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| 1 | BINDING | 37 | .With separation from material of liquid expressed |
| 2 | .Methods | 38 | .With heating or cooling |
| 3 | ..Compacting and binding | 39 | .With cutting or comminuting |
| 4 | .With automatic or material-triggered control | 40 | .With winding or folding |
| 5 | .With material winding or folding | 41 | .Forcing through constricted passage |
| 6 | .With material severing | 42 | .Successive compressions from different directions |
| 7 | .With material depositing or discharging | 43 | AUTOMATIC OR MATERIAL TRIGGERED CONTROL |
| 8 | .Binder applying | 44 | .Of insertion of separator between successive material charges |
| 9 | ..Preformed continuous annular binder | 45 | .of material addition, deposition, or discharging |
| 10 | ..With precutting of binder to length | 46 | .Of parallelism of platens |
| 11 | ..Plural flexible section binder | 47 | .Of roll separation or speed |
| 12 | ..Through annular material | 48 | .Of actuating means |
| 13 | ..Helically along material | 49 | ..Material presence or position starting |
| 14 | ..Indexing material between successive placements | 50 | ..By pressure applied to material |
| 15 | ..By rotation of material | 51 | ...With dwell time control |
| 16 | ..By swing of material gripping jaw | 52 | ...Reversing |
| 17 | ..Binder supported across passageway for material | 341 | SAFETY DEVICE |
| 18 | ...With material conveyer | 342 | .Means to disable or to forestall power to the press |
| 19 R | ...With threader crossing material path | 343 | ..Multiple triggers to start |
| 20 |Delivering binder to end gripper | 344 | ...Requires the use of both hands |
| 21 |Concurrently delivering to joiner | 345 | ..Associated with door or cover |
| 22 |Indexing gripper | 346 | ..Overload protection |
| 23 |Shifting gripper delivers binder to joiner | 347 | ..Hydraulic or pneumatic safety system |
| 24 |Threaders | 348 | ..Optical condition sensor |
| 19 A |Needle brake | 349 | .Barrier type (e.g., guard, shield, screen, hood, etc.) |
| 25 | ..Curved guide channel for pushed binder | 350 | ..Blocking mechanism between press surfaces |
| 26 | ..Material receiving loop channel | 351 | ..Convolute or elongated feed chute |
| 27 | ..Orbit traveling binder placer | 352 | ..Debris shield attached to moving press member |
| 28 | ..Reversing for successive placements | 353 | INTERRELATED |
| 29 | .Binder tighteners and joiners | 54 | PORTABLE RECEPTACLE LID APPLYING |
| 30 | ..Sleeve or clamp joining | 55 | .With receptacle transfer means |
| 31 | ..Twisters | 56 | .With lid fastening |
| 32 | .Binder tighteners | 57 | .With gathering of contents |
| 33 R | .Joiners | 58 | .With lid locating means |
| 33 PB | ..Plastic band | 59 | .Receptacle mountable |
| 34 | .Binder retaining material holders | 60 | .Upwardly displaced receptacle |
| 35 | METHODS | 61 | .Concurrently pressing spaced areas of lid |
| 36 | .With pre-enclosing in textile | | |

