

1.2	CONTACT LENS APPLICATOR	175	.Pole mounted
1.3	SANITARY HANDLER FOR PET DROPPINGS	26.5	DISCHARGING HAND RECEPTACLES, TRAYS OR CAGES
1.4	.Pole mounted	27.1	DETACHABLE LIFTER
1.5	..Catcher	28	.Pivoted graspers
3.5	MORTAR HAWK	29	..Rim- and bottom-engaging
3.6	ZIPPER PULLING TOOL	30	..Axially extending handle
4	BARREL-ROLLER TYPE	31.1	..Rim gripping jaws
5	EAR-CORN HOLDERS	31.2	.Band type
5.5	ROD-TYPE SUPPORTS AND HANGERS (E.G., TOBACCO, CONFECTION, ETC.)	32	.Bottom-engaging
		33	.Resilient
		34	.Sliding graspers
173	LIFTER FOR REMOVING ITEM (E.G., CAKE, TURKEY, ETC.) FROM CONTAINER	49	HAND FORKS AND SHOVELS
		50	.Fork-tine shovel clearers
6	PLATE TURNERS	50.5	..With grappling-type forks or shovels
7	PANCAKE TURNER, ICE CUBE REMOVER, OR CAKE SERVER TYPE	50.6	.Grappling type
		50.7	..Annularly arranged
8	.Special turning element	50.8	..With movable cooperating load-engaging member
8.5	CLOTHES TONGS		...Fixed and movable members
8.6	CARPET STRETCHER	50.9	.Convertible and combined
132	WIRE ENGAGING AND CLAMPING MEANS FOR USE WITH CABLE TYPE WIRE TENSIONING APPARATUS	51	..Fork and rake
		52	.Pivoted and adjustable head
133	.Wire engaging portion of means includes rotatable, generally circular disk or cylinder	53.5	.Snow shovel
		54.5	.Scoop
134	.Including threaded tightener	176	..With top cover
135	.Including pivotally attached and hand engaged lever	177	..Two or more distinct handles
136	..Having curved, camming protrusion formed on lever	178	..Apertured for fluent material
		179	..One piece type
9	STOVE IMPLEMENTS	180	.Fork
10	.Combined	55.5	.Edge guards
11	.Fire tong	56	.Handles
12	.Lid lifter	57	..Auxiliary
13	..Pivoted jaw	58	.Attachments
14	.Poker	59	..Foot pieces
15	HAND BARS AND HAND BARROWS	60	.Pole mounted
16	.Opposing jaws	181	SPEARS
17	.Cant hook type	61	.Pole mounted
18	.Railway coupling tools	182	BRICK CARRIERS
19.2	.Ball Retriever	62	.Hoist-line frame
19.3	.Grappling Gaff	63.1	..Expanding grapple, fluid pressure inflatable
22	.Store goods	63.2	UTILIZING FLUID PRESSURE (E.G., VACUUM, ETC.)
23	..Compound tool	183	.For eggs or light bulbs
23.5	.Laundry sticks	184	.Including diverse art structure (e.g., heater, light, sensor, vibrator, control, filter, etc.)
24	.Compound tool	185	
174	FOR AN ELECTRICAL CONDUCTOR OR REGULATOR (E.G., HOT-LINE STICK OR FUSE PULLER, ETC.)	64.2	.Venturi effect
25	HAND AND FINGER ATTACHMENTS	64.3	.By positive fluid stream directed against article
26	HAND-HOOK TYPE		

