

1	TORQUE RESPONSIVE NUT OR BOLT DRIVING CONNECTION	37	..Bulged portion having additional gripping means
2	.Frangible connection	38	..Bulged portion including bend line or reduced section
3	..Between concentric elements	39	.Frangible member
4	...Shear pin connecting means	40	..Frangibly connected expander
5	...Axially displaced	41	...Projecting outwardly from head
6	.Resilient connection	42	..Sleeve including weakened portion
7	..Ratchet	43	..Frangible mandrel
8	WITH MEANS TO INDICATE APPLICATION OF PREDETERMINED STRESS-STRAIN	44	.Including sleeve and distinct tapered expander (e.g., anchor bolt type)
9	.Axially deformable member or portion	45	..And means to captively retain expander
10	..Deformable washer	46	...Follower captive within groove
11	...Resilient	47	...Bridge-type retainer
12	...Coil spring	48	...Tongue-type retainer
13	.Color indicator	49	..Relative rotation preventing means
14	.Including gauge means	50	...Guide and follower
14.5	TENSIONED ALONG THE LONGITUDINAL AXIS BY A COAXIAL FORCE APPLYING DEVICE (E.G., MECHANICAL TENSIONER)	51	...Splines
15	HAVING SEPARATE EXPANDER MEANS	52	...Follower defined by corners of polygonal element
16	.Helical anchor	53	...Expander type
17	..Mates with mandrel thread	54	..Expansible element moved relative to stationary expander
18	..With wedge-shaped expander	54.1	...Spread by pressing element over initially inserted expander (e.g., push type)
19	.Fluent pressure actuated	55	..Expander threadedly engaged by mover
20	..Explosive	56	..Stepped expander
21	..Having securing element projecting through aperture in sleeve	70	..Expander having integral pull stem
22	..Deformable element	57.1	..Slotted sleeve spread by tapered expander
23	...Flowable mass	58	...Both ends slotted
24	..Oppositely acting double wedge expander means	59	...Slot spaced from ends
25	..Outwardly moving	60.1	...Expander moved into stationary sleeve (i.e., pull type)
26	..Both wedges provided with thread cooperating means	60.2	...Threaded expander
27	..Having rotation preventing means	60.3	...Including a hinge or hinge- like portion
28	...Groove and follower	61	...Folded blank type
29	.With hole forming means	62	...Slot angularly related to sleeve axis
30	..Formed on expansible sleeve	63	..Plural-sectioned sleeve
31	...Serrated end	64	...Having section retainer
32	..Made up of plural expansible segments or sections	65	...Ring or sleeve type
33	..Identical segments	66	....Destructible
34	..Bulged by axially contracting ends	67Bight type
35	..Having wedge-shaped section acting in slot		
36	..Twistable sleeve		

