METHODS

Class 216 is an integral part of this Class (Class 156), 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.

39. Plaster board making
40. ...With bending or folding of facing sheet
41. ...With water-proofing with added material
42. ...With embedding of reinforcing material during or subsequent to core formation
43. ...Pore forming in situ
44. ...With preliminary treatment of facing sheet
45. ...With subsequent treatment of plaster board
46. ...Perforating
47. ...Making electrical conductors of indefinite length
48. ...With filling of void or cavity with fluent material
49. ...Splicing
50. ...With mechanical working of conductor
51. ...Covering of conductor
52. ...With preformed material
53. ......Wrapping of sheet material (e.g., tape) about conductor and/or conductor assembly
54. ......By longitudinally bending sheet
55. ......Plural spaced conductors
56. ......Plural covering operations
57. ...Maintaining the natural appearance of plants or animal parts
58. ...Contour or profile photography to reproduce three-dimensional objects
59. ...Relief or intaglio representations of three-dimensional objects (e.g., relief modeling of photographs)
60. ...Surface bonding and/or assembly therefor
61. ...Simulated products of nature
62. ...With manual drawing or engraving
62.2 ...With formation of lamina by bulk deposition of discrete particles to form self-supporting article
62.4 ...Liberation or formation of fibers
62.6 ...By joining portions of batt to itself
62.8 ...To similarly formed batt
63. ..Manually arranging different colored or shaped discrete elements to form design
64. ..With measuring, testing, or inspecting
65. ..Of multiple spaced elements between and transverse of parallel webs (e.g., Venetian blind ladders)
66. ..Adhesive application of fasteners to articles (e.g., slide fastener to garment)
67. ..Utilizing phosphorescent or fluorescent material
68. ..With fur removal from animal pelt
69. ..Application of end closures to containers
70. ..Encasing movable or loosely confined element between adhering lamina (e.g., drawstrings)
71. ..Of lamina to building or installed structure
72. ..Setting or embedding tufts or discrete pile elements onto backing (e.g., rugs, brushes, etc.)
73.1 ...With sonic or ultrasonic treatment
73.2 ...Rod, strand, or filament
73.3 ...With sonic or ultrasonic cutting
73.4 ...Sheet or web splicing
73.5 ...Friction treatment (e.g., welding)
73.6 ...Vibratory treatment
74. ...With application of centrifugal force
75. ...With balancing of product
76. ...With parchmentizing or transparentizing

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..With pore forming in situ to form cellular lamina

78  ..Foaming
79  ...Subsequent to assembly of laminae
80  ..With refrigeration or freezing
81  ..With melting or gasification of permanently associated solid material in situ in airtight cavity
82  ..With flame contact of lamina
83  ..With swelling of material of lamina
84  ..Subsequent to assembly of laminae
85  ...Of lamina covering cylindrical or spherical body
86  ..Providing escapeways for gases trapped or generated between layers
87  ..Fray-prevention by bonding
89.11 ..With vitrification or firing ceramic material
89.12 ...Forming electrical article or component thereof
89.13 ....Elemental carbon containing (e.g., graphite, etc.)
89.14 ....Inorganic titanate compound containing
89.15 ....Nitride compound containing
89.16 ....Elemental metal or alloy containing
89.17 .....Silver containing
89.18 .....Copper containing
89.19 .....Tungsten containing
89.21 .....Molybdenum containing
89.22 .....Honeycomb-like
89.23 .....With wax or wax-like processing aid
89.24 ...Coloring agent containing
89.25 ...Elemental carbon containing (e.g., graphite, etc.)
89.26 ....Carbon fibers or filaments
89.27 ....Nitride compound containing
89.28 ...Elemental metal or alloy containing
90  ..Utilizing layer to prevent migration or bleeding between laminae

91  ..With separate permanent mechanical joining means (riveted, sewed, stapled, etc.)
92  ...With penetrating of fastener
93  ....Sewing
94  ..Reclaiming, renewing or repairing articles for reuse
95  ...Toroidal shapes (e.g., tire or tube)
96  ....Adhesively secured tire retreads
97  ....Puncture repairing
98  ...With removal of defective area to be repaired
99  ..Optically transparent glass sandwich making (e.g., window or filter)
100 ...Variegated colored lamina or interlayer
101 ...With cutting or breaking or partial removal of interlayer and/or lamina
102 ...With deformation or shaping of interlayer and/or lamina
103 ...With application of plural sequential pressures
104 ...With air evacuation between laminae
105 ...Directly applied fluid pressure
106 ...With preformed intermediate adhesive layer
107 ...Sandwich edge sealing
108 ...Mounting transparent lamina over window opening (e.g., slide-mounting)
109 ...Multipane glazing unit making (e.g., air-spaced panes)
110.1 ...Making flexible or resilient toroidal shape; e.g., tire, inner tube, etc.
111 ...Moving work progressively to separate assembly stations
112 ...Solid tire type (i.e., nonpneumatic)
113 ...Having cushioning void or cavity
114 ...Incorporation of solid nonrubber material at exposed tread surface of tire (e.g., anti-skid)
115 ...Applying flowable puncture sealing material
...Applying differently colored material at sidewall (e.g., white wall)

...Building tires directly from strands or cords

...Tubular (airtight) torus (e.g., auto tube-making)

...Multichamber safety tube

...Valve-applying

...Applying reinforcing material to external tube surface

...Joining tube ends to form torus

...Of plural layers

...At least one layer including metal cords

...With injection molding of outer lamina

...Axially assembling preformed flexible endless bands

......With tread-preforming

...Applying tread material to fully-formed carcass

......With specified treatment of tread material before application to carcass

......Shaping

......By winding or including application of inextensible lamina under tread bond

......With specified procedure for interlocking of lamina or removal of air from therebetween; e.g., "stitching", etc.