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| 62 | ..Loops or bails receiving receptacle | 307 |Plural endless conveyor presses |
| 63 | ..Approaching arms embracing receptacle | 308 |Means to control temperature |
| 64 | ..Translating projecting arms | 309 |Multiple temperature treating zones |
| 65 | COMPACTING ENSILAGE WITHIN SILO | 310 |Having cooling |
| 66 | ..With depositing or distributing | 311 |Platen in thermal contact with endless conveyor |
| 67 | ..Silo wall guide rollers | 312 |Having cooling |
| 68 | ..Vertical center post guided rollers | 313 |Drum in thermal contact with endless conveyor |
| 69 | ..Tamper suspended within silo | 314 |Having cooling |
| 70 R | WITH ADDITIONAL TREATMENT OF MATERIAL | 315 | ...Reciprocating platen-type press |
| 71 | ..Adding materials | 316 |Piston and box type |
| 72 | ..Recycling | 317 |Heating or cooling element in box wall |
| 73 | ..Liquid and/or steam | 318 |Electric heater |
| 74 | ...To material being fed or conveyed | 319 |Means to control temperature |
| 75 |Interstage | 320 |Electric heater |
| 76 | ..Winding or folding sheet, web or strand | 321 |Platen having particular thermally conductive feature |
| 77 | ..With subsequent transfer to repressing press | 322 |Temperature modulating insert |
| 78 | ..With shape retaining means | 323 |Press apparatus thermally insulated from heating/cooling means |
| 79 | ..With winding mandrel stripper | 324 |Plural reciprocating platens |
| 80 | ..Folding zigzag | 325 |Heating or cooling element in platen |
| 81 | ...Pivoted receiver | 326 |Heating or cooling element in platen |
| 82 | ..Circularly deposited through eccentric opening | 327 | ...Roll-type press |
| 83 | ..With presser roll along opening | 328 |Electric heater |
| 84 | ...With pusher moving to opening | 329 |Means to independently heat or cool different sections of roll |
| 85 | ...Receding receiver | 330 |Roll surface has particular thermally conductive feature |
| 86 | ..Mandrel and opposed presser roll | 331 |Plural stage or pass |
| 87 | ..Apron type (embracing belt loop) | 332 |Roll temperature conditioning means is external of roll, but in direct temperature conditioning contact with roll |
| 88 | ..Between opposed belts | 333 |Gas (e.g., steam) |
| 89 | ..Within group of three or more rolls | 334 |Roll heated or cooled internally |
| 90 | ..Separating materials (vacuumizing here) | 335 |Temperature conditioning fluid flow passage in roll surface |
| 91 | ..Plural solids | 336 |Roll core has a temperature conditioning fluid flow passage |
| 92 | ..Heating, cooling, or drying | 337 | ...Helix-type press |
| 300 | ..Press for a brake lining | 338 |Plural helices |
| 301 | ...Electric heater | | |
| 302 | ..Plural diverse presses | | |
| 303 | ..In press material handling train | | |
| 304 | ...In feed train | | |
| 305 | ..In press | | |
| 306 | ...Endless conveyor-type press | | |

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| 339 | ...Temperature conditioning means in chamber wall or jacket | 129 | ...Assembled slats or staves |
| 340 | ...Temperature conditioning means within helix | 130 | .External strainer |
| 94 | .Cutting, breaking, piercing, or comminuting | 131 | .Expressed liquid collector or receptor |
| 95 | ..In press material handling train | 132 | ..Demountably supporting press |
| 96 | ...In feed train | 133 | ...Drinking receptacle type |
| 97 | ...Cutter | 134 | ..With dispenser |
| 98 R | ..In press | 135 | ...Pouring spout |
| 98 A | ..Hay bale hole puncher | 136 | .Guards or shields |
| 70 A | .Crop crushing | 137 | PLURAL DIVERSE PRESSES |
| 99 | WITH ALARM, SIGNAL, INDICATOR, OR TEST MEANS | 138 | ..With subsequent press conveying while pressing |
| 100 | WITH GROUND-TRAVERSING WHEELS OR GUIDES | 139 | ..Successive diverse presses each conveying |
| 101 | WITH CLOTH ABOUT CAKE ENFOLDER | 140 | ..Loaded from other type press by transfer |
| 102 | COMBINED | 141 | ..Loaded by transversely moving platen or packer |
| 103 | CONVERTIBLE | 142 | ...Moving through inlet |
| 104 | WITH DRAIN MEANS FOR EXPRESSED LIQUID | 143 | ...Plural transversely moving platens |
| 105 | .Plural liquids (peel oil) | 144 | CONCURRENT PRESSING AND CONVEYING |
| 106 | .Liquid impelling means | 145 | .Helix-type compressor |
| 107 | .Drain tube inbedded in material | 146 | ..Right and left helices |
| 108 | ..With piercing point or edge | 147 | ..Overload release (yieldable choke) |
| 109 | ..Stacked boxes or plates | 148 | ..With valve or choke adjustment |
| 110 | .Drainage through or along pressure surface | 149 | ..Detachable choke |
| 111 | ..With valve or adjustable flow regulator | 150 | ..Helix interengaging abutment |
| 112 | ..With clearer or cleaner | 151 | .Endless conveyer type |
| 113 | ..Stacked boxes or plates | 152 | ..With conveyer charging or discharging means |
| 114 | ...Flexibly connected | 153 | ..Co-acting presser roll |
| 115 | ...Boxes or plates | 154 | ..With intermediate backup device |
| 116 | ..Movable surface | 155 R | .Roll type |
| 117 | ...Helix | 156 | ..Non-rotary co-acting press element |
| 118 | ...Endless conveyer | 157 | ..External and internal rolls |
| 119 | ...Trough forming | 158 R | ..Intersecting or inclined roll axes |
| 120 |Material enclosing | 158 C | ...Opposed discs |
| 121 | ...Roll | 159 | ..Vertical roll axes |
| 122 | ..Textile containing pressure surface | 160 | ..With backing roll |
| 123 | ...Pendant bag type | 161 | ..Plural stage or pass |
| 124 | ...Textile sustaining hoops | 162 R | ...Common roll |
| 125 | ..Fixed abutment or end wall surface | 163 R |Yieldable |
| 126 | .Drainage through or along surface spanning pressure surfaces | 164 |Adjustable line of force |
| 127 | ..Box, frame, cage, or annular wall | 165 |Differentially |
| 128 | ...Assembled rings or hoops | 163 A |Calendar pressure regulation |
| | | 166 | ...With turn plate or roll |
| | | 162 B | ...Roll crown control |
| | | 167 | ...Chute or conveyer between stages |
| | | 168 | ..Roll adjustment |