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68Tongue and groove	88	..Member engages inwardly facing surface and a flat side of bolt head or nut
69	..Expander or sleeve extruded during expansion		
71	..Sleeve having external gripping means	89	.Member extending between plural fasteners and restricting the rotation thereof in one direction more than the other (e.g., pawl and ratchet)
72	...Circumferential rib		
73	....And longitudinal rib		
74	...Struck from sleeve		
75	..Relatively sliding wedge surfaces	90	.Member extending between and engaging flat formed on side of each of a plurality of bolts or nuts (e.g., side lock)
76	..Wedge received in transverse slot in holding device or anchor		
77	...Double-faced wedge	91	..And element on opposite face of substructure restricting rotation of a cooperating nut or bolt
78	..Having wedge retainer means		
79	..Wedge surfaces act in single lateral direction	92	..Having plural openings or notches engaging a bolt or nut on two sides
80	..Including discrete activating means for wedge		
80.1	.Comprising a head and expandable portions spread by fastener (e.g., drywall anchor)	93	...Having plural parts, one of which engages the inwardly facing surface of a bolt head or nut
80.2	..Three or more expandable portions		
80.5	.Sleeve type (headless) with longitudinal slot, slit, or split expanded by fastener	94	....Special fishplate engaging inwardly facing surface
80.6	..Sleeve threaded	95	...Elastically or plastically deformable part
82	INCLUDING SETTABLE MATERIAL	96	..Having plural parts, one comprising a keeper
82.1	.Injected after fastener placement	97	...Unitary member, deformable in whole or in part
82.2	.Adhesive coating	98	..And engaging the inwardly facing surface of the bolt heads or nuts
82.3	.Adhesive encapsulated		
82.5	TEMPERATURE SENSITIVE OR RESPONSIVE	99	..Including separable keeper for member
81	THREADED FASTENER LOCKED TO A DISCREET STRUCTURE (E.G., PLATE, RAIL, WHEEL)	100	..Including element spacing member from substructure
84	.Prefabricated assembly comprising strip or sheet member carrying plural, similar fasteners	101	.Member engages the inwardly facing surface of a plurality of bolt heads or nuts
85	..Including element for holding fasteners against separation from member	102	.Series of elements, each restricting a single fastener, cooperating to restrict a series of fasteners
86	..Including a series of elements, one element restricting two fasteners of a plurality, and the remainder each restricting one fastener	103	.Member preassembled with substructure at through-passage or recess for holding single bolt or nut in coaxial relation therewith
87	.Elongate member extending between and interlocking plural bolts or nuts		

104	..Through-passage or recess having laterally extending entry for inserting member and nut	122	..Member having portion (e.g., tab) deformable in situ into engagement with flat or formation
105	..And a second substructure and means for capturing a complementary nut or bolt thereto	123	...And having specific structure to coact with substructure
106	..Having means for coupling a bolt to a nut (e.g., thread lock)	124	...Projection on member and coacting formation in substructure
107	..Member anchors bolt in substructure with threaded portion exposed (e.g., stud bolt)	125	..Sheet metal member having resilient pawl distorted therefrom
108	..Nut-encompassing sleeve member engaged within through-passage or recess	126	..Member includes means which attempt to penetrate substructure
109	..Locking ring coaxially related to an elongated, externally threaded nut	127	..Member abuts coacting part on substructure
110	..Member comprises a longitudinal key	128	..Member, or portion thereof, comprises movable pawl
111	..Member includes elastically or plastically deformable portion	129	..Member engages inwardly facing surface of bolt head or nut
112	..Having elastically deformable portion for attaching member to substructure	130	...And is formed from plural, cooperating parts
113	...Plastically deformable portion	131	...And has specific structure to coact with substructure
114	..Recessed or toothed member receiving movable pawl carried by bolt head or nut	132	.Member or portion thereof located between substructure and inwardly facing surface of bolt head or nut
115	..Having discrete, reciprocally movable pawl	133	..Member fixed to bolt shank, and member or bolt fixed to substructure
116	..Fastener, or coaxial adjunct therefor, having sidewardly facing flat or formation engaged by portion of member (e.g., side lock)	134	..Means holding member to bolt, nut or substructure prior to use
117	..Adjunct carried flat or formation	135	...By discrete element
118	..And thread lock coupling complementary fasteners	136	..Member comprises looplike element (e.g., washer) interlocked with additional element, one of them engaging substructure or surface in other than planar, face to face contact
119	..Member having opening or notch engaging a bolt head or nut on two sides	137	...Two looplike elements interlocked by laterally introduced key
120	..And element maintaining member in operative engagement with bolt head or nut	138	...Pawl element, movably carried by looplike element, coacts with ratchet on surface
121	...Member elastically or plastically deformable for attaching it to bolt head or nut	139	...Laterally introduced key locks looplike element to surface
		140	..Elongate member moves in longitudinally extending opening in bolt head or nut to enter substructure

