EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 1517

DATE: AUGUST 1, 2023

PROJECT RP11777

The following classification changes will be effected by this Notice of Changes:

Action	**Subclass**	**Group(s)**
SCHEME:		
Symbols Deleted:	B64G	1/007, 2001/1028, 2001/1035, 2001/1042, 2001/1057, 2001/1064, 2001/1071, 2001/1092, 2001/224, 2001/228, 2001/245, 2001/247, 1/288, 1/406, 2001/525, 2001/643
Symbols Deleted Pending Reclassification: (frozen (F))	B64G	1/405
Symbols New:	B64G	1/006, 1/008, 1/1028, 1/1035, 1/1042, 1/1057, 1/1064, 1/1071, 1/1081, 1/2221, 1/2222, 1/2223, 1/2224, 1/2225, 1/2226, 1/2227, 1/2228, 1/2229, 1/223, 1/228, 1/2421, 1/2422, 1/2423, 1/2425, 1/2427, 1/2429, 1/245, 1/247, 1/262, 1/264, 1/369, 1/4005, 1/4021, 1/4022, 1/4024, 1/4026, 1/411, 1/413, 1/415, 1/417, 1/4282, 1/465, 1/525, 1/623, 1/625, 1/642, 1/6425, 1/643, 1/644, 1/6455, 1/6457, 1/6459, 1/6462, 1/6464
Titles Changed:	B64G	1/1078, 1/14, 1/222, 1/24, 1/244, 1/40, 1/401, 1/402, 1/403, 1/404, 1/407, 1/641, 1/646
	B64G	3/00
Warnings New:	B64G	1/002, 1/006, 1/008, 1/1078, 1/1081, 1/222, 1/2221, 1/2228, 1/2229, 1/242, 1/2421, 1/2422, 1/2423, 1/2425, 1/2427, 1/2429, 1/244, 1/26, 1/262, 1/40, 1/4005, 1/401, 1/402, 1/4021, 1/4022, 1/4024, 1/4026, 1/405, 1/409, 1/411, 1/413, 1/417, 1/428, 1/4282, 1/46, 1/465, 1/60, 1/62, 1/623, 1/625, 1/641, 1/642, 1/6425, 1/643, 1/644, 1/645, 1/6455, 1/6457, 1/6459, 1/646, 1/6462
DEFINITIONS:		
Definitions Deleted: (no frozen (F) symbol definitions should be deleted)	B64G	1/007

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DATE: AUGUST 1, 2023

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Action	**Subclass**	**Group(s)**
Definitions New:		1/006, 1/1014, 1/1021, 1/1028, 1/105, 1/1057, 1/1071, 1/1078, 1/1081, 1/1085, 1/16, 1/22, 1/222, 1/223, 1/226, 1/228, 1/244, 1/281, 1/283, 1/285, 1/286, 1/32, 1/34, 1/361, 1/363, 1/365, 1/366, 1/368, 1/38, 1/4005, 1/401, 1/402, 1/4022, 1/4026, 1/403, 1/404, 1/407, 1/408, 1/409, 1/413, 1/415, 1/417, 1/421, 1/422, 1/423, 1/425, 1/426, 1/427, 1/428, 1/4282, 1/443, 1/446, 1/46, 1/48, 1/50, 1/503, 1/506, 1/525, 1/54, 1/546, 1/56, 1/58, 1/60, 1/62, 1/623, 1/625, 1/64, 1/641, 1/643, 1/644, 1/645, 1/6455, 1/646, 1/648
	B64G	3/00
	B64G	5/00
Definitions Modified:	B64G	1/00, 1/002, 1/005, 1/10, 1/12, 1/14, 1/24, 1/242, 1/26, 1/36, 1/40, 1/42, 1/66, 1/68
	B64G	4/00
	B64G	6/00
	B64G	7/00
	B64G	99/00

The following subclasses/groups are also impacted by this Notice of Changes (indicate subclasses/groups outside of the project scope, such as those listed in the CRL):
F03H 1/00, F03H 1/0006, F03H 1/0093

This Notice of Changes includes the following *[Check the ones included]:*

1. CLASSIFICATION SCHEME CHANGES
   - ☒ A. New, Modified or Deleted Group(s)
   - ☒ B. New, Modified or Deleted Warning(s)
   - ☐ C. New, Modified or Deleted Note(s)
   - ☐ D. New, Modified or Deleted Guidance Heading(s)
2. DEFINITIONS
   - ☒ A. New or Modified Definitions (Full definition template)
   - ☒ B. Modified or Deleted Definitions (Definitions Quick Fix)
3. ☒ REVISION CONCORDANCE LIST (RCL)
4. ☒ CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5. ☒ CHANGES TO THE CROSS-REFERENCE LIST (CRL)

CPC NOTICE OF CHANGES 1517

DATE: AUGUST 1, 2023

PROJECT RP11777

1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

SUBCLASS B64G - COSMONAUTICS; VEHICLES OR EQUIPMENT THEREFOR

Type*	**Symbol**	**Indent Level Number of dots (e.g. 0, 1, 2)**	**Title "CPC only" text should normally be enclosed in {curly brackets}****	**Transferred to#**
C	B64G1/002	1	{Launch systems}	B64G1/002, B64G1/006, B64G1/008
U	B64G1/005	2	{Air launch}	
N	B64G1/006	2	{Reusable launch rockets or boosters}	
D	B64G1/007	2	{Orbit transfer}	<administrative transfer to B64G1/2427>
N	B64G1/008	2	{Arrangement of launch rockets or boosters}	
D	B64G2001/1028	3	{using optical means for mapping, surveying or detection, e.g. of intelligence}	<administrative transfer to B64G1/1028 INV>
N	B64G1/1028	3	{using optical means for mapping, surveying or detection, e.g. of intelligence}	
D	B64G2001/1035	3	{using radar for mapping, surveying or detection, e.g. of intelligence}	<administrative transfer to B64G1/1035 INV>
N	B64G1/1035	3	{using radar for mapping, surveying or detection, e.g. of intelligence}	
D	B64G2001/1042	3	{specifically adapted for meteorology}	<administrative transfer to B64G1/1042 INV>
N	B64G1/1042	3	{specifically adapted for meteorology}	
D	B64G2001/1057	3	{specifically adapted for astronomy}	<administrative transfer to B64G1/1057 INV>
N	B64G1/1057	3	{specifically adapted for astronomy}	
D	B64G2001/1064	3	{specifically adapted for interplanetary, solar or interstellar exploration}	<administrative transfer to B64G1/1064 INV>
N	B64G1/1064	3	{specifically adapted for interplanetary, solar or interstellar exploration}	
D	B64G2001/1071	4	{Planetary landers intended for the exploration of the surface of planets, moons or comets}	<administrative transfer to B64G1/1071 INV>
N	B64G1/1071	4	{Planetary landers intended for the exploration of the surface of planets, moons or comets}	
C	B64G1/1078	2	{Maintenance satellites (refueling in space B64G1/4024)}	B64G1/1078, B64G1/1081
N	B64G1/1081	3	{for debris removal}	
U	B64G1/1085	2	{Swarms and constellations}	
D	B64G2001/1092	2	{Special features of modular spacecraft systems}	<administrative transfer to B64G1/223 INV>

M	B64G1/14	1	Space shuttles {(reusable launch rockets B64G1/006)}	
U	B64G1/22	1	Parts of, or equipment specially adapted for fitting in or to, cosmonautic vehicles	
C	B64G1/222	2	{for deploying structures between a stowed and deployed state}	B64G1/222, B64G1/2221, B64G1/2222, B64G1/2223, B64G1/2224, B64G1/2225, B64G1/2226, B64G1/2227, B64G1/2228, B64G1/2229
N	B64G1/2221	3	{characterised by the manner of deployment}	
N	B64G1/2222	4	{Folding}	
N	B64G1/2223	5	{via scissor linkage}	
N	B64G1/2224	5	{about multiple axes}	
N	B64G1/2225	4	{Rolling or unfurling (B64G1/2227 takes precedence)}	
N	B64G1/2226	4	{Telescoping}	
N	B64G1/2227	4	{Inflating}	
N	B64G1/2228	3	{characterised by the hold-down or release mechanisms}	
N	B64G1/2229	3	{characterised by the deployment actuating mechanism (inflating B64G1/2227)}	
N	B64G1/223	2	{Modular spacecraft systems}	
D	B64G2001/224	2	{Inflatable space structures}	<administrative transfer to B64G1/2227 INV>
U	B64G1/226	2	{Special coatings for spacecraft}	
D	B64G2001/228	2	{Damping of high-frequency vibration effects on spacecraft elements, e.g. by using acoustic vibration dampers}	<administrative transfer to B64G1/228 INV>
N	B64G1/228	2	{Damping of high-frequency vibration effects on spacecraft elements, e.g. by using acoustic vibration dampers}	
M	B64G1/24	2	Guiding or controlling apparatus, e.g. for attitude control (jet-propulsion plants F02K; navigation or navigational instruments, see the relevant subclasses, e.g. G01C; automatic pilots G05D1/00)	
C	B64G1/242	3	{Orbits and trajectories}	B64G1/242, B64G1/2421, B64G1/2422, B64G1/2423, B64G1/2425, B64G1/2427, B64G1/2429, B64G1/244

N	B64G1/2421	4	{Aerobraking}	
N	B64G1/2422	4	{using Lagrange points, e.g. halo orbits}	
N	B64G1/2423	4	{Sun-synchronous orbits}	
N	B64G1/2425	4	{Geosynchronous orbits}	
N	B64G1/2427	4	{Transfer orbits}	
N	B64G1/2429	4	{Station keeping}	
T	B64G1/244	3	{Spacecraft control systems}	
D	B64G2001/245	3	{Attitude control algorithms for spacecraft attitude control}	<administrative transfer to B64G1/245 INV>
N	B64G1/245	4	{Attitude control algorithms for spacecraft attitude control}	
D	B64G2001/247	3	{Advanced control concepts for autonomous, robotic spacecraft, e.g. by using artificial intelligence, neural networks or autonomous agents}	<administrative transfer to B64G1/247 INV>
N	B64G1/247	4	{Advanced control concepts for autonomous, robotic spacecraft, e.g. by using artificial intelligence, neural networks or autonomous agents}	
C	B64G1/26	3	using jets	B64G1/26, B64G1/262, B64G1/264
N	B64G1/262	4	{having adjustable angles, e.g. gimbaled thrusters}	
N	B64G1/264	5	{mounted on adjustable booms or the like}	
D	B64G1/288	4	{using gyroscopes as attitude sensors}	<administrative transfer to B64G1/369>
U	B64G1/368	4	{using gravimeters}	
N	B64G1/369	4	{using gyroscopes as attitude sensors}	
C	B64G1/40	2	Arrangements or adaptations of propulsion systems (propulsion plants per se, see the relevant subclasses, e.g. F02K, F03H)	B64G1/40, B64G1/4005
N	B64G1/4005	3	{Air-breathing propulsion}	
C	B64G1/401	3	{Liquid propellant rocket engines (Ion or plasma engines B64G1/413; Arcjets and other resistojets B64G1/415)}	B64G1/401, B64G1/4005
C	B64G1/402	3	{Propellant tanks; Feeding propellants}	B64G1/402, B64G1/4021, B64G1/4022, B64G1/4024, B64G1/4026
N	B64G1/4021	4	{Tank construction; Details thereof}	
N	B64G1/4022	4	{Arrangements of tanks in or on spacecraft}	
N	B64G1/4024	4	{Refueling in space}	
N	B64G1/4026	4	{providing propellant to propulsion systems of differing type}	
M	B64G1/403	3	{Solid propellant rocket engines}	
M	B64G1/404	4	{Hybrid rocket engines}	

