

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**Y10T 16/00**

Miscellaneous hardware [e.g., bushing, carpet fastener, caster, door closer, panel hanger, attachable or adjunct handle, hinge, window sash balance, etc.]

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

Y10T 24/00	Buckles, buttons, clasps, etc.	
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

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|-------------------|---|
| Y10T 29/00 | Metal working |
| 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 74 Series

Y10T 74/00	Machine element or mechanism
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., wobbler 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**Y10T 82/00****Turning**

- 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 117 Series

Y10T 117/00	Single-crystal, oriented-crystal, and epitaxy growth processes; non-coating apparatus therefor
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 152 Series

Y10T 152/00	Resilient tires and wheels
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

Y10T 156/00	Adhesive bonding and miscellaneous chemical manufacture	
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 conveyor
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 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 403 Series

Y10T 403/00	Joints and connections
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

Y10T 408/00 Cutting by use of rotating axially moving tool

- 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	.....	Pivotaly 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	.... Pivotal 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

Y10T 409/00	Gear cutting, milling, or planing	
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 furbishing 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 409/303336	...	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**Y10T 428/00****Stock material or miscellaneous articles**

- 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 Polyimidefluoride
- Y10T 428/1032 Polyimide-metallo
- 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 magnetoresistance [GMR] or colossal magnetoresistance [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 428/24	.	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 428/25	.	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 428/32	.	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

Former US Class 436 Series

Y10T 436/00	Chemistry: analytical and immunological testing	
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 464 Series

Y10T 464/00 **Rotary shafts, gudgeons, housings, and flexible couplings for rotary shafts**

- 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

Y10T 483/00	Tool changing
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