

**CPC****COOPERATIVE PATENT CLASSIFICATION****Y10T****TECHNICAL SUBJECTS COVERED BY FORMER US CLASSIFICATION****NOTE**

This subclass has been introduced in January 2015 in view of the CPC to accommodate for technical subjects formerly covered by USPC

**Former US Class 16 series**

<b>Y10T 16/00</b>	<b>Miscellaneous hardware [e.g., bushing, carpet fastener, caster, door closer, panel hanger, attachable or adjunct handle, hinge, window sash balance, etc.]</b>
Y10T 16/05	. Bushing
Y10T 16/063	.. Providing a restricted or insulated environment [i.e., sealable] for internal elements
Y10T 16/075	.. Bung or tap
Y10T 16/082	... Threaded
Y10T 16/088	.. Providing strain relief
Y10T 16/10	. Carpet fasteners
Y10T 16/104	.. Combined fasteners and stretchers
Y10T 16/109	.. Hook
Y10T 16/113	.. Moldings
Y10T 16/118	.. Rug
Y10T 16/122	.. Stair
Y10T 16/124	... Risers
Y10T 16/125	... Rods
Y10T 16/126	.... Catches
Y10T 16/1263	..... Sliding
Y10T 16/1267	..... Swinging
Y10T 16/127	.. Sliding
Y10T 16/131	.. Strips
Y10T 16/134	.. Swinging
Y10T 16/14	. Carpet stiffener or anti-slip device, per se
Y10T 16/18	. Casters
Y10T 16/182	.. Adjustable
Y10T 16/184	.. Wheels
Y10T 16/1847	... Antifrictionally mounted
Y10T 16/1853	... Multiple
Y10T 16/1857	.... Antifrictionally swivelled

Y10T 16/186	..	Antifrictionally swivelled
Y10T 16/1867	...	Ball
Y10T 16/1873	...	Cylinder
Y10T 16/1877	....	Pivoted
Y10T 16/188	..	Ball
Y10T 16/1887	...	Antifrictionally mounted
Y10T 16/1889	....	Ball
Y10T 16/1891	....	Cylinder
Y10T 16/1893	...	Pivoted
Y10T 16/19	..	Bracket supports
Y10T 16/191	..	Detachable
Y10T 16/193	..	Leg elevators
Y10T 16/1937	...	Sliding
Y10T 16/1943	...	Swinging
Y10T 16/195	..	Locked
Y10T 16/196	...	Shimmy dampening
Y10T 16/197	..	Lubricators
Y10T 16/199	..	Pintles
Y10T 16/201	..	Pintle retainers
Y10T 16/202	...	Frame
Y10T 16/203	..	Frame
Y10T 16/204	...	Single leg frame or fork
Y10T 16/205	..	Rigid wheel supports
Y10T 16/207	..	Scrapers
Y10T 16/209	..	Sliding
Y10T 16/21	...	for tubular leg
Y10T 16/211	..	Sockets
Y10T 16/212	..	Spring supported
Y10T 16/214	..	Inclined axle
Y10T 16/216	..	Caster guard
Y10T 16/218	..	Obstruction climbing aid
Y10T 16/22	.	Thermally released check or closer
Y10T 16/27	.	Checks and closers
Y10T 16/276	..	Liquid
Y10T 16/2766	...	Concentric spring chamber
Y10T 16/2769	....	Cam
Y10T 16/2771	...	Hinge
Y10T 16/2774	....	Floor pivot
Y10T 16/2777	...	Multiple piston
Y10T 16/2782	...	Oscillating cylinder

Y10T 16/2788	...	Oscillating piston
Y10T 16/2793	...	Side spring chamber
Y10T 16/2796	....	Cam
Y10T 16/2799	...	Spring and flexible link
Y10T 16/2804	...	Spring and gear
Y10T 16/281	..	Pneumatic
Y10T 16/282	...	Flexible link
Y10T 16/283	...	Hinge
Y10T 16/285	...	Spring and gear
Y10T 16/286	...	Spring and lever
Y10T 16/287	..	Spring and flexible link
Y10T 16/293	..	Spring and gear
Y10T 16/299	..	Spring and lever
Y10T 16/304	..	Hinge
Y10T 16/31	.	Gate hangers
Y10T 16/33	..	Sliding and swinging
Y10T 16/35	.	Panel hangers, travelers and/or tracks
Y10T 16/353	..	with flexible panel attaching means
Y10T 16/354	...	Covered, hollow or slotted track
Y10T 16/3543	....	with antifriction means
Y10T 16/3545	.....	Wood track
Y10T 16/3547	....	Wood track
Y10T 16/355	...	with antifriction means
Y10T 16/356	..	Ball
Y10T 16/359	..	Cylinder
Y10T 16/361	..	Guide brackets
Y10T 16/364	..	Guide rollers
Y10T 16/367	..	Link and lever
Y10T 16/37	..	Sliding shoe
Y10T 16/372	...	Drapery supports
Y10T 16/373	..	Track and bracket
Y10T 16/375	...	Drapery supports
Y10T 16/376	..	Covered, hollow or slotted track
Y10T 16/377	...	Wood
Y10T 16/378	...	Drapery supports
Y10T 16/3785	....	Wood
Y10T 16/379	..	Tracks
Y10T 16/3797	...	Drapery supports
Y10T 16/3803	...	Laminated
Y10T 16/381	..	Wheel mounts

Y10T 16/3813	...	Antifrictionally mounted wheels
Y10T 16/3816	...	Door elevating
Y10T 16/3819	...	Floor
Y10T 16/3822	...	Reciprocating track
Y10T 16/3825	...	Traveling wheel
Y10T 16/3828	...	Swinging
Y10T 16/3831	...	Swiveling
Y10T 16/3834	...	Vertically adjustable
Y10T 16/3837	...	Wheel and guide roller
Y10T 16/384	..	Wheels
Y10T 16/387	..	Overlapping doors, common track
Y10T 16/39	.	Ferrules, rings, and thimbles
Y10T 16/42	..	Ring ferrules
Y10T 16/44	.	Handle, handle component, or handle adjunct
Y10T 16/444	..	having receptacle within
Y10T 16/447	..	for plow
Y10T 16/451	..	Length adjustable pull handle for luggage or luggage cart [e.g., wheeled suitcase handle, etc.]
Y10T 16/455	..	Luggage-type [loop style] handgrip for carrying [e.g., suitcase, handbag, briefcase, shopping bag, package, etc.]
Y10T 16/4554	...	Extensible handle
Y10T 16/4559	...	Detachable handle
Y10T 16/4563	...	Welded or adhesively attached handle
Y10T 16/4567	...	Swinging handle
Y10T 16/4569	....	with means permanently connecting the handle to a carried article
Y10T 16/4571	...	with means permanently connecting the handle to a carried article
Y10T 16/4576	...	with carrier handle including a user enhanced grip attachment
Y10T 16/458	..	Door handle
Y10T 16/459	...	Detachable handle
Y10T 16/46	...	Knob type
Y10T 16/462	..	Drawer pull
Y10T 16/4628	...	Lift
Y10T 16/4636	...	Knob type
Y10T 16/464	....	Swinging
Y10T 16/4644	...	Loop type
Y10T 16/4652	...	Ring type
Y10T 16/466	..	Handle having mounted grip means [e.g., bicycle handlebar grips, etc.]
Y10T 16/469	..	Detachable handle
Y10T 16/4696	...	for battery
Y10T 16/4701	...	for casket

Y10T 16/4707	...	for container
Y10T 16/4713	...	Auxiliary handle
Y10T 16/4719	...	Extension
Y10T 16/4724	...	Cord or rope related
Y10T 16/473	..	Extensible handle
Y10T 16/476	..	Handle with ergonomic structure [e.g., finger engagement structure such as indents, grooves, etc.] and handle user-interaction [human engineering] enhancements such as improved handle dimensions and handle positioning
Y10T 16/48	.	Insulated handle
Y10T 16/484	..	Handwheel
Y10T 16/487	..	Knob type
Y10T 16/491	..	Wire type
Y10T 16/495	..	Unshaped or unattached pad
Y10T 16/498	..	Bar-type handle
Y10T 16/499	...	for lawnmower
Y10T 16/50	...	Swinging
Y10T 16/501	....	Casket handle
Y10T 16/502	..	Braced handle
Y10T 16/506	..	Knob-type handle
Y10T 16/508	...	with flexible suspending means
Y10T 16/509	..	Lift
Y10T 16/513	..	Loop-type handle
Y10T 16/515	...	Swinging
Y10T 16/516	..	Ring-type handle
Y10T 16/52	.	Hinge
Y10T 16/521	..	including frangible or fusible portion
Y10T 16/522	..	with diverse art portion or attachment
Y10T 16/524	..	Ball and socket
Y10T 16/525	..	Pliant or elastic hinge
Y10T 16/5253	...	Metallic
Y10T 16/5257	...	Snap or X hinge
Y10T 16/526	..	Eyeglass hinge
Y10T 16/527	..	Retractable pintle
Y10T 16/5275	...	Latch hinge
Y10T 16/528	..	Latch hinge
Y10T 16/5285	...	Resilient securing means
Y10T 16/529	..	including lever for shifting one member of hinge relative to another
Y10T 16/531	..	having staggered leaves
Y10T 16/532	..	including adjustment for changing relative orientation of hinged members
Y10T 16/5321	...	having plural independent adjustments

Y10T 16/5322	....	All rectilinear
Y10T 16/53225	.....	including screw-operated means to move hinged members
Y10T 16/5323	...	Pivotal adjustment
Y10T 16/53235	....	including screw-operated means to move hinged members
Y10T 16/53238	.....	About hinge axis
Y10T 16/5324	...	including means to move hinged members
Y10T 16/53247	....	Along or parallel to hinge axis
Y10T 16/5325	.....	including threaded hinge pin
Y10T 16/53253	....	Screw-operated
Y10T 16/53257	.....	to shift plate toward or away from hinged member
Y10T 16/5326	...	having adjustable spacer between leaf and hinged member [e.g., shim]
Y10T 16/5327	...	Adjustable along or parallel to hinge axis
Y10T 16/5329	...	having interdigitated surfaces or slot for hinge-to-member fastener
Y10T 16/533	..	having cover
Y10T 16/5335	...	Leaf cover
Y10T 16/534	..	having clamp for attaching hinge to hinged member
Y10T 16/5345	...	Circumferential clamp
Y10T 16/535	..	having means to facilitate assembly and disassembly of hinge sections to join or disjoin hinged members
Y10T 16/5353	...	Resiliently biased hinge
Y10T 16/5355	....	having helical spring along hinge axis
Y10T 16/5357	...	Resiliently biased retaining means
Y10T 16/5358	....	having discrete latch and spring to slide or pivot latch
Y10T 16/5359	....	Discrete retaining means for pivotal contacting surfaces
Y10T 16/536	...	Separation of pivotal contacting surfaces
Y10T 16/53605	....	having movable or removable connector
Y10T 16/53607	.....	Pintle removable from remainder of hinge
Y10T 16/536075	.....	and additional connector for pintle or separate pintle sections
Y10T 16/53608	.....	Screw-threaded connector
Y10T 16/5361	....	Axially shifting hinge sections
Y10T 16/53613	.....	At specific angular orientation of hinge sections
Y10T 16/53615	....	Hook and pin
Y10T 16/5362	....	Hook in aperture
Y10T 16/53625	....	Hook to hook
Y10T 16/5363	...	and discrete movable or removable connector to fasten one hinge section to another
Y10T 16/5367	...	by relatively sliding connection [e.g., dovetail]
Y10T 16/5369	....	including receiving connector attachable to hinged member
Y10T 16/537	..	having means to reduce friction between hinge parts
Y10T 16/5373	...	by fluid lubricant

Y10T 16/5377	...	Ball or roller bearing
Y10T 16/5379	....	Circularly distributed balls or rollers
Y10T 16/538	..	Resiliently biased hinge
Y10T 16/5381	...	including means to render spring ineffective through all or a portion of swing
Y10T 16/53815	....	comprising manipulatable element or portion
Y10T 16/5382	...	Biased from either direction toward neutral position [e.g., double acting]
Y10T 16/53822	....	Helical spring transverse to hinge axis
Y10T 16/53824	....	Plural hinge axes [e.g., multiple pintle]
Y10T 16/53825	.....	and barrels for helical springs on separate axes
Y10T 16/53826	....	Resiliently biased rolling or sliding cam surface
Y10T 16/53828	....	by helical spring along hinge axis
Y10T 16/5383	...	having transverse helical spring or elastic strip
Y10T 16/53832	....	Plural hinge axes [e.g., multiple pintle ]
Y10T 16/53833	.....	Four or more axes
Y10T 16/53834	....	to counterbalance weight of hinged member [e.g., closure biased to open position]
Y10T 16/53835	.....	including pivoted coaxial spring retaining bar
Y10T 16/53836	....	Over-center spring or linkage travel [e.g., "holdback hinge"]
Y10T 16/53838	....	having means to hold hinged members against pivotal movement about hinge axis [i.e., catch]
Y10T 16/5384	...	Over-center spring or linkage travel [e.g., "holdback hinge"]
Y10T 16/53843	....	Plural hinge axes
Y10T 16/53845	....	Coil spring having axis along or parallel to hinge axis
Y10T 16/53848	....	including camming or sliding surface to deflect spring perpendicularly to the hinge axis
Y10T 16/5385	...	having means to hold hinged members against pivotal movement about hinge axis [e.g., catch]
Y10T 16/5386	...	having force adjustment
Y10T 16/53862	....	Rotatable spring-engaging collar
Y10T 16/538627	.....	having detention aperture or protuberance
Y10T 16/538633	.....	having tool-receiving aperture
Y10T 16/53864	...	Plural hinge axes [e.g., multiple pintle]
Y10T 16/5387	...	having axially biased camming surface
Y10T 16/5388	...	Coil
Y10T 16/53883	....	Plural coils
Y10T 16/53885	....	to counterbalance weight of hinged member [e.g., horizontal closure biased to open position]
Y10T 16/53888	....	On pintle
Y10T 16/5389	...	torsion spring
Y10T 16/539	..	Gravitating hinge having vertical axis
Y10T 16/5393	...	having lift rod

Y10T 16/5395	...	having plural spaced hinge axes
Y10T 16/5398	...	including cam surface and follower
Y10T 16/53984	....	and rolling element
Y10T 16/53985	.....	Between opposing surfaces
Y10T 16/53987	.....	and detent in cam surface
Y10T 16/53988	....	On axially twisted or helically fluted element
Y10T 16/53992	....	including means to hold hinged members against pivotal movement
Y10T 16/53996	....	having aperture for slidably receiving pintle [e.g., camming knuckle]
Y10T 16/54	..	including means to hold or retard hinged members against pivotal movement [e.g., catch]
Y10T 16/5401	...	Magnetic
Y10T 16/5402	...	Resiliently biased catch
Y10T 16/54021	....	having spring force adjustment
Y10T 16/54023	....	including toggle linkage
Y10T 16/54024	....	having discrete manipulatable release means [e.g., lever]
Y10T 16/540243	.....	including cam or eccentric
Y10T 16/540247	.....	Sliding release means or lever-actuated sliding catch
Y10T 16/54025	....	Sliding
Y10T 16/540253	.....	Movement along or parallel to hinge axis
Y10T 16/540254	.....	Interdigitated or plural sockets
Y10T 16/540255	.....	Opposed interdigitated sliding collars on hinge axis
Y10T 16/540256	.....	and catch receiving socket
Y10T 16/540257	.....	and catch receiving socket
Y10T 16/54026	....	Pivoted
Y10T 16/54028	....	Plural alternately useable detents
Y10T 16/54029	....	Spring arm
Y10T 16/540295	.....	Plural opposed arms
Y10T 16/5403	...	by friction
Y10T 16/54033	....	Screw-threaded adjustment
Y10T 16/54034	.....	Along or parallel to hinge axis
Y10T 16/540345	.....	Threaded pintle
Y10T 16/54035	....	Cam or wedge actuator
Y10T 16/54038	....	On hinge pin or between surfaces surrounding hinge axis
Y10T 16/5404	...	Pivoted
Y10T 16/54044	....	Plural alternately useable detents
Y10T 16/54048	....	and sliding
Y10T 16/54052	....	Serially connected pivoted arms between leaves [e.g., brace]
Y10T 16/54056	....	About axis along or parallel to hinge axis
Y10T 16/5406	...	by transversely moving pin in slot
Y10T 16/5407	...	having discrete manipulatable release means [e.g., lever operated]



Y10T 16/5408	...	by shifting hinged members
Y10T 16/54085	....	Along hinge axis
Y10T 16/5409	...	Sliding
Y10T 16/54095	....	Along or parallel to hinge axis
Y10T 16/541	..	including toothed gear
Y10T 16/542	..	comprising nested open curved portions attached to hinged members
Y10T 16/543	...	including hinge pin
Y10T 16/544	..	including transversely moving pin in slot
Y10T 16/5443	...	Plural noncollinear pins and slots
Y10T 16/5444	....	Parallel slots
Y10T 16/5445	...	having pin fixed to pivoted arm or plate
Y10T 16/5448	...	Hinge pin movable along slot
Y10T 16/545	..	including sliding surfaces to permit relative translation of hinged members
Y10T 16/5453	...	and stop or abutment for pivotal movement
Y10T 16/5457	...	Movement transverse to hinge axis
Y10T 16/546	..	Three-hinged members
Y10T 16/547	..	having plural hinge axes [e.g., multiple pintle]
Y10T 16/5472	...	having transverse or skewed axes
Y10T 16/5474	...	Connected by serially arranged pivoted links between hinged members
Y10T 16/5475	....	Plural sets of serially arranged pivoted links
Y10T 16/5476	...	Four or more axes
Y10T 16/5478	...	including stop or latch
Y10T 16/548	..	including laminated leaf
Y10T 16/549	..	Wire hinge
Y10T 16/551	..	having stop or abutment
Y10T 16/5513	...	Adjustable or resilient
Y10T 16/5515	...	comprising relieved axially opposed relatively rotating surfaces
Y10T 16/5518	...	comprising platelike bearing portion curved about hinge axis
Y10T 16/552	..	Hinge axis passes through hinged member [e.g., floor hinge]
Y10T 16/5525	...	Pintle or pivot concealed in hinged member
Y10T 16/553	..	including means to retain pintle in hinge [e.g., tamper proof, nonrising pintle, etc.]
Y10T 16/5535	...	Threaded or slotted pintle or knuckle
Y10T 16/554	..	including means to fasten leaf to member
Y10T 16/5543	...	by expandable connector
Y10T 16/5547	...	Self-penetrating fastener
Y10T 16/555	..	Specified material
Y10T 16/557	..	Specific pintle structure
Y10T 16/558	..	Specific leaf structure
Y10T 16/559	..	having prongs or cooperating structure on leaf
Y10T 16/5595	...	Angular leaf sections

Y10T 16/55963	....	Parallel sections
Y10T 16/55975	....	Coplanar sections
Y10T 16/55988	....	including planar section perpendicular to hinge axis
Y10T 16/56	.	Closers
Y10T 16/568	..	Spring and flexible link
Y10T 16/577	..	Spring and gear
Y10T 16/585	..	Spring and lever
Y10T 16/593	..	Spring
Y10T 16/595	...	Bow
Y10T 16/597	...	Rubber
Y10T 16/599	...	torsional
Y10T 16/5995	....	Coil
Y10T 16/60	...	Volute
Y10T 16/602	..	Weight
Y10T 16/61	.	Closure checks
Y10T 16/615	..	Inertia
Y10T 16/62	..	Pneumatic
Y10T 16/625	..	Spring
Y10T 16/628	...	Rubber
Y10T 16/6285	....	Rubber cushioned
Y10T 16/629	....	Multiple or opposed buffer surfaces
Y10T 16/6295	....	Link type
Y10T 16/6298	.	Sash balances
Y10T 16/63	..	Cord and counterweight
Y10T 16/635	..	Sash and cord
Y10T 16/64	..	Spring
Y10T 16/641	...	Drum and cord
Y10T 16/642	...	Friction roller
Y10T 16/643	...	Lever
Y10T 16/644	...	Rack and pinion
Y10T 16/645	..	Rack and pinion
Y10T 16/65	.	Sash-cord fasteners
Y10T 16/655	..	Bendable
Y10T 16/66	..	Chain
Y10T 16/665	..	Clamps
Y10T 16/67	..	Hooks
Y10T 16/675	..	Knot
Y10T 16/68	..	Slack-cord holders
Y10T 16/685	..	Weight
Y10T 16/69	.	Sash-cord guides

Y10T 16/698	..	Wheel and casing
Y10T 16/706	..	Casings
Y10T 16/71	...	Sheet metal, single piece
Y10T 16/714	..	Multiple wheel
Y10T 16/722	..	Sliding
Y10T 16/73	.	Sash weights
Y10T 16/743	..	Composite
Y10T 16/755	..	Sectional
Y10T 16/767	..	Weight and wheel
Y10T 16/78	.	Window-bead fasteners
Y10T 16/82	.	Counterbalance device, per se
Y10T 16/84	..	Spring
Y10T 16/86	.	Door escutcheon or similar element
Y10T 16/90	.	Paper weight
Y10T 16/95	.	Miscellaneous element or attachment

#### **Former US Class 24 series**

<b>Y10T 24/00</b>	<b>Buckles, buttons, clasps, etc.</b>	
Y10T 24/10	.	Miscellaneous
Y10T 24/11	.	Album fasteners
Y10T 24/12	.	Gun band type
Y10T 24/13	.	Article holder attachable to apparel or body
Y10T 24/1303	..	Chatelaine safety hooks
Y10T 24/1306	..	Flower
Y10T 24/1309	...	Pin attached
Y10T 24/1312	..	Napkin
Y10T 24/1315	...	Hook
Y10T 24/1318	...	Neck enclosing
Y10T 24/1321	..	Pencil
Y10T 24/1324	...	Clasp attached
Y10T 24/1326	....	Finger ear, belt attached pencil holder
Y10T 24/1329	....	Pencil holder with paper clip
Y10T 24/1332	....	Combined and convertible pencil holder
Y10T 24/1335	....	Container type pencil holder
Y10T 24/1338	....	Separate pencil holder and pocket engaging clip
Y10T 24/1341	....	Sliding jaw pencil holding clip
Y10T 24/1344	....	Wire pencil holder
Y10T 24/1347	....	Flexible shank pencil holder
Y10T 24/135	....	with movable catch [e.g., pin pivoted lever, roller, etc.]

Y10T 24/1353	....	Pivoted jaw pencil holder
Y10T 24/1356	...	Pin attached
Y10T 24/1359	...	Rule holder
Y10T 24/1362	..	Sleeve holder [e.g., for inner coat]
Y10T 24/1365	..	Pin attached
Y10T 24/1368	..	Arm or leg carried holder
Y10T 24/1371	..	Eyeglass holder including retaining means
Y10T 24/1374	..	Neck supported holder
Y10T 24/1376	..	Holder contains pocket engager [e.g., antitheft device, wallet protector]
Y10T 24/1379	..	Key ring holder
Y10T 24/1382	..	Receptacle type holder
Y10T 24/1385	...	Eyeglass or spectacle case
Y10T 24/1388	..	Open-ended holster type holder
Y10T 24/1391	..	Article held by clip with spring [e.g., leaf, coil] member
Y10T 24/1394	..	Article held by clip
Y10T 24/1397	..	Article held by flexible connector [e.g., chain]
Y10T 24/14	.	Bale and package ties, hose clamps
Y10T 24/1402	..	Packet holders
Y10T 24/1404	...	Cord
Y10T 24/1406	...	Adjustable bands
Y10T 24/1408	...	Closed loops
Y10T 24/141	...	Plastic bands
Y10T 24/1412	..	with tighteners
Y10T 24/1414	...	Wedge
Y10T 24/1416	...	Winder
Y10T 24/1418	...	Self-locking [dead center or snap action]
Y10T 24/142	....	Adjustable girth
Y10T 24/1422	.....	Rack bar
Y10T 24/1424	...	Lever
Y10T 24/1427	...	Worm and tooth
Y10T 24/1429	....	Pivotal worm band clamp
Y10T 24/1431	....	Radial worm band clamp
Y10T 24/1433	...	Integral thread
Y10T 24/1435	....	External thread
Y10T 24/1437	.....	Both ends threaded
Y10T 24/1439	...	Radial screw
Y10T 24/1441	...	Tangential screw
Y10T 24/1443	....	Adjustable girth
Y10T 24/1445	.....	Step adjustment
Y10T 24/1447	.....	Plural separable parts

Y10T 24/1449	....	Wire
Y10T 24/1451	....	Plural separable parts
Y10T 24/1453	....	Pivotal strap parts
Y10T 24/1455	....	Plural wrap
Y10T 24/1457	..	Metal bands
Y10T 24/1459	...	Separate connections
Y10T 24/1461	....	One piece
Y10T 24/1463	.....	Sheet metal
Y10T 24/1465	.....	Buckle band connection
Y10T 24/1467	.....	Swedged sheet metal band connection
Y10T 24/1469	.....	End-to-end integral with band connecting means
Y10T 24/1471	....	Pivoted parts
Y10T 24/1473	....	Wedging parts
Y10T 24/1476	....	Wire
Y10T 24/1478	...	Circumferentially swagged band clamp
Y10T 24/148	...	End-to-end integral band end connection
Y10T 24/1482	...	Ratchet and tool tightened band clamp
Y10T 24/1484	...	Spring closed band clamp
Y10T 24/1486	...	Screw locked band clamp
Y10T 24/1488	...	Swedged to lock band ends
Y10T 24/149	..	Wire
Y10T 24/1492	...	Separate connections
Y10T 24/1494	....	Wire
Y10T 24/1496	..	Wooden bands
Y10T 24/1498	..	Plastic band
Y10T 24/15	.	Bag fasteners
Y10T 24/152	..	Swedged bag tie
Y10T 24/153	..	Plastic band bag tie
Y10T 24/155	..	Resilient slot bag tie
Y10T 24/157	..	Twist-to-close bag tie
Y10T 24/158	..	Slides to lock bag end within housing
Y10T 24/16	.	Belt fasteners
Y10T 24/1604	..	Tighteners
Y10T 24/1608	..	Hinged
Y10T 24/1612	...	Ring connected belt ends
Y10T 24/1616	...	Bent over flanged ends
Y10T 24/162	...	Pintle pin connected belt ends
Y10T 24/1624	...	V and round belts
Y10T 24/1628	...	Overlapped belt ends
Y10T 24/1632	...	Sheet metal knuckles, common pintle

Y10T 24/1636	...	Wire knuckles, common pintle
Y10T 24/164	...	Knuckle integral with belt material
Y10T 24/1644	...	Multiple pintles interconnected V-belt type
Y10T 24/1648	..	Lacing
Y10T 24/1652	..	One piece
Y10T 24/1656	...	Deflecting prong
Y10T 24/166	..	Screw clamp
Y10T 24/1664	..	Splices
Y10T 24/1668	..	Wire
Y10T 24/1672	..	Butt connected belt ends
Y10T 24/1676	..	V, round, trapezoidal belts
Y10T 24/168	..	Flanged belt ends, connector hold ends
Y10T 24/1684	..	Lapped ends of endless belts
Y10T 24/1688	..	Hinged ends of endless belts
Y10T 24/1692	..	Wire strands reinforce belts
Y10T 24/1696	..	Hook and loop type fastener and zipper belt end connection
Y10T 24/17	.	Buttoners
Y10T 24/18	.	Cuff holder
Y10T 24/181	..	Adjustable
Y10T 24/183	..	Sleeve clasp and button for cuff
Y10T 24/184	..	Sleeve clasp and clasp for cuff
Y10T 24/185	..	Sleeve clasp and hook for cuff
Y10T 24/186	..	Sleeve clasp and pin for cuff
Y10T 24/188	..	Sleeve pin and button for cuff
Y10T 24/189	..	Pin fastener
Y10T 24/19	.	Necktie fastener
Y10T 24/1903	..	Bands
Y10T 24/1907	...	End-securing pin
Y10T 24/191	...	Gripping
Y10T 24/1914	...	Depressors
Y10T 24/1917	....	Button engaging
Y10T 24/1921	....	Pin or spur
Y10T 24/1924	..	Button engaging
Y10T 24/1928	...	Adjustable
Y10T 24/1931	...	Cord loop
Y10T 24/1934	...	Pivoted or sliding jaw
Y10T 24/1938	...	Pin attached
Y10T 24/1941	..	Collar button combined
Y10T 24/1945	...	Clasp attached
Y10T 24/1948	...	Pin attached

Y10T 24/1952	...	Separable fastener
Y10T 24/1955	..	Tie, attached hook
Y10T 24/1959	..	Magnetic, adhesive, or snap type fastener connects tie to shirt
Y10T 24/1962	..	Tie engaging loop with shirt engaging fastener
Y10T 24/1966	..	Tie knot engaging and collar attaching
Y10T 24/1969	..	Tie clip and shirt clasp attaching
Y10T 24/1972	..	Tie clip and fastening pin
Y10T 24/1976	..	Tie pin with shirt fastener
Y10T 24/1979	..	Tie stiffener with shirt fastener
Y10T 24/1983	..	with pivotal jaws having spring means
Y10T 24/1986	..	Slider
Y10T 24/199	..	Ornamental
Y10T 24/1993	...	Key shaped
Y10T 24/1997	..	Resilient clasp
Y10T 24/20	.	Paper fastener
Y10T 24/201	..	with screw threaded or notch engaging securing means
Y10T 24/202	..	Resiliently biased
Y10T 24/203	...	including means to open or close fastener
Y10T 24/204	....	Pivotally mounted on pintle
Y10T 24/205	...	One piece
Y10T 24/206	....	Mounted on support means
Y10T 24/207	..	Adhesive
Y10T 24/208	..	Corner fastened
Y10T 24/209	..	Paper-penetrating
Y10T 24/21	.	Strap tighteners
Y10T 24/2102	..	Cam lever and loop
Y10T 24/2104	...	Step adjusted
Y10T 24/2106	....	Ski boot and garment fasteners
Y10T 24/2108	....	Split ring tightener
Y10T 24/2109	....	Chain and rope tighteners
Y10T 24/2111	....	Tire chain tighteners
Y10T 24/2113	....	Strap tighteners
Y10T 24/2115	....	Jewelry
Y10T 24/2117	...	Strap tighteners
Y10T 24/2119	...	Tie chain tighteners
Y10T 24/2121	...	Cargo tie down
Y10T 24/2123	...	Cover fasteners
Y10T 24/2125	...	Chain tighteners
Y10T 24/2126	...	Strap tightener machine
Y10T 24/2128	...	toggle actuated sliding jaw

Y10T 24/213	...	Jewelry
Y10T 24/2132	...	Split ring with tightener
Y10T 24/2134	...	Concrete form panels
Y10T 24/2136	...	Seat belt buckles
Y10T 24/2138	...	Chain, cable, wire tighteners, and anchors
Y10T 24/214	...	Envelope fasteners
Y10T 24/2142	...	Ski boot and garment fasteners
Y10T 24/2143	..	Strap-attached folding lever
Y10T 24/2145	...	toggle latch
Y10T 24/2147	...	Strap tightener
Y10T 24/2149	...	Tire antiskid strap tightener
Y10T 24/2151	...	Seat belts
Y10T 24/2153	...	Split ring fasteners
Y10T 24/2155	...	Jewelry-watch straps
Y10T 24/2157	...	Tie downs [covers, articles]
Y10T 24/2158	...	Cable, wire, rope tightener
Y10T 24/216	...	Ski boot and garment fasteners
Y10T 24/2162	...	Dress hem raisers
Y10T 24/2164	..	Midline
Y10T 24/2166	..	Jewelry
Y10T 24/2168	..	Seat belt
Y10T 24/217	..	Accordion straps
Y10T 24/2172	..	Parallel poles clamp
Y10T 24/2174	..	form panels for walls
Y10T 24/2175	..	Cargo tie down
Y10T 24/2177	..	Chain tighteners
Y10T 24/2179	..	Split band with tightener
Y10T 24/2181	..	Tire chain tighteners
Y10T 24/2183	..	Ski, boot, and shoe fasteners
Y10T 24/2185	..	Fixed jaw with sliding or pivoted jaw
Y10T 24/2187	..	Rack and pinion and circular tighteners
Y10T 24/2189	..	Circular flange container clamp
Y10T 24/2191	..	Strap stretching tools, tighteners, and sealers
Y10T 24/2192	..	Buckle type
Y10T 24/2194	..	Integral piece
Y10T 24/2196	..	toggle
Y10T 24/2198	..	Stocking top
Y10T 24/22	.	Trouser guards, clips, straps [e.g., above shoetops]
Y10T 24/23	.	Bedclothes holders
Y10T 24/24	.	T-head nongripping, fabric engaging type



- Y10T 24/25 . Zipper or required component thereof
- Y10T 24/2502 . . Plural zippers
- Y10T 24/2504 . . . Zipper chain
- Y10T 24/2505 . . . having surface sealing structure
- Y10T 24/2507 . . having slider or interconnected sliders with access opening for diverse-art member
- Y10T 24/2509 . . Plural independently movable sliders
- Y10T 24/2511 . . with distinct, stationary means for anchoring slider
- Y10T 24/2513 . . . and for aligning surfaces or obstructing slider movement
- Y10T 24/2514 . . with distinct member for sealing surfaces
- Y10T 24/2516 . . with distinct separable-fastener
- Y10T 24/2518 . . having coiled or bent continuous wire interlocking surface
- Y10T 24/252 . . . with stringer tape interwoven or knitted therewith
- Y10T 24/2521 . . . with stringer tape having specific weave or knit pattern
- Y10T 24/2523 . . . with core encircled by coils or bends
- Y10T 24/2525 . . . with mounting portion having structural formations complementary to stitching
- Y10T 24/2527 . . . Attached by stitching
- Y10T 24/2529 . . . . String or stringer tape having distinctive property [e.g., heat sensitive]
- Y10T 24/253 . . . with stringer tape having distinctive property [e.g., heat sensitive]
- Y10T 24/2532 . . having interlocking surface with continuous cross section
- Y10T 24/2534 . . . Opposed interlocking surface having dissimilar cross section
- Y10T 24/2536 . . having interlocking surface formed from single member with varying cross section
- Y10T 24/2538 . . . Opposed surface having dissimilar cross section
- Y10T 24/2539 . . Interlocking surface constructed from plural elements in series
- Y10T 24/2541 . . . having either noninterlocking element in, interrupted, or unequal length series
- Y10T 24/2543 . . . with element structural feature unrelated to interlocking or securing portion
- Y10T 24/2545 . . . Dissimilar opposed elements
- Y10T 24/2546 . . . Wire element
- Y10T 24/2548 . . . Preattached to mounting cord
- Y10T 24/255 . . . having interlocking portion with specific shape
- Y10T 24/2552 . . . . including symmetrical formations on opposite walls for engaging mating elements
- Y10T 24/2554 . . . . including complementary formations on opposite walls for engaging mating elements
- Y10T 24/2555 . . . . . Mating elements having reversed orientation of formations
- Y10T 24/2557 . . . having mounting portion with specific shape or structure
- Y10T 24/2559 . . . . including embracing jaws
- Y10T 24/2561 . . Slider having specific configuration, construction, adaptation, or material
- Y10T 24/2563 . . . including relatively movable spaced wings [i.e., restraining walls]
- Y10T 24/2564 . . . including converging channel and relatively movable separator island
- Y10T 24/2566 . . . including position locking-means attached thereto

Y10T 24/2568	....	Protrusion on pull tab directly engaging interlocking surfaces
Y10T 24/257	....	having surface engaging element shifted by reorientation of pull tab
Y10T 24/2571	.....	Resilient or spring biased element
Y10T 24/2573	.....	Selectively shifted by either of two pull tabs
Y10T 24/2575	.....	with relatively movable link
Y10T 24/2577	.....	Biased by distinct spring
Y10T 24/2579	.....	having aperture cooperating with guide post
Y10T 24/258	...	including means preventing bunching of structure-to-be-secured or stringer
Y10T 24/2582	...	having specific contour or arrangement of converging channel, separator island, or wing
Y10T 24/2584	....	Spaced segments of each wall of channel supported by different wings
Y10T 24/2586	...	including pull tab attaching means
Y10T 24/2588	...	including means for attaching components of slider together
Y10T 24/2589	...	with ornamental slider
Y10T 24/2591	..	with means for concealing surfaces
Y10T 24/2593	..	including complementary, aligning means attached to ends of interlocking surfaces
Y10T 24/2595	...	having specific mounting connection or reinforcing structure at connection
Y10T 24/2596	..	including means attaching interlocking surfaces together
Y10T 24/2598	..	including means for obstructing movement of slider
Y10T 24/26	.	Slit closing means including guides on opposite edges of slit and slidable bridging component
Y10T 24/262	..	with hand-actuated lever for shifting bridging component
Y10T 24/264	..	including structure linking and allowing variations in separation between opposite-guide-contacting portions of component
Y10T 24/266	..	having bridging components attached in series along carrying element
Y10T 24/268	..	having separate, independently movable, bridging components
Y10T 24/27	.	including readily dissociable fastener having numerous, protruding, unitary filaments randomly interlocking with, and simultaneously moving towards, mating structure [e.g., hook-loop type fastener]
Y10T 24/2708	..	Combined with diverse fastener
Y10T 24/2717	..	with distinct structure for sealing securement joint
Y10T 24/2725	..	with feature facilitating, enhancing, or causing attachment of filament mounting surface to support therefor
Y10T 24/2733	..	having filaments formed from continuous element interwoven or knitted into distinct, mounting surface fabric
Y10T 24/2742	..	having filaments of varied shape or size on same mounting surface
Y10T 24/275	..	with feature facilitating or causing attachment of filaments to mounting surface
Y10T 24/2758	...	Thermal or adhesive
Y10T 24/2767	..	having several, repeating, interlocking formations along length of filaments
Y10T 24/2775	..	having opposed structure formed from distinct filaments of diverse shape to those mating therewith
Y10T 24/2783	..	having filaments constructed from coated, laminated, or composite material

Y10T 24/2792	..	having mounting surface and filaments constructed from common piece of material
Y10T 24/28	.	Freight container to freight container fastener
Y10T 24/29	.	Drum or can spacer fastener
Y10T 24/30	.	Trim molding fastener
Y10T 24/301	..	having externally threaded attaching means
Y10T 24/302	...	and laterally extending biasing appendage
Y10T 24/303	..	having laterally extending biasing appendage
Y10T 24/304	..	Resilient metal type
Y10T 24/306	...	Strip formed
Y10T 24/307	...	Sheet metal formed
Y10T 24/308	...	Wire formed
Y10T 24/309	..	Plastic type
Y10T 24/31	.	Plural fasteners having intermediate flaccid connector
Y10T 24/312	..	Chain connector
Y10T 24/314	..	Elastic connector
Y10T 24/316	...	Strap connector
Y10T 24/318	..	Strap connector
Y10T 24/32	.	having magnetic fastener
Y10T 24/33	.	having adhesive fastener
Y10T 24/34	.	Combined diverse multipart fasteners
Y10T 24/3401	..	Buckle
Y10T 24/3403	...	and buckles
Y10T 24/3404	....	having separate material adjustment means
Y10T 24/3405	....	having separate disconnect means
Y10T 24/3407	.....	Pivotal lever type
Y10T 24/3408	....	having disconnect structure
Y10T 24/3409	.....	Resilient cooperating means
Y10T 24/3411	....	and pin
Y10T 24/3412	....	Crossed belt accommodating
Y10T 24/3413	...	and clasp
Y10T 24/3415	...	and pin
Y10T 24/3416	...	and hook
Y10T 24/3417	....	having disconnect means
Y10T 24/3419	....	having penetrating prong
Y10T 24/342	....	Buckle having plural receiving slots
Y10T 24/3421	...	including a button fastening element
Y10T 24/3423	...	and separable fastening means for attached fastener
Y10T 24/3424	....	Snap fastener
Y10T 24/3425	...	having roller means
Y10T 24/3427	..	Clasp

Y10T 24/3428	...	having pivoted members
Y10T 24/3429	....	Cam type member
Y10T 24/3431	....	Plural clasps
Y10T 24/3432	.....	and toggle operator
Y10T 24/3433	.....	Spring biased
Y10T 24/3435	.....	Coil
Y10T 24/3436	.....	and cam
Y10T 24/3437	....	Coil spring biased
Y10T 24/3439	...	Plural clasps
Y10T 24/344	....	Resilient type clasp
Y10T 24/3441	.....	and cam
Y10T 24/3443	.....	Spring biased jaw
Y10T 24/3444	.....	Circular work engageable
Y10T 24/3445	.....	and pin attachment
Y10T 24/3447	.....	and disconnect means
Y10T 24/3448	...	including a button fastening element
Y10T 24/3449	...	and hook
Y10T 24/3451	....	having intermediate connector allowing movement
Y10T 24/3452	.....	and adjustment means
Y10T 24/3453	....	having gripping configuration on clasp jaw
Y10T 24/3455	.....	Penetrating type
Y10T 24/3456	....	having cam
Y10T 24/3457	....	having separable jaws
Y10T 24/3459	...	and penetrating prong
Y10T 24/346	...	and pin
Y10T 24/3461	....	having separate pin loss prevention means
Y10T 24/3463	.....	Pin coextensive, coplanar, and contiguous with clasp jaw
Y10T 24/3464	....	Pin coextensive, coplanar, and contiguous with clasp jaw
Y10T 24/3465	....	Pin forms part of clasp jaw
Y10T 24/3467	..	Pin
Y10T 24/3468	...	and pin
Y10T 24/3469	....	and disconnect means
Y10T 24/3471	.....	Hook and eye type
Y10T 24/3472	....	and hook
Y10T 24/3473	.....	having connector allowing movement
Y10T 24/3475	....	having intermediate connector allowing movement
Y10T 24/3476	...	and hook
Y10T 24/3477	....	having intermediate connector allowing movement
Y10T 24/3479	.....	and adjustment means
Y10T 24/348	....	Hook having locking means

Y10T 24/3481	...	including a button fastening element
Y10T 24/3483	...	and penetrating prong
Y10T 24/3484	..	Hook
Y10T 24/3485	...	and hook
Y10T 24/3487	....	having biasing spring
Y10T 24/3488	....	Separately connected
Y10T 24/3489	....	having securing means
Y10T 24/3491	.....	Sliding
Y10T 24/3492	.....	Snap type
Y10T 24/3493	.....	Pivoted
Y10T 24/3495	...	having penetrating prong
Y10T 24/3496	...	including a button fastening element
Y10T 24/3497	..	Button fastening element including another fastener element
Y10T 24/3499	..	Penetrating prong
Y10T 24/35	.	Interchangeable button loop and pin
Y10T 24/36	.	Button with fastener
Y10T 24/3602	..	Loss-preventing devices
Y10T 24/3604	..	Adjustable
Y10T 24/3606	..	Cloth shanks and covers
Y10T 24/3609	..	Multiple attachment
Y10T 24/3611	..	Deflecting prong or rivet
Y10T 24/3613	...	Anvil or plate
Y10T 24/3615	...	Integral
Y10T 24/3617	..	Hinged leaf
Y10T 24/3619	...	Axially rotating
Y10T 24/3621	...	Double
Y10T 24/3623	...	Sliding
Y10T 24/3626	..	Sliding bar
Y10T 24/3628	..	Integral or rigid stud
Y10T 24/363	...	Bent sheet metal [integral]
Y10T 24/3632	..	Link
Y10T 24/3634	...	Integral rubber button, extendable shank
Y10T 24/3636	...	Extendably connected
Y10T 24/3638	...	Pivoted leaf
Y10T 24/364	...	Releasably locked
Y10T 24/3643	...	French cuff
Y10T 24/3645	...	Tufting
Y10T 24/3647	...	Integral piece
Y10T 24/3649	..	Pin attached
Y10T 24/3651	..	Separable

Y10T 24/3653	...	Screw
Y10T 24/3655	...	Spring
Y10T 24/3657	....	Resilient head
Y10T 24/366	....	Resilient socket
Y10T 24/3662	....	Rotating head
Y10T 24/3664	....	with operating devices
Y10T 24/3666	..	Separate thread bar
Y10T 24/3668	..	Spiral fastener
Y10T 24/367	..	Covers
Y10T 24/3672	...	Metal or plastic caps
Y10T 24/3674	..	Pads
Y10T 24/3677	..	Flexible button
Y10T 24/3679	..	Swivel button
Y10T 24/3681	..	Tufting type
Y10T 24/3683	..	Button with cavity for friction grip fastener
Y10T 24/3685	..	Button with shank for friction grip fastener
Y10T 24/3687	..	Heat or adhesive secured type
Y10T 24/3689	..	Thread or wire through apertured button
Y10T 24/3691	..	Eye shank type button
Y10T 24/3694	..	Ornamental type
Y10T 24/3696	..	for cuff or collar
Y10T 24/3698	..	Fabric embracing
Y10T 24/37	.	Drawstring, laced-fastener, or separate essential cooperating device therefor
Y10T 24/3703	..	Includes separate device for holding drawn portion of lacing
Y10T 24/3705	...	Device engages tie in lacing
Y10T 24/3708	....	and fully covers tie
Y10T 24/3711	...	Device engages element or formation on lacing
Y10T 24/3713	...	having relatively movable holding components or surfaces
Y10T 24/3716	....	with pivotal connection therebetween
Y10T 24/3718	....	with integral resilient linking structure therebetween
Y10T 24/3721	.....	formed from wire
Y10T 24/3724	...	having lacing wound thereabout or wedged therein
Y10T 24/3726	..	with holding means fixedly mounted on lacing
Y10T 24/3729	...	and forming lacing tips
Y10T 24/3732	..	Includes lacing holding structure within directing means therefor
Y10T 24/3734	..	having diverse shaped directing means for lacing
Y10T 24/3737	..	having lacing directing means in particular pattern
Y10T 24/3739	..	Includes lacing guiding roller within directing means
Y10T 24/3742	..	having eyelet type directing means
Y10T 24/3745	...	with permanently deformed mounting structure

Y10T 24/3747	....	Mounting structure formed from different material than directing passage
Y10T 24/375	..	having hook shaped directing means
Y10T 24/3753	...	and movable component or surface for closing throat
Y10T 24/3755	...	Mounted by structure allowing bodily movement thereof
Y10T 24/3758	...	formed from wire
Y10T 24/3761	...	with mounting structure formed from different material
Y10T 24/3763	...	with permanently deformed mounting structure
Y10T 24/3766	....	Expanding stud
Y10T 24/3768	..	having loop or sleeve shaped directing means
Y10T 24/3771	...	Entirely formed from flaccid material
Y10T 24/3774	...	Mounted by structure allowing bodily movement thereof
Y10T 24/3776	...	formed from wire
Y10T 24/3779	...	with permanently deformed mounting structure
Y10T 24/3782	....	Loop or sleeve closed when mounted
Y10T 24/3784	....	Expanding stud
Y10T 24/3787	..	having elastic segment in lacing
Y10T 24/3789	..	having means covering tip of lacing
Y10T 24/3792	...	Tasseled
Y10T 24/3795	...	with plural components
Y10T 24/3797	...	with permanently deformed mounting structure
Y10T 24/38	.	Strap cable or pipe button
Y10T 24/39	.	Cord and rope holders
Y10T 24/3902	..	Chain
Y10T 24/3904	...	Bead chain fasteners
Y10T 24/3907	..	Sheathed strand
Y10T 24/3909	..	Plural-strand cord or rope
Y10T 24/3911	..	Friction disk
Y10T 24/3913	..	Knot engaging
Y10T 24/3916	..	One-piece
Y10T 24/3918	...	Wedge slot
Y10T 24/392	...	Wire
Y10T 24/3922	....	Cord runs through center of coil
Y10T 24/3924	...	Sheet material
Y10T 24/3927	...	Slack adjuster
Y10T 24/3929	...	Rubber
Y10T 24/3931	...	Wire
Y10T 24/3933	...	Swagged, deformable
Y10T 24/3936	..	Pivoted part
Y10T 24/3938	...	Lever tension
Y10T 24/394	...	Cam lever

Y10T 24/3942	....	Laterally shifted rope
Y10T 24/3944	....	Cam engaging or disengaging
Y10T 24/3947	....	Fixed and movable jaws, movable jaw pulled
Y10T 24/3949	....	Link-connected parallel jaws
Y10T 24/3951	....	Dual cam
Y10T 24/3953	...	Pivotal means with plate aperture
Y10T 24/3956	...	Jaws locked together by cam, wedge, lever, or screw
Y10T 24/3958	..	Screw clamp
Y10T 24/396	...	Screw clamp with snubber
Y10T 24/3962	...	Tangential bolt
Y10T 24/3964	...	J-shaped bolt
Y10T 24/3967	...	Bolt perpendicular to cable axis
Y10T 24/3969	..	Sliding part or wedge
Y10T 24/3971	...	Rope looped about movable member
Y10T 24/3973	...	Rope clamped between cone and socket
Y10T 24/3976	...	Sliding ball
Y10T 24/3978	...	Screw actuated
Y10T 24/398	..	Bendable, ductible
Y10T 24/3982	..	Safety release
Y10T 24/3984	..	Alignable aperture and spring pressed moving element
Y10T 24/3987	..	Loop, adjustable
Y10T 24/3989	..	Snubbers, cleats by dielectric loss
Y10T 24/3991	..	Loop engaging
Y10T 24/3993	..	Ball or roller
Y10T 24/3996	..	Sliding wedge
Y10T 24/3998	..	Helical preform
Y10T 24/40	.	Buckles
Y10T 24/4002	..	Harness
Y10T 24/4005	...	Combined buckles and snap hooks
Y10T 24/4007	...	Lock
Y10T 24/4009	....	Key
Y10T 24/4012	...	Clamping
Y10T 24/4014	....	One-piece
Y10T 24/4016	....	Pivoted part or lever
Y10T 24/4019	....	Sliding part or wedge
Y10T 24/4021	...	Cross bails
Y10T 24/4023	....	Pivoted stud plate
Y10T 24/4026	....	Rigid stud
Y10T 24/4028	...	Penetrating tongue
Y10T 24/403	....	Guarded



Y10T 24/4033	....	One-piece
Y10T 24/4035	....	Multiple
Y10T 24/4037	....	Pivoted
Y10T 24/404	.....	Lever actuated
Y10T 24/4042	.....	Stud
Y10T 24/4044	....	Sliding part or wedge
Y10T 24/4047	...	Strap loops and attaching devices
Y10T 24/4049	...	Loop shields
Y10T 24/4051	..	Garment shielded
Y10T 24/4053	..	Combined pressure bar and guard
Y10T 24/4056	...	Hook attached
Y10T 24/4058	..	Penetrating prong
Y10T 24/406	...	One-piece
Y10T 24/4063	....	Hook attached
Y10T 24/4065	...	Pivoted
Y10T 24/4067	....	Hook attached
Y10T 24/407	...	Slide
Y10T 24/4072	..	Pivoted lever
Y10T 24/4074	...	Hook attached
Y10T 24/4077	...	Looped strap
Y10T 24/4079	..	Sliding part of wedge
Y10T 24/4081	...	Hook attached
Y10T 24/4084	...	Looped strap
Y10T 24/4086	..	Looped strap
Y10T 24/4088	..	One-piece
Y10T 24/4091	...	Hook attached
Y10T 24/4093	...	Looped strap
Y10T 24/4095	..	Fabric covered
Y10T 24/4098	..	Ornamental and/or object supported
Y10T 24/41	.	Pierced earring fastener
Y10T 24/42	.	Independent, headed, aperture pass-through fastener
Y10T 24/43	.	Fastener with revolving component wrapping structure-to-be-secured about fastener
Y10T 24/44	.	Clasp, clip, support-clamp, or required component thereof
Y10T 24/44009	..	Gripping member adapted for tool actuation or release
Y10T 24/44017	..	with specific mounting means for attaching to rigid or semirigid supporting structure or structure-to-be-secured
Y10T 24/44026	...	for cooperating with aperture in supporting structure or structure-to-be-secured
Y10T 24/44034	..	Dissociable gripping members
Y10T 24/44043	...	Channel and inserted bar
Y10T 24/44051	....	having operator or locking means

Y10T 24/4406	....	Resilient channel or bar
Y10T 24/44068	..	having gripping member actuated by fluid force
Y10T 24/44077	..	having inserted and receiving interlocking members connected by bendable, nonbiasing strap
Y10T 24/44085	...	Discrete flaccid strap
Y10T 24/44094	....	with distinct means for preventing separation of members
Y10T 24/44103	.....	Slidably mounted
Y10T 24/44111	....	with separate flaccid flap or pocket for protecting structure-to-be-secured
Y10T 24/4412	....	with separate, cavity-blocking gate on receiving member
Y10T 24/44128	....	Resilient inserted or receiving member
Y10T 24/44137	.....	Inserted or receiving member substantially covered or coated for protection or to promote gripping
Y10T 24/44145	.....	Resilient inserted member
Y10T 24/44154	.....	having engaging face formed from nonmetallic material
Y10T 24/44162	.....	having head and neck type engaging face
Y10T 24/44171	.....	having internal supporting or reinforcing element
Y10T 24/44179	.....	Circular head or neck
Y10T 24/44188	....	having wedge shaped, inserted and receiving members
Y10T 24/44197	....	with specific means for attaching to flaccid strap or supporting strap
Y10T 24/44205	.....	On the inserted member
Y10T 24/44214	....	having necked button sliding along length of closed, variable width loop
Y10T 24/44222	..	having flaccid gripping member
Y10T 24/44231	...	formed from elastic material
Y10T 24/44239	..	Encircling gripping member including semirigid band and operator for tightening
Y10T 24/44248	..	Encircling gripping member including semirigid band and means for adjusting girth
Y10T 24/44256	..	with specifically shaped, nongripping, rigid structure for connecting independently operable clasps, clips, or support-clamps
Y10T 24/44265	..	Gripping member face integral with or rigidly affixed to screw-driving portion
Y10T 24/44274	..	having either discrete flaccid or thin, nonbiasing, integral, connecting hinge
Y10T 24/44282	..	having equally spaced or continual gripping faces revolving about central axis
Y10T 24/44291	..	including pivoted gripping member
Y10T 24/44299	...	Pivoted member also slides
Y10T 24/44308	....	Tapered face
Y10T 24/44316	...	Pivoting gripping member either supports or coacts with sliding engaging face
Y10T 24/44325	...	having three or more pivotally connected gripping members
Y10T 24/44333	...	having toggle operator for moving
Y10T 24/44342	...	having rigid linking arm pivotally connected to each gripping member
Y10T 24/4435	....	with extended lever portion
Y10T 24/44359	.....	having lever end modified for attachment to support
Y10T 24/44368	...	Pivoted gripping member applies camming force
Y10T 24/44376	...	Spring or resiliently biased about pivot

Y10T 24/44385	....	Distinct spring
Y10T 24/44393	.....	Attached solely by spring
Y10T 24/44402	.....	with operator for moving pivoted member
Y10T 24/4441	.....	Camming or wedging element
Y10T 24/44419	.....	Pivoted or rotated element
Y10T 24/44427	.....	with position locking-means for gripping members
Y10T 24/44436	.....	including pivoted arm
Y10T 24/44444	.....	having specific surface material or irregularity on or along engaging face
Y10T 24/44453	.....	having specific handle structure
Y10T 24/44462	.....	Coil spring
Y10T 24/4447	.....	having coil portion coaxial or parallel with pivotal axis
Y10T 24/44479	.....	Flat or leaf spring
Y10T 24/44487	...	Closed by gravity or weight of structure-to-be-secured
Y10T 24/44496	...	with operator means for moving pivoted member
Y10T 24/44504	....	Threaded cylindrical rod and mating cavity
Y10T 24/44513	....	Camming or wedging element
Y10T 24/44521	.....	Pivoted or rotated element
Y10T 24/4453	...	with position locking-means for gripping members
Y10T 24/44538	....	Integral locking-means
Y10T 24/44547	...	having inserted and receiving interlocking engaging faces
Y10T 24/44556	....	Resilient gripping member
Y10T 24/44564	...	having specific surface material or irregularity on or along engaging face
Y10T 24/44573	..	including track or way guided and retained gripping member
Y10T 24/44581	...	Biased by distinct spring
Y10T 24/4459	...	with operator for moving guided member
Y10T 24/44598	....	Threaded cylindrical rod and mating cavity
Y10T 24/44607	...	Track or way oblique to path of gripping member
Y10T 24/44615	...	with position locking-means for gripping members
Y10T 24/44624	....	Integral locking-means
Y10T 24/44632	...	with specific mounting means for attaching to flaccid supporting structure or structure-to-be-secured
Y10T 24/44641	..	having gripping member formed from, biased by, or mounted on resilient member
Y10T 24/4465	...	Integrally combined, independently operable, diverse clasps, clips, or support-clamps
Y10T 24/44658	...	with specific means for mounting to flaccid supporting structure or structure-to-be-secured
Y10T 24/44667	....	Mounting means made entirely from integral wire portion of resilient gripping member
Y10T 24/44675	.....	Wire coiled about flaccid supporting structure
Y10T 24/44684	...	with operator for moving biased engaging face
Y10T 24/44692	....	Camming or wedging element

Y10T 24/44701	.....	Encircling sleeve type element
Y10T 24/44709	.....	Pivoted or rotated element
Y10T 24/44718	.....	Element pivots or rotates in plane parallel to plane bisecting opposed engaging faces
Y10T 24/44726	.....	Elongated element with pivot between cam and handle portions
Y10T 24/44735	.....	for moving engaging face of U-shaped gripping member
Y10T 24/44744	...	with position locking-means for engaging faces
Y10T 24/44752	....	Integral locking-means
Y10T 24/44761	....	Pivoted lock member
Y10T 24/44769	...	Opposed engaging faces on gripping member formed from single piece of resilient material
Y10T 24/44778	....	Piece totally forms clasp, clip, or support-clamp and has shaped, wirelike, or bandlike configuration with uniform cross section throughout its length
Y10T 24/44786	.....	Opposed faces located in and bias towards common plane in nonuse position
Y10T 24/44795	.....	Resilient gripping member having tightly twisted portion
Y10T 24/44803	.....	Resilient gripping member having coiled portion
Y10T 24/44812	.....	Convolutions of coil form faces
Y10T 24/44821	.....	Relatively movable segments of resilient gripping member contact and cross in nonuse position
Y10T 24/44829	.....	Segments form opposed engaging faces
Y10T 24/44838	.....	having specific handle structure
Y10T 24/44846	.....	having specific handle structure
Y10T 24/44855	.....	Terminal end of resilient member having engagement or disengagement enhancing structural modifications
Y10T 24/44863	.....	having specific surface irregularity on or along engaging face
Y10T 24/44872	....	having specific handle structure
Y10T 24/4488	.....	Movably attached to gripping member
Y10T 24/44889	....	Interlocking faces
Y10T 24/44897	....	with reinforcing member
Y10T 24/44906	....	having specific surface irregularity on or along engaging face
Y10T 24/44915	.....	Corrugated or toothed face
Y10T 24/44923	....	Clasp, clip, or support-clamp cut or shaped from a single sheet of resilient, uniformly thick, planar material
Y10T 24/44932	...	having specific surface material or irregularity on or along engaging face
Y10T 24/4494	...	having specific handle structure
Y10T 24/44949	...	including resilient biasing wire
Y10T 24/44957	....	Coiled wire
Y10T 24/44966	..	having gripping member shifted by operator
Y10T 24/44974	...	Threaded cylindrical rod and mating cavity
Y10T 24/44983	..	formed from single rigid piece of material
Y10T 24/44991	...	having specific surface irregularity on or along engaging face

Y10T 24/45	. Separable-fastener or required component thereof [e.g., projection and cavity to complete interlock]
Y10T 24/45005	.. with third detached member completing interlock [e.g., hook type]
Y10T 24/4501	... Quick connect or release [e.g., spring and detent]
Y10T 24/45016	... for jewelry
Y10T 24/45021	... including eyelet [e.g., shoes]
Y10T 24/45026	... for key holder
Y10T 24/45031	... for tire chain, strap, etc. [e.g., rotatable or sliding spring gate]
Y10T 24/45037	... for apparel and related accessories
Y10T 24/45042	.... Button, button related
Y10T 24/45047	..... Snap [e.g., key hole type]
Y10T 24/45052	.... Post and receiver [e.g., pin and slot]
Y10T 24/45058	.... Hook [e.g., within cavity]
Y10T 24/45063	.... Belt, strap, etc. [e.g., buckle or snap fastener]
Y10T 24/45068	.... Glove
Y10T 24/45073	.... Purse, wallet, etc.
Y10T 24/45079	... Belt, strap, harness, etc.
Y10T 24/45084	.... for safety belt buckle, strap, harness, etc.
Y10T 24/45089	... Sliding or rotating element
Y10T 24/45094	.... Element having key slot
Y10T 24/45099	... Resilient element [e.g., snap type]
Y10T 24/45105	.... for upholstery, panel, trim strip, etc. [e.g., spring biased]
Y10T 24/4511	.... Link with pivoted gate
Y10T 24/45115	... Hook
Y10T 24/4512	.... Snap with spring bias [e.g., gate]
Y10T 24/45126	.... for connecting chains [e.g., opposed pivoted hook]
Y10T 24/45131	.... for heavy load bearing device [e.g., chain, rope, cable, etc.]
Y10T 24/45136	..... Haim, harness, whiffletree, rein, etc.
Y10T 24/45141	... for chain, rope, cable, etc.
Y10T 24/45147	.... Coupler with sliding socket to complete interlock
Y10T 24/45152	.. Each mating member having similarly shaped, sized, and operated interlocking or intermeshable face
Y10T 24/45157	... Zipper-type [e.g., slider]
Y10T 24/45162	.... for garment [e.g., with ribs and grooves interlocking elements]
Y10T 24/45168	.... for container [e.g., bag]
Y10T 24/45173	... Resilient element
Y10T 24/45178	.... Snap [e.g., identical elements]
Y10T 24/45183	... Clasp [e.g., spring type]
Y10T 24/45188	.... for jewelry [e.g., buckle type]
Y10T 24/45194	.... for belt or strap

Y10T 24/45199	...	Hook
Y10T 24/45204	....	for belt, strap, etc. [e.g., with pivoted gate locking member]
Y10T 24/45209	....	for apparel
Y10T 24/45215	...	Slot and tab or tongue
Y10T 24/4522	...	Sliding or rotating element
Y10T 24/45225	..	including member having distinct formations and mating member selectively interlocking therewith
Y10T 24/4523	...	Hook
Y10T 24/45236	....	Multiple catch [e.g., with pivoted gate]
Y10T 24/45241	...	Slot and tab or tongue
Y10T 24/45246	....	having teeth or serrations [e.g., sliding with respect to each other]
Y10T 24/45251	...	Resilient element [e.g., with spring]
Y10T 24/45257	....	Snap with cavity
Y10T 24/45262	...	Pin, post and receiver
Y10T 24/45267	...	Notched clasp [e.g., with receiving slot]
Y10T 24/45272	...	Projection passes through cavity then moves toward noninserted portion of its member to complete interlock [e.g., snap hook]
Y10T 24/45277	....	Entire projection member forms loop or ring when interlocked
Y10T 24/45283	.....	Includes slidable gate closing entrance throat
Y10T 24/45288	....	Hook type projection member
Y10T 24/45293	.....	Plural hooks entering opposite sides of same cavity
Y10T 24/45298	.....	Hooks formed solely from wire
Y10T 24/45304	.....	Noninserted portion of projection member includes movably connected gate for closing access throat
Y10T 24/45309	.....	Threaded gate
Y10T 24/45314	.....	Revolvably mounted disc shaped gate
Y10T 24/45319	.....	Pivotally connected gate
Y10T 24/45325	.....	Gate swings transversely to plane of hook
Y10T 24/4533	.....	Gate also slides relative to pivot
Y10T 24/45335	.....	having means biasing gate about pivot
Y10T 24/4534	.....	and position locking-means for gate
Y10T 24/45346	.....	Includes distinct biasing spring
Y10T 24/45351	.....	Coil type spring
Y10T 24/45356	.....	Coiled about pivotal axis of gate
Y10T 24/45361	.....	having position locking-means for gate
Y10T 24/45366	.....	Locking-means pivotally connected
Y10T 24/45372	.....	Locking-means slidably mounted
Y10T 24/45377	.....	Gate closes when structure-to-be-secured is tensioned
Y10T 24/45382	.....	Track or way guided gate
Y10T 24/45387	.....	having means biasing gate
Y10T 24/45393	.....	Guide of gate encircles shank

Y10T 24/45398	.....	Cavity in shank forms track or way
Y10T 24/45403	.....	with position locking-means for gate
Y10T 24/45408	.....	Resilient, self-biased gate
Y10T 24/45414	.....	with position locking-means for gate
Y10T 24/45419	.....	Gate and hook formed from plastic
Y10T 24/45424	.....	Gate and hook formed solely from wire
Y10T 24/45429	.....	Gate and hook formed from single piece of sheet metal
Y10T 24/45435	.....	Projection pivotally attached to shank or mounting structure
Y10T 24/4544	.....	Projection slidably mounted to shank or mounting structure
Y10T 24/45445	.....	Projection self-biased towards shank or mounting structure
Y10T 24/4545	.....	and formed solely from wire
Y10T 24/45455	.....	Cooperating with relatively stationary wire gate
Y10T 24/45461	...	Interlocking portion actuated or released responsive to preselected condition [e.g., heat, pressure]
Y10T 24/45466	...	having electric or fluid powered, actuation or release, of interlock
Y10T 24/45471	...	Projection having movable connection between components thereof or variable configuration
Y10T 24/45476	....	with additional, similar projection for engaging different cavity
Y10T 24/45482	....	and operator therefor
Y10T 24/45487	.....	including camming or wedging element on projection member
Y10T 24/45492	.....	Pivotally attached element
Y10T 24/45497	....	including pivotal connection between projection components
Y10T 24/45503	.....	Component slides relative to connection
Y10T 24/45508	.....	and spring or resilient extension biasing about pivot
Y10T 24/45513	....	including slidably guided connection between nonself-biasing projection components
Y10T 24/45518	.....	and distinct spring biasing component
Y10T 24/45524	....	including resiliently biased projection component or surface segment
Y10T 24/45529	.....	Requiring manual force applied against bias to interlock or disengage
Y10T 24/45534	.....	having connected leading edge and separated trailing arms
Y10T 24/45539	.....	Cooperating with cavity having side walls and axially biased component capping end
Y10T 24/45545	.....	forming total external surface of projection
Y10T 24/4555	.....	and encircling hollow central area
Y10T 24/45555	.....	having separate mounting means inserted into area
Y10T 24/4556	.....	Plastic deformation of means or surface required for mounting
Y10T 24/45565	.....	having separate mounting means encompassing cross section of projection
Y10T 24/45571	.....	having dome-shaped head and expansion slit along side
Y10T 24/45576	.....	and connected surface at tip of head
Y10T 24/45581	.....	having inserted end formed by oppositely biased surface segments

Y10T 24/45586	.....	Constructed from wire
Y10T 24/45592	.....	having both resiliently biased and rigid components forming external surface of projection
Y10T 24/45597	...	Projection member including noninserted spring for engaging and pushing against receiving member
Y10T 24/45602	...	Receiving member includes either movable connection between interlocking components or variable configuration cavity
Y10T 24/45607	....	with additional cavity for engaging different projection
Y10T 24/45613	.....	having common means actuating or releasing interlocking components or surfaces
Y10T 24/45618	.....	and interlocking with independently associated or dissociated projection members
Y10T 24/45623	....	and operator therefor
Y10T 24/45628	.....	for plural, oppositely shifting, similar interlocking components or segments
Y10T 24/45634	.....	Operator includes camming or wedging element
Y10T 24/45639	.....	including pivotally connected element on receiving member
Y10T 24/45644	.....	for shifting pivotally connected interlocking component
Y10T 24/45649	.....	Element and component pivot about same axis
Y10T 24/45654	.....	for shifting slidably connected and guided, nonself-biasing interlocking component
Y10T 24/4566	.....	including slidably connected and guided element on receiving member
Y10T 24/45665	.....	for shifting pivotally connected interlocking component
Y10T 24/4567	.....	for shifting slidably connected and guided, nonself-biasing, interlocking component
Y10T 24/45675	....	having pivotally connected interlocking component
Y10T 24/45681	.....	Blocking removal of formation on projection from complementary formation on side wall of cavity
Y10T 24/45686	.....	and position locking-means therefor
Y10T 24/45691	.....	and relatively movable handle therefor
Y10T 24/45696	.....	Requiring manual force thereon to interlock or disengage
Y10T 24/45702	.....	Plural, oppositely shifting, similar interlocking components
Y10T 24/45707	.....	having aperture therein alignable with parallel access opening
Y10T 24/45712	.....	having interlocking portion thereof housed continuously within cavity
Y10T 24/45717	....	having cavity with side walls and axially biased component capping end
Y10T 24/45723	....	having slidably connected, nonself-biasing interlocking component
Y10T 24/45728	.....	Blocking removal of formation on projection from complementary formation on side wall of cavity
Y10T 24/45733	.....	and position locking-means therefor
Y10T 24/45738	.....	and relatively movable handle therefor
Y10T 24/45743	.....	Requiring manual force thereon to interlock or disengage
Y10T 24/45749	.....	Plural, oppositely shifting, similar interlocking components



Y10T 24/45754	.....	having closed aperture therethrough alignable with parallel access opening
Y10T 24/45759	....	having flaccid component defining access opening of cavity
Y10T 24/45764	.....	Component formed solely by flaccid cord
Y10T 24/4577	.....	with nonflaccid component
Y10T 24/45775	....	having resiliently biased interlocking component or segment
Y10T 24/4578	.....	Cavity or projection rotates about axis of cavity to dissociate
Y10T 24/45785	.....	Requiring manual force applied against bias to interlock or disengage
Y10T 24/45791	.....	and partially blocking separate, nonresilient access opening of cavity
Y10T 24/45796	.....	and closed elongated access opening for guiding transverse projection travel after insertion
Y10T 24/45801	.....	Nonresilient walls define opening
Y10T 24/45806	.....	formed from wire
Y10T 24/45812	.....	and access opening with gapped perimeter for allowing movement of noninserted projection support therepast
Y10T 24/45817	.....	Cavity constructed solely from wire
Y10T 24/45822	.....	Partially blocking separate, nonresilient, access opening of cavity
Y10T 24/45827	.....	and bodily shifted into or out of interlock location by manual force thereon
Y10T 24/45832	.....	formed from wire
Y10T 24/45838	.....	having curved or bent engaging section conforming to contour of projection
Y10T 24/45843	.....	Similar, distinct sections
Y10T 24/45848	.....	having distinct sections engaging projection at spaced points
Y10T 24/45853	.....	including separate, nonprojection-engaging spring for biasing
Y10T 24/45859	.....	Biased component or segment entirely formed from wire
Y10T 24/45864	.....	having portion of cavity deformed during mounting
Y10T 24/45869	.....	and cooperating with separate mounting component
Y10T 24/45874	.....	having axially extending expansion slit along side of cavity
Y10T 24/4588	...	Means for mounting projection or cavity portion
Y10T 24/45885	....	Allows bodily movement facilitating interlock
Y10T 24/4589	.....	About pivotal connection
Y10T 24/45895	.....	Includes resilient component separate from portion
Y10T 24/45901	....	Allows relocation of portion
Y10T 24/45906	....	having component of means permanently deformed during mounting operation
Y10T 24/45911	.....	and formed from or fixedly attached to projection or cavity portion
Y10T 24/45916	.....	Cooperates with detached component of means
Y10T 24/45921	.....	having shape facilitating impaling of mounting surface
Y10T 24/45927	.....	and inserted into or through cavity or projection
Y10T 24/45932	.....	and encircling cavity or projection
Y10T 24/45937	....	Consisting of thermally fusible substance

