DETECTION OR RANGE DETERMINATION
OF DISTANT OBJECT BY APPARATUS
USING SENSOR OF
ELECTROMAGNETIC OR SOUND
ENERGY

1. Radar
2. Cathode ray screen display
3. Simulation by light means
4. Optical means (e.g., image
   projector, etc.) or light or
   sound sensor (e.g., television
   camera, microphone, etc.)
5. Interference simulation
6. Sonar
7. Interference simulation
8. Simulation of Doppler shift of
   echo
9. Simulation by use of sound
   recording
10. ORGANIZED ARMED OR UNARMED
    CONFLICT OR SHOOTING
11. Self-propelled projectile
12. Launched underwater
13. Aerial warfare
14. Bombing
15. Gunnery
16. Gunfire spotting
17. Gun recoil simulation
18. Gun aiming
19. Cinematographic or cathode ray
    screen display
20. Training apparatus using beam
    of infrared, visible light, or
    ultraviolet radiation
21. Beam sensor included in
    apparatus
22. Means (e.g., target, terrain
    model, etc.) marked or pierced
    to simulate projectile impact
    point
23. Gun loading or projectile
    preparation (e.g., fuse
    setting, etc.)
24. Water warfare
25. Periscope view simulation
26. Range finding
27. AIRCRAFT WIND DRIFT SIMULATION
28. VEHICLE OPERATOR INSTRUCTION OR
    TESTING
29. Flight vehicle
30. Automatic pilot
31. Model viewed and maneuvered by
    trainee from point remote
    therefrom
32. Helicopter
33. Outer space vehicle
34. In flight
35. With simulation of night or
    reduced visibility flight
36. Aircraft, aircraft simulator,
    or means connected thereto
    traveling on ground or water
    during simulated flight
    training
37. Simulation of view from
    aircraft
38. View simulating means located
    on belt or cylinder
39. View simulating means located
    on element having spherical
    surface
40. Simulation of night or reduced
    visibility flight
41. Runway outlining or approach
    lights simulated
42. View simulated by cathode ray
    screen display
43. View simulated by projected
    image
44. Simulation of feel of control
    means (e.g., flight control
    stick, etc.)
45. Ground trainer agitated to
    simulate rough air buffeting
    or engine induced vibration of
    aircraft
46. Display or recordation of
    simulated flight path of
    ground trainer
47. Aircraft sound simulation
48. Aircraft or ambient condition
    simulated electrically or
    indicated by instrument or
    alarm
49. Takeoff or preparation
    therefor
50. Aircraft attitude (e.g., roll,
    etc.)
51. Ice formation or aircraft
    weight
52. Pressure
53. Propulsion means or accessory
Tiltable or turnable ground trainer...

With fan or simulated propeller...

With means for stabilizing trainer when idle...

By fluid actuated piston/cylinder ram...

Simulation of flight generated force applied to aircraft occupant...

Sail-equipped vehicle...

Bicycle or motorcycle...

Automobile or truck...

Model viewed and maneuvered by trainee from point remote therefrom...

Driver's skill measured by time or vehicle travel distance...

Recordation of driver's performance...

Real vehicle used in instruction or testing...

Vehicle positioned on rollers, belt, or platform...

Obstacle or other means contacted by improperly driven vehicle...

Simulation of view from vehicle...

View simulating means located on belt or cylinder...

Manipulation of gear shift lever or clutch pedal...

Building or room interior represented pictorially or by model...

Representation of furniture, bathroom or kitchen accessory, or cabinet placeable in different locations on representation of room interior...

Visualization of planting...

Vehicle positioned on rollers, belt, or platform...

Obstacle or other means contacted by improperly driven vehicle...

Simulation of view from vehicle...

View simulating means located on belt or cylinder...

Manipulation of gear shift lever or clutch pedal...

Architectural, Interior Design, or Industrial Plant Layout...

Magnet included in display or demonstration...

Brick, tile, roofing, or siding...

Curtain or wall, ceiling, or floor cover...

Light, mirror, or image projector included in display or demonstration...

Roller-mounted belt or strip included in display or demonstration...

Plaque (e.g., disk, etc.) turnable relative to index (e.g., window in card, etc.) to selectively align different points on plaque therewith...