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| 169 | ...Yieldable | 211 | WITH FLEXIBLE OR DEFORMABLE |
| 170 | ...Fluid pressure | | PRESSURE SURFACE |
| 171 | ...Spring | 212 | .Circumferentially tightened loop |
| 172 | ..Roll drive | 213 | INTERFITTING CUPS - FRUIT JUICER |
| 173 | ..With material handling or guiding | | TYPE |
| 174 | ...Roll strippers | 214 | RECIPROCATING PRESS CONSTRUCTION |
| 175 | ...Roll bearing guards | 215 | .With material depositing means |
| 176 | ..Roll pairs | 216 | ..Feeder controlled plunger actuation |
| 155 G | ..Glass making | 217 | ..Box traversing spreader |
| 177 | ..Moving compression chamber | 218 | ..With material displacing means (e.g., ejector) |
| 178 | ..Platen or piston type | 219 | ..With platen position or compression lock |
| 179 | ..Plunger and casing type | 220 | ..With material rebound restrainer |
| 180 | ..With successive charge separating means | 221 | ..Plural or indexing material supports or receptacles |
| 181 | ...Plunger carried separator supply | 222 | ..Belt |
| 182 | ...Separator series on endless belt | 223 | ..Rotary |
| 183 | ...Pusher inserted | 224 | ..Slidable |
| 184 | ...Separator structure | 225 | ..Partitioned or compartmented box |
| 185 | ..Plural compression chambers | 226 | ..With transversely displaceable piston or movable platen |
| 186 | ..Aligned oppositely conveying | 227 | ..Portable receptacle mountable |
| 187 | ..With material rebound restrainer or tucker | 228 | ..Pivoted or detachable beam |
| 188 R | ..With feeding or discharge handling | 229 R | ..With transversely displaceable box, receptacle, or stationary platen |
| 189 | ...Conveying to or through inlet | | |
| 188 BT | ...Bale thrower | 229 A | ..Compressing in separable container |
| 190 | ..With inlet closure | 230 | .Central strain rod type |
| 191 | ..Adjustable choke | 231 | .C-frame type |
| 192 | ..Overload relieving (yieldable) | 232 | .Plural movable platens on intersecting paths |
| 193 | PLURAL PRESSES | 233 | .Oscillatory or hinged platen or piston |
| 194 | ..Stacked boxes or plates | 234 | ..Plier type |
| 195 | ..Plural stacks | 235 | ...With impaling support for material |
| 196 | ..With charging and/or discharging | 236 | ..Parallel spaced pairs |
| 197 | ...Fluent supply | 237 | ..Plural movable platens on side- by-side paths |
| 198 | ...Cake loosening or ejecting | 238 | ..Combined reciprocating and rotating piston or platen |
| 199 | ..With positioning or supporting means | 239 | ..Piston advanced by box rotation |
| 200 | ...Link | 240 | .Box and piston type |
| 202 | ..Hinged plates | 241 | ..Piston carried box frame scrapers |
| 203 | ..Box or pot type | 242 | ..Adjustable size |
| 204 | ..With compression lock | 243 | ..Plier type (i.e., plural handles) |
| 205 | ...With openings (e.g., for removing or loosening cake) | 244 | ..Plural opposing pistons |
| 206 | ...Separable sections | 245 | ..Box guided piston |
| 207 | ..With material transfer from press to press | | |
| 208 | ..Concurrently actuated | | |
| 209 | ..Alternately compressing | | |
| 210 | ROLL AND PLATEN | | |