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141	..Locking dog or pawl carried by bolt head or nut and engaging substructure	160	...Closed loop having plural variations in the profile of a contact surface or a peripheral edge thereof
142	..Key introduced laterally at juncture of surface and substructure	161	...Variations comprise generally radially extending ridges or grooves
143	..Formations on either member or surface, and cooperative, restricting means on the other	162	...Variations comprise circumferentially spaced projections or recesses inset from both peripheries
144	...Formations on surface, means on member, one of which presents a sharp edged configuration	163	...Variations are teeth located along a periphery
145	....Formations comprise ramplike teeth, means comprises a movable pawl	164	....Both peripheries
146	....And substructure accommodation for member portion	165	....Each twisted about its radial axis
147	..Member comprises washer formed as closed loop or apertured plate or as split ring	166	.Design of fastener or substructure restricts rotation (e.g., flattened head rotatable in receiving slot, depression in substructure, bolt clipped to substructure)
148	...Engaging side wall of counterbore in substructure	167	..Locknut type on fastener
149	...Plural, axially adjacent washers, or plural part washer	168	..Including a lock thread
150	....Having one washer, or washer part, of a more yieldable nature than another washer, or part	169	..Mass of bolt head or nut offset from fastener longitudinal axis
151	...Split ring having radially outwardly extending end	170	..Nut and washer type formed from single blank folded over substructure
152	...Ends of split ring overlap in stressed condition	171	..Bolt or nut adapted to be fused directly to substructure (e.g., weld nut)
153	....Overlap of at least 180 degrees (e.g., coil)	172	.Nut, and means to engage substructure on its opposite faces for retaining nut at aperture therein, formed as unitary component
154	..Apertured plate of uniform thickness having undulating contact surfaces	173	..Means to engage extends through aperture
155	..Apertured plate having arched sectional configuration (e.g., concavo convex)	174	...Means to engage grasps an edge of substructure
156	....Arched configuration circumscribes aperture	175	....And has projection contacting periphery of aperture
157	...Split ring having opposed ends offset axially	176	..Fastener having a deformable portion or deforms substructure (e.g., prong)
158	....Contact surface contains a plurality of generally radially extending ridges or grooves removed from the ends	177	...Nut assembled to substructure utilizing cooperating regions on both
159	....Cross section other than rectangular	178	....Nut is externally and internally threaded cylinder
		179	....Nut penetrates substructure and anchors itself thereto (e.g., pierce nut)

180	....Nut deforms wall of preformed opening in substructure during assembly	202	..Utilizing a resilient characteristic of the member, or of a discrete element
181	....Both cooperating regions deformed	203	...With a discrete, resilient element
182	....Nonmetallic nut, resiliently deformed during assembly	204	..Structure is coaxial, distinct member (e.g., washer, key, or nut portion) that restricts nut piece
183	...Nut assembled to substructure by plastically deformable region on nut	205	..Member includes pawl- or pivoting key-type portion engaging threads
184	...Region on inwardly facing surface of bolt head or nut	206	...Utilizing a resilient characteristic of the key, or of a discrete element
185	....Surface extends radially beyond flat sides of bolt head or nut	207	...With a discrete, resilient element
186	.....And includes resilient flange	208	.....And key engageable with aligned formations (e.g., grooves) in axially outwardly facing portion of each threaded element
187	....Having axially directed projection or recess	209	..Member includes key, screw, tongue, etc. perpendicular to threads
188	.....Plural, radially extending, and generally equally spaced	210	...Utilizing a resilient characteristic of the key, or of a discrete element
189	....Surface deforms resiliently	211	...With a discrete, resilient element
190	HAVING STRUCTURE TO RESTRICT ROTATION OF THREADED, MATING PIECES (E.G., NUT LOCK)	212	...Including plastically deformable portion
191	..Structure contacts nut piece side and is fixed to the nut	213	....Comprising an elongated element divided longitudinally (e.g., a cotter pin)
192	..And contacts mating piece side	214	..Member includes screw receivable in an axially extending, internally threaded bore
193	...Utilizing a resilient characteristic of the member, or of a discrete element	215	...With an additional member between screw and axially outwardly facing portion
194	....With a discrete, resilient element	216	..Member or portion includes an axially disposed key
195	...Other element is a bolt, and member includes opening configured to engage side flat thereon	217	...Key coacts with bolt by occupying an axially extending recess formed in the radially outward surface thereof
196	....And further includes spaced, axially extending legs for engaging side flats on the nut	218	....And includes a portion adapted to extend into a transverse opening provided in the bolt
197	..Structure is coaxial, distinct member (e.g., washer) that restricts nut piece when fixed	219	....And includes a portion adapted to engage a substantial part of the periphery of the bolt
198	...Utilizing a resilient characteristic of the member, or of a discrete element		
199	....Member comprises key movable laterally into engagement with threaded elements		
200	..Member comprises key movable laterally into engagement with threaded elements		
201	...Member includes plastically deformable portion		

