

600	<b>INDUCTIVE HEATING</b>	645	..Strip (e.g., sheet, etc.)
601	.With diverse-type heating	646	..Slab (e.g., ingot, etc.)
602	.Metal working	647	.With workpiece support
603	..Bonding	648	..Levitation
604	...Container sealing	649	..Materials
605	...Wire (e.g., cable, etc.)	650	..With monitoring (e.g., regulating, etc.)
606	...Ring	651	..Gas environment
607	...Tube (i.e., pipe)	652	..Rotation of workpiece
608	....With electrical control (e.g., speed, temperature, gaging thickness, etc.)	653	..Conveyor
609	....Layering (e.g., coating, lining, etc.)	654	...Charge or discharge
610	....With preheating or postheating	655	...Multiple stations
611	....Plural (e.g., end to end, etc.)	656	....Plural heating zones
612	....Seam bonding	657	...Curve path
613	.....With impeder	658	...Lift (i.e., vertical movement)
614	.....With guiding device	659	..Pressure applicator (e.g., clamp, etc.)
615	...Brazing (e.g., cladding, etc.)	660	.With power supply system
616	...Soldering	661	..Power switching
617	...Welding	662	...Plural load inductors
618	.With heat exchange	663	...Condition responsive
619	..Roller (e.g., godet, etc.)	664	....Input monitoring
620	..Cooking	665	....Load sensing
621	...Utensil (e.g., pot, pan, etc.)	666	.....With tuning
622	...With support	667	.....Temperature
623	...Having cooling device	668	...With protection
624	...Core or coil structure	669	...Polyphase
625	...Intermediate member condition responsive	670	..With specific transformer
626	....Load sensing	671	..With plural load inductors
627	....Temperature	672	.Specific inductor configuration
628	..Fluid or liquid heater	673	..U-coil section
629	...By tube (i.e., pipe)	674	..Cylindrical coil
630	....Core or coil structure	675	..Planar coil
631	.....Core rotation	676	..With inductor support
632	..With cooling arrangement	677	..With cooling arrangement
633	..Bonding (e.g., nonmetallic, etc.)	678	<b>MICROWAVE HEATING</b>
634	..Susceptor	679	.With diverse device
635	..Specific heating application	680	.With diverse-type heating
636	..Wire (e.g., cable, etc.)	681	..Convection heating
637	..Rod	682	...Steam generating
638	...Semiconductor	683	...Gas burner
639	...Irregular (e.g., camshaft, etc.)	684	...Tunnel type
640	..Gear	685	..Resistive heating
641	..Valve	686	.Gas environment (e.g., pressurized, etc.)
642	..Ring or link	687	.Fluid heater
643	..Tube (i.e., pipe)	688	..Water
644	...Interior surface	689	..Beverage (e.g., coffee, etc.)
		690	.Waveguide applicator
		691	..Slotted
		692	...Meander (e.g., zigzag, etc.)
		693	...Having load passage
		694	..With dummy load

695	..Input power port arrangement	743	.....Choke cavity cover
696	...With tuning	744	...Absorption
697	...Plural feed	745	.Field modification
698	.Tunnel furnace	746	..With power feed structure
699	..With leakage suppression	747	...Phase shifting
700	..Conveyor	748	...Radiator (e.g., antenna, etc.)
701	...Plural heating zones	749	....Rotating
702	..With control system	750	...With tuning or particular modes
703	..Defrost		
704	..Load condition sensor	751	..Mixer (e.g., rotating stirrer, etc.)
705	...Plural diverse types		
706	...By ultrasonic or acoustic	752	..By load support movement
707	...Gas or vapor	753	...Horizontal and vertical
708	...Weight	754	...Horizontal (e.g., turntable, etc.)
709	...Field intensity/reflection		
710	...Temperature	755	....Portable
711	....By infrared	756	.Enclosed cavity structure
712	....Probe	757	..With cooling or ventilation
713	.....Wireless type	758	..With cavity illumination
714	..Remote (e.g., card, etc.)	759	.With heat exchange (e.g., susceptor, etc.)