186	.Including a suction activation or deactivation device (e.g., switch, etc.)	67.21	..With center of gravity adjustment
187	..Mechanical-type evacuation (i.e., no pump)	67.22	..With load retainer
188	.Having a plurality of suction ports or apertures	67.3	.Load capturing supports
189	.Having a resilient seal or resilient sealing	67.31	..Pivotable about horizontal axis
65	.Frames	67.32	..Rotatable about vertical axis
65.5	MAGNET	67.33	..Horizontally slideable
190	.Pole mounted	67.4	.Underlying load spanning support and sling
66.1	UNDERWATER IMPLEMENT	67.41	..With load retainer
66.2	.With locating means	67.5	.Load leveling or shifting
81.1	SPACING HOIST BAR OR FRAME	74	HOIST-LINE SLINGS
81.2	.Adjustable to accommodate different size loads	75	.Latch release
81.21	..Telescopic	76	..Bottom
81.3	.With center of gravity adjustment	77	.Net
81.4	.With orienting means	82.1	HOOK, HOISTLINE, OR GRAB TYPE
81.41	..Load engaging guide	82.11	.Cable and hook tackle
81.5	.Load supporting units	82.12	..With center of gravity adjustment
81.51	..Pivotal about horizontal axis	82.13	..Opposed load grasping hooks
81.52	..Rotatable about vertical axis	82.14	..Choker type
81.53	...Twist lock	82.15	.Driven positioning mean
81.54	..Horizontally slideable	82.16	.Resilient suspension means (e.g., spring or fluid)
81.55	..Underlying load spanning support and sling	82.17	.Locking device (i.e., hook throat closure)
81.56	..Hook	82.18	..Overlapping loop forming hooks
81.6	.Load gripping units	82.19	..Locking arm swings in plane of hook
81.61	..Pivoted gripping element	82.2	...With pivoted latch
81.62	..Slideable gripping element	82.21	...With sliding latch
68.1	HOISTABLE RECEPTACLE	82.22	..Swivel locking arm
68.2	.With discharge or loading means	82.23	..Slidable locking arm
68.21	..Bottom or side discharge or loading	82.24	.Load releasing means
68.22	...Charging bucket, concrete bucket, hod, caldron, or well bailer type	82.25	..Parachute release means
68.23Identical twin sectors (e.g., clamshell type, etc.)	82.26	..Store ejector (e.g., aircraft carried)
68.24Twin doors	82.27	..Boat detaching
68.25Vertically sliding closure	82.28	..Plurality of balls
68.26	..Tilting discharge or loading	82.29	..Explosive release
68.27	...With trunnions	82.3	..Motor operated
68.3	.Separable auxilliary hoisting means (e.g., sling, spreader frame)	82.31	..Pivoted load support
67.1	HOISTLINE ATTACHED LOAD SUPPORTING FRAME	82.32	...Plurality of similar coacting supports
67.2	.L-frame	82.33	...With pivoted latch
		82.34	...With sliding latch
		82.35	..Sliding load support
		82.36	..Load ejecting
		191	.Pole mounted (e.g., boat grab, rope attacher, etc.)
		85	OVERHEAD BEAM HOOKS AND GRAPPLES
		86.4	GRAPPLE
		86.41	.Load shifting