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220And includes a region plastically deformable into engagement with the axially outwardly facing portion	241Comprising surfaces of a curvilinear nature
221	..Member or portion includes piece that interlocks with an axially extending recess or slot in a bolt and a recess in an axially outwardly facing side of a nut	242	....Plastic deformation of at least one of the nuts
222	..Internally threaded locking member (e.g., jam nut)	243	....Reversed internal and external threads on one of the nuts
223	...Including means associated with at least one of the nuts for restricting rotation therebetween	244	....Oppositely threaded
224	....Key received in part in each of the nuts	245	.....Intersecting threads on the bolt
225	.....Including a plastically deformable portion	246	..By thread-gripping locking element
226	.....Received in axially extending passages or recesses	247	...Resilient grip
227	....Comprising one or more discrete members serving as a pawl and ratchet	248	....Split ring
228	.....Inherently resilient pawl	249	.....Including structure interfitting within a thread for less than a full turn thereof
229	....Axially directed, resiliently biased detent means	250	...Wire structure
230	....Canted element	251	....Helically coiled wire
231	....With means resiliently biasing the nuts apart	252	.....Including a free end in nonrotational engagement with the threaded element
232	....Side lock	253	...Gripping member includes a tapered section adapted to be axially depressed to cause radial movement of a portion thereof
233	.....Integral deformable means	254	..Gripping member is moved radially into engagement with the threads
234	.....By a discrete element	255	....Including discrete means to move or to lock the gripping member relative to the externally threaded element
235	.....Periphery encompassing means (e.g., a sleeve)	256	..Gripping member is moved tangentially into engagement with the threads
236	.....Including plastic deformation (e.g., bending) of the discrete element	257	.Including material in the nature of (1) a metallic coating, (2) a quantity of fusible metal or (3) a discrete member formed of ductile metal
237	....Having a part of one of the nuts extending into a circular, axially directed recess of the other, and further including, in the region of the recess, formations cooperating to restrict relative rotation	258	.Including settable material
238	.....At least one of the formations comprises a surface eccentric to the longitudinal axis of the nuts	259	.Comprising a thread lock
239	....Including cooperating formations on the axially opposing portions of the nuts	260	..Including a distortable metallic washer or sleeve
240	.....Comprising teeth of the ramp and buttress type	261	...In the nature of a dished washer
		262	..Including a coil spring
		263	..Differential thread means
		264	..Rocking thread section on the externally threaded element

