1 **PLURAL UNIT**
2.1 .Cathode ray tube
3 .Inter-electrode connection
5 .Control electrode unit
6 ..Plural control electrode units
7 **WITH EVACUATING PUMP**
8 **ARC AND SEPARATE INCANDESCENT BODY**
9 **FILAMENT AND SEPARATE INCANDESCENT BODY**
10 **WITH TEMPERATURE INDICATOR**
11 **WITH TEMPERATURE MODIFIER**
11.5 .Spark plug type
12 .Recirculating systems
13 .Having control means for the temperature modifier
14 .Pyroelectric type device
15 .Electric heater
16 ..For liquid electrode
17 .Double wall, jacket or casing for envelope
18 ..For conductive envelope devices
19 ...With plural electrode temperature modifying
20 ...With internal temperature modifying baffle
21 ...Cylindrical electrode type envelope
22 ..Fluid circulation type
23 ...Plural electrode temperature modifying
24 ...Flow directing means in casing
25 ..Sealed casing for envelope
26 ...Integral double wall type of envelope
27 ..Heat conserving or insulating type
28 ..Plural electrode temperature modifying
29 .For liquid electrode
30 .Hollow electrode or lead
31 ..Tubular coil electrode
32 ..Closed duct type (e.g., for liquid)
33 .Envelope with internal temperature modifying baffle
34 .Envelope with condensing chamber or surface
35 .Using liquids or fluid flow directing means
36 ..Jacket or casing
37 .For filament or heated cathode
38 ..Hollow shield around filament or cathode
39 .For electrode within an envelope
40 ..Radiating type surface
41 ...Material, roughened surface
42 .Mounted on lead-in or electrode support
43 .For lead-in-seal or stem protection
44 .For envelope wall
45 .Radiating type surface
46 .Having heat conducting path
47 .Heat conserving or insulating type
48 **WITH HANDLE**
49 **WITH DETACHABLE ELECTRICAL CONNECTOR OR SUPPORT**
50 .Resilient or vibration damping
51 .Electrical connector
52 **CONVERTIBLE**
53 **FLAME OR EXPLOSION TYPE**
54 **WITH RADIOACTIVE MATERIAL**
62 **CYCLOTRONS**
359.1 **WITH POSITIVE OR NEGATIVE ION ACCELERATION**
360.1 .Plural apertured electrodes
361.1 .Means for deflecting or focusing
362.1 .Supplying ionizable material (e.g., gas or vapor)
363.1 .Extraction or target electrode
364 **CATHODE RAY TUBE**
365 .Image pickup tube
366 ..Semiconductor depletion layer type
367 ...Mosaic
368 ....Plural junction
369 ..Mechanically responsive (e.g., sound)
370 ..Particular transparent conductor
371 ..With optical element
372 ...Light conducting fiber or rod
373 ..With photoemissive cathode
374 ...Mosaic
375 ...Plural photoemissive layers
376 ...With target
377 ....Secondary electron emissive
378 ....Support
379 ...Secondary electron emissive
380 ...Special ray sensitive
381 ...Image dissector
382 ...Focusing
383 ...Electrode or electrode support

384 ..Photoconductive
385 ...Layer composition
386 ....Plural layers
387 ...Secondary electron emissive
388 ...Special ray sensitive
389 ...Focusing
390 ...Electrode or electrode support
391 .Storage
392 ..Depletion layer type storage element
393 ..Double ended
394 ..Continuous storage element
395 ..Foraminous storage element
396 ..With non-beaming gun
397 ..With display
398 ...Integral or contiguous storage and display element
399 .Secondary emissive electrode
400 ..With display
401 ..Monoscope
402 .Shadow mask, support or shield
403 ..Non-circular aperture
404 ..With resilient support
405 ...Bimetallic
406 ...With studs
407 ..With frame
408 ..With screen
409 .Plural beam generating or control
410 ..With character forming electrode
411 ..One cathode source of plural beams
412 ..Convergence
413 ..With deflection
414 ..With focusing and accelerating electrodes
415 ..With screen
416 ...Including non-planar elements
417 ..With electrode support
418 .Signal translating output electrode
419 ..Plural
420 .Electron permeable window
421 .Beam deflecting means
422 ..Flat tube type
423 ..Electron reflecting mirror
424 ..Ion trap
425 ..Centering
426 ..Plural
427 ...Three or more
428 ....With convergence
429 ....Field varied near screen (i.e., post deflection)
430 .....By external element
431 ....Plural magnetic
432 ...Electrostatic
433 ....Magnetic
434 ....Nonparallel or asymmetric
435 .....Nonplanar
436 ....Enclosed or overlapping
437 ....With distortion correction
438 ....With support
439 ..Electrostatic
440 ..With yoke
441 .Ray generating or control
442 ..With magnetic focus
443 ...Internal
444 ..Sandwiched electrodes
445 ..Canted electrode (i.e., ion trap)
446 ..Including cathode assembly
447 ...With control grid adjacent cathode
448 ....With anode
449 .....With additional electrode
450 ......With coating or spiral electrode
451 ......With support
452 ...With focus electrode adjacent cathode
453 ....Noncircular beam type
454 ....Nonplanar cathode
455 .....Brillouin beam type
456 ..With support for electrode
457 ...Parallel rod type
458 ..Electrode
459 ...Movable
460 ...Plural
461 .Screen
462 ..Scale or graticule
463 ..Electroluminescent
464 ..Incandescent type
465 ..Light valve type
466 ..Nonluminescent layer
467 ..Phosphor composition
468 ...Rare earth
469 ...Embedded in face plate
470 ..Mosaic
471 ...Beam indexing element
472 ...Dot type
473 ..Plural layer type
474 ..With optics
475 ...Light conducting fiber or rod
476 ..Support

