CLASS 294 HANDLING: HAND AND HOIST-LINE IMPLEMENTS

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

July 2011
Including a suction activation
or deactivation device (e.g.,
switch, etc.)

Mechanical-type evacuation
(i.e., no pump)

Having a plurality of suction
ports or apertures

Having a resilient seal or
resilient sealing

Frames

Pole mounted

UNDERWATER IMPLEMENT

SPACING HOIST BAR OR FRAME

Adjustable to accommodate
different size loads

Telescopic

With center of gravity
adjustment

With orienting means

Load engaging guide

Load supporting units

Pivotal about horizontal axis

Rotatable about vertical axis

Twist lock

Horizontally slideable

Underlying load spanning
support and sling

Hook

Load gripping units

Pivoted gripping element

Slideable gripping element

HOISTABLE RECEPTACLE

With discharge or loading means

Bottom or side discharge or
loading

Charging bucket, concrete
bucket, hod, caldron, or well
bailer type

Identical twin sectors (e.g.,
clamshell type, etc.)

Twin doors

Vertically sliding closure

Tilting discharge or loading

With trunnions

Separable auxiliary hoisting
means (e.g., sling, spreader
frame)

HOISTLINE ATTACHED LOAD

SUPPORTING FRAME

L-frame

With center of gravity

adjustment

With load retainer

Load capturing supports

Pivotal about horizontal axis

Rotatable about vertical axis

Horizontally slideable

Underlying load spanning support
and sling

With load retainer

Load leveling or shifting

HOIST-LINE SLINGS

Cable and hook tackle

With center of gravity

adjustment

Opposed load grasping hooks

Choker type

Driven positioning mean

Resilient suspension means

(e.g., spring or fluid)

Locking device (i.e., hook
throat closure)

Overlapping loop forming hooks

Locking arm swings in plane of
hook

With pivoted latch

With sliding latch

Swivel locking arm

Slidable locking arm

Load releasing means

Parachute release means

Store ejector (e.g., aircraft
carried)

Boat detaching

Plurality of balls

Explosive release

Motor operated

Pivoted load support

Plurality of similar coacting
supports

With pivoted latch

With sliding latch

Sliding load support

Load ejecting

Pole mounted (e.g., boat grab,
rope attacher, etc.)

