What is claimed is:

1. A rocket launch system comprising:

a set of electric power lines for carrying electrical power from a remote electrical power system on earth, the electric power being continuously withdrawable along said set of electric power lines, said set of power lines having a low end portion for being positioned at a low altitude and a high end portion for extending into high altitudes;

a set of rocket-transporting device lines for transporting a rocket-transporting device between a low altitude and a high altitude, said rocket-transporting device lines having a low end portion for being positioned at a low altitude and a high end portion for extending into high altitudes; ~~and~~

lighter-than-air balloons connected to said sets of power lines and said rocket-transporting device lines for holding said sets of power lines and said carriage transporting lines upwards to a high altitude; and

a rocket-transporting device for transporting a rocket along said rocket-transporting device lines.

2. A rocket launch system according to claim 1 wherein the respective power lines of said set of electric power lines and the respective rocket transporting device lines of said set of rocket-transporting device lines are integrally combined into a set of power and transporting primary cable forming part of a set of power and transporting primary cables.

3. A rocket launch system according to claim 2 wherein said set of power and transporting primary cables are three in number for carrying three-phase electrical power.

~~4. A rocket launch system according to claim 2 wherein said lighter-than-air balloons are operatively attached to said set of power and transporting primary cables intermittently along the length of said set of power and transporting primary cables to support cumulatively said set of primary cables, and any other structure carried by said set of power and transporting primary cables.~~

~~5. A rocket launch system according to claim 8 and further including sets of spacer assemblies located intermittently along said set of power and transporting primary cables, each of said sets of spacer assemblies having cable-engaging structure for engaging respective ones of said set of power and transporting primary cables to maintain a spaced separation between said respective power and transporting primary cables in said set of power and transporting primary set of cables, and wherein said lighter-than-air balloons are respectively, operatively connected to at least one of said spacer assemblies.~~

~~6. A rocket launch system according to claim 2 and further comprising a docking station operatively connected to said set of power and transporting primary cables at a terminal position along the length of said set of power and transporting primary cables, said docking station being structured to receive a rocket-transporting device as part of a preparation for a launch of a rocket being transported in a rocket-transporting device.~~

~~7. A rocket launch system according to claim 6 and further comprising power and guiding secondary cables operatively attached to said docking station and being extendable to a higher altitude than the altitude of said docking station, said rocket launch system further comprising lighter-than-air balloons operatively connected to said power and guiding secondary cables for holding and tensioning said power and guiding secondary cables aloft above said power and transporting primary cables.~~

~~8. A rocket launch system comprising~~

~~an integrally combined set of power and transporting primary cables comprising the following combination:~~

~~a set of electric power lines for carrying electrical power from a remote power system on earth; and~~

~~a set of rocket transporting device lines for transporting a rocket transporting device between a low altitude and high altitude;~~

~~said power and transporting primary cables having a low end portion for being positioned at a low altitude and a high end portion for extending into high altitudes;~~

~~lighter-than-air balloons connected to said power and transporting primary cables, said lighter-than-air balloons being operatively attached to said set of power and transporting primary cables intermittently along the length of said set of power and transporting primary cables to support cumulatively said set of primary cables and any other structure carried by said set of power and transporting primary cables;~~

~~a docking station operatively connected to said set of power and transporting primary cables at a terminal position along the length of said set of power and transporting primary cables, said docking station being structured to receive a rocket transporting device as part of a preparation for a launch of a rocket being transported in the rocket transporting device;~~

~~power and guiding secondary cables operatively attached to said docking station and being extendable to a higher altitude than the altitude of said docking station;~~

~~primary tensioning lighter-than-air balloons operatively connected to said power and guiding secondary cables for holding and tensioning said power and guiding secondary cables aloft above said power and transporting primary cables; and~~

~~a lift ring assembly in operative engagement with said power and guiding secondary cables for deriving electrical power from and being guided by said power and guiding secondary cables, said lift ring assembly being positionable above said docking station and being operatively engageable with a rocket transporting device disposed in said docking station for lifting the rocket transporting device out of said docking station and having a rocket transporting device pivoting assembly for being tilted to a desired~~

~~rocket launch angle.~~

~~9. A rocket launch system according to claim 8 wherein said rocket transporting device pivoting assembly is a tubular lift ring configured to surround and operatively engage a carriage , and being tiltable to orient the carriage and the rocket disposed in the carriage to a desired launch angle.~~

~~10. A rocket launch system according to claim 8 and further comprising:~~

~~a lower hoist assembly located above said lift ring assembly when said rocket launch system is in operation,~~

~~a set of supporting tertiary cables extending from said lower hoist assembly for being operationally connectable to and supporting said lift ring assembly,~~

~~and a rocket transport device end gripper disposed between said lower hoist assembly and said lift ring assembly, and being operatively attached to said lower hoist assembly, said end gripper being releasably and lockably engageable with a carriage in said lift ring assembly, said lower hoist assembly lifting said end gripper for lifting a carriage into engagement with said rocket transporting device pivoting assembly prior to the launching of a rocket from a carriage disposed in said lift ring assembly~~.

~~11.~~4. A rocket launch system according to claim 1 ~~8~~ wherein said rocket-transporting device includes ~~carriage comprise~~:

traction drives for driving said rocket-transporting device ~~carriage~~ along said rocket-transporting device lines ~~power and transporting primary cables~~ , said traction drives comprising:

a reversible electrically powered energizing apparatus for deriving electrical power from said set of electric power lines ~~and transporting cables~~ when said traction drives require energy to cause said rocket-transporting device to travel upwards on said rocket-transporting device lines ~~power and transporting primary cables~~, and for reversible delivering electrical power to said set of electric power lines ~~and transporting cables~~ when said traction drives retard said rocket-transporting device ~~carriage~~ under the influence of gravity to descend said rocket-transporting device lines ~~power and transporting primary cables~~.

~~12.~~5. A rocket launch system according to claim 4 ~~11~~ wherein the respective power lines of said set of electric power lines and the respective rocket-transporting device lines of said set of rocket-transporting device lines are integrally combined into a power and transporting primary cable forming part of a set of power and transporting primary cables, said respective rocket-transporting devices being driven along said set of primary cables by said traction drives upon energization by said energizing apparatus.

~~13.~~6. A rocket launch system according to claim 5 ~~8~~ wherein each of said respective rocket-transporting devices is a respective carriage having an interior compartment configured to contain a rocket, the rocket being ejectable from said interior compartment during launch; and

wherein said set of power and transporting primary cables are three in number and carry three-phase power, and said electrically powered energizing apparatus is powered by three-phase electrical power.

~~14.~~7. A rocket launch system according to claim 5 ~~13~~ wherein said set of power and transporting primary cables are three in number and carry three-phase power, and said electrically powered energizing apparatus is powered by three-phase electrical power.

~~15. A rocket launch system according to claim 11 wherein said traction drives comprise a set of traction drive wheels associated with said respective carriage for engaging said respective primary cables of said set of power and transporting primary cables for transporting said respective carriage along said set of power and transporting primary cables.~~

~~16. A rocket launch system according to claim 13 wherein said lighter-than-air balloons are operatively attached to said set of power and transporting primary cables intermittently along the length of said set of power and transporting primary cables to support cumulatively said set of power and transporting primary cables, and any other structure supported by said set of power and transporting primary cables.~~

~~17. A rocket launch system according to claim 16 and further including sets of spacer assemblies located intermittently along said set of power and transporting primary cables, each of said set of spacer assemblies having cable engaging structure for engaging respective ones of said set of power and transporting primary cables to maintain a spaced separation between said respective primary cables, and wherein said lighter-than-air balloons are respectively, operatively connected to at least one of said spacer assemblies.~~

~~18. A rocket launch system according to claim 15 and further comprising a docking station operatively connected to said set of power and transporting primary cables at a terminal position along the length of said set of power and transporting primary cables, said docking station being structured to receive one of said respective carriages as part of a preparation for a launch of a rocket being transported in said carriage.~~

~~19. A rocket launch system according to claim 18 and further comprising power and guiding secondary cables operatively attached to said docking station and extendable to a higher altitude than the altitude of said docking station, said rocket launch system further comprising~~

~~primary tensioning lighter-than-air balloons operatively connected to said power and guiding secondary cables for holding said power and guiding secondary cables aloft above said power and transporting primary cables.~~

