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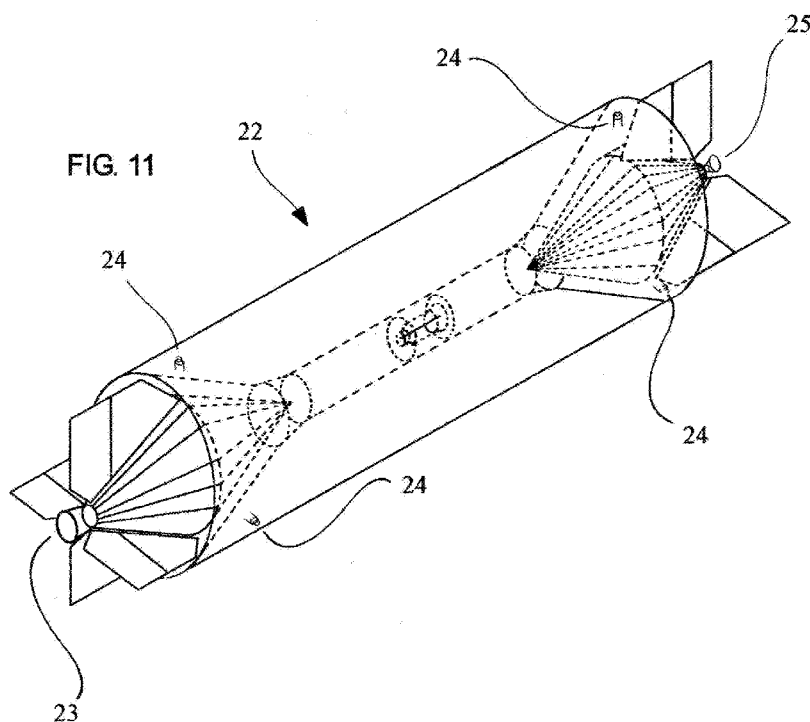
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Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

[Continued on next page]

(54) Title: IMPROVED AIRSHIP



(57) Abstract: An improved airship having a plurality of resilient gas bags & gas containers, a straight fuselage tubular hull, with an inner air passageway & propulsion means located therein, connecting air inlet, & outlet funnels fore, & aft, with air deflector cones axially positioned therein; further, propulsion, reverse, & directional rocket thrusters, additionally to typical airship components; furthermore, said airship having improved speed, maneuverability, efficiency, & adverse weather capability, reduced forward air resistance, & rearward drag in the air; and propulsive, attitudinal, & directional control in space.



— *as to non-prejudicial disclosures or exceptions to lack of novelty (Rule 4.17(v))*

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TITLE: Improved Airship

This application is intended as an international application, filed in the United States of America.

CROSS REFERENCE TO RELATED APPLICATIONS:

United States Patent and Trademark Office, provisional patent application No.61/598,879, filing date 02/14/2012, invention title: Ultra Low Drag Forward Resistance & Snag Airship; and United States Patent and Trademark Office, non-provisional patent application No.13/767,844 filing date 02/14/2013, invention title: Improved Airship; and United States Patent and Trademark Office Continuation in Part application No.13/907,320.

FEDERALLY SPONSORED RESEARCH

not applicable

SEQUENCE LISTING OR PROGRAM

not applicable

FIELD

[0001] The present invention relates to airships and more particularly to airships having internal or ducted propulsion systems.

BACKGROUND ART

[0002] Airships are well known, and have grown in popularity in recent years.

[0003] It is also well known that airships or dirigible type of aircraft are useful where quiet, the ability to hover in one place for an extended period, and to land in un-developed areas are desired. Yet conventional designs are lacking for speed, efficiency, and maneuverability.

And, that previous airship designs are slow, sluggish, inefficient and, incapable in high-wind gusts, and adverse weather.

[0004] Over the years there have been numerous improvements made to airships, and many designs to solve the problems described above.

These designs have generally been concentrated on the area of buoyancy control, propulsion, and aerodynamics, yet the best designs do not adequately solve the problems of slow, sluggish, inefficient, and high-wind-gust, and adverse-weather incapability to a satisfactory degree.

[0005] U.S. Pat. No. 6,607,163 discloses a conventional conical shaped airship with near space buoyancy and propulsion means however it does not have a tubular straight fuselage, non-protruding attitudinal control wings, air deflector cones, an inner air passageway, internal propulsion means, or outer atmospheric propulsion & attitudinal control means.

BACKGROUND (cont)

[0006] U.S. Pat. No. 5,071,090 shows a conventional conical shaped airship with an internal air passageway, and internal propulsion means, however it does not have a tubular straight fuselage, non-protruding attitudinal control wings, air-inlet & air outlet funnels, or air deflector cones, or outer atmospheric propulsion & attitudinal control means.

[0007] U.S. Pat. No. 4,967,983 describes an airfoil type airship with an internal air passageway, however it does not have a tubular straight fuselage, non-protruding attitudinal control wings, air deflector cones, or outer atmospheric propulsion & attitudinal control means.

[0008] U.S. Pat. No. 1,835,260 shows a conventional conical shaped airship with an internal air passageway, and internal propulsion means, however it does not have a fuselage, non-protruding attitudinal control wings, air deflector cones, or outer atmospheric propulsion & attitudinal control means.

[0009] U.S. Pat. No. 2,384,893 shows an airfoil airship having an internal air passageway however it does not have a tubular straight fuselage, non-protruding attitudinal control wings, air deflector cones, or outer atmospheric propulsion & attitudinal control means.

[0010] U.S. Pat. No. 3,288,397 shows a tri-hull airship airfoil with conventional elliptical shaped airship fuselages affixed together comprising an air-ship airfoil, having external control apertures and external propulsion means however it does not have a tubular straight fuselage, non-protruding attitudinal control wings, air deflector cones, an inner air passageway, an internal propulsion means, or outer atmospheric propulsion & attitudinal control means.

SUMMARY

[0011] A main advantage of the present invention is providing an improved airship that attempts to solve the problems of conventional airships detailed herein by incorporating one or more of the characteristics discussed in the embodiments listed below.

[0012] Accordingly several advantages of one or more aspects of the present invention are to provide an airship having improved speed performance, maneuverability, efficiency, and adverse weather capability.

[0013] It is a further advantage of the invention to provide an airship with reduced air displacement, forward air resistance, and rearward drag of the airship.

[0014] It is another advantage of the invention to provide an airship with improved airflow direction into, out of, and around the airship.

[0015] It is yet another advantage of the invention to provide an airship with improved attitudinal, directional, pitch, roll, & yaw, control, further, improved airflow control into, out of, and around the airship.

[0016] It is still another advantage of the invention to provide an improved airship with propulsive, attitudinal & directional control in space, air atmosphere, and transition to and from thereof.

SUMMARY (cont.)

[0017] The foregoing and other advantages are realized by providing a linear straight tubular shaped fuselage, having an inner air passageway axially extending there-through tapering inwardly from the furthest circumferential peripheral exterior edges of the fuselage fore, toward the interior mid region of the airship like a funnel, forming an air inlet in the fuselage fore, which then connects to the inner air passageway; propelling air into and out of the airship is the propulsion system located inside the inner air passageway which extends downstream and continues to the airship aft tapering outwardly like a funnel to the furthest circumferential peripheral exterior edges of the fuselage aft forming an air outlet in the aft of the fuselage.

[0018] This causes air to be transported from the front of the airship, into and through the inner air passageway out of and behind the airship, thereby moving the airship through the air.

[0019] The straight tubular shaped fuselage also having a plurality of air deflector cones axially centrally positioned substantially inside and extending from the air inlet and outlet openings fore and aft in the fuselage, connectedly affixed to the air inlet funnel and fuselage which direct airflow into and out of the airship to the circumferential peripheral regions of the air inlet and outlet openings, into, out-of, & through the inner air passageway which extends axially through the fuselage, thereby directing the airflow into, through, and out of the airship fuselage.

[0020] The plurality of airship deflector cones further providing containment for a plurality of lighter than air resilient gas bags thereby providing dynamic buoyant lift further adding to the airships buoyancy

SUMMARY (cont.)