477 R .Envelope
478 ..With external optical element
479 ..Coating or shielding
480 ..Composition
481 ..With getter or gas
482 ..Support for electrode or envelope
477 HC ..With details of high-voltage connector
93 **GEIGER-MUELLER TYPE**
523 **PHOTOSENSITIVE**
524 .With optical device
525 .Having phosphor screen
526 ..Proximity focus type
527 ..Photocathode responsive to phosphor
528 ..With electron multiplier
529 ..With control electrode
530 ..With photocathode on envelope
531 .Having plural photosensitive electrodes
532 .Photomultiplier
533 ..Having plural dynodes
534 ...Channel or circular type
535 ...Venetian blind type
536 ...Box or linear type
537 .Having a control electrode
538 .Gas phototube
539 .Responsive to ultraviolet radiation
540 .Having plural anodes or cathodes
541 .Having photocathode on tube wall
542 .Photocathode
543 ..With phosphor
544 ..With envelope
103 R .Secondary emitter type (e.g., electron multiplier)
103 CM ..Channel multiplier
104 .Plural secondary emissive electrodes
105 R ..Three or more
105 CM ...Channel multiplier
106 **SECONDARY EMISSION PREVENTION**
107 .Nonemissive material
107.5 **VARIABLE WIDTH ELECTRON STREAM (E.G., MAGIC EYE)**
483 **WITH LUMINESCENT SOLID OR LIQUID MATERIAL**
484 .With gaseous discharge medium
485 ..Phosphor on envelope wall
486 ...Including particular phosphor
487 ....Plural
488 ...Aperture-type tube
489 ...With protective coating or filter
490 ...With amalgam
491 ...Electrode structure or material
492 ....With shield or additional electrode
493 ...Envelope structure or material
494 .Coplanar electrodes
495 .Vacuum-type tube
496 ..Phosphor on anode segments
497 ...With accelerating or control electrode
498 .Solid-state type
499 ..Semiconductor depletion layer type
500 ...Matrix or array
501 ...Light conversion
502 ..With phosphor embedding material
503 ..With particular phosphor or electrode material
504 ...Organic phosphor
505 ..With electrode matrix
506 ..Plural layers
507 ...With photosensitive layer
508 ...With piezoelectric layer
509 ...With dielectric layer
510 ..With character display (e.g., digits or letters)
511 ..Flexible
512 ..With envelope or encapsulation
513 **WITH CHARACTER DISPLAY (E.G., DIGITS OR LETTERS)**
514 .Gaseous discharge medium
515 ..With character-shaped envelope
516 ..Electrode with character-shaped aperture
517 ..With electrode display segments
518 ...With dielectric layer or coating
519 ...Multiple display (i.e., side-by-side)
520 ..With integrant display electrode
521 ...Stacked electrodes (i.e., superimposed)
522 .Incandescent filament display
110 **WITH OPTICAL DEVICE OR SPECIAL RAY TRANSMISSIVE ENVELOPE**
111 .Plural diverse optical devices
112 .Polarizer or special ray transmission (e.g., filter)
113 .Reflector