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| 246 | ..Movable or removable box section | 269.18 | ..Rod, piston, or cylinder detail |
| 247 | ...Separable box head and box frame | 269.19 | ...Cylinder position adjustment |
| 248 |Insert of false head | 269.2 | ...Platen pivotally connected to piston or rod |
| 249 |With guided motion | 269.21 | ...Gasket or packing around piston |
| 250 |Pivoted | 273 | .Speed or power variable by power path selection |
| 251 |Axially slidable | 274 | .Intermittent actuator |
| 252 | ...Separable box frame sections | 275 | ..Plural |
| 253 | ...Piston operator actuated frame section | 276 | ...Acting at opposite ends of cross bar on movable platen |
| 254 | ...Counterbalanced | 277 | ...Cross connected alternately acting |
| 255 | ...Hinged | 278 | .Flexible element actuator |
| 256 | .Platen tripped stop or reverse | 279 | ..Varying radius windlass |
| 257 | .Range of movement adjustment | 280 | .With mechanical force multiplier |
| 258 R | .Platen level compensating | 281 | ..Transversely forced linkage joint (single toggles here) |
| 258 A | ..Parallel pressure surfaces | 282 | ...Shaft turned cam or crank and pitman |
| 259 | .With plunger return cushioning | 283 | ...Lever in linkage |
| 260 | .With actuation releasing for rebounding or biased return | 284 |Lever carried toothed sector |
| 261 | ..Over center releasing | 285 |Plural |
| 262 | ..Disengaging rack and pinion | 286 | ...Plural toggle joints |
| 263 | ..Interruption in rotated camming surface | 287 |Screw and nut between joints |
| 264 | .Opposed platens both actuated | 288 | ..Rack and pinion |
| 265 | .Spring or weight | 289 | ..Screw and nut |
| 266 | ..Return bias | 290 | ...Plural screws |
| 267 | ...Opposing flexible element actuator | 291 | ..Cam or tapering wedge |
| 268 | ..Interposed in actuating mechanism | 292 | ...Rotary or swinging |
| 269.01 | .Fluid pressure actuation | 293 | ..Fixed fulcrum lever |
| 270 | ..Combined with mechanical actuation | 294 | ..Plural oppositely moving struts |
| 271 | ...Mechanical force multiplier | 295 | PLATENS OR PRESSURE SURFACES |
| 272 |Toggle | 296 | .Flexibly connected opposed |
| 269.02 | ..Platen moved by elastically deformable pressure member | 297 | .Porous mats |
| 269.03 | ...Plural pressure members | 298 | CLOTHS FROM CAKE STRIPPERS |
| 269.04 | ..Inflatable bag | 299 | MISCELLANEOUS |
| 269.05 | ..Pressure intensifier | | |
| 269.06 | ..Multiple or staged driving means | | |
| 269.07 | ...Displacement additive | | |
| 269.08 | ...Pressure additive | 901 | SCRAP AUTO BODY CRUSHERS |
| 269.09 |Axially aligned pistons | 902 | CAN CRUSHERS |
| 269.1 |Independently actuated | 903 | PELLETTERS |
| 269.11 |Pull-down press | 904 | .Screw |
| 269.12 | ..Platen positioning means | 905 | .Inner roll |
| 269.13 | ..Pull-down press | 906 | .Reciprocating |
| 269.14 | ..Fluid supply system detail | 907 | .Rotary |
| 269.15 | ..Manually operable fluid system | 908 | .Series rolls |
| 269.16 | ...Particular valve feature | 909 | .Adjustable die openings |
| 269.17 | ..Frame assembly detail | 910 | MEAT |
| | | 911 | JET OR EXPLOSIVE |
| | | | <u>CROSS-REFERENCE ART COLLECTIONS</u> |

912 BINDER CONTAINERS
913 TRUSS PRESSES
914 SCRAP PAPER
915 FIXED UPPER RAM, LOWER MOVABLE
RECEPTACLE
916 COIL TIGHTENER AND BINDER
917 MAGNETIC
918 BOLSTER AND DIE

FOREIGN ART COLLECTIONS

FOR CLASS-RELATED FOREIGN DOCUMENTS
WITH ADDITIONAL TREATMENT OF
MATERIAL (100/70 R)
.Heating, cooling, or drying
(100/92)

FOR 100 ..In press (100/93R)
FOR 101 ...Platen press (100/93P)
FOR 102Brake lining (100/93PB)
FOR 103 ...Roll press (100/93RP)
FOR 104 ...Screw press (100/93S)