[0021] Further a plurality of bifurcated active and non-active winged control surfaces located at the fore and aft of the air inlet and outlet inner air way openings. The winged control surfaces being positioned horizontally and vertically across the inner air way openings, having the active control surfaces being rotate-ably, hinge-ably, attached to the non active control surfaces, and a plurality of actuators attached between the air intake and air outlet sections of the fuselage and to the control surfaces thereby operate-ably, rotate-ably, actuating the hinged active control surfaces respective to their non active control surfaces.

[0022] Thereby operate-ably, controlling direction of air flow into the air inlet opening and out of the air outlet opening; controlling direction, pitch, roll and yaw, of the airship.

[0023] The result is an improved airship having reduced air displacement, forward air resistance, rearward drag, fuel economy, speed performance, maneuverability, efficiency, and adverse weather capability.

BRIEF DESCRIPTION OF THE DRAWINGS

[0024] A clear conception of the advantages and features constituting the present invention, and of the construction and operation of typical mechanisms provided with the present invention, will become more readily apparent by referring to the exemplary, and therefore non-limiting, embodiments illustrated in the drawings accompanying and forming a part of this specification, wherein like reference numerals designate the same elements in the several views, and in which figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 10A, 11, & 11A illustrate various views of embodiments of the present invention wherein:

[0025] FIG. 1 is a sectional perspective view of the tubular airship;

[0026] FIG. 2 is a sectional side view of the tubular airship;

[0027] FIG. 3 is a sectional side view of the tubular airship showing the aerodynamic flow through, around, over and under the fuselage;

[0028] FIG. 4 is a sectional side view of the tubular airship showing the aerodynamic flow through, around, over and under the tri-tube airship fuselage embodiment of the present invention;

[0029] FIG. 5 is a schematic sectional end view showing the tri-tube airship fuselage embodiment of the present invention;

[0030] FIG. 6 is a sectional top or bottom view showing the tri-tube airship fuselage embodiment of the present invention;

[0030] FIG. 7 is a schematic sectional aft view of the present invention;

[0031] FIG. 8 is a schematic sectional aft view of the present invention;

BRIEF DESCRIPTION OF THE DRAWINGS (cont.)

[0032] FIG. 9 is a sectional perspective view of the tubular airship showing the aft control surface only embodiment of the present invention;

[0033] FIG. 10 is a sectional perspective view of the airship showing the tubular airship polygonal radar resistant fuselage embodiment of the present invention;

[0034] FIG. 10A is a sectional perspective partial view of the airship showing the aerodynamic control surfaces of the radar resistant fuselage embodiment of the present invention;

[0035] FIG. 11 is a sectional perspective view of the airship showing the propulsion rocket thrust nozzle, directional control rocket thruster nozzles, and reverse rocket thrust nozzle of the airship spaceship embodiment of the present invention;

[0036] FIG. 11A is a sectional schematic end view of the airship showing the propulsion rocket engine thrust nozzle, and directional control rocket engine thruster nozzles of the airship spaceship embodiment of the present invention;

BRIEF DESCRIPTION OF THE DRAWINGS (cont.)

[0037] In describing the preferred embodiment of the invention, which is illustrated in the drawings, specific terminology will be resorted to for the sake of clarity. However, it is not intended that the invention be limited to the specific terms so selected and it is to be understood that each specific term includes all technical equivalents which operate in a similar manner to accomplish a similar purpose. For example, the word “attached,” “operate-ably,” “rotate-ably,” “connectedly,” or terms similar thereto are often used. They are not limited to direct connection but include connection through other elements where such connection is recognized as being equivalent by those skilled in the art.

DESCRIPTION OF EMBODIMENTS

[0038] The present invention and the various features and advantageous details thereof are explained more fully with reference to the non-limiting embodiments described in detail in the following description.

[0039] Various alternative embodiments and modifications to the invention will be made apparent to one of ordinary skill in the art by the following detailed description taken together with the drawings.

DESCRIPTION OF EMBODIMENTS (cont.)

[0040] Accordingly it will also be understood the present invention as disclosed herein shall include materials & equipment including but not limited to pluralities of heat shields, motors, engines, compressors, compressed gas tanks, fuels, fuel tanks, pumps, pipes, valves, hoses, fittings, hydraulics, solenoids, actuators, batteries, computers, electronics, sensors, receivers, guidance & control systems, electronics, motors, servos, wires, connectors, connecting rods, composites, laminates, fabrics, carbon fiber, aluminum, titanium, gaskets, fasteners, adhesives, sealants, lubricants, gases, gaseous liquids, liquids, propulsive fuels, and all other materials, parts, equipment & apparatus for airship, aircraft and spacecraft construction &, operations shall be used.

[0041] Referring now to FIG. 1, it will be seen a schematic perspective view preferred embodiment of the invention; a tubular airship made in accordance with the present invention designated generally by reference numeral 1, is shown with it's primary components.

[0042] The tubular airship 1, has a linear straight tubular shaped fuselage designated generally by reference numeral 2.

[0043] Fuselage 2, having 6 sections: a linear straight tubular hull 3, an air deflector cone aft 4, an air deflector cone fore 5, an inner air passageway 9, an inner- air passageway outlet funnel 10, an inner- air passageway inlet funnel 11.

DESCRIPTION OF EMBODIMENTS (cont.)

[0044] The fuselage 2, tubular hull 3, inner air passageway 9, extends axially there-through the tubular hull 3, tapering inwardly from the furthest circumferential peripheral exterior edges in fore of tubular hull 3, forming inner air passageway inlet funnel 11, in fore of tubular hull 3, connecting to inner air passageway 9, axially extending downstream continuing to airship fuselage air outlet aft tapering outwardly to the furthest circumferential peripheral exterior edges in aft of tubular hull 3, forming inner air passageway outlet funnel 10, in aft of tubular hull 3.

[0045] The fuselage 2, further shown having fuselage air deflector cone fore 5, positioned centrally substantially inside and extending from fuselage air inlet 8, connectedly affixed to the airship fuselage tubular hull 3, fuselage inner air passageway inlet funnel 11 so as to allow for an air passageway between the fuselage inner air passageway inlet funnel 11, and the fuselage air deflector cone fore 5.

DESCRIPTION OF EMBODIMENTS (cont.)

[0046] Air deflector cone fore 5, position further defined as centrally substantially located inside and extending out of fuselage inner air passageway inlet funnel 11, connecting to inner air passageway 9, containing propulsion means 12, centrally axially located within inner air passageway 9, which is connected to inner air passageway outlet funnel 10, forming air outlet 7, having air deflector cone aft 4, positioned centrally substantially inside and extending from fuselage air outlet 7. Air deflector cone aft 4, position further defined as centrally substantially located inside and extending out of fuselage inner air passageway outlet funnel 10, connectedly affixed to the airship fuselage tubular hull 3, and the fuselage inner air passageway outlet funnel 10, so as to allow for an air passageway between the fuselage inner air passageway inlet funnel 11, and the fuselage air deflector cone aft 4.

[0046] The fuselage air deflector cones direct air flow to the circumferential perimeters of the airship air inlets and outlets, thereby minimizing forward air resistance and rearward drag.

[0047] The linear straight tubular airship 1, further shown having aft bifurcated active & non active horizontal attitudinal control wings rotate-ably, hinge-ably, attached 13, and aft bifurcated active & non active vertical attitudinal control wings rotate-ably, hinge-ably, attached 15, affixed to a plurality of actuators connected between fuselage inner air passageway outlet funnel 10, and the fuselage air deflector cone aft 4, in the fuselage air outlet 7.

DESCRIPTION OF EMBODIMENTS (cont.)

[0048] It will be further understood the linear straight tubular airship 1, further shown having fore bifurcated active & non active horizontal attitudinal control wings rotate-ably, hinge-ably, attached 14, and, fore bifurcated active & non active vertical attitudinal control wings rotate-ably, hinge-ably, attached 16, affixed to a plurality of actuators connected between fuselage inner air passageway inlet funnel 11, and the fuselage air deflector cone fore 5, in the fuselage air inlet 8. Thereby actuate-ably controlling direction of air flow into fuselage air inlet 8, and out of fuselage air outlet 7, providing directional, pitch, roll & yaw control of the linear straight tubular airship1.

