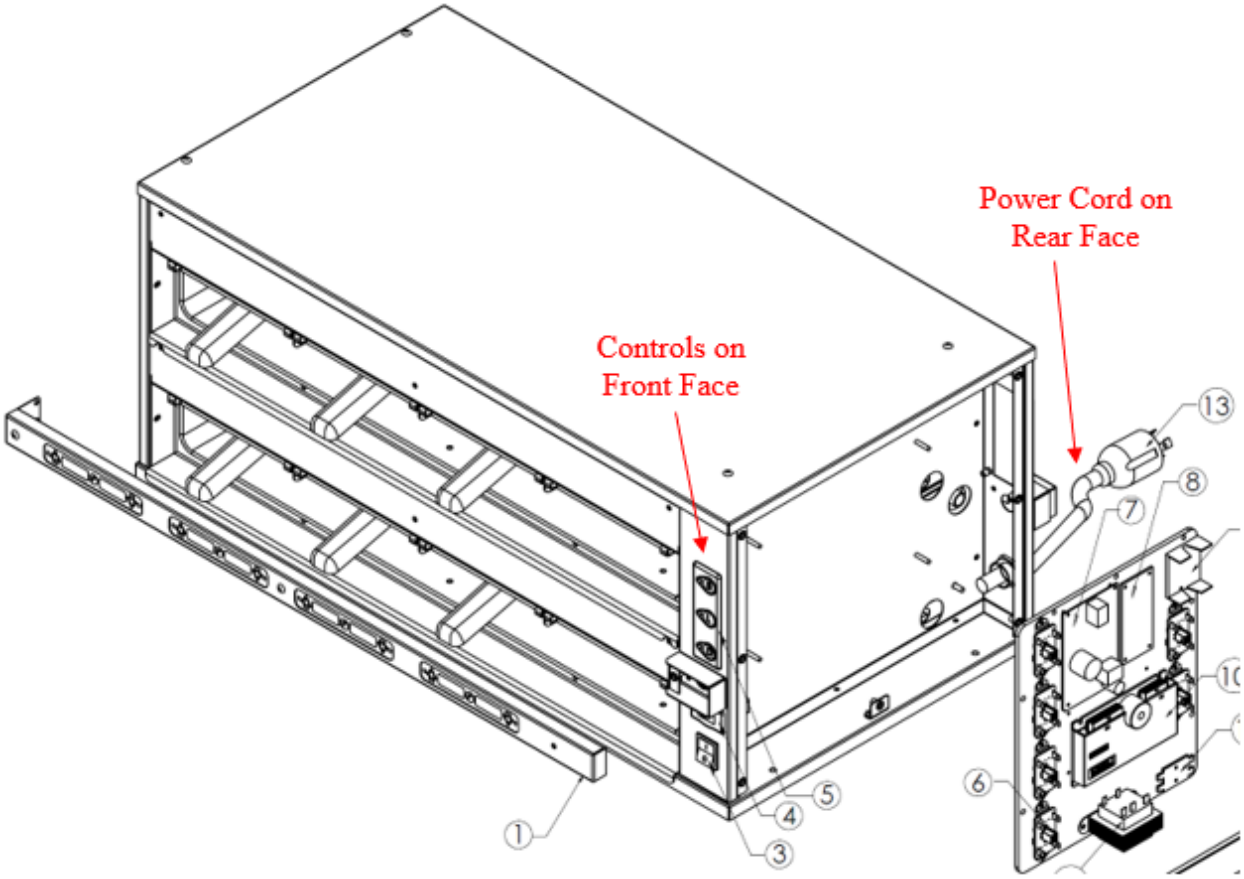
Moreover, the IRHS Documents illustrate the front and rear faces as generally mirror images (front including side panel controls, rear including a power cord). EX1003: ¶¶178-180, 189-191.





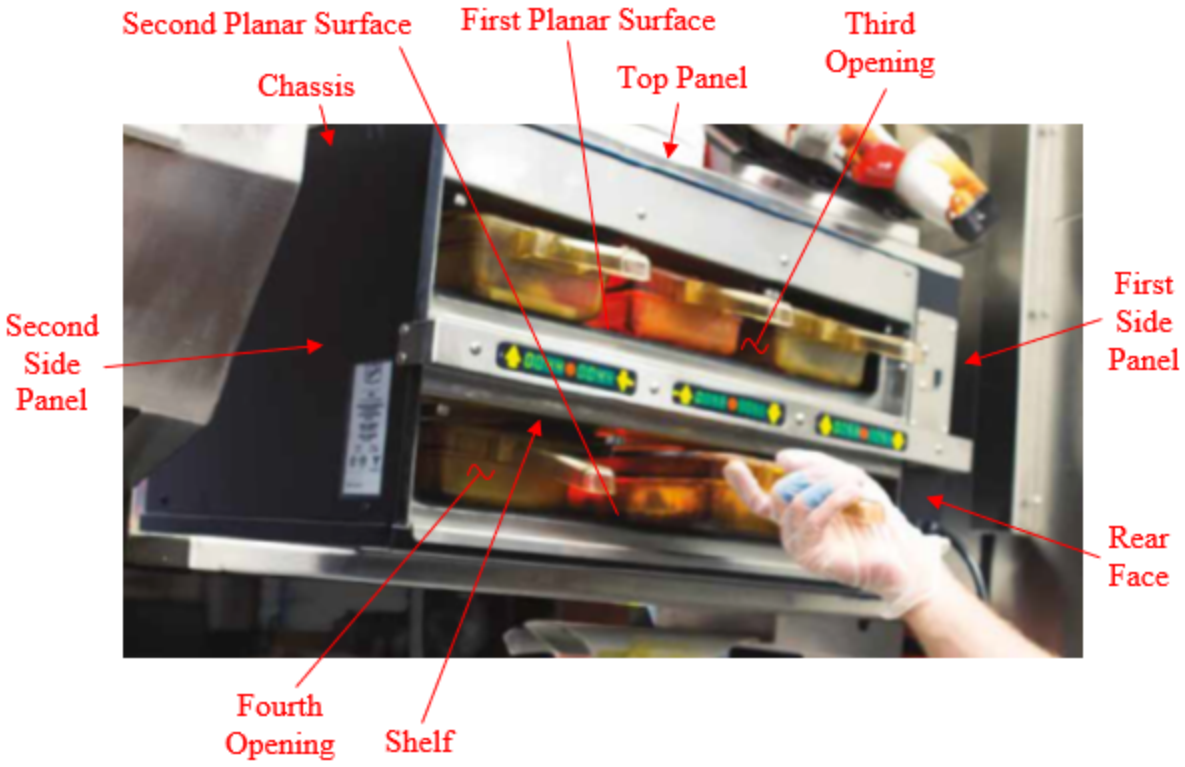


EX1007: 28, 51, 52.



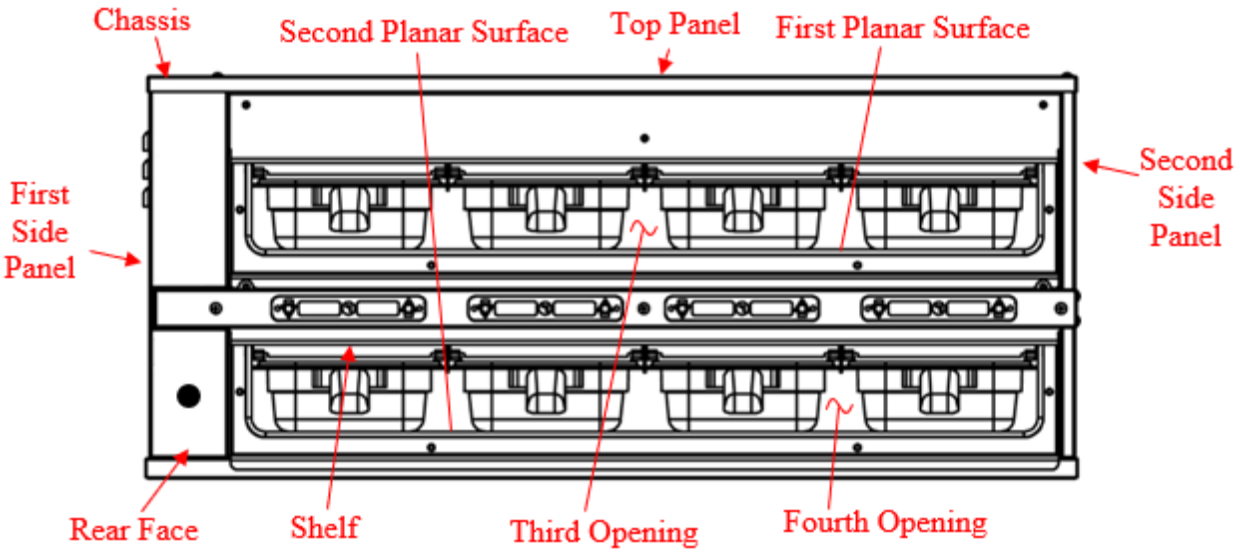
EX1005: 19.

The rear face has a third opening defined by the first planar surface, first and second side panels, and top panel, and a fourth opening defined by the second planar surface, first and second side panels, and shelf. EX1003: ¶¶181, 192.



EX1007: 52.

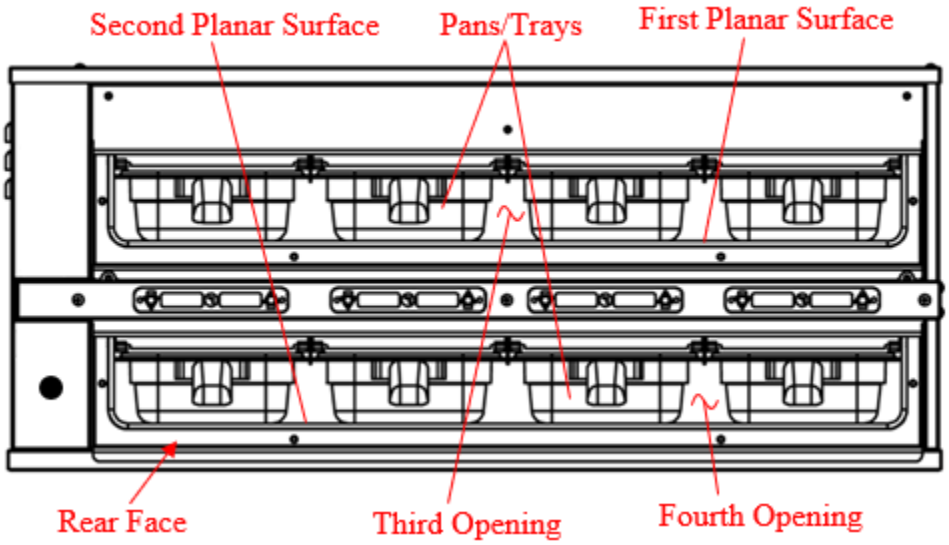
POSA understands this construction applies to IRHS24, a representative rear elevation of which below shows the rear face having a third opening defined by the first planar surface, first and second side panels, and top panel, and a fourth opening defined by the second planar surface, first and second side panels, and shelf. EX1003: ¶¶182, 193.



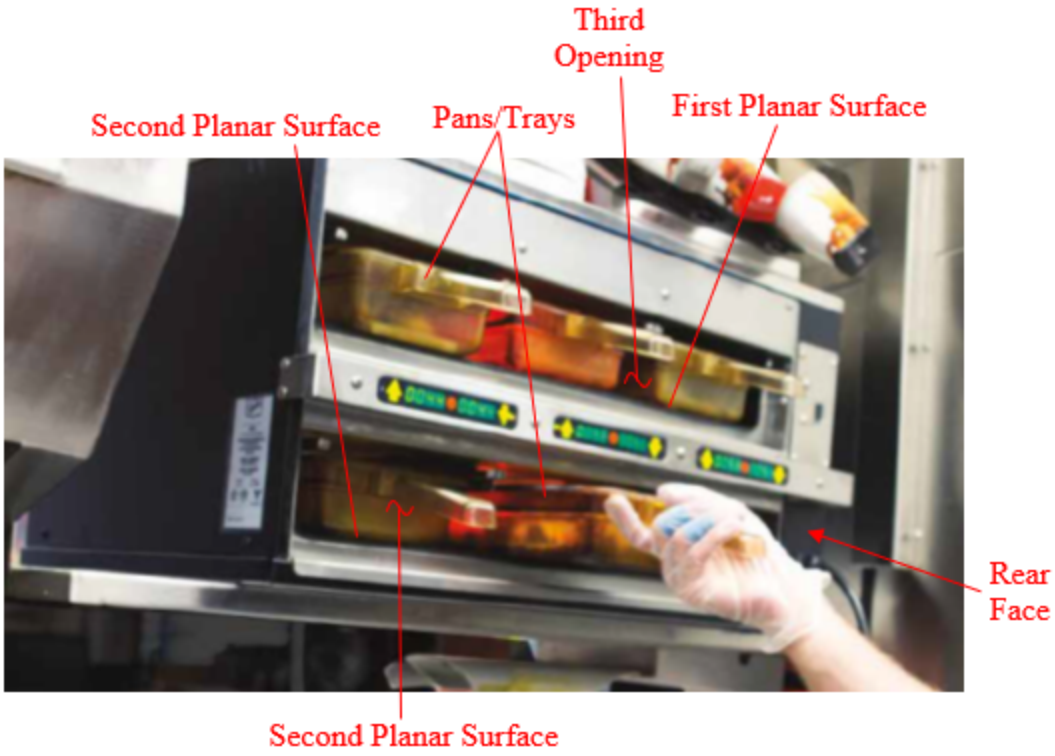
EX1005: 8 (modified to represent rear elevation).

1.h.2/1.i.2

The third and fourth openings allow food pans to pass therethrough from the respective planar surfaces. EX1003: ¶¶183-184, 194-195.



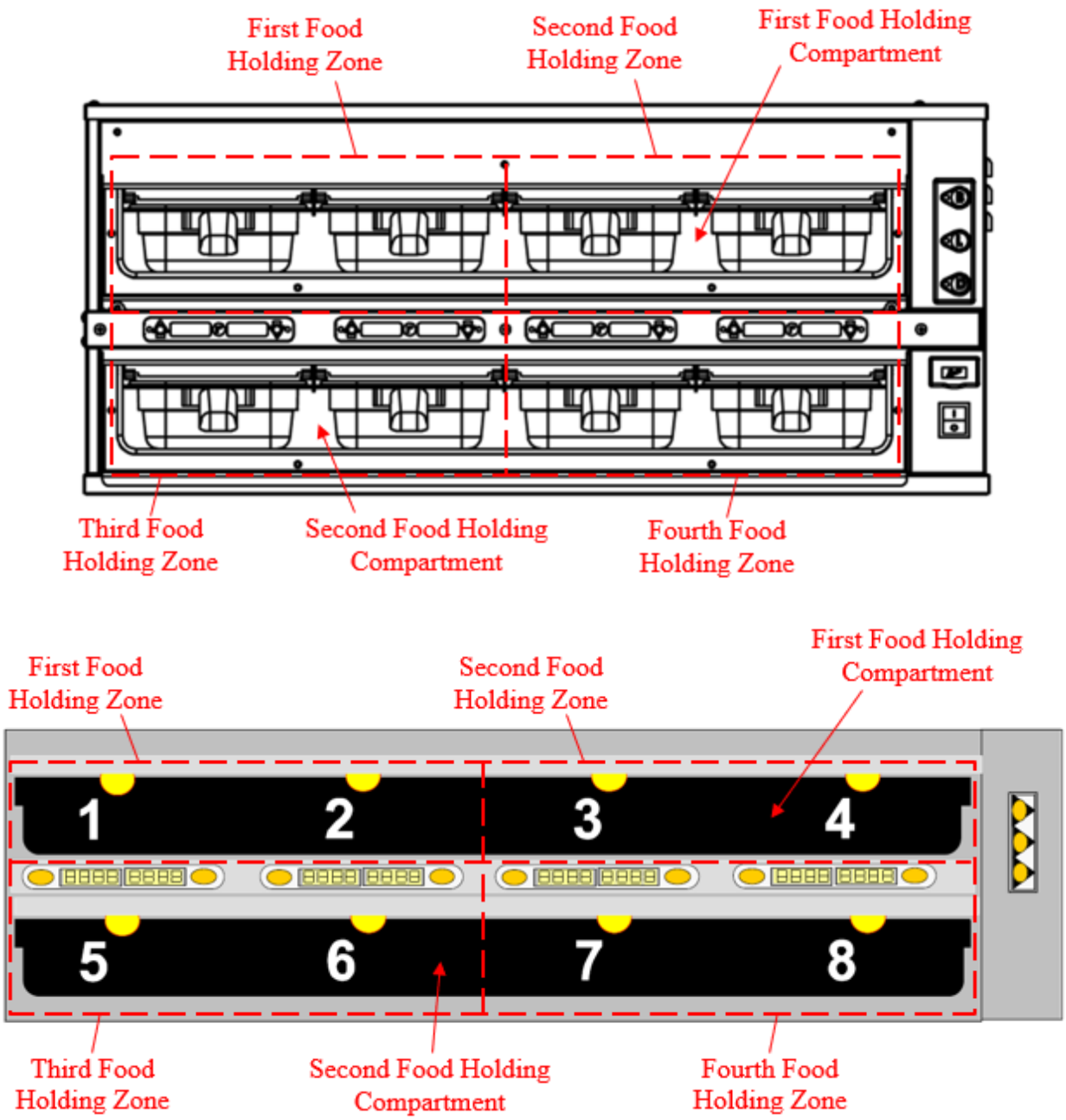
EX1005: 8 (modified-rear).



EX1007: 52.

1.j.1/1.k.1/1.l.1/1.m.1

The first compartment has first and second food holding zones and the second compartment has third and fourth food holding zones. EX1003: ¶¶196-197, 226-227, 234-235, 242-243.

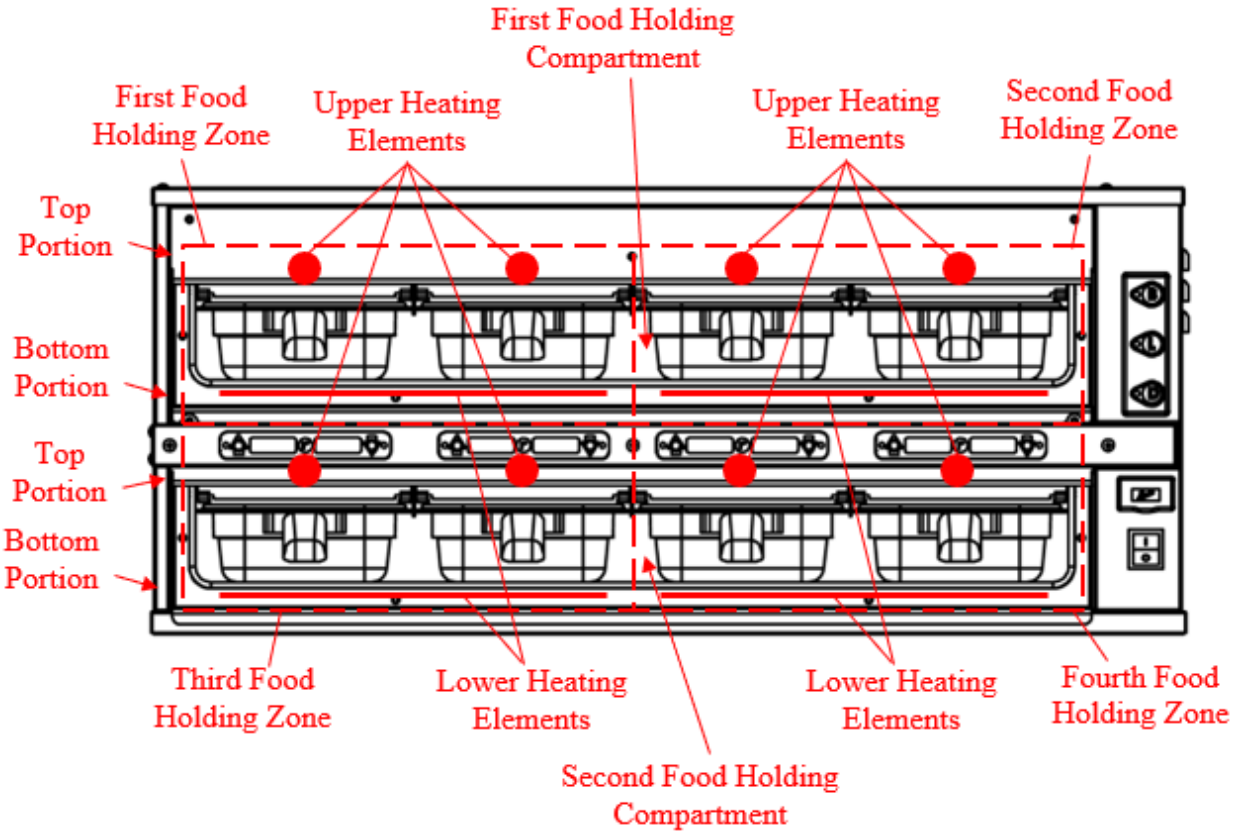


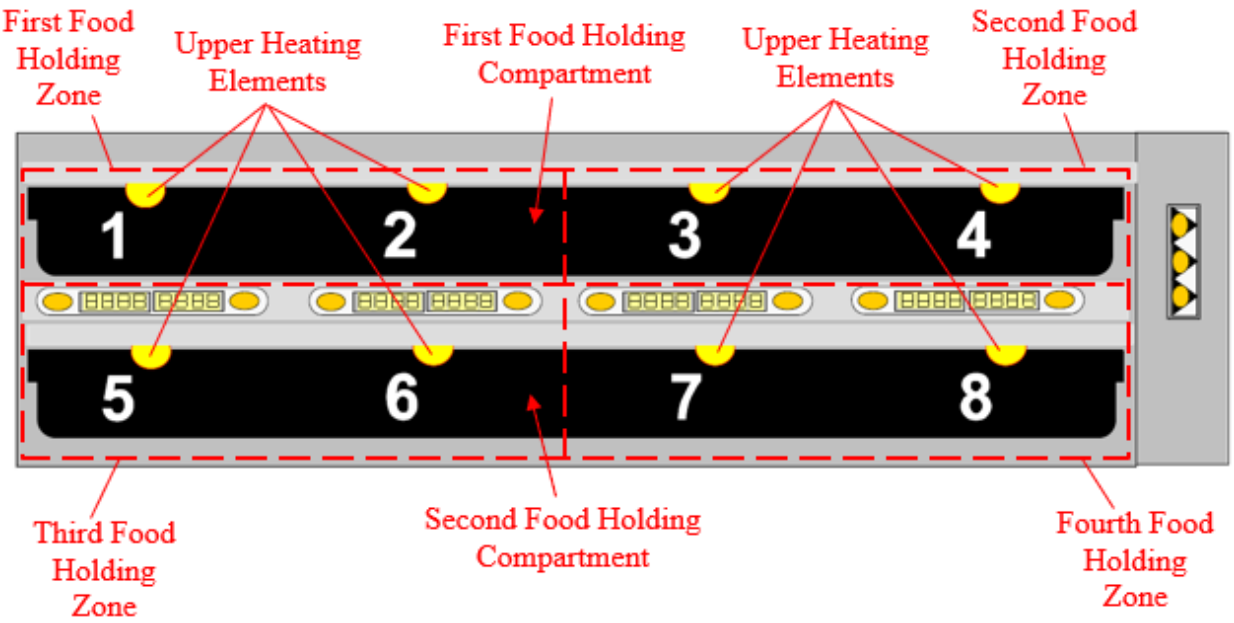
EX1005: 8, 25.

1.j.2/1.k.2/1.l.2/1.m.2

Each zone has independently controllable upper heating elements (IR bulbs) and an independently controllable lower heating element (electrical heating

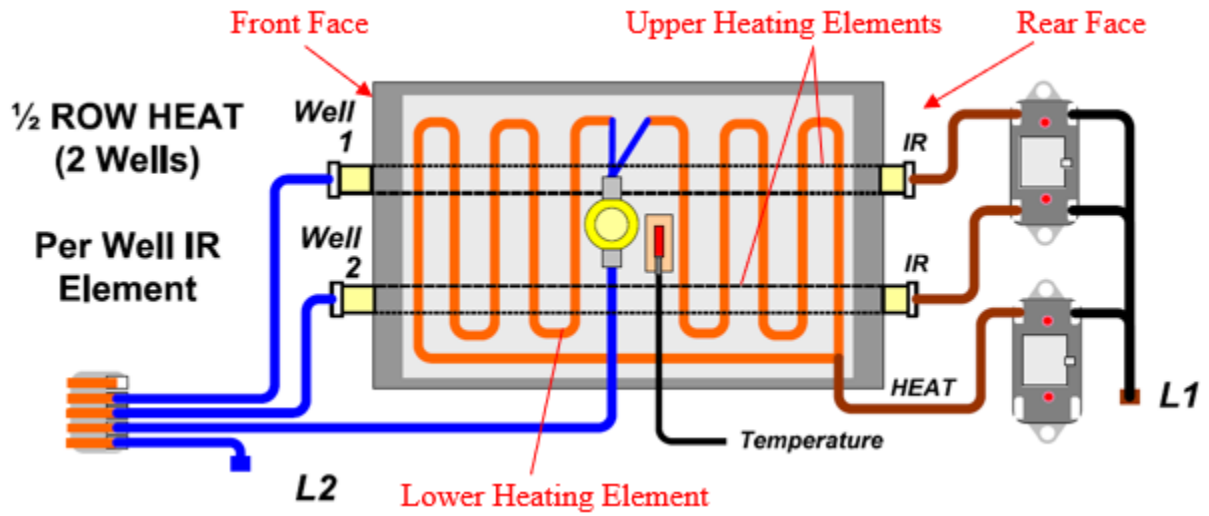
element) at respective top and bottom portions of the compartments. EX1003: ¶¶198-199, 228-229, 236-237, 244-245.





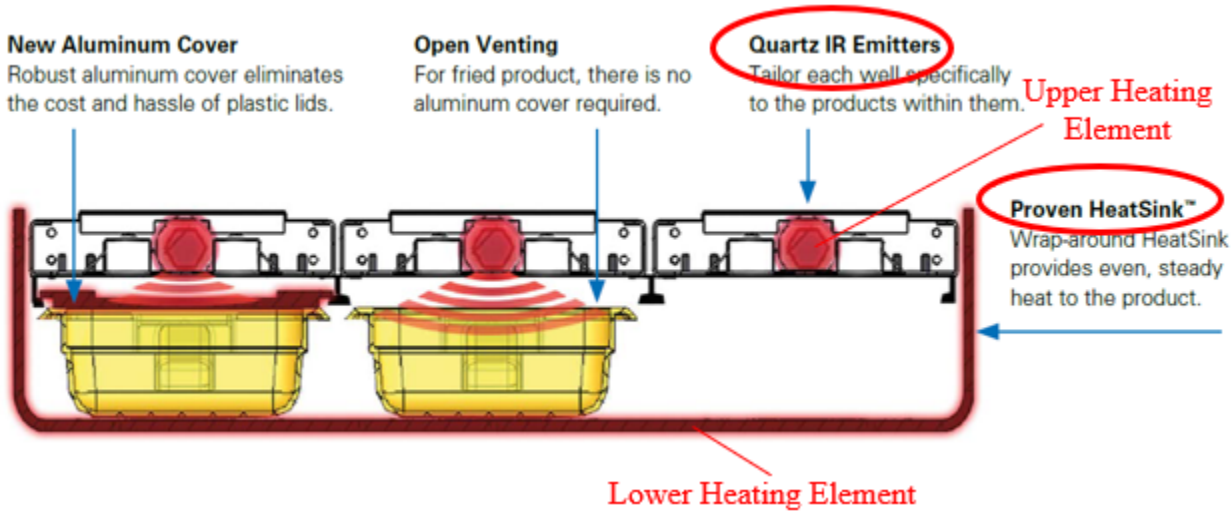
EX1005: 8, 25.

IRHS24 has four food holding zones. EX1003: ¶200. The schematic below shows the upper and lower heating elements for *one* zone. EX1005: 21, 25; EX1007: 53; EX1003: ¶200.

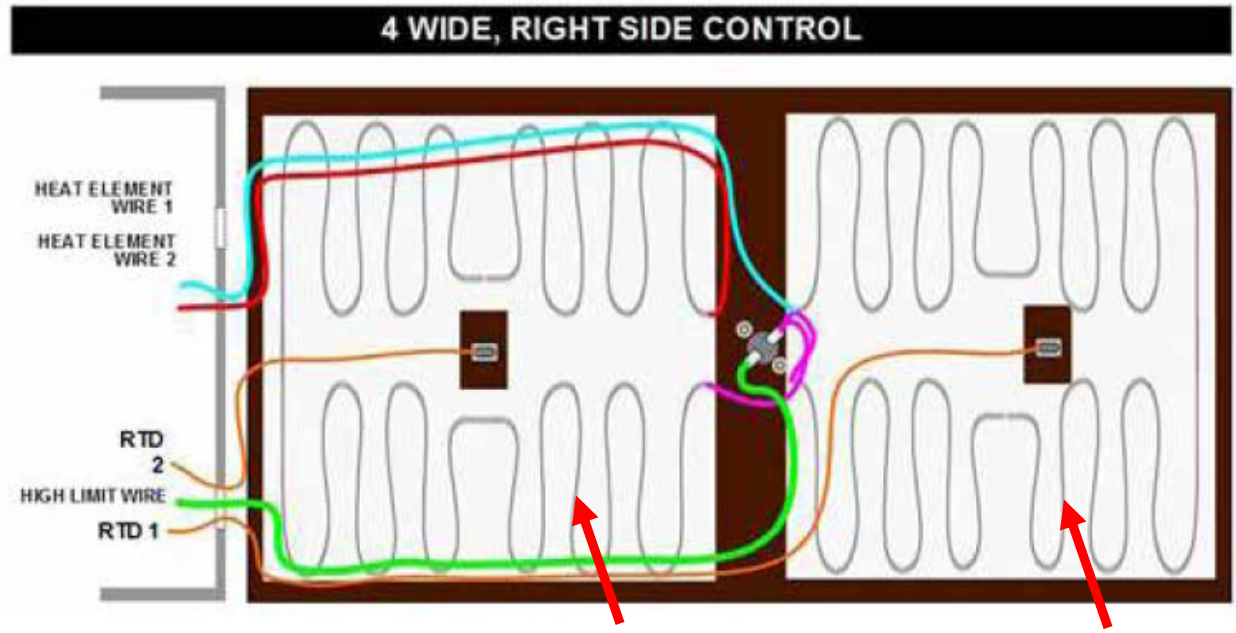


EX1005: 25.

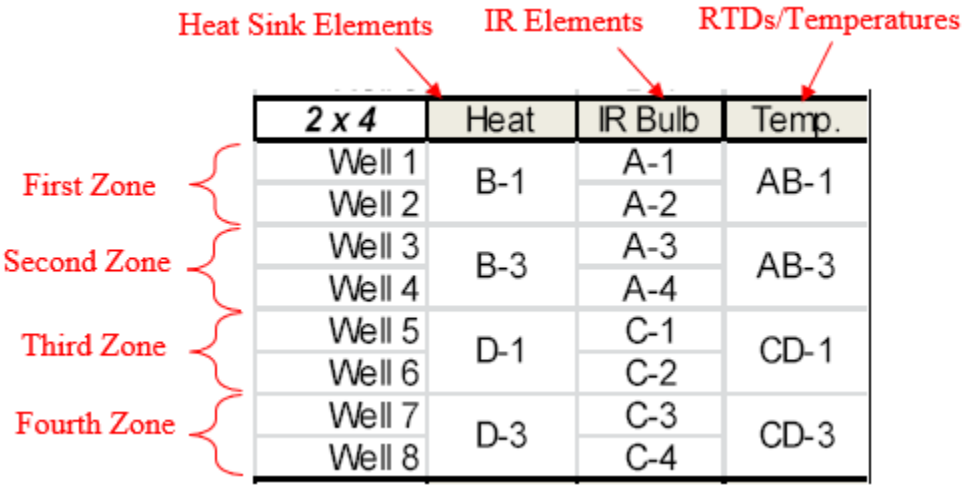
IRHS24 has two IR upper elements per zone (one per bay/well), and a single lower heating element per zone. EX1003: ¶¶201, 203-204. The IR upper heating elements are at a top portion of the respective compartments, and the lower heating elements are at a bottom portion of the respective compartments. EX1006: 1; EX1007: 53; EX1003: ¶202.



EX1007: 53.



EX1008: 58.



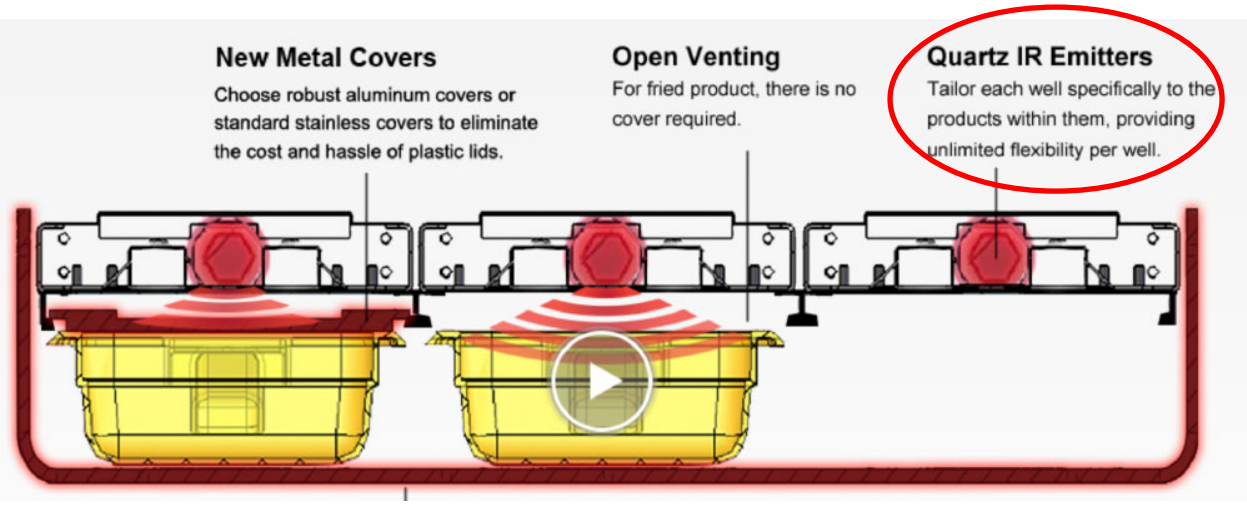
2 x 4	Heat	IR Bulb	Temp.
Well 1	B-1	A-1	AB-1
Well 2		A-2	
Well 3	B-3	A-3	AB-3
Well 4		A-4	
Well 5	D-1	C-1	CD-1
Well 6		C-2	
Well 7	D-3	C-3	CD-3
Well 8		C-4	

EX1008: 64.

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; 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: ¶¶205, 230, 238, 246.

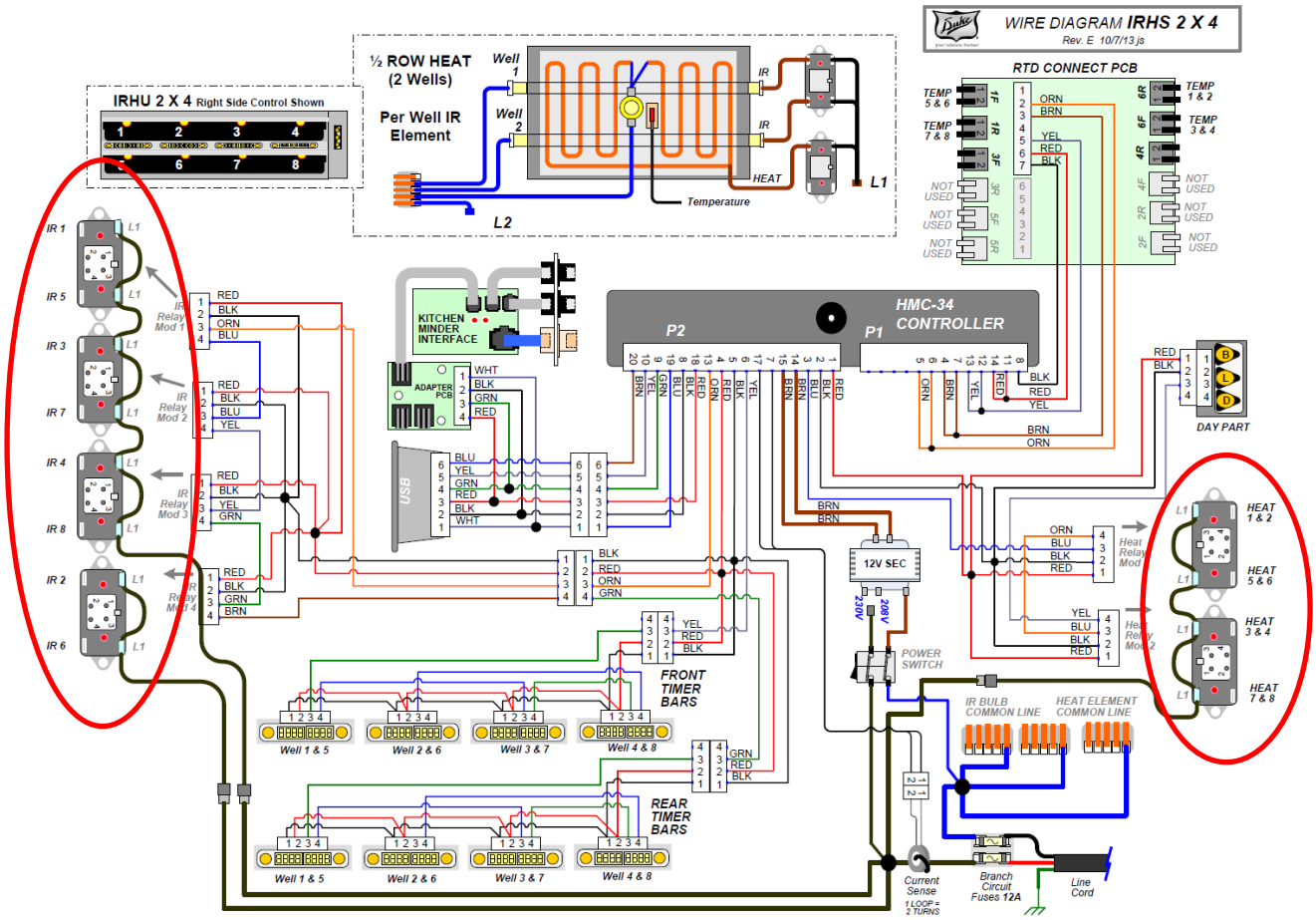
IRHS24 has "[z]oned bottom heat" ("1/2 ROW HEAT (2 Wells)") for "holding environment customization" and "individually controlled IR emitters" that "pulse on and off for optimum … energy … to the food." EX1006: 1; EX1007: 10, 53; EX1005: 15, 25-26; EX1003: ¶206. The IR bulbs operate independently of the lower heating elements via "IR Turbo Boost" for an "instant

shot of IR energy." EX1006: 1; EX1007: 22, 53 ("IR is pulsed only when needed, leading to drastic energy savings"); EX1003: ¶207.



EX1007: 10.

The wiring diagram shows independent control for every heating element via the controller independently operating each heating element's relay. EX1003: ¶¶208, 212-218.

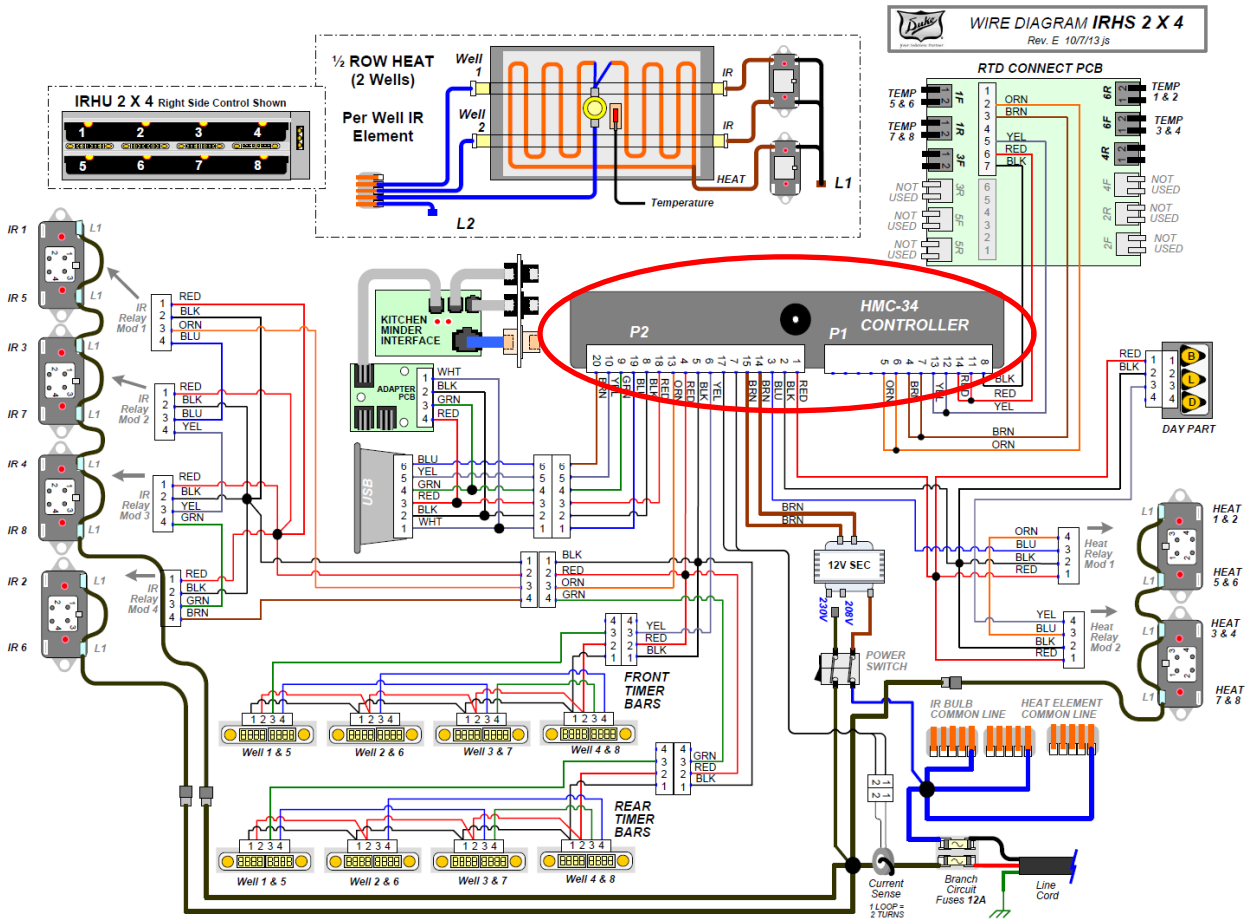


EX1005: 25 (annotated).

1.j.3/1.k.3/1.l.3/1.m.3

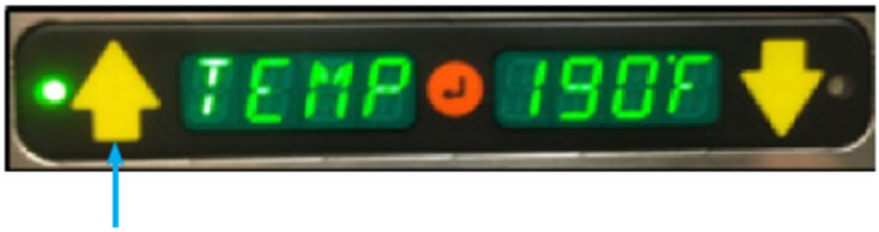
Each zone has a respective controllable food holding temperature. EX1006: 1 ("[c]ustom heat settings for food product"); EX1005: 4 ("[t]his new technology allows you to precisely control the environment in each pan, allowing customized settings for each food product"), 16 ("each food product has a tailored HeatSink temperature and InfraRed pulse rate"); EX1007: 10, 53; EX1003: ¶¶222-223, 231-232, 239-240, 247-248. The controller independently operates the heating

elements to control each zone's vertical temperature profile. EX1006: 1; EX1007: 51; EX1005: 16, 25; EX1003: ¶¶224, 233, 241, 249.



EX1005: 25.

For example, a zone's maintainable bottom temperature is based on sensor feedback and food type temperature setting. EX1005: 16, 25; EX1006: 1; EX1007: 53; EX1003: ¶¶225, 233, 241, 249.



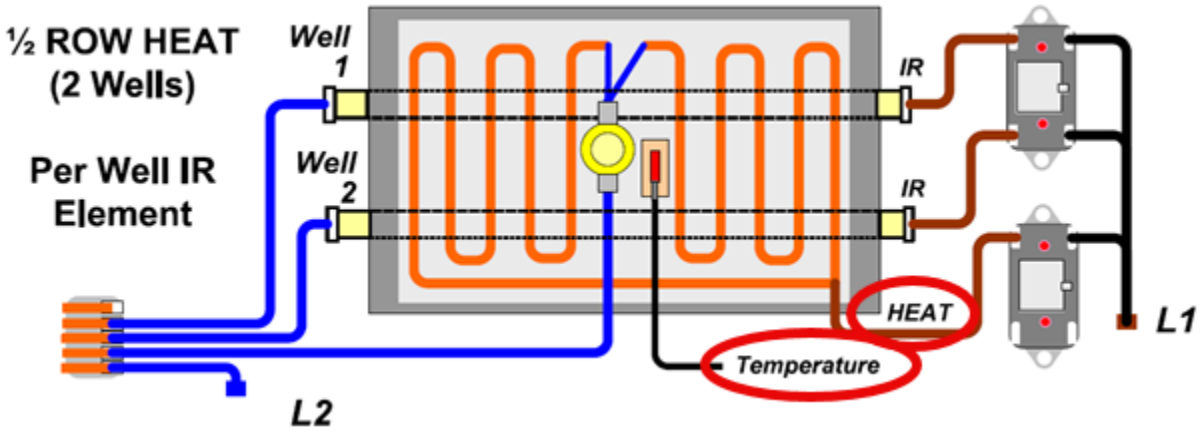
This indicates the Heat Sink Temperature for BURG.

SENS – SENSOR FAULT

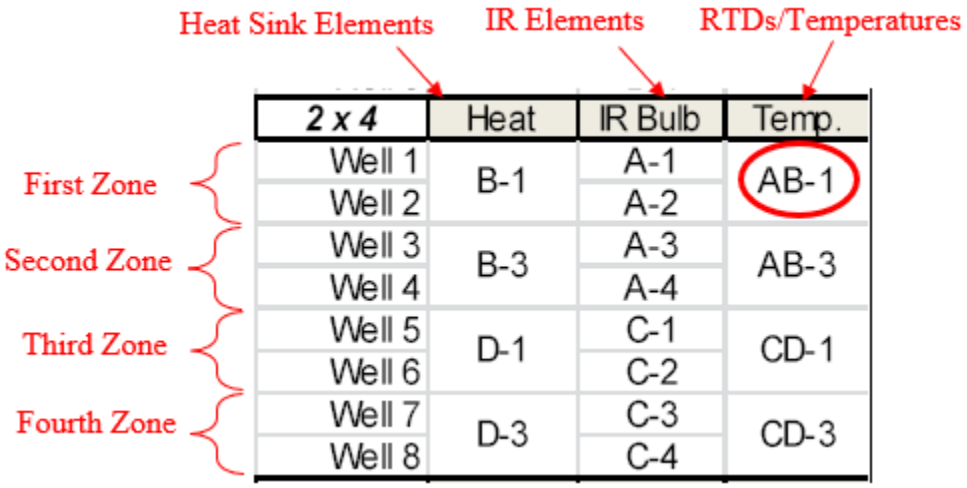
- May indicate the unit has been programmed improperly (i.e. loading a 2x4 product configuration file into a 2x2 unit). An attempt to properly reprogram the unit should be made.
- May indicate a fault with a heat sink temperature sensor. The affected pan location is not available for timing product and 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: 17, 15, 25.

