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(54) Title: HEAT ENERGY RECAPTURE AND RECYCLE AND ITS NEW APPLICATIONS

(57) Abstract: A heat absorbing radiator and a gas turbine engine or a reciprocating piston engine are used to recapture and recon-vert wasted heat energies into electric power and finally into hydrogen-deuterium fuel by having the engine's tailpipes submerged in cold compressed air inside the heat absorbing radiator pipes in reverse air flow to further drive the same engine. In order to capture fusion heat energy a hydrogen bomb is detonated in deep ocean to catch flames by water and the hot water energizes compressed air inside heat absorbing radiator pipes. In order to produce fusion energy an electric arc is passed across liquid or gaseous deuterium by an electro-plasma torch and a sparkplug in an internal combustion engine, or by detonating dynamite inside liquid deuterium. Diamond is produced by placing carbon inside a hydrogen bomb. Deuterium fusion flame is used first in smelting glass to large sizes before running an engine.



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Title of Invention:

**HEAT ENERGY RECAPTURE AND RECYCLE
AND ITS NEW APPLICATIONS**

Cross references:

This invention is a continuation-in-part of the previous U.S. Patent No. 5,435,259, U.S. Patent No. 6,327,994 B1, U.S. Patent No. 6,293,121 B1, and all other preceding patents in my name.

Statement Regarding Federally Sponsored Research - Not Applicable

Background Of The Invention

0001 This invention has the mission to recapture and recycle the otherwise wasted heat energy -- at the exhausts/tailpipes/chimneys and at the heat exchange chambers of cooling devices. It has been always a big blunder since the engine was invented wherein for more than 100 years, man has been helplessly and purposely allowing heat energy to escape into the atmosphere in the efforts to prevent overheating of the engines. Further, since the time fire was invented, heat energy has been always wasted, for lack of wisdom and lack of education, wherein the products of combustion and the poisonous gases had always been the enemy of man, and therefore, it has always been a big effort to eject soonest the waste gases which unfortunately carry away along with it so much heat energy. Additionally, so much heat energy has always been thrown away in the processes of smelting, glass/ceramics factories, freezing processes, refrigera-

tion and distillation process, which heat energy should have been recycled to pre-heat the subject matters of the processes. God has created so much free heat energy by means of the sun, but we look at it as our enemy such that we spend so much in construction of heat insulation in our houses, --- instead of using it to run our air conditioning and our refrigeration machines. All these blunders are dictated by the greedy secrete societies who hold monopoly on poisonous fuels and who suppress opposing technologies. The exhaust heat energy should be used to run water distillation machines and food processing machines, to dry trash fuel, to warm up sewer digestion chambers in biogas production, to dry animal manure for fertilizer in the farm, for cooking food, to pre-heat materials in the process of smelting, to heat up water in the process of electrolysis, to heat up water in the process of water-mist - vacuum-chamber-evaporation distillation process, to drive heat-absorbing electric generators in the process of producing hydrogen for fuel, etc. All heat exhaust from all engines, fuel cells, smelting plants, glass/ceramics plants, lamps, ovens etc., must be recaptured to further do work.

0002 As has been illustrated in my preceding U.S Patent No.6,327,994 B1, dated Dec. 11, 2001, the heat absorbing radiator 81 of Fig. 24, the heat absorbing radiator 3 of Fig. 23, the heat absorbing radiator 3-4 of Fig. 21, the heat absorbing radiator 3-4 of Fig. 22, and the heat absorbing radiator 3-4 of Fig. 20, had extensively demonstrated the functions and abilities of the multiple tube heat absorber in the process of heat recapture in partnership with a gas turbine engine 31-32-63-64.

0003 In this present representation and application, it is hereby extremely emphasized, as highlight of this invention, that the commercial utilization and industrial application of the heat absorbing radiator tubes is maximized by using it to absorb heat from the exhaust of Fuel Cells, the exhaust of steam engines, from the exhaust of all kinds of engines, from the exhaust and annealing of smelting plants of glass, metals, etc. Additionally, the radiator tubes are made multi-coil and so with the heat supply pipes are also made multi-coil that follow the coils of the heat absorber tubes. Additionally, to maximize heat transfer, the compressed air is made to enter the heat absorber tubes at the outlet lower temperature downstream end of the heat energy supply tubes and then exits at the high temperature upstream end of the heat energy supply tubes. This is a very important highlight of this invention because the higher temperature compressed air cannot absorb low temperature heat. It is therefore hereby extremely emphasized that the low temperature compressed air is matched with the low temperature heat supply, likewise, the high temperature compressed air is matched with the high temperature heat supply. Hence, in trying to collect the low temperature heat energy of the sunlight, the compressed air tubes must be made very hungry for heat:

1. by spraying cold water mist into the air before compression;
2. by passing the air thru cold pipes before compression;
- 25 3. by submerging the compressed air tubes into cold environment;
4. by matching low temperature air with the low temperature heat supply medium air or water, and
5. by reversing the flow of the heat absorbing medium, compressed air/water, at opposite the flow of the heat

supply medium, air, water, or oil. These improvements in the processes of heat absorbing mission has not been explained in the prior arts.

5 0004 This heat absorbing radiator tubes is hereby extremely emphasized as the key element that brings-in hot compressed air inside the engine, be it piston engine or be it turbine engine, by absorbing or gathering heat energy from the outside atmosphere or environment. The basic principle that runs the externally
10 heated gas turbine engine, as demonstrated in my preceding U.S Patent No. 6,237,994 B1, is that:--- hot compressed air is introduced, by the heat collecting radiator, into the space in between the compressor turbine and the power exhaust turbine. The power turbine is made larger than the compressor turbine,
15 but the air or steam pressure acting upon the smaller compressor turbine to reverse its motion is the same magnitude of steam pressure acting upon the larger exhaust power turbine to forward its motion. The compressor being smaller turbine is therefore over-powered and driven forward by the exhaust turbine,
20 thereby, more cold compressed air is introduce into the heat collector radiator which then continuously brings in more hot compressed air that expands to push forward the exhaust turbine. The hot air/steam expelled by the power turbine is then recaptured by the heat collector tubes/pipes that engulf the hot
25 tailpipes. These basic principles have not been explained in prior arts.

0005 As a newly created engine in this invention, which is hereby extremely emphasized as among the many highlight of

this invention, as has been fully explained basic principle in the preceding paragraph 0003, this principle is also applied to work between a larger exhaust piston and a smaller compressor piston which is directly connected with the larger exhaust piston by means of a straight connecting rod., such that there being equal
5 air/steam pressure acting in opposite direction to each piston, the larger exhaust piston over-powers and drives forward the smaller compressor piston. Thereby resulting to more cold compressed air introduced by the compressor smaller piston into the
10 heat collector radiator tubes which brings in more hot compressed air to drive the exhaust larger piston. The hot exhaust air/steam is then recaptured by the heat collector compressed air tubes which engulf the hot exhaust tail pipe of the engine.

15

0006 Additionally, for maximum utilization of the heat collector radiator tubes which contains cold compressed air, a plurality of this tubes are placed underwater to collect the low temperature heat energy of the warm waters in the tropical
20 oceans. Before compression, the cold air is passed thru cold waters pumped out from about 3000 feet beneath the ocean where the water temperature is very low in order to pre-compress the cold air. Additionally, a wide area of the ocean surface is made hotter from solar heat by a double transparent
25 roof to prevent the wind from stealing the heat energy out of the warm water. The hot seawater is then enclosed by a perimeter double fence to prevent the hot seawater from migrating into the cooler waters. As there is ocean current, it is also advantageous to raise up the perimeter fence above the water during the night to allow more warm water getting in touched with the heat

collector tubes. Additionally, it is also advantageous to install an adjustable sunlight reflector, which is tilted to the right towards the sun in the morning and titled to the left towards the sun in the afternoon in order to make the sun light penetrate the transparent roof and strike the tubes under the roof when the
5 sunlight is inclined. The sunlight reflector is in the form of shinny horizontal strips, laid on the roof and supported by a tilting device.

10 0007 The new invention of the "partnership between the heat collector radiator tube and the gas turbine engine" has opened a very wide horizon of opportunities in energy management, including but not limited to, the recapture and utilization of heat energy created by the detonation of the
15 hydrogen bomb under water. While in the process of producing diamonds, which is hereby extremely emphasized as the most outstanding by-product discovered in this invention in the efforts to produce heat energy, in the explosion of the hydrogen bomb, the deep water environment imposes a high pressure that
20 compacts the molten carbon/charcoal/graphite, and then instantly cools it into diamonds. Due to the flames of the blast being surrounded by water, the heat energy is therefore captured by the deep water, into which the heat collector radiator tubes are submerged. The bomb may also be detonated deep
25 underground but this is a very expensive procedure, hence, this invention limits it activity in deep water detonation, which may also be done inland by digging an open wide well or lake that is deep enough and filled up with water. The heat energy collector tubes are made very hungry for heat -- by passing fresh air thru chilling tunnels with added water spray inside the tunnels and at

the intake mouth of the compressor, -- to introduce high humidity or more matter that expands when heated, -- to add up more expanding power in pushing out the power exhaust turbine. It should be noted that the faster the compressed air
5 moves thru the tubes, the faster the tubes collects heat energy from the hot water/gas it is in contact with. Hence, the heat collector tube is divided into many multiple smaller tubes to speed up the compressed air and to distribute or to maximize contact with the heat source or heat supply medium. The
10 collected heat energy is then used to produce DC electricity, which is in turn used to produce Hydrogen and Deuterium to detonate the next hydrogen bomb.

15

Brief Summary of the Invention

0008 I. Missing Needs and Problems of the Prior Arts:

1. In the prior art, the heat energy of the hydrogen bomb is wasted to the atmosphere, and there is no way to recapture it
20 to do work.
2. There is no idea of detonating a hydrogen bomb by drop Hummer.
3. There is no idea of detonating a hydrogen bomb triggered by a dynamite submerged in liquid deuterium confined in strong
25 container.
4. There is no idea of detonating a hydrogen bomb by passing electric arc across the liquid deuterium.
5. There is no idea of detonating a hydrogen bomb by confined electrolysis of hot heavy water without air gap.
6. There is no idea of using the super temperature of fusion

energy for making diamonds.

- 5 7. There is no idea of capturing the heat energy of fusion by deepwater detonation and the heat absorbing radiator tubes collect the heat energy from the hot water to run a gas turbine or reciprocating engine.
8. There is no idea of using fusion energy for smelting glass, ceramics, metals, etc, and then the waste energy is recaptured to run an engine, and to distill water.
- 10 9. There is no idea to recapture the heat energy expelled by a fuel cell to run a gas turbine engine.
10. There is no idea to capture the low temperature heat energy expelled by air conditioning machines, refrigerator machines, freezing machines, etc., to run a gas turbine engine.
- 15 11. There is no idea for a reciprocating piston engine to drive a piston compressor, which supplies hot compressed air to drive the reciprocating piston engine.
12. There is no idea of using electric plasma torch to produce heat energy inside the hot power air duct to drive the power exhaust turbine.
- 20 13. There is no idea using electric plasma torch for smelting glass/ ceramics/metals and then the heat is recaptured to drive an engine.
14. There is no idea of manufacturing large glass bottles that serves as houses, large glass sections of roofs, floor, walls, posts, and girders for structures in salt waters, for boats, for houses under/floating on water and for other structural uses.
- 25 15. There are many countless things and ideas missing in the prior arts, which now are created and listed in the summary

of the invention and also had been discussed very well in the whole specifications of this presentation.

0009 II. Objectives and Advocacy of this Invention

- 5 1. To lead mankind to the furthest horizon of science and technology in energy management and manipulation.
2. To illustrate the true picture of what man has been missing in energy management.
3. To illustrate the awesome bounty of clean energy that God
10 has created for mankind.
4. To illustrate how far mankind has been oppressed, diverted, detoured, and poisoned by the oil owners and oil investors.
5. To provide a clear understanding of the truth that after all, the poisonous oil is not needed at all.
- 15 6. To advance the science and provide the technology in the design of machineries that maximize benefits from fuels, and/or heat energy sources/supplies.
7. To advance and maximize the total take-over of the hydrogen into the world's economy and to eliminate the
20 function of the fuel oil from the world's economy.
8. To provide a clear understanding of the technologies presented in the prior arts which were not substantially explained,-- in order to maximize utilization and commercialization of the prior arts.
- 25 9. To lead mankind into new exciting adventures in scientific applications of the prior arts, and more so, for the new discoveries of the existing God's creations but never before known to man.

0010 III. The New Creations of This Invention

5 In the efforts to produce heat, to control heat, to collect heat, and to maximize utilization of heat, the following new ideas, new concepts, and new devices had been discovered, had been invented, and hereby applied for patent, to wit:

1. Charcoal used as heat insulator and as absorber of solar light/heat to energize the heat collector radiator tubes.
- 10 2. Confined electrolysis without air gap/space for automatic liquefaction of deuterium and hydrogen to attain cold fusion by not chilling but with applied heat.
3. Recapture of heat and produce distilled water from the steam produce by Fuel Cells by means of the heat absorbing radiator tubes, and then the distilled water is sprayed into the intake of the compressor of the gas turbine engine, or used as drinking water.
- 15 4. Recapture of heat energy and water from the steam expelled by steam engine by means of the heat absorbing radiator tubes that contain compressed air or water.
- 20 5. It being in high pressure, the hot steam from fuel cell is injected into the combustion chamber of a gas turbine engine for power.
6. Hydrogen bomb is detonated under water to capture the heat energy into the deep water and converted into hot water.
- 25 7. The hydrogen bomb is detonated into subterranean aquifers to capture the heat and confine the heat energy underground.
8. Fusion is attained by drop Hummer to further compress the already pre-liquefied deuterium.
9. Fusion is attained by exploding a confined dynamite that

surrounds a liquid deuterium, or the liquid deuterium surrounds the dynamite in a strong container.

10. Fusion is attained by passing electric arc across the liquid deuterium or tritium in strong confinement.
- 5 11. Fusion energy is captured and harnessed by means of the heat absorbing radiator tubes submerged in the deep hot waters where hydrogen bombs are detonated.
12. Fusion plasma electric Torch, as means to produce cold fusion, serves to produce super high temperature to supply heat inside the compressed air power air duct/pipe.
- 10 13. Fusion energy is created by feeding hydrogen-deuterium into the gasoline/diesel internal combustion engines that have sparkplugs.
14. A hybrid spark plug made to produce multiple long electric arc jump of at least 1 centimeter or so, with multiple prong or no anode at all.
- 15 15. A reciprocating engine drives a double acting compressor that supplies compressed air into the heat-absorbing radiator which drive the reciprocating engine.
- 20 16. The heat energy expelled thru the tailpipe is recaptured by the heat-absorbing radiator pipes that run a gas turbine engine to produce hydrogen and to turbo-charge the internal combustion engine.
17. Heat energy is supplied inside the compressed air duct by smokeless burning of solid lumps of coal, coke, charcoal, wood and trash.
- 25 18. The gas turbine engine is feed with powdered: -- charcoal, coke, wood, trash, and other organics, -- to burn smokeless.
19. Deuterium Plasma Torch or cold fusion is used to heat up

- the catalytic converter at the down stream of the hot compressed air duct, just before the exhaust power turbine in order to remove smoke and carbon monoxides --- to recapture heat from catalytic converter by the power turbine.
- 5
20. Electricity is stored in the form of hydrogen-deuterium in newly invented hybrid tanks wherein water/mercury is used as sealant, which now has solved the problem of the escaping hydrogen.
- 10
21. Individual hot tubes are each inserted inside corresponding individual cold compressed air tubes to absorb or pick-up all the heat energy from the heater tubes, --- in maximum absorption.
22. The hybrid internal fusion piston engine with hybrid spark
- 15
- plugs has its combustion chambers individually submerged in abundant water for boiling steam power.
23. The energy in the exhaust tail pipes of engines or power plants is used:
- a. To power a reciprocating piston engines;
- 20
- b. To power a steam engine that produce pure water or hydrogen;
- c. To heat up a second stage radiator heat absorber;
- d. To heat up a small gas turbine engine that produce deuterium;
- 25
- e. To heat up water for storage;
- f. To heat up air for the house or home;
- g. To distill organics and wood, to produce charcoal and organic oil/gas recycled for pre-superheated fuel before release for burning;
- h. To dry trash, placed in conveyors, --- for fuel in power

- plants;
- i. To produce risen and stored in cold chambers for plastics;
- 5 24. Smokeless trash burning is done from the top of the trash, and the oxygen air is pre-superheated by the flames thru the heat absorbing radiator coiled tubes in the fire, and the oxygen air distributed by multi-nuzzle tubes into the various parts of the fire to completely oxidize unburned gas fumes flying around the combustion chamber.
- 10 25. Heat energy from smelting plants for glass/ceramics, steel, metals, stones, coal/wood distillation, etc, are recaptured by the heat collector tubes to run various kinds engines.
- 15 26. Glass or ceramic is smelted into many kinds of shapes of bottles or cubicles/chambers large enough to serve as houses, rooms of houses and buildings by interlocking together to form large houses or buildings. Same are made into large sections of roofs, floor, chambers, boats, walls, posts, beams, girders in interlocking bolts, which are advantageously used for habitation/human settlement structures floating/submerged in fresh/salt waters.
- 20 27. Fusion heat energy is used to smelt glass, ceramics, metals, calcium carbide, metals, firebricks, etc., and the exhaust heat is recaptured by heat absorbing radiator tubes to run engines.
- 25 28. Heat energy is recaptured by the heat collector tubes in the process of water distillation.
29. New innovative used and functions of empty plastic bottles --- to float ocean structures and human settlements on or submerged in the ocean.
30. New innovative function of floater bamboos and empty

- pipes --- for crisscrossing bamboo/pipes to make stiff walls and stiff floors floating on the ocean.
- 5 31. Distilled water is produced by electrolysis and then feed the hydrogen/oxygen in the fuel cell or gas turbine engine, and then condensed by recapturing heat from the exhaust steam for drinking water.
32. Oil production by dissolving organic trash in hydrogen or deuterium in a high pressure and high temperature container.
- 10 33. Remove hydrogen pressure by dissolving organics materials into the liquid hydrogen/deuterium.
34. Stop leak of hydrogen by water/mercury seal to prevent the hydrogen from getting in contact with the organic valve seal.
- 15 35. Colored distilled water to identify the water level against the liquid hydrogen or deuterium.
36. A bent outlet tube submerged in water or mercury is turned up above the water/mercury to let the hydrogen get into the tube and out from the storage tank, in order to used the stored hydrogen.
- 20 37. Steel reinforced glass made into arc roof strips for houses/buildings
38. Produce drinking/distilled water by electrolysis and then the hydrogen and oxygen are feed in fuel cell / gas turbine engine, and then condense the exhaust into drinking water by means of the heat absorbing radiator tubes of same gas turbine engine to help run the electrolysis machine.
- 25 39. Bamboos are stacked into boat's hull to ease up the boat construction industry.
40. Bamboo floaters, empty bottles, pipes, and glass globes

or pipes are used to make conglomerate floater sausages, -
-- in bags, sacks, baskets, bundles, and nets.

- 5 41. Swimming pools, Fishponds, Windmills, residential human settlements, and Agricultural lands are carried on water by crisscrossing walls that trap air, and by conglomerate of all kinds of floaters and/or platforms.
- 10 42. Maximum usage of hydrogen/deuterium serving to fuel hybrid engines for electric generation, for irrigation pumps, for desalination/distillation to produce irrigation water and drinking water, for transportation, for recreation, and for rain making by heat recapture.
42. Diamond production by thermonuclear detonation surrounding a compacted carbon in high pressure environment.
- 15 43. A new process of desalination wherein the Hydrogen/deuterium hybrid engines are used to mist spray seawater into the sky by means of giant propellers floating on the sea that drive upward winds with water spray to produce large amounts of clouds in the sky for rain making, -- the upward winds serving to propel large kite gliders upward to play in the sky for a long time by turning in a cycle getting into the upward wind when the glider losses elevation and be blown upward again-and-again --- a recreation and tourist attraction.
- 20 44. A new design for a floater wherein a plurality of criss-crossing horizontal walls assembly is air tightly covered by a plate on top to form a plurality of arrays of air chambers open at the bottom, and each chamber is filled up with compressed air as the load on top is increased to push down the water that gets upward into the chambers, -
- 25 - in order to from an ocean platform carrying power

plants, residential lands/houses, farmlands, factories, and serving as transportation.

- 5 45. A new design for taking maximum benefits from the heat energy of the ocean surface by using the cold temperature of the water at the ocean bottom to pre-compress the air before heating up by the ocean's warm waters, wherein, a fusion flame together with water mist is injected inside the compressed air pipe feeding the power turbine, wherein, the heat energy expelled by the power turbine is directed into the water for recapture by the ocean water.
- 10 46. A new design for compacting molten carbon for diamond making wherein the carbon is molten by electric arc in a high pressure container, and the heat is absorbed in water.
- 15 47. A new design for an ocean floating swimming pool having a salt water pool, a fresh water pool, and solar tent, wherein, the salt water pool has a floor serving as sand filter to keep the water free from poisonous jelly fish, etc.
- 20 48. A floating platform on the ocean or lake, that carries a residential house, and a farmland having a fishpond in a water tank that supplies fertilizer to the farmland out of the droppings from the fish, which is done in the process of cleaning the water of the fishpond.
- 25 49. A farmland constructed on a dry land, having a fishpond underlain by impervious materials to conserve water which is being pump out from underground deep well by means of windmills which also pumps fertilizers from the fishpond and irrigation water to the agricultural bed.
50. A house/building made of an assembly of monolithically poured or molded cubicles of glass/ceramics, having a roof filled up with water serving as a fishpond and an aqua

riceland serving as filter to clean the fishpond, --- for cottage industry in the farms.