Visual Art or Craft, Artistic Adornment, or Color Training or Demonstration...

Sculpture or craft involving manual carving or shaping...

Shape defined by filament (e.g., string, etc.)...

Color application (e.g., painting, etc.)...

Drawing...

Animal or human body model having movable parts...

Stencil...

Tracing...

Model support...

Grid included in drawing aid or scene viewer...

Perspective...

Orthogonal projection...

Flower arranging or landscaping...

Hair or wig styling...

Decorative sewing, needlework, weaving, or textile designing...

Design formed of identical or complementary elements...

Strips...

Color display...

Personal appearance or wearing apparel...

Cosmetic or nail polish...

Produced by spinning means (e.g., plural rotating color disks, etc.)...

Produced by superposed color filters...

Including mixing receptacle or holder for color material...

Including relatively rotatable elements (e.g., concentrically mounted color disks, etc.)...

Automobile...

Astrology...

Business or Economics...

Work schedule...

Record keeping...
<table>
<thead>
<tr>
<th>Class 434 Education and Demonstration</th>
<th>434 - 3</th>
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<tbody>
<tr>
<td><strong>110</strong> Coin or currency identification or counterfeit detection</td>
<td><strong>150</strong> Map or terrain model</td>
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<td><strong>111</strong> Celestial Navigation</td>
<td><strong>151</strong> ..With model or sample of natural or man-made item associated therewith</td>
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<td><strong>112</strong> Communication aids for the Handicapped</td>
<td><strong>152</strong> ..Relief</td>
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<td><strong>113</strong> Tactile reading aid (e.g., Braille, etc.)</td>
<td><strong>153</strong> ..Means for facilitating location of different points on map</td>
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<td><strong>114</strong> Converting information to tactile output</td>
<td><strong>154</strong> History or genealogy</td>
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<td><strong>115</strong> Braille writing slate</td>
<td><strong>155</strong> Identification of person or handwriting analysis</td>
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<tr>
<td><strong>116</strong> Converting information to sound</td>
<td><strong>156</strong> Language</td>
</tr>
<tr>
<td><strong>117</strong> Writing guide for the blind</td>
<td><strong>157</strong> .Foreign</td>
</tr>
<tr>
<td><strong>118</strong> Computer logic, operation, or programming instruction</td>
<td><strong>158</strong> .Shorthand</td>
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<tr>
<td><strong>126</strong> Fluid flow or wave motion</td>
<td><strong>159</strong> .Alphabet letter formation, recognition, or sequencing</td>
</tr>
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<td><strong>127</strong> Food</td>
<td><strong>160</strong> .Letter formed by segments</td>
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<tr>
<td><strong>128</strong> Game, board or table type</td>
<td><strong>161</strong> .Letter displayed upon manipulation of mechanism</td>
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<td><strong>129</strong> .Using playing card</td>
<td><strong>162</strong> .Writing or printing by hand</td>
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<td><strong>130</strong> Geography</td>
<td><strong>163</strong> ..Tracing</td>
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<tr>
<td><strong>131</strong> Terrestrial globe or accessory therefor</td>
<td><strong>164</strong> ..Slotted or grooved path</td>
</tr>
<tr>
<td><strong>132</strong> Relief globe</td>
<td><strong>165</strong> ..Writing sample included in teaching means</td>
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<tr>
<td><strong>133</strong> Having diverse use (e.g., pencil box, etc.)</td>
<td><strong>166</strong> ..Mechanical means for teaching proper position of body part while writing</td>
</tr>
<tr>
<td><strong>134</strong> Having magnet associated therewith</td>
<td><strong>167</strong> .Spelling, phonics, word recognition, or sentence formation</td>
</tr>
<tr>
<td><strong>135</strong> Having plural planar or curved surfaces (e.g., flat or frustoconical surfaces, etc.)</td>
<td><strong>168</strong> ..Magnet included in teaching means</td>
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<tr>
<td><strong>136</strong> Rotated by mechanical drive</td>
<td><strong>169</strong> ..Electrical component included in teaching means</td>
</tr>
<tr>
<td><strong>137</strong> Collapsible or arranged for convenient assembly, disassembly, or storage</td>
<td><strong>170</strong> ..Color used in teaching means</td>
</tr>
<tr>
<td><strong>138</strong> Inflatable</td>
<td><strong>171</strong> ..Letter or word bearing elements (e.g., cards, blocks, etc.) with interfitting surface configurations</td>
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<tr>
<td><strong>139</strong> With means representing vehicle moving relative to earth</td>
<td><strong>172</strong> ..Letter-bearing elements (e.g., cards, blocks, etc.) selectively aligned to form word or sentence</td>
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<td><strong>140</strong> Space vehicle</td>
<td><strong>173</strong> ..Letter-bearing belt or reel-mounted strip</td>
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<td><strong>141</strong> With means indicating distance between points on earth</td>
<td><strong>174</strong> ..Rotatably mounted letter bearing element</td>
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<tr>
<td><strong>142</strong> With means indicating time at different points on earth</td>
<td><strong>175</strong> ..Letter-bearing elements slidable between different grooves</td>
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<tr>
<td><strong>143</strong> With means demonstrating solar illumination of earth</td>
<td><strong>176</strong> ..Display of word or picture upon correct manipulation of teaching means</td>
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<tr>
<td><strong>144</strong> With means demonstrating wind currents over earth</td>
<td><strong>177</strong> .Crossword puzzle aid</td>
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<td><strong>145</strong> With internal light</td>
<td><strong>178</strong> .Reading</td>
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<tr>
<td><strong>146</strong> With means to facilitate finding or reading indicia thereon</td>
<td><strong>179</strong> .Speed</td>
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<tr>
<td><strong>147</strong> With map segment attachable thereto (e.g., continent, nation, etc.)</td>
<td><strong>180</strong></td>
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<tr>
<td><strong>148</strong> With suspension type support</td>
<td><strong>181</strong></td>
</tr>
<tr>
<td><strong>149</strong> Means indicating time at different points on earth</td>
<td><strong>182</strong></td>
</tr>
</tbody>
</table>