114 ..Plural reflectors
115 ..Multiple filament lamps
116 .Light diffusing
117 .Light valve or obscuring means
118 **SPARK PLUGS**
119 .Sealing-off valve for electrode chamber
120 .With fluid feed or air vent
121 .Reversible (e.g., part)
122 .Removable electrode on shell
123 .Plural series gaps
124 ..Intensifier in center electrode lead-in
125 .Movable electrode (e.g., for cleaning, adjustable)
126 ..Automatically moved (e.g., engine vibration)
127 .Cleaner (e.g., movable scraper)
128 .Plural insulated electrodes with individual lead-in
129 .With transparent part
130 .Non-conducting material in or adjacent gap (e.g., restricts spark)
131 R ..Non-shortest line spark and surface spark type
131 A ...Spark plugs with semiconductive material at the gap
132 .Capillary groove or space
133 .Ball electrode
134 .With radio shielding
135 .With particular connector structure
136 .Plural part center electrode lead-in
137 .Plural part insulating means
138 .Electrodes are pure figures of revolution about plug axis
139 .Ring or disk electrode (e.g., sector)
140 .Plural parallel gaps (e.g., main and standby, serrated electrode)
141 .Particular electrode structure or spacing
142 ..Gap on and along axis
143 .Shaped electrode chamber, insulator end, shell skirt, baffle or gas directing means
144 .With specific joint structure
145 ..Between center electrode and insulator
146 **WITH MOVABLE ELECTRODE OR SHIELD**
147 .Plural
148 .Movable envelope wall
149 .Rotary
150 .Movable liquid electrode
151 .Thermal actuator
152 .Magnetic actuator
153 **WITH MAGNETIC DEVICE**
154 .For generating plural fields
155 .Electrode generates field
156 .Field transverse to discharge
157 ..Concentrically arranged electrode with axial field
158 ...Pole pieces facing electrode ends
159 ....Electrode support penetrates pole piece
160 .With envelope
161 ..Gas or vapor type
162 ..Three or more electrodes
163 **LIQUID ELECTRODE DISCHARGE DEVICES**
164 .Shock absorber for liquid
165 .Plural liquid electrodes
166 .Starting band or external electrode
167 .Apertured electrode (e.g., grid) interposed in discharge space
168 .Plural anodes in separate envelope chambers
169 .Plural anodes with anode arc shield
170 .Auxiliary starting or holding electrode
171 ..Immersed in liquid electrode
172 .Liquid in contact with plural electrodes
173 .Cathode spot anchoring
545 **HAVING VALVE WITH GETTER, GAS/VAPOR GENERATING MATERIAL OR PRESSURE CONTROL MEANS**
546 **WITH FRANGIBLE CAPSULE CONTAINING GETTER, GAS OR VAPOR GENERATING MATERIAL**
547 **HAVING HEATING MEANS TO CONTROL GAS/VAPOR, GAS OR VAPOR GENERATING MEANS, OR GETTER MEANS**
548 .Incandescent lamp gettering
549 .Discharge device gettering
550 .Vapor generating
551 .Gas generating
552 **HAVING PRESSURE CONTROL OF GAS OR VAPOR**
553 **WITH GETTER**
554 .Plural
555 ..Diverse

556 .And vapor generator
557 .Incandescent lamp type
558 .Electrode includes getter, supports getter, or is connected to getter
559 .Mounted on electrode support
560 .With structure to direct or shield from getter
561 .With contained getter
562 .Gas or vapor device type
563 **HAVING GAS GENERATING MATERIAL**
564 **HAVING VAPOR GENERATING MATERIAL**
565 .Mercury vapor material
566 .Electrode or electrode support includes material
567 **WITH GAS OR VAPOR**
568 .Having a particular total or partial pressure
569 ..Incandescent lamp
570 ..Greater than 760 torr
571 ...Includes mercury in gas or vapor fill
572 ..One torr thru 760 torr
573 ...Having specified envelope detail
574 ...With electrode structure
575 ....Composite
576 .....With rare gas
577 ..Less than .1 torr
578 .Incandescent filament lamp
579 ..Tungsten-halogen cycle lamp
580 ..With filter, barrier, screen, shield, electric terminal or fuse
581 .Three or more electrode discharge device
582 ..Multiple gaseous discharge display panel
583 ...Having electric terminal detail
584 ...Having intersecting electrode sets
585 ....With three sets of electrodes
586 ....With dielectric member
587 .....And additional layer on member
588 ..Amplifier, cathanode, or ionic cathode
589 ..Counter, indicator, or switching tube
590 ..With shield to prevent discharge between electrodes
591 ..Having cathode heater
592 ...With control electrode
593 ....Plural
594 ..Start electrode exterior to envelope
595 ..Internal start or control electrode between discharge electrodes
596 ...Strip electrode
597 ...Interposed apertured electrode
598 ....Mean free-path spacing
599 ....Plural serial apertured electrodes
600 ...Two interposed electrodes
601 ..Start electrode not in main discharge path
602 ...Trigger electrode concentric with discharge electrode
603 ...Triggerable vacuum gap device
604 ..Plural serial electrodes
605 .Mean free-path spacing of envelope portions or content parts
606 ..Electrode spacing related to mean free path length
607 .Having electrode exterior to envelope
608 .Single electrode type discharge device, or including particulate material
609 .Having baffle, partition, or constricting means affecting discharge
610 ..Partition
611 ..Constriction means
612 ...Substantially the full length of discharge path
613 .Having electrode shield
614 ..With anode shield
615 ..Crater electrode with shield
616 ..With positive ion or cathode shield
617 .Having spur electrode
618 .Having hollow cathode
619 .Negative or cathode glow device
620 .Having specified electrode spacing
621 .Having electrodes with geometrical relationship
622 .Discharge device with diverse electrodes
623 .Having electrode lead-in or electrode support sealed to envelope
624 ..End cap seal
625 ..End plug seal
626 .Having lead-in shield