F	B64G1/405	3	{Ion or plasma engines (per se F03H1/00)}	B64G1/411, B64G1/413
D	B64G1/406	3	{Arcjets and other resistojets}	<administrative transfer to B64G1/415>
M	B64G1/407	3	{Solar sailing}	
C	B64G1/409	3	{Unconventional spacecraft propulsion systems}	B64G1/409, B64G1/411, B64G1/417
N	B64G1/411	3	{Electric propulsion}	
N	B64G1/413	4	{Ion or plasma engines}	
N	B64G1/415	4	{Arcjets or resistojets}	
N	B64G1/417	4	{Electromagnetic fields or flux without mass expulsion}	
C	B64G1/428	3	{Power distribution and management}	B64G1/428, B64G1/4282
N	B64G1/4282	4	{for transmitting power to earth or other spacecraft}	
C	B64G1/46	2	Arrangements or adaptations of devices for control of environment or living conditions (space suits B64G 6/00)	B64G1/46, B64G1/465
N	B64G1/465	3	{for controlling gravity}	
D	B64G2001/525	3	{Survival aids}	<administrative transfer to B64G1/525 INV>
N	B64G1/525	3	{Survival aids}	
C	B64G1/60	2	Crew or passenger accommodations	B64G1/60, B64G1/465
C	B64G1/62	2	Systems for re-entry into the earth's atmosphere; Retarding or landing devices	B64G1/62, B64G1/623, B64G1/625
N	B64G1/623	3	{Retarding devices, e.g. retrorockets}	
N	B64G1/625	3	{Landing devices; Undercarriages}	
U	B64G1/64	2	Systems for coupling or separating cosmonautic vehicles or parts thereof, e.g. docking arrangements	
C	B64G1/641	3	{Interstage or payload connectors (docking systems B64G1/646)}	B64G1/641, B64G1/642, B64G1/6425, B64G1/643
N	B64G1/642	4	{Clamps, e.g. Marman clamps}	
N	B64G1/6425	4	{arrangements for damping vibrations}	
D	B64G2001/643	4	{Dispensers for arranging multiple satellites in a single launcher}	<administrative transfer to B64G1/643 INV>
Q	B64G1/643	4	{for arranging multiple satellites in a single launcher}	B64G1/643, B64G1/644
N	B64G1/644	5	{arranged for independent deployment}	
C	B64G1/645	3	{Separators}	B64G1/645, B64G1/6455, B64G1/6457, B64G1/6459
N	B64G1/6455	4	{Pyrotechnics; Using heat}	
N	B64G1/6457	4	{Springs; Shape memory actuators}	
N	B64G1/6459	4	{Fluid-actuated}	

C	B64G1/646	3	{Docking or rendezvous systems (refueling in space B64G1/4024)}	B64G1/646, B64G1/6462, B64G1/6464
N	B64G1/6462	4	{characterised by the means for engaging other vehicles}	
N	B64G1/6464	5	{Docking probes and receivers}	
M	B64G3/00	0	Observing or tracking cosmonautic vehicles (radio or other waves systems for navigation or tracking G01S)	

*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; T = existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:

- **No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required "anchor" symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types.
- "Transferred to" column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the "Transferred to" column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: "<administrative transfer to XX>", "<administrative transfer to XX and YY simultaneously>", or "<administrative transfer to XX, YY, ...and ZZ simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be "additional information".
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations "ADD" or "INV": <administrative transfer to XX ADD> , <administrative transfer to XX INV>, or <administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the "D" entries of 2000-series or Y-series groups may not require a destination ("Transferred to") symbol, however it is required to specify "<no transfer>" in the "Transferred to" column for such cases.
- For finalization projects, the deleted "F" symbols should have <no transfer> in the "Transferred to" column.
- For more details about the types of scheme change, see CPC Guide.

B. New, Modified or Deleted Warning notice(s)

SUBCLASS B64G - COSMONAUTICS; VEHICLES OR EQUIPMENT THEREFOR

Type*	Location	Old Warning notice	New/Modified Warning
N	B64G1/002		Group B64G 1/002 is impacted by reclassification into groups B64G 1/006 and B64G 1/008. Groups B64G 1/002, B64G 1/006 and B64G 1/008 should be considered in order to perform a complete search.
N	B64G1/006		Group B64G 1/006 is incomplete pending reclassification of documents from group B64G 1/002. Groups B64G 1/002 and B64G 1/006 should be considered in order to perform a complete search.
N	B64G1/008		Group B64G 1/008 is incomplete pending reclassification of documents from group B64G 1/002. Groups B64G 1/002 and B64G 1/008 should be considered in order to perform a complete search.
N	B64G1/1078		Group B64G 1/1078 is impacted by reclassification into group B64G 1/1081. Groups B64G 1/1078 and B64G 1/1081 should be considered in order to perform a complete search.
N	B64G1/1081		Group B64G 1/1081 is incomplete pending reclassification of documents from group B64G 1/1078. Groups B64G 1/1078 and B64G 1/1081 should be considered in order to perform a complete search.
N	B64G1/222		Group B64G 1/222 is impacted by reclassification into groups B64G 1/2221, B64G 1/2222, B64G 1/2223, B64G 1/2224, B64G 1/2225, B64G 1/2226, B64G 1/2227, B64G 1/2228 and B64G 1/2229. All groups listed in this Warning should be considered in order to perform a complete search.
N	B64G1/2221		Groups B64G 1/2221-B64G 1/2227 are incomplete pending reclassification of documents from group B64G 1/222. All groups listed in this Warning should be considered in order to perform a complete search.
N	B64G1/2228		Group B64G 1/2228 is incomplete pending reclassification of documents from group B64G 1/222. Groups B64G 1/222 and B64G 1/2228 should be considered in order to perform a complete search.

N	B64G1/2229		Group B64G 1/2229 is incomplete pending reclassification of documents from group B64G 1/222. Groups B64G 1/222 and B64G 1/2229 should be considered in order to perform a complete search.
N	B64G1/242		Group B64G 1/242 is impacted by reclassification into groups B64G 1/2421, B64G 1/2422, B64G 1/2423, B64G 1/2425, B64G 1/2427, B64G 1/2429 and B64G 1/244. All groups listed in this Warning should be considered in order to perform a complete search.
N	B64G1/2421		Group B64G 1/2421 is incomplete pending reclassification of documents from group B64G 1/242. Groups B64G 1/242 and B64G 1/2421 should be considered in order to perform a complete search.
N	B64G1/2422		Group B64G 1/2422 is incomplete pending reclassification of documents from group B64G 1/242. Groups B64G 1/242 and B64G 1/2422 should be considered in order to perform a complete search.
N	B64G1/2423		Group B64G 1/2423 is incomplete pending reclassification of documents from group B64G 1/242. Groups B64G 1/242 and B64G 1/2423 should be considered in order to perform a complete search.
N	B64G1/2425		Group B64G 1/2425 is incomplete pending reclassification of documents from group B64G 1/242. Groups B64G 1/242 and B64G 1/2425 should be considered in order to perform a complete search.
N	B64G1/2427		Group B64G 1/2427 is incomplete pending reclassification of documents from group B64G 1/242. Groups B64G 1/242 and B64G 1/2427 should be considered in order to perform a complete search.
N	B64G1/2429		Group B64G 1/2429 is incomplete pending reclassification of documents from group B64G 1/242. Groups B64G 1/242 and B64G 1/2429 should be considered in order to perform a complete search.
N	B64G1/244		Group B64G 1/244 is incomplete pending reclassification of documents from group B64G 1/242. Groups B64G 1/242 and B64G 1/244 should be considered in order to perform a complete search.
N	B64G1/26		Group B64G 1/26 is impacted by reclassification into groups B64G 1/262 and B64G 1/264. Groups B64G 1/26, B64G 1/262 and B64G 1/264 should be

			considered in order to perform a complete search.
N	B64G1/262		Groups B64G 1/262 and B64G 1/264 are incomplete pending reclassification of documents from group B64G 1/26. Groups B64G 1/26, B64G 1/262 and B64G 1/264 should be considered in order to perform a complete search.
N	B64G1/40		Group B64G 1/40 is impacted by reclassification into group B64G 1/4005. Groups B64G 1/40 and B64G 1/4005 should be considered in order to perform a complete search.
N	B64G1/4005		Group B64G 1/4005 is incomplete pending reclassification of documents from groups B64G 1/40 and B64G 1/401. Groups B64G 1/40, B64G 1/401 and B64G 1/4005 should be considered in order to perform a complete search.
N	B64G1/401		Group B64G 1/401 is impacted by reclassification into group B64G 1/4005. Groups B64G 1/401 and B64G 1/4005 should be considered in order to perform a complete search.
N	B64G1/402		Group B64G 1/402 is impacted by reclassification into groups B64G 1/4021, B64G 1/4022, B64G 1/4024 and B64G 1/4026. All groups listed in this Warning should be considered in order to perform a complete search.
N	B64G1/4021		Group B64G 1/4021 is incomplete pending reclassification of documents from group B64G 1/402. Groups B64G 1/402 and B64G 1/4021 should be considered in order to perform a complete search.
N	B64G1/4022		Group B64G 1/4022 is incomplete pending reclassification of documents from group B64G 1/402. Groups B64G 1/402 and B64G 1/4022 should be considered in order to perform a complete search.
N	B64G1/4024		Group B64G 1/4024 is incomplete pending reclassification of documents from group B64G 1/402. Groups B64G 1/402 and B64G 1/4024 should be considered in order to perform a complete search.
N	B64G1/4026		Group B64G 1/4026 is incomplete pending reclassification of documents from group B64G 1/402. Groups B64G 1/402 and B64G 1/4026 should be considered in order to perform a complete search.
N	B64G1/405		Group B64G 1/405 is no longer used for the classification of documents as of

			August 1, 2023. The content of this group is being reclassified into groups B64G 1/411 and B64G 1/413. Groups B64G 1/405, B64G 1/411 and B64G 1/413 should be considered in order to perform a complete search.
N	B64G1/409		Group B64G 1/409 is impacted by reclassification into groups B64G 1/411 and B64G 1/417. Groups B64G 1/409, B64G 1/411 and B64G 1/417 should be considered in order to perform a complete search.
N	B64G1/411		Group B64G 1/411 is incomplete pending reclassification of documents from groups B64G 1/405 and B64G 1/409. Groups B64G 1/405, B64G 1/409 and B64G 1/411 should be considered in order to perform a complete search.
N	B64G1/413		Group B64G 1/413 is incomplete pending reclassification of documents from group B64G 1/405. Groups B64G 1/405 and B64G 1/413 should be considered in order to perform a complete search.
N	B64G1/417		Group B64G 1/417 is incomplete pending reclassification of documents from group B64G 1/409. Groups B64G 1/409 and B64G 1/417 should be considered in order to perform a complete search.
N	B64G1/428		Group B64G 1/428 is impacted by reclassification into group B64G 1/4282. Groups B64G 1/428 and B64G 1/4282 should be considered in order to perform a complete search.
N	B64G1/4282		Group B64G 1/4282 is incomplete pending reclassification of documents from group B64G 1/428. Groups B64G 1/428 and B64G 1/4282 should be considered in order to perform a complete search.
N	B64G1/46		Group B64G 1/46 is impacted by reclassification into group B64G 1/465. Groups B64G 1/46 and B64G 1/465 should be considered in order to perform a complete search.
N	B64G1/465		Group B64G 1/465 is incomplete pending reclassification of documents from groups B64G 1/46 and B64G 1/60. Groups B64G 1/46, B64G 1/465 and B64G 1/60 should be considered in order to perform a complete search.
N	B64G1/60		Group B64G 1/60 is impacted by reclassification into group B64G 1/465. Groups B64G 1/465 and B64G 1/60

			should be considered in order to perform a complete search.
N	B64G1/62		Group B64G 1/62 is impacted by reclassification into groups B64G 1/623 and B64G 1/625. Groups B64G 1/62, B64G 1/623 and B64G 1/625 should be considered in order to perform a complete search.
N	B64G1/623		Group B64G 1/623 is incomplete pending reclassification of documents from group B64G 1/62. Groups B64G 1/62 and B64G 1/623 should be considered in order to perform a complete search.
N	B64G1/625		Group B64G 1/625 is incomplete pending reclassification of documents from group B64G 1/62. Groups B64G 1/62 and B64G 1/625 should be considered in order to perform a complete search.
N	B64G1/641		Group B64G 1/641 is impacted by reclassification into groups B64G 1/642, B64G 1/6425 and B64G 1/643. All groups listed in this Warning should be considered in order to perform a complete search.
N	B64G1/642		Group B64G 1/642 is incomplete pending reclassification of documents from group B64G 1/641. Groups B64G 1/641 and B64G 1/642 should be considered in order to perform a complete search.
N	B64G1/6425		Group B64G 1/6425 is incomplete pending reclassification of documents from group B64G 1/641. Groups B64G 1/641 and B64G 1/6425 should be considered in order to perform a complete search.
N	B64G1/643		Group B64G 1/643 is incomplete pending reclassification of documents from group B64G 1/641. Group B64G 1/643 is also impacted by reclassification into group B64G 1/644. Groups B64G 1/641, B64G 1/643 and B64G 1/644 should be considered in order to perform a complete search.
N	B64G1/644		Group B64G 1/644 is incomplete pending reclassification of documents from group B64G 1/643. Groups B64G 1/643 and B64G 1/644 should be considered in order to perform a complete search.
N	B64G1/645		Group B64G 1/645 is impacted by reclassification into groups B64G 1/6455, B64G 1/6457 and B64G 1/6459. All groups listed in this Warning should be considered in order to perform a complete search.