715	..Power switching		
716	..With detector	760	.With specific transformer
717	...Plural power supplies	761	.With specific generator
718	...Having duty cycle	762	.Load support
719	..With timer	763	..Shelf
720	..With display or alarm	764	<b>CAPACITIVE DIELECTRIC HEATING</b>
721	..Starting circuitry	765	.Bonding
722	..Interlock circuitry and structure	766	..Shoe
723	...With additional safety feature	767	..Die embroidery
724	...With latch assembly	768	..Sewing machine type
725	.Cookware (e.g., vessel, utensil, etc.)	769	..Container sealing
726	..With food mixer	770	.Specific heating application
727	..Expandable	771	..Food
728	..With field modifier	772	..Fluent material
729	...Shielding	773	..Sheet (e.g., board, etc.)
730	..With heat exchange (e.g., susceptor, etc.)	774	.With workpiece support
731	...By fluent material (e.g., steaming, boiling, or frying, etc.)	775	..Conveyor
732	..With stand or handle	776	...Multiple stations
733	..With drainage	777	..Pressure applicator (e.g., clamp, etc.)
734	..With cover	778	.With power supply system
735	...Having vent	779	..Condition responsive
736	.Radiation protection	780	.Specific electrode configuration
737	..With leakage detector	50	<b>METAL HEATING (E.G., RESISTANCE HEATING)</b>
738	..With leakage prevention	51	.Chain
739	...Door assembly	52	..Methods
740	....With screen or window	53	.Rail bond
741	....With choke or seal	54	..Arc weld
742	.....Slotted choke	55	..Resistance weld methods
		56	.Wire, rod, or bar bonding
		56.1	..Of wire leads
		56.21	...By microbonding

56.22	...Methods	74	..Gas supply (e.g., by ingredient of electrode, by external source)
57	..Butt bonding (e.g., welding)		
58	..Methods		
59.1	..Of cylinders (e.g., pipes and tubes)	75	...Nonconsumable electrode (e.g., atomic hydrogen)
60 R	..Electric arc	76.1	..For deposition welding (e.g., coating or building up)
60.2	...Tube sheet welding		
61	...Methods	76.11	..With cooling means
60 A	...Rotatable tube welders	76.12	..Of multiple distinct layers
61.1	..Having internal support means	76.13	..By spark discharge
61.11	...With forming means	76.14	..By electric arc
61.12	...With cleaning means	76.15	...With nonconsumable electrode
61.13	...With edge guidance means	76.16	...Plasma
61.2	..Utilizing high frequency resistance heating	76.17	..By resistance heating
		77	..Cutting edges of tools
61.3	..With edge guidance means	78.01	..For bonding with pressure (e.g., resistance welding)
61.4	..With adjustable electrode means		
61.5	..With condition responsive control of the welding process	85.1	..Brazing or soldering
61.6	..Using three or more electrodes	85.12	...Utilizing radiant energy
61.7	..With cooling means	85.13	...Methods
62	..Helical seam	85.14	...With filler metal in circuit
63	..Rotary transformer part	85.15	...Methods
64	..Container (e.g., cans)	85.16	...Electrically heated tool (e.g., electrodes, heaters, etc.)