265	..Including a tapered (e.g., a conical) surface for wedging the internally threaded element against the externally threaded one	285	...Axial distortion
266	...Segmented internally threaded element	286	...With discrete means carried by the element for producing the distortion
267	....Discrete segments carried within a housing	287	...By axially directed impacted areas
268	....Including a discrete, threaded member carrying the tapered surface and threadedly engaging one of the threaded elements	288	...Of axially spaced threaded sections
269	.....Engaging a threaded exterior provided on the segmented element	289	....Coiled spring
270	....Including a sleeve or washer type member for carrying the tapered surface and surrounding the segmented element	290	...Including a region displaceable generally axially relative to another part of the element
271	..Externally threaded element includes an axially extending opening in its free end for receiving an expander member	291	....Having at least one region formed by a cut, slot, etc., across at least one sidewall of the element and extending generally radially into the element
272	..Including camming surfaces on the threaded elements or on an additional member	292	..Including a longitudinal locking member
273	...With a camming member having an eccentrically arranged recess for receiving the internally threaded element	293	..Having a toothed surface
274	..Having an element, or with a discrete member, adapted to cant the assembly	294	..Including a radial locking member
275	...With a discrete, canting member (e.g., a washer)	295	...Threadedly received in the internally threaded element
276	..Having the internally threaded element distorted	296	..Side clutch
277	...Radially inward distortion	297	..Roller
278	....With discrete means carried by the element for producing the distortion	298	..Ball
279	.....Threaded means	299	..Spring
280	....Of cantilevered segments (e.g., castellated end)	300	..Tangential locking member
281	....Of circumferentially spaced areas of continuous periphery	301	..Elastic gripping action
282	.....Defining a smooth curving, noncircular thread section (e.g., elliptically shaped)	302	...Elastic insert
283	.....Impacted areas	303	....Disposed in a counterbore in the internally threaded element
284	.....Located on the flats of a polygonally shaped element	304	....Disposed within an interruption of a threaded surface
		305	..Externally threaded element adapted to be compressed radially inwardly
		306	...Resilient element
		307	..Having threads of different pitch, or a thread of varying pitch
		308	..Involving dissimilarities in the sectional configuration of the threads
		309	...Resulting in the deformation of one thread by the other
		310By integral, interference-producing deviations from a standard thread shape

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311Located in the vicinity of the crest or the root of the thread	334	..Plastic deformation
312	..Including means biasing the threads in axially opposed directions	335	...Of an internally threaded element
313	.Washer having a deformable portion engageable with a threaded element	336	...Into an interruption in the thread of the externally threaded element associated therewith
314	..Resiliently deformable portion	337	HEADED FASTENER ELEMENT WITH NUT, WASHER, SECURING MEANS OR CAP
315	..With a member in the nature of a rotation preventing key movable laterally into engagement with the threaded elements	338	.Lap bolt or fastener
316	..And utilizing a resilient characteristic of the key, or of a discrete element	339	..Interference fit type
317	..With a discrete, resilient element	340	.Securing means pivotable about axis transverse to fastener axis, e.g., toggle bolt, etc.
318	....Comprising a spring of the coiled type	341	..And biasing spring
319	..And including a plastically deformable portion	342	...Spring engaging securing means
320	...Comprising an elongated element divided longitudinally (e.g., a cotter pin)	343	...Spring at opposite end from securing means
321	..With an elongated member in the nature of a rotation preventing key disposed axially of the threaded elements	344	..And discrete manual actuating means
322	..And utilizing a resilient characteristic of the key, or of a discrete element	345	..And pivoted retention means
323	..And including a plastically deformable portion	346	..Channel shaped securing means
324	.Elastic gripping action	347	.Headed fastener element with securing means and biasing spring
325	.Externally threaded element includes an axially extending opening in its free end for receiving an expander member	348	..Ball detent securing means
326	.Pawl and ratchet	349	..Securing means rotatable about fastener element or rotatably engageable by tool-rotatable headed fastener element
327	..Pawl carried by the internally threaded element	549	...Outwardly extending projection cooperates with socket member having ramp engagement means
328	...Pivoted pawl	550	....Including means providing axial adjustment
329	...Resilient pawl	551	.....Threaded adjustment
330	..Washer carried pawl	552	....And discrete biasing spring
331	...Resilient	553	....Similar, opposed ramp surfaces
332	..Including teeth of the ramp and buttress type on the axially inwardly facing portion of the internally threaded element	554	...Helically slotted securing means having cooperating engaging portion on socket member
333	..By deformation of a threaded element	555	....Through-slot for engagement with crossbar
		350	...Securing means rotatable and axially movable, e.g., wear take-up means, etc.
		351	.Draw bar or draft key fastener
		352	.Metallic resilient securing means
		353	..Retainer ring
		354	.Wedge-securing means
		355	..And apertured bolt
		356	.Penetrating pin securing means