[0049] Referring now to figure FIG.2 a side schematic view will be seen further showing the primary components of the tubular airship1, having the fuselage 2, including the fuselage tubular hull 3, the fuselage air deflector cone fore 5, the fuselage air deflector cone aft 4, the fuselage inner air passageway 9, the fuselage inner air passageway outlet funnel 10, the fuselage inner air passageway inlet funnel 11, the propulsion means 12, the horizontal control wings aft 13, the vertical control wings aft 15, the horizontal control wings fore 14, the vertical control wings fore 16, a plurality of resilient gas bags 6, the fuselage air inlet 8, the fuselage air outlet 7, and the cargo & operating equipment bay 17.

DESCRIPTION OF EMBODIMENTS (cont.)

[0050] Referring to FIG 3 a schematic side view will be seen, providing an understanding of the airflow 18, into the fuselage inner air passageway inlet funnel 11, over the vertical control wings fore 16, the horizontal control wings fore 14, around the fuselage air deflector cone fore 5, through the fuselage inner air passageway 9, through the propulsion means 12, and out through the fuselage inner air passageway outlet funnel 10, around the fuselage air deflector cone aft 4, over the vertical control wings aft 15, and horizontal control wings aft 13, then out of, and behind the airship. Thereby moving the air from in front of the airship, through, and behind the airship.

[0050] Referring to FIG 4 a schematic side view of the tubular airship 1, tri-tube airship 19, embodiment of the disclosed invention will be seen. Further it will be understood the airflow 18, into, through, out of, and around the tri-tube airship 19. More particularly the low air pressure area 27, lifting action generated by the tri-tube airships airfoil aerodynamics provided by the tri-tube airship 19, as the airship is positioned relative to oncoming airflow over through, out of, behind, and under the tri-tube airship 19.

[0051] Referring now to FIG. 5, a schematic sectional end view will be seen showing the tubular airship 1, tri-tube airship 19, embodiment of the disclosed invention. Further it will be understood that the tri-tube airship 19, comprises a plurality of single tube airships 1, joined and connected together in parallel, having cowlings 14, enclosing the fore and aft fuselage sections of the tri-tube airship 19, affixed between the plurality of single tube tubular airships 1. FIG. 4, in addition to the tubular airships 1, lift characteristics disclosed herein.

DESCRIPTION OF EMBODIMENTS (cont.)

[0052] Referring to FIG. 6, a schematic top & bottom view showing a further understanding of the plurality of single tube airships 1, comprising a tri-tube airship 19, embodiment of the present invention.

[0053] Referring to FIG. 7, a schematic sectional aft view of the present invention will be seen, showing the tubular airship 1, the fuselage 2, the fuselage tubular hull 3, resilient gas bag 6, fuselage air deflector cone aft 4, bifurcated active & non active horizontal attitudinal control wings aft 13, and bifurcated active & non active vertical attitudinal control wings aft 15.

[0054] Referring to FIG. 8, a schematic sectional view of the present invention will be seen showing the airship 1, the fuselage 2, the fuselage tubular hull 3, plurality of resilient gas-bags 6, cargo & operating equipment bay 17, propulsion means 12.

[0055] Referring to FIG. 9, a schematic perspective view will be seen of the tubular airship showing the aft bifurcated active & non active attitudinal control wings only embodiment of the present invention having winged control surfaces in the aft fuselage air outlet 7, only, in the tubular airship 1; the fuselage air deflector cone fore 5, only, positioned in the fuselage air inlet 8, providing reduced weight and air flow restriction into the fuselage inner air passageway inlet funnel 11. The airship 1, shown having a fuselage 2, fuselage tubular hull 3, plurality of resilient gas bags 6, inner air passageway 9, propulsion means 12, fuselage air deflector cone aft 4, fuselage inner air passageway outlet funnel 10, bifurcated active & non active horizontal attitudinal control wings 13, bifurcated active & non active vertical attitudinal control wings 15, and fuselage air outlet 7.

DESCRIPTION OF EMBODIMENTS (cont.)

[0056] Referring to FIG 10, it will be seen a schematic perspective view of said tubular airship 1, showing the tubular airship polygonal fuselage 21, embodiment of the present invention. Wherein it will be seen the fuselage 2, and the tubular hull 3, a plurality of resilient gas bags 6, fuselage air inlet 8, the fuselage inner air passageway inlet funnel 11, the fuselage air deflector cone fore 5, the fuselage inner air passageway 9, the propulsion means 12, the fuselage air deflector cone aft 4, the fuselage inner air passageway outlet funnel 10, the fuselage air outlet 7, providing an understanding of the tubular airship polygonal fuselage embodiment 21, showing the radar wave dissipating angular surfaces of the invention disclosed herein.

[0057] Referring to FIG. 10A, it will be seen a sectional schematic perspective partial aft view of said tubular airship 1, showing the tubular airship polygonal fuselage 21, embodiments horizontal control wings aft 15, vertical control wings aft 13, and the fuselage air outlet 7; further it will be understood that FIG 10A, shall additionally represent the tubular airship polygonal fuselage 21, embodiments horizontal control wings fore 14, vertical control wings fore 16, and the fuselage air inlet 8, having an identical structure as the airship aft components.

DESCRIPTION OF EMBODIMENTS (cont.)

[0058] Referring to FIG 11, it will be understood a schematic perspective view of the airship spaceship 22, embodiment of the present invention, additionally to the invention as defined in FIG.1, further including a propulsion rocket engine thrust nozzle 23, a plurality of directional control rocket engine thrust nozzles 24, and a reverse rocket engine thrust nozzle 25, thereby providing the means of propulsion, directional, and attitudinal control inside and outside the earth's atmosphere, and in transition to and from thereof. This definition is interpreted as if all of the language of FIG.1, were incorporated.

[0059] Referring to FIG. 11A, it will be understood a sectional aft view of the airship spaceship 22, embodiment of the present invention additionally to the invention as defined in FIG.1, further including the fuselage tubular hull 3, fuselage air deflector cone aft 4, resilient gas bag 6, the bifurcated active & non active horizontal attitudinal control wings 13, bifurcated active & non active vertical attitudinal control wings 15, and further including a propulsion rocket engine thrust nozzle 23, and a plurality of directional control rocket engine thrust nozzles 24; further it will be understood that FIG 10A, shall additionally represent the tubular airship polygonal fuselage 21, embodiments horizontal control wings fore 14, vertical control wings fore 16, and the fuselage air inlet 8, having an identical structure as the airship aft components. This definition is interpreted as if all of the language of FIG. 1, were incorporated.

DESCRIPTION OF EMBODIMENTS (cont.)

[0060] Although the best mode contemplated by the inventor of carrying out the present invention is disclosed above, practice of the present invention is not limited thereto. It will be manifest that various additions, modifications and rearrangements of the features of the present invention may be made without deviating from the spirit and scope of the underlying inventive concept. In addition, the individual components need not be fabricated from the disclosed material, but could be fabricated from virtually any suitable material. Moreover, the individual components need not be formed in the disclosed shapes, or assembled in the disclosed configuration, but could be provided in virtually any shape, and assembled in virtually any configuration. Further, although many elements and components are described herein as physically separate modules, it will be manifest that they may be integrated into the apparatus with which it is associated. Furthermore, all the disclosed features of each disclosed embodiment can be combined with, or substituted for, the disclosed features of every other disclosed embodiment except where such features are mutually exclusive.

INDUSTRIAL APPLICABILITY

[0061] The manner of using the improved airship as so far described, it will be apparent that by filling said plurality of resilient gas bags with helium or hydrogen gas, and fueling said plurality of propulsion means fuel tanks, and by initiating the jet engine combustion sequence and thereby the air propulsion, that, air flow will thereby be directed into the airship fore air intake funnel, around the fore air deflector cone & winged air control surfaces into & through the inner air passageway, into & through the engine propulsion means, out through the aft air funnel around the aft air deflector cone & winged air control surfaces so that by variably increasing and decreasing propulsion means rpm thereby air flow, and operate-ably actuating the winged air control surfaces said air ship is operate-ably controllably flown through the air, at improved speed, control, & economy.

[0062] It will further be apparent that by flying the airship as previously described, ascending to altitudes near space using dynamic buoyant lift provided by the plurality of resilient gas bags, compressors, tanks, and jet engine propulsion to beyond jet engine oxygen requirements, that by initiating rocket engine propulsion, and attitudinal thrusters, outer atmosphere space directional control is thereby provided.