51. A thermonuclear torpedo fired by a submarine boat upon an under water target impact wall to provide fusion energy into a floating power plant by means of the boiling deep water.
52. A thermonuclear bullet containing hydrogen/deuterium which explodes as a hydrogen bomb upon impact with a target hard-object, -- used to produce sustained fusion flame in a smelting oven, in a boiler, heat collector chamber, to burn/cut a structure, and to melt an armor.
53. An underwater large canon-gun fed with large thermonuclear bullets which are fired by the gun upon an underwater target impact-wall to produce fusion energy in a sustained manner, -- in order to run a thermonuclear power plant.
54. A thermonuclear bullet containing hydrogen/deuterium which explodes as hydrogen bomb upon impact with a hard target, as an effective weapon in armored combat.
55. A solar trap/oven, above a house-roof, supplied with additional heat energy from smokeless trash incinerator and hydrogen plasma torch, aside from solar heat, -- to run a gas turbine engine, --- serving as a retrofit to existing houses and buildings for purposes of self generation.
56. A new design for a hydrogen/deuterium electro-plasma torch for smelting and energizing an engine, wherein, the non-conductive container for the fusion reactor chamber is surrounded with non-conductive distilled water that prevents meltdown of the fusion chamber which effects boiling of the surrounding water into steam, and wherein,

additional liquid deuterium is spitted/shot out inward into the fusion flame in reverse against the outward flow of the flame, --- to take the opportunity for sustained fusion without the further use of electric arc anymore.

- 5 57. A large aquarium in the form of a fish on wheels or as boat used to transport live fish, fuels, food, grains/powder, or as a house on land, underwater, or floating on water.
58. A floating agricultural shallow bed for growing algae or water plants, well exposed to sunlight with clean filtered
- 10 water.
59. A new device/apparatus invented in support for water distillation process in combination with smelting and electrolysis process for the production of hydrogen-deuterium fuels, wherein the heat energy from the
- 15 smelting furnace, while in the production of smelted materials and smelted hardware, is conducted by a chimney in the form of a multi-tube / multi-coil hot radiator submerged in a steam boiler that powers a steam turbine in the production of hydrogen-deuterium fuels, out
- 20 of which the steam gets into a radiator submerged in cold compressed air, coming from the compressor of a gas turbine engine--that produce abundant hydrogen-deuterium fuels, to condense the steam into distilled water in the production of abundant drinking water and irrigation
- 25 water, wherein, the low temperature heat energy in the chimney past the steam boiler is further recaptured/ recycled by a second cold compressed air branching out at the outlet of the compressor to help drive the gas turbine engine, thereby the heat energy from the steam is recaptured to drive the gas turbine engine for electrolysis.

Brief Description Of The Several Views Of The Drawings

- 5 Fig. 1 -- is a hybrid gas turbine engine having, multiple stages progressive heat-collector or absorber compressed-air duct with plurality of branches and gate valves.
- Fig. 1 -- further illustrates a plurality of high efficiency heat-absorbing radiator made part of the branches of the heat energy collector compressed-air duct.
- 10 Fig. 1 -- further illustrates a new use of radiator tubes serving as device to absorb heat energy that heats up the compressed air rather than to dissipate heat.
- Fig. 1 -- further illustrates a plurality of cold compressed-air ducts serving to absorb the heat energy from all
- 15 different kinds of heat-energy sources, including fusion.
- Fig. 1 -- further illustrates that cold fusion, hydrogen bomb, fusion ovens, nuclear ovens, and hydrogen/deuterium/tritium burners are among the many heat sources.
- 20 Fig. 1 -- further illustrates the cold compressed air serves to condense: (1) the super hot steam expelled by steam engines, and (2) the hot steam expelled by fuel cells.
- Fig. 1 -- further illustrates the distilled water from the fuel cell and steam turbine serves as super charger by spraying
- 25 the pure water into the intake of the compressor.
- Fig. 1 -- further illustrates the cold humid compressed air serves to absorb low-temperature heat energy, such as, freezers, chillers, air conditioners, and solar heat.
- Fig. 1 -- further illustrates the compressed air, after it has been warmed up, further absorbs heat from various higher

temperature energy from fuel burning ovens.

Fig. 1 -- further illustrates that the air-oxygen supply and the oil/gas fuel torch are both pre-heated super-hot before getting into the solid fuel combustion chamber.

5 Fig. 1 -- further illustrates the heat energy from the exhaust power turbines is absorbed by the cold compressed air while in-route to push the power turbine or piston.

Fig. 1 -- further illustrates a new method of using fusion in smelting by using hydrogen/deuterium as pre-heated fuel in a super-hot plasma torch oven to inject heat into
10 the compressed air duct.

Fig. 1 -- further illustrates a new process or method to harvest the heat energy of a hydrogen bomb or thermonuclear bomb that is detonated underwater.

15 Fig. 1 -- further illustrates a reciprocating piston type engine is run by hot compressed air that is energized by the hot air expelled by the power turbine.

Fig. 1 -- further illustrates that the hot air expelled by the reciprocating piston engine is fed into the second stage compressed air duct.
20

Fig. 1 -- further illustrates the hot air expelled by the power turbine is used to produce super hot steam to run a steam engine, be it piston type or turbine type.

Fig. 1 -- further illustrates part of the electric output of this engine is used to generate hydrogen for fuel in the
25 fusion oven for producing heat energy and helium.

Fig. 1 -- further illustrates a self-sustaining process wherein part of the electricity produced is used to produce hydrogen for the fuel cells and fusion ovens.

Fig. 1 -- further illustrates part of the hydrogen produced by this

machine is feed to an internal combustion engine which in turn inject hot gas into the hot-air duct.

Fig. 1 -- further illustrates a smaller gas turbine engine is driven by the heat energy expelled by the larger gas turbine engine.

5

Fig. 1 -- further illustrates the heat energy expelled by the smaller gas turbine engine is used to heat up a water heater.

Fig. 1 -- further illustrates the heat expelled by the large power turbine is further used to produce heating air that is ventilated into inside buildings and houses.

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Fig. 1 -- further illustrates the heat expelled by the power turbine is used to heat up chunks of wood and coal in the process of destructive distillation.

15

Fig. 1 -- further illustrates the gaseous fumes from the distilled wood is feed into and serving as torch fuel inside the solid-fuel, coal/trash burning chamber.

Fig. 1 -- further illustrates the heat expelled by the power turbine is used to dry trash in a process of producing solid/liquid fuel for the large gas turbine engine.

20

Fig.2 -- illustrates a hybrid cyclone ash/dust separator.

Fig.2 -- further illustrates a wide spacious multiple stilling chambers of the cyclone dust separator around its outer sections to trap dust.

25

Fig. 3 -- illustrates a zigzag chimney that grabs the smoke and ash from the exhaust air of an organic trash fueled engine.

Fig. 4 -- illustrates a process to recapture heat energy from the tail pipe and the heat emitting cooling radiator of an engine to drive another engine.

Fig. 5 -- illustrates an underwater hydrogen bomb detonator apparatus in support of a new process to capture the heat energy into the deep waters in the efforts to produce heat energy.

5 Fig. 5 -- further illustrates a new process and its supporting device to recapture the heat energy produced by fusion to run an engine.

Fig. 5 -- further illustrates a new structural design out of recycled containers for a floor to support the whole fusion apparatus.

10 Fig. 5 -- further illustrates new design and method of constructing a floating platform thru a new recycle use of various kinds of empty used containers, such as, used bottles, bamboos, pipes and crisscrossing walls with sealed top cover to trap air.

15 Fig. 5 -- further illustrates a new design or method for constructing a floater structure in the form of a large sausage made of empty plastic bottles contained or wrapped around by nets or basket of ropes, wires, and bamboos.

20 Fig. 5 -- illustrates a new device to capture and condense the steam produce by underwater detonation of hydrogen bomb and to store the helium gas.

25 Fig. 6 -- illustrates a newly created smelting plant for glass/ceramics and metals, wherein the heat energy otherwise wasted in burning/ firing/ smelting and annealing, is captured to pre-superheat oxygen-air supply for clean burning of the fuel.

Fig. 6 -- further illustrates a newly created power plant, wherein, the consumed heat energy in the factory is

recaptured to run an engine that generates hydrogen to fuel the smelting processes.

5 Fig. 6 -- further illustrates a newly created smelting plant, wherein, hydrogen plasma torch, which is fusion energy, is used to melt sand and stones to produce large molded sections of glass/ceramic structures -- for houses and buildings.

10 Fig. 6 -- further illustrates a newly created power plant, wherein, the heat energy expelled by the engine is recaptured to heat up its own power compressed air and to distill water for re-supply into the compressor intake and for drinking.

15 Fig. 7 -- illustrates a newly created process for making diamonds, wherein, compacted carbon is placed at the center of a hydrogen bomb to implode the carbon.

20 Fig. 7 -- further illustrates a newly created process of making a hydrogen bomb, wherein, the liquid deuterium is placed at the center of a dynamite/bomb which is enclosed by a thick wall of cylindrical steel and/or glass to implode the deuterium.

25 Fig. 7 -- further illustrates a newly created basket made of perforated steel to support a new process of spreading the fusion flames to maximize water contact in the effort to capture the heat energy of fusion bomb in deep waters.

Fig. 7 -- further illustrates a new device/apparatus for the process of absorbing heat energy in the hot water, wherein, the fusion spot is fenced around by heat absorbing radiator tubes.

Fig. 7 -- further illustrates a new invention of a gas turbine

engine being run by a hydrogen bomb.

Fig. 8 -- illustrates a new process of detonating a hydrogen bomb by compressing the liquid deuterium by means of the impact of a drop hammer.

5 Fig. 8 -- further illustrates a new process of detonating a hydrogen bomb by adding a bomb/dynamite on top of the liquid deuterium being compressed by the drop hammer impact.

10 Fig. 8 -- further illustrates a new process of making diamonds, wherein, a compacted carbon/graphite is placed at the bottom of the liquid deuterium so that the diamonds are retained at the bottom of the fusion bomb apparatus.

15 Fig. 9 -- illustrates a new process of detonating a hydrogen bomb, wherein, a multiple high voltage electric arc are passed thru across the liquid deuterium.

20 Fig. 9 -- further illustrates a new process of making diamonds, wherein, a ball of compacted carbon/charcoal/graphite is placed at the bottom of the liquid deuterium to prevent it from being blown upward.

Fig. 9 -- further illustrates a new process of making a hydrogen bomb, wherein, the glass container is molded to the inside walls of the strong steel pressure developer container .

25 Fig. 9 -- further illustrates a new design for a hydrogen bomb, wherein, the electrodes are molded or baked embedded in the glass container to prevent the deuterium from escaping out.

Fig. 10 -- illustrates a newly invented device in support to a new process of forced confined electrolysis of heavy water

in the production of hydrogen and deuterium directly into liquid form.

5 Fig. 10 -- further illustrates a new design of a hydrogen bomb comprising a strong glass container with bake-in metal or lead electrodes for the high voltage electric arc forced to pass thru / across the liquid deuterium.

10 Fig. 10 -- further illustrates a new design for a hydrogen container, wherein hydrogen/deuterium is prevented to escape by water or mercury serving as outlet sealant of the container.

15 Fig. 11 -- illustrates a new process of maximizing benefits from various heat sources of the household including oil lamps, kerosene lamps, kerosene stove, gas stove, organic fuel burner, trash burner, and electric generator engine among heat suppliers.

Fig. 11-- further illustrates a new invention of a device that adapts various heat sources of the household for cooking/baking, to run a second electric generator, and to run a distillation machine.

20 Fig. 12 -- illustrates new invention of a structure for an ocean agricultural farm and ocean human habitation or human communities settlement on the ocean.

25 Fig. 12 -- further illustrates a new recycle use of waste empty bottles and pipes in sausages trapped in array of boxes.

Fig. 12 -- further illustrates a new structural design for an ocean platform made by crisscrossing walls with sealed cover plates on top to form arrays of boxes containing trapped air, wherein, the crisscrossing walls serving as stiffener of the floating platform.

Fig. 12 -- further illustrates a new ocean residence or home with an agricultural land loaded on the floater ocean platform.

Fig. 12-- illustrates a new structural design for an ocean platform made stiff by crisscrossing floater pipes or bamboos for carrying or transporting water or serving as footing for ocean structures.

Fig. 12 -- further illustrates a new crisscrossing pipe distillation structure, wherein, the floater pipes serve as vacuum evaporation chambers operated by hybrid engines/windmills.

Fig. 13 -- illustrates a new structural design for a bamboo boat or for floater pipes stacked and clipped together, -- to serve as hull of the boat which is powered by said hybrid fusion engines.

Fig. 13 -- illustrates a new structural design for a bamboo double hull boat, wherein, all the bamboo tips are group together to the far front and bended up to form a pointed nose of the hull.

Fig. 14 -- illustrates a cross-section of Fig. 13 showing the new structural design where bamboos or pipes are clipped together by a vertical post, and further showing how a double hull bamboo boat is structured.

Fig. 15 -- illustrate a new process and the new apparatus in support of the process of harvesting electricity from the ocean's warm waters serving as source of heat energy.

Fig. 15 -- further illustrates a new radiator tube design for the maxi-mum utilization of the heat absorbing radiator tubes.

- Fig. 15 -- further illustrates a new design for maximum absorption of the solar heat energy by shiny strips tilted left or right.
- 5 Fig. 16 -- illustrates a new apparatus that confines the carbon that is melted by strong electric arc to produce diamonds.
- Fig. 17 -- illustrates a floating swimming pool having a saltwater pool and having fresh water pool, side-by-side, all covered by a solar tent, and carried afloat by recycled or empty containers.
- 10 Fig. 18 -- illustrates a farmland, having a residential house, a fishpond, a plantation land, a windmill, and a water wave energy converter, -- floating on water energized by fusion engine.
- 15 Fig. 19 -- illustrates a farmland, having a fishpond the waste product of which is being discharged onto a plantation land in the efforts to clean the water in the fishpond.
- Fig. 19 -- further illustrates how a windmill/fusion engine cleans the fishpond and provides fertilizer onto the plantation land.
- 20 Fig. 20 -- illustrates a monolithic cubicle for a house component molded by molten glass, ceramics, fireclay, rocks, etc.
- Fig. 21 -- illustrates a whole house, having a roof-top fishpond that provides fertilizer to a roof-top vegetable garden, all made up by an assembly of molded cubicle house components.
- 25 Fig. 22 -- illustrates a new design for a floating fusion power plant fueled by successive underwater firing of torpedo hydrogen bombs.
- Fig. 22 -- further illustrates how a submarine boat is positioned

to fire torpedoes upon an underwater target impact wall.

Fig. 23 -- illustrates how a fusion power plant is built upon a coastal rocky bank fueled by undersea fusion boiler.

5 Fig. 23 -- further illustrates how a large canon gun fires deuterium bullets upon an impact wall to sustain fusion flame.

Fig. 24 -- illustrates how an inland fusion power plant is constructed and a machine gun successively fires
10 fusion bullets.

Fig. 24 -- further illustrates how a device shoots deuterium into the fusion flame upon detonation of the bullet to sustain the fusion flame without further firing bullets.

Fig. 25 -- illustrates how a solar thermal power plant is constructed as a retrofit upon an existing house.
15

Fig. 25 -- further illustrates how a smokeless trash burner is constructed to help the solar oven sustain heat energy.

Fig. 25 -- further illustrates how a fusion torch is used as a catalytic converter at the exhaust of a trash burner, and how the catalytic heat energy is recaptured.
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Fig. 26 -- illustrates a new design for a smelting plant that provides recaptured heat energy for an engine.

Fig. 26 -- further illustrates a hydrogen/deuterium electric plasma torch wherein a nuzzle shoots high-pressure deuterium into the fusion flame to sustain fusion
25 reaction without electric arc.

Fig. 26 -- further illustrates how the reactor of the plasma torch serves as water boiler which is required to keep it cool.

Fig. 26 -- further illustrates a design for a steam condensation

tower having cold-wind-pipe condensers across the tower chamber.

Fig. 27 -- illustrates a floating shallow box serving as algae growing bed carried by floaters, supplied with carbon dioxide.

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Fig. 27 -- further illustrates a new application for the hybrid fusion engine to drive compressor/vacuum and water pumps.

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Fig. 28 -- illustrates an aquarium in the form of a fish on wheels as transportation of live fish using hydrogen fusion engine.

Fig. 28 -- further illustrates a new usage of the hybrid fusion engine to drive the large transport fish as home underwater.

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Fig. 29 -- illustrates a small size floating shallow algae growing bed/cage on water for good sunshine and atmosphere.

Fig. 29 -- illustrates an algae growing floating bed/cage with screen/net sidings allowing the algae to grow out thru the net to provide food for the fish, but prevents the fish from getting in.

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Fig. 30 -- illustrates a newly invented power plant, smelting plant, water desalination plant, thermonuclear plant, hydrogen-deuterium generator plant, and house/building heating system all in one machine thru heat recapture and recycle apparatus -- for a clear understanding of the processes in Fig. 1.

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Fig. 31 -- illustrates is a diagrammatic presentation of the processes for a clear understanding of heat energy recapture and recycle to maximize benefits from fuel.

Detailed Description of the Invention

0001 In support to the advocacy and to the missions of this invention, the following new configurations, new embodiments, and new structural and mechanical devices are created to provide the most appropriate technology to handle the processes involved, which can be more understood by further reading the following descriptions of the drawings, to wit:

0002 Fig. 1 -- illustrates a new embodiment for a new innovative power plant displaying the most advance technology in maximizing benefits out of any kind heat source or any kind of fuel being spent, wherein, a cold compressed-air header duct 10 is communicated to a plurality of branches so that a multiple parallel and series of various kinds of heat-absorbing radiators of small tubes/pipes serving as energy collectors, parts 9, 12, 13, 14, 15, 16, 17, 18, 19, are communicated and able to conduct the cold compressed air supplied by the main compressor 1, *which is either a wide-face bladed turbine model or a piston-chamber model*, thru the air duct 10. *It should be noted at this point that it is hereby singled-out and extremely emphasized that this is a new idea of use and application of the radiator tube assembly 9, etc., wherein it is now used to absorb heat energy instead of the usual use of dissipating or throwing away heat energy to the surrounding atmosphere. This emphasis was not pointed out in my previews patent where the radiator was already used to absorb heat energy.* The compressed air is pushed thru across the above named radiators for pre-heating and further passed-on said air into the air-duct 11 which, in turn, supplies the already pre-heated compressed

air, at this point, into the heat-absorbing radiators **22 and 23**, which then supplies the already superheated compressed air, at this point, into the power air duct **24**. The super hot compressed air in the power air duct **24** is communicated to push out the power turbine **2** which is also either a wide-face bladed turbine or a reciprocating piston-chamber model, and which, in turn, drives the electric generator **3** and also drives the compressor **1**. *It should be noted at this point that, in the case where the engine is a reciprocating piston-chamber model, the compressor piston is much smaller than the exhaust piston so that the larger exhaust piston is push- out while the smaller compression piston is pulled-in by the larger piston to effect compression.*

0003 It is hereby extremely emphasized that *the cooler is the radiator tube, the more hungry or more efficient it is in absorbing heat, or the more heat absorbing power it has. Additionally, the more humid is the air inside the tube/container, the more heat energy it will absorb. This means that the water, being a matter that expands when heated and mixed in the air, provides more expanding power for the heated compressed air.* Wherefore, an abundant pure cold water mist **8**, is sprayed into the air at the intake of the compressor **1**. It is hereby extremely emphasized further that the water mist is a super charger or turbocharger because it makes the air very cool and very humid. *Cooling the air is making the air more compact and adding water into the air is further making the air more compact or pre-compressed, hence, this process of adding water is actually turbo-charging.* Thru the air duct **10**, the compressor **1** supplies cold compressed air into the radiator **9** which must be

in the form of a plurality of radiator steam tubes each air tightly communicated to the exhaust of the fuel cells by means of a header pipe, containing and conducting the super hot steam expelled by the fuel cells 5.

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0004 It is hereby extremely emphasized that for purposes of maximum absorption of the heat energy, each of these steam tubes is submerged into the super cold/humid running compressed air contained in another corresponding radiator cold-air tube in order for the cold compressed air to absorb the heat energy *in even distribution*, which otherwise would be wasted by the fuel cell 5, and to condense same hot steam into pure water being deposited into the water tank 7. The same steam tubes in radiator 9 also contain and conduct the super hot steam being expelled by the steam engine 4 and also condenses said super hot steam into distilled water, in addition to the mission of the cold compressed air to absorb the otherwise wasted heat energy expelled by the steam engine. *It should be noted at this point that alternatively, for easier construction, the steam from the fuel cell and/or steam engine does not have to be passing inside the radiator tubes of the compressed air, wherein, in this alternative, the hot steam is just distributely released thru plurality of windows into a large header low pressure pipe which encloses a plurality of spacedly assembled cold compressed air tubes 9 that absorb the heat. The cold compressed air radiator tubes are installed inside of, and parallel to, the hot steam header pipe to effect condensation of the steam into distilled water. The steam tubes deposit the distilled water into the tank 7 which re-supply the distilled water into the boiler of the same steam engine. The tank 7 also*

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supplies pure water to the water misting nuzzles 8. It should be noted further that the plurality of cold air tubes may just be spacedly submerged in the large tail steam pipeline/duct to directly absorb heat energy from the steam running/circulating around the steam duct, although this arrangement is not the most efficient heat exchanger. The radiator 9 consists of a plurality of steam tubes each inserted into inside a corresponding cold compressed air tube so that the running cold compressed air picks up the heat energy out of the running hot steam and condenses same steam into distilled water for recycle use.