357	..Longitudinally inserted	387.5	...Having distinct, spaced cutting edges or points (e.g., prongs)
358	...Outwardly deflected		
359	....Bifurcated		
360	.Deformable securing means	387.6	...Resembling a twist-drill-type bit
361	..Swageable collar		
362	..Securing means deflecting a portion of fastener end	387.7	....Cuttings or chips moved along curved relief channel
363	...Plural end legs	387.8	...And specified cutting edge, face, rake, relief surface, or flute angle (e.g., axially facing facets)
364	....Cotter pin fastener		
365	....Circular deflector		
366.1	.Headed bolt or screw with threads and complementary nut	388	.Double-ended
367	..Having stay bolt spacer sleeve	389	..Both ends threaded
368	..Having washer	390	.Single element having means facilitating or effecting separation
369	...Including sealing means		
370	....Stay bolt bearing washer	391	..By fluent pressure
366.2	..Flush mount or low profile	392	.Resiliently flexible
366.3	..Threads having a specific pitch or angle	393	.Set screw
371.1	.Sealing-type washer compressed by head	394	.Drive screw
371.2	.Washer adjacent head and having a particular shape (e.g., dished) or composition	395	.Having bore therethrough
372	..And separate attaching or retaining means	396	.Separate head element
372.5	.Cap over the head	397	..Threadedly attached to shank
372.6	..Having attaching or retaining means	398	.Head eccentric with respect to fastener axis
373	..Attachable cap structure	399	.Head having counter-sinking means
374	...By screw means	400	.Hook head, e.g., J-bolt, etc.
375	...Crimpable	401	.Elongated head, e.g., hanger bolt, etc.
376	...Weldable metal	402	.Head driving structure
377	...Moldable	403	..Socket or slot
378	EXTERNALLY THREADED FASTENER ELEMENT, E.G., BOLT, SCREW, ETC.	404	...Orthogonally arranged slots, e.g., Phillips head, etc.
379	.Stay bolt	405	...Opposed open ended plural slots, e.g., spanner, etc.
380	..Having spherical head	406	...Dovetail
381	...And telltale bore	407	...Having driver retaining means
382	..Having telltale bore	408	..Frictional engagement
383	.Multipart	409	..Wing structure
384	..Axially adjustable	410	..Plural diverse driving structures
385	..Comprising longitudinal side-by-side sections	411	.Thread or shank structure
386	.Pilot end having means enhancing fastening or installation	412	..Plural threads on single shank
387.1	..Drill-tip-type end	413	...Of different pitch
387.2	...Having a reaming portion	414	..Buttress thread
387.3	...Having enhanced gripping structure	415	..Of varying thread pitch
387.4	...Thread-tapping portion or with thread pitch stabilizing ridge	416	..Lobular thread
		417	..Circumferentially interrupted thread
		418	...By longitudinal slot
		419Shank bifurcated by slot extending entirely therethrough
		420Inclined slot