65	..Nonrotary electrode (e.g., oscillating)	85.17	...Furnaces or enclosures
66	..Inside electrode	85.18	...Wire lead bonders
67	..Resistance heating methods	85.19	...Machine for predetermined operation
68	..Cutting or disintegrating (e.g., machining engraving)	85.2	...Fluxes or solders
69.1	..Electric arc	85.21	...Solder preforms
69.11	..Electric spark machining	85.22	...Methods
69.12	..Wire cutting	78.02	..By solid-state bonding (e.g., diffusion)
69.13	...Circuits		
69.14	...Dielectric composition and purification	78.11	..Honeycomb
69.15	...Electrodes	78.12	...Methods
69.16	...Gap spacing control	78.13	..With additional heating device
69.17	...Methods	78.14	..With work cleaning means
69.18	...Pulse	78.15	..With work cutting means
69.19	...Safety circuits	78.16	..With work deforming means (e.g., tube sealing)
69.2	...Vibrating electrodes or workpiece	79	..With conveyer for workpiece
70	...Hand-type tools	80	...Spot bond
71	..Liquid electrode	81	..Roller electrode
72	..Nonatmospheric environment at hot spot (e.g., resistance weld under oil, vacuum)	82	...Roller moves over work
		83	...Methods
73	..Slag (e.g., submerged arc)	84	...Electrode structure
73.1	...Including electroslog welding	86.1	..By spot bonding
73.11	....For coating	86.21	...With hand-manipulative portable devices
73.2	...With granular flux supply	86.22	...With separately applied pressure and heat
73.21	....For deposition welding	86.23	...With welding pressure controlled by the work support

86.24	...With work orientation means	111	...Repeat or interrupted current systems (e.g., multiple welds, multiple heated weld)
86.25	...With significant electrode support		
86.31	....Having cooling means	112	...Stored energy discharge (e.g., inductive)
86.32	....Having magnetic force actuated electrode	113	....Condenser discharge
86.33	....Having adjustment means	114	...With space-discharge tube control (e.g., thyatron, ignitron)
86.41	.....With condition responsive control means		
86.51	.....Responsive to pressure	115	...Synchronous switching on and off
86.61	.....By force balancing		
86.7	....For predetermined welding operation	116	...With transformer
86.8	...Having interchangeable welding electrodes	117.1	..Methods
86.9	...For one-face welding	118	...Particular material (e.g., dissimilar, aluminum)
87	...Multiple spot type	119	..Electrodes (e.g., structure)
88	...Electrode positionable along fixed bus bar (e.g., reaction bar type)	120	...With cooling
89	...Fluid pressure actuated electrode	121.11	.By arc
90	...Plier or tong type	121.12	..Using electron beam
91.1	...With condition responsive control of the welding process	121.13	...Welding
91.2	...Methods	121.14	....Methods
91.21	....Of welding through insulation	121.15	...Deposition (e.g., sputtering)
91.22	....With additional heating to same spot	121.16	...Melting
91.23	....With work deforming	121.17	....Methods
92	...Current limitation (e.g., by interposed insulation)	121.18	...Cutting
93	....By localized projection	121.19	....Etching or trimming
94	....By interposed button	121.2	....Methods
95	..Percussive	121.21	...Chamber
96	...Methods	121.22	....Sealing
97	..Flash	121.23	....Monitoring
98	...Stud	121.24	...Nonvacuum environment
99	....Methods	121.25	...Shaping
100	...Methods	121.26	....With focusing
101	..Butt	121.27	....With electrode or gun structure
102	...Extended seam	121.28	...Position control
103	...One part fed	121.29	....Swept or scanned
104	...Methods	121.3	....Condition responsive
105	....Preparation of edges	121.31	...Workpiece position control
106	....By use of a bridging member (e.g., splice plate)	121.32	....Condition responsive
107	....End or edge to surface	121.33	...With fluid supply (e.g., shielding gas or coolant)
108	..Systems of current supply	121.34	...Power supply
109	...With indicator (e.g., recorder)	121.35	...Methods
110	...Controlled in response to current, voltage, or temperature	121.36	..Using plasma
		121.37	...Melting
		121.38	....Methods
		121.39	...Cutting
		121.4	....Etching
		121.41	....Methods
		121.42	....Rate control
		121.43	....With chamber
		121.44	....Methods
		121.45	...Welding

- 121.46 ....Methods
- 121.47 ...Spray coating
- 121.48 ...Plasma torch structure
- 121.49 ....Cooling system
- 121.5 ....Nozzle system
- 121.51 ....Gas supply system