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Projected image of reading matter
Apertured mask moved past reading matter carrier
Reading matter carrier moved past viewing position
Pacer moved down reading matter carrier
Directionality training (e.g., for dyslexics, etc.)
Speech
MAGNETIC OR GYRO COMPASS
MEASUREMENT OF LENGTH OR VOLUME
MATHEMATICS
Base conversion or use of base other than ten
Magnet included in teaching means
Arithmetic
Chalkboard or equivalent means having readily erasable surface
Manually manipulated numeral shaped elements
Numeric value represented by weight placed on balance
Manually manipulated elements having size proportional to numeric value
Fraction representing elements
Indicia-bearing belt or reel-mounted strip
Plaque (e.g., disk, etc.) turnable relative to index (e.g., window in card, etc.) to selectively align different points on plaque therewith
Plaque slidable relative to index (e.g., window in card, etc.) to selectively align different points on plaque therewith
Manually manipulated pin or peg
Electric component included in teaching means
Keyboard or like manually manipulated array (e.g., slides, levers, etc.)
Apertured elements threaded on elongate means (e.g., abacus, etc.)
Elements manually placed on or removed from elongate means during use
Means having number of marks (e.g., dots, etc.) or associated physical units (e.g., sticks, indentations, etc.) corresponding to numeric value
Rotatable wheel-shaped element (e.g., ring, disc, cylinder, etc.) having indicia on perimeter thereof
Color used in teaching means
Ball, block, or disk
Division or multiplication
Place value relative to decimal point
Geometry, trigonometry, or physical mathematic model structure
Pythagorean theorem
Property of sphere or spheroid
Property of circle or ellipse
Demonstration means using relatively turnable elements
Demonstration means using filament (e.g., string, etc.) to define geometric shape
METEOROLOGY
NUCLEAR ENERGY OR RADIOACTIVE RADIATION DETECTION OR SIMULATION
Air traffic control
Audiometry
Code communication
Visual signalling
Electricity or electronics
Dairying, farming, ranching, or other occupation involving care of plants or animals
Fire fighting
Keyboard operation (e.g., typing, key punching, etc.)
Means for selectively illuminating character on simulated keyboard
Means for selectively rendering key operable or inoperable
Means for selectively producing sound of character
Practice keyboard having individually depressible keys
With means to display character upon depression of key

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..Means on hand or finger for indicating finger to be used
Soldering or welding

PARLIAMENTARY PROCEDURE
-Cooperation of plural pupils
-Behavior or performance display (e.g., board for showing completed chores, etc.)