0005 *It should be noted further at this point that this radiator-means of absorbing/collecting heat energy outside the engine has been disclosed and demonstrated in my previous U.S. Patent No. 6,327,994 B1, but it has not been specifically singled out in the claims, and further, was not specifically disclosed that the hot radiator tube is inside the cold radiator tube or vise versa, hence, this heat absorbing radiator is now further improved and specifically disclosed in this present invention for clarification and for a wider variety of new applications of this radiator.*

0006 After passing thru radiator 9, the cold compressed air is now in the pre-heated state and communicated to proceed into the pre-heated air duct 11 which in turn pass-on the pre-heated compressed air into the super heating radiators 22 and 23.

0007 The branches of air duct 10 are provided with entrance gate valves 21 to close the corresponding air duct branch in case heat energy is not available in those branches. The heat absor-

bing radiators 12, 13, 14, 15, 16, 17, 18, 19, and 22 are constructed in the same kind of structure as the radiator 9 for maximum heat absorption efficiency. The radiators 12, 13, 14, 15, and 16 are connected to absorb low temperature sources of heat energy, such as the exhausts from: freezers, chillers, refrigerators, dehumidifiers, *water heater heat exhaust, fireplace heat exhaust, geothermal heat, any kind of hot water/liquid including the surface of the ocean/desert, solar heat, and including but not limited to heat energy produced by underwater detonation of hydrogen bomb and underground detonation of hydrogen bomb.* In the case where the hydrogen bomb is detonated underwater, the heat absorbing radiator is placed submerged under the hot water and over the hot water in order to be exposed it to the heat energy. In the case where the hydrogen bomb is detonated under ground, then the radiator is placed over the ground enclosed by a roof with walls to prevent the wind from stealing the heat energy.

0008 The radiators 17, 18, and 19 are connected to absorb high temperature heat sources, such as, *but not limited to the exhaust from fuel cells, heat exhaust from internal combustion engines fed with hydrogen-deuterium-tritium, heat exhausts from ceramics/glass kiln/furnace- annealing, heat exhaust from coal-distillation or coke oven heat, heat exhaust from gas turbine engines, which are hereby extremely emphasized as new idea applied for patent protection, to be fueled by powdered solid organics including but not limited to wood, paper, coke, charcoal, waste oil, trash etc. Additional heat sources for the above radiators 17, 18 and 19 include the heat exhaust from glass/ceramics/metal smelting, and heat exhaust form*

smokeless trash burning ovens. It is further extremely emphasized that smokeless trash burning is attained: (1) by pre-superheating the supply oxygen air thru recapturing the heat in the exhaust chimney which means that intake manifold pipe is inserted inside the chimney and directed towards the combustion chamber, (2) by distributing the hot oxygen air into the base of the fire, into the middle level of the fire, and into the top portion of the fire in order to oxidize the unburned gas fumes thru plurality of nuzzles/holes made along the length of a plurality of air delivery tubes/pipes leading into the fire, and (3) by burning the trash from the top in the same way as in burning the candle from the top, -- of which above new ideas of conditions are hereby applied for patent protection.

0009 It is hereby extremely emphasized further that it is my new idea hereby applied for patent protection, that powdered organic solid matter, such as, coal, coke, charcoal, wood, paper, dried leaves/grass, and powdered trash are feed in the gas turbine/jet engine by mixing same powder into the air intake or by injection said solid fuels into the compressed air duct, which mixture passes thru a burning pile of solid lumps 34 of coal/coke or charcoal or torch or wood.

0010 It is further hereby extremely emphasized that it is also my new idea for this invention for patent protect that it is extremely important to feed hydrogen-deuterium to an ordinary internal combustion piston-type gasoline engine 26A wherein the deuterium is subjected to the action of electric arc spreading around the chamber by a hybrid sparkplug, which

is the same principle as the plasma torch 26 or plasma electric welding, in order to achieve fusion in the combustion chamber in order to provide, via tailpipe 26B, abundant heat energy in the radiator tail pipe 25 and in the engine's 26A water/air cooling radiator system that supplies heat to the radiator 9. As
5 the same new idea, this same hydrogen-deuterium-tritium fuel must also be fed in liquid form to a diesel engine, wherein, it is hereby extremely emphasized that each chamber of same diesel engine is provided with a plurality of hybrid sparkplug that
10 spreads electric arc thru/across the injected deuterium around the chamber in order to attain fusion in the combustion chamber. It is further hereby extremely emphasized that the same hybrid sparkplug has no cathode for the purpose of making larger electric arc that jump a longer distance from the
15 chamber to the anode of the sparkplug, -- of which new idea is hereby applied for patent protection. The electric-plasma torch is also hereby extremely emphasized as a highlight new idea for this invention in using fusion energy for smelting furnaces for glass houses, steel/metal, ceramics, calcium carbide, etc, in
20 order to produce abundant clean heat energy as by-product of manufacturing, -- to heat up the compressed air in the radiator.

0011 The water tank 20 stores the pure water that has been condensed by the radiator 17 out of the steam expelled by the
25 fuel cell 5. The radiator 22 is connected to absorb high temperature heat energy from fuel combustion chambers, such as, trash, coal, charcoal, coke, powdered solid matters, liquid fuels, gaseous fuels, hydrogen, deuterium, nuclear fusion, hydrogen bomb detonated under water or confined water, and

confined water, and hydrogen bomb detonated in underground water, wherein, the radiator 22 is submerged in the hot water or steam or in the same way as radiator 9 is constructed. It should be noted at this point that fusion is attained by the principle

5 *illustrated by the tokamak compression chamber or the doughnut shaped torus, which compression is alternatively easily attained by detonating a dynamite that is submerged in a liquid hydrogen-deuterium-tritium, or alternatively thru plasma ionization by passing a lightning/electric arc discharge*

10 *thru/across a gaseous/liquid hydrogen- deuterium-tritium which is the same process used in the plasma-electric welding. Part of the resulting heat energy from fusion is used to smelt glass, ceramics, clay, earth, rocks/stones, sand, steel and metals and then the heat is recaptured during the annealing process by*

15 *means of the heat absorbing radiator 22, -- and out of the above ideas, it is therefore hereby extremely emphasized that it is my new idea of a process, which is hereby applied for patent, -- to smelt glass, ceramics, and metals by using fuel hydrogen-deuterium electric plasma torch or fusion energy to melt the*

20 *glass, ceramics, and metal, and wherein the molten glass/ceramics/earth/clay/stones are poured into large molds to form large house cubicles/sections/rooms, structural building components, high voltage capacitors, floating chambers/containers, hydrogen-deuterium fuel storage tanks, and large*

25 *water fish ponds/vessels/boats and swimming pools, which are assembled into houses and buildings for habitation on the land and habitation structures on the ocean, and base for floating windmills on the ocean, it being resistant to salt water, by which method, these presented new processes and new uses and/or functions of glass and ceramics are hereby newly created and*

hereby applied for protection by letters patent.

0012 This invention presents new ideas hereby applied for patent, including a new designs of hydrogen bomb which is
5 *extremely different and distinct from the prior art in that: (1) the gaseous or liquid hydrogen-deuterium-tritium is contained in a container/capsule having opposite internal electrodes thru which a discharge of lightning or electric arc is passed across thru the liquid deuterium as means to attain fusion of the*
10 *deuterium; (2):In another alternative new distinct invention of a new design of hydrogen bomb now presented, is that the deuterium is enclosed in a soft container/capsule which is surrounded by dynamites and the resulting assembly is totally enclosed by a strong container to produce super high pressure upon the liquid deuterium. The deuterium attains fusion by*
15 *implosion as a result of the explosion of the surrounding dynamites; and (3) In another alternative new design of hydrogen bomb as means to attain fusion is that the soft capsule containing liquid deuterium is placed at the bottom of a strong cylindrical container into which a rod or piston is driven down on top of the capsule by a large drop hammer to compress the capsule to the maximum in order to fuse the deuterium inside the capsule' in order to attain fusion. All of the above*
20 *alternatives must be done underwater or underground in order to capture the high temperature heat energy into the water where the radiator 22 is submerged. The advantage of this capsulation process of fusion is that the firing is do-able in rapid succession. Note that in support of the capsulation process of producing liquid deuterium, it is my new idea as a highlight of this invention hereby applied for patent protection – that the*
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capsule itself is made part of the electrolysis process device in separating the deuterium from the oxygen, wherein, the device is filled up totally full without air gaps with heavy water, and then the direct current is applied without allowing expansion due to production of gases. Hence, the deuterium and the oxygen will remain liquid without the use of any kind of compressor and without additional expenses. Note that cold fusion may occur during this process, but since it is done under deep waters to capture the heat energy, it will be safe for the operator because it is done by remote control.

0013 The radiator 23 is a heat-absorbing radiator device and a multiple tube containing low temperature compressed air, are placed inside the engine's exhaust tail pipe 25 and submerged in the hot gas inside the tail pipe 25 to absorb the heat energy of the tail pipe 25 while the compressed air inside the radiator 23 is on its way to push the power turbine/piston 2, which energy would otherwise be wasted. The tail-pipe heat energy is therefore recycled to re-drive and re-drive the power turbine 2 or engine which expelled the same heat energy, which scavenger process demonstrates the highest fuel efficiency ever created.

0014 Additional heat energy generators, such as hydrogen-deuterium/coke/wood/organics burners are placed inside the third 3rd heating stage power air duct 24. This burners are supplied with a combination of super pre-heated oxygen-air 32 and superheated organic vapors 33 out of wood/trash distillation 38 by passing the combination thru multiple tubes 23 placed inside the main tail pipe 25. An additional heat energy contributor fusion-oven 26 is placed into the 3rd heating air duct

24 wherein the electrolysis device 31 supplies deuterium into the diesel/gasoline/ deuterium engine 26A and into the plasma electro-fusion torch/oven 26 *which electrocutes a stream of pre-superheated deuterium in order to supply fusion heat into the*
5 *3rd heating duct 24.* The diesel/gasoline/deuterium engine 26A supplies heat energy by its tailpipe 26B into the main tailpipe 25 wherein the radiator 23 recaptures the heat energy expelled by the diesel/gasoline/deuterium engine 26A. The electric generator 3 supplies direct current electric power to the
10 electrolysis device 31 for the constant production of deuterium to feed the deuterium engine 26A and to feed the electro-fusion torch 26. Note that the deuterium-containing supply tube is coiled around the combustion chamber or fusion oven 26 in order to superheat the deuterium before the deuterium gets out
15 of the nuzzles.

0015 The superheated air-water vapor then push out thru the power turbine 2 , and then same hot air exhausts into the tailpipe 25 thru across the radiator 23 that powers the
20 reciprocating piston engine 28. Note that the large piston 28 is more powerful than the small piston 27 which is therefore driven thru the connecting rod 29 in order to inject compressed air into the heat absorbing radiator 23. The superheated compressed air then push the larger piston 28 and exhausts thru
25 the tailpipe 30 which communicates with the pre-heated air duct 11 to recapture the exhaust heat.

0016 The superheated air-water vapor/gas then proceeds thru the tailpipe 25 where it heats up the deuterium supply tube, heats up the organic gas supply tube 33, heats up the oxygen-air

supply pipeline 32 to provide high efficiency combustion to the lumpy fuel 34, heats up the heat absorbing radiator 23 which is inside the header air duct 24, heats up the small radiator 23, located at the far down stream of tail pipe 25, that powers the
5 small gas turbine engine 1-2-3 which exhaust thru the water heater 36 which in turn deposits hot water into the water tank 37, --- then same hot gas heats up the radiator 23 that provides hot air to the heating system 34 and 35 of the building, --- then same hot gas heats the wood/trash distillation oven 38 which
10 supplies organic gas thru pipe 33 and also supplies organic gas into the cold chamber 39 which liquefies the organic gas, --- then same hot gas heats the trash drying conveyor 40 which deposits dried trash into the bin 41, and finally, the waste air, which at this point is now just a warm air, exits thru the exhaust
15 chimney 43 which is communicated to an air cleaning device as illustrated by Fig. 2. The chute 44 supplies trash into the trash drier 40. *It should be noted at this point that the unburned gases from the oven of the lumpy fuel 34 and the excess hydrogen/deuterium from the oven 26 are further oxidize to a*
20 *clean burn by the super hot oxygen-air from the radiator 22 and from the radiator 23 thereby producing more heat energy.*

0017 It is hereby extremely emphasized further that it is my new idea, hereby applied for patent, that charcoal which does
25 not melt, either powdered or granulated, is a very effective very low cost heat barrier or insulator, hence, the heat insulator 42 is made of charcoal wrapped around the tail pipe 25 to maximized conservation of the tail heat energy. An additional heat conservation barrier is a ceramic paint around the tailpipe 25.

0018 It is further hereby extremely emphasized that it is my new idea, hereby applied for patent, wherein hydrogen-deuterium is produced by electrolysis of sea water or heavy water in a strong confinement where air is zero, so that the evolving hydrogen-deuterium, and oxygen, are automatically in the form of liquid, there being no air gap/space where the heavy water is pushed around by the expanding gases, and wherein further, the confinement submerged under the sea at about one mile deep so that the static pressure of the water head is enough to liquefy the hydrogen gas. In this way, there is more need to spend additional energy and equipment in trying to compress the hydrogen gas in high compression until it becomes liquid. The liquid hydrogen-deuterium is will then be ready to be fed into the diesel engine for fusion, or placed in capsules for detonation under water and underground.

0019 It is further hereby extremely emphasized that it is also my new idea, hereby applied for patent, that a new device for pollution control is now created in this invention in the form of the *hydrogen/fusion oven 26 in addition to platinum placed at the end after of all the fuel combustion processes in order to serve as high temperature catalytic converter or Catalytic Reduction of the NOx produced at the upstream combustion chambers*. The *bright beauty* of this new technology is that the heat energy of the catalytic oven is captured to provide ~~more~~ power to the engine.

0020 It is further hereby extremely emphasized that it is my new idea that the heat absorbing radiators 9 and 22 are also used to capture heat energy from hot waters created by erupting

Volcanoes underwater or on the ocean floors in order to contribute energy into the herein presented power plant.

0021 It is further hereby extremely emphasized that it is my
5 new idea, which is hereby applied for patent, wherein the
method of storing electric energy is in the form of hydrogen-
deuterium, which means that the generated electric energy is
converted into hydrogen-deuterium by electrolysis or decom-
position of heavy water, and the hydrogen-deuterium and the
10 oxygen are stored in multiple storage tanks in the homes and in
various facilities who have electric generating units, such as
windmills, solar, and/or engines.

0022 It should be noted at this point that the reader of this
15 presentation is supposed to be a person skilled in the art and
therefore should have a good understanding of what a radiator
tube is and how it is constructed and does not have to be
invented again. What has been invented herein is the new
function of the radiator tube as a participant in the whole
20 apparatus of the engine in the same way that the old one-way
check valve keeps participating in new inventions. It should be
noted further that the gas turbine engine, steam engine, fuel
cell, diesel engine, gasoline engine, internal combustion engine,
reciprocating piston engine, lumpy fuel oven, solar trap,
25 wood/trash distillation oven, air duct, radiator, and trash drying
conveyor are all old existing devices and therefore do not have
to be invented in this presentation. One newly created
distinctive device applied for patent in this presentation is that
the radiator's individual hot tube is inserted inside another
individual cold tube so that the cold air totally engulfs to pick

up engulfs to pick up all the heat energy out from the hot steam/gas tube in a maximum efficiency. The makers and assemblers of this new device/power plant are supposed to be skilled the art, hence, they should know very well how to produce the spare/component parts and they should know all the necessary connectors/bearings to complete the assembly. It should be noted at this point that all the needed materials and component parts are presently available in the open market. Hence, those components need not be reinvented.

0023 Fig. 2 -- illustrates a new idea and innovative cyclone dust collector unit identified as No. 45, hereby applied for patent protection, same collector being in the form of a vertical axis drum 46, which is directly communicated in series, thru section 1 -- 1, serving as a continuation of the engine's tail pipe 43 to take all the air exhaust of the gas turbine engine's tail pipe 43 of Fig.1 at the extreme end of its exhaust tail pipeline in order to remove particles of ashes expelled by the exhaust power turbine 2. The dirty air from the gas turbine passes thru the air duct 43 that is eccentrically communicated to the upper most portion of the drum 46 in order to make the air travel into a spiral downward motion in order to exit upward thru the open bottom of the central exhaust pipe 47. The spiral motion of the air produces centrifugal force upon the dust floating in the air, thereby driving the dust particles toward the side walls of the drum 46. It should be noted from the figure that there are plurality of radial vertical walls 52 spacedly arranged around the drum 46, wherein, each wall 52 has one vertical edge 53 pointed toward the central exhaust pipe 47 while the other edge of wall 52 is pointed outward to and attached to the inner side

of drum 46. It is hereby extremely emphasized and hereby applied for patent protection, that the function of the walls 52 is to provide a plurality of instilling spacious outer calm rooms along the periphery of the drum 46, so that the dust being pushed by centrifugal force will get trapped by the still air in-between the walls 52 and made to settle down. To prevent downward movement of dust-air mixture in between the walls 52, there is a plurality of floors 50 spacedly arranged in several levels in order to maximize instilling of the air and maximize settlement of dusts in the calm room in-between among the walls 52. Same floors are made inclined to make the accumulated dusts to slide down toward wall 46 and to exit thru the valve 54. The total cover plate sealed roof 48 is provided to force the waste air to move downward to the bottom of the exhaust pipe 47. Additional instilling walls 51 are also provided to further trap dusts. To make the unit 45 most efficient in collecting dust, it is hereby further extremely emphasized that the *vertical walls 52 must be made as wide as possible such that the distance between point a to point b or point c to point e -- is made at least one third 1/3 of the diameter of the drum 46.* Additionally, the height of the walls 52 --- the distance between point c to point d must be at least twice or 2 times the distance from point a to point d *to make it most efficient calm settling room dust collector.*

25

0024 Fig. 3 -- illustrates a new embodiment of a new and innovative idea of a dust-smoke collector unit No. 49, hereby applied for patent protection, same collector being in the form of a wet zigzag box air duct, which is communicated in series with unit 45 thru section 2 - 2 of the exhaust air duct 47 of Fig.

2, air duct 47 of Fig. 2, serving also as a continuation of the tail pipe 43 of Fig. 1 to take all the waste air coming out from the exit pipe 47 of Fig. 2, --- in order to further clean the waste air from the gas turbine engine of Fig. 1. This unit 49 is made wide and accommodating in order to reduce the air pressure required to push the waste air thru it, as it is made into a wide rectangular box zigzag air duct, which starts with the vertical entrance box 43, then thru the horizontal air duct comprising of a flat roof-ceiling 60, a water containment floor 57, a plurality of rough-wet surfaced air-deflector walls 58 spacedly attached to the ceiling with enough air clearance from the floor, a plurality of rough-wet surfaced air-deflector walls 59 with enough air clearance from the ceiling spacedly attached to the floor in-between the deflector walls 58, and an outlet mouth box 61 to 62. Each rough-wet surface 58 and 59 must be facing the in-coming waste dirty air in order that the dust and smoke will get stocked to the wet surface. It should be noted that there is wide space between the deflector walls 58 and 59 to remove unnecessary energy to push the air thru this air duct. It is further extremely emphasized that the ceilings and floors are also air deflectors, hence, same are made also made rough and wet. A low grade water supply is pumped from underground and injected thru pipeline 55 which has a plurality of pipe- tube branches 56 spacedly piercing downward thru the roof 60 at a good distance of one foot in front of each wet surface wall. Each tube branch 56 is provided with a plurality of water-misting spray nuzzles to optimize water presence into the air and onto the rough-wet surface ceilings and deflector walls in ceilings and deflector walls in order to maximize collection of dust and smoke. The floor is made into an inclined water carrier

to collect the dirty waste water which exits thru the outlet valve
54 to be filtered and recycled back to pipe 55. It is hereby
emphasized that the zigzag air duct 57 -- 60 is made longer to
be able to collect more dust but then there is more energy spent
5 to push the waste air thru it. Hence, it should be made enough
to pass the allowable standard of air pollution.