- 121.52 ....Electrode structure
- 121.53 ....Consumable electrode
- 121.54 ...Control systems
- 121.55 ....Gas supply
- 121.56 ....Arc positioning
- 121.57 ....Arc ignition
- 121.58 ...With work holder
- 121.59 ...Methods
- 121.6 ..Using laser
- 121.61 ...Beam energy control
- 121.62 ....Condition responsive
- 121.63 ...Welding
- 121.64 ....Methods
- 121.65 ...Melting
- 121.66 ....Methods
- 121.67 ...Cutting
- 121.68 ....Etching or trimming
- 121.69 .....Methods
- 121.7 ....Hole punching
- 121.71 ....Methods
- 121.72 ....Methods
- 121.73 ...Shaping
- 121.74 ....With mirror
- 121.75 ....With lens
- 121.76 ...Multiple beams
- 121.77 ....With sing source
- 121.78 ...Beam position control
- 121.79 ....Path adjustment
- 121.8 ....Swept or scanned
- 121.81 ....Condition responsive
- 121.82 ...Workpiece position control
- 121.83 ...With monitoring
- 121.84 ...With fluid supply
- 121.85 ...Method
- 121.86 ...Chamber
- 122 ..Control of arc direction
- 123 ...Magnetic
- 124.01 ..With ignition by retraction
- 124.02 ..With gap control
- 124.03 ...By arc voltage
- 124.1 ..With automatic positioning of arc
- 124.21 ...Including work cutting
- 124.22 ...In response to work shape
- 124.31 ....Having carriage supported by work
- 124.32 ....Having variable welding head travel rate (e.g., gravity feed)
- 124.33 ....Having electrode angle control
- 124.34 ....By using probe means
- 124.4 ...In response to work position
- 124.5 ...In response to the transfer rate of the weld metal
- 125.1 ..With predetermined welding operation
- 125.11 ...For closed path welding (e.g., circumferential welding)
- 125.12 ...For oscillating electrode welding
- 126 ...Vertical work (e.g., horizontal seam in vertical wall)
- 127 ..Spot arc bonding (e.g., arc riveting)
- 128 ..With working of bonding metal (e.g., by peening)
- 129 ..Brazing or soldering
- 130.01 ..Including circuits for monitoring arc parameters
- 130.1 ..Including arc-power supplies
- 130.21 ...With automatic output control (e.g., shortcircuit, infrared)
- 130.31 ....Responsive to arc voltage only
- 130.32 ....Responsive to arc current only
- 130.33 ....Responsive to both arc voltage and arc current
- 130.4 ...With arc ignition and stabilization arrangements
- 130.5 ...With predetermined time variation of arc voltage or current (e.g., programmed)
- 130.51 ....Pulsating or periodic output
- 132 ...Remote control
- 133 ...With generator (e.g., gas engine driven)
- 134 ....Electric motor driven
- 136 ..Welding
- 137 R ...Process
- 137 PS ....Power supply
- 137 WM ....Weld metal composition
- 137.2 ..With consumable electrode device
- 137.31 ...Gun
- 137.41 ....Having fume extractor
- 137.42 ....Having gas flow limiting shape (e.g., gas diffuser)
- 137.43 ....Having spatter shield

137.44	...Having integral electrode guide	150	V	...Riveting
137.51	....With flexibility	153		..Bending or twisting
137.52	....With wear resistant liner	154		..Subsequent to heating
137.61	...Having filler electrical contact structure	155		.Endless strip
137.62	...Having cooling means	156		.Rods and bars
137.63	...Having supply connection means (e.g., quick disconnect)	157		.Rivets
137.7	...Rate control	158		.Work holders
137.71	...Circuits	159		..Rotating supports
137.8	...Including filler wire deforming	160		..Mandrels (e.g., anvil)
137.9	...Supply cables (e.g., for current, shielding gas, coolant)	161		..Clamp
138	..Electrode holder (e.g., spring biased tong)	162		..Methods
139	...Plural adjustable electrodes (e.g., hand torch)	200		<b>HEATING DEVICES</b>
140	...Spring jaw (e.g., sprung by electrode)	201		.Combined with diverse-type art device
141	...With separate actuator	202		..Vehicle or vehicle component
142	...Plunger jaw (e.g., screw actuated)	203		...Windshield or window
143	...Spring biased	204		...Steering device
144	...Positive grip	205		...Motor or engine
145.1	.Weld rod structure	206		....Manifold
145.21	..Nonconsumable	207		....Carburetor
145.22	..Flux cored	208		....Radiator or cooling system
145.23	..Flux coated	209		..Electrical devices
145.31	...Partially	210		...Crystal or other vibratory device
145.32	...With wire wrap	211		..Apparel
145.41	..Nonmetal cover	212		..Bed covering (e.g., blanket)
146.1	.Weld rod composition	213		..Static structure (e.g., building pavement, etc.)