~~20. A rocket launch system according to claim 19 and further comprising a lift ring assembly in operative engagement with said power and guiding secondary cables for deriving electrical power and being guided by said power and guiding secondary cables, said lift ring assembly being positioned above said docking station and being operatively engageable with said respective carriages disposed in said docking station for lifting said respective carriages out of said docking station, said lift ring assembly comprising a tubular lift ring and a carriage pivoting assembly for tilting said tubular lift ring to a desirable rocket launch angle.~~

~~21. A rocket launch system according to claim 20 wherein said tubular lift ring is a hollow apparatus configured to surround and operatively engage said respective carriage, and being tiltable to orient said respective carriage and the rocket in said respective carriage in a desired launch direction.~~

~~22. A rocket launch system according to claim 21 and further comprising a lower hoist assembly from which are extendable a set of supporting tertiary cables for being operationally connectable to and supporting said lift ring assembly, and a carriage end gripper disposable between said lower hoist assembly and said lift ring assembly and being operatively attached to said lower hoist assembly, said carriage end gripper being releasably lockably engageable with one of said respective carriages in said lift ring assembly, said lower hoist assembly lifting said carriage end gripper for lifting said carriage into proper engagement with said carriage pivoting assembly prior to the launching of a rocket from said carriage disposed in said lifting ring assembly.~~

~~23. A rocket launch system according to claim 13 wherein said lighter-than-air balloons are operatively attached to said set of power and transporting primary cables intermittently along the length of said primary cables to support cumulatively said primary cables, and any other structure supported by said primary cables.~~

~~24. A rocket launch system according to claim 13 wherein said carriage includes a continuous pressure and heat resistant tube for holding a rocket, said tube preventing dangerous exhaust gases from leaving said carriage through any side of said carriage and damaging said cables.~~

~~25. A rocket launch system according to claim 1 wherein said lighter-than-air balloons are operatively attached to said set of electric power lines and to said set of rocket transporting device lines intermittently along the length of said respective sets of power and rocket transporting device lines to support cumulatively said respective sets of lines, and any other structure supported by said respective sets of lines.~~

~~26. A rocket launch system according to claim 20 and further including a tensioning balloons attachment frame connected to said secondary cables, said primary tensioning lighter-than-air balloons being attached to said tensioning balloons attachment frame for imparting sufficient tension to support cumulatively at least one of said respective carriages, secondary cables and any other structure supported on said tensioning balloons attachment frame below said attachment frame.~~

~~27. A rocket launch system according to claim 10 wherein said rocket launch system further comprises:~~

~~an upper hoist assembly attached to said tensioning balloon attachment frame and being operatively connected to said lower hoist assembly and to said power and guiding secondary cables, said upper hoist assembly drawing power from said power and guiding secondary cables for selectively raising and lowering said lower hoist carrier assembly to lift or assist in lifting one of said respective carriages into and out of engagement with said lift ring assembly.~~

~~28. A rocket launch system according to claim 26 wherein said docking station has connected thereto an upper ring part having an axis of rotation, a lower ring part coaxial with said upper ring part, said upper ring part and said lower ring part being connected together by a lower ring bearing, said upper ring part and said lower ring part being rotatable relative to each other, and a lower rotational drive system for driving said upper ring part and said lower ring part in counter rotation about said lower ring bearing and wherein said tensioning balloons attachment frame has connected thereto an upper ring having an axis of rotation, a lower ring coaxial with said upper ring, said upper ring and said lower ring being connected together by an upper rotary ring bearing, and an upper rotational drive system for driving said upper ring and said lower ring in counter rotation about said upper rotary ring bearing; said upper rotational drive system and said lower drive system being operatively connected to each other to coordinate the rotation of~~

~~said upper ring part and said lower ring to rotate as a unit to keep said associated cables from twisting around each other, said lower ring part and said upper ring rotating as a unit to counter wind-induced rotation and rotation resulting from the rotation of one of said respective carriages when the lower end of said carriage is held in said upper ring part and said respective carriage is being rotated for launch.~~

~~29. A rocket launch system according to claim 28 wherein said upper rotational drive system includes upper force thrusters for rotating or assisting in the rotation of said upper rotational drive structure, and wherein said lower rotational drive system includes lower force thrusters for rotating or assisting the rotation of said lower rotational drive system.~~

~~30. A rocket launch system according to claim 28 wherein each of said respective carriages have a longitudinal axis and external radial recesses extending along said respective carriage, said upper ring part and said lower ring part of said docking station are coaxially aligned to define an interior space for receiving and passing therethrough one of said respective carriages, said docking station having internal carriage guides for carrying electrical power to said traction drives and for entering said radial recesses to keep the respective carriages in proper alignment and stable while supplying electrical power to said respective carriages.~~

~~31. A rocket launch device according to claim 30 wherein said respective carriages have a triangular cross section with corner edges with said radial corner recesses extending along said corner edges; said lift ring assembly being supported by said tertiary cables, said lift ring assembly comprising a tubular lift ring with a triangular cross section for receiving one of said respective carriages, said tubular lift ring having inwardly extending internal carriage guides engageable with said radial recesses of said respective carriages for maintaining the orientation of said respective carriages in said tubular lift ring, said tubular lift ring having a longitudinal axis coincident with the longitudinal axis of said carriage, the angle of said longitudinal axis relative to ground is the elevation angle of said tubular lift ring.~~

~~32. A rocket launch system according to claim 31 wherein said carriage pivoting assembly tilts said tubular lift ring with respect to said secondary cables.~~

~~33. A rocket launch system according to claim 32 wherein a pair of said tertiary cables is on opposite sides of said tubular lift ring, and wherein said carriage pivoting assembly comprises:~~

~~a rotational drive system operatively connected to said tubular lift ring for rotating said lift ring;~~

~~lift ring guides operatively connected to said tertiary cables; and~~

~~pivot pins connected to and extending from said tubular lift ring, said pivot pins being~~

~~pivotally attached to each of said lift ring guides;~~

~~wherein said rotational drive system rotates said tubular lift ring to pivot about said pivot pins to change the elevation angle of said tubular lift ring and any of said respective carriages received thereby.~~

~~34. A rocket launch system according to claim 33 wherein the center of gravity of said tubular lift ring falls in the geometric center of said tubular lift ring, said center of gravity being coincident with the axis of said pivot pins.~~

~~35. A rocket launch system according to claim 34 wherein said tubular lift ring includes a clamping mechanism for the releasable clamping of said respective carriages with the center of gravity of said last-mentioned respective carriage being disposed on the axis of said pivot pins.~~

~~36. A rocket launch system according to claim 35 wherein said tertiary cables comprise two groups of cables of fixed length, said tertiary cables being connected to said lift ring guides to attach said lower hoist carrier assembly to said lift ring guides, said tertiary cables being 180° apart where said tertiary cables are attached to said lower hoist carrier assembly.~~

~~37. A rocket launch system according to claim 35 wherein said carriage end gripper includes a set of four orifices for allowing said secondary cables extending between said docking station and said rotational drive system to freely pass.~~

~~38. A rocket launch system according to claim 37 wherein said carriage end gripper further include a pair of orifices for allowing said tertiary cables extending between said lift ring assembly and said lower hoist assembly to pass.~~

~~39.~~8. A rocket launch system according to claim 3 wherein said lighter-than-air balloons provide tension to said power and transporting primary cables to enable said primary cables to function with a rocket-transporting device disposed on said respective lines.

~~40.~~9. A rocket launch system according to claim 8 ~~39~~ and further comprising at least one large harness having interconnected arms and balloon holders on said large harness for attachment to said lighter-than-air balloons, said tensioning balloon holders being attached to said power and transporting primary cables to provide said tension.

~~41.~~10. A rocket launch system according to claim 9 ~~40~~ and further incorporating at least one lower spacer assembly for separating said power and transporting primary cables from each other and attaching said respective tensioning balloon holders to said respective large harnesses and to said respective balloons.

~~42.~~11. A rocket launch system according to claim 8 ~~39~~ wherein said lighter-than-air balloons are selected from the group consisting of tapered balloons or any cylindrical balloon.