OVERHEAD BEAM HOOKS AND GRAPPLING

GRAPPLE

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 grapping means 198 .Pivoted jaws
86.13 .With separate lateral positioning means 200 .Automatic, including bowling pin handling
86.14 .With separate grapple-setting operator 201 .Separate cable operator
86.15 .Fluid pressure operator 202 .Load surrounding type
86.16 .With laterally movable grapple support 203 .Separate sliding operator
86.17 .With releasing means 204 .Cam-operated
86.18 .Excessive force-responsive 205 .Auxiliary operating handle
86.19 .Spring release means 206 .Crossed levers
86.2 .Grapping means latched in release position 207 .Hayfork-shaped type
86.21 .Lateral pocket and lug 208 .Inflatable
86.22 .Screw-threaded 89 .Lewis
86.23 .With impact means 90 .Collar-engaging
86.24 .Expanding grapple means 91 .Rigid yoke
86.25 .Cammed grapping means 92 .Expanding
86.26 .Contracting grapping means (e.g., overshot) 93 .Cam-spread jaws
86.27 .Inwardly biased grapping means with trip 94 .Pivoted
86.28 .Outwardly biased grapping means 95 .Slip wedge
86.29 .Pivoted grapping means 96 .Hayfork type
86.3 .Cammed grapping means 97 .Inflatable
86.31 .Inwardly biased grapping means 98 .Resilient jaws
86.32 .Resilient grapping means 99 .Hand-held (e.g., tweezer, tongs)
86.33 .Shoulder-engaging 100 .Separate sliding operator
86.34 .Including washover or cutover means 101 .Pivoted cam and hook
87.1 .Multiple grapples for multiple objects 102 .Socket and slip wedge
87.11 .Confection stick handling (e.g., stick used for frozen confection containing water, flavoring, and coloring) 102.1 .Well pipe elevator
87.2 .Groove- or shoulder-engaging type 102.2 .Fixed and moveable jaw
87.22 .Pivoted jaws 103 .Coil gripper
87.24 .Link- or lever-operated 104 .Pivoted jaw
87.26 .Slidable jaws 105 .Hayfork type
87.28 .Rigid type 106 .Pivoted jaws
192 .With actuating system (e.g., magnetic, piston, etc.) 107 .Hayfork type
193 .Lewis type 108 .With auxiliary retainer
194 .Pipe collar engaging 109 .Latched
87.12 .Egg handler 110 .Automatic
87.1 .Separate cable operator 110.1 .Cam and follower
111 .Surrounding frame 110.2 .Opposing load-engaging cams
112 .Suspension 114 .Separate sliding operator
113 .Surrounding frame 115 .Cam-operated
114 .Opposing load-engaging cams 116 .Auxiliary operating handle
115 .Separate sliding operator 117 .Crossed levers
116 .Cam-operated 118 .Tandem tongs
117 .Auxiliary operating handle 119 .Band type
118 .Pipe collar engaging
119.3 .Inflatable
119.4 .Swing dampener
92 .Rigid gripper
120 HAYFORK TYPE
121 .Corkscrew
122 .Single tilting fork
123 ..With auxiliary retainer
124 ..Latch release
125 ..Combined harpoon and fork
126 .Harpoon
127 ..Mechanically spread barbs
128 ...Multiple
129 ....Latch release
130 ...Latch release
131 SHIELD DEVICES
209 POLE MOUNTED IMPLEMENT
210 .Extensible
211 .U-shaped handler
137 ARTICLE CARRIER GRIPPED AND CARRIED BY HAND
138 .Including means to cover book or sheet
139 .Including support for optical instrument (e.g., camera holder)
140 .Carrier for person
141 .Convertible to, or useable as, different device or different type carrier
142 ...Having means for supporting or mounting carrier
143 ...Having plural receivers or supports for plural articles (e.g., rack)
144 ...Tray
145 .Configured for complimentary projections on package or article
146 .Having plural diverse receivers or supports for diverse articles
147 ...Including receiver or support for ski
148 .Including helical spring or elastic material for engaging or supporting article
149 .Having flaccid receiver, support or fastener for article
150 ..Including means to tighten flaccid member about article
151 ..Including rigid, semirigid or reinforced panel
152 .Having plural handles connected by flaccid receiver or support (e.g., sling)
153 ...And rigid handle or bar
154 ...Plural discrete flaccid supports for handle or bar at spaced points
155 ....And connected by cross-strap or brace (e.g., harness)
156 ...Single web or strap (e.g., sling)
157 ..Having parallel flaccid members forming article support
158 .Carrier component positioned in aperture in article
159 .Having plural discrete receivers or supports for spaced articles
160 ..Separable supports
161 ..Vertical array
162 ..Having movably mounted or separable means to retain articles
163 ...Common to plural receivers or supports
164 .Article gripping or retaining means actuated by lifting carrier
165 .Including means to release article or to fasten carrier to or around article
166 ..Resiliently biased
167 .Support or receiver movably, removably, or adjustably mounted to handle or handle portion (e.g., collapsible)
168 ...Having slidable sections
169 ...Having pivoted sections
170 .Including handle having article or cord engaging means depending at each end
171 .Having cord or bail accommodating groove or passage along length of handle
172 .Tray

UTILIZING AN ADHESIVE CONTACT
SPECIFIC END EFFECTOR FOR ROBOT ARM (E.G., ROBOT HAND, WAFER HANDLER, ETC.)

INCLUDING BAG HOLDER
EYE- OR U-BOLT ATTACHMENT
WITH FREEZE, THAW CAPABILITY
ARROW OR HOOK EXTRACTOR
CHOPSTICKS
MISCELLANEOUS COMPOUND IMPLEMENT
.Plier or tong type
MISCELLANEOUS
CROSS-REFERENCE ART COLLECTIONS

<table>
<thead>
<tr>
<th>CLASS</th>
<th>ART COLLECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>901</td>
<td>PLATE LIFTING CLAMP</td>
</tr>
<tr>
<td>902</td>
<td>GRIPPING ELEMENT</td>
</tr>
<tr>
<td>903</td>
<td>BATTERY CARRIER</td>
</tr>
<tr>
<td>904</td>
<td>VEHICLE CARRIER</td>
</tr>
<tr>
<td>905</td>
<td>WIRELESS REMOTE CONTROL DEVICE</td>
</tr>
<tr>
<td>906</td>
<td>ATOMIC FUEL HANDLER</td>
</tr>
<tr>
<td>907</td>
<td>SENSOR CONTROLLED DEVICE</td>
</tr>
</tbody>
</table>

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

WHEEL-ATTACHING DEVICES
43 LOOSE WHEEL
44 . Exterior hub groove
45 . Imposed roller
46 . Axle groove
47 . Lock bolt
48 . Axle end stop
49 . Linchpin
50 . Linchpin

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July 2011
July 2011