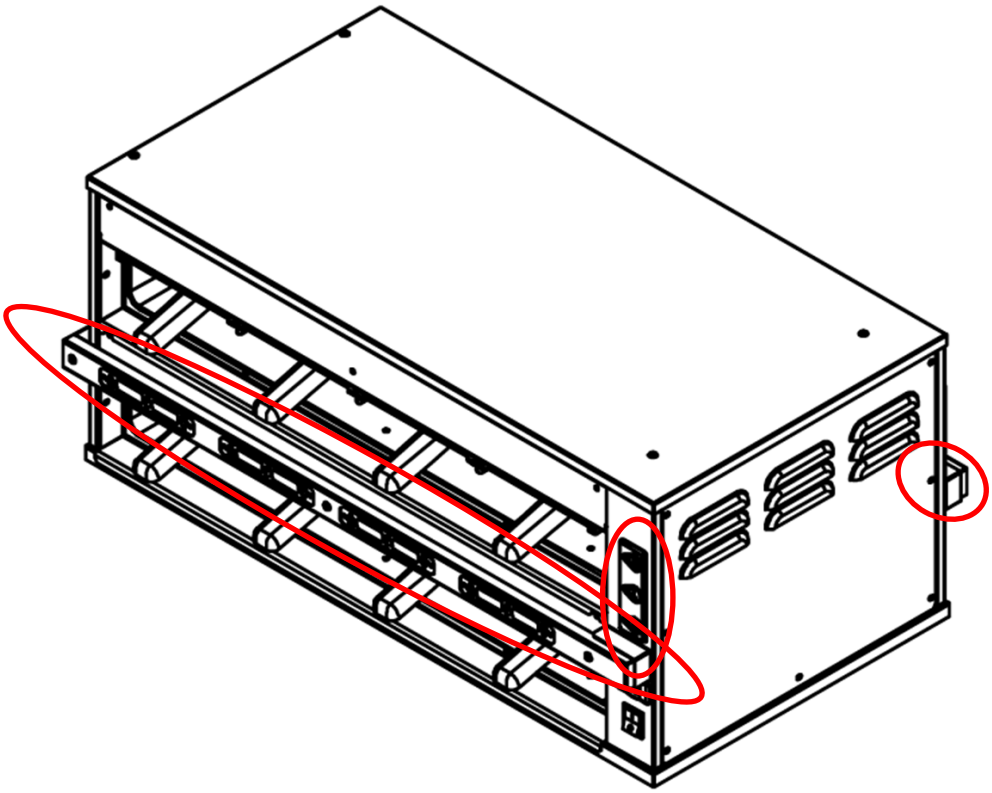


2 x 4	Heat	IR Bulb	Temp.
Well 1	B-1	A-1	AB-1
Well 2		A-2	
Well 3	B-3	A-3	AB-3
Well 4		A-4	
Well 5	D-1	C-1	CD-1
Well 6		C-2	
Well 7	D-3	C-3	CD-3
Well 8		C-4	

EX1008: 64.

1.n

A user interface includes timer bars, USB interface, and/or daypart interface for controlling each zone's temperature. EX1003: ¶¶250-251.

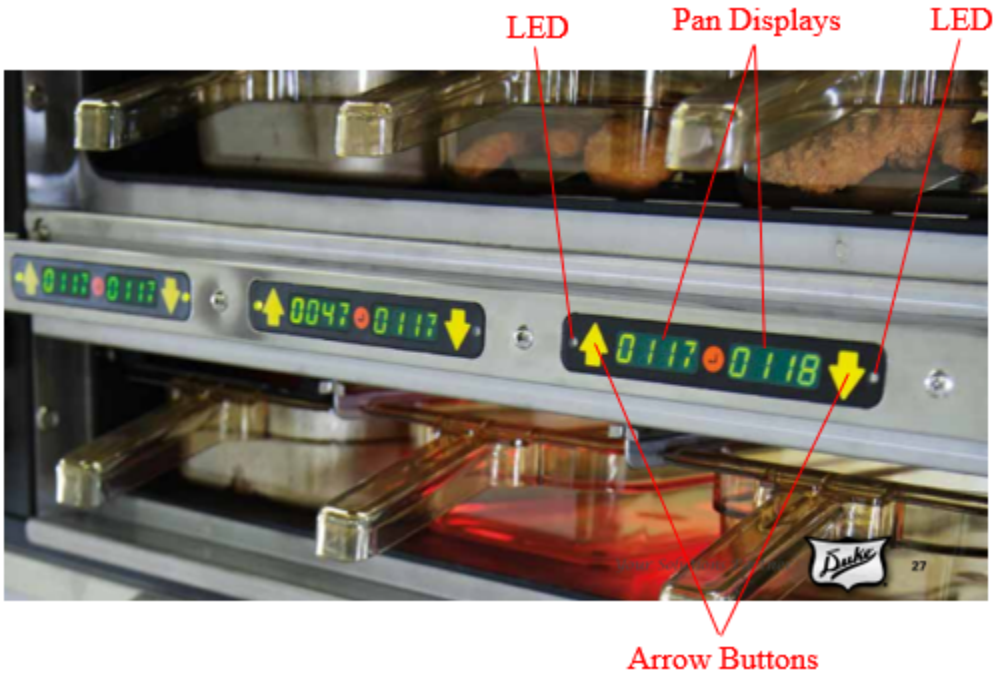


EX1005: 8.



EX1007: 28.

Timer bars control zone temperature by initiating hold cycle and activating heating elements. EX1005: 16; EX1003: ¶252.



EX1007: 52.

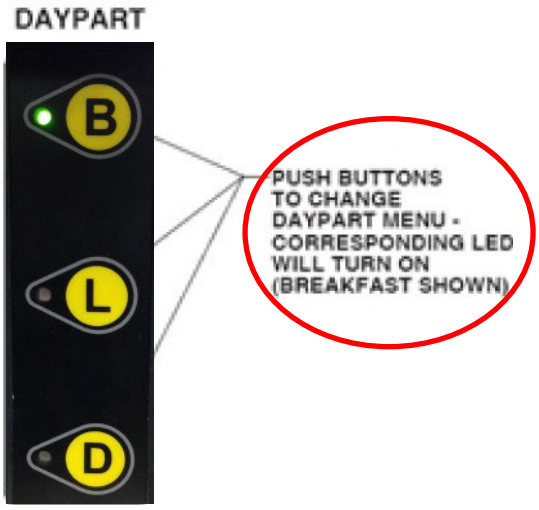
KEYPAD DISPLAYS

The Keypad Displays control and monitor the performance of each heating well. They are located inside of the Menu Bar(s) and the quantity varies (depending on model).

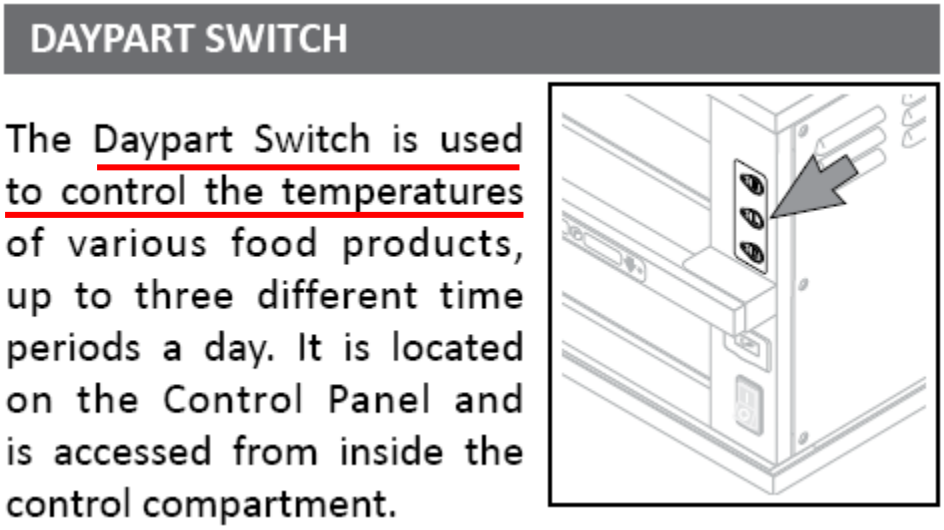
EX1008: 14.

USB interface programs each zone's temperature settings. EX1005: 19; EX1006: 1; EX1007: 58; EX1003: ¶253.

Daypart interface and/or timer bars control zone's temperature by switching between "Breakfast, Lunch, and Dinner" temperature settings. EX1005: 16-17; EX1006: 1; EX1003: ¶¶254-255.



EX1005: 16.



EX1008: 29.

MENU MODE – MANUAL ALTERNATIVE TO CHANGE DAYPART

1. Status LED stops flashing and "MEAL SET1" appears on the Display.



2. Press the ENTER Button again. Status LED FLASHES indicating Edit Mode.

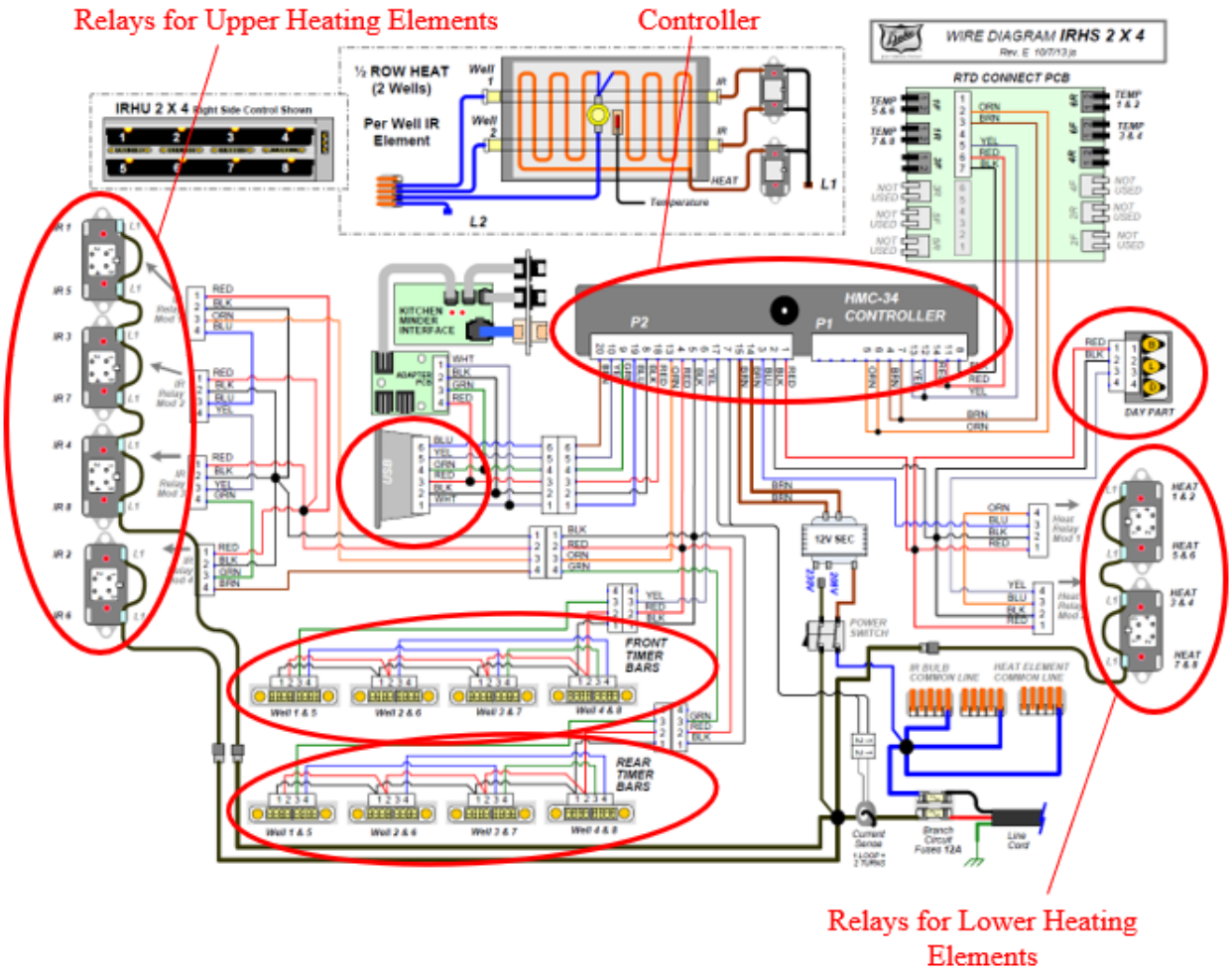


3. Use the Arrow Buttons to scroll to desired Daypart (i.e. "MEAL SET2", MEAL SET3") and press the ENTER Button to accept.
4. Status LED stops flashing, "UPDATING" is displayed for a few seconds, and then the desired Daypart ("MEAL SET") is displayed.

EX1005: 17.

1.o

A controller is operatively coupled to each heating element and user interface. EX1003: ¶¶256-257.



EX1005: 25.

CONTROLLER

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

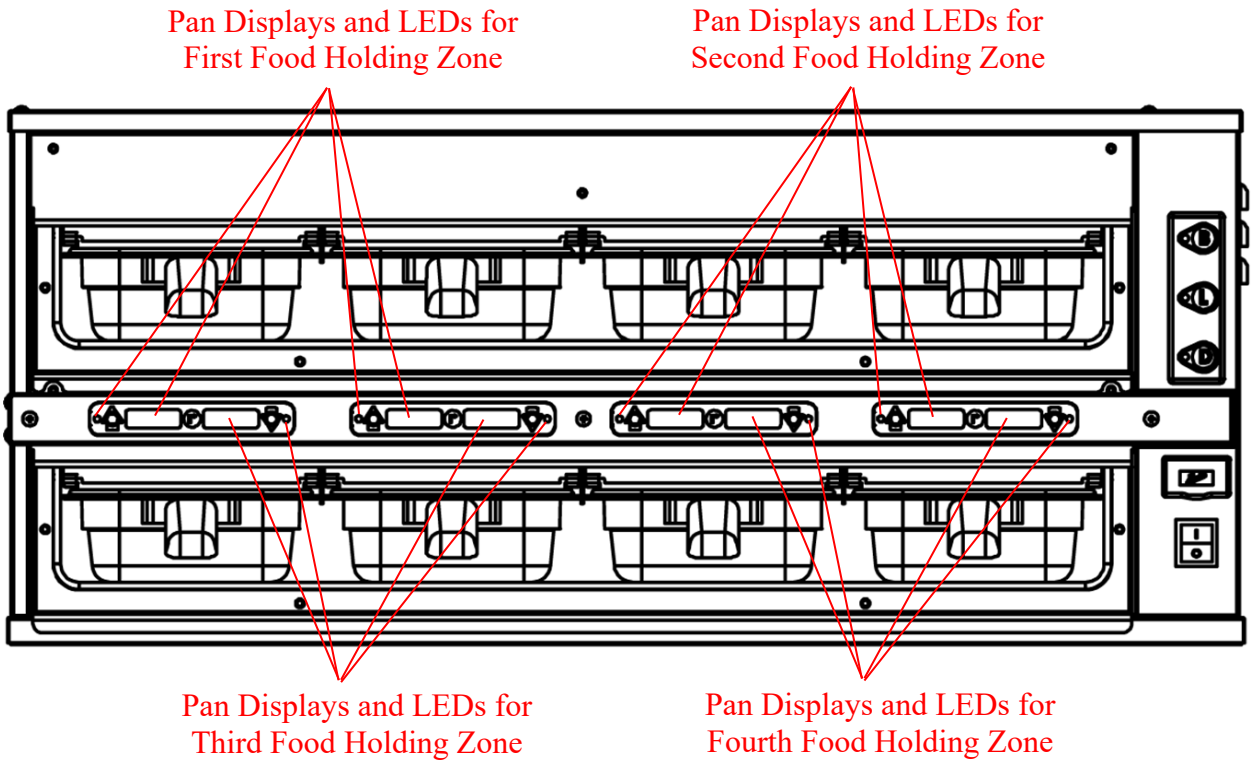
EX1008: 30.

The heating elements are independently controllable so each zone has an independently controlled food holding temperature. EX1005: 16; EX1006: 1; EX1007: 53; Section IV(B)(1.j.2/1.k.2/1.l.2/1.m.2); EX1003: ¶¶258-259. The

controller's connection to each heating element enables independent heating. EX1003: ¶258. The heating elements of each zone are operated independently per the specific food product type(s) assigned to the bay/zone. EX1006: 1; EX1005: 4 ("customized settings for each food product"), 16 ("each food product has a tailored HeatSink temperature and InfraRed pulse rate"), 25; EX1007: 10, 51, 53; EX1003: ¶260. For example, each zone has an independent temperature via sensor feedback and food type temperature setting. Section IV(B)(1.j.3/1.k.3/1.l.3/1.m.3). EX1003: ¶¶261-263

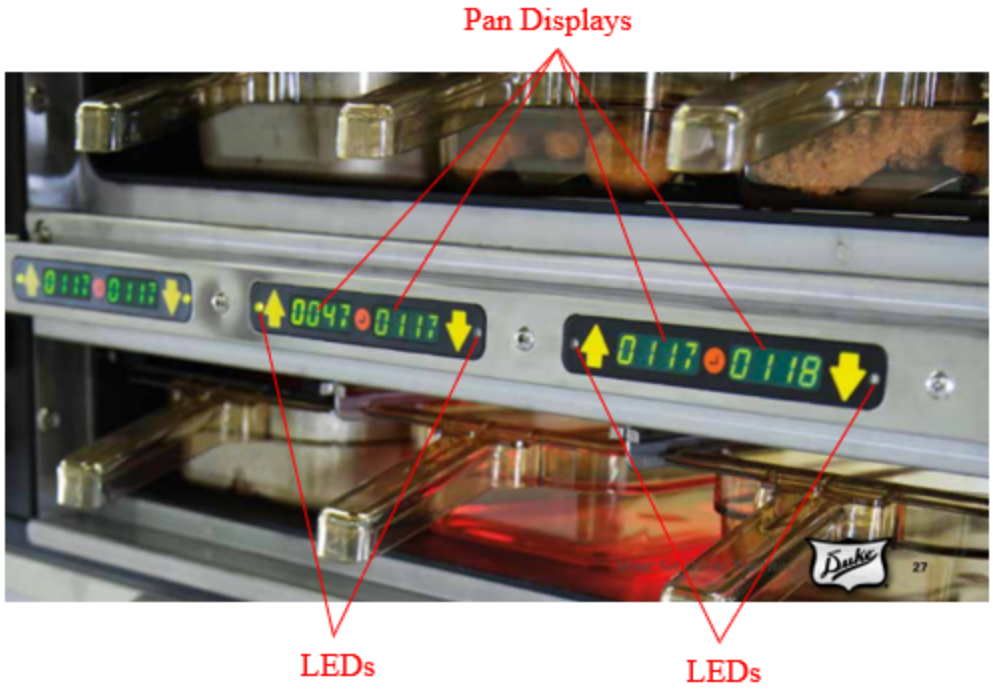
C. Claim 2

Pan displays and LEDs are graphical interfaces displaying each zone's temperature. EX1001: 6:1-15; EX1005: 21; EX1006: 1; EX1008: 42; EX1003: ¶¶264-268.



Displays show actual temperature or Product names?

EX1005: 8, 21.





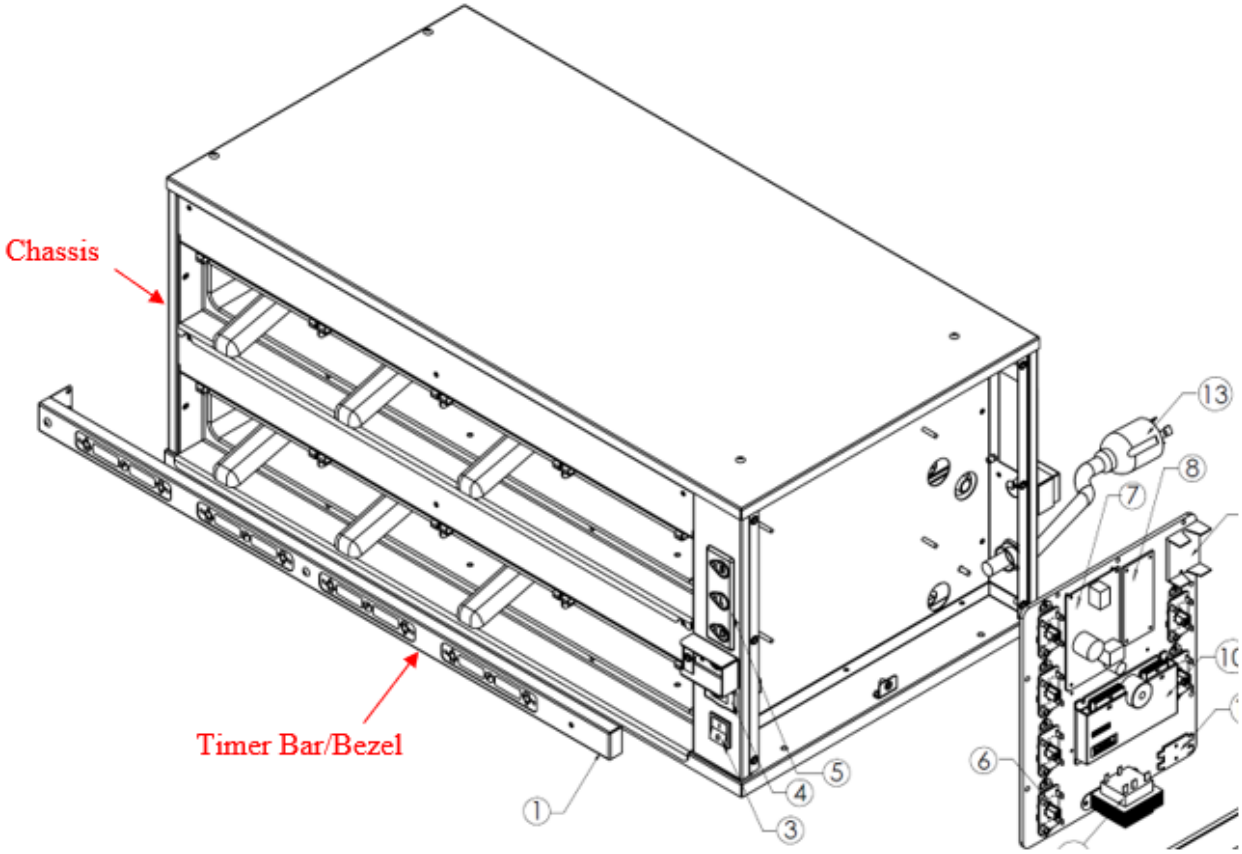
More Product Information at Each Well

(Product, Hold Time Remaining, Temperature)

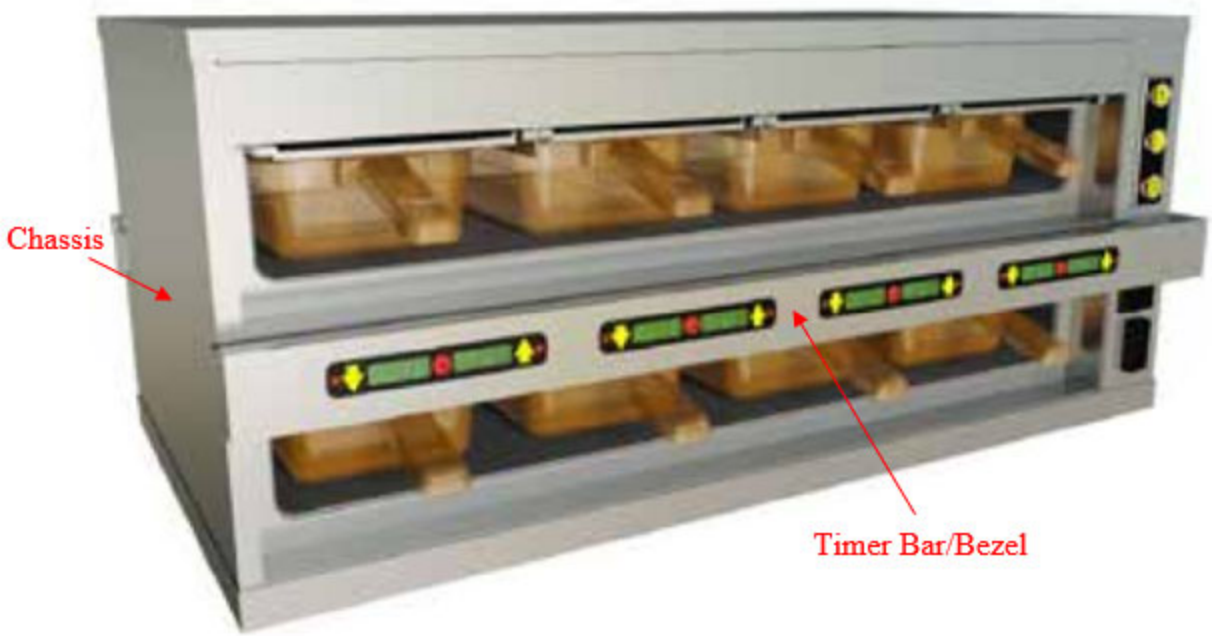
EX1007: 10-11, 52.

D. Claim 3

A front timer bar/bezel is attached to the chassis. EX1003: ¶¶269-270.

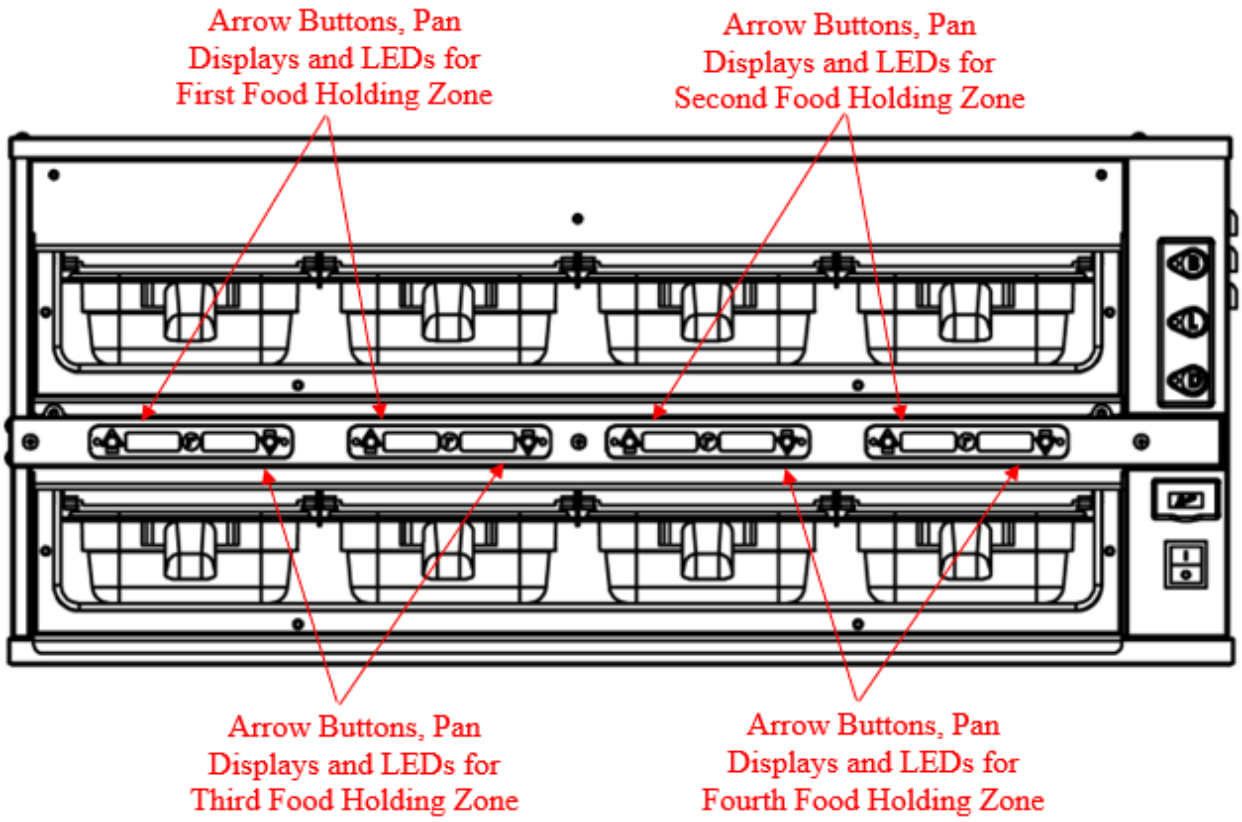


EX1005: 19.



EX1007: 56.

The front timer bar/bezel has dedicated controls (arrow buttons) and dedicated displays (LEDs and pan displays) (user interfaces) for each bay/zone. EX1003: ¶271. Each arrow button points to a corresponding bay/zone for an LED and pan display. EX1005: 16. EX1003: ¶¶271-272.



OPERATION – TIMER BAR FUNCTIONALITY

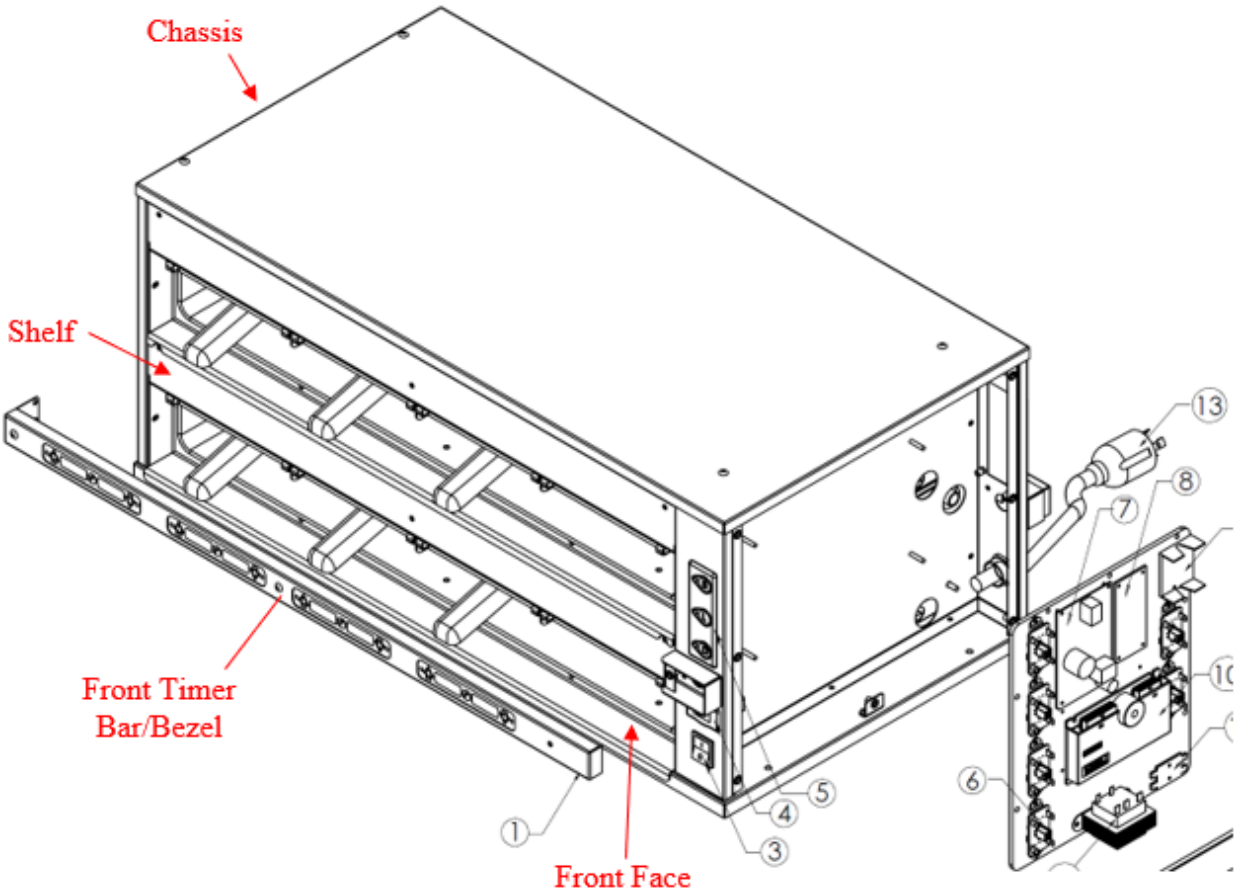


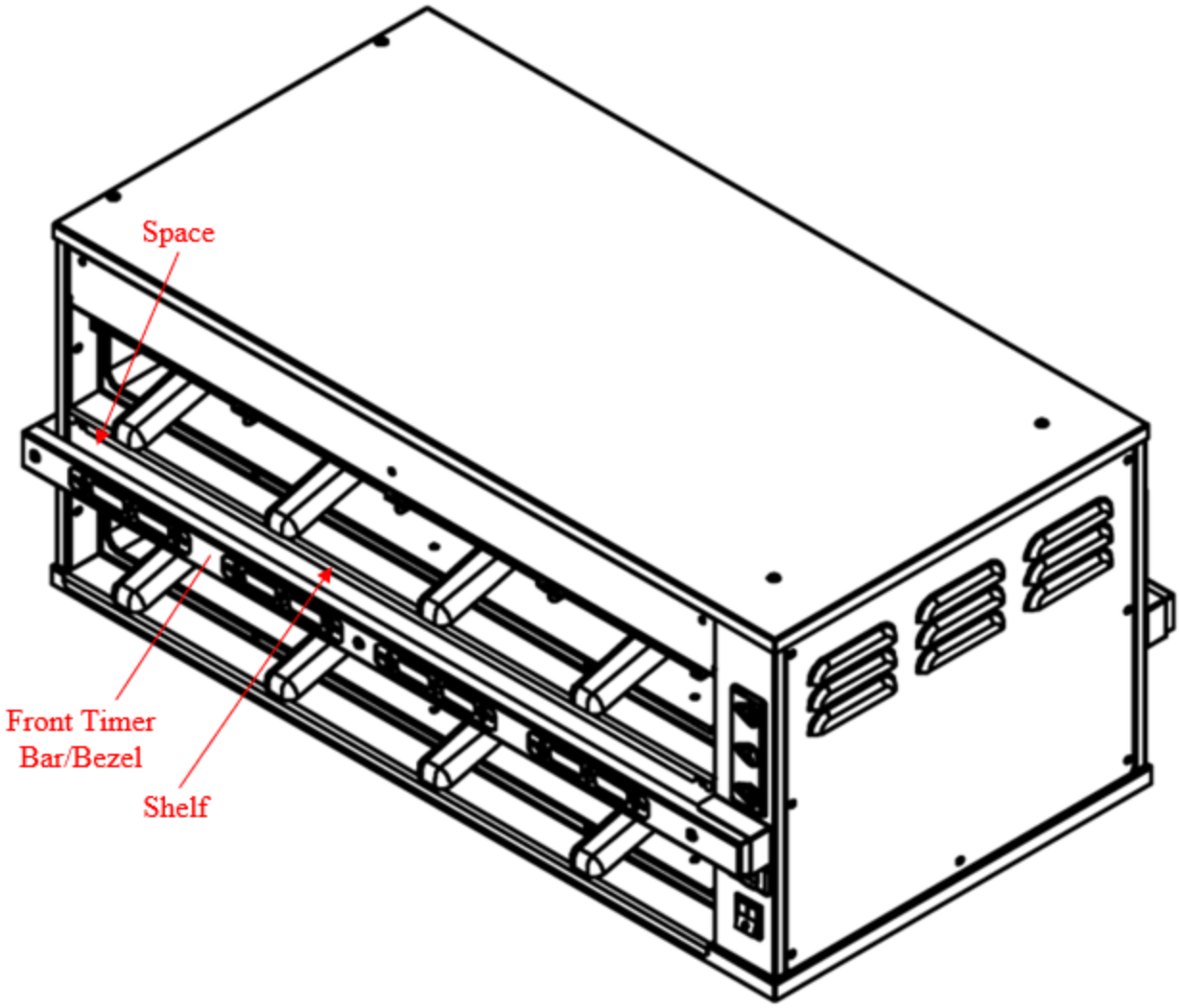
2. Arrow Buttons
   a. Used for Starting / Stopping / Resetting Timer.
   b. Used to access MENU MODE.
   c. Indicate which pan the adjacent Status LED and Pan Display are linked to.
3. Pan Display
   a. Displays Product Name and Hold Time Remaining (alternates between the two when Timer is active).
4. Enter Button
   a. Used to access MENU MODE.

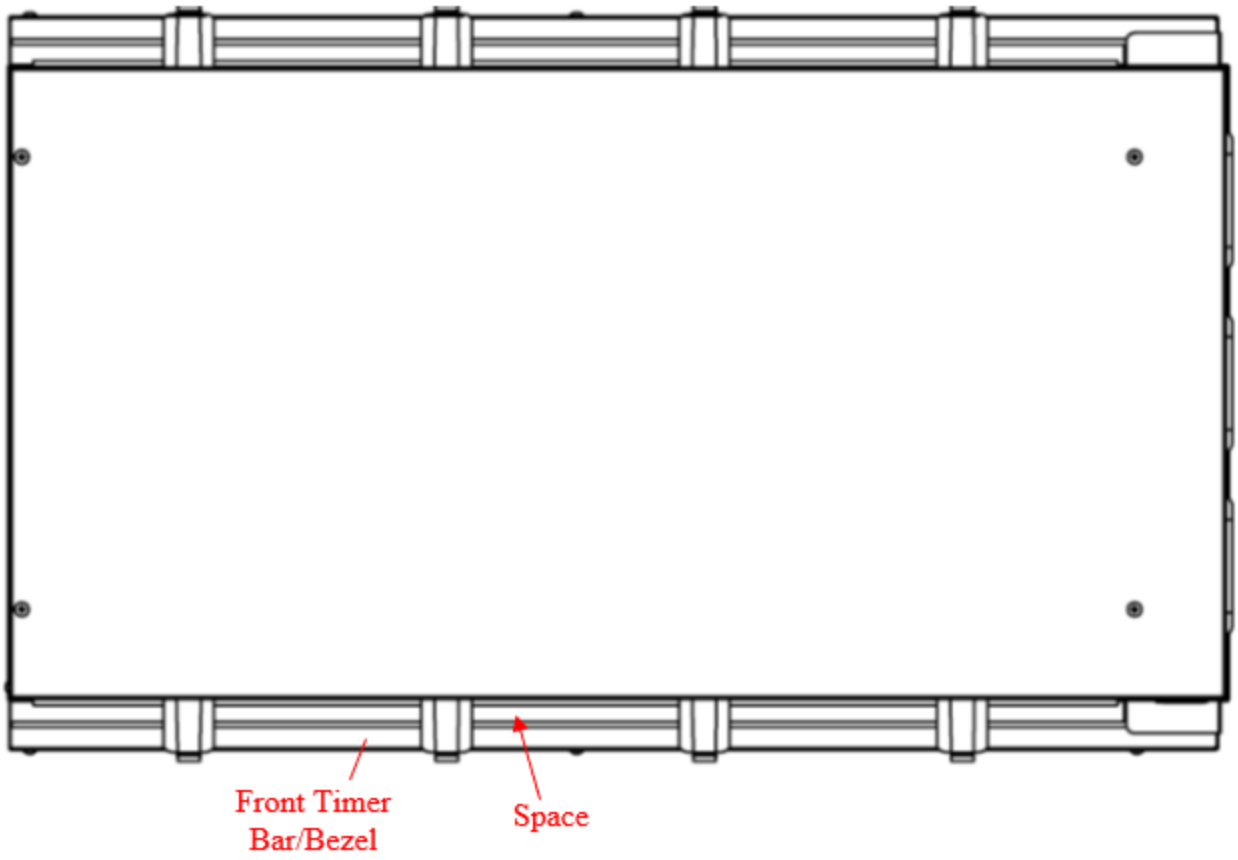
EX1005: 8, 16.

E. Claim 4

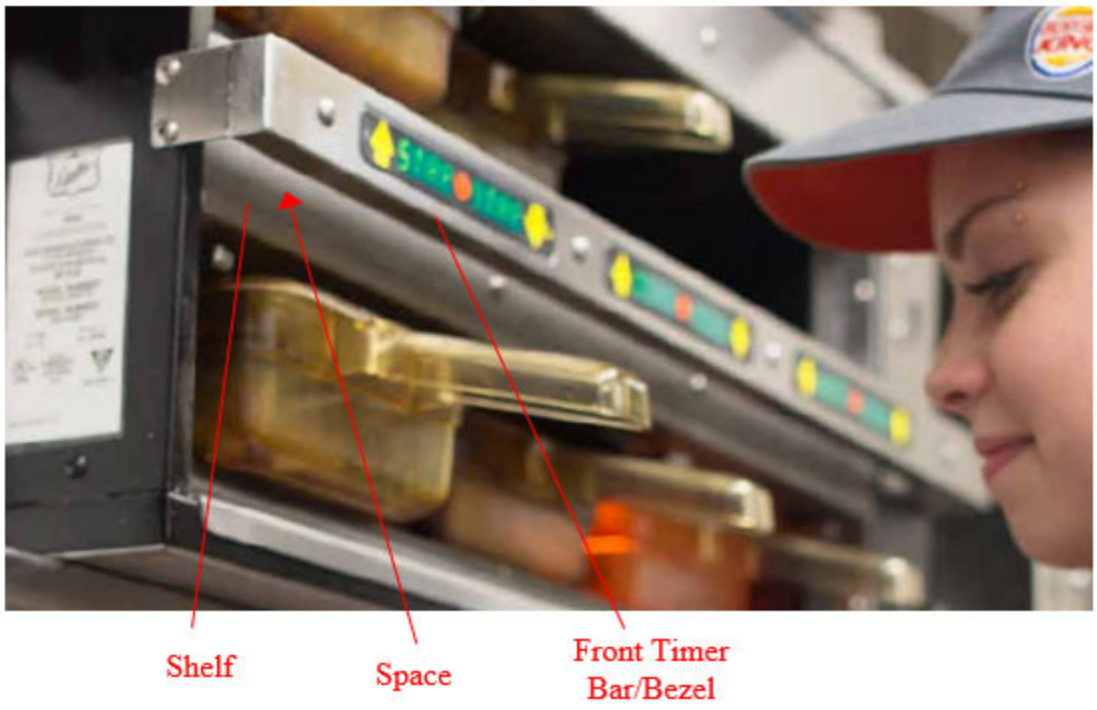
The front timer bar is set forward from the shelf/front face, defining a space therebetween. EX1003: ¶¶273-275.


Chassis
Shelf
Front Timer
Bar/Bezel
Front Face
1
3
4
5
6
7
8
13


Space
Front Timer
Bar/Bezel
Shelf


Front Timer
Bar/Bezel
Space

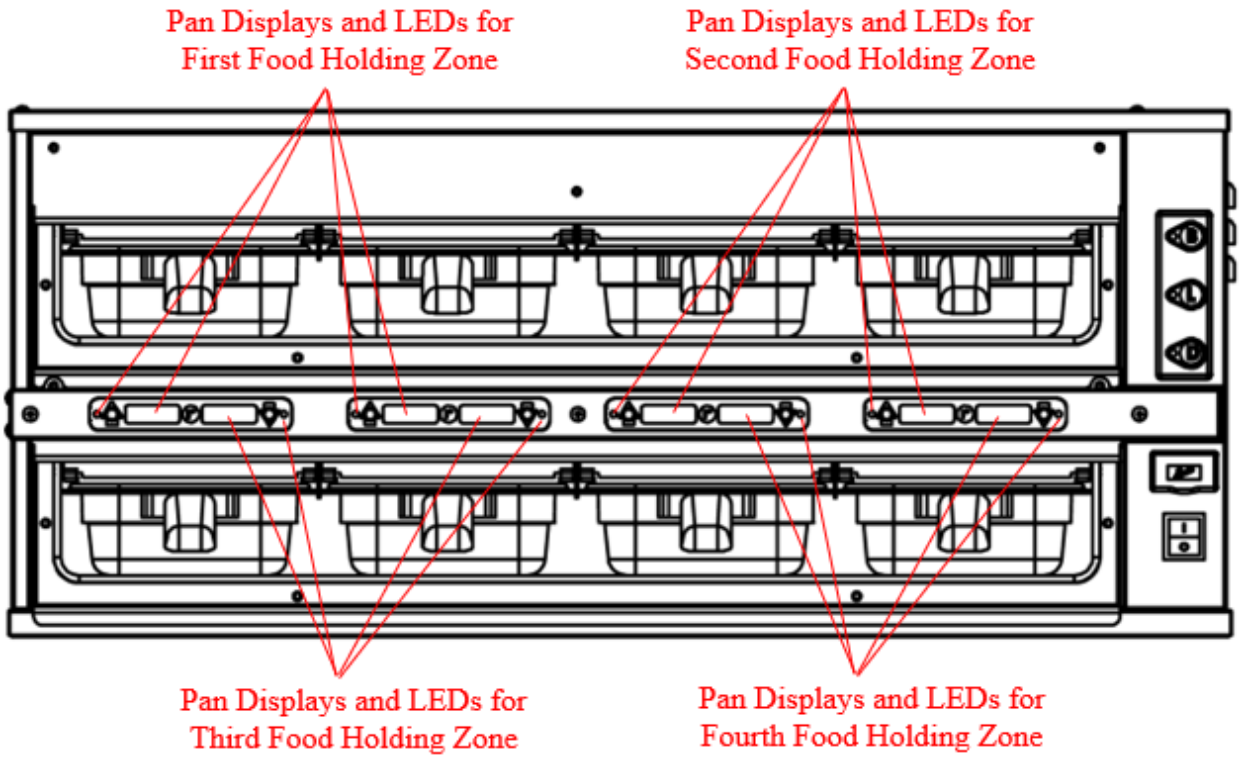
EX1005: 8, 19.

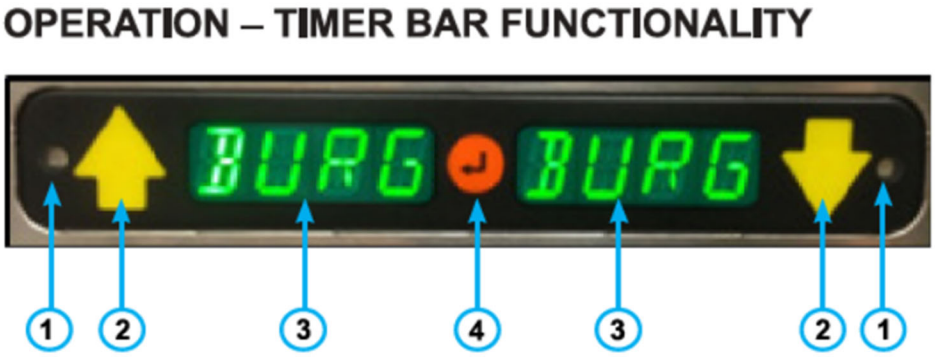

Shelf
Space
Front Timer
Bar/Bezel

EX1007: 28.