RADIO NAVIGATION
-Light sensor included in simulator of radio navigation equipment
-Simulation of upwardly directed airfield or landing approach marker radio beam
-Simulated radio signal generated by use of data storage means
-Simulated bearing or position or vehicle relative to radio transmitter or directional beam indicated to trainee by instrument
-Simulation of radio directional beam carrying Morse code signal

RELIGION
-Rosary

PHYSICAL EDUCATION
-Basketball
-Bowling
-Dancing
-Football, soccer, or rugby
-Golf
-Skiing
-Swimming
-Traversing ground (e.g., crawling, running, etc.)
-Body model with articulated parts
-Picture or image of body included in display or demonstration
-Developing or testing coordination
-Associating dissimilar objects with apertures or pegs having matching size, shape, or color
-Manipulation of tool or fastener (e.g., zipper, shoelaces, etc.)
-Tracing

ANATOMY, PHYSIOLOGY, THERAPEUTIC TREATMENT, OR SURGERY RELATING TO HUMAN BEING
-Dentistry
-Means mounting upper and lower tooth models for relative movement
-Cardiac massage or artificial respiration
-Simulation of body sound
-Anatomical representation
-Simulation of flow of body liquid
-Including superposed sheets respectively depicting different body parts
-Head or part thereof
-Eye
-Internal organ, blood vessel, or nerve
-Female genital
-Skeleton or bone
-Palpation or manual force application (e.g., chiropractic adjustment, etc.)
-Crystal structure model or display having discrete element (e.g., geometric shape, light, etc.) representing atom
-Molecular model or display having discrete element representing atom or radical
-Model having helical chain of elements (e.g., DNA model, etc.)
-Atom or radical represented by element formed of sheet material
-Model or display demonstrating structure or property of atom or radical
-Indicia chart (e.g., periodic table, etc.)
-Means demonstrating physical property (e.g., osmotic pressure, solubility, etc.) of substance
-Astronomy
-Representation of light generating celestial body
-Light spot
-Celestial globe
-And earth representation
-Finding or identifying aid
-Simulation of sun and earth

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...Simulation of motion of earth and another major planet around sun

...And moon

.....Moon model moved around earth model by mechanical or electrical means

......By belt drive

...Biology or taxidermy

...Specimen display

...Specimen enclosure

...Chemistry or metallurgy

...Geology

..Physics

..Electricity or magnetism

..Statics or dynamics

..Optics

TELLING TIME OR CALENDAR READING

VEHICLE MOVEMENT OR TRAFFIC ACCIDENT OR CONDITION

VOTING MACHINE OR BALLOT MARKING

CATHODE RAY SCREEN DISPLAY AND AUDIO MEANS

A. Karaoke

AUDIO RECORDING AND VISUAL MEANS

...Common carrier for visual means and audio recording

...Carrier used with image projector

...Card, sheet, or block

...Reading head moved past stationary audio track

....Manually

...Image projector

...With code on image carrier for controlling operation of apparatus

...With code on audio carrier for controlling operation of apparatus

...Visual information in book form

...Audio recording on disk

AUDIO RECORDING

...Listener's voiced response recorded

...Operation of apparatus controlled by listener's response to question or problem

QUESTION OR PROBLEM ELICITING RESPONSE

...Cathode ray screen display included in examining means

...Image projector included in examining means

...And light detector

..Mark transfer sheet (e.g., carbon paper, etc.) included in examining means

..Correctness of response indicated to examine by self-operating or examinee actuated means

..Involving heat or chemical reaction

..Involving fluid flow

..Involving magnetic attraction

..By optical element (e.g., mirror, color filter, lens, etc.)