......With specified procedure for cooling or heating; e.g., for vulcanization, etc.

......With specified procedure for bead, carcass or sidewall formation

......Bead-applying

......Folding fabric about bead

......Applying fabric to form (e.g., carcass building)

......Fabric splice end treatment

......Bead portion of carcass treatment

......Flexible endless drive belt making

......Forming grooves on inner surface

......"V" or trapezoid section belt

......With plastic shaping or molding

......Wrapping of belt prior to shaping

......With cutting to "V" or trapezoid section reinforced flexible tube making

......Assembling preformed helical coil or rings with separate tube

......With encapsulating of permanently fluent material in hollow or porous lamina or filling of space between adhered laminae

......Prior to bonding of laminae (e.g., golf balls)

......With inflation of airtight cavity

......With weaving, knitting, braiding, twisting or needling

......About tubular lamina

......With electro-deposition

......On adherent surface of lamina prior to assembly

......With temporary disassembling and subsequent bonding of same laminae

......With abrading or grinding of lamina

......Subsequent to assembly

......With destruction of solid transitory material; e.g., dissolving, melting, etc.

......With fluid pressure to prevent collapse of hollow structure during assembly and/or joining

......Joining indefinite length laminae end-to-end

......Of wire, rod, tube or filament

......With cutting of joining ends

......Bonding in stressed condition of at least one prestressed element

......Of stressed filaments

......During winding of lamina

......Bonding of sheets or webs only

......Running length web

......Stressing spherical or tubular body

......Bonding of flexible filamentary material while in indefinite length or running length

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167 ...With formation of filaments
168 ...With removal of filamentary material subsequent to lamination thereof
169 ...With winding of filamentary material
170 ....About spherical lamina
171 ....With winding of separate sheet or web
172 ....Winding about and uniting to core
173 ....Winding about subsequently removed core or mandrel
174 .....With cutting of filamentary material to form web or sheet
175 .....Of filamentary material only
176 ....To web of indefinite length
177 ....With axis of filamentary material nonparallel to axis of web
178 ....Plural filaments
179 .....Between plural webs
180 ...Of filamentary material only to form article
181 ....Article is sheet or web
182 ..Of at least two bonded subassemblies
183 ..With creping, wrinkling, crinkling
184 ...With winding of web or sheet
185 ...Uniting to separate core
186 ....Spherical core
187 ....Tubular core
188 .....Sequential winding of separate webs
189 ...About irregular or configured mandrel surface
190 ...Sequential winding of separate webs
191 ...With additional assembly (other than winding)
192 ....Prior to winding
193 ...With cutting of wound body (excludes nominal cutoff)
194 ...With reshaping of wound body
195 ...Longitudinally progressive helical winding
196 ...With permanent bending or reshaping or surface deformation of self sustaining lamina
197 ...By separating laminae between spaced secured areas (e.g., honeycomb expanding)
198 ...By inward collapsing of portion of hollow body
199 ...Running or continuous length work
200 ....Longitudinal bending
201 .....Prior to or during assembly with additional lamina
202 .....Overedge bending or overedge folding
203 .....And edge-joining of one piece blank to form tube
204 ....Folding
205 .....Transverse corrugating
206 .....Subsequent to assembly of laminae
207 .....With deformation or cutting of corrugated lamina
208 .....Treating material of corrugated lamina or dry adhesive thereon to render tacky
209 ....Surface deformation only (e.g., embossing)
210 ...To form undulated to corrugated sheet and securing to base with parts of shaped areas out of contact
211 ...With slitting or removal of material at reshaping area prior to reshaping
212 ...By bending, drawing or stretch forming sheet to assume shape of configured lamina while in contact therewith
213 .....Encasing or enveloping the configured lamina
214 ...With preshaping of lamina
215 .....Flexible sheet to cylinder lamina
216 ...Overedge bending of lamina about edges of sheetlike base
217 .....Bending of one piece blank and joining edges to form article
218 .....Hollow cylinder article
219 .....Surface deformation only of sandwich or lamina (e.g., embossed panels)
220 ...Subsequent to lamination
221 ...Subsequent to assembly
222 .....Of parallel stacked sheets only
223 .....Bending of one lamina only
224 .....To form dished or receptacle-like product
226 .....Folding only
By folding
Of preshaped laminae between closed similarly shaped press platens or clamps
With stretching
Direct contact transfer of adhered lamina from carrier to base
With formation of lamina of continuous length by molding or casting on endless carrier
Carrier is configured mold
Metal foil lamina
Of portion only of lamina from carrier
Plural transferring operations and/or with additional laminating
Solvent other than water to release lamina
Coating of transferred lamina
Running or continuous flexible web carrier
Plural superimposed laminae transferred
Transfer of printing or design
To base coated with adhesive
With lamina formation by molding or casting
Forming plural continuous web laminae
By extrusion
Encapsulating or enclosing a lamina
Hollow article or lamina
Differential fluid pressure used
Specific nonuniform lamina or article; e.g., netting or rib and groove, etc.
With printing
Electrical, magnetic, or wave energy used
With cutting, severing, or perforating
After bonding; e.g., as finishing step, etc.
Differential fluid pressure used
Bonding spaced preforms
Pretreatment
Post-treatment
...Article or at least one lamina of nonuniform thickness or discontinuous
...Bonding in specified environment (other than temperature)
...Pressure assisted bonding
...In configured mold
...On temporary planar support (e.g., film casting)
...With stripping of adhered lamina
...With cutting of one lamina only while adhered
...And assembly with different lamina
...With cutting, punching, tearing or severing
...And simultaneously bonding (e.g., cut-seaming)
...Perforating lamina
...Subsequent to assembly of laminae
...Splitting sheet lamina in plane intermediate of faces
...Spiral peeling
...Prior to assembly
...Partial cutting (e.g., grooving or incising)
...Cutting to shape joining edge surfaces only
...Continuous longitudinal slitting
...Bonding face to face of laminae cut from single sheet
...Punching and bonding pressure application by punch
...Closure cap liner applying type
...Separate cutting of separate sheets or webs
...Of plural laminae from single stock and assembling to each other or to additional lamina
...Applying plural cut laminae to single face of additional lamina
...Joining of cut laminae end-to-end
...Flash, trim or excess removal
...Partial cutting bonded sandwich (e.g., grooving or incising)
...Of continuous or running length bonded web
CLASS 156 ADHESIVE BONDING AND MISCELLANEOUS CHEMICAL MANUFACTURE