F. Claim 6

Timer bar's/bezel's pan displays and LEDs are graphical interfaces displaying each zone's temperature setting. EX1001: 6:1-15; EX1005: 16-17; EX1006: 1; EX1008: 47; EX1003: ¶¶276-280.





2. Arrow Buttons
   a. Used for Starting / Stopping / Resetting Timer.
   b. Used to access MENU MODE.
   c. Indicate which pan the adjacent Status LED and Pan Display are linked to.
3. Pan Display
   a. Displays Product Name and Hold Time Remaining (alternates between the two when Timer is active).
4. Enter Button
   a. Used to access MENU MODE.

MENU MODE – DISPLAY LINK, HOLD TIME, TEMPERATURE

1. Press the UP Arrow Button repeatedly to scroll up or down through “LINK”, “TIME”, and “TEMP”. The DOWN Arrow button can be used to cycle the opposite direction.



This indicates all products named BURG are linked pan locations.

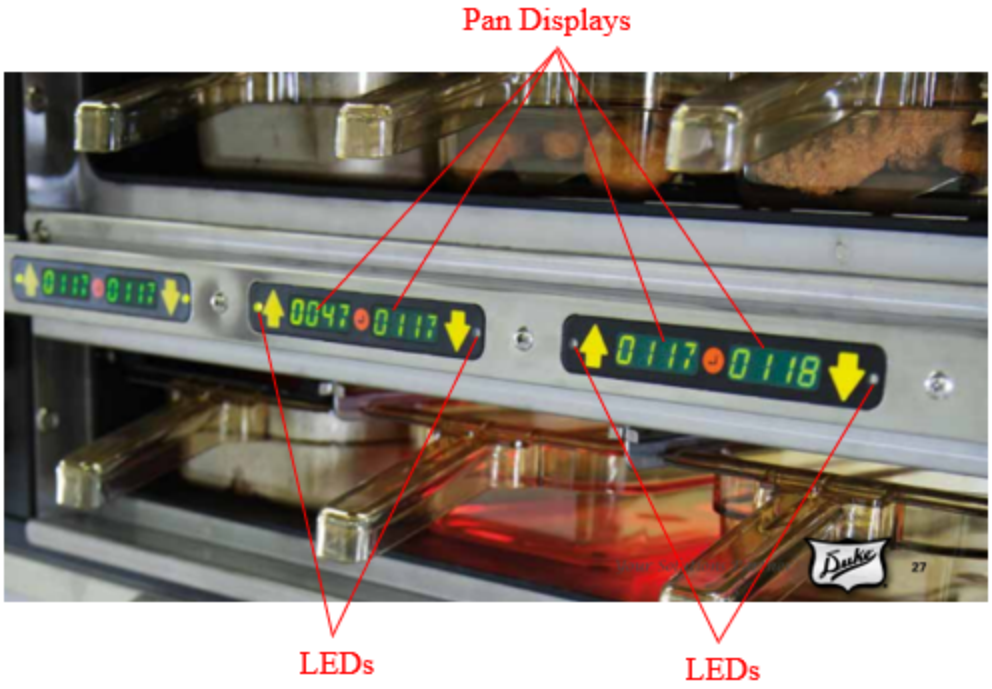


This indicates the hold time for BURG.



This indicates the Heat Sink Temperature for BURG.

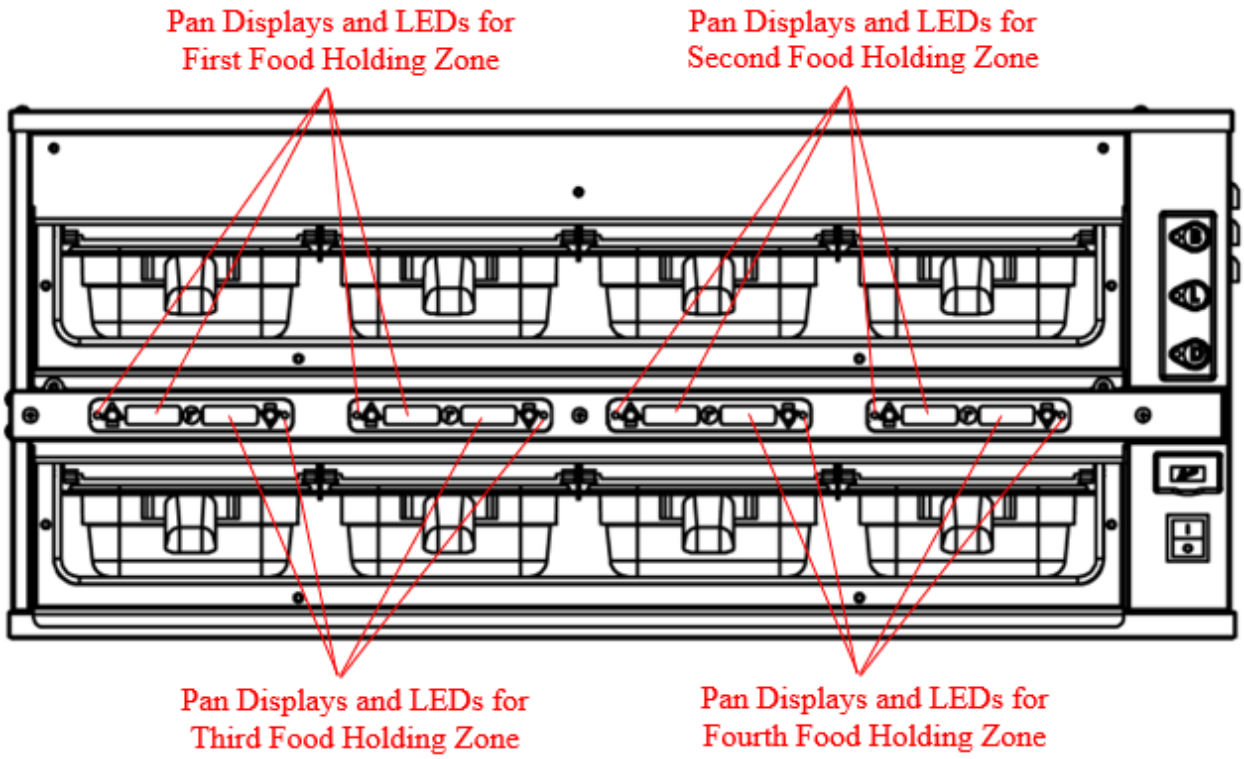
EX1005: 8, 16-17.



EX1007: 52.

G. Claims 7/8

LEDs and pan displays display additional food item information (inactive/active, “use first”, name, hold time) about the food in the zone. EX1006: 1; EX1005: 16; EX1003: ¶¶281-285.

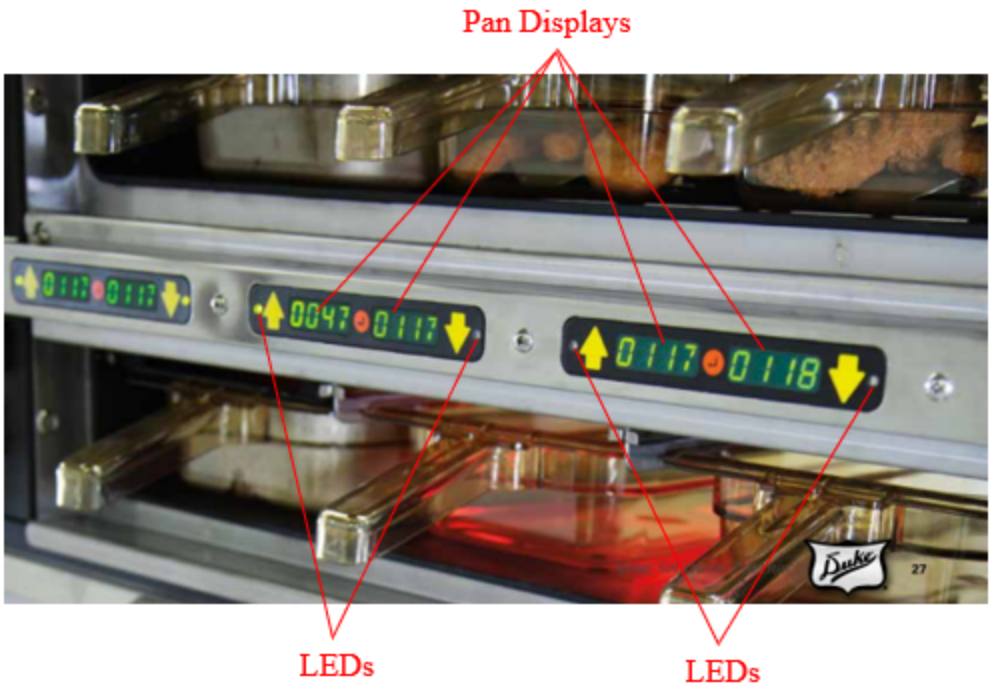


OPERATION – TIMER BAR FUNCTIONALITY



1. Status LEDs: Used for indicating status of pan.
   a. Non-Illuminated -Timer is Inactive – no product in pan
   b. GREEN – Timer is Active – product in pan (use first)
   c. FLASHING GREEN = Cook Warning Time reached (cook more product) or keypad in EDIT MODE (programming)

EX1005: 8, 16.





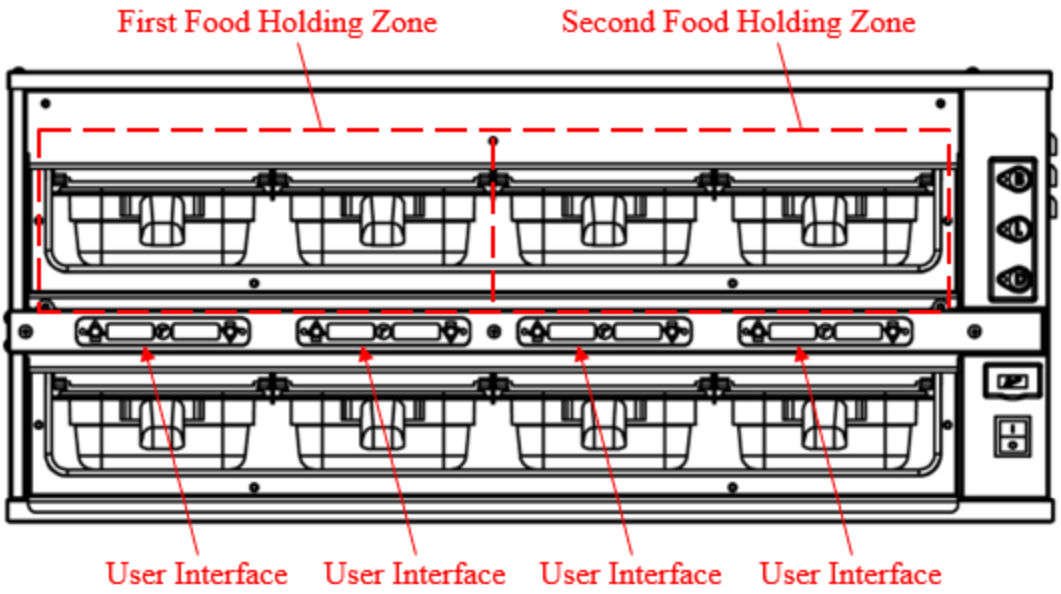
More Product Information at Each Well

(Product, Hold Time Remaining, Temperature)

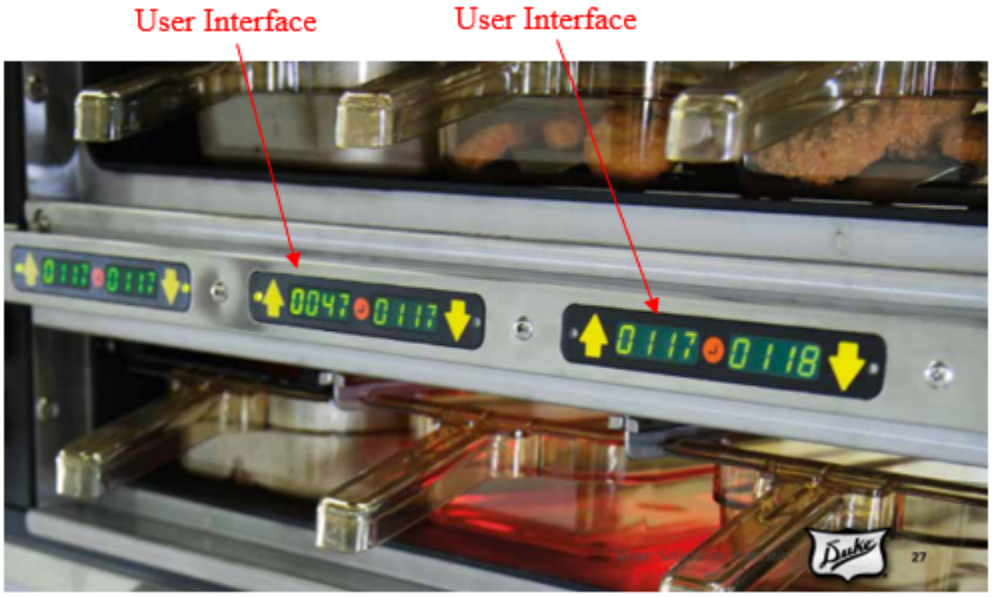
EX1007: 10-11, 52.

H. Claim 9

The front timer bar/bezel has two user interfaces horizontally below the first and second zones. EX1003: ¶¶286-289.



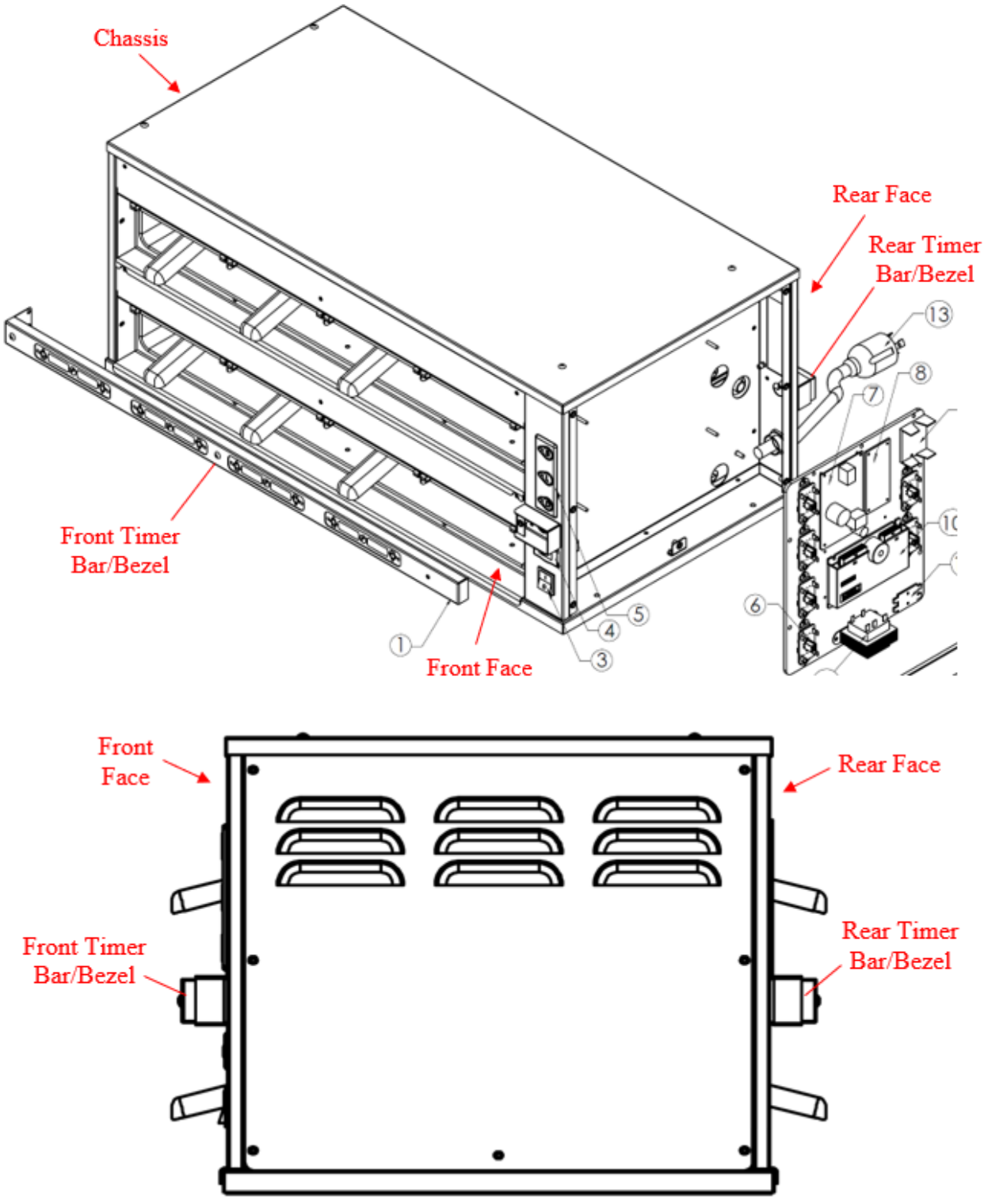
EX1005: 8.



EX1007: 52.

I. Claim 10

Front and rear timer bars/bezels are proximate the respective front and rear faces. EX1003: ¶¶290-292.


Chassis
Rear Face
Rear Timer
Bar/Bezel
13
8
7
10
6
5
4
3
1
Front Timer
Bar/Bezel
Front Face
Front
Face
Rear Face
Front Timer
Bar/Bezel
Rear Timer
Bar/Bezel

EX1005: 8, 19.





EX1007: 51-52.

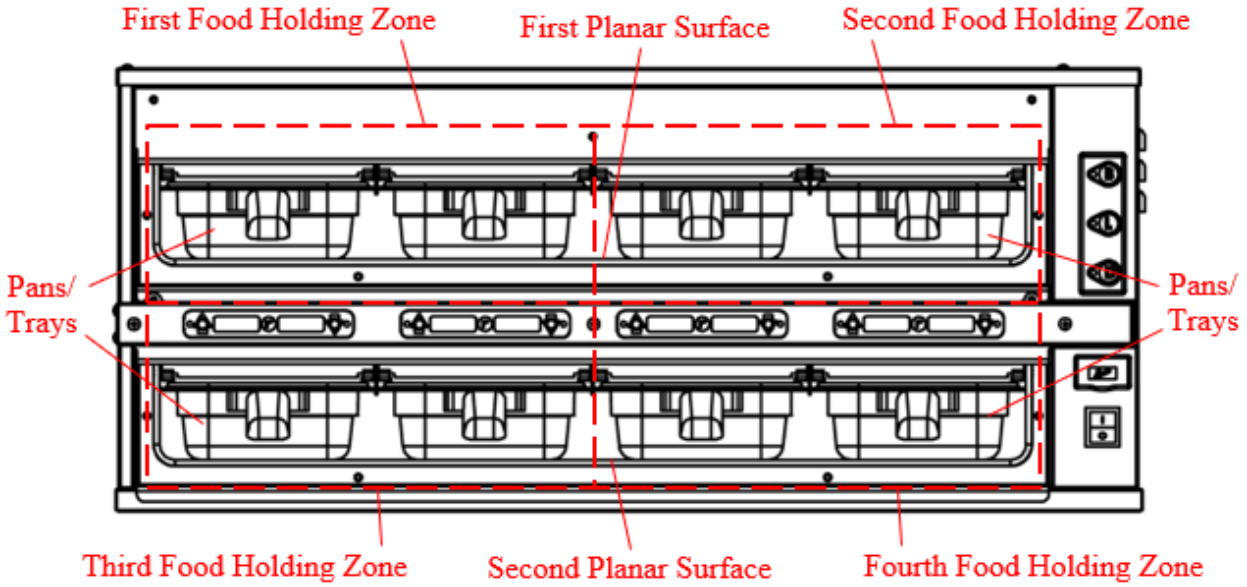
MENU BA RS

The Menu Bars hold the Keypad Displays that control and monitor the performance of each heating well. The quantity varies (depending on model) and are located on the front and back faces of the unit.

EX 1008: 12.

J. Claim 14

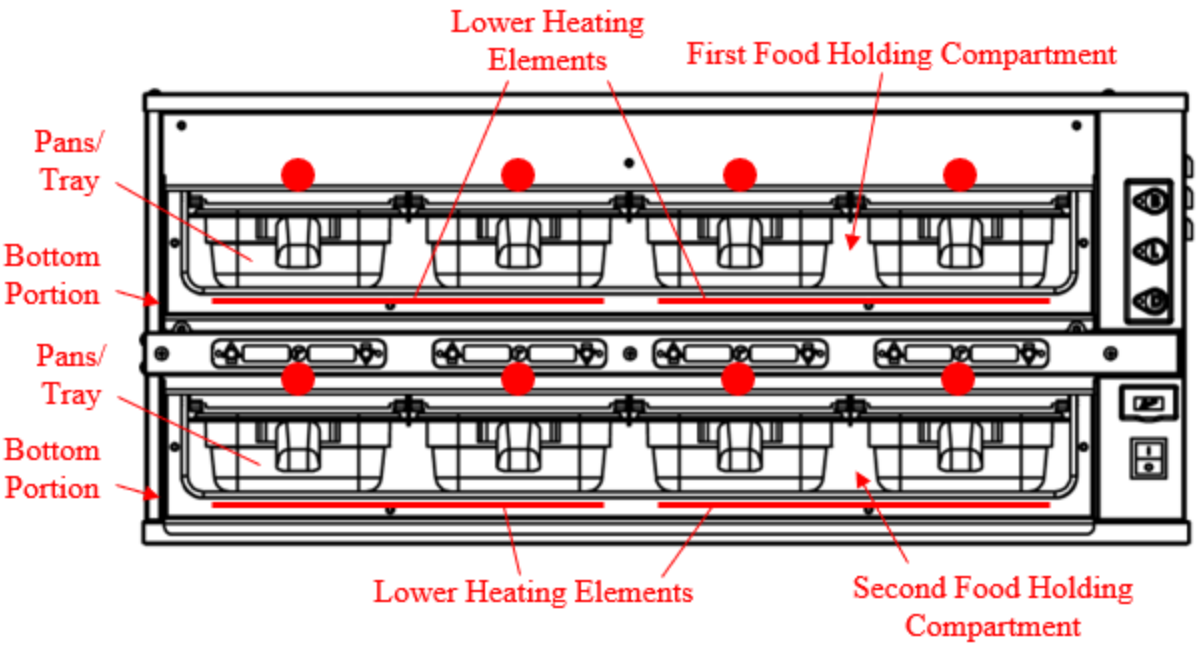
Pans/trays rest on the planar surfaces within each zone. EX1003: ¶¶293-295.



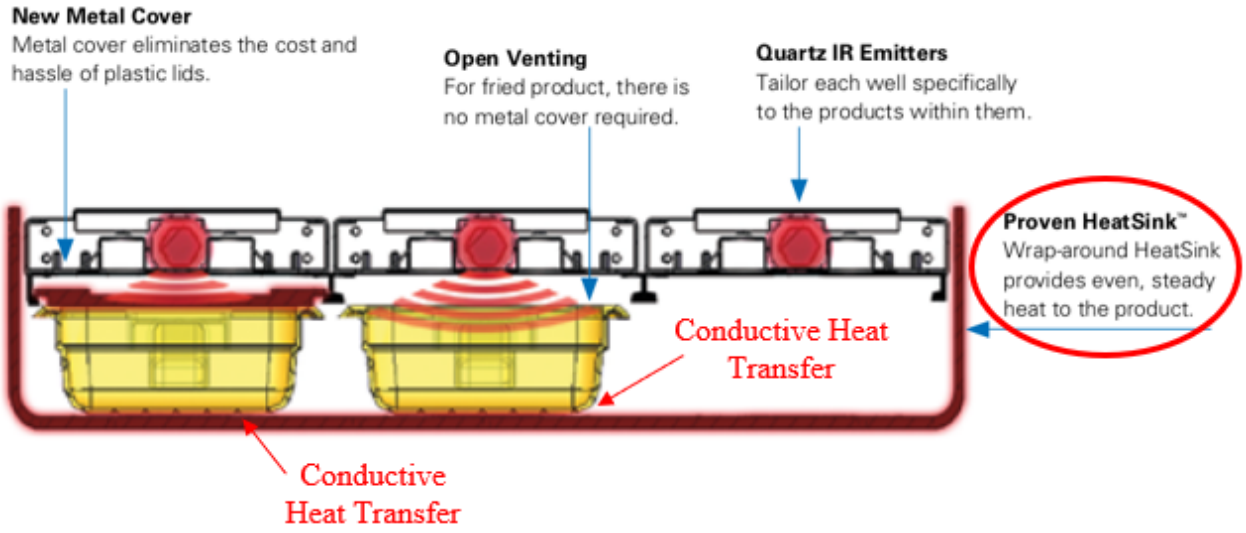
EX1005: 8.

K. Claims 15/17.b

Lower heating elements are part of the HeatSinks and conductively heat pans on the planar surface. EX1007: 51; EX1016: Fig. 2, ¶[0039]; EX1017: Fig. 3, 4:51-53; EX1003: ¶¶296-300, 306-307.



EX1005: 8.



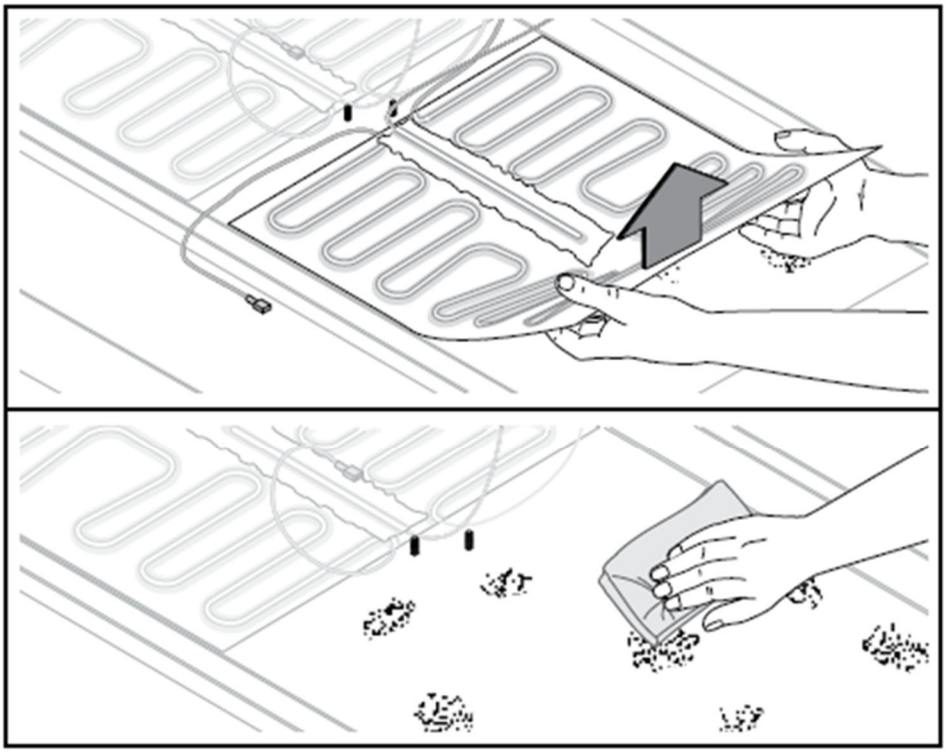
EX1007: 53.

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.

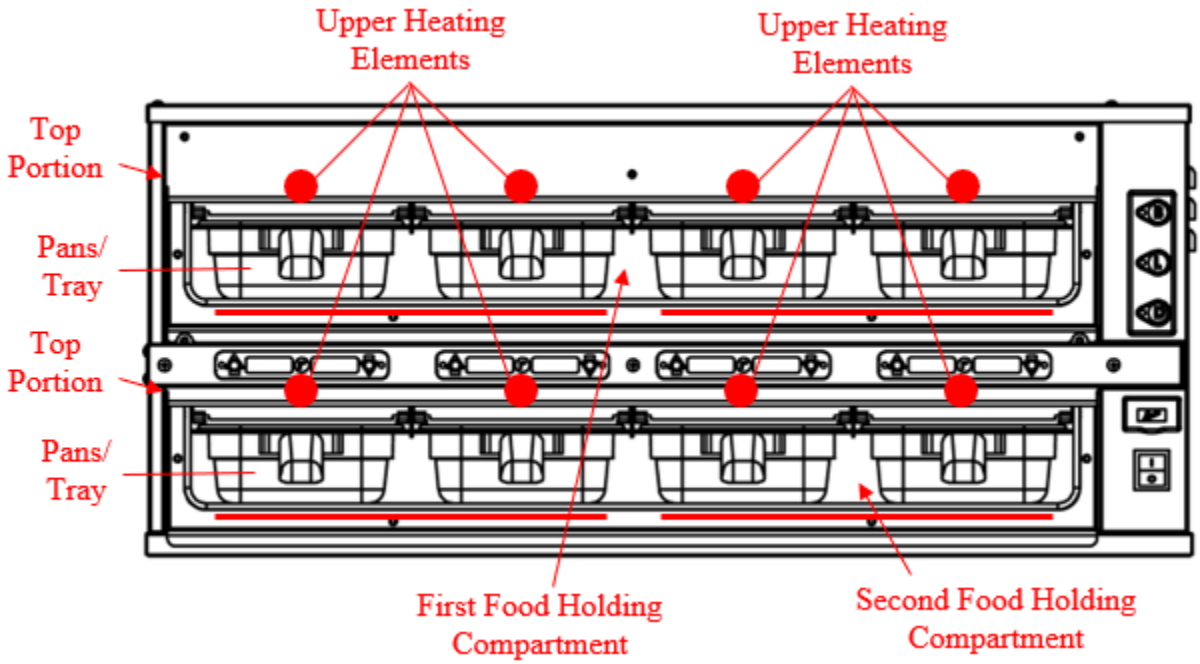
13. Remove the affected Heat Element by peeling off from the heat sink. Ensure any excess tape and/or adhesive is removed.

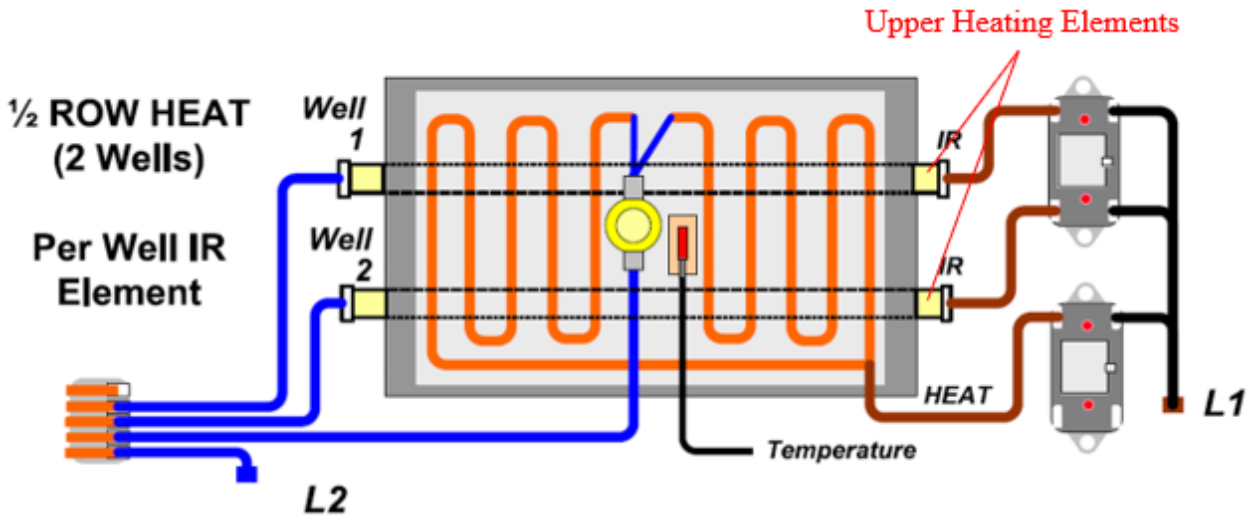


EX1008: 22.

L. Claims 16/17.a

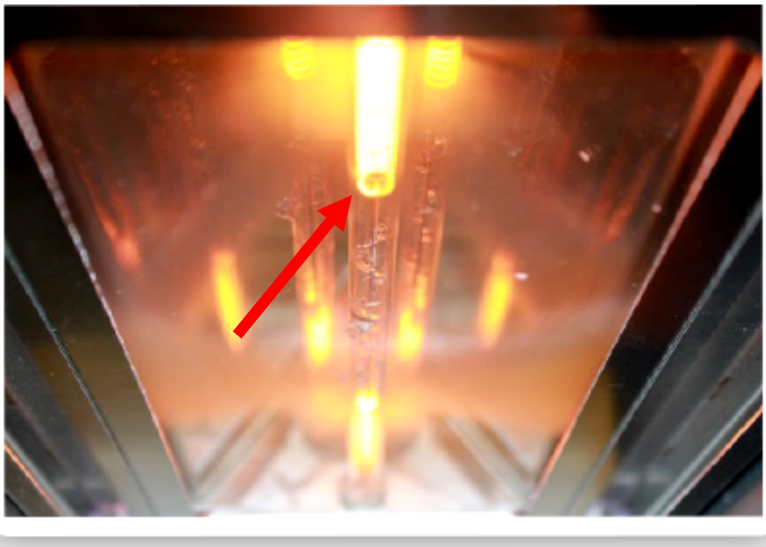
Upper heating elements (IR bulbs) radiantly heat pans/trays. EX1005: 20; EX1007: 51; EX1003: ¶¶301-305.





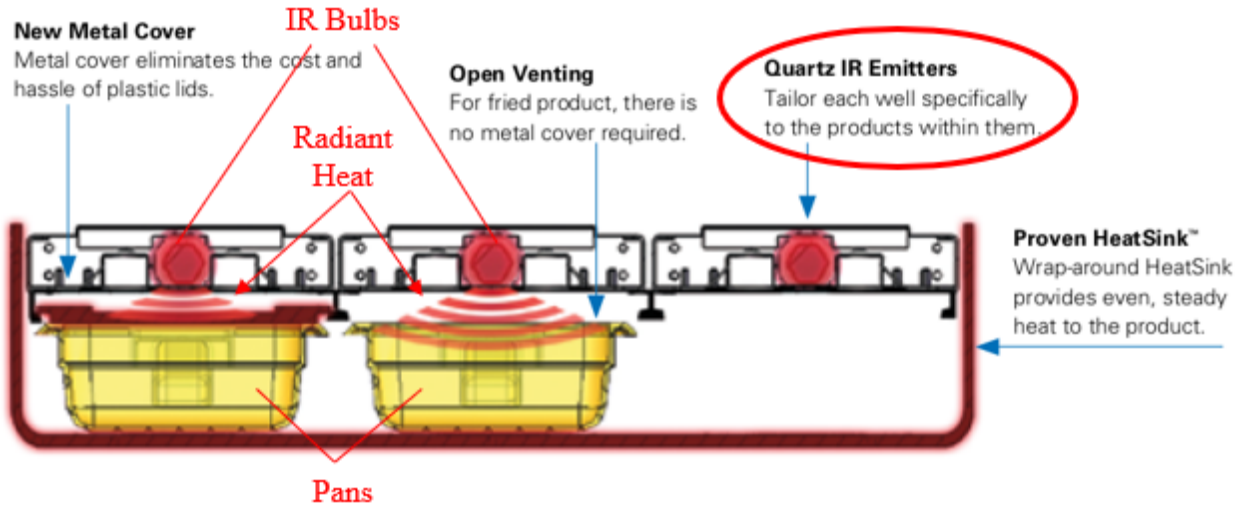
EX1005: 8, 25.

Duke Sealed IR



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

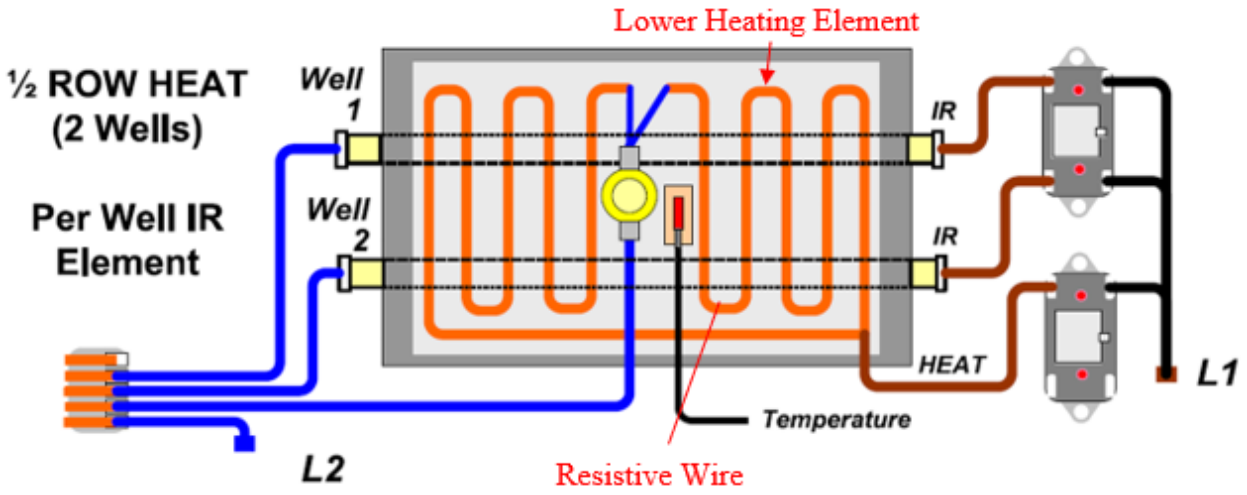




EX1007: 11, 36, 53.

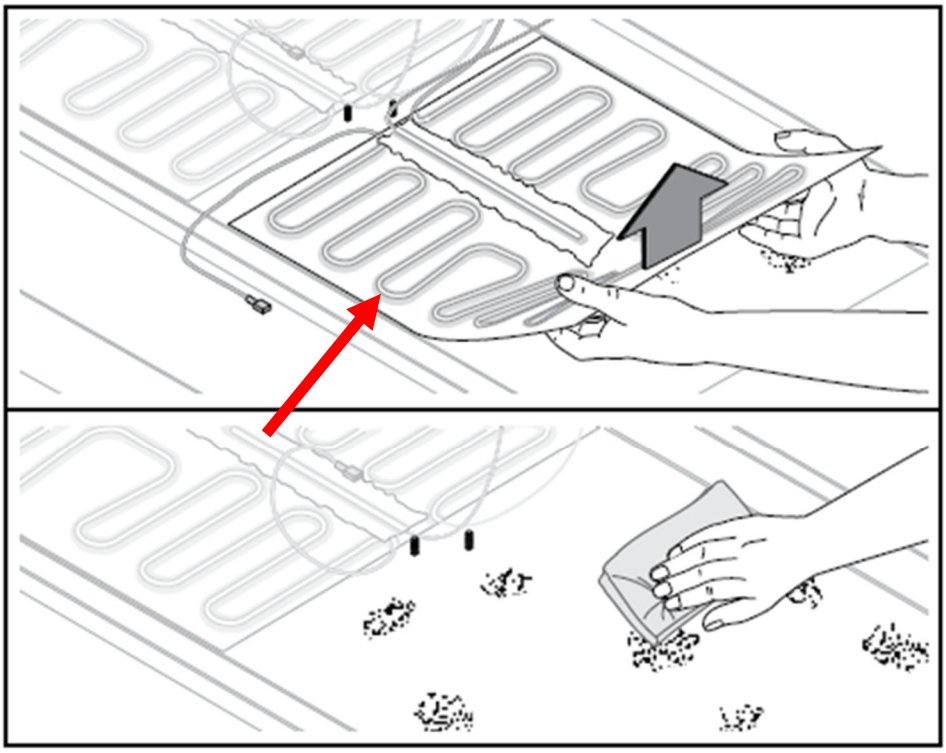
M. Claim 18

Each lower heating element comprises a resistive wire. EX1003: ¶¶308-310.



EX1005: 25.

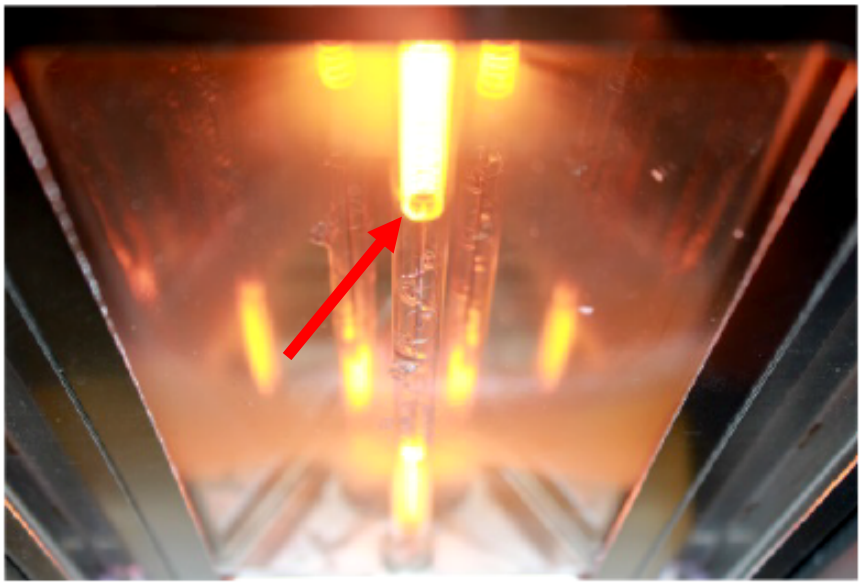
13. Remove the affected Heat Element by peeling off from the heat sink. Ensure any excess tape and/ or adhesive is removed.



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

Each first, third, fifth, and sixth heating element is a Quartz IR Bulb having a coiled resistive wire (glowing/hot). EX1007: 53; EX1025: 1:29-30; EX1003: ¶¶311-312.

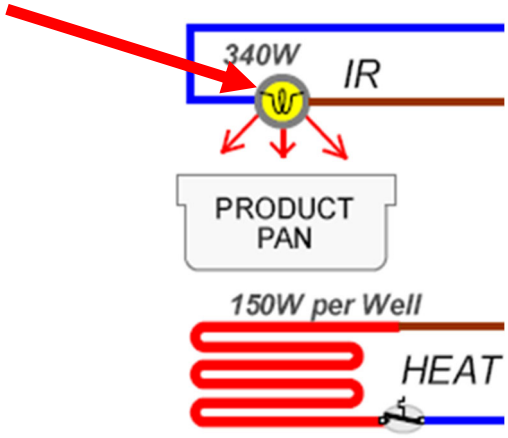
Duke Sealed IR



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



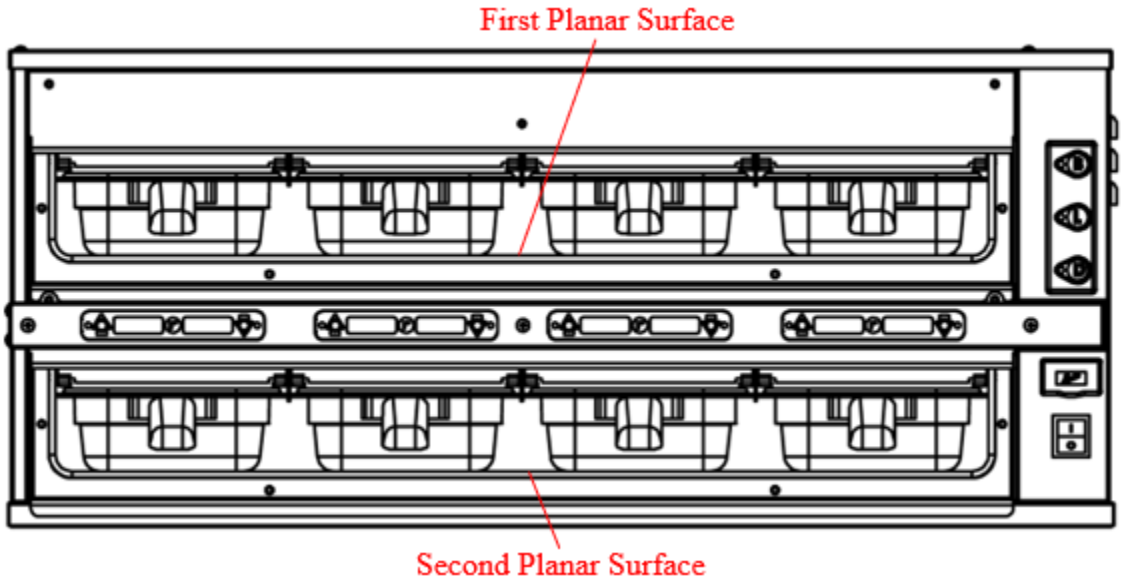
EX1007: 11, 36.



EX1008: 64 (showing schematic coiled resistive wire).

N. Claim 19

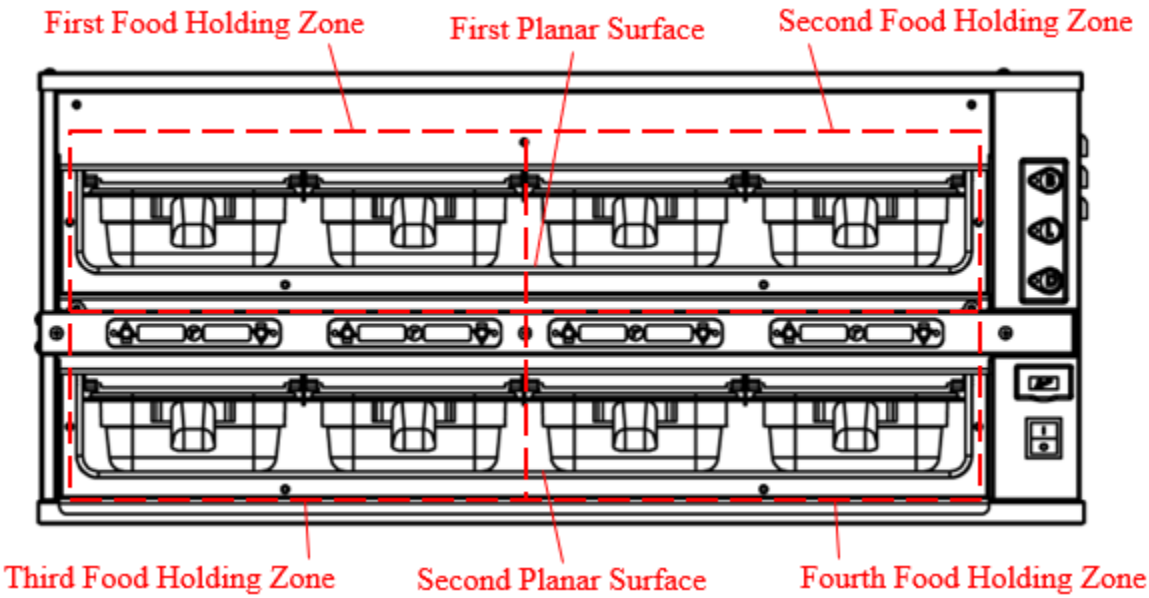
The planar surfaces are continuous. EX1003: ¶¶313-315.



EX1005: 8.