Y10T 24/45942	....	having threaded formation
Y10T 24/45948	....	having specific structure for cooperating with stitching
Y10T 24/45953	....	having shape facilitating impaling of mounting surface
Y10T 24/45958	...	Plural distinct cavities or projections
Y10T 24/45963	....	Hook type
Y10T 24/45969	...	Hook-shaped projection member passing through cavity
Y10T 24/45974	....	formed from single piece of sheet metal
Y10T 24/45979	....	formed solely from wire
Y10T 24/45984	...	Cavity having specific shape
Y10T 24/4599	....	including closed elongated access opening for guiding transverse projection travel after insertion
Y10T 24/45995	....	having access opening with gapped perimeter for allowing movement of noninserted projection support therepast
Y10T 24/46	.	Pin or separate essential cooperating device therefor
Y10T 24/4602	..	with separately operable, manually releasable, nonpenetrating means for mounting [e.g., drapery hook]
Y10T 24/4604	..	having distinct guiding, holding, or protecting means for penetrated portion
Y10T 24/4605	...	Means detachable from or flaccidly connected to pin [e.g., hatpin type]
Y10T 24/4607	....	for pin having plural penetrating portions
Y10T 24/4609	....	including relatively movable guiding, holding, or protecting components or surfaces
Y10T 24/4611	.....	having operator for moving holding component or surface
Y10T 24/4613	.....	Moves pivoting holding component
Y10T 24/4614	.....	Moves slidably guided, nonself-biasing, holding component
Y10T 24/4616	.....	having pierceable [e.g., cork] or naturally resilient [e.g., rubber] surfaces
Y10T 24/4618	.....	with pivotal connection therebetween
Y10T 24/462	.....	with slidable connection between nonself-biasing components
Y10T 24/4621	.....	having resiliently biased component or surface
Y10T 24/4623	.....	Coiled about longitudinal axis of held portion
Y10T 24/4625	.....	and aperture therein alignable with another spaced aperture of means
Y10T 24/4627	.....	and nonresilient structure for guiding portion thereto
Y10T 24/4629	....	including structure for cooperating with formation [e.g., cavity] formed on penetrating portion
Y10T 24/463	...	for pin having plural penetrating portions
Y10T 24/4632	....	Each independently movable towards and into cooperation with means
Y10T 24/4634	...	including relatively movable guiding, holding, or protecting components or surfaces
Y10T 24/4636	....	with connection allowing component to revolve about axis of held penetrating portion
Y10T 24/4638	....	with pivotal connection therebetween
Y10T 24/4639	.....	having position locking means therefor
Y10T 24/4641	.....	Spring or resiliently biased

Y10T 24/4643	....	with slidable connection between nonself-biasing components
Y10T 24/4645	.....	Component slides parallel to axis of held penetrating portion
Y10T 24/4646	....	Means engages formation formed on penetrating portion
Y10T 24/4648	....	having nonresilient and resilient components
Y10T 24/465	....	Means formed from single resilient wire
Y10T 24/4652	....	Means formed from resilient sheet metal
Y10T 24/4654	...	with independent, spaced, intermediate connections, or formations [e.g., coils], about which portion or means move
Y10T 24/4655	....	Includes slidable connection
Y10T 24/4657	...	with pivotal connection between penetrating portion and means
Y10T 24/4659	....	Connection also permits sliding movement
Y10T 24/4661	....	Resiliently biased about connection
Y10T 24/4663	...	with slidable connection intermediate penetrating portion and means
Y10T 24/4664	...	having resilient bridging structure between portion and means
Y10T 24/4666	....	Means includes structure for cooperating with formation [e.g., cavity] formed on portion
Y10T 24/4668	....	and penetrating portion formed from wire
Y10T 24/467	.....	Bridging structure includes elongated nonwire element
Y10T 24/4671	.....	Wire also forms coiled bridging structure about which portion moves
Y10T 24/4673	.....	including distinct device for cooperating with coil
Y10T 24/4675	.....	having means also formed from same wire
Y10T 24/4677	..	with cavity for guiding structure-to-be-secured towards penetrating portion [e.g., stocking support]
Y10T 24/4679	..	having penetrating portion retractable or of changeable length
Y10T 24/468	..	having interconnected distinct penetrating portions
Y10T 24/4682	...	Connection allows movement therebetween
Y10T 24/4684	....	Slidable connection
Y10T 24/4686	....	Resilient connection
Y10T 24/4688	...	formed from common wire
Y10T 24/4689	....	and pointing in same direction
Y10T 24/4691	..	Penetrating portion includes relatively movable structure for resisting extraction
Y10T 24/4693	..	having specific wire penetrating portion
Y10T 24/4695	...	Wire curved or bent
Y10T 24/4696	..	having distinct head structure
Y10T 24/4698	...	Movably connected to penetrating portion
Y10T 24/47	.	Strap-end-attaching devices
Y10T 24/4709	..	Bendable sheet material
Y10T 24/4718	..	Watch pintle connected
Y10T 24/4727	..	Webbing to tube [lawn chair]
Y10T 24/4736	..	Buckle connected
Y10T 24/4745	..	End clasp

- Y10T 24/4755 . . Hook
- Y10T 24/4764 . . Ring-loop
- Y10T 24/4773 . . Cargo tiedown
- Y10T 24/4782 . . Watch strap
- Y10T 24/4791 . . Enlarged end epoxy
- Y10T 24/48 . Pivoted edge stays
- Y10T 24/49 . Fastener destructively secured by reshaping distortion force [e.g., ductile fastener]
- Y10T 24/492 . . Distorted structure having shape facilitating impaling
- Y10T 24/493 . . . and distinct fastener structure cooperating with impaled structure
- Y10T 24/495 . . . . Detached cooperating structure
- Y10T 24/497 . . . including plural impaling elements
- Y10T 24/498 . . . . Elements form single aperture [e.g., split shank type]
- Y10T 24/50 . Readily interlocking, two-part fastener requiring either destructive or tool disengagement
- Y10T 24/505 . . including additional fastener structure linking parts
- Y10T 24/51 . Hanger on portable article support for manual attachment thereof to overhead support [e.g., drapery hook]

#### **Former US Class 29 Series**

- |                   |   |
|-------------------|---|
| <b>Y10T 29/00</b> | <b>Metal working</b>                                  |
| Y10T 29/10        | . Battery-grid making                                 |
| Y10T 29/11        | . Bias [i.e. , helically] cutting of tubular stock    |
| Y10T 29/1106      | . . including orbital cutter                          |
| Y10T 29/1113      | . . . within stock support                            |
| Y10T 29/1119      | . . . with orbiting strip accumulator                 |
| Y10T 29/1125      | . . including means to inflate stock                  |
| Y10T 29/1131      | . . with means to feed stock along support or mandrel |
| Y10T 29/1138      | . . . Single means produces compound motion           |
| Y10T 29/1144      | . . . . Endless belt drive means                      |
| Y10T 29/115       | . . . Axially   |
| Y10T 29/1156      | . . . Rotatably                                       |
| Y10T 29/1163      | . . with means to rotate and store stock supply       |
| Y10T 29/1169      | . . . Axis of rotation parallel to support or mandrel |
| Y10T 29/1175      | . . with means for arcuate shift of mandrel           |
| Y10T 29/1181      | . . including means to handle produced strip or web   |
| Y10T 29/1188      | . . . with common adjustment for cutter               |
| Y10T 29/1194      | . . Method  |
| Y10T 29/12        | . Buckle making                                       |
| Y10T 29/13        | . Button-fastener making                              |
| Y10T 29/14        | . Shredding metal or metal wool article making        |

Y10T 29/142	.. Metal wool making
Y10T 29/143	... Shaving or longitudinal cutting
Y10T 29/145	.... Soap-pad making
Y10T 29/147	.. Metal wool bundling
Y10T 29/148	... Soap-pad making
Y10T 29/15	. Cord heddle making
Y10T 29/16	. Cotter-pin making
Y10T 29/17	. Crankshaft making apparatus
Y10T 29/18	. Expanded metal making
Y10T 29/185	.. by use of reciprocating perforator
Y10T 29/19	. Eyebolt or hook making
Y10T 29/20	. Fence barb making
Y10T 29/203	.. by use of reciprocating cutter or die
Y10T 29/207	.. by use of rotary cutter or die
Y10T 29/21	. Finger-ring forming or sizing
Y10T 29/22	. Fishhook making
Y10T 29/23	. Gem and jewel setting
Y10T 29/24	. Hinge making or assembling
Y10T 29/25	. Lacing-stud making
Y10T 29/26	. Paper-fastener making
Y10T 29/27	. Plow or cultivator iron making
Y10T 29/28	. Puddlers balls making
Y10T 29/29	. Railway-chair making
Y10T 29/30	. Foil or other thin sheet-metal making or treating
Y10T 29/301	.. Method
Y10T 29/302	... Clad or other composite foil or thin metal making
Y10T 29/303	... with assembling or disassembling of a pack
Y10T 29/304	.... Using transitory solid cover material
Y10T 29/305	.... including bond prevention treatment
Y10T 29/306	.... Disassembling of a pack
Y10T 29/307	... by shaving or longitudinal cutting
Y10T 29/308	... Using transitory material
Y10T 29/309	.. Means for opening or separating a pack
Y10T 29/31	. Spectacle-frame making
Y10T 29/32	. Spiral cutting of flat stock
Y10T 29/33	. Stereotype-plate finishing
Y10T 29/34	. Means for forming clench-tongue [eg, for tieband]
Y10T 29/35	. Tire upsetting, with cutting, punching, etc.
Y10T 29/36	. toothed-cylinder making apparatus [e.g. , texture working cylinder]
Y10T 29/37	. Impeller making apparatus

Y10T 29/38	. Type finishing and grooving
Y10T 29/39	. Venetian blind assembling
Y10T 29/40	. Umbrella-frame making
Y10T 29/41	. Barrier layer or semiconductor device making
Y10T 29/413	.. Barrier layer device making
Y10T 29/417	... Electrolytic device making [e.g., capacitor]
Y10T 29/42	. Piezoelectric device making
Y10T 29/43	. Electric condenser making
Y10T 29/435	.. Solid dielectric type
Y10T 29/44	. Filing
Y10T 29/442	.. of key article
Y10T 29/444	.. Continuous band type
Y10T 29/446	.. Reciprocating type
Y10T 29/448	.. File-blank stripper
Y10T 29/45	. Scale remover or preventor
Y10T 29/4506	.. for hollow workpiece
Y10T 29/4511	... Interior surface
Y10T 29/4517	.. Rolling deformation or deflection
Y10T 29/4522	... for wire or rod
Y10T 29/4528	.. with rotary head
Y10T 29/4533	.. Fluid impingement
Y10T 29/4539	... with heater
Y10T 29/4544	... Liquid jet
Y10T 29/455	... Airblast
Y10T 29/4556	.. Chainer
Y10T 29/4561	.. Scraper or scalper
Y10T 29/4567	.. Brush type
Y10T 29/4572	.. Mechanically powered operator
Y10T 29/4578	... Tack or needle type
Y10T 29/4583	... Hammer
Y10T 29/4589	... Blade or chisel
Y10T 29/4594	.. Hand tool
Y10T 29/46	. Burning in, wearing in, or oil burnishing
Y10T 29/47	. Burnishing
Y10T 29/471	.. of water laid fibrous article [e.g., paper]
Y10T 29/473	... Heated burnishing member
Y10T 29/474	.... Burnishing tool reciprocates across work surface
Y10T 29/476	.. Continuous feed
Y10T 29/477	.. of gear article
Y10T 29/479	.. by shot peening or blasting

Y10T 29/48	. Upholstered article making
Y10T 29/481	.. Method
Y10T 29/482	.. Tufting
Y10T 29/483	... with means to clench fastener
Y10T 29/484	... with means to insert guide pin or fastener
Y10T 29/486	.. Cover stretching
Y10T 29/487	.. Edge-roll forming
Y10T 29/488	.. form or holder
Y10T 29/489	... with follower
Y10T 29/49	. Method of mechanical manufacture
Y10T 29/49002	.. Electrical device making
Y10T 29/49004	... including measuring or testing of device or component part
Y10T 29/49005	... Acoustic transducer
Y10T 29/49007	... Indicating transducer
Y10T 29/49009	... Dynamoelectric machine
Y10T 29/49011	.... Commutator or slip ring assembly
Y10T 29/49012	.... Rotor
Y10T 29/49014	... Superconductor
Y10T 29/49016	... Antenna or wave energy "plumbing" making
Y10T 29/49018	.... with other electrical component
Y10T 29/4902	... Electromagnet, transformer or inductor
Y10T 29/49021	.... Magnetic recording reproducing transducer [e.g., tape head, core, etc.]
Y10T 29/49023	..... including dissassembly step
Y10T 29/49025	..... Making disc drive
Y10T 29/49027	..... Mounting preformed head/core onto other structure
Y10T 29/49028	..... Mounting multitrack head
Y10T 29/4903	..... with bonding
Y10T 29/49032	..... Fabricating head structure or component thereof
Y10T 29/49034	..... Treating to affect magnetic properties
Y10T 29/49036	..... including measuring or testing
Y10T 29/49037	..... Using reference point/surface to facilitate measuring
Y10T 29/49039	..... with dual gap materials
Y10T 29/49041	..... with significant slider/housing shaping or treating
Y10T 29/49043	..... Depositing magnetic layer or coating
Y10T 29/49044	..... Plural magnetic deposition layers
Y10T 29/49046	..... with etching or machining of magnetic material
Y10T 29/49048	..... Machining magnetic material [e.g., grinding, etching, polishing]
Y10T 29/4905	..... Employing workholding means
Y10T 29/49052	..... by etching
Y10T 29/49053	..... Multitrack heads having integral holding means

Y10T 29/49055	.....	with bond/laminating preformed parts, at least two magnetic
Y10T 29/49057	.....	Using glass bonding material
Y10T 29/49059	.....	with work positioning means
Y10T 29/4906	.....	Providing winding
Y10T 29/49062	.....	Multilayered winding
Y10T 29/49064	.....	by coating
Y10T 29/49066	.....	Preformed winding
Y10T 29/49067	.....	Specified diverse magnetic materials
Y10T 29/49069	....	Data storage inductor or core
Y10T 29/49071	....	by winding or coiling
Y10T 29/49073	....	by assembling coil and core
Y10T 29/49075	....	including permanent magnet or core
Y10T 29/49076	.....	From comminuted material
Y10T 29/49078	.....	Laminated
Y10T 29/4908	....	Acoustic transducer
Y10T 29/49082	...	Resistor making
Y10T 29/49083	....	Heater type
Y10T 29/49085	....	Thermally variable
Y10T 29/49087	....	with envelope or housing
Y10T 29/49089	.....	Filling with powdered insulation
Y10T 29/49091	.....	with direct compression of powdered insulation
Y10T 29/49092	.....	Powdering the insulation
Y10T 29/49094	.....	by oxidation
Y10T 29/49096	.....	with winding
Y10T 29/49098	.....	Applying terminal
Y10T 29/49099	....	Coating resistive material on a base
Y10T 29/49101	....	Applying terminal
Y10T 29/49103	....	Strain gauge making
Y10T 29/49105	...	Switch making
Y10T 29/49107	...	Fuse making
Y10T 29/49108	...	Electric battery cell making
Y10T 29/4911	....	including sealing
Y10T 29/49112	....	including laminating of indefinite length material
Y10T 29/49114	....	including adhesively bonding
Y10T 29/49115	....	including coating or impregnating
Y10T 29/49117	...	Conductor or circuit manufacturing
Y10T 29/49119	....	Brush
Y10T 29/49121	....	Beam lead frame or beam lead device
Y10T 29/49123	....	Co-axial cable
Y10T 29/49124	....	On flat or curved insulated base, e.g., printed circuit, etc.



Y10T 29/49126	.....	Assembling bases
Y10T 29/49128	.....	Assembling formed circuit to base
Y10T 29/4913	.....	Assembling to base an electrical component, e.g., capacitor, etc.
Y10T 29/49131	.....	by utilizing optical sighting device
Y10T 29/49133	.....	with component orienting
Y10T 29/49135	.....	and shaping, e.g., cutting or bending, etc.
Y10T 29/49137	.....	Different components
Y10T 29/49139	.....	by inserting component lead or terminal into base aperture
Y10T 29/4914	.....	with deforming of lead or terminal
Y10T 29/49142	.....	including metal fusion
Y10T 29/49144	.....	by metal fusion
Y10T 29/49146	.....	with encapsulating, e.g., potting, etc.
Y10T 29/49147	.....	Assembling terminal to base
Y10T 29/49149	.....	by metal fusion bonding
Y10T 29/49151	.....	by deforming or shaping
Y10T 29/49153	.....	with shaping or forcing terminal into base aperture
Y10T 29/49155	.....	Manufacturing circuit on or in base
Y10T 29/49156	.....	with selective destruction of conductive paths
Y10T 29/49158	.....	with molding of insulated base
Y10T 29/4916	.....	Simultaneous circuit manufacturing
Y10T 29/49162	.....	by using wire as conductive path
Y10T 29/49163	.....	with sintering of base
Y10T 29/49165	.....	by forming conductive walled aperture in base
Y10T 29/49167	.....	with deforming of conductive path
Y10T 29/49169	....	Assembling electrical component directly to terminal or elongated conductor
Y10T 29/49171	.....	with encapsulating
Y10T 29/49172	.....	by molding of insulating material
Y10T 29/49174	....	Assembling terminal to elongated conductor
Y10T 29/49176	.....	with molding of electrically insulating material
Y10T 29/49178	.....	by shrinking of cover
Y10T 29/49179	.....	by metal fusion bonding
Y10T 29/49181	.....	by deforming
Y10T 29/49183	.....	of ferrule about conductor and terminal
Y10T 29/49185	.....	of terminal
Y10T 29/49187	.....	with forming eyelet from elongated conductor
Y10T 29/49188	.....	with penetrating portion
Y10T 29/4919	.....	Through insulation
Y10T 29/49192	.....	with insulation removal
Y10T 29/49194	....	Assembling elongated conductors, e.g., splicing, etc.
Y10T 29/49195	.....	with end-to-end orienting

Y10T 29/49197	.....	including fluid evacuating or pressurizing
Y10T 29/49199	.....	including deforming of joining bridge
Y10T 29/49201	.....	with overlapping orienting
Y10T 29/49202	.....	including oppositely facing end orienting
Y10T 29/49204	....	Contact or terminal manufacturing
Y10T 29/49206	.....	by powder metallurgy
Y10T 29/49208	.....	by assembling plural parts
Y10T 29/4921	.....	with bonding
Y10T 29/49211	.....	of fused material
Y10T 29/49213	.....	Metal
Y10T 29/49215	.....	by impregnating a porous mass
Y10T 29/49217	.....	by elastic joining
Y10T 29/49218	.....	with deforming
Y10T 29/4922	.....	with molding of insulation
Y10T 29/49222	.....	forming array of contacts or terminals
Y10T 29/49224	.....	with coating
Y10T 29/49226	...	Electret making
Y10T 29/49227	...	Insulator making
Y10T 29/49229	..	Prime mover or fluid pump making
Y10T 29/49231	...	I.C. [internal combustion] engine making
Y10T 29/49233	....	Repairing, converting, servicing or salvaging
Y10T 29/49234	....	Rotary or radial engine making
Y10T 29/49236	...	Fluid pump or compressor making
Y10T 29/49238	....	Repairing, converting, servicing or salvaging
Y10T 29/4924	....	Scroll or peristaltic type
Y10T 29/49242	....	Screw or gear type, e.g., Moineau type
Y10T 29/49243	....	Centrifugal type
Y10T 29/49245	....	Vane type or other rotary, e.g., fan
Y10T 29/49247	...	Valve lifter making
Y10T 29/49249	...	Piston making
Y10T 29/4925	....	Repairing, converting, servicing or salvaging
Y10T 29/49252	....	Multi-element piston making
Y10T 29/49254	.....	Utilizing a high energy beam, e.g., laser, electron beam
Y10T 29/49256	....	with assembly or composite article making
Y10T 29/49258	.....	with thermal barrier or heat flow provision
Y10T 29/49259	.....	with fiber reinforced structure
Y10T 29/49261	.....	by composite casting or molding
Y10T 29/49263	.....	by coating or cladding
Y10T 29/49265	....	Ring groove forming or finishing
Y10T 29/49266	....	Gudgeon pin, wrist pin, piston pin, or boss therefor

Y10T 29/49268	....	with other attaching provision for connecting rod
Y10T 29/4927	...	Cylinder, cylinder head or engine valve sleeve making
Y10T 29/49272	....	with liner, coating, or sleeve
Y10T 29/49274	...	Piston ring or piston packing making
Y10T 29/49275	....	including forging or hammering
Y10T 29/49277	....	including casting or molding
Y10T 29/49279	....	including rolling or die forming, e.g., drawing, punching
Y10T 29/49281	....	including coating or plating
Y10T 29/49282	....	including grinding or honing
Y10T 29/49284	....	including machining or angular cutting
Y10T 29/49286	...	Crankshaft making
Y10T 29/49288	...	Connecting rod making
Y10T 29/4929	....	including metallurgical bonding
Y10T 29/49291	....	including metal forging or die shaping
Y10T 29/49293	...	Camshaft making
Y10T 29/49295	...	Push rod or rocker arm making
Y10T 29/49297	...	Seal or packing making
Y10T 29/49298	...	Poppet or I.C. engine valve or valve seat making
Y10T 29/493	....	Valve guide making
Y10T 29/49302	....	Repairing, converting, servicing or salvaging
Y10T 29/49304	....	Valve tappet making
Y10T 29/49306	....	Valve seat making
Y10T 29/49307	....	Composite or hollow valve stem or head making
Y10T 29/49309	.....	including forging
Y10T 29/49311	.....	including extruding
Y10T 29/49313	.....	including casting
Y10T 29/49314	....	with assembly or composite article making
Y10T 29/49316	..	Impeller making
Y10T 29/49318	...	Repairing or disassembling
Y10T 29/4932	...	Turbomachine making
Y10T 29/49321	....	Assembling individual fluid flow interacting members, e.g., blades, vanes, buckets, on rotary support member
Y10T 29/49323	....	Assembling fluid flow directing devices, e.g., stators, diaphragms, nozzles
Y10T 29/49325	....	Shaping integrally bladed rotor
Y10T 29/49327	...	Axial blower or fan
Y10T 29/49329	...	Centrifugal blower or fan
Y10T 29/4933	...	Fluid coupling device
Y10T 29/49332	...	Propeller making
Y10T 29/49334	....	Utilizing hollow tube blank
Y10T 29/49336	...	Blade making

Y10T 29/49337	....	Composite blade
Y10T 29/49339	....	Hollow blade
Y10T 29/49341	.....	with cooling passage
Y10T 29/49343	.....	Passage contains tubular insert
Y10T 29/49345	..	Catalytic device making
Y10T 29/49346	..	Rocket or jet device making
Y10T 29/49348	..	Burner, torch or metallurgical lance making
Y10T 29/4935	..	Heat exchanger or boiler making
Y10T 29/49352	...	Repairing, converting, servicing or salvaging
Y10T 29/49353	...	Heat pipe device making
Y10T 29/49355	...	Solar energy device making
Y10T 29/49357	...	Regenerator or recuperator making
Y10T 29/49359	...	Cooling apparatus making, e.g., air conditioner, refrigerator
Y10T 29/49361	...	Tube inside tube
Y10T 29/49362	...	Tube wound about tube
Y10T 29/49364	...	Tube joined to flat sheet longitudinally, i.e., tube sheet
Y10T 29/49366	...	Sheet joined to sheet
Y10T 29/49368	....	with inserted tubes
Y10T 29/49369	....	Utilizing bond inhibiting material
Y10T 29/49371	.....	with subsequent fluid expansion
Y10T 29/49373	...	Tube joint and tube plate structure
Y10T 29/49375	....	including conduit expansion or inflation
Y10T 29/49377	...	Tube with heat transfer means
Y10T 29/49378	....	Finned tube
Y10T 29/4938	.....	Common fin traverses plurality of tubes
Y10T 29/49382	.....	Helically finned
Y10T 29/49384	.....	Internally finned
Y10T 29/49385	.....	Made from unitary workpiece, i.e., no assembly
Y10T 29/49387	...	Boiler making
Y10T 29/49389	...	Header or manifold making
Y10T 29/49391	...	Tube making or reforming
Y10T 29/49393	...	with metallurgical bonding
Y10T 29/49394	..	Accumulator making
Y10T 29/49396	..	Condenser, evaporator or vaporizer making
Y10T 29/49398	..	Muffler, manifold or exhaust pipe making
Y10T 29/494	..	Fluidic or fluid actuated device making
Y10T 29/49401	..	Fluid pattern dispersing device making, e.g., ink jet
Y10T 29/49403	..	Tapping device making
Y10T 29/49405	..	Valve or choke making
Y10T 29/49407	...	Repairing, converting, servicing or salvaging

Y10T 29/49409	...	Valve seat forming
Y10T 29/4941	...	Valve stem or tire valve making
Y10T 29/49412	...	with assembly, disassembly or composite article making
Y10T 29/49414	....	Joining plural semi-circular components
Y10T 29/49416	....	with material shaping or cutting
Y10T 29/49417	.....	including molding or casting
Y10T 29/49419	.....	including machining or drilling
Y10T 29/49421	.....	including metallurgical bonding
Y10T 29/49423	.....	including metal deforming
Y10T 29/49425	....	including metallurgical bonding
Y10T 29/49426	...	including metal shaping and diverse operation
Y10T 29/49428	..	Gas and water specific plumbing component making
Y10T 29/4943	...	Plumbing fixture making
Y10T 29/49432	...	Nozzle making
Y10T 29/49433	....	Sprayer
Y10T 29/49435	...	Flexible conduit or fitting therefor
Y10T 29/49437	...	Flue connector device making
Y10T 29/49439	...	Trap making
Y10T 29/4944	...	Return connector device making
Y10T 29/49442	...	T-shaped fitting making
Y10T 29/49444	...	Elbow or L-shaped fitting making
Y10T 29/49446	...	Ferrule making or reforming
Y10T 29/49448	..	Agricultural device making
Y10T 29/49449	...	Traction apparatus, e.g., for tractor
Y10T 29/49451	...	Harvester guard
Y10T 29/49453	..	Pulley making
Y10T 29/49455	...	Assembly
Y10T 29/49456	....	with shaping
Y10T 29/49458	...	Disc splitting to form pulley rim groove
Y10T 29/4946	...	Groove forming in sheet metal pulley rim
Y10T 29/49462	..	Gear making
Y10T 29/49464	...	Assembling of gear into force transmitting device
Y10T 29/49465	...	Gear mounting
Y10T 29/49467	...	Gear shaping
Y10T 29/49469	....	Worm gear
Y10T 29/49471	....	Roll forming
Y10T 29/49472	....	Punching or stamping
Y10T 29/49474	....	Die-press shaping
Y10T 29/49476	....	Gear tooth cutting
Y10T 29/49478	....	Gear blank making

Y10T 29/4948	....	with specific gear material
Y10T 29/49481	..	Wheel making
Y10T 29/49483	...	Railway or trolley wheel making
Y10T 29/49485	....	Multiple part or composite
Y10T 29/49487	.....	with axle or hub
Y10T 29/49488	...	Steering wheel
Y10T 29/4949	...	Material winding, e.g., reel, spool
Y10T 29/49492	...	Land wheel
Y10T 29/49494	....	Assembling tire to wheel body
Y10T 29/49496	....	Disc type wheel
Y10T 29/49497	.....	Assembling wheel disc to rim and hub
Y10T 29/49499	.....	Assembling wheel disc to rim
Y10T 29/49501	.....	with disc shaping
Y10T 29/49503	.....	Integral rim and disc making
Y10T 29/49504	.....	Disc shaping
Y10T 29/49506	....	Tensioned spoke type wheel making
Y10T 29/49508	.....	Tensioning all spokes simultaneously
Y10T 29/4951	.....	Tensioning spokes in series
Y10T 29/49512	.....	Tensioning spokes individually
Y10T 29/49513	....	Compression, e.g., nontension, spoke type wheel making
Y10T 29/49515	.....	Joining spokes to rim and hub
Y10T 29/49517	.....	Joining spokes to rim
Y10T 29/49519	.....	Joining spokes to hub
Y10T 29/4952	.....	Making plural spokes from a single blank
Y10T 29/49522	.....	Individual spoke making
Y10T 29/49524	....	Rim making
Y10T 29/49526	.....	with assembling
Y10T 29/49528	.....	Demountable rim making
Y10T 29/49529	.....	Die-press shaping
Y10T 29/49531	.....	Roller forming
Y10T 29/49533	....	Hub making
Y10T 29/49535	.....	with assembling
Y10T 29/49536	.....	Hub shaping
Y10T 29/49538	....	Tire making
Y10T 29/4954	....	Wheel trim making, e.g., wheel cover, hubcap
Y10T 29/49542	.....	with means for retaining trim member on wheel
Y10T 29/49544	..	Roller making
Y10T 29/49545	...	Repairing or servicing
Y10T 29/49547	...	Assembling preformed components
Y10T 29/49549	....	Work contacting surface element assembled to core

Y10T 29/49551	.....	Work contacting surface wound about core
Y10T 29/49552	.....	with prestressing of component by heat differential, e.g., shrink, fit
Y10T 29/49554	.....	Work contacting surface having annular axial sections
Y10T 29/49556	....	Work contacting surface element assembled to end support members
Y10T 29/49558	....	Includes securing removable cover on roller
Y10T 29/4956	...	Fabricating and shaping roller work contacting surface element
Y10T 29/49561	....	toothed roller
Y10T 29/49563	....	with coating or casting about a core
Y10T 29/49565	...	One-piece roller making
Y10T 29/49567	..	Dental appliance making
Y10T 29/49568	...	Orthodontic device making
Y10T 29/4957	..	Sound device making
Y10T 29/49572	...	Hearing aid component making
Y10T 29/49574	...	Musical instrument or tuning fork making
Y10T 29/49575	...	including diaphragm or support therefor
Y10T 29/49577	...	Phonograph component making
Y10T 29/49579	..	Watch or clock making
Y10T 29/49581	...	having arbor, pinion, or balance
Y10T 29/49583	...	having indicia, face, or dial
Y10T 29/49584	...	having case, cover, or back
Y10T 29/49586	...	having crown, stem, or pendent
Y10T 29/49588	..	Jewelry or locket making
Y10T 29/4959	...	Human adornment device making
Y10T 29/49591	....	Bracelet making
Y10T 29/49593	....	Finger ring making
Y10T 29/49595	...	Latch, clasp, or fastener component making
Y10T 29/49597	...	Ornamental stock making
Y10T 29/49599	..	Knob or knob shank making
Y10T 29/496	..	Multiperforated metal article making
Y10T 29/49602	...	Coil wound wall screen
Y10T 29/49604	...	Filter
Y10T 29/49606	..	Turnbuckle making
Y10T 29/49607	..	Spring-head clip making
Y10T 29/49609	..	Spring making
Y10T 29/49611	...	for vehicle or clutch
Y10T 29/49613	...	for human comfort
Y10T 29/49615	...	Resilient shock or vibration absorber utility
Y10T 29/49616	..	Structural member making
Y10T 29/49618	...	Restoring existing member, e.g., reinforcing, repairing
Y10T 29/4962	...	Grille making

Y10T 29/49622	...	Vehicular structural member making
Y10T 29/49623	...	Static structure, e.g., a building component
Y10T 29/49625	....	Openwork, e.g., a truss, joist, frame, lattice-type or box beam
Y10T 29/49627	.....	Frame component
Y10T 29/49629	....	Panel
Y10T 29/49631	....	Columnar member
Y10T 29/49632	....	Metal reinforcement member for nonmetallic, e.g., concrete, structural element
Y10T 29/49634	....	Beam or girder
Y10T 29/49636	..	Process for making bearing or component thereof
Y10T 29/49638	...	Repairing
Y10T 29/49639	...	Fluid bearing
Y10T 29/49641	...	Linear bearing
Y10T 29/49643	...	Rotary bearing
Y10T 29/49645	....	Thrust bearing
Y10T 29/49647	....	Plain bearing
Y10T 29/49648	.....	Self-adjusting or self-aligning, including ball and socket type, bearing and component making
Y10T 29/4965	.....	Deforming socket to secure ball
Y10T 29/49652	.....	Die-press shaping
Y10T 29/49654	.....	having liner
Y10T 29/49655	.....	having liner
Y10T 29/49657	.....	Socket making
Y10T 29/49659	.....	by molding or casting
Y10T 29/49661	.....	Nonmetallic socket
Y10T 29/49663	.....	by assembling
Y10T 29/49664	.....	Ball making
Y10T 29/49666	.....	with metallurgical bonding
Y10T 29/49668	.....	Sleeve or bushing making
Y10T 29/4967	.....	Nonmetallic
Y10T 29/49671	.....	Strip or blank material shaping
Y10T 29/49673	.....	Die-press shaping
Y10T 29/49675	.....	having inner lining layer
Y10T 29/49677	.....	having liner
Y10T 29/49679	....	Anti-friction bearing or component thereof
Y10T 29/4968	.....	Assembling of race, cage, and rolling anti-friction members
Y10T 29/49682	.....	Assembling of race and rolling anti-friction members
Y10T 29/49684	.....	with race making
Y10T 29/49686	.....	Assembling of cage and rolling anti-friction members
Y10T 29/49687	.....	with cage making



Y10T 29/49689	.....	Race making
Y10T 29/49691	.....	Cage making
Y10T 29/49693	.....	Roller making
Y10T 29/49694	.....	Ball making
Y10T 29/49696	...	Mounting
Y10T 29/49698	...	Demounting
Y10T 29/497	...	Pre-usage process, e.g., preloading, aligning
Y10T 29/49702	...	Lubricating
Y10T 29/49703	...	Sealing
Y10T 29/49705	...	Coating or casting
Y10T 29/49707	...	Bearing surface treatment
Y10T 29/49709	...	Specific metallic composition
Y10T 29/4971	...	Nonmetallic bearing element
Y10T 29/49712	..	Ball making
Y10T 29/49714	...	Hollow ball
Y10T 29/49716	..	Converting
Y10T 29/49718	..	Repairing
Y10T 29/49719	...	Seal or element thereof
Y10T 29/49721	...	with disassembling
Y10T 29/49723	....	including reconditioning of part
Y10T 29/49725	.....	by shaping
Y10T 29/49726	.....	Removing material
Y10T 29/49728	.....	and by a metallurgical operation, e.g., welding, diffusion bonding, casting
Y10T 29/4973	....	Replacing of defective part
Y10T 29/49732	...	by attaching repair preform, e.g., remaking, restoring, or patching
Y10T 29/49734	....	and removing damaged material
Y10T 29/49735	.....	Mechanically attaching preform with separate fastener
Y10T 29/49737	.....	Metallurgically attaching preform
Y10T 29/49739	....	Mechanically attaching preform by separate fastener
Y10T 29/49741	.....	Screw threaded fastener
Y10T 29/49742	....	Metallurgically attaching preform
Y10T 29/49744	....	Screw threaded preform
Y10T 29/49746	...	by applying fluent material, e.g., coating, casting
Y10T 29/49748	...	by shaping, e.g., bending, extruding, turning, etc.
Y10T 29/4975	....	including heating
Y10T 29/49751	..	Scrap recovering or utilizing
Y10T 29/49753	...	Metalworking to consolidate scrap
Y10T 29/49755	...	Separating one material from another
Y10T 29/49757	....	by burning or heating

Y10T 29/49758	..	During simulated operation or operating conditions
Y10T 29/4976	...	Temperature
Y10T 29/49762	..	Center locating and shaping
Y10T 29/49764	..	with testing or indicating
Y10T 29/49766	...	torquing threaded assemblage or determining torque herein
Y10T 29/49767	....	Determining relative number of threaded member rotations
Y10T 29/49769	...	Using optical instrument [excludes mere human eyeballing]
Y10T 29/49771	...	Quantitative measuring or gauging
Y10T 29/49773	....	by radioactive tracing
Y10T 29/49774	....	by vibratory or oscillatory movement
Y10T 29/49776	....	Pressure, force, or weight determining
Y10T 29/49778	...	with aligning, guiding, or instruction
Y10T 29/4978	....	Assisting assembly or disassembly
Y10T 29/49782	..	of a slide fastener
Y10T 29/49783	...	of slider
Y10T 29/49785	...	of interlocking element
Y10T 29/49787	..	Obtaining plural composite product pieces from preassembled workpieces
Y10T 29/49789	..	Obtaining plural product pieces from unitary workpiece
Y10T 29/4979	...	Breaking through weakened portion
Y10T 29/49792	...	Dividing through modified portion
Y10T 29/49794	...	Dividing on common outline
Y10T 29/49796	...	Coacting pieces
Y10T 29/49798	...	Dividing sequentially from leading end, e.g., by cutting or breaking
Y10T 29/49799	..	Providing transitory integral holding or handling portion
Y10T 29/49801	..	Shaping fiber or fibered material
Y10T 29/49803	..	Magnetically shaping
Y10T 29/49805	..	Shaping by direct application of fluent pressure
Y10T 29/49806	...	Explosively shaping
Y10T 29/49808	..	Shaping container end to encapsulate material
Y10T 29/4981	..	Utilizing transitory attached element or associated separate material
Y10T 29/49812	...	Temporary protective coating, impregnation, or cast layer
Y10T 29/49813	..	Shaping mating parts for reassembly in different positions
Y10T 29/49815	..	Disassembling
Y10T 29/49817	...	with other than ancillary treating or assembling
Y10T 29/49819	...	with conveying of work or disassembled work part
Y10T 29/49821	...	by altering or destroying work part or connector
Y10T 29/49822	...	by applying force
Y10T 29/49824	....	to elastically deform work part or connector
Y10T 29/49826	..	Assembling or joining
Y10T 29/49828	...	Progressively advancing of work assembly station or assembled portion of work

Y10T 29/49829	....	Advancing work to successive stations [i.e., assembly line]
Y10T 29/49831	....	Advancing station
Y10T 29/49833	...	Punching, piercing or reaming part by surface of second part
Y10T 29/49835	....	with shaping
Y10T 29/49837	.....	of first part
Y10T 29/49838	...	by stringing
Y10T 29/4984	...	Retaining clearance for motion between assembled parts
Y10T 29/49842	....	Between tube-forming helical coils
Y10T 29/49844	....	Through resilient media
Y10T 29/49845	....	by deforming interlock
Y10T 29/49847	.....	by folding part into plural ears
Y10T 29/49849	.....	by wrapping around
Y10T 29/49851	.....	of link closure
Y10T 29/49853	.....	of sphere, i.e., ball, in socket
Y10T 29/49854	.....	Ball point pen making
Y10T 29/49856	.....	Allowing assembled sphere to move in single plane only
Y10T 29/49858	.....	of flange into tubular socket
Y10T 29/4986	.....	Outwardly deforming internally fitted rod
Y10T 29/49861	...	Sizing mating parts during final positional association
Y10T 29/49863	...	with prestressing of part
Y10T 29/49865	....	by temperature differential [e.g., shrink fit]
Y10T 29/49867	....	of skin on frame member
Y10T 29/49869	.....	by flexing
Y10T 29/4987	....	Elastic joining of parts
Y10T 29/49872	.....	Confining elastic part in socket
Y10T 29/49874	....	Prestressing rod, filament or strand
Y10T 29/49876	....	by snap fit
Y10T 29/49877	...	of flexible wall, expansible chamber devices [e.g., bellows]
Y10T 29/49879	...	Spaced wall tube or receptacle
Y10T 29/49881	...	of separate helix [e.g., screw thread]
Y10T 29/49883	...	Ribbing
Y10T 29/49885	...	with coating before or during assembling
Y10T 29/49886	....	to roughen surface
Y10T 29/49888	...	Subsequently coating
Y10T 29/4989	...	with spreading of cable strands
Y10T 29/49892	...	Joining plate edge perpendicularly to frame
Y10T 29/49893	...	Peripheral joining of opposed mirror image parts to form a hollow body
Y10T 29/49895	...	Associating parts by use of aligning means [e.g., use of a drift pin or a "fixture"]
Y10T 29/49897	....	Registering mating opposed tool parts [e.g., registering a punch and a cooperating die]

Y10T 29/49899	....	by multiple cooperating aligning means
Y10T 29/49901	....	Sequentially associating parts on stationary aligning means
Y10T 29/49902	....	by manipulating aligning means
Y10T 29/49904	...	Assembling a subassembly, then assembling with a second subassembly
Y10T 29/49906	...	Metal deforming with nonmetallic bonding
Y10T 29/49908	...	Joining by deforming
Y10T 29/49909	....	Securing cup or tube between axially extending concentric annuli
Y10T 29/49911	.....	by expanding inner annulus
Y10T 29/49913	.....	by constricting outer annulus
Y10T 29/49915	....	Overedge assembling of seated part
Y10T 29/49917	.....	by necking in cup or tube wall
Y10T 29/49918	.....	At cup or tube end
Y10T 29/4992	.....	by flaring inserted cup or tube end
Y10T 29/49922	.....	by bending over projecting prongs
Y10T 29/49924	....	of parallel side-by-side elongated members
Y10T 29/49925	....	Inward deformation of aperture or hollow body wall
Y10T 29/49927	.....	Hollow body is axially joined cup or tube
Y10T 29/49929	.....	Joined to rod
Y10T 29/49931	.....	Joined to overlapping ends of plural rods
Y10T 29/49933	.....	After thinning
Y10T 29/49934	.....	by axially applying force
Y10T 29/49936	....	Surface interlocking
Y10T 29/49938	....	Radially expanding part in cavity, aperture, or hollow body
Y10T 29/4994	.....	Radially expanding internal tube
Y10T 29/49941	.....	Peripheral edge joining of abutting plates
Y10T 29/49943	.....	Riveting
Y10T 29/49945	...	by driven force fit
Y10T 29/49947	...	by applying separate fastener
Y10T 29/49948	....	Multipart cooperating fastener [e.g., bolt and nut]
Y10T 29/4995	.....	Nonthreaded
Y10T 29/49952	.....	At least one part is nonmetallic
Y10T 29/49954	....	Fastener deformed after application
Y10T 29/49956	.....	Riveting
Y10T 29/49957	.....	At least one part nonmetallic
Y10T 29/49959	....	Nonresilient fastener
Y10T 29/49961	.....	At least one part nonmetallic
Y10T 29/49963	....	Threaded fastener
Y10T 29/49964	.....	At least one part nonmetallic
Y10T 29/49966	....	with supplemental joining
Y10T 29/49968	.....	Metal fusion joining

Y10T 29/4997	.....	At least one part nonmetallic
Y10T 29/49972	..	with separating, localizing, or eliminating of as-cast defects from a metal casting [e.g., anti-pipe]
Y10T 29/49973	...	Compressing ingot while still partially molten
Y10T 29/49975	...	Removing defects
Y10T 29/49977	....	From center of ingot to leave hollow blank
Y10T 29/49979	....	After deforming
Y10T 29/4998	..	Combined manufacture including applying or shaping of fluent material
Y10T 29/49982	...	Coating
Y10T 29/49984	....	and casting
Y10T 29/49986	....	Subsequent to metal working
Y10T 29/49988	...	Metal casting
Y10T 29/49989	....	Followed by cutting or removing material
Y10T 29/49991	....	Combined with rolling
Y10T 29/49993	...	Filling of opening
Y10T 29/49995	..	Shaping one-piece blank by removing material
Y10T 29/49996	...	Successive distinct removal operations
Y10T 29/49998	..	Work holding
Y10T 29/50	.	Convertible metal working machine
Y10T 29/505	..	Vise type
Y10T 29/51	.	Plural diverse manufacturing apparatus including means for metal shaping or assembling
Y10T 29/5101	..	Slide fastener or slide fastener element
Y10T 29/5102	..	Binding or covering and cutting
Y10T 29/5103	...	Cutting covering material only
Y10T 29/5104	..	Type of machine
Y10T 29/5105	...	Drill press
Y10T 29/5107	....	Drilling and other
Y10T 29/5108	....	Portable
Y10T 29/5109	...	Lathe
Y10T 29/511	....	Grinding attachment
Y10T 29/5111	....	Pulley or wheel
Y10T 29/5112	....	Convertible
Y10T 29/5113	....	Commutator
Y10T 29/5114	....	Lathe and tool
Y10T 29/5115	...	Planer
Y10T 29/5116	..	forging and bending, cutting or punching
Y10T 29/5117	...	Fastener [zipper]
Y10T 29/5118	...	Riveting
Y10T 29/512	...	Ball making

Y10T 29/5121	...	Wire working
Y10T 29/5122	..	with means to feed work during tool contact
Y10T 29/5123	...	including nonrotary flying tool
Y10T 29/5124	..	with means to feed work intermittently from one tool station to another
Y10T 29/5125	...	Stock turret
Y10T 29/5126	....	Swiss type
Y10T 29/5127	...	Blank turret
Y10T 29/5128	....	Rotary work - vertical axis
Y10T 29/5129	....	Rotary work - horizontal axis
Y10T 29/513	....	Stationary work
Y10T 29/5132	....	Belt drive
Y10T 29/5133	....	Crankshaft
Y10T 29/5134	....	Collapsible tube
Y10T 29/5135	...	Endless belt
Y10T 29/5136	..	Separate tool stations for selective or successive operation on work
Y10T 29/5137	...	including assembling or disassembling station
Y10T 29/5138	....	and means to machine work part to fit cooperating work part
Y10T 29/5139	....	and means to sever work prior to disassembling
Y10T 29/514	.....	comprising means to strip insulation from wire
Y10T 29/5141	....	and means to stake electric wire to commutator or armature in assembling of electric motor or generator
Y10T 29/5142	....	and means to sever work from supply
Y10T 29/5143	....	and means to machine product
Y10T 29/5145	.....	to sever product to length
Y10T 29/5146	..	Common reciprocating support for spaced tools
Y10T 29/5147	..	including composite tool
Y10T 29/5148	...	including severing means
Y10T 29/5149	....	to sever electric terminal from supply strip
Y10T 29/515	....	to trim electric component
Y10T 29/5151	.....	Means comprising hand-manipulatable implement
Y10T 29/5152	..	with turret mechanism
Y10T 29/5153	...	Multiple turret
Y10T 29/5154	...	tool turret
Y10T 29/5155	....	Rotary tool holder
Y10T 29/5157	....	Sliding tool holder
Y10T 29/5158	....	Fluid operated
Y10T 29/5159	....	Cam operated
Y10T 29/516	.....	Longitudinal turret axis
Y10T 29/5161	.....	Transverse turret axis
Y10T 29/5162	....	Lever operated

Y10T 29/5163	....	Rack-and-pinion operated
Y10T 29/5164	....	Screw operated
Y10T 29/5165	...	including rotating and/or locking means
Y10T 29/5166	....	Frictional and positive
Y10T 29/5167	....	Lock means for tool or work turrets
Y10T 29/5168	..	Multiple-tool holder
Y10T 29/517	...	Laterally movable stock holder
Y10T 29/5171	...	Axial tool and transversely movable slide rest
Y10T 29/5172	....	Rotary tool spindle
Y10T 29/5173	...	Longitudinally and transversely movable
Y10T 29/5174	....	Rotary tool spindle
Y10T 29/5175	...	Oscillating tool
Y10T 29/5176	..	including machining means
Y10T 29/5177	...	and work-holder for assembly
Y10T 29/5178	..	Attachment
Y10T 29/5179	..	Speed controller
Y10T 29/518	..	Carriage stop mechanism
Y10T 29/5182	..	Flash remover
Y10T 29/5183	..	Welding strip ends
Y10T 29/5184	..	Casting and working
Y10T 29/5185	..	Tube making
Y10T 29/5186	..	Covering
Y10T 29/5187	..	Wire working
Y10T 29/5188	..	Radiator making
Y10T 29/5189	..	Printing plate
Y10T 29/519	..	Turret
Y10T 29/5191	..	Assembly
Y10T 29/5192	..	Armature
Y10T 29/5193	..	Electrical connector or terminal
Y10T 29/5195	..	Tire valve or spark plug
Y10T 29/5196	..	Multiple station with conveyor
Y10T 29/5197	..	Multiple stations working strip material
Y10T 29/5198	..	Continuous strip
Y10T 29/5199	..	Work on tubes
Y10T 29/52	.	Plural diverse manufacturing apparatus
Y10T 29/53	.	Means to assemble or disassemble
Y10T 29/53004	..	with means to regulate operation by use of templet, tape, card or other replaceable information supply
Y10T 29/53009	...	with comparator
Y10T 29/53013	....	Computer input

Y10T 29/53017	...	Web or strand-carried information supply
Y10T 29/53022	..	with means to test work or product
Y10T 29/53026	..	with randomly actuated stopping or disabling means
Y10T 29/5303	...	Responsive to condition of work or product
Y10T 29/53035	...	Responsive to operative [e.g., safety device, etc.]
Y10T 29/53039	..	with control means energized in response to activator stimulated by condition sensor
Y10T 29/53043	...	including means to divert defective work part
Y10T 29/53048	...	Multiple station assembly or disassembly apparatus
Y10T 29/53052	....	including position sensor
Y10T 29/53057	...	Responsive to timer
Y10T 29/53061	...	Responsive to work or work-related machine element
Y10T 29/53065	....	with means to fasten by deformation
Y10T 29/5307	.....	Self-piercing work part
Y10T 29/53074	....	with means to fasten by elastic joining
Y10T 29/53078	....	with means to fasten by frictional fitting
Y10T 29/53083	....	including means to apply magnetic force directly to position or hold work
Y10T 29/53087	..	with signal, scale, illuminator, or optical viewer
Y10T 29/53091	...	for work-holder for assembly or disassembly
Y10T 29/53096	..	including means to provide a controlled environment
Y10T 29/531	..	Nuclear device
Y10T 29/53104	..	Roller or ball bearing
Y10T 29/53109	...	including deforming means
Y10T 29/53113	..	Heat exchanger
Y10T 29/53117	...	including means to manipulate heat exchanger tube bundle
Y10T 29/53122	...	including deforming means
Y10T 29/53126	..	Means to place sheath on running-length core
Y10T 29/5313	..	Means to assemble electrical device
Y10T 29/53135	...	Storage cell or battery
Y10T 29/53139	....	including deforming means
Y10T 29/53143	...	Motor or generator
Y10T 29/53148	....	Means to assemble commutator
Y10T 29/53152	....	Means to position insulation
Y10T 29/53157	....	Means to stake wire to commutator or armature
Y10T 29/53161	....	including deforming means
Y10T 29/53165	...	Magnetic memory device
Y10T 29/5317	...	Laminated device
Y10T 29/53174	...	Means to fasten electrical component to wiring board, base, or substrate
Y10T 29/53178	....	Chip component
Y10T 29/53183	....	Multilead component



Y10T 29/53187	...	Multiple station assembly apparatus
Y10T 29/53191	...	Means to apply vacuum directly to position or hold work part
Y10T 29/53196	...	Means to apply magnetic force directly to position or hold work part
Y10T 29/532	...	Conductor
Y10T 29/53204	....	Electrode
Y10T 29/53209	....	Terminal or connector
Y10T 29/53213	.....	Assembled to wire-type conductor
Y10T 29/53217	.....	Means to simultaneously assemble multiple, independent conductors to terminal
Y10T 29/53222	.....	Means comprising hand-manipulatable implement
Y10T 29/53226	.....	Fastening by deformation
Y10T 29/5323	.....	Fastening by elastic joining
Y10T 29/53235	.....	Means to fasten by deformation
Y10T 29/53239	.....	Means to fasten by elastic joining
Y10T 29/53243	....	Multiple, independent conductors
Y10T 29/53248	....	Switch or fuse
Y10T 29/53252	...	Means to simultaneously fasten three or more parts
Y10T 29/53257	...	Means comprising hand-manipulatable implement
Y10T 29/53261	...	Means to align and advance work part
Y10T 29/53265	...	with work-holder for assembly
Y10T 29/5327	...	Means to fasten by deforming
Y10T 29/53274	..	Means to disassemble electrical device
Y10T 29/53278	...	Storage cell or battery
Y10T 29/53283	...	Means comprising hand-manipulatable implement
Y10T 29/53287	..	Means to place traveler on ring or ring on bobbin of a textile machine
Y10T 29/53291	..	Slide fastener
Y10T 29/53296	...	Means to assemble stop onto stringer
Y10T 29/533	...	Means to assemble slider onto stringer
Y10T 29/53304	...	Means to assemble teeth onto stringer
Y10T 29/53309	...	Disassembly means
Y10T 29/53313	..	Means to interrelatedly feed plural work parts from plural sources without manual intervention
Y10T 29/53317	...	Box or pallet assembly means
Y10T 29/53322	...	Means to assemble container
Y10T 29/53326	....	Handle to container
Y10T 29/5333	....	Label to container
Y10T 29/53335	....	Pressurized dispensing container
Y10T 29/53339	....	Hypodermic syringe
Y10T 29/53343	....	including fluid component
Y10T 29/53348	...	Running-length work

Y10T 29/53352	....	Means including orbiting running-length work supply
Y10T 29/53357	....	Pipe section
Y10T 29/53361	....	Assembled to article
Y10T 29/53365	...	Multiple station assembly apparatus
Y10T 29/5337	...	including assembly pallet
Y10T 29/53374	...	including turret-type conveyer
Y10T 29/53378	...	including converging conveyers
Y10T 29/53383	...	and means to fasten work parts together
Y10T 29/53387	....	by deforming
Y10T 29/53391	....	by elastic joining
Y10T 29/53396	....	by friction fit
Y10T 29/534	..	Multiple station assembly or disassembly apparatus
Y10T 29/53404	...	including turret-type conveyer
Y10T 29/53409	...	including converging conveyers
Y10T 29/53413	....	and primary central conveyer
Y10T 29/53417	...	Means to fasten work parts together
Y10T 29/53422	....	by deforming
Y10T 29/53426	....	by elastic joining
Y10T 29/5343	..	Means to drive self-piercing work part
Y10T 29/53435	..	including assembly pallet
Y10T 29/53439	..	including provision to utilize thermal expansion of work
Y10T 29/53443	..	Means to assemble or disassemble container and fluid component
Y10T 29/53448	..	Vehicle wheel
Y10T 29/53452	...	Railway wheel
Y10T 29/53457	..	Tumbler lock
Y10T 29/53461	..	toy doll
Y10T 29/53465	..	Film or tape cartridge
Y10T 29/5347	..	Crystal to watch or clock
Y10T 29/53474	..	Means to insert or extract pen point
Y10T 29/53478	..	with magazine supply
Y10T 29/53483	...	and magnetic work-holder or positioner
Y10T 29/53487	...	Assembling means comprising hand-manipulatable implement
Y10T 29/53491	....	One work part comprising living tissue
Y10T 29/53496	....	comprising driver for snap-off-mandrel fastener; e.g., Pop [TM] riveter
Y10T 29/535	....	One work part comprising nut or screw
Y10T 29/53504	....	One work part comprising paper clip
Y10T 29/53509	....	Means to assemble tire stud into tire tread
Y10T 29/53513	....	Means to fasten by deforming
Y10T 29/53517	.....	Fastening sinker to fishing line
Y10T 29/53522	...	Means to fasten by deforming

Y10T 29/53526	..	Running-length work
Y10T 29/5353	...	Assembled on core
Y10T 29/53535	..	including means to vibrate work
Y10T 29/53539	..	including work conveyer
Y10T 29/53543	...	including transporting track
Y10T 29/53548	....	and work carrying vehicle
Y10T 29/53552	..	Valve applying or removing
Y10T 29/53557	...	Engine valve unit puller or applier
Y10T 29/53561	...	Engine valve spring compressor [only]
Y10T 29/53565	....	Plural spring engagement
Y10T 29/5357	....	Screw operated
Y10T 29/53574	.....	Parallel or tong type, side entrance
Y10T 29/53578	....	Lever operated
Y10T 29/53583	.....	Single jaw or valve engagement
Y10T 29/53587	.....	Plier type
Y10T 29/53591	...	to or from wheel rim of resilient tire or tube
Y10T 29/53596	...	Removal tool
Y10T 29/536	..	Piston ring inserter or remover
Y10T 29/53604	...	Plier-type operation
Y10T 29/53609	....	with ring encirclement
Y10T 29/53613	..	Spring applier or remover
Y10T 29/53617	...	Transmission spring
Y10T 29/53622	...	Helical spring
Y10T 29/53626	...	Flat spiral spring [e.g., watch or clock type]
Y10T 29/5363	...	Circular spring
Y10T 29/53635	...	Leaf spring
Y10T 29/53639	..	Means to stake watch or clock
Y10T 29/53643	...	Plier type
Y10T 29/53648	..	Brake lining to brake shoe
Y10T 29/53652	..	Tube and coextensive core
Y10T 29/53657	..	to apply or remove a resilient article [e.g., tube, sleeve, etc.]
Y10T 29/53661	...	Nipple to nursing bottle
Y10T 29/53665	...	Well protector to sucker rod
Y10T 29/5367	..	Coupling to conduit
Y10T 29/53674	..	Loose-leaf sheet binder
Y10T 29/53678	..	Compressing parts together face to face
Y10T 29/53683	..	Spreading parts apart or separating them from face to face engagement
Y10T 29/53687	..	by rotation of work part
Y10T 29/53691	...	Means to insert or remove helix
Y10T 29/53696	..	Means to string

Y10T 29/537	..	tool handle and tool
Y10T 29/53704	..	tool chuck and tool
Y10T 29/53709	..	Overedge assembling means
Y10T 29/53713	...	Belt-hook attacher
Y10T 29/53717	...	Annular work
Y10T 29/53722	....	with radially acting tool inside annular work
Y10T 29/53726	....	with second workpiece inside annular work one workpiece moved to shape the other
Y10T 29/5373	.....	comprising driver for snap-off-mandrel fastener; e.g., Pop [TM] riveter
Y10T 29/53735	.....	including near side fastener shaping tool
Y10T 29/53739	.....	Pneumatic- or fluid-actuated tool
Y10T 29/53743	.....	Liquid
Y10T 29/53748	.....	and gas
Y10T 29/53752	.....	having rotary drive mechanism
Y10T 29/53757	.....	having allochiral actuating handles
Y10T 29/53761	.....	having repositionable annulus engaging tool
Y10T 29/53765	.....	including near side fastener shaping tool
Y10T 29/5377	...	Riveter
Y10T 29/53774	....	Single header
Y10T 29/53778	.....	Pipe joiner
Y10T 29/53783	...	Clip applier
Y10T 29/53787	...	Binding or covering
Y10T 29/53791	....	Edge binding
Y10T 29/53796	..	Puller or pusher means, contained force multiplying operator
Y10T 29/538	...	Hubcap and hub
Y10T 29/53804	...	Battery post and terminal
Y10T 29/53809	...	Cotter pin and cooperating member
Y10T 29/53813	....	Plier type means
Y10T 29/53817	...	Valve stem pin or key and another member
Y10T 29/53822	...	Machine key and another member
Y10T 29/53826	...	Arbor-type press means
Y10T 29/5383	...	having fluid operator
Y10T 29/53835	...	having wedge operator
Y10T 29/53839	...	having percussion or explosive operator
Y10T 29/53843	....	Tube, sleeve, or ferrule inserting or removing
Y10T 29/53848	...	having screw operator
Y10T 29/53852	....	C-frame
Y10T 29/53857	....	Central screw, work-engagers around screw
Y10T 29/53861	.....	Work-engager arms along or parallel to screw
Y10T 29/53865	.....	with arm connecting engaging means

Y10T 29/5387	.....	Pivotal arms
Y10T 29/53874	.....	Pivotal grippers on screw
Y10T 29/53878	.....	Tubular or tube segment forms work-engager
Y10T 29/53883	.....	Screw threaded work-engager
Y10T 29/53887	.....	Movable grippers on screw
Y10T 29/53891	.....	Plate or bar forms work-engager
Y10T 29/53896	...	having lever operator
Y10T 29/539	....	Plier type means
Y10T 29/53904	..	Means comprising piston ring group contractor or holder
Y10T 29/53909	..	Means comprising hand manipulatable tool
Y10T 29/53913	...	Aligner or center
Y10T 29/53917	....	Tube with tube
Y10T 29/53922	....	Auto wheel with auto chassis
Y10T 29/53926	....	Clutch plates
Y10T 29/5393	...	Means comprising impact receiving tool
Y10T 29/53935	....	C-frame
Y10T 29/53939	....	Thread protector [e.g., wheel axle type]
Y10T 29/53943	...	Hand gripper for direct push or pull
Y10T 29/53948	....	Centrifugal separator
Y10T 29/53952	....	Tube sleeve or ferrule applying or removing
Y10T 29/53957	.....	Thread-tapping grip
Y10T 29/53961	..	with work-holder for assembly
Y10T 29/53965	...	for assembling a luminescent mantle
Y10T 29/5397	...	and assembling press [e.g., truss assembling means, etc.]
Y10T 29/53974	...	having means to permit support movement while work is thereon
Y10T 29/53978	..	including means to relatively position plural work parts
Y10T 29/53983	..	Work-supported apparatus
Y10T 29/53987	..	Tube, sleeve or ferrule
Y10T 29/53991	..	Work gripper, anvil, or element
Y10T 29/53996	..	by deforming
Y10T 29/54	.	Miscellaneous apparatus

#### **Former US Class 70 series**

<b>Y10T 70/00</b>	<b>Locks</b>
Y10T 70/10	. Miscellaneous
Y10T 70/20	. Attack-actuated defeating mechanisms
Y10T 70/25	.. With reset mechanisms
Y10T 70/30	. Hasp
Y10T 70/308	.. Combination lock

Y10T 70/317	...	Hasp-carried
Y10T 70/325	...	Keeper-carried
Y10T 70/333	..	Key lock
Y10T 70/342	...	Hasp-carried
Y10T 70/35	....	Keeper-encasing
Y10T 70/358	.....	Dead bolt
Y10T 70/367	.....	Latching bolt
Y10T 70/375	....	Dead bolt
Y10T 70/383	....	Latching bolt
Y10T 70/392	...	Keeper-carried
Y10T 70/40	.	Portable
Y10T 70/402	..	Fetters
Y10T 70/404	...	Manacles and cuffs
Y10T 70/407	....	Nippers
Y10T 70/409	...	Shackles
Y10T 70/411	..	Clamps
Y10T 70/413	..	Padlocks
Y10T 70/415	...	Combination and/or key-controlled
Y10T 70/417	...	Combination-controlled
Y10T 70/42	....	Non-shackle type
Y10T 70/422	....	Rigid shackle
Y10T 70/424	.....	Sliding
Y10T 70/426	.....	Removable
Y10T 70/428	.....	Pivoted
Y10T 70/43	.....	Sliding detent
Y10T 70/433	.....	Swinging detent
Y10T 70/435	....	Flexible shackle
Y10T 70/437	...	Key-controlled
Y10T 70/439	....	Non-shackle type
Y10T 70/441	.....	Housing extension and cooperating detent
Y10T 70/443	.....	Single stem or shank
Y10T 70/446	....	Rigid shackle
Y10T 70/448	.....	Divided shackle
Y10T 70/45	.....	Divided jaw type
Y10T 70/452	.....	Sliding
Y10T 70/454	.....	Removable
Y10T 70/457	.....	Arcuate locus
Y10T 70/459	.....	Both legs engaged
Y10T 70/461	.....	Short leg engaged
Y10T 70/463	.....	Long leg engaged

Y10T 70/465	.....	Pivoted
Y10T 70/467	.....	Sliding detent
Y10T 70/47	.....	Free end only engaged
Y10T 70/472	.....	Pivoted end only engaged
Y10T 70/474	.....	Swinging detent
Y10T 70/476	.....	Free end only engaged
Y10T 70/478	.....	Pivoted end only engaged
Y10T 70/48	.....	Arcuate locus
Y10T 70/483	....	Flexible shackle
Y10T 70/485	...	With seal
Y10T 70/487	...	Parts, accessories, attachments and adjuncts
Y10T 70/489	....	Housings
Y10T 70/491	....	Shackles
Y10T 70/493	....	Protectors
Y10T 70/496	.....	Sheaths
Y10T 70/498	.....	Shields or canopies
Y10T 70/50	.	Special application
Y10T 70/5004	..	For antitheft signaling device on protected article
Y10T 70/5009	..	For portable articles
Y10T 70/5013	...	Canes, umbrellas, apparel
Y10T 70/5018	...	Robes
Y10T 70/5022	...	Tools
Y10T 70/5027	...	Supporting stands
Y10T 70/5031	...	Receptacle
Y10T 70/5035	....	Bag
Y10T 70/504	.....	Collapsible throat
Y10T 70/5044	.....	Pivoted rigid jaw
Y10T 70/5049	.....	Attache or briefcase, portfolio
Y10T 70/5053	.....	Interengageable slide fastener type
Y10T 70/5058	....	Trunk and/or suitcase
Y10T 70/5062	.....	Projecting fixed or movable lug type
Y10T 70/5066	.....	Bolt type
Y10T 70/5071	.....	Hasp controlled
Y10T 70/5075	.....	Link and lever of hasp type
Y10T 70/508	.....	Hasp type
Y10T 70/5084	.....	Hasp-carried lock
Y10T 70/5089	.....	Loop type
Y10T 70/5093	..	For closures
Y10T 70/5097	...	Cabinet
Y10T 70/5102	....	Projecting lug type

Y10T 70/5106	.....	External catch
Y10T 70/5111	....	Projectable bolt
Y10T 70/5115	.....	Multiple bolts
Y10T 70/5119	.....	Multidirectional displacement
Y10T 70/5124	.....	Swinging and hooked end
Y10T 70/5128	...	Drawer
Y10T 70/5133	....	Dead bolt
Y10T 70/5137	....	Till
Y10T 70/5142	.....	Combination
Y10T 70/5146	...	Window
Y10T 70/515	....	Sliding sash
Y10T 70/5155	...	Door
Y10T 70/5159	....	Emergency exit
Y10T 70/5164	....	Links to limit opening
Y10T 70/5168	....	Braces
Y10T 70/5173	....	Sliding door
Y10T 70/5177	.....	Extending keeper
Y10T 70/5181	.....	Rigid or fixed
Y10T 70/5186	.....	Extensible
Y10T 70/519	.....	Projecting or extending bolt
Y10T 70/5195	.....	Projectable bolt
Y10T 70/5199	....	Swinging door
Y10T 70/5204	.....	Interfitting lock housing and keeper
Y10T 70/5208	.....	Multiple dead bolts
Y10T 70/5212	.....	Sliding dead bolt
Y10T 70/5217	.....	Swinging dead bolt
Y10T 70/5221	.....	Locking latch bolt, biased
Y10T 70/5226	.....	Combined dead bolt and latching bolt
Y10T 70/523	.....	Multiple dead bolts
Y10T 70/5235	.....	Multiple latch bolts
Y10T 70/5239	.....	Dead bolt, dogged latch bolt
Y10T 70/5243	.....	Manually dogged latch bolt
Y10T 70/5246	.....	Dead bolts
Y10T 70/5248	.....	Multiple
Y10T 70/5252	.....	Sliding and swinging
Y10T 70/5257	.....	Combination operable only
Y10T 70/5261	.....	Key operable only
Y10T 70/5265	.....	Sliding and rotary
Y10T 70/527	.....	Sliding
Y10T 70/5274	.....	Combination operable only



Y10T 70/5279	.....	Key operable only
Y10T 70/5283	.....	Swinging
Y10T 70/5288	.....	Combination operable only
Y10T 70/5292	.....	Key operable only
Y10T 70/5296	.....	Single
Y10T 70/5301	.....	Sliding and swinging
Y10T 70/5305	.....	Combination operable only
Y10T 70/531	.....	Key operable only
Y10T 70/5314	.....	Sliding and rotary
Y10T 70/5319	.....	Sliding
Y10T 70/5323	.....	Multidirectional displacement
Y10T 70/5327	.....	Keeper interlocking
Y10T 70/5332	.....	Curved
Y10T 70/5336	.....	Combination operable only
Y10T 70/5341	.....	Key operable only
Y10T 70/5345	.....	Swinging
Y10T 70/535	.....	Keeper and housing interlocking
Y10T 70/5354	.....	With hooked end
Y10T 70/5358	.....	Combination operable only
Y10T 70/5363	.....	Key operable only
Y10T 70/5367	.....	Screw
Y10T 70/5372	.....	Locking latch bolts, biased
Y10T 70/5376	.....	Keeper interlocking
Y10T 70/5381	.....	Projectable beyond normal biased position
Y10T 70/5385	.....	Spring projected
Y10T 70/5389	.....	Manually operable
Y10T 70/5394	.....	Directly acting dog for exterior, manual, bolt manipulator
Y10T 70/5398	.....	Related dog for interior, manual, bolt manipulator
Y10T 70/5403	.....	Dog having a dog
Y10T 70/5407	.....	Related dogging means for latch-bolt
Y10T 70/5412	.....	Dog and dog actuator always interconnected
Y10T 70/5416	.....	Exterior manipulator declutched from bolt when dogged
Y10T 70/542	.....	Manual dog-controller concentric with bolt manipulator
Y10T 70/5425	.....	Shiftable rollback serves as dog
Y10T 70/5429	.....	Additional dog-controller key actuated for dogging and undogging
Y10T 70/5434	.....	Dog-controller axially slidable and axially rotatable
Y10T 70/5438	.....	Dog-controller rotatable
Y10T 70/5442	.....	Key-actuated lock releases dog
Y10T 70/5447	.....	Manual bolt-manipulator operation releases dog