270 ....One web only
271 ....Continuous longitudinal slitting
272.2 ..With direct application of electrical, magnetic, or radiant energy to work
272.4 ...Involving magnetically susceptible lamina or incorporating into the work a particulate susceptor material having magnetic properties
272.6 ...Exposure of work to corona or glow discharge
272.8 ...Exposure of work to laser
273.1 ...Developing electrostatic charge
273.3 ...Before final assembly; e.g., to cure lamina, etc.
273.5 ....Before and after final assembly
273.7 ...Applying pressure before electrical, magnetic, or radiant energy
273.9 ...Work constitutes conductor of electrical circuit
274.2 ....Conductor is a coil
274.4 ...Exposure of work to electrode
274.6 ....Continuously moving work in relation to electrode
274.8 ....With application of adhesive
275.1 ...Only part of containing lamina surfaces bonded; e.g., seaming, etc.
275.3 ....With application of adhesive
275.5 ...To polymerize or cure material in work
275.7 ...With application of adhesive
276 ..With mass application of nonadhesive fibers or particles between laminae
277 ..With printing
278 ..With coating of nonadherent face of lamina
279 ...Coating with fibers or particles
280 ...Subsequent to bonding
281 ...Combined; e.g., with cleaning, etc.
282 ..Simultaneous heating and cooling
283 ..Adhesive applied as dry particles
284 ...Treating particle with liquid to render tacky
285 ..Direct application of vacuum or fluid pressure during bonding
286 ...To remove gas from between assembled laminae
287 ...To the lining of hollow body
288 ..Simultaneous pressure application to at least two separate sandwiches
289 ..Utilizing parting or release material to prevent adhesion
290 ..Bonding of facing continuously contacting laminae at spaced points only
291 ...By nonuniform adhesive application
292 ..Of laminae having opposed facing areas out of contact
293 ..Inserting of lamina in hole, aperture or recess of other lamina and adherence to side walls thereof
294 ...Core within tube
295 ..Adhesive applying to restricted area and spreading thereof by assembly pressure
296 ..Strands, rods, tubes or sticklike bodies to each other only
297 ..Of discrete laminae to single face of additional lamina
298 ..Embedding of laminae within face of additional laminae
299 ...All laminae planar and face to face
300 ....With covering of discrete laminae with additional lamina
301 ......Opposed laminae are running length webs
302 .....Lamina is running length web
303 ......Feeding of discrete laminae from separate sources
303.1 ..Inserting lamina into preformed plastic body
304.1 ..Butt edge joining of laminae
304.2 ...Joining of nonplanar elements; e.g., configured hollow objects, etc.
304.3 ....With joiner member or reinforcement
304.4 ....Carpet or fabric joined
304.5 ...With preliminary edge treatment or joining of edges of irregular shape; e.g., tongue and groove, beveled, etc.