INDUSTRIAL APPLICABILITY (cont.)

[0063] Further yet that flight of the airship to altitudes below space and into inner atmosphere is provided by using rocket engine thrusters & dynamic buoyant lift provided by the plurality of resilient gas bags, , compressors, & tanks, and that upon descent into inner atmospheric space to altitude and oxygen levels sufficient for jet engine ignition, jet engine ignition is initiated thereby providing airship propulsion and attitudinal control for inner atmospheric flight.

[0064] It will still further be apparent that by operating the airship as afore described and installing explosives materials in the cargo bay that the means of a buoyant missile is herein provided.

CITATION LIST

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16. patent No. US 1,998,380, published 04/16/1935, patentee: M. Medoff;
17. patent No. US 1,895,518, published 01/31/1933, patentee: G.W. Peck;
18. patent No. US 1,835,260, published 12/08/1931, patentee: C. Barrera;
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Army (cancels) Spy Blimp.

CLAIMS: I hereby claim:

1. An improved airship comprising:

a linear straight tubular shaped fuselage, said fuselage having an inner air passageway axially extending there-through tapering inwardly from the furthest circumferential peripheral exterior edges of said fuselage fore, toward the interior mid region of said airship like a funnel, forming an air inlet opening in said fuselage fore, connecting to said inner air passageway extending downstream continuing to airship aft tapering outwardly like a funnel to the furthest circumferential peripheral exterior edges of said fuselage aft forming an air outlet opening in aft of said fuselage, said straight tubular shaped fuselage having horizontal and vertical winged control surfaces, and having a means for reducing air displacement, forward air resistance, rearward drag and improved fuel economy speed, maneuverability, high wind gust, and adverse weather capability;

a means for directing airflow into and out of said airship to the circumferential peripheral regions of said air inlet and outlet openings, out of and into said inner air passageway extending through said fuselage, said means for directing airflow comprising a plurality of air deflector cones axially affixed centrally positioned substantially inside and extending from said air inlet and outlet openings in fore and aft in said fuselage;

CLAIMS: (cont.)

a means for controlling direction, pitch, roll & yaw, and further means for directing air flow into and out of said airship, said means for controlling direction, pitch, roll & yaw, and directing air flow into and out of said airship, comprising a plurality of bifurcated active and non active hinge-ably, rotate-ably connected winged control surfaces located at the front and rear of said air inlet and outlet inner air way openings, said winged control surfaces being positioned horizontally and vertically across said inner air way openings, said active control surfaces being rotate-ably hinge-ably, attached to said non active control surfaces, and a plurality of actuators attached between said air intake funnel and air outlet funnel and deflector cone sections of said fuselage to said control surfaces to operate-ably, rotate-ably actuate said hinged active control surfaces respective to said non active control surfaces, thereby actuate-ably controlling direction of air flow into said air inlet opening and out of said air outlet opening;

a means for containing a plurality of lighter than air resilient gas cells, said means comprising a plurality of containers, said containers comprising said fuselage, fore and aft air deflector cones;

a means of providing lift and atmospheric buoyancy said means provided by a plurality of resilient lighter than air gas bag cells, said gas cells being filled preferably with helium or hydrogen gas;

a further means for providing lift comprises said fore and aft horizontal wing control surfaces, by rotate-ably positioning said active wing control surface relative to incoming and out flowing air so as to effect high and low air pressure areas respectively above and below said fore and aft horizontal wing control surfaces;

CLAIMS: (cont.)

a means for propelling said airship located within said inner air passageway;

a means for thermal protection shielding from jet engine exhaust said means shielding interior of said inner air passageway around and aft of: engine, said aft air deflector cone, said aft inner air way outlet funnel, and said winged control surfaces;

a means for containing operational equipment & payload bays, said means comprising space located preferably inside lower portion of said fuselage;

a means for reduced radar reflection said means comprising said tubular shaped fuselage said tubular fuselage radial surface reflectively defusing radar waves away from radar receivers;

a means for propulsive control in space, air atmosphere, and transition to and from thereof, said means comprising a main rocket engine thrust nozzle axially centrally positioned in aft of said aft air deflector cone;

a means for controlling direction, pitch, roll & yaw in space, air atmosphere, and transition to and from thereof, said means comprising a plurality of rocket engine thrust nozzles positioned fore, aft, top, bottom, left, and right of said fuselage exterior;

a means for further reduced radar cross section said means provided by polygonal tubular fuselage embodiments flat surfaces reflectively defusing radar waves away from the radar receiver;

CLAIMS: (cont.)

2. An improved airship as in claim 1 wherein said tubular fuselage has a straight linear tubular hull having a substantially smooth exterior surface of said tubular fuselage, and said fuselage having a fore air inlet opening connecting to said inner air passageway, said air inlet opening tapering inwardly from furthest circumferential peripheral exterior edge of said tubular fuselage fore, defining said air inlet opening, and aft air outlet opening connected to said inner air passageway, said aft air outlet opening tapering outwardly from said inner air passageway to furthest circumferential peripheral exterior edge of said tubular fuselage aft defining said air outlet opening and said inner air passageway, defining said tubular fuselage.
3. An improved airship as in claim 1 wherein said tubular fuselage has air deflector cones said deflector cones positioned fore and aft, centrally affixed within said fuselage inner air passageway inlet and outlet openings.
4. An improved airship as in claim 1 wherein said tubular fuselage comprises a straight tubular hull having a substantially smooth exterior surface of said tubular fuselage.
5. An improved airship as in claim 1 wherein said means for propelling said airship comprises preferably a high by pass jet engine, located within said inner air passageway mid region within said tubular fuselage.
6. An improved airship as in claim 1 wherein said means for thermal protection shielding of jet engine exhaust heat comprising preferably phenolic impregnated carbon ablator material, ablative heat shields, passive or active cooling means.

CLAIMS: (cont.)

7. An improved airship as in claim 1 wherein said means for more economical air transportation at higher speeds comprises: a plurality of resilient lighter than air gas bag cells, said gas bag cells providing primary method of lift thereby using fuel for propulsion more than lift, a tubular fuselage, internal winged control surfaces, air deflector cones, an inner air passageway, and internal propulsion means thereby providing a more streamlined airship with less forward air resistance, less rearward drag, and no drag from control surface apertures outside the airship fuselage, thereby transporting cargo by air more economically than other means at comparable speeds.

8. An improved airship as in claim 1 wherein said means for reducing forward air resistance said means comprises: a tubular fuselage, internal winged control surfaces, air deflector cones, an inner air passageway, internal propulsion means.

9. An improved airship as in claim 1 wherein said means for reducing rearward drag comprises: a tubular fuselage, internal winged control surfaces, air deflector cones, an inner air passageway, and internal propulsion means.

10. An improved airship as in claim 1 wherein said means for reducing external fuselage aerodynamic friction comprises: a tubular fuselage, internal winged control surfaces, air deflector cones, an inner air passageway, and internal propulsion means.