Y10T 70/5451	.....	Manual bolt-manipulator operation releases dog
Y10T 70/5456	.....	Interior manual bolt-manipulator serves as dog-controller
Y10T 70/546	.....	For both dogging and undogging
Y10T 70/5465	.....	Manual dog-controller
Y10T 70/5469	.....	With additional lock actuated dog-controller
Y10T 70/5473	.....	Additional dog-controller controls both dogging and undogging
Y10T 70/5478	.....	Accessible at door edge
Y10T 70/5482	.....	Slidable only
Y10T 70/5487	.....	Manual bolt-manipulator is slidable only
Y10T 70/5491	.....	Manual bolt-manipulator is lever
Y10T 70/5496	.....	Freely movable external manipulator
Y10T 70/55	.....	Dogged bolt or connections
Y10T 70/5504	.....	Automatic
Y10T 70/5509	.....	Snub bolt
Y10T 70/5513	.....	By manipulator
Y10T 70/5518	.....	Connections only
Y10T 70/5522	.....	Gravity projected
Y10T 70/5527	.....	Projecting mechanism is lock controlled
Y10T 70/5531	.....	Combination and/or key operable
Y10T 70/5535	.....	Trip release
Y10T 70/554	... ..	Cover, lid, cap, encasing shield
Y10T 70/5544	....	Pivoted
Y10T 70/5549	.....	Cover-carried lock
Y10T 70/5553	.....	Dead bolt
Y10T 70/5558	.....	Latching bolt
Y10T 70/5562	....	Removable
Y10T 70/5566	.....	External locking devices
Y10T 70/5571	.....	Freely movable when locked
Y10T 70/5575	.....	Directly seating
Y10T 70/558	.....	Cover-carried lock
Y10T 70/5584	.....	Dead bolt
Y10T 70/5589	.....	Latching bolt
Y10T 70/5593	.....	Movably seating
Y10T 70/5597	.....	Cover-carried lock
Y10T 70/5602	.....	Dead bolt
Y10T 70/5606	.....	Latching bolt
Y10T 70/5611	..	For control and machine elements
Y10T 70/5615	...	Valve
Y10T 70/5619	....	Locked stationary

Y10T 70/5624	.....	Externally mounted locking device
Y10T 70/5628	.....	Valve encasing
Y10T 70/5633	.....	Housing-carried lock
Y10T 70/5637	.....	With padlock
Y10T 70/5642	...	Rod
Y10T 70/5646	...	Rotary shaft
Y10T 70/565	....	Locked stationary
Y10T 70/5655	.....	Housing-carried lock
Y10T 70/5659	.....	Dead bolt
Y10T 70/5664	.....	Latching bolt
Y10T 70/5668	.....	Shaft-carried lock
Y10T 70/5673	....	Freely movable when locked
Y10T 70/5677	.....	Shaft-carried clutch
Y10T 70/5681	...	Gear
Y10T 70/5686	....	Planetary
Y10T 70/569	...	Lever
Y10T 70/5695	....	Guide
Y10T 70/5699	.....	Quadrant
Y10T 70/5704	.....	Lever-carried lock
Y10T 70/5708	.....	Fixed lever-receiving keeper
Y10T 70/5712	.....	Lever-carried lock
Y10T 70/5717	....	Multiple
Y10T 70/5721	.....	Externally mounted locking device
Y10T 70/5726	.....	With padlock
Y10T 70/573	....	Single
Y10T 70/5735	.....	Externally mounted locking device
Y10T 70/5739	.....	With padlock
Y10T 70/5743	.....	Disconnectable
Y10T 70/5748	.....	Foldable
Y10T 70/5752	.....	Universal mounting
Y10T 70/5757	...	Handle, handwheel or knob
Y10T 70/5761	....	Retractable or flush handle
Y10T 70/5765	....	Rotary or swinging
Y10T 70/577	.....	Locked stationary
Y10T 70/5774	.....	Externally mounted locking device
Y10T 70/5779	.....	With padlock
Y10T 70/5783	.....	Combination lock
Y10T 70/5788	.....	Push pin or button
Y10T 70/5792	.....	Handle-carried key lock
Y10T 70/5796	.....	Coaxially mounted

Y10T 70/5801	.....	Axially movable bolt
Y10T 70/5805	.....	Freely movable when locked
Y10T 70/581	.....	Combination lock
Y10T 70/5814	.....	Push pin or button
Y10T 70/5819	.....	Handle-carried key lock
Y10T 70/5823	.....	Coaxial clutch connection
Y10T 70/5827	.....	Axially movable clutch
Y10T 70/5832	....	Lock and handle assembly
Y10T 70/5836	...	Wheel
Y10T 70/5841	....	Rotation blocking
Y10T 70/5845	.....	Spoke gap traversing type
Y10T 70/585	.....	Brake type
Y10T 70/5854	...	Bolt, nut, stud, stud-cap
Y10T 70/5858	....	Locked stationary
Y10T 70/5863	....	Freely movable when locked
Y10T 70/5867	....	Encased
Y10T 70/5872	..	For cycles
Y10T 70/5876	...	Anchors
Y10T 70/5881	...	Stands
Y10T 70/5885	...	Drive
Y10T 70/5889	..	For automotive vehicles
Y10T 70/5894	...	Plural point
Y10T 70/5898	.....	With switch
Y10T 70/5903	...	Hood
Y10T 70/5907	.....	With switch
Y10T 70/5912	...	Fuel valve
Y10T 70/5916	.....	With switch
Y10T 70/592	.....	Cap combined
Y10T 70/5925	...	Transmission
Y10T 70/5929	.....	Cover combined
Y10T 70/5934	.....	Selective-type shift rod, fork or block
Y10T 70/5938	.....	With switch
Y10T 70/5942	.....	Planetary type
Y10T 70/5947	.....	With switch
Y10T 70/5951	.....	With switch
Y10T 70/5956	...	Steering mechanism with switch
Y10T 70/596	...	Pilot wheel control or linkage
Y10T 70/5965	...	Control levers with switch
Y10T 70/5969	...	Other element with switch
Y10T 70/5973	...	Remote control

Y10T 70/5978	....	With switch
Y10T 70/5982	...	Accessories
Y10T 70/5987	....	Spare or mounted wheel or tire
Y10T 70/5991	.....	Tire or rim only
Y10T 70/5996	..	For seats
Y10T 70/60	.	Systems
Y10T 70/625	..	Operation and control
Y10T 70/65	...	Central control
Y10T 70/675	...	Serially operable
Y10T 70/70	.	Operating mechanism
Y10T 70/7006	..	Predetermined time interval controlled
Y10T 70/7011	...	Positively initiated delay interval
Y10T 70/7017	....	Interval terminating
Y10T 70/7023	....	Repeating interval
Y10T 70/7028	...	Electric
Y10T 70/7034	...	Clockwork control
Y10T 70/704	....	Continuously operating once initiated
Y10T 70/7045	.....	Emergency release
Y10T 70/7051	..	Using a powered device [e.g., motor]
Y10T 70/7057	...	Permanent magnet
Y10T 70/7062	...	Electrical type [e.g., solenoid]
Y10T 70/7068	....	Actuated after correct combination recognized [e.g., numerical, alphabetical, or magnet[s] pattern]
Y10T 70/7073	.....	Including use of a key
Y10T 70/7079	.....	Key rotated [e.g., Eurocylinder]
Y10T 70/7085	.....	Using a dial having indicia or pointer and indicia
Y10T 70/709	.....	Plural interdependent or plural independently operable tumbler sets
Y10T 70/7096	.....	With mechanism having rocker arm or linked bars
Y10T 70/7102	....	And details of blocking system [e.g., linkage, latch, pawl, spring]
Y10T 70/7107	....	And alternately mechanically actuated by a key, dial, etc.
Y10T 70/7113	....	Projected and retracted electrically
Y10T 70/7119	....	Projected electrically only
Y10T 70/7124	....	Retracted electrically only
Y10T 70/713	....	Dogging manual operator
Y10T 70/7136	....	Key initiated actuation of device
Y10T 70/7141	..	Combination and key
Y10T 70/7147	..	Combination or key
Y10T 70/7153	..	Combination
Y10T 70/7158	...	Individual blocking elements
Y10T 70/7164	....	Selectively operable

Y10T 70/7169	...	Complex movement or puzzle type
Y10T 70/7175	....	Labyrinthian passage
Y10T 70/7181	...	Tumbler type
Y10T 70/7186	....	Plural interdependent sets
Y10T 70/7192	....	Plural independently operable sets
Y10T 70/7198	....	Single tumbler set
Y10T 70/7203	.....	With ball or roller
Y10T 70/7209	.....	Intersect sliding tumblers
Y10T 70/7215	.....	Individually set sliding tumblers
Y10T 70/722	.....	Manually operable
Y10T 70/7226	.....	Associated movable operator
Y10T 70/7232	.....	Removable
Y10T 70/7237	.....	Rotary or swinging tumblers
Y10T 70/7243	.....	Intersect tumblers
Y10T 70/7249	.....	Tumblers released
Y10T 70/7254	.....	Fence held spaced from tumblers
Y10T 70/726	.....	Individually set
Y10T 70/7266	.....	Movable selector
Y10T 70/7271	.....	Associated movable operator
Y10T 70/7277	.....	Removable
Y10T 70/7282	.....	Pin or rod and slot
Y10T 70/7288	.....	Spindle operator
Y10T 70/7294	.....	Concentric spindles
Y10T 70/7299	.....	Axially shiftable spindle
Y10T 70/7305	.....	Manually operable
Y10T 70/7311	...	Step-by-step
Y10T 70/7316	...	Combination upsetting
Y10T 70/7322	...	Permutation
Y10T 70/7328	....	Compound tumblers
Y10T 70/7333	.....	With fastener or holder
Y10T 70/7339	.....	Pin and socket
Y10T 70/7345	....	Removable change element
Y10T 70/735	...	Operating elements
Y10T 70/7356	....	Fences
Y10T 70/7362	.....	Bolt or lock housing supported
Y10T 70/7367	....	Tumbler structure and position
Y10T 70/7373	.....	Nested
Y10T 70/7379	.....	Variant diameter
Y10T 70/7384	.....	Mounts
Y10T 70/739	.....	Motion-restraining means

Y10T 70/7395	.....	Friction holder
Y10T 70/7401	....	Spindles
Y10T 70/7407	....	Operating indicators
Y10T 70/7412	.....	Portable combination setting guide
Y10T 70/7418	.....	Dials
Y10T 70/7424	...	Tampering prevention or attach defeating
Y10T 70/7429	....	Resonance type
Y10T 70/7435	....	Hidden or covered dial
Y10T 70/7441	..	Key
Y10T 70/7446	...	Multiple keys
Y10T 70/7452	....	Selective shutout type
Y10T 70/7458	....	Interdependent
Y10T 70/7463	....	Master- and change-key
Y10T 70/7469	.....	Change-key shutout
Y10T 70/7475	.....	Submaster- and change-key
Y10T 70/748	.....	Change-key shutout
Y10T 70/7486	...	Single key
Y10T 70/7492	....	Tumblerless push or pull key
Y10T 70/7497	....	Tumblerless warded
Y10T 70/7503	....	Tumbler and ward type
Y10T 70/7508	....	Tumbler type
Y10T 70/7514	.....	Sliding and rotary or swinging tumblers
Y10T 70/752	.....	Sliding tumblers
Y10T 70/7525	.....	Longitudinal
Y10T 70/7531	.....	Transverse
Y10T 70/7537	.....	Rotary or swinging tumblers
Y10T 70/7542	.....	Single set
Y10T 70/7548	.....	Directly key engaged
Y10T 70/7554	.....	Cylinder type with auxiliary tumblers or wards
Y10T 70/7559	.....	Cylinder type
Y10T 70/7565	.....	Plural tumbler sets
Y10T 70/7571	.....	Concentric tumblers
Y10T 70/7576	.....	Sliding and rotary plug
Y10T 70/7582	.....	Sliding plug
Y10T 70/7588	.....	Rotary plug
Y10T 70/7593	.....	Sliding tumblers
Y10T 70/7599	.....	Transverse of plug
Y10T 70/7605	.....	Pin tumblers
Y10T 70/761	.....	Rotatable pins [e.g., MEDECO lock]
Y10T 70/7616	.....	Including sidebar

Y10T 70/7621	.....	Including sidebar
Y10T 70/7627	.....	Rotary or swinging tumblers
Y10T 70/7633	.....	Transverse of plug
Y10T 70/7638	.....	Cylinder and plug assembly
Y10T 70/7644	.....	Key- and tool-controlled
Y10T 70/765	.....	Key only controlled
Y10T 70/7655	.....	Cylinder attaching or mounting means
Y10T 70/7661	.....	Detachable or removable cylinder
Y10T 70/7667	.....	Operating elements, parts and adjuncts
Y10T 70/7672	.....	Cylinder
Y10T 70/7678	.....	Adjustable
Y10T 70/7684	.....	Plug
Y10T 70/7689	.....	Tumblers
Y10T 70/7695	.....	Plate
Y10T 70/7701	.....	Pin
Y10T 70/7706	.....	Operating connections
Y10T 70/7712	.....	Rollbacks
Y10T 70/7718	.....	Intermediate
Y10T 70/7723	.....	Cylinder rings
Y10T 70/7729	...	Permutation
Y10T 70/7734	....	Automatically key set combinations
Y10T 70/774	....	Adjustable tumblers
Y10T 70/7746	.....	Removable change element
Y10T 70/7751	...	With ball or roller
Y10T 70/7757	...	Push or pull key operation
Y10T 70/7763	...	Key ejecting
Y10T 70/7768	...	Key-removal preventing
Y10T 70/7774	...	False or picking key trapping
Y10T 70/778	...	Operating elements
Y10T 70/7785	....	Tumblers
Y10T 70/7791	....	Keys
Y10T 70/7797	.....	Picking
Y10T 70/7802	.....	Multi-part structures
Y10T 70/7808	.....	With foldable shank or stem
Y10T 70/7814	.....	With extensible shank or stem
Y10T 70/7819	.....	With slidable bit portion
Y10T 70/7825	.....	With pivoted or swinging bit portion
Y10T 70/7831	.....	Nested second key
Y10T 70/7836	.....	Plural shanks, stems or bit wings
Y10T 70/7842	.....	Single shank or stem



Y10T 70/7847	.....	Round rigid
Y10T 70/7853	.....	Tubular
Y10T 70/7859	.....	Flat rigid
Y10T 70/7864	.....	Cylinder lock type
Y10T 70/787	.....	Irregular nonplanar or undulated
Y10T 70/7876	.....	Bow or head
Y10T 70/7881	.....	Bitting
Y10T 70/7887	.....	Frangible
Y10T 70/7893	.....	Permutation
Y10T 70/7898	.....	Threaded
Y10T 70/7904	.....	Magnetic features
Y10T 70/791	.....	Ejecting feature
Y10T 70/7915	...	Tampering prevention or attack defeating
Y10T 70/7921	....	Armoring
Y10T 70/7927	....	Anti-jimmy
Y10T 70/7932	....	Anti-pick
Y10T 70/7938	.....	Guard ward
Y10T 70/7944	.....	Guard tumbler
Y10T 70/7949	....	Yielding or frangible connections
Y10T 70/7955	....	Keyhole guards
Y10T 70/796	.....	Portable
Y10T 70/7966	.....	Combination-controlled
Y10T 70/7972	.....	Portable
Y10T 70/7977	.....	Key-controlled
Y10T 70/7983	.....	Portable
Y10T 70/7989	....	Key securers, fasteners or retainers
Y10T 70/7994	.....	Portable
Y10T 70/80	.	Parts, attachments, accessories and adjuncts
Y10T 70/8027	..	Condition indicators
Y10T 70/8054	...	With recorder
Y10T 70/8081	....	Electric
Y10T 70/8108	....	Padlock
Y10T 70/8135	...	With register
Y10T 70/8162	....	Padlock
Y10T 70/8189	...	Contactual feeler
Y10T 70/8216	...	Tampering detector
Y10T 70/8243	....	With seal
Y10T 70/827	...	Attention-directing
Y10T 70/8297	..	For combination-operated mechanism
Y10T 70/8324	...	Housings

Y10T 70/8351	...	Operating attachments
Y10T 70/8378	...	Knobs, hand grips, etc.
Y10T 70/8405	...	Combination finders
Y10T 70/8432	..	For key-operated mechanism
Y10T 70/8459	...	Housings
Y10T 70/8486	....	Cylindrical
Y10T 70/8514	....	Face plate
Y10T 70/8541	....	Mounting arrangements
Y10T 70/8568	...	Escutcheons
Y10T 70/8595	...	Key guides, internal
Y10T 70/8622	...	Key insertion guides
Y10T 70/8649	...	Keyhole covers
Y10T 70/8676	...	Key holders
Y10T 70/8703	....	Flexible
Y10T 70/873	....	One-piece
Y10T 70/8757	....	Releasable catches
Y10T 70/8784	....	Parallel key loops, coaxially mounted, individually movable
Y10T 70/8811	...	Key identification
Y10T 70/8838	..	Adjustment provisions
Y10T 70/8865	..	Reversible structures
Y10T 70/8892	..	Silencers or mufflers
Y10T 70/8919	..	Antifriction provisions
Y10T 70/8946	..	Emergency unlocking or release arrangements
Y10T 70/8973	..	Mounting aids, guides and assistors

#### **Former US Class 74 Series**

<b>Y10T 74/00</b>	<b>Machine element or mechanism</b>
Y10T 74/10	. High frequency vibratory devices
Y10T 74/11	. Tripping mechanism
Y10T 74/111	.. Speed controlled
Y10T 74/113	... Valve gear trips [e.g., steam engine "Corliss" type]
Y10T 74/114	.. Retarded
Y10T 74/115	... Plural, sequential, trip actuations
Y10T 74/116	... Clock train
Y10T 74/118	.... Winding knob trip [e.g., alarm mechanism]
Y10T 74/119	.. Hit and miss
Y10T 74/12	. Gyroscopes
Y10T 74/1204	.. with caging or parking means
Y10T 74/1207	... Rotor spin and cage release type

Y10T 74/1211	...	and resetting means
Y10T 74/1214	..	with gimbal lock preventing means
Y10T 74/1218	..	Combined
Y10T 74/1221	..	Multiple gyroscopes
Y10T 74/1225	...	with rotor drives
Y10T 74/1229	..	Gyroscope control
Y10T 74/1232	...	Erecting
Y10T 74/1236	....	by plural diverse forces
Y10T 74/1239	....	by jet
Y10T 74/1243	....	by weight
Y10T 74/1246	....	by friction
Y10T 74/125	....	by magnetic field
Y10T 74/1254	....	by motor torque
Y10T 74/1257	...	Damping
Y10T 74/1261	..	with pick off
Y10T 74/1264	...	Optical
Y10T 74/1268	...	Pneumatic
Y10T 74/1271	...	Conducting liquid
Y10T 74/1275	...	Electrical
Y10T 74/1279	...	Electrical and magnetic
Y10T 74/1282	..	with rotor drive
Y10T 74/1286	..	Vertical gyroscopes
Y10T 74/1289	..	Horizontal gyroscopes
Y10T 74/1293	..	Flexure hinges for gyros
Y10T 74/1296	..	Flywheel structure
Y10T 74/13	.	Machine starters
Y10T 74/131	..	Automatic
Y10T 74/132	...	Separate power mesher
Y10T 74/133	...	Holders
Y10T 74/134	...	Clutch connection
Y10T 74/136	...	Worm and wheel
Y10T 74/137	...	Reduction gearing
Y10T 74/138	..	Radial meshing
Y10T 74/139	..	Cam operated
Y10T 74/14	.	Rotary member or shaft indexing, e.g., tool or work turret
Y10T 74/1406	..	with safety device or drive disconnect
Y10T 74/1412	..	with locating point adjusting
Y10T 74/1418	..	Preselected indexed position
Y10T 74/1424	...	Sequential
Y10T 74/1429	....	Skip position

Y10T 74/1435	....	Held by torque
Y10T 74/1441	....	Geneva or mutilated gear drive
Y10T 74/1447	....	Velocity control
Y10T 74/1453	....	Interlocked rotator and brake
Y10T 74/1459	.....	Diverse-type brakes
Y10T 74/1465	.....	with axially acting friction brake
Y10T 74/1471	..	Plural operators or input drives
Y10T 74/1476	..	with means to axially shift shaft
Y10T 74/1482	..	Single revolution input effects desired fractional output
Y10T 74/1488	..	Control means
Y10T 74/1494	..	Locking means
Y10T 74/15	.	Intermittent grip type mechanical movement
Y10T 74/1502	..	Escapement
Y10T 74/1503	..	Rotary to intermittent unidirectional motion
Y10T 74/1505	...	Automatically controlled
Y10T 74/1506	....	Speed
Y10T 74/1508	...	Rotary crank or eccentric drive
Y10T 74/151	....	Adjustable
Y10T 74/1511	....	Lever transmitter
Y10T 74/1513	.....	Adjustable leverage
Y10T 74/1515	....	Rack and pinion transmitter
Y10T 74/1516	.....	Adjustable throw
Y10T 74/1518	....	Rotary cam drive
Y10T 74/1519	.....	Adjustable throw
Y10T 74/1521	.....	Radial cam
Y10T 74/1523	.....	Radial cam
Y10T 74/1524	...	Intermittently engaged clutch
Y10T 74/1526	..	Oscillation or reciprocation to intermittent unidirectional motion
Y10T 74/1527	...	Screw and nut devices
Y10T 74/1529	...	Slide actuator
Y10T 74/1531	....	Multiple acting
Y10T 74/1532	...	Rack actuator
Y10T 74/1534	....	Multiple acting
Y10T 74/1535	.....	Inwardly facing racks
Y10T 74/1537	....	Oscillating
Y10T 74/1539	.....	Multiple acting
Y10T 74/154	.....	Inwardly facing racks
Y10T 74/1542	...	Strap actuator
Y10T 74/1544	....	Multiple acting
Y10T 74/1545	.....	Spring or weight return

Y10T 74/1547	....	Single acting
Y10T 74/1548	.....	Engine starter type
Y10T 74/155	.....	Spring or weight return
Y10T 74/1552	.....	Spring or weight return
Y10T 74/1553	...	Lever actuator
Y10T 74/1555	....	Rotary driven element
Y10T 74/1556	.....	Multiple acting
Y10T 74/1558	..	Grip units and features
Y10T 74/156	...	Compound movement handle
Y10T 74/1561	....	Reversible
Y10T 74/1563	....	Transverse pivots
Y10T 74/1565	...	Gripper releasing devices
Y10T 74/1566	....	Power pawl lifter
Y10T 74/1568	.....	Automatic
Y10T 74/1569	.....	Idle stroke
Y10T 74/1571	.....	Cooperating holding pawl
Y10T 74/1573	.....	Power stroke
Y10T 74/1574	.....	Cooperating holding pawl
Y10T 74/1576	....	Holding pawl lifter
Y10T 74/1577	...	Gripper mountings, lever
Y10T 74/1579	....	Reversible
Y10T 74/1581	....	Multiple acting
Y10T 74/1582	.....	Single ratchet or clutch
Y10T 74/1584	...	Gripper mountings, slide
Y10T 74/1585	....	Multiple acting
Y10T 74/1587	...	Grip features
Y10T 74/1589	....	Driving band
Y10T 74/159	.....	Clamping
Y10T 74/1592	....	Driven band and gripper
Y10T 74/1594	.....	Positive grip
Y10T 74/1595	....	Driving ratchet-bar or rack
Y10T 74/1597	.....	Multiple acting
Y10T 74/1598	....	Driven ratchet-bar and power dog
Y10T 74/16	.	Alternating-motion driven device with means during operation to adjust stroke
Y10T 74/1608	..	Constant length stroke with means to displace end limits
Y10T 74/1616	...	Cyclical displacement responsive to the alternating-motion
Y10T 74/1625	..	Stroke adjustable to zero and/or reversible in phasing
Y10T 74/1633	...	Plural driving means to jointly drive the driven device
Y10T 74/1642	...	Device driven from selected points on oscillating link
Y10T 74/165	...	Driving lever with adjustable pivot point

Y10T 74/1658	...	Eccentric and strap drive, shiftable eccentric
Y10T 74/1667	....	Changing the extent of eccentricity
Y10T 74/1675	...	Crank pin drive, shiftable pin
Y10T 74/1683	...	Cam and follower drive
Y10T 74/1692	....	Axial-type cam [e.g., wabblers type]
Y10T 74/17	.	Rotary driven device adjustable during operation relative to its supporting structure
Y10T 74/173	..	Screw and nut adjusting means
Y10T 74/177	..	Rack and pinion adjusting means
Y10T 74/18	.	Mechanical movements
Y10T 74/18008	..	Oscillating to reciprocating and alternating rotary
Y10T 74/18016	..	Oscillating to reciprocating and intermittent rotary
Y10T 74/18024	..	Rotary to reciprocating and rotary
Y10T 74/18032	...	Rotary to reciprocating or rotary
Y10T 74/1804	..	Rotary to reciprocating and alternating rotary
Y10T 74/18048	..	Rotary to reciprocating and intermittent rotary
Y10T 74/18056	..	Rotary to or from reciprocating or oscillating
Y10T 74/18064	...	Head motions
Y10T 74/18072	...	Reciprocating carriage motions
Y10T 74/1808	....	Phonograph type
Y10T 74/18088	...	Rack and pinion type
Y10T 74/18096	....	Shifting rack
Y10T 74/18104	....	Shiftable pinion
Y10T 74/18112	....	Segmental pinion
Y10T 74/1812	....	Alternately rotated pinion
Y10T 74/18128	....	Clutchable gears
Y10T 74/18136	.....	Bevel
Y10T 74/18144	...	Overcoming dead center
Y10T 74/18152	...	Belt or chain carried member
Y10T 74/1816	...	Crank, lever, toggle, and slide
Y10T 74/18168	...	Crank, lazy-tong, and slide
Y10T 74/18176	...	Crank, pitman, lever, and slide
Y10T 74/18182	....	Pump jack type
Y10T 74/18184	...	Crank, pitman, and lever
Y10T 74/182	....	Multiple levers
Y10T 74/18208	...	Crank, pitman, and slide
Y10T 74/18216	...	Crank, lever, and slide
Y10T 74/18224	....	Rack connections
Y10T 74/18232	...	Crank and lever
Y10T 74/1824	....	Slidable connections
Y10T 74/18248	...	Crank and slide

Y10T 74/18256	....	Slidable connections [e.g., scotch yoke]
Y10T 74/18264	...	Crank and multiple pitmans
Y10T 74/18272	...	Planetary gearing and slide
Y10T 74/1828	...	Cam, lever, and slide
Y10T 74/18288	...	Cam and lever
Y10T 74/18296	...	Cam and slide
Y10T 74/18304	....	Axial cam
Y10T 74/18312	.....	Grooved
Y10T 74/1832	.....	Multiple screw
Y10T 74/18328	.....	Alternately rotated screw
Y10T 74/18336	....	Wabblers type
Y10T 74/18344	...	Unbalanced weights
Y10T 74/18352	...	Trammel-pitman
Y10T 74/1836	..	Rotary to rotary
Y10T 74/18368	...	Inertia or centrifugal transmitters
Y10T 74/18376	...	Crank, pitman, lever, and crank
Y10T 74/18384	...	Crank, lever, and crank
Y10T 74/18392	...	Crank, pitman, and crank
Y10T 74/184	...	Cranks, link connected
Y10T 74/18408	...	Cranks, slidable connections
Y10T 74/18416	..	Rotary to alternating rotary
Y10T 74/18424	...	Mangle connections
Y10T 74/18432	....	Shiftable driven gear
Y10T 74/1844	.....	Central teeth
Y10T 74/18448	....	Mutilated gearing connections
Y10T 74/18456	...	Crank, pitman, and lever
Y10T 74/18464	...	Reciprocating rack connections
Y10T 74/18472	....	Crank and pitman actuator
Y10T 74/1848	....	Simple crank actuator
Y10T 74/18488	...	Oscillating rack connections
Y10T 74/18496	....	Mangle actuated
Y10T 74/18504	....	Crank and pitman actuator
Y10T 74/18512	...	Flexible connector type
Y10T 74/1852	...	Associated inertia devices
Y10T 74/18528	..	Rotary to intermittent unidirectional motion
Y10T 74/18536	...	Space machines
Y10T 74/18544	..	Rotary to gyratory
Y10T 74/18552	...	Unbalanced weight
Y10T 74/1856	..	Reciprocating or oscillating to intermittent unidirectional motion
Y10T 74/18568	..	Reciprocating or oscillating to or from alternating rotary

Y10T 74/18576	...	including screw and nut
Y10T 74/18584	....	Shaft shorter than nut
Y10T 74/18592	....	Auxiliary drive [e.g., fluid piston, etc.] for load
Y10T 74/186	....	Alternate power path operable on failure of primary
Y10T 74/18608	....	Single input split into two intermediate outputs that are subsequently superposed into a single output
Y10T 74/18616	....	Single input, plural outputs
Y10T 74/18624	....	Plural inputs, single output
Y10T 74/18632	.....	Plural nuts driving shaft
Y10T 74/1864	.....	Shaft and nut driven
Y10T 74/18648	....	Carriage surrounding, guided by, and primarily supported by member other than screw [e.g., linear guide, etc.]
Y10T 74/18656	....	Carriage surrounded, guided, and primarily supported by member other than screw [e.g., linear guide, etc.]
Y10T 74/18664	....	Shaft moves through rotary drive means
Y10T 74/18672	....	Plural screws in series [e.g., telescoping, etc.]
Y10T 74/1868	....	Deflection related
Y10T 74/18688	....	Limit stop
Y10T 74/18696	....	including means to selectively transmit power [e.g., clutch, etc.]
Y10T 74/18704	....	Means to selectively lock or retard screw or nut
Y10T 74/18712	....	Contamination related
Y10T 74/1872	.....	Imperforate enclosure
Y10T 74/18728	....	Backlash
Y10T 74/18736	....	Pressurized fluid introduced between nut and screw
Y10T 74/18744	....	Lubrication
Y10T 74/18752	....	Manually driven
Y10T 74/1876	...	including inertia device
Y10T 74/18768	....	with rack and pinion
Y10T 74/18776	.....	Rectilinear rack
Y10T 74/18784	...	including bevel gears
Y10T 74/18792	...	including worm
Y10T 74/188	...	including spur gear
Y10T 74/18808	....	with rack
Y10T 74/18816	.....	Curvilinear rack
Y10T 74/18824	.....	with biasing means
Y10T 74/18832	...	including flexible drive connector [e.g., belt, chain, strand, etc.]
Y10T 74/1884	....	with sprocket wheel
Y10T 74/18848	....	with pulley
Y10T 74/18856	..	Oscillating to oscillating
Y10T 74/18864	...	Snap action
Y10T 74/18872	....	Plate spring



Y10T 74/1888	...	Geared connections
Y10T 74/18888	..	Reciprocating to or from oscillating
Y10T 74/18896	...	Snap action
Y10T 74/18904	....	Plate spring
Y10T 74/18912	...	Compound lever and slide
Y10T 74/1892	...	Lever and slide
Y10T 74/18928	....	Straight line motions
Y10T 74/18936	....	Slidable connections
Y10T 74/18944	....	Link connections
Y10T 74/18952	....	toggle transmissions
Y10T 74/1896	....	Cam connections
Y10T 74/18968	....	Flexible connections
Y10T 74/18976	...	Rack and pinion
Y10T 74/18984	...	Inclined ramp
Y10T 74/18992	..	Reciprocating to reciprocating
Y10T 74/19	.	Gearing
Y10T 74/19005	..	Nonplanetary gearing differential type [e.g., gearless differentials]
Y10T 74/19009	..	Single gearing unit includes fluid drive
Y10T 74/19014	..	Plural prime movers selectively coupled to common output
Y10T 74/19019	..	Plural power paths from prime mover
Y10T 74/19023	..	Plural power paths to and/or from gearing
Y10T 74/19028	...	Alternate input connections single hand crank
Y10T 74/19033	...	Fluid drive divides or combines alternate paths
Y10T 74/19037	...	One path includes fluid drive
Y10T 74/19042	...	Friction-type gearing
Y10T 74/19047	...	Worm-type gearing
Y10T 74/19051	...	Single driven plural drives
Y10T 74/19056	....	Parallel
Y10T 74/1906	....	Nonparallel
Y10T 74/19065	....	Aligned
Y10T 74/1907	....	Parallel and aligned
Y10T 74/19074	...	Single drive plural driven
Y10T 74/19079	....	Parallel
Y10T 74/19084	.....	Spur
Y10T 74/19088	.....	Bevel
Y10T 74/19093	.....	Spur and bevel
Y10T 74/19098	.....	Helical
Y10T 74/19102	.....	Belt or chain
Y10T 74/19107	....	Nonparallel
Y10T 74/19112	....	Aligned

Y10T 74/19116	.....	Vehicle
Y10T 74/19121	....	Concentric
Y10T 74/19126	...	Plural drivers plural driven
Y10T 74/1913	....	Bevel
Y10T 74/19135	....	Spur
Y10T 74/1914	...	Alternate drivers and driven
Y10T 74/19144	...	Miscellaneous [plural power paths]
Y10T 74/19149	..	with fluid drive
Y10T 74/19153	...	Condition responsive control
Y10T 74/19158	...	with one or more controllers for gearing, fluid drive, or clutch
Y10T 74/19163	....	with interrelated controls
Y10T 74/19167	..	In series plural interchangeably locked nonplanetary units
Y10T 74/19172	..	Reversal of direction of power flow changes power transmission to alternate path
Y10T 74/19177	...	Input and output exchange functions
Y10T 74/19181	..	toothed gear and recirculated unconnected elements
Y10T 74/19186	..	Alternating rotary or continuous
Y10T 74/19191	..	Alternating rotary
Y10T 74/19195	...	Progressive
Y10T 74/192	...	Shiftable and/or slidable gears
Y10T 74/19205	...	Clutchable gears
Y10T 74/1921	....	On single driven member
Y10T 74/19214	....	On single driving member
Y10T 74/19219	..	Interchangeably locked
Y10T 74/19223	...	Disconnectable counter shaft
Y10T 74/19228	...	Multiple concentric clutch shafts
Y10T 74/19233	...	Plurality of counter shafts
Y10T 74/19237	...	Internal-external gears
Y10T 74/19242	...	Combined gear and clutch
Y10T 74/19247	....	Preselector
Y10T 74/19251	...	Control mechanism
Y10T 74/19256	....	Automatic
Y10T 74/1926	.....	Speed responsive
Y10T 74/19265	.....	Governor
Y10T 74/1927	.....	with belt gearing
Y10T 74/19274	.....	torque responsive
Y10T 74/19279	....	Cam operated
Y10T 74/19284	...	Meshing assisters
Y10T 74/19288	....	Double clutch and interposed transmission
Y10T 74/19293	...	Longitudinally slidable
Y10T 74/19298	....	Multiple spur gears

Y10T 74/19302	.....	with tumbler gear
Y10T 74/19307	.....	Selective
Y10T 74/19312	.....	Direct clutch and drive
Y10T 74/19316	.....	Progressive
Y10T 74/19321	.....	Direct clutch and drive
Y10T 74/19326	.....	Fluid operated
Y10T 74/1933	....	Multiple bevel gears
Y10T 74/19335	....	Single spur gear
Y10T 74/1934	.....	Tumbler and cone
Y10T 74/19344	.....	Multiple cone
Y10T 74/19349	....	Single bevel gear
Y10T 74/19353	....	Pin or crown gears
Y10T 74/19358	...	Laterally slidable gears
Y10T 74/19363	....	Rotary carriage
Y10T 74/19367	....	Swinging carriage
Y10T 74/19372	...	Single forward and reverse speeds
Y10T 74/19377	...	Slidable keys or clutches
Y10T 74/19381	....	Alternative clutch shaft
Y10T 74/19386	....	Multiple clutch shafts
Y10T 74/19391	.....	Progressive
Y10T 74/19395	.....	Keys simultaneously slidable
Y10T 74/194	.....	Selective
Y10T 74/19405	.....	Multiple forward and reverse
Y10T 74/19409	.....	Single forward and reverse
Y10T 74/19414	....	Single clutch shaft
Y10T 74/19419	.....	Progressive
Y10T 74/19423	.....	Multiple key
Y10T 74/19428	.....	Spur
Y10T 74/19433	.....	Fluid operated
Y10T 74/19437	.....	Electrically operated
Y10T 74/19442	.....	Single key
Y10T 74/19447	.....	Clutch and ratchet
Y10T 74/19451	.....	Spur gears
Y10T 74/19456	.....	Intermediate clutch
Y10T 74/1946	.....	Sliding clutch carrier
Y10T 74/19465	.....	Sliding clutch operator
Y10T 74/1947	.....	Selective
Y10T 74/19474	.....	Multiple key
Y10T 74/19479	.....	Spur gears
Y10T 74/19484	.....	Single speed forward and reverse

Y10T 74/19488	.....	Spur gears
Y10T 74/19493	.....	Bevel gears
Y10T 74/19498	.....	Bevel and idler gears
Y10T 74/19502	..	Pivotally supported
Y10T 74/19507	...	Windmill turntable
Y10T 74/19512	...	Screw
Y10T 74/19516	...	Spur
Y10T 74/19521	...	Bevel
Y10T 74/19526	....	Wheel type
Y10T 74/1953	....	Wringer type
Y10T 74/19535	..	Follow-up mechanism
Y10T 74/1954	..	Eccentric driving shaft and axle
Y10T 74/19545	..	Central driving shaft in axle
Y10T 74/1955	..	Parallel shafts, adjustable gear mesh
Y10T 74/19555	..	Varying speed ratio
Y10T 74/1956	..	Adjustable
Y10T 74/19565	...	Relative movable axes
Y10T 74/1957	....	Parallel shafts
Y10T 74/19575	....	Automatic control
Y10T 74/1958	.....	Parallel shafts
Y10T 74/19585	...	Fixed axes
Y10T 74/1959	....	Parallel shafts
Y10T 74/19595	....	Automatic control
Y10T 74/196	.....	Parallel shafts
Y10T 74/19605	..	Reversing means
Y10T 74/19609	...	Governor control
Y10T 74/19614	..	Disconnecting means
Y10T 74/19619	..	Displaceable elements
Y10T 74/19623	..	Backlash take-up
Y10T 74/19628	..	Pressure distributing
Y10T 74/19633	..	Yieldability in gear trains
Y10T 74/19637	..	with brake means for gearing
Y10T 74/19642	..	Directly cooperating gears
Y10T 74/19647	...	Parallel axes or shafts
Y10T 74/19651	....	External type
Y10T 74/19656	.....	Pin teeth
Y10T 74/1966	...	Intersecting axes
Y10T 74/19665	....	Bevel gear type
Y10T 74/1967	...	Rack and pinion
Y10T 74/19674	...	Spur and bevel

Y10T 74/19679	...	Spur
Y10T 74/19684	....	Motor and gearing
Y10T 74/19688	...	Bevel
Y10T 74/19693	....	Motor vehicle drive
Y10T 74/19698	...	Spiral
Y10T 74/19702	....	Screw and nut
Y10T 74/19707	.....	Plural longitudinally variably spaced nuts
Y10T 74/19712	.....	Threadless
Y10T 74/19716	.....	Non-linear screw
Y10T 74/19721	.....	Thread geometry
Y10T 74/19726	.....	Thread pitch varies over axial length
Y10T 74/1973	.....	Shaft thread is spirally wound wire
Y10T 74/19735	.....	Nut disengageable from screw
Y10T 74/1974	.....	Nut segments hinged parallel to shaft [e.g., clam shell-type, etc.]
Y10T 74/19744	.....	Rolling element engaging thread
Y10T 74/19749	.....	Recirculating rolling elements
Y10T 74/19753	.....	Plural independent recirculating element paths
Y10T 74/19758	.....	Single thread common to plural paths
Y10T 74/19763	.....	Roller return path in shaft
Y10T 74/19767	.....	Return path geometry
Y10T 74/19772	.....	Rolling element deflector
Y10T 74/19777	.....	Interconnected or cooperating rollers or roller structure
Y10T 74/19781	.....	Non-recirculating rolling elements
Y10T 74/19786	.....	Captured sphere
Y10T 74/19791	.....	Cylindrical or quasi-cylindrical roller element [e.g., inclined roller, etc.]
Y10T 74/19795	.....	Parallel to shaft
Y10T 74/198	.....	Perpendicular to shaft
Y10T 74/19805	.....	Less than 360 degrees of contact between nut and screw
Y10T 74/19809	.....	Independent nut segments
Y10T 74/19814	.....	Integral deformable tangs engaging screw
Y10T 74/19819	....	Driven rack or shaft
Y10T 74/19823	....	Screw
Y10T 74/19828	....	Worm
Y10T 74/19833	.....	Variable speed
Y10T 74/19837	.....	Intermittent motion
Y10T 74/19842	.....	Distribution of pressure
Y10T 74/19847	...	torque actuated safety devices
Y10T 74/19851	..	Gear and rotary bodies
Y10T 74/19856	...	Laterally-spaced wheels

Y10T 74/1986	...	Radially-spaced wheels
Y10T 74/19865	...	with flywheel
Y10T 74/1987	..	Rotary bodies
Y10T 74/19874	...	Mutilated
Y10T 74/19879	...	Geneva
Y10T 74/19884	...	Irregular teeth and bodies
Y10T 74/19888	...	External and internal teeth
Y10T 74/19893	...	Sectional
Y10T 74/19898	....	Backlash take-up
Y10T 74/19902	.....	Screw and nut
Y10T 74/19907	....	Sound deadening
Y10T 74/19912	....	Differential disks
Y10T 74/19916	....	Multiple disks
Y10T 74/19921	....	Separate rim
Y10T 74/19926	.....	Detachable
Y10T 74/1993	....	Segmental rim
Y10T 74/19935	....	Sheet metal
Y10T 74/1994	....	Diametrically split
Y10T 74/19944	....	Shaft-admitting insert
Y10T 74/19949	..	Teeth
Y10T 74/19953	...	Worm and helical
Y10T 74/19958	...	Bevel
Y10T 74/19963	...	Spur
Y10T 74/19967	....	Yieldable
Y10T 74/19972	....	form
Y10T 74/19977	.....	Antifriction
Y10T 74/19981	.....	Roller
Y10T 74/19986	.....	Twisted
Y10T 74/19991	..	Lubrication
Y10T 74/19995	...	Teeth
Y10T 74/20	.	Control lever and linkage systems
Y10T 74/20006	..	Resilient connections
Y10T 74/20012	..	Multiple controlled elements
Y10T 74/20018	...	Transmission control
Y10T 74/20024	....	Fluid actuator
Y10T 74/2003	....	Electrical actuator
Y10T 74/20037	....	Occupant propelled vehicle
Y10T 74/20043	.....	Transmission controlled by flexible cable
Y10T 74/20049	....	Transmission controlled by flexible cable
Y10T 74/20055	....	Foot operated

Y10T 74/20061	.....	Multiple foot-operated controls
Y10T 74/20067	....	Control convertible between automatic and manual operation
Y10T 74/20073	....	Control of plural mechanisms [e.g., control of transmission and control of 4 - wheel drive]
Y10T 74/20079	.....	Separate control levers
Y10T 74/20085	....	Restriction of shift, gear selection, or gear engagement
Y10T 74/20091	.....	Prevention of reverse shift
Y10T 74/20098	.....	Separate actuator to disengage restrictor
Y10T 74/20104	.....	Shift element interlock
Y10T 74/2011	.....	with detent, recess, notch, or groove
Y10T 74/20116	.....	Resiliently biased interlock
Y10T 74/20122	.....	Spherical restrictor
Y10T 74/20128	.....	Resiliently biased restrictor
Y10T 74/20134	....	having vibration damper
Y10T 74/2014	....	Manually operated selector [e.g., remotely controlled device, lever, push button, rotary dial, etc.]
Y10T 74/20146	.....	Control lever on steering column
Y10T 74/20152	.....	Control lever movable through plural planes
Y10T 74/20159	.....	Control lever movable through plural planes
Y10T 74/20165	.....	Spherical mount [e.g., ball and socket]
Y10T 74/20171	.....	Resiliently biased control lever
Y10T 74/20177	....	Particular element [e.g., shift fork, template, etc.]
Y10T 74/20183	.....	Shift fork structure
Y10T 74/20189	...	Foot operated
Y10T 74/20195	....	Offset extension
Y10T 74/20201	...	Control moves in two planes
Y10T 74/20207	..	Multiple controlling elements for single controlled element
Y10T 74/20213	...	Interconnected
Y10T 74/2022	....	Hand and foot
Y10T 74/20226	.....	Accelerator
Y10T 74/20232	....	Marine
Y10T 74/20238	...	Interlocked
Y10T 74/20244	....	Push button
Y10T 74/2025	....	Rod blocks actuation of rotary member
Y10T 74/20256	...	Steering and controls assemblies
Y10T 74/20262	....	Rotary control shaft
Y10T 74/20268	....	Reciprocating control elements
Y10T 74/20274	.....	Flexible
Y10T 74/2028	.....	Handle bar type
Y10T 74/20287	.....	Flexible control element

Y10T 74/20293	....	with horn control
Y10T 74/20299	...	Antirattling elements
Y10T 74/20305	...	Robotic arm
Y10T 74/20311	....	including power cable or connector
Y10T 74/20317	....	including electric motor
Y10T 74/20323	....	including flaccid drive element
Y10T 74/20329	....	Joint between elements
Y10T 74/20335	.....	Wrist
Y10T 74/20341	...	Power elements as controlling elements
Y10T 74/20348	....	Planar surface with orthogonal movement and rotation
Y10T 74/20354	....	Planar surface with orthogonal movement only
Y10T 74/2036	....	Pair of power elements
Y10T 74/20366	...	Power and manual controlling elements
Y10T 74/20372	...	Manual controlling elements
Y10T 74/20378	....	Planar surface with orthogonal movement or rotation
Y10T 74/20384	....	Levers
Y10T 74/2039	.....	Pair of levers
Y10T 74/20396	..	Hand operated
Y10T 74/20402	...	Flexible transmitter [e.g., Bowden cable]
Y10T 74/20408	....	Constant tension sustaining
Y10T 74/20414	.....	Hydraulic control
Y10T 74/2042	....	and hand operator
Y10T 74/20426	.....	Slidable
Y10T 74/20432	.....	for moving a mirror
Y10T 74/20438	.....	Single rotatable lever [e.g., for bicycle brake or derailleur]
Y10T 74/20444	....	including rolling antifriction elements
Y10T 74/2045	....	and sheath support, connector, or anchor
Y10T 74/20456	....	Specific cable or sheath structure
Y10T 74/20462	....	Specific cable connector or guide
Y10T 74/20468	...	Sliding rod
Y10T 74/20474	...	Rotatable rod, shaft, or post
Y10T 74/2048	....	Gear, drum, and cable
Y10T 74/20486	....	Drum and cable
Y10T 74/20492	....	Gear
Y10T 74/20498	.....	Variable ratio
Y10T 74/20504	.....	Screw and nut
Y10T 74/2051	....	Adjustable
Y10T 74/20516	....	Mountings
Y10T 74/20522	.....	Antenna
Y10T 74/20528	..	Foot operated



Y10T 74/20534	...	Accelerator
Y10T 74/2054	...	Signal
Y10T 74/20546	..	Knee operated
Y10T 74/20552	...	Elbow
Y10T 74/20558	..	Variable output force
Y10T 74/20564	...	Flexible
Y10T 74/2057	...	Variable input leverage
Y10T 74/20576	..	Elements
Y10T 74/20582	...	Levers
Y10T 74/20588	....	toggle
Y10T 74/20594	.....	Lazy tongs
Y10T 74/206	....	Adjustable
Y10T 74/20606	....	Swing posts
Y10T 74/20612	....	Hand
Y10T 74/20618	.....	Jointed
Y10T 74/20624	.....	Adjustable
Y10T 74/2063	....	Stops
Y10T 74/20636	...	Detents
Y10T 74/20642	....	Hand crank
Y10T 74/20648	....	Interrelated lever release
Y10T 74/20654	....	Gear
Y10T 74/2066	....	Friction
Y10T 74/20666	....	Lever engaging
Y10T 74/20672	....	Lever engaging rack
Y10T 74/20678	.....	Pivoted
Y10T 74/20684	.....	Lever carried pawl
Y10T 74/2069	.....	Handle release
Y10T 74/20696	.....	Finger lever release
Y10T 74/20702	.....	Slidable
Y10T 74/20708	.....	Pedal controlled
Y10T 74/20714	....	Lever carried rack
Y10T 74/2072	.....	Pivoted
Y10T 74/20726	.....	Pedal controlled
Y10T 74/20732	...	Handles
Y10T 74/20738	....	Extension
Y10T 74/20744	....	Hand crank
Y10T 74/2075	.....	Extensible
Y10T 74/20756	.....	Collapsible
Y10T 74/20762	....	Shaft connections
Y10T 74/20768	.....	Engine starter type

Y10T 74/20774	.....	Holders
Y10T 74/2078	....	Handle bars
Y10T 74/20786	.....	Spring biased or supported
Y10T 74/20792	.....	Folding or adjustable
Y10T 74/20798	.....	Sectional
Y10T 74/20804	.....	Simultaneously movable
Y10T 74/2081	.....	Continuous
Y10T 74/20816	.....	with handle latch
Y10T 74/20822	.....	Attachments and accessories
Y10T 74/20828	.....	Handholds and grips
Y10T 74/20834	....	Hand wheels
Y10T 74/2084	.....	Knob or dial
Y10T 74/20846	.....	Slidable
Y10T 74/20852	.....	Pivoted
Y10T 74/20858	.....	Releasable
Y10T 74/20864	.....	Handles
Y10T 74/2087	.....	Rim grips and covers
Y10T 74/20876	....	Caps and covers
Y10T 74/20882	...	Rocker arms
Y10T 74/20888	...	Pedals
Y10T 74/20894	....	Treadles
Y10T 74/209	....	Extension
Y10T 74/20906	.....	Offset
Y10T 74/20912	....	Pads and covers
Y10T 74/20918	...	Foot rests
Y10T 74/20924	...	Controller checks
Y10T 74/2093	...	Slot closers and lever guards
Y10T 74/21	.	Elements
Y10T 74/2101	..	Cams
Y10T 74/2102	...	Adjustable
Y10T 74/2104	....	Flexible strip
Y10T 74/2105	....	Memory devices
Y10T 74/2106	....	Timer devices
Y10T 74/2107	...	Follower
Y10T 74/2109	..	Balancing for drum, e.g., washing machine or arm-type structure, etc., centrifuge, etc.
Y10T 74/211	..	Eccentric
Y10T 74/2111	...	Plural, movable relative to each other [including ball[s]]
Y10T 74/2112	....	Concentric
Y10T 74/2114	...	Adjustable

Y10T 74/2115	....	Radially
Y10T 74/2116	...	having anti-friction means, e.g., roller bearing, lubrication, etc.
Y10T 74/2117	..	Power generating-type flywheel
Y10T 74/2119	...	Structural detail, e.g., material, configuration, superconductor, discs, laminated, etc.
Y10T 74/212	....	Containing fiber or filament
Y10T 74/2121	..	Flywheel, motion smoothing-type
Y10T 74/2122	...	with fluid balancing means
Y10T 74/2123	....	and pressure compensation
Y10T 74/2125	....	and elastic device
Y10T 74/2126	....	and bearings
Y10T 74/2127	...	with electrical or magnetic damping
Y10T 74/2128	...	Damping using swinging masses, e.g., pendulum type, etc.
Y10T 74/213	...	Damping by increasing frictional force
Y10T 74/2131	...	Damping by absorbing vibration force [via rubber, elastomeric material, etc.]
Y10T 74/2132	...	Structural detail, e.g., fiber, held by magnet, etc.
Y10T 74/2133	..	Pawls and ratchets
Y10T 74/2135	...	Noiseless
Y10T 74/2136	...	Pivoted pawls
Y10T 74/2137	....	Single tooth
Y10T 74/2138	....	Flexible single tooth
Y10T 74/214	....	Multiple tooth
Y10T 74/2141	...	Sliding pawls
Y10T 74/2142	..	Pitmans and connecting rods
Y10T 74/2143	...	Radial
Y10T 74/2144	...	Yieldable
Y10T 74/2146	....	Longitudinal springs
Y10T 74/2147	....	Fluid cushion
Y10T 74/2148	....	Automatic release
Y10T 74/2149	.....	toggle link type
Y10T 74/2151	...	Longitudinally adjustable
Y10T 74/2152	...	Hollow rod, lubricated
Y10T 74/2153	...	Sheet metal type
Y10T 74/2154	...	Counterbalanced
Y10T 74/2156	....	Weight type
Y10T 74/2157	.....	Rotating
Y10T 74/2158	....	Spring
Y10T 74/2159	...	Section coupled
Y10T 74/216	...	Bearings, adjustable
Y10T 74/2162	...	Engine type

Y10T 74/2163	...	Idler arm
Y10T 74/2164	..	Cranks and pedals
Y10T 74/2165	...	with attached gear
Y10T 74/2167	...	Variable
Y10T 74/2168	...	Pedals
Y10T 74/2169	....	Counterbalanced
Y10T 74/217	....	with toe or shoe clips
Y10T 74/2172	....	Adjustable or folding
Y10T 74/2173	..	Cranks and wrist pins
Y10T 74/2174	...	Multiple throw
Y10T 74/2175	....	Sectional
Y10T 74/2177	...	Sectional
Y10T 74/2178	...	Yieldable
Y10T 74/2179	...	Adjustable
Y10T 74/218	....	Automatically
Y10T 74/2181	...	Variable
Y10T 74/2183	...	Counterbalanced
Y10T 74/2184	....	Vibration dampers
Y10T 74/2185	...	Lubricated
Y10T 74/2186	..	Gear casings
Y10T 74/2188	...	Axle and torque tubes
Y10T 74/2189	...	Cooling
Y10T 74/219	..	Guards
Y10T 74/2191	...	for rotary member
Y10T 74/2193	..	Guard mechanisms
Y10T 74/2194	...	Automatic
Y10T 74/2195	....	Oscillating member actuator
Y10T 74/2196	....	Reciprocating member actuator
Y10T 74/2198	...	Operator controlled
Y10T 74/2199	...	Set screw
Y10T 74/22	.	Miscellaneous

### **Former US Class 82 Series**

<b>Y10T 82/00</b>	<b>Turning</b>
Y10T 82/10	. Process of turning
Y10T 82/11	. Talking machine tablet
Y10T 82/12	. Radially moving rotating tool inside bore
Y10T 82/122	.. Forming non-circular bore
Y10T 82/125	.. Tool simultaneously moving axially

Y10T 82/128	... Pivoted to tool-carrier
Y10T 82/13	. Pattern section
Y10T 82/135	.. Cam-controlled cutter
Y10T 82/14	. Axial pattern
Y10T 82/141	.. having transverse tool and templet guide
Y10T 82/142	... with workpiece gauge
Y10T 82/143	... having electrical actuator
Y10T 82/145	.... And hydraulic actuator
Y10T 82/147	... having hydraulic actuator
Y10T 82/148	.. Pivoted tool rest
Y10T 82/149	.. Profiled cutter
Y10T 82/15	. Tapers
Y10T 82/152	.. Offset work axis
Y10T 82/154	.. Transversely shifted cutter
Y10T 82/156	... Templet controlled
Y10T 82/158	... Gear controlled
Y10T 82/16	. Severing or cut-off
Y10T 82/16016	.. Processes
Y10T 82/16032	.. Automatic and/or triggered control
Y10T 82/16049	.. Combined with means to sharpen tool[s]
Y10T 82/16065	.. Combined with means to apply fluid
Y10T 82/16081	.. Combined with means to heat tool and/or work
Y10T 82/16098	.. with dust or chip handling
Y10T 82/16114	.. including scrap cutting means
Y10T 82/16131	.. Flying cutter type
Y10T 82/16147	.. Cutting couple straddling work
Y10T 82/16163	... with pattern, guide or cam means [noncircular product]
Y10T 82/16181	... Plural cutting means [pairs, or pair, plus single]
Y10T 82/16196	... Rotary shear pair
Y10T 82/16213	.... Tool axes parallel to axis of work rotation
Y10T 82/16229	.. Interrelated means for tool infeed and circumrotation
Y10T 82/16245	... Dependent upon reaction to work
Y10T 82/16262	... Infeed cam disk rotation geared to tool holder rotation
Y10T 82/16278	.... Axial infeed cam
Y10T 82/16295	.... including centrifugal balancing means
Y10T 82/16311	.... Scroll plate infeed cam
Y10T 82/16327	... Infeed cam plate braked with respect to tool[s] carrier plate
Y10T 82/16344	... Orbital cogwheel and fixed detent
Y10T 82/16361	... Common gear means
Y10T 82/16377	.... including adjustable means to vary gear speed

Y10T 82/16393	....	with manual disconnect lever
Y10T 82/16409	...	with means to feed work
Y10T 82/16426	..	Infeed means
Y10T 82/16442	...	with means to circumrotate tool[s] about work
Y10T 82/16459	....	Fluid means for relative tool actuation
Y10T 82/16475	....	Gear means for tool actuation
Y10T 82/16491	.....	including axial cam
Y10T 82/16508	.....	with indicator
Y10T 82/16524	....	Bell crank linkage for tool[s] holder
Y10T 82/16541	....	Resilient means for tool actuation
Y10T 82/16557	.....	with means for manual retraction
Y10T 82/16573	...	Hand crank for tool holder
Y10T 82/16591	...	Power driven eccentric
Y10T 82/16606	....	Fluid motor
Y10T 82/16622	....	Plural tools
Y10T 82/16639	...	Tool within work
Y10T 82/16655	...	with means to rotate tool[s]
Y10T 82/16672	....	including rotatable cutters supporting work
Y10T 82/16688	....	Planetating work mandrels
Y10T 82/16704	....	Pivoted tool carriage
Y10T 82/16721	.....	with adjustable work stops
Y10T 82/16737	....	Eccentric periphery rotary tool
Y10T 82/16754	....	Means to feed work axially
Y10T 82/16771	....	Translatable work support carriage
Y10T 82/16786	....	with tool groove in support roll[s]
Y10T 82/16803	...	Rotatable tool[s] driven by contact with work
Y10T 82/16819	....	Axially movable tool support
Y10T 82/16836	.....	Freely floating parallel to axis
Y10T 82/16852	.....	with supplemental nonrotative tool
Y10T 82/16868	.....	including clutch control for work rotation
Y10T 82/16885	....	including resilient means urging work against rotary support
Y10T 82/16901	...	Separate means for plural tools
Y10T 82/16918	...	Spring urged
Y10T 82/16934	....	For window shade
Y10T 82/16951	...	Tool adjustment and/or stop
Y10T 82/16967	...	with means to support and/or rotate work
Y10T 82/16983	...	with means to feed work
Y10T 82/17	.	Lathe for pulley
Y10T 82/18	.	Lathe for wheel or axle
Y10T 82/185	..	In situ lathe for railroad wheel

Y10T 82/19	. Lathe for crank or crank pin
Y10T 82/192	.. Portable lathe for crank pin
Y10T 82/195	.. having work oscillator
Y10T 82/198	... having work driver
Y10T 82/20	. Lathe for screw cutting
Y10T 82/205	.. having swinging feed nut and tool bar
Y10T 82/21	. Portable lathe for brake drum, disc, or shoe
Y10T 82/22	. Portable lathe for pipe turning
Y10T 82/23	. Portable lathe for piston grooving
Y10T 82/24	. Bench lathe
Y10T 82/245	.. Watchmaker's lathe
Y10T 82/25	. Lathe
Y10T 82/2502	.. with program control
Y10T 82/2504	... And transmission
Y10T 82/2506	... And tool turret
Y10T 82/2508	.. with tool turret
Y10T 82/2511	.. Vertical
Y10T 82/2512	.. having facing tool fed transverse to work
Y10T 82/2514	.. with work feeder or remover
Y10T 82/2516	... Magazine type
Y10T 82/2518	.... Bar feeder
Y10T 82/2521	... Bar feeder
Y10T 82/2522	.. Portable
Y10T 82/2524	.. Multiple
Y10T 82/2527	.. having hollow cutter head
Y10T 82/2529	.. Revolvable cutter heads
Y10T 82/2531	.. Carriage feed
Y10T 82/2533	... Control
Y10T 82/2535	.... Electrical type
Y10T 82/2537	... Apron mechanism
Y10T 82/2539	.... Feednut control
Y10T 82/2541	... Slide rest
Y10T 82/2543	.... Multiple tool support
Y10T 82/2545	.... Tool relief
Y10T 82/2547	... Change gears
Y10T 82/2549	... Feedscrews and rods
Y10T 82/2552	.. Headstock
Y10T 82/2554	... Speed changing gear
Y10T 82/2556	.... Speed change gears for maintaining constant cutting speed
Y10T 82/2558	... Spindle reverser

Y10T 82/2561	...	Spindle or work angler
Y10T 82/2562	...	Spindle and bearings
Y10T 82/2564	..	Tailstock
Y10T 82/2566	..	Bed
Y10T 82/2568	..	Center
Y10T 82/2571	...	Alignment adjuster
Y10T 82/2572	..	Attachment
Y10T 82/2574	...	Stop [e.g., carriage, tool, work, etc.]
Y10T 82/2577	....	Tool slide
Y10T 82/2579	....	Collet or spindle
Y10T 82/2581	....	Indexible [e.g., roll type, etc.]
Y10T 82/2583	..	Tool and work rest
Y10T 82/2585	..	Tool rest
Y10T 82/2587	...	Turret type holder [e.g., multiple tools, etc.]
Y10T 82/2589	...	Quick release tool or holder clamp
Y10T 82/2591	...	Tool post
Y10T 82/2593	..	Work rest
Y10T 82/2595	...	with noise or vibration dampener
Y10T 82/2597	...	Center rest
Y10T 82/26	.	Work driver
Y10T 82/262	..	Lathe dog
Y10T 82/264	...	Cam grip
Y10T 82/266	..	Mandrel
Y10T 82/268	...	Expansible
Y10T 82/27	.	Centerer
Y10T 82/28	.	Drill press attachment for turning
Y10T 82/29	.	Attachment for cutting a valve
Y10T 82/30	.	Miscellaneous

#### **Former US Class 83 series**

<b>Y10T 83/00</b>	<b>Cutting</b>
Y10T 83/02	. Other than completely through work thickness
Y10T 83/0207	.. or through work presented
Y10T 83/0215	... Including use of rotary scoring blade
Y10T 83/0222	.... Plural independent rotary scoring blades
Y10T 83/023	... With infeeding of work
Y10T 83/0237	.. Pricking
Y10T 83/0244	... Including use of orbiting tool carrier
Y10T 83/0252	... With infeeding of tool



Y10T 83/0259	..	Edge trimming [e.g., chamfering, etc.]
Y10T 83/0267	..	Splitting
Y10T 83/0274	...	By use of endless band or chain knife
Y10T 83/0281	...	By use of rotary blade
Y10T 83/0289	....	Plural independent rotary blades
Y10T 83/0296	...	With infeeding of work
Y10T 83/0304	..	Grooving
Y10T 83/0311	...	By use of plural independent rotary blades
Y10T 83/0319	....	Forming common groove
Y10T 83/0326	....	Blades turning about perpendicular axes
Y10T 83/0333	..	Scoring
Y10T 83/0341	...	Processes
Y10T 83/0348	...	Active means to control depth of score
Y10T 83/0356	...	Serially
Y10T 83/0363	...	Plural independent scoring blades
Y10T 83/037	....	Rotary scoring blades
Y10T 83/0378	.....	On opposite sides of work
Y10T 83/0385	...	Rotary scoring blade
Y10T 83/0393	....	With means to rotate blade
Y10T 83/04	.	Processes
Y10T 83/0405	..	With preparatory or simultaneous ancillary treatment of work
Y10T 83/041	...	By heating or cooling
Y10T 83/0414	....	At localized area [e.g., line of separation]
Y10T 83/0419	...	By distorting within elastic limit
Y10T 83/0424	....	By stretching
Y10T 83/0429	....	By compressing
Y10T 83/0433	....	By flexing around or by tool
Y10T 83/0438	.....	To conform to shape of tool
Y10T 83/0443	...	By fluid application
Y10T 83/0448	..	With subsequent handling [i.e., of product]
Y10T 83/0453	...	By fluid application
Y10T 83/0457	...	By retaining or reinserting product in workpiece
Y10T 83/0462	...	By accelerating travel
Y10T 83/0467	...	By separating products from each other
Y10T 83/0472	...	By moving work support to which a tacky product is adhered
Y10T 83/0476	..	Including stacking of plural workpieces
Y10T 83/0481	..	Puncturing
Y10T 83/0486	..	With manipulation of tool protective strip [e.g., backing strip]
Y10T 83/0491	..	Cutting of interdigitating products
Y10T 83/0495	..	Making and using a registration cut

Y10T 83/05	..	With reorientation of tool between cuts
Y10T 83/0505	..	With reorientation of work between cuts
Y10T 83/051	...	Relative to same tool
Y10T 83/0515	..	During movement of work past flying cutter
Y10T 83/0519	...	Cyclically varying rate of tool or work movement
Y10T 83/0524	..	Plural cutting steps
Y10T 83/0529	...	Blanking and cutting
Y10T 83/0534	....	Cutting to join blanked holes
Y10T 83/0538	...	Repetitive transverse severing from leading edge of work
Y10T 83/0543	....	Alternately forming products of less than total width of work
Y10T 83/0548	....	With longitudinal severing
Y10T 83/0553	.....	Effected by plural steps
Y10T 83/0558	.....	Along zigzag or undulant line or cut
Y10T 83/0562	.....	Prior to transverse severing
Y10T 83/0567	....	Nonrectilinear cutting
Y10T 83/0572	...	Plural cutting steps effect progressive cut
Y10T 83/0577	...	Repetitive blanking
Y10T 83/0581	..	Cutting part way through from opposite sides of work
Y10T 83/0586	..	Effecting diverse or sequential cuts in same cutting step
Y10T 83/0591	..	Cutting by direct application of fluent pressure to work
Y10T 83/0596	..	Cutting wall of hollow work
Y10T 83/06	..	Blanking
Y10T 83/0605	..	Cut advances across work surface
Y10T 83/061	.	With manually actuated means to disturb cyclic operation
Y10T 83/081	.	With randomly actuated stopping means
Y10T 83/083	..	With means to permit subsequent hand operation
Y10T 83/084	..	With stop-signal-responsive means to actuate auxiliary cutter
Y10T 83/086	..	With sensing of product or product handling means
Y10T 83/088	..	Responsive to tool detector or work-feed-means detector
Y10T 83/089	...	Responsive to tool characteristic
Y10T 83/091	..	Responsive to work sensing means
Y10T 83/093	...	Of buckled work
Y10T 83/094	....	Running loop
Y10T 83/096	...	Detector supported on or urged against work
Y10T 83/098	....	Resiliently biased
Y10T 83/099	..	Manually operated
Y10T 83/101	.	With stopping means effective on completion of predetermined number of tool cycles
Y10T 83/121	.	With means to accomplish delayed stopping after cessation of cyclic operation
Y10T 83/141	.	With means to monitor and control operation [e.g., self-regulating means]
Y10T 83/145	..	Including means to monitor product

Y10T 83/148	..	Including means to correct the sensed operation
Y10T 83/152	...	And modify another operation
Y10T 83/155	...	Optimizing product from unique workpiece
Y10T 83/159	..	Including means to compensate tool speed for work-feed variations
Y10T 83/162	.	With control means responsive to replaceable or selectable information program
Y10T 83/164	..	For cutting component of animal; e.g., hair clipper
Y10T 83/166	..	Removable element carries program
Y10T 83/169	...	Indeterminate length, web or strand
Y10T 83/171	....	Magnetic
Y10T 83/173	..	Arithmetically determined program
Y10T 83/175	...	With condition sensor
Y10T 83/178	....	Responsive to work
Y10T 83/18	...	With operator input means
Y10T 83/182	.	With means to weigh product
Y10T 83/202	.	With product handling means
Y10T 83/2022	..	Initiated by means responsive to product or work
Y10T 83/2024	...	Responsive to work
Y10T 83/2027	..	Initiated by means directly responsive to tool movement
Y10T 83/2029	...	In return motion of tool
Y10T 83/2031	..	Including means to drape the product
Y10T 83/2033	..	Including means to form or hold pile of product pieces
Y10T 83/2035	...	In nested relation
Y10T 83/2037	...	In stacked or packed relation
Y10T 83/204	....	Stacker sweeps along product support
Y10T 83/2042	....	Including cut pieces overlapped on delivery means
Y10T 83/2044	....	And means to separate product portions
Y10T 83/2046	....	Including means to move stack bodily
Y10T 83/2048	.....	By movement of stack holder
Y10T 83/205	.....	By timed relocation of holder along path of stack gscheme-change-itemth
Y10T 83/2053	.....	Interrelated adjustment of holder movement and work-feeder
Y10T 83/2055	....	And means to resist stack movement
Y10T 83/2057	....	Including means to deliver individual pieces to a stack holder
Y10T 83/2059	.....	With spindle to enter a hole or to make hole in product
Y10T 83/2061	.....	By face-engaging means to push product broadside into stacked relation
Y10T 83/2063	....	Upon emergence from hollow cutter
Y10T 83/2066	..	By fluid current
Y10T 83/2068	...	Plural blasts directed against plural product pieces
Y10T 83/207	...	By suction means
Y10T 83/2072	..	By brush means