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<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>304.6</td>
<td>By heat</td>
</tr>
<tr>
<td>304.7</td>
<td>Of carpet or fabric</td>
</tr>
<tr>
<td>305</td>
<td>By applying after assembly an adhesive, solvent or chemical activating agent</td>
</tr>
<tr>
<td>306.3</td>
<td>By pressure or drying only, without tack; e.g., for easy delamination, etc.</td>
</tr>
<tr>
<td>306.6</td>
<td>Using single, preformed, diverse bonding lamina between other laminae</td>
</tr>
<tr>
<td>306.9</td>
<td>Including curing of nonfully polymerized material</td>
</tr>
<tr>
<td>307.1</td>
<td>By curing of nonfully polymerized self-sustaining lamina</td>
</tr>
<tr>
<td>307.3</td>
<td>With coating or impregnating a face to be adhered</td>
</tr>
<tr>
<td>307.4</td>
<td>Indefinite plurality of similar impregnated thin sheets; e.g., &quot;decorative laminate&quot; type, etc.</td>
</tr>
<tr>
<td>307.5</td>
<td>Coating solidified; e.g., by drying, etc., before assembly</td>
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<tr>
<td>307.7</td>
<td>Including uncurable lamina; e.g., metal, paper, etc.</td>
</tr>
<tr>
<td>308.2</td>
<td>By tackifying substance of self-sustaining lamina to be bonded; e.g., autogenous bonding, etc.</td>
</tr>
<tr>
<td>308.4</td>
<td>Only part of contacting laminae surfaces bonded; e.g., seam, seal, etc.</td>
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<tr>
<td>308.6</td>
<td>With treating agent application to a surface</td>
</tr>
<tr>
<td>308.8</td>
<td>Plural agents applied sequentially or to different laminae or using water as sole agent</td>
</tr>
<tr>
<td>309.3</td>
<td>Diverse laminae</td>
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<tr>
<td>309.6</td>
<td>Involving defined plastic flow or melting of entire lamina</td>
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<tr>
<td>309.9</td>
<td>With heating of lamina prior to assembly</td>
</tr>
<tr>
<td>310</td>
<td>Of laminae having a different coating on at least two mating surfaces</td>
</tr>
<tr>
<td>311</td>
<td>Sequential heating and cooling during pressure applying</td>
</tr>
<tr>
<td>312</td>
<td>Sequential different pressure applying</td>
</tr>
<tr>
<td>313</td>
<td>Interposing intermediate laminate between non-coated laminae</td>
</tr>
<tr>
<td>314</td>
<td>Sequentially applying different liquids or liquefiable materials to adhering face of lamina</td>
</tr>
<tr>
<td>315</td>
<td>At least two liquids rubber and/or resin-containing</td>
</tr>
<tr>
<td>316</td>
<td>First applied liquid acid-containing</td>
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<tr>
<td>317</td>
<td>Protein-containing liquid</td>
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<tr>
<td>318</td>
<td>Carbohydrate-containing liquid</td>
</tr>
<tr>
<td>319</td>
<td>One liquid containing inorganic material only</td>
</tr>
<tr>
<td>320</td>
<td>Heating of dry adhesive on lamina prior to assembly contact</td>
</tr>
<tr>
<td>321</td>
<td>Heating adhesive by contacting with heated lamina</td>
</tr>
<tr>
<td>322</td>
<td>Heating lamina prior to assembly or adhesive applying</td>
</tr>
<tr>
<td>323</td>
<td>Interposing subsequently removed flexible element between lamina and a pressure applying surface</td>
</tr>
<tr>
<td>324</td>
<td>Running or continuous webs of indefinite length</td>
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<tr>
<td>324.4</td>
<td>By tackifying a single lamina of intermediate laminate</td>
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<tr>
<td>325</td>
<td>Particular adhesive</td>
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<tr>
<td>326</td>
<td>Organic containing</td>
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<tr>
<td>327</td>
<td>Synthetic resin containing</td>
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<tr>
<td>328</td>
<td>With carbohydrate and/or protein or derivatives thereof</td>
</tr>
<tr>
<td>329</td>
<td>Silicon resin</td>
</tr>
<tr>
<td>330</td>
<td>Epoxy resin</td>
</tr>
<tr>
<td>330.9</td>
<td>Nitrogenous resin</td>
</tr>
<tr>
<td>331.1</td>
<td>With polymerization completion, i.e., curing, after assembly</td>
</tr>
<tr>
<td>331.2</td>
<td>N only in unlinked side-chain or side-ring</td>
</tr>
<tr>
<td>331.3</td>
<td>Derived from aldehyde or ketone</td>
</tr>
<tr>
<td>331.4</td>
<td>Iso- or thio-cyanate moiety reacted in curing</td>
</tr>
<tr>
<td>331.5</td>
<td>N in a ring</td>
</tr>
<tr>
<td>331.6</td>
<td>N only in unlinked side-chain or side-ring; e.g., polyvinyl, pyridine, etc.</td>
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<tr>
<td>331.7</td>
<td>Derived from iso- or thio-cyanate; e.g., polyurethane, etc.</td>
</tr>
<tr>
<td>331.8</td>
<td>Derived from acyclic compound containing N</td>
</tr>
</tbody>
</table>
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331.9 .......And aldehyde, ketone, or carbocyclic moiety-containing compound
332 .......Polycarboxylic acid ester resin
333 .......Halogenated hydrocarbon resin
334 .......Hydrocarbon resin
335 .......Phenolic-aldehyde resin
336 .......Protein and/or carbohydrate containing and/or derivatives thereof
337 .......Bituminous containing
338 .......Natural rubber containing
344 .Delaminating, per se
345.1 DIFFERENTIAL FLUID ETCHING APPARATUS
345.11 .For liquid etchant
345.12 ..With mechanical polishing (i.e., CMP-chemical mechanical polishing)
345.13 ...With measuring, sensing, detection or process control means
345.14 ...With wafer retaining ring
345.15 ...With measuring, sensing, detection or process control means
345.16 ...With endpoint detection means
345.17 ...Liquid etchant spray means
345.18 ..With means to supply, remove, or recycle liquid etchant outside of etching tank or chamber (e.g., supply tanks or pipe network)
345.19 ..With mechanical mask or shutter for shielding workpiece
345.2 ...Running length workpiece (e.g., etching indeterminate length strip)
345.21 ..Liquid etchant spray type
345.22 ..With plural etching zones for a single discrete workpiece in apparatus
345.23 ..With specified workpiece support
345.24 .With measuring, sensing, detection or process control means
345.25 .For endpoint detection
345.26 .For detection or control of pressure or flow of etchant gas
345.27 ..For temperature detection or control
345.28 ..For detection or control of electrical parameter (e.g., current, voltage, resistance, power, etc.)
345.29 .With etchant gas supply or exhaust structure located outside of etching chamber (e.g., supply tank, pipe network, exhaust pump, particle filter)
345.3 .With mechanical mask, shield or shutter for shielding workpiece
345.31 .With means for passing discrete workpiece through plural chambers (e.g., loadlock)
345.32 ..With robot arm connected by doors to plural other chambers (i.e., cluster tool)
345.33 .With gas inlet structure (e.g., inlet nozzle, gas distributor)
345.34 ..Showerhead-type
345.35 .With plasma generation means remote from processing chamber
345.36 ..By microwave
345.37 .With heating or cooling means for apparatus part other than workpiece support
345.38 .With multiple gas energizing means associated with one workpiece etching
345.39 .With means to generate and to direct a reactive ion etchant beam at a workpiece
345.4 .With means to direct electron beam or ion beam to a gas to energize the gas
345.41 .With microwave gas energizing means
345.42 ..With magnetic field generating means for control of the etchant gas
345.43 .Having glow discharge electrode gas energizing means
345.44 ..Electrically coupled to a power supply or matching circuit
345.45 ..Including more than two electrodes (e.g., triode reactors)
345.46 ..With magnetic field generating means for control of the etchant gas
345.47 ..Parallel plate electrodes