N	B64G1/6455		Group B64G 1/6455 is incomplete pending reclassification of documents from group B64G 1/645. Groups B64G 1/645 and B64G 1/6455 should be considered in order to perform a complete search.
N	B64G1/6457		Group B64G 1/6457 is incomplete pending reclassification of documents from group B64G 1/645. Groups B64G 1/645 and B64G 1/6457 should be considered in order to perform a complete search.
N	B64G1/6459		Group B64G 1/6459 is incomplete pending reclassification of documents from group B64G 1/645. Groups B64G 1/645 and B64G 1/6459 should be considered in order to perform a complete search.
N	B64G1/646		Group B64G 1/646 is impacted by reclassification into groups B64G 1/6462 and B64G 1/6464. Groups B64G 1/646, B64G 1/6462 and B64G 1/6464 should be considered in order to perform a complete search.
N	B64G1/6462		Groups B64G 1/6462 and B64G 1/6464 are incomplete pending reclassification of documents from group B64G 1/646. Groups B64G 1/646, B64G 1/6462 and B64G 1/6464 should be considered in order to perform a complete search.

*N = new warning, M = modified warning, D = deleted warning

NOTE: The "Location" column only requires the symbol PRIOR to the location of the warning. No further directions such as "before" or "after" are required.

2. A. DEFINITIONS (new)

Insert: The following new Definitions.

B64G 1/006

Definition statement

This place covers:

Rockets for launching spacecraft which are intended for multiple launches.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Space shuttles	B64G 1/14

B64G 1/1014

Definition statement

This place covers:

Satellites for providing navigation signals, e.g. GPS.

References

Limiting References

This place does not cover:

Navigation systems	G01S 5/145

Informative references

Attention is drawn to the following places, which may be of interest for search:

Satellite radio beacon positioning systems	G01S 19/00

B64G 1/1021

Definition statement

This place covers:

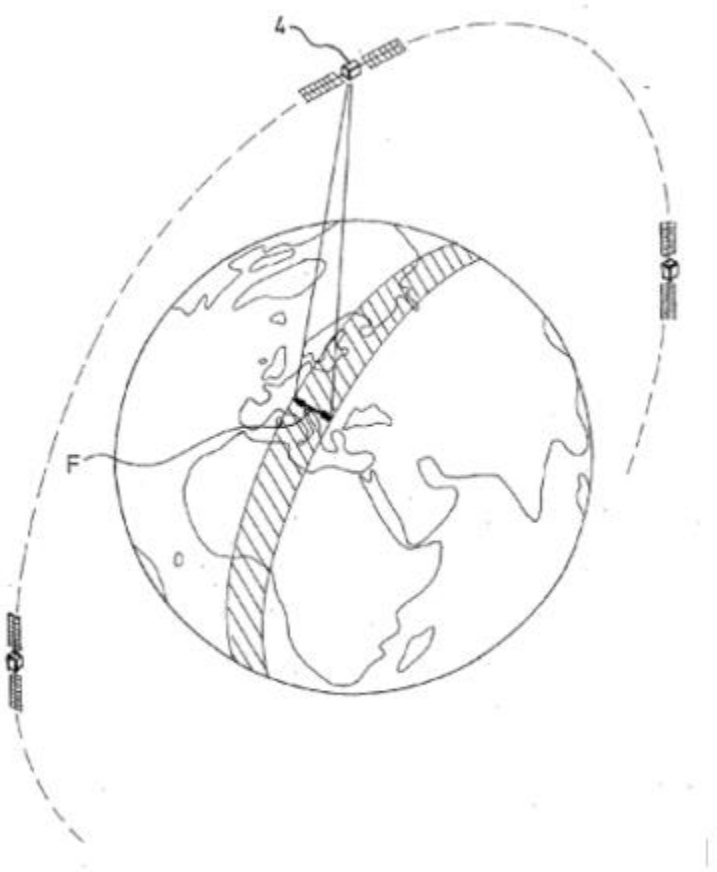
Satellites for observing the earth, e.g. for surveillance, meteorology or cartography.

B64G 1/1028

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B64G 1/105

Definition statement

This place covers:

Spacecraft specially adapted for scientific research relating to the cosmos or microgravity environments.

B64G 1/1057

Definition statement

This place covers:

For example, space telescopes.

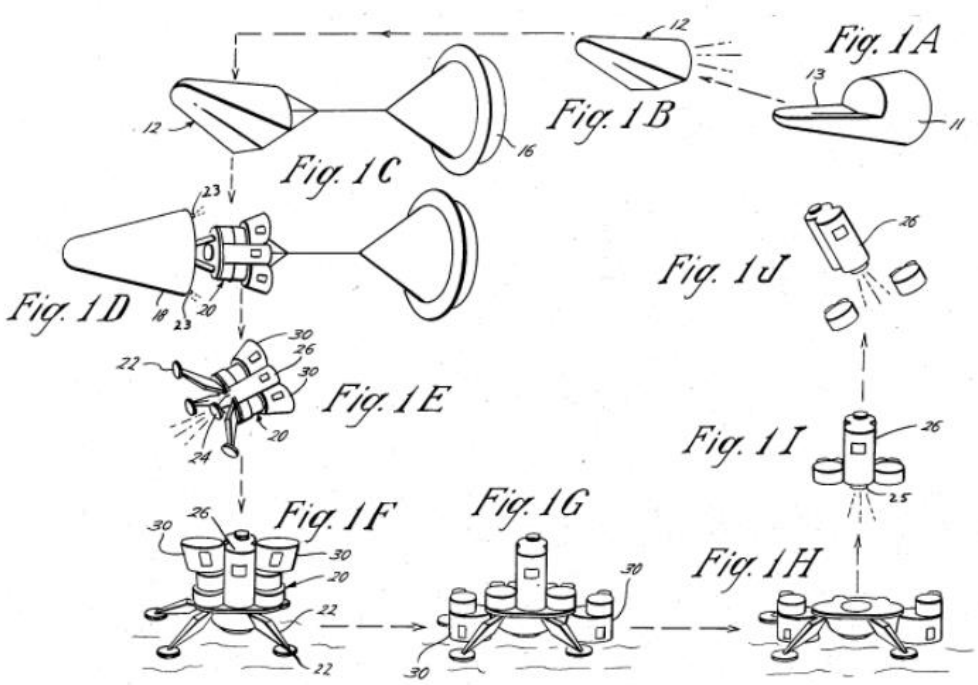
B64G 1/1071

Definition statement

This place covers:

Spacecraft which come to rest on the surface of celestial bodies other than the earth.

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Planetary rovers	B64G 1/16

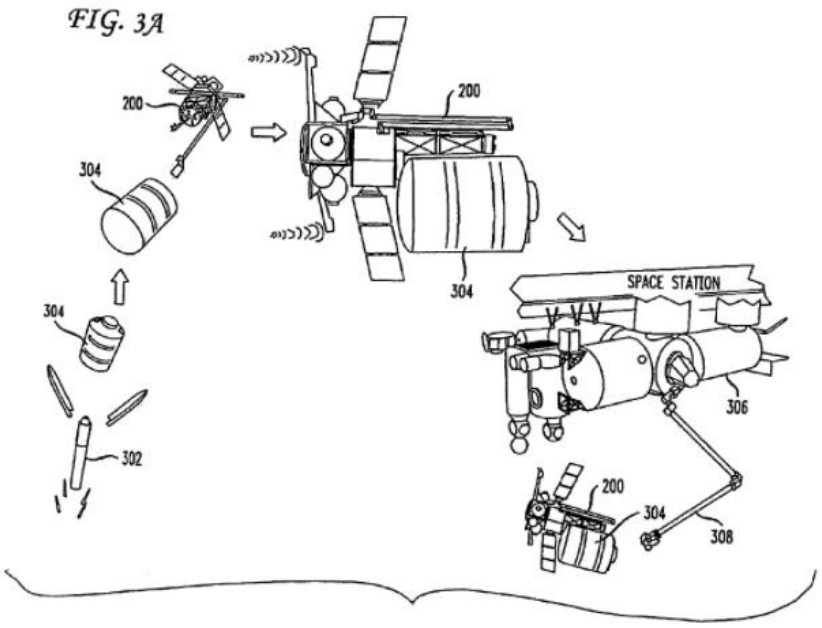
B64G 1/1078

Definition statement

This place covers:

Spacecraft for maintaining the position, attitude or operation of other spacecraft, e.g. space tugs or resupply.

Illustrative example of subject matter classified in this group:



References

Limiting References

This place does not cover:

Refueling in space	B64G 1/4024

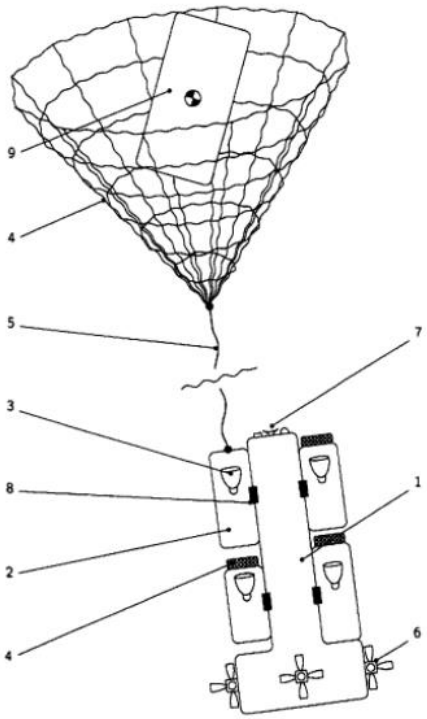
B64G 1/1081

Definition statement

This place covers:

Systems for clearing debris from orbit.

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Rendezvous or docking of spacecraft	B64G 1/646

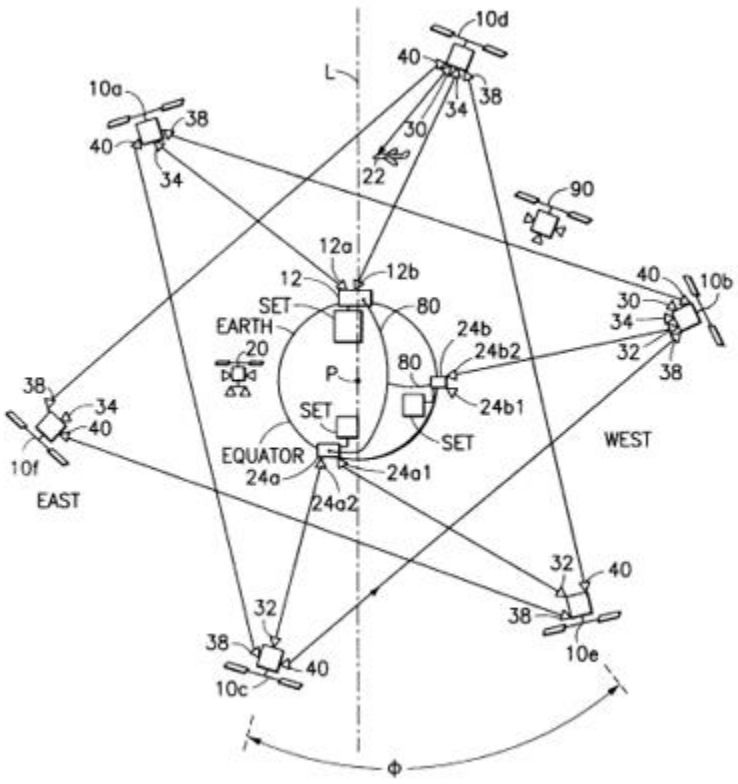
B64G 1/1085

Definition statement

This place covers:

Multiple satellites in orbit working together as a system.