Y10T 83/2074	..	Including means to divert one portion of product from another
Y10T 83/2077	...	By kerf entering guide
Y10T 83/2079	...	Remaining or re-inserted product portion from base material
Y10T 83/2081	...	Gravity type
Y10T 83/2083	...	Deflecting guide
Y10T 83/2085	....	Positionable gate in product flow path
Y10T 83/2087	...	Diverging product movers
Y10T 83/209	..	Including means to replace product in base material after cutting
Y10T 83/2092	..	Means to move, guide, or permit free fall or flight of product
Y10T 83/2094	...	Means to move product at speed different from work speed
Y10T 83/2096	...	Means to move product out of contact with tool
Y10T 83/2098	....	With means to effect subsequent conveying or guiding
Y10T 83/21	....	Out of contact with a rotary tool
Y10T 83/2103	.....	Mover surrounds axis of tool rotation
Y10T 83/2105	.....	Mover mounted on rotary tool
Y10T 83/2107	.....	For radial movement of product
Y10T 83/2109	.....	Resiliently mounted
Y10T 83/2111	.....	Mover is resiliently mounted
Y10T 83/2113	.....	Pivoted mover
Y10T 83/2116	.....	And plural rotating tools
Y10T 83/2118	.....	Stationary mover
Y10T 83/212	.....	And plural rotating tools
Y10T 83/2122	....	By ejector within a hollow cutter
Y10T 83/2124	.....	And means to strip the outer surface of a cutter
Y10T 83/2127	.....	Ejector operated with return stroke of cutter
Y10T 83/2129	.....	By means carried by cooperating cutter
Y10T 83/2131	.....	By cam-operated ejector
Y10T 83/2133	.....	By resiliently biased ejector
Y10T 83/2135	....	Moving stripper timed with tool stroke
Y10T 83/2137	.....	And alternatively movable to or from operating position
Y10T 83/214	.....	Latched stripper released by tool return
Y10T 83/2142	.....	Plural strippers operative upon plural tools
Y10T 83/2144	.....	Single stripper operative upon plural tools
Y10T 83/2146	.....	Spring arm stripper
Y10T 83/2148	.....	Linkage actuated
Y10T 83/215	.....	Carried by moving tool element or its support
Y10T 83/2153	.....	Fluid pressure actuated stripper
Y10T 83/2155	.....	Stripper biased against product
Y10T 83/2157	.....	Elastomeric stripper contacting product
Y10T 83/2159	.....	By spring means

Y10T 83/2161	.....	By free weight of stripper
Y10T 83/2163	.....	Stripper biased against product
Y10T 83/2166	.....	Spring biased stripper
Y10T 83/2168	....	Manually operated stripper
Y10T 83/217	....	Stationary stripper
Y10T 83/2172	.....	Stripper encircles moving tool
Y10T 83/2174	...	Blockable exit port
Y10T 83/2177	...	Tool conforming member interposed between tool and work
Y10T 83/2179	...	Including means to move, or resist movement of, cut pieces along delivery chute
Y10T 83/2181	...	Active delivery means mounted on tool support
Y10T 83/2183	...	Product mover including gripper means
Y10T 83/2185	....	Suction gripper
Y10T 83/2187	....	Reciprocating product handler
Y10T 83/219	....	Rotating or oscillating product handler
Y10T 83/2192	...	Endless conveyor
Y10T 83/2194	....	And means to remove product therefrom
Y10T 83/2196	...	Roller[s]
Y10T 83/2198	...	Tiltable or withdrawable support
Y10T 83/22	...	Means to move product laterally
Y10T 83/2203	....	Oscillating means
Y10T 83/2205	....	Reciprocating means
Y10T 83/2207	...	Means to move product in a nonrectilinear path
Y10T 83/2209	...	Guide
Y10T 83/2211	....	Abutment in path of product being moved by work feeder
Y10T 83/2213	....	Product-diverting conduit in or from hollow tool
Y10T 83/2216	....	Inclined conduit, chute or plane
Y10T 83/2218	....	Abutment interposed in path of free fall or flight of product
Y10T 83/222	.	With receptacle or support for cut product
Y10T 83/242	.	With means to clean work or tool
Y10T 83/263	.	With means to apply transient nonpropellant fluent material to tool or work
Y10T 83/283	.	With means to control or modify temperature of apparatus or work
Y10T 83/293	..	Of tool
Y10T 83/303	.	With tool sharpener or smoother
Y10T 83/313	..	Spatially fixed tool
Y10T 83/323	.	With means to stretch work temporarily
Y10T 83/343	.	With means to deform work temporarily
Y10T 83/364	.	By fluid blast and/or suction
Y10T 83/384	.	By tool inside hollow work
Y10T 83/385	..	Work pre-packed with internal tool[s]

Y10T 83/386	..	With expanding mandrel
Y10T 83/387	..	Interrelated tool feed means and means to actuate work immobilizer
Y10T 83/388	...	Actuated clamp element and work holder coact to position work
Y10T 83/39	..	Synchronized tool and work feeding means
Y10T 83/391	..	With means to position tool[s] for cutting
Y10T 83/392	..	One tool [either internal or external] having compound motion
Y10T 83/393	...	Annulus and disc-type tool pair
Y10T 83/394	..	One tool having unidirectional rotary motion
Y10T 83/395	..	One tool having only rectilinear motion[s]
Y10T 83/396	...	Annulus and disc-type tool pair
Y10T 83/397	....	A tool has a sequence of motion in plural paths
Y10T 83/398	...	Internal tool is an active cutter
Y10T 83/40	...	Multiple external active tools
Y10T 83/401	....	Tools operate in a substantially common transverse plane of cut
Y10T 83/402	.....	With tool actuating cams on a common support
Y10T 83/403	..	With manually actuated means to position or facilitate positioning of work
Y10T 83/404	.	By means to misalign aligned apertured tools
Y10T 83/408	..	Combined with another type tool of the class
Y10T 83/412	..	Rectilinear relative movement only
Y10T 83/416	..	Rotary relative movement solely about a single pivot
Y10T 83/42	...	With plural apertures in one or both carriers
Y10T 83/424	.	By increased tensioning of work-enclosing wire
Y10T 83/444	.	Tool engages work during dwell of intermittent workfeed
Y10T 83/4443	..	Unicyclic
Y10T 83/4445	...	Convertible to and from unicyclic
Y10T 83/4448	...	Controlled by mechanical means
Y10T 83/445	..	With work-moving clamp jaw
Y10T 83/4453	..	Work moved solely by movable abutment
Y10T 83/4455	..	Operation initiated by work-driven detector means to measure work length
Y10T 83/4458	..	Work-sensing means to control work-moving or work-stopping means
Y10T 83/446	...	With means to initiate tool feed by same control impulse
Y10T 83/4463	..	Work-sensing means to initiate tool feed
Y10T 83/4465	...	With work-stopping abutment in sensing means
Y10T 83/4468	..	Plural tools at same station, one positioned for continuous engagement with work
Y10T 83/447	..	Plural tools successively actuated at same station
Y10T 83/4473	...	During one dwell period
Y10T 83/4475	..	Tool has motion additional to cutting stroke during tool cycle
Y10T 83/4478	...	Tool has additional motion during work dwell
Y10T 83/448	....	Included in plural cutting cycles
Y10T 83/4483	...	Tool has work-feeding motion

- Y10T 83/4486     ..     With variable direction of work-feed from cycle to cycle
- Y10T 83/4488     ...     In one of certain selected directions
- Y10T 83/4491     ..     Interlock between tool actuating and work feed means
- Y10T 83/4493     ..     Tool motion initiates work feed and vice versa
- Y10T 83/4496     ..     Stored energy means for moving work or tool, loaded by tool or work
- Y10T 83/4498     ...     Work feed means actuates energy storage device for tool
- Y10T 83/4501     ..     Work feed means controlled by means mounted on tool or tool support
- Y10T 83/4503     ...     Such means drives the work feed means
- Y10T 83/4506     ....     Work feed means carried by tool or tool support
- Y10T 83/4508     ....     With supplemental work feed means
- Y10T 83/4511     ....     On return stroke of tool
- Y10T 83/4513     ...     Work feed means halted by means on tool or tool support
- Y10T 83/4516     ..     Work-feed mechanism in nonfeed motion effects or initiates tool actuation
- Y10T 83/4518     ...     By striking tool actuator
- Y10T 83/4521     ....     Nonfeed motion is reverse to feed motion
- Y10T 83/4523     ..     With means to vary number of work-feed increments between tool strokes
- Y10T 83/4526     ..     Dwell caused by imposing reverse motion on portion of flexible moving work
- Y10T 83/4529     ..     With uninterrupted flow of work from supply source
- Y10T 83/4531     ..     Work feed increment shorter than longitudinal tool field
- Y10T 83/4534     ..     Unequal work feed increments in recurring series
- Y10T 83/4536     ...     Work carriage carries ratchet means to determine increments
- Y10T 83/4539     ..     Means to change tool position, or length or datum position of work- or tool-feed increment
- Y10T 83/4541     ...     With means to vary magnitude of work-feed increment
- Y10T 83/4544     ....     Multi-increment type [e.g., ticket issuing]
- Y10T 83/4546     .....     Length selector initiates machine operation
- Y10T 83/4549     ....     By change in length of one member of feed-driving linkage
- Y10T 83/4551     .....     Rotating member
- Y10T 83/4554     ....     By change of effective shape of driving or driven surface of element of work-feed mechanism
- Y10T 83/4556     ....     By adjustment of fixed stop
- Y10T 83/4559     ...     With means to vary magnitude or base position of tool stroke
- Y10T 83/4561     ..     With means to facilitate manual repositioning [shift] of work
- Y10T 83/4564     ..     With means to produce plurality of work-feed increments per tool cycle
- Y10T 83/4567     ...     Including supplemental work-feed means
- Y10T 83/4569     ....     Manual
- Y10T 83/4572     ....     With stop adapted to engage abutment surface on work
- Y10T 83/4574     .....     Plurality of work stops successively effective
- Y10T 83/4577     ..     Work fed successively to plural tools
- Y10T 83/4579     ...     With change of direction between tools



Y10T 83/4582	..	Work advance occurs during return stroke of tool
Y10T 83/4584	..	Dwell defined only by "dead-center" of rotating crank
Y10T 83/4587	..	Dwell initiated by disengagement of surface of moving frictional feed means from work
Y10T 83/4589	...	Feed means has interrupted frictional surface
Y10T 83/4592	...	Feed means has rotary motion
Y10T 83/4594	..	Dwell caused by clamping or blocking work during continuous operation of feed means
Y10T 83/4597	..	With means to control magnitude of work-feed increment or work acceleration
Y10T 83/4599	...	Means to prevent random or excessive work feeds
Y10T 83/4602	...	Full stroke required of feed means
Y10T 83/4604	..	Work feed functions as tool support
Y10T 83/4607	..	With rotary work-carrier
Y10T 83/461	..	With abutment to position work being fed with respect to cutter
Y10T 83/4612	...	With slip between positioned work and feed means
Y10T 83/4615	..	Work guide and feed means have open side
Y10T 83/4617	..	Work feed means modified to maintain clearance from tool
Y10T 83/462	..	Plurality of work feed means in separate paths
Y10T 83/4622	..	Intermittent drive type of gearing for work-feed means
Y10T 83/4625	...	Gearing modified to lock the work-feed means
Y10T 83/4627	...	Mutilated gear in mesh with gear driving work-feed means
Y10T 83/463	..	Work-feed element contacts and moves with work
Y10T 83/4632	...	Comprises a work-moving gripper
Y10T 83/4635	...	Comprises element entering aperture in, or engaging abutment surface on, work
Y10T 83/4637	..	With means to guide, position, or present work to work-feed means
Y10T 83/464	...	Means to transport work to work-feed means
Y10T 83/4642	....	Including means to pick articles from pack or stack
Y10T 83/4645	..	With means to clamp work during dwell
Y10T 83/4647	..	One-revolution clutch in tool drive
Y10T 83/465	.	Cutting motion of tool has component in direction of moving work
Y10T 83/4653	..	With means to initiate intermittent tool action
Y10T 83/4656	...	Tool moved in response to work-sensing means
Y10T 83/4659	....	With means to vary "length" of product
Y10T 83/4662	.....	To vary an end-product "length" [e.g., "crop cut"]
Y10T 83/4664	....	With photo-electric work-sensing means
Y10T 83/4667	....	With trip-switch work-sensing means
Y10T 83/467	.....	To initiate feed movement of tool
Y10T 83/4673	.....	And to initiate flying movement of tool
Y10T 83/4676	....	With work-responsive means to initiate flying movement of tool
Y10T 83/4679	.....	With flying work-gripper means related to tool carrier



Y10T 83/4682	.....	With means controlling flying speed dependent on work speed
Y10T 83/4685	...	With means to vary frequency of initiation
Y10T 83/4688	....	By orbitally traveling trigger pin[s]
Y10T 83/4691	..	Interrelated control of tool and work-feed drives
Y10T 83/4693	..	With means to concurrently adjust flying frequency and retain flying speed of tool
Y10T 83/4696	..	Plural diverse flying cutters
Y10T 83/4699	..	Combined with other type cutter
Y10T 83/4702	...	With slitter
Y10T 83/4705	..	Plural separately mounted flying cutters
Y10T 83/4708	..	With means to render cutter pass[es] ineffective
Y10T 83/4711	...	With means to produce "mis-cut"
Y10T 83/4714	..	Oscillating work shifter adjacent cutter
Y10T 83/4717	...	Work actuated senser initiates shifter
Y10T 83/472	..	Wire tool
Y10T 83/4722	...	On tool support having reciprocation parallel to direction of work-feed
Y10T 83/4725	....	And rotation about axis parallel to direction of work-feed
Y10T 83/4728	..	Tool flies by engagement with the work
Y10T 83/4731	...	Tool merely flexes with moving work
Y10T 83/4734	..	Flying support or guide for work
Y10T 83/4737	..	With tool speed regulator
Y10T 83/474	..	With work feed speed regulator
Y10T 83/4743	...	With means to vary cyclically speed of work
Y10T 83/4746	..	Spring return of tool in counterfly direction
Y10T 83/4749	..	Tool mounted on oscillating standard
Y10T 83/4751	...	Both tools of couple on single standard
Y10T 83/4754	....	One tool swings out of work path on return stroke
Y10T 83/4757	..	Tool carrier shuttles rectilinearly parallel to direction of work feed
Y10T 83/476	...	Including means to secure work to carrier
Y10T 83/4763	...	Both members of cutting pair on same carrier
Y10T 83/4766	..	Orbital motion of cutting blade
Y10T 83/4769	...	Work feeder mounted on tool support
Y10T 83/4772	....	Gripper-type feeder
Y10T 83/4775	...	Tool speed varied within each orbital cycle
Y10T 83/4778	...	Work feed gripper carried on endless belt
Y10T 83/478	...	Endless belt or chain tool carrier
Y10T 83/4783	...	Constantly oriented tool with arcuate cutting path
Y10T 83/4786	....	Cutting couple type
Y10T 83/4789	...	Rotatable disc-type tool on orbiting axis
Y10T 83/4792	....	Idling disc
Y10T 83/4795	...	Rotary tool

Y10T 83/4798	....	Segmented disc slitting or slotting tool
Y10T 83/4801	....	With undulant cutting edge [e.g., "pinking" tool]
Y10T 83/4804	....	Single tool action drive
Y10T 83/4807	.....	With one-revolution drive
Y10T 83/4809	....	With loop former preceding tool
Y10T 83/4812	....	Compound movement of tool during tool cycle
Y10T 83/4815	.....	Axial reciprocation of tool
Y10T 83/4818	....	Interconnected work feeder and tool driver
Y10T 83/4821	....	Side cutting helical blade
Y10T 83/4824	....	With means to cause progressive transverse cutting
Y10T 83/4827	.....	With helical cutter blade
Y10T 83/483	....	With cooperating rotary cutter or backup
Y10T 83/4833	.....	Cooperating tool axes adjustable relative to each other
Y10T 83/4836	.....	With radial overlap of the cutting members
Y10T 83/4838	.....	With anvil backup
Y10T 83/4841	.....	With resilient anvil surface
Y10T 83/4844	.....	Resiliently urged cutter or anvil member
Y10T 83/4847	....	With cooperating stationary tool
Y10T 83/485	.	Cutter with timed stroke relative to moving work
Y10T 83/487	..	Work swings about progressively cutting tool during tool stroke
Y10T 83/489	..	Tool actuated by movable work support
Y10T 83/49	..	Traveling cutter
Y10T 83/492	..	With means to vary timing of tool feed
Y10T 83/494	..	Uniform periodic tool actuation
Y10T 83/496	...	With periodic lateral feed of tool or work
Y10T 83/498	...	With plural tool stations
Y10T 83/50	...	Reciprocating tool
Y10T 83/501	...	With plural tools on a single tool support
Y10T 83/503	..	With plural tool stations
Y10T 83/505	.	Operation controlled by means responsive to product
Y10T 83/515	..	Actuation of tool controlled
Y10T 83/525	.	Operation controlled by detector means responsive to work
Y10T 83/527	..	With means to control work-responsive signal system
Y10T 83/528	...	To delay response to work-senser
Y10T 83/53	...	To change length of product
Y10T 83/531	..	With plural work-sensing means
Y10T 83/533	..	With photo-electric work-sensing means
Y10T 83/535	..	Release of interlock controlled
Y10T 83/536	..	Movement of work controlled
Y10T 83/538	..	Positioning of tool controlled

Y10T 83/54	..	Actuation of tool controlled by work-driven means to measure work length
Y10T 83/541	..	Actuation of tool controlled in response to work-sensing means
Y10T 83/543	...	Sensing means responsive to work indicium or irregularity
Y10T 83/544	...	With trip-switch in work-sensing mechanism
Y10T 83/546	.	Interrelated tool actuating and work guide moving means
Y10T 83/566	.	Interrelated tool actuating means and means to actuate work immobilizer
Y10T 83/5669	..	Work clamp
Y10T 83/5678	...	Tool deflected by guide on tightened clamp
Y10T 83/5687	....	With means to control clamping force
Y10T 83/5696	...	Clamp driven by reaction from tool force
Y10T 83/5705	...	With means providing for plural steps in clamping stroke
Y10T 83/5715	...	With sequencing means
Y10T 83/5724	...	With provision for manual control of clamp
Y10T 83/5733	...	Tool or tool support on movable clamp jaw
Y10T 83/5742	...	Clamp moved by direct impact of tool or tool support
Y10T 83/5751	....	Clamp retracted by impact of tool or tool support
Y10T 83/576	...	Clamp actuating means driven by tool or tool support
Y10T 83/5769	....	Clamp yieldably driven by tool or tool support
Y10T 83/5778	.....	With resilient drive element
Y10T 83/5787	...	Clamp driven by yieldable means
Y10T 83/5796	....	Drive means is resilient
Y10T 83/5805	....	Fluid pressure yieldable drive means
Y10T 83/5815	..	Work-stop abutment
Y10T 83/5824	...	Oppositely effective abutments
Y10T 83/5833	...	With cyclic means to alter work-stopping position
Y10T 83/5842	...	Stop partakes of tool motion
Y10T 83/5851	....	Carried by tool or tool support
Y10T 83/586	.	Interrelated tool actuating means and means to actuate work-mover stop
Y10T 83/606	.	Interrelated tool actuating means and guard means
Y10T 83/613	..	Work guard
Y10T 83/619	..	Cutter guide slot closer
Y10T 83/626	.	Operation of member controlled by means responsive to position of element remote from member [e.g., interlock]
Y10T 83/637	..	With means to initiate operation of member
Y10T 83/647	.	With means to convey work relative to tool station
Y10T 83/6472	..	By fluid current
Y10T 83/6473	..	Centrifugal feed to tangential tool [e.g., "Beria" type]
Y10T 83/6475	..	With means to regulate work-feed speed
Y10T 83/6476	..	Including means to move work from one tool station to another
Y10T 83/6478	...	Tool stations angularly related

Y10T 83/648	....	Work manipulated between tool stations
Y10T 83/6481	....	With static tool
Y10T 83/6483	...	Tool stations staggered relative to one another
Y10T 83/6484	...	Punch or die station
Y10T 83/6486	...	Notcher or pinker station
Y10T 83/6488	...	Work reciprocated past double-edged knife
Y10T 83/6489	...	Slitter station
Y10T 83/6491	....	And transverse cutter station
Y10T 83/6492	..	Plural passes of diminishing work piece through tool station
Y10T 83/6494	...	Work alternately, angularly re-oriented relative to tool station
Y10T 83/6496	....	By additional means to engage work and orient it relative to tool station
Y10T 83/6497	....	By roller or roll-like element
Y10T 83/6499	...	Work rectilinearly reciprocated through tool station
Y10T 83/65	....	With means to cause or permit angular re-orientation of work about axis parallel to plane of cut
Y10T 83/6502	.....	By endless member having work-engaging teeth
Y10T 83/6504	.....	By member having work-engaging tooth
Y10T 83/6505	.....	Including plural work-engaging teeth
Y10T 83/6507	.....	Fluid operated
Y10T 83/6508	....	With means to cause movement of work transversely toward plane of cut
Y10T 83/651	.....	By means to cause movement toward and away from plane of cut
Y10T 83/6512	.....	Actuated by movement of a member on reciprocating means
Y10T 83/6513	.....	Actuated by passive means which is external to reciprocating means
Y10T 83/6515	....	By means to define increment of movement toward plane of cut
Y10T 83/6516	.....	Interrelated with movement of reciprocating means
Y10T 83/6518	.....	By pusher mechanism
Y10T 83/652	.....	With additional work holding or positioning means
Y10T 83/6521	.....	Work holding means includes actuator
Y10T 83/6523	.....	Including plural, simultaneously acting pusher elements
Y10T 83/6524	.....	Independently adjustable
Y10T 83/6526	.....	With additional means to retract elements
Y10T 83/6528	.....	Power derived from movement of reciprocating means
Y10T 83/6529	.....	Power derived from fluid pressure means
Y10T 83/6531	.....	Movement by screw means
Y10T 83/6532	.....	Movement by rack and pinion or pawl
Y10T 83/6534	.....	With handle
Y10T 83/6536	.....	By carriage
Y10T 83/6537	....	By cable or belt drive
Y10T 83/6539	..	With means for transverse positioning of work on a moving conveyor
Y10T 83/654	..	With work-constraining means on work conveyor [i.e., "work-carrier"]

Y10T 83/6542	...	Plural means to constrain plural work pieces
Y10T 83/6544	....	End of work protrudes through aperture in carrier
Y10T 83/6545	...	With means to guide work-carrier in nonrectilinear path
Y10T 83/6547	....	About axis fixed relative to tool station
Y10T 83/6548	.....	Infeed
Y10T 83/655	.....	About vertical axis
Y10T 83/6552	.....	Cut normal to axis
Y10T 83/6553	.....	Work-guide tube
Y10T 83/6555	.....	Cut normal to axis
Y10T 83/6556	.....	Oscillating work-carrier
Y10T 83/6558	.....	Multiple cutters
Y10T 83/656	.....	Coaxial rotary cutters
Y10T 83/6561	.....	Work stationary during cut
Y10T 83/6563	...	With means to orient or position work carrier relative to tool station
Y10T 83/6564	....	By pattern or templet
Y10T 83/6566	....	By indexing means
Y10T 83/6568	...	With additional work-locating means on work-carrier
Y10T 83/6569	..	With means to stop work conveyor
Y10T 83/6571	..	With means to store work articles
Y10T 83/6572	..	With additional means to engage work and orient it relative to tool station
Y10T 83/6574	...	By work-stopping abutment
Y10T 83/6576	...	By opposed lateral guide means
Y10T 83/6577	...	With means to adjust additional means
Y10T 83/6579	..	With means to press work to work-carrier
Y10T 83/658	..	With projections on work-carrier [e.g., pin wheel]
Y10T 83/6582	..	Tool between tandem arranged work carrying means
Y10T 83/6584	..	Cut made parallel to direction of and during work movement
Y10T 83/6585	...	Including nonconcurrently acting tool
Y10T 83/6587	...	Including plural, laterally spaced tools
Y10T 83/6588	....	Tools mounted on common tool support
Y10T 83/659	.....	Tools axially shiftable on support
Y10T 83/6592	...	Interrelated work-conveying and tool-moving means
Y10T 83/6593	....	With reciprocating tool [e.g., "jigsaw" type]
Y10T 83/6595	....	With means to move tool laterally of feed direction during cutting
Y10T 83/6596	....	With means to effect difference between work speed and tool speed
Y10T 83/6598	....	Tool co-axial with work-conveying means
Y10T 83/66	...	With means to press work to tool
Y10T 83/6601	...	Bevel cutting tool
Y10T 83/6603	...	Tool shiftable relative to work-conveying means
Y10T 83/6604	...	Tool in contact with surface of work-conveying means

Y10T 83/6606	...	Tool between laterally spaced work-conveying means
Y10T 83/6608	...	By rectilinearly moving work carriage
Y10T 83/6609	....	Angularly adjustable
Y10T 83/6611	.....	Having positive adjustment stop; e.g., link
Y10T 83/6612	.....	Having position indicating means
Y10T 83/6614	....	Pusher engaging rear surface of work
Y10T 83/6616	.....	Having means to actuate pusher
Y10T 83/6617	.....	Hydraulic or pneumatic means
Y10T 83/6619	.....	Gear or pulley actuated pusher
Y10T 83/662	.....	Lever, cam, or link actuated pusher
Y10T 83/6622	....	Having means to actuate carriage
Y10T 83/6624	.....	Hydraulic or pneumatic means
Y10T 83/6625	.....	Gear or pulley
Y10T 83/6627	.....	Adapted to place tension on flacid member
Y10T 83/6628	.....	Lever, cam, or link means
Y10T 83/663	....	On or attached to vehicle
Y10T 83/6632	....	Supported for movement at one side of tool only
Y10T 83/6633	...	By work moving flexible chain or conveyor
Y10T 83/6635	...	By feed roller
Y10T 83/6636	....	Pinch rollers
Y10T 83/6638	...	Unattached manual work pusher
Y10T 83/664	..	Roller
Y10T 83/6641	...	Plural independent rollers for feed of plural distinct work
Y10T 83/6643	...	Shaped to conform to work
Y10T 83/6644	...	With work-supplying reel
Y10T 83/6646	....	And provision for selecting feed length
Y10T 83/6648	...	Continuous conveying during , cutting; e.g., straw cutting
Y10T 83/6649	...	Supporting work at cutting station
Y10T 83/6651	....	Comprising part of cutting station
Y10T 83/6652	...	Tool and feed roller actuated by common handle
Y10T 83/6654	...	Tool and roller on common movable support
Y10T 83/6656	..	Rectilinear movement only
Y10T 83/6657	...	Tool opposing pusher
Y10T 83/6659	....	Hydraulically or pneumatically actuated
Y10T 83/666	....	Screw actuated
Y10T 83/6662	....	Gear or pulley actuated
Y10T 83/6664	....	Lever, cam, or link actuated
Y10T 83/6665	....	Spring or gravity urged
Y10T 83/6667	..	Work carrier rotates about axis fixed relative to tool station
Y10T 83/6668	..	Interrelated work-feeding means and tool-moving means

- Y10T 83/667 . Tool carrier or guide affixed to work during cutting
- Y10T 83/674 .. By flexible work-engaging member
- Y10T 83/68 .. Entirely work supported
- Y10T 83/687 . By tool reciprocable along elongated edge
- Y10T 83/6875 .. With means permitting tool to be rotatably adjusted about its cutting edge during cutting
- Y10T 83/688 .. With dynamic balancing or shock absorbing means
- Y10T 83/6885 .. With tool of another type
- Y10T 83/689 .. With means to change to other type tool
- Y10T 83/6895 .. Plural reciprocable tools
- Y10T 83/69 .. Stored energy furnishes drive in one direction
- Y10T 83/6905 .. With tool in-feed
- Y10T 83/691 ... And auxiliary means for promoting or retarding tool in-feed
- Y10T 83/6915 .... By yieldable means
- Y10T 83/692 .... And means to vary tool in-feed speed
- Y10T 83/6925 .... With interrelated tool actuating and in-feed means
- Y10T 83/693 ... Of rectilinearly reciprocating tool
- Y10T 83/6935 .... With in-feed by pivoting carrier
- Y10T 83/694 ... And means to prevent tool in-feed
- Y10T 83/6945 ... With passive means to guide tool directly
- Y10T 83/695 .... By plural opposed guide surfaces
- Y10T 83/6955 ..... Having relative adjustment between guide surfaces
- Y10T 83/696 ..... With relative adjustment between guide and work or work-support
- Y10T 83/6965 ..... By or with additional movable work-support portion
- Y10T 83/697 ..... By rotation about an axis parallel to the work-support surface
- Y10T 83/6975 ..... By rotation about an axis perpendicular to the work-support surface
- Y10T 83/698 ... Including means to cause nonrectilinear tool infeed
- Y10T 83/6985 ... Of arcuately oscillating tool
- Y10T 83/699 ... Of tool carrier on single moving pivot
- Y10T 83/6995 .... Pivot moves in closed loop
- Y10T 83/70 .... Pivot moves to and fro in arcuate path
- Y10T 83/7005 ..... Axis of arcuate path moves during cutting
- Y10T 83/701 .... Pivot moves to and fro in rectilinear path
- Y10T 83/7015 .. Having uniplanar compound motion
- Y10T 83/702 ... By plural arcuately oscillating carrier
- Y10T 83/7025 ... Constantly oriented tool travelling in orbit
- Y10T 83/703 ... Tool rocks cutting reciprocations
- Y10T 83/7035 .... One tool reciprocates along fixed guide element
- Y10T 83/704 .. With work-support and means to vary relationship between tool and work support
- Y10T 83/7045 .. Arcuately oscillating tool carried on single pivot



Y10T 83/705	..	With means to support tool at opposite ends
Y10T 83/7055	...	And apply drive force to both ends of tool
Y10T 83/706	....	By flexible drive means
Y10T 83/7065	....	By reciprocating rigid support
Y10T 83/707	.	By endless band or chain knife
Y10T 83/7076	..	With programming means
Y10T 83/7083	..	With cutter other than endlessly orbiting type
Y10T 83/7089	..	Including contiguous oppositely moving knife portions
Y10T 83/7095	..	With means to change to non-endlessly orbiting cutter
Y10T 83/7101	..	With tool in-feed
Y10T 83/7108	...	Including ground-traversing vehicle
Y10T 83/7114	...	Including means to permit arcuate in-feed motion
Y10T 83/712	....	Including means to relocate path of in-feed motion
Y10T 83/7126	.....	Angular relative previous path
Y10T 83/7133	...	By gravity
Y10T 83/7139	....	With fluid in-feed regulating means
Y10T 83/7145	...	By motor-driven mechanism
Y10T 83/7151	..	With scale or indicator
Y10T 83/7158	..	Including plural cutting zones
Y10T 83/7164	...	With adjustment of separation between zones
Y10T 83/717	....	By lever means
Y10T 83/7176	....	By screw-threaded means
Y10T 83/7183	...	Including "figure-8" band
Y10T 83/7189	...	Comprising plural bands
Y10T 83/7195	..	Including means to adjust relationship between band and work-support surface
Y10T 83/7201	...	By varying angle between band and work-support surface
Y10T 83/7208	....	By tilting band carrier
Y10T 83/7214	.....	About point of intersection of cutting span and work-support surface
Y10T 83/722	...	By varying distance between band and work-support surface
Y10T 83/7226	..	With means to guard the tension
Y10T 83/7233	...	Including means to retard undriven pulley or sprocket
Y10T 83/7239	...	With means to vary distance between pulley or sprocket axes
Y10T 83/7245	....	And angular relationship of axes
Y10T 83/7251	....	Including means to yieldably bias pulley
Y10T 83/7258	.....	By fluid means
Y10T 83/7264	..	With special blade guide means
Y10T 83/727	.	With means to guide moving work
Y10T 83/728	..	In pivotal or arcuate movement
Y10T 83/73	..	Guide fixed to or integral with stationary tool element
Y10T 83/731	...	Tool element cooperates with a second tool



Y10T 83/732	..	With guard
Y10T 83/734	..	With attachment or operative connection to tool carrier
Y10T 83/735	..	With attachment or operative connection to passive tool guide
Y10T 83/736	..	Guide cooperates with template or straight edge secured to work
Y10T 83/738	..	Curved or deflecting guide
Y10T 83/739	..	Positively confines or otherwise determines path of work
Y10T 83/74	..	Adapted to permit maneuvering of work at tool zone
Y10T 83/741	..	With movable or yieldable guide element
Y10T 83/743	...	Opposed to work-supporting surface
Y10T 83/744	..	Plural guide elements
Y10T 83/745	...	Opposed
Y10T 83/747	..	Opposed to work-supporting surface
Y10T 83/748	.	With work immobilizer
Y10T 83/7487	..	Means to clamp work
Y10T 83/7493	...	Combined with, peculiarly related to, other element
Y10T 83/75	....	With or to tool guide
Y10T 83/7507	....	Guide for traveling cutter
Y10T 83/7513	....	Tool or tool support on movable clamp jaw
Y10T 83/752	...	With means providing for plural steps in clamping stroke
Y10T 83/7527	...	With equalizer or self-aligning jaw
Y10T 83/7533	...	With biasing or counterbalancing means
Y10T 83/754	...	Clamp driven by yieldable means
Y10T 83/7547	...	Liquid pressure actuating means
Y10T 83/7553	...	Including means to retain clamp jaw in position
Y10T 83/756	...	Self-locking drive means
Y10T 83/7567	...	Manually actuated drive means
Y10T 83/7573	...	Including clamping face of specific structure
Y10T 83/758	...	With means to adjust clamp position or stroke
Y10T 83/7587	..	Gapped work-constrainer
Y10T 83/7593	..	Work-stop abutment
Y10T 83/76	...	With scale or indicator
Y10T 83/7607	...	Normal to plane of cut
Y10T 83/7613	....	Adjustable
Y10T 83/762	.....	Angularly relative to plane of cut; e.g., miter
Y10T 83/7627	....	With traversing cutter guide; e.g., cut-off saw
Y10T 83/7633	...	Collapsible
Y10T 83/764	...	Retractable
Y10T 83/7647	...	Adjustable
Y10T 83/7653	....	Having curved cutting edge to make arcuate cut, plural nonaligned intersecting cutting edges, or spaced punches

Y10T 83/766	.....	Spaced edges
Y10T 83/7667	...	Having curved cutting edge to make arcuate cut, plural nonaligned intersecting cutting edges, or spaced punches
Y10T 83/7673	....	Spaced edges
Y10T 83/768	.	Rotatable disc tool pair or tool and carrier
Y10T 83/7684	..	With means to support work relative to tool[s]
Y10T 83/7688	...	Plural tool elements successively actuated at same station
Y10T 83/7693	...	Tool moved relative to work-support during cutting
Y10T 83/7697	....	Tool angularly adjustable relative to work-support
Y10T 83/7701	...	Supporting surface and tool axis angularly related
Y10T 83/7705	....	Adjustable angular relationship
Y10T 83/7709	...	Unidirectionally movable work support
Y10T 83/7713	....	With opposed work-presser
Y10T 83/7718	.....	Presser co-axial with tool
Y10T 83/7722	...	Support and tool relatively adjustable
Y10T 83/7726	....	By movement of the tool
Y10T 83/773	...	Work-support includes passageway for tool [e.g., slotted table]
Y10T 83/7734	..	With guard for tool
Y10T 83/7738	..	Optional tool pairs alternatively operative
Y10T 83/7743	...	One element of tool pairs common to all pairs
Y10T 83/7747	..	With means to permit replacement of tool
Y10T 83/7751	..	Means to separate elements of tool pair
Y10T 83/7755	..	Carrier for rotatable tool movable during cutting
Y10T 83/7759	...	Unicyclic movement
Y10T 83/7763	...	Tool carrier reciprocable rectilinearly
Y10T 83/7768	....	With means to adjust path of reciprocation
Y10T 83/7772	.....	Angular relative to previous path
Y10T 83/7776	....	With means to reciprocate carrier
Y10T 83/778	.....	And means to rotate tool
Y10T 83/7784	....	With means to rotate tool
Y10T 83/7788	...	Tool carrier oscillated or rotated
Y10T 83/7793	..	Means to rotate or oscillate tool
Y10T 83/7797	...	Including means to rotate both elements of tool pair
Y10T 83/7801	....	Including means to rotate both elements at different speeds
Y10T 83/7805	....	And means to change speed of rotation
Y10T 83/7809	..	Tool pair comprises rotatable tools
Y10T 83/7813	...	Tool pair elements angularly related
Y10T 83/7818	....	Elements of tool pair angularly adjustable relative to each other
Y10T 83/7822	...	Tool pair axially shiftable
Y10T 83/7826	....	With shifting mechanism for at least one element of tool pair

Y10T 83/783	...	Tool pair comprises contacting overlapped discs
Y10T 83/7834	....	With means to effect axial pressure on pair
Y10T 83/7838	.....	With means to change axial pressure
Y10T 83/7843	....	With means to change overlap of discs
Y10T 83/7847	...	Tool element axially shiftable
Y10T 83/7851	...	Tool pair comprises disc and cylindrical anvil
Y10T 83/7855	....	With adjustable means to urge tool elements together
Y10T 83/7859	...	Elements of tool pair adjustably spaced
Y10T 83/7863	..	Tool pair comprises rotatable tool and nonrotatable tool
Y10T 83/7868	..	Tool element selectively operative
Y10T 83/7872	..	Tool element mounted for adjustment
Y10T 83/7876	...	Plural, axially spaced tool elements
Y10T 83/788	.	Tool pair comprises rotatable anvil and fixed-type tool
Y10T 83/793	..	Anvil has motion in addition to rotation [i.e., traveling anvil]
Y10T 83/798	...	Additional motion is along fixed arcuate path
Y10T 83/803	...	With plural anvils
Y10T 83/808	.	Two tool pairs, driver for one pair moves relative to driver for other pair
Y10T 83/811	..	One tool support acts as driver for other
Y10T 83/814	...	Punch and shear
Y10T 83/817	..	With variable spacing between tool pairs
Y10T 83/819	...	With intermediate work support
Y10T 83/822	..	Punch and shear
Y10T 83/825	..	Successively acting
Y10T 83/828	.	With illuminating or viewing means for work
Y10T 83/839	..	Mirror or lens
Y10T 83/849	.	With signal, scale, or indicator
Y10T 83/85	..	Signal; e.g., alarm
Y10T 83/851	..	Indicator comprising work or product
Y10T 83/852	..	Responsive to force
Y10T 83/853	..	Indicates tool position
Y10T 83/855	...	Relative to another element
Y10T 83/856	....	To work-engaging member
Y10T 83/857	.....	Calibrated scale or indicator
Y10T 83/858	.....	Indicates dimension of work being cut
Y10T 83/859	.....	Dynamic indicator
Y10T 83/86	....	To another tool assembly
Y10T 83/861	....	To cooperating tool
Y10T 83/862	....	To another component of tool assembly
Y10T 83/863	....	Adjustable guide for traversing tool; e.g., radial saw guide or miter saw guide
Y10T 83/865	..	Indicates work characteristic

Y10T 83/866	..	Indicates wear
Y10T 83/867	..	Bubble level
Y10T 83/868	..	Counter
Y10T 83/869	.	Means to drive or to guide tool
Y10T 83/8691	..	Unicyclic
Y10T 83/8693	...	With adjustable stopping point or tool
Y10T 83/8694	...	With brake or blocking means
Y10T 83/8696	..	Means to change datum plane of tool or tool presser stroke
Y10T 83/8697	...	For disabling of continuously actuated cutter
Y10T 83/8699	...	With adjustable stop
Y10T 83/87	...	By varying length of tool stroke
Y10T 83/8702	..	Clicker die press
Y10T 83/8703	...	With die handling attachment
Y10T 83/8704	...	With reciprocating presser
Y10T 83/8706	....	Laterally movable to selective operative positions
Y10T 83/8707	.....	Pivotal or revolving only
Y10T 83/8709	.....	With means to impart, limit, or control pivotal motion of presser
Y10T 83/871	.....	Interrelated with presser reciprocating means
Y10T 83/8712	.....	With means to mount presser for oscillation about column
Y10T 83/8713	....	With adjustable bed block
Y10T 83/8714	....	Including presser member reinforcing, or flexure compensating, means
Y10T 83/8716	....	With manually actuated control apparatus for reciprocation of presser member
Y10T 83/8717	..	By deforming resilient tool or tool support
Y10T 83/8719	..	With transmission yieldable on overload
Y10T 83/872	..	With guard means
Y10T 83/8722	...	Static
Y10T 83/8723	....	Adjustable
Y10T 83/8725	..	Including movable, tool protecting, cushioning sheet
Y10T 83/8726	..	Single tool with plural selective driving means
Y10T 83/8727	..	Plural tools selectively engageable with single drive
Y10T 83/8729	...	Predetermined sequence of selection
Y10T 83/873	....	Of paired tools
Y10T 83/8732	...	Turret of tools
Y10T 83/8733	..	Tool movable to cooperate selectively with one of a plurality of mating tools
Y10T 83/8735	..	With means providing for plural steps in tool stroke
Y10T 83/8736	..	Sequential cutting motions
Y10T 83/8737	..	With tool positioning means synchronized with cutting stroke
Y10T 83/8739	...	Anvil moves into and out of operative position
Y10T 83/874	...	Straight line positioning

Y10T 83/8742	..	Tool pair positionable as a unit
Y10T 83/8743	...	Straight line positioning
Y10T 83/8745	..	Tool and anvil relatively positionable
Y10T 83/8746	...	Straight line
Y10T 83/8748	..	Tool displaceable to inactive position [e.g., for work loading]
Y10T 83/8749	...	By pivotal motion
Y10T 83/875	..	With templet surface following tool
Y10T 83/8752	..	Tool moves work to and against cooperating tool
Y10T 83/8753	...	With means to clamp or bind work to moving tool
Y10T 83/8755	...	One tool resiliently mounted or biased
Y10T 83/8756	...	Work forced through tool aperture or between spaced cooperating tools
Y10T 83/8758	...	Manually actuated work-moving tool
Y10T 83/8759	..	With means to connect or disconnect tool and its drive
Y10T 83/8761	...	Continuously moving drive means [e.g., "gag"]
Y10T 83/8762	....	Hand actuated connecting means
Y10T 83/8763	..	Convertible from tool path to another or from implement to machine
Y10T 83/8765	..	Magnet- or solenoid-actuated tool
Y10T 83/8766	...	Tool movement modifies actuating circuit
Y10T 83/8768	...	Solenoid core is tool or tool support
Y10T 83/8769	..	Cutting tool operative in opposite directions of travel
Y10T 83/8771	..	Motion direction of tool influenced by resistance of work
Y10T 83/8772	..	One tool edge of tool pair encompasses work [e.g., wire cutter]
Y10T 83/8773	..	Bevel or miter cut
Y10T 83/8775	..	With tool tensioning means
Y10T 83/8776	..	Constantly urged tool or tool support [e.g., spring biased]
Y10T 83/8778	...	Ledger blade
Y10T 83/8779	...	Oscillating tool urged axially
Y10T 83/8781	....	And urged about pivotal axis
Y10T 83/8782	...	Stored energy furnishes cutting force
Y10T 83/8784	....	With reset
Y10T 83/8785	...	Through return [noncutting] stroke
Y10T 83/8786	....	Oscillating tool
Y10T 83/8788	..	Tool return mechanism separate from tool advance mechanism
Y10T 83/8789	..	With simple revolving motion only
Y10T 83/8791	...	Tool mounted on radial face of rotor
Y10T 83/8792	...	Variable speed during one revolution [e.g., intermittent]
Y10T 83/8794	...	Revolving tool moves through recess in work holder or cooperating tool
Y10T 83/8795	....	Progressively cutting
Y10T 83/8796	...	Progressively cutting
Y10T 83/8798	..	With simple oscillating motion only

Y10T 83/8799	...	Plural tool pairs
Y10T 83/8801	....	Plural tools on single oscillating arm [i.e., tool holder]
Y10T 83/8802	...	And means to move cooperating cutter member
Y10T 83/8804	...	Tool driver movable relative to tool support
Y10T 83/8805	....	Cam or eccentric revolving about fixed axis
Y10T 83/8807	....	Gear or ratchet pawl drives toothed tool support
Y10T 83/8808	....	Toggle links, one link pivoted to tool support
Y10T 83/8809	....	Fixed axis lever
Y10T 83/8811	.....	Adjustable mechanical advantage
Y10T 83/8812	...	Cutting edge in radial plane
Y10T 83/8814	....	Adjustable
Y10T 83/8815	....	With guide means for the cutting member
Y10T 83/8817	...	Axially extending cutting edge
Y10T 83/8818	....	Axially progressing cut
Y10T 83/882	....	Adjustable
Y10T 83/8821	..	With simple rectilinear reciprocating motion only
Y10T 83/8822	...	Edge-to-edge of sheet or web [e.g., traveling cutter]
Y10T 83/8824	...	With provision for dynamic balance
Y10T 83/8825	...	With lost motion in tool drive
Y10T 83/8827	...	Means to vary force on, or speed of, tool during stroke
Y10T 83/8828	...	Plural tools with same drive means
Y10T 83/883	....	Tools positioned by template
Y10T 83/8831	....	Plural distinct cutting edges on same support
Y10T 83/8832	.....	Concentrically mounted
Y10T 83/8834	.....	Successively acting
Y10T 83/8835	...	And means to move cooperating cutting member
Y10T 83/8837	...	With application of force to opposite ends of tool supporting crosshead
Y10T 83/8838	....	By relatively movable fixed axis levers
Y10T 83/884	....	By connecting rod articulated with tool support
Y10T 83/8841	...	Tool driver movable relative to tool support
Y10T 83/8843	....	Cam or eccentric revolving about fixed axis
Y10T 83/8844	....	Gear actuated tool support
Y10T 83/8845	....	Toggle links, one link pivoted to tool support
Y10T 83/8847	....	Screw actuated tool support
Y10T 83/8848	....	Connecting rod articulated with tool support
Y10T 83/885	....	Fixed axis lever
Y10T 83/8851	.....	Adjustable mechanical advantage
Y10T 83/8853	....	Including details of guide for tool or tool support
Y10T 83/8854	...	Progressively cutting
Y10T 83/8855	...	With spaced guide pins [e.g., die set leader pins]

Y10T 83/8857	...	With inclined guides
Y10T 83/8858	...	Fluid pressure actuated
Y10T 83/886	....	Utilizing fluid amplifier
Y10T 83/8861	....	Diaphragm
Y10T 83/8863	....	Explosive fluid
Y10T 83/8864	....	Plural cylinders
Y10T 83/8866	....	Offset cutter
Y10T 83/8867	...	With means to adjust tool position on tool holder
Y10T 83/8868	....	Adjustably mounted cooperating tool
Y10T 83/887	..	Parallel draw-cut [e.g., translatable]
Y10T 83/8871	...	Link suspension
Y10T 83/8873	..	Straight line motion combined with tilting in plane of stroke
Y10T 83/8874	..	Uniplanar compound motion
Y10T 83/8876	...	Reciprocating plus work approach [e.g., saw type]
Y10T 83/8877	...	With gyratory drive
Y10T 83/8878	..	Guide
Y10T 83/888	...	With nonrigidly positioned member
Y10T 83/8881	...	With anti-friction means
Y10T 83/8883	....	Roller with peripheral flange or groove
Y10T 83/8884	....	Disc
Y10T 83/8886	...	With means to vary space between opposed members
Y10T 83/8887	....	By rectilinear movement of member
Y10T 83/8889	...	With means to adjust position
Y10T 83/889	.	Tool with either work holder or means to hold work supply
Y10T 83/896	..	Rotatable wound package supply
Y10T 83/902	...	Plural supply sources
Y10T 83/909	.	Cutter assemblage or cutter element therefor [e.g., chain saw chain]
Y10T 83/913	..	With means permitting removal of cutter element
Y10T 83/917	..	Having diverse cutting elements
Y10T 83/921	...	And noncutting depth gauge
Y10T 83/925	..	Having noncutting depth gauge
Y10T 83/929	.	Tool or tool with support
Y10T 83/9292	..	Wire tool
Y10T 83/9295	..	Work supported tool [e.g., clicker die]
Y10T 83/9297	...	With product ejection facilitator
Y10T 83/93	...	With tool manipulating portion
Y10T 83/9302	...	With tool positioning abutment
Y10T 83/9304	...	To sever article from work and cut within article
Y10T 83/9307	...	With tool contour adjusting means
Y10T 83/9309	..	Anvil

Y10T 83/9312	...	Rotatable type
Y10T 83/9314	..	Pointed perforators
Y10T 83/9317	..	Endless band or belt type
Y10T 83/9319	..	Toothed blade or tooth therefor
Y10T 83/9321	...	With means to vary tooth position
Y10T 83/9324	...	With additional cutting means
Y10T 83/9326	...	Plural separable sections
Y10T 83/9329	....	Tooth separable from blade
Y10T 83/9331	.....	By independent connecting element
Y10T 83/9333	.....	Transversely movable
Y10T 83/9336	.....	Arcuately movable
Y10T 83/9338	.....	With additional element to prevent movement of connecting element
Y10T 83/9341	.....	Rectilinearly movable
Y10T 83/9343	.....	By deformation
Y10T 83/9346	...	Uniformly varying teeth or tooth spacing
Y10T 83/9348	...	Undulating tooth arrangement
Y10T 83/935	...	Plural tooth groups
Y10T 83/9353	....	Including raker tooth group
Y10T 83/9355	....	Including intermediate raker tooth
Y10T 83/9358	...	Series of dissimilar teeth
Y10T 83/936	...	Series of allochiral teeth
Y10T 83/9362	...	Teeth having transversely curved cutting edge
Y10T 83/9365	...	Teeth having cutting edge parallel to blade surface
Y10T 83/9367	...	Teeth having cutting edge perpendicular to blade surface
Y10T 83/937	..	Tool mounted by and between spaced arms
Y10T 83/9372	..	Rotatable type
Y10T 83/9374	...	With spacer interposed between shaft-mounted tools
Y10T 83/9377	...	Mounting of tool about rod-type shaft
Y10T 83/9379	....	At end of shaft
Y10T 83/9382	...	Punching plus nonpunching tool
Y10T 83/9384	...	Notching plus nonnotching tool
Y10T 83/9387	...	Punching tool
Y10T 83/9389	....	Shear type
Y10T 83/9391	...	Notching tool
Y10T 83/9394	...	Helical tool
Y10T 83/9396	...	Shear type
Y10T 83/9399	....	Cutting edge wholly parallel to axis of rotation
Y10T 83/9401	....	Cutting edge wholly normal to axis of rotation
Y10T 83/9403	...	Disc type



Y10T 83/9406	...	Radially adjustable tool
Y10T 83/9408	...	Spaced cut forming tool
Y10T 83/9411	..	Cutting couple type
Y10T 83/9413	...	Spiral type cutter
Y10T 83/9416	...	To punch and cut punched article
Y10T 83/9418	...	Punching plus nonpunching tool
Y10T 83/942	...	Notching plus nonnotching tool
Y10T 83/9423	...	Punching tool
Y10T 83/9425	....	Tool pair
Y10T 83/9428	....	Shear-type male tool
Y10T 83/943	.....	Multiple punchings
Y10T 83/9432	.....	Plural spaced successively operative shearing portions
Y10T 83/9435	.....	Progressive cutting
Y10T 83/9437	....	Shear-type female tool
Y10T 83/944	....	Multiple punchings
Y10T 83/9442	...	Notching tool
Y10T 83/9444	....	Shear type
Y10T 83/9447	...	Shear type
Y10T 83/9449	...	Spaced cut forming tool
Y10T 83/9452	...	With tool contour adjusting means
Y10T 83/9454	..	Reciprocable type
Y10T 83/9457	..	Joint or connection
Y10T 83/9459	...	Magnetic connection
Y10T 83/9461	...	Resiliently biased connection
Y10T 83/9464	...	For rotary tool
Y10T 83/9466	....	Flexible sleevelike tool
Y10T 83/9469	....	Adjustable
Y10T 83/9471	.....	Rectilinearly
Y10T 83/9473	...	For rectilinearly reciprocating tool
Y10T 83/9476	....	Tool is single element with continuous cutting edge [e.g., punch, etc.]
Y10T 83/9478	....	Tool is single element reciprocable generally perpendicularly to elongate cutting edge [e.g., shear, etc.]
Y10T 83/9481	....	Tool is single element reciprocable along elongate cutting edge [e.g., saw blade, etc.]
Y10T 83/9483	....	Adjustable
Y10T 83/9486	.....	Rectilinearly
Y10T 83/9488	...	Adjustable
Y10T 83/949	....	Rectilinearly
Y10T 83/9493	..	Stationary cutter
Y10T 83/9495	...	Nonparallel cutting edges

Y10T 83/9498	... Parallel cutting edges
Y10T 83/95	. Machine frame
Y10T 83/96	.. Guard
Y10T 83/97	. Miscellaneous

**Former US Class 117 Series**

<b>Y10T 117/00</b>	<b>Single-crystal, oriented-crystal, and epitaxy growth processes; non-coating apparatus therefor</b>
Y10T 117/10	. Apparatus
Y10T 117/1004	.. with means for measuring, testing, or sensing
Y10T 117/1008	... with responsive control means
Y10T 117/1012	... with a window or port for visual observation or examination
Y10T 117/1016	.. with means for treating single-crystal [e.g., heat treating]
Y10T 117/102	.. for forming a platelet shape or a small diameter, elongate, generally cylindrical shape [e.g., whisker, fiber, needle, filament]
Y10T 117/1024	.. for crystallization from liquid or supercritical state
Y10T 117/1028	... Crucibleless apparatus having means providing movement of discrete droplets or solid particles to thin-film precursor [e.g., Verneuil method]
Y10T 117/1032	... Seed pulling
Y10T 117/1036	.... including solid member shaping means other than seed or product [e.g., EDFG die]
Y10T 117/104	..... Means for forming a hollow structure [e.g., tube, polygon]
Y10T 117/1044	..... including means forming a flat shape [e.g., ribbon]
Y10T 117/1048	..... Pulling includes a horizontal component
Y10T 117/1052	.... including a sectioned crucible [e.g., double crucible, baffle]
Y10T 117/1056	.... including details of precursor replenishment
Y10T 117/106	.... including sealing means details
Y10T 117/1064	.... including a fully-sealed or vacuum-maintained crystallization chamber [e.g., ampoule]
Y10T 117/1068	.... including heating or cooling details [e.g., shield configuration]
Y10T 117/1072	.... including details of means providing product movement [e.g., shaft guides, servo means]
Y10T 117/1076	... having means for producing a moving solid-liquid-solid zone
Y10T 117/108	.... Including a solid member other than seed or product contacting the liquid [e.g., crucible, immersed heating element]
Y10T 117/1084	.... having details of a stabilizing feature
Y10T 117/1088	.... including heating or cooling details
Y10T 117/1092	... Shape defined by a solid member other than seed or product [e.g., Bridgman-Stockbarger]
Y10T 117/1096	... including pressurized crystallization means [e.g., hydrothermal]

**Former US Class 137 series**

<b>Y10T 137/00</b>	<b>Fluid handling</b>
Y10T 137/0318	. Processes
Y10T 137/0324	.. With control of flow by a condition or characteristic of a fluid
Y10T 137/0329	... Mixing of plural fluids of diverse characteristics or conditions
Y10T 137/0335	.... Controlled by consistency of mixture
Y10T 137/034	.... Controlled by conductivity of mixture
Y10T 137/0346	.... Controlled by heat of combustion of mixture
Y10T 137/0352	.... Controlled by pressure
Y10T 137/0357	... For producing uniform flow
Y10T 137/0363	... For producing proportionate flow
Y10T 137/0368	... By speed of fluid
Y10T 137/0374	... For regulating boiler feed water level
Y10T 137/0379	... By fluid pressure
Y10T 137/0385	.. Carbonated beverage handling processes
Y10T 137/0391	.. Affecting flow by the addition of material or energy
Y10T 137/0396	.. Involving pressure control
Y10T 137/0402	.. Cleaning, repairing, or assembling
Y10T 137/0407	... Repairing or assembling hydrant [e.g., fireplug, etc.]
Y10T 137/0413	... Gas or water meter repairing or assembling
Y10T 137/0419	... Fluid cleaning or flushing
Y10T 137/0424	.... Liquid cleaning or flushing
Y10T 137/043	..... Valve or valve seat cleaning
Y10T 137/0435	... Mechanical cleaning [e.g., pig, etc.]
Y10T 137/0441	... Repairing, securing, replacing, or servicing pipe joint, valve, or tank
Y10T 137/0447	.... Including joint or coupling
Y10T 137/0452	.... Detecting or repairing leak
Y10T 137/0458	.... Tapping pipe, keg, or tank
Y10T 137/0463	..... Particular aperture forming means
Y10T 137/0469	..... Cutter or cutting tool
Y10T 137/0475	..... Having deformable or inflatable means
Y10T 137/048	.... With content loading or unloading [e.g., dispensing, discharge assistant, etc.]
Y10T 137/0486	.... Specific valve or valve element mounting or repairing
Y10T 137/0491	... Valve or valve element assembling, disassembling, or replacing
Y10T 137/0497	.... Fluid actuated or retarded
Y10T 137/0502	.... Multi way valve
Y10T 137/0508	.... Ball valve or rotary ball valve
Y10T 137/0514	.... Gate valve

Y10T 137/0519	....	Plug valve
Y10T 137/0525	....	Butterfly valve
Y10T 137/053	....	Float valve
Y10T 137/0536	.	Highspeed fluid intake means [e.g., jet engine intake]
Y10T 137/0645	..	With condition responsive control means
Y10T 137/0753	.	Control by change of position or inertia of system
Y10T 137/0777	..	With second control
Y10T 137/0801	..	Position relative body of water [e.g., marine governors]
Y10T 137/0826	...	Float controlled
Y10T 137/085	...	Pressure or head controlled
Y10T 137/0874	..	Vent opening or closing on tipping container
Y10T 137/0898	..	By shifting of liquid level
Y10T 137/0923	..	By pendulum or swinging member
Y10T 137/0947	...	With servo connection to valve
Y10T 137/0971	.	Speed responsive valve control
Y10T 137/0989	..	Acceleration responsive valve control
Y10T 137/1007	..	With manual valve control
Y10T 137/1026	..	Speed change and excess speed valve control
Y10T 137/1044	..	With other condition responsive valve control
Y10T 137/1062	...	Governor drive failure responsive
Y10T 137/108	..	Centrifugal mass type [exclusive of liquid]
Y10T 137/1098	...	With multiple valves
Y10T 137/1116	...	Periodically actuated valve
Y10T 137/1135	...	Rotating valve and rotating governor
Y10T 137/1153	...	Excess speed responsive
Y10T 137/1171	...	With fluid servo-motor
Y10T 137/1189	.	Freeze condition responsive safety systems
Y10T 137/1244	..	With freeze waste
Y10T 137/1298	..	Stop and waste
Y10T 137/1353	..	Low temperature responsive drains
Y10T 137/1407	.	Combustion failure responsive fuel safety cut-off for burners
Y10T 137/1516	..	Thermo-electric
Y10T 137/1624	.	Destructible or deformable element controlled
Y10T 137/1632	..	Destructible element
Y10T 137/1639	...	Combined destructible and fusible element
Y10T 137/1647	...	Explosive actuation
Y10T 137/1654	...	Separable valve coupling or conduit
Y10T 137/1662	....	Tensile or sheer pin or bolt
Y10T 137/1669	...	Tensile or sheer pin or bolt
Y10T 137/1677	....	Pressure causes pin or bolt to destruct

Y10T 137/1684	...	With alarm or indicator
Y10T 137/1692	...	Rupture disc
Y10T 137/1699	....	Means for holding entire disc after rupture
Y10T 137/1707	....	Disc burst after destruction of additional element
Y10T 137/1714	....	Direct pressure causes disc to burst
Y10T 137/1722	.....	Two-way rupture disc
Y10T 137/1729	.....	Dome shape
Y10T 137/1737	.....	Reverse buckling
Y10T 137/1744	....	Specific weakening point
Y10T 137/1752	....	Integral disc assembly
Y10T 137/1759	....	Knife or cutter causes disc to break
Y10T 137/1767	.....	Movable knife or cutter
Y10T 137/1774	...	With counterbalancing element
Y10T 137/1782	...	Frangible element returns pressure responsive valve
Y10T 137/1789	...	Having pressure responsive valve
Y10T 137/1797	..	Heat destructible or fusible
Y10T 137/1804	...	With second sensing means
Y10T 137/1812	...	In fluid flow path
Y10T 137/1819	...	Safety cut-off
Y10T 137/1827	....	With heater for destructible or fusible element
Y10T 137/1834	....	With external closing means
Y10T 137/1842	.	Ambient condition change responsive
Y10T 137/1866	..	For controlling soil irrigation
Y10T 137/189	...	Soil moisture sensing
Y10T 137/1915	..	Burner gas cutoff
Y10T 137/1939	..	Atmospheric
Y10T 137/1963	...	Temperature
Y10T 137/1987	....	With additional diverse control
Y10T 137/2012	...	Pressure
Y10T 137/2036	..	Underwater
Y10T 137/206	.	Flow affected by fluid contact, energy field or coanda effect [e.g., pure fluid device or system]
Y10T 137/2065	..	Responsive to condition external of system
Y10T 137/2071	...	And causing change or correction of sensed condition
Y10T 137/2076	..	Utilizing diverse fluids
Y10T 137/2082	..	Utilizing particular fluid
Y10T 137/2087	..	Means to cause rotational flow of fluid [e.g., vortex generator]
Y10T 137/2093	...	Plural vortex generators
Y10T 137/2098	...	Vortex generator as control for system
Y10T 137/2104	...	Vortex generator in interaction chamber of device

Y10T 137/2109	...	By tangential input to axial output [e.g., vortex amplifier]
Y10T 137/2115	....	With means to vary input or output of device
Y10T 137/212	..	System comprising plural fluidic devices or stages
Y10T 137/2125	...	Plural power inputs [e.g., parallel inputs]
Y10T 137/2131	....	Variable or different-value power inputs
Y10T 137/2136	.....	Pulsating power input and continuous-flow power input
Y10T 137/2142	....	With variable or selectable source of control-input signal
Y10T 137/2147	....	To cascaded plural devices
Y10T 137/2153	.....	With feedback passage[s] between devices of cascade
Y10T 137/2158	.....	With pulsed control-input signal
Y10T 137/2164	..	Plural power inputs to single device
Y10T 137/2169	...	Intersecting at interaction region [e.g., comparator]
Y10T 137/2174	....	Co-lineal, oppositely-directed power inputs [e.g., impact modulator]
Y10T 137/218	..	Means to regulate or vary operation of device
Y10T 137/2185	...	To vary frequency of pulses or oscillations
Y10T 137/2191	...	By non-fluid energy field affecting input [e.g., transducer]
Y10T 137/2196	....	Acoustical or thermal energy
Y10T 137/2202	...	By movable element
Y10T 137/2207	....	Operating at timed intervals [e.g., to produce pulses]
Y10T 137/2213	....	Electrically-actuated element [e.g., electro-mechanical transducer]
Y10T 137/2218	....	Means [e.g., valve] in control input
Y10T 137/2224	..	Structure of body of device
Y10T 137/2229	..	Device including passages having V over T configuration
Y10T 137/2234	...	And feedback passage[s] or path[s]
Y10T 137/224	...	With particular characteristics of control input
Y10T 137/2245	....	Multiple control-input passages
Y10T 137/2251	...	And multiple or joined power-outlet passages
Y10T 137/2256	...	And enlarged interaction chamber
Y10T 137/2262	...	And vent passage[s]
Y10T 137/2267	..	Device including passages having V over gamma configuration
Y10T 137/2273	..	Device including linearly-aligned power stream emitter and power stream collector
Y10T 137/2278	.	Pressure modulating relays or followers
Y10T 137/2322	..	Jet control type
Y10T 137/2365	..	Plural series units
Y10T 137/2409	..	With counter-balancing pressure feedback to the modulating device
Y10T 137/2452	...	With counter-counter balancing pressure feedback
Y10T 137/2496	.	Self-proportioning or correlating systems
Y10T 137/2499	..	Mixture condition maintaining or sensing
Y10T 137/2501	...	Dividing and recombining flow
Y10T 137/2504	...	By specific gravity

Y10T 137/2506	...	By viscosity or consistency
Y10T 137/2509	...	By optical or chemical property
Y10T 137/2511	..	Fuel controlled by boiler or water system condition
Y10T 137/2514	..	Self-proportioning flow systems
Y10T 137/2516	...	Interconnected flow displacement elements
Y10T 137/2519	....	Movable trap chamber
Y10T 137/2521	...	Flow comparison or differential response
Y10T 137/2524	....	Flow dividers [e.g., reversely acting controls]
Y10T 137/2526	....	Main line flow displaces or entrains material from reservoir
Y10T 137/2529	....	With electrical controller
Y10T 137/2531	...	Flow displacement element actuates electrical controller
Y10T 137/2534	...	Liquid level response
Y10T 137/2536	....	Float controlled weir or valve
Y10T 137/2539	....	Swinging outlet pipe controller
Y10T 137/2541	...	With measuring type discharge assistant
Y10T 137/2544	..	Supply and exhaust type
Y10T 137/2546	...	Vacuum or suction pulsator type [e.g., milking machine]
Y10T 137/2549	....	With trip linkage or snap action
Y10T 137/2552	....	With pulsation responsive pilot valve
Y10T 137/2554	...	Reversing or 4-way valve systems
Y10T 137/2557	...	Waste responsive to flow stoppage
Y10T 137/2559	..	Self-controlled branched flow systems
Y10T 137/2562	...	Dividing and recombining
Y10T 137/2564	...	Plural inflows
Y10T 137/2567	....	Alternate or successive inflows
Y10T 137/2569	.....	Control by depletion of source
Y10T 137/2572	....	One inflow supplements another
Y10T 137/2574	...	Bypass or relief controlled by main line fluid condition
Y10T 137/2577	....	Liquid level responsive
Y10T 137/2579	....	Flow rate responsive
Y10T 137/2582	.....	Including controlling main line flow
Y10T 137/2584	.....	Relief or bypass closes as main opens
Y10T 137/2587	.....	Bypass or relief valve biased open
Y10T 137/2589	.....	Pilot valve operated
Y10T 137/2592	.....	Carried choke
Y10T 137/2594	.....	Choke
Y10T 137/2597	.....	Variable choke resistance
Y10T 137/2599	.....	Venturi
Y10T 137/2602	.....	Flapper
Y10T 137/2605	....	Pressure responsive

Y10T 137/2607	.....	With pressure reducing inlet valve
Y10T 137/261	.....	Relief port through common sensing means
Y10T 137/2612	.....	Common sensor for both bypass or relief valve and other branch valve
Y10T 137/2615	.....	Bypass or relief valve opens as other branch valve closes
Y10T 137/2617	.....	Bypass or relief valve biased open
Y10T 137/262	.....	Increasing pressure progressively closes then reopens by-pass or relief valve
Y10T 137/2622	.....	Bypass or relief valve responsive to pressure downstream of outlet valve
Y10T 137/2625	.....	Pilot valve
Y10T 137/2627	.....	Outlet valve carried by bypass or relief valve
Y10T 137/263	.....	Plural sensors for single bypass or relief valve
Y10T 137/2632	.....	Sensors interconnected by timing or restrictive orifice
Y10T 137/2635	.....	Pilot valve operated
Y10T 137/2637	.....	Mechanical movement between sensor and valve
Y10T 137/264	.....	Electrical control
Y10T 137/2642	.....	Sensor rigid with valve
Y10T 137/2645	.....	Flexible sensor
Y10T 137/2647	.....	Pressure responsive outlet valve
Y10T 137/265	...	Plural outflows
Y10T 137/2652	....	Single actuator operates plural outlets simultaneously
Y10T 137/2655	....	Biased open isolation valve
Y10T 137/2657	....	Flow rate responsive
Y10T 137/266	.....	Primer valve
Y10T 137/2663	....	Pressure responsive
Y10T 137/2665	.....	With external control for correlating valve [e.g., manual]
Y10T 137/2668	....	Alternately or successively substituted outflow
Y10T 137/267	.....	Control by filling auxiliary gravitating or float operating tank
Y10T 137/2673	.....	Control by filling outlet tank or receiver
Y10T 137/2675	.....	Float controlled
Y10T 137/2678	.....	Four port reversing valve
Y10T 137/268	.....	Responsive to pressure or flow interruption
Y10T 137/2683	.....	Plural outlets control with automatic reset
Y10T 137/2685	.....	Manually set to a single outflow position
Y10T 137/2688	.....	Flow rate responsive
Y10T 137/269	.....	Flow sensing turbine
Y10T 137/2693	.....	Pressure responsive
Y10T 137/2695	.....	Responsive to outlet pressure
Y10T 137/2698	.....	Electrical control
Y10T 137/27	..	Liquid level responsive
Y10T 137/2703	..	Flow rate responsive



Y10T 137/2705	...	Pressure differential
Y10T 137/2708	..	Plural sensors
Y10T 137/271	...	For single valve
Y10T 137/2713	.	Siphons
Y10T 137/272	..	Plural
Y10T 137/2727	...	Tank truck mounted
Y10T 137/2733	...	Sequentially discharging in parallel
Y10T 137/274	....	From plural tanks
Y10T 137/2747	...	Main siphon with auxiliary starting, stopping or resetting siphon
Y10T 137/2754	....	Sinking or bucket-type float operated main siphon, float emptying auxiliary siphon
Y10T 137/2761	..	With discharge-controlling receiver
Y10T 137/2768	...	With float
Y10T 137/2774	..	Periodic or accumulation responsive discharge
Y10T 137/2781	...	With manual control
Y10T 137/2788	...	Control by filling auxiliary tank
Y10T 137/2795	...	Float-operated inlet to siphon
Y10T 137/2802	...	Release of trapped air
Y10T 137/2808	....	Through float-operated vent
Y10T 137/2815	....	Through liquid trap seal
Y10T 137/2822	.....	Auxiliary liquid trap seal
Y10T 137/2829	..	With strainer, filter, separator or sediment trap
Y10T 137/2836	..	With recorder, register, signal, indicator or inspection window
Y10T 137/2842	..	With flow starting, stopping or maintaining means
Y10T 137/2849	...	Siphon venting or breaking
Y10T 137/2856	...	With leakage or entrained air removal
Y10T 137/2863	...	Pressure applied to liquid in supply chamber
Y10T 137/287	...	Plunge or immersion starting
Y10T 137/2877	...	Pump or liquid displacement device for flow passage
Y10T 137/2883	....	Piston
Y10T 137/289	.....	Co-axial within flow passage
Y10T 137/2897	....	Collapsible bulb
Y10T 137/2904	...	Siphon inlet movable to and from seat
Y10T 137/2911	...	With valve or closure in-flow passage
Y10T 137/2917	..	With means for mounting and/or positioning relative to siphon chamber
Y10T 137/2924	..	Elements
Y10T 137/2931	.	Diverse fluid containing pressure systems
Y10T 137/2934	..	Gas lift valves for wells
Y10T 137/2937	..	Gas pressure discharge of liquids feed traps [e.g., to boiler]
Y10T 137/294	...	Gas pressure controlled by amount of liquids in boiler or discharge receiver