146.21	..Nonconsumable	214		..Vending, dispensing, or display device
146.22	..Nonferrous	215		..Shoe machinery
146.23	..Containing nickel, chromium, and iron	216		..Printing or reproduction device
146.24	..Metal deoxidizer or denitrogenizer	217		..Chair, bed, or other body-supporting means
146.3	...Particulate	218		..Table or cabinet
146.31	..Particulate	219		..Mirror
146.32	..Alloying	220		..Light means
146.41	...Nickel or chromium	221		.Tool or instrument
146.51	...Containing carbide	222		..Hair heaters
146.52	...Shielding	223		...Singeing apparatus
147	..With eye shield	224		...Electrolytic
148	.Bonding	225		...With heated clamp means (e.g., hand-held)
149	.With forging or shaping (e.g., of powder)	226		...With heated casing
150 R	..Upsetting	227		..Hand-manipulative
151	...Anvil electrode	228		...With heat distribution means (i.e., heat applied to extended area)
152	...Simultaneous with heating	229		...With heated tip or other heat concentration means (i.e., heat applied to localized area)
		230		...With tip cooling, clamping, or lighting means

231	....Convertible	266	...Resilient means
232	....Internal arc-type heating unit	267	..With housing casing or support means for igniter unit
233	....Tip in electrical circuit	268	..With source of power or current
234	.....Work in circuit	269	..With indicating means
235	.....With transformer secondary	270	..With igniter unit structure
236	....Coil or loop-type heating element		
237	.....Integral with tip		Class 392 is an integral part of this Class (Class 219), as shown by the position of this box, and follows the schedule hierarchy of this Class, retaining all pertinent definitions and Class lines of this class.
238	.....Detachable tip		
239	.....Threaded		
240	..With power supply, voltage or current control, or connection and/or disconnection means		
241	...With thermal control means		
242	...Supports	383	.Electric arc-type devices
243	.Combined with pressure application means	384	..With perforating or disintegrating means
244	..Rotatable	385	.Combined with container, enclosure, or support for material to be heated
245	..Sole plate-type pressure application means (e.g., flatiron)	386	..Portable or mobile
246	...Combined with stand	387	...Food conveying type (e.g., lunch box)
247	...With complementary electrical connector means to external circuit terminating in stand	388	..With means whereby material to be heated may be passed continuously through heated area (e.g., conveyor)
248	..With condition-responsive indicator	389	..Revolving enclosure
249	...Convertible	390	..Muffle-type enclosure
250	..With power supply, voltage or current-control means	391	..Oven type
251	....Thermally responsive	392	...Combined with additional material support
252	.....Adjustable	393	...Oven performs plural diverse functions
253	.....Comprising fusible metal, expansible liquid, or bar means	394	...With plural ovens
254	...With heating unit structure	395	...With plurality of separate heating units
255	....Plural heating units	396	....Of diverse construction or functioning in diverse manners
256	..With electrical circuit completion or terminal structure	397	....Of different resistive values
257	....Automatically operated	398	....Selectively energized
258	..With heat storage, exchange, or reflector means	399	..With heat energy transfer, distribution, or accumulator means
259	...Supporting devices	400	....By convection
260	.Resistive element: igniter type	401	...With steam generating means
261	..With blower, suction, or other ignition facilitating means	402	..With casing or support for heating unit or units
262	..With current control or external circuit connection or disconnection means	403	....Retractable or detachable (from heated enclosure)
263	...Automatic	404	....Hinged or adjustable (within the heated enclosure)
264	....Thermally responsive		
265	.....Bimetallic or other flexible means		

405	....Including heat energy reflecting or directing means	433	...With heating unit unitary with or attached to the stand
406	..With resistance heating means surrounding heating area	434	...Adjustable relative to vessel or stand
407	....Embedded within or between walls of container	435	...With external electrical circuit connection or disconnection means
408	..With resistance heating unit or units fixed enclosed by or located within heating area	436	...With heating unit attaching or support means
409	..With heating unit structure or composition	437	...Immersible
410	....With plural section heating element	438	..With vessel
411	....With infrared generating means	439	...With heat storage or transfer means
412	..With current or voltage control or regulating means	440	...With pressure generating or maintaining means (e.g., pressure cooker)
413	....Automatically responsive to condition of heating area	441	..With temperature or current control means
414	..With switch or other external circuit completing means	442	....Adjustable
415	..Deep well	443.1	..Exposed horizontal planar support surface for material to be heated (e.g., hot plate, etc.)