~~43.~~12. A rocket launch system according to claim 10 ~~41~~ wherein said at least one large

harness has three arms forming an equilateral triangle, and said at least one lower spacer assembly comprises three-sided lower spacer arms forming an equilateral triangle parallel to the respective arms of said respective large harnesses, said at least one lower spacer assembly having lower spacer assembly-connecting structure at the juncture of respective lower spacer arms, and said rocket launch system further comprises lower spacer harness leads connecting said respective lower spacer assembly-connecting structure with said respective tensioning balloon holders.

~~44.~~13. A rocket launch system according to claim 12 ~~43~~ and further incorporating an upper spacer assembly having three arms forming an equilateral triangle having structure at the respective intersections of said three arms for separating said power and transporting primary cables from each other.

~~45.~~14. A rocket launch system according to claim 13 ~~44~~ and further including upper spacer assembly cable ties connecting the opposite ends of said respective three arms to said three arms of said respective large harnesses, and tension ties interconnecting said respective intersections of said three arms of said upper spacer assembly to the respective intersections of said three arms of said respective large harnesses.

~~46.~~15. A rocket launch assembly according to claim 14 ~~45~~ wherein said upper spacer assembly comprises three upper spacer arms forming an equilateral triangle with arms parallel to the respective arms of said respective large harnesses, and said rocket launch system further comprises upper spacer connecting structure disposed at the intersection of the respective upper spacer arms, and upper spacer connecting ties interconnects said respective upper spacer connecting structure and said opposite ends of said arms of said respective large harnesses.

~~47.~~16. A rocket launch system according to claim 15 ~~46~~ wherein said arms of said upper spacer assembly further include tie holders at the midpoint of said respective arms, and said rocket launch system further includes cable leads interconnecting said upper spacer connecting structure of said arms of said upper harness assembly and said tie holders of said respective arms of said respective large harnesses.

~~48.~~17. A rocket launch system according to claim 16 ~~47~~ wherein said at least one large harness comprises at least one additional large harness installed periodically along the length of said set of primary cables with said lighter-than-air balloons attached thereto to compensate for the full weight of said primary cables.

~~49.~~18. A rocket launch system according to claim 16 ~~47~~ and further including a further upper spacer assembly for separating said power and transporting primary cables from each other.

~~50.~~19. A rocket launch system according to claim 18 ~~49~~ and further including further upper assembly cable ties connected to said further upper spacer assembly and said upper harness.

~~51.~~20. A rocket launch system according to claim 19 ~~50~~ wherein said further upper spacer assembly comprises three further upper spacer arms forming an equilateral triangle with arms parallel to the respective arms of said respective large harnesses, and said rocket launch system further comprises further upper spacer arms connecting structure disposed at the intersection of the respective further upper spacer arms, and a set of further upper spacer connecting ties interconnects said respective further upper spacer connecting structure and said opposite ends of said arms of said respective large harnesses.

~~52.~~21. A rocket launch system according to claim 9 ~~40~~ and further including large harness reaction thrusters operatively connected to said at least one large harness for orienting said docking station, said lift ring assembly and said carriage end gripper to be oriented with respect to vertical to compensate for wind forces and for the deflation of any of said lighter-than-air balloons.

~~53.~~22. A rocket launch system according to claim 21 ~~52~~ and further including position sensors for controlling the direction and force of said large harness reaction thruster.

~~54.~~23. A rocket launch system according to claim 22 ~~53~~ wherein one of said reaction thrusters is disposed at the intersection of each of the respective arms of said at least one large harness.

~~55.~~24. A rocket launch system according to claim 23 ~~54~~ wherein each of said reaction thrusters comprises a fan mounted within a fan housing.

~~56.~~25. A rocket launch system according to claim 24 ~~55~~ and wherein said rocket launch system further includes a pair of arms disposed at the intersection of said respective arms of said at least one large harness, and coaxial pins having a coaxial axis extending into said respective fan housings for enabling said respective fan housings to pivot about said respective coaxial axes in clockwise and counterclockwise directions.

~~57.~~26. A rocket launch system according to claim 25 ~~56~~ wherein said rocket launch system further includes respective rotatable support joints mounted at said respective tensioning balloon holders, and said respective reaction thrusters are pivotably and rotatably gimbaled electric thrusters for orienting said docking station, said lift ring assembly and said carriage end gripper with respect to vertical to compensate for wind forces and for deflation of any of said lighter-than-air balloons.

~~58.~~27. A rocket launch system according to claim 20 ~~51~~ and further including stabilizing straps attached to said respective lower spacer assembly and to said upper spacer assembly to prevent said respective primary cables from touching said respective lighter-than-air balloons.

~~59.~~28. A rocket launch system according to claim 27 ~~58~~ and further including a stabilizer

connected intermittently to each of said primary cables between said primary cables and said respective lighter-than-air balloons, said respective stabilizers including respective connecting members for connecting said respective stabilizers to said respective stabilizing straps.

~~60.~~29. A rocket launch system according to claim 28 ~~59~~ wherein each of said respective stabilizers is composed of three stabilizing arms which collectively intersect to form an equilateral triangle.

~~61.~~30. A rocket launch system according to claim 29 ~~60~~ wherein a pair of stabilizing straps is attached to said respective connecting members, said respective pairs of stabilizing straps form various angles, and wherein said rocket launch system includes strap connectors attached to said lighter-than-air balloons for enabling said stabilizing straps to contact said respective lighter-than-air balloons longitudinally.

~~62. A rocket launch system according to claim 4 and further including at least one large harness for being operatively attached to said lighter-than-air balloons, said rocket launch system further including basal connectors extending from said respective large harnesses to said respective lighter-than-air balloons to connect said lighter-than-air balloons to said respective large harnesses, said respective basal connections being tangent to said respective lighter-than-air balloons.~~

~~63. A rocket launch assembly according to claim 10 wherein said carriage pivoting assembly is in a freefall condition upon the launch of a rocket, and wherein said secondary cables are of sufficient length to safely allow a time period of sufficient length at the local acceleration due to gravity of lower hoist assembly with any items suspended therefrom, to be sufficiently long for a rocket to be launched from a carriages, and safely decelerate the carriage and rocket to rest in the event of a misfire.~~

~~64. A rocket launch system according to claim 22 wherein said carriage pivoting assembly is in a freefall condition upon the launch of a rocket, and wherein said secondary cables are of sufficient length to safely allow a time period of sufficient length at the local acceleration due to gravity of said lower hoist assembly with a rocket transport device having a rocket disposed therein in the event of a misfire while said tilting structure is in the freefall condition.~~

~~65. A rocket launch system according to claim 2 wherein said power and transporting primary cable is a body of cable composed of strands of wire having looped-out portions extending from said body of cable for securing items to said primary cable, each looped-out portion exiting from and returning to said body of said primary cable.~~

~~66. A rocket launch system according to claim 65 and further including an adaptive connector having aligned wall orifices therein, and a connector for extending through a pair of said aligned orifices and one of said looped-out portions for connecting said adaptive connector to~~

~~said primary cable.~~

~~67. A rocket launch system according to claim 65 and further including a carriage for transporting a rocket along said primary cables, said carriage including traction wheels for engaging said respective primary cables and rotating on said respective primary cables without contacting said looped-out portions to propel said carriage along said primary cables.~~

~~68. A rocket launch system according to claim 6 and further incorporating a launcher for launching respective rocket transporting devices, said launcher including a turntable mechanism for receiving respective rocket transporting devices for delivering to said docking station, said turntable mechanism comprising:~~

~~a turntable base; and~~

~~a turret assembly mounted on said turntable base, the low end portion of said set of power and transporting primary cables being connected to said turret assembly, and transporting structure for transporting respective rocket transporting devices from and to said turret assembly along said primary cables.~~

~~69. A rocket launch system according to claim 68 wherein said turret assembly comprises:~~

~~a rotatable turntable rotatable with respect to said turntable base, said rotatable turntable having a rotatable turntable orifice for receiving respective rocket transporting devices;~~

~~a lower guide tube mounted on said rotatable turntable, said lower guide tube having a lower guide tube orifice alignable with and having a size corresponding to said rotatable turntable orifice, said lower guide tube receiving respective rocket transporting devices, said lower guide tube comprising lower guide tube guiding structure for locating the respective rocket transporting devices in said lower guide tube orifice;~~

~~a secondary guide structure comprising an integral tube having an integral tube orifice and secondary guiding structures alignable with said lower guide tube guiding structure, and primary cable connecting structure for connecting said primary cables to said secondary guide structure; and~~

~~a rotating assembly for rotating said lower guide tube with respect to said secondary guide structure to align said lower guide tube orifice and said integral tube orifice, and to align said lower guide tube guide structure and said secondary guide structure;~~

~~said rotatable turntable rotating said lower guide tube and said secondary guide structure in a desired direction for the movement of a respective rocket transporting device.~~

~~70. A rocket launch system according to claim 69 wherein the respective rocket transporting devices have respective longitudinal axes and a set of external recesses extending along the length of the respective rocket transporting devices, and said lower guiding structure~~

and said secondary guiding structure are internal carriage guides for being received by the set of external recesses in the respective rocket-transporting devices.