Illustrative example of subject matter classified in this group:



B64G 1/16

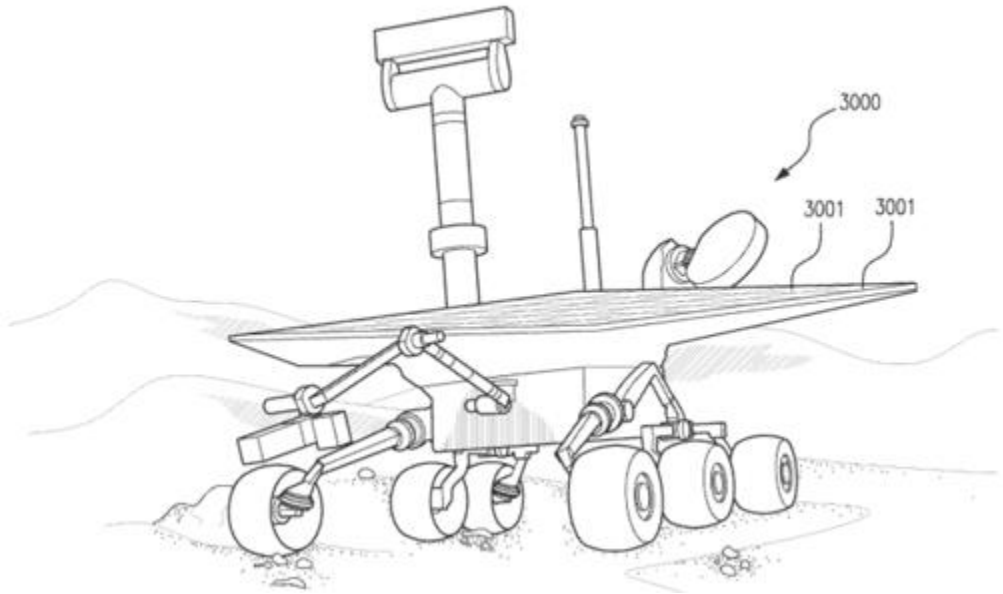
Definition statement

This place covers:

Manned or unmanned land vehicles specially adapted for use on other celestial bodies, e.g. Mars rovers.

Extraterrestrial air vehicles.

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Land vehicle aspects	B60 - B62
Balloons	B64B
Air vehicle aspects	B64C

B64G 1/22

Definition statement

This place covers:

Structural aspects of satellites, e.g. the frames of satellites.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Body structures common to spacecraft and aircraft	B64C 1/00

B64G 1/222

Definition statement

This place covers:

Spacecraft components which are deployed after launch from a stowed state, e.g. foldable solar panels.

Mechanisms for deploying such components.

Illustrative example of subject matter classified in this group:

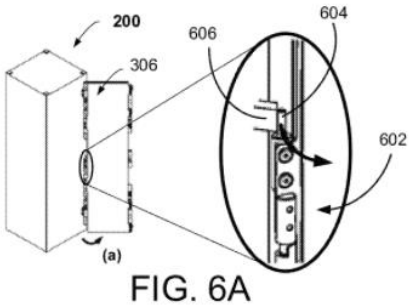


FIG. 6A

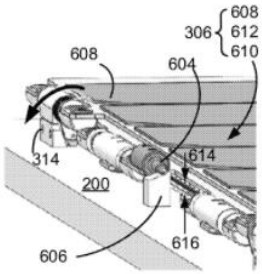


FIG. 6B

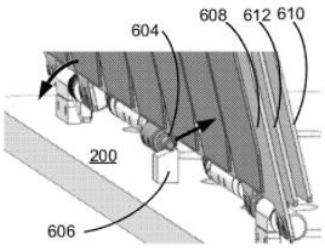


FIG. 6C

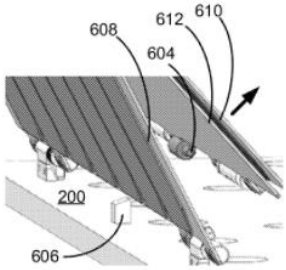


FIG. 6D

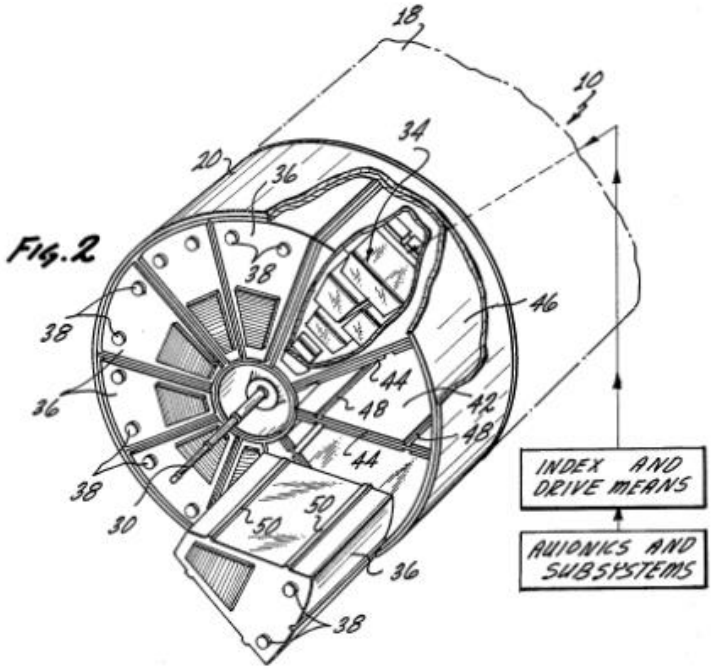
B64G 1/223

Definition statement

This place covers:

Spacecraft having modular structures or systems.

First illustrative example of subject matter classified in this group:



Second illustrative example of subject matter classified in this group:

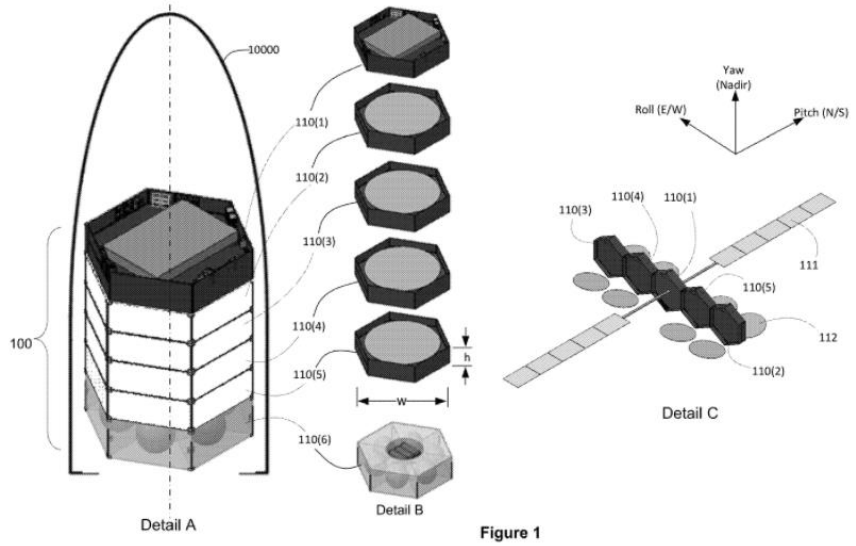


Figure 1

B64G 1/226

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Coating compositions	C09D

B64G 1/228

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Vibration damping in general	F16F

B64G 1/244

Definition statement

This place covers:

Data processing systems for orbit, attitude or position control.

Mathematical concepts relating to orbit, attitude or position control.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Manner for effecting attitude changes, e.g. using jets	B64G 1/26 – B64G 1/34

B64G 1/281

Definition statement

This place covers:

Spacecraft which are stabilised in attitude by spinning about a primary axis.

Control of any such spin.

Illustrative example of subject matter classified in this group:

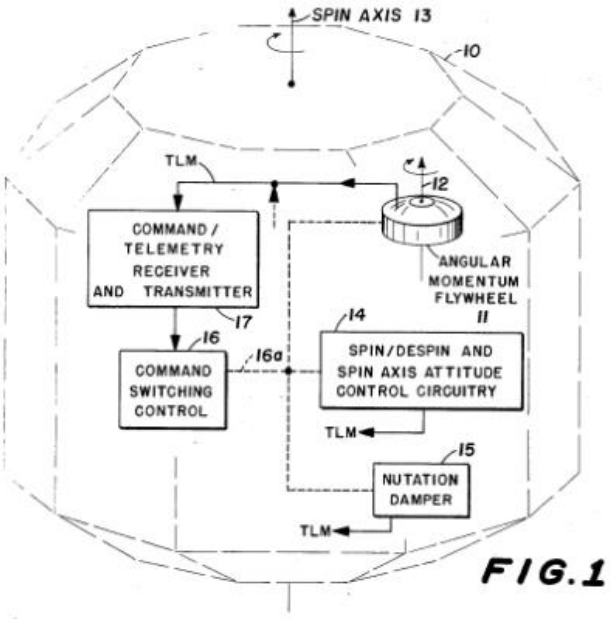


FIG. 1

B64G 1/283

Definition statement

This place covers:

Spacecraft which use rotating flywheels for attitude orientation.

B64G 1/285

Definition statement

This place covers:

Spacecraft which use rotating flywheels for attitude stabilisaton.

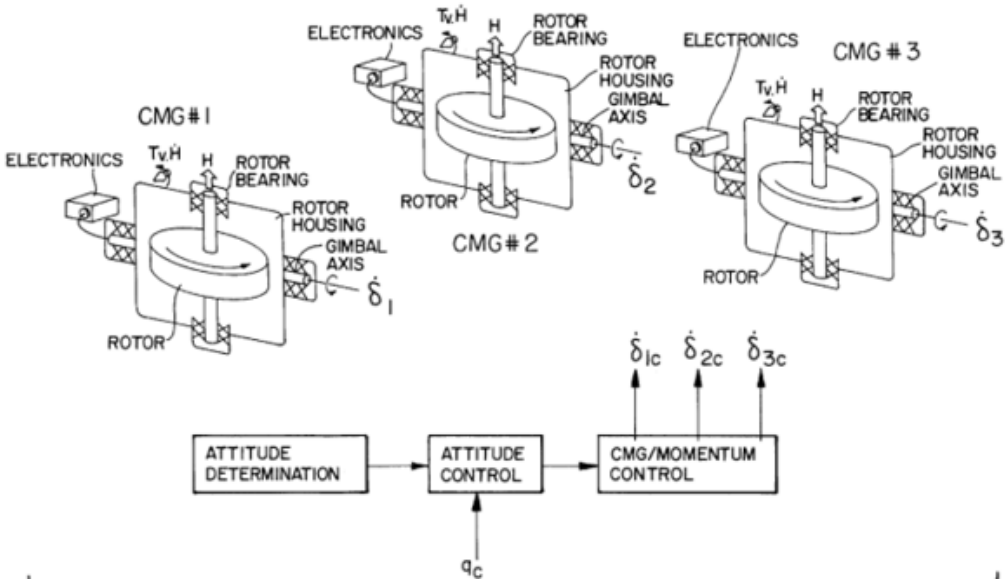
B64G 1/286

Definition statement

This place covers:

Spacecraft which use gimbaled rotors for attitude control.