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421Helically oriented	459	...Having plural prongs on one end
422	..By transversely extending bore	460	...Having identical ends
423	..Truncated thread	461	..Of sheet metal
424	..Shank structure	462	...Including stiffening means
425	...Twisted	463	....Rib
426	...Tapered	464	.....Entire fastener having corrugations parallel to driving direction
427	INTERNALLY THREADED FASTENER ELEMENT, E.G., NUT, ETC.	465	.....Having sawtooth penetrating edge
428	..Including lubricating means	466	...Prongs cut and formed from body portion
429	..Having cap	467	...Plural prongs from single opening
430	..Cap crimped onto nut	468	....Including opposed prongs defining mirror image of each other
431	..Resiliently retained	469	..Multipart
432	..Multipart	470	..Having prongs of different length
433	..Including movable threaded segments	471	..Each prong bevelled from a single side toward its opposite side
434	..Moved by fluent pressure	472	...Bevel located on outside of prong
435	..Wing	473	..Having distinct driving head
436	..Thread structure	474	...Plural heads
437	..Interrupted	475	..Having means to limit penetration short of bridge portion
438	..Coil spring	476	..Having frangible portion
439	IMPACT DRIVEN FASTENER, E.G., NAIL, SPIKE, TACK, ETC.	477	..Of sheet metal
440	..Having means to facilitate explosive driving	478	..Folded or twisted
441	..Discrete guide or centering means	479	..Hollow fastener
442	..Plural attached fasteners	480	..Separately attached head
443	..Integral strip	481	..Head having central recess
444	..Laterally attached only at head or bridge	482	..Plural axially aligned heads
445	..Attached end-to-end	483	..Wire formed head
446	..Including integral locking means	484	..Domed head
447	..Comprising deformable portion	485	..Hook head
448	...Expansible on impact	486	..Head forms segment of disk
449	....Axially collapsible section	487	..Shank or penetrating end structure
450	..Having means engageable on underside of member being secured by fastener	488	..Flat-sided shank
451.1	..Comprising protrusion or recess on shank	489	...Tapered
452	...Longitudinal rib	490	..Stepped shank
453	....Spiral rib	491	..Oval or lobular shank
454	.....Defined by twisted shank	492	..Angular shank portion
455	...Circumferential rib	493	..End structure
456	...Barb or spur-type projection	494	...Pyramidal point
451.2	..Undulating type	495	...Slotted end
451.3	...Serrations or sharp teeth	496	...Chisel point
451.4	..Longitudinal flute, depression, or channel	497	...Stepped end
451.5	...Shoulder-type protrusion		
457	..Multiple prong, e.g., nailing plate, staple, etc.		
458	..Oppositely disposed prongs		

498 ...Conical point
 499 ...Having a curved surface
 500 **HEADED FASTENER ELEMENT**
 501 .Having plastically flowable or
 deflectable end, e.g., rivet,
 etc.
 502 ..Plural end legs
 503 ...Sheet metal type
 504 ..Solid end type
 505 ...Stay bolt
 506 ...Bolt head and end flowable
 507 ...Domed head
 508 .Having resilient securing
 structure on shank
 509 ..Concentric ridge or flange
 510 ...Plural ridges or flanges
 511 **FASTENER SECURING ELEMENT**
 512 .Having elastomeric material
 513 .Cotter pin
 514 ..Having deformed resilient
 middle portion
 515 ..Having folded back leg
 516 .Resilient metallic
 517 ..Retainer ring
 518 ...Having gripper holes
 519 ...Plural radial sectioned
 520 ..Sheet metal
 521 ...Circular
 522 ..Parallel legs, e.g., U-shaped,
 etc.
 523 ...Folded leg having fastener
 aperture or recess
 524Plural folds
 525 ..Having plural longitudinal
 slits
 526 ...And slit coincident with
 element axis
 527 ...And helically inclined
 tongues, e.g., speed nut, etc.
 528 ..Having longitudinal slit
 coincident with element axis
 529 ..Having longitudinal slot
 forming fastener engaging
 slide
 530 ..Wire or rod formed
 531 **WASHER STRUCTURE**
 532 .Including release means
 533 .Including means for retaining
 washer to fastener
 534 .Including antifriction means
 535 .Including adjustable thickness
 means
 536 ..Wear or lost motion
 compensating means

537 .Having leveling means
 538 ..Inclined planar face
 539 .Radially positionable
 540 ..Pivotally hinged sections
 541 ..Secured by plastic deformation
 542 .Sealing
 543 .Wire formed
 544 .Axially resilient
 545 .Corrugated
 546 .Spacer
 547 ..Of folded sheet material
 548 **MISCELLANEOUS**