71. A rocket launch system according to claim 69 wherein one of said turntable and said turntable base has a perimetrical portion and a flat surface, and a vertical, annular flange extending from said perimetrical portion and a horizontal, annular flange extending from said vertical, annular flange and having an upper, lower and radial surfaces of said vertical, annular flange rotatable about respective radial axes; and wherein wheels are mounted for engagement by said turntable and said turntable base;

and the other of said turntable and said turntable base has a vertical, annular, tubular part concentric with the other of said turntable and said turntable base and a horizontal, annular flange extending from said vertical, annular tubular part, said horizontal, annular flange and said other of said turntable and turntable base having surfaces for engagement by said respective wheels for reducing the friction between said turntable and said turntable base upon the relative rotation thereof.

72. A rocket launch system according to claim 69 wherein said turntable and said turntable base each has a perimetrical end portion for receiving a rolling bearing, and a vertical, annular flange extending from said perimetrical portion and a horizontal, annular flange extending from said vertical, annular flange and having annular bearing surfaces for receiving rolling bearings;

and the other of said turntable and said turntable base having a vertical, annular, tubular part concentric with the other of said turntable and said turntable base and a horizontal, annular flange extending from said vertical, annular, tubular part, having annular bearing surfaces; and

rolling bearings disposed between said horizontal, annular flange and both of said annular, horizontal flanges and said horizontal, annular flange in said annular bearing surfaces;

said rolling bearings reducing the friction between said turntable and said turntable base upon the relative rotation therebetween and resisting axial compressive and tensile forces as well as forces perpendicular to the axis of rotation and combinations thereof.

73. A rocket launch system according to claim 69 wherein said turret assembly further comprises:

a yoke including a pair of spaced apart arms pivotally mounted on said turntable, said lower guide tube pivotally mounted between said pair of arms, said lower guide tube and said secondary guide structure being pivotally mounted between said pair of arms, the axes of rotation of said turntable and said lower guide tube intersecting orthogonally.

74. A rocket launch system according to claim 73 wherein said integral tube is located at a fixed distance from the common pivot of said integral tube and lower guide tube, said secondary guide tube structure being counterbalanced about the horizontal pivot of said secondary guide structure, said secondary guide structure being alignable with the upper end of said lower

guide tube to render said integral tube and said lower guide tube coaxial, and said secondary guiding structure and said lower guide tube guiding structure in alignment.

75. A rocket launch system according to claim 69 wherein the respective rocket transport devices have electrically powered traction drives for engaging said respective primary cables for transporting the respective rocket transporting devices, and lower guide tube guiding structure and said secondary guiding structure are electrically energized to transmit electrical power to said traction drives.

76. A rocket launch system according to claim 69 and further including an elevating assembly for elevating a rocket transport device into said turret assembly, said elevating assembly for engaging the respective rocket transport devices for moving the respective rocket transport devices into said turret assembly.

77. A rocket launch system according to claim 76 wherein said rotatable turntable has an orifice for receiving respective rocket transport devices, and said elevating assembly comprises:

a hydraulic cylinder;

a hydraulic piston operatively disposed inside said hydraulic cylinder;

a hydraulic piston rod connected to said hydraulic piston and being axially movable with respect to said hydraulic cylinder;

an upper swiveling assembly operatively mounted on said hydraulic piston for receiving the respective rocket transporting devices and aligning the rocket transporting devices with said rotatable turntable orifice; and

a rotary drive for rotating said upper swiveling assembly.

78. A rocket launch system according to claim 77 wherein said upper swiveling assembly comprises:

a rotatable bed for receiving the respective rocket transporting devices and rotating the transporting devices to align the respective rocket transporting devices with said rotatable turntable orifice.

79. A rocket launch system according to claim 78 wherein said upper swiveling assembly further comprises a table portion mounted on said rotatable bed for receiving for further conveyance respective rocket transporting devices.

80. A rocket launch system according to claim 79 wherein said elevating assembly further comprises a non rotating bed fixed to said piston rod; said rotatable bed being mounted on said non rotating bed.

81. A rocket launch system according to claim 80 wherein said upper swiveling assembly receives respective rocket transporting devices from lateral conveying devices having a

~~set of lateral conveying device wheels, and said table portion is associated with tracks aligned with the set of lateral conveying device wheels for enabling the lateral conveying devices to be received on said table portion of said elevating assembly.~~

~~82. A rocket launch system according to claim 81 wherein the respective lateral conveying devices and said table portion have attaching structure for releasably attaching the respective lateral conveying devices to said table portion.~~

~~83. A rocket launch system according to claim 82 wherein said attaching structure comprises a selected one of the group consisting of alignment pins and fractional rotation twist pins extending from the upper surface of said table portion for being received in corresponding sockets in the respective lateral conveying devices, and alignment pin sockets and fractional rotation pin sockets in said table portion for receiving corresponding tapered alignment pins and corresponding fractional rotation twist pins extending from the respective lateral conveying devices.~~

~~84. A rocket launch system according to claim 81 and further including a pathway having a set of tracks engageable by the set of wheels of the lateral conveying device for conveying respective rocket-transporting devices to said table portion for transfer to said elevating system.~~

~~85. A rocket launch system according to claim 84 and further comprising a rocket storage structure for storing rockets to be launched from said rocket launch system, loaded in respective rocket-transporting devices.~~

~~86. A rocket launch system according to claim 85 wherein said rocket storage structure is storage racks separated by blast-resistant partition walls.~~

~~87. A rocket launch system according to claim 85 and further including a rocket loading system for removing respective rocket-transporting devices from said rocket storage structure, and assembly bays, said rocket loading system moving respective rocket-transporting devices to respective assembly bays.~~

~~88. A rocket launch system according to claim 87 wherein said rocket loading structure comprises:~~

~~a transverse loader movable with respect to the respective assembly bays;~~

~~a set of tracks upon which said transverse loader travels; and~~

~~a guide assembly for guiding said transverse loader and components of said transverse loader.~~

~~89. A rocket launch system according to claim 88 wherein said transverse loader moves longitudinally with respect to the assembly bays, and said transverse loader comprises an elevator assembly movable transversely on said transverse loader and vertically for receiving~~

~~respective rocket transporting devices at a relatively high elevation and lowering the respective rocket transporting devices into the respective assembly bays.~~

~~90. A rocket launch system according to claim 89 wherein said guide assembly comprises:~~

~~wheeled trucks movable on said set of tracks and carrying said transverse loader along said set of tracks; and~~

~~rails extending across said transverse loader, said elevator assembly being movable along said rails.~~

~~91. A rocket launch system according to claim 90 and further including an elevator assembly wheeled truck for carrying said elevator assembly along said rails.~~

~~92. A rocket launch system according to claim 91 wherein said elevator assembly includes:~~

~~a guide support apparatus mounted on said elevator assembly wheeled truck and extending in a vertical direction; and~~

~~an elevator operatively coupled to said guide support apparatus, said elevator having electro-mechanical structures for moving said elevator on said guide support apparatus;~~

~~said elevator assembly lifting rockets and carriages from said storage racks and lowering the respective rockets and carriages into said respective assembly bays, and said transfer loader moving respective rockets and carriages between said racks and said assembly bays.~~

~~93. A rocket launch system according to claim 92 wherein the respective rockets have elevator assembly attachment receptacles, and said elevator assembly further comprises:~~

~~a grasping assembly for operatively engaging the elevator assembly attachment receptacles for respective rockets disposed in said respective assembly bays for enabling said assembly to lift the respective rockets from said respective assembly bays.~~

~~94. A rocket launch system according to claim 93 wherein said elevator assembly further comprises:~~