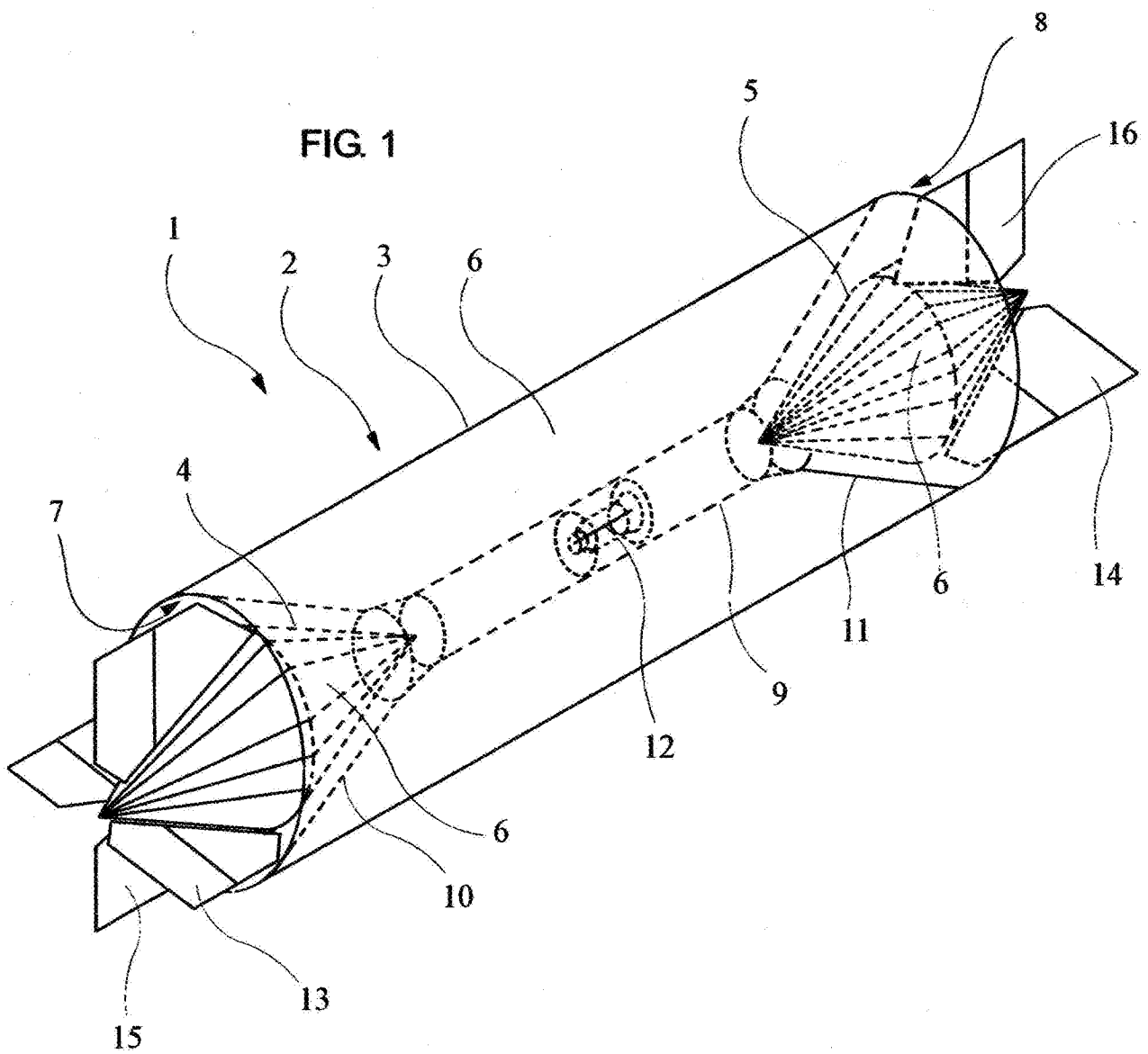
11. An improved airship as in claim 1 wherein said means for attaining higher speeds comprises: a tubular fuselage, internal winged control surfaces, air deflector cones, inner air passageway, and internal propulsion means.

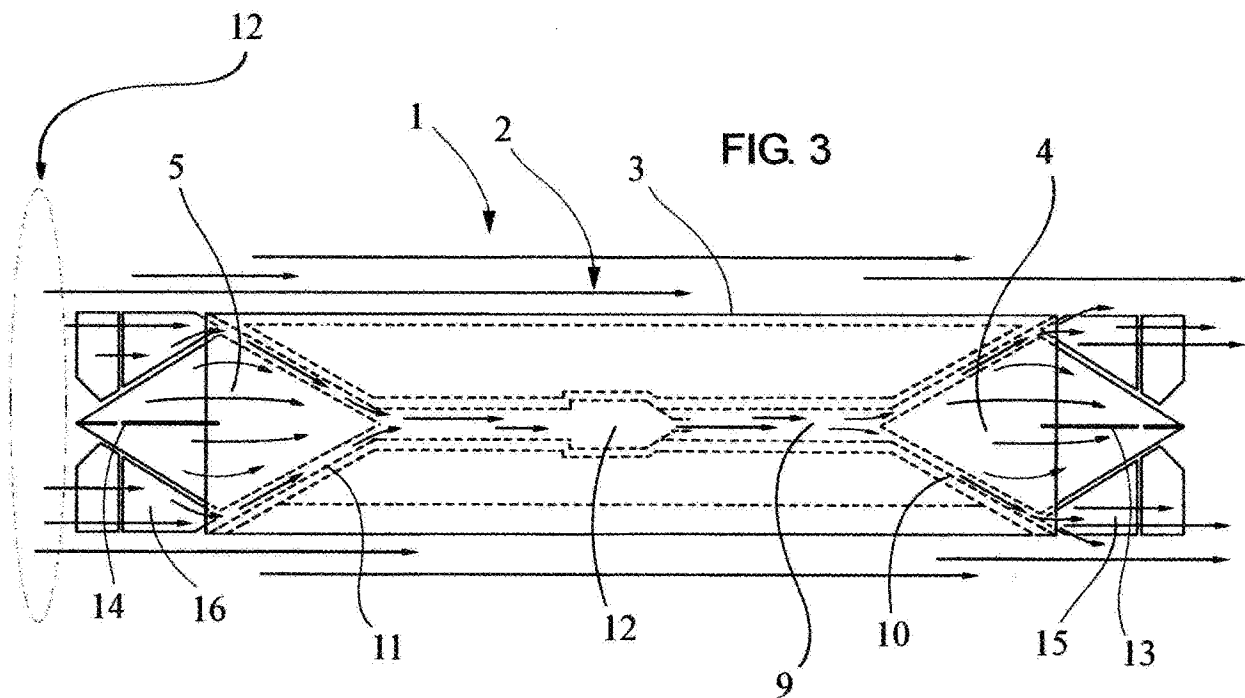
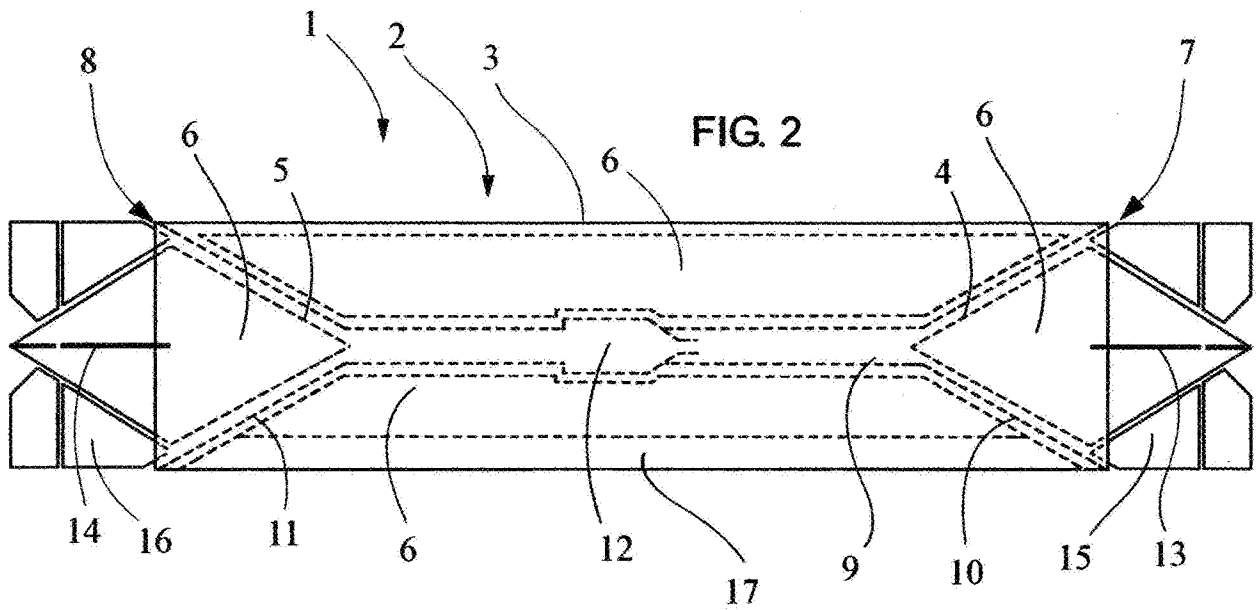
CLAIMS: (cont.)