Y10T 137/2943	....	Pressure connection at liquid level in boiler or discharge receiver
Y10T 137/2947	...	Gas pressure controlled by amount of liquid in trap
Y10T 137/295	....	Plural trap chambers
Y10T 137/2953	.....	Gravitating
Y10T 137/2956	....	Gravitating vessel
Y10T 137/2959	.....	Sinking or bucket type float
Y10T 137/2962	.....	Pivoted vessel with fluid passage through pivot
Y10T 137/2965	....	Float responsive
Y10T 137/2968	.....	Liquid control valve positively actuated
Y10T 137/2971	.....	Gas condensing type
Y10T 137/2975	.....	Gas inlet and outlet valves unitary
Y10T 137/2978	...	Gas pressure controlled by manual or cyclic means
Y10T 137/2981	....	Movable trap chamber
Y10T 137/2984	..	Foam control in gas charged liquids
Y10T 137/2987	...	Level or pressure responsive
Y10T 137/299	...	Separate handling of foam
Y10T 137/2993	...	With conditioning trap or chamber
Y10T 137/2996	....	Recarbonation
Y10T 137/30	....	With trap or chamber by-pass
Y10T 137/3003	..	Fluid separating traps or vents
Y10T 137/3006	...	Liquids separated from liquid
Y10T 137/3009	...	Plural discriminating outlets for diverse fluids
Y10T 137/3012	....	Common actuator for control valves
Y10T 137/3015	....	Choke or restricted passage gas bleed
Y10T 137/3018	.....	From above liquid level
Y10T 137/3021	...	Discriminating outlet for liquid
Y10T 137/3024	....	With alternately operated inlet and outlet valves
Y10T 137/3028	....	With non-discriminating gas vent or liquid discharge
Y10T 137/3031	.....	Abnormal pressure responsive liquid blow-off or drain
Y10T 137/3034	.....	Manual control
Y10T 137/3037	....	With auxiliary inlet or by-pass valve
Y10T 137/304	....	With fluid responsive valve
Y10T 137/3043	.....	Successively opened valves
Y10T 137/3046	.....	Gas collecting float [e.g., inverted bucket]
Y10T 137/3049	.....	Downstream from valve
Y10T 137/3052	.....	Level responsive
Y10T 137/3056	.....	Weight or pressure
Y10T 137/3059	.....	Gravitating vessel
Y10T 137/3062	.....	Sinking or bucket type float
Y10T 137/3065	.....	Servo-control

Y10T 137/3068	.....	Float
Y10T 137/3071	.....	With main line gas outlet from trap chamber
Y10T 137/3074	.....	With outlet extending above liquid in trap
Y10T 137/3077	.....	Servo-control
Y10T 137/308	.....	With pressure balanced outlet valve
Y10T 137/3084	...	Discriminating outlet for gas
Y10T 137/3087	....	With reverse flow stop or pressure regulating valve
Y10T 137/309	....	Fluid sensing valve
Y10T 137/3093	.....	With vaporized liquid stop
Y10T 137/3096	.....	With separate return for condensate
Y10T 137/3099	.....	Float responsive
Y10T 137/3102	...	With liquid emptying means
Y10T 137/3105	....	Self-emptying
Y10T 137/3109	..	Liquid filling by evacuating container
Y10T 137/3112	..	Main line flow displaces additive from shunt reservoir
Y10T 137/3115	..	Gas pressure storage over or displacement of liquid
Y10T 137/3118	...	Surge suppression
Y10T 137/3121	...	With return of liquid to supply
Y10T 137/3124	...	Plural units
Y10T 137/3127	...	With gas maintenance or application
Y10T 137/313	....	Gas carried by or evolved from liquid
Y10T 137/3133	.....	Gas injectors
Y10T 137/3137	....	Gas injected by liquid pressure or flow
Y10T 137/314	....	Unitary mounting for gas pressure inlet and liquid outlet
Y10T 137/3143	...	With liquid level responsive gas vent or whistle
Y10T 137/3146	....	Combined high and low level responsive
Y10T 137/3149	.	Back flow prevention by vacuum breaking [e.g., anti-siphon devices]
Y10T 137/3185	..	Air vent in liquid flow line
Y10T 137/3222	...	With liquid seal in liquid flow line
Y10T 137/3258	....	Automatic valve in vent line
Y10T 137/3294	...	Valved
Y10T 137/3331	....	With co-acting valve in liquid flow path
Y10T 137/3367	.	Larner-Johnson type valves; i.e., telescoping internal valve in expanded flow line section
Y10T 137/3421	..	Line condition change responsive
Y10T 137/3476	..	Internal servo-motor with internal pilot valve
Y10T 137/353	...	Pilot controlled passage in nose or needle
Y10T 137/3584	.	Inflatable article [e.g., tire filling chuck and/or stem]
Y10T 137/36	..	With pressure-responsive pressure-control means
Y10T 137/3615	...	Pulsating

Y10T 137/3631	...	Diaphragm, bellows or expansible tube
Y10T 137/3646	...	Co-axial inflation and relief valves
Y10T 137/3662	..	With gauge or indicator
Y10T 137/3677	...	With deflating means
Y10T 137/3693	...	Selectively connected
Y10T 137/3709	..	Stem attached relief valve
Y10T 137/3724	..	With coupling means
Y10T 137/374	..	With cap
Y10T 137/3755	...	Valve actuating, assembling or locking means on cap
Y10T 137/3771	....	Valve manually seated
Y10T 137/3786	..	Removable valve head and seat unit [valve insides]
Y10T 137/3802	.	With vehicle guide or support, e.g., service station
Y10T 137/402	.	Distribution systems involving geographic features
Y10T 137/4238	.	With cleaner, lubrication added to fluid or liquid sealing at valve interface
Y10T 137/4245	..	Cleaning or steam sterilizing
Y10T 137/4252	...	Reverse fluid flow
Y10T 137/4259	...	With separate material addition
Y10T 137/4266	...	Steam sterilizing
Y10T 137/4273	...	Mechanical cleaning
Y10T 137/428	....	Valve grinding motion of valve on seat
Y10T 137/4287	.....	Concentric stem
Y10T 137/4294	.....	Spring pressed
Y10T 137/4301	.....	Lost motion permits grinding
Y10T 137/4308	.....	With swivel-preventing means
Y10T 137/4315	.....	Nut releasable from body and/or stem
Y10T 137/4322	.....	With independent grinding actuator
Y10T 137/4329	.....	Separable
Y10T 137/4336	....	Cleaning member reciprocates in passage
Y10T 137/4343	.....	By-pass cleaning
Y10T 137/4351	.....	Independent actuation
Y10T 137/4358	..	Liquid supplied at valve interface
Y10T 137/4365	...	Plural feed
Y10T 137/4372	...	Line pressure feed
Y10T 137/4379	...	Feed by or with actuation
Y10T 137/4386	...	Loss control
Y10T 137/4393	...	Screw feed
Y10T 137/44	....	With check valve
Y10T 137/4407	.....	Excess relief
Y10T 137/4414	.....	Jacking
Y10T 137/4421	....	Jacking

Y10T 137/4428	....	Seating
Y10T 137/4435	...	Spring biased piston feed
Y10T 137/4442	...	External pressure
Y10T 137/4449	...	Gravity or capillary feed
Y10T 137/4456	.	With liquid valves or liquid trap seals
Y10T 137/4463	..	Liquid seal in liquid flow line; flow liquid forms seal
Y10T 137/4471	...	Valves
Y10T 137/4478	....	Line condition change responsive
Y10T 137/4486	.....	Plural valves or valve seats
Y10T 137/4493	.....	Pivoted valve
Y10T 137/4501	.....	Ball valve
Y10T 137/4508	.....	Seats vertically up
Y10T 137/4516	...	Seal replenishers
Y10T 137/4523	...	Plural inlet
Y10T 137/4531	...	Divided and recombined passages
Y10T 137/4538	...	Tangential inlet flow
Y10T 137/4546	...	Downward partition encircles projecting outlet
Y10T 137/4553	...	Submerged inlet pipe end
Y10T 137/4561	....	Hinged seal bowl
Y10T 137/4568	....	Distinct seal bowl in flow line connected casing
Y10T 137/4576	...	U-seals
Y10T 137/4583	....	Topside access beneath cover plate closed floor opening
Y10T 137/4591	....	Enlarged upflow leg
Y10T 137/4598	.....	Topside access opening
Y10T 137/4606	....	Even diameter legs
Y10T 137/4613	.....	Access opening
Y10T 137/4621	..	Seal for relatively movable valving parts
Y10T 137/4628	...	Horizontally moving valve
Y10T 137/4636	....	Rotary
Y10T 137/4643	..	Liquid valves
Y10T 137/4651	...	Branched passage for sealing liquid
Y10T 137/4658	...	With auxiliary means for varying liquid level
Y10T 137/4666	...	With baffle
Y10T 137/4673	.	Plural tanks or compartments with parallel flow
Y10T 137/469	..	Sequentially filled and emptied [e.g., holding type]
Y10T 137/4707	...	With relative rotation of tank group and filling head
Y10T 137/4723	....	With rotary filling and emptying head
Y10T 137/474	..	With housings, supports or stacking arrangements
Y10T 137/4757	..	Battery or electrolytic cell replenishment
Y10T 137/4774	...	Barometric supply

Y10T 137/479	..	Flow dividing compartments
Y10T 137/4807	..	Tank type manifold [i.e., one tank supplies or receives from at least two others]
Y10T 137/4824	..	Tank within tank
Y10T 137/4841	..	With cross connecting passage
Y10T 137/4857	..	With manifold or grouped outlets
Y10T 137/4874	...	Tank truck type
Y10T 137/4891	.	With holder for solid, flaky or pulverized material to be dissolved or entrained
Y10T 137/5109	.	Convertible
Y10T 137/5153	..	Reversible check
Y10T 137/5196	..	Unit orientable in a single location between plural positions
Y10T 137/524	...	Reversible stop and vent or waste
Y10T 137/5283	..	Units interchangeable between alternate locations
Y10T 137/5327	.	Hydrant type
Y10T 137/5333	..	Water crane type
Y10T 137/5339	...	Spout operated valve
Y10T 137/5345	...	Rotating riser
Y10T 137/535	....	Spout articulated to riser
Y10T 137/5356	....	Vertically movable riser
Y10T 137/5362	...	Extensible spout
Y10T 137/5368	...	Spout articulated to riser
Y10T 137/5374	..	Plural riser
Y10T 137/538	..	Expansible chamber operated by valve actuator for draining riser
Y10T 137/5386	..	With pump or ejector
Y10T 137/5392	..	Removable valve and valve seat
Y10T 137/5397	...	With extension to facilitate removal
Y10T 137/5403	..	Removable valve with supplemental check valve
Y10T 137/5409	..	Movable riser actuated valve
Y10T 137/5415	...	Reciprocating riser
Y10T 137/5421	....	Piston type valve
Y10T 137/5427	..	Balanced valve
Y10T 137/5433	..	Valve actuator extends laterally from bottom of riser
Y10T 137/5438	..	Valve actuator outside riser
Y10T 137/5444	...	Lever actuator
Y10T 137/545	...	With casing, flush with ground or pavement surface
Y10T 137/5456	..	With casing
Y10T 137/5462	...	Flush with ground or pavement surface
Y10T 137/5468	...	Cap, cover or hood
Y10T 137/5474	...	With heater
Y10T 137/5479	..	With actuator lubricating means
Y10T 137/5485	..	With valve at outlet

Y10T 137/5491	..	With supplemental valve
Y10T 137/5497	..	Protection against freezing
Y10T 137/5503	...	Stop and waste
Y10T 137/5509	....	With disabling means
Y10T 137/5515	....	Separate relatively movable valves with single actuator
Y10T 137/5521	.....	Unidirectional abutting connection between main valve or actuator and waste valve
Y10T 137/5526	.....	With screw or gear in actuating mechanism
Y10T 137/5532	....	Reciprocating relatively fixed valves
Y10T 137/5538	.....	Waste through lower valve guide
Y10T 137/5544	.	Reversing valves - regenerative furnace type
Y10T 137/5617	..	With cooling
Y10T 137/5689	..	Rotary reversing valve
Y10T 137/5762	.	With leakage or drip collecting
Y10T 137/5835	..	Relatively movable receptacle or drain pipe and outlet
Y10T 137/5907	..	Collector for waste liquid derived from solid, gas or vapor
Y10T 137/598	.	With repair, tapping, assembly, or disassembly means
Y10T 137/5983	..	Blow out preventer or choke valve device [e.g., oil well flow controlling device, etc.]
Y10T 137/5987	..	Solenoid or electromagnetically operated valve
Y10T 137/599	..	Pressure regulating type valve
Y10T 137/5994	...	Diaphragm type
Y10T 137/5997	..	Gas or water meter replacing
Y10T 137/60	..	Assembling or disassembling flexible tube or sleeve type valve
Y10T 137/6004	..	Assembling or disassembling float or float valve
Y10T 137/6007	..	Assembling or disassembling multi way valve
Y10T 137/6011	..	Assembling, disassembling, or removing cartridge type valve [e.g., insertable and removable as a unit, etc.]
Y10T 137/6014	...	Faucet type [e.g., domestic water use, etc.]
Y10T 137/6017	....	Including removable valve head and seat unit
Y10T 137/6021	....	Including mechanical movement actuator
Y10T 137/6024	....	Particular handle or handle fastening means
Y10T 137/6028	..	Assembling or disassembling pivoted valve
Y10T 137/6031	..	Assembling or disassembling rotary valve
Y10T 137/6035	...	Rotary ball valve
Y10T 137/6038	....	Particular valve seat or interface seal
Y10T 137/6041	.....	Replaceable
Y10T 137/6045	.....	With top entry valve
Y10T 137/6048	...	Butterfly valve
Y10T 137/6052	....	Having valve head or seat packing
Y10T 137/6055	....	With head and stem collections

Y10T 137/6058	...	Plug valve
Y10T 137/6062	....	Having retainer at actuator end
Y10T 137/6065	..	Assembling or disassembling reciprocating valve
Y10T 137/6069	...	Having particularly packed or sealed mechanical movement actuator
Y10T 137/6072	...	Gate valve
Y10T 137/6075	....	Bifaced
Y10T 137/6079	....	Having particular valve seat
Y10T 137/6082	.....	Including seal
Y10T 137/6086	..	Assembling or disassembling check valve
Y10T 137/6089	..	With mechanical movement between actuator and valve
Y10T 137/6092	...	Plural motions of valve
Y10T 137/6096	...	Lever type
Y10T 137/6099	...	Gear type
Y10T 137/6103	...	Cam type
Y10T 137/6106	...	Screw type
Y10T 137/6109	..	Tool for applying or removing valve or valve member
Y10T 137/6113	...	Including sealing feature
Y10T 137/6116	..	With holding means functioning only during transportation assembly or disassembly
Y10T 137/612	..	Tapping a pipe, keg, or apertured tank under pressure
Y10T 137/6123	...	With aperture forming means
Y10T 137/6126	...	Imperforate closure removing and holding tap
Y10T 137/613	...	With valved closure or bung
Y10T 137/6133	....	Combined rotary and longitudinal movement of valve
Y10T 137/6137	....	Longitudinal movement of valve
Y10T 137/614	....	Rotary movement of valve
Y10T 137/6144	...	With core ejectors
Y10T 137/6147	....	Impact operated
Y10T 137/615	..	Foot valve extraction from top of enclosure
Y10T 137/6154	..	With disassembly tool engaging feature
Y10T 137/6157	...	Wrench engaging lugs
Y10T 137/6161	..	With provision of alternate wear parts
Y10T 137/6164	...	Valve heads and/or seats
Y10T 137/6167	....	Opposite duplicate surfaces of unitary structure
Y10T 137/6171	.....	Homogeneous material
Y10T 137/6174	.....	Valve heads
Y10T 137/6178	....	Different portions of continuous surfaces
Y10T 137/6181	....	Successively used adjacent independent elements
Y10T 137/6184	..	Removable valve with normally disabled supplemental check valve
Y10T 137/6188	...	Check valve disabled by normally movable main valve part



Y10T 137/6191	....	Ball check
Y10T 137/6195	....	Spring bias
Y10T 137/6198	.	Non-valving motion of the valve or valve seat
Y10T 137/6253	..	Rotary motion of a reciprocating valve
Y10T 137/6307	...	Turbine on valve
Y10T 137/6362	...	Manual rotating means
Y10T 137/6416	.	With heating or cooling of the system
Y10T 137/6443	..	With burner
Y10T 137/647	...	Flue extending through fluid
Y10T 137/6497	..	Hot and cold water system having a connection from the hot to the cold channel
Y10T 137/6525	..	Air heated or cooled [fan, fins, or channels]
Y10T 137/6552	..	With diversion of part of fluid to heat or cool the device or its contents
Y10T 137/6579	..	Circulating fluid in heat exchange relationship
Y10T 137/6606	..	With electric heating element
Y10T 137/6633	.	With fluid system support for workman or non-system material
Y10T 137/6851	.	With casing, support, protector or static constructional installations
Y10T 137/6855	..	Vehicle
Y10T 137/6858	...	Locomotive
Y10T 137/6862	....	Boiler or steam dome
Y10T 137/6866	...	Railway car
Y10T 137/6869	....	Car frame
Y10T 137/6873	....	End of car
Y10T 137/6877	....	Roof, wall or floor
Y10T 137/6881	...	Automotive
Y10T 137/6884	....	Steering post or wheel
Y10T 137/6888	....	Dash
Y10T 137/6892	....	Floor or frame
Y10T 137/6895	....	Fender or running board
Y10T 137/6899	...	With hose reel storage means
Y10T 137/6903	...	Guided by means of track or guideway
Y10T 137/6906	...	Aerial or water-supported [e.g., airplane or ship, etc.]
Y10T 137/691	...	With retractable or nonuse-positionable support wheel
Y10T 137/6914	...	Vehicle supports fluid compressor and compressed fluid storage tank
Y10T 137/6918	..	With hose storage or retrieval means
Y10T 137/6921	...	With means for plural hoses
Y10T 137/6925	...	With flow regulation responsive to hose movement
Y10T 137/6929	....	Reel type
Y10T 137/6932	...	With retrieval means
Y10T 137/6936	....	Power stop or brake
Y10T 137/694	.....	Responsive to position of hose in casing

Y10T 137/6943	....	Biased to retracted position
Y10T 137/6947	.....	Boom type
Y10T 137/6951	.....	Weighted
Y10T 137/6954	...	Reel with support therefor
Y10T 137/6958	....	Ground supported
Y10T 137/6962	...	Basket or holder for folded coiled hose
Y10T 137/6966	..	Static constructional installations
Y10T 137/6969	...	Buildings
Y10T 137/6973	....	Outside access to portions of the system
Y10T 137/6977	....	Escutcheon type support
Y10T 137/698	....	Wall
Y10T 137/6984	.....	Recessed gas outlet box
Y10T 137/6988	....	Floor installation
Y10T 137/6991	...	Ground supporting enclosure
Y10T 137/6995	....	Valve and meter wells
Y10T 137/6999	.....	With means to center well on valve
Y10T 137/7002	.....	Detachable base plate
Y10T 137/7006	.....	Vertical casing aligned by valve casing
Y10T 137/701	.....	Combined with actuator
Y10T 137/7014	.....	Telescopic well casing
Y10T 137/7017	.....	Telescopic well casing
Y10T 137/7021	.....	Covers
Y10T 137/7025	....	Pipe line transport
Y10T 137/7028	...	Tapering or tower type
Y10T 137/7032	..	Furniture and housing furnishings
Y10T 137/7036	..	Jacketed
Y10T 137/7039	..	Tank supports
Y10T 137/7043	..	Guards and shields
Y10T 137/7047	...	Resilient abutment for preventing breakage
Y10T 137/7051	...	Nozzle abutment for scratch or damage prevention
Y10T 137/7054	...	Cover for beer cooler aperture for faucet
Y10T 137/7058	...	Sanitary covers or shields
Y10T 137/7062	...	Valve guards
Y10T 137/7065	....	With means for accommodating a detachable actuator
Y10T 137/7069	.	With lock or seal
Y10T 137/71	..	With seal
Y10T 137/7131	..	Common lock and valve actuator
Y10T 137/7162	...	Combination lock
Y10T 137/7194	...	Biased valve
Y10T 137/7225	...	Mechanical movement between lock and valve

Y10T 137/7256	..	Locks against rotary motion
Y10T 137/7287	.	Liquid level responsive or maintaining systems
Y10T 137/729	..	Washing machine cycle control
Y10T 137/7293	..	Liquid excluding devices for gas inlet or outlets
Y10T 137/7297	..	With second diverse control
Y10T 137/73	...	Manual control
Y10T 137/7303	..	Control of both inflow and outflow of tank
Y10T 137/7306	..	Electrical characteristic sensing
Y10T 137/731	..	With control fluid connection at desired liquid level
Y10T 137/7313	..	Control of outflow from tank
Y10T 137/7316	...	Self-emptying tanks
Y10T 137/7319	....	By float
Y10T 137/7323	...	By float
Y10T 137/7326	....	Low level safety cut-off
Y10T 137/7329	..	With supplemental or safety closing means or bias
Y10T 137/7332	...	Sinking or bucket type float
Y10T 137/7336	...	Gravitating tank
Y10T 137/7339	..	By weight of accumulated fluid
Y10T 137/7342	...	In sinking or bucket type float
Y10T 137/7345	...	Oil burner fuel overflow preventing safety cut-offs
Y10T 137/7349	...	In communicating measuring vessel
Y10T 137/7352	....	Top and bottom connections
Y10T 137/7355	...	In gravitating tank
Y10T 137/7358	..	By float controlled valve
Y10T 137/7361	...	Valve opened by external means, closing or closing control by float
Y10T 137/7365	...	Single float controls plural valves
Y10T 137/7368	...	Servo relay operation of control
Y10T 137/7371	....	Fluid pressure
Y10T 137/7374	.....	Flexible diaphragm valve
Y10T 137/7378	.....	From tank
Y10T 137/7381	...	Quick acting
Y10T 137/7384	....	Pilot float released
Y10T 137/7387	....	Over center mechanism
Y10T 137/7391	.....	Shifting weight
Y10T 137/7394	....	Trip mechanism
Y10T 137/7397	.....	Weight or spring bias
Y10T 137/74	....	Lost motion mechanism
Y10T 137/7404	...	Plural floats
Y10T 137/7407	...	With counter-balance
Y10T 137/741	....	Within tank

Y10T 137/7413	...	Level adjustment or selection means
Y10T 137/7417	...	With float leakage disposal
Y10T 137/742	...	In separate communicating float chamber
Y10T 137/7423	...	Rectilinearly traveling float
Y10T 137/7426	....	Float co-axial with valve or port
Y10T 137/743	.....	Float is spreader or anti-splash means
Y10T 137/7433	.....	Float surrounds inlet pipe
Y10T 137/7436	.....	Float rigid with valve
Y10T 137/7439	...	Float arm operated valve
Y10T 137/7442	....	With valve retarder or cushion means
Y10T 137/7446	....	With flow guide or restrictor
Y10T 137/7449	.....	External hood or deflector or annular outlet surrounding the inlet pipe
Y10T 137/7452	....	Movable nozzle or inlet terminal
Y10T 137/7455	....	Valve removable from outside container
Y10T 137/7459	....	With U-shaped inlet pipe having terminal valve
Y10T 137/7462	....	With refill pipe
Y10T 137/7465	....	Assembly mounted on and having reciprocating valve element coaxial with inlet pipe
Y10T 137/7468	.....	Horizontal or side entering pipe
Y10T 137/7472	.....	Vertical inlet riser
Y10T 137/7475	....	With toggle or second lever connected to valve
Y10T 137/7478	....	With interposed cam, gear or threaded connection
Y10T 137/7481	....	Rotary valve element
Y10T 137/7485	....	Pivoted valve
Y10T 137/7488	....	Ball valves
Y10T 137/7491	....	Balanced valves
Y10T 137/7494	....	Flexible valve
Y10T 137/7498	..	Barometric
Y10T 137/7501	...	With shut-off between supply tank and receiver
Y10T 137/7504	.	Removable valve head and seat unit
Y10T 137/7559	..	Pump type
Y10T 137/7613	..	Threaded into valve casing
Y10T 137/7668	..	Retained by bonnet or closure
Y10T 137/7722	.	Line condition change responsive valves
Y10T 137/7723	..	Safety cut-off requiring reset
Y10T 137/7724	...	Thermal
Y10T 137/7725	...	Responsive to both high and low pressure or velocity
Y10T 137/7726	...	Responsive to change in rate of flow
Y10T 137/7727	....	Excessive flow cut-off
Y10T 137/7728	...	High pressure cut-off

Y10T 137/7729	...	Reset by pressure equalization valve or by-pass
Y10T 137/773	...	Fluid released trip
Y10T 137/7731	...	Fluid counter-biased or unseated valve
Y10T 137/7732	....	With mechanical stop against reopening
Y10T 137/7733	....	With fluid pressure seating of valve
Y10T 137/7734	..	Fluid opened valve requiring reset
Y10T 137/7736	..	Consistency responsive
Y10T 137/7737	..	Thermal responsive
Y10T 137/7738	..	Pop valves
Y10T 137/7739	...	Pop closing valves
Y10T 137/774	...	Pop pressure reactor in inflow to valve
Y10T 137/7741	...	Pop pressure reactor in branched released path
Y10T 137/7742	....	Separate relief valves or valves for each branch
Y10T 137/7743	...	Lost motion between pop pressure reactor and valve
Y10T 137/7744	...	Adjustable choke
Y10T 137/7745	....	Annular lip or baffle
Y10T 137/7746	.....	On movable valve part
Y10T 137/7747	.....	Screw threaded
Y10T 137/7748	..	Combustion engine induction type
Y10T 137/7749	...	Valve in auxiliary inlet to induction line
Y10T 137/775	...	With manual modifier
Y10T 137/7751	...	With suction compensator
Y10T 137/7752	...	With separate reactor surface
Y10T 137/7753	...	Unbalanced pivoted valve [e.g., unbalanced butterfly type]
Y10T 137/7754	..	Line flow effect assisted
Y10T 137/7755	...	Reactor surface normal to flow
Y10T 137/7756	...	Reactor surface separated from flow by apertured partition
Y10T 137/7757	....	Through separate aperture
Y10T 137/7758	..	Pilot or servo controlled
Y10T 137/7759	...	Responsive to change in rate of fluid flow
Y10T 137/776	....	Control by pressures across flow line valve
Y10T 137/7761	...	Electrically actuated valve
Y10T 137/7762	...	Fluid pressure type
Y10T 137/7764	....	Choked or throttled pressure type
Y10T 137/7765	.....	Pilot valve within main valve head
Y10T 137/7766	.....	Choked passage through main valve head
Y10T 137/7767	.....	Loose fitting piston
Y10T 137/7768	.....	Pilot controls supply to pressure chamber
Y10T 137/7769	....	Single acting fluid servo
Y10T 137/777	.....	Spring biased

Y10T 137/7771	..	Bi-directional flow valves
Y10T 137/7772	...	One head and seat carried by head of another
Y10T 137/7773	....	Supporting valve only spring biased
Y10T 137/7774	....	Supporting valve spring carried by supporting valve
Y10T 137/7775	.....	Spring stop on supported valve stem
Y10T 137/7776	.....	Spring abuts guide for supported valve stem
Y10T 137/7777	....	Both valves spring biased
Y10T 137/7778	...	Axes of ports perpendicular
Y10T 137/7779	...	Axes of ports parallel
Y10T 137/778	...	Axes of ports co-axial
Y10T 137/7781	..	With separate connected fluid reactor surface
Y10T 137/7782	...	With manual or external control for line valve
Y10T 137/7783	...	Valve closes in responses to reverse flow
Y10T 137/7784	...	Responsive to change in rate of fluid flow
Y10T 137/7785	....	Valve closes in response to excessive flow
Y10T 137/7786	....	Turbine or swinging vane type reactor
Y10T 137/7787	....	Expansible chamber subject to differential pressures
Y10T 137/7788	.....	Pressures across fixed choke
Y10T 137/7789	.....	With Venturi tube having a connection to throat
Y10T 137/7791	.....	Pressures across flow line valve
Y10T 137/7792	....	Movable deflector or choke
Y10T 137/7793	...	With opening bias [e.g., pressure regulator]
Y10T 137/7794	....	With relief valve
Y10T 137/7795	....	Multi-stage
Y10T 137/7796	....	Senses inlet pressure
Y10T 137/7797	....	Bias variable during operation
Y10T 137/7798	.....	Ancillary reactor surface responds to inlet pressure
Y10T 137/7799	.....	Liquid transfer
Y10T 137/78	.....	Weight
Y10T 137/7801	....	Balanced valve
Y10T 137/7802	....	Liquid level responsive gas flow control
Y10T 137/7803	....	With protective separator
Y10T 137/7804	....	Main flow through isolated reactor chamber
Y10T 137/7805	....	Through external pipe
Y10T 137/7806	.....	Modified valve casing
Y10T 137/7807	.....	Adjustable external lever
Y10T 137/7808	....	Apertured reactor surface surrounds flow line
Y10T 137/7809	....	Reactor surface separated by apertured partition
Y10T 137/781	.....	In valve stem
Y10T 137/7811	.....	Also through reactor surface

Y10T 137/7812	.....	Valve stem passes through the aperture
Y10T 137/7813	.....	Plural reactor surfaces
Y10T 137/7814	.....	Reactor is an inverted cup having liquid seal
Y10T 137/7815	.....	With movement dampener
Y10T 137/7816	.....	Valve head in inlet chamber
Y10T 137/7818	.....	Valve head in inlet chamber
Y10T 137/7819	.....	Rectilinear valve stem rigid with reactor surface
Y10T 137/782	.....	Reactor surface is diaphragm
Y10T 137/7821	.....	With valve closing bias
Y10T 137/7822	....	Reactor surface closes chamber
Y10T 137/7823	.....	Valve head in inlet chamber
Y10T 137/7824	.....	Reactor surface is inverted cup [float]
Y10T 137/7825	.....	Rectilinear valve stem rigid with reactor surface
Y10T 137/7826	.....	With valve closing bias
Y10T 137/7827	.....	In reactor chamber
Y10T 137/7828	.....	Valve head on yoke
Y10T 137/7829	.....	Yoke has valve closing bias
Y10T 137/783	.....	Reactor operatively connected to valve by mechanical movement
Y10T 137/7831	....	With mechanical movement between actuator and valve
Y10T 137/7832	...	Plural valves biased closed
Y10T 137/7833	...	With means for mounting or connecting to system
Y10T 137/7834	...	Valve seat or external sleeve moves to open valve
Y10T 137/7835	...	Valve seating in direction of flow
Y10T 137/7836	....	Flexible diaphragm or bellows reactor
Y10T 137/7837	..	Direct response valves [i.e., check valve type]
Y10T 137/7838	...	Plural
Y10T 137/7839	....	Dividing and recombining in a single flow path
Y10T 137/784	.....	Integral resilient member forms plural valves
Y10T 137/7841	....	One valve carries head and seat for second valve
Y10T 137/7842	....	Diverse types
Y10T 137/7843	....	Integral resilient member forms plural valves
Y10T 137/7845	....	With common biasing means
Y10T 137/7846	....	Mechanically interconnected
Y10T 137/7847	...	With leak passage
Y10T 137/7848	....	Permits flow at valve interface
Y10T 137/7849	....	Bypass in valve casing
Y10T 137/785	...	With retarder or dashpot
Y10T 137/7851	....	End of valve forms dashpot chamber
Y10T 137/7852	....	End of valve moves inside dashpot chamber
Y10T 137/7853	.....	Enlarged piston on end of valve stem

Y10T 137/7854	...	In couplings for coaxial conduits, e.g., drill pipe check valves
Y10T 137/7855	....	Valve seat threaded into a coupling element
Y10T 137/7856	....	Valve seat formed on or carried by a coupling element
Y10T 137/7857	....	Valve seat clamped between coupling elements
Y10T 137/7858	...	With means for selecting area of valve or seat
Y10T 137/7859	...	Single head, plural ports in parallel
Y10T 137/786	....	Concentric ports
Y10T 137/7861	....	Annular head
Y10T 137/7862	.....	Central post on seat
Y10T 137/7863	.....	Stop
Y10T 137/7864	.....	With guide
Y10T 137/7865	.....	Guide
Y10T 137/7866	...	Plural seating
Y10T 137/7867	....	Sequential
Y10T 137/7868	.....	Resilient gasket
Y10T 137/7869	...	Biased open
Y10T 137/787	....	Oppositely swinging vanes
Y10T 137/7871	....	Weight biased
Y10T 137/7873	.....	Ball valves
Y10T 137/7874	.....	Edge pivoted valve
Y10T 137/7875	....	Pivoted valves
Y10T 137/7876	...	With external means for opposing bias
Y10T 137/7877	....	With means for retaining external means in bias opposing position
Y10T 137/7878	...	With bias adjustment indicator
Y10T 137/7879	...	Resilient material valve
Y10T 137/788	....	Having expansible port
Y10T 137/7881	.....	Apertured plate
Y10T 137/7882	.....	Having exit lip
Y10T 137/7883	.....	With biasing means
Y10T 137/7884	.....	Side vent
Y10T 137/7885	.....	Multiple slit
Y10T 137/7886	.....	Internally extending mount
Y10T 137/7887	....	Center flexing strip
Y10T 137/7888	....	With valve member flexing about securement
Y10T 137/7889	.....	Sleeve
Y10T 137/789	.....	Central mount
Y10T 137/7891	.....	Flap or reed
Y10T 137/7892	.....	With stop
Y10T 137/7893	.....	With spring
Y10T 137/7894	.....	With weight



Y10T 137/7895	.....	Peripherally secured diaphragm
Y10T 137/7896	....	Annulus
Y10T 137/7897	...	Vacuum relief type
Y10T 137/7898	...	Pivoted valves
Y10T 137/79	....	Head retained by removable closure
Y10T 137/7901	....	Valve head movably connected for accommodation to seat
Y10T 137/7902	....	Valve mounted on end of pipe
Y10T 137/7903	....	Weight biased
Y10T 137/7904	...	Reciprocating valves
Y10T 137/7905	....	Plural biasing means
Y10T 137/7906	....	Cam means for adjusting and fixing bias
Y10T 137/7907	....	Varying effective lever arm
Y10T 137/7908	....	Weight biased
Y10T 137/7909	.....	Valve body is the weight
Y10T 137/791	.....	Ball valves
Y10T 137/7911	.....	Removable cage
Y10T 137/7912	.....	Separable seat
Y10T 137/7913	.....	Guided head
Y10T 137/7914	.....	Cage
Y10T 137/7915	.....	Guide stem
Y10T 137/7916	.....	With closing stop
Y10T 137/7917	.....	Oppositely disposed
Y10T 137/7918	.....	Head slidable on guide rod
Y10T 137/7919	.....	Guide and seat integral unit
Y10T 137/792	.....	Guide and closure integral unit
Y10T 137/7921	....	Weight coaxial with valve
Y10T 137/7922	....	Spring biased
Y10T 137/7923	....	With means to protect spring from fluid
Y10T 137/7924	....	Spring under tension
Y10T 137/7925	....	Piston-type valves
Y10T 137/7927	....	Ball valves
Y10T 137/7928	.....	With follower
Y10T 137/7929	....	Spring coaxial with valve
Y10T 137/793	.....	Broken valve parts retainer
Y10T 137/7931	.....	Spring in inlet
Y10T 137/7932	.....	Valve stem extends through fixed spring abutment
Y10T 137/7933	.....	Yoke or cage-type support for valve stem
Y10T 137/7934	.....	Spring abuts removable valve stem guide
Y10T 137/7935	.....	Head slides on guide-rod concentric with spring
Y10T 137/7936	.....	Spring guides valve head

Y10T 137/7937	.....	Cage-type guide for stemless valves
Y10T 137/7938	.....	Guide means integral and coplanar with valve disk
Y10T 137/7939	.....	Head between spring and guide
Y10T 137/794	.	With means for separating solid material from the fluid
Y10T 137/7976	..	Plural separating elements
Y10T 137/8013	..	Sediment chamber
Y10T 137/8049	..	Movable strainer
Y10T 137/8085	..	Hollow strainer, fluid inlet and outlet perpendicular to each other
Y10T 137/8122	..	Planar strainer normal to flow path
Y10T 137/8158	.	With indicator, register, recorder, alarm or inspection means
Y10T 137/8175	..	Plural
Y10T 137/8192	...	Unobvious - "combination lock" type
Y10T 137/8208	..	Time
Y10T 137/8225	..	Position or extent of motion indicator
Y10T 137/8242	...	Electrical
Y10T 137/8259	...	Selection from plural branches
Y10T 137/8275	...	Indicator element rigidly carried by the movable element whose position is indicated
Y10T 137/8292	....	Movable indicator element is a pointer
Y10T 137/8309	.....	Pointer integral with handle
Y10T 137/8326	..	Fluid pressure responsive indicator, recorder or alarm
Y10T 137/8342	..	Liquid level responsive indicator, recorder or alarm
Y10T 137/8359	..	Inspection means
Y10T 137/8376	.	Combined
Y10T 137/8593	.	Systems
Y10T 137/85938	..	Non-valved flow dividers
Y10T 137/85946	..	Faucet connected, sink drained
Y10T 137/85954	..	Closed circulating system
Y10T 137/85962	...	With thermal circulating means [thermo-siphons]
Y10T 137/8597	..	Main line as motive fluid for follower-type feeder
Y10T 137/85978	..	With pump
Y10T 137/85986	...	Pumped fluid control
Y10T 137/85994	....	Manual
Y10T 137/86002	....	Fluid pressure responsive
Y10T 137/8601	.....	And pilot valve
Y10T 137/86019	.....	Direct response valve
Y10T 137/86027	....	Electric
Y10T 137/86035	...	Combined with fluid receiver
Y10T 137/86043	....	Reserve or surge receiver
Y10T 137/86051	....	Compressed air supply unit

Y10T 137/86059	....	Hydraulic power unit
Y10T 137/86067	....	Fluid sump
Y10T 137/86075	...	And jet-aspiration type pump
Y10T 137/86083	...	Vacuum pump
Y10T 137/86091	...	Resiliently mounted pump
Y10T 137/86099	...	Hand pump
Y10T 137/86107	...	Multiple inlet with multiple outlet
Y10T 137/86115	...	Downstream cyclic distributor
Y10T 137/86123	....	Distributor part unitary with movable pump part
Y10T 137/86131	...	Plural
Y10T 137/86139	....	Serial
Y10T 137/86147	.....	With single motive input
Y10T 137/86155	.....	One pump driven by motive fluid from the other
Y10T 137/86163	....	Parallel
Y10T 137/86171	...	With pump bypass
Y10T 137/86179	...	Drain valve actuator mounted on pump
Y10T 137/86187	..	Plural tanks or compartments connected for serial flow
Y10T 137/86196	...	Separable with valved-connecting passage
Y10T 137/86204	...	Fluid progresses by zigzag flow
Y10T 137/86212	...	Plural compartments formed by baffles
Y10T 137/8622	...	Plural top-to-bottom connected tanks
Y10T 137/86228	...	With communicating opening in common walls of tanks or compartments
Y10T 137/86236	..	Tank with movable or adjustable outlet or overflow pipe
Y10T 137/86244	...	Horizontally traversing outlet
Y10T 137/86252	...	Float-supported outlet
Y10T 137/8626	...	Swinging outlet pipe or spout
Y10T 137/86268	..	With running joint between movable parts of system
Y10T 137/86276	..	Movable tank
Y10T 137/86284	..	With antisplash means not in flow passage
Y10T 137/86292	..	System with plural openings, one a gas vent or access opening
Y10T 137/863	...	Access and outlet
Y10T 137/86308	....	Tank access opening and bottom outlet
Y10T 137/86316	.....	Access opening interlock or telltale on outlet valve actuator
Y10T 137/86324	...	Tank with gas vent and inlet or outlet
Y10T 137/86332	....	Vent and inlet or outlet in unitary mounting
Y10T 137/8634	...	With vented outlet
Y10T 137/86348	..	Tank with internally extending flow guide, pipe or conduit
Y10T 137/86356	...	Nondraining overflow type
Y10T 137/86364	...	Inverted "U" passage
Y10T 137/86372	...	Inlet internally extending

Y10T 137/86381	..	Head-establishing standpipe or expansion chamber [e.g., surge tanks]
Y10T 137/86389	..	Programmer or timer
Y10T 137/86397	...	With independent valve controller
Y10T 137/86405	...	Repeating cycle
Y10T 137/86413	....	Self-cycling
Y10T 137/86421	....	Variable
Y10T 137/86429	.....	Attachable and removable element
Y10T 137/86437	.....	Adjustable cam
Y10T 137/86445	...	Plural, sequential, valve actuations
Y10T 137/86453	....	Plural trips or trip actuations
Y10T 137/86461	....	Variable cycle
Y10T 137/86469	...	Clock alarm mechanism controlled
Y10T 137/86477	...	Biased latch, cam operated
Y10T 137/86485	..	Line condition change responsive release of valve
Y10T 137/86493	..	Multi-way valve unit
Y10T 137/86501	...	Sequential distributor or collector type
Y10T 137/86509	...	Sequentially progressive opening or closing of plural ports
Y10T 137/86517	....	With subsequent closing of first port
Y10T 137/86525	.....	Flow combining with flow dividing
Y10T 137/86533	.....	Rotary
Y10T 137/86541	.....	Plug
Y10T 137/86549	...	Selective reciprocation or rotation
Y10T 137/86558	...	Plural noncommunicating flow paths
Y10T 137/86566	....	Rotary plug
Y10T 137/86574	...	Supply and exhaust
Y10T 137/86582	....	Pilot-actuated
Y10T 137/8659	.....	Variable orifice-type modulator
Y10T 137/86598	.....	Opposed orifices; interposed modulator
Y10T 137/86606	.....	Common to plural valve motor chambers
Y10T 137/86614	.....	Electric
Y10T 137/86622	....	Motor-operated
Y10T 137/8663	.....	Fluid motor
Y10T 137/86638	....	Rotary valve
Y10T 137/86646	.....	Plug type
Y10T 137/86654	.....	For plural lines
Y10T 137/86662	.....	Axial and radial flow
Y10T 137/8667	....	Reciprocating valve
Y10T 137/86678	.....	Combined disk or plug and gate or piston
Y10T 137/86686	.....	Plural disk or plug
Y10T 137/86694	.....	Piston valve

Y10T 137/86702	.....	With internal flow passage
Y10T 137/8671	.....	With annular passage [e.g., spool]
Y10T 137/86718	...	Dividing into parallel flow paths with recombining
Y10T 137/86726	....	Valve with bypass connections
Y10T 137/86734	....	With metering feature
Y10T 137/86743	....	Rotary
Y10T 137/86751	.....	Plug
Y10T 137/86759	....	Reciprocating
Y10T 137/86767	.....	Spool
Y10T 137/86775	.....	With internal passage
Y10T 137/86783	.....	Unequal heads
Y10T 137/86791	.....	Piston
Y10T 137/86799	.....	With internal flow passage
Y10T 137/86807	.....	Sequential opening or closing of serial ports in single flow line
Y10T 137/86815	...	Multiple inlet with single outlet
Y10T 137/86823	....	Rotary valve
Y10T 137/86831	...	Selective opening of plural ports
Y10T 137/86839	...	Four port reversing valves
Y10T 137/86847	...	Pivoted valve unit
Y10T 137/86855	....	Gate
Y10T 137/86863	...	Rotary valve unit
Y10T 137/86871	....	Plug
Y10T 137/86879	...	Reciprocating valve unit
Y10T 137/86887	....	Combined disk or plug and gate or piston
Y10T 137/86895	....	Plural disk or plug
Y10T 137/86903	..	Plural petcocks
Y10T 137/86911	..	Sequential distributor or collector type
Y10T 137/86919	..	Sequentially closing and opening alternately seating flow controllers
Y10T 137/86928	..	Sequentially progressive opening or closing of plural valves
Y10T 137/86936	...	Pressure equalizing or auxiliary shunt flow
Y10T 137/86944	....	One valve seats against other valve [e.g., concentric valves]
Y10T 137/86952	.....	Locomotive throttle
Y10T 137/8696	.....	Gate
Y10T 137/86968	.....	With balancing chamber
Y10T 137/86976	.....	First valve moves second valve
Y10T 137/86984	.....	Actuator moves both valves
Y10T 137/86992	...	With subsequent closing of first opened port
Y10T 137/87	....	Simultaneously moved port controllers
Y10T 137/87008	...	Screw-actuated differential valves
Y10T 137/87016	...	Lost motion

Y10T 137/87024	....	Cam determines sequence
Y10T 137/87032	....	Rotary concentric valves
Y10T 137/8704	....	First valve actuates second valve
Y10T 137/87048	..	With preselecting means for plural valve actuator
Y10T 137/87056	..	With selective motion for plural valve actuator
Y10T 137/87064	...	Oppositely movable cam surfaces
Y10T 137/87072	...	Rotation about either of two pivotal axes
Y10T 137/8708	...	Rotation of actuator arm about its pivot and its axis
Y10T 137/87088	...	Reciprocation along and rotation about same axis
Y10T 137/87096	..	Valves with separate, correlated, actuators
Y10T 137/87105	...	Correlated across separable flow path joint
Y10T 137/87113	...	Interlocked
Y10T 137/87121	...	Coaxial stems
Y10T 137/87129	....	Rotary
Y10T 137/87137	.....	And reciprocating
Y10T 137/87145	.....	Concentric, central valve removable
Y10T 137/87153	..	Plural noncommunicating flow paths
Y10T 137/87161	...	With common valve operator
Y10T 137/87169	..	Supply and exhaust
Y10T 137/87177	...	With bypass
Y10T 137/87185	....	Controlled by supply or exhaust valve
Y10T 137/87193	...	Pilot-actuated
Y10T 137/87201	....	Common to plural valve motor chambers
Y10T 137/87209	....	Electric
Y10T 137/87217	...	Motor
Y10T 137/87225	....	Fluid motor
Y10T 137/87233	...	Biased exhaust valve
Y10T 137/87241	....	Biased closed
Y10T 137/87249	..	Multiple inlet with multiple outlet
Y10T 137/87257	..	Hydraulic brake line [e.g., hill holders]
Y10T 137/87265	..	Dividing into parallel flow paths with recombining
Y10T 137/87273	...	With fluid coupling [e.g., railway car hose coupling, truck-trailer oil system coupling, etc.]
Y10T 137/87281	...	System having plural inlets
Y10T 137/8729	....	Having digital flow controller
Y10T 137/87298	...	Having digital flow controller
Y10T 137/87306	....	Having plural branches under common control for separate valve actuators
Y10T 137/87314	.....	Electromagnetic or electric control [e.g., digital control, bistable electro control, etc.]
Y10T 137/87322	...	With multi way valve having serial valve in at least one branch

Y10T 137/8733	...	Fluid pressure regulator in at least one branch
Y10T 137/87338	...	Flow passage with bypass
Y10T 137/87346	....	Including mixing feature
Y10T 137/87354	....	Including flowmeter
Y10T 137/87362	....	Including cleaning, treating, or heat transfer feature
Y10T 137/8737	.....	Water treatment feature
Y10T 137/87378	...	Second valve assembly carried by first valve head
Y10T 137/87386	....	With rotary plug having variable restrictor
Y10T 137/87394	....	Carried valve is direct response valve [e.g., check valve, etc.]
Y10T 137/87402	...	With foam controlling means [e.g., beer, soda faucets]
Y10T 137/8741	...	With common operator
Y10T 137/87418	....	Balanced valve
Y10T 137/87426	....	Single resilient member actuates or forms plural passages
Y10T 137/87434	....	Valves deform to close passage
Y10T 137/87442	....	Rotary valve
Y10T 137/8745	.....	Including rigid plate with flexible or resilient seal
Y10T 137/87458	.....	Axes of rotation of valves intersect at point
Y10T 137/87467	.....	Axes of rotation parallel
Y10T 137/87475	.....	Adjacent plate valves always parallel
Y10T 137/87483	.....	Adjacent plate valves counter rotate
Y10T 137/87491	....	Mechanical movement between actuator and non-rotary valve
Y10T 137/87499	...	Fluid actuated or retarded
Y10T 137/87507	...	Electrical actuator
Y10T 137/87515	...	Mechanical movement between actuator and valve
Y10T 137/87523	...	Rotary valve
Y10T 137/87531	....	Butterfly valve
Y10T 137/87539	...	Having guide or restrictor
Y10T 137/87547	....	Manually variable
Y10T 137/87555	...	Having direct response valve [e.g., check valve, etc.]
Y10T 137/87563	....	With reverse flow direction
Y10T 137/87571	..	Multiple inlet with single outlet
Y10T 137/87579	...	Faucet attachment
Y10T 137/87587	...	Combining by aspiration
Y10T 137/87595	....	Combining of three or more diverse fluids
Y10T 137/87603	....	Plural motivating fluid jets
Y10T 137/87611	....	Flow control by varying position of a fluid inlet relative to entrainment chamber
Y10T 137/87619	....	With selectively operated flow control means in inlet
Y10T 137/87627	.....	Flow control means is located in aspirated fluid inlet

Y10T 137/87635	.....	Single actuator operates flow control means located in both motivating fluid and aspirated fluid inlets
Y10T 137/87643	....	With condition responsive valve
Y10T 137/87652	...	With means to promote mixing or combining of plural fluids
Y10T 137/8766	....	With selectively operated flow control means
Y10T 137/87668	.....	Single actuator operates plural flow control means
Y10T 137/87676	...	With flow control
Y10T 137/87684	....	Valve in each inlet
Y10T 137/87692	.....	With common valve operator
Y10T 137/877	..	With flow control means for branched passages
Y10T 137/87708	...	With common valve operator
Y10T 137/87716	....	For valve having a flexible diaphragm valving member
Y10T 137/87724	....	For valve having a ball head
Y10T 137/87732	....	With gearing
Y10T 137/8774	....	Threaded actuator
Y10T 137/87748	....	Pivoted or rotary motion converted to reciprocating valve head motion
Y10T 137/87756	.....	Spring biased
Y10T 137/87764	....	Having fluid actuator
Y10T 137/87772	....	With electrical actuation
Y10T 137/8778	....	Spring biased
Y10T 137/87788	...	With valve or movable deflector at junction
Y10T 137/87796	....	Movable deflector spout in lateral port
Y10T 137/87804	....	Valve or deflector is tubular passageway
Y10T 137/87812	....	Pivoted valve or deflector
Y10T 137/8782	....	Rotary valve or deflector
Y10T 137/87829	...	Biased valve
Y10T 137/87837	....	Spring bias
Y10T 137/87845	.....	For valve having a ball head
Y10T 137/87853	.....	With threaded actuator
Y10T 137/87861	.....	Spring coaxial with valve
Y10T 137/87869	.....	Biased open
Y10T 137/87877	...	Single inlet with multiple distinctly valved outlets
Y10T 137/87885	...	Sectional block structure
Y10T 137/87893	...	With fluid actuator
Y10T 137/87901	...	With threaded actuator
Y10T 137/87909	...	Containing rotary valve
Y10T 137/87917	..	Flow path with serial valves and/or closures
Y10T 137/87925	...	Separable flow path section, valve or closure in each
Y10T 137/87933	....	Common joint and valve seat faces, or sections joined by closing members
Y10T 137/87941	....	Each valve and/or closure operated by coupling motion



Y10T 137/87949	.....	Linear motion of flow path sections operates both
Y10T 137/87957	.....	Valves actuate each other
Y10T 137/87965	....	Valve- or closure-operated by coupling motion
Y10T 137/87973	....	Coupling interlocked with valve, or closure or actuator
Y10T 137/87981	...	Common actuator
Y10T 137/87989	....	Delivery cock with terminal valve
Y10T 137/87997	....	Alternately seating
Y10T 137/88005	.....	Biased valve
Y10T 137/88014	....	Opposed screw
Y10T 137/88022	...	One valve head provides seat for other head
Y10T 137/8803	....	Also carries head of other valve
Y10T 137/88038	...	One valve head carries other valve head
Y10T 137/88046	...	Biased valve with external operator
Y10T 137/88054	...	Direct response normally closed valve limits direction of flow
Y10T 137/88062	...	Coaxial oppositely directed seats
Y10T 137/8807	..	Articulated or swinging flow conduit
Y10T 137/88078	...	Actuates valve
Y10T 137/88086	....	Plural motions of valve
Y10T 137/88094	....	Reciprocating valve
Y10T 137/88102	....	Rotary valve
Y10T 137/8811	.	Frangible
Y10T 137/9029	.	With coupling
Y10T 137/9138	..	Flexible
Y10T 137/9247	.	With closure
Y10T 137/9464	.	Faucets and spouts
Y10T 137/9682	.	Miscellaneous

### **Former US Class 152 Series**

<b>Y10T 152/00</b>	<b>Resilient tires and wheels</b>
Y10T 152/10	. Tires, resilient
Y10T 152/10009	.. Emergency
Y10T 152/10018	.. with splash guards
Y10T 152/10027	.. with wear indicating feature
Y10T 152/10036	.. Cushion and pneumatic combined
Y10T 152/10045	... Metallic spring cushion
Y10T 152/10054	... Enclosed cushion
Y10T 152/10063	... Superimposed
Y10T 152/10072	.... Plungers
Y10T 152/10081	.... Edge-secured cushion

Y10T 152/1009	....	Guide flanges
Y10T 152/10099	.....	Radial stops
Y10T 152/10108	.....	Bolts or studs
Y10T 152/10117	...	Integral
Y10T 152/10126	....	with removable inner tube
Y10T 152/10135	..	Armored
Y10T 152/10144	...	Single tube tires internal
Y10T 152/10153	....	Metal
Y10T 152/10162	.....	Plates
Y10T 152/10171	...	Casing construction
Y10T 152/1018	....	Embedded
Y10T 152/10189	.....	Metal
Y10T 152/10198	.....	Plates
Y10T 152/10207	.....	Annular
Y10T 152/10216	.....	Linked mat
Y10T 152/10225	.....	Woven
Y10T 152/10234	...	Interliners
Y10T 152/10243	....	Cotton, fabric, or rubber
Y10T 152/10252	....	Metal
Y10T 152/10261	.....	Scale armor
Y10T 152/1027	.....	Annular
Y10T 152/10279	..	Cushion
Y10T 152/10288	...	Sectional
Y10T 152/10297	....	Annular
Y10T 152/10306	.....	Superimposed
Y10T 152/10315	....	Superimposed
Y10T 152/10324	....	with apertured external binders
Y10T 152/10333	....	Radial bolt secured
Y10T 152/10342	....	Abutting sections
Y10T 152/10351	.....	with annular internal binders
Y10T 152/1036	.....	Interfitting
Y10T 152/10369	.....	Indented at joints
Y10T 152/10378	...	Casing enclosed core
Y10T 152/10387	....	Separate core
Y10T 152/10396	.....	Removable
Y10T 152/10405	.....	Sponge rubber
Y10T 152/10414	.....	with core compression
Y10T 152/10423	.....	Superimposed rings
Y10T 152/10432	.....	Sectional transversely
Y10T 152/10441	.....	Balls

Y10T 152/1045	.....	Integral structure
Y10T 152/10459	.....	Recessed
Y10T 152/10468	.....	Chambered
Y10T 152/10477	.....	Perforated
Y10T 152/10486	.....	Chambered
Y10T 152/10495	..	Pneumatic tire or inner tube
Y10T 152/10504	...	Asymmetric tire
Y10T 152/10513	...	Tire reinforcement material characterized by short length fibers or the like
Y10T 152/10522	...	Multiple chamber
Y10T 152/10531	....	Cylinder and piston
Y10T 152/1054	.....	Mutually free walls
Y10T 152/10549	.....	Interfitting
Y10T 152/10558	.....	Balls
Y10T 152/10567	.....	with simultaneous inflating means
Y10T 152/10576	....	Annular chambers
Y10T 152/10585	.....	with simultaneous inflating means
Y10T 152/10594	.....	Mutually free walls
Y10T 152/10603	.....	with simultaneous inflating means
Y10T 152/10612	.....	with simultaneous inflating means
Y10T 152/10621	...	Sectional casings
Y10T 152/1063	....	Circumferential
Y10T 152/10639	.....	Rigid inner sections
Y10T 152/10648	...	with means restricting relative movement between tire and inner tube [e.g., anti-creep feature, etc.]
Y10T 152/10657	...	with means to protect inner tube from rim
Y10T 152/10666	...	Automatic sealing of punctures [e.g., self-healing, etc.]
Y10T 152/10675	....	Using flowable coating or composition
Y10T 152/10684	.....	On inner surface of tubeless tire
Y10T 152/10693	.....	Sealant in plural layers or plural pockets
Y10T 152/10702	.....	within or part of construction of inflating inner tube
Y10T 152/10711	.....	Sealant in plural layers or plural pockets
Y10T 152/1072	....	by compression
Y10T 152/10729	....	with reinflating means
Y10T 152/10738	...	with means to protect tire from rim
Y10T 152/10747	...	Means other than rim closing the tire opening
Y10T 152/10756	....	Positive casing closure
Y10T 152/10765	...	Characterized by belt or breaker structure
Y10T 152/10774	....	Consisting of only one ply
Y10T 152/10783	....	Reinforcing plies made up from wound narrow ribbons

Y10T 152/10792	....	Structure where each bias angle reinforcing cord ply has no opposingly angled ply
Y10T 152/10801	....	Structure made up of two or more sets of plies wherein the reinforcing cords in one set lie in a different angular position relative to those in other sets
Y10T 152/1081	....	Breaker or belt characterized by the chemical composition or physical properties of elastomer or the like
Y10T 152/10819	...	Characterized by the structure of the bead portion of the tire
Y10T 152/10828	....	Chafer or sealing strips
Y10T 152/10837	....	Bead characterized by the radial extent of apex, flipper or chafer into tire sidewall
Y10T 152/10846	....	Bead characterized by the chemical composition and or physical properties of elastomers or the like
Y10T 152/10855	...	Characterized by the carcass, carcass material, or physical arrangement of the carcass materials
Y10T 152/10864	....	Sidewall stiffening or reinforcing means other than main carcass plies or foldups thereof about beads
Y10T 152/10873	....	with two or more differing cord materials
Y10T 152/10882	..	Patches
Y10T 152/10891	...	Mechanically secured
Y10T 152/109	....	Inside and outside, bolt connected
Y10T 152/10909	...	with plugs
Y10T 152/10918	...	Bandages
Y10T 152/10927	....	Mechanically secured
Y10T 152/10936	.....	to felly or rim

#### **Former US Class 156 Series**

<b>Y10T 156/00</b>	<b>Adhesive bonding and miscellaneous chemical manufacture</b>	
Y10T 156/10	.	Methods of surface bonding and/or assembly therefor
Y10T 156/1002	..	with permanent bending or reshaping or surface deformation of self sustaining lamina
Y10T 156/1003	...	by separating laminae between spaced secured areas [e.g., honeycomb expanding]
Y10T 156/1005	...	by inward collapsing of portion of hollow body
Y10T 156/1007	...	Running or continuous length work
Y10T 156/1008	....	Longitudinal bending
Y10T 156/101	.....	Prior to or during assembly with additional lamina
Y10T 156/1011	.....	Overedge bending or overedge folding
Y10T 156/1013	.....	and edge-joining of one piece blank to form tube
Y10T 156/1015	....	Folding
Y10T 156/1016	....	Transverse corrugating
Y10T 156/1018	.....	Subsequent to assembly of laminae
Y10T 156/102	.....	with deformation or cutting of corrugated lamina

Y10T 156/1021	.....	Treating material of corrugated lamina or dry adhesive thereon to render tacky
Y10T 156/1023	....	Surface deformation only [e.g., embossing]
Y10T 156/1025	...	to form undulated to corrugated sheet and securing to base with parts of shaped areas out of contact
Y10T 156/1026	...	with slitting or removal of material at reshaping area prior to reshaping
Y10T 156/1028	...	by bending, drawing or stretch forming sheet to assume shape of configured lamina while in contact therewith
Y10T 156/103	....	Encasing or enveloping the configured lamina
Y10T 156/1031	....	with preshaping of lamina
Y10T 156/1033	....	Flexible sheet to cylinder lamina
Y10T 156/1034	...	Overedge bending of lamina about edges of sheetlike base
Y10T 156/1036	...	Bending of one piece blank and joining edges to form article
Y10T 156/1038	....	Hollow cylinder article
Y10T 156/1039	...	Surface deformation only of sandwich or lamina [e.g., embossed panels]
Y10T 156/1041	....	Subsequent to lamination
Y10T 156/1043	...	Subsequent to assembly
Y10T 156/1044	....	of parallel stacked sheets only
Y10T 156/1046	.....	Bending of one lamina only
Y10T 156/1048	.....	to form dished or receptacle-like product
Y10T 156/1049	....	Folding only
Y10T 156/1051	...	by folding
Y10T 156/1052	..	with cutting, punching, tearing or severing
Y10T 156/1054	...	and simultaneously bonding [e.g., cut-seaming]
Y10T 156/1056	...	Perforating lamina
Y10T 156/1057	....	Subsequent to assembly of laminae
Y10T 156/1059	...	Splitting sheet lamina in plane intermediate of faces
Y10T 156/1061	...	Spiral peeling
Y10T 156/1062	...	Prior to assembly
Y10T 156/1064	....	Partial cutting [e.g., grooving or incising]
Y10T 156/1066	....	Cutting to shape joining edge surfaces only
Y10T 156/1067	....	Continuous longitudinal slitting
Y10T 156/1069	.....	Bonding face to face of laminae cut from single sheet
Y10T 156/107	....	Punching and bonding pressure application by punch
Y10T 156/1072	.....	Closure cap liner applying type
Y10T 156/1074	....	Separate cutting of separate sheets or webs
Y10T 156/1075	....	of plural laminae from single stock and assembling to each other or to additional lamina
Y10T 156/1077	.....	Applying plural cut laminae to single face of additional lamina
Y10T 156/1079	.....	Joining of cut laminae end-to-end
Y10T 156/108	...	Flash, trim or excess removal

Y10T 156/1082	...	Partial cutting bonded sandwich [e.g., grooving or incising]
Y10T 156/1084	...	of continuous or running length bonded web
Y10T 156/1085	....	One web only
Y10T 156/1087	....	Continuous longitudinal slitting
Y10T 156/1089	..	of discrete laminae to single face of additional lamina
Y10T 156/109	...	Embedding of laminae within face of additional laminae
Y10T 156/1092	...	All laminae planar and face to face
Y10T 156/1093	....	with covering of discrete laminae with additional lamina
Y10T 156/1095	.....	Opposed laminae are running length webs
Y10T 156/1097	....	Lamina is running length web
Y10T 156/1098	.....	Feeding of discrete laminae from separate sources
Y10T 156/11	.	Methods of delaminating, per se; i.e., separating at bonding face
Y10T 156/1105	..	Delaminating process responsive to feed or shape at delamination
Y10T 156/1111	..	Using solvent during delaminating [e.g., water dissolving adhesive at bonding face during delamination, etc.]
Y10T 156/1116	...	Using specified organic delamination solvent
Y10T 156/1121	..	Using vibration during delaminating
Y10T 156/1126	..	Using direct fluid current against work during delaminating
Y10T 156/1132	...	Using vacuum directly against work during delaminating
Y10T 156/1137	...	Using air blast directly against work during delaminating
Y10T 156/1142	..	Changing dimension during delaminating [e.g., crushing, expanding, warping, etc.]
Y10T 156/1147	...	Using shrinking or swelling agent during delaminating
Y10T 156/1153	..	Temperature change for delamination [e.g., heating during delaminating, etc.]
Y10T 156/1158	...	Electromagnetic radiation applied to work for delamination [e.g., microwave, uv, ir, etc.]
Y10T 156/1163	...	Sintering for delamination
Y10T 156/1168	..	Gripping and pulling work apart during delaminating
Y10T 156/1174	...	Using roller for delamination [e.g., roller pairs operating at differing speeds or directions, etc.]
Y10T 156/1179	...	with poking during delaminating [e.g., jabbing, etc.]
Y10T 156/1184	....	Piercing layer during delaminating [e.g., cutting, etc.]
Y10T 156/1189	...	with shearing during delaminating
Y10T 156/1195	...	Delaminating from release surface
Y10T 156/12	.	Surface bonding means and/or assembly means with cutting, punching, piercing, severing or tearing
Y10T 156/125	..	Plural severing means each acting on a different work piece
Y10T 156/13	..	Severing followed by associating with part from same source
Y10T 156/1304	..	Means making hole or aperture in part to be laminated
Y10T 156/1309	...	and securing separate part over hole or aperture
Y10T 156/1313	..	Cutting element simultaneously bonds [e.g., cut seaming]
Y10T 156/1317	..	Means feeding plural workpieces to be joined

Y10T 156/1322	...	Severing before bonding or assembling of parts
Y10T 156/1326	....	Severing means or member secured thereto also bonds
Y10T 156/133	....	Delivering cut part to indefinite or running length web
Y10T 156/1335	.....	Cutter also delivers cut piece
Y10T 156/1339	....	Delivering cut part in sequence to serially conveyed articles
Y10T 156/1343	...	Cutting indefinite length web after assembly with discrete article
Y10T 156/1348	..	Work traversing type
Y10T 156/1352	...	with liquid applying means
Y10T 156/1357	....	Slitting and severing
Y10T 156/1361	....	Cutting after bonding
Y10T 156/1365	...	Fixed cutter
Y10T 156/137	..	Stamp from multiple row sheet type
Y10T 156/1374	..	with means projecting fluid against work
Y10T 156/1378	..	Cutter actuated by or secured to bonding element
Y10T 156/1383	...	with liquid applicator
Y10T 156/1387	....	Common actuator for bonding and liquid applying means
Y10T 156/1391	.....	Liquid applied to web before cutting
Y10T 156/1396	.....	Roller applicator
Y10T 156/14	.	Surface bonding means and/or assembly means with shaping, scarifying, or cleaning joining surface only
Y10T 156/15	.	Combined or convertible surface bonding means and/or assembly means
Y10T 156/16	.	Surface bonding means and/or assembly means with bond interfering means [slip sheet, etc. ]
Y10T 156/17	.	Surface bonding means and/or assembly means with work feeding or handling means
Y10T 156/1702	..	For plural parts or plural areas of single part
Y10T 156/1705	...	Lamina transferred to base from adhered flexible web or sheet type carrier
Y10T 156/1707	....	Discrete spaced laminae on adhered carrier
Y10T 156/171	.....	Means serially presenting discrete base articles or separate portions of a single article
Y10T 156/1712	...	Indefinite or running length work
Y10T 156/1715	....	Means joining indefinite length work edge to edge
Y10T 156/1717	.....	Means applying adhesively secured tape to seam
Y10T 156/172	.....	Means applying fluid adhesive to work edge
Y10T 156/1722	....	Means applying fluent adhesive or adhesive activator material between layers
Y10T 156/1724	.....	At spaced areas
Y10T 156/1727	.....	Plural indefinite length or running length workpieces
Y10T 156/1729	.....	Fluid applied to nip between indefinite length webs
Y10T 156/1732	.....	Fluid applied to plural workpieces
Y10T 156/1734	....	Means bringing articles into association with web
Y10T 156/1737	....	Discontinuous, spaced area, and/or patterned pressing

Y10T 156/1739	....	Webs of different width, longitudinally aligned
Y10T 156/1741	....	Progressive continuous bonding press [e.g., roll couples]
Y10T 156/1744	...	Means bringing discrete articles into assembled relationship
Y10T 156/1746	....	Plural lines and/or separate means assembling separate sandwiches
Y10T 156/1749	....	All articles from single source only
Y10T 156/1751	....	At least three articles
Y10T 156/1754	.....	At least two applied side by side to common base
Y10T 156/1756	.....	Plural ranks
Y10T 156/1759	.....	Sheet form common base
Y10T 156/1761	.....	Stacked serially
Y10T 156/1763	....	Magazine stack directly contacting separate work
Y10T 156/1766	.....	Magazine movable to work
Y10T 156/1768	....	Means simultaneously conveying plural articles from a single source and serially presenting them to an assembly station
Y10T 156/1771	.....	Turret or rotary drum-type conveyer
Y10T 156/1773	.....	For flexible sheets
Y10T 156/1776	....	Means separating articles from bulk source
Y10T 156/1778	.....	Stacked sheet source
Y10T 156/178	.....	Rotary or pivoted picker
Y10T 156/1783	.....	Translating picker
Y10T 156/1785	..	Magazine stack directly contacting work
Y10T 156/1788	..	Work traversing type and/or means applying work to wall or static structure
Y10T 156/179	...	with liquid applying means
Y10T 156/1793	...	Grip or clamp for web end
Y10T 156/1795	...	Implement carried web supply
Y10T 156/1798	..	with liquid adhesive or adhesive activator applying means
Y10T 156/18	.	Surface bonding means and/or assembly means with handle or handgrip
Y10T 156/19	.	Delaminating means
Y10T 156/1906	..	Delaminating means responsive to feed or shape at delamination
Y10T 156/1911	..	Heating or cooling delaminating means [e.g., melting means, freezing means, etc.]
Y10T 156/1917	...	Electromagnetic radiation delaminating means [e.g., microwave, uv, ir, etc.]
Y10T 156/1922	..	Vibrating delaminating means
Y10T 156/1928	..	Differential fluid pressure delaminating means
Y10T 156/1933	...	Spraying delaminating means [e.g., atomizer, etc.]
Y10T 156/1939	....	Air blasting delaminating means]
Y10T 156/1944	...	Vacuum delaminating means [e.g., vacuum chamber, etc.]
Y10T 156/195	..	Delaminating roller means
Y10T 156/1956	...	Roller pair delaminating means
Y10T 156/1961	..	Severing delaminating means [e.g., chisel, etc.]
Y10T 156/1967	...	Cutting delaminating means



Y10T 156/1972	....	Shearing delaminating means
Y10T 156/1978	..	Delaminating bending means
Y10T 156/1983	...	Poking delaminating means
Y10T 156/1989	...	Corner edge bending delaminating means
Y10T 156/1994	..	Means for delaminating from release surface

#### **Former US Class 225 series**

<b>Y10T 225/00</b>	<b>Severing by tearing or breaking</b>	
Y10T 225/10	.	Methods
Y10T 225/12	..	With preliminary weakening
Y10T 225/14	..	Longitudinally of direction of feed
Y10T 225/16	..	Transversely of continuously fed work
Y10T 225/18	...	Progressively to or from one side edge
Y10T 225/20	.	Severing by manually forcing against fixed edge
Y10T 225/201	..	With other type severing means
Y10T 225/202	..	With timer-released means for preventing work feed-out
Y10T 225/203	..	Including means to effect bias cut
Y10T 225/205	..	With feed-out of predetermined length from work supply
Y10T 225/206	...	Including means to select or adjust feed-out length
Y10T 225/207	...	Including feed-out stop for manually pulled work
Y10T 225/208	....	Stop abuts work edge or work-mounted article
Y10T 225/209	....	With feed-out of lead-end to aid initial grasping
Y10T 225/21	...	Merely to provide lead-end for manual grasping
Y10T 225/211	...	Manually operated feed-out mechanism
Y10T 225/213	..	With indicator
Y10T 225/214	...	Indicates length to be severed from supply
Y10T 225/215	..	With blade-edge guard
Y10T 225/216	...	Movable
Y10T 225/217	..	Work stripped from blade by relatively movable means
Y10T 225/218	...	Including movable blade
Y10T 225/22	..	With means to move work toward or into severing position
Y10T 225/221	...	With means to strip adhering work therefrom
Y10T 225/222	..	With work-immobilizing pasteur surface
Y10T 225/223	...	With finger-access opening
Y10T 225/224	..	With means to hold pad or stack of individual sheets
Y10T 225/225	...	With means to separate severed end of stub from supply package
Y10T 225/226	...	With changeable blade-edge contour
Y10T 225/228	....	Slidable notcher
Y10T 225/229	...	Blade slidable along plane of work surface