0025 FIG. 4 -- illustrates an embodiment of a new and
innovative engine or power plant used for producing energy to
10 the maximum efficiency of output or conversion of every unit of
fuel being spent, serving as, but not limited to: locomotive
power for cars/trucks or transportations for land, sea, and air,
for home electric/hydrogen generators, for generators in various
facilities, and for generators in utility companies, --- wherein,
15 the internal combustion piston engine 26 is feed with gasoline,
diesel fuel, and hydrogen-deuterium fuel by the fuel pipeline 33;
--- wherein, for maximum efficiency of burning the fuel, the
diesel / gasoline engine 26 is provided with at least two hybrid
sparkplugs that have no anode in order that the *hydrogen-*
20 *deuterium fuel is subjected to heavy electric arc superheating to*
attain electric plasma and fusion fire in the combustion
chambers; --- wherein, for further efficiency in utilizing the
heat energy produced by the plasma and fusion, the heat energy
expelled by the engine 26 thru its coil tailpipe 27 is recaptured
25 by the heat absorbing coil radiator pipeline 23 containing the
compressed air pumped in by the compressor 1, same
compressed air encloses the hot coil tailpipe 27; --- wherein, to
safeguard against overheating of the piston engine 26, its
combustion chambers are submerged in cold waters by more

rapid pumping of the cooling water and by making more water spaces around the combustion chambers; --- wherein, for further efficiency, the heat energy produced by the catalytic converter assembly/unit 26A is recaptured by the heat absorbing coil radiator pipeline 23 which encloses same catalytic converter that is connected in series to the coil tailpipe 27 at its upstream 1/5 section; --- wherein, for further efficiency, the heat energy taken out from the body of the engine 26 and contained by the water cooling coil pipeline 28 is recaptured by the heat absorbing coil radiator pipeline 10 which contains compressed air that encloses the hot water cooling coil pipeline 28 which is made into as much coils as possible to collect all the heat energy from same water; --- wherein, for maximum efficiency of heat transfer or heat energy collection into the collector coil pipeline 10 and 23, the cold compressed air from compressor 1 is directed to start absorbing heat energy at the downstream end of the coiled tailpipe 27 and from the downstream end of the coiled water cooling pipeline 28, -- the purpose of this is to prevent expelling heat energy into the outside atmospheric air; ---- wherein, for further efficiency, an additional water pump is connected in series with the water cooling coil pipeline 28 for rapid water cooling circulation inside the engine 26 as there is too much heat produced by the plasma-fusion fire in the chambers; --- wherein, for further efficiency, the heat energy collected by the radiator 10 is totally transferred to the radiator 23 by direct transfer of the pre-heated compressed air in a series connection, the radiator 23 being at the downstream; --- wherein, for further efficiency, some of the cold compressed air from the compressor 1 is circulated around the engine block 26 by means of a heat absorbing

5 radiator containment jacket around the engine block 26 to collect the heat energy from the surface of the engine block 26 before proceeding to joint the air inside the heat collector radiator 10; --- wherein, to effect the harvested heat energy, which has been always wasted in the prior arts, the superheated compressed air inside the radiator coil pipeline 23 is all directed into the power header pipe 24 in order to push the exhaust power turbine 2 which drives the compressor 1 and also drives the DC generator 3 which in turn directly drives the electrolysis machine 31, *hereby emphasized --without voltage regulator,* which fill up the hydrogen-deuterium storage tank 7 that supplies the deuterium to the engine 26 thru the fuel pipe 33, the heavy water stored in the tank 20 being constantly supplied into the electrolysis machine 31; --wherein, for further efficiency, the hot air exhaust expelled by the power turbine 2 is directed to pass into the coiled tailpipe 25 which encloses another branch of the cold compressed air radiator coiled pipe 10 which then transfers the pre-heated compressed air into the radiator 23 thru pipe 11; --wherein, for further efficiency, the engine 26 is turbo-charged with cold compressed air from the compressor 1 by way of the air port 5 which is supplied thru a branch of radiator 10; --wherein, for further efficiency, the air control valve 21 is provided to equalize the air temperature of pipe 11 with the air temperature at the downstream end of coil radiator pipe 10; --wherein, for further efficiency, distilled water is mist sprayed into the intake mouth of the compressor 1 to produce high density air intake; --wherein, a heat insulator 42 jacket of various kinds which is more preferably made of powdered charcoal wrapped around the heat collector coil pipes 10, 11, 23, 24, and 25 to prevent heat seepage into the

open atmosphere; --- wherein, for further efficiency, the engine 26 is geared to drive additional electric generator to contribute direct current electric power into the electrolysis machine 31 in order to produce much more hydrogen-deuterium fuel for the engine 26; --- wherein, for further efficiency, the engine 26 is geared to drive the compressor 1 which in turn drives the electric generator 3 for a good start of the gas turbine engine 1 - 2 which later on, as it picks up power, will be the one driving the engine 26; --- wherein, for further efficiency, the gasoline-diesel fuel is shut off and only the hydrogen-deuterium is being fed into the engine 26 because there will be too much hydrogen-deuterium being excessively produce for storage; and wherein, for further efficiency, the hybrid muffler 29 is provide, as usual, to prevent noise generated by the tailpipe 27, but in this invention, is also made into a water boiler and heavy water boiler separately supplied by a water tank and the steam is directed separately to passed thru a plurality of coiled tubes exposed to the open cold atmospheric air for rapid condensation into distilled water to be supplied into the compressor 1 and the distilled heavy water is stored into the water tank 20. In summary, the heat energy expelled by the engine 26 is utilized to produce deuterium fuel for the engine 26, to distill ordinary water for the compressor 1 and to distill heavy water for the electrolysis machine 31, and to turbo-charge the engine 26 with cold compressed air by the compressor 1. Alternatively, the hot air in the tailpipe 27 may be used in the distillation of drinking water while the car/truck/bus is traveling on the road, since there is too much deuterium produced already stored in the car, by an additional branch of the tailpipe 27 directed to a boiler which may be shut off by a control valve when all the water

loaded in the car has been distilled. It is further noted at this point that there is so much heat energy created by plasma-fusion done in this engine or power plant, therefore, a new technology is further developed for the production of abundant distilled water in the homes and municipalities out of the ocean water, underground water, and recycled water which ever is available, -
5 -- by using the heat energy of the tailpipe 27 for the evaporation process, and then recapture the heat energy given off by the steam in the process of condensation by the radiator 10 and 23,
10 of which new application of the plasma-fusion energy and the recapture technology is hereby applied for patent protection.

0026 FIG. 5 --- illustrates a new embodiment of a new and innovative power plant identified as No. 11 floating on the water, lake/sea/ocean, or man-made lake, serving to capture and
15 harvest the heat energy given off by the detonation of a hydrogen bomb 34 by a process: --- wherein, for the safety of the apparatus 11, the hydrogen bomb 34 is detonated deep underwater so that the heat of the flame is transferred outright
20 to the water, thereby preventing meltdown of the structures 11, and thereby producing a boiling water; --- wherein, a perforated roof or dome 23 is placed underwater above and covering the detonation spot in order to delay the flame from rising up and same dome is provided with perforated hulls 22 to distribute the
25 flames into the water; --- wherein, the detonation spot is surrounded by heat insulation walls 27 to confine the heat energy to a very limited amount of water in contact with the boiling water; --- wherein, a rigid floor 39 is place at a good distance below the detonation spot to prevent cracking of

the floor 39 serving as confinement enclosure to prevent downward scattering of the hot water; --- wherein, a heat insulator 42 is provided covering the floor 39 and covering the lower parts of the dome 23 to prevent seepage of heat energy, the dome 23 being anchored to the floor 39; --- wherein, a plurality of heat absorbing coiled tailpipe radiator 25 is submerged into the hot waters and into the upward path of the hot steam that is rising upward from the boiling water, same tailpipe radiator 25 contains all the hot air expelled by the exhaust power turbine 2, and the hot air is made to follow thru the coiled tailpipe 25 upward until allowed to escape thru the chimney 43 into the free atmosphere; --- wherein, a plurality of heat absorbing/collector coiled radiator pipeline 9 and 10 containing the cold compressed air driven by the compressor 1, same cold compressed air radiator 9 and 10 spaciouly enclose the hot air tailpipe 25 and coiled to follow according to the coils of the tailpipe 25 until fully communicated to the power oven 24 which contains the plasma torch 26 and delivers all the compressed super hot air into and to push the exhaust turbine 2. It should noted that the oven 26 is fueled by hydrogen-deuterium which is subjected to heavy electric arc from high temperature electrodes while traveling its way out along a tunnel created inside a high melting point materials, such as, firebricks, etc., in order to generate heat energy from plasma electric torch and fusion. This oven is shut off as soon as there is enough energy harvested from the detonation of hydrogen bomb. As soon as the exhaust power turbine 2 starts running, it will start driving the compressor 1 thru the drive shaft 5 and also start driving the electric generator 3 which supplies electric power for the electric arc action in oven 26. *As a highlight*

of this invention hereby applied for patent protection, this new process/method of detonating the hydrogen bomb 34 is done: 1. by exploding a confined dynamite with a liquid deuterium confined in soft container at the center of the dynamite which
5 then hammer an implosion action upon the already pre-super-compressed liquid deuterium; 2. by confining the liquid deuterium by means of a strong steel cylindrical/spherical container and the dynamite is exploded at the center of the liquid deuterium to hammer a super-high compression upon the
10 already pre-super-compressed liquid deuterium; 3. by confining the liquid deuterium in a non-electric material strong container which is provided with metallic multiple electrodes on opposite sides to created a multiple heavy high voltage electric arc across the liquid deuterium, thereby, the liquid deuterium
15 becomes superheated and super-compressed , -- hence, fusion is attained. It should be noted at this point that the strong outer container for the hydrogen bomb must be at least 6 inches thick, depending upon the diameter of the bomb, high-carbon steel molten poured in a cylindrical / spherical mold. In the case of
20 the electric arc hydrogen bomb, the strong outer container must be at least but not limited to a 12 inches thick glass molten poured in a cylindrical / spherical mold to be able to hold the high pressure of compressing the deuterium into a liquid form, and further to prevent short circuiting the high voltage electric
25 arc.

0027 In order to prevent short circuiting the electric power supply in the efforts to detonate the hydrogen bomb 34 by electric arc, It is hereby extremely emphasized and important, as a key element for this patent applied for, that the water used

to submerge the hydrogen bomb must be a distilled water because the big reason for this is that pure water does not conduct electricity, such that the high voltage electric power to produce the heavy electric are inside the liquid deuterium is carried by wires or conductor submerged into the water, -- the switch of which is above the water line 39. The electric contact points for the electrodes of the bomb are at the down end of the conveyor-railway 30 such that the stopper 33 places the electrodes right in contact with the electric terminals. The plurality of free inlet/outlet doors 29 are provide all around the foot of the wall 23 to provide and allow water exits during bomb blast.

0028 It is but wise to take the opportunity to use the abundant heat energy produced by fusion into the distillation/purification of low-grade, subterranean water, recycled water or ocean water. The conveyor-railway 30 are made temperature resistant, as it will be melted by the fusion fire, into which the electric cable conductors are embedded and insulated free from the salt/ionized water, and same conductors are further embedded free from saltwater into and end inside the capsule of the liquid deuterium serving as electrodes therein, to prevent short circuit by the salt water. The other ends of the conductors are extended up above the water where the detonation switches are located. The gate valves 31 and 32 are provided for safe placement of the bomb 34 down thru the conveyor 30 by alternately opening/closing the valves. The room 35 is provided for launching station for the bombs into the conveyor 30. The heat insulator 42 is provided on the floor 39, and upon the lower portion of the dome wall 23 to prevent

meltdown of the structures. *It is hereby extremely emphasize that the bomb is detonated under water about at least 100 feet deep and the diameter of the dome wall 23 is at least 100 feet wide to provide enough room for the blast for the safety of the structures.* Although the volume of the water involve is too much, successive detonation of bombs will make the whole contained water into boiling temperature. The heat resistant insulator 42 on the foot of the walls 23 and on the floor 39 is made into compressed air bubbles contained in flexible tubes/chambers laid on the floor and walls serving as shock absorbers. Further, the floor 39 is also made of chambers of compressed air to make it pliant and elastic in order to withstand the shock of the blast. To maintain the water level 39 the floater 8 is provided to control the valve 19 which allows automatic supply of distilled water thru pipeline 28, thru the free inlet/outlet door 29 and into the boiler or steam generator chamber 4. The up rising super hot steam from chamber 4 heats up the water above the boiler hulls 22 and further rises thru to heat up the coiled heat absorbing radiators 9 and 10, some of which are submerged into the hot waters to collect the heat energy. As there is a necessity to maintain pure water in the detonation chamber 4, all the steam going up passed across the radiator 10 is taken up by a plurality of coiled pipeline assembly 12 which is exposed to the cold wind 13 to produce distilled water that is deposited into the tank 20. By means of the gate valve 21A the water from tank 20 transfers to the tank 7 in order to maintain the water level 21. It should be noted also that the cold upstream portion of the radiator 10 condenses plenty of the

rising steam, hence, the radiators 9 and 10 are inclined down to the outer end to make the condense water vapor cling and travel along the bottom of the radiators 9 and 10 where a water collector gutter is installed to make drinking water. Any excess
5 uncondensed steam is further condensed by the plurality of cold air/water tubes 14 installed across the chimney 15. It is noted that passing cold air thru the tubes 14 consumes less energy than passing cold water thru same tubes for purposes of
10 condensing the steam in desalination process. The cold air during the night is pushed thru the tubes 14 to enhance condensation of the steam. All excess water vapor are allowed to exit into the atmosphere. As the helium, which is produced by the fusion blast, is lighter than water vapor, it floats to the ceiling of the chimney 15 and is therefore sucked by the
15 compressor 18 at the upper corner of the chimney 15 and thereby deposited into the container 17. As there will be so much distilled water, it will be delivered in enough quantity to supply the needs of the town or city and irrigations for the farms.

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0029 For purposes of producing abundant deuterium, the detonation-boiler chamber 4 is totally filled with 100% heavy water which then will be evaporated by the fusion heat energy and the distilled heavy water is deposited into the water tank 20.
25 The distilled heavy water is then subjected to electrolysis to produce deuterium and oxygen and stored for any future purposes.

0030 It should be noted further in this FIG. 5 that the gas turbine engine 1-2-3 must be above the water, hence, the whole

apparatus is attached to a plurality of floaters 37 of any low cost kind, including but not limited to, bundles of empty/waste bottles 44, boxes, pipes, and chambers of glass/metals, or inflatables, - placed inside bags, net sausages, baskets, waste rubber tires, and assembled structural frames made of glass or steel, --- and same floaters tied to the lower structures of the power plant by strap-ropes. These methods and designs for making floater devices, most specially the use of empty plastic bottles 44 is one of the highlights of this invention applied for patent rights. The outer portion of the bottom floor 39 which is actually a platform is made rigid and as wide as possible to be able to serve as an underwater anti-oscillation wide-face device to minimize oscillation of the whole apparatus by the water waves specially during windy weather, as illustrated by the movement 45. The platform is made rigid and good floater by means of the crisscrossing walls 40 made of glass/ceramics, metals, wood, etc., -- forming a horizontal array of boxes with open bottom containing compressed air or inflatables, and a strong sealed top cover serving as floor which then can carry houses/homes, fertile soil for agriculture and windmills on the ocean, of which new idea is a highlight of this invention and applied for patent.

0031 FIG. 6 --- illustrates an embodiment hereby identified as apparatus 12 in support for a new and innovative most efficient usage of fuel in the process of smelting materials, including but not limited to, glass into various devices and structural forms, including but not limited to, cubicles/rooms of houses, homes, large hotels and buildings, boats, land transportation, large bottles, water transportation, large con-

controlled climate chambers for agriculture and homes, large
underwater chambered homes and transportations, large
air/water pipes, large pipes for floating seawalls, fishponds,
swimming pools, and for floating ocean platforms, etc., ---
5 wherein, hydrogen-deuterium fuel is used in electric plasma
fusion torches 5 to melt the sand materials for glass
ceramics, metals, etc. ; --- wherein, alternative fuels, including
cock, charcoal 34, wood, trash, are fed into smokeless burning
ovens/furnace 32-33-35 directed to melt sand/lahar/stone/dirt to
10 make glass/ceramic structures ; --- wherein, a steam boiler 22 is
placed right above close to the melting pot 13 to recapture the
excess heat energy not absorbed by the melting pot 13 in order
to contribute high pressure steam into the compressed air 24
thru the steam duct 6; --- wherein, the fuel cell 4 is made to
15 contribute high temperature steam into the compressed air 24
thru the steam duct 6; --- wherein, the heat energy inside the
annealing lehr 16 and 27 for the molten glass are recaptured by
the cold compressed oxygen air injected by the compressor 1
thru the cold air duct 18 and the resulting hot oxygen air is
20 supplied by the nuzzle 29 to further oxidize the un-burned
fumes from the trash burner 35 and to contribute more heat into
the melting furnace 13 and into the boiler 22; --- wherein, the
excess heat energy not absorbed by the melting furnace 13 and
by the boiler 22 is directed to get into the hot tailpipe 25; ---
25 wherein, the cold heat absorbing multiple pipe radiator 9,
containing the main compressed air 24, is submerged into inside
the hot tailpipe 25, starting from the downstream end of the
tailpipe 25, to recapture all the heat energy that had been
introduced into the tailpipe 25 by the various heat producing
devices 4, 5, 35; wherein, the super heated compressed air 24 is

directed to push the power exhaust turbine 2 which drives the compressor 1 and also drives the electric generator 3 thru the drive shaft 10; --- wherein, the electric generator 3 and the fuel cell 4 are dedicated to produce abundant hydrogen-deuterium fuel to produce more heat energy at the electric-plasma torch 5 and at the fuel cell 4; --- wherein, the new and innovative processes of producing hydrogen-deuterium fuel are: 1. that the electrolysis machine 31 is connected in a series with the plasma electric torch 5 so that all the electric current passing thru the torch 5 are all carried by exchanging/splitting ions in the water in the evolvment of hydrogen gas, and 2. that the heat energy from the plasma/fusion torch 5 and the heat energy from the trash fuel 34 are used first for melting glass because by way of the collector radiator 9 and 23 all the heat energy is recaptured back to produce the hydrogen-deuterium fuel; and --- wherein, the heat energy at the downstream extension of the tailpipe 25 is further recaptured by the cold compressed air coiled pipe radiator 23 to contribute more hot compressed air into the main compressed air 24. It should be noted that in the process of smokeless trash burning, part of the super hot oxygen air 24 is directed to pick up more heat on its way thru the oxygen pipe 33 by passing thru the super hot exhaust air duct from the furnace 35. The oxygen supply pipe 33 is then branched into a plurality of elongated tube nuzzles to pick up heat from the fire before the super hot oxygen actually gets in contact with the fuel 34 and with the gas fumes evaporating from the fuel 34. The tubes 32 are further provided with side perforations to provide hot oxygen to the gas fumes that escaped the nuzzles 32. The unit 30 is a step up transformer-rectifier-inverter assembly to jack up the voltage of the direct current to at least 10,000 DC volts to

be able to produce a heavy electric arc in the plasma electric torch. Additionally, a large capacitor is also installed before the plasma torch to produce a large spark upon the deuterium inside the chamber 5. The conveyor 14 injects the sand materials to a chute where it is pre-heated, by the outgoing exhaust hot air from the furnace 35, to high temperatures on its way to the melting furnace 13. The molten glass from the melting pot 13 flows down thru the chute 15 and into the mold 17 where it is annealed and cold down by the cold compressed air supplied by pipe 18, -- into a large structural member for erection on salt waters. Likewise, in another new process of smelting glass, the mold 19 is filled up with sand which is molten by the plasma-fusion torch 5, wherein, the mold 19 on rollers is the one moving under the torch 5 in order to progressively melt the stock pile of sand along the length of the mold 19, which is also annealed by the cold compressed air supplied by the pipe 18. Additionally, the remaining heat energy at the downstream end of the tailpipe 25 which becomes tailpipe 43 is recaptured by the water heater coiled pipe heat absorbing radiator 36 before the waste warm air, no longer hot air, is allowed to escape out into the free atmosphere thru the chimney 43. The hot water from the heat collector 36 is then mist sprayed into the vacuum chamber 8 for rapid evaporation as it is sucked out by the pump and condensed thru the cooling radiator 21 and the distilled water is deposited into the tank 20 for production of drinking water out the otherwise wasted heat energy in the process of smelting. The salt/low-grade water in the multi-pipe heat collector radiator 38 is pre-heated by solar light during the daylight. The distilled water is also used to be mist sprayed to the intake of the compressor 1 in order to turbo-

charge the gas turbine engine, of which all the above new ideas presented by this FIG. 6 are hereby reserved in the proprietary rights of the herein inventor and applied for protection by a Letters Patent. It should be noted that for quick understanding, this FIG. 6 is showing a straight heat absorbing radiator 9 which makes the drive shaft 10 very long, but as shown in FIG. 1, the actual construction is that the power turbine 2 is made very close to the compressor 1 by making the air duct radiator 9 into a plurality of multi-coiled radiator pipes.

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0032 FIG. 7 --- illustrates an embodiment of a new and innovative apparatus for a power plant 13, in the maximum usage of the heat energy absorbing coiled radiator pipes, serving as a newly invented device in support of the newly invented processes, as highlights of this patent application, comprising: -

15 - 1. a process for the production of fusion heat energy in the efforts to produce electric power, wherein the liquid deuterium 7 is placed inside a soft container which is surrounded by a bomb 6, which in turn is tightly contained by a thick strong

20 steel and glass container 5 and the bomb 6 is detonated by radio or remote control; -- 2. a process for producing diamonds by using the high temperature fusion heat energy by placing a compacted ball of graphite 8 contained in a soft metal container submerged in the liquid deuterium 7 thereby the graphite is

25 molten and compacted in deep water without chance to evaporate when the hydrogen bomb 6 is detonated; and --

- 3. a process for capturing and converting the evolved heat energy from the hydrogen bomb 6-5-7 by detonating it deep underwater inside a cylindrical/spherical basket 4 of perforated steel made wide enough and strong enough so as not to be

destroyed by the high temperature blast; --- wherein, to further capture the heat energy, the basket 4 is provided to distribute the fusion fire to a maximum contact with the water, thru the plurality of perforations, in order to convert all the fire into a hot water; --- wherein, to further capture the heat energy, as the hot water will rise up to the surface, it is then confined by the floating heat insulator fence/wall 15 made deep enough against the intrusion of the surrounding cold waters of the lake/ocean; --- wherein, to further capture the heat energy, a plurality of multiple coils of heat absorbing radiator pipes 9 and 10 are provided, submerged into the hot waters and also made as roof containment dome against the rising hot steam; and --- wherein, cold compressed air is introduced by the compressor 1 into the outer radiator 9 to absorb the heat energy from the lower temperature water towards the fence/wall 15, to start with, and then same now pre-heated compressed air is directed to pass into the inner radiator 10 to absorb heat energy from the high temperature water at the center boiling chamber, and since the compressed air becomes very hot, it then continue expanding with full force to push the exhaust power turbine 2 which drives the compressor 1 and also drives the electric generator 3 thru the drive shaft 14, -- thereby, the hydrogen bomb 6 energy is tamed as a genie to help mankind by way of this invention. The floater pipe 11 serves as transportation to carry the basket 4 on its way to the detonation spot. The suspension cable rope 13 is made long enough thru a hoist pulley so that the bomb is detonated to a deep of at least 300 feet to keep the molten diamond remain in solid state. The floater pipe 11 is partially filled with water so that the submergence is just 90% to prevent to much oscillation by the water waves while trying to place the

bomb on the exact position. Note that the heat absorbing radiators 9 and 10 are designed to have as much branches and coils as possible, horizontal and vertical and extended deep into the water to at least 100 feet to maximize with the hot water. It should be noted that the strong steel container 5 must be at least 6 to 12 inches thick in order hold the super pressure and to obstruct for a few seconds the release/escape of the super high pressure hammer and super temperature upon the already super compressed liquid deuterium in order to attain fusion detonation. Of course, there is an underwater weight attached to the bottom end of the radiator 9 and 10 to pull down and sink the radiators 9 and 10 into the deep water. The lake/ocean surface 39 indicates the relative submergence of the whole power plant as it is anchored floating on the ocean/lake.