~~a body at the lower end of elevator;~~

~~depending legs attached to said elevator, said legs being movable with said elevator at different locations around the respective rockets for operative engagement with the respective receptacles of the respective rockets;~~

~~guides for guiding said depending legs into the respective receptacles; and~~

~~leg attachment apparatus for releasably attaching said respective legs to the respective receptacles.~~

~~95. A rocket launch system according to claim 94 wherein the respective receptacles include fractional rotation twist-lock pin sockets, and said leg attachment apparatus comprises~~

~~fractional rotation twist-lock pins for securely and releasably attaching the respective rockets to said elevator assembly.~~

~~96. A rocket launch system according to claim 92 wherein said transverse loader further comprises stabilizing arm assemblies mounted on said elevator assembly for engaging and stabilizing the respective rockets disposed in said elevator assembly.~~

~~97. A rocket launch system according to claim 96 wherein said stabilizing arm assemblies comprise arms with structure for engaging the respective rockets, and actuators attached to said respective arms for operating said respective arms to engage and release the respective rockets.~~

~~98. A rocket launch system according to claim 87 and further comprising lateral conveying devices for conveying rocket-transporting devices between said rocket storage structure, said assembly bays and said table portion, said lateral conveying device comprising wheels for operatively engaging said set of tracks.~~

~~99. A rocket launch system according to claim 98 wherein the respective rocket-transporting devices have a base end proximal a rocket contained in the respective rocket-transporting devices, and said lateral conveying device further comprises receiving structure for stably receiving the base end to hold the respective rocket-transporting devices in an upright position, and a locking mechanism for releasably locking a rocket-transporting device in said receiving structure.~~

~~100. A rocket launch system according to claim 99 wherein said locking mechanism comprises fractional rotation twist-lock pins.~~

~~101. A rocket launch system according to claim 99 wherein said lateral conveying device has independently steerable wheels and a steering mechanism for moving said lateral conveying device on said set of tracks.~~

~~102. A rocket launch system according to claim 101 and further including loading apparatus for loading rocket-transporting devices onto said lateral conveying device, said loading apparatus comprising:~~

~~a loading bed rotatable about an axis of rotation for receiving a rocket-transporting device; and~~

~~a rotator operatively connected to said loading bed for rotating said loading bed from a holding position for holding a rocket-transporting device on said loading bed to a release a release position for enabling the rocket-transporting device to be displaced to a respective one of said receiving structures of said lateral conveying devices in an upright position.~~

~~103. A rocket launch system according to claim 97 and further comprising a main pathway extending in operative proximity to said rocket storage structure and said assembly bays, and rails disposed in said main pathway upon which lateral conveying devices can move for~~

~~transporting rocket transporting devices.~~

~~104. A rocket launch system according to claim 103 and further including bay pathways leading from said respective assembly bays to said main pathway and rails in said bay pathways for operative intersection with said rails in said main pathway.~~

~~105. A rocket launch system according to claim 104, wherein said assembly bays are located below ground surface, and have the shape of an inverted frustum and made of a concrete material for limiting the effects of damage due to the detonation of rocket propellant by deflecting the blast upwardly and laterally.~~

~~106. A rocket launch assembly according to claim 105 and further including slidable blast covers slidable over said respective assembly bays for protecting against damage in the event of an accidental blast in said bay.~~

~~107. A rocket launch according to claim 76 wherein said elevating assembly comprises an electro-mechanical elevating assembly.~~

~~108. A rocket launch system according to claim 13 wherein said carriage comprises opposed end openings, and end covers at said respective end openings to protect the interior of said respective carriage and any rocket contained in said respective carriage from the weather.~~

~~109. A rocket launch system according to claim 108 wherein said end covers are retractable membranes.~~

~~110. A rocket launch system according to claim 108 wherein at least one of said end covers is movable between open and closed positions to open and close said at least one end opening.~~

~~111. A rocket launch system according to claim 208 wherein said traction drives comprise a set of traction drive wheels associated with said respective carriages for engaging said respective primary cables of said power and transporting primary cables for both transporting said respective carriages along said set of power and transporting primary cables, said set of traction drive wheels being operatively connected to said reversible electrically powered energizing apparatus, said traction drives serving as regenerative brakes when said respective carriages move along said primary cables under the influence of gravity to effect the delivery of electrical power to said primary cables.~~

~~112. A rocket launch system according to claim 13 wherein said respective carriages have receptacles for being used to lift said respective carriages into components of said rocket launch system.~~

~~113. A rocket launch system according to claim 112 wherein said receptacles are pin-lock receptacles.~~

~~114. A rocket launch system according to claim 13 wherein said carriages have internal retractable arms having an active condition for holding a rocket securely within said respective~~

carriages, and being retracted to an inactive condition to enable launch of the rocket from said carriage.

115. A rocket launch system according to claim 114 wherein said retractable arms hold a rocket with the center of gravity of the rocket being coincident with the center of gravity of said respective carriage.

116. A rocket launch system according to claim 13 wherein said carriage has three sides defining in cross section a triangle, each side intersecting two other sides to form three intersections, and said carriage further comprises external recesses at said intersections for being guided in respective components of said rocket launch system.

117. A rocket launch system according to claim 13 wherein said traction drives comprise a set of traction wheels associated with the respective carriages for engaging primary cables of said set of power and transporting primary cables for transporting the respective carriages along said set of power and transporting primary cables, said traction wheels comprising opposing cylindrical wheels having annular grooves for partially enveloping primary cables on which said respective carriage rides, wherein said electrically powered energizing apparatus is a reversible electrically powered energizing apparatus, said reversible electrically powered energizing apparatus derives electrical power from said set of electrical power lines when said set of traction drives lift said respective carriage along said set of primary cables, and said reversible electrically powered energizing apparatus reversibly delivers electrical power to said set of electrical power lines when said traction drives move said respective carriage under the influence of gravity to descend said set of primary cables.

118. A rocket launch system according to claim 117 wherein said reversible electrically powered energizing apparatus comprises a motor generator operatively coupled with said respective cylindrical wheels for being electrically powered by said rotating cylindrical wheels as said respective carriage descends said set of primary cables.

119. A rocket launch system according to claim 114 wherein the rockets for loading in said carriage has a set of slots, and said retractable arms have head members, said retractable arms having an active position wherein said respective head members enter the respective slots in the rockets to hold the rockets securely in said respective carriages, and an inactive position wherein said stem and head member are retractable from the respective slots to enable launch of the rockets.

120. A rocket launch system according to claim 119 wherein said carriage comprises a pressure and heat resistant tube having a cavity for holding said retractable arms and protecting doors movable between an open position enabling movement of said retractable arms to hold a rocket, and a closed position to protect said retractable arms.

121. A rocket launch system according to claim 120 wherein said pressure and heat resistant tube has a cavity covering end door with an airflow detector for pivoting between an open position for assisting in enabling said retractable arm to hold a rocket, and a closed position for assisting in protecting said protecting doors and said cavity.

122. A rocket launch system according to claim 121 wherein said cavity includes pivot pins for mounting said end door for pivoting between said open and closed positions.

~~123. A rocket launch system according to claim 121 wherein said arm comprises:~~

~~a base member mounted in said cavity for moving said retractable arm between said active and said inactive positions;~~

~~a stem connecting said base member to said head member;~~

~~said retractable arm being movably coupled to said cavity covering end door;~~

~~and wherein said rocket launch system further comprises:~~

~~a hydraulic cylinder movably coupled to said retractable arm for moving said retractable arm between the active and inactive position of said retractable arm;~~

~~said hydraulic cylinder moving said retractable arm to the inactive position in response to movement of said end door to the open position to enable launch of a rocket in said carriage, and moving said retractable arm to the active position in response to movement of said end door to the closed position to hold the rockets securely in said respective carriage.~~

~~124. A rocket launch system according to claim 13 wherein said carriage has a retroactive arm for entering an arm receiving opening in a respective rocket for holding the respective rocket in said carriage prior to launch, said arm being retractable from the opening in preparation for launch of the respective rocket.~~

~~125. A rocket launch system according to claim 13 wherein said carriage has an arm receiving opening for receiving a retractable arm from a respective rocket for holding the respective rocket in said carriage prior to launch, said arm receiving opening enabling retraction of the retractable arm in preparation for launch of the respective rocket.~~

