

1	<b>PROCESS</b>	42	..Lock-washer type
2	.Assembling or disassembling fastener with element	43	<b>APPARATUS HAVING SAFETY MECHANISM</b>
3	..Bolt or screw with washer	44	<b>APPARATUS HAVING AUTOMATIC CONTROL</b>
4	...By telescoping	45	.Having means sensing a condition or change in a condition
5	..Attaching cap to fastener	46	.For assembling fastener and washer
6	...Screw fastener	47	<b>APPARATUS HAVING MEANS FOR MEASURING OR TESTING</b>
7	...Nail fastener	48	<b>APPARATUS FOR ASSEMBLING OR DISASSEMBLING FASTENER WITH ELEMENT</b>
8	.Making externally threaded fastener, e.g., screw or bolt	49	.Headed fastener with element, e.g., bolt with nut and washer
9	..Screw	50	..Having telescoping means
10	...Forming thread	51	..Attaching cap to fastener
11	..Bolt	52	...Screw fastener
12	...Having specific configuration	53	...Nail fastener
13	....U-frame type	54	...Having nicking means
14	....Hollow bolt type	55	...Having means to feed rectangular stock
15	.....And prong	56	...Having rotatable workholder
16	....Formed by extrusion	57	<b>APPARATUS FOR MAKING EXTERNALLY THREADED FASTENER OR ARTICLE, E.G., SCREW, BOLT, ETC.</b>
17	....Formed by heat treatment	58	.Screw fastener making
18	.Making internally threaded fastener, e.g., nut	59	..Wooden screw
19	..Lock-nut type, e.g., castellated nut	60	..Having head nicking
20	..Having securement feature	61	...And shaving means
21	...Fusible or deformable type	62	...And rotatable workholder
22	....Weld nut type	63	...Punch and die type
23	..Having driver engagement feature, e.g., wing nut, etc.	64	..Having head shaving means
24	..Having decorative feature, e.g., cap nut, etc.	65	..Having pointing means
25	..Formed by metal working	66	..Having thread cutting means
26	...Forging	67	...Portable
27	.Making headed fastener, e.g., rivet or nail, etc.	68	...And pointing means
28	..Rivet type	69	...And severing means
29	...Hollow type	70	...Having plural dies
30	....Having prong	71	....Axial aligned
31	...Formed by extrusion	72	....Turret mounted
32	...Formed by heat treatment	73	...Having collapsible die
33	....And pressure, e.g., forging	74	....And bevel operator
34	..Nail type	75	....And cam operator
35	...Horseshoe	76	.....Forming taper thread
36	....Formed by heat treatment and metal shaping, i.e., wrought type	77	....And lever closer
37	....Formed by severing, i.e., cut type	78	.....Cone type
38	...Formed by heat treatment and metal shaping, i.e., wrought type	79	....And pivotable chaser carrier
39	....Spike type	80	...Having chaser cutter
40	..Wire type	81	....Rotatable type
41	.Making washer	82	...Having recessed cylindrical die block

CLASS 470 THREADED, HEADED FASTENER, OR WASHER MAKING: PROCESS  
AND APPARATUS

83	..Having self releasable die holder	130	..Having spiral shank forming means
84	..Having thread swaging means	131	.Wrought fastener making
85	...And reciprocable die	132	..Spike type
86	.Having bolt pointing means	133	...Having roller die
87	<b>APPARATUS FOR MAKING INTERNALLY THREADED FASTENER, I.E., NUT</b>	134	...Having pointing means
88	.Castellated nut type	135	...Having rotary workholder
89	.Having forger	136	..Nail type
90	..And plural rotatable dies	137	.Header means
91	..And plural punches	138	..And laterally movable carrier
92	..And coiler	139	...Bolt blank making
93	..And side swagger	140	.Having plural rotatable dies
94	...And mandrel	141	.Having reciprocating die and heading means
95	..And transfer means	142	..And toggle operator for die movement
96	.Having taper	143	...Bolt blank making
97	..And reamer	144	..And wedge closing dies
98	..And work handler	145	...Bolt blank making
99	..And multiple tap spindles	146	..Making nail
100	...Circular gang type	147	.Having side swagger
101	..And plural tap gripper	148	.Having punch means
102	..And release means	149	..Forming cotter-slot
103	..And yieldable tap driver	150	.Having head finisher
104	...Feed nut type	151	..Broach type
105	..And finishing means	152	.Having ejection means
106	.Having broaching means	153	..And blank shear or cutoff means
107	.Having milling means	154	.Having transfer means
108	.Having facing means	155	.Having guage
109	.Having transfer means	156	.Having cutting means
110	<b>APPARATUS FOR MAKING HEADED FASTENER, E.G., NAIL, RIVET, ETC.</b>	157	..Making cut-type nail
111	.Horseshoe nail making	158	...Tack strip making
112	..Cut-type	159	...And heading means
113	...Having finishing means	160	...And pointing means
114	...And cutter	161	..Forming shank slot
115	...And rotary workholder	162	<b>APPARATUS FOR MAKING WASHER</b>
116	..Having chain drive	163	.Lock washer
117	..Having roll forging means	164	<b>MATERIAL SUPPLY FEEDER OR DISTRIBUTOR</b>
118	..Traveling roll type	165	.Nut or washer delivery means
119	..Having side swage means	166	..For forger
120	..Having rotary workholder	167	..Nut feeder
121	.Wire nail making	168	.Nail plate feeder
122	..String nail type	169	..Having oscillator
123	..Having multiple header means	170	..Having reverser
124	...Opposite end former	171	...And gear
125	..Having reciprocating die and header	172	...Rack and pinion
126	...And toggle closing dies	173	...Segmental type
127	...And wedge closing dies	174	..Having roller or drum feeder with strap drive
128	..Having distributing means	175	..Nipper and nose piece
129	..Having rotary workholder	176	.Material infeed means
		177	.Having gripper feed jaws

178 .Having reciprocating lifter  
179 .Having rotary disk  
180 .Having inclined chute  
181 **TAP SPINDLE REVERSING DEVICE**  
182 .Having spur gears  
183 **IMPLEMENT, E.G., DIE, ETC.**  
184 .Nail or screw capping die  
185 .Screw threading die  
186 ..Thread trimmming  
187 ..Radial chaser  
188 ...Taper threading  
189 ...Having die-blade adjuster  
190 ...Adjustable  
191 .Bolt or rivet forming die  
192 .Nail forming die  
193 ..Horseshoe type  
194 ...Cut  
195 ..Wire type  
196 ..Wrought type  
197 .Nut or washer forming die  
198 .Tap  
199 ..Combined  
200 ..Radially adjustable  
201 ..Collapsible  
202 ...Cam core  
203 ...Wedge core  
204 ..Thread swage  
205 .Bolt or rivet heading punch  
206 .Nut or washer arbor  
207 .Die holder  
208 .Anvil  
209 **MISCELLANEOUS**

**CROSS-REFERENCE ART COLLECTIONS**

900 **FLOATING WORKHOLDER**  
901 **PIPE OR ROD WORKHOLDER**  
902 **WORKHOLDER INDEX**  
903 **YIELDABLE SPINDLE**  
904 **TURRET**  
905 **WIRE COIL INSERT**  
906 **NYLON PLUG LOCK**  
907 **CLINCH NUT FEEDER**

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