..Reward dispensed for correct answer

..Picture or pattern completed by examinee placing plaques bearing portions thereof in correct relation

..Hand-held element insertable to different depths in apertures respectively representing right and wrong answers

..By means including electrical component

...Response of plural examinees communicated to monitor or recorder by electrical signals

...Light detector

...Part of electric circuit completed when examinee places end of flexible lead, or means connected thereto (e.g., plug, etc.), in contact with another element

...Part of electric circuit completed when examinee depresses portion of sheet having electric conductor associated therewith

...Part of electric circuit completed when examinee places free element in contact with another element

...Correct answer indicator lamp carried by free element

...Question or problem located on endless belt or reel mounted strip

...Size or shape of, or aperture in, free element controls indication of response correctness

...Correct answer illuminated
345 Size or shape of, or aperture in, free element controls indication of response correctness
346 Correctness of response indicated when examinee physically alters element other than by marking it
347 Correct answer displayed on side of element opposite side displaying question or problem
348 Correct answer hidden until examinee moves element
349 Means for receiving examinee's written response
350 Response of plural examinees communicated to monitor or recorder by electrical signals
351 Wireless signals
352 With means for indicating first examinee to respond
353 Grading of response form
354 Comparison of response form with standard answer form
355 Light detector sensing response
356 Electrical means sensing conductive mark representing response
357 Means sensing aperture representing response
358 Light detector sensing response
359 Electrical means sensing conductive mark representing response
360 Means sensing aperture representing response
361 Means perforating response form at correct answer location
362 Electrical means for recording examinee's response
363 Card or sheet for receiving examinee's written, marked, or punched response
364 With apertured overlay
365 MEANS FOR DEMONSTRATING APPARATUS, PRODUCT, OR SURFACE CONFIGURATION, OR FOR DISPLAYING EDUCATION MATERIAL OR STUDENT'S WORK
366 Means for simulating abnormal condition
367 Means for comparing characteristics of plural articles or materials
368 Superposed indicia bearing sheets, one depicting interior view
369 Means for displaying article at various stages of manufacture or treatment
370 Transparent means permitting interior view
371 Mirror for displaying something (e.g., apparel, hair style, etc.) as it would appear when associated with viewer
372 Aircraft, spacecraft, or component thereof
373 Land or water vehicle (e.g., automobile, boat, etc.) or component thereof
374 Servicing aid (e.g., lubrication chart, etc.)
375 Shock absorber or spring
376 Tire, wheel, or brake
377 Beauty aid or perfume
378 Burial means or grave maker
379 Demonstration or display of electrical apparatus or component
380 Motor or generator
381 Fluid filter
382 Household equipment
383 Refrigerator or air conditioner
384 Vacuum cleaner
385 Insulation
386 Jewelry or monogram
387 Lock or safe
388 Lubricant or lubrication
389 Mechanical power source (e.g., engine, windmill, etc.)
390 Mining
391 Pen or pencil
392 Sport equipment
393 Toy
394 Timepiece or component thereof
395 Wearing apparel
396 Displayed on doll or manikin
397 Footwear
398 Hose
399 Headwear
400 Neckwear
401 Machine mechanism
402 Rotatable element having indicia or picture on perimeter thereof
403 Block or like manually manipulatable object having indicia or picture on face thereof, or three-dimensional form for demonstrating shape

404 Plaque (e.g., disk, etc.) turnable relative to index (e.g., window in card, etc.) to selectively align different points on plaque therewith

405 Plaque slidable relative to index (e.g., window in card, etc.) to selectively align different points on plaque therewith

406 Jigsaw elements having indicia thereon

407 Manually manipulated pin or peg inserted into display board

408 Chalkboard or equivalent means having easily erasable surface

409 Mark formed by magnetic attraction between materials (e.g., particles in sheet made visible by movement of magnet over sheet, etc.)

410 Mark formed by bonding sheet to underlying surface with pressure-applying stylus (e.g., Magic Slate, etc.)

411 Erasable surface on endless belt

412 Erasable surface on reel-mounted sheet

413 Separate elements having erasable surfaces

414 Relatively swingable

415 With pencil holder or sharpener

416 With chart, illustration, or indicia

417 Chalkboard cleaning means, chalk or eraser holder, or chalk dust receiver

418 With ruler, straight edge, or holder therefor

419 Pivotal about horizontal axis

420 Vertically adjustable

421 Attached to wall

422 Hand-carried school slate

423 With rigid corner cap or separate means holding slate frame elements together

424 With cushion or noise muffler attached to slate frame

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