~~126. A rocket launch system according to claim 2 and further comprising a docking station connected to said set of power and transporting primary cables at a terminal positioned along the length of said set of power and transporting primary cables, said docking station being structured to receive a telescope conveying carriage, and a telescope holding system operatively connected to said docking station.~~

~~127. A rocket launch system according to claim 126 wherein said telescope holding system includes a rotatable turntable.~~

~~128. A rocket launch system according to claim 127 wherein said telescope holding system including a mount constructed to hold a telescope.~~

~~129. A rocket launch system according to claim 128 wherein said telescope holding system further comprises a telescope holding structure for holding a telescope on said rotatable turntable.~~

~~130. A rocket launch system according to claim 129 and further including a telescope tilting structure.~~

~~131. A rocket launch system according to claim 130 and further including an elevator tube for providing a transport path for a telescope conveying carriage for conveying a telescope to said mount, said mount being constructed to hold said telescope conveying carriage for placing the telescope in operative position(s).~~

~~132. A rocket launch system according to claim 131 wherein said elevator tube further includes electricity carrying cables or wheels for powering the telescope conveying carriage in said elevator tube.~~

~~133. A rocket launch system according to claim 132 wherein said docking station has a lower part and an upper part rotatable with respect to said lower part, and a rotational drive system for offsetting the relative rotation of said lower part and said upper part.~~

~~134. A rocket launch system according to claim 133 and further including a ring bearing located between said lower part and said upper part for reducing the friction between said lower part and said upper part and wherein said rotational drive system comprises reaction thrusters for providing said offsetting.~~

~~135. A rocket launch system according to claim 134 and further comprising:~~

~~electrical power secondary cables extending upwardly from said docking station when said docking station has been elevated under the influence of said lighter than air balloons; and~~

~~a lift ring drivable upwardly and downwardly on said secondary cables, said lift ring including traction drivers and carriage holding structures for holding a telescope conveying carriage, said carriage holding structure being pivotal and rotatable with respect to said secondary cables to orient a telescope conveying carriage held in said carriage holding structure for entry into said elevator tube.~~

~~136. A rocket launch system according to claim 135 and further comprising an upper docking station connected to said secondary cables, said upper docking station comprising an upper part, a lower part, said last mentioned upper part and said last mentioned lower part being rotatable in opposite directions about an imaginary vertical axis, a rotational drive system for rotating said last mentioned upper part and lower part, and a ring bearing for reducing the friction between said last mentioned upper part and lower part.~~

~~137. A rocket launch system according to claim 13 and further comprising a one occupant rocket to be launched from said carriage, said one occupant rocket having a steerable motor.~~

~~138. A rocket launch system according to claim 13, and further comprising a main rocket being launched from said carriage for being manned by an occupant, and a launch or re entry suit worn by the occupant, said suit comprising:~~

~~a set of joints at at least some of the joints of the occupant wearing said suit, said joints~~

~~being lockable in an optimally aerodynamic position for launch, the occupant with said joints being loaded feet first into the top of said rocket for resisting the G-force effects of the rocket during launch.~~

~~139. A rocket launch system according to claim 138 wherein structure is provided for unlocking said set of joints in response to the cessation of operation of said rocket.~~

~~140. A rocket launch system according to claim 13 and further comprising a main rocket being launched from said carriage for being manned by an occupant, and a launch or re-entry suit to be worn by the occupant, said suit comprising porous pads on the exterior of said suit for being filled with fluid and being substantially fillable with fluid during launch and during re-entry to cool by evaporation the exterior of said suit.~~

~~141. A rocket launch system according to claim 13 and further comprising a main rocket being launched from said carriage for being manned by an occupant, and a launch or re-entry suit to be worn by the occupant, said suit comprising an ablative exterior material with thermal insulation.~~

~~142. A rocket launch system according to claim 13 and further comprising a main rocket being launched from said carriage for being manned by an occupant, and a launch or re-entry suit to be worn by the occupant, said suit comprising an exterior material having heat-resistant thermal insulation.~~

~~143. A rocket launch system according to claim 13 and further comprising a main rocket for being controllably launchable from said carriage by said rocket launch system, said controlled launch of said main rocket ceasing at a period after said controlled launch, a core rocket being releasable from said main rocket after launch of said main rocket, and at least one pod for respectively holding an occupant and being detachably connected to said core rocket, said at least one pod being ejectable from said core rocket for being guided to the earth or a destination in orbit.~~

~~144. A rocket launch system according to claim 143 and further comprising a windshield connected to said at least one pod for protecting the occupant held in said at least one pod against high velocity air.~~

~~145.~~31. A rocket launch system according to claim 3 and further comprising a main rocket for being controllably launched by said rocket launch system and a core rocket being carried with and releasable from said main rocket, and a windshield operatively connected to said core rocket for protection against high velocity air.

~~146. A rocket launch system according to claim 13 and further including a main rocket for being launched from said carriage, at least one pod for being ejectable from said main rocket, and a sled-like re-entry frame included in said at least one pod, said re-entry frame having steering~~

~~fins and an aerodynamic spike with a disc serving as a forward shockwave initiator.~~

~~147. A rocket launch system according to claim 13 and further comprising a rocket being launched from said carriage, structure for holding an occupant, and a space suit for being worn by the occupant, said space suit being capable of holding a liquid for accommodating G-force effects.~~

~~148. A rocket launch system according to claim 147 wherein structure is provided for holding the person in an upright position.~~

~~149. A rocket launch system according to claim 147 wherein the said space suit has a helmet with a rigid outer shell, an inner suit for laying close to the occupant wearing said space suit to separate the occupant from the liquid, and a face mask fixed to said inner suit.~~

~~150. A rocket launch system according to claim 147 wherein said space suit has a helmet and a face mask.~~

~~151. A rocket launch system according to claim 150 and further including a heating apparatus for heating a liquid in said space suit.~~

~~152. A rocket launch system according to claim 150 and further including ventilating apparatus for connecting with an air supply.~~

~~153. A rocket launch system according to claim 150 and further including a leakage canal for draining fluid from said face mask.~~

~~154. A rocket launch system according to claim 148 and further comprising an electro-mechanical piston apparatus and a cylinder for operatively holding said piston apparatus, said piston apparatus being movable in and out of said cylinder, said piston apparatus being operated by electro-mechanical apparatus for controlling the volume of liquid in said suit for normal respiration.~~

~~155. A rocket launch system according to claim 150 wherein said suit further includes a rigid outer shell with a sleeve, said sleeve being composed of a soft material.~~

~~156. A rocket launch system according to claim 155 wherein said soft material is selected from the group consisting of elastic webbing, soft open-pore foam and soft open-pore webbing.~~

~~157. A rocket launch system according to claim 155 and further including elastic tendons, each tendon being attached to said suit and being tangent to said sleeve and being attached to said sleeve.~~

~~158. A rocket launch system according to claim 157 wherein said space suit has powered joints for at least some of the joints of an occupant wearing said space suit, and wherein said rocket launch system has structure for sensing the tension in said respective tendons for providing feedback to direct said powered joints of said space suit to mirror the motions of the~~

~~occupant wearing said space suit to keep the occupant centered in said space suit.~~

~~159. A rocket launch system according to claim 13 and further including a rocket for launching from said carriage, and an aerospace plane attached to the body of said rocket, said aerospace plane having folded lift and directional control structures attached to the body of said aerospace plane, said aerospace plane having wings movable between folded and unfolded positions under the control of said folded lift and directional control structures.~~

~~160. A rocket launch system according to claim 13 and further including a rocket for launching from said carriage, and a lifting-type re-entry vehicle, said lifting-type re-entry vehicle having folded lift and directional control structures having folded and unfolded configurations.~~

~~161. A rocket launch system according to claim 13 and further including a rocket for launching from said carriage, said rocket having a payload protected by aerodynamic shells, said aerodynamic shells being detachable after said rocket has left the earth's atmosphere following the launch of said rocket and said payload has entered space.~~

~~162. A rocket launch system according to claim 2 wherein said cables have a steel exterior.~~

~~163. A rocket launch system according to claim 2 wherein said cables have a steel exterior, and an interior composed of copper-coated steel strands.~~

~~164. A rocket launch system according to claim 13 wherein the rockets to be transported by said respective carriages have at least one fin, and said respective carriages have an internal support for holding the respective rockets, said internal support has slots for receiving the respective at least one rocket fin and holding the respective rockets stable in said carriage.~~

~~165.~~32. A rocket launch system according to claim 3 and further including at least one spacer assembly for maintaining a spaced separation between said three power and transporting primary cables, said primary cables having an adaptive connector comprising a pair of spaced, parallel flanges extending generally radially from said primary cables at the same level for each of said three primary cables, said spacer assembly comprising:

three generally straight arms forming a generally equilateral triangle, said three generally straight arms being generally coplanar and forming an intersection on opposite ends of said respective straight arms;

an orthogonal flange disposed at said respective intersections and being generally perpendicular to the plane of said three generally straight arms and disposed between said respective pairs of spaced, parallel flanges extending from said respective primary cables; and

attaching structure for attaching said respective orthogonal flanges and said respective pairs of spaced, parallel flanges extending from said primary cables.