Y10T 225/23	..	Zigzag-folded supply package
Y10T 225/231	..	Separate blades usable alternatively or sequentially on same work supply
Y10T 225/232	..	Plural supply sources
Y10T 225/233	...	On turret-type support with single blade
Y10T 225/234	...	With movable blade registrable selectively with each source
Y10T 225/236	...	With plural blades
Y10T 225/237	....	With individual blade for each source
Y10T 225/238	..	With housing for work supply
Y10T 225/239	...	Liquid-, gas-, or light-tight work passage
Y10T 225/24	...	With inspection window or transparent panel
Y10T 225/241	...	With mounting means for housing
Y10T 225/243	...	Blade on pivoted closure for housing
Y10T 225/244	...	Sectional telescoping housing
Y10T 225/245	....	Including removable cap or sleeve enclosure for spooled work supply
Y10T 225/246	...	Including special support for wound supply package
Y10T 225/247	....	Bearing or trunnions to engage package core
Y10T 225/248	...	Single blank container
Y10T 225/249	....	Blade unitary with container
Y10T 225/251	....	With closure fastener
Y10T 225/252	...	With brake or tensioner
Y10T 225/253	....	Restricted or restrictable work outlet
Y10T 225/254	...	With finger-access opening to facilitate work feed-out
Y10T 225/255	...	With internal guide
Y10T 225/256	..	Blade carrier bodily and slidably supported on running length work
Y10T 225/257	..	Blade mounted on hand-held wound package
Y10T 225/259	...	With lead-end stripper for tacky adhesive work
Y10T 225/26	...	By resiliently embracing outer circumference of package
Y10T 225/261	...	Work supply nonrotatably wound on flanged spool
Y10T 225/262	....	Circumferentially movable blade radially retained by beaded or grooved flanges
Y10T 225/263	....	Blade carrier supports hollow spool for rotation
Y10T 225/264	....	Flange edge notched to provide or coact with cutter
Y10T 225/266	....	With clamp for lead-end of strand-type work
Y10T 225/267	.....	Strand clamped against flange
Y10T 225/268	...	By resiliently engaging package ends or interior of core
Y10T 225/269	...	Blade carrier supports package for rotation
Y10T 225/27	..	Movable blade continually biased toward wound web supply package
Y10T 225/271	...	Including temporary bias-disabling means
Y10T 225/272	...	Including stripper to separate lead-end from package
Y10T 225/274	...	Weight of bodily movable package contributes to blade-biasing force

Y10T 225/275	...	Blade slidably guided
Y10T 225/276	..	Blade movable to severing position by moving work
Y10T 225/277	...	With simultaneous application of brake or clamp
Y10T 225/278	....	Applied to running length work
Y10T 225/279	.....	Opposed movable jaws
Y10T 225/28	..	Wound package bodily biased toward fixed blade
Y10T 225/282	..	With fixed blade and support for wound package
Y10T 225/283	...	Body- or belt-attached
Y10T 225/284	...	With brake applied to supply package
Y10T 225/285	...	With guide spaced from blade edge to provide lead-end therebetween
Y10T 225/286	..	With work-abutment stop
Y10T 225/287	..	With brake or clamp
Y10T 225/289	...	Thread cutter and clamp attachment for sewing machine presser foot
Y10T 225/29	...	Applied to running length work
Y10T 225/291	....	Spaced from blade edge to provide lead-end therebetween
Y10T 225/292	.....	Blade manually movable to expose lead-end
Y10T 225/293	...	Manually applied, spring returned
Y10T 225/294	..	With guide for running length work
Y10T 225/295	..	Blade manually movable to or from severing position
Y10T 225/297	..	With means to facilitate lead-end grasping
Y10T 225/298	..	Blades or severing devices
Y10T 225/299	...	Adjustable blade-edge contour
Y10T 225/30	.	Breaking or tearing apparatus
Y10T 225/304	..	Including means to apply thermal shock to work
Y10T 225/307	..	Combined with preliminary weakener or with nonbreaking cutter
Y10T 225/314	...	Successively actuated sharp and dull tools
Y10T 225/321	...	Preliminary weakener
Y10T 225/325	....	With means to apply moment of force to weakened work
Y10T 225/329	..	Plural breakers
Y10T 225/336	..	Conveyer diverter for moving work
Y10T 225/343	...	Plural divergent work paths
Y10T 225/35	..	Work-parting pullers [burststers]
Y10T 225/357	...	Relatively movable clamps
Y10T 225/364	..	Axial twisters
Y10T 225/371	..	Movable breaking tool
Y10T 225/379	...	Breaking tool intermediate spaced work supports
Y10T 225/386	....	Clamping supports
Y10T 225/393	..	Web restrainer

**Former US Class 279 Series****Y10T 279/00****Chucks or sockets**

- Y10T 279/10 . Expanding
- Y10T 279/1004 .. Collet type
- Y10T 279/1008 ... Fixed jaws and moving cam
- Y10T 279/1012 ... Fixed cam and moving jaws
- Y10T 279/1016 .. Jaws mounted on flexible member; i.e., diaphragm
- Y10T 279/1021 .. Fluid-pressure actuator
- Y10T 279/1024 ... Directly expanding jaws
- Y10T 279/1029 .... Jaw is expansible chamber; i.e., bladder type
- Y10T 279/1033 ... Expanding jaws via mechanical connection
- Y10T 279/1037 .. Axially moving actuator
- Y10T 279/1041 ... Wedge
- Y10T 279/1045 .... Internal cone
- Y10T 279/1049 .... with jaw positively interlocked with wedge; e.g., dovetail or T-slot
- Y10T 279/1054 .... with resilient means contacting nonresilient jaw
- Y10T 279/1058 ..... Constricting band, annulus, or clip
- Y10T 279/1062 ... Toggle
- Y10T 279/1066 ... Axially compressible element expands radially
- Y10T 279/1071 ... Lever
- Y10T 279/1074 .. Rotary actuator
- Y10T 279/1079 ... Clutch or self-actuating type
- Y10T 279/1083 .. Jaw structure
- Y10T 279/1087 ... Resilient
- Y10T 279/1091 ... Ball or roller
- Y10T 279/1095 ... Pivoted
- Y10T 279/11 . Vacuum
- Y10T 279/12 . with fluid-pressure actuator
- Y10T 279/1208 .. with measuring, indicating or control means
- Y10T 279/1216 .. Jaw is expansible chamber; i.e., bladder type
- Y10T 279/1224 .. Pneumatic type
- Y10T 279/1233 .. Jaws mounted on flexible member; i.e., diaphragm
- Y10T 279/1241 .. Socket type
- Y10T 279/1249 ... Collet
- Y10T 279/1258 .... Fixed cam and moving jaws
- Y10T 279/1266 .... Moving cam and fixed jaws
- Y10T 279/1274 .. Radially reciprocating jaws
- Y10T 279/1283 ... Fluid pressure directly moves jaws

Y10T 279/1291	...	Fluid pressure moves jaws via mechanical connection
Y10T 279/13	.	Angularly adjustable or indexing
Y10T 279/14	.	Eccentric
Y10T 279/15	.	Threaded grip
Y10T 279/16	.	Longitudinal screw clamp
Y10T 279/17	.	Socket type
Y10T 279/17008	..	Multiple alternative
Y10T 279/17017	..	Self-centering of floating
Y10T 279/17025	...	Radially reciprocating jaws
Y10T 279/17034	...	Transverse holder and setscrew
Y10T 279/17042	..	Lost motion
Y10T 279/17051	...	Swinging external yoke or detent
Y10T 279/17059	....	Rotary socket
Y10T 279/17068	...	Rotary socket
Y10T 279/17076	...	Spreading elements
Y10T 279/17085	...	Key retainer
Y10T 279/17094	...	Sleeve type retainer
Y10T 279/17102	....	Sleeve in socket
Y10T 279/17111	..	Fluid-conduit drill holding
Y10T 279/17119	..	Feed type
Y10T 279/17128	..	Self-grasping
Y10T 279/17136	...	Yielding grasping jaws
Y10T 279/17145	....	Ball or roller
Y10T 279/17153	....	Spring jaws
Y10T 279/17162	...	Yielding detent
Y10T 279/17171	...	One-way-clutch type
Y10T 279/17179	....	Wedge
Y10T 279/17188	....	Side detent
Y10T 279/17196	.....	Ball or roller
Y10T 279/17205	..	Conical clamp threaded in socket
Y10T 279/17213	..	Transversely oscillating jaws
Y10T 279/17222	...	Screw actuated
Y10T 279/17231	..	Pivoted jaws
Y10T 279/17239	...	Moving-cam actuator
Y10T 279/17247	....	Threaded cam sleeve
Y10T 279/17256	....	Reciprocating cam sleeve
Y10T 279/17264	...	Fixed cam and moving jaws
Y10T 279/17273	....	Axial screw actuator
Y10T 279/17282	....	Threaded-sleeve actuator
Y10T 279/17291	..	Resilient split socket

Y10T 279/17299	...	Threaded cam sleeve
Y10T 279/17307	...	Reciprocating cam sleeve
Y10T 279/17316	...	Unitary
Y10T 279/17324	....	Split at one end only
Y10T 279/17333	.....	Transverse screw actuator
Y10T 279/17341	.....	Cam actuator
Y10T 279/17351	....	Split end to end
Y10T 279/17358	....	with jaw pads or insert
Y10T 279/17367	...	Nonresilient member biased by a resilient member
Y10T 279/17376	...	Resilient member reinforced by another resilient member
Y10T 279/17384	..	with means to exclude contaminants; e.g., seal, shield
Y10T 279/17393	..	One movable side
Y10T 279/17401	...	Sleeved
Y10T 279/17411	..	Spring biased jaws
Y10T 279/17418	...	Unitary
Y10T 279/17427	....	Split at one end only
Y10T 279/17435	....	Split at both ends
Y10T 279/17444	....	Split end to end
Y10T 279/17452	....	with jaw pads or insert
Y10T 279/17461	...	Nonresilient member biased by a resilient member
Y10T 279/17471	...	Resilient member reinforced by another resilient member
Y10T 279/17478	...	with means to exclude contaminants; e.g., seal, shield
Y10T 279/17487	...	Moving-cam actuator
Y10T 279/17495	....	Threaded sleeve and wedge
Y10T 279/17504	....	Threaded cam sleeve
Y10T 279/17512	.....	Loose jaws
Y10T 279/17521	....	Reciprocating cam sleeve
Y10T 279/17529	...	Fixed cam and moving jaws
Y10T 279/17538	....	Threaded-sleeve actuator
Y10T 279/17547	....	Axial screw actuator
Y10T 279/17555	...	Loose jaws
Y10T 279/17564	..	Loose jaws
Y10T 279/17572	...	Moving-cam actuator
Y10T 279/17581	....	Threaded cam sleeve
Y10T 279/17589	....	Reciprocating cam sleeve
Y10T 279/17598	...	Fixed cam and moving jaws
Y10T 279/17606	....	Threaded sleeve and body
Y10T 279/17615	..	Obliquely guided reciprocating jaws
Y10T 279/17623	...	Threaded sleeve and jaw
Y10T 279/17632	....	Conical sleeve

Y10T 279/17641	...	Threaded central cone and jaw
Y10T 279/17649	...	Threaded sleeve and body
Y10T 279/17658	...	Reciprocating jaw advancing sleeve
Y10T 279/17666	..	Radially reciprocating jaws
Y10T 279/17675	...	Transverse-screw actuated
Y10T 279/17683	....	Interlaced jaws
Y10T 279/17692	...	Moving-cam actuator
Y10T 279/17701	....	Threaded cam sleeve
Y10T 279/17709	....	Threaded sleeve and wedge
Y10T 279/17717	....	Rotary eccentric-cam sleeve
Y10T 279/17726	.....	Roller and rocking jaw
Y10T 279/17735	.....	Worm actuated
Y10T 279/17743	....	Reciprocating cam sleeve
Y10T 279/17752	.....	Ball or roller jaws
Y10T 279/17761	..	Side detent
Y10T 279/17769	...	Pivoted or rotary
Y10T 279/17777	....	Sleeved
Y10T 279/17786	...	Spring
Y10T 279/17794	....	Sleeved
Y10T 279/17803	...	Rotary cam sleeve
Y10T 279/17811	...	Reciprocating sleeve
Y10T 279/17821	...	Set screw
Y10T 279/17829	...	U-clamp
Y10T 279/17837	...	Plural bolt
Y10T 279/17846	...	Single transverse bolt
Y10T 279/17854	...	Longitudinal clamping wedge
Y10T 279/17863	..	Shouldered-tang holding
Y10T 279/17871	...	Cap
Y10T 279/17881	....	Screw
Y10T 279/17888	..	Tang offset within socket
Y10T 279/17897	..	Tang offset without socket
Y10T 279/17905	..	Bottomless
Y10T 279/17914	...	Friction grip
Y10T 279/17923	..	Transverse pin
Y10T 279/17931	..	Screw threaded
Y10T 279/17941	...	Nut lock
Y10T 279/17948	....	Threaded sleeve
Y10T 279/17957	..	Friction grip
Y10T 279/17965	...	Drill type
Y10T 279/17974	..	Barbed or pronged tang

Y10T 279/17982	..	Molded or cast-in tang
Y10T 279/17991	..	Adjustable length or size
Y10T 279/18	.	Pivoted jaw
Y10T 279/182	..	Cam-sleeve actuated
Y10T 279/185	..	Internal-cone actuated
Y10T 279/188	..	Toggle actuated
Y10T 279/19	.	Radially reciprocating jaws
Y10T 279/1906	..	with indicator
Y10T 279/1913	..	Transverse-screw actuated
Y10T 279/1921	...	Annular rack
Y10T 279/1926	..	Spiral cam or scroll actuated
Y10T 279/1933	...	Worm
Y10T 279/1941	...	Bevel pinion
Y10T 279/1946	..	Rack-and-pinion actuated
Y10T 279/1953	..	Toggle actuated
Y10T 279/1961	..	Lever actuated
Y10T 279/1966	...	Internal cone
Y10T 279/1973	..	Wedge actuated
Y10T 279/1981	..	External-cone actuated
Y10T 279/1986	..	Jaws
Y10T 279/1993	...	with means to facilitate jaw removal
Y10T 279/20	.	with safety feature
Y10T 279/21	.	with measuring, indicating or control means
Y10T 279/22	.	Double acting
Y10T 279/23	.	with magnetic or electrostatic means
Y10T 279/24	.	by centrifugal force
Y10T 279/243	..	to counterbalance jaws
Y10T 279/247	..	to grip tool or workpiece
Y10T 279/25	.	Compensation for eccentricity
Y10T 279/26	.	with centering means
Y10T 279/27	.	Separate chuck-actuating power source
Y10T 279/275	..	Self-contained
Y10T 279/28	.	for gear or spline molding
Y10T 279/29	.	More than one set of gripping means
Y10T 279/30	.	Torsion mandrel
Y10T 279/31	.	Jaws mounted on flexible member; i.e. , diaphragm
Y10T 279/32	.	Means to prevent jaw loosening
Y10T 279/33	.	Member applies axial force component
Y10T 279/34	.	Accessory or component
Y10T 279/3406	..	Adapter



Y10T 279/3412	...	Drive conversion
Y10T 279/3418	...	for particular tool or workpiece
Y10T 279/3425	..	Sliding cam chuck actuator
Y10T 279/3431	..	Chuck key
Y10T 279/3437	...	Safety feature; e.g., ejector, interlock
Y10T 279/3443	...	Key holding or attaching means
Y10T 279/3451	...	Nonseparable or built-in
Y10T 279/3456	..	Padded or cushioned jaw
Y10T 279/3462	..	Jaw insert
Y10T 279/3468	...	Machinable jaw
Y10T 279/3475	....	Locking or positioning means
Y10T 279/3481	..	Tool or workpiece ejector
Y10T 279/3487	..	Tool or work stop or locator
Y10T 279/3493	..	Protection means; e.g., cover, seal, overstress prevention, air blast
Y10T 279/35	.	Miscellaneous

#### **Former US Class 292 series**

<b>Y10T 292/00</b>	<b>Closure fasteners</b>
Y10T 292/03	. Miscellaneous
Y10T 292/06	. Adjustable backset
Y10T 292/08	. Bolts
Y10T 292/0801	.. Multiple
Y10T 292/0802	... Sliding and rotary
Y10T 292/0803	... Sliding and swinging
Y10T 292/0805	.... Combined motion
Y10T 292/0806	..... Lever-operating means
Y10T 292/0807	... Sliding and hooked end
Y10T 292/0808	... Sliding and roller
Y10T 292/0809	... Sliding and spring arm
Y10T 292/081	... Swinging and hooked end
Y10T 292/0811	... Swinging and roller
Y10T 292/0813	... Swinging and spring arm
Y10T 292/0814	... Double acting
Y10T 292/0815	.... Roller
Y10T 292/0816	.... Sliding
Y10T 292/0817	.... Spring arm
Y10T 292/0818	.... Swinging
Y10T 292/082	... Spring arm
Y10T 292/0821	.... Combined motion

Y10T 292/0822	...	Emergency operating means
Y10T 292/0823	...	Gear
Y10T 292/0824	...	Roller
Y10T 292/0825	...	Hooked end
Y10T 292/0826	....	Operating means
Y10T 292/0828	.....	Link and lever
Y10T 292/0829	.....	Cam
Y10T 292/083	.....	Flexible
Y10T 292/0831	.....	Lever
Y10T 292/0832	.....	Push or pull rod
Y10T 292/0833	.....	Rigid
Y10T 292/0834	...	Sliding
Y10T 292/0836	....	Operating means
Y10T 292/0837	.....	Cam and lever
Y10T 292/0838	.....	Lever and push or pull rod
Y10T 292/0839	.....	Link and lever
Y10T 292/084	.....	Cam
Y10T 292/0841	.....	Flexible
Y10T 292/0843	.....	Gear
Y10T 292/0844	.....	Lever
Y10T 292/0845	.....	Push or pull rod
Y10T 292/0846	.....	Rigid
Y10T 292/0847	.....	Screw
Y10T 292/0848	...	Swinging
Y10T 292/0849	....	Operating means
Y10T 292/0851	.....	Cam and lever
Y10T 292/0852	.....	Link and cam
Y10T 292/0853	.....	Link and lever
Y10T 292/0854	.....	Cam
Y10T 292/0855	.....	Flexible
Y10T 292/0856	.....	Gear
Y10T 292/0857	.....	Lever
Y10T 292/0859	.....	Push or pull rod
Y10T 292/086	.....	Rigid
Y10T 292/0861	.....	Screw
Y10T 292/0862	..	Swinging and hooked end, multiple head
Y10T 292/0863	..	Sliding and rotary
Y10T 292/0864	...	Combined motion
Y10T 292/0866	...	Multiple head
Y10T 292/0867	...	Spring projected

Y10T 292/0868	....	Combined motion
Y10T 292/0869	...	Spring retracted
Y10T 292/087	..	Loops
Y10T 292/0871	...	Sliding and swinging, lever-operating means
Y10T 292/0872	...	Sliding catch
Y10T 292/0874	...	Spring-arm catch
Y10T 292/0875	...	Swinging catch
Y10T 292/0876	..	Double acting
Y10T 292/0877	...	Sliding and swinging
Y10T 292/0878	...	Sliding
Y10T 292/0879	....	Roller
Y10T 292/088	...	Spring arm
Y10T 292/0882	....	Roller
Y10T 292/0883	...	Swinging
Y10T 292/0884	....	Roller
Y10T 292/0885	...	Roller
Y10T 292/0886	..	Sliding and swinging
Y10T 292/0887	...	Operating means
Y10T 292/0889	....	Cam
Y10T 292/089	....	Lever
Y10T 292/0891	....	Rigid
Y10T 292/0892	...	Multiple head
Y10T 292/0893	...	Spring retracted
Y10T 292/0894	..	Spring arm
Y10T 292/0895	...	Operating means
Y10T 292/0897	....	Link and lever
Y10T 292/0898	....	Cam
Y10T 292/0899	....	Flexible
Y10T 292/09	....	Lever
Y10T 292/0901	....	Push or pull rod
Y10T 292/0902	....	Rigid
Y10T 292/0903	.....	Seal catch
Y10T 292/0905	.....	Swinging catch
Y10T 292/0906	....	Screw
Y10T 292/0907	...	Multiple head
Y10T 292/0908	..	Emergency operating means
Y10T 292/0909	...	Panel
Y10T 292/091	...	Platform
Y10T 292/0911	..	Hooked end
Y10T 292/0913	...	Sliding and swinging

Y10T 292/0914	....	Operating means
Y10T 292/0915	.....	Cam
Y10T 292/0916	.....	Gear
Y10T 292/0917	.....	Lever
Y10T 292/0918	.....	Rigid
Y10T 292/092	.....	Screw
Y10T 292/0921	...	Multiple head
Y10T 292/0922	....	Operating means
Y10T 292/0923	.....	Lever
Y10T 292/0924	.....	Push or pull rod
Y10T 292/0925	.....	Rigid
Y10T 292/0926	...	Spring projected
Y10T 292/0928	....	Operating means
Y10T 292/0929	.....	Link and lever
Y10T 292/093	.....	Cam
Y10T 292/0931	.....	Flexible
Y10T 292/0932	.....	Lever
Y10T 292/0933	.....	Push or pull rod
Y10T 292/0934	.....	Rigid
Y10T 292/0936	...	Spring retracted
Y10T 292/0937	...	Gravity actuated
Y10T 292/0938	....	Operating means
Y10T 292/0939	.....	Cam
Y10T 292/094	.....	Flexible
Y10T 292/0941	.....	Lever
Y10T 292/0943	.....	Push or pull rod
Y10T 292/0944	.....	Rigid
Y10T 292/0945	...	Operating means
Y10T 292/0946	....	Link and lever
Y10T 292/0947	....	Cam
Y10T 292/0948	....	Closure
Y10T 292/0949	....	Lever
Y10T 292/0951	....	Rigid
Y10T 292/0952	.....	Closure catch
Y10T 292/0953	.....	Friction catch
Y10T 292/0954	.....	Padlock or seal catch
Y10T 292/0955	.....	Screw catch
Y10T 292/0956	.....	Sliding catch
Y10T 292/0957	.....	Spring-arm catch
Y10T 292/0959	.....	Swinging catch

Y10T 292/096	..	Sliding
Y10T 292/0961	...	Multiple head
Y10T 292/0962	....	Operating means
Y10T 292/0963	.....	Link and lever
Y10T 292/0964	.....	Cam
Y10T 292/0966	.....	Gear
Y10T 292/0967	.....	Lever
Y10T 292/0968	.....	Rigid
Y10T 292/0969	...	Spring projected
Y10T 292/097	....	Operating means
Y10T 292/0971	.....	Cam and lever
Y10T 292/0972	.....	Lever and push or pull rod
Y10T 292/0974	.....	Link and lever
Y10T 292/0975	.....	Link and push or pull rod
Y10T 292/0976	.....	Sliding cam
Y10T 292/0977	.....	Cam
Y10T 292/0978	.....	Specifically related to vehicle closure
Y10T 292/0979	.....	Bolt disabled by contraretractive movement of inside handle
Y10T 292/098	.....	Auxiliary bolt
Y10T 292/0982	.....	Bolt blocking or disabling means
Y10T 292/0983	.....	Involves rollback
Y10T 292/0984	.....	Rollback members located on separate spindles
Y10T 292/0985	.....	Discrete pivotable or rotatable actuator
Y10T 292/0986	.....	Discrete push or pull actuator
Y10T 292/0987	.....	Bolt has ancillary projection spring
Y10T 292/0989	.....	Plural rollback elements directionally selectively effective
Y10T 292/099	.....	On separate spindles
Y10T 292/0991	.....	On a tubular member
Y10T 292/0992	.....	Flexible
Y10T 292/0993	.....	Gear
Y10T 292/0994	.....	Lever
Y10T 292/0995	.....	Push or pull rod
Y10T 292/0997	.....	Rigid
Y10T 292/0998	.....	Screw
Y10T 292/0999	...	Spring retracted
Y10T 292/10	....	Friction catch
Y10T 292/1001	....	Sliding catch
Y10T 292/1002	....	Spring-arm catch
Y10T 292/1003	....	Swinging catch
Y10T 292/1005	....	Cam-operating means

Y10T 292/1006	...	Gravity actuated
Y10T 292/1007	....	Operating means
Y10T 292/1008	.....	Cam and lever
Y10T 292/1009	.....	Link and lever
Y10T 292/101	.....	Cam
Y10T 292/1011	.....	Lever
Y10T 292/1013	.....	Rigid
Y10T 292/1014	...	Operating means
Y10T 292/1015	....	Link and lever
Y10T 292/1016	....	Cam
Y10T 292/1017	....	Flexible
Y10T 292/1018	....	Gear
Y10T 292/102	....	Lever
Y10T 292/1021	....	Motor
Y10T 292/1022	....	Rigid
Y10T 292/1023	.....	Closure catch
Y10T 292/1024	.....	Friction catch
Y10T 292/1025	.....	Padlock or seal catch
Y10T 292/1026	.....	Screw catch
Y10T 292/1028	.....	Sliding catch
Y10T 292/1029	.....	Seal
Y10T 292/103	.....	Spring-arm catch
Y10T 292/1031	.....	Swinging catch
Y10T 292/1032	.....	Seal
Y10T 292/1033	....	Screw
Y10T 292/1034	...	Curved
Y10T 292/1036	...	End lever
Y10T 292/1037	...	Pivoted end
Y10T 292/1038	...	Roller
Y10T 292/1039	..	Swinging and camming
Y10T 292/10395	...	Spring projected
Y10T 292/104	....	Rigid operating means
Y10T 292/1041	...	Rigid operating means
Y10T 292/1043	..	Swinging
Y10T 292/1044	...	Multiple head
Y10T 292/1045	....	Operating means
Y10T 292/1046	.....	Cam
Y10T 292/1047	.....	Closure
Y10T 292/1048	.....	Lever
Y10T 292/1049	.....	Rigid

Y10T 292/1051	...	Spring projected
Y10T 292/1052	....	Operating means
Y10T 292/1053	.....	Lever and push or pull rod
Y10T 292/1054	.....	Link and cam
Y10T 292/1055	.....	Link and lever
Y10T 292/1056	.....	Cam
Y10T 292/1057	.....	Flexible
Y10T 292/1059	.....	Lever
Y10T 292/106	.....	Push or pull rod
Y10T 292/1061	.....	Rigid
Y10T 292/1062	...	Spring retracted
Y10T 292/1063	...	Gravity actuated
Y10T 292/1064	....	Operating means
Y10T 292/1066	.....	Cam and lever
Y10T 292/1067	.....	Link and lever
Y10T 292/1068	.....	Cam
Y10T 292/1069	.....	Flexible
Y10T 292/107	.....	Lever
Y10T 292/1071	.....	Push or pull rod
Y10T 292/1072	.....	Rigid
Y10T 292/1074	....	Roller
Y10T 292/1075	...	Operating means
Y10T 292/1076	....	Link and lever
Y10T 292/1077	....	Cam
Y10T 292/1078	....	Closure
Y10T 292/1079	....	Gear
Y10T 292/108	....	Lever
Y10T 292/1082	....	Motor
Y10T 292/1083	....	Rigid
Y10T 292/1084	.....	Closure catch
Y10T 292/1085	.....	Friction catch
Y10T 292/1086	.....	Padlock or seal catch
Y10T 292/1087	.....	Screw catch
Y10T 292/1089	.....	Sliding catch
Y10T 292/109	.....	Seal
Y10T 292/1091	.....	Spring-arm catch
Y10T 292/1092	.....	Swinging catch
Y10T 292/1093	.....	Seal
Y10T 292/1094	....	Screw
Y10T 292/1095	..	Seal-rupturing devices

Y10T 292/1097	..	Reversible
Y10T 292/1098	...	Cam and lever operating means
Y10T 292/1099	..	Screw
Y10T 292/11	.	Magnetic
Y10T 292/14	.	Ball
Y10T 292/17	.	Bendable securers
Y10T 292/175	.	Bolt releasers
Y10T 292/18	..	Free-end-engaging means
Y10T 292/19	..	Foot operated
Y10T 292/20	.	Clamps
Y10T 292/202	..	Hatch fastener
Y10T 292/205	..	Ring
Y10T 292/207	...	Permanently deformed
Y10T 292/209	...	Resilient wedge
Y10T 292/212	...	With expanding or contracting means
Y10T 292/214	....	Screw
Y10T 292/216	....	Toggle lever
Y10T 292/218	..	Screw against closure
Y10T 292/221	..	Screw and nut
Y10T 292/223	...	Swingable
Y10T 292/225	..	Cam-operating means
Y10T 292/228	..	Portable
Y10T 292/23	.	Cross bars
Y10T 292/237	..	Screw-operating means
Y10T 292/243	..	Vehicle door latches
Y10T 292/25	.	Cylinder
Y10T 292/28	.	Extension link
Y10T 292/282	..	Multiple
Y10T 292/283	..	Chain
Y10T 292/285	..	Notched bar
Y10T 292/286	...	Sliding catch
Y10T 292/288	...	Swinging catch
Y10T 292/289	..	Slotted bar
Y10T 292/291	...	Sliding catch
Y10T 292/293	...	Swinging catch
Y10T 292/2935	..	Slotted or notched keeper
Y10T 292/294	...	Sliding catch
Y10T 292/296	...	Swinging catch
Y10T 292/297	..	Notched keeper
Y10T 292/299	..	Slotted keeper



Y10T 292/301	.. Friction catch
Y10T 292/302	.. Screw catch
Y10T 292/304	.. Sliding catch
Y10T 292/305	.. Swinging catch
Y10T 292/306	. Gear
Y10T 292/307	.. Sliding catch
Y10T 292/308	.. Swinging catch
Y10T 292/31	. Hasps
Y10T 292/314	.. Sliding catch
Y10T 292/319	... Seal
Y10T 292/323	.. Swinging catch
Y10T 292/327	... Seal
Y10T 292/331	.. Seal catch
Y10T 292/336	.. Seal-rupturing devices
Y10T 292/34	. Portable
Y10T 292/37	. Portable securer plate or bar
Y10T 292/373	.. Sliding and swinging holding member
Y10T 292/376	.. Screw-holding member
Y10T 292/379	.. Sliding holding member
Y10T 292/382	... Screw-operating means
Y10T 292/385	... Screw catch
Y10T 292/388	... Sliding catch
Y10T 292/391	... Swinging catch
Y10T 292/394	.. Swinging holding member
Y10T 292/397	... Catch devices
Y10T 292/40	. Rings
Y10T 292/42	. Rigid engaging means
Y10T 292/426	.. Screw catch
Y10T 292/432	.. Sliding catch
Y10T 292/438	.. Spring-arm catch
Y10T 292/444	.. Swinging catch
Y10T 292/45	. Rod clamps
Y10T 292/47	.. Friction-plate catch
Y10T 292/48	. Seals
Y10T 292/481	.. Compressible disk
Y10T 292/483	... Reinforced
Y10T 292/484	... Multiple
Y10T 292/485	.... Sheet metal
Y10T 292/487	.... Hard and soft metal
Y10T 292/488	... Sheet metal

Y10T 292/49	..	Compressible rivets and eyelets
Y10T 292/491	..	Distorted shackle
Y10T 292/492	..	Driving
Y10T 292/494	..	Interengaging shackle ends, inclosing housing
Y10T 292/4945	..	Rigid shackle ends
Y10T 292/495	...	Resilient and rigid engaging means
Y10T 292/496	...	Resilient engaging means
Y10T 292/497	..	Resilient shackle ends
Y10T 292/498	...	Rigid engaging means
Y10T 292/499	...	Resilient engaging means
Y10T 292/50	..	Single piece, spring catch
Y10T 292/502	..	Shiftable catch shackle operated
Y10T 292/503	..	Split-ring catch, shackle operated
Y10T 292/505	..	Strap-end fasteners
Y10T 292/506	..	Rigid disk, distorted shackle
Y10T 292/507	..	Tag type
Y10T 292/509	..	Encasing
Y10T 292/51	.	Seal bolts
Y10T 292/513	.	Shackles
Y10T 292/516	..	Sliding catch, seal
Y10T 292/522	..	Swinging catch, seal
Y10T 292/528	..	Seal catch
Y10T 292/534	..	Seal-rupturing devices
Y10T 292/54	.	Trippers
Y10T 292/546	..	Sliding detent
Y10T 292/552	..	Spring-arm detent
Y10T 292/558	..	Sliding bolt, swinging detent
Y10T 292/564	..	Swinging bolt, swinging detent
Y10T 292/57	.	Operators with knobs or handles
Y10T 292/59	.	Rollback and spindle connection
Y10T 292/62	.	Bolt casings
Y10T 292/65	.	Braces
Y10T 292/67	..	Portable
Y10T 292/68	.	Keepers
Y10T 292/683	..	Segment
Y10T 292/685	..	With anti-friction means
Y10T 292/688	..	With silencing or anti-rattle means
Y10T 292/691	...	Take-up
Y10T 292/694	..	Covers
Y10T 292/696	..	With movable dog, catch or striker

Y10T 292/699	... Motor controlled
Y10T 292/702	... Pivoted or swinging
Y10T 292/705	.. Adjustable
Y10T 292/707	... Vertically
Y10T 292/71	. Wedges
Y10T 292/73	.. Portable
Y10T 292/74	. Weights
Y10T 292/76	. Blind-slat holders
Y10T 292/79	. Bolt guards
Y10T 292/82	. Knobs
Y10T 292/85	. Knob-attaching devices
Y10T 292/854	.. Friction
Y10T 292/858	.. Screw
Y10T 292/861	... Guards
Y10T 292/865	.. Sliding
Y10T 292/869	.. Spring arm
Y10T 292/873	.. Swinging
Y10T 292/876	.. Wedge
Y10T 292/88	. Knob bearings
Y10T 292/91	. Knob rose plates
Y10T 292/93	. Latch spindles
Y10T 292/96	. Latch-spindle catches

#### **Former US Class 307 series**

<b>Y10T 307/00</b>	<b>Electrical transmission or interconnection systems</b>
Y10T 307/25	. Plural load circuit systems
Y10T 307/258	.. Common conductor or return type
Y10T 307/266	... Polyphase
Y10T 307/273	.... Phase balancing
Y10T 307/281	... Voltage divider type
Y10T 307/289	... Plural output generators
Y10T 307/297	.. Transformer connections
Y10T 307/305	.. Plural sources of supply
Y10T 307/313	... Interconnected for energy transfer
Y10T 307/32	.... With control of magnitude of energy transfer
Y10T 307/328	.... Diverse sources
Y10T 307/336	..... AC and DC
Y10T 307/344	... Substitute or alternate source
Y10T 307/352	... With control of magnitude of current or power

Y10T 307/359	...	Diverse sources
Y10T 307/367	....	AC and DC
Y10T 307/375	....	Different frequencies
Y10T 307/383	....	Different voltages
Y10T 307/391	...	Selectively connected loads and/or sources
Y10T 307/398	..	Anticoupling of load circuits through same source
Y10T 307/406	..	Control of current or power
Y10T 307/414	...	Load current proportioning or dividing
Y10T 307/422	...	Constant magnitude control
Y10T 307/43	....	By control of one or more load circuits
Y10T 307/438	...	Limit control
Y10T 307/445	..	Serially connected load circuits
Y10T 307/453	...	Selective series-parallel connections
Y10T 307/461	..	Selectively connected or controlled load circuits
Y10T 307/469	...	Condition responsive
Y10T 307/477	...	Code-controlled
Y10T 307/484	...	Sequential or alternating
Y10T 307/492	..	Circuit arrangements or layouts
Y10T 307/50	.	Plural supply circuits or sources
Y10T 307/505	..	One source floats across or compensates for other source
Y10T 307/511	...	With intervening converter
Y10T 307/516	....	Storage battery or accumulator-type source
Y10T 307/522	...	Dynamoelectric-type source
Y10T 307/527	...	Storage battery or accumulator-type source
Y10T 307/533	....	With series-connected auxiliary source
Y10T 307/538	....	Tap-changing or variable number of cells
Y10T 307/544	..	Circulating- or inter-current control or prevention
Y10T 307/549	..	Load current control
Y10T 307/555	...	Load current division
Y10T 307/56	....	Serially connected sources
Y10T 307/565	....	Fixed or predetermined ratio
Y10T 307/571	.....	Diverse-or unlike-type sources
Y10T 307/576	.....	Plural generators
Y10T 307/582	.....	Plural converters
Y10T 307/587	....	Peak or excess load
Y10T 307/593	...	Constant load or current
Y10T 307/598	....	Serially connected sources
Y10T 307/604	...	Load-limiting
Y10T 307/609	...	Serially connected sources
Y10T 307/615	..	Substitute or emergency source

Y10T 307/62	...	Plural substitute sources
Y10T 307/625	...	Storage battery or accumulator
Y10T 307/631	....	With intervening dynamoelectric machine
Y10T 307/636	...	Dynamoelectric
Y10T 307/642	..	Sources distributed along load circuit
Y10T 307/647	..	Load transfer without paralleling sources
Y10T 307/653	..	Series-parallel connection of sources
Y10T 307/658	..	Diverse or unlike electrical characteristics
Y10T 307/664	...	Differing frequencies
Y10T 307/669	...	Differing capacities
Y10T 307/675	...	Differing voltages
Y10T 307/68	....	Generator sources
Y10T 307/685	..	Series-connected sources
Y10T 307/691	...	Generator sources
Y10T 307/696	..	Selective or optional sources
Y10T 307/702	...	Predetermined sequence
Y10T 307/707	..	Plural converters
Y10T 307/713	..	Plural transformers
Y10T 307/718	..	Plural generators
Y10T 307/724	..	Connecting or disconnecting
Y10T 307/729	...	Condition responsive
Y10T 307/735	....	Attainment of voltage, frequency or phase relationship
Y10T 307/74	.	Switching systems
Y10T 307/747	..	Plural switches
Y10T 307/753	...	Lazy-man switch type
Y10T 307/76	...	Selectively actuated
Y10T 307/766	..	Condition responsive
Y10T 307/773	...	Light, heat, vibratory or radiant energy
Y10T 307/779	...	Fluid pressure, density, level, velocity or humidity
Y10T 307/786	...	Mechanical force
Y10T 307/793	....	Speed, centrifugal or kinetic force
Y10T 307/799	.....	Inertia or acceleration
Y10T 307/806	.....	Direction of rotation
Y10T 307/812	.....	Differential speed between two bodies
Y10T 307/819	.....	Torque
Y10T 307/826	...	Electrical
Y10T 307/832	....	Power or energy
Y10T 307/839	....	Polarity, phase sequence or reverse flow
Y10T 307/845	....	AC or DC discriminating
Y10T 307/852	....	Frequency

Y10T 307/858	....	Voltage
Y10T 307/865	....	Current
Y10T 307/872	..	Repetitive make and break
Y10T 307/878	...	Electronically controlled relay
Y10T 307/885	....	Responsive to physical condition
Y10T 307/891	...	Thermal relay
Y10T 307/898	...	Vibrating relay
Y10T 307/904	...	Miscellaneous
Y10T 307/911	..	With operation facilitating feature
Y10T 307/918	...	Preliminary reduction in current or voltage of system
Y10T 307/924	...	Switch contact conditioning
Y10T 307/931	....	Polarity reversing
Y10T 307/937	..	Switch actuation
Y10T 307/944	...	Power circuit controlled
Y10T 307/951	...	With time delay or retardation means
Y10T 307/957	....	Electrically initiated
Y10T 307/964	....	Series connected switches
Y10T 307/97	...	With locking, holding or braking means
Y10T 307/977	...	Electrical actuator
Y10T 307/983	...	Fluid-pressure actuator

#### **Former US Class 403 Series**

<b>Y10T 403/00</b>	<b>Joints and connections</b>	
Y10T 403/10	.	Selectively engageable hub to shaft connection
Y10T 403/11	.	including frangible component
Y10T 403/12	.	Selectively assembled, e.g. , convertible, etc.
Y10T 403/125	..	Selective orientation
Y10T 403/13	.	Inflatable connector
Y10T 403/14	.	with opening for access to connector or operator
Y10T 403/142	..	to threaded component
Y10T 403/145	...	Transverse to thread axis
Y10T 403/148	..	to biased component
Y10T 403/15	.	Closure or plug spaced from joint
Y10T 403/16	.	with adjunctive protector, broken parts retainer, repair, assembly or disassembly feature
Y10T 403/1608	..	Holding means or protector functioning only during transportation, assembly or disassembly
Y10T 403/1616	..	Position or guide means
Y10T 403/1624	...	Related to joint component
Y10T 403/1633	..	Utilizing fluid pressure

Y10T 403/1641	.. Back-off means, e.g., separator, etc.
Y10T 403/1649	.. Handle or handwheel
Y10T 403/1658	... Actuates retainer or blocker
Y10T 403/1666	.. tool-engaging or accommodating means or with tool
Y10T 403/1674	... for latch or retainer
Y10T 403/1683	.. Releasably captive nut or bolt
Y10T 403/1691	.. Means to lock bolt or nut when other is turned
Y10T 403/17	. with adjunctive shield
Y10T 403/18	. Structurally installed in diverse art device
Y10T 403/185	.. Head or base
Y10T 403/19	. Coupling supported by independent bearing
Y10T 403/20	. with indicator or inspection means
Y10T 403/21	. Utilizing thermal characteristic, e.g. , expansion or contraction, etc.
Y10T 403/213	.. Interposed material of intermediate coefficient of expansion
Y10T 403/217	.. Members having different coefficients of expansion
Y10T 403/22	. with fluid pressure responsive component
Y10T 403/23	. with ambient condition responsive control means
Y10T 403/24	. with independent handle or operator
Y10T 403/25	. with distinct fluid or article handling or directing feature
Y10T 403/251	.. External reservoir
Y10T 403/253	.. Pressure fitting
Y10T 403/255	.. including port or reservoir communicating with joint
Y10T 403/257	... Articulated member
Y10T 403/259	.... At joint interface
Y10T 403/26	. Non-adhering fluent material at joint
Y10T 403/27	. with strain-limiting means
Y10T 403/28	. Combined
Y10T 403/29	. Rotarily connected, differentially translatable members, e.g. , turn-buckle, etc.
Y10T 403/291	.. having tool-engaging means or operating handle
Y10T 403/293	.. having operating mechanism
Y10T 403/295	.. having locking means
Y10T 403/297	.. Differential pitch, similar hand
Y10T 403/299	.. Externally threaded actuator
Y10T 403/30	. Laterally related members connected by latch means, e.g. , scaffold connectors
Y10T 403/31	. Flexible diaphragm or bellows
Y10T 403/315	.. with additional connection or packing
Y10T 403/32	. Articulated members
Y10T 403/32008	.. Plural distinct articulation axes
Y10T 403/32016	... Three or more parallel axes
Y10T 403/32024	... Single adjustment for plural axes

Y10T 403/32032	...	Plural ball and socket
Y10T 403/32041	...	Universal
Y10T 403/32049	....	Non-coplanar axes
Y10T 403/32057	...	Angular and linear
Y10T 403/32065	....	Screw and swivel
Y10T 403/32073	....	Pivot stud slidable in elongated opening
Y10T 403/32081	...	Parallel rotary
Y10T 403/32091	...	Plural translating connections
Y10T 403/32098	..	Branched
Y10T 403/32106	..	Member pivoted at rigid corner
Y10T 403/32114	..	including static joint
Y10T 403/32122	...	Trunnion assembly to side of rod
Y10T 403/32131	...	One member is plate or side
Y10T 403/32139	....	Secant, i.e., rod extending through plate
Y10T 403/32147	....	Plate or side forms bearing surface
Y10T 403/32155	....	Bearing component clamped to plate or side, e.g., bolted, etc.
Y10T 403/32163	...	Articulate joint intermediate end joints
Y10T 403/32172	....	Variable angle
Y10T 403/32181	.....	Universal
Y10T 403/32188	...	Angled or offset members
Y10T 403/32196	...	Articulate joint is ball and socket
Y10T 403/32204	....	with threaded joint
Y10T 403/32213	...	Articulate joint is a swivel
Y10T 403/32221	...	Articulate joint comprises pivoted clevis or channel bar
Y10T 403/32229	...	Articulate joint is a slide
Y10T 403/32237	..	including operator
Y10T 403/32245	..	Arcuate shank moves in complementary guide
Y10T 403/32254	..	Lockable at fixed position
Y10T 403/32262	...	At selected angle
Y10T 403/32271	....	Movable brace between members
Y10T 403/32278	....	Members rotatable about oblique axes
Y10T 403/32286	....	Clamping screw traverses sliding complementary arcuate bearing surfaces
Y10T 403/32295	....	Securing yoke or ring spaced radially from locking means
Y10T 403/32303	.....	Eyebolt
Y10T 403/32311	....	Ball and socket
Y10T 403/32319	....	including pivot stud
Y10T 403/32327	.....	including radially spaced detent or latch component
Y10T 403/32336	.....	Engaging notch or recess in outer periphery of component
Y10T 403/32344	.....	Side of rod engages recess in radial face
Y10T 403/32352	.....	Pivoted detent



Y10T 403/32361	.....	Engaging recess in radial face
Y10T 403/32368	.....	including radial interengaging tongue and slot or serrations
Y10T 403/32377	.....	Radially spaced arcuate slot engages fastener
Y10T 403/32385	.....	Locked by plural motions of one member
Y10T 403/32393	.....	including bridging keeper
Y10T 403/32401	.....	Locked by nesting parts
Y10T 403/32409	.....	Members locked in axial alignment
Y10T 403/32418	....	Plural distinct positions
Y10T 403/32426	...	Plural distinct positions
Y10T 403/32434	....	Unidirectional movement, e.g., ratchet, etc.
Y10T 403/32442	....	At least one discrete position
Y10T 403/32451	.....	Step-by-step adjustment
Y10T 403/32459	.....	Retainer extends through aligned recesses
Y10T 403/32467	...	Telescoping members
Y10T 403/32475	....	having detent
Y10T 403/32483	.....	Spring biased
Y10T 403/32491	.....	Threaded
Y10T 403/32501	.....	Cam or wedge
Y10T 403/32508	.....	having transverse pin
Y10T 403/32516	....	Remotely actuated
Y10T 403/32524	....	Self-locking
Y10T 403/32532	...	Clamped members
Y10T 403/32541	..	Rotatable members resiliently biased to one position
Y10T 403/32549	..	including limit means
Y10T 403/32557	...	for pivotal motion
Y10T 403/32565	....	Ball and socket with restricted movement about one axis
Y10T 403/32573	.....	Ball stud passes through confining opening
Y10T 403/32581	....	Pin and slot
Y10T 403/32591	....	Opposed stops on one member
Y10T 403/32598	..	Threaded interface
Y10T 403/32606	..	Pivoted
Y10T 403/32614	...	including circumferential biasing or damping means
Y10T 403/32622	...	Rocking or rolling contact
Y10T 403/32631	...	Universal ball and socket
Y10T 403/32639	....	including internal tie means
Y10T 403/32647	....	Plural concave surfaces with diverse curvature
Y10T 403/32655	.....	Interposed concavo-convex component
Y10T 403/32663	.....	Outer surfaces
Y10T 403/32672	....	Swiveled ball parts or seat
Y10T 403/32681	....	Composite ball

Y10T 403/32688	.....	Spring biased segments
Y10T 403/32696	.....	Nonmetallic part
Y10T 403/32704	.....	Stud extends into ball
Y10T 403/32713	....	Elastomerically biased or backed components
Y10T 403/32721	....	Elastomeric seat
Y10T 403/32729	....	Externally packed
Y10T 403/32737	....	including liner, shim, or discrete seat
Y10T 403/32745	.....	Spring acts through wedging surfaces
Y10T 403/32754	.....	Variably preloaded
Y10T 403/32762	.....	Spring-biased seat opposite ball stud
Y10T 403/32771	.....	Porous
Y10T 403/32778	.....	Completely spacing the members
Y10T 403/32786	....	Divided socket-type coupling
Y10T 403/32795	....	Bifurcated socket
Y10T 403/32803	....	Separable socket sections
Y10T 403/32811	....	Spring-biased
Y10T 403/32819	...	including tension or take-up means
Y10T 403/32827	....	Interposed spring means coaxial with pivot
Y10T 403/32836	....	Acting through tapered surface on bearing component
Y10T 403/32844	....	Manually variable
Y10T 403/32852	....	External of bearing assembly, e.g., antirattler, etc.
Y10T 403/32861	...	T-pivot, e.g., wrist pin, etc.
Y10T 403/32868	....	Floating pin
Y10T 403/32877	....	Pin is integral with or secured to inner member
Y10T 403/32885	....	Expanded pin or end
Y10T 403/32893	....	including distinct pin retainer
Y10T 403/32901	.....	Unitary clip or plug
Y10T 403/32909	.....	Threaded pin end
Y10T 403/32918	....	fork and tongue
Y10T 403/32926	.....	with interposed antifriction means
Y10T 403/32934	.....	Oppositely laterally movable tines
Y10T 403/32942	...	On oblique interface
Y10T 403/32951	...	Transverse pin or stud
Y10T 403/32959	....	Traverses interposed facing component
Y10T 403/32967	....	Attached to or integral with one member
Y10T 403/32975	..	Rotatable
Y10T 403/32983	...	Rod in socket
Y10T 403/32991	..	Axially spring-biased coaxial members
Y10T 403/33	.	Transverse rod to spaced plate surfaces
Y10T 403/335	..	Retainer utilizes or abuts plural plates

Y10T 403/34	. Branched
Y10T 403/341	.. Three or more radiating members
Y10T 403/342	... Polyhedral
Y10T 403/343	.... Unilateral of plane
Y10T 403/344	... Plural pairs of axially aligned members
Y10T 403/345	... Coplanar
Y10T 403/346	.... Additional rod held by encompassing means
Y10T 403/347	.. Polyhedral
Y10T 403/348	.. Parallel rods
Y10T 403/349	.. Coplanar
Y10T 403/35	. Diverse material coupling member
Y10T 403/36	. Three or more serial joints, at least one diverse
Y10T 403/362	.. Nonaligned axes
Y10T 403/364	.. Separable intermediate joint
Y10T 403/366	... Axially acting connector
Y10T 403/368	... Screw or cam
Y10T 403/37	. Joint involving plural layers of single rod
Y10T 403/38	. Laterally related rods independently joined to transverse surface
Y10T 403/39	. Rod to member to side, e.g. , plate, rod side, etc.
Y10T 403/3906	.. Rod side to member to side
Y10T 403/3913	.. Unilateral of side
Y10T 403/3921	.. Arcuate or multiplanar side
Y10T 403/3926	... Encompassed side
Y10T 403/3933	.. Intermediate member includes tubular part
Y10T 403/3941	... Side or tubular part deformed in situ
Y10T 403/3946	... Intermediate member extends through side
Y10T 403/3953	.... Split or divided tubular part and coacting compressor
Y10T 403/3961	.... Transverse clamp secures rod and tubular part
Y10T 403/3966	.... Rod also extends through side
Y10T 403/3973	... Oblique rod
Y10T 403/3981	... Intermediate member secured to side by radial flange
Y10T 403/3986	... Internally threaded tubular part
Y10T 403/3993	.. Intermediate member extends completely through side
Y10T 403/40	. Radially spaced members joined by independent coupling
Y10T 403/405	.. Flexible intermediate member
Y10T 403/41	. Coacting connection between inner member and plural parts of outer member
Y10T 403/42	. Rigid angle coupling, e.g. , elbow or u, etc.
Y10T 403/43	. Axially curved or bent portion of rod is joint component
Y10T 403/4309	.. Interfitted crossing rods
Y10T 403/4318	.. Joined to laterally related transverse surface at axially spaced points

Y10T 403/4327	..	Reversely bent portion
Y10T 403/4336	...	Around eye-forming thimble
Y10T 403/4345	...	with wedge clamp
Y10T 403/4354	...	Held by crimped collar
Y10T 403/4363	...	Open U
Y10T 403/4372	..	Intertwisted ends
Y10T 403/4381	..	End of rod is deflected laterally within connector
Y10T 403/4391	..	Plural rods distorted by single component
Y10T 403/44	.	Three or more members connected at single locus
Y10T 403/443	..	All encompassed
Y10T 403/447	..	Mutually contacting
Y10T 403/45	.	Flexibly connected rigid members
Y10T 403/451	..	Rigid sleeve encompasses flexible bushing
Y10T 403/452	...	Longitudinally divided sleeve
Y10T 403/453	..	Flexible sleeve-type coupling
Y10T 403/454	..	Connecting pin traverses radially interposed elastomer
Y10T 403/455	..	Elastomer interposed between radially spaced members
Y10T 403/456	...	Elastomer encompasses shoulder on inner member
Y10T 403/457	...	including axially acting compressing means
Y10T 403/458	...	Composite bushing with elastomeric component
Y10T 403/459	..	Helical spring type coupling
Y10T 403/46	.	Rod end to transverse side of member
Y10T 403/4602	..	Corner joint
Y10T 403/4605	..	Stirrup
Y10T 403/4608	..	Structure attached to rod end encompasses side
Y10T 403/4611	...	Clamped saddle
Y10T 403/4614	...	Yoke or ring
Y10T 403/4617	....	having radial screw at bight
Y10T 403/4621	..	including saddle
Y10T 403/4622	..	Gland type
Y10T 403/4625	...	Rod and side gripped simultaneously by single actuation
Y10T 403/4628	..	Rod clamped to hole edge
Y10T 403/4631	..	Rod to open edge of side, e.g., wrap-around connection
Y10T 403/4634	..	Rod and side deformingly interlocked
Y10T 403/4637	..	Radially interposed, side-engaging shim or bushing
Y10T 403/4641	..	Socket formed by shaping or deforming side
Y10T 403/4642	..	Integral transverse projection on side, e.g., necked, etc.
Y10T 403/4645	...	From rod side
Y10T 403/4648	..	Utilizing opposite sides of member
Y10T 403/4651	...	Rod is expanded by component inserted from distal side

Y10T 403/4654	....	Separate and deformable component
Y10T 403/4657	....	Plural contacting components
Y10T 403/4661	....	Barbed component
Y10T 403/4662	...	Inserted, blind-side-engaging, retaining portion on rod
Y10T 403/4665	...	Stepped or tapered recess in side
Y10T 403/4668	....	Terminal, rod-attached retainer engages distal side
Y10T 403/4671	.....	Inserted into rod
Y10T 403/4674	...	Clamped member
Y10T 403/4677	....	Clamping component engages recessed side
Y10T 403/4681	....	Bolted to rod
Y10T 403/4682	....	Between rod shoulder and terminal nut
Y10T 403/4685	....	Bolted through member
Y10T 403/4688	....	Coaxial collar or shoulder or rod is clamp element
Y10T 403/4691	..	Flange on rod bolted to side
Y10T 403/4694	..	Rod received in recessed side, e.g., socket or tapered opening, etc.
Y10T 403/4697	..	Utilizing internal rod structure
Y10T 403/47	.	Molded joint
Y10T 403/471	..	And independent connection
Y10T 403/472	..	including mechanical interlock
Y10T 403/473	..	Socket or open cup for bonding material
Y10T 403/475	..	Member cast in situ
Y10T 403/477	..	Fusion bond, e.g., weld, etc.
Y10T 403/478	...	Metallic fusion material
Y10T 403/479	....	Added bonding material, e.g., solder, braze, etc.
Y10T 403/48	.	Shrunk fit
Y10T 403/49	.	Member deformed in situ
Y10T 403/4908	..	Separating element between strands of member
Y10T 403/4916	..	Interposed deforming element contacts socket bottom
Y10T 403/4924	..	Inner member is expanded by longitudinally inserted element
Y10T 403/4933	..	by separate, deformable element
Y10T 403/4941	..	Deformation occurs simultaneously with action of separate, diverse function, joint component
Y10T 403/4949	..	Deforming component is inserted section
Y10T 403/4958	..	Separate deforming means remains with joint assembly
Y10T 403/4966	..	Deformation occurs simultaneously with assembly
Y10T 403/4974	..	by piercing
Y10T 403/4983	..	Diverse resistance to lateral deforming force
Y10T 403/4991	..	Both members deformed
Y10T 403/50	.	Bridged by diverse connector
Y10T 403/51	.	including spaced, diverse connections

Y10T 403/52	. including distinct packing
Y10T 403/53	. Split end with laterally movable opposed portions
Y10T 403/535	.. with separate force-applying means
Y10T 403/54	. Flexible member is joint component
Y10T 403/55	. Member ends joined by inserted section
Y10T 403/551	.. Externally bridged
Y10T 403/553	.. Laterally inserted section
Y10T 403/555	.. Angle section
Y10T 403/556	.. Section threaded to member
Y10T 403/557	.. Expansible section
Y10T 403/559	.. Fluted or splined section
Y10T 403/56	. Thread adaptor
Y10T 403/57	. Distinct end coupler
Y10T 403/5706	.. Diverse serial connections
Y10T 403/5713	... Axially cleft coupler
Y10T 403/5721	.. Single actuator for plural connections
Y10T 403/5726	... Axially biased end portions
Y10T 403/5733	.. Plural opposed sockets
Y10T 403/5741	.. Separate screw or pin-type connections
Y10T 403/5746	.. Continuous thread
Y10T 403/5753	.. having separable end caps or plugs
Y10T 403/5761	.. Interrupted periphery, e.g., split or segmental, etc.
Y10T 403/5766	... Axially divided segments
Y10T 403/5773	.... Interfitting
Y10T 403/5781	.... Bolted
Y10T 403/5786	... Split
Y10T 403/5793	.. including member wedging or camming means
Y10T 403/58	. including ancillary means blocking disconnection of joint
Y10T 403/581	.. Blocker for assembled joint retainer
Y10T 403/583	... Blocker keeper
Y10T 403/585	... Blocked key
Y10T 403/587	.. Blocker is catch or key
Y10T 403/589	.. Cam or thread lock
Y10T 403/59	. Manually releaseable latch type
Y10T 403/591	.. having operating mechanism
Y10T 403/592	... Ball detent
Y10T 403/593	... Remotely actuated
Y10T 403/595	... Lever
Y10T 403/597	.. Swiveled bolt
Y10T 403/598	.. Transversely sliding pin

Y10T 403/599	.. Spring biased manipulator
Y10T 403/60	. Biased catch or latch
Y10T 403/602	.. by separate spring
Y10T 403/604	... Radially sliding catch
Y10T 403/606	.. Leaf spring
Y10T 403/608	.. Pivoted
Y10T 403/61	. Side slide: elongated co-linear members
Y10T 403/62	. Annular recess is joint component
Y10T 403/63	. Convergent interface
Y10T 403/635	.. Tapered
Y10T 403/64	. Interconnected flanges or shoulders
Y10T 403/642	.. Separate flange or shoulder
Y10T 403/645	.. Axially bolted or riveted
Y10T 403/648	.. Clamped
Y10T 403/65	. Scarf
Y10T 403/655	.. Mirror images
Y10T 403/66	. Interfitted members with external bridging piece
Y10T 403/67	. Thimble: screw or cam
Y10T 403/68	. Screw or cam
Y10T 403/69	. Axially split or separable member
Y10T 403/70	. Interfitted members
Y10T 403/7001	.. Crossed rods
Y10T 403/7003	... One rod is encompassed by the other
Y10T 403/7005	.. Lugged member, rotary engagement
Y10T 403/7007	... Bayonet joint
Y10T 403/7009	.. Rotary binding cam or wedge
Y10T 403/7011	... Radially interposed shim or bushing
Y10T 403/7013	.... Arcuate slip
Y10T 403/7015	.. Assembled by plural manipulations of member
Y10T 403/7016	.. Diametric end slot is joint component
Y10T 403/7018	.. including separably interposed key
Y10T 403/7021	... Axially extending
Y10T 403/7022	.... Resilient
Y10T 403/7024	.... Longitudinally stepped or tapered
Y10T 403/7026	.. Longitudinally splined or fluted rod
Y10T 403/7028	... Splayed or having a cam surface for anti-backlash
Y10T 403/7031	... Rod designed to be manipulable, e.g., twistable, within coupling for quick disconnect
Y10T 403/7032	... including a means, e.g., spring biased portion, for misalignment correction
Y10T 403/7033	... including a lock or retainer

Y10T 403/7035	...	Specific angle or shape of rib, key, groove, or shoulder
Y10T 403/7037	..	Externally shouldered or headed rod
Y10T 403/7039	..	Socket
Y10T 403/7041	..	including set screw
Y10T 403/7043	..	Interfitted angle or channel bars
Y10T 403/7045	..	Interdigitated ends
Y10T 403/7047	..	Radially interposed shim or bushing
Y10T 403/7049	...	Biased by distinct radially acting means
Y10T 403/7051	...	Wedging or camming
Y10T 403/7052	....	Engaged by axial movement
Y10T 403/7054	.....	Plural, circumferentially related shims between members
Y10T 403/7056	.....	Threaded actuator
Y10T 403/7058	.....	Split or slotted bushing
Y10T 403/7061	...	Resilient
Y10T 403/7062	..	Clamped members
Y10T 403/7064	...	by wedge or cam
Y10T 403/7066	....	having actuator
Y10T 403/7067	.....	Threaded actuator
Y10T 403/7069	.....	Axially oriented
Y10T 403/7071	.....	Lever actuator
Y10T 403/7073	..	Peripheral enlargement, depression, or slot on one member is joint component
Y10T 403/7075	..	including discrete retainer
Y10T 403/7077	...	for telescoping members
Y10T 403/7079	....	Transverse pin
Y10T 403/7081	.....	Multiple retainers
Y10T 403/7083	.....	having means to prevent removal of retainer
Y10T 403/7084	.....	Bolt, rivet, or screw
Y10T 403/7086	.....	Wedge pin
Y10T 403/7088	.....	Sliding pin
Y10T 403/7091	.....	Expansible retainer
Y10T 403/7092	...	for interfitted side faces
Y10T 403/7094	..	Enlarged head in complementary recess, e.g., dovetail, etc.
Y10T 403/7096	..	Rigid angle
Y10T 403/7098	..	Non-circular rod section is joint component
Y10T 403/71	.	Rod side to plate or side
Y10T 403/7105	..	Connected by double clamp
Y10T 403/7111	..	Shackle is integral with or independently attached to proximate side of plate or other side
Y10T 403/7117	..	Flanged or grooved rod
Y10T 403/7123	..	Traversed by connector



- Y10T 403/7129 . . Laterally spaced rods
- Y10T 403/7135 . . . by separable shim or bushing in connector
- Y10T 403/7141 . . . Plural channels in connector
- Y10T 403/7147 . . Connected by flexible tie
- Y10T 403/7152 . . Lapped rod ends
- Y10T 403/7158 . . Diagonal connector
- Y10T 403/7164 . . One rod held between bight and other rod extending through aperture in leg of connector
- Y10T 403/7171 . . Two rods encompassed by single connector
- Y10T 403/7176 . . Resilient clip
- Y10T 403/7182 . . Yoke or ring-type connector
- Y10T 403/7188 . . . Rod received in open channel
- Y10T 403/7194 . . Crossed rods
- Y10T 403/72 . . Miter joint
- Y10T 403/725 . . Connector bridges inner or outer periphery
- Y10T 403/73 . . Rigid angle
- Y10T 403/74 . . Particular configuration or material of member
- Y10T 403/75 . . having a joining piece extending through aligned openings in plural members
- Y10T 403/76 . . having a cam, wedge, or tapered portion
- Y10T 403/77 . . Miscellaneous

#### **Former US Class 407 Series**

- Y10T 407/00** **Cutters, for shaping**
- Y10T 407/10 . . including noncutting work modifying means
- Y10T 407/11 . . including chip breaker, guide or deflector detachable from tool and tool holder
- Y10T 407/112 . . Adjustable relative to cutting edge
- Y10T 407/114 . . . including adjusting means
- Y10T 407/116 . . Attached to or integral with tool clamping jaw
- Y10T 407/118 . . Chip breaker
- Y10T 407/12 . . Freely movable cutting edge
- Y10T 407/13 . . Yieldable tool
- Y10T 407/134 . . Resiliently mounted tool
- Y10T 407/137 . . . including yield stress or flexure limit adjusting means
- Y10T 407/14 . . with means to apply fluid to cutting tool
- Y10T 407/15 . . Rotary broach
- Y10T 407/16 . . Rectilinear broach
- Y10T 407/1614 . . Hollow tool for surrounding workpiece
- Y10T 407/1628 . . including holder having seat for inserted tool
- Y10T 407/1642 . . . Annular tool

Y10T 407/1657	...	including single tooth
Y10T 407/1671	..	Plural tooth groups
Y10T 407/1685	..	including sequentially acting teeth of stepped cutting width
Y10T 407/17	.	Gear cutting tool
Y10T 407/1705	..	Face mill gear cutting tool
Y10T 407/171	...	Adjustable teeth
Y10T 407/1715	..	Hob
Y10T 407/172	...	Thread cutting
Y10T 407/1725	...	including holder having seat for inserted tool
Y10T 407/173	...	for cutting involute gear tooth
Y10T 407/1735	..	Rotary, gear shaving cutting tool
Y10T 407/174	..	Gear generating, revolving shaper cutting tool
Y10T 407/1745	..	Rotary, tooth form cutting tool
Y10T 407/18	.	File or rasp
Y10T 407/1805	..	Flexible blade or carrier therefor
Y10T 407/181	..	Tire rasp
Y10T 407/1815	..	Rotary file or round disc
Y10T 407/182	..	Composite, diverse sector, or assembled
Y10T 407/1825	..	Handle or holder, per se
Y10T 407/19	.	Rotary cutting tool
Y10T 407/1902	..	Gang
Y10T 407/1904	..	Composite body of diverse material
Y10T 407/1906	..	including holder [i.e., head] having seat for inserted tool
Y10T 407/1908	...	Face or end mill
Y10T 407/191	....	Plural simultaneously usable separable tools in common seat or common clamp actuator for plural simultaneously usable tools
Y10T 407/1912	....	Tool adjustable relative to holder
Y10T 407/1914	.....	Radially
Y10T 407/1916	.....	And axially
Y10T 407/1918	.....	Selectively
Y10T 407/192	....	with separate means to fasten tool to holder
Y10T 407/1922	.....	Wedge clamp element
Y10T 407/1924	....	Specified tool shape
Y10T 407/1926	...	Plural simultaneously usable separable tools in common seat or common clamp actuator for plural simultaneously usable tools
Y10T 407/1928	...	Tool adjustable relative to holder
Y10T 407/193	....	Radially
Y10T 407/1932	...	with means to fasten tool seat to holder
Y10T 407/1934	...	with separate means to fasten tool to holder
Y10T 407/1936	....	Apertured tool

Y10T 407/1938	....	Wedge clamp element
Y10T 407/194	.....	Resilient clamp jaw
Y10T 407/1942	...	Peripherally spaced tools
Y10T 407/1944	....	Sectional support
Y10T 407/1946	..	Face or end mill
Y10T 407/1948	...	with cutting edge entirely across end of tool [e.g., router bit, end mill, etc.]
Y10T 407/195	..	Compound tooth arrangement
Y10T 407/1952	..	Having peripherally spaced teeth
Y10T 407/1954	...	Axially tapering tool
Y10T 407/1956	...	Circumferentially staggered
Y10T 407/1958	....	Plural teeth spaced about a helix
Y10T 407/196	...	Varying in cutting edge profile
Y10T 407/1962	...	Specified tooth shape or spacing
Y10T 407/1964	....	Arcuate cutting edge
Y10T 407/1966	.....	Helical tooth
Y10T 407/20	.	Profiled circular tool
Y10T 407/21	.	Arc segment tool
Y10T 407/22	.	including holder having seat for inserted tool
Y10T 407/2202	..	Plural spaced seats and common holder
Y10T 407/2204	...	Relatively adjustable seats
Y10T 407/2206	...	Simultaneously usable
Y10T 407/2208	..	Plural simultaneously usable separable tools in common seat or common clamp actuator for plural simultaneously usable tools
Y10T 407/221	...	Adjustable tool
Y10T 407/2212	..	with tool ejector
Y10T 407/2214	..	with separate means to adjust tool to and fro relative to holder
Y10T 407/2216	...	with indicator
Y10T 407/2218	...	Plural provisions for adjustment
Y10T 407/222	...	by moving tool seat
Y10T 407/2222	..	Tool adjustable relative to holder
Y10T 407/2224	...	with indicator
Y10T 407/2226	...	Plural provisions for adjustment
Y10T 407/2228	....	Plural interfering seats
Y10T 407/223	....	including pivotable seat or tool
Y10T 407/2232	.....	with detent
Y10T 407/2234	.....	Pivoted seat
Y10T 407/2236	.....	And pivotable tool
Y10T 407/2238	...	by adjustable or replaceable stop
Y10T 407/224	....	Adjustable
Y10T 407/2242	.....	Screw

Y10T 407/2244	...	by movement of seat relative to holder
Y10T 407/2246	....	Pivoted seat
Y10T 407/2248	...	Pivoted tool
Y10T 407/225	...	Resiliently biased tool clamping jaw
Y10T 407/2252	...	Rectilinearly
Y10T 407/2254	....	including rotatable cam clamp element
Y10T 407/2256	....	including wedge clamp element
Y10T 407/2258	.....	And guide or detent
Y10T 407/226	....	including detent
Y10T 407/2262	....	Tool gripped directly by set screw
Y10T 407/2264	....	Slidable jaw
Y10T 407/2266	..	Holder adapted for tools of different shape
Y10T 407/2268	..	with chip breaker, guide or deflector
Y10T 407/227	..	with separate means to fasten tool seat to holder
Y10T 407/2272	..	with separate means to fasten tool to holder
Y10T 407/2274	...	Apertured tool
Y10T 407/2276	....	with means projecting through aperture to force tool laterally against reaction surface
Y10T 407/2278	.....	Tilting clamp element and separate means to tilt same
Y10T 407/228	...	Rotatable cam clamp element
Y10T 407/2282	...	including tool holding clamp and clamp actuator
Y10T 407/2284	....	Wedge clamp element
Y10T 407/2286	....	Resiliently biased clamp jaw
Y10T 407/2288	.....	Integral with holder
Y10T 407/229	....	Pivoted jaw
Y10T 407/2292	....	Slidable jaw
Y10T 407/23	.	including tool having plural alternatively usable cutting edges
Y10T 407/235	..	with integral chip breaker, guide or deflector
Y10T 407/24	.	with chip breaker, guide or deflector
Y10T 407/245	..	comprising concave surface in cutting face of tool
Y10T 407/25	.	including cut off tool
Y10T 407/26	.	comprising cutting edge bonded to tool shank
Y10T 407/27	.	comprising tool of specific chemical composition
Y10T 407/28	.	Miscellaneous