O. Claim 20

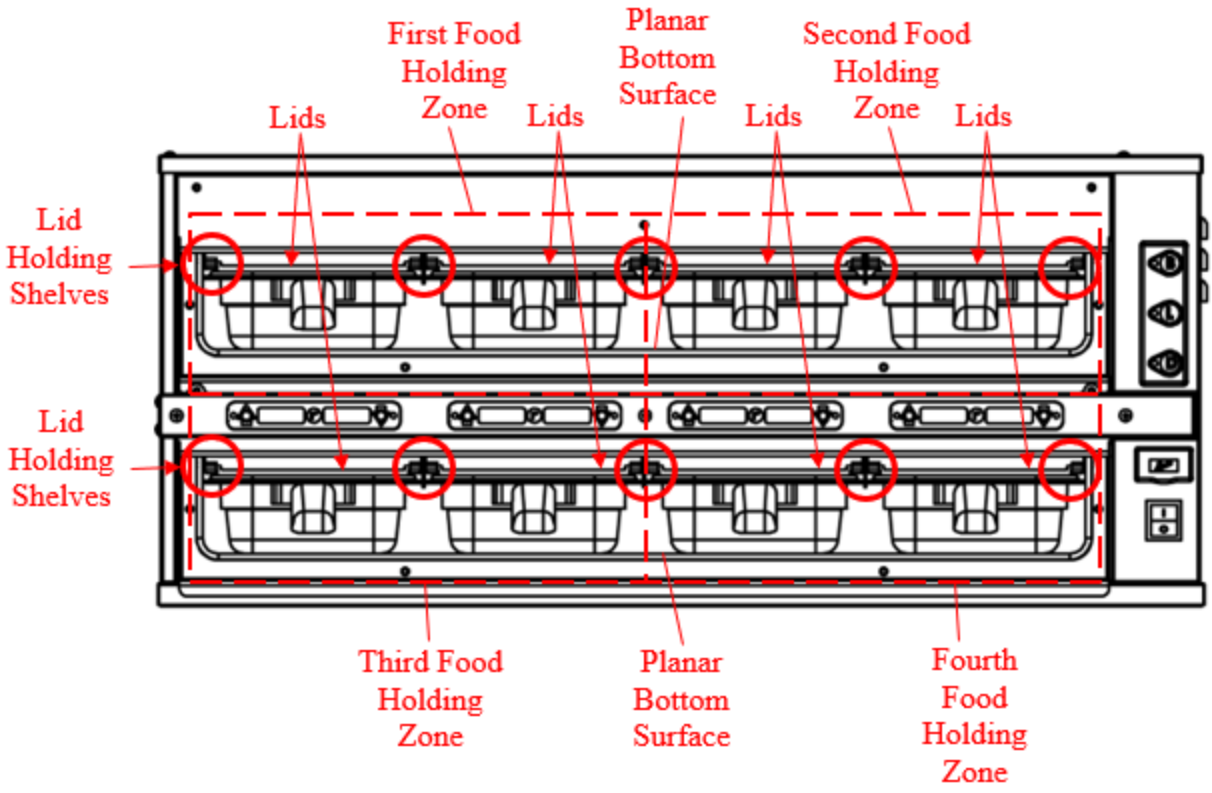
The planar surfaces are free of dividing walls/structures between zones. EX1003: ¶¶316-318.



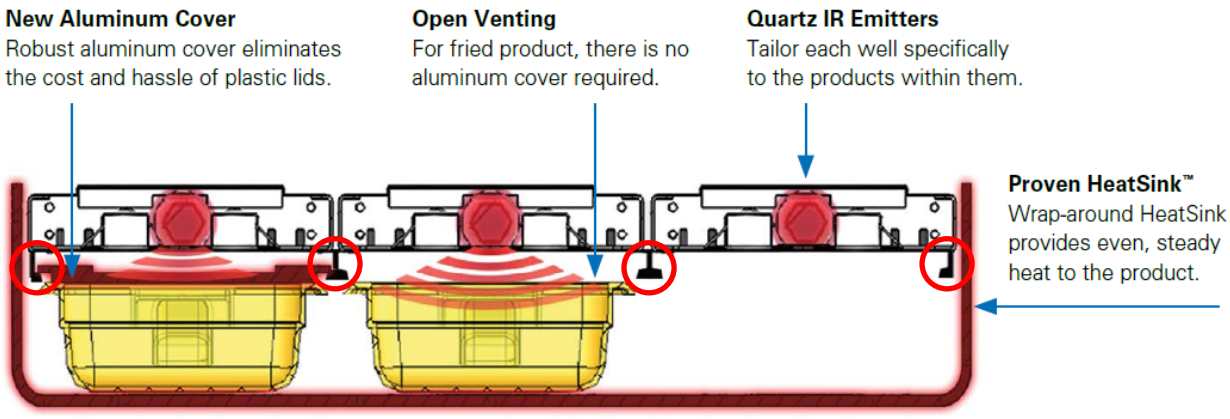
EX1005: 8.

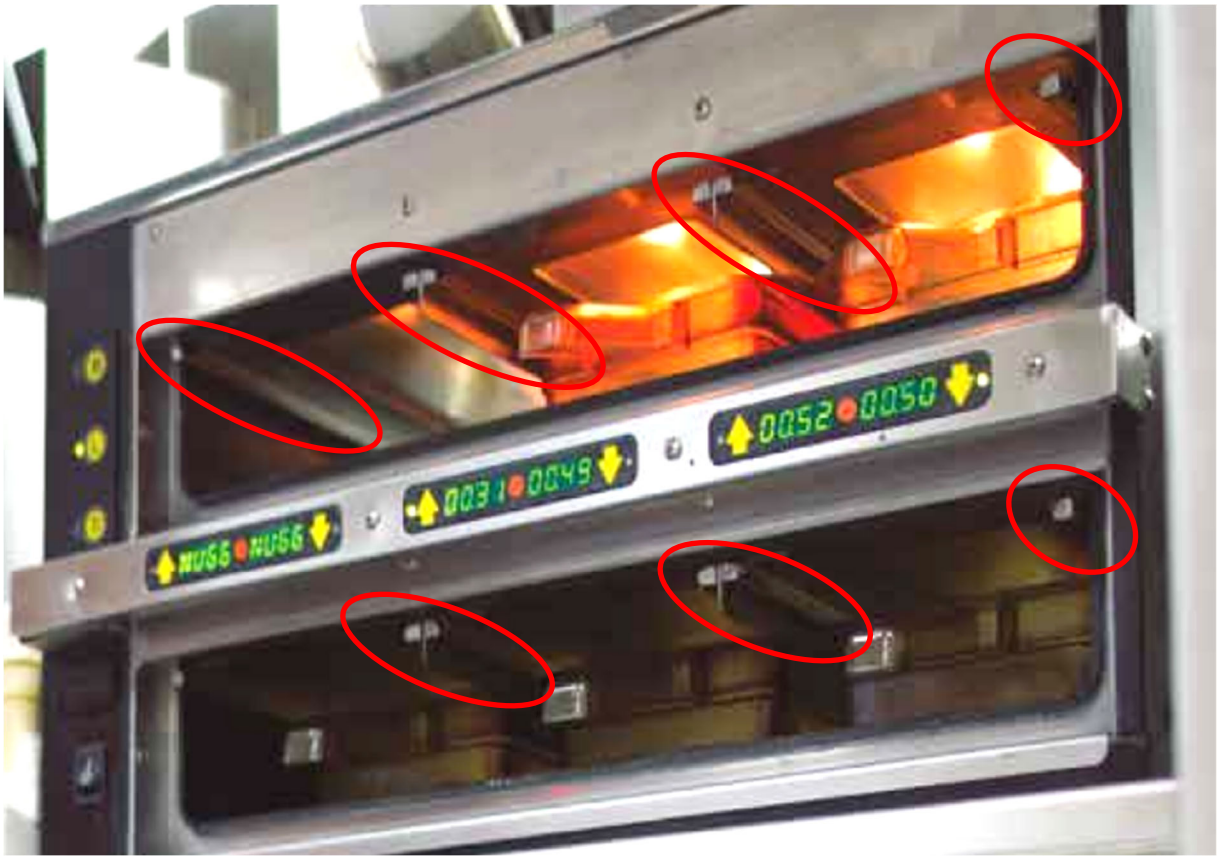
P. Claim 21

IRHS24 includes lids for each zone. EX1005: 4, 8, 20-21; EX1007: 53, 56, 58; EX1003: ¶¶319-320. IRHS24's zones comprise lid-holding shelves elevated above the planar bottom surfaces in the compartments for receiving/storing lids. EX1003: ¶¶321-322.

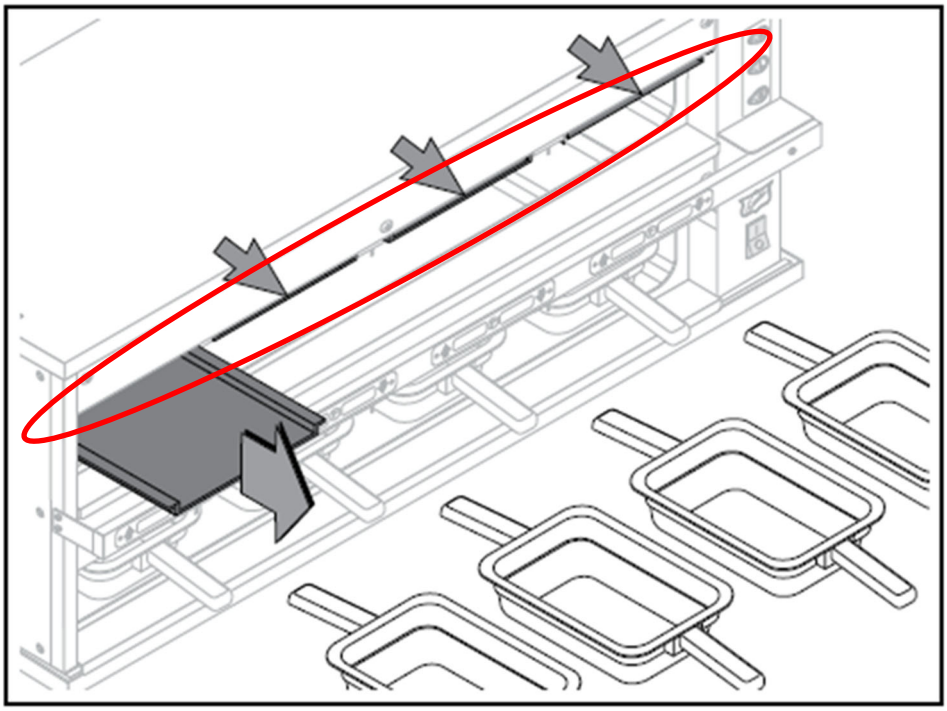

First Food Holding Zone
Planar Bottom Surface
Second Food Holding Zone
Lids
Lids
Lids
Lids
Lid Holding Shelves
Lid Holding Shelves
Third Food Holding Zone
Planar Bottom Surface
Fourth Food Holding Zone

EX1005: 8.


New Aluminum Cover
Robust aluminum cover eliminates the cost and hassle of plastic lids.
Open Venting
For fried product, there is no aluminum cover required.
Quartz IR Emitters
Tailor each well specifically to the products within them.
Proven HeatSink™
Wrap-around HeatSink provides even, steady heat to the product.



EX1007: 53, 36.

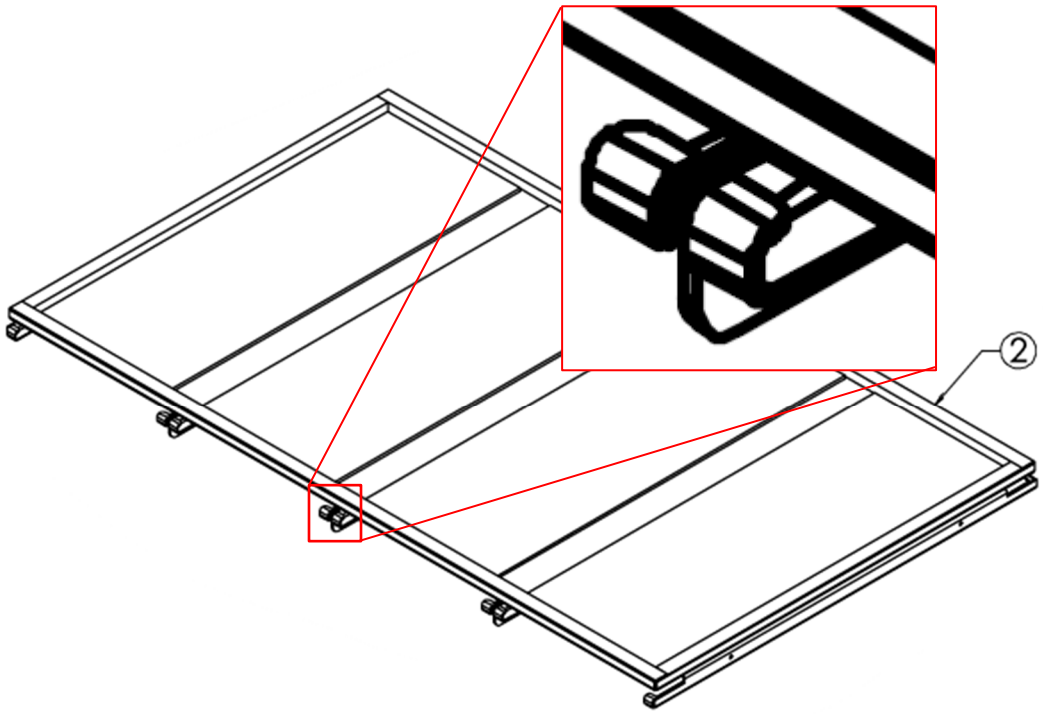


EX1008: 16.

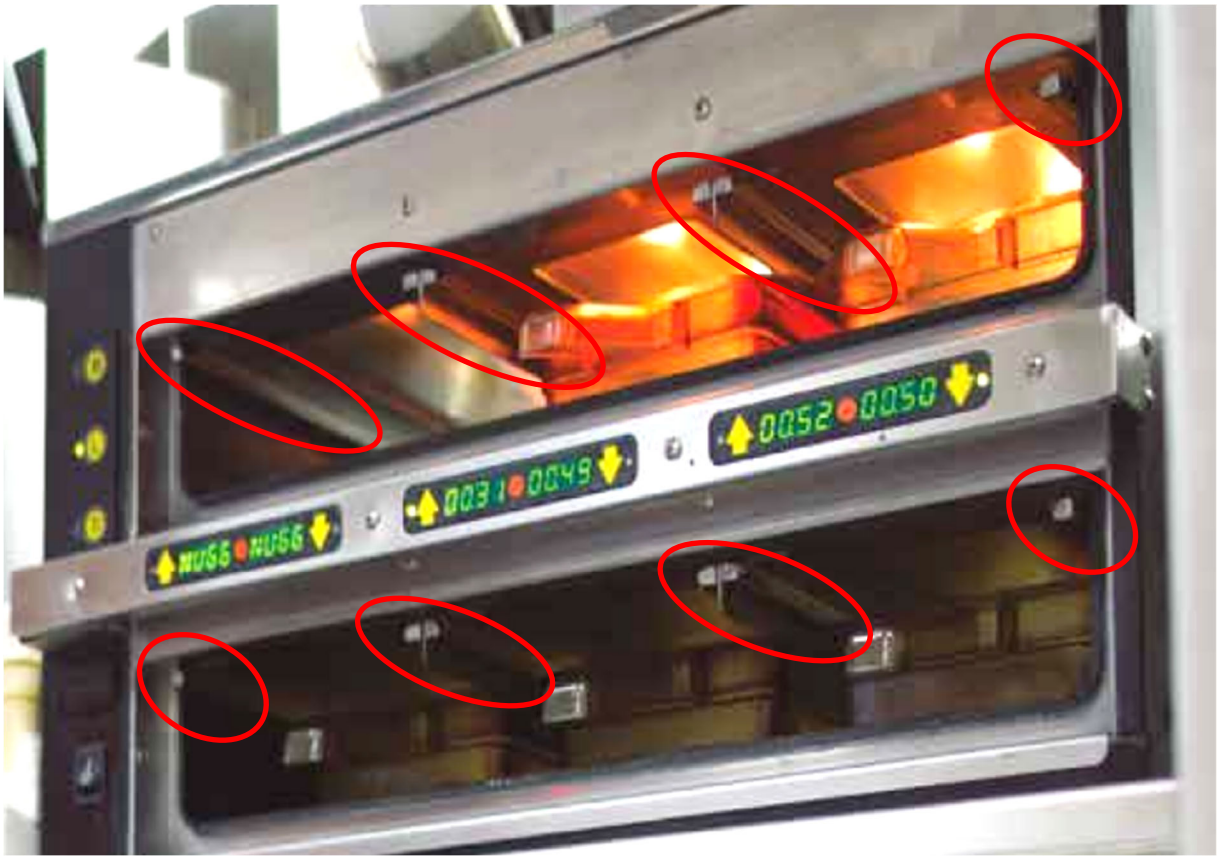
Q. Claim 24

POSA understands IRHS24's lid-holding shelves comprise sheet metal.

EX1003: ¶¶323-325.



EX1005: 19.

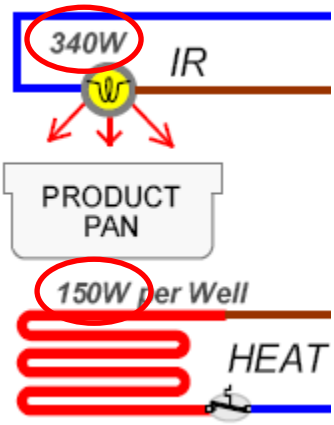


EX1007: 36.

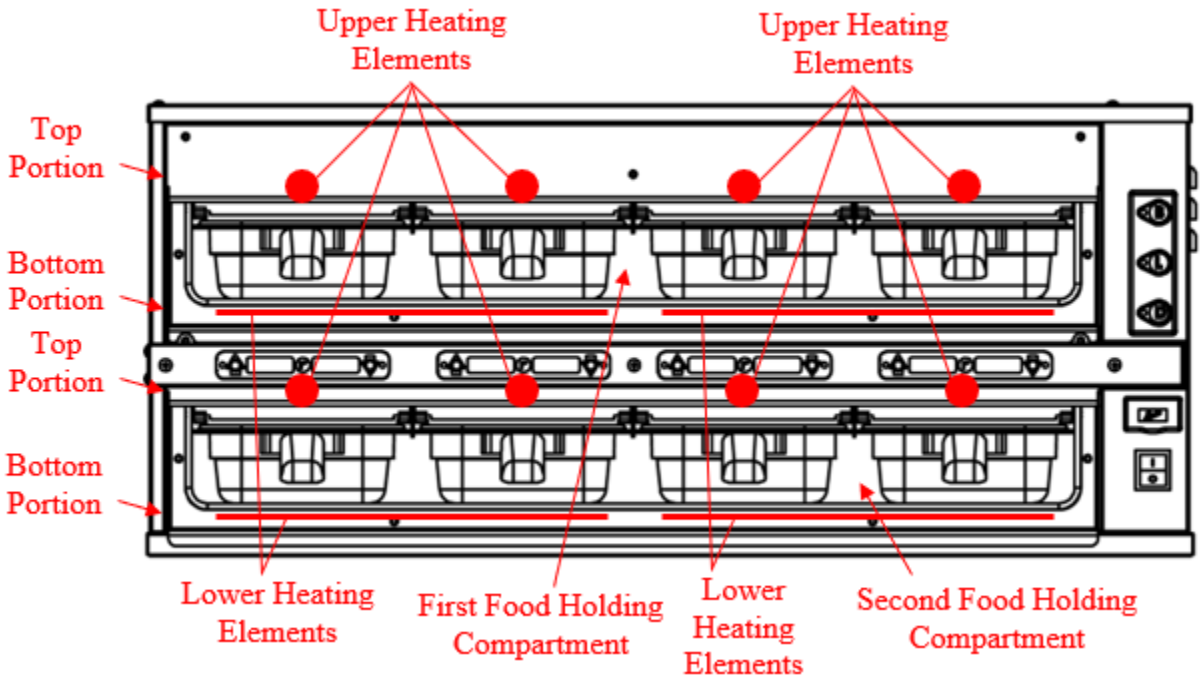
R. Claim 26

Per Sections IV(B)(1.j.2/1.k.2/1.l.2/1.m.2), IV(B)(1.o), the upper and lower heating elements are independently controllable. EX1003: ¶¶326-327. The IR upper heating elements are controllable via controller (adapted) to output more heat energy than the lower heating elements. EX1003: ¶327. Moreover, each upper heating element is rated (adapted) for more wattage (340W) than the lower heating element (300W). EX1008: 64; EX1003: ¶328. 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: ¶329. The

upper elements output more heat energy than the "gentle" lower elements at least during IR Turbo Boost. EX1003: ¶¶329-330.



EX1008: 64.



EX1005: 8.

S. Claim 27

The planar surfaces comprise aluminum or such construction is obvious. EX1006: 1; EX1005: 4, 8, 20-21; EX1007: 53, 58; Sections IV(B)(1.d.2/1.e.1); EX1003: ¶¶331-334.

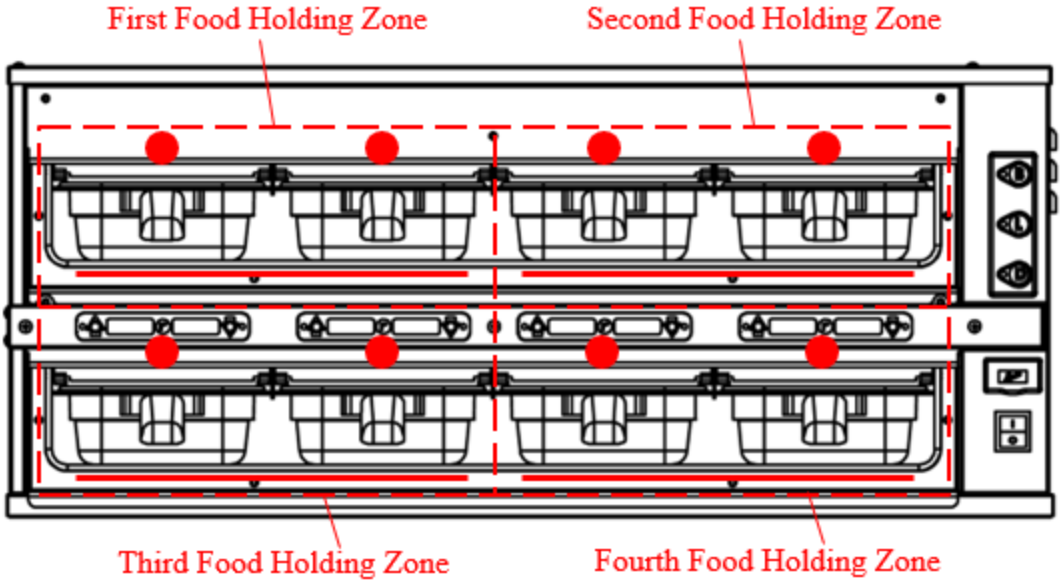
T. Claim 28/29

Per Sections IV(B)(1.j.2/1.k.2/1.l.2/1.m.2), IV(B)(1.o), the heating elements of each zone are independently controllable from other zone's heating elements. EX1003: ¶¶335-336. The IRHS Documents teach customized temperature settings by food type and zones having different food types. EX1006: 1; EX1005: 4 ("customized settings for each food product"), 16; EX1007: 51, 53; EX1003: ¶¶337-338. Temperature settings for each zone are independent of food types in other zones. EX1005: 25; EX1006: 1; EX1007: 53 ("[t]otal well independence allows freedom in product placement in the IRHS"); EX1003: ¶339.



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: ¶¶340-345.



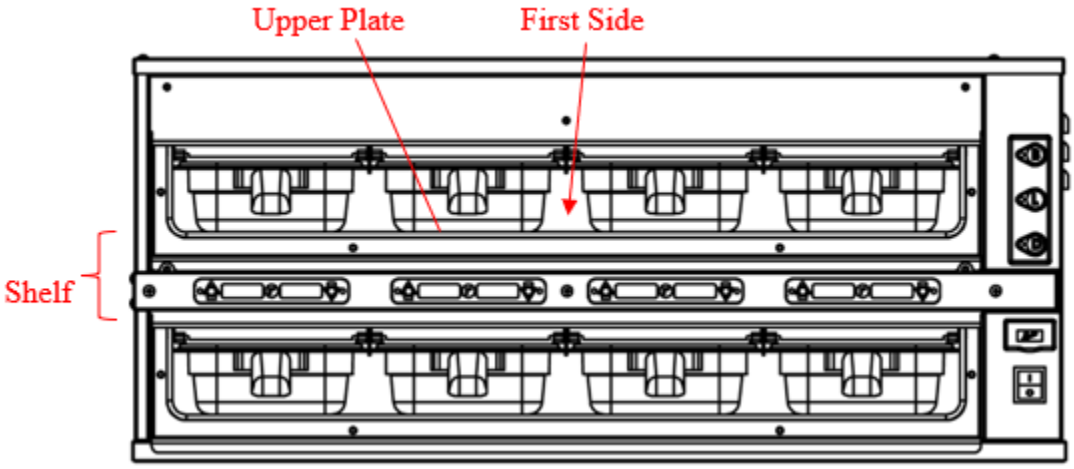
EX1005: 8.

U. Claim 30

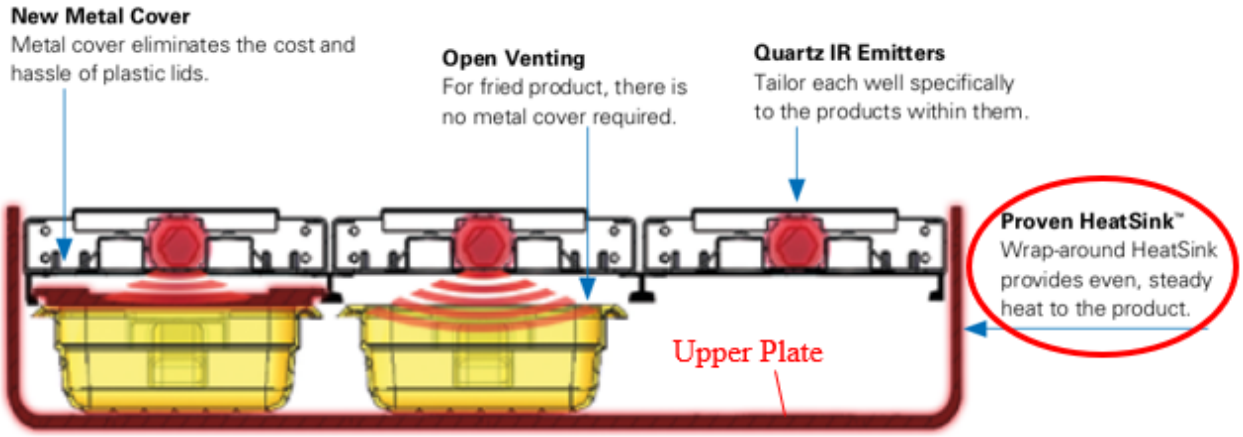
30.a.1

The shelf has a thermally conductive aluminum HeatSink upper plate in the shelf forming (and therefore in thermal communication with) the first side or this is

obvious per Section IV(B)(1.d.2/1.e.2). EX1006: 1; Section IV(S); EX1003: ¶¶346-347.

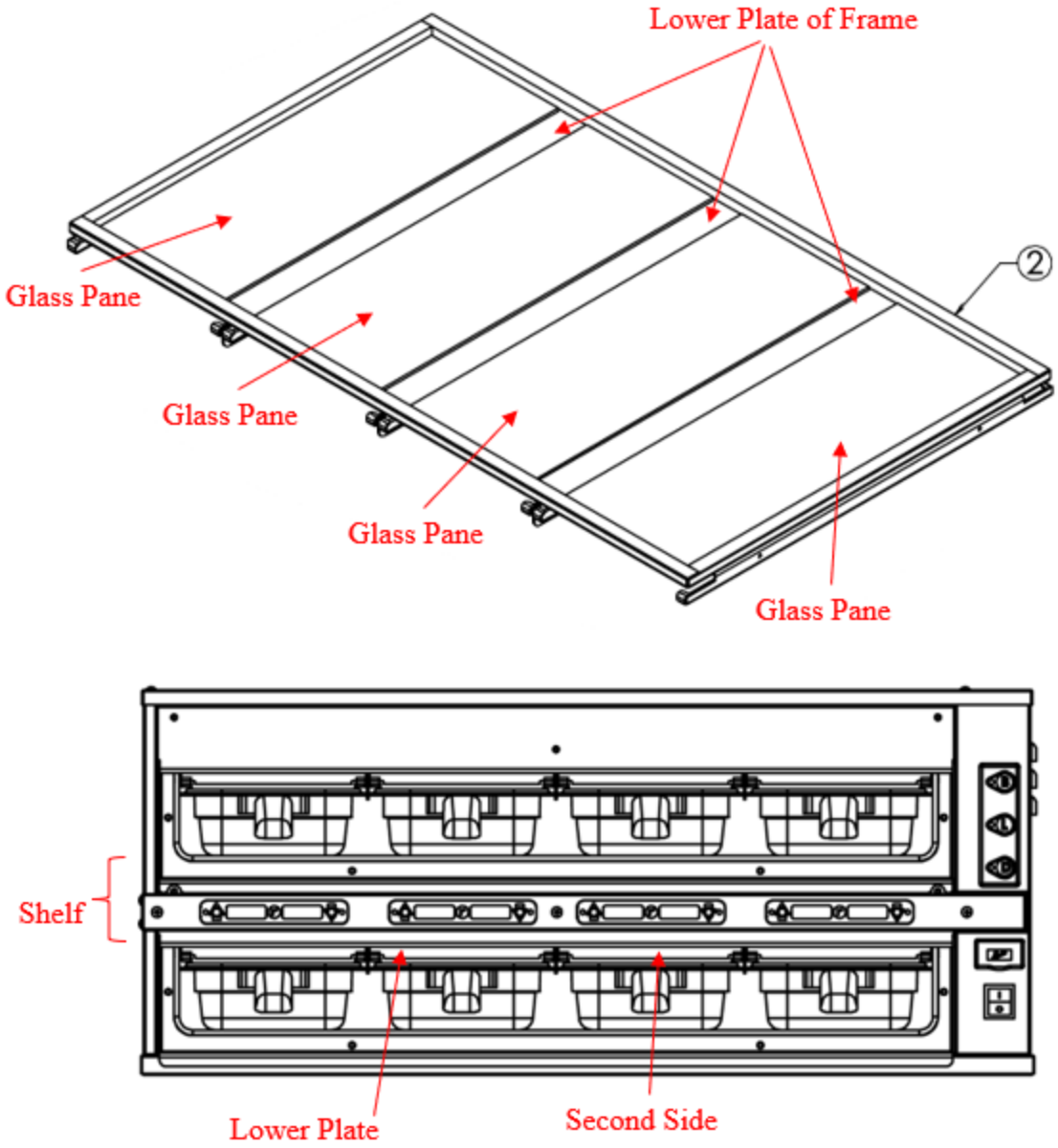


EX1005: 8.

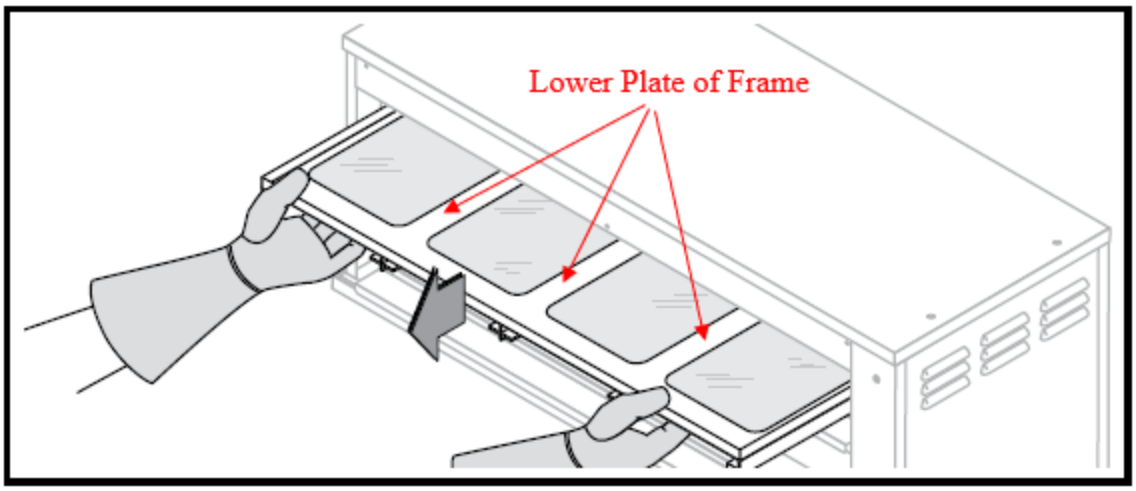


EX1007: 53.

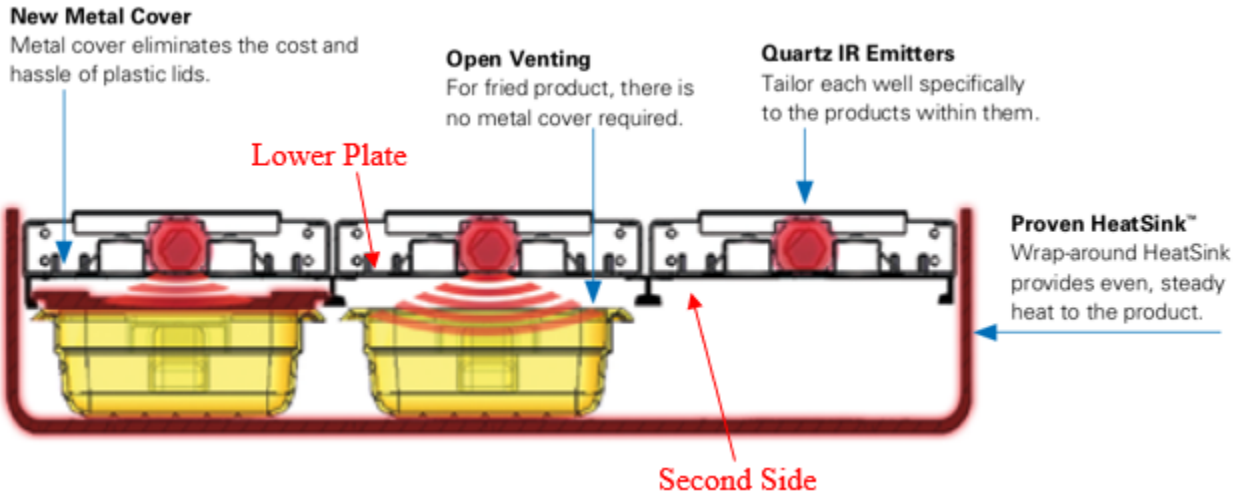
The shelf comprises a glass support frame including a flat sheet metal plate with IR window cutouts. EX1005: 14, 19-20; EX1003: ¶348. The sheet metal plate is in the shelf, spans the shelf's width/depth, forms (and therefore is in thermal communication with) the shelf's second side, carries the glass panes, and supports the lid shelves. EX1003: ¶349.


Lower Plate of Frame
Glass Pane
Glass Pane
Glass Pane
Glass Pane
②
Shelf
Lower Plate
Second Side

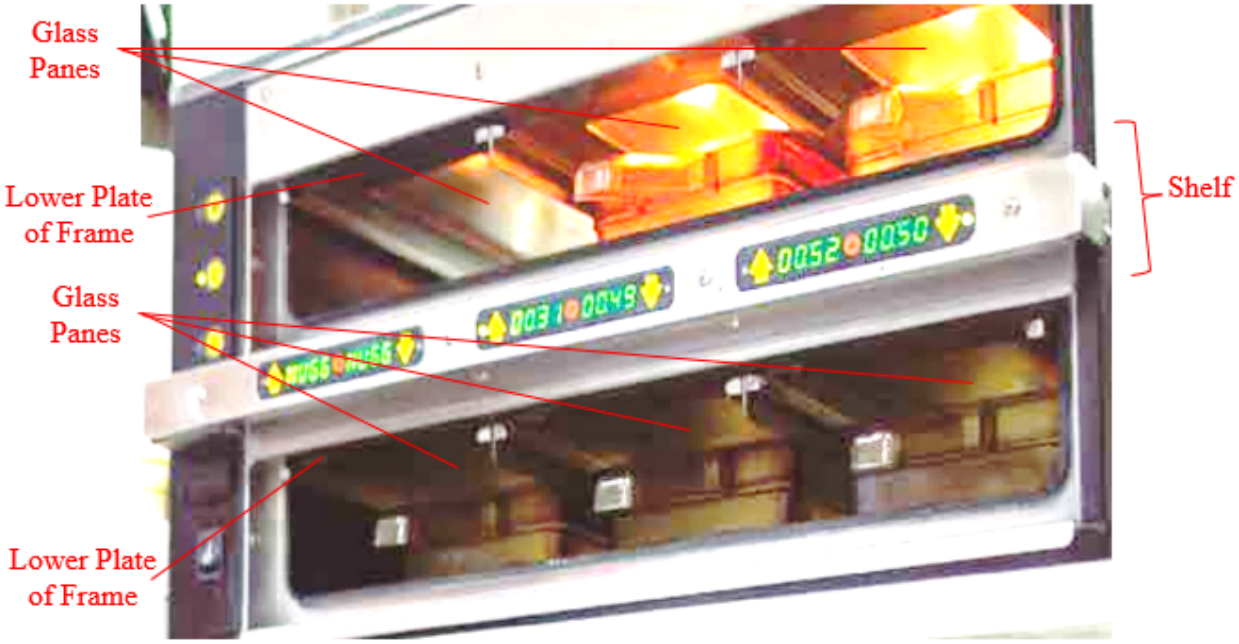
EX1005: 19, 8.

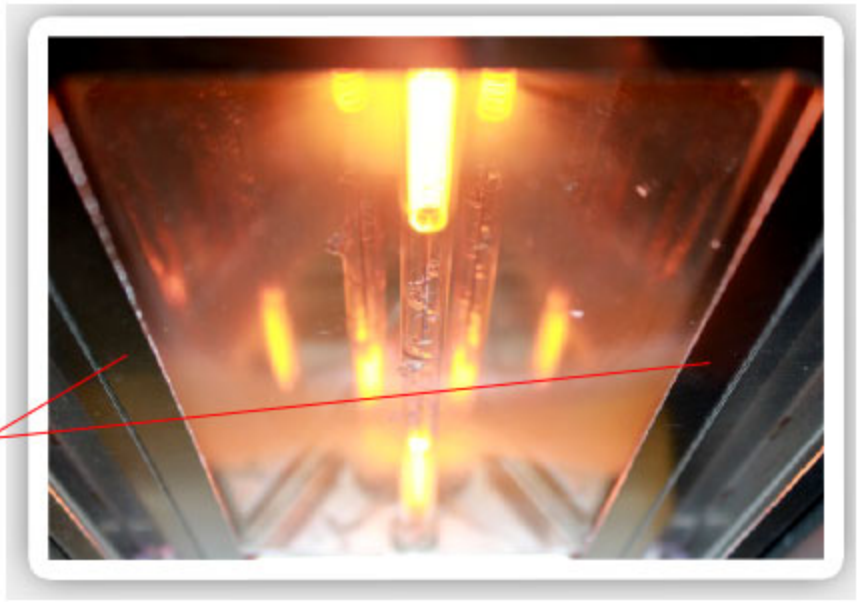

Lower Plate of Frame

EX1008: 25.


New Metal Cover
Metal cover eliminates the cost and hassle of plastic lids.
Open Venting
For fried product, there is no metal cover required.
Quartz IR Emitters
Tailor each well specifically to the products within them.
Lower Plate
Proven HeatSink™
Wrap-around HeatSink provides even, steady heat to the product.
Second Side


Shelf
Lower Plate

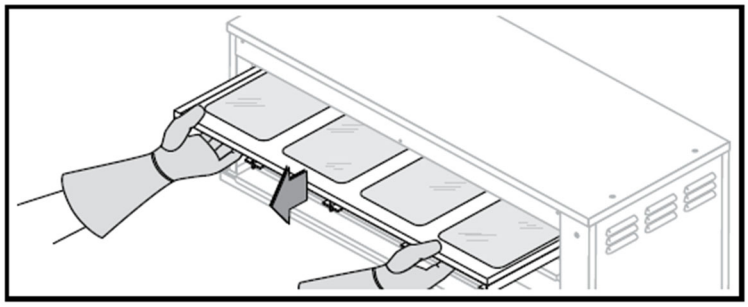

Glass Panes
Lower Plate of Frame
Glass Panes
Lower Plate of Frame
Shelf



EX1007: 53, 32, 36, 11.

The sheet metal plate is thermally conductive. EX1008: 25, 27; EX1003: ¶350.

NOTE: Make sure the glass has cooled off sufficiently to avoid burns to bare skin. Use gloves if necessary.



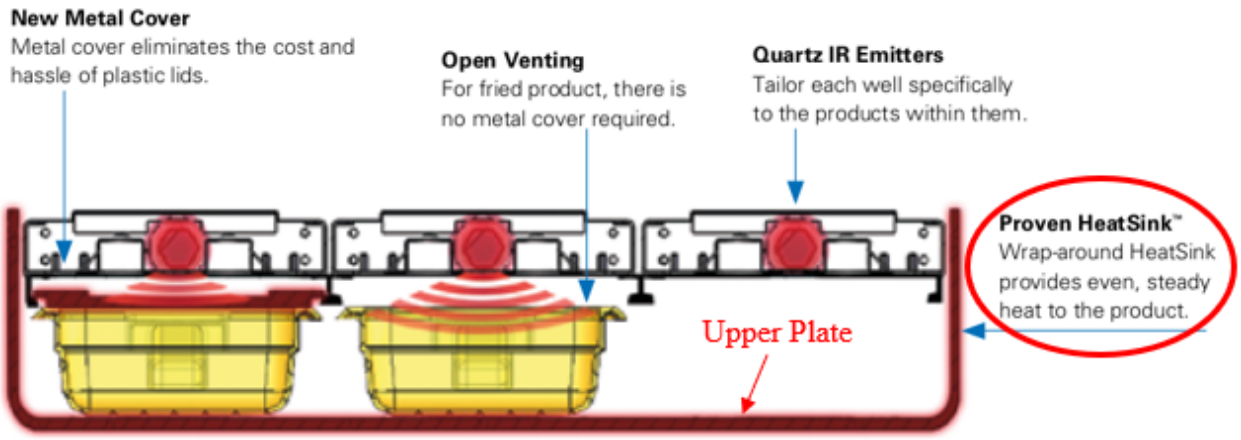
EX1008: 27.

Moreover, it would have been obvious to make the plate from stainless steel, a thermally conductive material, for durability, cleanability, and rust resistance,

with reasonable expectation of success (IRHS's existing stainless steel construction). EX1005: 13; EX1006: 1; EX1007: 53, 58; EX1003: ¶351.

30.a.2

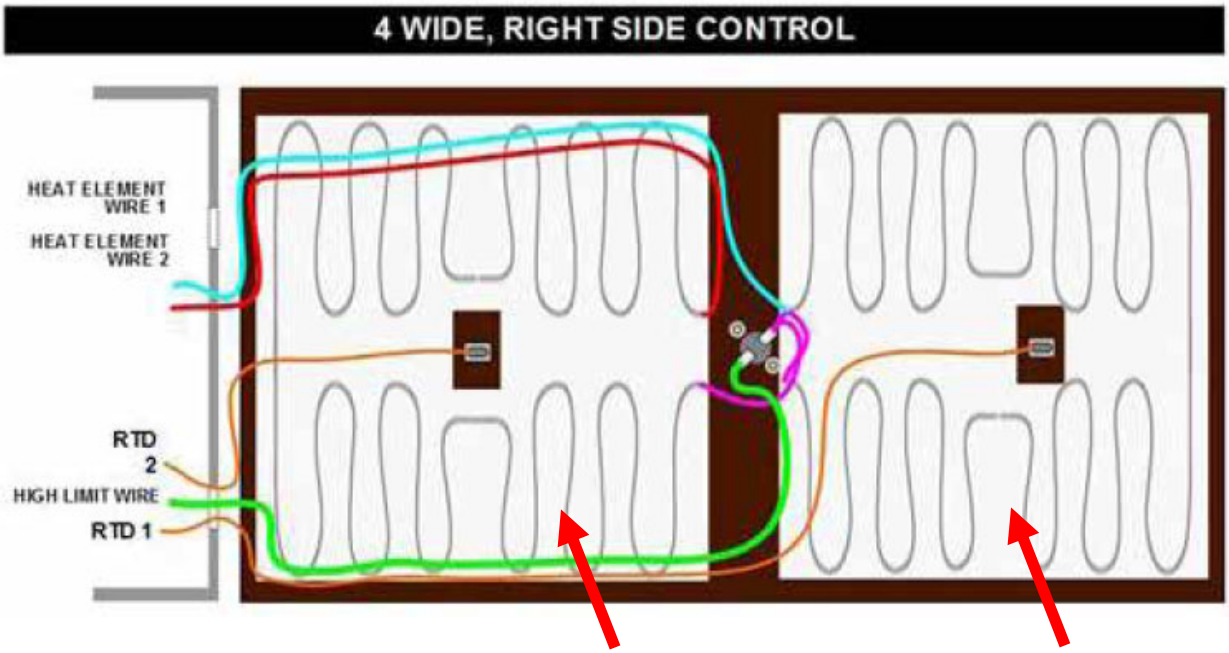
A first set of the shelf's heating elements (the first compartment's lower heating elements) are part of the HeatSink for the upper/first compartment, heating pans and HeatSink's plate from underneath, and, thus, are understood to be in thermal communication with the upper plate. EX1007: 51, 53; EX1016: Fig. 2, ¶[0039]; EX1017: Fig. 3, 4:51-53; Sections IV(K), IV(U)(30.a.1); EX1003: ¶¶352-354.



EX1007: 53.

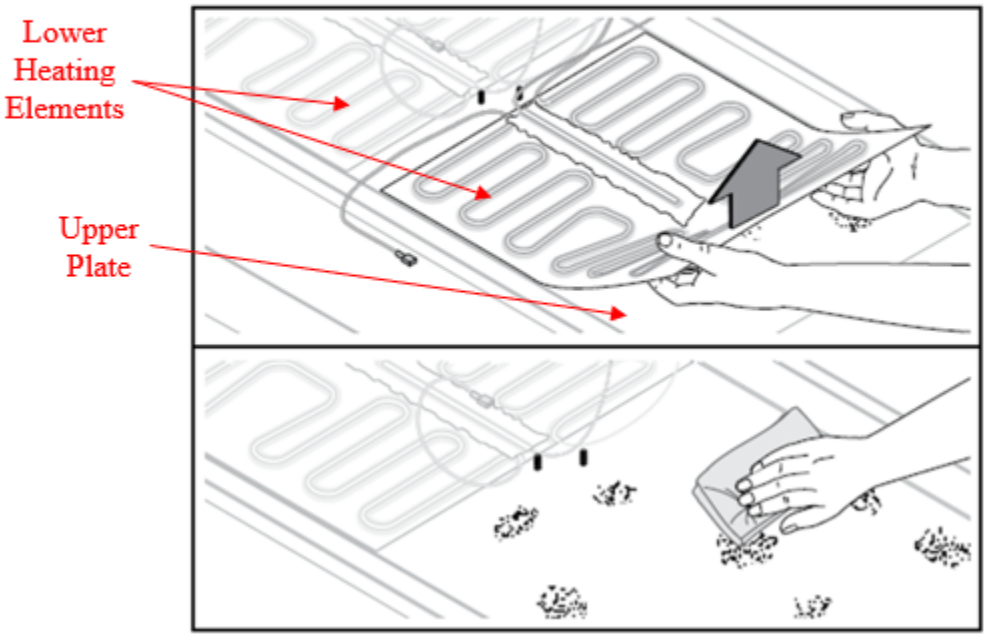
HEAT ELEMENTS

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.