~~166. A rocket launch system according to claim 38 and further comprising:~~

support cables other than said primary cables for attaching and supporting other items to said primary cables; and

support structure for attaching said support cables to said respective primary cables, said support structure comprising:

at least one primary cable flange extending from said respective primary cables in a plane including the longitudinal axis of each of said respective primary cables;

a cable support member having cable connecting structure for connecting an end of said respective cables to said cable support member; and

at least one cable support member flange attached to said cable support member for being attached to said at least one primary cable flange.

167. A rocket launch system according to claim 166 wherein at least one of said at least one primary cable flange and said at least one cable support member flange is a pair of spaced apart parallel flanges for receiving the other of said at least one primary cable flange and said at least one cable support member flange, and wherein said rocket launch system further comprises connecting structure for connecting said at least one primary cable flange and said at least one cable support member flange together.

168. A rocket launch system according to claim 167 wherein at least one end of said support cables has a coupling yoke with a pair of spaced apart receiving members having aligned lug receiving holes, and wherein said support member is a support plate having individual lug receiving holes, said support plate slipping between said spaced apart lug receiving members with said individual lug receiving hole in alignment with said aligned lug receiving holes, and a lug fastening said yoke and the cable attached thereto, to said support member.

169. A rocket launch system according to claim 21 wherein said carriage has opposite ends, and wherein said carriage further comprises thrusters at each of said ends for reducing oscillation of said carriage in said lift ring assembly.

170. A rocket launch system according to claim 169 wherein said thrusters are reversible variable pitch thrusters.

171. A rocket launch system according to claim 170 wherein said reversible variable pitch thrusters each comprise:

a hub motor; and

a set of blades extending from said hub motor for being rotated in selectively opposite directions by said hub motor.

172. A rocket launch system according to claim 171 and further comprising pivotable thruster mountings rotatably mounted on the respective ends of said carriage, said thruster mountings holding said hub motor and said blades and being rotatable from a rest position within

~~said carriage to an active position parallel to the longitudinal axis of said carriage.~~

~~173. A rocket launch system according to claim 172 wherein said thruster mountings are rotatable about opposite ends of said carriage between said rest position, said active position, and an obtuse position away from the openings of said respective ends to avoid the impingement of exhaust gases of rockets being launched from said carriage and to enable loading a rocket into said carriage.~~

~~174. A docking station for use in a rocket launching system, the rocket launching system including a set of primary electrical power and transporting cables for extending upwardly into high altitudes and operatively connected to said docking station, a set of secondary electrical power and transporting cables for extending further upwardly into high altitudes and operatively connected to said docking station and a rocket transporting device movable along the set of primary and secondary electrical power and transporting cables, said docking station comprising:~~

~~structure for receiving one of the rocket transporting devices in preparation for the launch of a rocket carried by the rocket transporting device; and~~

~~rotating apparatus for controlling the rotation of said docking station to prevent the twisting of the sets of primary and secondary cables when said docking station is located in a high altitude.~~

~~175. A docking station according to claim 174 wherein the rocket launch system includes upper rotational systems connected to the set of secondary electrical power and transporting cables, and wherein said rotating apparatus comprises an upper ring part having an axis of rotation, a lower ring part coaxial with said upper ring part, said upper ring part and said lower ring part being connected together and rotatable relative to each other, and a lower rotational drive system for driving one of said upper ring part and said lower ring part in counter rotation, said lower rotational drive system being operatively connected to the upper rotational drive system to coordinate the relative rotation of said lower ring with said upper drive system to keep the second set of secondary cables from twisting around each other.~~

~~176. A docking station according to claim 175 wherein said lower rotational drive system includes lower force thrusters for rotating or assisting the rotation of said lower rotational drive system.~~

~~177. A lift ring assembly for use in a rocket launching system, the rocket launching system including a set of primary electrical power and transporting cables engageable by rocket transporting devices traveling along said respective cables and deriving electrical power from said electrical cables to energize the rocket transporting devices, said cables extending upwardly into high altitudes for transporting and powering respective rocket transporting devices, a docking station connected to the set of primary electrical power and transporting cables for receiving the rocket transporting devices and putting the received rocket transporting devices in proper alignment and rendering the received rocket transporting devices stable for subsequent transporting of the rocket transport devices into higher altitudes, and a set of secondary electrical power and guiding cables for extending upwardly into higher altitudes from the docking station for transporting and powering respective rocket transporting devices, the~~

~~docking station receiving respective rocket transporting devices from the set of primary electrical power and transporting cables in preparation of the launch of a rocket carried by the respective rocket transporting devices;~~

~~said lift ring assembly being in operative engagement with the set of secondary electrical power and guiding cables for deriving electrical power and being guided by the set of secondary electrical power and guiding cables, said lift ring assembly being positionable above the docking station and operatively engageable with a rocket transporting device disposed in the docking station for lifting the rocket transporting device out of the docking station, said lift ring assembly having a carriage pivoting assembly for being tilted to a desired rocket launch angle.~~

~~178. A lift ring assembly according to claim 177 wherein the carriage pivoting assembly is a tubular lift ring configured to surround and operatively engage a rocket transporting device, and being tiltable to orient the rocket transporting device and the rocket disposed in the rocket transporting device to a desired launch angle.~~

~~179. A rocket launch system according to claim 20 and further comprising a lower hoist assembly located above said lift ring assembly when said rocket launch system is in operation, a set of supporting tertiary cables extending from said lower hoist assembly for being operationally connectable to and supporting said lift ring assembly, and a rocket transport device end gripper disposable between said lower hoist assembly and said lift ring assembly and being operatively attached to said lower hoist assembly, said end gripper being releasably and lockably engageable with a carriage in said lift ring assembly, said lower hoist assembly lifting said end gripper for lifting a rocket transporting device into engagement with said carriage pivoting assembly prior to the launching of a rocket from a carriage disposed in said lift ring assembly.~~

~~180.~~33. A rocket transporting system for use in a rocket launching system, the rocket launching system having a set of power and transporting cables, said rocket-transporting system configured to provide electrical power to said power and transporting cables to transport and eject a rocket to be launched and comprising:

an electrical energy provider disposed on the earth for directing electrical energy to said rocket launching system, said electrical energy provider including the set of power and transporting cables;

at least one rocket transporting device having traction drives, said traction drives comprising electrically powered energizing apparatus operatively engageable with the set of power and transporting cables for deriving electrical power from the set of power and transporting cables and transporting said rocket-transporting device along the set of power and transporting cables.

~~181.~~34. A rocket-transporting device according to claim 33 ~~180~~ wherein the set of power and transporting cables of the rocket launching system are three in number and carry three-phase power, said rocket transporting system being configured to provide three-phase electrical power, and said electrically powered energizing apparatus is powered by the three-phase electrical power.