#### **Former US Class 408 Series**

<b>Y10T 408/00</b>	<b>Cutting by use of rotating axially moving tool</b>
Y10T 408/03	. Processes
Y10T 408/04	.. Bit detachable

Y10T 408/05	. with means to weigh or test work or product
Y10T 408/08	. with means to regulate operation by use of templet, tape, card, or other replaceable information supply
Y10T 408/10	. with interlock between machine elements
Y10T 408/13	. with randomly-actuated stopping means
Y10T 408/14	.. Responsive to condition of Tool or tool-drive
Y10T 408/15	.. Responsive to condition of work or product
Y10T 408/16	. with control means energized in response to activator stimulated by condition sensor
Y10T 408/165	.. to control Tool rotation
Y10T 408/17	.. to control infeed
Y10T 408/172	... Responsive to Tool
Y10T 408/173	... Responsive to work
Y10T 408/175	.. to control relative positioning of Tool and work
Y10T 408/18	. with stopping upon completion of prescribed operation
Y10T 408/20	.. Responsive to condition of work or product
Y10T 408/21	. with signal, indicator, illuminator or optical means
Y10T 408/23	. including means to cause Tool to progressively vibrate toward work
Y10T 408/26	. with means to condition tool
Y10T 408/29	. with means to deForm work temporarily
Y10T 408/31	. Convertible cutting means
Y10T 408/33	.. Utilizing common cutting Tool
Y10T 408/34	. Combined cutting means
Y10T 408/344	.. including Tool operating on rotating work
Y10T 408/348	.. Plural other type cutting means
Y10T 408/35	... including plural rotating tools
Y10T 408/352	.. including rotating cutter other than rotating, axially moving Tool
Y10T 408/353	... Crystalline cutter
Y10T 408/355	... Utilized in cutting work or product to length
Y10T 408/3555	.... Adapted to cut entire thickness of work at one pass
Y10T 408/356	.. including plunging [single stroke] cutter
Y10T 408/36	. Machine including plural tools
Y10T 408/365	.. Axes of tools moving with work during operation
Y10T 408/367	... including means to infeed Tool and means to infeed work or including coaxial tools
Y10T 408/368	... Plural work stations
Y10T 408/37	.. Turret of tools
Y10T 408/375	.. Coaxial tools
Y10T 408/378	... Coaxial, opposed tools
Y10T 408/3784	.... with additional, converging Tool
Y10T 408/3788	.... Plural pairs of coaxial, opposed tools

Y10T 408/3792	....	with means to sequentially feed tools toward work
Y10T 408/3796	....	with interconnected means to simultaneously feed tools
Y10T 408/38	..	Plural, simultaneously operational tools
Y10T 408/3806	...	with plural simultaneously operational work stations
Y10T 408/3809	....	Successively acting on workpiece
Y10T 408/381	.....	Pivotally mounted, work-advancing, work-supporting means, pivot-axis parallel to tool-axis
Y10T 408/3811	...	with provision for adjustment of relationship of axes
Y10T 408/3817	...	at least one Tool driven by orbiting wrist plate
Y10T 408/3822	...	at least one Tool including flexible drive connection
Y10T 408/3828	...	with work-infeed
Y10T 408/3833	...	with means to advance work relative to Tool
Y10T 408/3839	...	with presser-foot
Y10T 408/3844	...	with tool-opposing, work-engaging surface
Y10T 408/385	..	Rotatable about parallel axes
Y10T 408/39	.	with radially outer limit of cutting edge moving to define cylinder partially, but not entirely encircled by work
Y10T 408/42	.	Axis of Tool moving with work during operation
Y10T 408/44	.	with means to apply transient, fluent medium to work or product
Y10T 408/45	..	including Tool with duct
Y10T 408/453	...	and means to move gaseous fluid by application of vacuum
Y10T 408/455	...	Conducting channel extending to end of Tool
Y10T 408/458	...	including nozzle
Y10T 408/46	..	including nozzle
Y10T 408/47	.	with work-infeed means
Y10T 408/476	..	Driven by fluid motor
Y10T 408/482	..	Driven by means having sliding engagement therewith
Y10T 408/488	..	Driven by lever or connecting link
Y10T 408/494	..	and gear to drive infeed means
Y10T 408/50	.	with product handling or receiving means
Y10T 408/51	..	Ejector
Y10T 408/52	.	with work advancing or guiding means
Y10T 408/54	..	Means to intermittently advance work
Y10T 408/545	...	Rotary, work-supporting means
Y10T 408/55	.	with work-engaging structure other than Tool or tool-support
Y10T 408/551	..	with means actuated by work to release Tool from fixed position in Tool support
Y10T 408/552	...	Adapted to engage work at tool-axis
Y10T 408/553	..	Centering means adapted to be replaced by Tool
Y10T 408/554	..	Magnetic or suction means
Y10T 408/556	..	Tool supporting wheel

Y10T 408/5565	...	Wheel-axis parallel to tool-axis
Y10T 408/557	..	Frictionally engaging sides of opening in work
Y10T 408/558	...	Opening coaxial with Tool
Y10T 408/5583	....	Engaging sides of opening being enlarged by Tool
Y10T 408/5584	.....	Engaging surface axially advanced of tool-action
Y10T 408/5586	.....	Engaging surface subsequent to tool-action on that surface
Y10T 408/5587	....	Valve fitting
Y10T 408/559	..	Funnel like work-engaging surface cooperating with protuberance on work
Y10T 408/56	..	Adapted to "form" recession in work
Y10T 408/5605	...	Recession at tool-axis
Y10T 408/561	..	Having tool-opposing, work-engaging surface
Y10T 408/5612	...	Tool having shiftable tool-axis
Y10T 408/5614	...	Angularly adjustable surface
Y10T 408/5616	....	Adjustable about axis that is parallel to tool-axis
Y10T 408/5617	...	Laterally adjustable surface
Y10T 408/5619	...	Flexible or concatenated member
Y10T 408/5621	...	Connected to Tool through opening being enlarged by Tool
Y10T 408/5622	....	Plural, coaxially opposing, work-engaging means
Y10T 408/5623	...	with presser foot
Y10T 408/56238	....	Encompassed by Tool during cut
Y10T 408/56245	....	including tool-guide [or bushing]
Y10T 408/56253	....	Base supported machine
Y10T 408/5626	...	with means to move Tool relative to other work-engaging structure along tool-axis
Y10T 408/5627	....	Having sliding engagement therewith
Y10T 408/56275	.....	Screw coaxial with Tool
Y10T 408/5628	...	Tool having screw-thread engaging frame to cause infeed
Y10T 408/563	..	Work-gripping clamp
Y10T 408/5633	...	Adapted to coaxially grip round work
Y10T 408/56337	....	Oppositely moving lateral clamps
Y10T 408/5634	.....	Three or more moving clamps
Y10T 408/56343	....	Base supported clamp
Y10T 408/5635	...	Oppositely moving lateral clamps
Y10T 408/5638	...	Adjustable relative to tool-axis
Y10T 408/564	..	Movable relative to Tool along tool-axis
Y10T 408/5647	...	including means to move Tool
Y10T 408/5653	...	with means to bias Tool away from work
Y10T 408/566	..	Axially fixed to Tool
Y10T 408/5665	...	Work-engaging surface parallel to tool-axis
Y10T 408/567	..	Adjustable, tool-guiding jig

Y10T 408/568	... Guide bushing
Y10T 408/569	.. Bushing
Y10T 408/57	. Tool-support with means to receive tool-position indicator
Y10T 408/60	. Plural tool-assemblages
Y10T 408/62	.. Coaxial
Y10T 408/625	... Spring biased
Y10T 408/63	. Tool or tool-support with torque-applying ratchet
Y10T 408/637	.. with thrust applying means
Y10T 408/639	... Reversible ratchet
Y10T 408/641	... Double-acting ratchet
Y10T 408/643	.. Reversible ratchet
Y10T 408/65	. Means to drive tool
Y10T 408/655	.. with specific Tool structure
Y10T 408/66	.. Friction gearing
Y10T 408/665	.. Universal or flexible drive connection to rotate Tool
Y10T 408/67	.. Belt and pulley
Y10T 408/675	.. including means to move Tool along tool-axis
Y10T 408/6757	... Fluid means
Y10T 408/6764	... Laterally adjustable Tool
Y10T 408/6771	... with clutch means
Y10T 408/6774	.... including plural speed drive
Y10T 408/6776	.... Actuated by Tool movement
Y10T 408/6779	... Rack and pinion
Y10T 408/6786	... Manually moved lever
Y10T 408/6793	... Screw coaxial with Tool
Y10T 408/68	. Tool or tool-support with thrust-applying machine-engaging screw
Y10T 408/70	. Tool or tool-support with torque-applying clutch
Y10T 408/72	.. Friction clutch
Y10T 408/73	. Tool or tool-support with torque-applying spline
Y10T 408/75	.. Relative motion of splined shaft and tool-support causing release of Tool from operating position
Y10T 408/76	. Tool-carrier with vibration-damping means
Y10T 408/78	. Tool of specific diverse material
Y10T 408/81	. Tool having crystalline cutting edge
Y10T 408/83	. Tool-support with means to move Tool relative to tool-support
Y10T 408/85	.. to move radially
Y10T 408/852	... with Tool releasing trigger
Y10T 408/853	.... and separate Tool setting means
Y10T 408/854	... to move eccentrically mounted Tool
Y10T 408/855	.... Tool-support including plural, adjustable sections



Y10T 408/856	...	Moving means including pinion engaging rack-like surface of Tool
Y10T 408/858	...	Moving means including wedge, screw or cam
Y10T 408/8583	....	with resiliently urged Tool
Y10T 408/85837	.....	with spring retainer
Y10T 408/85843	.....	Resilient Tool or tool-support
Y10T 408/8585	....	including oppositely moving, diverging tools
Y10T 408/8588	....	Axially slidable moving-means
Y10T 408/85884	.....	Tool pivotally mounted on support
Y10T 408/85888	.....	Having axially spaced shoulders
Y10T 408/85892	.....	Screw driven wedge or cam
Y10T 408/85893	.....	Screw with axis radially spaced from tool-axis
Y10T 408/85894	.....	Annular wedge-collar
Y10T 408/858945	.....	Axially spaced tool-retaining collars
Y10T 408/858946	.....	with travelling wedge
Y10T 408/858948	.....	Tool having axially facing, collar-receiving groove
Y10T 408/858949	.....	including two-piece collar
Y10T 408/85895	.....	Traveling wedge
Y10T 408/858953	.....	Interfitting, tool-retaining wedge
Y10T 408/858955	.....	including separable interfitting element
Y10T 408/858957	.....	Having externally threaded shank connected to tool-support
Y10T 408/85896	.....	Annular wedge-collar
Y10T 408/859	....	Rotary cam
Y10T 408/8591	.....	Scroll plate
Y10T 408/85913	.....	Volute scroll
Y10T 408/85915	.....	with means to rotate scroll
Y10T 408/85918	.....	with adjustable means to limit scroll movement
Y10T 408/8592	.....	Coaxial with tool-axis
Y10T 408/8593	....	Wedge moving perpendicular to tool-axis
Y10T 408/8595	....	Pivotable tool-support
Y10T 408/8598	....	Screw extending perpendicular to tool-axis
Y10T 408/85985	.....	Plural tools moved by diametrically opposed screws
Y10T 408/85988	.....	Screws mounted on common shaft
Y10T 408/8599	.....	Tool having pitch-stabilizing ridge
Y10T 408/85995	.....	with tool-holding clamp and clamp actuator
Y10T 408/86	.	Tool-support with means to permit positioning of the Tool relative to support
Y10T 408/865	..	Pivotable Tool
Y10T 408/868	...	with multiple cutting positions
Y10T 408/87	..	Tool having stepped cutting edges
Y10T 408/8713	...	including means to permit both radial and axial positioning of edge
Y10T 408/8725	...	including means to permit relative axial positioning of edges

Y10T 408/8729	....	with work-engaging structure other than cutting edge
Y10T 408/8734	....	including central Tool axially movable relative to support
Y10T 408/8738	...	including inverse cutting edge
Y10T 408/875	..	including means to "form" depression in work
Y10T 408/88	..	including central-lead
Y10T 408/885	..	including tool-holding clamp and clamp actuator
Y10T 408/888	...	Movable along tool-axis
Y10T 408/89	.	Tool or Tool with support
Y10T 408/892	..	with work-engaging structure detachable from cutting edge
Y10T 408/8923	...	Removable central lead
Y10T 408/8925	...	Depth-limiting member
Y10T 408/8928	...	Adjustable
Y10T 408/893	..	Hollow milling Tool
Y10T 408/895	..	Having axial, core-receiving central portion
Y10T 408/8953	...	with lateral outlet
Y10T 408/8957	...	and having stepped cutting edges
Y10T 408/896	..	Having product-receiving chamber
Y10T 408/8967	...	and central lead-screw
Y10T 408/8973	...	and central lead
Y10T 408/898	..	Helical ribbon Tool
Y10T 408/899	..	Having inversely angled cutting edge
Y10T 408/90	...	and axially extending peripheral cutting spur
Y10T 408/901	..	Having axially extending peripheral cutting spur
Y10T 408/902	..	Having central lead-screw
Y10T 408/904	..	with pitch-stabilizing ridge
Y10T 408/9042	...	and radially spaced cutting edge
Y10T 408/9044	...	including cutting teeth of different width
Y10T 408/9045	....	and different root circles
Y10T 408/9046	...	including tapered section
Y10T 408/90467	....	and relieved cutting edge
Y10T 408/90473	....	including work-embracing cutting edges
Y10T 408/9048	...	Extending outwardly from tool-axis
Y10T 408/905	..	Having stepped cutting edges
Y10T 408/906	...	Axially spaced
Y10T 408/9065	....	with central lead
Y10T 408/907	..	including detailed shank
Y10T 408/909	..	Having peripherally spaced cutting edges
Y10T 408/9093	...	Each formed by a pair of axially facing facets
Y10T 408/9095	...	with axially extending relief channel
Y10T 408/9097	....	Spiral channel

Y10T 408/9098	...	with means to retain Tool to support
Y10T 408/90987	....	Wedge means
Y10T 408/90993	....	Screw driven means
Y10T 408/91	.	Machine frame
Y10T 408/92	..	with counterweight mechanism
Y10T 408/93	..	including pivotally mounted tool-carrier
Y10T 408/935	...	including laterally movable tool-carrier
Y10T 408/94	.	Tool-support
Y10T 408/95	..	with tool-retaining means
Y10T 408/953	...	Clamping jaws
Y10T 408/957	...	Tool adapter
Y10T 408/96	.	Miscellaneous
Y10T 408/97	..	Drill bushings
Y10T 408/98	..	Drill guide
Y10T 408/99	..	Adjustable stop

#### **Former US Class 409 Series**

<b>Y10T 409/00</b>	<b>Gear cutting, milling, or planing</b>	
Y10T 409/10	.	Gear cutting
Y10T 409/100159	..	with regulation of operation by use of templet, card, or other replaceable information supply
Y10T 409/100318	...	including follower for templet
Y10T 409/100477	..	and burnishing simultaneously
Y10T 409/100636	..	with compensation for backlash in drive means
Y10T 409/100795	..	with work or product advancing
Y10T 409/100954	...	Utilizing transfer arm
Y10T 409/101113	..	Gear chamfering or deburring
Y10T 409/101272	...	Using relatively reciprocating or oscillating cutter
Y10T 409/101431	..	Gear tooth shape generating
Y10T 409/10159	...	Hobbing
Y10T 409/101749	....	Process
Y10T 409/101908	.....	Generating tooth for bevel gear
Y10T 409/102067	....	including means to shift hob between cutting passes
Y10T 409/102226	....	with control means energized in response to activator stimulated by condition sensor
Y10T 409/102385	....	Plural hobs
Y10T 409/102544	....	including infeed means
Y10T 409/102703	.....	to infeed along axis of work rotation
Y10T 409/102862	.....	Infeed of cutter
Y10T 409/103021	.....	and infeed radially of axis of work rotation

Y10T 409/10318	.....	Vertically
Y10T 409/103339	.....	to infeed radially of axis of work rotation
Y10T 409/103498	.....	Infeed of cutter
Y10T 409/103657	.....	and infeed tangentially of work axis
Y10T 409/103816	...	Milling with radial faced tool
Y10T 409/103975	....	Process
Y10T 409/104134	....	Adapted to cut bevel gear
Y10T 409/104293	.....	with means to continuously rotate work and means to co-form all teeth of gear
Y10T 409/104452	.....	Bevel gear having nonparallel opposing tooth flanks
Y10T 409/104611	.....	including rotary cutter cradle
Y10T 409/10477	...	by relative axial movement between synchronously indexing or rotating work and cutter
Y10T 409/104929	....	Crowning
Y10T 409/105088	....	Displacing cutter axially relative to work [e.g., gear shaving, etc.]
Y10T 409/105247	.....	Using gear shaper-cutter
Y10T 409/105406	.....	Plural distinct cutting edges
Y10T 409/105565	.....	Cutting rotating work, the axis of which lies in a plane intersecting the cutter axis
Y10T 409/105724	...	Gear shaving
Y10T 409/105883	...	Using rotary cutter
Y10T 409/106042	....	having axially directed cutting edge
Y10T 409/106201	....	Plural rotary cutters
Y10T 409/10636	....	On reciprocating carriage
Y10T 409/106519	...	Using reciprocating or oscillating cutter
Y10T 409/106678	....	Bevel gear cutting
Y10T 409/106837	.....	Dual cutters
Y10T 409/106996	.....	Double acting cutter
Y10T 409/107155	....	Rectilinearly reciprocating cutter
Y10T 409/107314	.....	Cutter comprising a rack
Y10T 409/107473	...	Making a noncircular gear, worm, rotor, or a planar-faced gear
Y10T 409/107632	..	Gear shaving
Y10T 409/107791	..	Using rotary cutter
Y10T 409/10795	...	Process
Y10T 409/108109	...	End mill
Y10T 409/108268	....	Radially faced
Y10T 409/108427	.....	Using plural, selectively usable tools
Y10T 409/108586	...	Plural rotary cutters
Y10T 409/108745	...	Cutting action along work axis
Y10T 409/108904	....	Cutting action intersecting work axis
Y10T 409/109063	..	Using reciprocating or oscillating cutter

Y10T 409/109222	...	Broach
Y10T 409/109381	...	including circumferentially disposed cutting edges
Y10T 409/10954	..	Work dividing or checking of work position or division
Y10T 409/109699	..	with work clamping
Y10T 409/20	.	with refurbishing of cutter
Y10T 409/30	.	Milling
Y10T 409/300056	..	Thread or helix generating
Y10T 409/300112	...	Process
Y10T 409/300168	...	with means to regulate operation by use of templet, card, or other replaceable information supply
Y10T 409/300224	....	Complete cycle
Y10T 409/30028	....	to regulate cutting depth [e.g., relief, taper, etc.]
Y10T 409/300336	....	to regulate rate of motion [e.g., stopping, etc.]
Y10T 409/300392	...	with nonthread or nonhelix generating, milling cutter
Y10T 409/300448	...	with means to advance work or product
Y10T 409/300504	...	Plural cutters or work holders
Y10T 409/30056	...	with planetary cutter
Y10T 409/300616	...	Work means to move work axially and means to interrelate work movement with cutter rotation
Y10T 409/300672	...	with means to rotate work and means to interrelatedly infeed the work relative to the cutter
Y10T 409/300728	....	Means to infeed the cutter
Y10T 409/300784	...	with means to circumferentially adjust the position of the cutter with respect to the work
Y10T 409/30084	..	with regulation of operation by templet, card, or other replaceable information supply
Y10T 409/300896	...	with sensing of numerical information and regulation without mechanical connection between sensing means and regulated means [i.e., numerical control]
Y10T 409/300952	...	to cut lock key
Y10T 409/301008	....	Using templet other than a key
Y10T 409/301064	....	Complete cycle
Y10T 409/30112	...	Process
Y10T 409/301176	...	Reproducing means
Y10T 409/301232	....	including pantograph cutter-carrier
Y10T 409/301288	.....	and means to move work at work station
Y10T 409/301344	.....	About work axis
Y10T 409/3014	.....	Pivotaly supported for vertical movement
Y10T 409/301456	.....	and means to counterbalance carrier
Y10T 409/301512	.....	including plural cutters
Y10T 409/301568	....	by use of pivotaly supported tracer
Y10T 409/301624	....	Duplicating means

Y10T 409/30168	.....	with means for operation without manual intervention
Y10T 409/301736	.....	to make a double curvature foil
Y10T 409/301792	.....	including means to sense optical or magnetic image
Y10T 409/301848	.....	with means to support templet above or under work
Y10T 409/301904	.....	including tracer adapted to trigger electrical energy
Y10T 409/30196	.....	to actuate electrically driven work or tool moving means
Y10T 409/302016	.....	to actuate fluid driven work or tool moving means
Y10T 409/302072	.....	including tracer adapted to trigger fluid energy
Y10T 409/302128	.....	to actuate fluid driven work or tool moving means
Y10T 409/302184	.....	including cutter and tracer fixed to move laterally together
Y10T 409/30224	.....	and provision for circumferential relative movement of cutter and work
Y10T 409/302296	.....	including plural cutters
Y10T 409/302352	.....	including plural cutters
Y10T 409/302408	.....	including cross-slide tool carrier
Y10T 409/302464	.....	including plural cutters
Y10T 409/30252	.....	including cross-slide tool carrier
Y10T 409/302576	.....	with means to support templet above or under work
Y10T 409/302632	.....	with provision for circumferential relative movement of cutter and work
Y10T 409/302688	....	with provision for circumferential relative movement of cutter and work
Y10T 409/302744	.....	and means for operation without manual intervention
Y10T 409/3028	.....	including tracer adapted to trigger electrical or fluid energy
Y10T 409/302856	....	For using planar templet in cutting profile [e.g., contour map from planar map, etc.]
Y10T 409/302912	....	including means for operation without manual intervention
Y10T 409/302968	...	including means for operation without manual intervention
Y10T 409/303024	....	including simultaneously usable plural tracers or including tracer adapted to simultaneously use plural templates
Y10T 409/30308	.....	to make a double curvature foil
Y10T 409/303136	....	to make a double curvature foil
Y10T 409/303192	....	including cutter and tracer fixed to move together
Y10T 409/303248	....	with provision for circumferential relative movement of cutter and work
Y10T 409/303304	...	and provision for circumferential relative movement of cutter and work
Y10T 409/30336	...	including cutter and tracer fixed to move together
Y10T 409/303416	..	Templet, tracer, or cutter
Y10T 409/303472	...	Tracer
Y10T 409/303528	....	Adapted to trigger electrical energy
Y10T 409/303584	.....	Photocell
Y10T 409/30364	....	Adapted to trigger fluid energy
Y10T 409/303696	...	Templet
Y10T 409/303752	..	Process

Y10T 409/303808	...	including infeeding
Y10T 409/303864	..	with means to weigh or test work or product
Y10T 409/30392	..	with means to protect operative or machine [e.g., guard, safety device, etc.]
Y10T 409/303976	..	with means to control temperature or lubricate
Y10T 409/304032	...	Cutter or work
Y10T 409/304088	..	with means to remove chip
Y10T 409/304144	..	Means to trim edge
Y10T 409/3042	..	Means to remove scale or raised surface imperfection
Y10T 409/304256	...	Means to remove flash or burr
Y10T 409/304312	..	with means to dampen vibration
Y10T 409/304368	..	Means to mill epitrochoidal shape
Y10T 409/304424	..	Means for internal milling
Y10T 409/30448	..	with detachable or auxiliary cutter support to convert cutting action
Y10T 409/304536	..	including means to infeed work to cutter
Y10T 409/304592	...	with compensation for backlash in drive means
Y10T 409/304648	...	with control means energized in response to activator stimulated by condition sensor
Y10T 409/304704	....	In response to cutter or cutter carriage
Y10T 409/30476	....	In response to work or work carriage
Y10T 409/304816	.....	to control rate of infeed or return
Y10T 409/304872	.....	to control limit of infeed
Y10T 409/304928	.....	Adapted to hydraulically or pneumatically stimulate control
Y10T 409/304984	.....	Adapted to electrically stimulate control
Y10T 409/30504	....	to control rate of infeed or return
Y10T 409/305096	....	to effect stopping of infeed
Y10T 409/305152	...	with means to change rate of infeed
Y10T 409/305208	...	Means to mill indeterminate length work
Y10T 409/305264	...	Multiple work stations
Y10T 409/30532	...	with means to advance work or product
Y10T 409/305376	....	Vertically
Y10T 409/305432	....	Endless or orbital work or product advancing means
Y10T 409/305488	...	to reciprocate or oscillate work
Y10T 409/305544	...	with work holder
Y10T 409/3056	....	and means to selectively position work
Y10T 409/305656	....	including means to support work for rotation during operation
Y10T 409/305712	.....	and including means to infeed cutter toward work axis
Y10T 409/305768	.....	with linear movement of work
Y10T 409/305824	.....	with angular movement of work
Y10T 409/30588	...	including friction gearing drive
Y10T 409/305936	...	including fluid drive

Y10T 409/305992	..	with means to effect stopping upon completion of operation
Y10T 409/306048	..	with means to advance work or product
Y10T 409/306104	...	Endless or orbital work or product advancing means
Y10T 409/30616	..	with means to precisely reposition work
Y10T 409/306216	..	Randomly manipulated, work supported, or work following device
Y10T 409/306272	...	For machining commutator
Y10T 409/306328	...	For cutting longitudinal groove in shaft [e.g., keyway, etc.]
Y10T 409/306384	...	with work supported guide means
Y10T 409/30644	....	to guide tool to move in arcuate path
Y10T 409/306496	...	with work follower
Y10T 409/306552	...	Randomly manipulated
Y10T 409/306608	....	End mill [e.g., router, etc.]
Y10T 409/306664	..	including means to infeed rotary cutter toward work
Y10T 409/30672	...	with means to limit penetration into work
Y10T 409/306776	...	Axially
Y10T 409/306832	....	with infeed control means energized in response to activator stimulated by condition sensor
Y10T 409/306888	.....	In response to cutter condition
Y10T 409/306944	.....	In response to work condition
Y10T 409/307	....	with work holder
Y10T 409/307056	....	and laterally
Y10T 409/307112	.....	Simultaneously
Y10T 409/307168	....	Plural cutters
Y10T 409/307224	..	with infeed control means energized in response to activator stimulated by condition sensor
Y10T 409/30728	....	In response to cutter condition
Y10T 409/307336	....	In response to work condition
Y10T 409/307392	...	with means to change rate of infeed
Y10T 409/307448	...	with work holder
Y10T 409/307504	....	Indexable
Y10T 409/30756	...	Machining arcuate surface
Y10T 409/307616	....	with means to move cutter eccentrically
Y10T 409/307672	...	Angularly adjustable cutter head
Y10T 409/307728	...	including gantry-type cutter-carrier
Y10T 409/307784	...	Plural cutters
Y10T 409/30784	..	including means to adjustably position cutter
Y10T 409/307896	...	with work holder or guide
Y10T 409/307952	...	Linear adjustment
Y10T 409/308008	....	with control for adjustment means responsive to activator stimulated by condition sensor
Y10T 409/308064	.....	Responsive to position of cutter



Y10T 409/30812	.....	and means to clamp cutter support in adjusted position
Y10T 409/308176	....	with position indicator or limit means
Y10T 409/308232	....	and angular adjustment
Y10T 409/308288	....	including gantry-type cutter-carrier
Y10T 409/308344	....	Plural cutters
Y10T 409/3084	...	with position indicator or limit means
Y10T 409/308456	...	with right angle cutter drive
Y10T 409/308512	...	Compound angular adjustment
Y10T 409/308568	...	Plural cutters
Y10T 409/308624	..	with limit means to aid in positioning of cutter bit or work [e.g., gauge, stop, etc.]
Y10T 409/30868	..	Work support
Y10T 409/308736	...	with position indicator or stop
Y10T 409/308792	...	Indexable
Y10T 409/308848	....	including dividing head
Y10T 409/308904	.....	Multiple row dividing head
Y10T 409/30896	...	with angular adjustment
Y10T 409/309016	...	with work holder or guide
Y10T 409/309072	....	including cutter limited to rotary motion
Y10T 409/309128	...	with means to adjust work support vertically
Y10T 409/309184	..	including cutter limited to rotary motion
Y10T 409/30924	...	Cutter turning about vertical axis
Y10T 409/309296	..	Detachable or repositionable tool head
Y10T 409/309352	..	Cutter spindle or spindle support
Y10T 409/309408	...	with cutter holder
Y10T 409/309464	....	and draw bar
Y10T 409/30952	..	with cutter holder
Y10T 409/309576	..	Machine frame
Y10T 409/309632	...	Overarm harness structure
Y10T 409/309688	...	including counterbalancing means
Y10T 409/309744	...	including means to compensate for deformation
Y10T 409/3098	....	Deflection of cutter spindle
Y10T 409/309856	...	Convertible from lathe
Y10T 409/309912	...	including relatively movable components and means to relatively immobilize these components
Y10T 409/309968	..	Tailstock
Y10T 409/40	.	Broaching
Y10T 409/400175	..	Process
Y10T 409/40035	..	with control means energized in response to activator stimulated by condition sensor
Y10T 409/400525	...	Responsive to condition of work or product

Y10T 409/4007	..	with means to distribute cutter infeed force
Y10T 409/400875	..	with means to select cutter or to select or modify cutter drive
Y10T 409/40105	..	with means to clean, lubricate, or modify temperature of work or cutter
Y10T 409/401225	..	with product handling means
Y10T 409/4014	...	Between plural broaching stations
Y10T 409/401575	...	Means to eject broached product
Y10T 409/40175	...	Chip removal means
Y10T 409/401925	..	with means to protect operative or machine [e.g., guard, safety device, etc.]
Y10T 409/4021	...	with safety means for overload or safety interlock
Y10T 409/402275	..	with work immobilizer and means to activate work immobilizer interrelated with cutter infeed, work infeed, or work advance
Y10T 409/40245	..	with work infeed or advancing means and means to clamp the work thereto, which clamping means is interrelated with work or cutter infeed
Y10T 409/402625	..	Means to remove flash or burr
Y10T 409/4028	..	Means for cutting groove
Y10T 409/402975	...	Arcuate groove in cylindrical surface
Y10T 409/40315	....	Rifling
Y10T 409/403325	..	Orbital carrier for cutter
Y10T 409/4035	..	Orbital carrier for work
Y10T 409/403675	..	with means to cyclically manipulate cutter or cutter support
Y10T 409/40385	...	to reorient, introduce, or remove cutter
Y10T 409/404025	...	Cutter released to interim support at termination of cutting stroke
Y10T 409/4042	...	to remove and return cutter to cutter support
Y10T 409/404375	..	with plural cutters
Y10T 409/40455	..	with means to advance, infeed, or manipulate work
Y10T 409/404725	...	Interrelated with cutter infeed
Y10T 409/4049	....	including means supporting work and additional means opposing infeed force
Y10T 409/405075	....	including work indexing means for sequential cutting of different surfaces of a single workpiece
Y10T 409/40525	....	including work indexing means for sequential cutting of surfaces of different workpieces
Y10T 409/405425	....	with means to retract work from path of tool's idle return stroke
Y10T 409/4056	...	to infeed work past cutter
Y10T 409/405775	..	with means to hold work during cutting
Y10T 409/40595	...	including work clamping means
Y10T 409/406125	...	with means to adjust or facilitate adjustment of work or work holder
Y10T 409/4063	...	with means on work or work holder to guide cutter during infeed
Y10T 409/406475	..	Cutter infeed means
Y10T 409/40665	...	Imparting rectilinear motion to cutter
Y10T 409/406825	....	and rotary motion to cutter

Y10T 409/407	....	Fluid powered means
Y10T 409/407175	....	Rack means
Y10T 409/40735	....	Screw means
Y10T 409/407525	..	Machine frame
Y10T 409/4077	..	Cutter support or guide
Y10T 409/50	.	Planing
Y10T 409/500164	..	with regulation of operation by templet, card, or other replaceable information supply
Y10T 409/500328	...	including use of tracer adapted to trigger electrical or fluid energy
Y10T 409/500492	....	including provision for circumferential relative movement of cutter and work
Y10T 409/500656	...	including provision for circumferential relative movement of cutter and work
Y10T 409/50082	..	Process
Y10T 409/500984	..	with means to lubricate
Y10T 409/501148	..	with product handling means
Y10T 409/501312	..	Randomly manipulated, work supported, or work following device
Y10T 409/501476	..	Means to remove flash or burr
Y10T 409/50164	...	Elongated work
Y10T 409/501804	....	Flash or burr inside hollow work
Y10T 409/501968	....	Transverse burr
Y10T 409/502132	...	Flat work
Y10T 409/502296	..	of commutator
Y10T 409/50246	..	Means for trimming edge [e.g., chamfering, scarfing, etc.]
Y10T 409/502624	..	Means for cutting groove
Y10T 409/502788	...	Arcuate groove
Y10T 409/502952	....	For rifling
Y10T 409/503116	...	Inside hollow work
Y10T 409/50328	..	Means for shaving by blade spanning work surface
Y10T 409/503444	...	Concave work surface [e.g., bearing, stereotype printing plate, etc.]
Y10T 409/503608	...	Circumferential surface
Y10T 409/503772	...	including rack driven infeed means
Y10T 409/503936	...	including roller infeed means
Y10T 409/5041	..	Means for cutting arcuate surface
Y10T 409/504264	...	Cycloidal surface
Y10T 409/504428	...	with work infeed and means to arcuately reposition the cutter
Y10T 409/504592	...	with work infeed and means to arcuately reposition the work
Y10T 409/504756	..	with means to relatively infeed cutter and work
Y10T 409/50492	...	and means to rotate work and cutter at same rate about converging axes
Y10T 409/505084	...	with plural sequentially acting cutters or with double acting cutter
Y10T 409/505248	...	and means to vary rate of infeed
Y10T 409/505412	...	Reciprocating work infeed means

Y10T 409/505576	....	with fluid-driven bed
Y10T 409/50574	....	with rack-driven bed
Y10T 409/505904	....	with screw-driven bed
Y10T 409/506068	....	and means to permit repositioning of cutter laterally
Y10T 409/506232	...	Reciprocating cutter infeed means
Y10T 409/506396	....	Reciprocating cutter horizontally
Y10T 409/50656	.....	with work support and lead screw to reposition work support
Y10T 409/506724	.....	with fluid-powered means to drive cutter
Y10T 409/506888	.....	with pivoting link to drive cutter
Y10T 409/507052	.....	Link driven by crank
Y10T 409/507216	.....	with rack to drive cutter
Y10T 409/50738	.....	with screw to drive cutter
Y10T 409/507544	....	with link or cam to drive cutter
Y10T 409/507708	....	with rack to drive cutter
Y10T 409/507872	...	including means causing return stroke
Y10T 409/508036	..	Machine frame
Y10T 409/5082	...	Means to permit repositioning of cutter
Y10T 409/508364	....	Laterally
Y10T 409/508528	.....	Plural independently positioned cutters
Y10T 409/508692	.....	including clutch
Y10T 409/508856	.....	including repositioning means and means to effect stopping thereof
Y10T 409/50902	...	including relatively movable components and means to relatively immobilize these components
Y10T 409/509184	...	Work table
Y10T 409/509348	..	Tool head
Y10T 409/509512	...	with selectively usable cutting edges
Y10T 409/509676	...	with means to permit repositioning of cutting for idle return stroke
Y10T 409/50984	....	comprising pivotable cutter or cutter support

#### **Former US Class 428 Series**

<b>Y10T 428/00</b>	<b>Stock material or miscellaneous articles</b>
Y10T 428/10	. Liquid crystal optical display having layer of specified composition
Y10T 428/1005	.. Alignment layer of specified composition
Y10T 428/1009	... Alignment layer is inorganic
Y10T 428/1014	... Silicon compound [i.e., organosilicon]
Y10T 428/1018	... Polyamide
Y10T 428/1023	... Polyimide
Y10T 428/1027	.... Polyimidfluoride
Y10T 428/1032	.... Polyimidmetalo

Y10T 428/1036	..	with viewing layer of specified composition
Y10T 428/1041	...	Polarizer or dye containing viewing layer
Y10T 428/1045	...	Silicon compound [e.g., glass, organosilicon, etc.]
Y10T 428/105	...	Ester [e.g., polycarbonate, polyacrylate, etc.]
Y10T 428/1055	..	with charge transferring layer of specified composition
Y10T 428/1059	..	with bonding or intermediate layer of specified composition [e.g., sealant, space, etc.]
Y10T 428/1064	...	Inorganic layer
Y10T 428/1068	...	Silicon compound [i.e., organosilicon]
Y10T 428/1073	...	Epoxy
Y10T 428/1077	...	Ester
Y10T 428/1082	...	Unsaturated aliphatic polymer [e.g., vinyl, etc.]
Y10T 428/1086	..	with substrate layer of specified composition
Y10T 428/1091	...	Releasable substrate layer to expose adhesive
Y10T 428/1095	...	Inorganic substrate layer [e.g., ceramic, metallic, glass, etc.]
Y10T 428/11	.	Magnetic recording head
Y10T 428/1107	..	Magnetoresistive
Y10T 428/1114	...	having tunnel junction effect
Y10T 428/1121	...	Multilayer
Y10T 428/1129	....	Super lattice [e.g., giant magneto resistance [GMR] or colossal magneto resistance [CMR], etc.]
Y10T 428/1136	...	Single film
Y10T 428/1143	...	with defined structural feature
Y10T 428/115	..	Magnetic layer composition
Y10T 428/1157	..	Substrate composition
Y10T 428/1164	..	with protective film
Y10T 428/1171	..	with defined laminate structural detail
Y10T 428/1179	...	Head with slider structure
Y10T 428/1186	...	with head pole component
Y10T 428/1193	..	with interlaminar component [e.g., adhesion layer, etc.]
Y10T 428/12	.	All metal or with adjacent metals
Y10T 428/12007	..	Component of composite having metal continuous phase interengaged with nonmetal continuous phase
Y10T 428/12014	..	having metal particles
Y10T 428/12021	...	having composition or density gradient or differential porosity
Y10T 428/12028	...	Composite; i.e., plural, adjacent, spatially distinct metal components [e.g., layers, etc.]
Y10T 428/12035	....	Fiber, asbestos, or cellulose in or next to particulate component
Y10T 428/12042	....	Porous component
Y10T 428/12049	....	Nonmetal component
Y10T 428/12056	.....	Entirely inorganic

Y10T 428/12063	....	Nonparticulate metal component
Y10T 428/12069	.....	Plural nonparticulate metal components
Y10T 428/12076	.....	Next to each other
Y10T 428/12083	.....	Nonmetal in particulate component
Y10T 428/1209	.....	Plural particulate metal components
Y10T 428/12097	.....	Nonparticulate component encloses particles
Y10T 428/12104	.....	Particles discontinuous
Y10T 428/12111	.....	Separated by nonmetal matrix or binder [e.g., welding electrode, etc.]
Y10T 428/12118	.....	Nonparticulate component has Ni-, Cu-, or Zn-base
Y10T 428/12125	.....	Nonparticulate component has Fe-base
Y10T 428/12132	.....	Next to Fe-containing particles
Y10T 428/12139	.....	Nonmetal particles in particulate component
Y10T 428/12146	....	Nonmetal particles in a component
Y10T 428/12153	...	Interconnected void structure [e.g., permeable, etc.]
Y10T 428/1216	...	Continuous interengaged phases of plural metals, or oriented fiber containing
Y10T 428/12167	....	Nonmetal containing
Y10T 428/12174	....	Mo or W containing
Y10T 428/12181	..	Composite powder [e.g., coated, etc.]
Y10T 428/12188	..	having marginal feature for indexing or weakened portion for severing
Y10T 428/12194	...	For severing perpendicular to longitudinal dimension
Y10T 428/12201	..	Width or thickness variation or marginal cuts repeating longitudinally
Y10T 428/12208	...	Variation in both width and thickness
Y10T 428/12215	...	Marginal slots [i.e., deeper than wide]
Y10T 428/12222	..	Shaped configuration for melting [e.g., package, etc.]
Y10T 428/12229	..	Intermediate article [e.g., blank, etc.]
Y10T 428/12236	...	Panel having nonrectangular perimeter
Y10T 428/12243	....	Disk
Y10T 428/1225	....	Symmetrical
Y10T 428/12257	.....	Only one plane of symmetry
Y10T 428/12264	...	having outward flange, gripping means or interlocking feature
Y10T 428/12271	...	having discrete fastener, marginal fastening, taper, or end structure
Y10T 428/12278	....	Same structure at both ends of plural taper
Y10T 428/12285	....	Single taper [e.g., ingot, etc.]
Y10T 428/12292	..	Workpiece with longitudinal passageway or stopweld material [e.g., for tubular stock, etc.]
Y10T 428/12299	..	Workpiece mimicking finished stock having nonrectangular or noncircular cross section
Y10T 428/12306	..	Workpiece of parallel, nonfastened components [e.g., fagot, pile, etc.]
Y10T 428/12313	...	Arranged to avoid lateral displacement
Y10T 428/12319	...	Composite

Y10T 428/12326	..	with provision for limited relative movement between components
Y10T 428/12333	..	Helical or with helical component
Y10T 428/1234	..	Honeycomb, or with grain orientation or elongated elements in defined angular relationship in respective components [e.g., parallel, inter- secting, etc.]
Y10T 428/12347	..	Plural layers discontinuously bonded [e.g., spot-weld, mechanical fastener, etc.]
Y10T 428/12354	..	Nonplanar, uniform-thickness material having symmetrical channel shape or reverse fold [e.g., making acute angle, etc.]
Y10T 428/12361	..	having aperture or cut
Y10T 428/12368	...	Struck-out portion type
Y10T 428/12375	..	having member which crosses the plane of another member [e.g., T or X cross section, etc.]
Y10T 428/12382	..	Defined configuration of both thickness and nonthickness surface or angle therebetween [e.g., rounded corners, etc.]
Y10T 428/12389	..	having variation in thickness
Y10T 428/12396	...	Discontinuous surface component
Y10T 428/12403	...	Longitudinally smooth and symmetrical
Y10T 428/1241	..	Nonplanar uniform thickness or nonlinear uniform diameter [e.g., L-shape]
Y10T 428/12417	...	Intersecting corrugating or dimples not in a single line [e.g., waffle form, etc.]
Y10T 428/12424	..	Mass of only fibers
Y10T 428/12431	..	Foil or filament smaller than 6 mils
Y10T 428/12438	...	Composite
Y10T 428/12444	..	Embodying fibers interengaged or between layers [e.g., paper, etc.]
Y10T 428/12451	..	Macroscopically anomalous interface between layers
Y10T 428/12458	..	having composition, density, or hardness gradient
Y10T 428/12465	..	having magnetic properties, or preformed fiber orientation coordinate with shape
Y10T 428/12472	..	Microscopic interfacial wave or roughness
Y10T 428/12479	..	Porous [e.g., foamed, spongy, cracked, etc.]
Y10T 428/12486	..	Laterally noncoextensive components [e.g., embedded, etc.]
Y10T 428/12493	..	Composite; i.e., plural, adjacent, spatially distinct metal components [e.g., layers, joint, etc.]
Y10T 428/125	...	Deflectable by temperature change [e.g., thermostat element]
Y10T 428/12507	....	More than two components
Y10T 428/12514	....	One component Cu-based
Y10T 428/12521	....	Both components Fe-based with more than 10% Ni
Y10T 428/12528	...	Semiconductor component
Y10T 428/12535	...	with additional, spatially distinct nonmetal component
Y10T 428/12542	....	More than one such component
Y10T 428/12549	.....	Adjacent to each other
Y10T 428/12556	....	Organic component
Y10T 428/12562	.....	Elastomer
Y10T 428/12569	.....	Synthetic resin

Y10T 428/12576	....	Boride, carbide or nitride component
Y10T 428/12583	....	Component contains compound of adjacent metal
Y10T 428/1259	.....	Oxide
Y10T 428/12597	....	Noncrystalline silica or noncrystalline plural-oxide component [e.g., glass, etc.]
Y10T 428/12604	.....	Film [e.g., glaze, etc.]
Y10T 428/12611	....	Oxide-containing component
Y10T 428/12618	.....	Plural oxides
Y10T 428/12625	....	Free carbon containing component
Y10T 428/12632	...	Four or more distinct components with alternate recurrence of each type component
Y10T 428/12639	...	Adjacent, identical composition, components
Y10T 428/12646	....	Group VIII or IB metal-base
Y10T 428/12653	.....	Fe, containing 0.01-1.7% carbon [i.e., steel]
Y10T 428/1266	...	O, S, or organic compound in metal component
Y10T 428/12667	....	Oxide of transition metal or Al
Y10T 428/12674	...	Ge- or Si-base component
Y10T 428/12681	...	Ga-, In-, Tl- or Group VA metal-base component
Y10T 428/12687	...	Pb- and Sn-base components: alternative to or next to each other
Y10T 428/12694	....	and next to Cu- or Fe-base component
Y10T 428/12701	...	Pb-base component
Y10T 428/12708	...	Sn-base component
Y10T 428/12715	....	Next to Group IB metal-base component
Y10T 428/12722	....	Next to Group VIII metal-base component
Y10T 428/12729	...	Group IIA metal-base component
Y10T 428/12736	...	Al-base component
Y10T 428/12743	....	Next to refractory [Group IVB, VB, or VIB] metal-base component
Y10T 428/1275	....	Next to Group VIII or IB metal-base component
Y10T 428/12757	.....	Fe
Y10T 428/12764	....	Next to Al-base component
Y10T 428/12771	...	Transition metal-base component
Y10T 428/12778	....	Alternative base metals from diverse categories
Y10T 428/12785	....	Group IIB metal-base component
Y10T 428/12792	.....	Zn-base component
Y10T 428/12799	.....	Next to Fe-base component [e.g., galvanized]
Y10T 428/12806	....	Refractory [Group IVB, VB, or VIB] metal-base component
Y10T 428/12812	.....	Diverse refractory group metal-base components: alternative to or next to each other
Y10T 428/12819	.....	Group VB metal-base component
Y10T 428/12826	.....	Group VIB metal-base component
Y10T 428/12833	.....	Alternative to or next to each other



Y10T 428/1284	.....	W-base component
Y10T 428/12847	.....	Cr-base component
Y10T 428/12854	.....	Next to Co-, Fe-, or Ni-base component
Y10T 428/12861	....	Group VIII or IB metal-base component
Y10T 428/12868	.....	Group IB metal-base component alternative to platinum group metal-base component [e.g., precious metal, etc.]
Y10T 428/12875	.....	Platinum group metal-base component
Y10T 428/12882	.....	Cu-base component alternative to Ag-, Au-, or Ni-base component
Y10T 428/12889	.....	Au-base component
Y10T 428/12896	.....	Ag-base component
Y10T 428/12903	.....	Cu-base component
Y10T 428/1291	.....	Next to Co-, Cu-, or Ni-base component
Y10T 428/12917	.....	Next to Fe-base component
Y10T 428/12924	.....	Fe-base has 0.01-1.7% carbon [i.e., steel]
Y10T 428/12931	.....	Co-, Fe-, or Ni-base components, alternative to each other
Y10T 428/12937	.....	Co- or Ni-base component next to Fe-base component
Y10T 428/12944	.....	Ni-base component
Y10T 428/12951	.....	Fe-base component
Y10T 428/12958	.....	Next to Fe-base component
Y10T 428/12965	.....	Both containing 0.01-1.7% carbon [i.e., steel]
Y10T 428/12972	.....	Containing 0.01-1.7% carbon [i.e., steel]
Y10T 428/12979	.....	Containing more than 10% nonferrous elements [e.g., high alloy, stainless]
Y10T 428/12986	...	Adjacent functionally defined components
Y10T 428/12993	..	Surface feature [e.g., rough, mirror]
Y10T 428/13	.	Hollow or container type article [e.g., tube, vase, etc.]
Y10T 428/1303	..	Paper containing [e.g., paperboard, cardboard, fiberboard, etc.]
Y10T 428/1307	...	Bag or tubular film [e.g., pouch, flexible food casing, envelope, etc.]
Y10T 428/131	..	Glass, ceramic, or sintered, fused, fired, or calcined metal oxide or metal carbide containing [e.g., porcelain, brick, cement, etc.]
Y10T 428/1314	...	Contains fabric, fiber particle, or filament made of glass, ceramic, or sintered, fused, fired, or calcined metal oxide, or metal carbide or other inorganic compound [e.g., fiber glass, mineral fiber, sand, etc.]
Y10T 428/1317	...	Multilayer [continuous layer]
Y10T 428/1321	....	Polymer or resin containing [i.e., natural or synthetic]
Y10T 428/1324	..	Flexible food casing [e.g., sausage type, etc.]
Y10T 428/1328	..	Shrinkable or shrunk [e.g., due to heat, solvent, volatile agent, restraint removal, etc.]
Y10T 428/1331	...	Single layer [continuous layer]
Y10T 428/1334	..	Nonself-supporting tubular film or bag [e.g., pouch, envelope, packet, etc.]
Y10T 428/1338	...	Elemental metal containing

Y10T 428/1341	...	Contains vapor or gas barrier, polymer derived from vinyl chloride or vinylidene chloride, or polymer containing a vinyl alcohol unit
Y10T 428/1345	...	Single layer [continuous layer]
Y10T 428/1348	..	Cellular material derived from plant or animal source [e.g., wood, cotton, wool, leather, etc.]
Y10T 428/1352	..	Polymer or resin containing [i.e., natural or synthetic]
Y10T 428/1355	...	Elemental metal containing [e.g., substrate, foil, film, coating, etc.]
Y10T 428/1359	....	Three or more layers [continuous layer]
Y10T 428/1362	...	Textile, fabric, cloth, or pile containing [e.g., web, net, woven, knitted, mesh, nonwoven, matted, etc.]
Y10T 428/1366	....	Textile, fabric, cloth, or pile is sandwiched between two distinct layers of material unlike the textile, fabric, cloth, or pile layer
Y10T 428/1369	...	Fiber or fibers wound around each other or into a self-sustaining shape [e.g., yarn, braid, fibers shaped around a core, etc.]
Y10T 428/1372	...	Randomly noninterengaged or randomly contacting fibers, filaments, particles, or flakes
Y10T 428/1376	...	Foam or porous material containing
Y10T 428/1379	...	Contains vapor or gas barrier, polymer derived from vinyl chloride or vinylidene chloride, or polymer containing a vinyl alcohol unit
Y10T 428/1383	....	Vapor or gas barrier, polymer derived from vinyl chloride or vinylidene chloride, or polymer containing a vinyl alcohol unit is sandwiched between layers [continuous layer]
Y10T 428/1386	...	Natural or synthetic rubber or rubber-like compound containing
Y10T 428/139	...	Open-ended, self-supporting conduit, cylinder, or tube-type article
Y10T 428/1393	....	Multilayer [continuous layer]
Y10T 428/1397	...	Single layer [continuous layer]
Y10T 428/14	.	Layer or component removable to expose adhesive
Y10T 428/1405	..	Capsule or particulate matter containing [e.g., sphere, flake, microballoon, etc.]
Y10T 428/141	..	Bituminous
Y10T 428/1414	..	Ceramic, glass, glasslike, vitreous
Y10T 428/1419	..	Wax containing
Y10T 428/1424	..	Halogen containing compound
Y10T 428/1429	...	Fluorine
Y10T 428/1433	...	Coloring agent containing
Y10T 428/1438	..	Metal containing
Y10T 428/1443	...	Aluminum
Y10T 428/1448	...	Coloring agent containing
Y10T 428/1452	..	Polymer derived only from ethylenically unsaturated monomer
Y10T 428/1457	...	Silicon
Y10T 428/1462	..	Polymer derived from material having at least one acrylic or alkacrylic group or the nitrile or amide derivative thereof [e.g., acrylamide, acrylate ester, etc.]
Y10T 428/1467	..	Coloring agent
Y10T 428/1471	..	Protective layer

Y10T 428/1476	.. Release layer
Y10T 428/1481	.. Dissimilar adhesives
Y10T 428/1486	.. Ornamental, decorative, pattern, or indicia
Y10T 428/149	.. Sectional layer removable
Y10T 428/1495	... Adhesive is on removable layer
Y10T 428/15	. Sheet, web, or layer weakened to permit separation through thickness
Y10T 428/16	. Two dimensionally sectional layer
Y10T 428/161	.. with frame, casing, or perimeter structure
Y10T 428/162	.. Transparent or translucent layer or section
Y10T 428/163	.. Next to unitary web or sheet of equal or greater extent
Y10T 428/164	... Continuous two dimensionally sectional layer
Y10T 428/166	.... Glass, ceramic, or metal sections [e.g., floor or wall tile, etc.]
Y10T 428/167	.... Cellulosic sections [e.g., parquet floor, etc.]
Y10T 428/168	... Nonrectangular
Y10T 428/169	.. Sections connected flexibly with external fastener
Y10T 428/17	. Three or more coplanar interfitted sections with securing means
Y10T 428/18	. Longitudinally sectional layer of three or more sections
Y10T 428/183	.. Next to unitary sheet of equal or greater extent
Y10T 428/187	... Continuous sectional layer
Y10T 428/19	. Sheets or webs edge spliced or joined
Y10T 428/192	.. Sheets or webs coplanar
Y10T 428/193	... Double faced corrugated sheets or webs connected
Y10T 428/195	... Beveled, stepped, or skived in thickness
Y10T 428/197	... with noncoplanar reinforcement
Y10T 428/198	.... Pile or nap surface sheets connected
Y10T 428/20	. Patched hole or depression
Y10T 428/21	. Circular sheet or circular blank
Y10T 428/211	.. Gear
Y10T 428/213	.. Frictional
Y10T 428/214	.. End closure
Y10T 428/215	.. Seal, gasket, or packing
Y10T 428/216	.. Ornamental, decorative, pattern, or indicia
Y10T 428/218	.. Aperture containing
Y10T 428/219	.. Edge structure
Y10T 428/22	. Nonparticulate element embedded or inlaid in substrate and visible
Y10T 428/23	. Sheet including cover or casing
Y10T 428/231	.. Filled with gas other than air; or under vacuum
Y10T 428/232	.. Encased layer derived from inorganic settable ingredient
Y10T 428/233	.. Foamed or expanded material encased
Y10T 428/234	.. including elements cooperating to form cells

Y10T 428/236	...	Honeycomb type cells extend perpendicularly to nonthickness layer
Y10T 428/237	..	Noninterengaged fibered material encased [e.g., mat, batt, etc.]
Y10T 428/238	...	Metal cover or casing
Y10T 428/239	..	Complete cover or casing
Y10T 428/23907	.	Pile or nap type surface or component
Y10T 428/23914	..	Interlaminar
Y10T 428/23921	..	With particles
Y10T 428/23929	..	Edge feature or configured or discontinuous surface
Y10T 428/23936	...	Differential pile length or surface
Y10T 428/23943	..	Flock surface
Y10T 428/2395	..	Nap type surface
Y10T 428/23957	..	Particular shape or structure of pile
Y10T 428/23964	...	U-, V-, or W-shaped or continuous strand, filamentary material
Y10T 428/23971	....	Continuous strand with adhesive bond to backing
Y10T 428/23979	..	Particular backing structure or composition
Y10T 428/23986	..	With coating, impregnation, or bond
Y10T 428/23993	..	Composition of pile or adhesive
Y10T 428/24	.	Structurally defined web or sheet [e.g., overall dimension, etc.]
Y10T 428/24008	..	including fastener for attaching to external surface
Y10T 428/24017	...	Hook or barb
Y10T 428/24025	..	Superposed movable attached layers or components
Y10T 428/24033	..	including stitching and discrete fastener[s], coating or bond
Y10T 428/24041	...	Discontinuous or differential coating, impregnation, or bond
Y10T 428/2405	....	Coating, impregnation, or bond in stitching zone only
Y10T 428/24058	..	including grain, strips, or filamentary elements in respective layers or components in angular relation
Y10T 428/24066	...	Wood grain
Y10T 428/24074	...	Strand or strand-portions
Y10T 428/24083	....	Nonlinear strands or strand-portions
Y10T 428/24091	....	with additional layer[s]
Y10T 428/24099	.....	On each side of strands or strand-portions
Y10T 428/24107	.....	including mechanically interengaged strands, strand-portions or strand-like strips
Y10T 428/24116	....	Oblique to direction of web
Y10T 428/24124	...	Fibers
Y10T 428/24132	..	including grain, strips, or filamentary elements in different layers or components parallel
Y10T 428/2414	..	including fringe
Y10T 428/24149	..	Honeycomb-like
Y10T 428/24157	...	Filled honeycomb cells [e.g., solid substance in cavities, etc.]
Y10T 428/24165	...	Hexagonally shaped cavities

Y10T 428/24174	..	including sheet or component perpendicular to plane of web or sheet
Y10T 428/24182	...	Inward from edge of web or sheet
Y10T 428/2419	..	Fold at edge
Y10T 428/24198	...	Channel-shaped edge component [e.g., binding, etc.]
Y10T 428/24207	...	with strand[s] or strand-portion[s] between layers [e.g., upholstery trim, etc.]
Y10T 428/24215	...	Acute or reverse fold of exterior component
Y10T 428/24223	....	Embedded in body of web
Y10T 428/24231	....	At opposed marginal edges
Y10T 428/2424	.....	Annular cover
Y10T 428/24248	.....	One piece
Y10T 428/24256	.....	Abutted or lapped seam
Y10T 428/24264	...	Particular fold structure [e.g., beveled, etc.]
Y10T 428/24273	..	including aperture
Y10T 428/24281	...	Struck out portion type
Y10T 428/24289	....	Embedded or interlocked
Y10T 428/24298	...	Noncircular aperture [e.g., slit, diamond, rectangular, etc.]
Y10T 428/24306	....	Diamond or hexagonal
Y10T 428/24314	....	Slit or elongated
Y10T 428/24322	...	Composite web or sheet
Y10T 428/24331	....	including nonapertured component
Y10T 428/24339	.....	Keyed
Y10T 428/24347	.....	From both sides
Y10T 428/24355	..	Continuous and nonuniform or irregular surface on layer or component [e.g., roofing, etc.]
Y10T 428/24364	...	with transparent or protective coating
Y10T 428/24372	...	Particulate matter
Y10T 428/2438	....	Coated
Y10T 428/24388	.....	Silicon containing coating
Y10T 428/24397	....	Carbohydrate
Y10T 428/24405	....	Polymer or resin [e.g., natural or synthetic rubber, etc.]
Y10T 428/24413	....	Metal or metal compound
Y10T 428/24421	....	Silicon containing
Y10T 428/2443	.....	Sand, clay, or crushed rock or slate
Y10T 428/24438	...	Artificial wood or leather grain surface
Y10T 428/24446	...	Wrinkled, creased, crinkled or creped
Y10T 428/24455	....	Paper
Y10T 428/24463	.....	Plural paper components
Y10T 428/24471	...	Crackled, crazed or slit
Y10T 428/24479	..	including variation in thickness
Y10T 428/24488	...	Differential nonuniformity at margin

Y10T 428/24496	...	Foamed or cellular component
Y10T 428/24504	....	Component comprises a polymer [e.g., rubber, etc.]
Y10T 428/24512	.....	Polyurethane
Y10T 428/24521	...	with component conforming to contour of nonplanar surface
Y10T 428/24529	....	and conforming component on an opposite nonplanar surface
Y10T 428/24537	....	Parallel ribs and/or grooves
Y10T 428/24545	....	Containing metal or metal compound
Y10T 428/24554	....	including cellulosic or natural rubber component
Y10T 428/24562	...	Interlaminar spaces
Y10T 428/2457	...	Parallel ribs and/or grooves
Y10T 428/24579	....	with particulate matter
Y10T 428/24587	....	Oblique to longitudinal axis of web or sheet
Y10T 428/24595	...	and varying density
Y10T 428/24603	....	Fiber containing component
Y10T 428/24612	...	Composite web or sheet
Y10T 428/2462	....	with partial filling of valleys on outer surface
Y10T 428/24628	..	Nonplanar uniform thickness material
Y10T 428/24636	...	Embodying mechanically interengaged strand[s], strand-portion[s] or strand-like strip[s] [e.g., weave, knit, etc.]
Y10T 428/24645	....	with folds in parallel planes
Y10T 428/24653	...	Differential nonplanarity at margin
Y10T 428/24661	...	Forming, or cooperating to form cells
Y10T 428/24669	...	Aligned or parallel nonplanarities
Y10T 428/24678	....	Waffle-form
Y10T 428/24686	....	Pleats or otherwise parallel adjacent folds
Y10T 428/24694	....	Parallel corrugations
Y10T 428/24702	.....	with locally deformed crests or intersecting series of corrugations
Y10T 428/24711	.....	Plural corrugated components
Y10T 428/24719	.....	with corrugations of respective components intersecting in plane projection
Y10T 428/24727	.....	with planar component
Y10T 428/24736	...	Ornamental design or indicia
Y10T 428/24744	..	Longitudinal or transverse tubular cavity or cell
Y10T 428/24752	..	Laterally noncoextensive components
Y10T 428/2476	...	Fabric, cloth or textile component
Y10T 428/24769	...	Cellulosic
Y10T 428/24777	..	Edge feature
Y10T 428/24785	...	including layer embodying mechanically interengaged strands, strand portions or strand-like strips [e.g., weave, knit, etc.]
Y10T 428/24793	...	Comprising discontinuous or differential impregnation or bond

Y10T 428/24802	..	Discontinuous or differential coating, impregnation or bond [e.g., artwork, printing, retouched photograph, etc.]
Y10T 428/2481	...	including layer of mechanically interengaged strands, strand-portions or strand-like strips
Y10T 428/24818	....	Knitted, with particular or differential bond sites or intersections
Y10T 428/24826	...	Spot bonds connect components
Y10T 428/24835	...	including developable image or soluble portion in coating or impregnation [e.g., safety paper, etc.]
Y10T 428/24843	...	with heat sealable or heat releasable adhesive layer
Y10T 428/24851	...	Intermediate layer is discontinuous or differential
Y10T 428/2486	....	with outer strippable or release layer
Y10T 428/24868	....	Translucent outer layer
Y10T 428/24876	.....	Intermediate layer contains particulate material [e.g., pigment, etc.]
Y10T 428/24884	.....	Translucent layer comprises natural oil, wax, resin, gum, glue, gelatin
Y10T 428/24893	...	including particulate material
Y10T 428/24901	....	including coloring matter
Y10T 428/24909	....	Free metal or mineral containing
Y10T 428/24917	...	including metal layer
Y10T 428/24926	...	including ceramic, glass, porcelain or quartz layer
Y10T 428/24934	...	including paper layer
Y10T 428/24942	..	including components having same physical characteristic in differing degree
Y10T 428/2495	...	Thickness [relative or absolute]
Y10T 428/24959	....	of adhesive layers
Y10T 428/24967	....	Absolute thicknesses specified
Y10T 428/24975	.....	No layer or component greater than 5 mils thick
Y10T 428/24983	...	Hardness
Y10T 428/24992	...	Density or compression of components
Y10T 428/249921	.	Web or sheet containing structurally defined element or component
Y10T 428/249922	..	Embodying intertwined or helical component[s]
Y10T 428/249923	..	Including interlaminar mechanical fastener
Y10T 428/249924	..	Noninterengaged fiber-containing paper-free web or sheet which is not of specified porosity
Y10T 428/249925	...	Fiber-containing wood product [e.g., hardboard, lumber, or wood board, etc.]
Y10T 428/249926	...	Including paper layer
Y10T 428/249927	...	Fiber embedded in a metal matrix
Y10T 428/249928	...	Fiber embedded in a ceramic, glass, or carbon matrix
Y10T 428/249929	....	Fibers are aligned substantially parallel
Y10T 428/24993	.....	Fiber is precoated
Y10T 428/249931	....	Free metal or alloy fiber
Y10T 428/249932	...	Fiber embedded in a layer derived from a water-settable material [e.g., cement, gypsum, etc.]



Y10T 428/249933	...	Fiber embedded in or on the surface of a natural or synthetic rubber matrix
Y10T 428/249934	....	Fibers are aligned substantially parallel
Y10T 428/249935	.....	Fiber is nonlinear [e.g., crimped, sinusoidal, etc.]
Y10T 428/249936	.....	Fiber is precoated
Y10T 428/249937	....	Fiber is precoated
Y10T 428/249938	....	Composite or conjugate fiber [e.g., fiber contains more than one chemically different material in monofilament or multifilament form, etc.]
Y10T 428/249939	....	Two or more layers
Y10T 428/24994	...	Fiber embedded in or on the surface of a polymeric matrix
Y10T 428/249941	....	Fiber is on the surface of a polymeric matrix having no embedded portion
Y10T 428/249942	....	Fibers are aligned substantially parallel
Y10T 428/249943	.....	Fiber is nonlinear [e.g., crimped, sinusoidal, etc.]
Y10T 428/249944	.....	Fiber is precoated
Y10T 428/249945	.....	Carbon or carbonaceous fiber
Y10T 428/249946	.....	Glass fiber
Y10T 428/249947	.....	Polymeric fiber
Y10T 428/249948	....	Fiber is precoated
Y10T 428/249949	....	Two or more chemically different fibers
Y10T 428/24995	....	Two or more layers
Y10T 428/249951	.....	Including a free metal or alloy constituent
Y10T 428/249952	.....	At least one thermosetting synthetic polymeric material layer
Y10T 428/249953	..	Composite having voids in a component [e.g., porous, cellular, etc.]
Y10T 428/249954	...	With chemically effective material or specified gas other than air, N, or carbon dioxide in void-containing component
Y10T 428/249955	...	Void-containing component partially impregnated with adjacent component
Y10T 428/249956	....	Void-containing component is inorganic
Y10T 428/249957	.....	Inorganic impregnant
Y10T 428/249958	....	Void-containing component is synthetic resin or natural rubbers
Y10T 428/249959	....	Void-containing component is wood or paper
Y10T 428/24996	...	With internal element bridging layers, nonplanar interface between layers, or intermediate layer of commingled adjacent foam layers
Y10T 428/249961	...	With gradual property change within a component
Y10T 428/249962	...	Void-containing component has a continuous matrix of fibers only [e.g., porous paper, etc.]
Y10T 428/249963	....	And a force disintegratable component [e.g., stencil sheet, etc.]
Y10T 428/249964	....	Fibers of defined composition
Y10T 428/249965	.....	Cellulosic
Y10T 428/249966	.....	Plural cellulosic components
Y10T 428/249967	...	Inorganic matrix in void-containing component
Y10T 428/249968	....	Of hydraulic-setting material
Y10T 428/249969	....	Of silicon-containing material [e.g., glass, etc.]



Y10T 428/24997	....	Of metal-containing material
Y10T 428/249971	...	Preformed hollow element-containing
Y10T 428/249972	....	Resin or rubber element
Y10T 428/249973	....	Mineral element
Y10T 428/249974	....	Metal- or silicon-containing element
Y10T 428/249975	...	Void shape specified [e.g., crushed, flat, round, etc.]
Y10T 428/249976	...	Voids specified as closed
Y10T 428/249977	....	Specified thickness of void-containing component [absolute or relative], numerical cell dimension or density
Y10T 428/249978	...	Voids specified as micro
Y10T 428/249979	....	Specified thickness of void-containing component [absolute or relative] or numerical cell dimension
Y10T 428/24998	....	Composite has more than two layers
Y10T 428/249981	...	Plural void-containing components
Y10T 428/249982	...	With component specified as adhesive or bonding agent
Y10T 428/249983	....	As outermost component
Y10T 428/249984	....	Adhesive or bonding component contains voids
Y10T 428/249985	....	Composition of adhesive or bonding component specified
Y10T 428/249986	...	Void-containing component contains also a solid fiber or solid particle
Y10T 428/249987	...	With nonvoid component of specified composition
Y10T 428/249988	....	Of about the same composition as, and adjacent to, the void-containing component
Y10T 428/249989	.....	Integrally formed skin
Y10T 428/24999	....	Inorganic
Y10T 428/249991	....	Synthetic resin or natural rubbers
Y10T 428/249992	.....	Linear or thermoplastic
Y10T 428/249993	.....	Hydrocarbon polymer
Y10T 428/249994	..	Composite having a component wherein a constituent is liquid or is contained within preformed walls [e.g., impregnant-filled, previously void containing component, etc.]
Y10T 428/249995	...	Constituent is in liquid form
Y10T 428/249996	....	Ink in pores
Y10T 428/249997	....	Encapsulated liquid
Y10T 428/249998	...	Indefinite plurality of similar impregnated thin sheets [e.g., "decorative laminate" type, etc.]
Y10T 428/249999	...	Differentially filled foam, filled plural layers, or filled layer with coat of filling material
Y10T 428/25	.	Web or sheet containing structurally defined element or component and including a second component containing structurally defined particles
Y10T 428/251	..	Mica
Y10T 428/252	..	Glass or ceramic [i.e., fired or glazed clay, cement, etc.] [porcelain, quartz, etc.]
Y10T 428/253	..	Cellulosic [e.g., wood, paper, cork, rayon, etc.]