627 .Having electrode heated by space discharge current
628 ..Coil type
629 .Having resistance heated cathode
630 .Having electrode of alkali, alkaline or rare earth material
631 .Having particular electrode structure
632 ..Cathode or anode
633 .Electrode composition
634 .Envelope with particular structure
635 ..Envelope layer or coating
636 .Envelope composition
637 .With particular gas or vapor
638 ..With metal vapor
639 ...Mercury vapor
640 ....And rare earth metal
641 .....With rare gas
642 ....And rare gas
643 ..One or more rare gases
230 **DISCHARGE DEVICE WITH POSITIVE ION EMITTER**
231.01 **FLUENT MATERIAL SUPPLY OR FLOW DIRECTING MEANS**
231.11 .Lightning or surge arrester
231.21 ..Expulsion type
231.31 .Plasma
231.41 ..Arc discharge type
231.51 ...With tangential fluent supply
231.61 ...Electromagnetic output (i.e., light)
231.71 .Arc discharge lamp or radiation source
232 **ELECTRODES IMMERSED IN LIQUID**
233 **INVOLVING PARTICULAR DEGREE OF VACUUM**
234 **ELECTRODE EXTERIOR TO ENVELOPE**
235 **IMPERFECT ELECTRICAL CONTACT BETWEEN ELECTRODES**
236 **STAND-BY ELECTRODE TYPE (WITH SPARE ELECTRODE)**
237 **WITH ELECTRODE REPLACEMENT MEANS OR DEMOUNTABLE**
238 **WITH SUPPORT AND/OR SPACING STRUCTURE FOR ELECTRODE AND/OR SHIELD**
239 .For shield
240 ..Shield supported by electrode, electrode support, or spacer
241 ...Extending across ends of plural discharge device electrodes
242 ..Shield supported by or forming part of envelope stem
243 .For plural electrodes of discharge device
244 ..Envelope supports or forms electrode
245 ...Plural discharge spaces formed by three or more electrodes
246 ...Electrode forms part of envelope
247 ....Hollow electrode with another electrode supported by end structure
248 ...Conductive envelope supports plural electrodes
249 ...Elongated envelope with electrodes spaced along length
250 ....With spacer between electrodes or electrode supports
251 ....Plural electrodes supported along the length of a wire, rod, or tube
252 ...Support structure supported by the envelope
253 ....At spaced or opposed portions of envelope
254 .....At three or more portions of envelope
255 .....Same electrode supported by spaced or opposed portions
256 ....Insulating or ceramic support rod or tube
257 ....With spacer between electrode or electrode supports
258 .....Spacer between envelope and support or electrode
259 .....Insulating coating forms spacer
260 .....Plate or bar extending across ends of electrodes
261 ......Plates or bars at opposed ends of electrodes
262 .....Ceramic bead for joining parts
263 ....With indirectly heated cathode
264 ....With U-shaped, V-shaped, or plural sections filament
265 ....Apertured electrode (e.g., grid) supported between two other electrodes
266 ....Stem or envelope structure
267 ..Plural rod electrodes