416	..Convertible	444.1	...Material is an electronic semiconductor device
417	..With plurality of separate heating units	445.1	...With indicator
418	..With adjustable position heating unit or units	446.1	...Having sensor
419	..With current control or external circuit opening or closing means	447.1	....Responsive to presence of material (e.g., food, a cooking vessel, etc.)
420	..Crucible or furnace type (i.e., adapted to hold meltable material)	448.11	....Responsive to temperature
421	..Melting pot	448.12	....Having microprocessor to control output of the heating device
422	..With plural separate heating units	448.13	....Of material (e.g., food, a cooking vessel, etc.)
423	..With protection means for heating unit or switch	448.14	.....Using thermistor-type sensor
424	..With resistance heating element surrounding or embedded within walls of container	448.15	.....Using temperature expansible fluid-type sensor
425	..With current or voltage control means	448.16	.....Using bimetallic member-type sensor
426	..With significant heating unit structure or composition	448.17	....Of the exposed horizontal planar support surface
427	....Container comprises resistance heating element	448.18	.....Using bimetallic member-type sensor
428	..Plural containers	448.19	....By rod or wire in a tube (e.g., thermo-cutoff probe, etc.)
429	..With vessel and stand	449.1	...Heating by convection
430	..With heat storage or transfer means	450.1	...For direct contact with food (e.g., grill, griddle, etc.)
431	..With pressure generating or maintaining means	451.1	...Having support for a heating unit
432	..Vessel separable from stand		

452.11	....Frame, casing, or housing (e.g., range top, stove top, countertop, etc.)	465.1	...Heating element contacting planar underside of the exposed horizontal planar support surface (e.g., sheet metal, etc.)
452.12	.....Supporting an imperforate exposed horizontal planar surface to overlie the heating unit (e.g., cooktop, etc.)	466.1	...Foil or film-type of heating element
452.13	.....Convertible (e.g., to an oven, to storage, etc.)	467.1	...Support for the heating element
453.11	...Allowing heating unit movement	468.1	...Heating element is embedded in the exposed horizontal planar support surface
453.12	.....Enabling the exposed horizontal planar surface to conform to material having other than a planar surface	468.2	...Heating element is in a groove formed on underside of the exposed horizontal planar support surface (e.g., cast metal plate, etc.)