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0033 FIG. 8 --- illustrates an embodiment of a new and innovative apparatus 1 serving as a new device in support of a newly invented process as highlights of this invention for the production of fusion heat energy for purposes of producing diamonds as a by-product in a new process of producing electric power, wherein, the key element and highlight of this invention applied for patent is that the container 7 keeping the deuterium 26 to stay in liquid form is made of cylindrical/spherical soft metal, such as, lead, copper, and aluminum sited on a lower curved die 8, so that when it is compressed by the upper curved die 5 same container does not crack and does not lose the liquid deuterium 26, thereby the deuterium is forced to fuse into helium, --- resulting to the release a fusion fire. In addition to the compression dynamite 3, the drop hammer 2 is raised to a height of at least 100 feet depending upon the weight of the

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hammer 2 and also depending upon the power of the dynamite 3 which explodes upon compression by the hammer thru the solid steel piston 4, just so to produce the require compression in the efforts to attain fusion. By action of the high pressure fusion
5 fire will liquefy the ball of graphite 28 without a chance to evaporate nor to oxidize as it is held in strong confinement 10 which is at least 12 inches in thickness made of high carbon steel wrapped around by taut fiberglass flat ropes. It is a requirement that the ball of graphite 28 is placed at the bottom
10 of the liquid deuterium 26 so that the blast will not throw out the diamonds, but rather push down to the bottom of the blast compartment and deposit the diamonds into the holes of the metal base 13 as the die 8 will be melted. It is further noted that there is a dike of clay 29 around the base of the graphite
15 ball 28 to prevent the deuterium getting below the graphite ball 28 to prevent it from being blown upward. It is also very important that there is a wall of fire bricks 6 to prevent melt down of the strong steel container 10. The steel block 12 also serve as containment floor to confine the fusion fire and the
20 diamonds. It is also a requirement that the containment block 12 is supported by a thick bed rock 16 on the ocean floor by drilling test, -- to maximize the compressive shock delivered by the drop hammer 2. In the efforts to capture the fusion heat energy into the water, it is required that the conveyor pipe 11 is
25 welded sealed to the bottom floor block 12, wherein, same pipe 11 designed to hold the implosion action of the water at the deep of at least 120 feet considering that its diameter is a required passage chute way of the large drop hammer 2 and the required height of 100 feet drop, hence, the vertical length of the pipe 11 must also be at least 120 feet. The drop hammer 2 is

provided with a space from the pipe 11 and also provided with a plurality of vertical holes 9 serving as upward air passage to relieve the pressure under the hammer 2 as it compresses the air in its way in the pipe 11 while it is speeding down to hit the solid piston 4. The pipe 11 is designed to be destroyed by the blast purposely to allow water to quickly get into the detonation chamber to save the diamond 28 from getting evaporated. The hoist cable rope 14 serves to pull the hammer 2 back to its high position. The water surface 15 indicates the relative submergence of the whole apparatus.

0034 FIG. 9 --- illustrates a new embodiment of a new and innovative apparatus 2 serving as a new device in support of a newly invented process of producing fusion energy for purposes of producing diamonds as a by-product in a new process of producing electric power, --- wherein, a ball of compacted graphite/carbon 28 is placed-submerged into and at the bottom center of a liquid hydrogen-deuterium 26 that is confined-sealed inside a strong at least 6 inches thick cylindrical/spherical glass/ceramics container 7, a material that cannot be dissolved by hydrogen, having a plurality of internal positive 14 and negative metallic 13 electrodes which cannot be dissolved by the liquid deuterium 26, same electrodes 13 - 14 had been baked with the glass container 7 and into the glass electric insulator 9 to make sure there is no deuterium leak and no electrical leak, there by the high voltage electric arc 3 is forced to jump across the liquid deuterium 26. A compacted clay 29 is molded concave at the bottom of the deuterium 26 serving as seat for the ball of graphite 28 to make sure that the diamonds so formed will not blow upward during the detonation, there

being no deuterium under the graphite 28. An additional compacted graphite 30 is an upward continuation of the graphite 28 to serve as contract point to create more electric arc 8 across the liquid deuterium 26. The glass container 7 is baked inside
5 of and onto the inner walls of the high carbon steel container 5 which is made strong enough to take hold of the high pressure and temperature for a moment, thereby requiring that the thickness of the container 5 must be at least 12 inches or more, depending upon the size of the deuterium being fused.
10 The positive and negative electrodes 13 - 14 are each connected to a high electrical conductivity copper rods 10 - 11 embedded into high melting point non-conductive materials, such as, fire-bricks 6 bonded together by molten pure glass. The high carbon steel basket 12 is a vertical cylindrical container, is protected
15 from melt down by the brick wall 6, is sited on a bedrock on the ocean floor, and is designed to serve as settling basket 12 for the diamonds 28 after the blast. The underwater perforated flat roof 4 is placed some 200 feet above the blast serving to distribute the fusion flames horizontally --- in order to
20 maximize water contact with the flames, --- in order to capture all the heat energy into the water and be harvested by the heat absorbing coiled radiator tubes. The basket 12 is hoisted up by the steel cable rope 15 which is attached to a horizontal aerial railway, in order to bring basket 12 to a safe place to pick out
25 the diamonds, and --- to recharge the whole apparatus with another capsule 5-6-7-9-10-11-13-14-26-28-29-30 of liquid deuterium 26.

0035 FIG. 10 --- illustrates an embodiment of a new and innovative apparatus 66 serving as a newly invented device in

support for a new and innovative electrolysis-fusion process of forced electrolysis that directly produce liquefied deuterium 26 without using a compressor pump, as highlights of this patent application, for the production of fusion energy, --- wherein, a
5 distilled hot heavy water 30 is subjected to electrolysis in the efforts to separate its deuterium 26 component from its oxygen 25 component; --- wherein, all the rooms/ spaces of the container 5 - 7 - 27 are all filled up with heavy water without air bubbles left unfilled with heavy water, and all outlets are
10 closed, -- in order to prevent any expansion of the deuterium 26 and of the oxygen 25 so separated, hence, they will be produced and forced to stay as liquids during the process of electrolysis without using a compressor pump that would consume so much energy to liquefy a gaseous deuterium. In the process of the
15 electrolysis, there is so much amount of temperature rise upon the liquid deuterium 26 and upon the liquid oxygen 25 in addition to the speed electrolysis requirement where the heavy water 30 is brought to high initial temperature at 95 degrees centigrade to double the speed of decomposition of the heavy
20 water without freezing the deuterium, hence, high alert must be taken by the operator to stay away some 100 yards away from the electrolysis machine 66 with underground shelter because fusion is attained by this simple electrolysis process. There being no expansion allowance in this electrolysis device 66, *the*
25 *molecules are pushed against each other by so much tremendous pressure that no one has ever imagined because liquid cannot be compressed. Therefore, by this apparatus 66 which directly produce liquefied deuterium is a new invention of cold fusion because it does not require magnetic compression nor million degrees of temperatures.* Hence, it is best to do this kind of

electrolysis- fusion process in deep waters in order to trap the fusion heat energy into the water. Since the deep ocean bottom is cold, it is required that a plurality of electrodes 13 - 14 are provided protruding inside the chamber 5 serving to produce high voltage electric arcs 3 across the liquid deuterium 26 in order to introduce high temperatures upon the deuterium, -- in order to attain fusion in the deep water. The compacted powdered organic materials 28, such as, wood, trash, plastics, etc., is placed, water sealed in plastic package, inside the container 5 to serve as an indicator or detector of the presence of liquid hydrogen-deuterium 26 which dissolves the organic powder 28 and disappears into the liquid deuterium 26. *Please note that this process of dissolving organics into liquid hydrogen-deuterium by means of this new apparatus, serving as among the highlights of this patent, is a breakthrough or a new invention in converting organics into oil or alcohol, and as a means of producing oil, without the use of splitting high temperatures and also a new invention of suppressing the high pressure of a liquid hydrogen because the organics is now holding down the hydrogen molecules.* It is further hereby extremely emphasized that organic materials must be dissolved into the hydrogen in order to remove the pressure of the hydrogen inside the tank and to ease the seal off problem in handling hydrogen. Further, the distilled heavy water 30 is tainted with color so that the water surface 23 will be clearly identified and *to stop the electrolysis process at that point of the water level 23 which must always be above the outlet seal 19 so that the hydrogen 26 will not get in touch to dissolve the seal 19 and escape out. It is 1000 time easier to seal off water/mercury 22 by rubber materials than to seal-off hydrogen*

26 because it dissolves all organic matter. Therefore, this is a new break-through or an invention to seal off hydrogen 26 by means of water or mercury 22 placed at the outlet. The deuterium is allowed to get out the chamber 5 by means of the gate valve 20 thru pipe 12 which is turned up above the water surface 23 to bring its inlet up to the deuterium 26 to get in, and then turned down under water/mercury hide from hydrogen-deuterium 26 to stop the escape of hydrogen. Please note that this method of sealing off any hydrogen-deuterium in any chamber --- by way of bent outlet pipe 12 that turns up and down, -- is a new breakthrough and is therefore it is a new invention/creation serving as among the highlights of this patent application. Sealing off the oxygen 25 inside the chamber 7 is not a problem with the valves and the sealants, hence, no need for the water 22 to stay above the outlet 24. The seal off valves 10 and 11 which sit on the rubber seal 15, are provided for purposes disconnecting the chambers 5 and 7 from the chamber 27 by unlocking the clamps 17 and 18 in order to transport the chamber 5 to a detonation site of a fusion power plant or engine. The sealer 21 is a rubber ring is provided as a high pressure water sealer in the form of a hard rubber. By way of the crank arm 34 the crank 32 move up and down the plunger rod 8 and 9 and the valve 10 and 11 to open the water way and to close the water way. The plunger rod 8/9 holds the valve 10/11 by means of catcher clip-ring which is easily disconnected. The valves 10/11 may also be gate valves. The apparatus 66 is assembled first, then laid down, then filled up with heavy water 30 thru inlet 29, which is in upright position when the apparatus 66 is laid down, to let out all air bubbles. The positive 6 and the negative 4 terminals are connected to a DC source/generator to

run the electric current thru the anode 2 to the cathode 1 witch
attracts the hydrogen-deuterium ions pick up electrons from the
cathode. The hydrogen-deuterium molecules are lighter than
water 30, hence, are forced to move up thru the water way
5 passed valve 10 and finally gets into the chamber 5 a liquid
hydrogen-deuterium 26. The same process is done with the
oxygen molecules 25. The cover plate 33 is some times
remove to open the manhole for the repair of crank mechanism
31, 32, and 8. It should be noted at this point that the chambers
10 5, 7, and 27 are made very strong with at least 6 to 12 inches
thickness of molten pure glass poured in a mold in order to
withstand the pressure of a liquid hydrogen at 95 degrees
centigrade.

15 0036 FIG. 11 --- illustrates an embodiment of a new
invention and innovative device to harvest maximum benefits
from any kind of fuel being burned or benefits from various
kinds of devices that burn fuel, including but not limited to:
engines or fuel cells 4, trash burners 8, oil or kerosene lamps
20 26, oil/gas stoves 26A, gas fuel burners, and crude oil burners, -
-- for baking or cooking oven 12-13-15, --- as a by-product
along with other new and innovative processes for the
production of hydrogen, electric power, and distilled water 7, --
in the efforts: -- to use the least cost fuel, -- to maximize the
25 adaptability and usage of various heat energy resources
including gas lamps 26, gas stoves 26A, trash burners 34, gas
engine electric generator 4, etc., alternately or all together used
in action to heat up the baking oven 12-13-15, --
--- wherein, an oil lamp/kerosene lamp 26, while in the process
of producing and providing abundant light for the house,

workplace, living vicinities, animal houses, its exhaust waste heat energy is made to pass thru a hot-air duct 24 which serves as a heat containment chamber;

5 --- wherein, an oil burning or gas burning stove 26A, while in the process of producing / providing heat energy for cooking, is made to pass its waste heat energy exhaust thru the hot-air duct 24 to contribute or to provide heat energy therein;

10 --- wherein, a smokeless organic fuel, wood, trash burner 8, while in the process of producing and providing heat energy for smelting or various industrial purposes, is made to pass its heat energy exhaust into the hot-air duct 24;

15 --- wherein, a fuel burning engine 4 or fuel cell, while in the process of producing and providing mechanical or electrical energy for industrial purposes, is made to exhaust its waste heat energy into the hot-air duct 24 to provide or to contribute heat energy therein;

20 --- wherein, an enclosed metallic chamber serving as a clean oven 12-15 is placed into the heat containment chamber / hot-air duct 24 and submerged into the waste hot gases to absorb heat energy there from;

25 --- wherein, a plurality of cooking plates or plates in conveyor 13, containing food to be cooked, are placed inside the clean oven in order to bake the foods; a fuel cell or an engine 4 that produce heat in driving various kinds of devices including an electric generator 5 has its exhaust tail pipe 6 directed to inject heat energy into the upstream end of the hot-air duct 24.

0037 The smokeless burner 8 is an elongated pipe tapering smaller at its exit nuzzle end and having a plurality of orifice or holes along its length serving to distribute oxygen air supply

into the flames and on to the organic trash fuel 34. The burner 8 is either vertical or horizontal but it must be submerged into the flames or submerged into the hot-air exhaust of the burning chamber because it is hereby extremely emphasized that the oxygen-air supply must be pre-heated to supper hot temperature before it gets in touch with the organic fuel being burned. It is hereby extremely emphasized that there must be a plurality of this burner 8 alongside with each other into the fire in order to evenly distribute the pre-heated oxygen-air into the gas fumes that are flying around with the flames in order to completely oxidize the black/blue smokes before leaving the burning chamber. The fresh oxygen-air inlet 11 must be well below the burning chamber and it is hereby extremely emphasized that it engulfs around the burning chamber in order that the new intake air is pre-heated by the hot outside walls of the burning chamber --- as a process of recapturing heat energy. This smokeless organic trash burner is very important to be used in cleaning residential areas while in the process of producing distilled drinking water and in the process of producing hydrogen to fuel the cars, transportations and for the conversion of trash into oil. It should be noted at this point that there are many alternatives for providing the burning chamber, one of which is an individualized concrete/firebricks or metallic drum filled up with trash and loaded on a conveyor or a merry-go-round carousel to successively get into the burning station directly under the burner 8.

0038 It is also hereby extremely emphasized that there are plurality of heat emitting radiator tubes placed inside the oven 12-15 under the cooking plates and above the cooking plates,

same heater radiator tubes serving also as part of the hot-air duct and same tubes containing hot gases expelled by the heat producing sources 4, 34, 26, and 26A, --- in order to maximized the cooking speed.

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0039 The downstream end of the hot air duct 24 is then communicated in series with the next hot air duct 10 which is a multi-coil air duct and which contains a heat absorbing multi-coil – multi-tubes radiator 9 that contains compressed air which is continuously injected by the piston or turbine compressor 1 starting in the tubes 9 placed at the down stream end of the hot air duct 10. It is hereby extremely emphasized that, while its is cool, the compressed air must start at the coolest down stream end of the hot air duct 10 in order to absorb the low temperature heat energy at the down stream section of the hot air duct 10. The pre-warmed compressed air then proceed thru the down stream section of heat absorbing tubes 9 which are in the higher temperature up stream section of the hot air duct 10. At the end of the downstream of the heat absorber tube 9, the compressed air is already superheated and therefore same compressed air ready to expand with full power. The hot compressed air is then allowed to pass thru the gate value 21, and proceeds to drive the exhaust Power piston or turbine 2 and exist into the hot air duct 16.

0040 The waste hot air from air duct 16 and from the hot air duct 10 then proceeds into the hot air duct 43 which contains a plurality of water boiler tubes or Vacuum evaporation chamber 18 which evaporates hot water by mist spray in a vacuum atmos-

5 where. The water vapor from the tubes/chambers 18, by its own pressures or by pump, then proceeds into the vapor separator chamber 22, and the pure water vapor gets into the condensation tubes 19 which are submerged in the cold water supply inside the tank 17. The condensed distilled water get out of the downstream end of tubes 19 and drops down into the distilled water collection tank 7. The uncondensed water vapor than proceeds up to the wind cold condensation multi-coil tubes 23 having its low points communicated to the condensate collector tubes 25. The condensation coil tubes 23 is either installed inside a wind tunnel or is just exposed a cross the open wind as a means for cooling the water vapor. Further, the water vapor is compressed in order to speed up condensation.

15 0041 FIG. 12 --- illustrates an embodiment of a new and innovative design of a floating platform 14-15, which has been indicated or illustrated in the herewith foregoing underwater platform 39,40,44 of Fig. 5 that is used to help partially float the whole apparatus of Fig. 5. Same platform consisting a plurality of air container including, but not limited to, bamboos, crisscrossing pipes 19-17, array of boxes created by crisscrossing walls 13-14 with sealed top cover plate 15 to trap air inside the boxes. Part 16 being the bottom edge of the wall 14. Further, the array of boxes 13-14-15-16 are filled up with a plurality of empty bottles 12 and empty pipes 17 which pierces several walls 14, purposely to make sure that there is no air leak allowing air escape from the boxes 13-14-15. It is also hereby extremely emphasized that the purpose of the walls 17-14-15 is to provide a stiff platform against the wavering water waves, hence, same walls at are also constructed in the form of

stiff/rigid structural truss enough to enclose the air container, some of which are bundled together in the form of sausages in baskets or bags of nets. This design of constructing a floating platform is extremely emphasized as one of the many highlight
5 of this invention applied for patent.

0042 --- For purposes of maximizing commercial use of this platform 13-14-15, and 17 & 19, the platform is floated above the water level 26, and the top cover plate 15 is overlain
10 by fertile soil 20 serving as agricultural bed for various kinds of plants 23. To prevent rapid evaporation of the irrigation water the surface of the farm soil 20 is covered with plastic sheet 22. The power/farm house 11 is constructed on the firm pavement 21. The whole floating platform is bordered by floating vertical
15 chambered pipes enough to stop the water waves and provided with mouth and valves to produce compressed air out of the splashing water waves. This vertical floating pipe boarder serves as floating sea wall which has been already claimed in my proceeding U.S. Patent No. 6,327,994 B1 and U.S. Patent
20 No. 6,293,121 B1. This ocean agricultural farm platform also serve as a carrier for housing projects, housing or habitation settlement on the ocean to expand the territories of various countries into and over the ocean. This ocean platform is also used as carrier for windmill farms 10 over the ocean to generate
25 electric power for the human settlement, to produce hydrogen fuel, drinking distilled water, and irrigation water for the ocean farm.

0043--- Additionally for purposes of maximizing utilization of air container and the ocean platform, the floater device is

made of crisscrossing empty pipes or bamboos to make it stiff/rigid platform with high buoyancy, and is made to carry power/home houses 11, buildings, windmills 10, drinking water in tanks, compressors, vacuum pumps for purposes of distillation of sea water for irrigation, and other equipment, wherein the empty pipes 17 & 19 serving as vacuum evaporation chamber into which, water is mist sprayed to speed up evaporation. The water vapor is then mixed with cold water in high pressure to speed up condensation. This new idea of vacuum evaporation chamber has been claimed under my U.S. Patent No. 6,293,121 B1. There being so much buoyancy made available, this platform is overlain by a plate flooring 18 which support the water tank 24-25 and the windmill 10 above the water surface 26.

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0044- FIG. 13--- Illustrates a new and innovative design for a boat, wherein, in the effort to maximize utilization of the air container floaters used in Fig. 5, one of which is the bamboo 12, which is now used to form a boat. The larger end of the bamboo 12 which is used to become the rear of the boat, clipped by water-splitting nose 30 for use when sailing rearward, same clip is also used at both ends, and the smaller end of the bamboo 12 is used to become the pointed front of the boat. A plurality of the bamboos of at least one clip are vertically stacked and each securely tied/fastened to central vertical rigid flat clip structure 26 which may be doubled, wherein, one stack of bamboos 12 are placed in-between the two clips 26 while the other stacks of bamboos 12 are attached to each left and right sides of the clips 26 to multiply the buoyancy of the boat. The smaller tip of the attached bamboos are tied together by flat

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ropes 27 or wires and tautly tied by a rope/wires 29 to the rear in order to bend the bamboos 12 up ward, such that the front tip of the boat is above the water. This boat serves many functions in the water community, including serving as carrier of water 25 in the tank 24, to serve as transportation and to serve as recreation boat, and to serve as demonstration to show to mankind to how easy it is to make a boat at the lowest cost.