Illustrative example of subject matter classified in this group:



B64G 1/32

Definition statement

This place covers:

Systems for interacting with the magnetic field of the earth or other celestial body to control orbit, attitude or position of the spacecraft.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Using sensors for detecting or measuring the magnetic field	B64G 1/366

B64G 1/34

Definition statement

This place covers:

Systems for interacting with the gravitational field of the earth or other celestial body to control orbit, attitude or position of the spacecraft.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Using sensors for detecting or measuring the gravitational field	B64G 1/368

B64G 1/361

Definition statement

This place covers:

Sensors which detect the position of stars to determine attitude or position.

B64G 1/363

Definition statement

This place covers:

Sensors which detect the position of the sun to determine attitude or position.

B64G 1/365

Definition statement

This place covers:

Sensors which detect the position of the Earth or points thereon to determine attitude or position.

B64G 1/366

Definition statement

This place covers:

Sensors which detect or measure surrounding magnetic fields to determine attitude or position.

B64G 1/368

Definition statement

This place covers:

Sensors which detect gravitational fields to determine attitude or position.

B64G 1/38

Definition statement

This place covers:

Damping of oscillations in attitude or position of the spacecraft, often due to external perturbations.

B64G 1/4005

Definition statement

This place covers:

Propulsion systems using intake air to create thrust.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Rockets combined with air-breathing jet-propulsion plant	F02K 9/78

B64G 1/401

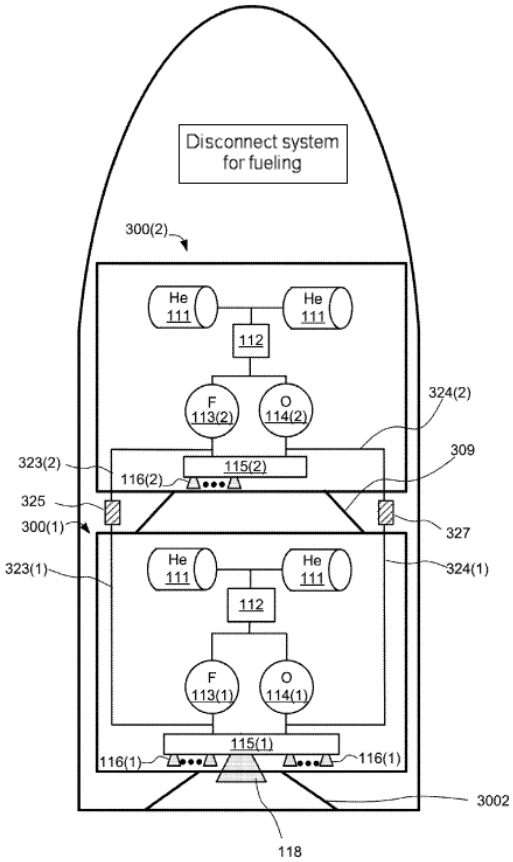
Definition statement

This place covers:

Spacecraft propulsion systems which use liquid or gaseous propellants, either alone (monopropellants) or in combination (bipropellants).

Air-breathing systems.

Illustrative example of subject matter classified in this group:



References

Limiting References

This place does not cover:

Using ions or plasma	B64G 1/413

Arcjets and other resistojets	B64G 1/415

Informative references

Attention is drawn to the following places, which may be of interest for search:

Liquid or gas propellant rockets, per se	F02K 9/42

B64G 1/402

Definition statement

This place covers:

Arrangements for storing and feeding propellants within spacecraft.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Feeding propellants, per se	F02K 9/44
Means for supplying the propellant	F03H 1/0012
Vessels for containing or storing compressed, liquefied or solidified gases	F17C

B64G 1/4022

Definition statement

This place covers:

Refueling probes and receivers for fueling spacecraft in space.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Refueling on ground	B64G 5/00

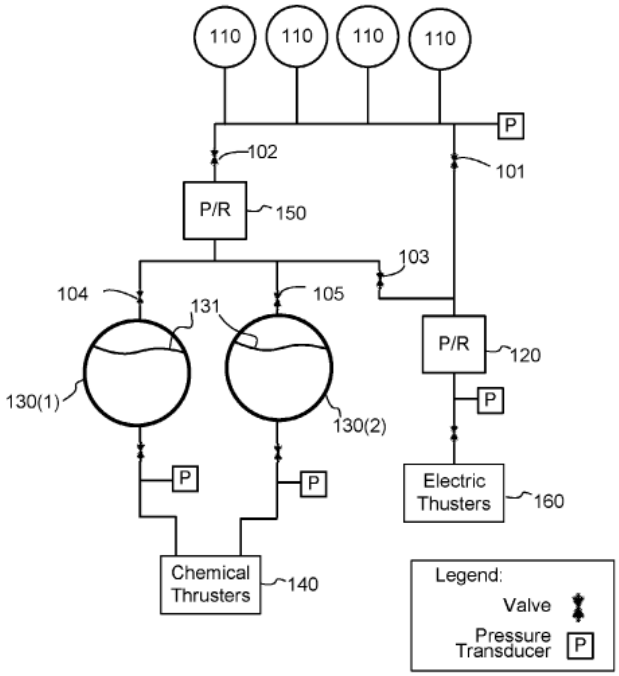
B64G 1/4026

Definition statement

This place covers:

Systems which selectively or additionally provide propellant to differing types of thrusters.

Illustrative example of the subject matter classified in this group:



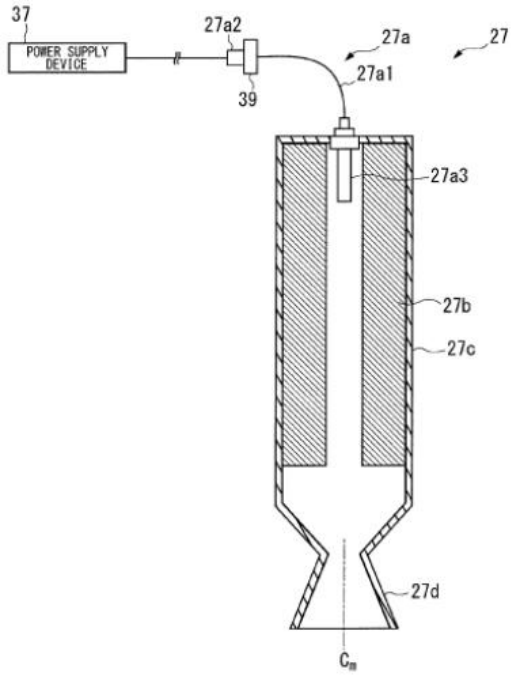
B64G 1/403

Definition statement

This place covers:

Spacecraft propulsion systems which use solid propellant.

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Solid propellant rockets, per se	F02K 9/08

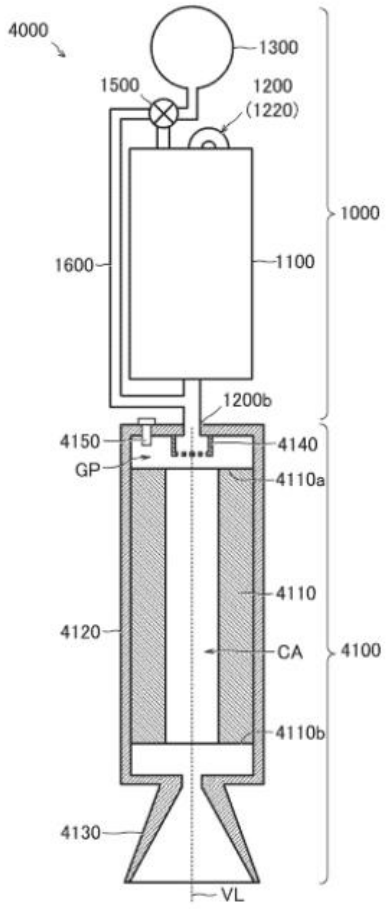
B64G 1/404

Definition statement

This place covers:

Spacecraft propulsion systems which use a combination of liquid propellants and solid propellants within the same propulsion plant.

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Hybrid rocket engines, per se	F02K 9/72

B64G 1/407

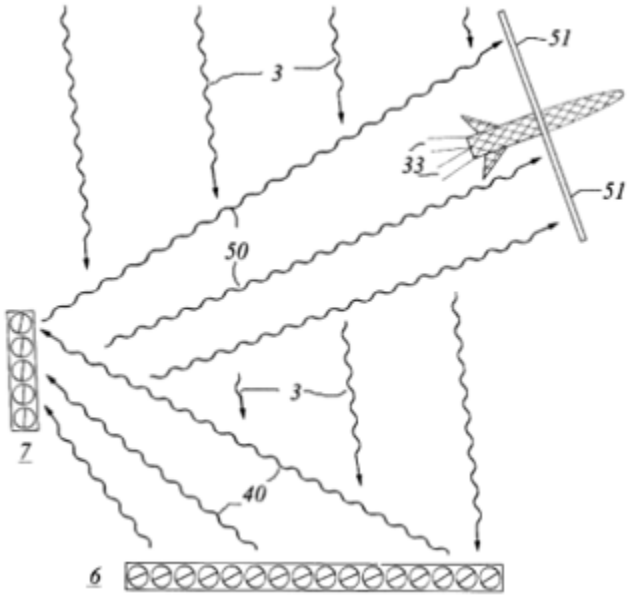
Definition statement

This place covers:

Spacecraft propulsion which uses radiation pressure, such as by solar wind or lasers, acting upon spacecraft surfaces.

Attitude control using such radiation pressure.

Illustrative example of subject matter classified in this group:



B64G 1/408

Definition statement

This place covers:

Spacecraft propulsion systems involving nuclear reactions to produce thrust, e.g. nuclear thermal propulsion.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Nuclear power generation	B64G 1/422

B64G 1/409

Definition statement

This place covers:

Spacecraft propulsion systems without mass expulsion, e.g. using photons or magnetic fields.

Spacecraft propulsion systems which violate known laws of physics.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Propulsion systems using photons or without mass expulsion, per se	F03H

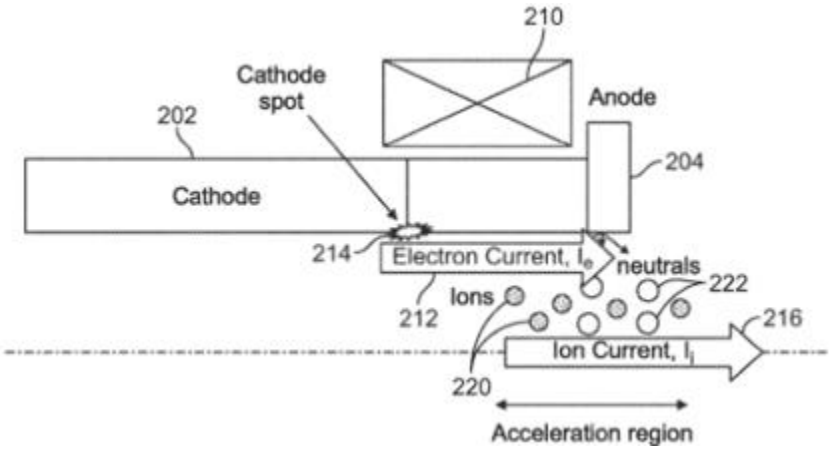
B64G 1/413

Definition statement

This place covers:

Spacecraft propulsion which expel ions or plasma (ions and electrons) to produce a reactive propulsive thrust.