86.42	.Interwoven contractable gripper (e.g., chinese fingers)	195	..Expanding (e.g., internal type, etc.)
86.1	.Well type	196	..Resilient jaws
86.11	..Basket-forming	197	..Fixed and moveable jaw
86.12	..Combined insertable and surrounding grappling means	198 199	..Pivoted jaws ...Automatic, including bowling pin handling
86.13	..With separate lateral positioning means	200	...Separate cable operator
86.14	..With separate grapple-setting operator	201 202	...Load surrounding type ...Separate sliding operator
86.15	...Fluid pressure operator	203	...Cam-operated
86.16	..With laterally movable grapple support	204 205	...Auxiliary operating handle ...Crossed levers
86.17	..With releasing means	206	...Hayfork-shaped type
86.18	...Excessive force-responsive	207	..Slidable jaws
86.19	...Spring release means	208	..Inflatable
86.2	..Grappling means latched in release position	89 90	.Lewises .Collar-engaging
86.21	...Lateral pocket and lug	91	..Rigid yoke
86.22	...Screw-threaded	93	.Expanding
86.23	..With impact means	94	..Cam-spread jaws
86.24	..Expanding grapple means	95	...Pivoted
86.25	...Cammed grappling means	96	...Slip wedge
86.26	..Contracting grappling means (e.g., overshot)	97 98	..Pivoted ...Hayfork type
86.27	...Inwardly biased grappling means with trip	98.1 99.1	..Inflatable .Resilient jaws
86.28	...Outwardly biased grappling means	99.2	..Hand-held (e.g., tweezer, tongs)
86.29	...Pivoted grappling means	100	..Separate sliding operator
86.3	...Cammed grappling means	101	.Pivoted cam and hook
86.31	...Inwardly biased grappling means	102.1 102.2	.Socket and slip wedge ..Well pipe elevator
86.32	...Resilient grappling means	103.1	.Fixed and moveable jaw
86.33	...Shoulder-engaging	103.2	..Coil gripper
86.34	..Including washover or cutover means	104 105	..Pivoted jaw ...Hayfork type
87.1	.Multiple grapples for multiple objects	106 107	.Pivoted jaws ..Hayfork type
87.11	..Confection stick handling (e.g., stick used for frozen confection containing water, flavoring, and coloring)	108 109 110.1	...With auxiliary retainer ...Latched ..Automatic
87.12	..Egg handler	110.2	...Cam and follower
87.2	..Groove- or shoulder-engaging type	111 112 113	..Separate cable operator ...Suspension ..Surrounding frame
87.22	...Pivoted jaws	114	...Opposing load-engaging cams
87.24	...Link- or lever-operated	115	..Separate sliding operator
87.26	...Slidable jaws	116	..Cam-operated
87.28	...Rigid type	117	..Auxiliary operating handle
192	..With actuating system (e.g., magnetic, piston, etc.)	118 119	..Crossed levers ...Tandem tongs
193	..Lewis type	119.1	.Slideable jaws
194	..Pipe collar engaging	119.2	.Band type

119.3	.Inflatable	153	..And rigid handle or bar
119.4	.Swing dampener	154	...Plural discrete flaccid supporting members suspended from handle or bar at spaced points
92	.Rigid gripper		
120	HAYFORK TYPE		
121	.Corkscrew		
122	.Single tilting fork	155	...And connected by cross-strap or brace (e.g., harness)
123	..With auxiliary retainer		
124	..Latch release	156	...Single web or strap (e.g., sling)
125	.Combined harpoon and fork		
126	.Harpoon	157	..Having parallel flaccid members forming article support
127	..Mechanically spread barbs		
128	...Multiple	158	.Carrier component positioned in aperture in article
129	...Latch release		
130	...Latch release	159	.Having plural discrete receivers or supports for spaced articles
131	SHIELD DEVICES		
209	POLE MOUNTED IMPLEMENT		
210	.Extensible	160	..Separable supports
211	.U-shaped handler	161	..Vertical array
137	ARTICLE CARRIER GRIPPED AND CARRIED BY HAND	162	..Having movably mounted or separable means to retain articles
138	.Including means to cover book or sheet	163	...Common to plural receivers or supports
139	.Including support for optical instrument (e.g., camera holder)	164	.Article gripping or retaining means actuated by lifting carrier
140	.Carrier for person		
141	.Convertible to, or useable as, different device or different type carrier	165	.Including means to release article or to fasten carrier to or around article
142	..Having means for supporting or mounting carrier	166	..Resiliently biased
143	..Having plural receivers or supports for plural articles (e.g., rack)	167	.Support or receiver movably, removably, or adjustably mounted to handle or handle portion (e.g., collapsible)
144	...Tray	168	..Having slidable sections
145	.Configured for complimentary projections on package or article	169	..Having pivoted sections
146	.Having plural diverse receivers or supports for diverse articles	170	.Including handle having article or cord engaging means depending at each end
147	..Including receiver or support for ski	171	.Having cord or bail accommodating groove or passage along length of handle
148	.Including helical spring or elastic material for engaging or supporting article	172	.Tray
149	.Having flaccid receiver, support or fastener for article	212	UTILIZING AN ADHESIVE CONTACT
150	..Including means to tighten flaccid member about article	213	SPECIFIC END EFFECTOR FOR ROBOT ARM (E.G., ROBOT HAND, WAFER HANDLER, ETC.)
151	..Including rigid, semirigid or reinforced panel	214	INCLUDING BAG HOLDER
152	..Having plural handles connected by flaccid receiver or support (e.g., sling)	215	EYE- OR U-BOLT ATTACHMENT
		216	WITH FREEZE, THAW CAPABILITY
		217	ARROW OR HOOK EXTRACTOR
		218	CHOPSTICKS
		2	MISCELLANEOUS COMPOUND IMPLEMENT
		3	.Plier or tong type
		219	MISCELLANEOUS