0045 Fig. 14--- Illustrates an embodiment of a new and innovative construction of a boat showing a cross section of Fig. 13, made of bamboos or pipes 12 which are attached and clipped together to a central structure 26 which is a single/double/triple frame post to hold more pipes, to form a hull of the boat at low affordable cost. The hulls are interconnected together by a horizontal structure 28 to form a double hull boat. The boat is used to carry water and other all kinds of cargo 25 in tank 24. This method of constructing a boat has been claimed in my preceding U.S Patent No. 5,027,735 entitled or named "KASIPAGAN BOAT".

00046 Fig. 15 -- illustrates the embodiment of a newly invented apparatus in support of a new concept of process in converting the warm heat energy of the tropical ocean into electric power or into hydrogen, wherein, the newly invented partnership, between the gas turbine 1-2-3 engine and the heat absorbing radiator tubes 7 and 9, is used to the maximum effect or to maximize benefits out of the heat energy of the ocean's warm waters. By nature, the water under the deep ocean is very cold, while, the water on *the surface of the ocean is warmed up by the solar heat*, thereby a big difference in temperature is

existing in unlimited quantities of volume of water. To make use of the heat energy stored on the ocean surface in the most efficient process of harvesting energy, a plurality of the multi-coil heat absorbing radiator 9 are spread on the water around the engine 1-2-3. To make the heat collector 9 very hungry for heat energy, *the compressed air passing thru the tube 9 must be very cold in order to speed up heat absorption of the low temperature heat energy that surrounds the tubes 9.* Additionally, *the materials for the tube 9 must be aluminum --- it being the most efficient conductor of heat, and/or copper being the second most efficient heat conductor.* Therefore, there is a necessity to make use of the coldwater reservoir at the bottom of the ocean to serve as cooling agent. Hence, the cold water shaft 12 is created to conduct the cold water that is pumped up by the impeller 4, wherein, *part 11 is a stator fluid deflector in opposite direction against the impeller 4 -- as one highlight of this invention. The vane/blade 11 is in reverse action against the impeller 4 to speed up water pumping.* The pump impeller 4 is driven by the drive shaft 5, which is driven by the power exhaust turbine 2. The cold water rises to the horizontal cold pipe 8, which engulfs the multi-tubes 7 that contain fresh air from the atmospheric intake 6. The cold water in pipe 8 absorbs the heat from the air inside the tubes 7, hence, the air in tubes 7 shrinks because it becomes cold air, which becomes very dense air. The cold water in pipe 8 then continue to run for heat exchange until it exits thru the pipe 10 about 3,000 feet for disposal away from the heat collector tubes 9. The dense cold intake air then proceeds thru the scrawl case 15 where distilled water 20 is mist sprayed by atomizer 21 into the pre-cold air --to make it more humidly dense and cooler further,

further, and where said intake air approaches the compressor 1 in reverse direction against the blades of the compressor 1. The cold compressed air exits the compressor 1 thru a centrifugal pump to further step up the air density and to remove reverse actions against the blades of the compressor 1. The cold compressed air then proceeds into the main header 14 where the compressed air is cleaned up of excess water content and deposited into the water trap 31, and then same air proceeds into the pipe header 29, which is a ring pipe around the engine 1-2-3, floating on the water and serving as a central connector for branching out into the plurality of heat collector tubes 9 to get in touch with warm water, thru the cold sidewalls of the tubes 9. The additional water trap 32 is also provided at the bottom of the first loop of tubes 9 to prevent water clogging at the bottom loops. The distilled water collected by the water traps 31 and 32 are then pumped out and recycled back into the distilled water tank 20. The cold air becomes warmer and gains expanding energy as it travels thru the plurality of multi-coil tubes 9 until it gets into the central connector pipe header 30 to communicate with the plurality of upper hot tubes 22 which are submerged just below the hot surface of the water 19. The tubes 22 has increased in temperature due to direct sunlight and due to the solar trap transparent roof sheets 17 and 18 which have vertical space between them of at least 6 inches by inserting empty transparent air containers in-between sheets --- serving as spacers and heat insulators/barriers. Additionally, the shiny strip sunlight reflectors 16 are made adjustable being titled to the right towards the morning sun and titled to the left towards the afternoon sun, -- in order to make more sunlight pass thru the transparent roof sheets 17 and 18 at a more direct incidence

to give more heat into the tubes 22 and to the water. *It is hereby extremely emphasized that the adjustable metal strips solar reflectors incorporated with the solar trap is also a major break thru or highlight in this present invention.* The compressed air is now hot at this point and is then fully energized, and then proceeds into the Power Header hot air duct 24 where the high pressure gas/fusion/oil/solid-fuel torch 26 injects more heat energy into the already hot compressed air, a major highlight of this invention. Additionally, hot distilled water is mist sprayed by hot compressed air atomizer or steam from a boiler or cold distilled water mist --- is injected into the combustion chamber 24 to provide more expanding power capacity and to minimize NOx pollution. These cold/hot water mist and steam injection into the combustion chamber is also a major highlight of this invention. In the case where power is dependent solely with the solar heat, and the torch 26 is not running, then it is best to inject high pressure cold distilled water mist into the header pipe 30 to add more heat absorbing capacity. The finally energized hot compressed air then gets into the scrawl case 13 which have stator blades in reverse action against the blades of the power turbine 2. The expanding hot compressed air pushes to drive the blades of the exhaust power turbine 2 which in turn drives the compressor 1 and also drives the electric generator 3. The power turbine 2 expels hot air exhaust thru the main tailpipe 25 which splits up into a plurality of heat disseminator pipes 27 coiled into the water to leave the heat energy behind into the water below the solar trap roof before the waste air is allowed to escape out to the atmosphere thru the exhaust chimney 43, -- to maximize heat recapture and to pre-heat the

cold compressed air newly produced by the compressor 1. Due to the torch 26, the air expelled by the power turbine is much hotter than the solar trap, much more so when the sun is out, therefore, when the torch 26 is running, a pair of diversion gate valves are operated to make the hot exhaust air passed thru the various small radiator pipes 27 that are engulfed by the pipes 22 *which must be, hereby extremely emphasized, -- above the water, --* to maximize recapture the exhaust heat, -- before the exhaust hot air gets into the coil pipes that are submerged into the water to leave the last drop of heat energy therein. The power turbine 2 drives the electric generators 3, drives the compressors 14 & 1, and also drives the cold water lifter pump 4 by means of the drive shaft 5. The pump 4 is just below the cold pipe 8, but the intake mouth of the water suction shaft 12 is located at about 3000 feet into the deep ocean to get the coldest water. It is hereby emphasized that the suction pipe 12 is made to carry the weight of the gas turbine engine 1-2-3 and its appurtenances. The energy being tapped by this engine is as unlimited as the ocean. During the cold nights of December, the drive shaft 5 is disconnected from the pump 4 because the atmospheric air during the cold season is cold enough, and the header pipe shaft 12 is just injected with high pressure mist sprayed by compressed air atomizer with cold ordinary/sea water or fog 20 & 21, --- to further cool the pipes 7. The pressure of the atomizer's compressed air keeps pushing the fog/mist out thru the exhaust pipe 10. There is also circumference fence in the form of a floating sea wall 33 to stop the water waves 19 and to confine or to conserve the heat energy on the water within touch of the heat absorbing radiator pipes 9 and 22, hence, the sea wall 33 must be built to be a good

heat insulator by using materials such as dry paper or foam plastics or powdered charcoal. Aside from being a floater device, the stiff horizontal board wing 34 is also provide to serve as an anti-oscillation resistor against the water waves to stabilize the fence 33. The heavy weight 35 serves to keep the fence 33 in erect posture as it is being vertically acted upon the by floater 34. There are many various available configurations of devices that may help maximize benefits from heat energy sources, heat mediums, and heat insulators, including, but not limited to, a group of interlinked power turbines, that drive a group of interlinked compressors and *a group of interlinked electric generators which run a plurality of electrolysis units for the maximum production of hydrogen fuel, specially those floating on the ocean to avoid pollution upon the communities,* of which the herein inventor hereby reserves all the rights to the ideas pertinent to the subject matters of these inventions.

00047 FIG. 16 -- illustrates a new embodiment serving as means of producing heat energy to be contributed to power the gas turbine engine thru the heat absorption radiator pipes 9 of FIG. 1, wherein, the heat energy is produced by passing heavy electric arc 3 thru to melt a compacted carbon powder 28 at a very high pressure compactor piston 4. Upon cooling, the molten compacted carbon 28 becomes diamond for jewelry or a hard stone used for cutting and for drilling. This clearly illustrates a process where the otherwise would be wasted manufacturing heat energy is recaptured and recycle. The weight of the solid bock or water tank 2 and the weight of the capacitor 26 are joint together to press down the piston 4 which must be of high melting point material not to become part of the

molten carbon 28. The same is true with the confinement 6 serving as heat barrier and electrical insulator which is a dry powdered glass, silica, sand, or fire-bricks. The actual pressurizing part is the hollow spherical or cylindrical container 5 which is made of steel or glass because these materials are of high tension power and which is further wrapped around by fiber glass ropes. The large electrical conductors 9 and 10 carry the electrical discharge from the capacitor 26 thru the electrodes 13 and 14 which are surrounded by electrical insulator 9. The part 12 serves as solid footing for the whole apparatus.

00048 FIG. 17 -- illustrates new embodiment serving as means for an additional further effort to *maximized utilization of the hybrid hydrogen/deuterium-fueled engine of FIG. 1 or FIG. 4 to provide power for the ocean platform and to produce drinking water by oxidizing hydrogen*, and to obtain maximum benefit from the new idea of recycling used containers or to use new containers 44 some of which are in the form of bottles/pipes/boxes/bamboos and crisscrossing walls 40, which are used to carry or float water or *swimming pools, hotels, and restaurants on the oceans or lakes* to make swimming/bathing safe from predators or shark attack or poisonous jelly fish and debris, wherein, the water 25 is fresh water and water 26 is ocean/sea/salt water. The floaters 40 and 44 are covered by strong flat plates air tightly attached to the top of the crisscrossing walls 40, -- serving to stop air from rising up thru the floor 20 and 39. Filled up with compressed air, the floater recycled containers 44 are confined within the boxes formed between the crisscrossing walls 40 so that there is air remaining

under the floor 20 and 39 if the air trapped by the crisscrossing wall happens to escape. Beneath the sea water 26 is a porous sand filter 20 serving as floor of the swimming pool serving to allow clean filtered sea water to rise up from the bottom to maintain the water level at the lip 13, as upon agitation, water waves created spill over the lip 13 and drops down into the gutter 11 and subsequently drains to the ocean thru the drainpipe 19. As a result of losing water thru the drainpipe 19, the ocean water from below the filter sand floor 20 automatically rises to refill the tank 26 because the water level at the lip 13 has diminished, --- and the cycle goes on. The vertical division wall 18 separates the fresh water 25 from the salt water 26 to provide choice of water in the swimming pool. The fresh water pool has an impervious floor 39 to prevent sea water from getting into the fresh water pool 25. The level of the fresh water 25 is also continuously being diminished by the water waves spilling over the lip 13 created by the swimmers. The spilled over fresh water is caught by the gutter 11 and get discharged onto the filtration sand bed 21 for cleaning. The filtered water then drops down onto the water collector 22 which recycles the fresh water by gravity back into the fresh water pool 25 without using water pump that consumes energy or with zero energy spent. *The energy doing this recycling water flow is the energy of the swimmers that produce water waves which jumps over the lip 13. It is hereby extremely emphasized that this is a new application in a process wherein the energy of the swimmer is used to recycle water in the swimming pool --- as one highlight of this invention.* In the process of cleaning the sand filter 21, the windmill 10 is used to pump water into the pipeline/water collector 22 to reverse the flow of water upward.

thru the sand bed 21 to float the accumulated dirt and direct it to discharge onto a flower/vegetable plant garden elevated above the sea level 27. Additionally, the windmill 10 is made wide-face blade to be powerful enough to produce electric power and hydrogen fuel for the facility specially for the kitchen. Wall 9
5 is a glazed tiled wall set back about 8 inches from the lip 13 and with a height of 1.5 feet above the lip 13 for the swimmers to sit down above the water. The large boxes 12 are water tight sleeping/lodging rooms, machinery rooms, equipment storage
10 rooms, workshop rooms, and storage for hydrogen fuel and for compressed air produced by the compressor 16 and 17, --- built under the patio floor and around the swimming pool serving as additional floater during storms. The strong walls 16 are oriented to face the water waves 27 or ocean waves to protect
15 the floating swimming pool. It is hereby extremely emphasized that the wall 16 is so constructed in the form of honeycomb air trap cavities 16 having float ball valves 17, such that, when the water waves 17 splashes upon the bottom of wall 16, the water jumps upward filling up the cavities and pushing up the entrap-
20 ped air thru the valves 17 thereby compressing the air inside the cavities 16. The compressed air then is used to run a gas turbine engine fired by the hydrogen from the windmill 10 which also supplies compressed air to help run the gas turbine engine. It is also extremely important that the people trying to
25 enjoy the excitement in this facility be protected from the burning sun by the large umbrella made of light nylon cloth tent 23 supported by ropes and *alternatively hereby emphasized as made into a large air bubble tent*, specially so because they remove their clothes while in the facility to swim or to advertise their beautiful bodies. To clear the area from having a center

posts, the tent 23 is suspended by ropes, such that, the central post 8 is suspended at erect position by means of a central connector 6 at its base. A plurality of strut posts 14 are erected at the perimeter of the patio surrounding the swimming pool, made tall enough, such that, the ropes enter-connecting the top of the perimeter strut posts to the base connector 6 will lift the central post 8 at a height that connector 6 is about 10 feet above the floor of the patio. Each top of the strut post 14 is also interconnected to the connector 7 at the top of the central post 8 by an upper taut rope sloping down to the top of the strut 14 serving as rafter support for the cloth umbrella/tent 23.

00049 FIG. 18 -- illustrates a new embodiment for an additional further effort to maximize utilization of the hybrid deuterium fusion engine of FIG. 1 or FIG. 4 to power the ocean platform and to produce drinking water by oxidizing the hydrogen or by distillation and to obtain maximum benefits from the new idea of recycling used containers or to use new air containers 44, some of which are in the form of chambers/bottles/pipes/boxes/bamboos and crisscrossing walls 40 with an air-tight flat plate on top to trap compressed air, --- in order to hold enough air under the floor in order to float the structure or the whole ocean platform apparatus, which carries human settlement residential houses 11, agricultural lands/ponds 20, fishponds/water 26, windmills 10, industrial parks 12, offices 11, and water wave energy 27 converters 9 & 29, to name a few, -- on the ocean or on the lake. On top of, and carried by, the floaters 40 & 44 is the tank which contains the water 26 with a surface 13, either salt or fresh water or mixed, where the fishes 24 is fed/grown and produce droppings or waste matters

15, --- representing a fishpond. The floor 22 of the pond is made up with valleys and hills to concentrate the waste matters 15 at certain points. *There is the floor net 14, as it is hereby extremely emphasized to prevent the fishes from agitating the waste matters 15 to make the water 26 stay clean and clear, as one highlight of this invention.* Thru a water pump, the windmill 10 runs the pipes 18 to pick up the waste matters 15 early enough before it is digested by bacteria into colloidal particles in mixture with the water 26. As an extension of pipe 18, pipe 10 19 distributes the waste matter on the agricultural land/pond 20 serving as fertilizer in growing plants/algae 23. Additionally, the soil of the land 20 also serves as water filter allowing the cleaned water to drop down into the collector pipe 21 which returns the water back to the fishpond 26, -- the water 26 does not diminish too much. The water wave 27 energy converter 29 15 is a multi-stage air compressor *having 3 stage chambers, with the higher valve 16, the lower valve 17, and it is important to note that it has the impact wall 8 that drives the wave 27 upward into the chamber, -- to effectively compress air* even as the sizes of the wave 27 may vary, -- in order to drive the exhaust turbine 9 which in turn drives a DC electric generator to produced direct current electricity. The windmill generates DC electricity and compressed air, -- when there is no much waste matter to be pump out of the fishpond. The DC electric power 25 is passed thru a multiple electrolysis machines, *directly from the generator, to produce hydrogen/deuterium fuel, -- some of which is burned inside the compressed air compartment of compressor 29 and thru the gas turbine 9 to produce more direct current and, as it is hereby extremely emphasized as highlight of this invention, to produce drinking water, H₂O, as result of*

oxidizing the hydrogen in the process of producing heat energy into the gas turbine engine 9, -- thereby effecting desalination process. The excess water not drunk by the community is then added as water 26 in the fishpond and irrigation on the land 20.

5 The tail DC power after passing thru the electrolysis machine is then stored in capacitor houses and batteries for obvious uses. The hydrogen/deuterium fuel is then fed to the hybrid fusion engine. It should be noted *that the residential houses are made into habitable capacitors that store DC power even from the*
10 *lightning.* It is also important to note that there is a *floating enclosure having a plastic horizontal sheet floor placed at mid-deep of the water hanging from the frame of the floating feeding enclosure to save the feeds from sinking down onto the muddy floor -- as one bright highlight of this invention.*

15

00050 FIG. 19 -- illustrates a new embodiment for a high tech farm comprising a fish culture, a vegetation land, a wide-face sail windmill farm, a deep well water farm, and hydrogen/deuterium production farm, -- in the efforts to maximize
20 production out of a given farmland by *maximum utilization of the hydrogen/deuterium-fed hybrid engine of FIG. 1, FIG. 4, and FIG. 6, wind power, and solar power to power the farms and to produce drinking water by oxidizing the hydrogen,* wherein, *the windmill 10, which is hereby extremely emphasized*
25 *as having wide-face sail blades and a pointed front nose cone 12 to split and divert the wind outward to bump upon the sails,* pumps up water from underground well 25 to supply it into the fishpond 26 and farm 19, while windmill 11, of same design, pumps compressed air to supply it as aeration underwater of bubbles into the fishpond water 26 thru pipe 8 and pipe 9 to

provide more oxygen to the fishes 24. Most of the times, the windmills produce compressed air, *hydrogen/ deuterium fuel to run the hybrid external/ internal combustion engine of FIG. 1 or FIG. 4* that drives a DC generator and also drives the water pump 13 for the times there is no wind, -- *which is one application for the hybrid hydrogen/deuterium-fueled engine, while producing drinking water by oxidizing the hydrogen.* The water pump 13 gets water from underground by opening the valve 7 when the windmill 10 does not work. By opening the valve 4 and closing valve 7, the pump 13 suck out the waste matter 15 thru the pipe 18. *The windmills are given an elongated pointed nose 12 to the front, hereby extremely emphasized-- to drive the wind outward to bump the blades, which is one highlight of this invention.* Both the pipe 3 and the pipe 18 are used by the windmill 10 in supplying water 26 to the fishpond, and to the agri-farm 19, and to suck the waste matters, by manipulation of the valves 4, 5, 6, and 7. The water 26 in the fishpond is prevented from sinking into the earth 17 by the impervious layer/sheets 2, and by the compacted clay or glass/ceramics tiles or plastic sheets 20. The clay layer 20 is prevented from being suck up by the waste suction pipe 18 by means of the overlaying tiles 22 and boulder stones 21. By way of the pipe 27 with the valves 4, 6, & 7 opened, the windmill 10 effects suction of the waste matter 15 and discharge it to the farm 19. The earth dyke 18 is built circular to make the pond 26 circular, *which is hereby extremely emphasized one bright highlight of this invention applied for patent, -- the purpose of which is to drive the water 26 to a merry-go-round motion, once in a while, to make a vortex effect that brings all the dirt/waste matters into the center of the water pond where the suction pipe 18 is located*

5 -for easy short time cleaning of the pond. The farmland 19 is also underlain by a compacted clay or glass/ceramics tiles or plastic sheets 20 and its clay dike 16 to prevent irrigation water from escaping down into the earth 17. A bottom net 14 at about one foot above the floor 22 is provided to limit/prevent the fishes from agitating the waste matters they drop on the floor 22. It should be noted at this point that glass/ceramics products of various shapes and sizes are among the major products in the process of producing heat energy to run the multi-fueled hybrid engine of FIG. 1 and the engine of FIG. 6.

15 00051 FIG. 20 -- illustrates a new embodiment to provide additional further opportunity to maximize utilization and to maximize benefits from the *newly invented hydrogen/deuterium fueled hybrid engines of FIG. 1 and FIG. 6*, wherein, in the efforts to produce heat energy to run the hybrid engines, the fuel burner or combustor is built into a smelting plant that produce various kinds of products, including metals, firebricks, charcoal, plant-distillates, glass/ceramics items of various sizes and shapes, photovoltaic solar cells, etc., and the exhaust heat is absorbed by the hybrid engines which converts the heat energy into electric power. One of the many special glass/ceramics products is a house or habitation building made up of cubicles/sections/components of buildings, and/or structural parts molded out of molten glass/ceramics/sand/stones by monolithic pour into a metal/concrete/clay mold without cracks/joints, and these cubicles are interlock/jointed to each other forming a large building being powered or served by the hybrid engines. The cubicles are molded to have windows 18, doors 27, a roof 7, an upward wall 16 above the periphery of

the roof, walls 11, a bottom lip 28, and a joint key having a rubber water sealant 22, -- ready for assembling a large building. This invention created a plurality of shapes and sizes of glass/ceramic cubicles serving as components of larger assemblies of structures depending upon the desired function of the resulting assembly, some of which are chambers serving as undersea houses or floating on waters, while some are houses with fishpond culture on top of each house, to name a few.