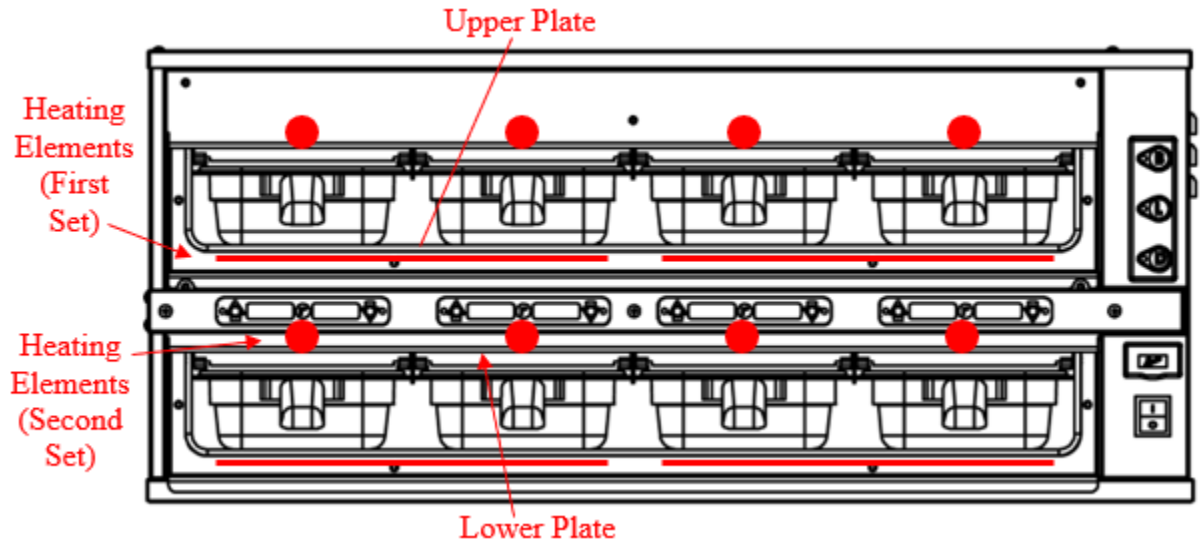
EX1008: 21, 58.

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

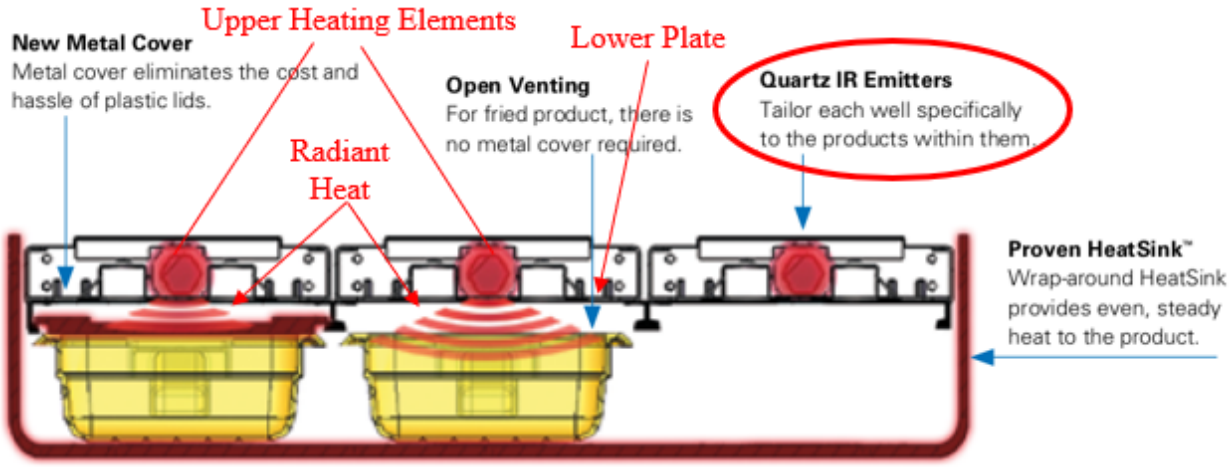


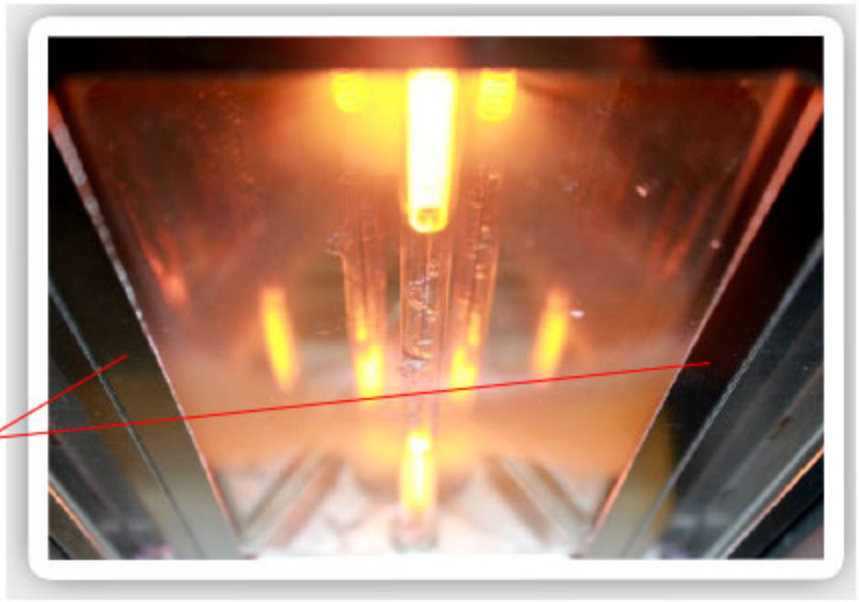
EX1008: 22.

The lower (sheet metal) plate is directly below the lower/second compartment's upper IR heating elements (second set) in the shelf. EX1003: ¶355. These IR heating elements are in thermal communication with the lower plate because they heat it. EX1003: ¶356.



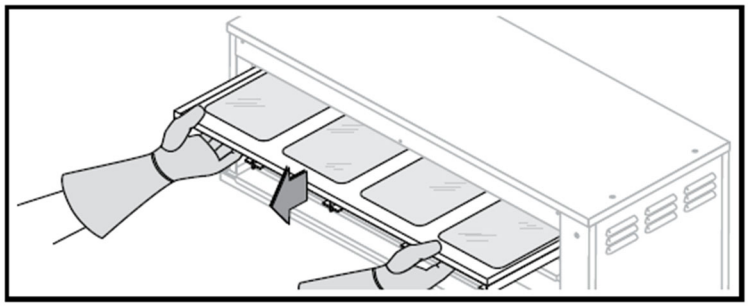
EX1005: 8.





EX1007: 53, 11.

NOTE: Make sure the glass has cooled off sufficiently to avoid burns to bare skin. Use gloves if necessary.



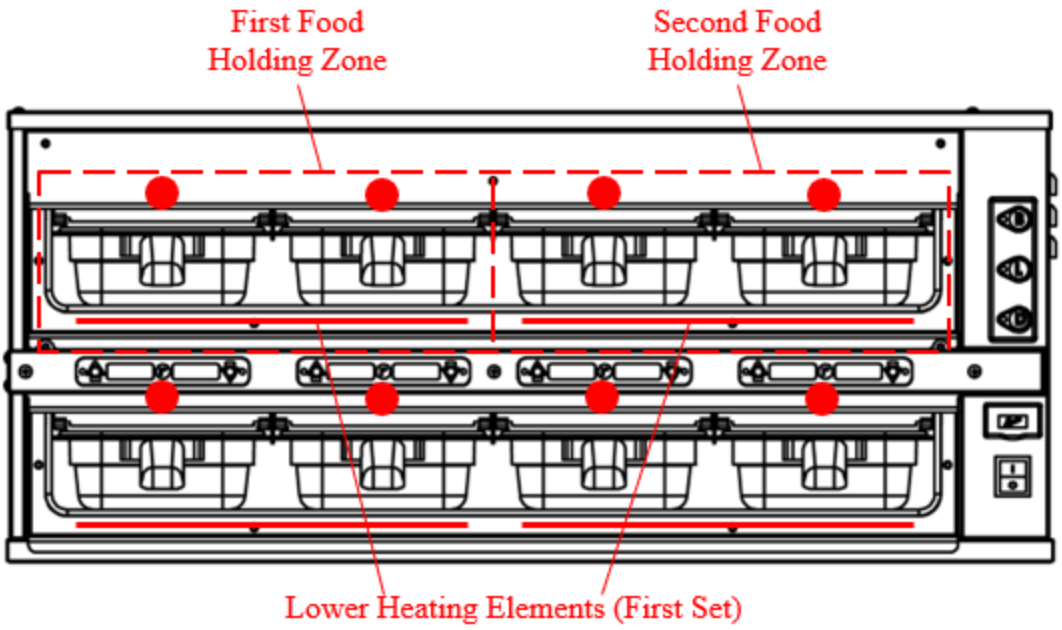
EX1008: 25.

The heating elements are independently controllable per Sections IV(B)(1.j.2/1.k.2/1.l.2/1.m.2), IV(B)(1.j.3/1.k.3/1.l.3/1.m.3), IV(B)(1.o). EX1003: ¶357.

30.b/30.c

Per Sections IV(B)(1.j.2/1.k.2/1.l.2/1.m.2), IV(B)(1.j.3/1.k.3/1.l.3/1.m.3), IV(B)(1.o), the lower heating elements (first set) and upper heating elements (second set) are independently controllable via the controller. EX1005: 16, 25; EX1006: 1; EX1007: 53; EX1003: ¶¶358-359, 362-364.

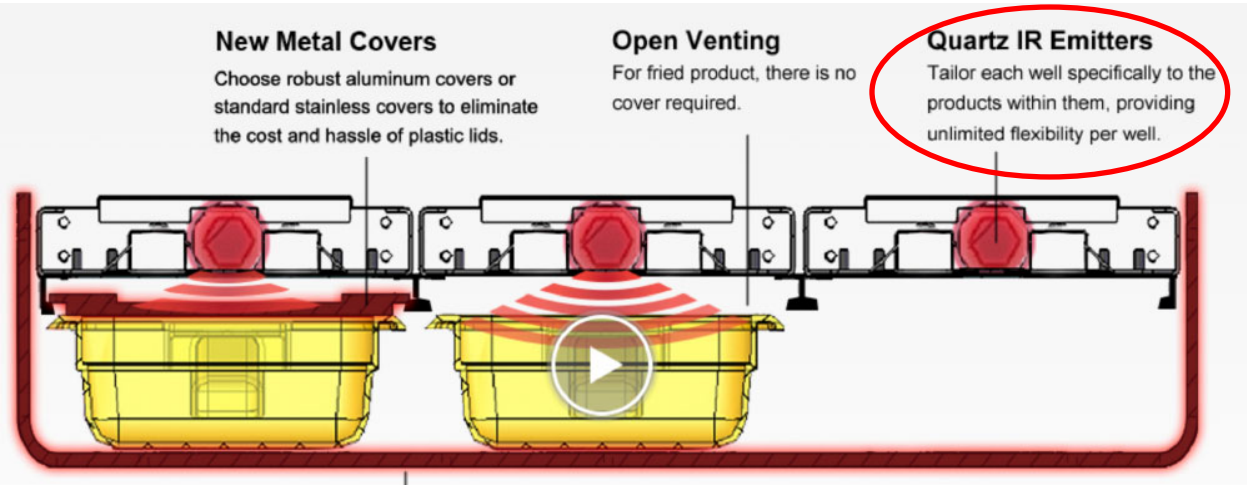
The lower heating elements are capable of providing different heat energy amounts into the first and second zones per Section IV(T) for heating to different temperatures. EX1003: ¶¶360-361.



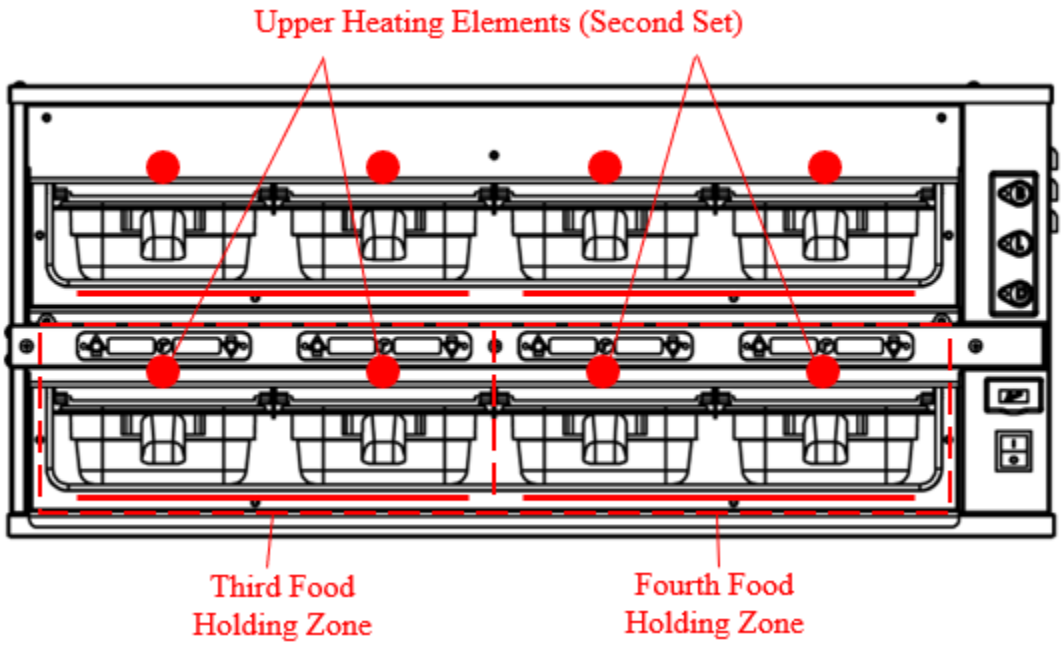
EX1005: 8.

The upper heating elements are capable of providing different heat energy amounts into the third and fourth zones per Section IV(T) for heating to different temperatures. EX1005: 16, 25. EX1006: 1; EX1007: 10, 53; EX1003: ¶365. And

each upper heating element can be independently activated to provide a limited period of increased heat output. EX1006: 1; EX1007: 22; EX1003: ¶¶366-368.



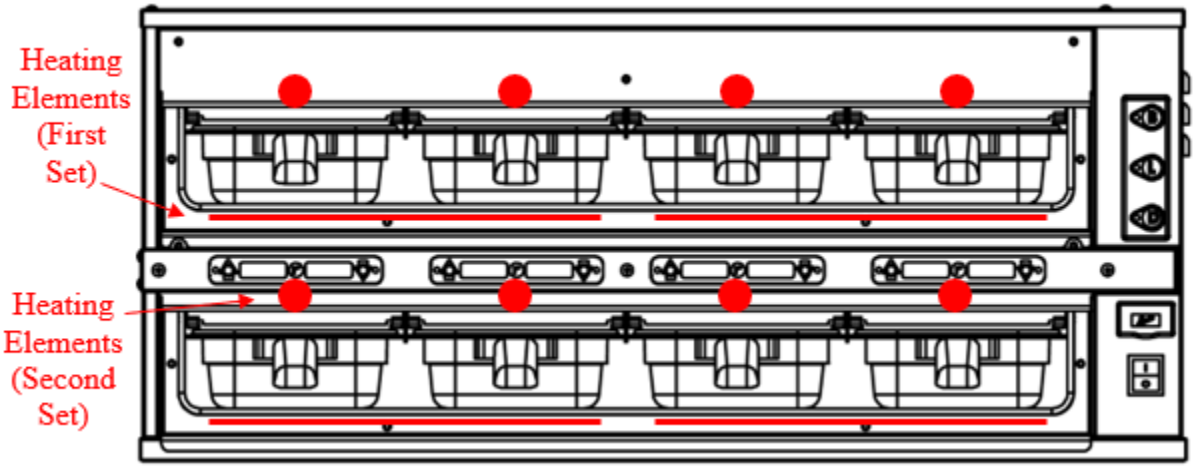
EX1007: 10.



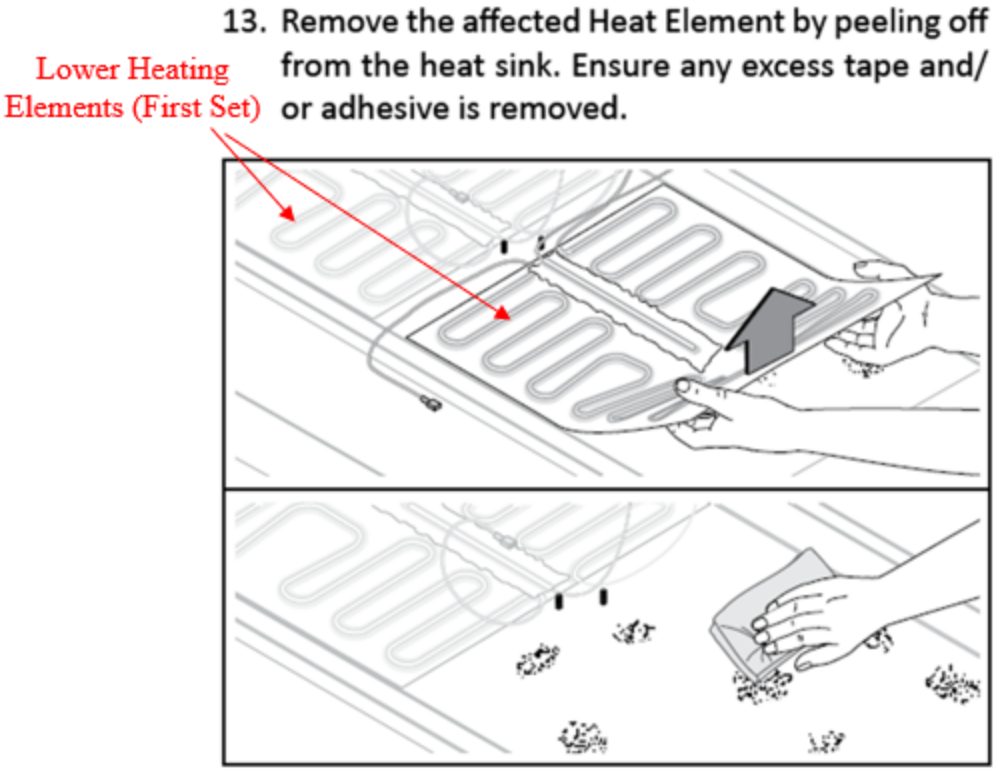
EX1005: 8.

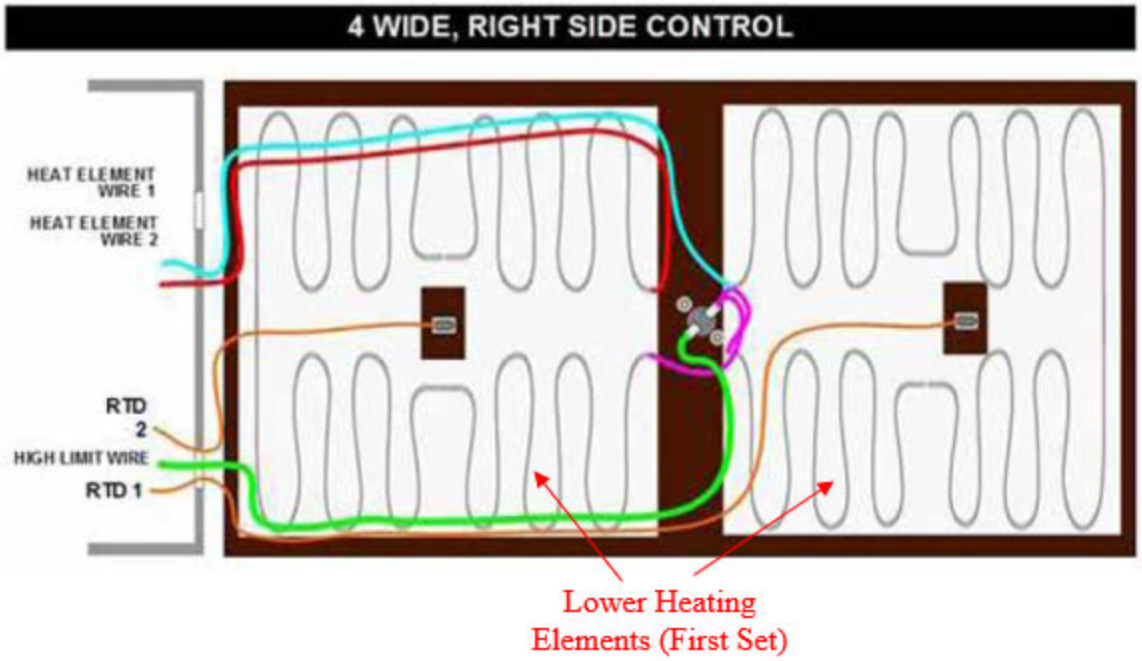
V. Claim 32

The first and second sets have two and four heating elements, respectively. *In re Skvorecz*, 580 F.3d 1262, 1267 (Fed. Cir. 2009) ("comprising" is open ended); EX1003: ¶¶369-373.



EX1005: 8.





EX1008: 22, 58.

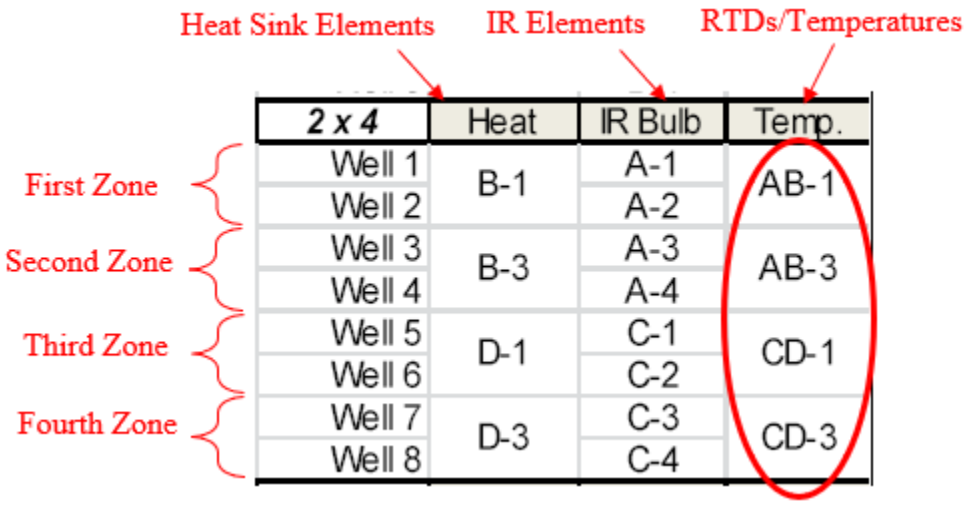
W. Claim 33

Per Sections IV(B)(1.n), IV(B)(1.o), the user interface sets the temperature of each zone via settings received by the USB interface and/or daypart selection changing food types. EX1003: ¶¶374-375.



EX1007: 12.

Per Sections IV(B)(1.j.3/1.k.3/1.l.3/1.m.3), IV(B)(1.o), IV(T), the IRHS Documents teach customized temperature settings by food type and independently controllable zones having different food types, such that it would have been obvious to hold different food types in the four zones and for the controller to heat the zones to four different temperatures according to customized settings for each food type. EX1006: 1; EX1005: 4, 16, 25; EX1007: 51, 53; EX1028: 39 (180°F for eggs, 200°F for bacon, 190°F for fish, 220°F for meatballs); EX1003: ¶¶376-379.



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.

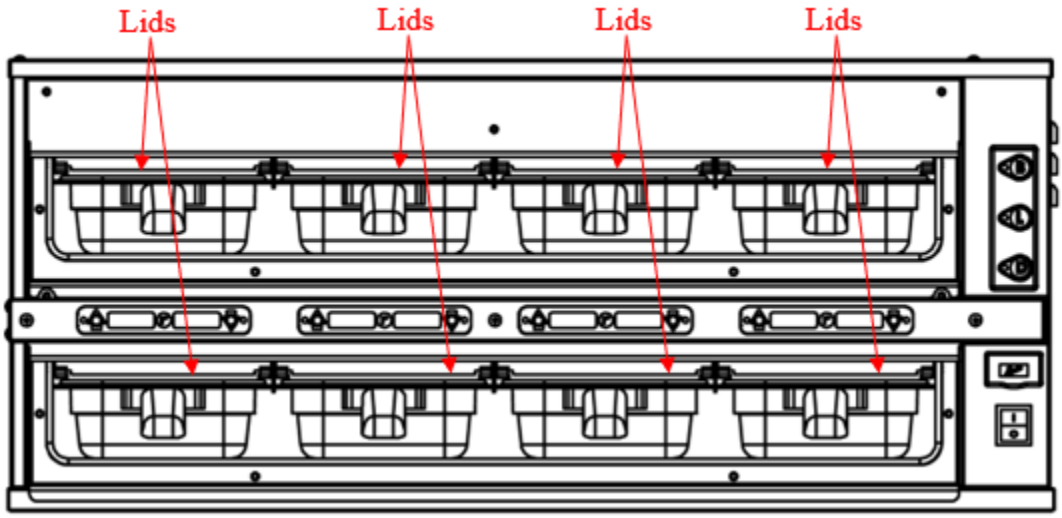
X. Claim 34

Met per Sections IV(B)(1.j.3/1.k.3/1.l.3/1.m.3), IV(B)(1.n) IV(B)(1.o), IV(T), IV(W). EX1003: ¶¶380-383.

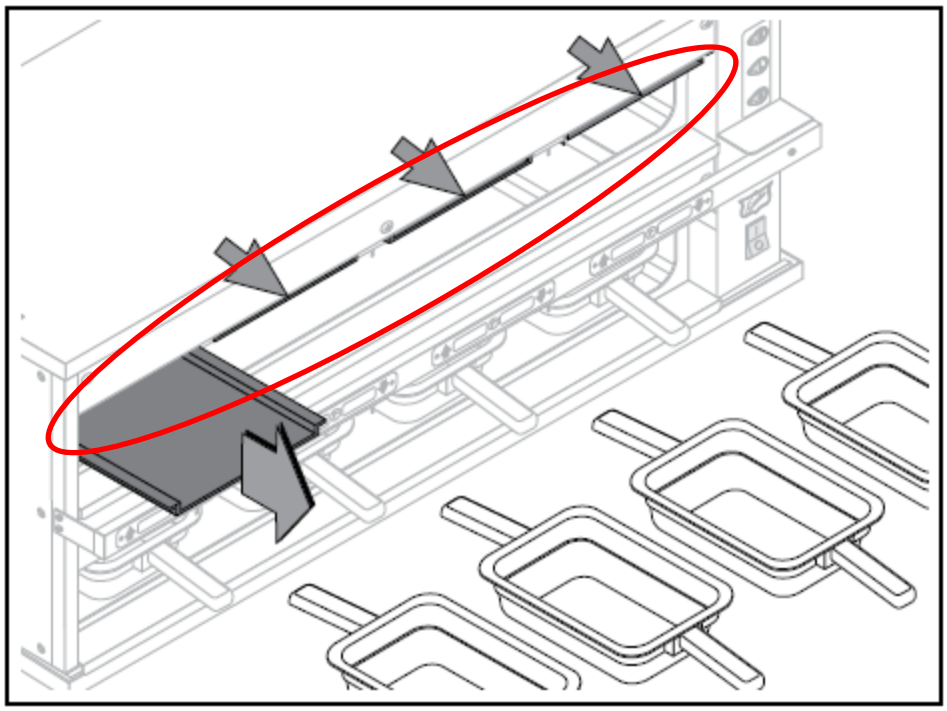
V. GROUND 2: Claims 5, 11-13, 22, and 23 Would Have Been Obvious Over the IRHS Documents in view of Hartfelder, and/or Shei'099

A. Modification based on Hartfelder and/or Shei'099

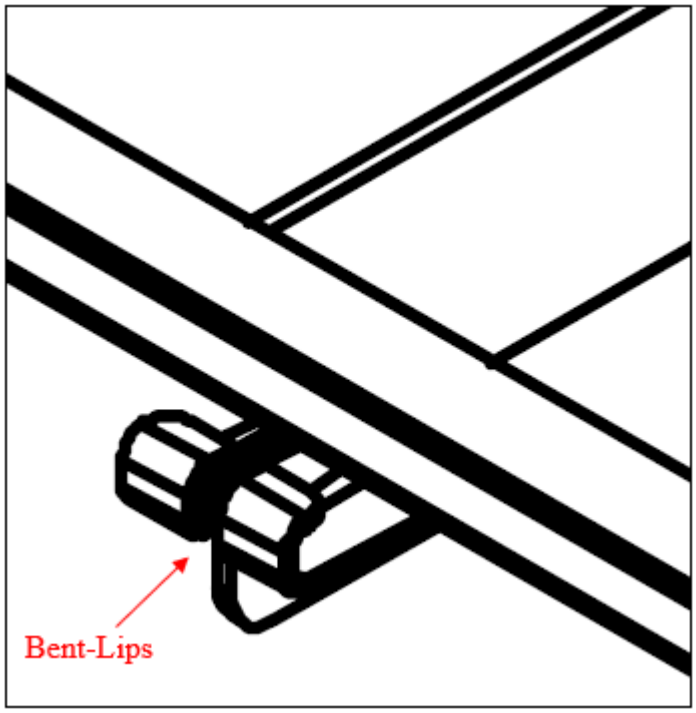
IRHS24 includes lids above each bay and bent-lip lid retainers. EX1005: 4, 8, 20-21; EX1007: 53, 56, 58; EX1003: ¶¶384-388.



EX1005: 8.



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: ¶¶389-391.

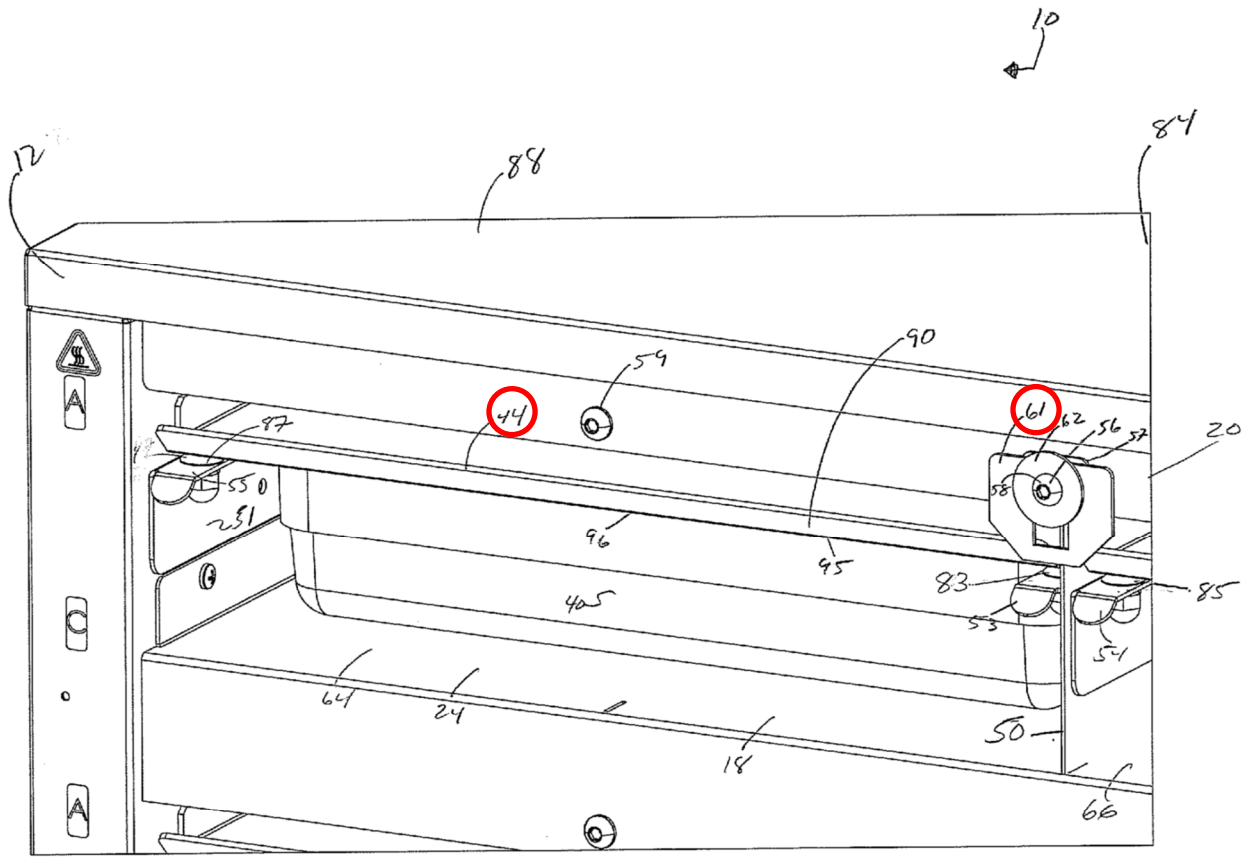


FIGURE 9

EX1013.

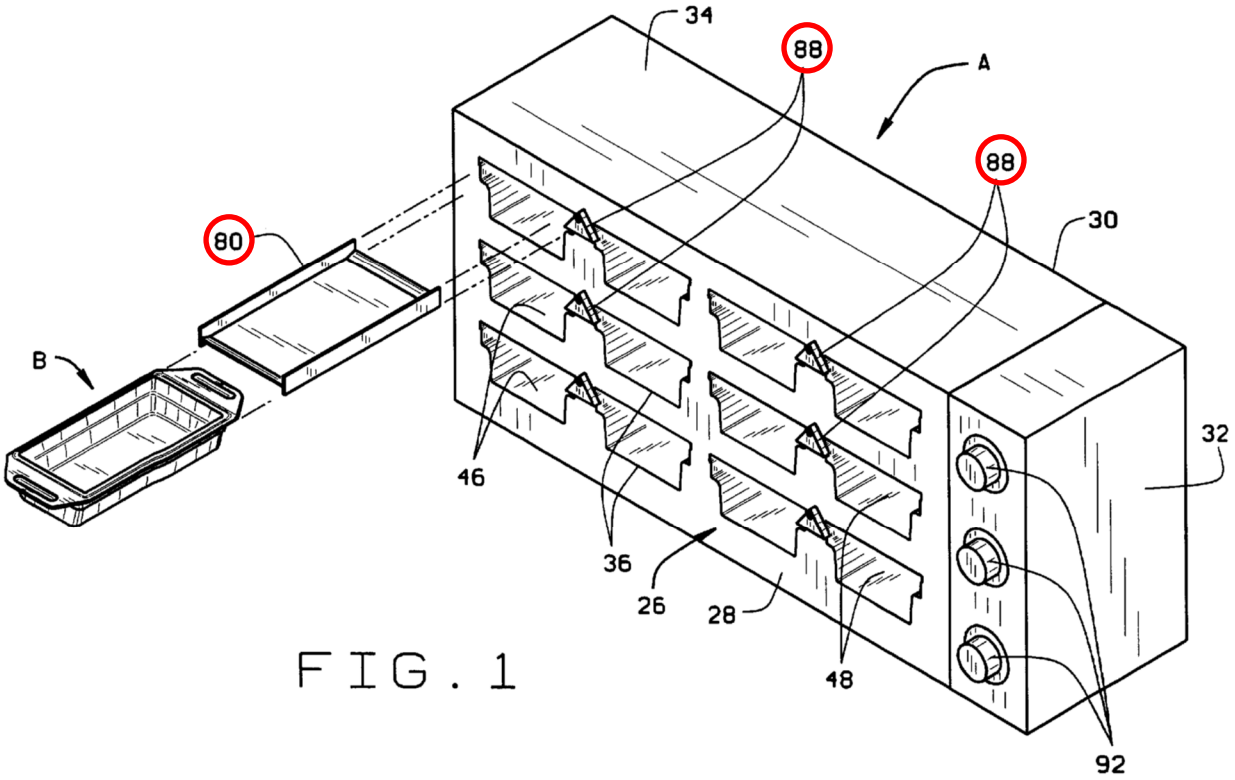


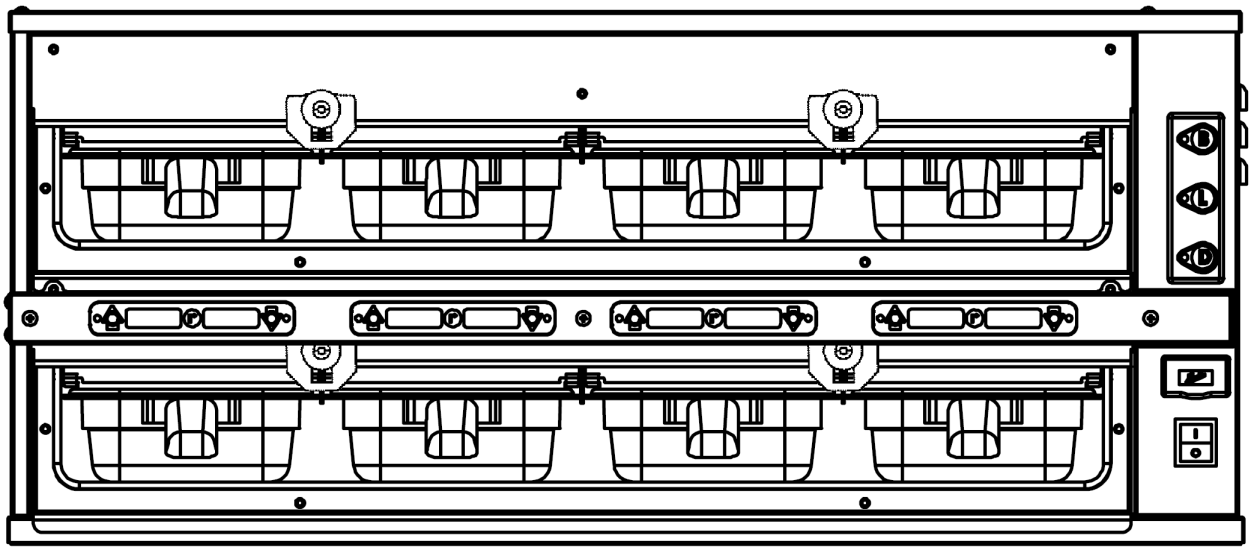
FIG. 1

EX1017.

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: ¶392. 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: ¶393. This would maintain lid position for covering pans. EX1003: ¶393. 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: ¶¶394-395.

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: ¶¶396-397.

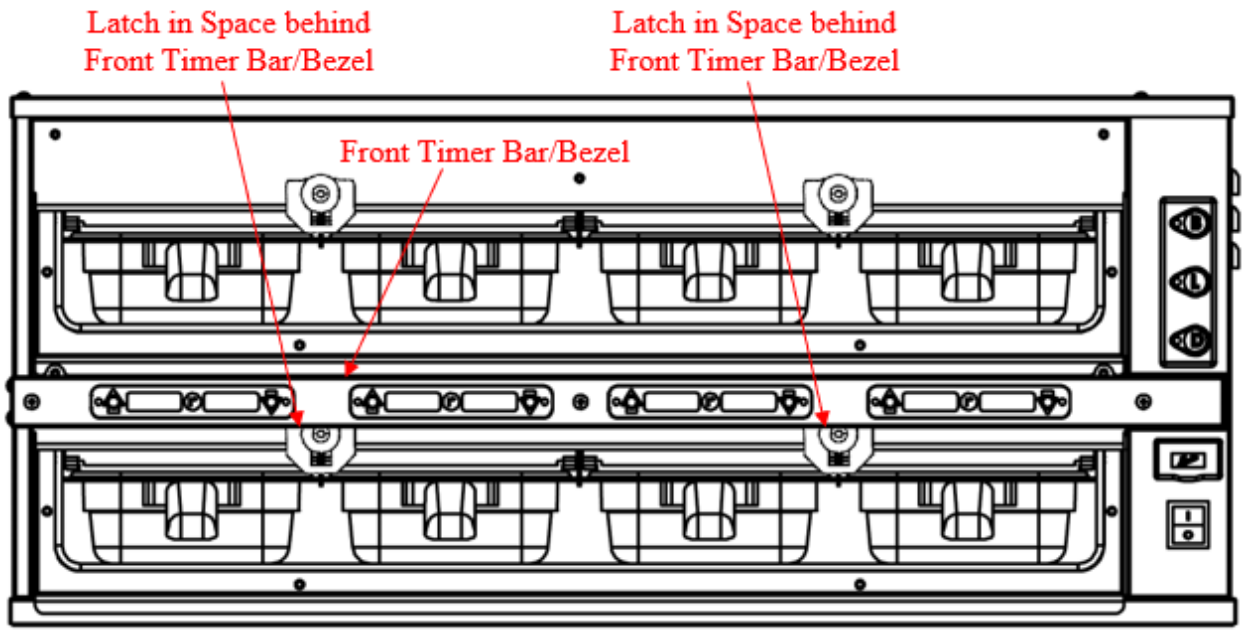
Each stop would be on the face of the chassis/shelf between two lids as in Hartfelder and Shei'099. EX1003: ¶398. A representative illustration of IRHS24 including Hartfelder's stops is below. EX1003: ¶399. A modification implementing Shei'099's stops would be similar but with Shei'099's stops. EX1003: ¶399.



EX1005: 8 (modified, unannotated).

B. Claims 5/13

Per Hartfelder and/or Shei'099, the stops (latches) would be in the space between the front timer bar/bezel and front face. Section V(A); EX1003: ¶¶400-402.



EX1005: 8 (modified).

It would have been obvious to position the latches here as taught by Hartfelder and/or Shei'099—positioned adjacent the openings and lids, and thus to engage and retain the lids (even with a bezel (76)). EX1013: Figs. 1-5, 9, ¶[0039]; EX1003: ¶¶403-404.

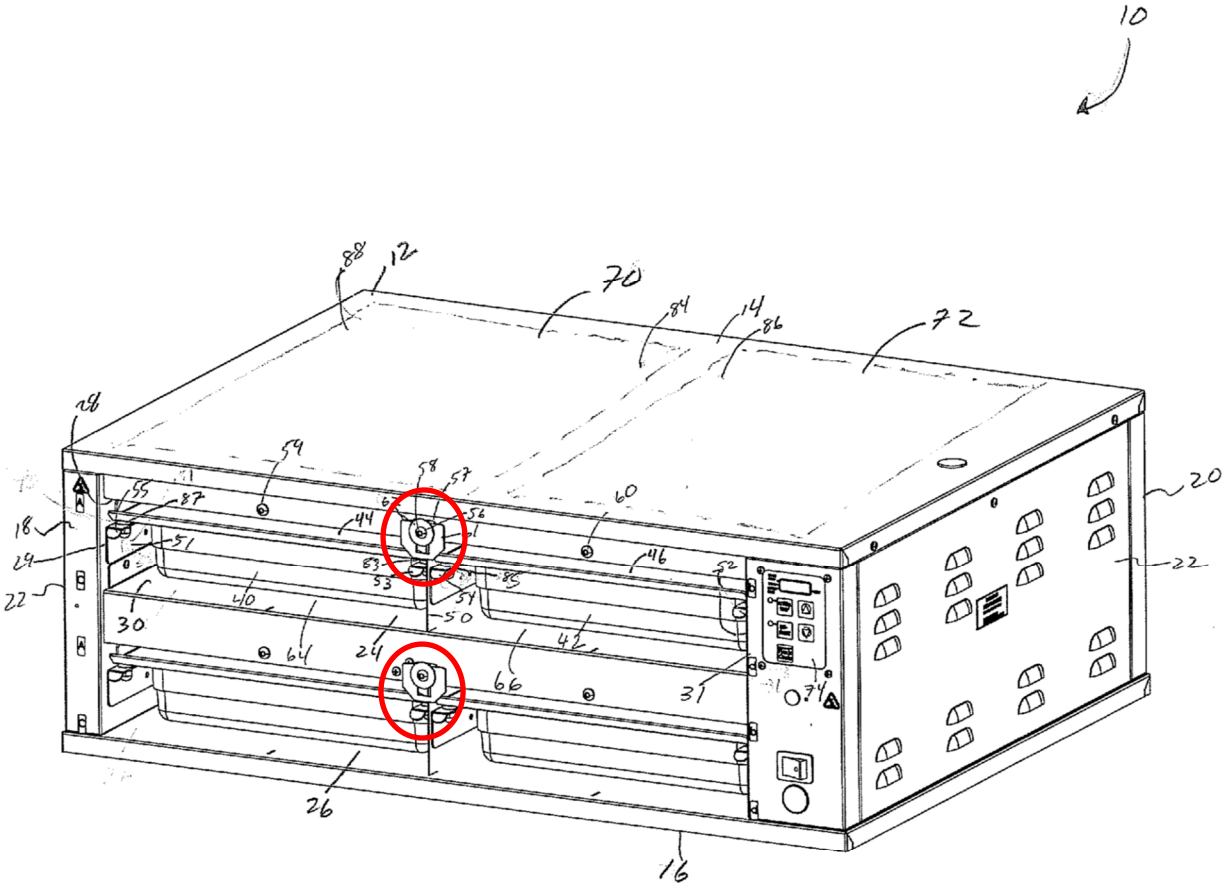
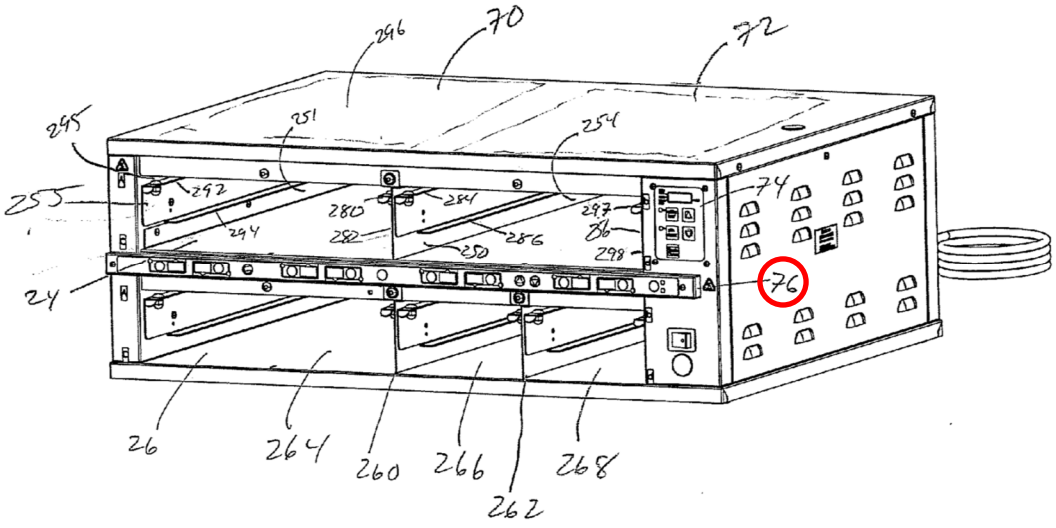

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FIGURE 1


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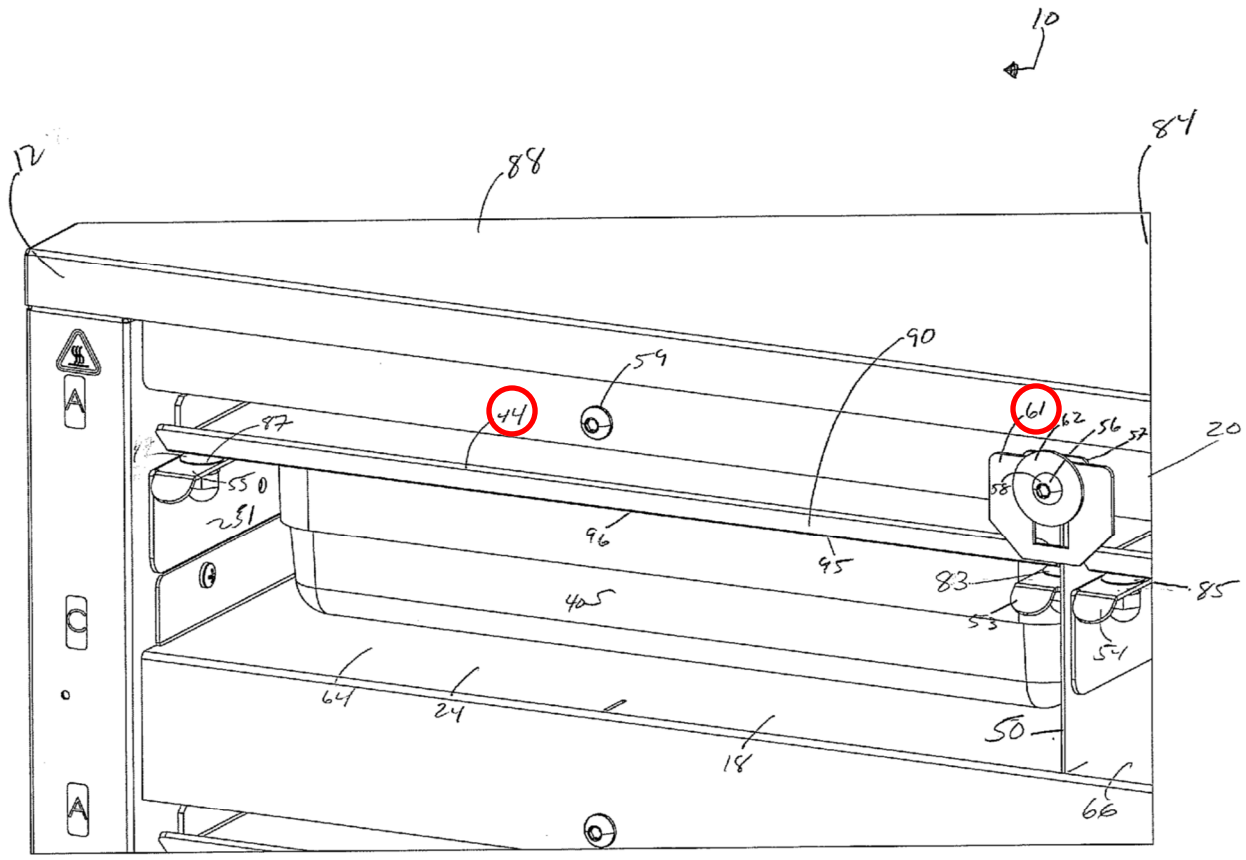


FIGURE 9

EX1013: Figs. 1, 3, 9.