~~182. At least one rocket transporting device according to claim 180 wherein said at least one rocket transporting device is a carriage having an interior compartment configured to~~

~~contain a rocket, the rocket being ejectable from said interior compartment during launch.~~

~~183. A carriage according to claim 182 wherein said traction drives comprise a set of traction drive wheels for engaging the respective power and transporting cables to be energized by said respective cables for transporting said carriage upwardly along the set of power and transporting cables.~~

~~184. A carriage according to claim 183 and further comprising a reversible electrically powered energizing apparatus for deriving electrical power from said set of power and transporting cables when said carriage is transported upwardly along said set of power and transporting cables, and for reversibly delivering electrical power to said set of power and transporting cables when said set of traction drives moves said carriage under the influence of gravity to descend said set of power and transporting cables.~~

~~185. A carriage according to claim 182 and further comprising at least one internal retractable arm movable between an active condition for holding a rocket in the interior compartment of said carriage, and an inactive condition for not holding a rocket.~~

~~186. A carriage according to claim 185 wherein said at least one internal retractable arm holds a rocket in which the center of gravity of the rocket being coincident with the center of gravity of said carriage.~~

~~187. A carriage according to claim 182 wherein said carriage has three sides defining in cross section a triangle.~~

~~188. A carriage according to claim 182 wherein said set of traction drive wheels comprises opposing cylindrical wheels, said cylindrical wheels having annular grooves for partially enveloping the respective cables for transporting said carriage on the respective cables.~~

~~189. A carriage according to claim 183 wherein said respective traction drive wheels are rotatable traction drive wheels.~~

~~190. A carriage according to claim 185 and further comprising a pressure and heat resistant tube having a cavity at normally ambient pressure for holding said at least one retractable arm, and protecting doors movable between an open position enabling movement of said at least one retractable arm to hold a rocket, and a closed position to assist in protecting said protecting doors and said cavity.~~

~~191. A carriage according to claim 190 wherein said at least one retractable arm comprises:~~

~~a base member mounted in said cavity for moving said at least one end door retractable arm between said active and said inactive positions;~~

~~a head member; and~~

~~a stem connecting said base member to said head member;~~

~~and wherein said carriage further comprises:~~

~~a weatherproof cavity covering end door; said at least one retractable arm being movably coupled to said~~

~~cavity covering end doors; and~~

~~a hydraulic cylinder movably coupled to each of said at least one retractable arm for moving said at least one retractable arm between the active and inactive conditions;~~

~~said hydraulic cylinder moving said retractable arm to the inactive condition in response to movement of said cavity covering end doors to the open position to enable launch of a rocket from said carriage, and moving said retractable arm to the active condition in response to movement of said end doors to the closed positions.~~

~~192. A turntable mechanism configured for receiving respective rocket transporting devices and for delivering the respective rocket transporting devices to a launch assembly, the launch assembly having power and transporting cables for conveying the respective rocket transporting devices along the cables, the cables having a low portion and an elevated portion, said turntable mechanism comprising:~~

~~a turntable base; and~~

~~a turret assembly mounted on said turntable base, said turret assembly being connected to the low portion of the power and transporting cables;~~

~~the launch assembly further having transporting structure for transporting respective rocket transporting devices from and to said turret assembly along the power and transporting cables.~~

~~193. A turret assembly according to claim 192 and further comprising:~~

~~a rotatable turntable rotatable with respect to said turntable base;~~

~~a lower guide tube mounted on said rotatable turntable, said lower guide tube having a lower guide tube orifice for receiving respective rocket transporting devices and lower guide tube guiding structure for locating the respective rocket transporting devices in said lower guide tube orifice;~~

~~a secondary guide structure comprising an integral tube having an integral tube orifice and secondary guiding structures alignable with said lower guide tube guiding structure, and primary cable connecting structure for connecting the primary cables to said secondary guide structure; and~~

~~a rotating assembly for rotating said lower guide tube with respect to said secondary guide structure to align said lower guide tube orifice and said integral tube orifice, and to align said lower guide tube guide structure and said secondary guide structure;~~

~~said rotatable turntable rotating said lower guide tube and said secondary guide structure in a desired direction for the movement of a respective rocket transporting device.~~

~~194. A turret assembly according to claim 193 wherein the respective rocket transporting devices have respective longitudinal axes and a set of external recesses extending along the length~~

~~of the respective rocket transporting devices, and said lower guide tube guiding structure and said secondary guide structure have internal carriage guides for being received by the set of external recesses in the respective rocket transporting devices.~~

~~195. A turret assembly according to claim 193 wherein said rotatable turntable has an orifice for receiving respective rocket transporting devices, and said turret assembly further comprises:~~

~~a yoke including a pair of spaced apart arms pivotally mounted on said turntable, said lower guide tube and said secondary guide structure being pivotally mounted between said pair of arms for pivoting with respect to said yoke, the axes of rotation of said turntable and said lower guide tube intersecting orthogonally.~~

~~196. A turret assembly according to claim 193 wherein the respective rocket transport devices have electrically powered traction drives for engaging the respective primary cables for transporting the respective rocket transporting devices, and said lower guide tube guiding structure and said secondary guiding structure are electrically powered to transmit electrical power to the traction drives.~~

~~197. A space suit to be worn by an occupant riding in a rocket at high altitudes or in space, said suit comprising:~~

~~a set of joints at at least some of the joints of an occupant wearing said suit, said set of joints being lockable in an optimally aerodynamic position with respect to the rocket for launch, wherein the occupant wears said space suit and is loaded feet first onto the top of the rocket for resisting the G force effects of the rocket during launch.~~

~~198. A space suit according to claim 197 and further including structure for unlocking said set of joints in response to cessation of the operation of the rocket.~~

~~199. A space suit to be worn by an occupant riding in a rocket at high altitudes or in space, said suit having porous pads for being filled with liquid, said porous pads being substantially fillable with liquid during launch to space and during re entry to cool by evaporation the exterior of said suit during re entry to the low altitude from the high altitude.~~

~~200. A space suit to be worn by an occupant riding in a rocket at high altitudes, said suit comprising an ablative exterior material with thermal insulation.~~

~~201. A space suit comprising:~~

~~a helmet;~~

~~a body suit comprising:~~

~~a rigid outer shell;~~

~~an inner suit; and~~

~~an interior portion between said outer shell and said inner suit, said interior portion capable of holding a liquid;~~

~~a nontoxic liquid filling said interior portion; and~~

~~heat maintaining apparatus for heating said nontoxic liquid to a temperature level~~

~~comfortable to a wearer of said space suit.~~

~~202. A space suit according to claim 201 wherein said nontoxic liquid is located between said inner suit and said rigid outer shell.~~

~~203. A space suit according to claim 201 wherein said heat maintaining apparatus is a heating or cooling and circulation apparatus.~~

~~204. A space suit according to claim 201 wherein said helmet comprises:~~

~~an outer helmet shell;~~

~~an interior face mask sealed against the face of the occupant of said space suit;~~

~~an air supply tube connecting said interior face mask and said outer helmet shell;~~

~~a visor;~~

~~a seal between said inner suit and said face mask;~~

~~a nontoxic liquid between said visor and said face mask; and~~

~~a ventilator for said face mask.~~

~~205. A space suit according to claim 204 and further including a leakage canal for draining liquid from said helmet if liquid leakage occurs.~~

~~206. A space suit according to claim 201 and further including volume changing structure for changing the volume of said liquid according to the breathing of the wearer, said volume changing structure comprising a powered piston and cylinder apparatus for regulating said liquid in said space suit, and piston powered apparatus for regulating the operation of said piston according to the respiration of the wearer.~~

~~207. A space suit according to claim 201 wherein said rigid outer shell includes rigid shell arms, rigid shell legs and rigid shell torso for receiving the arms, legs and torso of the wearer and further comprising:~~

~~internal sleeves for receiving the respective body, arms and legs of the wearer, said internal sleeves being made of a soft material not impeding significantly the flow of said liquid through said internal sleeves, said internal sleeves extending throughout the interior of said respective rigid shell arms, the rigid shell legs and the rigid torso;~~

~~said internal sleeves and said rigid shell arms, said rigid shell legs and said rigid shell torso having powered joints;~~

~~elastic tendons tangent to said respective internal sleeves and connected to said rigid shell arms, said rigid shell legs and said rigid shell torso for maintaining the arms, legs and body of the wearer centered in said respective rigid shell arms, rigid shell legs and rigid shell torso; and~~

~~electronic apparatus operatively connected to said powered joints and to said elastic tendons for sensing the tension in said elastic tendons and feeding measurements of the sensed tension to said powered joints to direct said powered joints to mirror the motion of the wearer.~~

~~208. A rocket launch system according to claim 11 wherein said electrically powered energizing apparatus is a reversible electrically powered energizing apparatus for deriving electrical power from said set of electrical power lines when said traction drives lift said rocket transporting device along said set of rocket transporting device lines, and said reversible electrically powered energizing apparatus reversibly delivers electrical power to said set of electrical power lines when said traction drives move said rocket transporting device under the influence of gravity to descend said set of rocket transporting device lines.~~