268 ..Insulating spacer between discharge electrodes
269 .With vibration damping device
270 .For indirectly heated cathode
271 .For filament
272 ..Plural filaments
273 ..Plural section filament
274 ..Supports supported by opposed parts of envelope
275 ..Insulator supports filament
276 ...Conductive member supports insulator
277 ...Insulating standard supports filament brackets or anchors
278 ..Tension device for filament
279 ..Support intermediate of filament ends
281 .Support mounted in or around aperture in conductive wall or plate
282 .Conductive envelope supports electrode
283 .Electrode supported by envelope
284 ..Electrode supporting member supported by envelope
285 ...Supporting wire, rod, or tube supported by envelope
286 ....At spaced or opposed portions of envelope
287 ....Support collar surrounding envelope stem
288 ....Spacer between envelope and support or electrode
289 ....Ceramic or insulating support
290 ....Stem or envelope structure
291 ..Electrode formed by coating on envelope
292 .Supporting and/or spacing elements
293 **DISCHARGING DEVICES WITH APERTURED ELECTRODE (E.G., GRID) INTERPOSED BETWEEN TWO ELECTRODES**
294 .Non-uniformly spaced from another electrode
295 .Interposed electrode with non-uniform mesh area (e.g., variable mu)
296 .Plural interposed apertured electrodes
297 ..Serially arranged
298 ...Plural interelectrode discharge
299 ...Aligned apertures (e.g., beam power)
300 ...Three or more serially arranged
301 ..Plural interelectrode discharge spaces
302 .Plural cathodes
303 .Three or more nonemissive electrodes (e.g., plural anodes)
304 .Plural-parallel-section cathode with electrode surrounding each section
305 **DISCHARGE HEATED ANODE TYPE (E.G., CATHANODE)**
306 **DISCHARGE DEVICES HAVING THREE OR MORE ELECTRODES**
307 .Four or more electrodes
308 .Discharge control electrode
309 **DISCHARGE DEVICES HAVING A MULTIPOINTED OR SERRATED EDGE ELECTRODE**
310 **DISCHARGE DEVICES HAVING A THERMIONIC OR EMISSIVE CATHODE**
311 **DISCHARGE DEVICES HAVING AN ELECTRODE OF PARTICULAR MATERIAL**
312 **WITH CASING OF JACKET FOR ENVELOPE**
313 **WITH ELECTRICAL SHIELD OR STATIC CHARGE DISTRIBUTION MEANS**
314 **NONREPAIRABLE**
315 **INCANDESCENT LAMPS**
316 .Plural filaments or glowers
317 **WITH ENVELOPE**
318.01 .Having base and connector
318.02 ..Secure to each end of a double-ended or tubular envelope
318.03 ..Having an annular contact disposed concentrically about the longitudinal axis of the envelope
318.04 ...Having screw thread coupling contact
318.05 ..Having spaced, longitudinally engaging, pronglike contacts
318.06 ..Having three or more electrical contacts
318.07 ..Associated with pinch (or press) seal of envelope
318.08 ..Base attached to the envelope with cement or adhesive
318.09 ..Base attached to the envelope with friction or other mechanical means

318.1 ...Resilient mechanical means for attaching the base to the envelope
318.11 ..Having a reflector in combination with base
318.12 .Having a connector
323 **COMBINED**
324 .With casing or jacket
325 **MISCELLANEOUS DISCHARGE DEVICES**
326 **ELECTRODE AND SHIELD STRUCTURES**
327 .Self-baking electrodes (e.g., Soederberg)
328 .Liquid electrode container
329 .Mosaic electrodes
331 .With lead wire or connector
332 ..Inserted section or material
333 ..Filament or wire shield or electrode
334 ..Nonmetallic electrode or shield
335 ..Rod electrode or shield
336 .Point source cathodes
337 .Indirectly heated cathodes
338 ..Plural separate cathode sections
339 ..Interior emissive hollow cathodes
340 ..Insulating material between heater and cathode
341 .Filament or resistance heated electrodes
342 ..Noninductive
343 ..Plural wires or strands
344 ..Coiled
345 ..Coated
346 R .Cathodes containing and/or coated with electron emissive material
346 DC ..Dispensator cathode
347 .Incandescible upon electron bombardment
348 .Foraminous electrodes (e.g., grids) or shields
349 ..Nonuniform mesh area or nonstraight electrodes or nonuniform cross sectional area electrodes
350 ..Rods, wire, or mesh supported on rod or post
351 .Multipointed or serrated edge electrode
352 .Composite electrodes or shields
353 ..With non-discharge-sustaining portion
354 ..Cored rod
355 ..Coated or laminated
356 .Tubular or hollow sleeve
357 .Rods
358 **MISCELLANEOUS (E.G., ELECTROLYTIC LIGHT SOURCE)**

**FOREIGN ART COLLECTIONS**

FOR 000 **CLASS-RELATED FOREIGN DOCUMENTS**

**DIGESTS**

DIG 7 **BOMBARDMENT INDUCED CONDUCTIVITY**