CROSS-REFERENCE ART COLLECTIONS

- 901 **PLATE LIFTING CLAMP**
- 902 **GRIPPING ELEMENT**
- 903 **BATTERY CARRIER**
- 904 **VEHICLE CARRIER**
- 905 **WIRELESS REMOTE CONTROL DEVICE**
- 906 **ATOMIC FUEL HANDLER**
- 907 **SENSOR CONTROLLED DEVICE**

FOREIGN ART COLLECTIONS

FOR 000 **CLASS-RELATED FOREIGN DOCUMENTS**

Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

- FOR 100 **MISCELLANEOUS (294/1.1)**
- FOR 101 **POLE MOUNTED IMPLEMENT (294/19.1)**
HANDS FORKS AND SHOVELS (294/49)
- FOR 102 .Scoop (294/55)
- FOR 103 **VACUUM (294/64.1)**
GRAPPLE (294/86.4)
- FOR 104 .Magnet- or piston-controlled (294/88)

- 1 **WHEELS**
- 2 .With crank pin
- 3 .Epicyclic
- 4 .Rack rail
- 5 .Attached gear
- 6 .Counterbalance
- 7 .Sound deadeners
- 8 .Composite cast
- 8.5 .Convertible road and rail
- 9.1 .Moveable flange
- 9.2 ..Moveable for road use
- 10 .Loose tires
- 11 .Tire cushions
- 12 ..Pneumatic
- 13 ..Wooden blocks

- 14 ..Metallic springs
- 15 .Tire fasteners
- 16 ..By welding
- 17 ..By casting
- 18 ..Integral lugs
- 19 ..Transverse keys
- 20 ..Bolted lap flanges
- 21 .Webs
- 22 ..Sheet metal
- 23 ...With filler
- 24 ...With integral tire
- 25 .Spokes
- 26 ..Cast in
- 27 .Integral cast
- 28 ..Hollow webs
- 29 .Wrought
- 30 .Composition
- 30.1 .Pneumatic tire wheel
- 31.1 .Wheel tread
- 32 ..Multiple rollers
- 33 ..Multiple
- 34 ..Form
- 35 .Bushings
- 36.1 **AXLE**
- 37 .Sleeved and fixed wheels
- 38 .Twin middle bearing
- 39 .Coupling
- 40 ..Bolted flange
- 41 .Mine car
- 42 ..Axle brackets
- 42.1 .Outer axle or housing positioned about axle by roller or ball bearing
- 42.2 .Specified end cap fastening means
- 43 **WHEEL-ATTACHING DEVICES**
- 44 **LOOSE WHEEL**
- 45 .Exterior hub groove
- 46 ..Imposed roller
- 47 .Axle groove
- 48 ..Lock bolt
- 49 .Axle end stop
- 50 ..Linchpin

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FOR 000 **CLASS-RELATED FOREIGN DOCUMENTS**