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Ion or plasma engines, per se	F03H 1/00

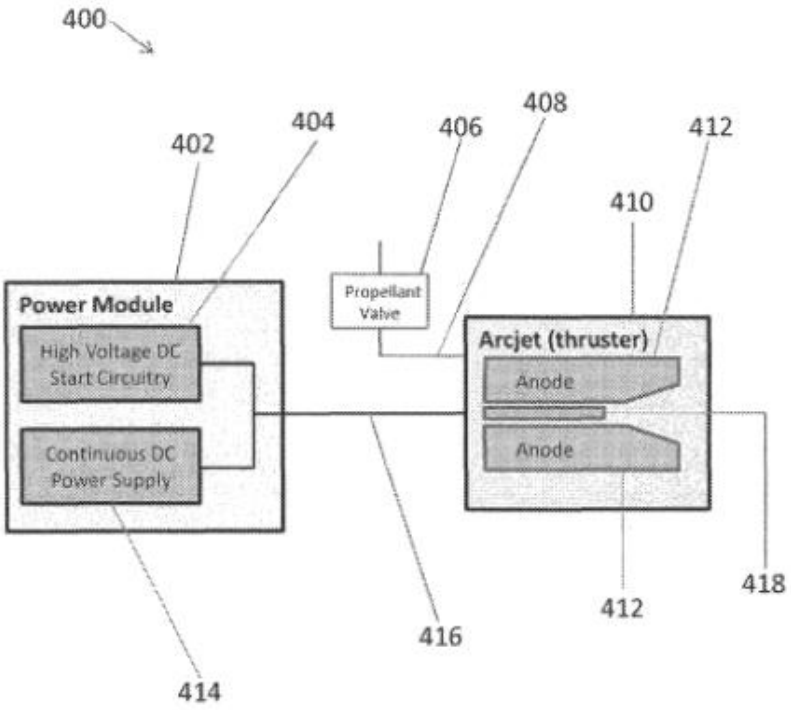
B64G 1/415

Definition statement

This place covers:

Spacecraft propulsion systems which use an electrical discharge (arc) or other form of electrical heating to heat the propellant to produce thrust.

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arcjets, per se	F03H 1/00

B64G 1/417

Definition statement

This place covers:

Systems which use or interact solely with electromagnetic properties to propel a spacecraft.

References

Informative References

Attention is drawn to the following places, which may be of interest for search:

Expelling ions, plasma or the like	B64G 1/413

B64G 1/421

Definition statement

This place covers:

Systems for deriving electrical energy from sources other than sunlight.

B64G 1/422

Definition statement

This place covers:

Systems for deriving electrical energy from nuclear reactions.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Nuclear spacecraft propulsion	B64G 1/408
Nuclear reactors, power plants	G21B, G21C, G21D

B64G 1/423

Definition statement

This place covers:

Systems for deriving electrical energy from the chemical reaction within a generator, wherein the reactants, typically hydrogen and oxygen, are supplied from outside of the generator.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Fuel cells, per se	H01M 8/00

B64G 1/425

Definition statement

This place covers:

Systems and arrangements in the spacecraft for storing power.

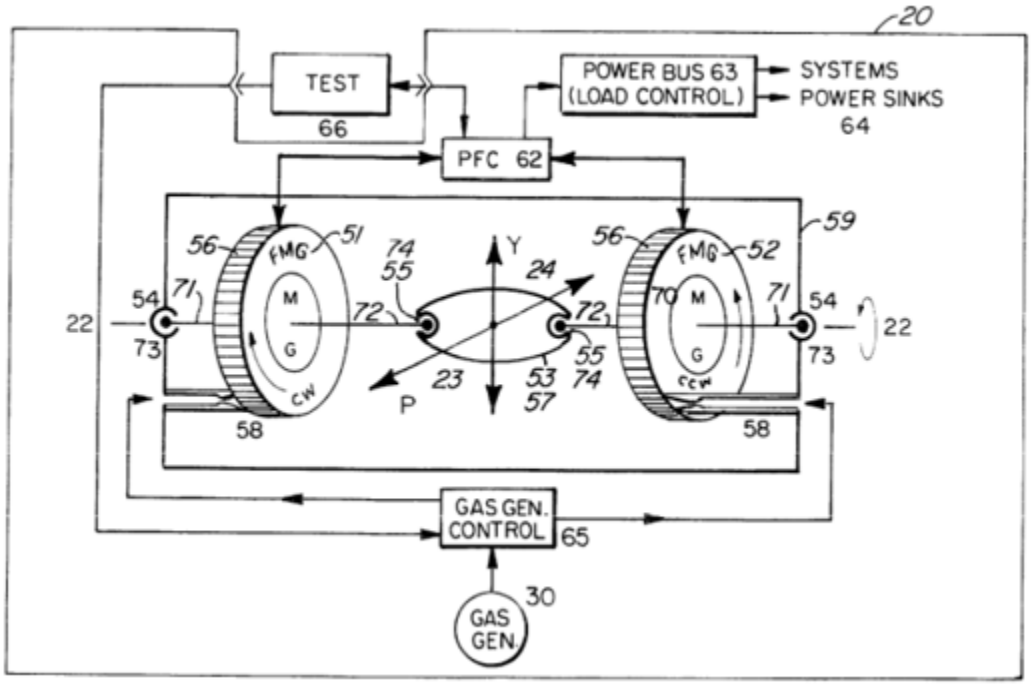
B64G 1/426

Definition statement

This place covers:

Systems for storing power in mechanical form using rotating flywheels.

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Flywheel power storage, per se	H02J 15/007

B64G 1/427

Definition statement

This place covers:

Systems for storing power in the form of thermal energy.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Thermal energy storage, in general	F28D 20/00

B64G 1/428

Definition statement

This place covers:

Systems and arrangements for distributing and regulating spacecraft power.

Spacecraft systems for transmitting space-generated power to earth-based locations.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Power supply and distribution in general	H02J

B64G 1/4282

Definition statement

This place covers:

Spacecraft systems for transmitting space-generated power to locations on earth or other celestial bodies, or for use by other spacecraft.

B64G 1/443

Definition statement

This place covers:

Spacecraft systems and arrangements for deriving electrical energy through photovoltaics, e.g. solar panels.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Solar cells, per se	H01L 31/00
Solar panels, per se	H02S

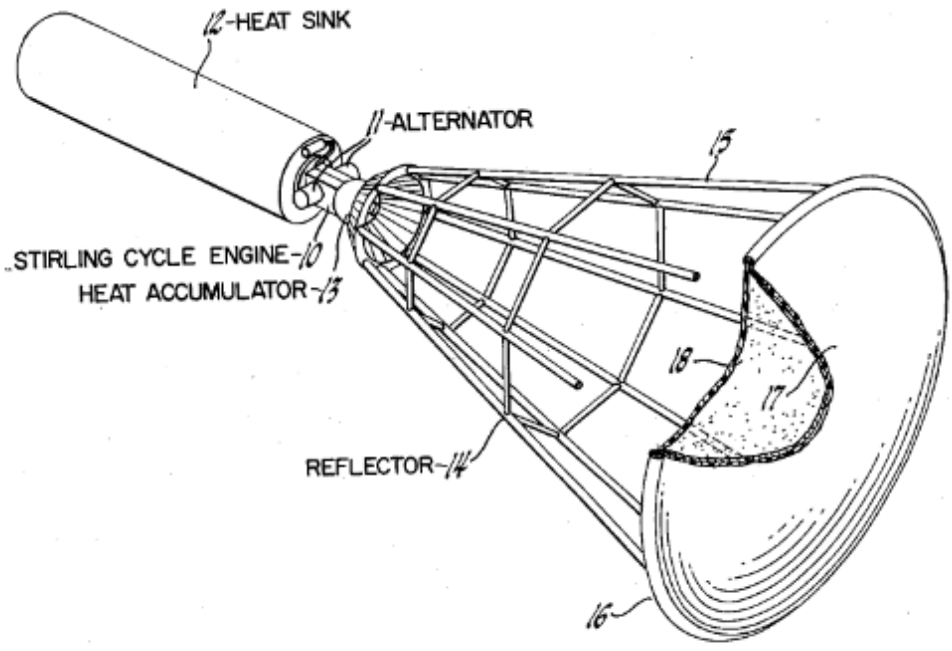
B64G 1/446

Definition statement

This place covers:

Spacecraft systems and arrangements for deriving electrical energy from thermal energy generated by solar energy.

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Solar thermal propulsion	B64G 1/40
Solar heat systems, in general	F24S

B64G 1/46

Definition statement

This place covers:

Systems and arrangements for controlling the environmental parameters within the spacecraft, e.g. life-support systems for occupants.

References

Limiting references

This place does not cover:

Space suits	B64G 6/00

B64G 1/48

Definition statement

This place covers:

Arrangements for treating the atmosphere within the spacecraft, e.g. air conditioning or oxygen generation.

References

Limiting References

This place does not cover:

Heating or cooling the atmosphere	B64G 1/50

Informative references

Attention is drawn to the following places, which may be of interest for search:

Filtering of particles from gases, waste gas removal or treatment	B01D 53/00
Air conditioning in general	F24F

Special rules of classification

Reference F24F is non-limiting in the subgroup B64G 1/48. CPC will be updated/corrected once this inconsistency is resolved in IPC.

B64G 1/50

Definition statement

This place covers:

Systems for regulating the temperature of the spacecraft or of its atmosphere or components.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Temperature control in general	G05D 23/00

Special rules of classification

Reference G05D 23/00 is non-limiting in the subgroup B64G 1/50. CPC will be updated/corrected once this inconsistency is resolved in IPC.

B64G 1/503

Definition statement

This place covers:

Panels, and arrangements thereof, for transferring heat between the spacecraft and the environment.

B64G 1/506

Definition statement

This place covers:

Systems and arrangements using fluid, which undergoes a phase change, flowing through pipes to transfer heat.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Heat pipes, per se	F28D 15/02

B64G 1/525

Definition statement

This place covers:

Devices for use by spacecraft occupants for survival in space or returning to earth.

B64G 1/54

Definition statement

This place covers:

Spacecraft arrangements for protection against ionising radiation, ions or plasma.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Protection against radiation in general	G21F

Special rules of classification

Reference G21F is non-limiting in the subgroup B64G 1/54. CPC will be updated/corrected once this inconsistency is resolved in IPC.

B64G 1/546

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Radiation hardening	The process of making electrical components and circuits resistant to damage or malfunction caused by ionising radiation

B64G 1/56

Definition statement

This place covers:

Systems for protecting the spacecraft from impacts by natural or artificial space debris, e.g. shielding.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Detecting meteoroid or space debris	B64G 1/68
Tracking space debris	B64G 3/00

Special rules of classification

Reference B64G 1/68 is non-limiting in the subgroup B64G 1/56. CPC will be updated/corrected once this inconsistency is resolved in IPC.

B64G 1/58

Definition statement

This place covers:

Arrangements for protecting the spacecraft from thermal loads, e.g. insulation.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Temperature control	B64G 1/50
Thermal insulation in general	F16L 59/00

Special rules of classification

Systems used to shield against thermal loads during re-entry are additionally attributed the symbol B64G 1/62.

Reference F16L 59/00 is non-limiting in the subgroup B64G 1/58. CPC will be updated/corrected once this inconsistency is resolved in IPC.

B64G 1/60

Definition statement

This place covers:

Systems and arrangements generally related to the occupancy of persons within a spacecraft, e.g. flight decks or sleeping quarters.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements for control of environment or living conditions	B64G 1/46

B64G 1/62

Definition statement

This place covers:

Systems specially adapted for re-entry into the atmosphere.

Systems for slowing the descent into the atmosphere or landing upon a surface, e.g. landing legs.

B64G 1/623

Definition statement

This place covers:

Devices for reducing or otherwise managing the speed at which a spacecraft descends.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Parachutes, per se	B64D 17/00, B64D 19/00

B64G 1/625

Definition statement

This place covers:

Devices for aiding the landing of a spacecraft, e.g. ground contact sensors, or mitigating landing impacts, e.g. cushions.

Landing gear for spacecraft.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Landing gear, in general	B64C 25/00

B64G 1/64

Definition statement

This place covers:

Systems for coupling spacecraft sections together, or payloads to spacecraft or launch systems.

Systems for joining previously separate vehicles or components into combined vehicles or systems of vehicles.

Systems for separating vehicles or components of vehicles into individual vehicles or components.

Systems for releasing payloads, e.g. satellites from launch vehicles.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Assembling of space structures	B64G 99/00

B64G 1/641

Definition statement

This place covers:

Devices for coupling spacecraft sections together, or for coupling payloads to spacecraft or launchers, e.g. Marman clamps.

References

Limiting References

This place does not cover:

Docking systems	B64G 1/646

Informative references

Attention is drawn to the following places, which may be of interest for search:

Means for interconnecting rocket sections	F42B 15/36

B64G 1/643

Definition statement

This place covers:

Systems in which multiple satellites are launched with a single launcher.