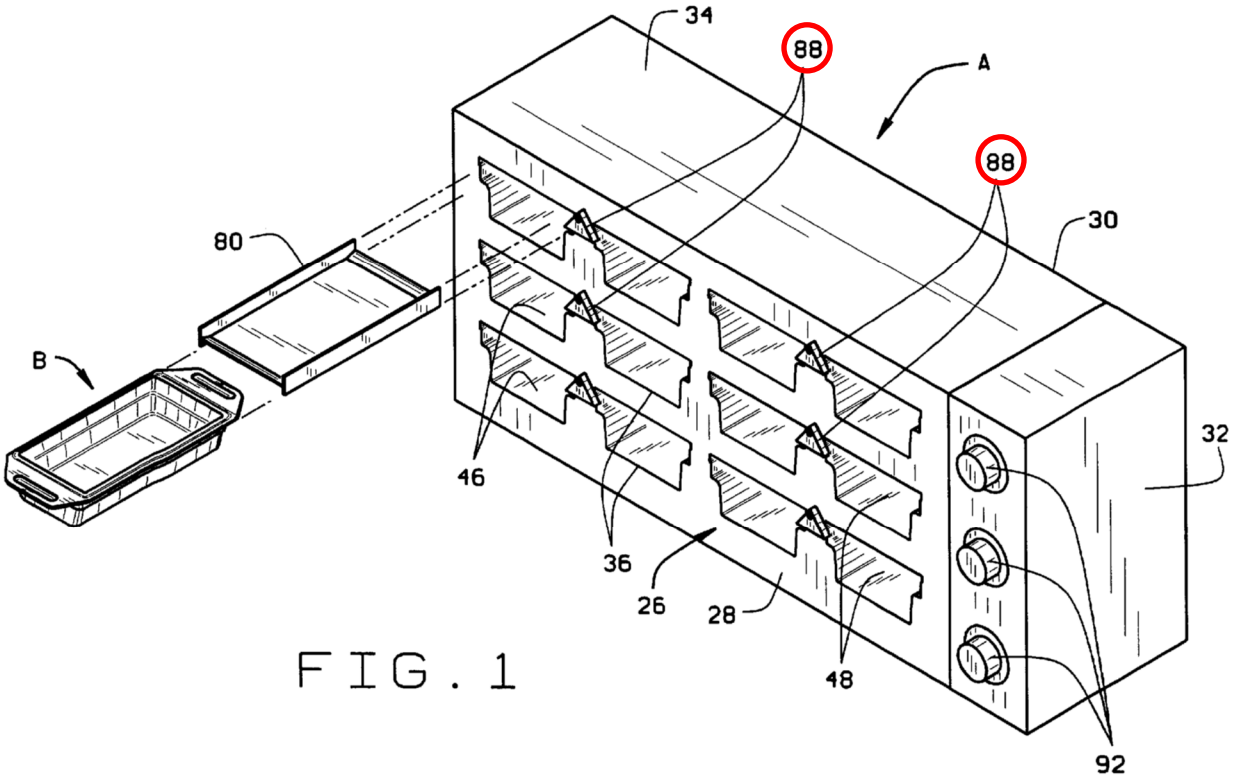
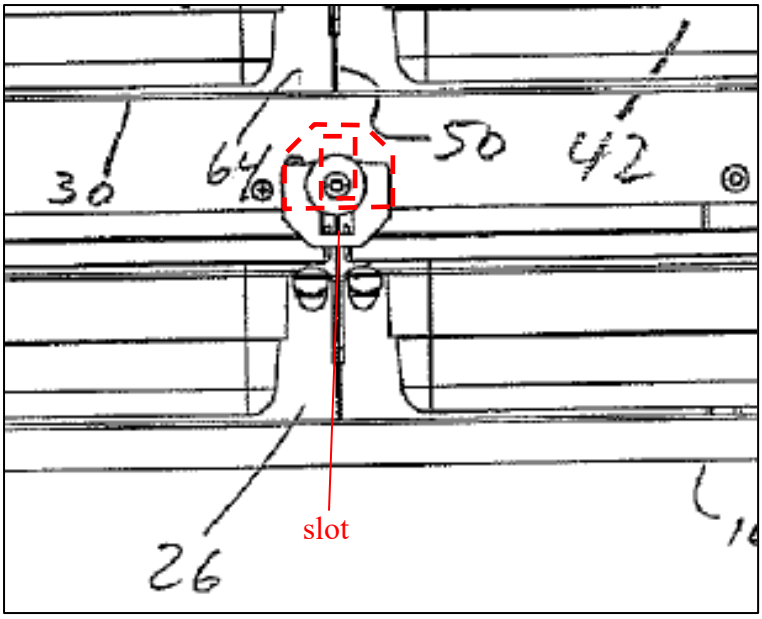


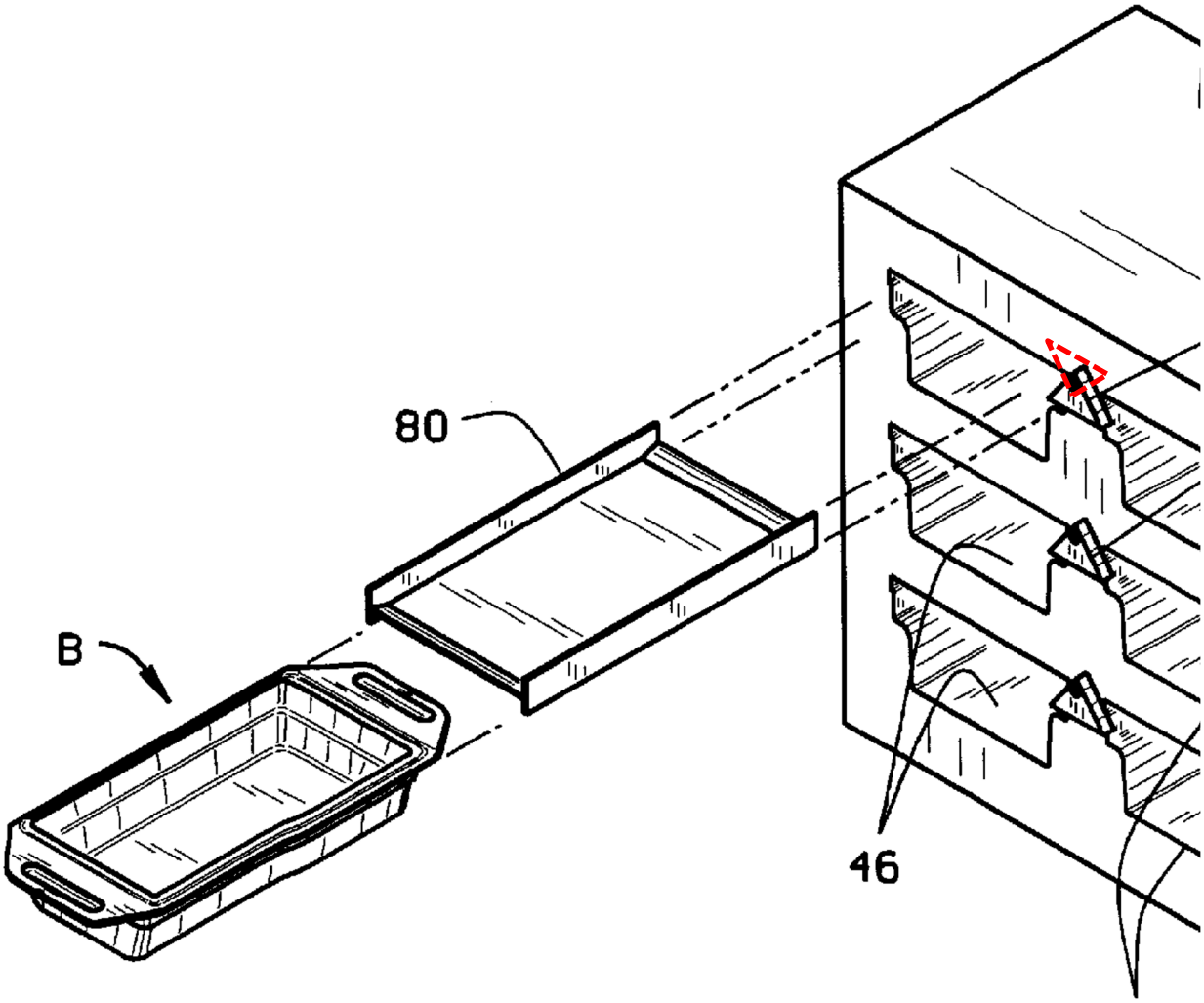
FIG. 1

EX1017.

Per Hartfelder and/or Shei'099, the stops/latches would be moveable/rotatable between locked/first and unlocked/second positions. EX1013: Fig. 2; EX1017: 6:9-32, Fig. 1; EX1016: ¶[0043], Fig. 1; EX1003: ¶¶405-407, 418-419.

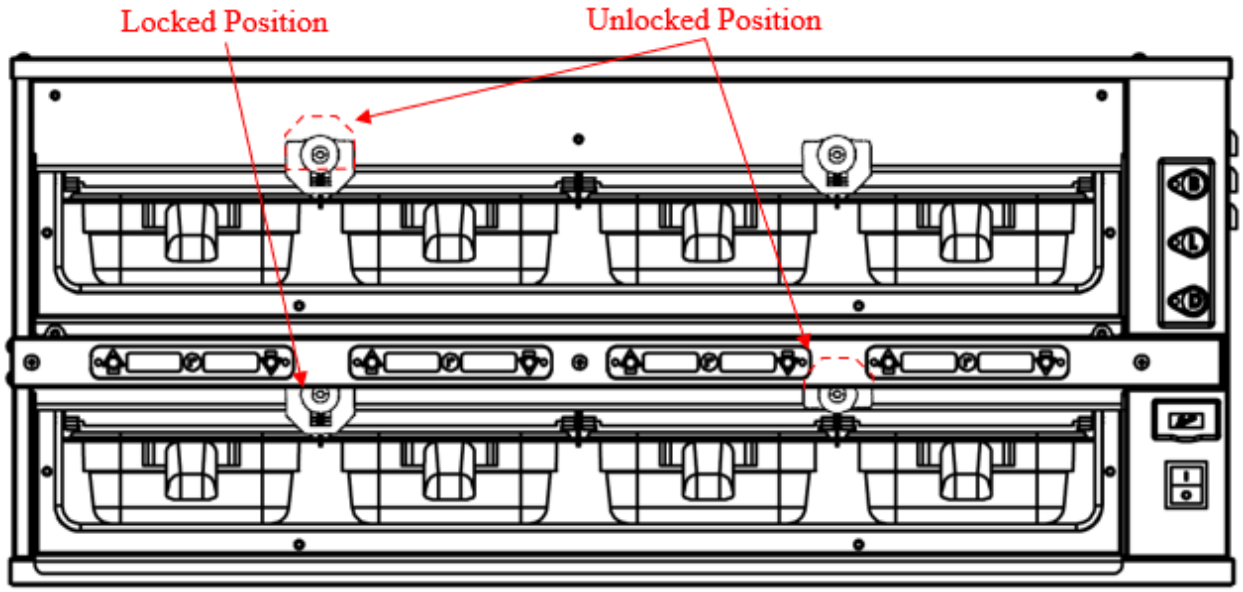


EX1013: Fig. 2 (enlarged).



EX1017: Fig. 1 (enlarged).

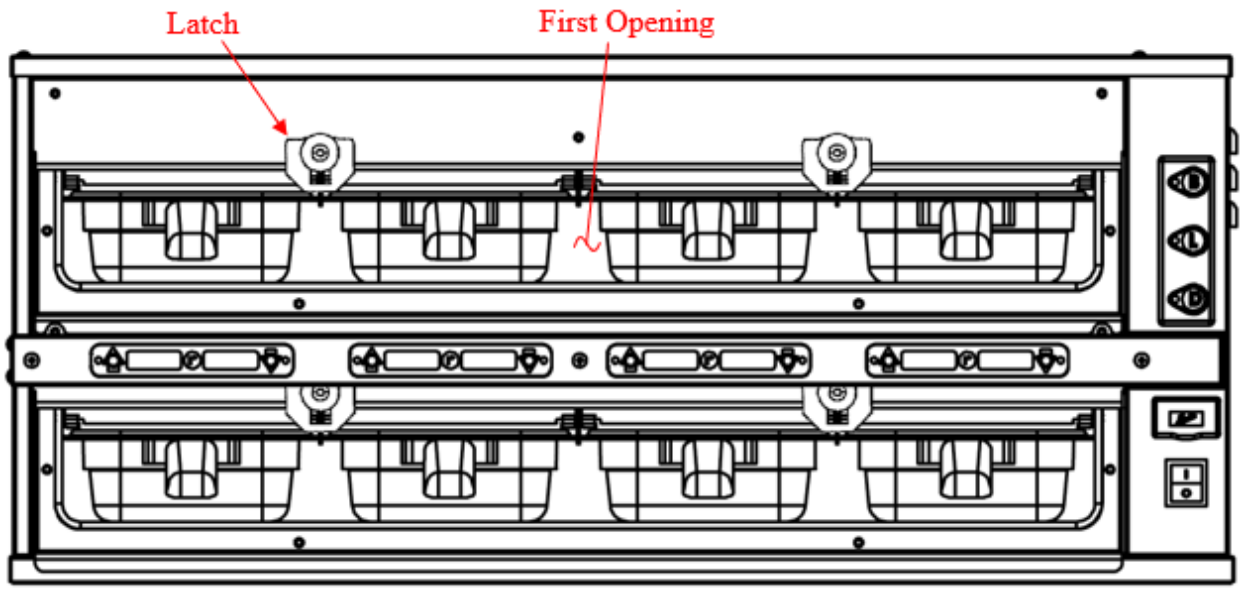
Therefore, latches rotatable between locked/first and unlocked/second positions in the space between the front timer bar/bezel and front face would be obvious. EX1003: ¶¶408-409, 420-421.



EX1005: 8 (modified).

C. Claim 11

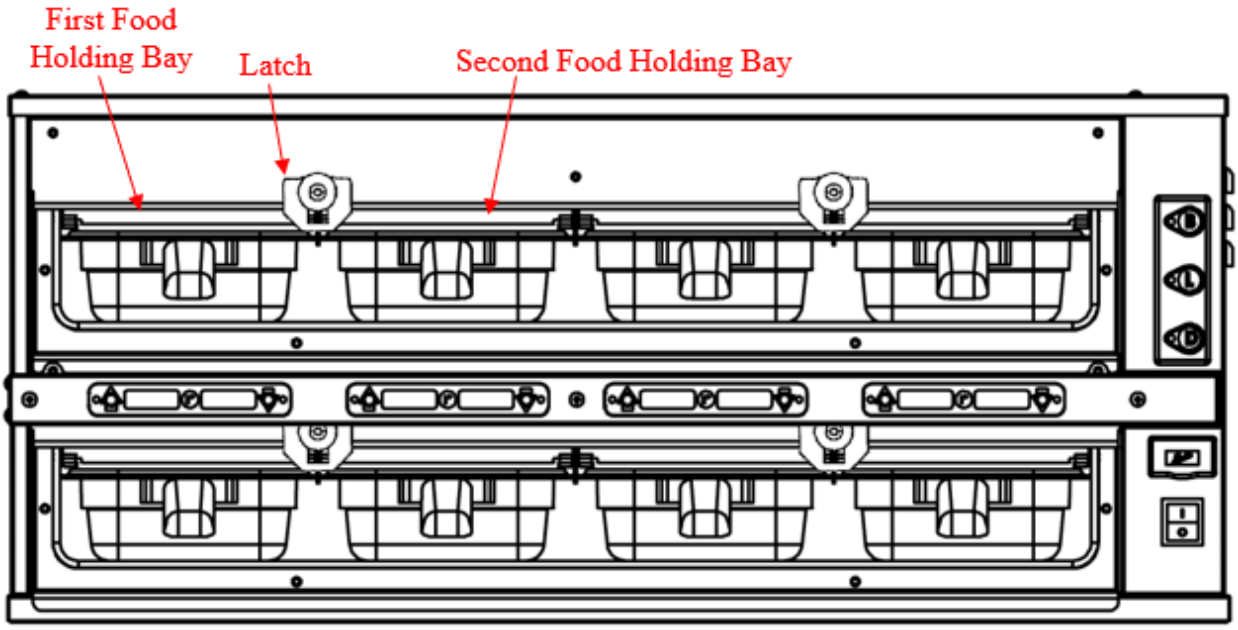
Hartfelder and Shei'099 disclose latches adjacent openings such that it would have been obvious to modify IRHS24 to have latches adjacent the first opening. Section V(A); EX1013: ¶[0058]; EX1017: 6:9-32; EX1003: ¶¶410-414.



EX1005: 8 (modified).

D. Claim 12

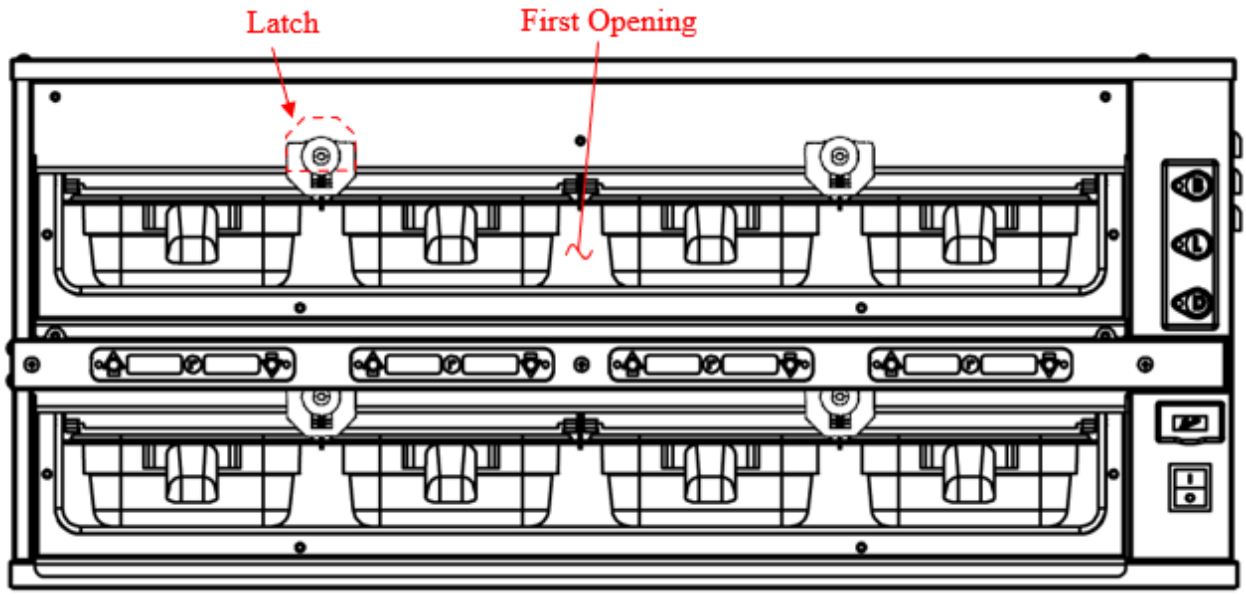
Per Hartfelder and Shei'099, the latch would be between first and second bays. Section V(A); EX1013: ¶¶[0039], [0058], Figs. 1-5, 9; EX1017: 6:9-32; EX1003: ¶¶415-417.



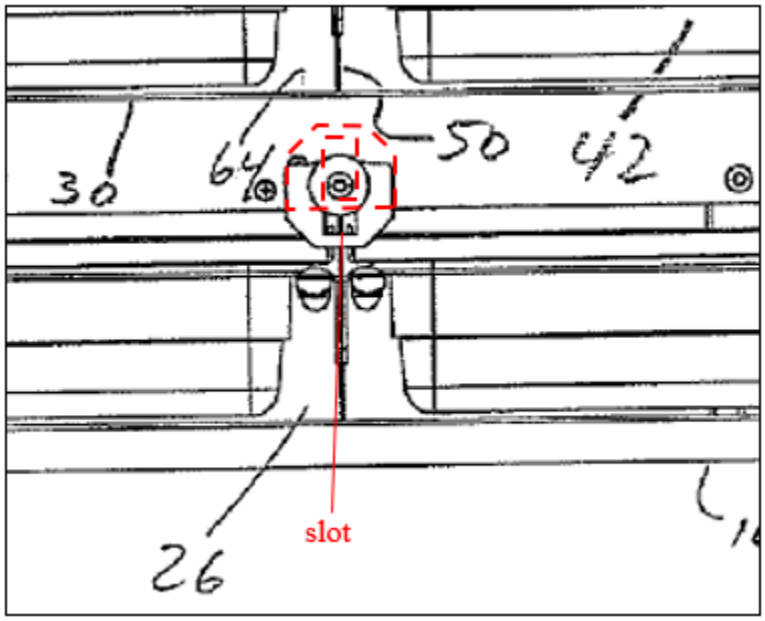
EX1005: 8 (modified).

E. Claim 22

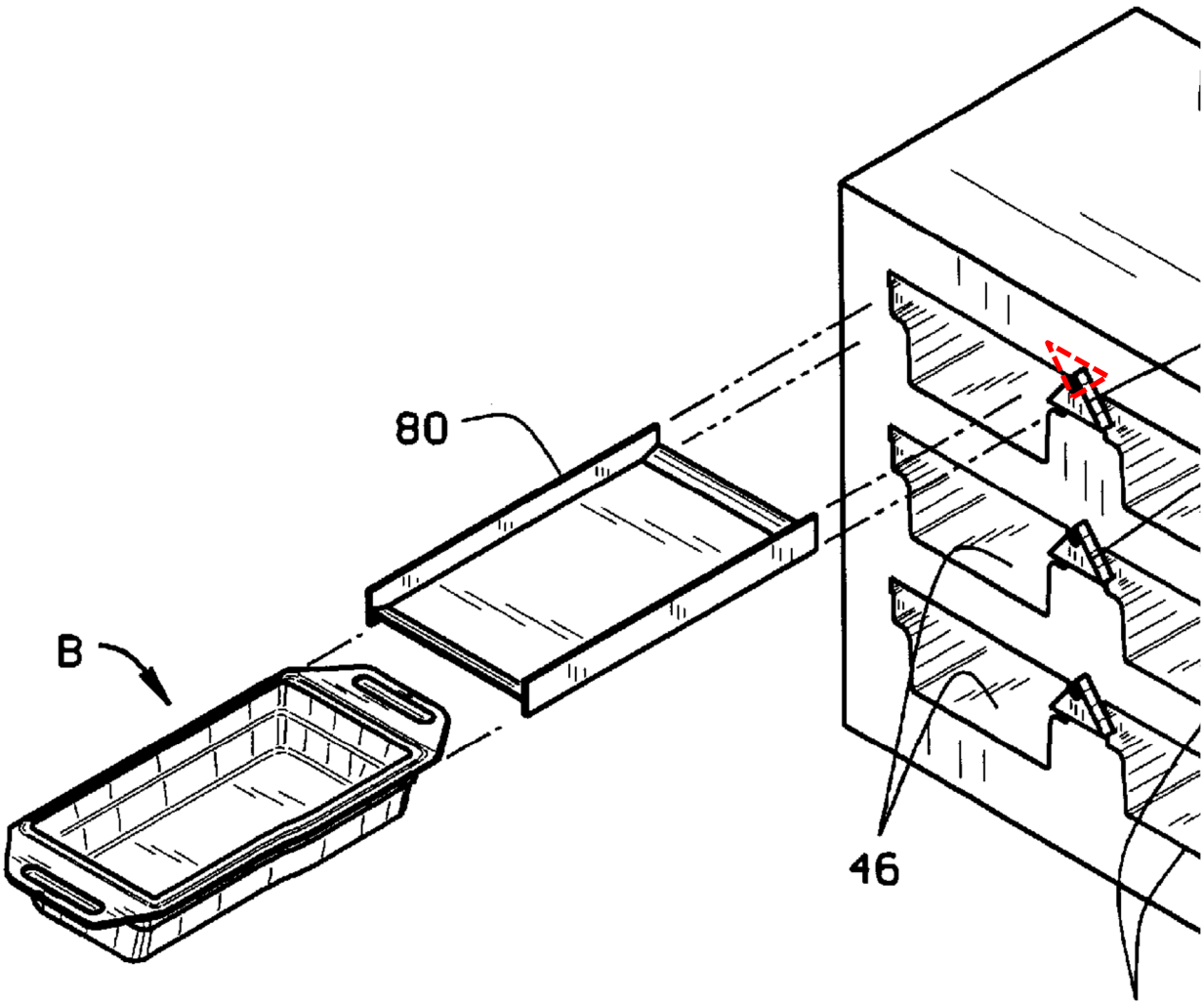
Obvious per Sections V(B)-(C). EX1003: ¶¶422-425. In the locked position, the latch would be positioned (gravity/at rest) to block/prevent lid removal. EX1013: ¶[0058], Fig. 2; EX1017: 6:19-21; EX1016: ¶[0043], Fig. 1; EX1003: ¶426. In the unlocked position, the latch would be rotated (e.g., 45-degrees, 180-degrees (annotated)) to allow lid removal. EX1013: Fig. 2; EX1017: 6:9-32, Fig. 1; EX1016: ¶[0043], Fig. 1; EX1003: ¶¶427-429.



EX1005: 8 (modified).



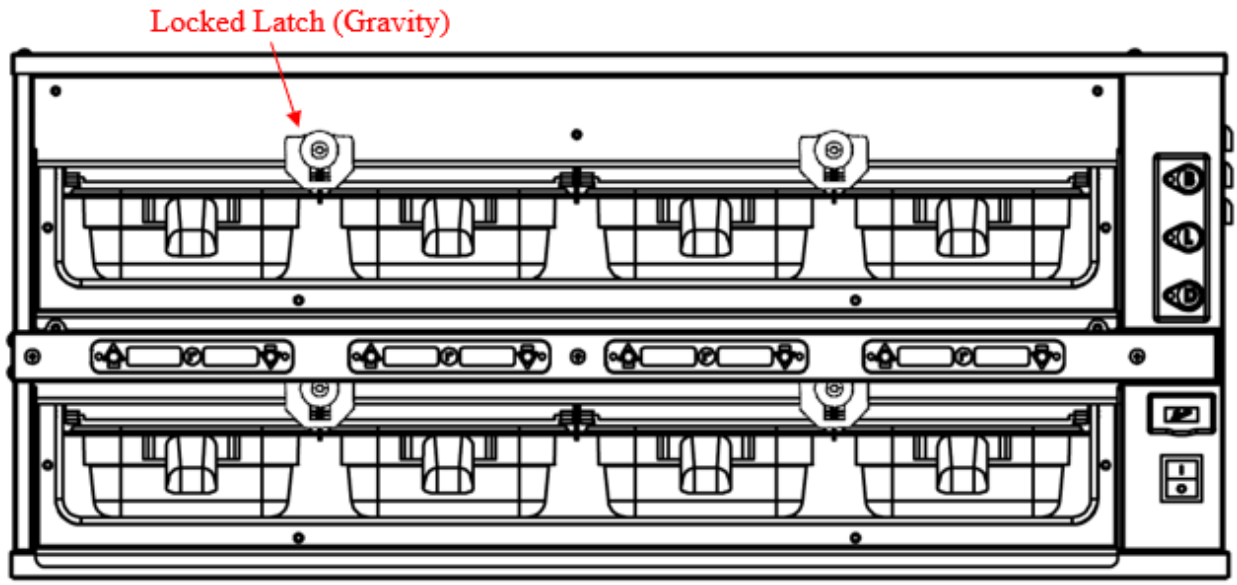
EX1013: Fig. 2 (enlarged).



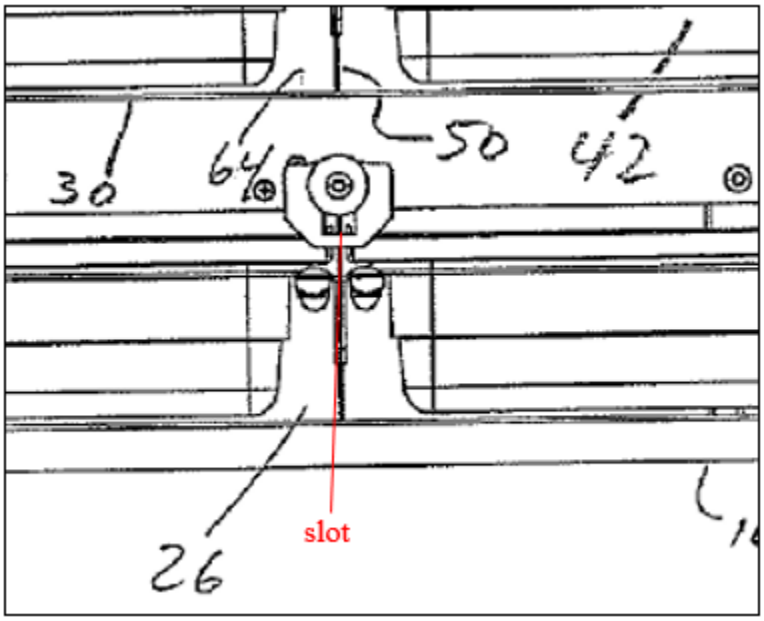
EX1017: Fig. 1 (enlarged).

F. Claim 23

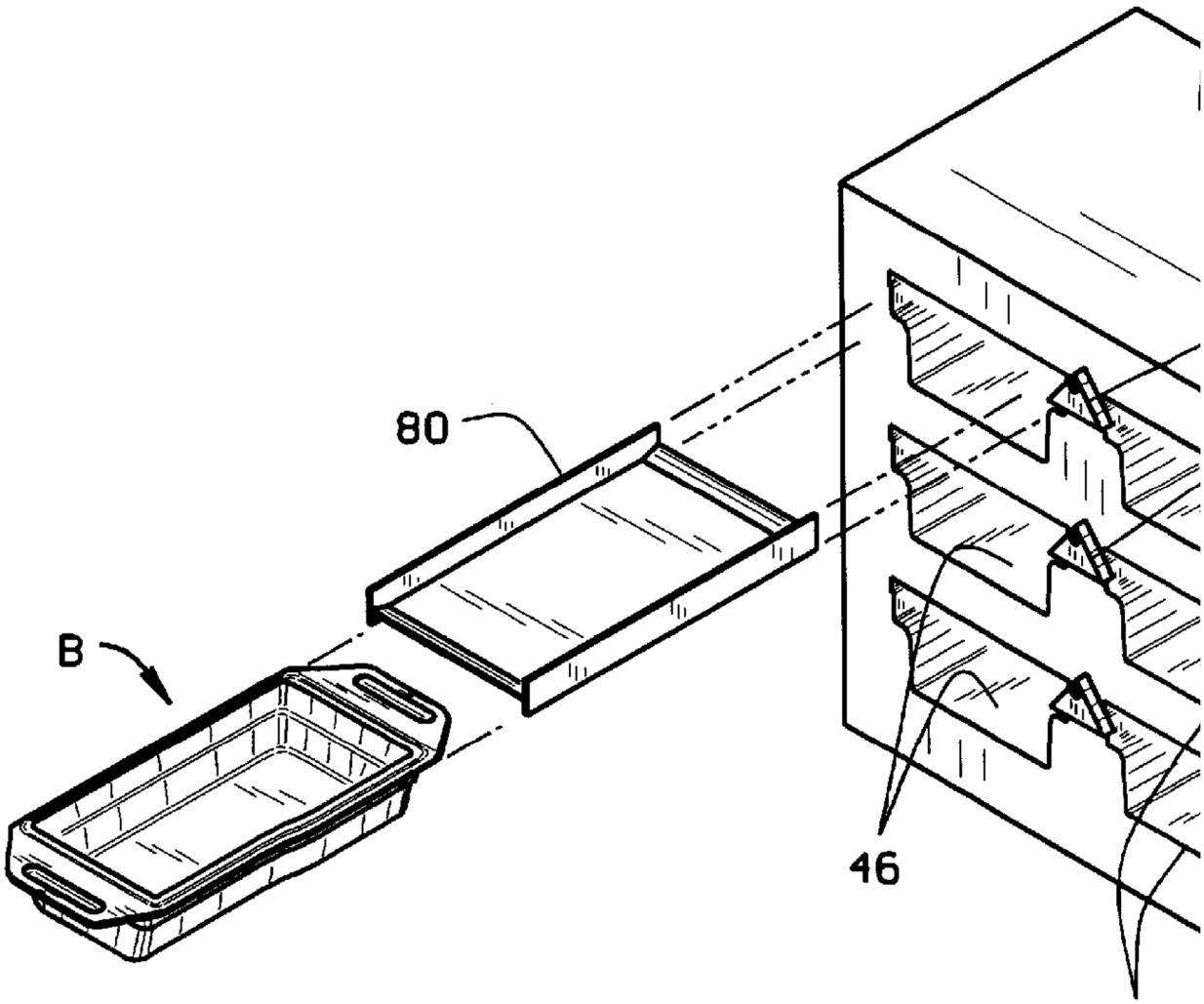
Gravity would bias the rotatable latch into the locked position (latch's center of gravity below the fastener). Section V(B); EX1013: Figs. 2, 9; EX1017: 6:9-32, Fig. 1; EX1016: ¶[0043], Fig. 1; EX1003: ¶¶430-435.



EX1005: 8 (modified).



EX1013: Fig. 2 (enlarged).



EX1017: Fig. 1 (enlarged).

VI. GROUND 3: Claim 18 Would Have Been Obvious Over the IRHS Documents in view of Veltrop and Poole (If Necessary)

If it is determined the IRHS24's heating elements do not comprise resistive wires, such a configuration would have been obvious. EX1003: ¶436. In this ground, claims 1 and 18 are obvious per Grounds 1 and 7-9, with claim 18 being further obvious per below.

Veltrop's cabinet has electrically-resistive heater wires (67). EX1022: ¶¶[0010], [0025], Fig. 2; EX1003: ¶437.

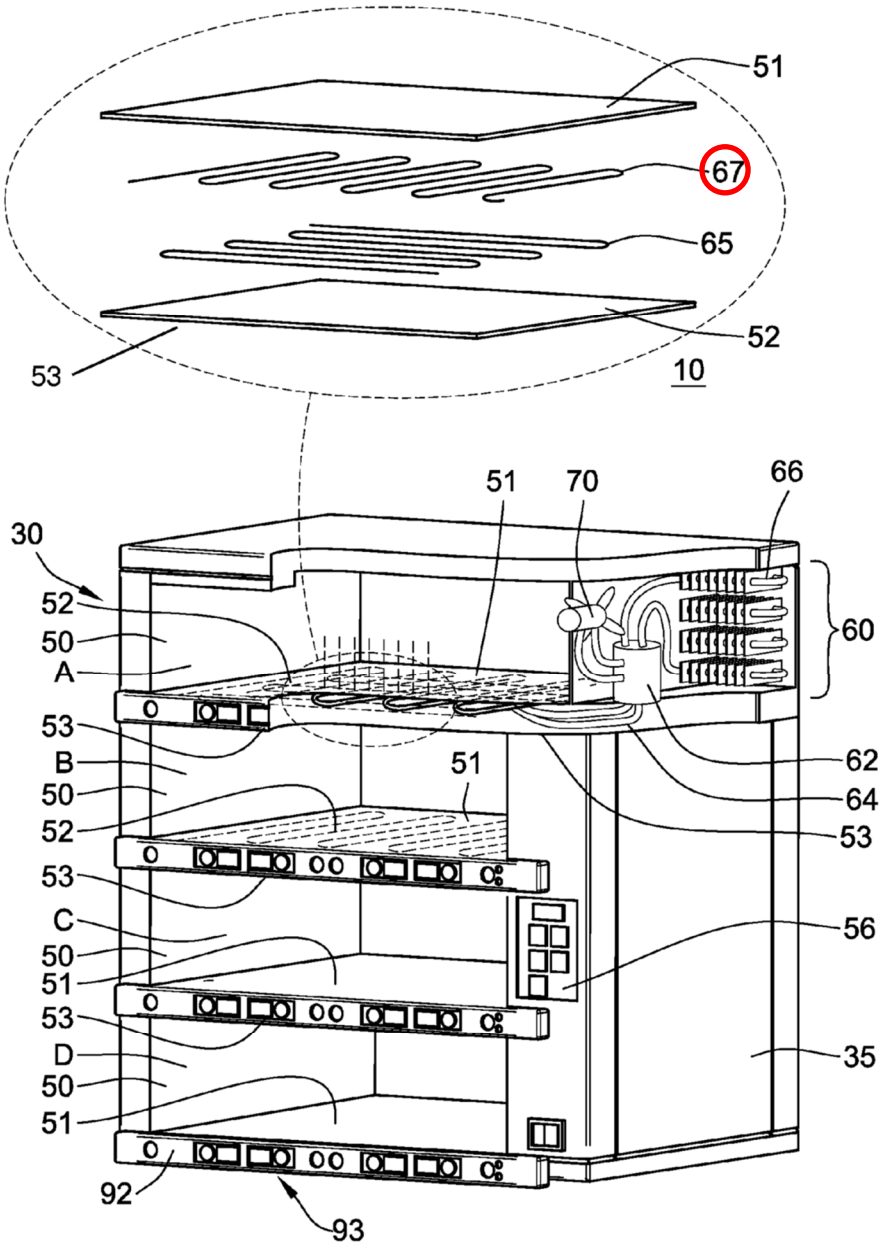
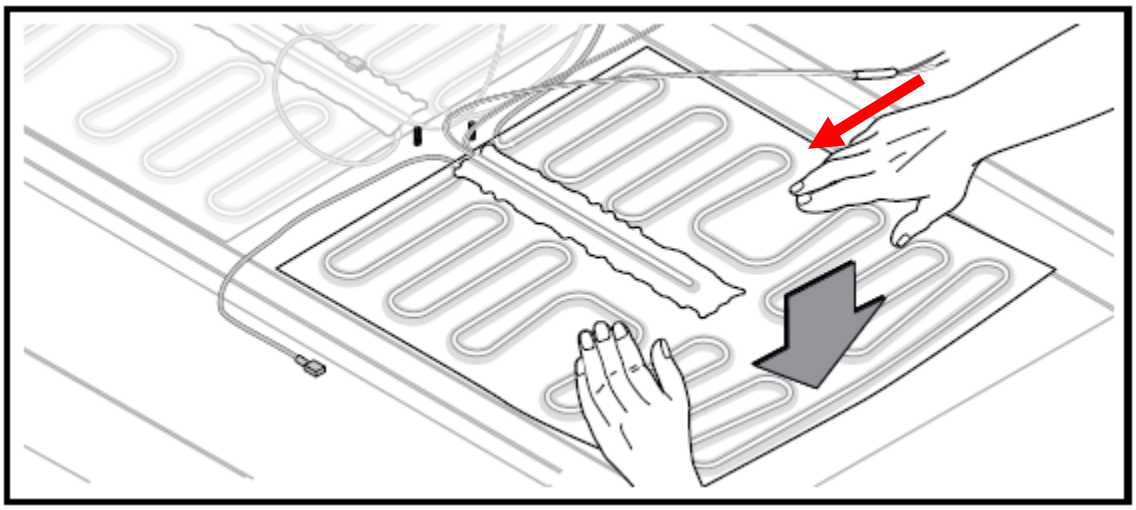


FIG. 2

EX1022.

Per Veltrop, it would have been obvious for IRHS24's second and fourth heating elements to comprise an electrically-resistive heater wire to generate heat. EX1003: ¶438. IRHS24 teach electrical heating elements. EX1003: ¶439. POSA would understand electrically-resistive wire is a suitable heat source for IRHS24. EX1022: ¶[0025]; EX1003: ¶¶439-440.

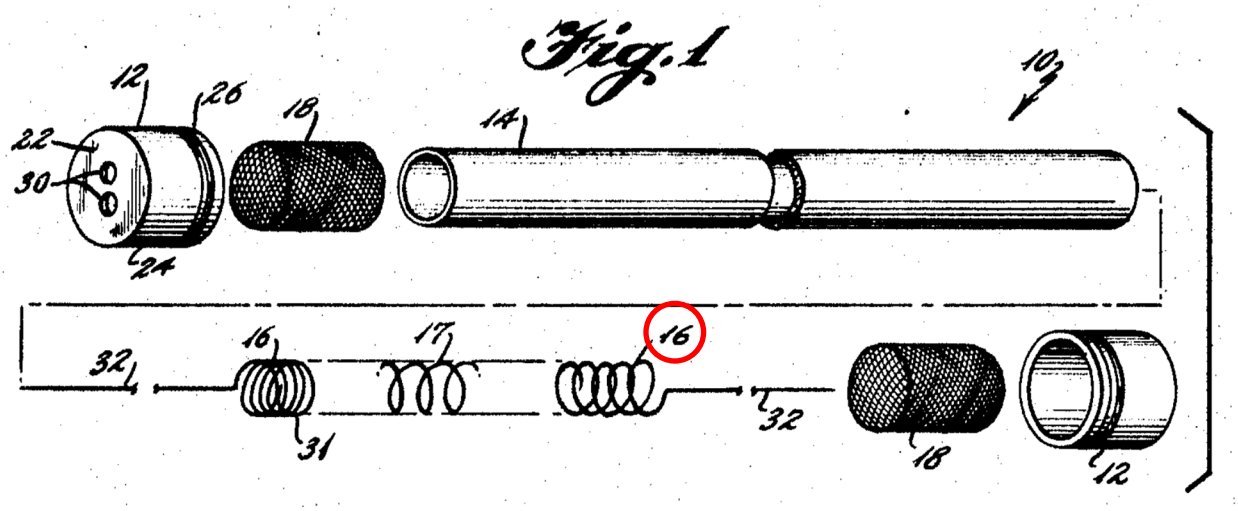


EX1008: 23.

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: ¶¶441-442.

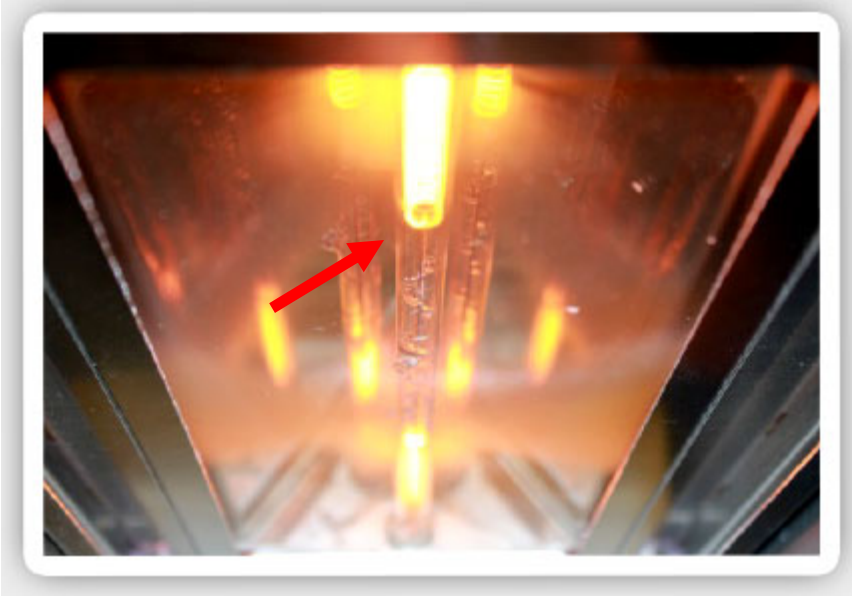
This renders obvious each lower heating element comprising an electrically-resistive heater wire. EX1003: ¶443.

Poole teaches an "infrared quartz heater" with a resistance wire (16). EX1025: Title, 1:29-30, 2:6-7; EX1003: ¶444.



EX1025.