Y10T 428/254	..	Polymeric or resinous material
Y10T 428/256	..	Heavy metal or aluminum or compound thereof
Y10T 428/257	...	Iron oxide or aluminum oxide
Y10T 428/258	..	Alkali metal or alkaline earth metal or compound thereof
Y10T 428/259	..	Silicic material
Y10T 428/26	.	Web or sheet containing structurally defined element or component, the element or component having a specified physical dimension
Y10T 428/261	..	In terms of molecular thickness or light wave length
Y10T 428/263	..	Coating layer not in excess of 5 mils thick or equivalent
Y10T 428/264	...	Up to 3 mils
Y10T 428/265	....	1 mil or less
Y10T 428/266	..	of base or substrate
Y10T 428/268	..	Monolayer with structurally defined element
Y10T 428/269	..	including synthetic resin or polymer layer or component
Y10T 428/27	.	Web or sheet containing structurally defined element or component, the element or component having a specified weight per unit area [e.g., gms/sq cm, lbs/sq ft, etc.]
Y10T 428/273	..	of coating
Y10T 428/277	...	Cellulosic substrate
Y10T 428/28	.	Web or sheet containing structurally defined element or component and having an adhesive outermost layer
Y10T 428/2804	..	Next to metal
Y10T 428/2809	..	including irradiated or wave energy treated component
Y10T 428/2813	..	Heat or solvent activated or sealable
Y10T 428/2817	...	Heat sealable
Y10T 428/2822	....	Wax containing
Y10T 428/2826	....	Synthetic resin or polymer
Y10T 428/283	...	Water activated
Y10T 428/2835	..	including moisture or waterproof component
Y10T 428/2839	..	with release or antistick coating
Y10T 428/2843	..	including a primer layer
Y10T 428/2848	..	Three or more layers
Y10T 428/2852	..	Adhesive compositions
Y10T 428/2857	...	including metal or compound thereof or natural rubber
Y10T 428/2861	...	having readily strippable combined with readily readhearable properties [e.g., stick-ons, etc.]
Y10T 428/2865	...	including monomer or polymer of carbohydrate [e.g., starch, dextrin, etc.] Or protein [e.g., casein, animal protein, etc.] Or derivative thereof
Y10T 428/287	...	including epoxy group or epoxy polymer
Y10T 428/2874	...	including aldehyde or ketone condensation polymer [e.g., urea formaldehyde polymer, melamine formaldehyde polymer, etc.]
Y10T 428/2878	...	including addition polymer from unsaturated monomer
Y10T 428/2883	....	including addition polymer of diene monomer [e.g., SBR, SIS, etc.]

Y10T 428/2887	....	including nitrogen containing polymer [e.g., polyacrylonitrile, polymethacrylonitrile, etc.]
Y10T 428/2891	....	including addition polymer from alpha-beta unsaturated carboxylic acid [e.g., acrylic acid, methacrylic acid, etc.] Or derivative thereof
Y10T 428/2896	...	including nitrogen containing condensation polymer [e.g., polyurethane, polyisocyanate, etc.]
Y10T 428/29	.	Coated or structually defined flake, particle, cell, strand, strand portion, rod, filament, macroscopic fiber or mass thereof
Y10T 428/2902	..	Channel shape
Y10T 428/2904	..	Staple length fiber
Y10T 428/2905	...	Plural and with bonded intersections only
Y10T 428/2907	...	with coating or impregnation
Y10T 428/2909	...	Nonlinear [e.g., crimped, coiled, etc.]
Y10T 428/2911	..	Mica flake
Y10T 428/2913	..	Rod, strand, filament or fiber
Y10T 428/2915	...	including textile, cloth or fabric
Y10T 428/2916	...	including boron or compound thereof [not as steel]
Y10T 428/2918	...	including free carbon or carbide or therewith [not as steel]
Y10T 428/292	....	In coating or impregnation
Y10T 428/2922	...	Nonlinear [e.g., crimped, coiled, etc.]
Y10T 428/2924	....	Composite
Y10T 428/2925	....	Helical or coiled
Y10T 428/2927	...	including structurally defined particulate matter
Y10T 428/2929	...	Bicomponent, conjugate, composite or collateral fibers or filaments [i.e., coextruded sheath-core or side-by-side type]
Y10T 428/2931	....	Fibers or filaments nonconcentric [e.g., side-by-side or eccentric, etc.]
Y10T 428/2933	...	Coated or with bond, impregnation or core
Y10T 428/2935	....	Discontinuous or tubular or cellular core
Y10T 428/2936	....	Wound or wrapped core or coating [i.e., spiral or helical]
Y10T 428/2938	....	Coating on discrete and individual rods, strands or filaments
Y10T 428/294	....	including metal or compound thereof [excluding glass, ceramic and asbestos]
Y10T 428/2942	.....	Plural coatings
Y10T 428/2944	.....	Free metal in coating
Y10T 428/2945	.....	Natural rubber in coating
Y10T 428/2947	.....	Synthetic resin or polymer in plural coatings, each of different type
Y10T 428/2949	.....	Glass, ceramic or metal oxide in coating
Y10T 428/2951	.....	Metal with weld modifying or stabilizing coating [e.g., flux, slag, producer, etc.]
Y10T 428/2953	.....	Titanium compound in coating
Y10T 428/2955	.....	Silicic material in coating
Y10T 428/2956	.....	Glass or silicic fiber or filament with metal coating

Y10T 428/2958	.....	Metal or metal compound in coating
Y10T 428/296	.....	Rubber, cellulosic or silicic material in coating
Y10T 428/2962	....	Silane, silicone or siloxane in coating
Y10T 428/2964	....	Artificial fiber or filament
Y10T 428/2965	.....	Cellulosic
Y10T 428/2967	.....	Synthetic resin or polymer
Y10T 428/2969	.....	Polyamide, polyimide or polyester
Y10T 428/2971	....	Impregnation
Y10T 428/2973	...	Particular cross section
Y10T 428/2975	....	Tubular or cellular
Y10T 428/2976	....	Longitudinally varying
Y10T 428/2978	....	Surface characteristic
Y10T 428/298	...	Physical dimension
Y10T 428/2982	..	Particulate matter [e.g., sphere, flake, etc.]
Y10T 428/2984	...	Microcapsule with fluid core [includes liposome]
Y10T 428/2985	....	Solid-walled microcapsule from synthetic polymer
Y10T 428/2987	.....	Addition polymer from unsaturated monomers only
Y10T 428/2989	...	Microcapsule with solid core [includes liposome]
Y10T 428/2991	...	Coated
Y10T 428/2993	....	Silicic or refractory material containing [e.g., tungsten oxide, glass, cement, etc.]
Y10T 428/2995	.....	Silane, siloxane or silicone coating
Y10T 428/2996	.....	Glass particles or spheres
Y10T 428/2998	....	including synthetic resin or polymer
Y10T 428/30	.	Self-sustaining carbon mass or layer with impregnant or other layer
Y10T 428/31	.	Surface property or characteristic of web, sheet or block
Y10T 428/315	..	Surface modified glass [e.g., tempered, strengthened, etc.]
Y10T 428/31504	.	Composite [nonstructural laminate]
Y10T 428/31507	..	Of polycarbonate
Y10T 428/31511	..	Of epoxy ether
Y10T 428/31515	...	As intermediate layer
Y10T 428/31518	....	Next to glass or quartz
Y10T 428/31522	....	Next to metal
Y10T 428/31525	...	Next to glass or quartz
Y10T 428/31529	...	Next to metal
Y10T 428/31533	..	Of polythioether
Y10T 428/31536	..	Including interfacial reaction product of adjacent layers
Y10T 428/3154	..	Of fluorinated addition polymer from unsaturated monomers
Y10T 428/31544	...	Addition polymer is perhalogenated
Y10T 428/31547	..	Of polyisocyanurate

Y10T 428/31551	..	Of polyamidoester [polyurethane, polyisocyanate, polycarbamate, etc.]
Y10T 428/31554	...	Next to second layer of polyamidoester
Y10T 428/31558	...	Next to animal skin or membrane
Y10T 428/31562	...	Next to polyamide [nylon, etc.]
Y10T 428/31565	...	Next to polyester [polyethylene terephthalate, etc.]
Y10T 428/31569	...	Next to natural rubber
Y10T 428/31573	...	Next to addition polymer of ethylenically unsaturated monomer
Y10T 428/31576	....	Ester monomer type [polyvinylacetate, etc.]
Y10T 428/3158	....	Halide monomer type [polyvinyl chloride, etc.]
Y10T 428/31583	....	Nitrile monomer type [polyacrylonitrile, etc.]
Y10T 428/31587	....	Hydrocarbon polymer [polyethylene, polybutadiene, etc.]
Y10T 428/31591	...	Next to cellulosic
Y10T 428/31594	...	Next to aldehyde or ketone condensation product [phenol-aldehyde, etc.]
Y10T 428/31598	...	Next to silicon-containing [silicone, cement, etc.] layer
Y10T 428/31601	....	Quartz or glass
Y10T 428/31605	...	Next to free metal
Y10T 428/31609	...	Particulate metal or metal compound-containing
Y10T 428/31612	....	As silicone, silane or siloxane
Y10T 428/31616	...	Next to polyester [e.g., alkyd]
Y10T 428/3162	....	Cross-linked polyester [e.g., glycerol maleate-styrene, etc.]
Y10T 428/31623	...	Next to polyamide or polyimide
Y10T 428/31627	...	Next to aldehyde or ketone condensation product
Y10T 428/3163	....	Next to acetal of polymerized unsaturated alcohol [e.g., formal butyral, etc.]
Y10T 428/31634	...	Next to cellulosic
Y10T 428/31638	....	Cellulosic ester
Y10T 428/31641	...	Next to natural rubber, gum, oil, rosin, wax, bituminous or tarry residue
Y10T 428/31645	...	Next to addition polymer from unsaturated monomers
Y10T 428/31649	....	Ester, halide or nitrile of addition polymer
Y10T 428/31652	..	Of asbestos
Y10T 428/31656	...	With metal layer
Y10T 428/31659	...	With cellulosic layer
Y10T 428/31663	...	As siloxane, silicone or silane
Y10T 428/31667	...	Next to addition polymer from unsaturated monomers, or aldehyde or ketone condensation product
Y10T 428/3167	..	Of cork
Y10T 428/31674	...	Including natural oil or gum or rosin [e.g., linoleum, etc.]
Y10T 428/31678	..	Of metal
Y10T 428/31681	...	Next to polyester, polyamide or polyimide [e.g., alkyd, glue, or nylon, etc.]
Y10T 428/31685	....	Natural source polyamide [e.g., casein, gelatin, etc.]
Y10T 428/31688	...	Next to aldehyde or ketone condensation product

Y10T 428/31692	...	Next to addition polymer from unsaturated monomers
Y10T 428/31696	....	Including polyene monomers [e.g., butadiene, etc.]
Y10T 428/31699	....	Ester, halide or nitrile of addition polymer
Y10T 428/31703	...	Next to cellulosic
Y10T 428/31707	...	Next to natural rubber
Y10T 428/3171	....	With natural rubber next to second layer of natural rubber
Y10T 428/31714	...	Next to natural gum, natural oil, rosin, lac or wax
Y10T 428/31717	...	Next to bituminous or tarry residue
Y10T 428/31721	..	Of polyimide
Y10T 428/31725	..	Of polyamide
Y10T 428/31728	...	Next to second layer of polyamide
Y10T 428/31732	....	At least one layer is nylon type
Y10T 428/31736	...	Next to polyester
Y10T 428/31739	...	Nylon type
Y10T 428/31743	....	Next to addition polymer from unsaturated monomer[s]
Y10T 428/31746	.....	Polymer of monoethylenically unsaturated hydrocarbon
Y10T 428/3175	...	Next to addition polymer from unsaturated monomer[s]
Y10T 428/31754	....	Natural source-type polyamide
Y10T 428/31757	....	Polymer of monoethylenically unsaturated hydrocarbon
Y10T 428/31761	...	Next to aldehyde or ketone condensation product
Y10T 428/31765	...	Inorganic-containing or next to inorganic-containing
Y10T 428/31768	...	Natural source-type polyamide [e.g., casein, gelatin, etc.]
Y10T 428/31772	....	Next to cellulosic
Y10T 428/31775	.....	Paper
Y10T 428/31779	...	Next to cellulosic
Y10T 428/31783	....	Paper or wood
Y10T 428/31786	..	Of polyester [e.g., alkyd, etc.]
Y10T 428/3179	...	Next to cellulosic
Y10T 428/31794	...	Of cross-linked polyester
Y10T 428/31797	...	Next to addition polymer from unsaturated monomers
Y10T 428/31801	..	Of wax or waxy material
Y10T 428/31804	...	Next to cellulosic
Y10T 428/31808	....	Cellulosic is paper
Y10T 428/31812	.....	Glassine paper
Y10T 428/31815	..	Of bituminous or tarry residue
Y10T 428/31819	...	Next to cellulosic
Y10T 428/31823	....	Paper
Y10T 428/31826	..	Of natural rubber
Y10T 428/3183	...	Next to second layer of natural rubber

Y10T 428/31833	...	Next to aldehyde or ketone condensation product or addition polymer from unsaturated monomers
Y10T 428/31837	....	Including polyene monomers
Y10T 428/31841	...	Next to cellulosic
Y10T 428/31844	..	Of natural gum, rosin, natural oil or lac
Y10T 428/31848	...	Next to cellulosic
Y10T 428/31851	....	Natural oil
Y10T 428/31855	..	Of addition polymer from unsaturated monomers
Y10T 428/31859	...	Next to an aldehyde or ketone condensation product
Y10T 428/31862	....	Melamine-aldehyde
Y10T 428/31866	.....	Impregnated or coated cellulosic material
Y10T 428/3187	....	Amide-aldehyde
Y10T 428/31873	.....	Urea or modified urea-aldehyde
Y10T 428/31877	....	Phenol-aldehyde
Y10T 428/3188	...	Next to cellulosic
Y10T 428/31884	....	Regenerated or modified cellulose
Y10T 428/31888	.....	Addition polymer of hydrocarbon[s] only
Y10T 428/31891	.....	Where addition polymer is an ester or halide
Y10T 428/31895	....	Paper or wood
Y10T 428/31899	.....	Addition polymer of hydrocarbon[s] only
Y10T 428/31902	.....	Monoethylenically unsaturated
Y10T 428/31906	.....	Ester, halide or nitrile of addition polymer
Y10T 428/31909	...	Next to second addition polymer from unsaturated monomers
Y10T 428/31913	....	Monoolefin polymer
Y10T 428/31917	.....	Next to polyene polymer
Y10T 428/3192	.....	Next to vinyl or vinylidene chloride polymer
Y10T 428/31924	....	Including polyene monomers
Y10T 428/31928	....	Ester, halide or nitrile of addition polymer
Y10T 428/31931	...	Polyene monomer-containing
Y10T 428/31935	...	Ester, halide or nitrile of addition polymer
Y10T 428/31938	...	Polymer of monoethylenically unsaturated hydrocarbon
Y10T 428/31942	..	Of aldehyde or ketone condensation product
Y10T 428/31946	...	Next to second aldehyde or ketone condensation product
Y10T 428/31949	...	Next to cellulosic
Y10T 428/31953	....	Modified or regenerated cellulose
Y10T 428/31957	....	Wood
Y10T 428/3196	.....	Phenoplast
Y10T 428/31964	....	Paper
Y10T 428/31967	.....	Phenoplast
Y10T 428/31971	..	Of carbohydrate

Y10T 428/31975	...	Of cellulosic next to another carbohydrate
Y10T 428/31978	....	Cellulosic next to another cellulosic
Y10T 428/31982	.....	Wood or paper
Y10T 428/31986	.....	Regenerated or modified
Y10T 428/31989	...	Of wood
Y10T 428/31993	...	Of paper
Y10T 428/31996	....	Next to layer of metal salt [e.g., plasterboard, etc.]
Y10T 428/32	.	Composite [nonstructural laminate] of inorganic material having metal-compound-containing layer and having defined magnetic layer
Y10T 428/325	..	Magnetic layer next to second metal compound-containing layer
Y10T 428/4935	.	Impregnated naturally solid product [e.g., leather, stone, etc.]
Y10T 428/662	..	Wood timber product [e.g., piling, post, veneer, etc.]
Y10T 428/8305	.	Miscellaneous [e.g., treated surfaces, etc.]

### **Former US Class 436 Series**

<b>Y10T 436/00</b>	<b>Chemistry: analytical and immunological testing</b>	
Y10T 436/10	.	Composition for standardization, calibration, simulation, stabilization, preparation or preservation; processes of use in preparation for chemical testing
Y10T 436/100833	..	Simulative of a gaseous composition
Y10T 436/101666	..	Particle count or volume standard or control [e.g., platelet count standards, etc.]
Y10T 436/102499	..	Blood gas standard or control
Y10T 436/103332	..	Bilirubin or uric acid standard or control
Y10T 436/104165	..	Lipid, cholesterol, or triglyceride standard or control
Y10T 436/104998	..	Glucose, ketone, nitrate standard or control
Y10T 436/105831	..	Protein or peptide standard or control [e.g., hemoglobin, etc.]
Y10T 436/106664	..	Blood serum or blood plasma standard or control
Y10T 436/107497	..	Preparation composition [e.g., lysing or precipitation, etc.]
Y10T 436/108331	..	Preservative, buffer, anticoagulant or diluent
Y10T 436/109163	..	Inorganic standards or controls
Y10T 436/11	.	Automated chemical analysis
Y10T 436/110833	..	Utilizing a moving indicator strip or tape
Y10T 436/111666	..	Utilizing a centrifuge or compartmented rotor
Y10T 436/112499	..	with sample on test slide
Y10T 436/113332	..	with conveyance of sample along a test line in a container or rack
Y10T 436/114165	...	with step of insertion or removal from test line
Y10T 436/114998	...	with treatment or replacement of aspirator element [e.g., cleaning, etc.]
Y10T 436/115831	..	Condition or time responsive
Y10T 436/116664	...	with automated titrator
Y10T 436/117497	..	with a continuously flowing sample or carrier stream
Y10T 436/118339	...	with formation of a segmented stream



Y10T 436/119163	..	with aspirator of claimed structure
Y10T 436/12	.	Condition responsive control
Y10T 436/13	.	Tracers or tags
Y10T 436/14	.	Heterocyclic carbon compound [i.e. , O, S, N, Se, Te, as only ring hetero atom]
Y10T 436/141111	..	Diverse hetero atoms in same or different rings [e.g., alkaloids, opiates, etc.]
Y10T 436/142222	..	Hetero-O [e.g., ascorbic acid, etc.]
Y10T 436/143333	...	Saccharide [e.g., DNA, etc.]
Y10T 436/144444	....	Glucose
Y10T 436/145555	..	Hetero-N
Y10T 436/146666	...	Bile pigment
Y10T 436/147777	...	Plural nitrogen in the same ring [e.g., barbituates, creatinine, etc.]
Y10T 436/148888	....	Uric acid
Y10T 436/15	.	Inorganic acid or base [e.g. , hcl, sulfuric acid, etc. ]
Y10T 436/153333	..	Halogen containing
Y10T 436/156666	..	Sulfur containing
Y10T 436/16	.	Phosphorus containing
Y10T 436/163333	..	Organic [e.g., chemical warfare agents, insecticides, etc.]
Y10T 436/166666	..	of inorganic phosphorus compound in body fluid
Y10T 436/17	.	Nitrogen containing
Y10T 436/170769	..	N-Nitroso containing [e.g., nitrosamine, etc.]
Y10T 436/171538	..	Urea or blood urea nitrogen
Y10T 436/172307	..	Cyanide or isocyanide
Y10T 436/173076	..	Nitrite or nitrate
Y10T 436/173845	..	Amine and quaternary ammonium
Y10T 436/174614	...	Tertiary amine
Y10T 436/175383	...	Ammonia
Y10T 436/176152	..	Total nitrogen determined
Y10T 436/176921	...	As part of an elemental analysis
Y10T 436/177692	..	Oxides of nitrogen
Y10T 436/178459	...	Only nitrogen dioxide
Y10T 436/179228	...	Both nitrogen oxide and dioxide
Y10T 436/18	.	Sulfur containing
Y10T 436/182	..	Organic or sulfhydryl containing [e.g., mercaptan, hydrogen, sulfide, etc.]
Y10T 436/184	...	Only hydrogen sulfide
Y10T 436/186	..	Sulfur dioxide
Y10T 436/188	..	Total or elemental sulfur
Y10T 436/19	.	Halogen containing
Y10T 436/193333	..	In aqueous solution
Y10T 436/196666	..	Carbon containing compound [e.g., vinylchloride, etc.]
Y10T 436/20	.	Oxygen containing

Y10T 436/200833	..	Carbonyl, ether, aldehyde or ketone containing
Y10T 436/201666	...	Carboxylic acid
Y10T 436/202499	...	Formaldehyde or acetone
Y10T 436/203332	..	Hydroxyl containing
Y10T 436/204165	...	Ethanol
Y10T 436/204998	..	Inorganic carbon compounds
Y10T 436/205831	...	Carbon monoxide only
Y10T 436/206664	..	Ozone or peroxide
Y10T 436/207497	..	Molecular oxygen
Y10T 436/208339	...	Fuel/air mixture or exhaust gas analysis
Y10T 436/209163	...	Dissolved or trace oxygen or oxygen content of a sealed environment
Y10T 436/21	.	Hydrocarbon
Y10T 436/212	..	Aromatic
Y10T 436/214	..	Acyclic [e.g., methane, octane, isoparaffin, etc.]
Y10T 436/216	...	Unsaturated [e.g., ethylene, diene, etc.]
Y10T 436/218	..	Total hydrocarbon, flammability, combustibility [e.g., air-fuel mixture, etc.]
Y10T 436/22	.	Hydrogen, per se
Y10T 436/23	.	Carbon containing
Y10T 436/235	..	In an aqueous solution [e.g., TOC, etc.]
Y10T 436/24	.	Nuclear magnetic resonance, electron spin resonance or other spin effects or mass spectrometry
Y10T 436/25	.	including sample preparation
Y10T 436/25125	..	Digestion or removing interfering materials
Y10T 436/2525	..	Stabilizing or preserving
Y10T 436/25375	..	Liberation or purification of sample or separation of material from a sample [e.g., filtering, centrifuging, etc.]
Y10T 436/255	...	including use of a solid sorbent, semipermeable membrane, or liquid extraction
Y10T 436/25625	..	Dilution
Y10T 436/2575	..	Volumetric liquid transfer
Y10T 436/25875	..	Gaseous sample or with change of physical state

#### **Former US Class 442 series**

<b>Y10T 442/00</b>	<b>Fabric [woven, knitted, or nonwoven textile or cloth, etc.]</b>
Y10T 442/10	. Scrim [e.g., open net or mesh, gauze, loose or open weave or knit, etc.]
Y10T 442/102	.. Woven scrim
Y10T 442/103	... Including a multifilament fiber precoated with other than free metal or alloy prior to weaving
Y10T 442/105	... Comprising a composite fiber
Y10T 442/107	... Comprising at least two chemically different fibers
Y10T 442/109	... Metal or metal-coated fiber-containing scrim

Y10T 442/11	....	Including an additional free metal or alloy constituent
Y10T 442/112	.....	Particulate free metal or alloy constituent
Y10T 442/114	....	Including a foam layer
Y10T 442/116	....	Including a woven fabric which is not a scrim
Y10T 442/117	.....	Including a nonwoven fabric which is not a scrim
Y10T 442/119	....	Including a paper layer
Y10T 442/121	....	Including a nonwoven fabric which is not a scrim
Y10T 442/122	.....	Two or more nonwoven fabric layers
Y10T 442/124	....	Including a natural or synthetic rubber layer
Y10T 442/126	....	Including a preformed film, foil, or sheet
Y10T 442/128	....	Including a layer derived from a water-settable material [e.g., cement, gypsum, etc.]
Y10T 442/129	....	Including a ceramic or glass layer
Y10T 442/131	....	Including a coating or impregnation of synthetic polymeric material
Y10T 442/133	...	Inorganic fiber-containing scrim
Y10T 442/134	....	Including a carbon or carbonized fiber
Y10T 442/136	....	Including a foam layer
Y10T 442/138	....	Including a metal layer
Y10T 442/14	....	Including an additional scrim layer
Y10T 442/141	....	Including a woven fabric which is not a scrim
Y10T 442/143	....	Including a nonwoven fabric which is not a scrim
Y10T 442/145	....	Including a preformed film, foil, or sheet
Y10T 442/147	....	Including a mica layer
Y10T 442/148	....	Including a coating or impregnation containing particulate material other than fiber
Y10T 442/15	...	Including a foam layer
Y10T 442/152	...	Including a free metal or alloy constituent
Y10T 442/153	...	Including an additional scrim layer
Y10T 442/155	...	Including a paper layer
Y10T 442/157	.....	Two or more paper layers
Y10T 442/159	...	Including a nonwoven fabric which is not a scrim
Y10T 442/16	....	Two or more nonwoven layers
Y10T 442/162	...	Including a natural or synthetic rubber layer
Y10T 442/164	...	Including a preformed film, foil, or sheet
Y10T 442/166	....	Cellulose acetate film or sheet
Y10T 442/167	....	Fluorinated polyolefin film or sheet
Y10T 442/169	....	Polyolefin film or sheet
Y10T 442/171	...	Including a layer derived from a water-settable material [e.g., cement, gypsum, etc.]
Y10T 442/172	...	Coated or impregnated
Y10T 442/174	....	Including particulate material other than fiber in coating or impregnation

Y10T 442/176	....	Three or more layers
Y10T 442/178	....	Synthetic polymeric fiber
Y10T 442/179	.....	Nylon fiber
Y10T 442/181	....	Bitumen coating or impregnation
Y10T 442/183	...	Synthetic polymeric fiber
Y10T 442/184	..	Nonwoven scrim
Y10T 442/186	...	Comprising a composite fiber
Y10T 442/188	...	Metal or metal-coated fiber-containing scrim
Y10T 442/19	....	Including a paper layer
Y10T 442/191	...	Inorganic fiber-containing scrim
Y10T 442/193	....	Including a foam layer
Y10T 442/195	...	Including a foam layer
Y10T 442/197	...	Including a nonwoven fabric which is not a scrim
Y10T 442/198	...	Coated or impregnated
Y10T 442/20	.	Coated or impregnated woven, knit, or nonwoven fabric which is not [a] associated with another preformed layer or fiber layer or, [b] with respect to woven and knit, characterized, respectively, by a particular or differential weave or knit, wherein the coating or impregnation is neither a foamed material nor a free metal or alloy layer
Y10T 442/2008	..	Fabric composed of a fiber or strand which is of specific structural definition
Y10T 442/2016	..	Impregnation is confined to a plane disposed between both major fabric surfaces which are essentially free of impregnating material
Y10T 442/2025	..	Coating produced by extrusion
Y10T 442/2033	..	Coating or impregnation formed in situ [e.g., by interfacial condensation, coagulation, precipitation, etc.]
Y10T 442/2041	..	Two or more non-extruded coatings or impregnations
Y10T 442/2049	...	Each major face of the fabric has at least one coating or impregnation
Y10T 442/2057	....	At least two coatings or impregnations of different chemical composition
Y10T 442/2066	.....	Different coatings or impregnations on opposite faces of the fabric
Y10T 442/2074	.....	At least one coating or impregnation contains particulate material
Y10T 442/2082	.....	At least one coating or impregnation functions to fix pigments or particles on the surface of a coating or impregnation
Y10T 442/209	....	At least one coating or impregnation contains particulate material
Y10T 442/2098	...	At least two coatings or impregnations of different chemical composition
Y10T 442/2107	....	At least one coating or impregnation contains particulate material
Y10T 442/2115	.....	At least one coating or impregnation functions to fix pigments or particles on the surface of a coating or impregnation
Y10T 442/2123	...	At least one coating or impregnation contains particulate material
Y10T 442/2131	....	At least one coating or impregnation functions to fix pigments or particles on the surface of a coating or impregnation
Y10T 442/2139	..	Coating or impregnation specified as porous or permeable to a specific substance [e.g., water vapor, air, etc.]
Y10T 442/2148	...	Coating or impregnation is specified as microporous but is not a foam

Y10T 442/2156	..	Coating or impregnation collects radionuclide or heavy metal
Y10T 442/2164	..	Coating or impregnation specified as water repellent
Y10T 442/2172	...	Also specified as oil repellent
Y10T 442/218	...	Organosilicon containing
Y10T 442/2189	...	Fluorocarbon containing
Y10T 442/2197	...	Nitrogen containing
Y10T 442/2205	...	Natural oil or wax containing
Y10T 442/2213	..	Coating or impregnation is specified as weather proof, water vapor resistant, or moisture resistant
Y10T 442/2221	..	Coating or impregnation is specified as water proof
Y10T 442/223	...	Organosilicon containing
Y10T 442/2238	...	Fluorocarbon containing
Y10T 442/2246	...	Nitrogen containing
Y10T 442/2254	...	Natural oil or wax containing
Y10T 442/2262	..	Coating or impregnation is oil repellent but not oil or stain release
Y10T 442/227	...	Fluorocarbon containing
Y10T 442/2279	..	Coating or impregnation improves soil repellency, soil release, or anti- soil redeposition qualities of fabric
Y10T 442/2287	...	Fluorocarbon containing
Y10T 442/2295	...	Linear polyether group chain containing
Y10T 442/2303	..	Coating or impregnation provides a fragrance or releases an odor intended to be perceptible to humans
Y10T 442/2311	..	Coating or impregnation is a lubricant or a surface friction reducing agent other than specified as improving the "hand" of the fabric or increasing the softness thereof
Y10T 442/232	...	Fluorocarbon containing
Y10T 442/2328	...	Organosilicon containing
Y10T 442/2336	...	Natural oil or wax containing
Y10T 442/2344	..	Coating or impregnation is anti-slip or friction-increasing other than specified as an abrasive
Y10T 442/2352	..	Coating or impregnation functions to soften the feel of or improve the "hand" of the fabric
Y10T 442/2361	..	Coating or impregnation improves stiffness of the fabric other than specified as a size
Y10T 442/2369	..	Coating or impregnation improves elasticity, bendability, resiliency, flexibility, or shape retention of the fabric
Y10T 442/2377	...	Improves elasticity
Y10T 442/2385	...	Improves shrink resistance
Y10T 442/2393	...	Coating or impregnation provides crease-resistance or wash and wear characteristics
Y10T 442/2402	..	Coating or impregnation specified as a size
Y10T 442/241	..	Coating or impregnation improves snag or pull resistance of the fabric
Y10T 442/2418	..	Coating or impregnation increases electrical conductivity or anti-static quality

Y10T 442/2426	...	Elemental carbon containing
Y10T 442/2434	...	Linear polyether group chain containing
Y10T 442/2443	...	Nitrogen and phosphorus containing
Y10T 442/2451	...	Phosphorus containing
Y10T 442/2459	...	Nitrogen containing
Y10T 442/2467	...	Sulphur containing
Y10T 442/2475	..	Coating or impregnation is electrical insulation-providing, -improving, or -increasing, or conductivity-reducing
Y10T 442/2484	..	Coating or impregnation is water absorbency-increasing or hydrophilicity-increasing or hydrophilicity-imparting
Y10T 442/2492	...	Polyether group containing
Y10T 442/25	..	Coating or impregnation absorbs sound
Y10T 442/2508	..	Coating or impregnation absorbs chemical material other than water
Y10T 442/2516	...	Chemical material is one used in biological or chemical warfare
Y10T 442/2525	..	Coating or impregnation functions biologically [e.g., insect repellent, antiseptic, insecticide, bactericide, etc.]
Y10T 442/2533	...	Inhibits mildew
Y10T 442/2541	...	Insect repellent
Y10T 442/2549	..	Coating or impregnation is chemically inert or of stated nonreactance
Y10T 442/2557	...	Oxygen or ozone resistant
Y10T 442/2566	...	Organic solvent resistant [e.g., dry cleaning fluid, etc.]
Y10T 442/2574	...	Acid or alkali resistant
Y10T 442/2582	..	Coating or impregnation contains an optical bleach or brightener or functions as an optical bleach or brightener [e.g., it masks fabric yellowing, etc.]
Y10T 442/259	..	Coating or impregnation provides protection from radiation [e.g., U.V., visible light, I.R., micscheme-change-itemave, high energy particle, etc.] or heat retention thru radiation absorption
Y10T 442/2598	...	Radiation reflective
Y10T 442/2607	...	Radiation absorptive
Y10T 442/2615	..	Coating or impregnation is resistant to penetration by solid implements
Y10T 442/2623	...	Ballistic resistant
Y10T 442/2631	..	Coating or impregnation provides heat or fire protection
Y10T 442/2639	...	Coated or impregnated asbestos fabric
Y10T 442/2648	...	Coating or impregnation is specified as an intumescent material
Y10T 442/2656	...	Antimony containing
Y10T 442/2664	...	Boron containing
Y10T 442/2672	...	Phosphorus containing
Y10T 442/268	....	Phosphorus and nitrogen containing compound
Y10T 442/2689	....	A phosphorus containing compound and a nitrogen containing compound
Y10T 442/2697	....	Phosphorus and halogen containing compound
Y10T 442/2705	....	A phosphorus containing compound and a halogen containing compound
Y10T 442/2713	...	Halogen containing

Y10T 442/2721	...	Nitrogen containing
Y10T 442/273	..	Coating or impregnation provides wear or abrasion resistance
Y10T 442/2738	..	Coating or impregnation intended to function as an adhesive to solid surfaces subsequently associated therewith
Y10T 442/2746	...	Heat-activatable adhesive
Y10T 442/2754	...	Pressure-sensitive adhesive
Y10T 442/2762	..	Coated or impregnated natural fiber fabric [e.g., cotton, wool, silk, linen, etc.]
Y10T 442/277	...	Coated or impregnated cellulosic fiber fabric
Y10T 442/2779	....	Coating or impregnation contains an acrylic polymer or copolymer [e.g., polyacrylonitrile, polyacrylic acid, etc.]
Y10T 442/2787	....	Coating or impregnation contains a vinyl polymer or copolymer
Y10T 442/2795	....	Coating or impregnation contains an epoxy polymer or copolymer or polyether
Y10T 442/2803	....	Polymeric coating or impregnation from a silane or siloxane not specified as lubricant or water repellent
Y10T 442/2811	....	Coating or impregnation contains polyimide or polyamide
Y10T 442/282	....	Coating or impregnation contains natural gum, rosin, natural oil, or wax
Y10T 442/2828	....	Coating or impregnation contains aldehyde or ketone condensation product
Y10T 442/2836	.....	Phenol-aldehyde condensate
Y10T 442/2844	.....	Melamine-aldehyde condensate
Y10T 442/2852	.....	Amide-aldehyde condensate [e.g., modified urea-aldehyde condensate, etc.]
Y10T 442/2861	..	Coated or impregnated synthetic organic fiber fabric
Y10T 442/2869	...	Coated or impregnated regenerated cellulose fiber fabric
Y10T 442/2877	...	Coated or impregnated polyvinyl alcohol fiber fabric
Y10T 442/2885	...	Coated or impregnated acrylic fiber fabric
Y10T 442/2893	...	Coated or impregnated polyamide fiber fabric
Y10T 442/2902	....	Aromatic polyamide fiber fabric
Y10T 442/291	...	Coated or impregnated polyolefin fiber fabric
Y10T 442/2918	....	Polypropylene fiber fabric
Y10T 442/2926	..	Coated or impregnated inorganic fiber fabric
Y10T 442/2934	...	Coating or impregnation contains vinyl polymer or copolymer
Y10T 442/2943	....	Vinyl acetate polymer or copolymer
Y10T 442/2951	...	Coating or impregnation contains epoxy polymer or copolymer or polyether
Y10T 442/2959	...	Coating or impregnation contains aldehyde or ketone condensation product
Y10T 442/2967	....	Amide-aldehyde condensate
Y10T 442/2975	...	Coated or impregnated ceramic fiber fabric
Y10T 442/2984	...	Coated or impregnated carbon or carbonaceous fiber fabric
Y10T 442/2992	...	Coated or impregnated glass fiber fabric
Y10T 442/30	.	Woven fabric [i.e., woven strand or strip material]
Y10T 442/3008	..	Woven fabric has an elastic quality

Y10T 442/3016	...	Including a preformed layer other than the elastic woven fabric [e.g., fabric or film or foil or sheet layer, etc.]
Y10T 442/3024	...	Including elastic strand or strip
Y10T 442/3033	..	Including a strip or ribbon
Y10T 442/3041	...	Woven fabric comprises strips or ribbons only
Y10T 442/3049	..	Including strand precoated with other than free metal or alloy
Y10T 442/3057	...	Multiple coatings
Y10T 442/3065	..	Including strand which is of specific structural definition
Y10T 442/3073	...	Strand material is core-spun [not sheath-core bicomponent strand]
Y10T 442/3081	....	Core is synthetic polymeric material
Y10T 442/3089	...	Cross-sectional configuration of strand material is specified
Y10T 442/3098	....	Cross-sectional configuration varies longitudinally along the strand
Y10T 442/3106	....	Hollow strand material
Y10T 442/3114	....	Cross-sectional configuration of the strand material is other than circular
Y10T 442/3122	.....	Cross-sectional configuration is multi-lobal
Y10T 442/313	...	Strand material formed of individual filaments having different chemical compositions
Y10T 442/3138	....	Including inorganic filament
Y10T 442/3146	..	Strand material is composed of two or more polymeric materials in physically distinct relationship [e.g., sheath-core, side-by-side, islands-in-sea, fibrils-in-matrix, etc.] or composed of physical blend of chemically different polymeric materials or a physical blend of a polymeric material and a filler material
Y10T 442/3154	...	Sheath-core multicomponent strand material
Y10T 442/3163	...	Islands-in-sea multicomponent strand material
Y10T 442/3171	...	Strand material is a blend of polymeric material and a filler material
Y10T 442/3179	..	Woven fabric is characterized by a particular or differential weave other than fabric in which the strand denier or warp/weft pick count is specified
Y10T 442/3187	...	Triaxially woven fabric
Y10T 442/3195	...	Three-dimensional weave [e.g., x-y-z planes, multi-planar warps and/or wefts, etc.]
Y10T 442/3203	....	Multi-planar warp layers
Y10T 442/3211	....	Multi-planar weft layers
Y10T 442/322	...	Warp differs from weft
Y10T 442/3228	....	Materials differ
Y10T 442/3236	.....	Including inorganic strand material
Y10T 442/3244	.....	Including natural strand material [e.g., cotton, wool, etc.]
Y10T 442/3252	.....	Including synthetic polymeric strand material
Y10T 442/326	.....	Including synthetic polymeric strand material
Y10T 442/3268	.....	Including natural strand material
Y10T 442/3276	.....	Including polyamide strand material
Y10T 442/3285	.....	Including polyester strand material



Y10T 442/3293	...	Warp and weft are identical and contain at least two chemically different strand materials
Y10T 442/3301	...	Coated, impregnated, or autogenous bonded
Y10T 442/3309	....	Woven fabric contains inorganic strand material
Y10T 442/3317	....	Woven fabric contains synthetic polymeric strand material
Y10T 442/3325	..	Including a foamed layer or component
Y10T 442/3333	...	Including a free metal or alloy constituent
Y10T 442/3341	...	Plural foam layers
Y10T 442/335	...	Plural fabric layers
Y10T 442/3358	....	Including a nonwoven fabric layer
Y10T 442/3366	...	Woven fabric is coated, impregnated, or autogenously bonded
Y10T 442/3374	....	Coating or impregnation includes particulate material other than fiber
Y10T 442/3382	..	Including a free metal or alloy constituent
Y10T 442/339	...	Metal or metal-coated strand
Y10T 442/3398	...	Vapor or sputter deposited metal layer
Y10T 442/3407	...	Chemically deposited metal layer [e.g., chemical precipitation or electrochemical deposition or plating, etc.]
Y10T 442/3415	...	Preformed metallic film or foil or sheet [film or foil or sheet had structural integrity prior to association with the woven fabric]
Y10T 442/3423	....	Plural metallic films or foils or sheets
Y10T 442/3431	....	Plural fabric layers
Y10T 442/3439	.....	Including a nonwoven fabric layer
Y10T 442/3447	....	Including a preformed synthetic polymeric film or sheet [i.e., film or sheet having structural integrity prior to association with the woven fabric]
Y10T 442/3455	....	Including particulate material other than fiber
Y10T 442/3463	...	Plural fabric layers
Y10T 442/3472	..	Woven fabric including an additional woven fabric layer
Y10T 442/348	...	Mechanically needled or hydroentangled
Y10T 442/3488	....	Four or more layers
Y10T 442/3496	....	Coated, impregnated, or autogenously bonded
Y10T 442/3504	...	Woven fabric layers comprise chemically different strand material
Y10T 442/3512	....	Three or more fabric layers
Y10T 442/352	.....	One of which is a nonwoven fabric layer
Y10T 442/3528	...	Three or more fabric layers
Y10T 442/3537	....	One of which is a nonwoven fabric layer
Y10T 442/3545	....	Woven fabric layers impregnated with a blend of thermosetting and thermoplastic resins
Y10T 442/3553	....	Woven fabric layers impregnated with an organosilicon resin
Y10T 442/3561	....	Woven fabric layers impregnated with a natural or synthetic rubber
Y10T 442/3569	....	Woven fabric layers impregnated with a thermosetting resin
Y10T 442/3577	.....	Phenolic resin

Y10T 442/3585	.....	Epoxy resin
Y10T 442/3594	....	Woven fabric layers impregnated with a thermoplastic resin [e.g., vinyl polymer, etc.]
Y10T 442/3602	...	Three or more distinct layers
Y10T 442/361	....	At least one layer is derived from water-settable material [e.g., cement, gypsum, etc.]
Y10T 442/3618	....	At least one layer contains wood or cork
Y10T 442/3626	....	At least one layer contains bituminous material [e.g., tar, pitch, asphalt, etc.]
Y10T 442/3634	....	At least one layer comprises paper
Y10T 442/3642	....	At least one layer contains natural or synthetic rubber
Y10T 442/365	....	At least one layer is a preformed synthetic polymeric film or sheet
Y10T 442/3659	....	At least one layer comprises ceramic or glass material in other than particulate form
Y10T 442/3667	....	Composite consisting of at least two woven fabrics bonded by an interposed adhesive layer [but not two woven fabrics bonded together by an impregnation which penetrates through the thickness of at least one of the woven fabric layers]
Y10T 442/3675	.....	Fabric layer contains natural strand material
Y10T 442/3683	.....	Fabric layer contains carbon or carbonaceous strand material
Y10T 442/3691	.....	Fabric layer contains glass strand material
Y10T 442/3699	....	Including particulate material other than fiber
Y10T 442/3707	..	Woven fabric including a nonwoven fabric layer other than paper
Y10T 442/3715	...	Nonwoven fabric layer comprises parallel arrays of strand material
Y10T 442/3724	...	Needled
Y10T 442/3732	....	Including an additional nonwoven fabric
Y10T 442/374	.....	Additional nonwoven fabric comprises chemically different strand material than the first nonwoven fabric
Y10T 442/3748	.....	Including inorganic strand material
Y10T 442/3756	....	Nonwoven fabric layer comprises at least two chemically different fibers
Y10T 442/3764	....	Coated, impregnated, or autogenously bonded
Y10T 442/3772	...	Hydroentangled
Y10T 442/378	...	Coated, impregnated, or autogenously bonded
Y10T 442/3789	....	Plural nonwoven fabric layers
Y10T 442/3797	....	Coating or impregnation is derived from a water-settable material [e.g., cement, gypsum, etc.]
Y10T 442/3805	....	Coating or impregnation contains natural or synthetic rubber
Y10T 442/3813	....	Coating or impregnation contains synthetic polymeric material
Y10T 442/3821	....	Coating or impregnation contains bituminous material
Y10T 442/3829	....	Four or more layers
Y10T 442/3837	.....	Including particulate material other than fiber
Y10T 442/3846	....	Including particulate material other than fiber
Y10T 442/3854	..	Woven fabric with a preformed polymeric film or sheet

Y10T 442/3862	...	Ester condensation polymer sheet or film [e.g., polyethylene terephthalate, etc.]
Y10T 442/387	...	Vinyl polymer or copolymer sheet or film [e.g., polyvinyl chloride, polyvinylidene chloride, polyvinyl acetate, etc.]
Y10T 442/3878	...	Fluorinated olefin polymer or copolymer sheet or film [e.g., Teflon®, etc.]
Y10T 442/3886	...	Olefin polymer or copolymer sheet or film [e.g., polypropylene, polyethylene, ethylene-butylene copolymer, etc.]
Y10T 442/3894	...	Amide condensation polymer sheet or film [e.g., nylon 6, etc.]
Y10T 442/3902	...	Polyimide sheet or film
Y10T 442/3911	...	Natural or synthetic rubber sheet or film
Y10T 442/3919	...	Including particulate material other than fiber
Y10T 442/3927	..	Including a paper or wood pulp layer
Y10T 442/3935	...	Mica paper layer
Y10T 442/3943	...	Plural paper or wood pulp layers
Y10T 442/3951	...	Including a bituminous layer
Y10T 442/3959	...	Including an outermost adhesive layer
Y10T 442/3967	...	Including a natural or synthetic rubber layer
Y10T 442/3976	..	Including strand which is stated to have specific attributes [e.g., heat or fire resistance, chemical or solvent resistance, high absorption for aqueous composition, water solubility, heat shrinkability, etc.]
Y10T 442/3984	...	Strand is other than glass and is heat or fire resistant
Y10T 442/3992	...	Strand is heat shrinkable
Y10T 442/40	.	Knit fabric [i.e., knit strand or strip material]
Y10T 442/406	..	Including parallel strips
Y10T 442/413	..	Including an elastic strand
Y10T 442/419	..	Including strand precoated with other than free metal or alloy
Y10T 442/425	..	Including strand which is of specific structural definition
Y10T 442/431	...	Cross-sectional configuration of strand material is specified
Y10T 442/438	...	Strand material formed of individual filaments having different chemical compositions
Y10T 442/444	..	Strand is a monofilament composed of two or more polymeric materials in physically distinct relationship [e.g., sheath-core, side-by-side, islands-in-sea, fibrils-in-matrix, etc.] or composed of physical blend of chemically different polymeric materials or a physical blend of a polymeric material and a filler material
Y10T 442/45	..	Knit fabric is characterized by a particular or differential knit pattern other than open knit fabric or a fabric in which the strand denier is specified
Y10T 442/456	...	Including additional strand inserted within knit fabric
Y10T 442/463	....	Warp knit insert strand
Y10T 442/469	..	Including a foamed layer or component
Y10T 442/475	..	Including a free metal or alloy constituent
Y10T 442/481	...	Chemically deposited metal layer [e.g., chemical precipitation or electrochemical deposition or plating, etc.]
Y10T 442/488	..	Including an additional knit fabric layer
Y10T 442/494	..	Including a nonwoven fabric layer other than paper

Y10T 442/50	. FELT FABRIC
Y10T 442/51	.. From natural organic fiber [e.g., wool, etc.]
Y10T 442/53	... Including particulate material other than fiber
Y10T 442/54	... At least three layers
Y10T 442/56	.. From synthetic organic fiber
Y10T 442/57	.. Including particulate material other than fiber
Y10T 442/59	.. At least three layers
Y10T 442/60	. Nonwoven fabric [i.e., nonwoven strand or fiber material]
Y10T 442/601	.. Nonwoven fabric has an elastic quality
Y10T 442/602	... Nonwoven fabric comprises an elastic strand or fiber material
Y10T 442/603	.. Including strand or fiber material precoated with other than free metal or alloy
Y10T 442/604	... Strand or fiber material is glass
Y10T 442/605	... Strand or fiber material is inorganic
Y10T 442/607	... Strand or fiber material is synthetic polymer
Y10T 442/608	.. Including strand or fiber material which is of specific structural definition
Y10T 442/609	... Cross-sectional configuration of strand or fiber material is specified
Y10T 442/61	.... Cross-sectional configuration varies longitudinally along strand or fiber material
Y10T 442/611	.... Cross-sectional configuration of strand or fiber material is other than circular
Y10T 442/612	.... Hollow strand or fiber material
Y10T 442/613	.... Microcellular strand or fiber material
Y10T 442/614	... Strand or fiber material specified as having micro dimensions [i.e., microfiber]
Y10T 442/615	.... Strand or fiber material is blended with another chemically different microfiber in the same layer
Y10T 442/616	..... Blend of synthetic polymeric and inorganic microfibers
Y10T 442/618	..... Blend of chemically different inorganic microfibers
Y10T 442/619	.... Including other strand or fiber material in the same layer not specified as having micro dimensions
Y10T 442/62	.... Including another chemically different microfiber in a separate layer
Y10T 442/621	.... Including other strand or fiber material in a different layer not specified as having micro dimensions
Y10T 442/622	.... Microfiber is a composite fiber
Y10T 442/623	.... Microfiber is glass
Y10T 442/624	.... Microfiber is carbon or carbonaceous
Y10T 442/625	.... Autogenously bonded
Y10T 442/626	.... Microfiber is synthetic polymer
Y10T 442/627	... Strand or fiber material is specified as non-linear [e.g., crimped, coiled, etc.]
Y10T 442/629	.... Composite strand or fiber material
Y10T 442/63	.... Carbon or carbonaceous strand or fiber material
Y10T 442/631	.... Glass strand or fiber material

Y10T 442/632	....	A single nonwoven layer comprising non-linear synthetic polymeric strand or fiber material and strand or fiber material not specified as non-linear
Y10T 442/633	.....	Synthetic polymeric strand or fiber material is of staple length
Y10T 442/634	....	A nonwoven fabric having a layer comprising non-linear synthetic polymeric strand or fiber material and a separate and distinct layer comprising strand or fiber material which is not specified as non-linear
Y10T 442/635	....	Synthetic polymeric strand or fiber material
Y10T 442/636	.....	Synthetic polymeric strand or fiber material is of staple length
Y10T 442/637	..	Including strand or fiber material which is a monofilament composed of two or more polymeric materials in physically distinct relationship [e.g., sheath-core, side-by-side, islands-in-sea, fibrils-in-matrix, etc.] or composed of physical blend of chemically different polymeric materials or a physical blend of a polymeric material and a filler material
Y10T 442/638	...	Side-by-side multicomponent strand or fiber material
Y10T 442/64	...	Islands-in-sea multicomponent strand or fiber material
Y10T 442/641	...	Sheath-core multicomponent strand or fiber material
Y10T 442/642	...	Strand or fiber material is a blend of polymeric material and a filler material
Y10T 442/643	..	Including parallel strand or fiber material within the nonwoven fabric
Y10T 442/644	...	Parallel strand or fiber material is glass
Y10T 442/645	...	Parallel strand or fiber material is inorganic [e.g., rock wool, mineral wool, etc.]
Y10T 442/646	...	Parallel strand or fiber material is naturally occurring [e.g., cotton, wool, etc.]
Y10T 442/647	..	Including a foamed layer or component
Y10T 442/648	...	Including a free metal or alloy constituent
Y10T 442/649	...	Plural foamed layers
Y10T 442/651	...	Plural fabric layers
Y10T 442/652	...	Nonwoven fabric is coated, impregnated, or autogenously bonded
Y10T 442/653	.....	Including particulate material other than fiber
Y10T 442/654	..	Including a free metal or alloy constituent
Y10T 442/655	...	Metal or metal-coated strand or fiber material
Y10T 442/656	...	Preformed metallic film or foil or sheet [film or foil or sheet had structural integrity prior to association with the nonwoven fabric]
Y10T 442/657	...	Vapor, chemical, or spray deposited metal layer
Y10T 442/658	...	Particulate free metal or alloy constituent
Y10T 442/659	..	Including an additional nonwoven fabric
Y10T 442/66	...	Additional nonwoven fabric is a spun-bonded fabric
Y10T 442/662	....	Needled
Y10T 442/663	....	Hydroentangled
Y10T 442/664	...	Including a wood fiber containing layer
Y10T 442/665	...	Including a layer derived from a water-settable material [e.g., cement, gypsum, etc.]
Y10T 442/666	...	Mechanically interengaged by needling or impingement of fluid [e.g., gas or liquid stream, etc.]
Y10T 442/667	....	Needled

Y10T 442/668	...	Separate nonwoven fabric layers comprise chemically different strand or fiber material
Y10T 442/669	....	At least one layer of inorganic strand or fiber material and at least one layer of synthetic polymeric strand or fiber material
Y10T 442/67	...	Multiple nonwoven fabric layers composed of the same inorganic strand or fiber material
Y10T 442/671	...	Multiple nonwoven fabric layers composed of the same polymeric strand or fiber material
Y10T 442/673	...	Including particulate material other than fiber
Y10T 442/674	..	Nonwoven fabric with a preformed polymeric film or sheet
Y10T 442/675	...	Ester condensation polymer sheet or film [e.g., polyethylene terephthalate, etc.]
Y10T 442/676	...	Vinyl polymer or copolymer sheet or film [e.g., polyvinyl chloride, polyvinylidene chloride, polyvinyl acetate, etc.]
Y10T 442/677	...	Fluorinated olefin polymer or copolymer sheet or film [e.g., TeflonR, etc.]
Y10T 442/678	...	Olefin polymer or copolymer sheet or film [e.g., polypropylene, polyethylene, ethylene-butylene copolymer, etc.]
Y10T 442/679	...	Natural or synthetic rubber sheet or film
Y10T 442/68	..	Melt-blown nonwoven fabric
Y10T 442/681	..	Spun-bonded nonwoven fabric
Y10T 442/682	..	Needled nonwoven fabric
Y10T 442/684	...	Containing at least two chemically different strand or fiber materials
Y10T 442/685	....	Containing inorganic and polymeric strand or fiber materials
Y10T 442/686	....	Containing polymeric and natural strand or fiber materials
Y10T 442/687	....	Containing inorganic strand or fiber material
Y10T 442/688	....	Containing polymeric strand or fiber material
Y10T 442/689	..	Hydroentangled nonwoven fabric
Y10T 442/69	..	Autogenously bonded nonwoven fabric
Y10T 442/691	...	Inorganic strand or fiber material only
Y10T 442/692	...	Containing at least two chemically different strand or fiber materials
Y10T 442/693	..	Including a paper layer
Y10T 442/695	..	Including a wood containing layer
Y10T 442/696	..	Including strand or fiber material which is stated to have specific attributes [e.g., heat or fire resistance, chemical or solvent resistance, high absorption for aqueous compositions, water solubility, heat shrinkability, etc.]
Y10T 442/697	..	Containing at least two chemically different strand or fiber materials
Y10T 442/698	...	Containing polymeric and natural strand or fiber materials
Y10T 442/699	..	Including particulate material other than strand or fiber material

#### **Former US Class 464 Series**

<b>Y10T 464/00</b>	<b>Rotary shafts, gudgeons, housings, and flexible couplings for rotary shafts</b>
Y10T 464/10	. having heating or cooling means

- Y10T 464/20 . with auxilliary indicator or alarm
- Y10T 464/30 . Electrical or magnetic coupling
- Y10T 464/40 . Coupling accommodates drive between members having misaligned or angularly related axes, transmits torque via radially directed pin, and has particular balancing means
- Y10T 464/50 . Shafting having particular vibration dampening or balancing structure

#### **Former US Class 477 Series**

- Y10T 477/00** **Interrelated power delivery controls, including engine control**
- Y10T 477/10 . Steering by driving
- Y10T 477/20 . Plural engines
- Y10T 477/23 . . . Electric engine
- Y10T 477/24 . . . with brake control
- Y10T 477/26 . . . with clutch control
- Y10T 477/27 . . with clutch control
- Y10T 477/30 . Electric engine
- Y10T 477/32 . . with clutch control
- Y10T 477/322 . . . with brake control
- Y10T 477/3225 . . . . Stopped at end of cycle
- Y10T 477/323 . . . Engine stopped at end of cycle
- Y10T 477/325 . . . Common controller
- Y10T 477/327 . . . Electric clutch
- Y10T 477/328 . . . Speed responsive
- Y10T 477/33 . . with transmission control
- Y10T 477/333 . . . Load motion limit control
- Y10T 477/337 . . . Transmission change by moving engine
- Y10T 477/34 . . . Reversible engine
- Y10T 477/343 . . . Engine starting interlock
- Y10T 477/347 . . . Condition responsive engine control
- Y10T 477/35 . . Brake engaged when engine energy deactivated, brake disengaged when engine energy activated
- Y10T 477/357 . . . Cam actuated brake
- Y10T 477/363 . . . Electrically actuated brake
- Y10T 477/37 . . Brake actuation opens switch to engine
- Y10T 477/373 . . . Electrically actuated brake
- Y10T 477/377 . . . Fluid actuated brake
- Y10T 477/38 . . Control means selectively operates engine energy input and brake
- Y10T 477/387 . . . Fluid actuated brake
- Y10T 477/393 . . . Electrically actuated brake
- Y10T 477/40 . Gas turbine engine

Y10T 477/45	..	Continuously variable transmission
Y10T 477/50	.	with supercharger
Y10T 477/55	..	Manifold pressure control
Y10T 477/60	.	Transmission control
Y10T 477/606	..	Differential transmission
Y10T 477/613	..	Plural outputs
Y10T 477/619	..	Continuously variable friction transmission
Y10T 477/6197	...	with fluid drive
Y10T 477/6203	...	with clutch control
Y10T 477/621	...	with brake control
Y10T 477/6217	...	Interrelated control of diverse transmissions
Y10T 477/6223	...	Constant speed output
Y10T 477/623	...	Controlled by engine map
Y10T 477/6237	...	Belt-type
Y10T 477/624	....	Fluid pressure control
Y10T 477/6242	.....	Ratio change controlled
Y10T 477/62423	.....	Engine coast braking
Y10T 477/62427	.....	with electric valve control
Y10T 477/62429	.....	Duty ratio control
Y10T 477/6243	...	Fluid pressure control
Y10T 477/625	..	Fluid resistance inhibits rotation of planetary transmission element
Y10T 477/631	..	including fluid drive
Y10T 477/633	...	Impeller-turbine-type
Y10T 477/6333	....	Engine controlled
Y10T 477/6337	....	with countershaft gearing
Y10T 477/63378	.....	and turbine shaft brake
Y10T 477/63385	.....	and clutch control
Y10T 477/63393	.....	Control of or by fluid drive
Y10T 477/634	....	with hydrodynamic braking
Y10T 477/6343	....	with nonratio brake
Y10T 477/6347	....	Control responsive to fluid drive
Y10T 477/635	....	with clutch control
Y10T 477/6351	.....	Disengaged during shift
Y10T 477/6352	.....	Speed responsive
Y10T 477/63525	.....	Electrical
Y10T 477/6353	....	with fluid unit vane control
Y10T 477/6357	....	Fill and empty-type fluid units
Y10T 477/636	...	Ratio control
Y10T 477/637	....	with planetary transmission control
Y10T 477/638	..	with clutch control



Y10T 477/6388	...	and brake control
Y10T 477/6389	....	Temperature responsive control
Y10T 477/639	....	Engine controlled
Y10T 477/6392	....	Clutch controlled
Y10T 477/6394	....	Gearing controlled
Y10T 477/6395	...	Temperature responsive control
Y10T 477/6403	...	Clutch, engine, and transmission controlled
Y10T 477/6407	....	Electronic digital control
Y10T 477/641	...	Clutch and transmission controlled
Y10T 477/6414	....	Speed responsive control
Y10T 477/6415	.....	with manual override
Y10T 477/6417	.....	Vacuum actuated clutch
Y10T 477/6418	...	Clutch and engine controlled
Y10T 477/6422	....	Speed responsive control
Y10T 477/6424	.....	Plural speed signals
Y10T 477/6425	...	Clutch controlled
Y10T 477/6428	....	Electric clutch
Y10T 477/643	....	Vacuum actuated clutch
Y10T 477/6432	.....	Electric control
Y10T 477/6433	...	Engine controlled
Y10T 477/6437	....	Speed responsive
Y10T 477/644	..	with brake control
Y10T 477/646	...	Anti-creep
Y10T 477/647	...	Brake controls transmission
Y10T 477/648	....	Pressure controlled
Y10T 477/649	...	One control blocks another
Y10T 477/65	..	Control by sensed ambient condition, pattern indicia, external signal, or temperature
Y10T 477/653	...	Temperature control
Y10T 477/656	..	Engine starting interlock
Y10T 477/663	..	Exhaust emission control
Y10T 477/669	..	Engine ignition control for transmission change
Y10T 477/67	...	Ignition advanced or retarded
Y10T 477/671	...	Ignition intermitting and safety means limiting duration of intermission
Y10T 477/673	...	Ignition intermitting controlled by manifold pressure
Y10T 477/674	...	Ignition intermitting initiated by positioning accelerator
Y10T 477/6745	.....	Initiation inhibited by sensed condition
Y10T 477/675	..	Engine controlled by transmission
Y10T 477/676	...	Constant output shaft speed
Y10T 477/677	...	Diminution during transmission change

Y10T 477/679	...	Responsive to transmission output condition
Y10T 477/68	...	Transmission setting contingent
Y10T 477/6805	....	Change to neutral idles engine
Y10T 477/6808	.....	Engine input variable in neutral
Y10T 477/681	..	Anticreep
Y10T 477/688	..	Transmission controlled by engine
Y10T 477/689	...	Shift from neutral shock control
Y10T 477/6895	....	Pressure controlled
Y10T 477/69	...	Engine [coast] braking
Y10T 477/691	....	Electric valve control
Y10T 477/692	...	by acceleration
Y10T 477/693	...	by input manifold pressure or engine fuel control
Y10T 477/6931	....	Selector-type
Y10T 477/6933	....	with positive shift means
Y10T 477/69335	.....	with synchronization
Y10T 477/6934	....	Prevents unsafe or unintentional shift
Y10T 477/6935	.....	Reverse inhibitor
Y10T 477/6936	....	Shift valve control
Y10T 477/69362	.....	Hysteresis
Y10T 477/693625	.....	Electric control
Y10T 477/69363	.....	Plural shift valves
Y10T 477/693635	.....	Electric control
Y10T 477/693636	.....	Downshift control
Y10T 477/693637	.....	Kickdown
Y10T 477/693638	.....	Selector valve overrule
Y10T 477/69364	.....	Downshift control
Y10T 477/693643	.....	Kickdown
Y10T 477/693645	.....	Selector valve overrule
Y10T 477/69365	.....	Electric control
Y10T 477/69366	.....	Downshift control
Y10T 477/69367	.....	Downshift control
Y10T 477/693675	.....	Kickdown
Y10T 477/69368	.....	Selector valve overrule
Y10T 477/6937	....	Servo motor timing
Y10T 477/69373	.....	Downshift
Y10T 477/693738	.....	with fluid accumulator
Y10T 477/693742	.....	Electric valve control
Y10T 477/693746	.....	Double acting servo
Y10T 477/693754	.....	Speed responsive control
Y10T 477/693762	.....	Electric valve control

Y10T 477/69377	.....	with fluid accumulator
Y10T 477/69378	.....	Engine parameter controls back pressure
Y10T 477/69379	.....	Electric valve control
Y10T 477/6938	.....	Double acting servo
Y10T 477/69383	.....	Speed responsive control
Y10T 477/69387	.....	Electric valve control
Y10T 477/6939	....	Transmission pressure controlled
Y10T 477/69393	.....	Variable capacity pump
Y10T 477/69395	.....	Line pressure controlled
Y10T 477/693958	.....	Responsive to speed
Y10T 477/693962	.....	Electric valve control
Y10T 477/693964	.....	Duty ratio control
Y10T 477/693965	.....	Transmission setting contingent
Y10T 477/693973	.....	Electric valve control
Y10T 477/69398	.....	Electric valve control
Y10T 477/694	..	Engine control linkage mounted on manual gearshift lever
Y10T 477/70	.	Clutch control
Y10T 477/71	..	with starter
Y10T 477/73	..	with fluid drive
Y10T 477/735	...	Speed responsive control
Y10T 477/74	..	with brake control
Y10T 477/743	...	Clutch controlled
Y10T 477/745	....	and brake controlled
Y10T 477/747	...	Engine controlled
Y10T 477/75	..	Condition responsive control
Y10T 477/753	...	Speed responsive
Y10T 477/755	....	Slip rate control
Y10T 477/757	...	Overload release
Y10T 477/759	....	Engine shut off
Y10T 477/76	..	Electric clutch
Y10T 477/78	..	Regulated clutch engagement
Y10T 477/79	..	Engine controlled by clutch control
Y10T 477/80	.	Brake control
Y10T 477/81	..	Sensed condition responsive control of engine of brake
Y10T 477/813	...	Brake
Y10T 477/814	....	and engine
Y10T 477/816	....	Speed or acceleration responsive
Y10T 477/817	...	Speed or acceleration responsive
Y10T 477/82	..	Plural diverse brake means

Y10T 477/83	..	Engine energy control having adjusting and holding device, with means on brake control to override holding device
Y10T 477/833	...	Holding device engaged by electric means
Y10T 477/835	....	Magnetic holding device
Y10T 477/837	...	Mechanical holding device engaged by mechanical means
Y10T 477/839	....	Device or means including a threaded shaft, rack or ratchet
Y10T 477/84	..	Brake control having holding device, with means on engine control to override holding device
Y10T 477/847	...	Holding device responsive to motion, speed or acceleration
Y10T 477/85	....	Holding device comprising brake valve operated by solenoid
Y10T 477/853	...	Holding device engaged by electric means
Y10T 477/857	....	Holding device comprising brake valve operated by solenoid
Y10T 477/86	..	Brake engaged when engine energy deactivated, brake disengaged when engine energy is activated
Y10T 477/865	...	Internal combustion engine
Y10T 477/868	....	Controls brake valve
Y10T 477/869	.....	Vacuum actuated brake
Y10T 477/87	..	Brake condition change modifies engine condition
Y10T 477/873	...	Brake actuation interrupts ignition circuit of fluid engine
Y10T 477/877	...	Brake actuation decreases or eliminates fluid energy input to engine
Y10T 477/878	....	by closing throttle valve
Y10T 477/879	....	by preventing increasing operation of engine energy control
Y10T 477/88	..	Decreasing fluid energy input to engine actuates brake
Y10T 477/89	..	Control means selectively operates engine energy input and brake
Y10T 477/893	...	Foot operated control means
Y10T 477/8936	....	Engine and brake control including interconnected elements
Y10T 477/8941	....	Pivots and translates
Y10T 477/8944	.....	Pivots about intermediate fulcrum
Y10T 477/8947	....	Pivots about two fulcrums
Y10T 477/8953	....	Pivots about intermediate fulcrum
Y10T 477/8959	....	Lever reciprocates on moveable supports at both ends
Y10T 477/8964	....	Pivots for sequential operation
Y10T 477/897	...	Control means including fluid passage

#### **Former US Class 483 Series**

<b>Y10T 483/00</b>	<b>Tool changing</b>
Y10T 483/10	. Process
Y10T 483/11	. with safety means
Y10T 483/115	.. Guard

- Y10T 483/12 . with means to regulate operation by means of replaceable information supply [e.g. , templet, tape, card, etc. ]
- Y10T 483/123 . . Replaceable information comprising tool location
- Y10T 483/127 . . . including determining optimum tool access path
- Y10T 483/13 . with control means energized in response to activator stimulated by condition sensor
- Y10T 483/132 . . Responsive to tool identifying information
- Y10T 483/134 . . . Identifying information on tool or tool holder
- Y10T 483/136 . . Responsive to tool
- Y10T 483/138 . . . including means to monitor and control, i.e., adaptive machining
- Y10T 483/14 . with signal or indicator
- Y10T 483/15 . with means to condition or adjust tool or tool support
- Y10T 483/16 . with means to transfer work
- Y10T 483/165 . . Plural machine tools, e.g., flexible manufacturing
- Y10T 483/17 . including machine tool or component
- Y10T 483/1702 . . Rotating work machine tool [e.g., screw machine, lathe, etc.]
- Y10T 483/1705 . . . Tool support comprises rotary spindle
- Y10T 483/1707 . . . Tool having specific mounting or work treating feature
- Y10T 483/171 . . . . Workpiece holder [e.g., chuck or chuck jaw, collet, etc.]
- Y10T 483/1712 . . . . Turning tool insert changer
- Y10T 483/1714 . . . Tool changer between tool support and matrix
- Y10T 483/1717 . . . . Plural matrices
- Y10T 483/1719 . . . . Tool support comprises turret
- Y10T 483/1721 . . . . . Linearly moveable tool changer
- Y10T 483/1724 . . . . Linearly moveable tool changer
- Y10T 483/1726 . . . Direct tool exchange between tool support and matrix
- Y10T 483/1729 . . Reciprocating tool machine tool [e.g., broaching machine, shaping machine, etc.]
- Y10T 483/1731 . . . including matrix
- Y10T 483/1733 . . Rotary spindle machine tool [e.g., milling machine, boring, machine, grinding machine, etc.]
- Y10T 483/1736 . . . Tool having specific mounting or work treating feature
- Y10T 483/1738 . . . . Tool head
- Y10T 483/174 . . . . Abrading wheel
- Y10T 483/1743 . . . . including means for angularly orienting tool and spindle
- Y10T 483/1745 . . . . . Spindle angularly oriented to align with tool
- Y10T 483/1748 . . . Tool changer between spindle and matrix
- Y10T 483/175 . . . . Plural matrices
- Y10T 483/1752 . . . . including tool holder pivotable about axis
- Y10T 483/1755 . . . . . Plural tool holders pivotable about common axis
- Y10T 483/1757 . . . . . including intermediate tool changer
- Y10T 483/176 . . . . . Intermediate tool changer includes tool holder pivotable about axis

Y10T 483/1762	.....	Tool holders pivotable with respect to each other
Y10T 483/1764	.....	Tool holders pivotable about plural nonparallel axes
Y10T 483/1767	.....	Linearly movable tool holders
Y10T 483/1769	.....	Extensible tool holders
Y10T 483/1771	.....	Translatable axis
Y10T 483/1774	.....	Distinct tool changer for each tool
Y10T 483/1776	.....	including intermediate tool changer
Y10T 483/1779	.....	Linearly movable tool holder
Y10T 483/1781	.....	Tool holder pivotable about plural nonparallel axes
Y10T 483/1783	....	including linearly translatable tool changer [e.g., shuttle, ram, etc.]
Y10T 483/1786	.....	Plural tool holders
Y10T 483/1788	.....	Orthogonally translatable
Y10T 483/179	...	Direct tool exchange between spindle and matrix
Y10T 483/1793	....	Spindle comprises tool changer
Y10T 483/1795	.....	Matrix indexes selected tool to transfer position
Y10T 483/1798	....	including means to project tool from matrix
Y10T 483/18	.	Tool transfer to or from matrix
Y10T 483/1809	..	Matrix including means to latch tool
Y10T 483/1818	..	Matrix including means to project tool for transfer
Y10T 483/1827	...	Rectilinear
Y10T 483/1836	...	Pivoting
Y10T 483/1845	..	Plural matrices
Y10T 483/1855	...	including tool replenishing
Y10T 483/1864	..	including tool pot or adapter
Y10T 483/1873	..	Indexing matrix
Y10T 483/1882	...	Rotary disc
Y10T 483/1891	...	Chain or belt
Y10T 483/19	.	Miscellaneous