453.13	.....Using hinge for tilting or pivoting	469	..Cylindrical or roller-type support for material to be heated
453.14	.....Of pintle and gudgeon type	470	...With plural heating units
453.15	.....Having an axis at an acute or obtuse angle to the exposed horizontal planar surface	471	...With external electrical circuit completion means
454.11	...Bracket having a hub and three or more angularly spaced horizontal projections (e.g., a spider, etc.)	472	.Plural functions simultaneously or convertible
454.12	....Having means to secure to the heating unit or a surrounding support	473	..To nonheating device
455.11	...Pan or cup (e.g., a drip pan, etc.)	474	..To diverse-type electric heating device
455.12	....Reflector-type	475	.With plural heat utilization means (single heater)
456.1	...Ring having a flange overlaying hole in a surrounding support surface	476	.Plural separate heating devices
457.1	...Having direct manually actuated electrical switch	477	..With common power supply or current control means
458.1	...Having electrical connection	478	..With unitary housing, support, or casing means
459.1	...Receptacle (e.g., socket, an insulator block, a terminal block, etc.)	479	..Diverse type (each electric)
460.1	..Heating element gapped from underside of the exposed horizontal support surface (e.g., ceramic plate, radiation-type, etc.)	480	..Selectively activated
461.1	...Support for the heating element	481	.With protective means for heater
462.1	....Plural heating elements	482	.With power supply and voltage or current regulation or current control means
463.1	...Formed by tubularly shaped heating unit	483	..Controlling or regulating plural separate distinct heating resistance elements(i.e., one control system for all elements)
464.1	...Having plural tubular heating units	484	...Of diverse resistance characteristics or value
		485	...With total current or power limiting means
		486	...Selectively, sequentially or alternately
		487	...With indicator means
		488	..With voltage limitation, conversion, or adapting means

489	..Combined manual and automatic regulating or control means	519	...Including electromagnetic relay means
490	..Automatic regulating or control means	520	..With heater-unit housing, casing, or support means (e.g., frame and single sheet)
491	...Combined (e.g., electromechanical and thermal)	521	..Including or comprising holding or support means for material to be heated
492	...Comprising timing or cycling means	522	..Housing, casing, or support performs plural diverse functions (e.g., window)
493	...Electromechanical	523	..Housing, casing, or support insertable into material or space to be heated (e.g., immersion type)
494	...Thermally responsive	524	..Comprising hinged or separable compartment (e.g., waffle iron type)
495	...Thermomagnetic	525	...With plurality of or sectional heating means
496	...Pressure responsive	526	..With means for attaching housing or casing to an external device (e.g., magnetic or vacuum)
497	..Comprising voltage and/or current measuring and comparing or combining means	527	...Body-supported (e.g., human body)
498	...Including follow-up servo means	528	..Flexible or resilient (e.g., warming pad)
499	...Including bridge means	529	...Cloth or other fabric
500	...Including electron or glow-discharge tube means	530	..With heat storage or transfer means (vanes)
501	...Including semiconductor means (e.g., transistor)	531	..With thermal insulation or cooling means
502	..Utilizing light-sensitive and/or responsive means	532	..With open frame or grid-type support
503	...Inductive reactor means (e.g., auto transformer)	533	..Portable (e.g., with handle)
504	..Comprising variable resistance means	534	..Rigid tubular housing, casing, or support (e.g., flattened tube)
505	...Comprising nonlinear or negative temperature coefficient resistance means	535	..Specially formed or adapted to fit material to be heated (e.g., a pipe)
506	..With signal or indicating means	536	..With heating unit mounting or attaching means
507	..With current connection and/or disconnection means (e.g., switch)	537	...Plural units combined with single casing housing or support
508	..Plural means intermittently or selectively operated	538	..With heating unit structure
509	..Automatically operated	539	..Comprising plural separate and distinct resistive elements
510	...Thermally responsive	540	..With heat storage or transfer means (e.g., fins or plate)
511	...With auxiliary heating means for thermal switch means	541	..With terminal or connector means (e.g., to external circuit means)
512	...Comprising linearly expansible metal		
513	...Comprising expansible fluid (e.g., alcohol or mercury)		
514	...With solenoid means		
515	...Adjustable means		
516	...Insertable into or in direct contact with heated material		
517	...Fusible link		
518	..Responsive to weight, position, or presence of body to be heated		

- 542 ..With resistive-element  
attaching, securing or  
electrical insulation means
- 543 ...Comprising coating printed or  
deposited on core sheath or  
support means
- 544 ...Element embedded within or  
completely surrounded by core,  
sheath, or support means
- 545 ..Resistive element interwoven  
with fabric support
- 546 ..Core, sheath, or support means  
for heating element
- 547 ...Comprising material to be  
heated
- 548 ...Of particular construction or  
material
- 549 ....Flexible
- 550 ....Sectional or interconnectable  
insulator means
- 551 ....Gasket or wafer-type  
insulator means
- 552 ..Heating element structure
- 553 ...Of particular construction  
and/or material (e.g.,  
infrared generator)

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