Per Poole, it would have been obvious to use infrared quartz heaters including resistive wires as the IR bulbs (first, third, fifth, sixth heating elements) to generate IR heat. EX1003: ¶445. 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: ¶445. IRHS24 disclose using quartz IR bulbs and Poole discloses suitable quartz IR bulbs. EX1003: ¶446.



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: ¶447.

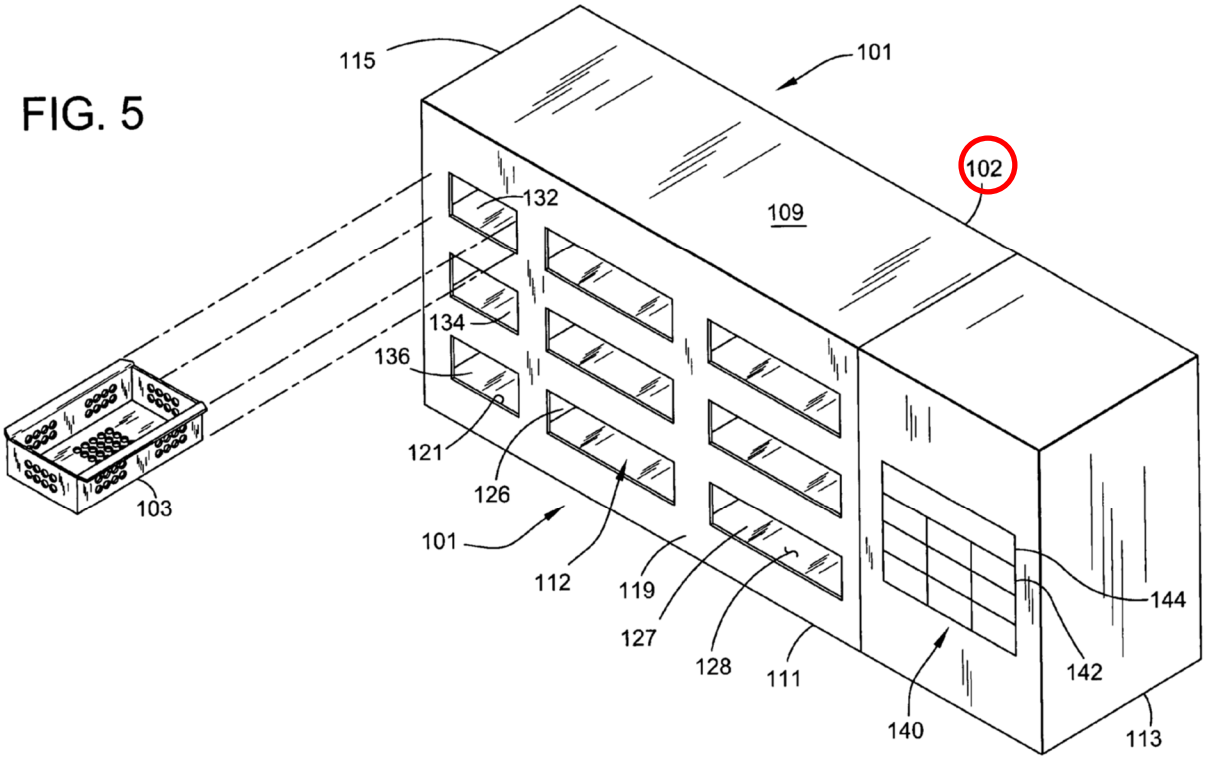
This renders obvious each upper heating element comprising an infrared quartz heater with resistive wire. EX1003: ¶¶448-449.

VII. GROUND 4: Claim 24 Would Have Been Obvious Over the IRHS Documents in view of Shei'821 and/or Shei'155 (If Necessary)

If it is determined the IRHS24's lid-holding shelves do not comprise sheet metal, such a configuration would have been obvious. EX1003: ¶450. In this ground, claims 1, 14, 21, and 24 are obvious per Grounds 1 and 7-9, with claim 24 being further obvious per below.

Shei'155 and Shei'821 teach fabricating holding cabinets (102, 10) and lid shelves (36A) from sheet metal. EX1016: ¶[0046]; EX1011: ¶¶[0024], [0035], [0039]; EX1003: ¶¶451-453.

FIG. 5



EX1016.

FIG. 1

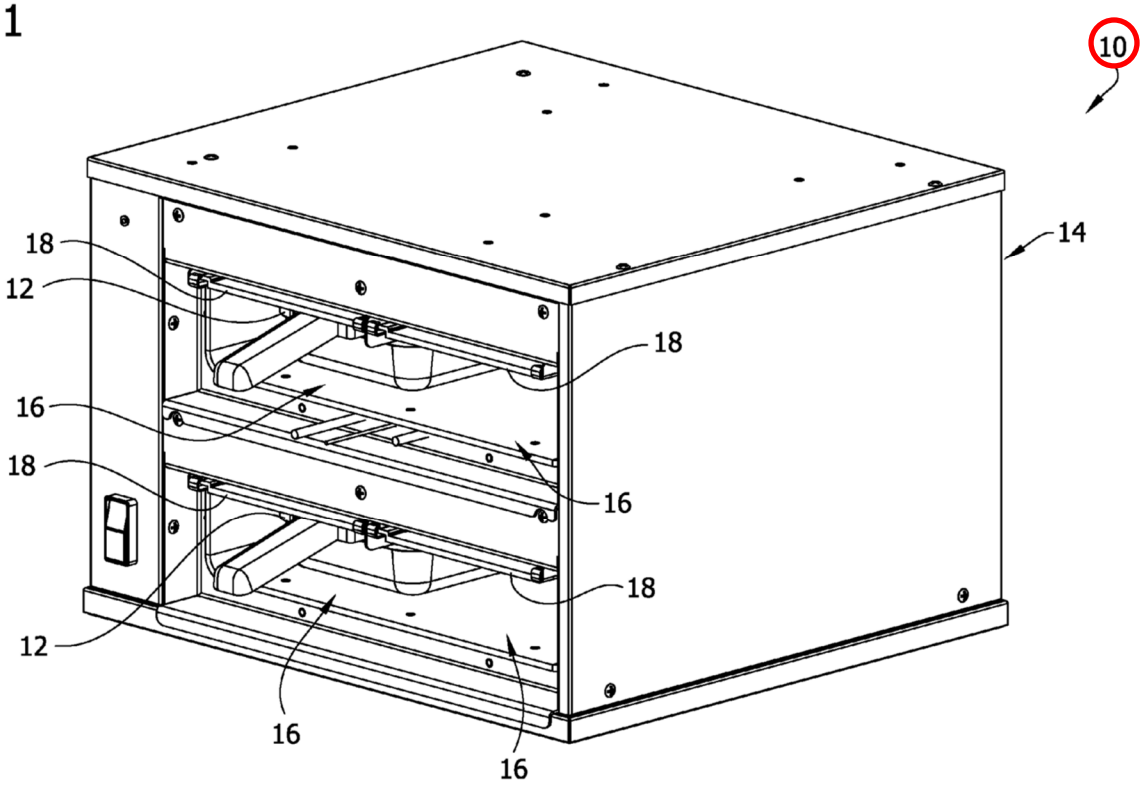

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FIG. 7

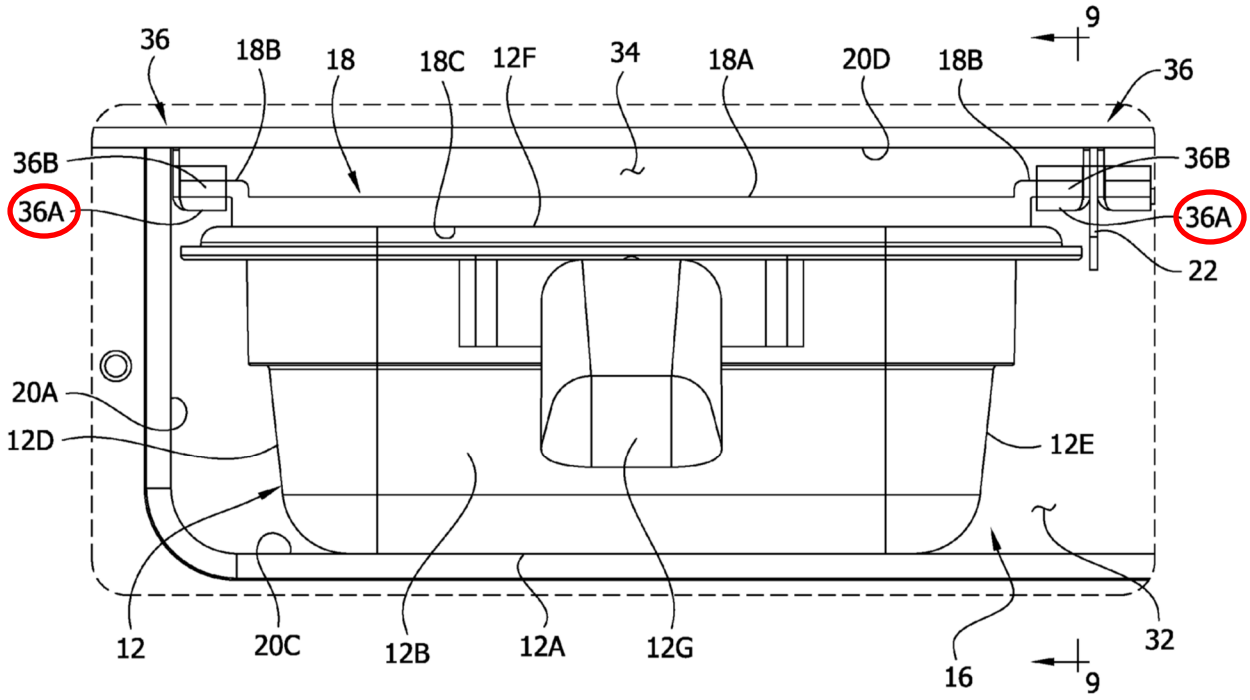
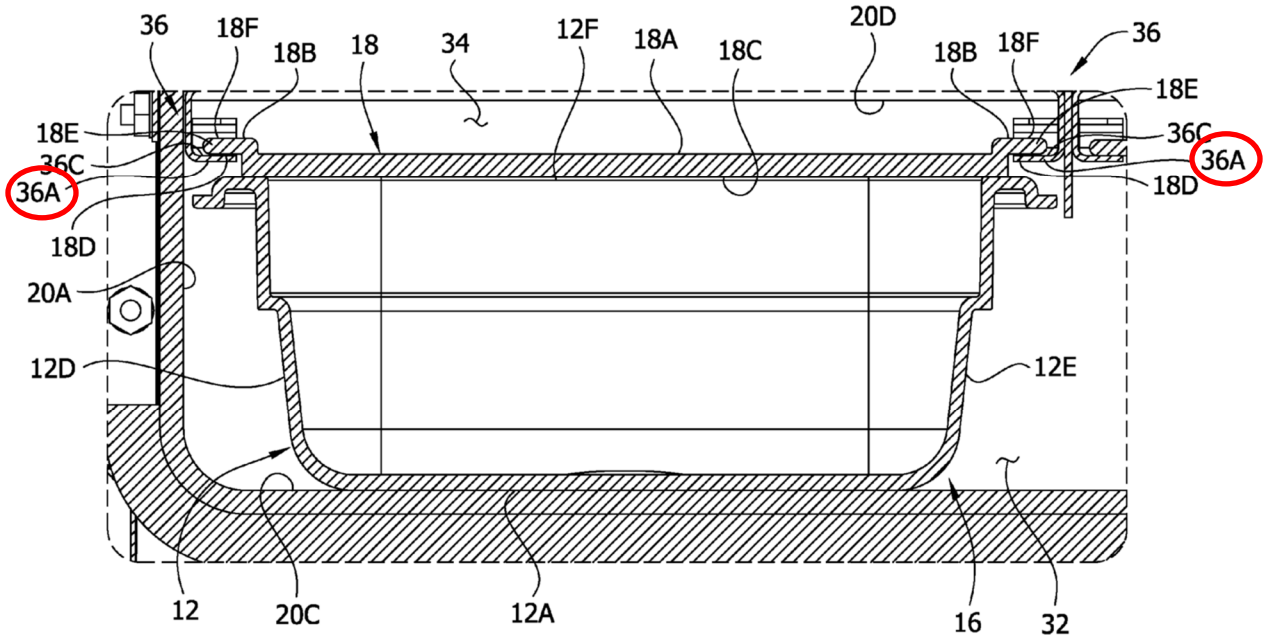

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FIG. 8



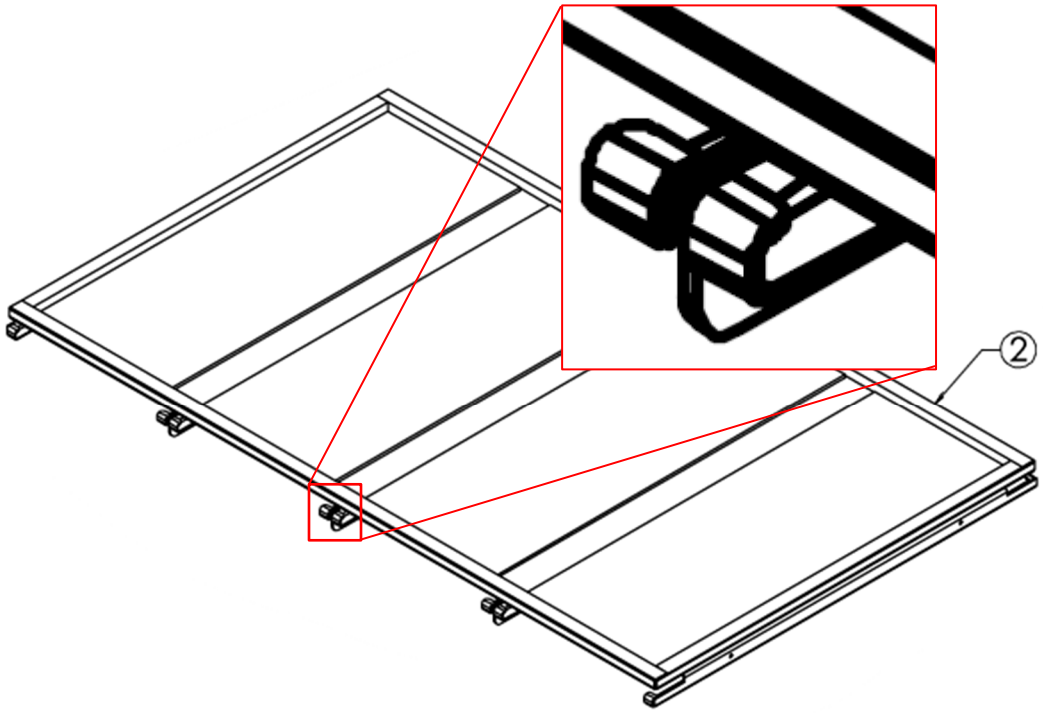
EX1011.

It would have been obvious to make IRHS24 lid-holding shelves from sheet metal per Shei'821 and/or Shei'155 as a known suitable material for constructing shelves. EX1016: ¶[0046]; EX1011: ¶[0039]; EX1003: ¶454.

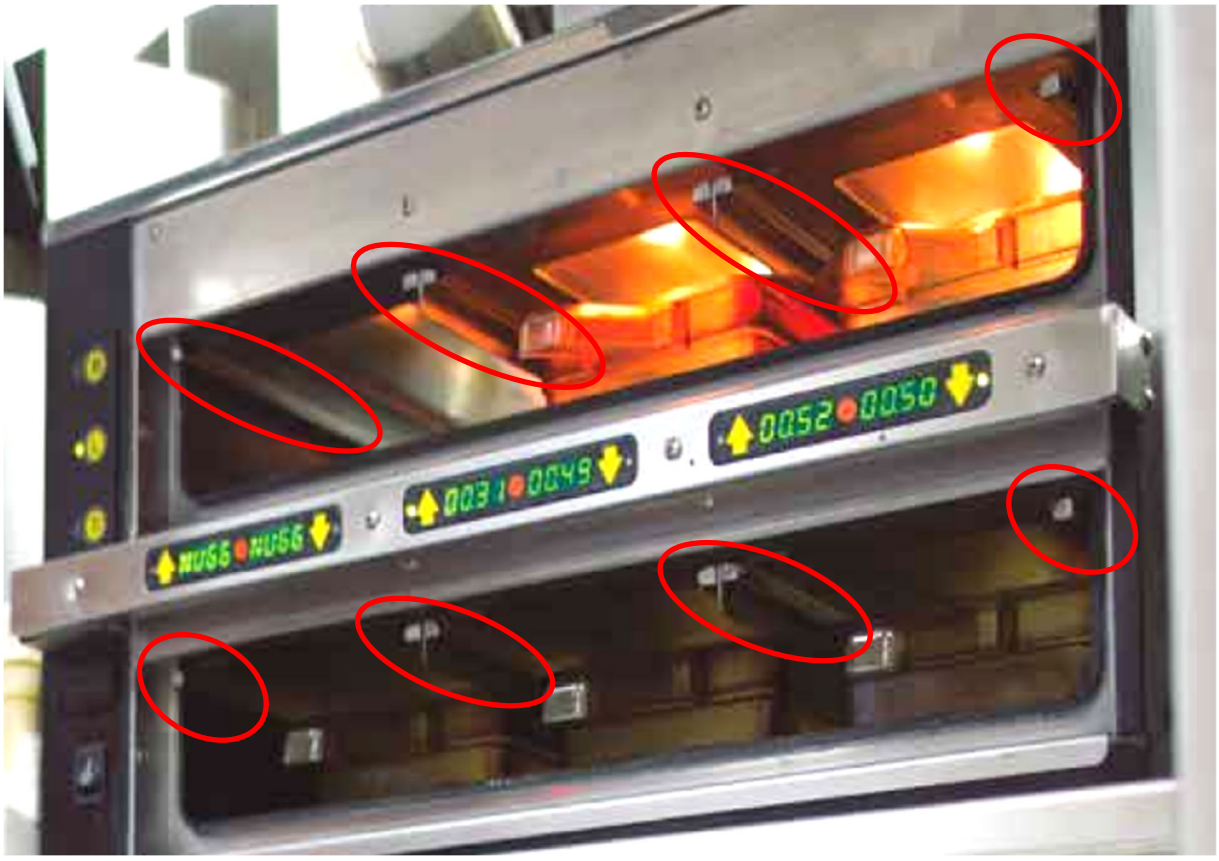
Moreover, constructing shelves from sheet metal is an obvious design choice. *In re Leshin*, 277 F.2d 197, 199 (CCPA 1960) ("selection of known plastics …, would be entirely obvious"); *Ex parte Gehring*, Appeal No. 2014-004556 at 6 (P.T.A.B. June 14, 2016) ("selection of a suitable material is [an] obvious design choice"); EX1003: ¶455.

This combines known elements (sheet metal and IRHS24's shelves) according to known methods (IRHS24 construction) and/or the simple substitution

of one known alternative (sheet metal) for another (IRHS24 shelf material) to yield predictable results (shelves supporting lids) with reasonable expectation of success (IRHS24's existing shelf shape is suitable for sheet metal). EX1003: ¶¶455-458.



EX1005: 19 (enlarged).



EX1007: 36.

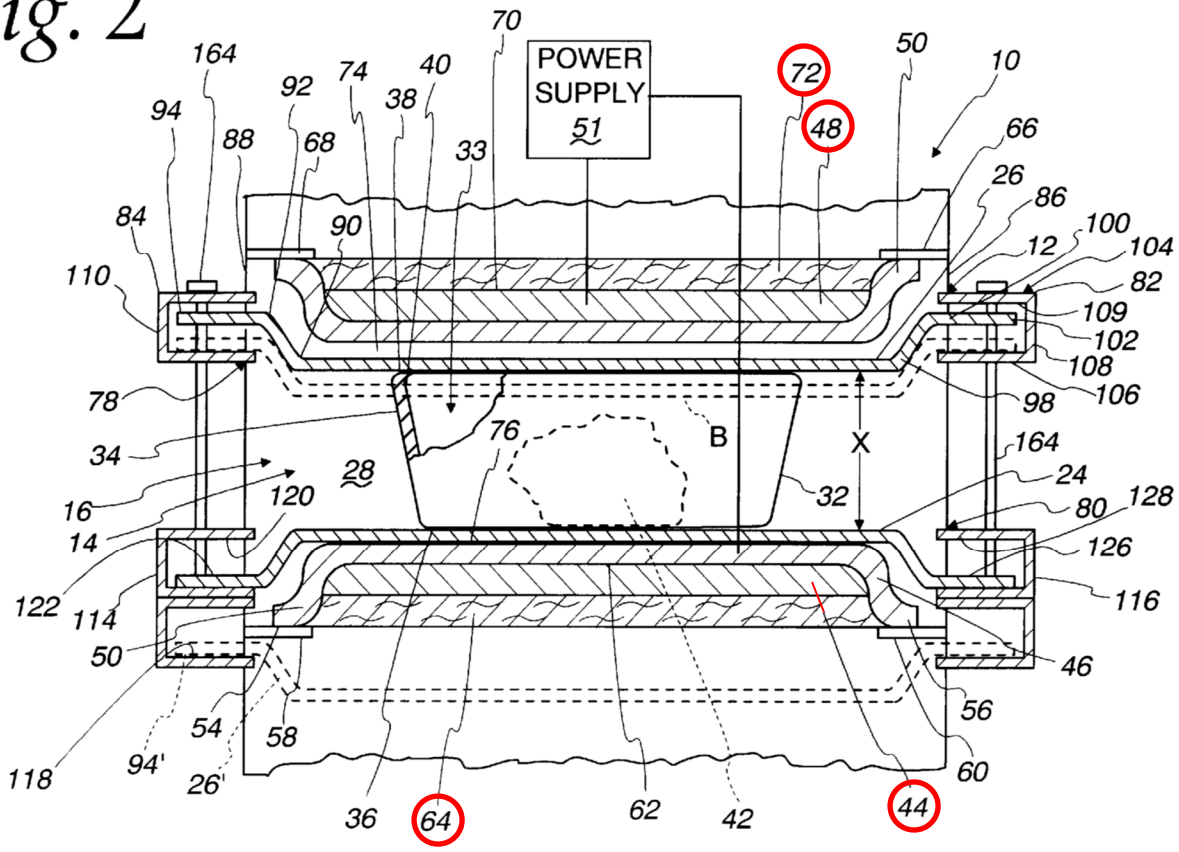
This renders obvious each lid-holding shelf comprising sheet metal.

EX1003: ¶¶459-460.

VIII. GROUND 5: Claim 31 Would Have Been Obvious Over the IRHS Documents in view of Fortmann'967 and/or Fortmann'197

Fortmann'967 and Fortmann'197 teach insulation (64, 72) backing and between heating elements (44, 48, 501, 521-524). EX1018: 3:64-65, 4:4-38, Fig. 2; EX1014: 9:32-37, Figs. 1, 10; EX1003: ¶¶461-466.

Fig. 2


POWER SUPPLY 51
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66
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90
100
12
104
82
110
109
102
108
106
78
98
76
B
X
34
164
24
28
32
16
120
80
128
14
126
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EX1018.

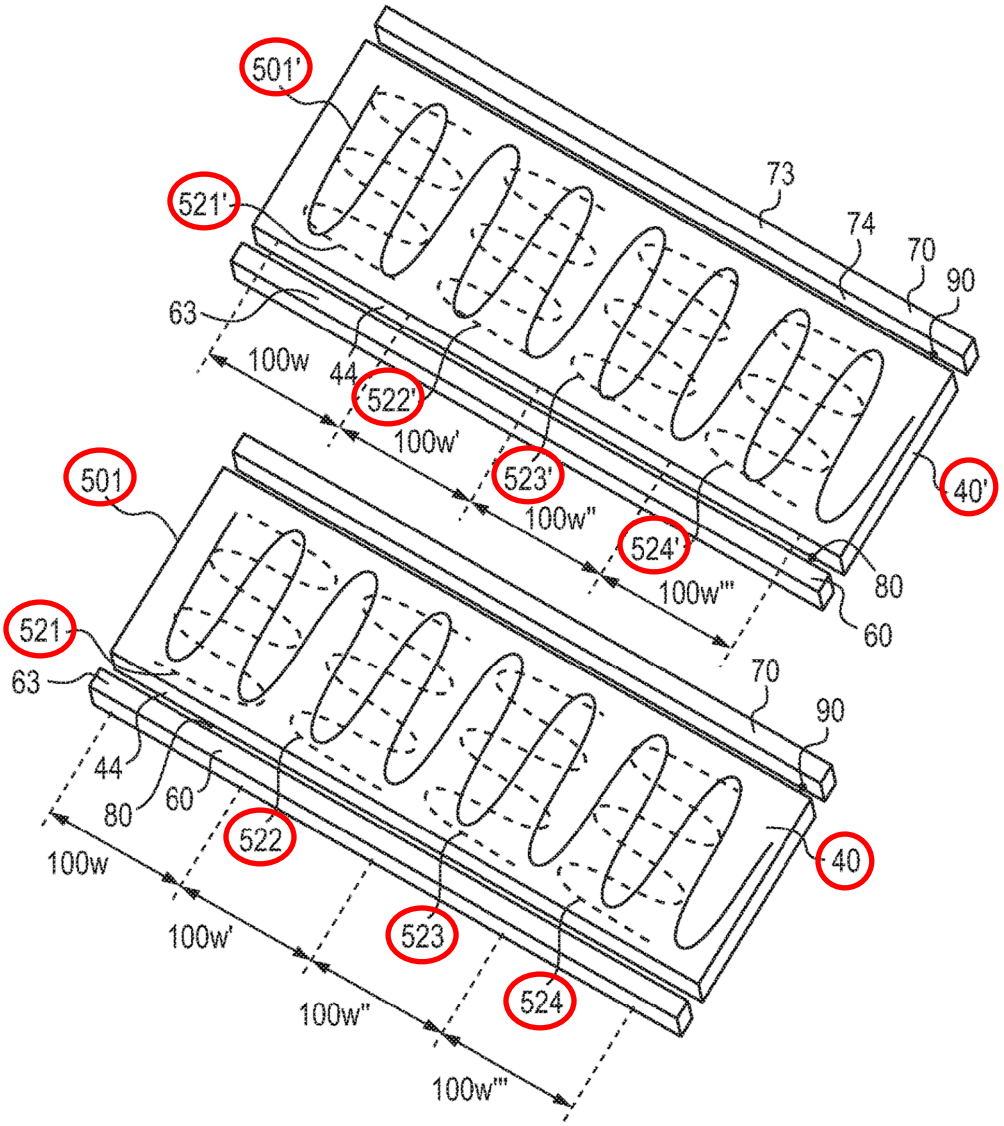


FIG. 10

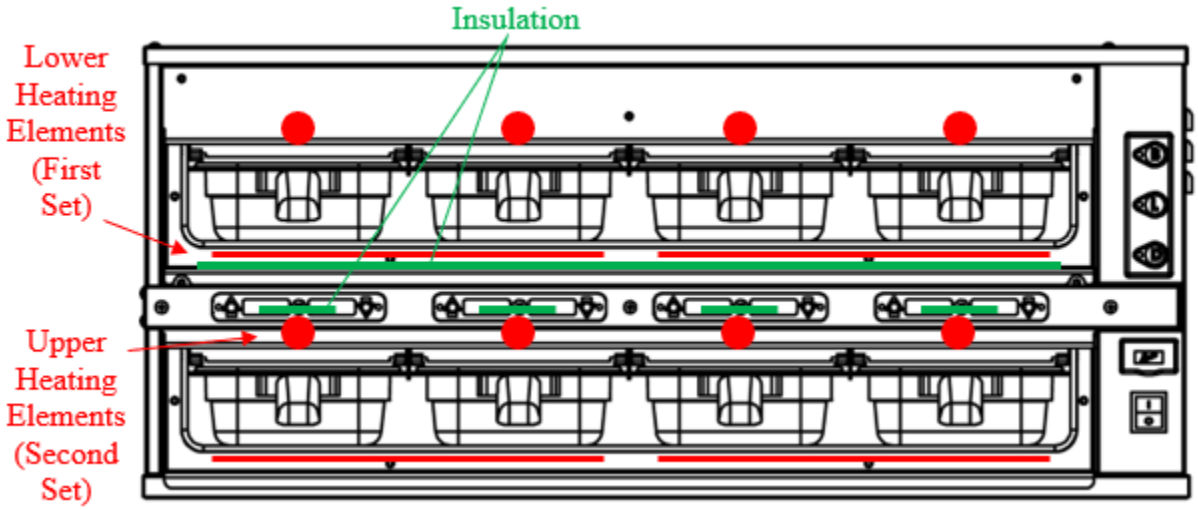
EX1014.

It would have been obvious to arrange insulation between the first and second heating element sets to direct heat from the first set into the first/upper compartment and heat from the second set into the second/lower compartment.

EX1014: 9:32-37; EX1022: ¶[0025]; EX1003: ¶467. Insulation increases compartment thermal separation, heating accuracy, and efficiency, and reduces power consumption. EX1003: ¶468.

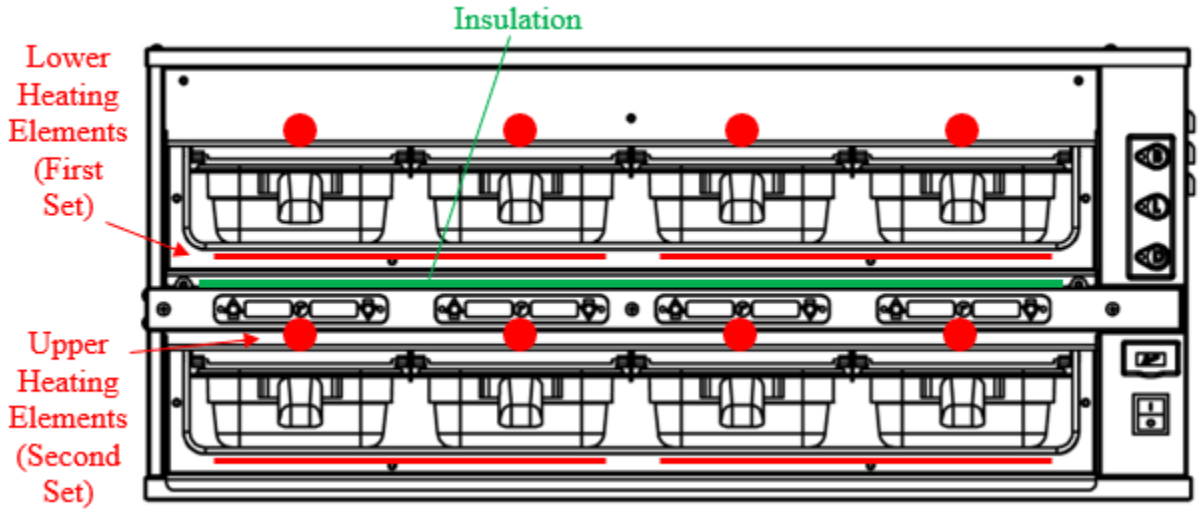
This uses a known technique (insulation) to improve a similar device (IRHS24) in the same way (Fortmann'967's and/or Fortmann'197's arrangement) with reasonable expectation of success (using insulation as intended). EX1018: 4:33-38; EX1014: 9:32-37; EX1003: ¶¶469-471.

Insulation backing heating elements per Fortmann'967 is illustrated below. EX1018: 4:33-38; EX1003: ¶472.



EX1005: 8 (modified).

Insulation between heating elements per Fortmann'197 is illustrated below. EX1014: 9:32-37; EX1003: ¶473.



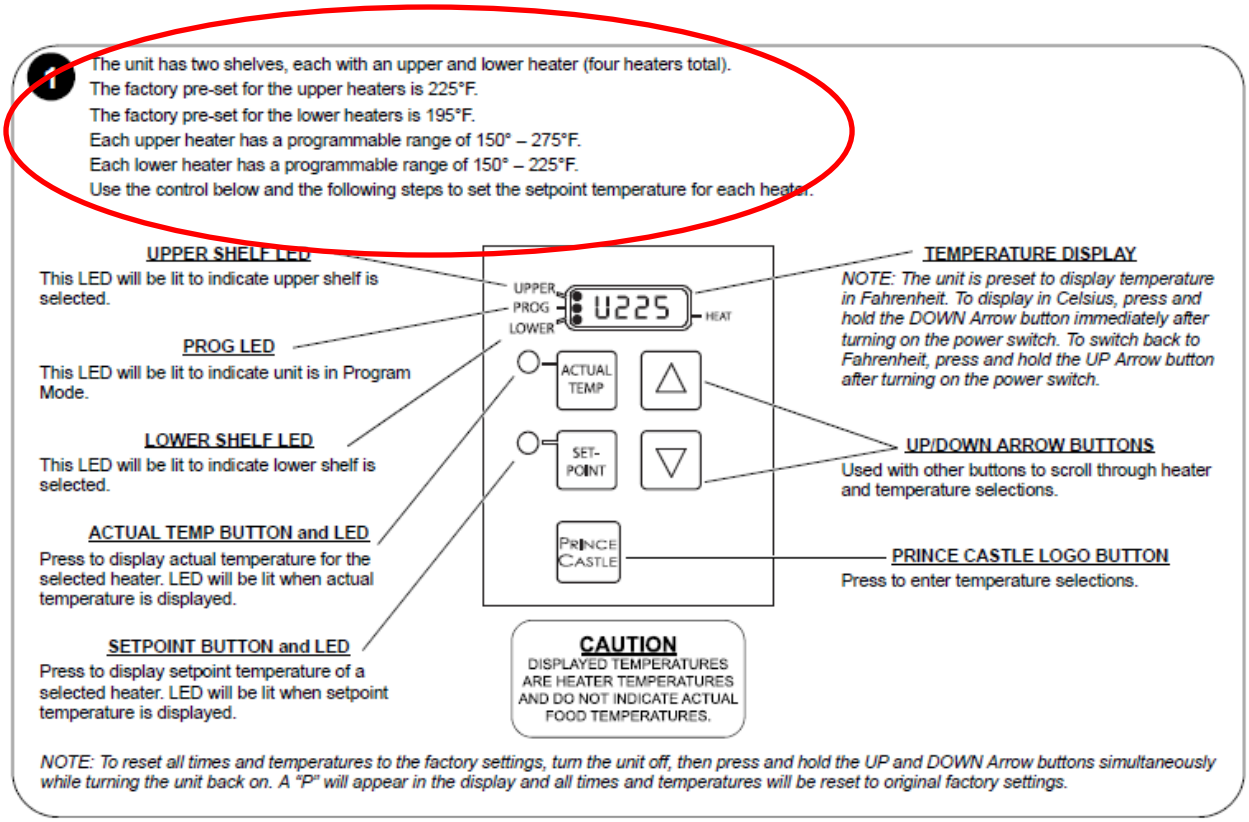
EX1005: 8 (modified).

Either configuration renders obvious insulative material between the first and second heating element sets. EX1003: ¶474.

IX. GROUND 6: Claim 26 Would Have Been Obvious Over the IRHS Documents in view of Prince Castle and/or Reese (If Necessary)

If it is determined the IRHS24's upper heating elements are not adapted to output more heat energy than the lower heating elements, such a relationship would have been obvious. EX1003: ¶475. In this ground, claims 1 and 26 are obvious per Grounds 1 and 7-9, with claim 26 being further obvious per 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: ¶¶476-479.



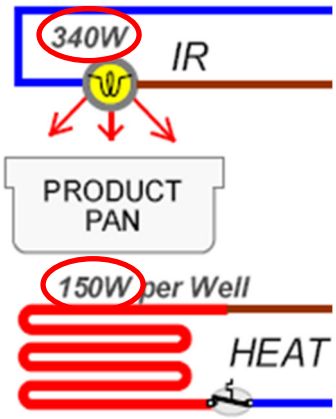
EX1009: 40.

Reese teaches turbo boost functions for upper IR. EX1027: ¶¶[0001], [0019], [0021], [0025]; EX1003: ¶¶480-481.

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,

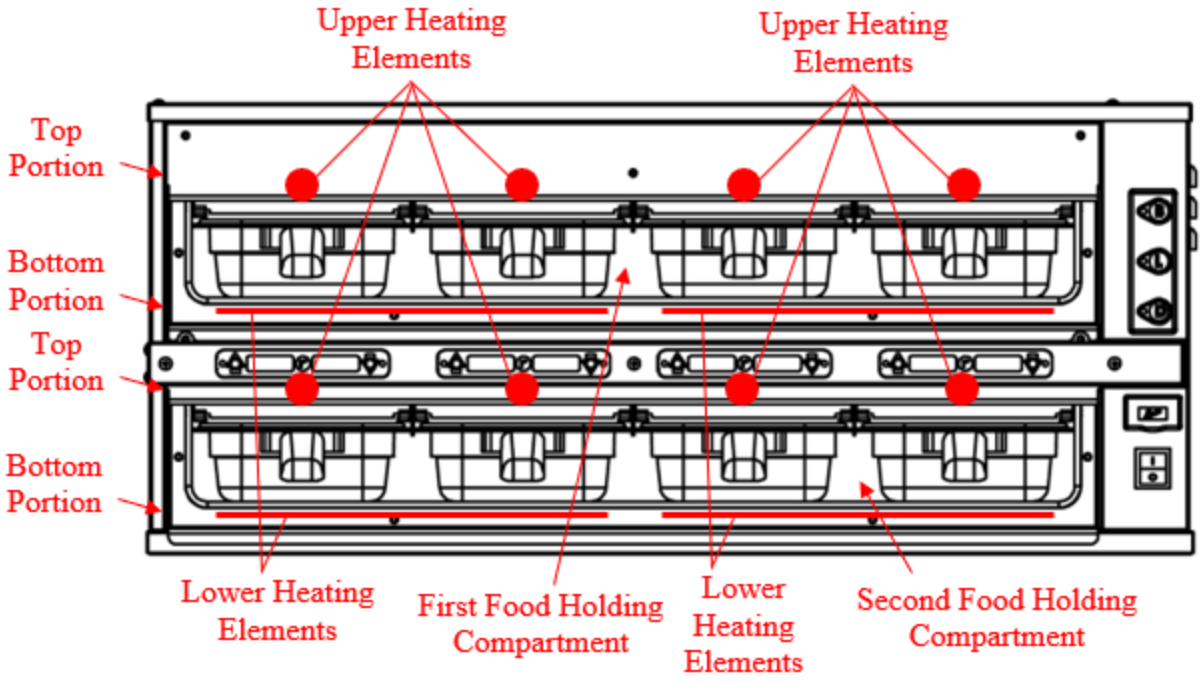
and/or permit the cook "to re-crisp [fried] food," "melt cheese," and/or "brown [food]" with the IR element. EX1027: ¶[0021]; EX1006: 1; EX1003: ¶¶481-487. This would help "provide optimum environment" and "minimize temperature distribution from top to bottom." EX1006: 1; EX1007: 51; EX1003: ¶488.

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: ¶¶489-490.



EX1008: 64.

This renders obvious each upper heating element being adapted to output more heat energy than each lower heating element (higher target temperature, turbo boost functionality, and/or higher wattage rating). EX1003: ¶¶491-494.



EX1005: 8.

X. GROUND 7: Claims 1-24 and 26-34 Would Have Been Obvious Over the IRHS Documents in view of Hartfelder, Shei'099, Veltrop, Poole, Shei'821, Shei'155, Fortmann'967, Fortmann'197, 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 above). EX1003: ¶¶495-496.

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: ¶¶497-498, 503-504.

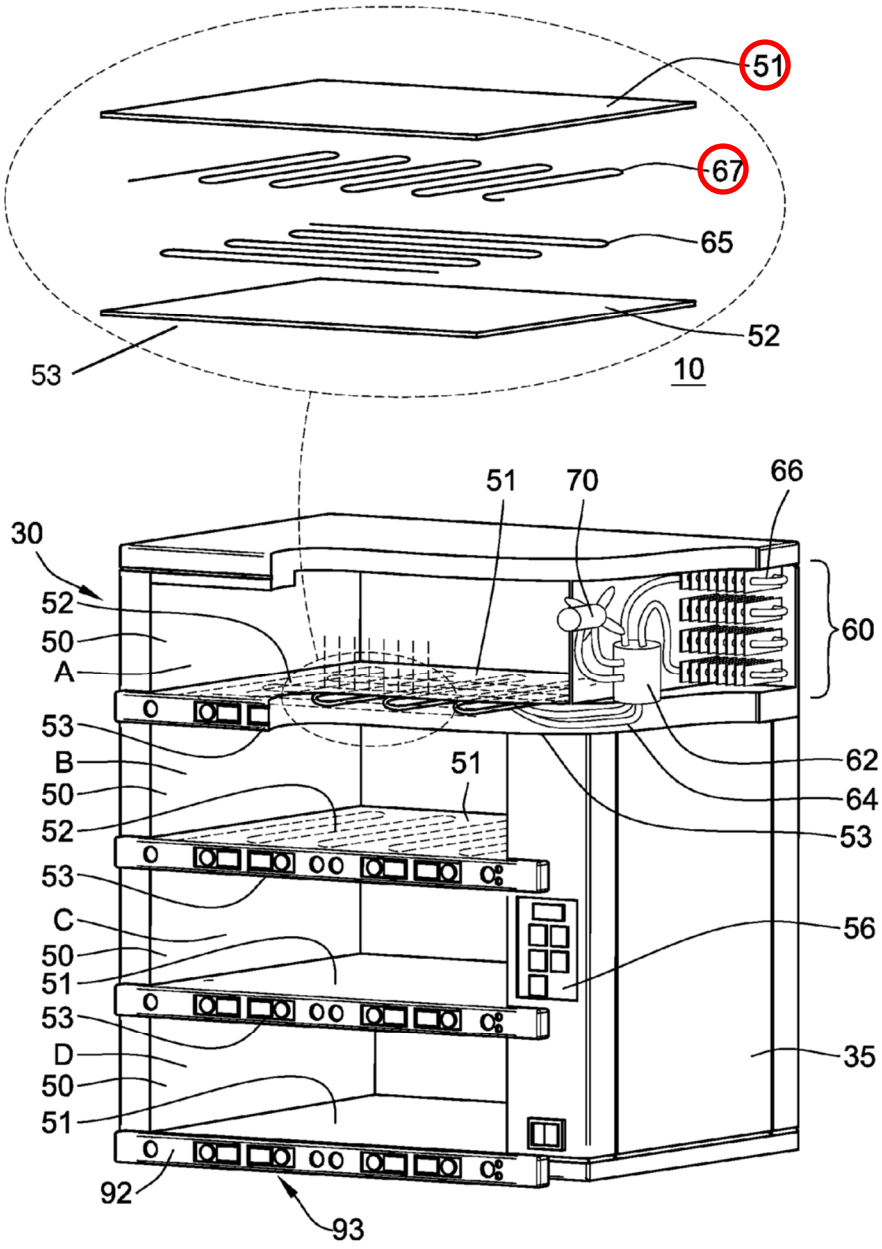
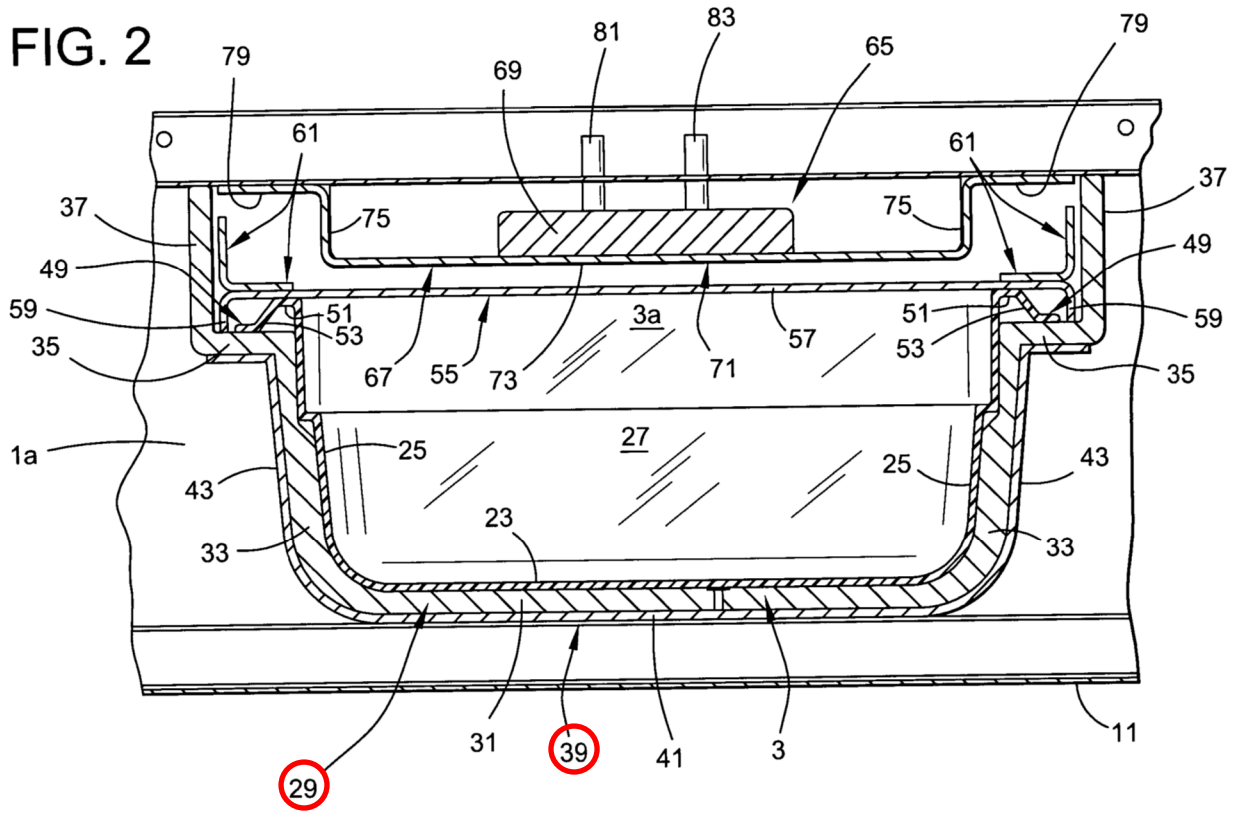

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FIG. 2

EX1022.



EX1016.

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: ¶499.

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: ¶¶500-501.

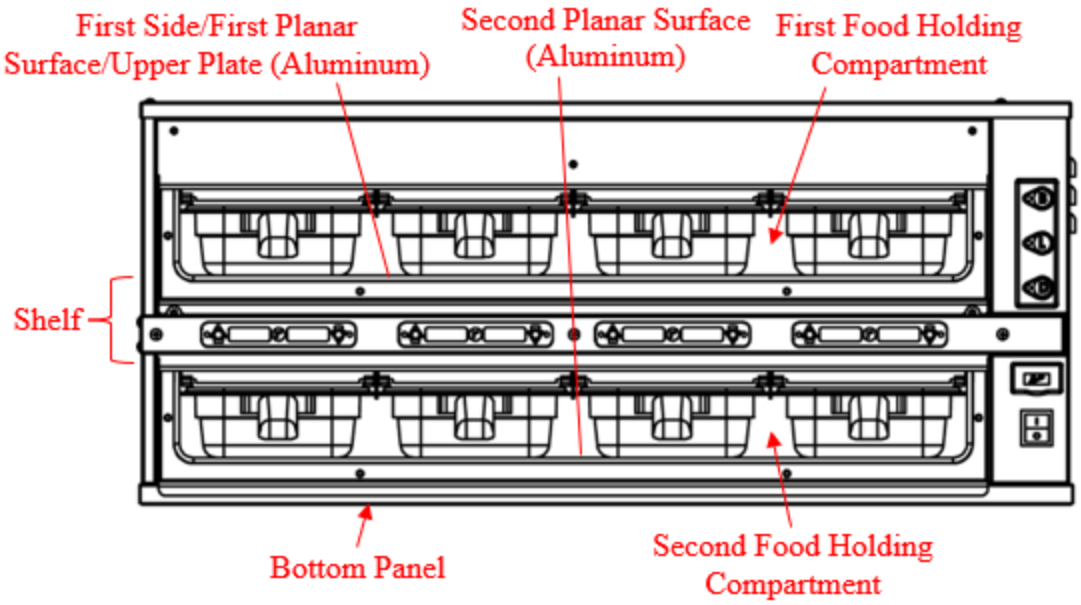
This renders obvious IRHS24's lower heating elements heating the heatsink plates and pans through conduction. EX1003: ¶502.