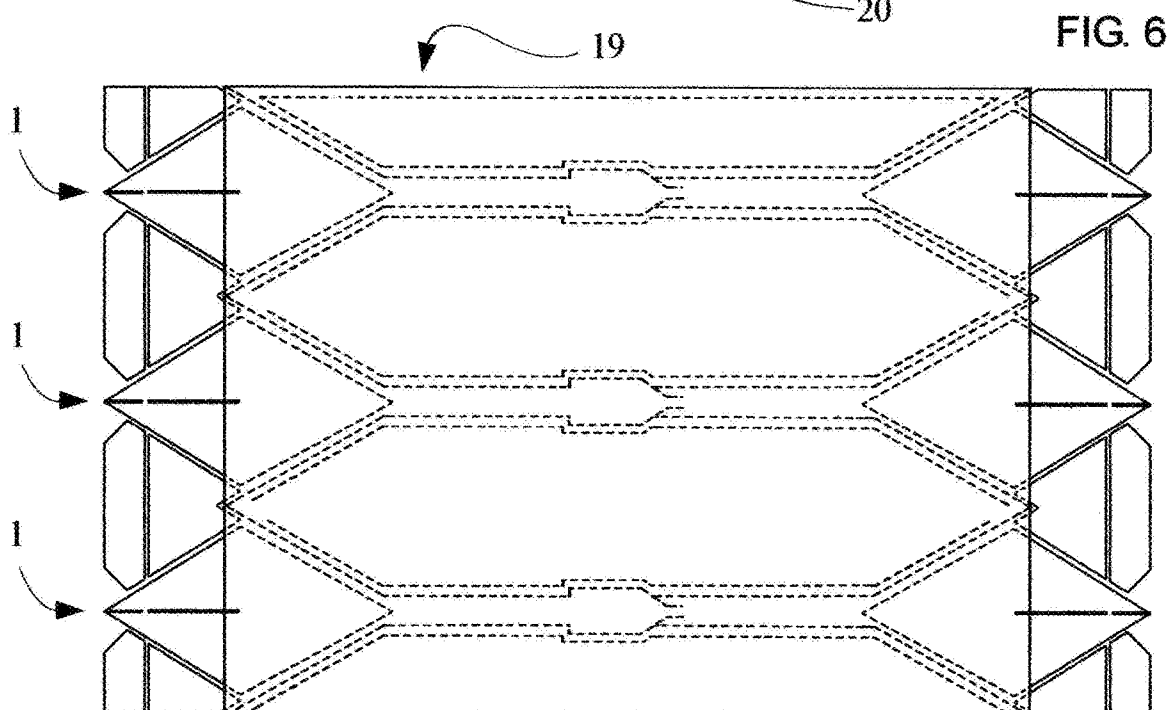
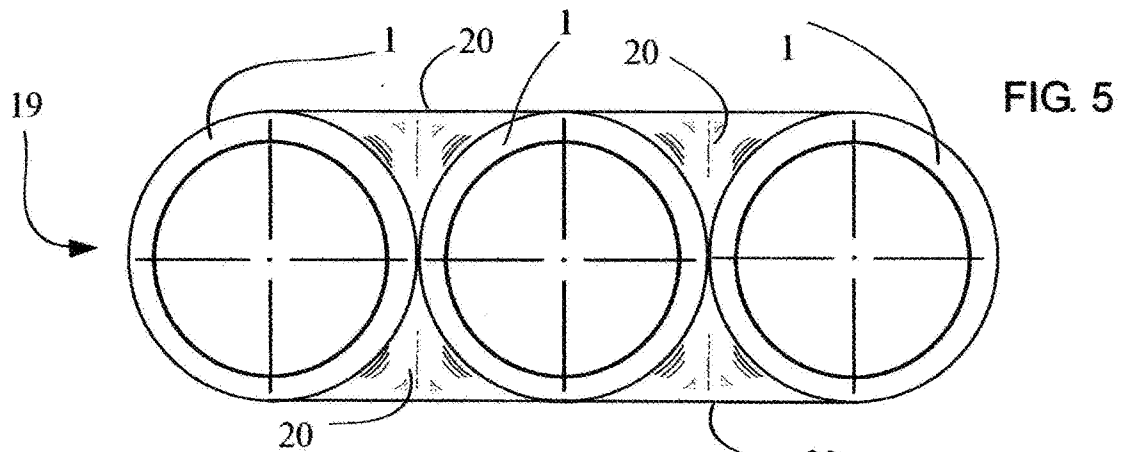
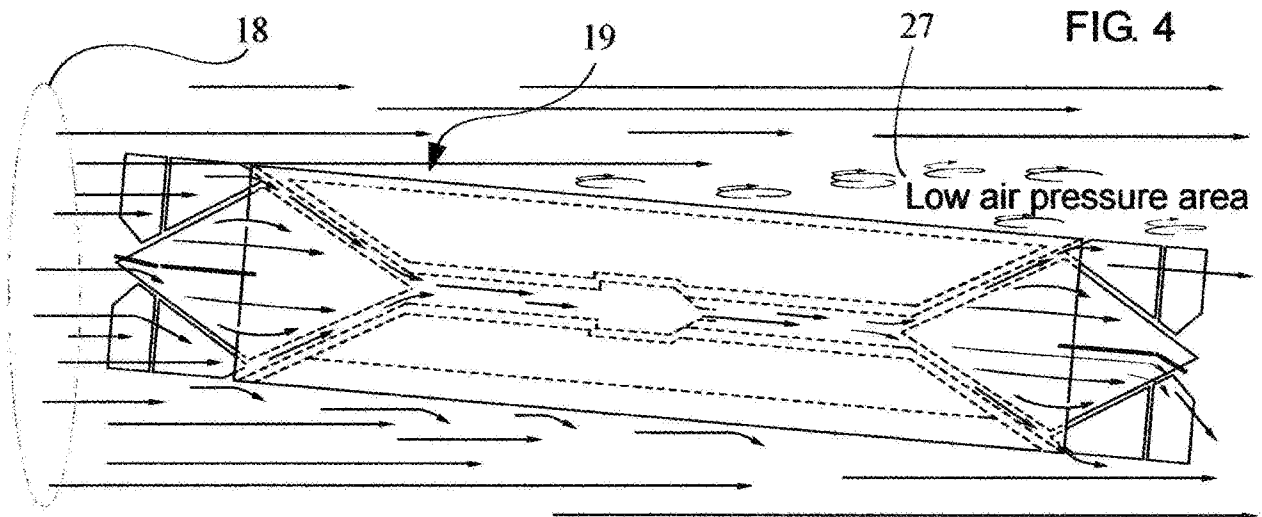
12. An improved airship as in claim 1 wherein said means for propelling said airship comprises preferably a jet engine turbo prop having a plurality of propellers connect fore and aft to jet engine located within said inner air passageway mid region within said tubular fuselage.

13. An improved airship as in claim 1 wherein said means for propelling said airship comprises preferably a jet engine turbo shaft driven propellers having a plurality of propellers connect fore and aft to jet engine located within said inner air passageway mid region within said tubular fuselage.