00052 FIG. 21 -- illustrates a further maximum utilization of the multi-fueled *hybrid hydrogen/deuterium engines of FIG. 1 and of FIG. 6* used to provide electric energy for homes/ buildings, urban or rural areas. The resulting assembly out of the cubicle of FIG. 20 is a new and innovative multi-chambered house being served by the new hybrid engine of FIG. 1 and FIG. 6 having a fishpond 26 on the roof surrounded by the containment walls 16 and glass floor 2 with a water sealant 22, -- for the purpose of commercial culture of various fishes 24 and the vegetation 23, serving as a cottage industry. The roof 2 serves as floor of the fishpond. As the roof 2 is transparent, there will be so much sunlight getting into the house, hence, there will be a need to grow algae and plants floating on the water, same plants serve as food for the fishes 24. Additionally, there is a white gravel layer spread on the floor 2 to reflect sunlight upward out of the water 26 aside from a solar trap thermal energy absorber serving as roof of the fishpond to keep the house cool. The windmill 10 having a wind splitter nose 12, pumps compressed air thru the tower pipe 25 that serves as compression chamber, and discharge it as aeration tiny bubbles into the water 26 thru the valve 5, pipe 8, and pipe 9, --

in order to supply enough oxygen for the fish 24 when the pond is over crowded with fish. By closing valve 5 and opening valve 4, the water pump 13 is driven by electric power from the hybrid engine of FIG. 1 in order to suck out the waste matters from the floor of the fishpond thru pipes 8 and 9, and discharge it as fertilizer onto the farmland 20 to grow the plant 23. The waste water 19 is filtered by the land/soil 20 and drops down into the under ground water collector 21 which returns the water by gravity force into the fishpond to become clean water 26. The net 14 is provided to limit/prevent the fishes 24 from agitating the waste materials that dropped on the floor 2. Part 6 is a solid glass/ceramic wall serving as post of the house. During the casting process, the windows 18 and doors 27 are created thru the wall 6 upon which the louver window 33 and the door head 31 are attached respectively. In the process of erection, the ground 17 is compacted where the concrete spread footings 29 are laid on upon which the lower lips 28 of walls 6 are rested.

00053 FIG. 22 -- illustrates a new and innovative apparatus for a fusion driven externally heated engine 1, 2, 3, in the same way as the engine of FIG. 1, having a plurality of heat absorbing radiator pipes 10, 11, 12, 14, 22, containing cold compressed air, configured to absorb heat from a *deep water Fusion Reactor* which heat up the water by a blast of hydrogen/deuterium bomb 17 carried by a torpedo that is detonated by an underwater impact wall 16. The torpedo is fired from a submarine boat 21 thru the firing chamber 19. The submarine boat 21 carries a plurality of torpedoes containing calibrated hydrogen bombs 17 to successively fire torpedoes to

bump against the solid impact wall 16 in a regular basis to maintain the high temperature of the deep water and the production of hot steam rising out of the water to keep heating up the heat absorbing radiator pipes 10, 11, 12, 14, 22. The chamber 26 is provided to the boat 21 to keep it stay upright, at the same time the chamber 26 is used as access to the boat for refilling/restocking the boat with more torpedo bombs 17. There are several submarine boats 21 loaded with bombs 17 to take turns in firing torpedoes against the impact wall 16 for successive detonation. The ramp 20 is provided to snugly catch the firing chamber nose 19 to hit the impact wall target 16 at ball's eye. The perforated heat distributor metallic tent 23 is lifted by a structure attached to the radiators 22 thru the rope 13 to maintain the exact submergence of the detonation apparatus 16, 23, 18, having the calibrated floaters 40 and 44 to make the rope 13 stay taut but not to pull down the radiator 22 into underwater. The radiator pipe 12 and 14 are calculated/calibrated/ configured to float the whole apparatus such that the radiator pipes 22 are always above the water surface 41. The heat insulator wall 15 is a perimeter circular fence to prevent seepage/waste or spreading of heat energy to the surrounding waters, serving as wall of the boiler chamber and serving as impact wall against the ocean waves, hence, it is a strong wall. The additional calibrated/adjustable weight 47 is provided to prevent the radiator 22 from rising too high above the water level 41. The hottest heat absorbing radiator pipeline 24 does the final feeding to the exhaust power turbine 2 which drives the compressor 1 and also drives the electric generator 3. The large hot exhaust tail pipe 25 is splitted into a plurality of smaller hot pipes which are each individually engulfed by a

plurality of cold compressed air radiator pipes 10, *herein extremely emphasized -- in reverse air flow, as one highlight to maximize absorption of the otherwise wasted heat energy and recycle same energy back into the radiator heating systems to drive the power turbine again and again. The part 43 is an exhaust chimney outlet for the air expelled by the power turbine, same air is already lukewarm not hot anymore because the heat has been absorbed by the cold compressed air contained in pipes 10.*

00054 **FIG. 23** -- illustrates a new and innovative apparatus for a fusion driven engine 1, 2, 3, wherein, the fusion reactor is a dug-out pit 36 in the ground in shallow waters 41 beside a body of water or irrigation canal/pipeline or large water tank supplied with fresh irrigation water preferably distilled water to prevent salt accumulation in the reactor pit, and wherein, fusion is attained by compression of the liquid deuterium, just the way it is done illustrated by **FIG. 8**, wherein further, *the rear section of the bullet 17 contains a heavy weight solid piston that compresses the liquid deuterium upon impact with the wall 16, - as one of the highlights of this invention.* In another alternative, as shown in **FIG. 7**, fusion is attained by detonating a dynamite that surrounds the liquid deuterium which is contained in the bullet 17 of this apparatus. In another alternative, the dynamite is surrounded by the liquid deuterium in a strong container. The charge inside the cartridge 34 is detonated by the underwater big gun 33 thereby firing the bullet 17 which gets impacted with the underwater target impact wall 16. *The violent impact detonates the dynamite at the front section of the bullet, thereby creating two violent forces that*

sandwich the liquid deuterium, --- thereby triggering the fusion reaction. The magazine 35 is filled with compressed air to prevent water getting into the barrel 33 which is pointed slopping downward and the impact wall 16 is positioned lower.

5 Further, the magazine 35 is keep refilled with the bullet assembly 34 as the gun keeps firing to sustain the high temperature required in the oven to heat up the plurality of heat absorbing radiator pipes 22 which, by means of the power header pipe 24, runs the exhaust power turbine 2 which drives

10 the air compressor 2 and also drives the electric generator 3. The pit 36 accumulates the pistons and metal fragments that are recovered, smelted and poured into molds to reproduce the bullets 17 together with its heavy solid pistons. The perforated steel plate 23 distributes evenly the heat energy or hot steam

15 rising from the fusion reactor. The exhaust pipe 25 containing the hot air expelled by the power turbine 2 is splitted into a plurality of small pipe branches to distribute the otherwise wasted heat energy into the upper rear section of the oven via exit 43 to provide pre-heating to the cold pipe 10 containing

20 fresh cold air, being pushed by the compressor 1 in reverse air flow against the hot air, to maximize absorption and recycling of the exhaust heat energy, -- before it is finally allowed to get out of the oven and re-directed into a water heater/boiler that produces distilled water for drinking/irrigation and for spraying

25 into the compressor 1. The heat insulator structure 15 serves as sealed roof of the oven to prevent the wind from stealing the heat energy. The magazine cover 11 is provided with counter weight 12 to ease operation in reloading bullets 34 into the magazine 35 which is further provided with air valves at its

30 mid-section to stop the compressed air from releasing upward

because the water will rush into the gun 33. The watertight compartment or chamber 38 contains the mechanism for successive reloading the gun 33 and to expel the cartridge 34. The watertight manhole 37 serves as access to the reloading
5 chamber 38 for maintenance activities. The rock/concrete or compacted clay foundation 20 serves to limit seepage of water into the reactor pit 36 which also serves as a sump to collect water that boils/produces the needed steam. *It is hereby extremely emphasized that this detonation/fusion reactor*
10 *chamber/pit 36 is also preferably made into a large detonation high pressure water pipe or underground underwater tunnel that directly supplies high pressure steam into and to drive a large exhaust steam-turbine engine 2, -- as one important highlight of this invention.* The concrete footing 39 is provided to the
15 machines in place with minimal vibrations or possible dislocations due to various forces.

00055 **FIG. 24** -- illustrates a new and innovative embodiment for a small fusion-run power plant constructed on dry land without water as part of the process, -- except distilled water
20 being sprayed into the compressor 1, -- wherein, the deuterium bullet/bomb 17 makes a fusion detonation in mid-air thru supper compression upon reaction with the target impact wall 16, -- thereby producing supper high temperature in the reaction
25 chamber/oven/furnace. The heat energy is evenly distributed around the oven/furnace by the double layer perforated sub-roof 23 which also controls the flying fragments from the bomb 17. The molten fragments from deuterium bomb 17 are collected by the funnel 15 and drop into the collector bin 19. The barrel of
30 the gun 30 pierces thru a tight fit hole thru the wall 7 to prevent

leakage of heat energy from the blast of bomb 17. The compartment 20 is filled with water to prevent overheat of the gun 30. The magazine 21 holds a plurality of bullets 17 for successive firing and detonation of the bomb 17 by manipulating the trigger 29. *It is hereby extremely emphasized, at this point, that there is no need for oxygen air to burn the fuel, hence, there is no inlet to prevent outside atmospheric air getting into the furnace, thereby, the fusion heat energy is totally confined inside the furnace for a long time until absorb by the cold compressed air in the heat collector radiators. This is a very bright highlight of this invention.* The heat insulator wall 27 also serves as shock/pressure containment wall to prevent escape of heat energy. The cold compressed air supplied by the compressor 1 into the heat absorbing radiator pipe 10 picks up the heat energy expelled by the power exhaust turbine 2 into the chimney 25. Then the pre-heated compressed air proceeds into the radiator pipes 12 to pick up more heat from the oven, then flows into the radiator pipes 22 to pick up the higher temperature heat energy from the oven for final heating up, and then the superheated compressed air is collected into the header power pipe 24 which is communicated to make the super energized compressed air push the power turbine 2 which drives the compressor 1 which in turn drives the electric generator 3. The part 43 is the waste air outlet expelled by the power turbine 2, while 44 is the waste air or helium outlet from the fusion oven. There is also provided a liquid deuterium 26 that gets into the piston injection pump 8 which spits high pressure deuterium 26 into the fusion flame created by bullet 17 exactly at the time of detonation of the bomb 17 --- such that the injected deuterium 26 is subjected to the super high temperature

of the fusion flame, hence, the injected deuterium 26 also reacts to produce additional fusion flame into the oven without going thru manufacturing process of the deuterium bullet 17, --- thereby the fusion flame is continuously sustained by the high pressure pump 8. Additionally, a capsule of liquid deuterium is also released thru a conveyor into the fusion flame at regular interval as an alternative to maintain continuous fusion flame without further spending large amounts of electric arc for detonation. The door 40 is provided for maintenance access to repair the funnel 15. The concrete wall 41 also serves as footing/foundation carrying the wall 27.

00056 FIG. 25 -- illustrates a further maximization commercialization for the most efficient energy converter ever invented engine shown in FIG. 1 of this application, --by means of a new and innovative solar thermal converter into electricity, -- hereby showing a solar trap/oven 27 that accumulates solar heat that gets in freely into the oven, but the wind is prevented from stealing the heat energy, along with trash/multi-fuel smokeless burner 26 that contributes heat energy into the solar trap/oven 27, and the heat energy is collected from the solar trap 27 by the heat absorbing radiator pipes 10 and 23 which contains the energized compressed to push the exhaust power turbine 2 which drives the electric generator 3 together with the air compressor 1 which drives compressed air into the heat energy collectors/absorbers radiator pipes 10, 11, and 23 in a continuous process of energy conversion in the most efficient way ever provided by God, as illustrated by FIG. 1 of this patent application, wherein parts: 1 is an oppositely rotating wide-face blade turbine compressor combined with centrifugal pump that supplies compress air throughout the system, same air serving as

heat absorbing agent; 2 is an oppositely rotating wide-face blade exhaust power turbine which is pushed by the expanding hot compressed air, and which drives the generator 3 and the compressor 1; 3 is an oppositely rotating multi-layer drum Direct
5 Current electric generator driven by the power turbine 2, so there is no need to control the voltage output, because the electrolysis machine does not care if the voltage is variable, ---
anyway, the inverter and the transformer are down stream from the electrolysis machine -- hereby extremely emphasized as one
10 *major highlight of this invention* ; 4 is the roof of an existing house, which carries the solar trap 27; 5 is a water misting device that supplies cold water vapor out of distilled water for high humidity into the compressor 1, -- to provide more matter
15 heated, --- for purposes of providing more heat absorbing capacity, -- in the process of efficiently collecting the heat from the oven 27; 6 is a header pipe directly supplied with high humidity compressed air from the centrifugal pump; 7 is a plurality of evenly spaced small radiator pipes communicated to
20 and along the length of the header pipe 6 by which it is supplied with compressed air, -- serving to collect heat escaping downward from the oven 27, --- and to keep the house cool; 8 is a reflective aluminum foil or whatever shinny metal, serving as bottom floor of the oven 27, to bounce the infrared light back
25 upward to the oven 27; 9 is a mirror, or any reflective metal sheet to bounce back upward the solar light/heat/infrared light, -
- to prevent the house getting hot, additionally, an R-30 heat insulator covered by a black metal sheet is laid over the mirror,
- - and the black metal sheet is sprayed over by black charcoal
30 powder to prevent the heat energy from bouncing back upward, -
-- to make the solar trap 27 most efficient; 10 is a plurality of

pre-heated pipes which contains the compressed air that graduated from engulfing the exhaust air pipes from the power turbine and from the exhaust air from the oven 27, --- and which is communicated from the downstream end of pipes 11; 11 is a plurality of horizontal coils of enlarge cold pipe containing the cold compressed air from the compressor 1 thru pipe 7 and containing the small radiator hot tubes/pipe 25, --- *as hereby extremely emphasized to be in reverse air flow against the hot air flow from the heat suppliers, such as, the power turbine 2 and the oven 27, -- in order that the cooler compressed air gets in touch with the lower temperature exhaust air and -- as the compressed air becomes hotter it is the one getting in touch with the higher temperature exhaust air nearer to the mouth of the power turbine 2, ---* giving extreme emphasis that each pipe 11 engulfs a smaller hot radiator pipe 25 that is communicated with the exhaust of the power turbine 2 and also communicated with the outlet of the solar trap/oven 27 to contain the hot air expelled by the power turbine 2 and by the oven 27, ****in order to recapture and recycle the otherwise wasted heat energy back to the power turbine 2 --- to maximize heat absorption efficiency ever; 12 is the fresh air and powdered fuel intake gate or entrance gate, where powdered fuel is hereby extremely emphasized as one highlight or organic vapor fuel as one more highlight of this invention, --- same gate has gate valve or throttle to allow hot oxygen from pipe 30, wherein by venturi vacuum action, it allows fuel and fresh oxygen air getting into the smokeless multi-fuel/trash burner 26 that supplies supplemental heat energy into the solar trap/oven 27 when the sun is out; 13 is an iron double sheet, having heat insulator materials, specifically carbon granules as a new use of carbon as one highlight of this invention, -- in-between shell-walls of the

multi-fuel burner 26; 14 is a shut-off throttle or window which is closed to prevent cold fresh air from getting into the intake gate 12 when the valve 29 is open to maximize intake of hot oxygen air from pipe 30 expelled by the power turbine 2 as one highlight ---thru tailpipe 25 for more perfect combustion of the trash fuel, --- and to recapture or recycle the otherwise wasted heat energy expelled by the power turbine 2 --- back to the solar trap/oven 27, --- to drive and re-drive the power turbine again and again, --as one highlight of this invention; 15 is an upward chimney in the form of a catalytic converter directed to deliver hot combustion air, less NOx -- but contributes what ever heat it produces and which is made hotter by the heat produced by *the NUCLEAR/FUSION RACTOR 34 as an additional high temperature heat contributor to decompose NOx, -- which heat energy is a recaptured energy into the solar trap or oven 27, --- which is a new use or function of the catalytic converter being a heat contributor to the oven 27, --- as one highlight of this invention;* 16 are movable/adjustable horizontal narrow shinny plates serving to reflect or redirect the solar light downward into the solar trap 27, manipulated when the sun is less than 60 degrees above the horizon, in order to maximize sunlight getting into the solar trap 27, --in order to maximize harvesting efficiency for maximum benefits from the solar heat; 17 is the outer transparent roof cold sheet that allows sunshine to get thru into the solar trap 27, which is covering the solar trap 27, -- exposed to exclude the wind, made strong enough to withstand at least 40 mph winds; 18 is the inner transparent roof hot sheet that allows sunshine to get thru into the solar trap 27, which is covering the solar trap 27, which excludes the entrapped heat energy from getting in touch with the outer roof cold sheet 17, -- thereby preventing the solar heat from escaping upward

back to the atmosphere, --- same roof sheets 17 and 18 are made waterproof serving as roof 4 of the house/building as has been illustrated by FIG. 21 of the U.S. Patent No. 6,327,994 , --- additionally hereby being extremely emphasized that this solar trap/oven also covers the yard of the house to maximize solar harvest within the limits of the whole property; 19 is the Electrolysis Device containing distilled water run by DC direct output from the Generator 3, --- in order to produce *hydrogen/DEUTERIUM being continuously fed into the fuel cell or hydrogen burner or FUSION reactor 34 as a major highlight of this invention*, to contribute final heat into the final hot pipe upstream of the power turbine 2, ---same *Electrolysis Device 19 contributes all the oxygen that it produces into the hot oxygen air pipeline 30 to further perfect the combustion of the solid fuel 35 – which process is one major highlight of this invention in support of the smokeless incinerator 26* ; 21 are the sunlight rays getting into the solar trap 27 by passing thru the transparent roofs/walls 17 and 18; 23 are the plurality of heat absorbing radiator small tubes, communicated with the downstream end of pipe 10 to take the pre-heated compressed air that graduated from the turbine exhaust pipe coils 11, --- constructed and laid in multi-layers inside the heat containment chamber or solar trap 27, --- imperatively made into small radiator tubes to maximize contact of the cold compressed air with hot oven air --- to speed up absorption of heat into the large volume of compressed air passing thru inside the radiator tubes 23; 25 are the header pipes and the small radiator pipes containing the hot air expelled by the power turbine 2 and expelled by the solar trap oven 27 as being pushed out by the fuel burner 26; 26 is the multi-fuel smokeless burner chamber having the containment walls 13 of iron/steel/firebricks, used to

burn trash, powdered organics, oil, wood, alcohol, hydrogen, diesel, acetylene, and gasoline, -- the purpose and function of this burner is to burn fuel without producing NOx, -- it being low pressure and low temperature, -- *it being noted herein that*

5 *the fuel burner 26 is one of the many contributors of heat energy into the gas turbine engine illustrated in FIG. 1; 27 is the solar trap oven or heat containment chamber containing all the heat absorbing coils of radiator tubes 11, 23, and 25. This oven 27 is supposed to be flat box serving as roof 4 of the house*

10 *or to cover the roof 4 of an existing house to retrofit the house with solar oven 27; 28 is a gate valve used, when closed, to prevents the exhaust heat energy from getting out to the atmosphere and to divert it to pipe 30; 29 is a gate valve used, when opened, allows the exhaust heat energy to get into pipe 30 in*

15 *order to recycle the otherwise wasted energy; 30 is a hot clean air pipeline to bring pre-heated oxygen air from the power turbine 2 into the smokeless fuel burner 26 for a more perfect combustion of the fuel 35, and to recapture/recycle the otherwise wasted heat energy expelled by the power turbine 2*

20 *and put the heat back into the oven 27 and back to drive the power turbine 2 again and again; 32 are multiples of perforated tubes placed into and above the fire or down stream of the fire and inside the fuel burner chamber 26, containing fresh oxygen air from the intake 12 and serving to super pre-heat the oxygen*

25 *supply and to distribute the super heated oxygen close to the fuel 35 and around the burning chamber 26 to oxidize unburned gas fumes or smoke before it gets out of the burner chamber 26 or out thru the chimney/catalytic converter 15, -- the perforations of 32 serving as nuzzles for the hot oxygen; 33 is the*

30 *entrance pipe for compressed air to start up the power turbine 2 to drive the compressor 1, -- and to supply super hot oxygen air*

into the burner 34; 34 is a burner fed by high volatile fuels/
deuterium, oxidized by super-hot compressed air supplied by the
pipe 33 from pipe 23 to supplement heat energy into the whole
system when the sun is out, -- *same burner 34 being preferably*
5 *a nuclear/fusion reactor, which is being used for various*
smelting processes and for destructive distillation of organics/
wood/coal, --- as a major highlight of this invention, --- wherein
further, for large power plants, the reactor 34 is placed outside
the pipe 15 or 23 and inside the solar trap oven 27 to prevent
10 melt-down of the pipeline, --- *such that the energy used for*
smelting is recaptured by the radiator pipes 23 --- as hereby
extremely emphasized as a major highlight of this invention ;
35 are solid, wood, liquid, gas, low grade oil, and trash fuel
being burned in the smokeless multi-fuel burner 26; 38 is a
15 water heater tank containing water into which the exhaust tail
pipes are submerged in coils in order to heat up or boil the
water for production of distilled water being supplied into the
sprayer device 5; 42 is a heat insulator enclosure to prevent
cold air/wind from getting in contact with the heat absorbing
20 radiator pipes 11, -- to conserve heat; 43 is a header exhaust
hot air tailpipe containing the exhaust air from the power
turbine 2 after graduating from the lower heat exchange coil
pipes 11 and 25; 44 is a header exhaust hot air tailpipe
containing the *exhaust zero-oxygen hot air from the solar*
25 *trap/oven 27* after graduating from the upper heat exchange coil
pipes 11 and 25, -- same pipe 25 branches into a plurality of
small heat radiator tubes, submerged into the water tank 38 and
made to supply the otherwise wasted heat energy recaptured or
recycled into the water heater or water boiler 38 to produce
30 distilled water for use in the water mist spray by the device 5
into the compressor 1 -- to provide into the compressed air *an*

additional matter that expands when heated, -- a means of increasing the heat absorbing capacity of the compressed air, same process is one of the major highlights of this invention.