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: ¶505. Aluminum is relatively lightweight (easier to ship) and inexpensive. EX1003: ¶506.

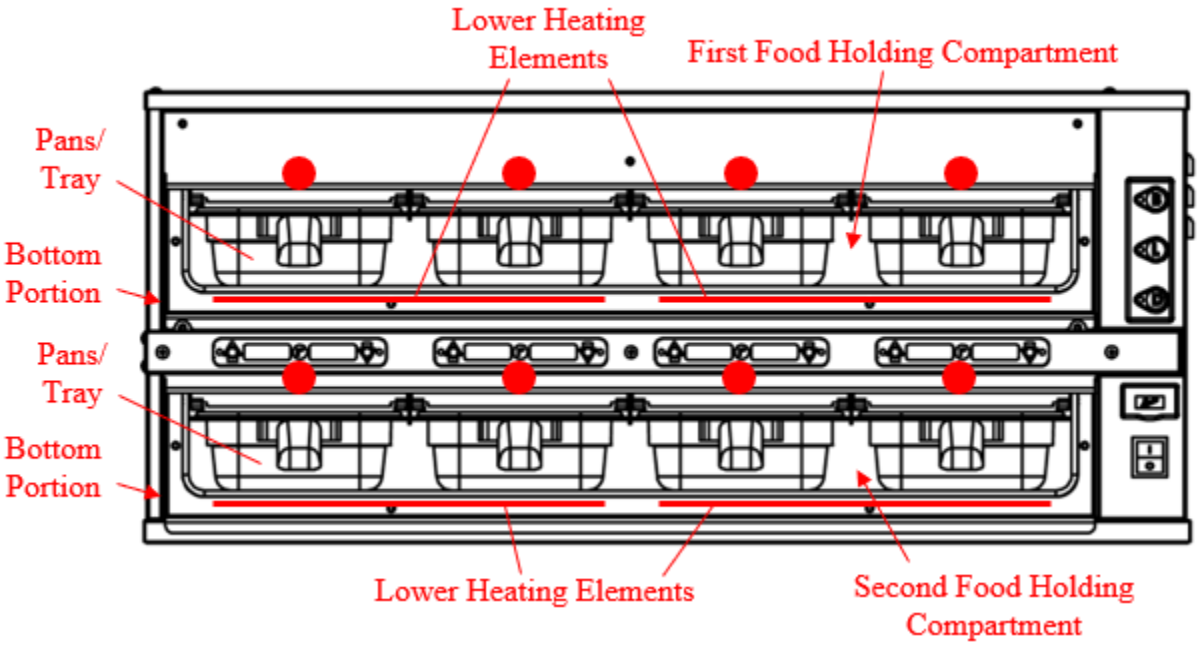
This uses a known technique (aluminum) to improve a similar device (IRHS24's heatsink) in the same way (aluminum surfaces supporting pans for localized heating) with reasonable expectation of success (known suitability of aluminum shelves having multiple zones in warming cabinets). EX1016: ¶[0039]; EX1020: ¶¶[0021]-[0023]; EX1021: ¶¶[0020]-[0022]; EX1022: ¶[0023]; EX1003: ¶¶507, 509-511.

This renders obvious the planar surfaces and upper plate (formed by IRHS24's heatsinks) comprising thermally conductive aluminum. EX1003: ¶508.

In this ground, claims 1-24 and 26-34 are obvious per Grounds 1-6 and 8-9, with at least limitations/claims 1.d.2, 1.e.1, 15, 17, 27, and 30.a.1 further being obvious as described above and demonstrated below. EX1003: ¶512.



EX1005: 8.

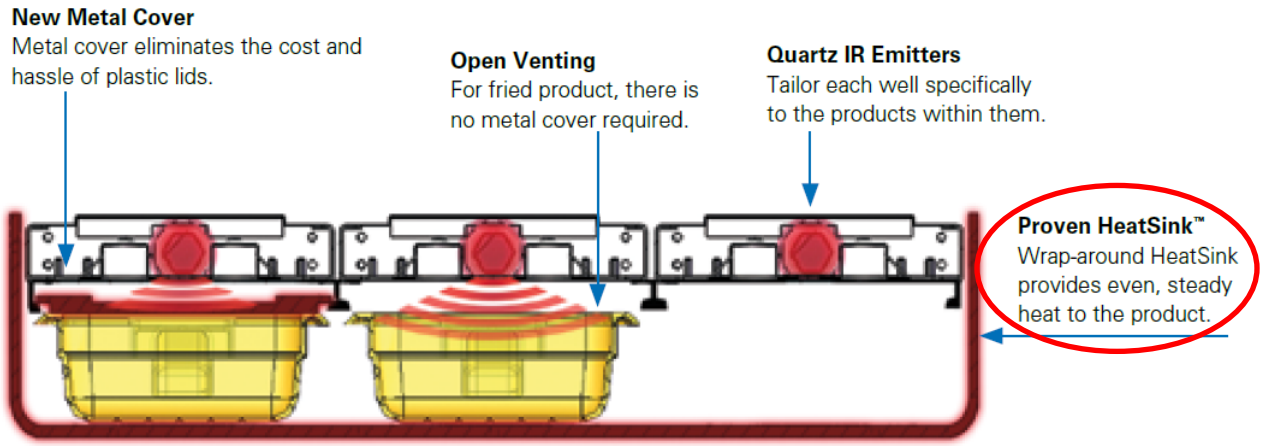


EX1005: 8.

XI. GROUND 8: Claims 1-24 and 26-34 Would Have Been Obvious Over the IRHS Documents in view of Hartfelder, Shei'099, Veltrop, Poole, Shei'821, Shei'155, Fortmann'967, Fortmann'197, Prince Castle, and Reese (If Necessary)

If limitations pertaining to "panels" and "planar surfaces" are determined not to be met, such limitations would have been obvious. EX1003: ¶513.

IRHS24's heatsink sides extend upwardly. EX1003: ¶¶514-515.



EX1007: 53.

Hartfelder and Veltrop teach flat heatsinks (30, 51). EX1013: ¶¶[0030], [0037]; EX1022: ¶¶[0016], [0022], [0025]; EX1003: ¶¶516-517.

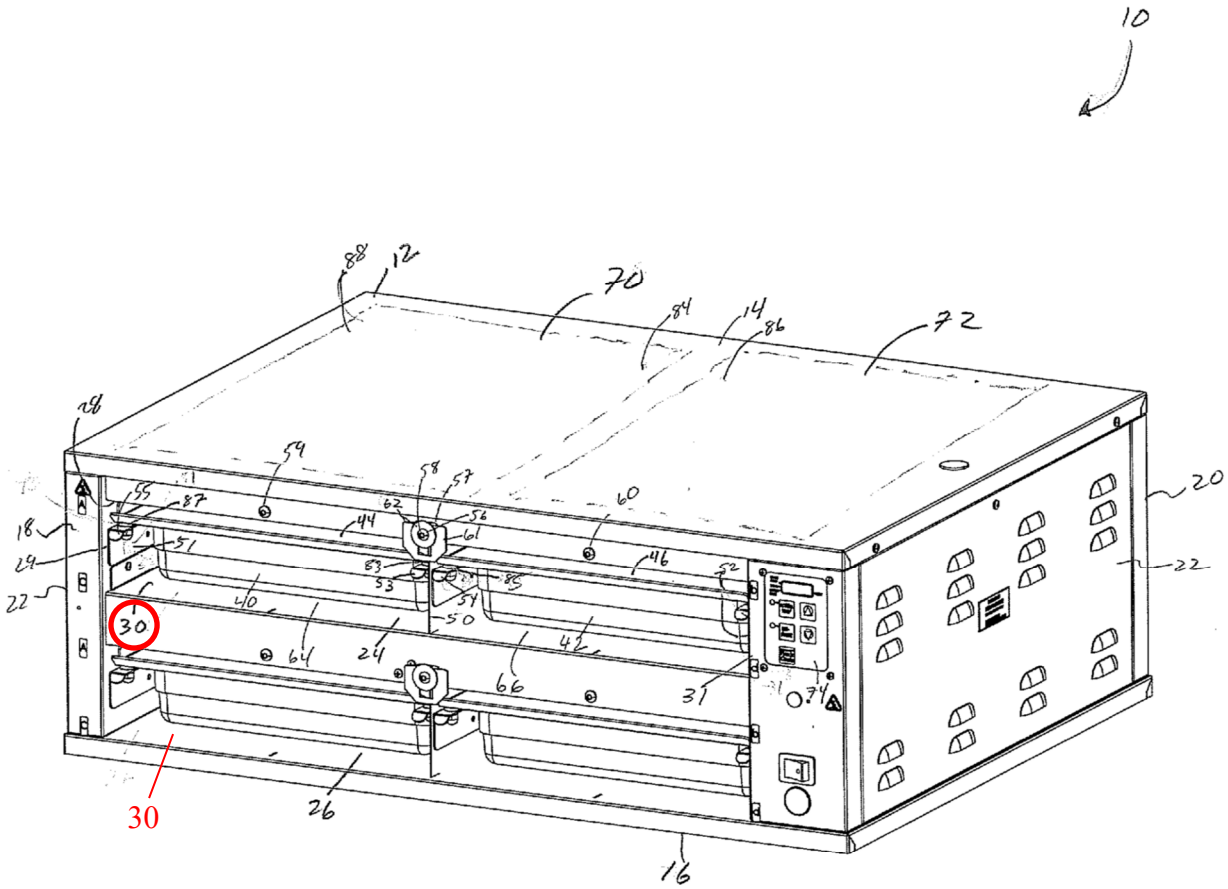


FIGURE 1

EX1013.

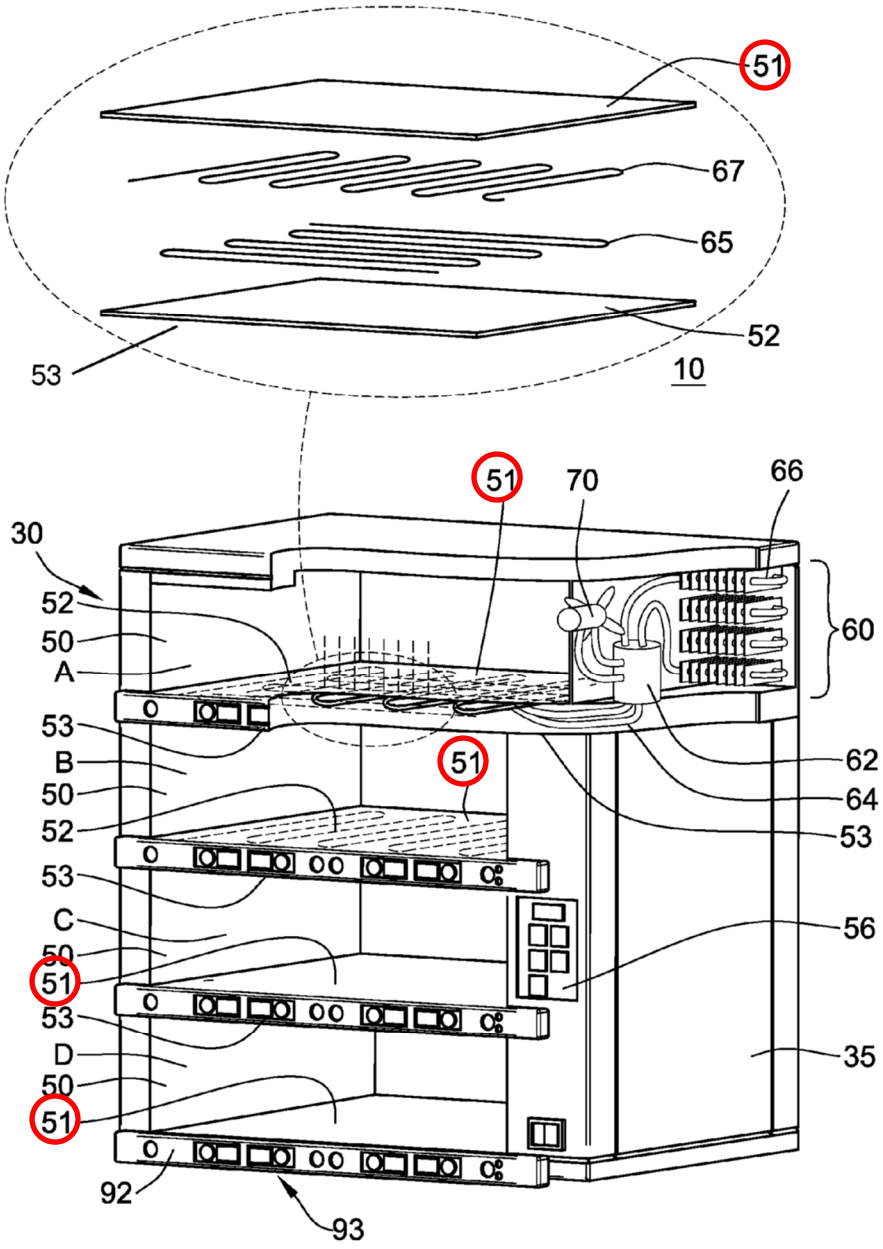


FIG. 2

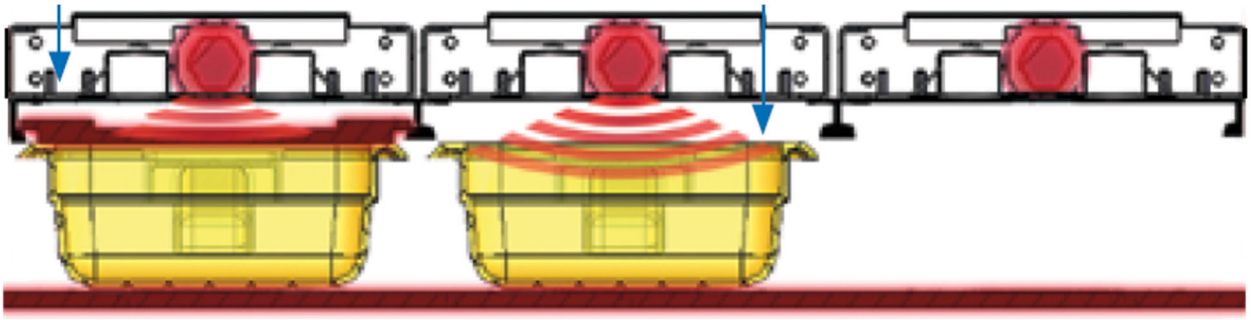
EX1022.

Per Hartfelder and/or Veltrop, it would have been obvious to modify IRHS24's heatsinks to be planar (omitting upward sides). EX1003: ¶518. This

would reduce IRHS24's width, furthering the small footprint goal. EX1007: 53; EX1003: ¶519. This would also be cheaper to manufacture (less material, easier to construct) and cheaper to ship (smaller package, less weight) and provide better heating consistency (compartment sides vs. middle). EX1003: ¶¶520-523.

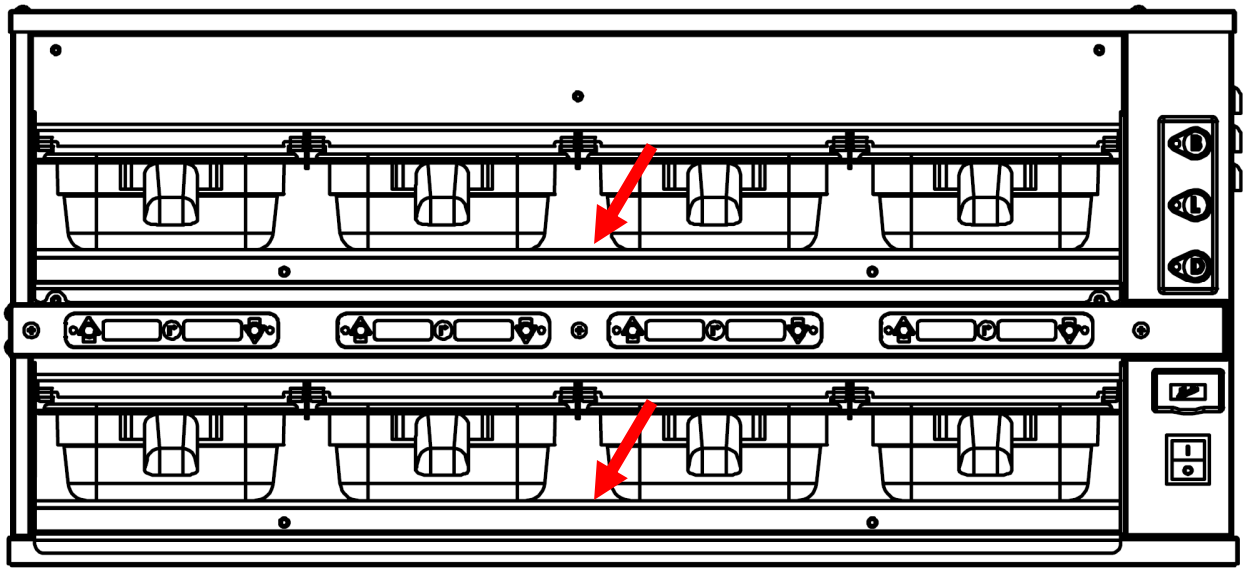
This applies a known technique (flat heatsink) to improve a similar device (IRHS24) in the same way (flat heatsinks) with reasonable expectation of success (minor reconfigurations demonstrated in the art). EX1013: Fig. 1; EX1022: Fig. 2; EX1020: ¶¶[0021]-[0023]; EX1003: ¶¶524-525.

IRHS24's modified heatsink is represented below. EX1003: ¶526.

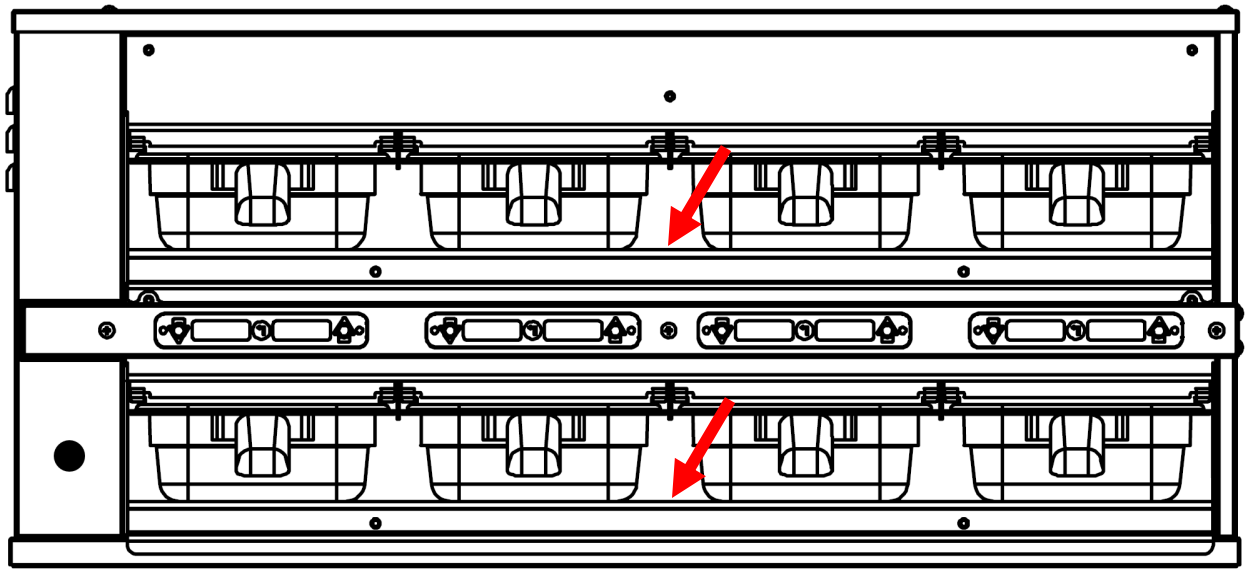


EX1007: 53 (modified)

Modified IRHS24 is shown below. EX1003: ¶527.

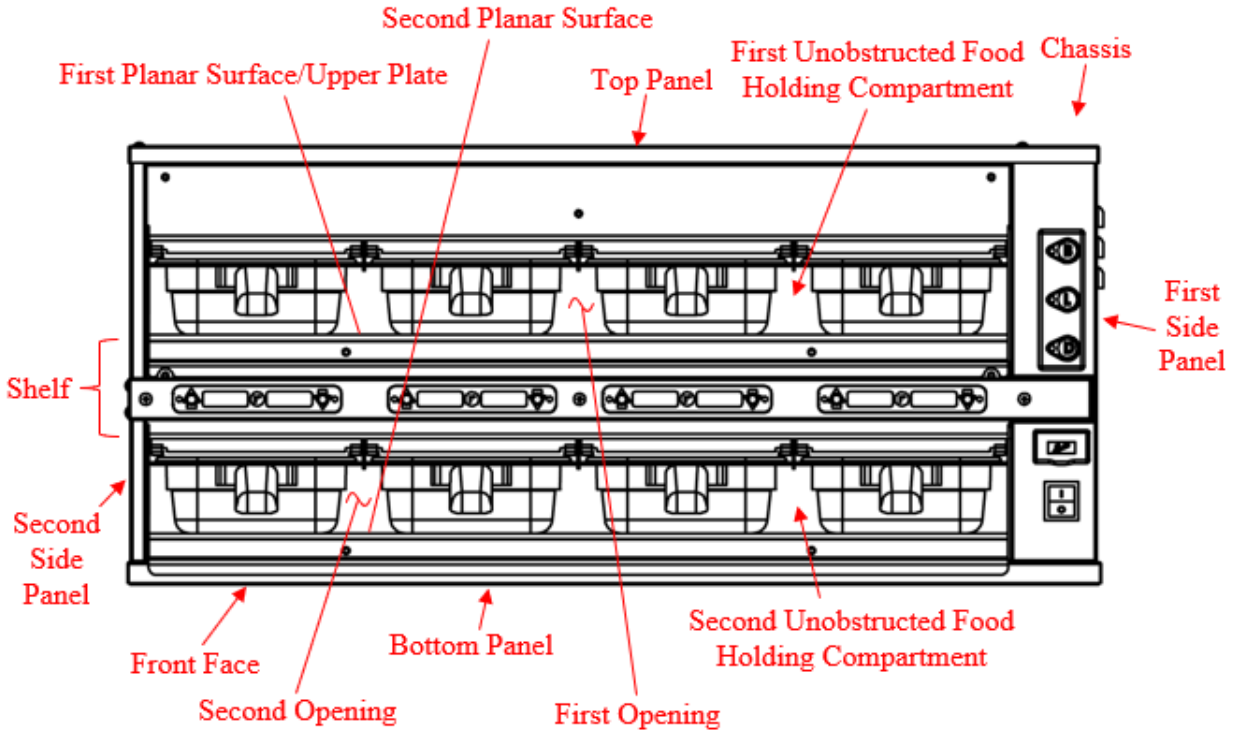


EX1005: 8 (modified-front).

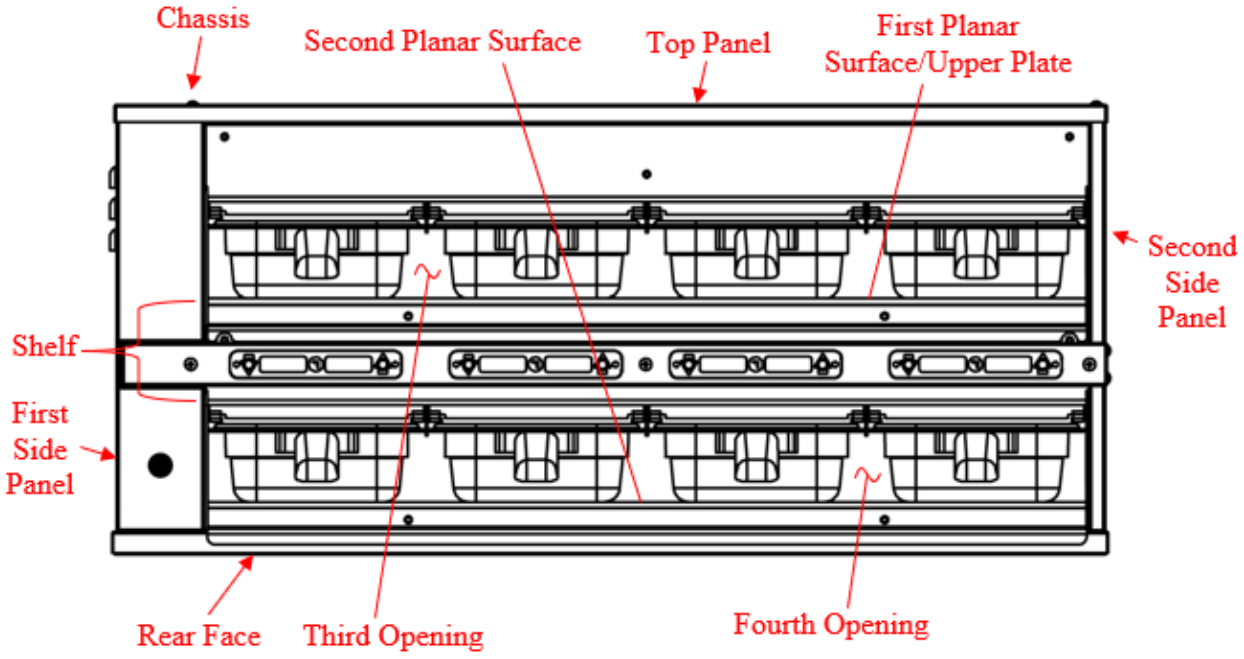


EX1005: 8 (modified-rear).

In this ground, claims 1-24 and 26-34 are obvious per Grounds 1-7 and 9, with at least limitations 1.a, 1.b.1, 1.b.3, 1.c.1, 1.c.3, 1.d.2, 1.e.1, 1.f.1, 1.g.1, 1.h.1, 1.i.1, and 30.a.1 further being obvious as demonstrated below. EX1003: ¶528.



EX1005: 8 (modified-front).



EX1005: 8 (modified-rear).

XII. GROUND 9: Claims 1-24 and 26-34 Would Have Been Obvious Over the IRHS Documents in view of Hartfelder, Shei'099, Veltrop, Poole, Shei'821, Shei'155, Fortmann'967, Fortmann'197, Prince Castle, Reese, Vaseloff, and McMillan (If Necessary)

If limitations pertaining to the user/graphical interface and displays are determined not to be met, such limitations would have been obvious. EX1003: ¶¶529-531.

Each bay (34) of Vaseloff's cabinet has a corresponding display/control group (display device (60), timer status indicator (62), timer button (64)). EX1026: 2:60-63, 3:48-51, 4:5-6, 4:20-33, 4:48-49, 6:51-52, Fig. 4; EX1003: ¶¶532-536.

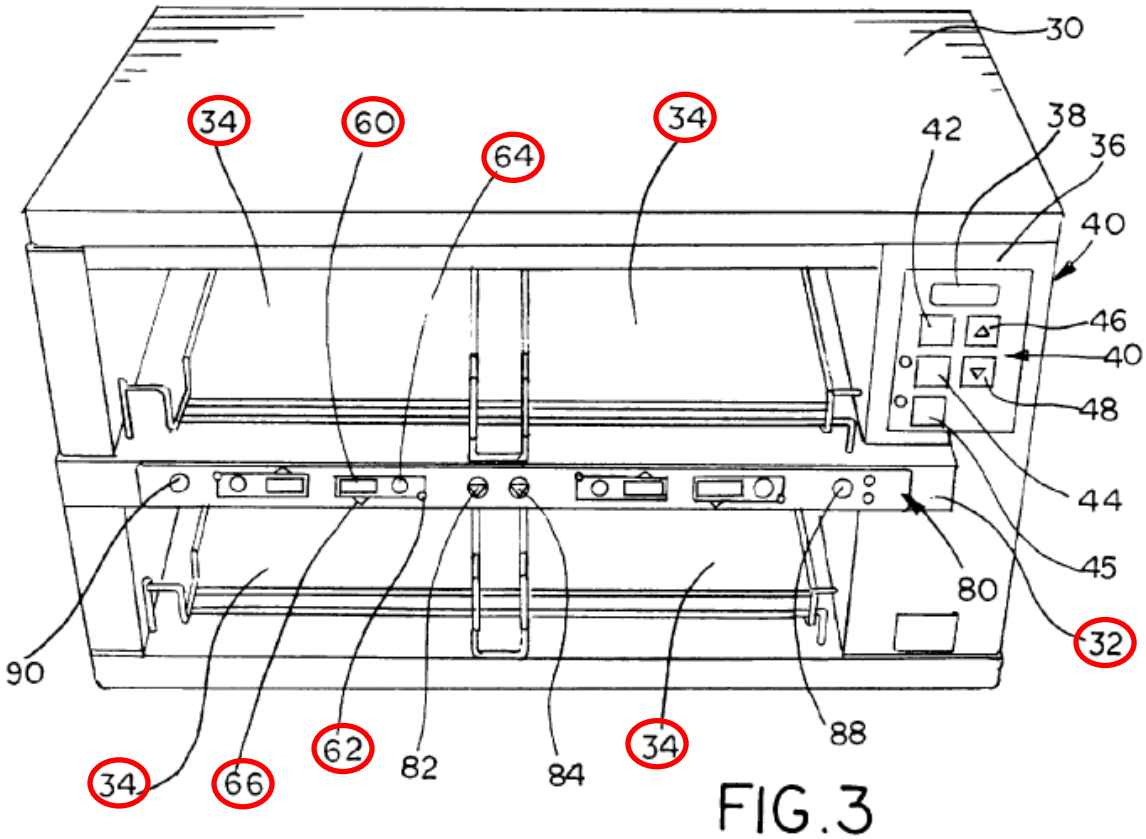


FIG.3

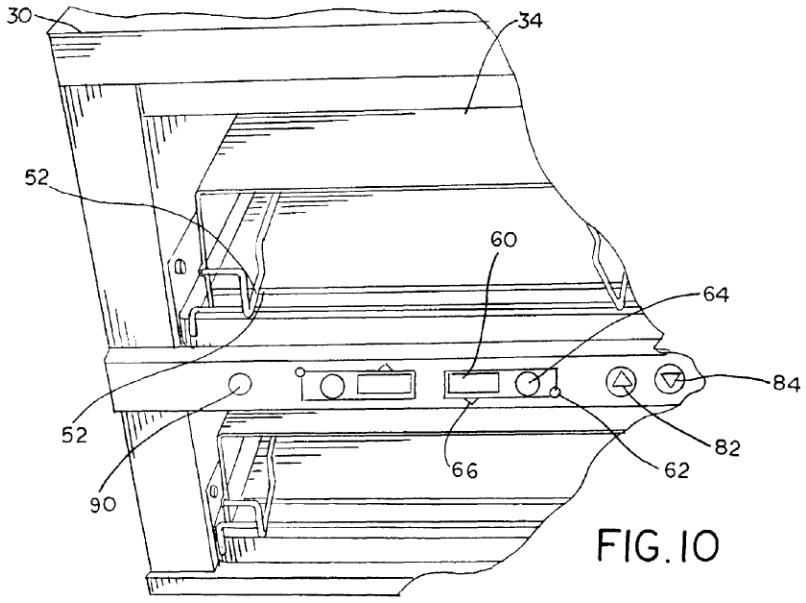


FIG. 10

EX1026.

Transfer button (90) transfers pan and associated information (hold time, temperature settings) from one bay to another, and the arrow buttons (82, 84) increase/decrease parameters. EX1026: 6:51-7:32, 9:27-64; 10:26-33; EX1003: ¶537.

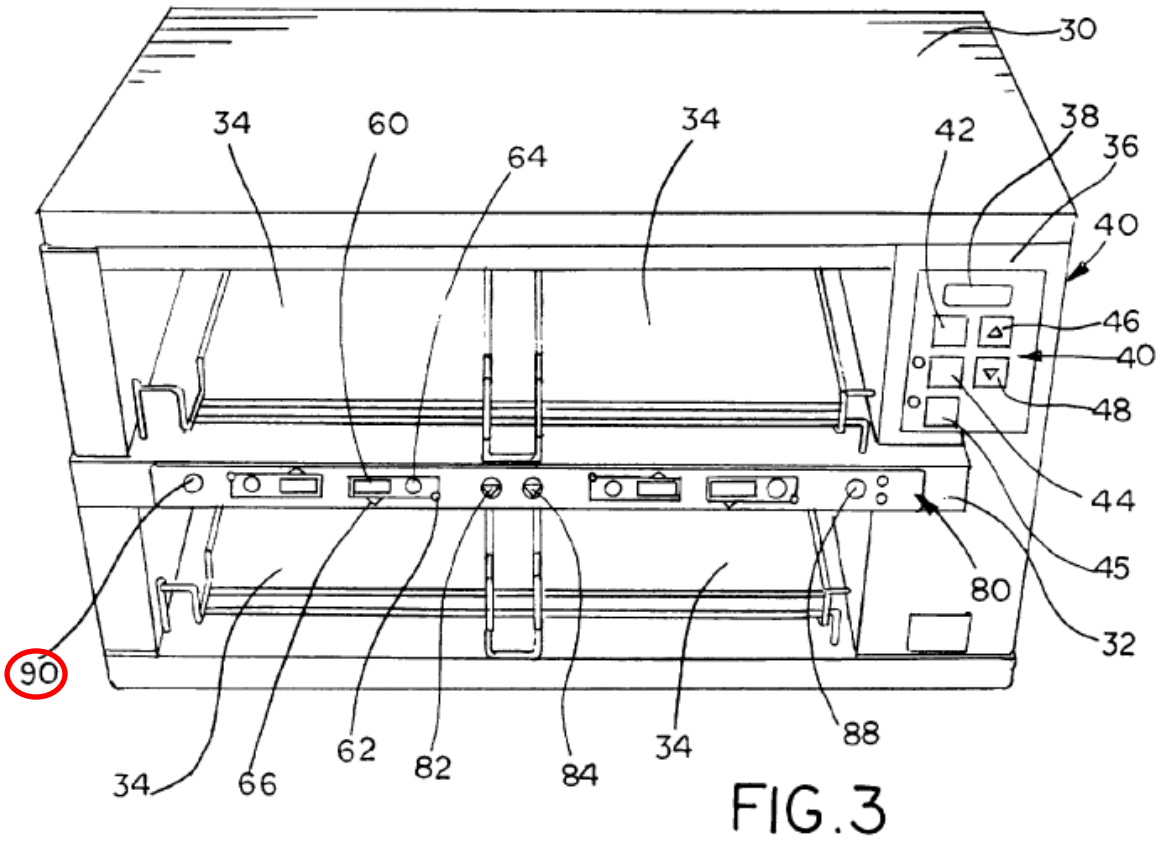
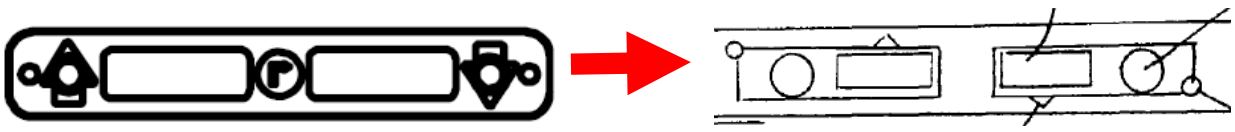


FIG.3

EX1026.

Per Vaseloff, it would have been obvious to replace the controls of IRHS24 timer bars with Vaseloff's timer module controls (in IRHS24's timer bar housing). EX1003: ¶538. Each IRHS24 control/display group (below left) would be replaced by two groups (below right) of Vaseloff's display devices, timer status indicators, timer buttons, and indicator arrows. EX1003: ¶¶538-539.



EX1007: 8. EX1026: Fig. 10.

Vaseloff's controls would add convenience, flexibility, and pan transfer capability, and some users may find Vaseloff's controls to be more intuitive, to display more information, and/or to more clearly display or associate information with respective pan bays/zones. EX1026: 4:20-22, 4:26-29, 57-58, 6:1-25, 6:65-7:20; 11:35-38; EX1003: ¶¶540-541. This applies a known technique (timer bar controls) to improve a similar device (IRHS24's timer bars) in the same way (displays and controls for each bay/zone). EX1003: ¶542.

POSA would have had reasonable expectation of success because Vaseloff's "food timing system [] can be applied to any food preparation and storage device." EX1026: 11:35-38; EX1003: ¶543. Vaseloff's controls would be connected to IRHS24's controller (POSA modifying any connections/programming as needed). EX1005: 25; EX1003: ¶544.

McMillan teaches message areas (183a-d) for each bay to display actual and setpoint temperatures via temperature key (187) and change setpoint temperatures via program and arrow keys (184, 185, 188). EX1019: 4:36-59, 10:10-33, 10:43-58; EX1003: ¶¶545-548.

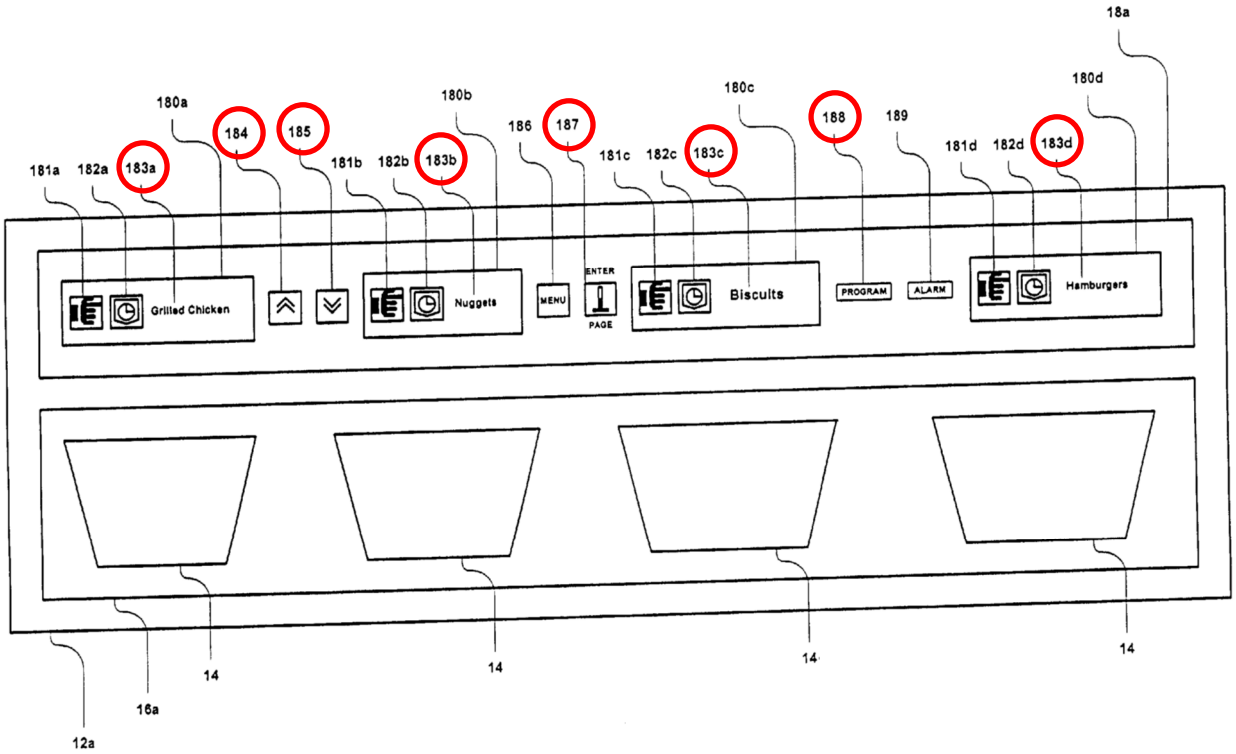


Fig. 5a

EX1019.

Per McMillan, it would have been obvious to modify the IRHS24/Vaseloff timer bars to display current and setpoint temperatures in Vaseloff's display device for each bay, and change setpoint temperatures. EX1019: 10:30-32; EX1003: ¶¶549-550. POSA would have implemented Vaseloff's arrow buttons (82, 84) (for increasing/decreasing parameters) or McMillan's arrow keys (184, 185) to "increase and decrease displayed values (e.g., temperature, time)," per McMillan. EX1026: 7:30-32; EX1019: 10:46-48; EX1003: ¶551. Incorporating McMillan's arrow, temperature, and/or program key(s)/button(s) "allow[s] a user to display temperature information, enter operational changes, and/or … change or select …

holding temperatures." EX1019: 10:52-58; EX1003: ¶552. POSA would know how to implement the keys/buttons as physical buttons. EX1026: 2:60-3:19; EX1003: ¶552.[2]

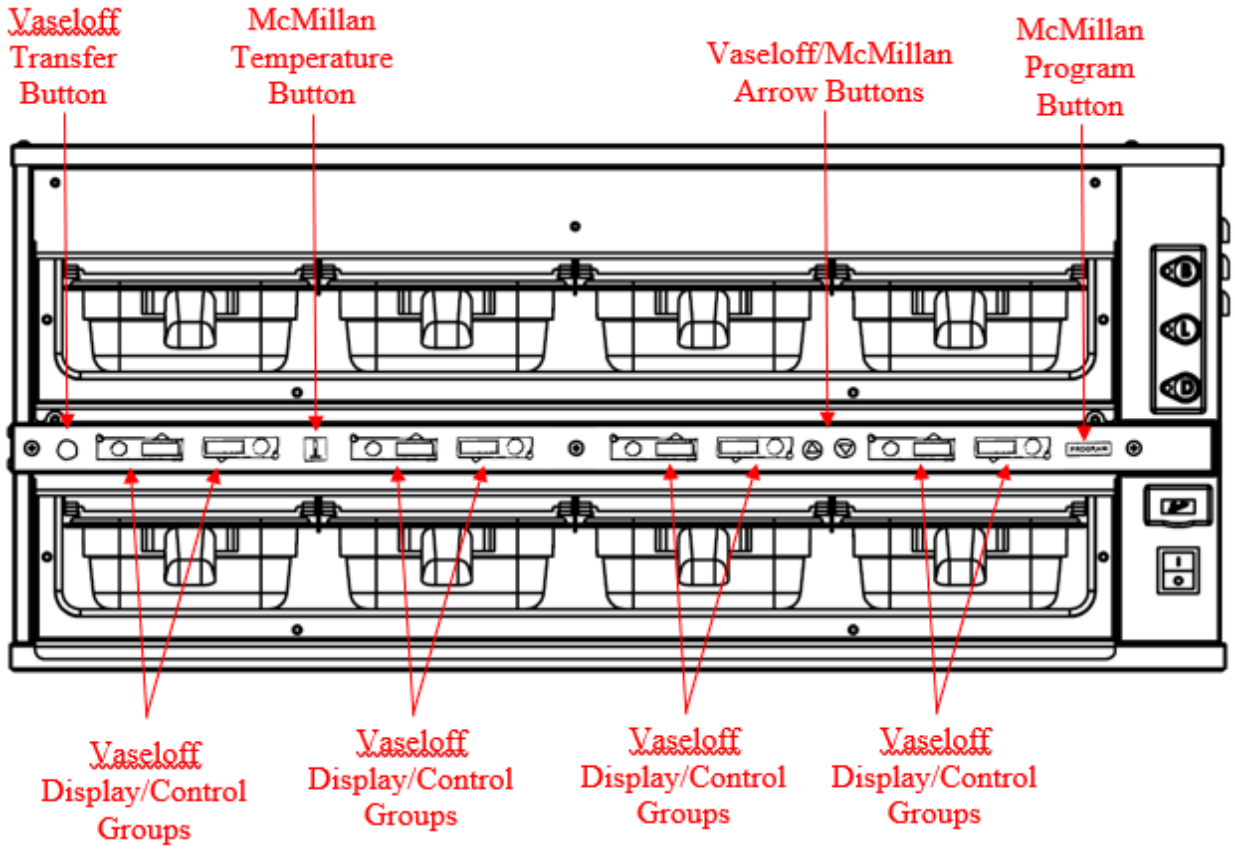
POSA would program the IRHS24/Vaseloff timer bars to show current and setpoint temperatures for each bay/zone in the associated display and change the setpoint temperature for bays/zones via the arrow, temperature, and/or program buttons, similar to McMillan. EX1019: 10:6-8, 10:20-33, 10:42-58; EX1003: ¶¶555-556. This provides easy, fast, and intuitive ways to view current and setpoint temperatures and change setpoint temperatures where easily associated with the corresponding bay/zone. EX1019: 1:29-35, 1:38-49, 10:6-10; EX1026: 4:20-22, 4:25-30; EX1003: ¶557.

This applies a known technique (actual and setpoint temperature display, changing setpoint temperature) to improve a similar device (IRHS24/Vaseloff) in the same way (displaying actual and setpoint temperatures and setting temperature) with reasonable expectation of success (Vaseloff's displays show parameter modifications via arrow buttons). EX1026: 4:10-12, 7:26-32; EX1003: ¶¶558-559.

[2] Vaseloff's activity button would be replaced with McMillan's temperature and/or program button(s) or omitted for IRHS24's daypart interface. EX1026: 7:46-8:39; Section IV(B)(1.n); EX1003: ¶¶553-554.

POSA would have connected arrow, temperature, and/or program button(s) to IRHS24's controller (modifying any connections/programming as needed to display and change temperature). EX1005: 25; EX1019: 6:15-19; EX1003: ¶560.

IRHS24 modified per Vaseloff and McMillan is shown below. EX1003: ¶561.



EX1005: 8 (modified-front).

In this ground, claims 1-24 and 26-34 are obvious per Grounds 1-8, with at least limitations/claims 1.n, 1.o, 2, 3, 6-9, 33, and 34 further being obvious per Vaseloff and McMillan as explained and/or demonstrated below. EX1003: ¶562.

- 1.n/33/34: Incorporated Vaseloff timer bar controls (display devices) are user interfaces further modified to set each zone's temperature per McMillan. EX1019: 10:43-58; EX1003: ¶563.
- 1.o: Vaseloff's and McMillan's controls would be connected to IRHS24's controller. EX1005: 25; EX1003: ¶563.
- 2: Incorporated Vaseloff timer bar controls have display devices (graphical interface) which display each zone's holding temperature per McMillan. EX1019: 10:30-32; EX1003: ¶563.
- 3/6: Incorporated Vaseloff controls in the timer bars/bezels have dedicated display devices for each zone which display the set temperature of the zone per McMillan. EX1019: 10:30-32; EX1003: ¶563.
- 7/8: Vaseloff's display devices would show the name (additional information) of the food item stored in the zone. EX1005: 16; EX1006: 1; EX1007: 10-11; EX1026: 4:5-8; EX1019: Fig. 5a (183a-183d); EX1003: ¶563.
- 9: Shown below.