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345.48 .With radio frequency (rf) antenna or inductive coil gas energizing means
345.49 ..With magnetic field generating means for control of the etchant gas
345.5 .With means for photochemical energization of a gas using ultraviolet, visible, or x-ray radiation
345.51 .With workpiece support
345.52 ..With means to heat the workpiece support
345.53 ..With means to cool the workpiece support
345.54 ..With means to move the workpiece inside the etching chamber
345.55 ...With means to cause rotary movement of the workpiece
346 PLASTER BOARD MAKING APPARATUS
347 .With surface deformation means
348 .With edge treatment means
349 SURFACE BONDING MEANS AND/OR ASSEMBLY MEANS THEREFOR
350 .Automatic and/or material-triggered control
351 ..Plural interrelated sensing means
352 ..To stop operation of complete machine
353 ..Of cutter
354 ...And separate means feeding cut pieces in sequence and applying to serially conveyed articles
355 ...Responsive to feed of article to which cut piece is applied
356 ..Of application of fluent material to work
357 ...By presence or absence of work to which applied
358 ..Of application of bonding pressure
359 ..Of temperature and/or motion of heat exchange means
360 ..Means responsive to weight or dimension
361 ..Of feed or motion of indefinite length work or transfer carrying tape
362 ..Of feed of articles to assembly station
363 ...Responsive to presence, absence, or condition of article to which applied
364 ....Sheet feeding
365 ..With safety interlocks
366 ..With timing means
367 ..With electrical controls
368 ..For starting or stopping machine operation
369 .With testing, measuring, and/or indicating means
370 .With inspecting and/or illuminating means
370.6 ..With means applying wave energy or electrical energy directly to work
370.7 ..To an electrically conductive lamina or component incorporated into the work
370.8 ..With means to assemble laminae or position them relative to each other
370.9 ...With plural diverse heating means
371 .With tube-forming means
372 ...With electrode or coil member contacting work
373 ..Electrodes on opposing sides of smallest dimension of work
374 ......With means moving one electrode toward the other electrode
375 ...Responsive to presence, absence, or condition of article to which applied
376 ..Of application of fluent material to work
377 ...By presence or absence of work to which applied
378 ..Of application of bonding pressure
379 ..Of temperature and/or motion of heat exchange means
380 ...Responsive to presence, absence, or condition of article to which applied
381 ..Chamber enclosing work during bonding and/or assembly
382 ..Evacuated or fluid pressure chamber
383 ..Means encasing separate non-adhered part between adhered laminae
384 ..With printing
385 ...Simultaneous with bonding
386 ...Printing member also bonds