Illustrative example of subject matter classified in this group:

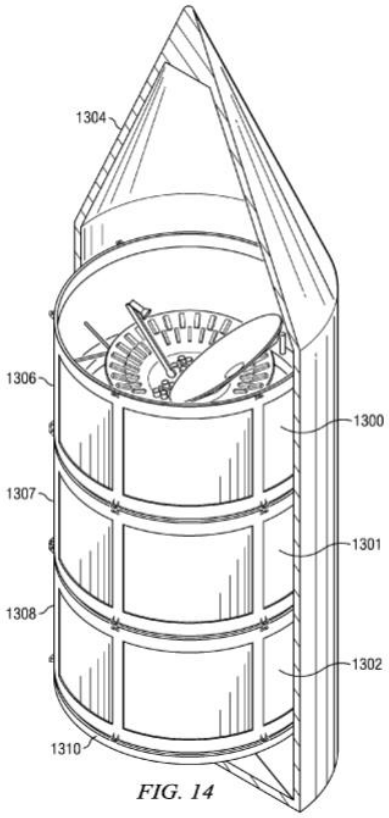


FIG. 14

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Piggyback	Using the excess space of a launcher to launch additional spacecraft

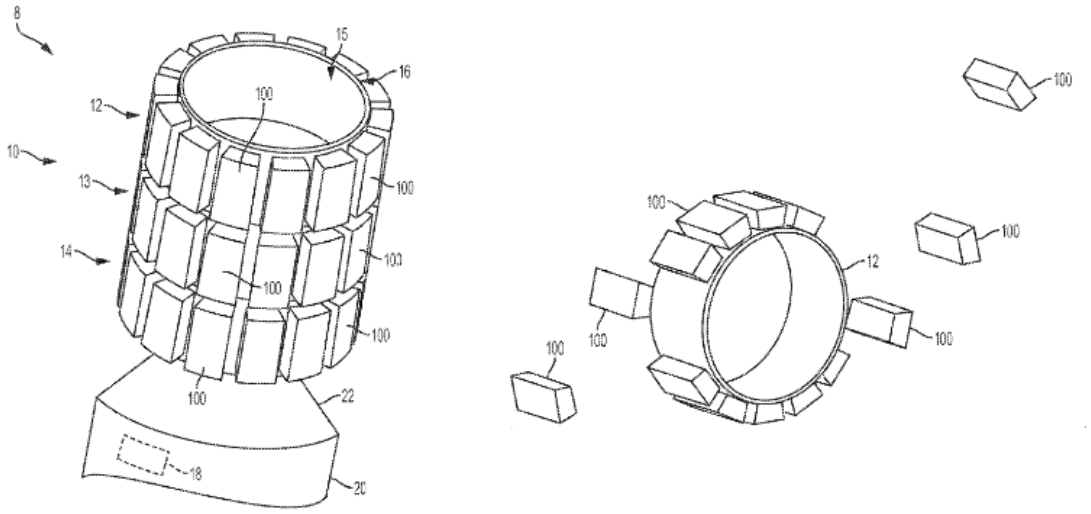
B64G 1/644

Definition statement

This place covers:

Arrangements of satellites in which each satellite may be deployed independently of any other satellite.

Illustrative example of subject matter classified in this group:



B64G 1/645

Definition statement

This place covers:

Systems for separating spacecraft sections from each other.

Systems for separating payloads from spacecraft or launchers.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Equipment for deploying structures between a stowed and deployed state characterised by the deployment actuating mechanism	B64G 1/2229
Disconnecting rocket sections	F42B 15/36

B64G 1/6455

Definition statement

This place covers:

Arrangements using a charge or other explosive means for separating the components.

Arrangements for burning or melting components to cause separation.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Blasting cartridges, i.e. case and explosive	F42B 3/00
Electric heating	H05B

B64G 1/646

Definition statement

This place covers:

Systems for approaching and joining individual spacecraft with each other.

References

Limiting References

This place does not cover:

Refueling in space	B64G 1/4024

Informative references

Attention is drawn to the following places, which may be of interest for search:

Satellites for servicing other satellites	B64G 1/1078
Rendezvous trajectories, in general	B64G 1/242

Special rules of classification

Systems for clearing space debris are classified only in B64G 1/1078.

B64G 1/648

Definition statement

This place covers:

Spacecraft systems which are coupled together by tethers.

B64G 3/00

Definition statement

This place covers:

Observing or tracking spacecraft, space stations or other natural or artificial debris.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Radio or other wave system for navigating or tracking	G01S

Special rules of classification

Reference G01S is non-limiting in the subgroup B64G 3/00. CPC will be updated/corrected once this inconsistency is resolved in IPC.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Ephemeris	Tables, or the collection of tables in books or data files, giving the calculated positions of celestial objects at regular intervals throughout a period.

B64G 5/00

Definition statement

This place covers:

Starting towers, fueling arrangements, transportation devices and other ground equipment for assisting the operation of spacecraft prior to or during launch.

References

Limiting references

This place does not cover:

Observing or tracking cosmonautic vehicles	B64G3/00

2. A. DEFINITIONS (modified)

B64G 1/00

Definition statement

Replace: The existing Definition statement text with the following updated text.

Satellites and other vehicles intended for use in space or on other celestial bodies.

Components specially adapted therefor.

B64G 1/002

Definition statement

Replace: The existing Definition statement text with the following updated text.

Systems for launching spacecraft, e.g. rockets.

Space elevators.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Replace: The existing Informative references table with the following updated table.

Payload connectors	B64G 1/641
Separators	B64G 1/645
Rockets	F42B 15/00

B64G 1/005

Definition statement

Replace: The existing Definition statement text with the following updated text and new image.

Launching using aircraft.

Illustrative example of subject matter classified in this group:

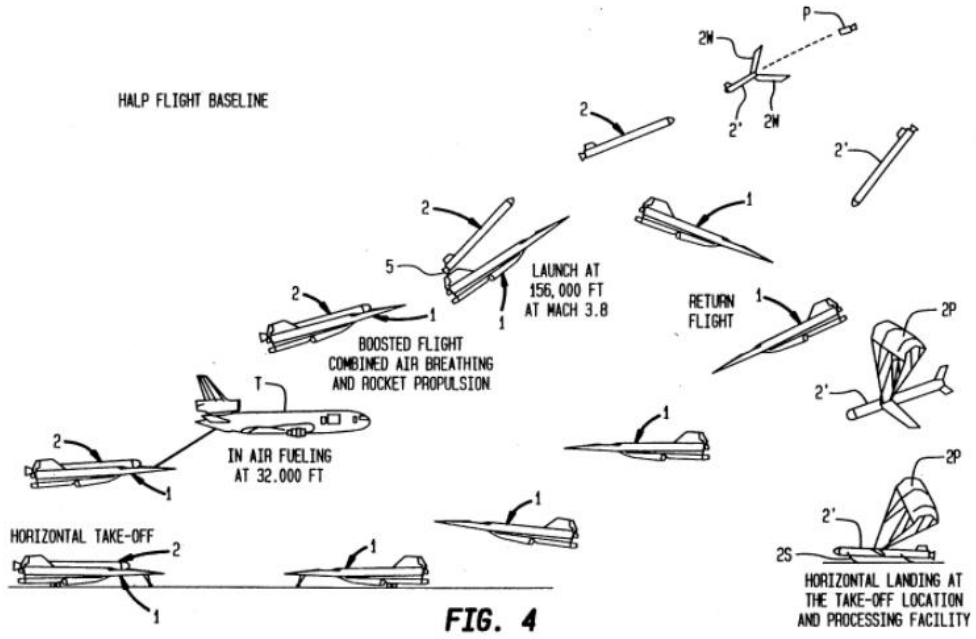


FIG. 4

B64G 1/10

Definition statement

Replace: The existing Definition statement text with the following updated text.

- Spacecraft characterised by the type or purpose.
- Shapes or forms of spacecraft.
- Satellite constellations.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Insert: The following new reference in the Informative references table.

Shapes or forms adapted for gravity gradient control	B64G 1/34

Insert: The following new Special rules section.

Special rules of classification

References B64G 1/14 and H04B 7/185 are non-limiting in the subgroup B64G 1/10. CPC will be updated/corrected once this inconsistency is resolved in IPC.

B64G 1/12

Definition statement

Replace: The existing Definition statement text with the following updated text.

Manned space stations and space vehicles.

References

Insert: The following new Informative references section.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Manned space shuttles	B64G 1/14

B64G 1/14

Definition statement

Replace: The existing Definition statement text with the following updated text.

Reusable space vehicles for transportation between the earth and space.

References

Insert: The following new Limiting references section.

Limiting References

This place does not cover:

Reusable launch rockets or boosters	B64G 1/006

B64G 1/24

Definition statement

Replace: The existing Definition statement text with the following updated text.

- Attitude detection and control.
- Orbit detection and control.
- Position detection and control, e.g. station-keeping.

References

Delete: The entire Limiting references section.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Insert: The following four new references in the Informative references table.

Tracking space vehicles	B64G 3/00
Jet propulsion plants	F02K
Navigation or navigational instruments	G01C
Automatic pilots common to spacecraft and aircraft	G05D 1/00

Insert: The following new Special rules section.

Special rules of classification

References F02K, G01C and G05D 1/00 are non-limiting in the subgroup B64G 1/24. CPC will be updated/corrected once this inconsistency is resolved in IPC.

B64G 1/242

Definition statement

Replace: The existing Definition statement text with the following updated text.

- Control and modification of orbits.
- Transfer orbits during operation or end-of-life.
- Position control, e.g. station-keeping.

Insert: The following new Synonyms and keywords section.

Synonyms and keywords

In patent documents, the following abbreviations are often used:

HEO	“High Earth Orbit” or “Highly Elliptical Orbit”

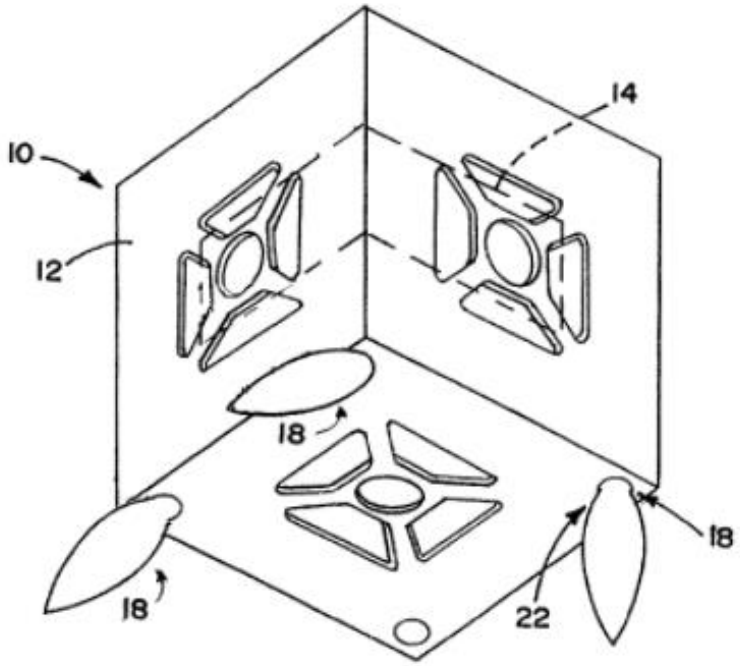
B64G 1/26

Definition statement

Replace: The existing Definition statement text with the following updated text and new image.

Systems which expel propellant to effect attitude or position control.

Illustrative example of subject matter classified in this group:



References

Insert: The following new Informative references section.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Details of the jet device used in spacecraft	B64G 1/40
Rocket-engine plants, i.e. plants carrying both fuel and oxidant therefore; Control thereof	F02K 9/00
Producing a reactive propulsive thrust	F03H

B64G 1/36

References

Insert: The following new Informative references section.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Sensors, per se	G01C 21/00

B64G 1/40

Definition statement

Replace: The existing Definition statement text with the following updated text.

Types of propulsion systems for cosmonautic vehicles and arrangements thereof.

References

Delete: The entire Limiting references section.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Insert: The following two new references in the Informative references table.