CROSS-REFERENCE ART COLLECTIONS

900 **FASTENER OR FASTENER ELEMENT
 COMPOSED OF PLURAL DIFFERENT
 MATERIALS**
 901 .Core and exterior of different
 materials
 902 ..Metal core
 903 ...Resinous exterior
 904 **FASTENER OR FASTENER ELEMENT
 COMPOSED OF NONMETALLIC
 MATERIAL**
 905 .Paper or wood
 906 .Leather or fabric
 907 .Elastomeric
 908 .Resinous material
 909 **FASTENER OR FASTENER ELEMENT
 COMPOSED OF THERMO-RESPONSIVE
 MEMORY MATERIAL**
 910 **ANTITAMPER MEANS**
 911 .One-way drive
 912 **ANTISPLITTING FASTENER**
 913 **SELF-EXPANDING ANCHOR**
 914 **COATED BOLT**
 915 **BOLT HAVING PACKING JOINT**
 916 **BOLT HAVING TENSION FEATURE**
 917 **NUT HAVING TENSION FEATURE**
 918 **THREADLESS NUT**
 919 **SCREW HAVING DRIVING CONTACTS**
 920 **STAPLE**
 921 **MULTIPLE-PRONGED NAIL, SPIKE OR
 TACK**
 922 **NAIL, SPIKE OR TACK HAVING
 LOCKING DEVICE**
 923 **NAIL, SPIKE OR TACK HAVING
 SPECIFIC HEAD STRUCTURE**
 924 **COUPLED NUT AND BOLT**
 924.1 .Deformed
 925 .Top stop

CLASS 411 EXPANDED, THREADED, DRIVEN, HEADED, TOOL-DEFORMED, OR
LOCKED-THREADED FASTENER

926	.Positive lock	969	..Deformable retainer
927	..Side	970	..Resilient retainer
928	..Thread gripper	971	..And side lock
929	.Thread lock	972	.Distorted
929.1	..Coil spring	973	.Gravity bolthead, nut or washer
929.2	..Distorted washer	974	.Side lock
930	..Flowing metal or settable material	975	..Rotatable washer
931	..Superposed nuts	976	...Bent tongue-locked
932	...Oppositely threaded	977	...Pawl-locked
933	....Key or pawl locked	978	..Pawl and ratchet
934	.....Side locked	979	..Resilient
935	..Cam or cone grip	980	...Automatic
935.1	...Cam	981	....Coiled washer
936	..Canted nut	982	....Spring-tongued washer plate
937	..Distorted nut	983	..Inelastic tongue
937.1	...Predistorted thread pitch or diameter	984	..Longitudinal
937.2	...Post-distorted thread pitch or diameter	985	...Bolthead- or nut-held
938	..Distorted thread	986	....Reversed bolthead or nut
939	..Longitudinal key	987	...Side pin
940	..Radial key or gib	988	...Spike-held locking plate
941	..Side clutch	989	...Swinging
941.1	...Spring	990	..Washer tongue-held
941.2	...Roller	991	..Transversely sliding
941.3	...Ball	992	...Key, plate, or bar
942	..Tangential key	993	....bolthead- or nut-held
943	.Flexible washer	994	....Sliding washer
944	.Flexible key	995	..Transversely swinging
945	.Cross key	996	.Transverse base-locking key
946	..Spring-seated	997	.Longitudinal fastener
947	.Elastic-gripping action	998	WITH POSITIVE BOLT LOCK
948	.Longitudinal key	999	WITH RETAINER (E.G., TETHER)
949	.Ratchet and bolt-carried pawl		
950	.Ratchet and nut-carried pawl		
951	..Flexible		
952	..Pivoted		
953	.Washer-carried pawl		
954	.Wedged slotted bolt		
955	LOCKED BOLTHEAD OR NUT		
956	.Automatic base clutch		
957	..Biting tooth		
958	...Coiled washer		
959	...Bolt- or nut-carried		
960	..Friction		
961	..Pawl and ratchet		
962	...Bolthead or nut-carried pawl		
963	...Yielding interlocking washer		
964	..Detent		
965	..With retainer		
966	..Multiple (i.e., gang type)		
967	..Deformable bolthead or nut		
968	..Deformable base member		

FOREIGN ART COLLECTIONS

FOR 000 **CLASS-RELATED FOREIGN DOCUMENTS**

DIGESTS

DIG 1 **THREAD FORMING, REFORMING, OR CLEANING**
 DIG 2 **TEMPERATURE MODIFICATION**
 DIG 3 **UTILIZING FLUID PRESSURE**