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387 ..Printing
388 ..After bonding
389 ..Including cleaning, conditioning
   or renewing means for
   apparatus
390 ..With coating means for work
   (other than laminating
   adhesive)
391 ..Work-secured and/or work-guided
392 ..Pipe wrapping type
393 ..With braiding or weaving means
394.1 ..Tire body building type
395 ..Means delaminating protective
   liner from lamina
396 ..Multiple discrete building
   forms and/or means advancing a
   building form through multiple
   work stations
397 ..Means building tires from
   strands or narrow tapes
398 ..Means operating on the bead
   portion of the tire
399 ...Means trimming fabric adjacent
   bead
400 ...Means folding carcass fabric
   about a bead
401 ...Inflatable bag type
402 ...Disc or roller type
403 ...Means placing bead ring on
tire carcass
404 ..Solid tire building type
405.1 ..With fabric or tread stock
   feeding means
406 ...Means selecting stock from
   multiple source
406.2 ...For transporting discrete
   ring-shaped lamina
406.4 ...With cutting, heating,
   laminating, or shaping means
   upstream of assembling means
406.6 ...Stretching means
407 ...Centerless core or off-center
   support of annular tire
   structure
408 ...Relative traversing motion
   between rotating tire
   supporting structure and
   pressing or bending means
409 ...Compound traversing motion
410 ...With changing direction of
   force of pressing or bending
   means with respect to the axis
   of rotation of the supporting
   structure (e.g., curved drum)
411 .....Pressing means manually
   advanced toward the axis or
   rotation of the supporting
   structure
412 ...Resilient or deformable
   surface pressing or bending
   element
413 ...Plural sequential pressing or
   bending elements
414 ...Building drums, per se
415 ...Axially or widthwise
   adjustable or collapsible
416 ...Resilient and/or inflatable
   core
417 ...Collapsible
418 ...Rack and pinion type actuator
419 ....Resilient spring actuated
420 ....Toggle linkage lever type
   actuator
421 ...Stitching elements, per se
421.2 ..Tire chamber and means
   regulating interior casing
   pressure
421.4 ..With means for folding lamina
   while on drum
421.6 ..Tire support with pressing or
   heating means
421.8 ..Ring-shaped lamina stretching
   means
422 ...Tire bead ring winding type
423 ..Means assembling part within
   hole or aperture (telescoping)
424 ..Electric lamp or space
   discharge device envelope
   basing type
425 ..Longitudinally progressive
   helical winding means
426 ..With means cutting wound body
   to form sheet or web
427 ...Strands secured to web
428 ..Forming and/or covering
   indefinite length article
429 ...Rotating core or mandrel
430 ...By winding plural strands or
   webs
431 ...About circular section core
   or mandrel
432 .....Plural discrete axially
   spaced winding means
433 ..Indefinite or running length
   flexible strand, rod, tube, or
   filament uniting
434 ..Means applying transverse
   spacers to spaced parallel
   strands

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435 . . . Pile fabric making type
436 . . . To indefinite or running length
437 . . . With means forming web by
438 . . . With means folding web
439 . . . Transversely of web
440 . . . Reciprocating feed means for
441 . . . Means gathering strands or
441.5 . Envelope sealing type
442 . . . With stamp applying means
442.1 . With bending or folding means
442.2 . With feeding means
442.3 . Reciprocating feed
442.4 . Work traversing type
443 . With bending, folding, winding,
444 . Pneumatic blast to bend work
445 . About preformed sphere
446 . Rotating mandrel or article
447 . Means registering sheet with
448 . Translating axis of rotation
449 . Rolling mandrel or article
450 . Winding flexible web
451 . Article rolls across sheet
452 . . . By gravity
453 . . . Belt feed
454 . . . By gravity
455 . . . Belt feed
456 . . . Axis translates in circular
457 . . . Centerless core or mandrel
458 . . . Means serially feeding mandrel
459 . . . For an indefinite or running
460 . . . Tire bead or endless belt
461 . . . Longitudinal bending
462 . . . Corrugating
463 . . . Plural sequential bending
464 . . . And means feeding discrete
465 . . . Single web only
466 . . . Tube-making type
467 . . . And means uniting
noncoextensive plural webs
468 . . . Means bending to configuration
469 . . . Transverse withdrawal of
470 . . . And means applying separate
471 . . . While still on shape-
472 . . . Fluted roll-shape retainer
473 . . . Separate means holding web
474 . . . Pleating means
475 . . . To configuration of part to
476 . . . Plural discrete bending means,
477 . . . Plural, distinct, sequential
478 . . . Intersecting bend axis
479 . . . Means bending sheet over
480 . . . With separate member
481 . . . Arcuate bending
482 . . . Having intersecting axes of
483 . . . Flexible sheet across through
484 . . . Sheet applied to passage
485 . . . With additional separate
486 . . . Member travels along
487 . . . Flexible bristle wiping
488 . . . Bodily deformable pad type
489 . . . Opposed movable biased
490 . . . Positively actuated to
491 . . . Cam defeats bias
492 . . . By swinging folding member
493 . . . Deformable pad
494 . . . With stretching or tensioning
495 . . . By driven web feeding means
496 . . . To transversely stretch or
497 . . . With gas, vapor, or flame
498 . . . With work cooling means