Jet-propulsion plants	F02K
Producing a reactive propulsive thrust	F03H

Insert: The following new Special rules section.

Special rules of classification

Details of propulsion systems used as attitude or position control jets proper for B64G 1/26 are still classified within B64G 1/40 as applicable.

Propulsion systems using tethers are placed only in B64G 1/40.

References F02K and F03H are non-limiting in the subgroup B64G 1/40. CPC will be updated/corrected once this inconsistency is resolved in IPC.

B64G 1/42

Definition statement

Replace: The existing Definition statement text with the following updated text.

Types of power supply systems for cosmonautic vehicles and arrangements thereof.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Insert: The following new reference in the Informative references table.

Circuits for supplying or distributing electrical power; Systems for storing electrical energy	H02J

B64G 1/66

Definition statement

Replace: The existing Definition statement text with the following updated text.

Antennas, flight deck control sticks, indicators and other equipment specially adapted for spacecraft use, not provided for elsewhere.

Insert: The following new Special rules section.

Special rules of classification

Reference H01Q 1/28 is non-limiting in the subgroup B64G 1/66. CPC will be updated/corrected once this inconsistency is resolved in IPC.

B64G 1/68

Definition statement

Replace: The existing Definition statement text with the following updated text.

Devices for detecting meteoroids and other space debris.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Replace: The existing Informative references table with the following updated table.

Protection against meteoroids or debris	B64G 1/56
Tracking space debris or decommissioned vehicles	B64G 3/00

B64G 4/00

Definition statement

Replace: The existing Definition statement text with the following updated text.

Tools specially adapted for use in space or on spacecraft, e.g. robotic arms.

B64G 6/00

Definition statement

Replace: The existing Definition statement text with the following updated text.

Apparel for use in space.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Replace: The text in the second row of the Informative references table with the following updated text.

Flight suits	B64D 10/00

B64G 7/00

Insert: The following new Special rules section.

Special rules of classification

Reference G09B 9/00 is non-limiting in the subgroup B64G 7/00. CPC will be updated/corrected once this inconsistency is resolved in IPC.

B64G 99/00

Definition statement

Replace: The existing Definition statement text with the following updated text.

Constructions of structures specially adapted for use in space, not otherwise provided for.

Moon bases, and the like.

Manufacturing, assembling, maintenance or repairing in space.

References

Insert: The following new Informative references section.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Structural aspects of spacecraft, e.g. frames	B64G 1/22

Delete: The entire Special rules section.

2. B. DEFINITIONS QUICK FIX

Symbol	**Location of change** (e.g., section title)	**Existing reference symbol or text**	**Action; New symbol; New text**
B64G 1/007			Delete the entire definition

NOTES:

- The table above is used for corrections or modifications to existing definitions, e.g. delete an entire definition or part thereof; propose new wording or modify wording of a section, change the symbol the definition is associated with, change or delete a reference symbol, etc.
- Do not delete (F) symbol definitions.

3. REVISION CONCORDANCE LIST (RCL)

Type*	**From CPC Symbol (existing)**	**To CPC Symbol(s)**
C	B64G 1/002	B64G 1/002, B64G 1/006, B64G 1/008
D	B64G 1/007	<administrative transfer to B64G 1/2427>
D	B64G 2001/1028	<administrative transfer to B64G 1/1028 INV>
D	B64G 2001/1035	<administrative transfer to B64G 1/1035 INV>
D	B64G 2001/1042	<administrative transfer to B64G 1/1042 INV>
D	B64G 2001/1057	<administrative transfer to B64G 1/1057 INV>
D	B64G 2001/1064	<administrative transfer to B64G 1/1064 INV>
D	B64G 2001/1071	<administrative transfer to B64G 1/1071 INV>
C	B64G 1/1078	B64G 1/1078, B64G 1/1081
D	B64G 2001/1092	<administrative transfer to B64G 1/223 INV>
C	B64G 1/222	B64G 1/222, B64G 1/2221, B64G 1/2222, B64G 1/2223, B64G 1/2224, B64G 1/2225, B64G 1/2226, B64G 1/2227, B64G 1/2228, B64G 1/2229
D	B64G 2001/224	<administrative transfer to B64G 1/2227 INV>
D	B64G 2001/228	<administrative transfer to B64G 1/228 INV>
C	B64G 1/242	B64G 1/242, B64G 1/2421, B64G 1/2422, B64G 1/2423, B64G 1/2425, B64G 1/2427, B64G 1/2429, B64G 1/244
D	B64G 2001/245	<administrative transfer to B64G 1/245 INV>
D	B64G 2001/247	<administrative transfer to B64G 1/247 INV>
C	B64G 1/26	B64G 1/26, B64G 1/262, B64G 1/264
D	B64G 1/288	<administrative transfer to B64G 1/369>
C	B64G 1/40	B64G 1/40, B64G 1/4005
C	B64G 1/401	B64G 1/401, B64G 1/4005
C	B64G 1/402	B64G 1/402, B64G 1/4021, B64G 1/4022, B64G 1/4024, B64G 1/4026
F	B64G 1/405	B64G 1/411, B64G 1/413
D	B64G 1/406	<administrative transfer to B64G 1/415>
C	B64G 1/409	B64G 1/409, B64G 1/411, B64G 1/417
C	B64G 1/428	B64G 1/428, B64G 1/4282
C	B64G 1/46	B64G 1/46, B64G 1/465
D	B64G 2001/525	<administrative transfer to B64G 1/525 INV>
C	B64G 1/60	B64G 1/60, B64G 1/465
C	B64G 1/62	B64G 1/62, B64G 1/623, B64G 1/625
C	B64G 1/641	B64G 1/641, B64G 1/642, B64G 1/6425, B64G 1/643
D	B64G 2001/643	<administrative transfer to B64G 1/643 INV>
Q	B64G 1/643	B64G 1/643, B64G 1/644
C	B64G 1/645	B64G 1/645, B64G 1/6455, B64G 1/6457, B64G 1/6459
C	B64G 1/646	B64G 1/646, B64G 1/6462, B64G 1/6464

* C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed.

NOTES:

- Only C, D, F, and Q type entries are included in the table above.
- When multiple symbols are included in the "To" column, do not use ranges of symbols.

- For administrative transfer of documents, the following text should be used: "< administrative transfer to XX>", "<administrative transfer to XX and YY simultaneously>", or "<administrative transfer to XX, YY, ...and ZZ simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be "additional information".
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations "ADD" or "INV": <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the "D" entries of 2000-series or Y-series groups may not require a destination ("To") symbol, however it is required to specify "<no transfer>" in the "To" column for such cases.
- RCL is not needed for finalisation projects.

4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

CPC	**IPC**	**Action***
B64G 1/006	B64G 1/00	NEW
B64G 1/007		DELETE
B64G 1/008	B64G 1/00	NEW
B64G 2001/1028		DELETE
B64G 1/1028	B64G 1/10	NEW
B64G 2001/1035		DELETE
B64G 1/1035	B64G 1/10	NEW
B64G 2001/1042		DELETE
B64G 1/1042	B64G 1/10	NEW
B64G 2001/1057		DELETE
B64G 1/1057	B64G 1/10	NEW
B64G 2001/1064		DELETE
B64G 1/1064	B64G 1/10	NEW
B64G 2001/1071		DELETE
B64G 1/1071	B64G 1/10	NEW
B64G 1/1081	B64G 1/10	NEW
B64G 2001/1092		DELETE
B64G 1/2221	B64G 1/22	NEW
B64G 1/2222	B64G 1/22	NEW
B64G 1/2223	B64G 1/22	NEW
B64G 1/2224	B64G 1/22	NEW
B64G 1/2225	B64G 1/22	NEW
B64G 1/2226	B64G 1/22	NEW
B64G 1/2227	B64G 1/22	NEW
B64G 1/2228	B64G 1/22	NEW
B64G 1/2229	B64G 1/22	NEW
B64G 1/223	B64G 1/22	NEW
B64G 2001/224		DELETE
B64G 2001/228		DELETE
B64G 1/228	B64G 1/22	NEW
B64G 1/2421	B64G 1/24	NEW
B64G 1/2422	B64G 1/24	NEW
B64G 1/2423	B64G 1/24	NEW
B64G 1/2425	B64G 1/24	NEW
B64G 1/2427	B64G 1/24	NEW
B64G 1/2429	B64G 1/24	NEW
B64G 2001/245		DELETE
B64G 1/245	B64G 1/24	NEW
B64G 2001/247		DELETE
B64G 1/247	B64G 1/24	NEW
B64G 1/262	B64G 1/26	NEW
B64G 1/264	B64G 1/26	NEW

CPC NOTICE OF CHANGES 1517

DATE: AUGUST 1, 2023

PROJECT RP11777

CPC	**IPC**	**Action***
B64G 1/288		DELETE
B64G 1/369	B64G 1/36	NEW
B64G 1/4005	B64G 1/40	NEW
B64G 1/4021	B64G 1/40	NEW
B64G 1/4022	B64G 1/40	NEW
B64G 1/4024	B64G 1/40	NEW
B64G 1/4026	B64G 1/40	NEW
B64G 1/406		DELETE
B64G 1/411	B64G 1/40	NEW
B64G 1/413	B64G 1/40	NEW
B64G 1/415	B64G 1/40	NEW
B64G 1/417	B64G 1/40	NEW
B64G 1/4282	B64G 1/42	NEW
B64G 1/465	B64G 1/46	NEW
B64G 2001/525		DELETE
B64G 1/525	B64G 1/52	NEW
B64G 1/623	B64G 1/62	NEW
B64G 1/625	B64G 1/62	NEW
B64G 1/642	B64G 1/64	NEW
B64G 1/6425	B64G 1/64	NEW
B64G 2001/643		DELETE
B64G 1/643	B64G 1/64	NEW
B64G 1/644	B64G 1/64	NEW
B64G 1/6455	B64G 1/64	NEW
B64G 1/6457	B64G 1/64	NEW
B64G 1/6459	B64G 1/64	NEW
B64G 1/6462	B64G 1/64	NEW
B64G 1/6464	B64G 1/64	NEW

*Action column:

- For an (N) or (Q) entry, provide an IPC symbol and complete the Action column with "NEW."
- For an existing CPC main trunk entry or indexing entry where the existing IPC symbol needs to be changed, provide an updated IPC symbol and complete the Action column with "UPDATED."
- For a (D) CPC entry or indexing entry complete the Action column with "DELETE." IPC symbol does not need to be included in the IPC column.
- For an (N) 2000 series CPC entry which is positioned within the main trunk scheme (breakdown code) provide an IPC symbol and complete the action column with "NEW".
- For an (N) 2000 series CPC entry positioned at the end of the CPC scheme (orthogonal code), with no IPC equivalent, complete the IPC column with "CPCONLY" and complete the action column with "NEW".

NOTES:

- F symbols are <u>not</u> included in the CICL table above.
- T and M symbols are not included in the CICL table above unless a change to the existing IPC is desired.

5. CROSS-REFERENCE LIST (CRL)

Scheme references impacted by this revision project

Location of reference to be changed	**Referenced subclass or group to be changed**	**Action; New reference symbol; New text**
F03H 1/0006	B64G 1/405	Replace with B64G 1/413
F03H 1/0093	B64G 1/406	Replace with B64G 1/415

Definitions references impacted by this revision project

Location of reference to be changed	**Referenced subclass or group to be changed**	**Section of definition**	**Action; New reference symbol; New text**
F03H 1/00	B64G 1/406	Informative references	Replace with B64G 1/415
F03H 1/00	B64G 1/405	Limiting references	Replace with B64G 1/413

NOTES:

- The CRL tables above are used for changes to locations **outside** of the project scope. Changes to references in scheme titles or definitions inside the project scope will be reflected in the "scheme change" template or one of the "definition" templates.
- In addition to other changes proposed in the tables above, in the column titled "Referenced subclass or group to be changed," **referenced** D symbols should indicate an action of "delete" or should indicate a replacement symbol and **referenced** F symbols should indicate a replacement symbol.
- When a reference is deleted, text related to that reference will also be deleted unless other references or a range of references associated with the same text remain.