FIG. 1







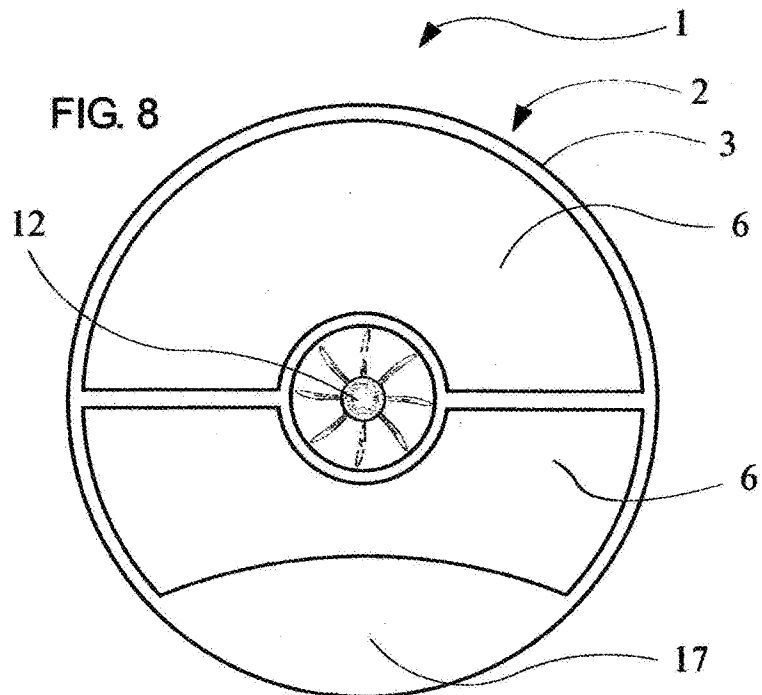
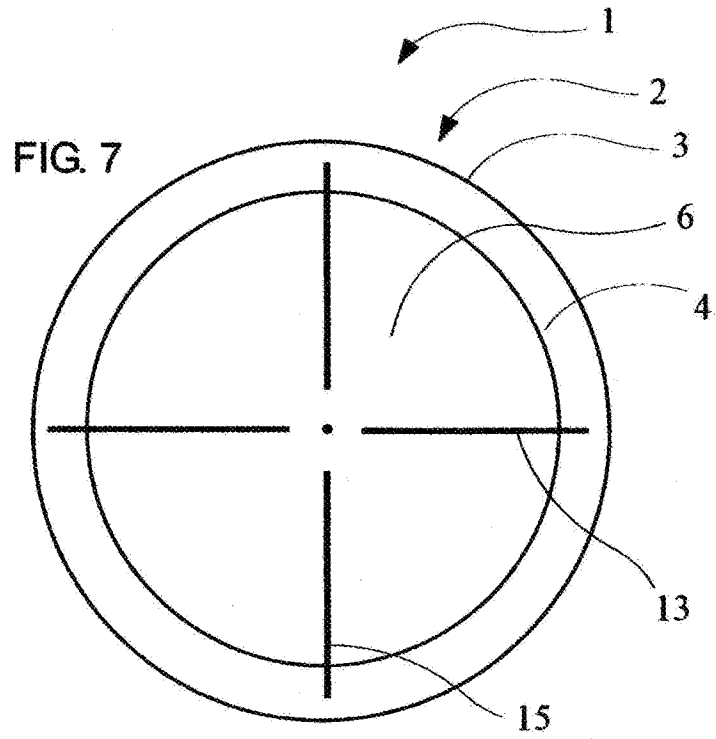
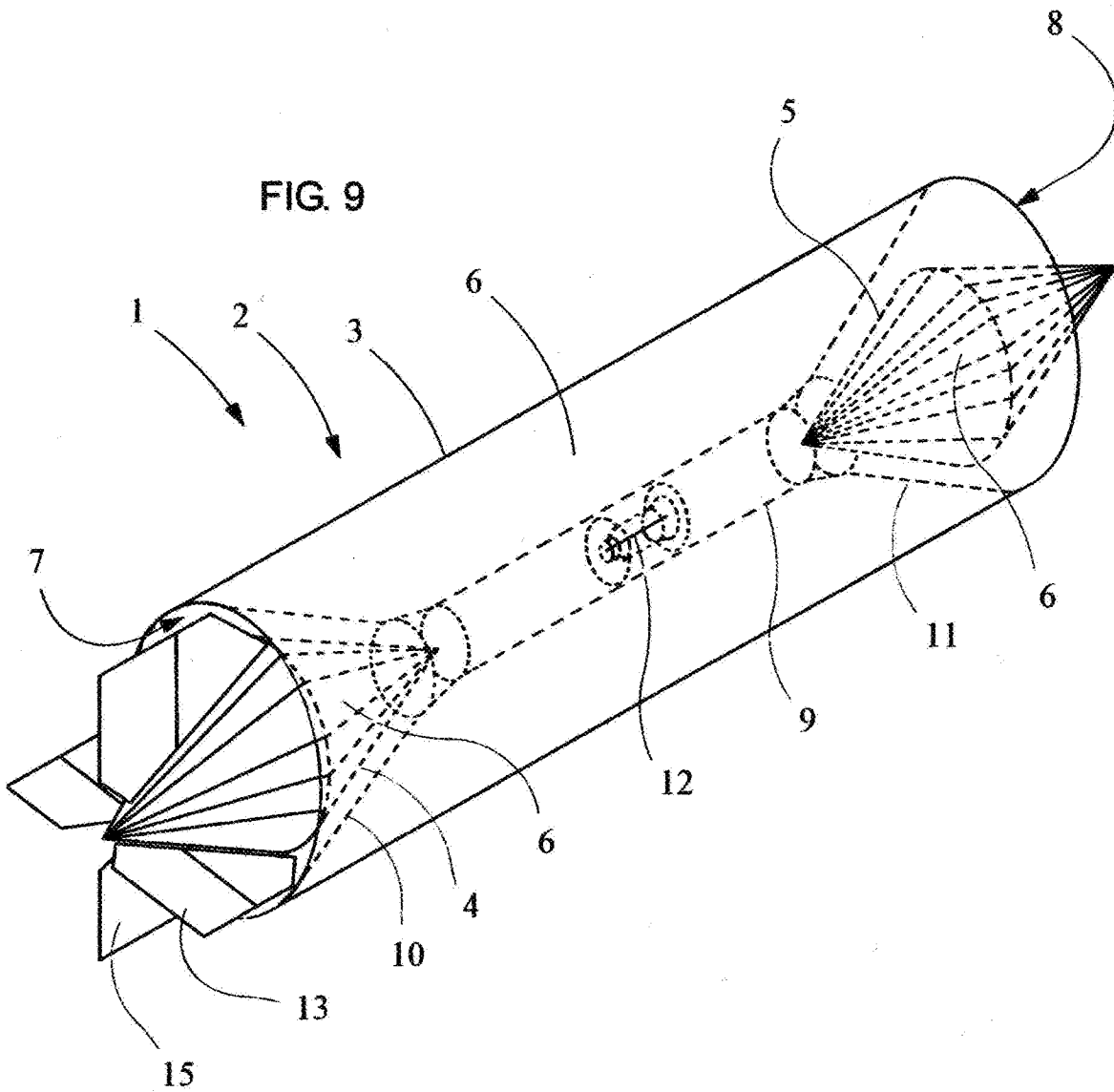
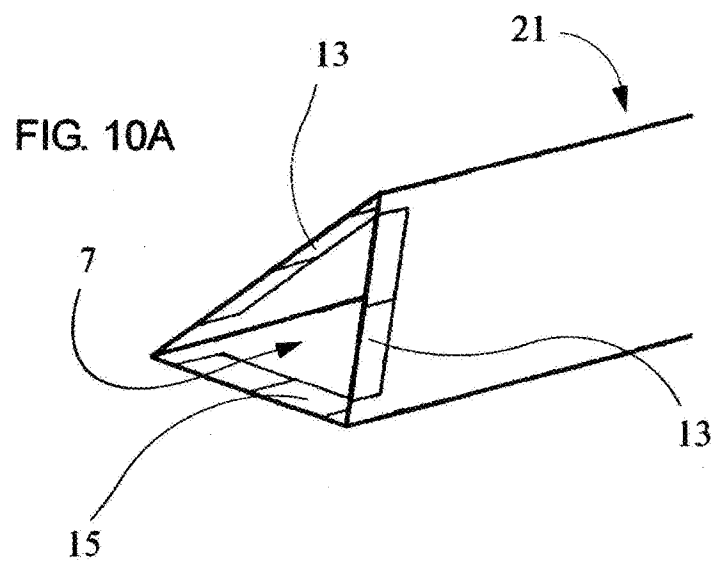
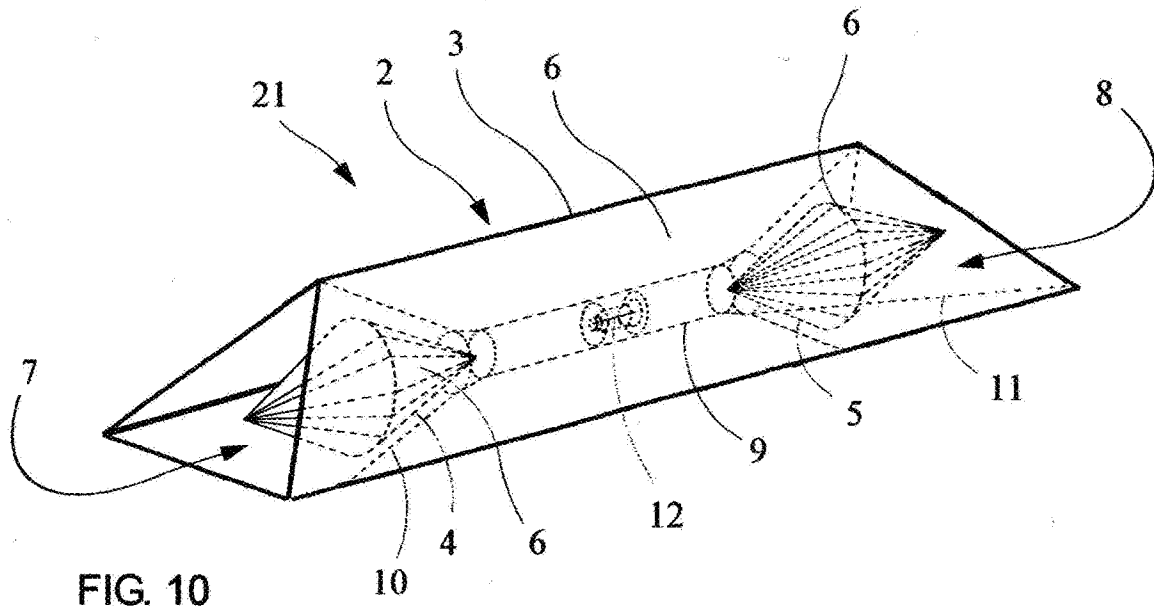
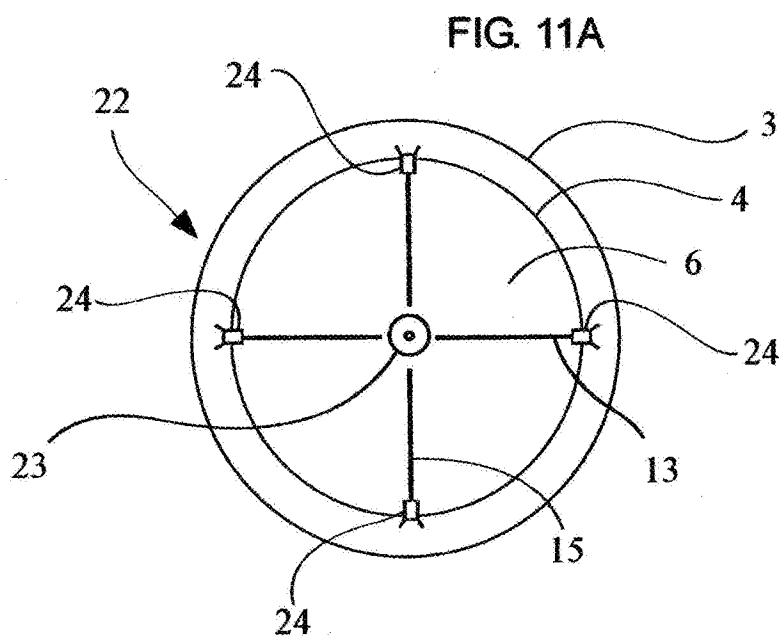
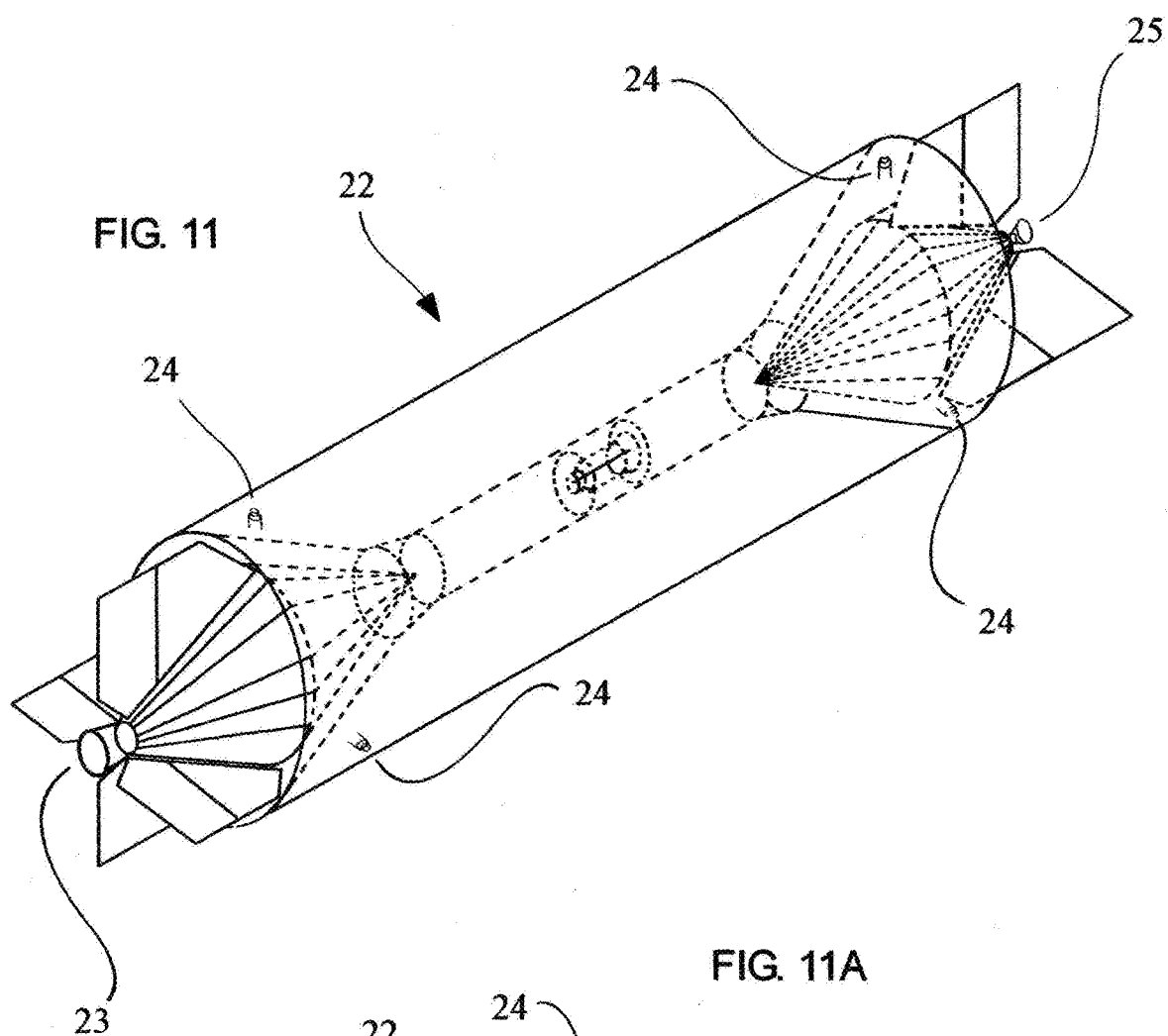


FIG. 9







INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2014/015519

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B64B 1/26 (2014.01)

USPC - 244/171.1

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - B64B 1/00, 1/06, 1/08, 1/10, 1/12, 1/20, 1/26, 1/58 1/60 (2014.01)

USPC - 244/25, 30, 96, 98, 99.11, 125, 128, 171.1, 900

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

CPC - B64B 1/00, 1/06, 1/08, 1/10, 1/12, 1/20, 1/26, 1/58, 2201/00 (2014.02)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase, Google Patents, Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2,465,457 A (JOHNSTON) 29 March 1949 (29.03.1949) entire document	1-13
Y	US 2009/0152391 A1 (MCWHIRK) 18 June 2009 (18.06.2009) entire document	1-13
Y	US 2,384,893 A (CROOK) 18 September 1945 (18.09.1945) entire document	1-13
Y	US 5,115,997 A (PETERSON) 26 May 1992 (26.05.1992) entire document	1-13

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

13 May 2014

Date of mailing of the international search report

23 MAY 2014

Name and mailing address of the ISA/US

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