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499 ...With separate (nonpress) heating means for work
500 ...With casting, plastic molding, or extruding means
501 ...With means generating at least one self-sustaining web (e.g., film casting)
502 ...Means joining flexible indefinite length or endless bodies end-to-end (e.g., film, tape, belt splicers)
503 ...Tube splicing type (e.g., inner tube)
504 ...Moving web (flying splice or with web accumulating means)
505 ...Means applying adhesive tape to joint only
506 ...With severing means for tape before application
507 ...Longitudinally moving web support moving web ends into association
508 ...With scraper or adhesive applying means
509 ...With scraper or adhesive applying means
510 ...With cutting, punching, piercing, severing, or tearing
511 ...Plural severing means each acting on a different work piece
512 ...Severing followed by associating with part from same source
513 ...Means making hole or aperture in part to be laminated
514 ...And securing separate part over hole or aperture
515 ...Cutting element simultaneously bonds (e.g., cut seaming)
516 ...Means feeding plural workpieces to be joined
517 ...Severing before bonding or assembling of parts
518 ...Severing means or member secured thereto also bonds
519 ...Delivering cut part to indefinite or running length web
520 ...Cutter also delivers cut piece
521 ...Delivering cut part in sequence to serially conveyed articles
522 ...Cutting indefinite length web after assembly with discrete article
523 ...Work traversing type
524 ...With liquid applying means
525 ...Slitting and severing
526 ...Cutting after bonding
527 ...Fixed cutter
528 ...Stamp from multiple row sheet type
529 ...With means projecting fluid against work
530 ...Cutter actuated by or secured to bonding element
531 ...With liquid applicator
532 ...Common actuator for bonding and liquid applying means
533 ...Liquid applied to web before cutting
534 ......Roller applicator
535 ...With means shaping, scarifying, or cleaning joining surface only
536 ...Combined and/or convertible
537 ...With bond interfering means (slip sheet, etc.)
538 ...With work feeding or handling means
539 ...For plural parts or plural areas of single part
540 ...Lamina transferred to base from adhered flexible web or sheet type carrier
541 ......Discrete spaced laminae on adhered carrier
542 ......Means serially presenting discrete base articles or separate portions of a single article
543 ...Indefinite or running length work
544 ...Means joining indefinite length work edge to edge
545 ...Means applying adhesively secured tape to seam
546 ...Means applying fluid adhesive to work edge
547 ...Means applying fluent adhesive or adhesive activator material between layers
548 ......At spaced areas
549 ......Plural indefinite length or running length workpieces
550 ......Fluid applied to nip between indefinite length webs

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551 ......Fluid applied to plural workpieces
552 ......Means bringing articles into association with web
553 ......Discontinuous, spaced area, and/or patterned pressing
554 ......Webs of different width, longitudinally aligned
555 ......Progressive continuous bonding press (e.g., roll couples)
556 ......Means bringing discrete articles into assembled relationship
557 ......Plural lines and/or separate means assembling separate sandwiches
558 ......All articles from single source only
559 ......At least three articles
560 ......At least two applied side by side to common base
561 ......Plural ranks
562 ......Sheet form common base
563 ......Stacked serially
564 ......Magazine stack directly contacting separate work
565 ......Magazine movable to work
566 ......Means simultaneously conveying plural articles from a single source and serially presenting them to an assembly station
567 ......Turret or rotary drum-type conveyer
568 ......For flexible sheets
569 ......Means separating articles from bulk source
570 ......Stacked sheet source
571 ......Rotary or pivoted picker
572 ......Translating picker
573 ......Magazine stack directly contacting work
574 ......Work traversing type and/or means applying work to wall or static structure
575 ......With liquid applying means
576 ......Grip or clamp for web end
577 ......Implement carried web supply
578 ......With liquid adhesive or adhesive activator applying means
579 ......With handle or handgrip
580 ......Presses or press platen structures, per se
580.1 ......With sonic or ultrasonic means
580.2 ......Specified structure of sonic or ultrasonic work contacting surface
580.3 ......Relieved or configured pressing face
581 ......Rotary
582 ......C-frame type
583 ......Nonuniform heating
583.1 ......Impulse heating
583.2 ......With significantly flexible platen
583.3 ......Electric heating
583.4 ......Hinged platen
583.5 ......Electric heating
583.6 ......Plural adjustable pressure points
584 ......DELAMINATING APPARATUS
585 ......MISCELLANEOUS

CROSS-REFERENCE ART COLLECTIONS

906 ......OFF-DRUM MANUFACTURE OF TIRE FABRIC OR PLY
907 ......Including assembly of bias-cut fabric
908 ......LAMINATING SHEET TO ENTIRE EDGE OF BLOCK AND BOTH ADJACENT OPPOSITE SURFACES; E.G., BOOKBINDING, ETC.
909 ......APPARATUS FOR APPLYING NEW TREAD TO USED TIRE CASING; E.G., RETREADING, RECAPPING, ETC.
910 ......BONDING TIRE CORD AND ELASTOMER: IMPROVED ADHESIVE SYSTEM
911 ......DIFFERENTIAL ETCHING APPARATUS HAVING A VERTICAL TUBE REACTOR
912 ......DIFFERENTIAL ETCHING APPARATUS HAVING A HORIZONTAL TUBE REACTOR
913 ......DIFFERENTIAL ETCHING APPARATUS INCLUDING PARTICULAR MATERIALS OF CONSTRUCTION
914 ......DIFFERENTIAL ETCHING APPARATUS INCLUDING FOCUS RING SURROUNDING A WAFER FOR PLASMA APPARATUS
915 ......DIFFERENTIAL ETCHING APPARATUS INCLUDING CHAMBER CLEANING MEANS OR SHIELD FOR PREVENTING DEPOSITS
DIFFERENTIAL ETCHING APPARATUS
HAVING A BARREL REACTOR

FOREIGN ART COLLECTIONS
FOR 000 CLASS-RELATED FOREIGN DOCUMENTS

DIGESTS

DIG 1 LABELLING FLAT, ESSENTIALLY RIGID SURFACES (1/100)
DIG 2 .Affixing labels to one flat surface of articles; e.g., of packages, of flat bands (1/02)
DIG 3 .Affixing labels; e.g., wrap-around labels, to two or more flat surfaces of a polyhedral article (1/04)
DIG 4 ..Of a box; e.g., cigarette box (1/06)
DIG 5 LABELLING OTHER THAN FLAT SURFACES (3/00)

DIG 6 .Affixing labels to elongated objects; e.g., wires, cables, bars, tubes, (3/02)
DIG 7 ..Applying bands or labels to cigars or cigarettes (3/04)
DIG 8 .Affixing labels to short rigid containers (3/06)
DIG 9 ..To container bodies (3/08)
DIG 10 ...The container being positioned for labelling with its centerline horizontal (3/10)
DIG 11 ....By rolling the labels onto cylindrical containers; e.g., bottles (3/12)
DIG 12 ....The container being positioned for labelling with its centerline vertical (3/14)
DIG 13 ....By rolling the labels onto cylindrical containers; e.g., bottles (3/16)
DIG 14 ..To container necks (3/18)
DIG 15 ..To bottle closures (3/20)
DIG 16 ...Affixing metal foil coverings (3/22)
DIG 17 ...Affixing labels indicating original state of bottle snap or screw closure (3/24)

DIG 18 .Affixing labels to nonrigid containers; e.g., bottles made of polyethylene, boxes to be inflated by internal air pressure prior to labelling (3/26)

DIG 19 LABELLING FABRICS OR COMPARABLE MATERIALS OR ARTICLES WITH DEFORMABLE SURFACE, E.G., PAPER, FABRIC ROLLS, STOCKINGS, SHOES (5/00)

DIG 20 .Using adhesives (5/02)
DIG 21 ..Thermo-activatable adhesives (5/04)
DIG 22 .Using staples (5/06)

DIG 23 AFFIXING TAGS (7/00)

DIG 24 DETAILS OF LABELLING MACHINES OR APPARATUS (9/00)

DIG 25 .Devices for moving articles, e.g., containers, past labelling station (9/02)
DIG 26 ..Having means for rotating the articles (9/04)
DIG 27 .Devices for presenting articles in predetermined attitude or position at labelling station (9/06)

DIG 28 .Label feeding (9/08)
DIG 29 ..Label magazines (9/10)
DIG 30 ..Removing separate labels from stacks (9/12)
DIG 31 ...By vacuum (9/14)
DIG 32 ...By wetting devices (9/16)
DIG 33 ..Label feeding from strips; e.g., from rolls (9/18)
DIG 34 ..Gluing the labels or articles (9/20)
DIG 35 ..By wetting (9/22)
DIG 36 ..By heat (9/24)
DIG 37 ..Devices for applying labels (9/26)
DIG 38 ..Air-blast devices (9/28)
DIG 39 ..Rollers (9/30)
DIG 40 ...Cooperating rollers between which articles and labels are fed (9/32)
DIG 41 ..Flexible bands (9/34)
DIG 42 ..Wipers; pressers (9/36)
DIG 43 ..Label cooling or drying (9/38)
DIG 44 ..Controls; safety devices (9/40)
DIG 45 ..Label feed control (9/42)
DIG 46 ...By special means responsive to marks on labels or articles (9/44)

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DIG 47 . Applying date marks, code marks, or the like to the label during labelling (9/46)

DIG 48 MANUALLY CONTROLLED OR MANUALLY OPERABLE LABEL DISPENSERS; E.G., MODIFIED FOR THE APPLICATION OF LABELS TO ARTICLES (11/00)

DIG 49 . Having printing equipment (11/02)

DIG 50 . Having means for moistening the labels (11/04)

DIG 51 . Having means for heating thermoactivable labels (11/06)