5 00057 FIG. 26 -- illustrates an embodiment of a new and innovative device serving to illuminate in details some of the basic principles involve in FIG. 1 of this application, *most specially the fusion plasma torch that contributes the final high temperature heat energy into the engine of FIG. 1*, to enable
10 mankind to maximize benefits from any given fuel. Maximum benefits distilled water being fed into the same engine. As shown in this drawing, there is the reactor/heat producer chamber 26 enclosed by the container 4 which is made up of electric insulator materials, such as, glass, ceramics, fireclay,
15 basalt rocks, etc., -- *to confine the electric arc 5 that ignites the high pressure hydrogen/deuterium into fusion reaction*, thereby producing the fusion flame 6 that exits thru the bottom outlet of the chamber 26 in the form of a fusion torch 41 that melts the raw materials 35 in process of smelting glass/ceramics/steel/
20 metals. The flowing molten materials 36 drops down into the molding 38 where the process of annealing and cooling takes place by which the heat energy is taken up by the cold compressed air that is continuously passing thru inside the heat absorber pipe 22, which is communicated to the power pipe 24 that drives
25 the power turbine 2 by way of the exiting high power hot compressed air. To prevent melting of the glass/ceramic container 4, it is submerged into the surrounding distilled water 21 which is contained in an electric insulator 11 also to prevent short circuiting of the electric arc 5. The fuel tubes/nuzzles 8, 18, &
30 19 are also made of glass/ceramics or non-conductors to prevent

short circuiting of the electric arc 5. The section of the steam pipe 9 and of the water supply pipe 12 near the electrode 13 are also made of a non-conductive material, such as glass or ceramics. *It is hereby extremely emphasized that the water supply 20 from the water tank 10 and the cooling water 21 are both made of pure distilled water which is also a non-conductive material to prevent short circuiting of the high voltage electric arc 5, and also to prevent accumulation of salt/calcium upon the surfaces of the boiler containers 4 and 11, which is a new use or application of distilled water, --- hereby noted as among the major highlights of this invention.* The large electric cable wire 15 brings in a large supply of high voltage direct current electric power from a large capacitor, which is charged by windmills and by the lightning, -- onto the electrode 13 to produce the electric arc 5, which ends down onto the anode plate 39, which is grounded by grounding negative rod 40. *It is hereby extremely emphasized that the fusion chamber 4 and the boiler container 11 are made transparent/translucent in order that the fusion process is observed by the operators to make necessary adjustments during the process, and the boiler is surrounded by photovoltaic cells to convert the fusion light into electric power.* If the boiler is made of opaque materials, then a window is provided for observation purposes. To start producing the fusion flame 6, liquid/high pressure hydrogen/deuterium is allowed to enter the fusion chamber 26 thru the pipes 8 by opening the valves 16 and 17 and immediately followed by switching on the electric power to the electrode 13. The fusion chamber 26 is made long enough to provide enough time travel of the deuterium gas and time long enough for the deuterium being exposed into the high voltage electric arc 5. The bottom opening of the reactor chamber for

the fusion flame 6 to exit is constricted into a nuzzle having a removable plug/cork, *which is provided with a copper conductor rod at its center*, in order to increase the density of the hydrogen/deuterium that got into the reactor chamber 26 while waiting for the electric arc 5 to pass thru it. The electric arc 5 will blow off the cork and opens the nuzzle upon strike of the lightning 5 and releases down the fusion flame 41 upon the glass/sand 35 loaded on the conveyor 37 to become molten glass/ceramics 36, which pours into the mold 38. The moment the fusion flame 6 is created and/or existing, the operators take the opportunity to successively create more fusion flames by injecting high pressure hydrogen/deuterium upward, thru the nuzzles 18 and 19 by opening the valves 27 and 28, into the super hot fusion flame 6 to trigger a continuous fusion reaction without using or consuming electric arc 5 again, -- *which fusion reaction in continuous process is one of the major breakthroughs and highlights of this invention*. As the container 4 surrounding and in touch the fusion flame 6 becomes hot, the water 21, in touch with the outside walls of the hot container 4, reacts immediately by boiling to keep the temperature down to 100 degrees centigrade to prevent melt down of the container 4. The created hot steam 7 moves up into the hot pipe 9 which splits into a plurality of small radiator pipes that make a plurality of loops inside the pipe 22 where the cold compressed air absorbs the heat energy of the steam 7 inside the radiator pipe 9, and then the pre-heated compressed air proceeds into the smelting and annealing chamber to absorb the heat energy from the molten glass/ceramics 36, to pick up the heat energy from the annealing mold 38 and to pick up the heat energy from the fusion flame 41 at which point the compressed air is then super energized, by which energy the compressed air kicks and drives

the exhaust power turbine 2. The hot air exhaust expelled by the power turbine 2 is then redirected/recycled by means of small radiator tubes that get inside the pipe 22 for the compressed air to absorb the heat energy expelled by the power turbine 2. The steam 7, having been exposed to the cold compressed air of pipe 22, condenses and drops into the tank 31 as a distilled water, which is recycled back and added to the water 20 inside the tank 10. The pipe 9 brings the uncondensed steam 7 out of pipe 22 and up into the condensation tower 33 where the steam/vapor 7 is totally condensed by the cold wind blowing thru the pipes 34 across the condensation tower 33. The condensate drops down into the collector tank 32 as a distilled water, which is recycled and added back to the water supply 20 inside the tank 10. *It should be noted at this point that the condensation tower 33 having a plurality of small wind radiator tubes/pipes 34 piercing across the tower 33 is a new invention and a technology breakthrough which is hereby extremely emphasized as one of the major highlights of this invention applied for patent.* To speed up condensation of the steam 7 inside the condensation tower 33, the steam 7 must be pressurized at high pressure, hence, it is important that the water supply 20 be highly elevated above the boiler 11. The water surface elevation inside the boiler 11 is controlled automatically by the float valve 14, -- the same as the toilet tank controller. This type of *distillation, and smelting/manufacturing process is specially designed for large volumes of glass and ceramics for molding large monolithic cubicles, sections, structural beams, posts, all parts of houses, buildings, and distilled irrigation water, in addition to large cylinders/chambers and pipes serving as underwater houses, for underwater or floating ocean transports, and for storage of gas, hydrogen,*

deuterium, and water, -- which technology applications are among the major breakthroughs and highlights of this invention, -- hereby applied for patent.

5 00058 **FIG. 27** -- Illustrate an embodiment of a new and innovative device serving to illuminate some efforts for maximum usage and commercialization of the hybrid fusion engines in accordance with Claim-1, and further to illustrate recycling of food that was processed by energy but became
10 wasted matter thru fish farming, wherein, a water tank 26 floating on the lake 41 or ocean under the sun, has a water tight bottom floor 46 filled up with waste organic matter 20, from a fishpond / chicken farm / piggery farm / livestock farm, serving as fertile soil of about one foot thick, -- for purposes of growing
15 algae 23 and water plants to be harvested, processed, and given back to the fish / animals for food. The water tank 26 is made to prevent outside water from getting in because the algae 23 requires a little bit salty or brackish water for it to grow faster, -- hence, the fresh water in the lake must be mixed with salt
20 water in proper proportion inside the water tank 26 or growing agricultural pond. The whole water tank 26 is buoyed/carried by compressed air chambers made up of crisscrossing walls 40 and the airtight cover plate 46, -- and compressed air is introduced into the chambers by the nuzzle valves 12 that pierced thru the
25 cover plate/floor 46. As the chambers are open-bottoms, the compressed air is used to push down the water levels 38 and 39 inside the chambers to produce more buoyant force carrying the water tank 26. Even without pressure gauge instruments, it can be practically calculated when to stop injecting compressed air
30 from the compressor 14 thru the distributing pipeline 11, -- by observing the desired submergence of the vacuums chambers 37

which are provided to serve as driers for the feeds being processed, and also serving as buoyant floater carriers for the tank 26. Part 42 is the open bottom lips of the walls 40. The structure platform 9 carries the compressor 14 in place. By closing gate valves 4 and 6 and having the gate valve 5 opened, the compressor 14 supplies compressed air from the atmosphere, which contains carbon dioxide, into the water by tiny bubbles thru the perforated bottom section of the nipple pipes 17 which are supplied by pipes 15 and 18. *It is hereby by extremely emphasized that carbon dioxide is mixed with the water thru the introduction of compressed -- as a living / growing requirements of the underwater plants, -- as one of the highlights of this invention.* Hence, as a minimum requirement, several fishes are placed to grow inside the screen cages 16 to supply carbon-dioxide into the water. *It should be noted at this point that the fishes are confined inside the cage 16 to prevent the fishes from eating / destroying the algae being cultured and being grown in large quantities for the production feeds.* Aside from the oxygen from the compressed air from the compressor 14, the growing algae provide abundant oxygen for the fishes inside the cage 16. It should also be noted that the cage 16 is provided to prevent the algae from getting into the pipe 14 when it is functioning as suction pipe in transferring the water 26 thru the pipe 18, thru the open gate value 6, by running the water pump 16 and into the filtration water tank 27 via pipe 19. The water transfer is done in order to clean / clear the water 26 as it is becoming turbid or muddy due to the decomposition of organic wastes from the fishes and the fertilizer soil 20, -- by passing the water thru the filtration bed layers of 20, 7, and pea gravel 8 inside the tank 27. By the water head created in tank 27, the filtered water is forced to return thru the open window 29 back

into the tank 26. Some additional choices for buoyant floaters 44 are in the form of sausages of empty containers / pipes, which are also used to float the floating agricultural water bed 26 and 27.

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00059 An additional way of making this agricultural water bed is by constructing small shallow units of at least 4 feet or more wide by 6 feet or more in length by 1 foot deep water, and a plurality of these units are floated on tank 26 or on lakes 10 fishponds spacedly arranged row by row such that a maintenance small boat / raft passes in between beds to harvest the algae and to plant some more algae. It is important to note that, in order to maximize benefits from the waters on which these water beds are floated, a plurality of fishes are placed under the beds, for 15 purposes of growing large quantities of fish by feeding them with the algae produced by the beds. Each bed has a flat floor made up of bamboo / pipes frames that serves as floater to carry the fertile soil on the floor. The top lip of each bed is at least 6" above the water and framed by bamboos / wood / metals / 20 plastics / glass / ceramics, -- to bring down the cost of construction. The sides of each bed are made of screens thru which the algae will grow outward such that the fish will be able eat the protruding tips of the algae thru the screen, --- but prevents the fishes from getting into the bed and destroy the 25 algae plantation. The lips of the bed is raised above the water by means of floaters made up of empty containers attached by strings to the frames of the bottom floor. These small units of water beds do not need aeration due to the carbon dioxide produced by the fishes, -- but the fishes being grown under the 30 beds are supplied with oxygen by means of compressed air from the compressor 14 which is run by hybrid fusion-scavenger

engine illustrated by FIG. 1 and FIG. 4. The organic waste matters of the fishes under the beds are gathered by wide sheets stretched below the fishes and placed as fertilizer for the floors of the water beds. This innovative devices for large scale production of algae is hereby claimed and applied for patent, --
5 as algae cannot grow in deep waters.

00060 Fig. 28 -- illustrates an embodiment of a new and innovative device for further application, utilization, and maximum commercialization of the hybrid plasma-fusion scavenger of FIG. 1, and FIG. 4, wherein, a transportation vehicle is made in the form of large fish 6 provided with engine 1, transmission gears, and wheels 7 and 8, with the ability to run on land. The fish 6 is made water tight, able to float as a boat on deep waters, and provided with water propellers 22 with the ability to travel to at good speed on the lake and on the ocean. The fish 6 further having an air compressor, a compressed air tank, a water pump, and a water tank, -- for purposes of having the fish 6 able to submerge under the ocean to serve as a submarine home/
15 houses/hotel which is provided with oxygen by electrolysis of the sea water, in which process, the hydrogen-deuterium gas produced is supplied to run the fusion engine 1. The fish further having a strong low level bumper 4 to protect the whole fish 6 and to prevent debris from getting under the fish 6. A door 12 is provided to allow the driver 10 to get in and out of the fish 6.
25 There are also the manholes 14 and 16 serving as entrance door for live fish and water being transported. Inside the fish body 26 are multiple subdividing walls serving to segregate different kinds of fishes selected for the market. The bottom drain man-
30 hole 18 serves as fish outlet, waste matter outlet, -- and water inlet for the process of getting the house-fish 6 underwater to

become free from the turbulent water waves. The spar 20 serves as decorative ornament which carries lanterns and headlight to get the attention of the public. The whole body 26 is made of transparent glass bubble or ceramics/metals in multiple segments jointed together, if not made one whole monolithic piece. Several units of this submarine houses are deployed floating or submerged under the sea for human settlement on the ocean to save the land for agricultural production. As a further application, the body 26 of the fish 6 is made into a large straight cylindrical tank having fins/tail, and filled up of natural gas/ hydrogen/deuterium at high pressure -- for purposes of transporting fuels in the communities. Additionally, the large cylindrical glass/ceramic/metallic tank fish 6 is also used to contain other gaseous, liquid, food-grains and powered organics, -- for transport across the sea/ocean/land following an undersea cable-railway or coded path --- for high speed driving under the sea. A plurality of this large cylindrical fish 6 are jointed together to form a long train transportation for land and underwater. This fish 6 is further armed to defend itself on the high seas, --- by torpedo, by missiles, by un-man radar balloons, by laser guns, etc.

00061 FIG. 29 --- Illustration in detail a small shallow unit of an algae 23 grower floating pond/cage, energized by the engine of Fig.1/Fig.4, having a screen siding 16 and floated on water in order, as it is hereby extremely emphasized, *to expose the algae 23 to good sunshine above the turbid water.* The whole apparatus is made of cheap materials locally available in the farms, including bamboos / empty pipes / waste containers / bottles, --- serving as floaters, and structures. The box 8 and the structure 46 are made up of bamboo splits. Said box 8 contain

the fertile soil 20 at more or less one-foot below the water surface 13 by means of the bamboo floaters 12 and the adjustable floater 37 which contains air and water at an adjustable ratio depending upon the desired bed submergence.

5 The frame structure 7 is made up of whole bamboo as floater and which further functions to serve as lifting bar carrying the weight of the soil 20, and further serving as holding frame for the screen/net 16. The screen/net 16 allows the algae 23 to grow outside the cage to become food for the fish 24. The bar 9

10 holds the posts 7 to hold the floater 37.

00062 FIG. 30 -- illustrates a new embodiment of a new design for a newly invented device for and in support to the various newly invented processes, as has been illustrated by the

15 herein FIG.1, to implement this invention's mission to maximize the benefits out of fuel and from other heat energy sources, including but not limited to, solar heat, geothermal heat, exhaust heat from various kinds of smelting furnaces, cooking ovens, steam engine or steam turbines, heat exhaust from various kinds

20 of engines, fuel cells, trash/organic burners, gas burners, oil burners, warm/hot atmospheric/tropical/desert air, and warm waters of the ocean, among others, wherein, in the process of producing glass/ceramic plates/structural parts and steel/metals/firebricks/fireclay by smelting, in the process of producing

25 roasted coal/coke/charcoal and evaporated organics, or in the process of cooking/steaming foods or concrete blocks, -- the exhaust heat energy coming out of the furnace 35 or oven 35 is channeled and sucked into the partial vacuum chimney/radiator

30 15 as the first downstream section of the chimney, which branches into several coils of heat emitting radiator pipes or tubes that are submerged into a boiler 5 of water where the otherwise

wasted excess heat energy is absorbed or recaptured by the water being converted into steam which rises thru the steam pipe 6 which is communicated to drive the steam engine/turbine 4 serving as a second electric generator engine -- as the first
5 by-product of smelting. For purposes of further recapturing the excess heat energy coming out of the steam engine 4, the steam is channeled thru coils of multiple branches of heat emitting radiator pipes/tubes 9 submerged into cold compressed air inside the first stage preheating cold air duct 10 being supplied
10 by the centrifugal compressor 1A -- in order to further recapture the otherwise wasted heat energy contained in radiator 9 expelled by the steam engine 4 in order to condense the steam into distilled drinking water, as a third by-product of smelting, which drops down thru the water collector pipe 7A which brings
15 the distilled water into the storage tank 7 for the community supply. For further scavenger recapture of the otherwise wasted excess heat, the chimney 15 coming out of the steam boiler 5 is then coiled into multiple branches of heat emitting radiator pipe 15A, as the second down stream section of the chimney, placed
20 inside the final stage heating air duct 24 and submerged into the already pre-warmed compressed air coming out of the steam condenser air duct 10 so that the pre-warmed compressed air is further heated up by absorbing the excess heat from the chimney 15A. Due to limited space in the drawing, as it is not shown, it
25 should be noted that the chimney 15A is made separate from the chimney 27 and goes up thru air duct 10, 22, and thru to preheat the water 32, -- in order to prevent back flow from the tailpipe 27 and to create partial vacuum at the exhaust of the furnace 35 to suck out the oxygen air from the annealing chamber 12. For
30 further scavenger/recapture of the heat energy, the third downstream section of the chimney is coiled into multiple

branches of heat emitting radiator pipes/tubes 27 placed inside the down stream section of the cold condenser air duct 10 so that the pre-warmed air passed the condenser is further heated up by absorbing the heat energy from the third downstream section 27 of the chimney. For further scavenger recapture of the heat energy, the upstream point of first stage cold compressed-air duct 10 is provided with a branch out 22 serving as a fresh cold compressed air chamber/duct into which the fourth down stream section of the chimney, in the form of a multiple branch coiled heat emitting radiator 28, -- is submerged so that the fresh cold compressed air in chamber 22 will picks up the heat energy contained in the now lower temperature section of the chimney 28. For further scavenger recapture of the heat energy, the fifth downstream now very low temperature section of the chimney, in the form of a multiple branch coiled heat emitting radiator 29, -- is submerged so that the water 32 will pickup the last droplet of the remaining heat energy contained in the last section of the chimney 29 -- in order to pre-warm/heat the low grade water 32 to be distilled, most specially when the sun is out, -- thereby achieving maximum recapture and recycle of the heat energy expelled by the furnace/oven 35. It being that the compressed air in the air duct 10 is fresh clean, and has just got heated up by the heat emitting radiator steam condenser 9 and further heated up by the heat emitting radiator exhaust chimney/tail pipe 27, as a first stage heating, it is just logical that a portion of the clean hot compressed air is used to circulate at a regulated flow thru the pipe/air duct 21 to warm up the house or building where people dwell or work in a comfortable environment. Since the warm air in the building needs to be continuously replaced by fresh warm oxygen air, the warm air of the building is exited and entered into the down-

stream section of the pipe 21 which is coiled in multi-branches radiator 30 into the water 31 to make the cold night time chilled water 31 recapture the residue heat energy contained in the building's exhaust warm air before it is finally thrown out by chimney 39 -- in order to recycle same heat energy to pre-warm up the water 31 and to contribute in the production of steam. Note that the coldwater port 34 is located at the far right end of the water heater tank in order that the cold water 31 flows to become warm water 32 in reverse flow against the flow of the heating air inside the radiator 29 and inside the radiator 30. To take advantage of the free God's gift solar heat available during the day, the solar trap 16, comprising a wide double deck transparent roof, is made to cover the water 32 thereby allowing the solar heat radiation 16A to penetrate the roof and get freely to heat up the water 32 wherein the bottom floor of the water container is made black color to absorb the sunlight, but prevents the wind from stealing the heat energy being accumulated or trapped under the transparent roof 16. The solar trap 16 is made up of a lower heat-resistant transparent roof sheet and of an upper heat-resistant transparent roof sheet spacedly superimposed above the lower roof sheet with enough air space in between, -- thereby the air is serving as heat insulator between the two sheets and effectively keeping the water 32 stay hot. Note that this solar trap does not have to be invented anymore as I have already claimed and patented in my US Patent No. 5,507,943, issue date April 16,1996, but since this new function of the solar tap 16 to help in water distillation is a new idea, it is again a part of the rights now applied for patent. The pre-heated water 32, at what ever temperature, gets down thru the pipeline 11 which is made, as it is hereby extremely emphasized, to have a vertical loop 11A of sufficiently deep

5 enough to create a high water-head or high water/steam pressure
when the water 32 is pushed back by the steam pressure at the
boiler 5 -- it being that the steam engine/turbine 4 impedes or
regulates the free flow of steam out of the steam boiler 5. The
10 deep loop pipe 11A, which is made sufficiently lower in
elevation than the boiler 5, is hereby extremely emphasized as a
newly invented device, as a major highlight of this invention
applied for patent, to provide continuous flow of high pressure
water supply into the boiler 5, even as the water supply 32 is
15 just a few feet above the level of boiler 5, -- without the use of
a regulating intermittent shut-off valve in pipe 11 entrance to
the boiler 5. It is hereby note that the steam engine 4 is
incorporated in the process to take the opportunity to make the
steam pressure produce electric or mechanical power for
20 whatever use in support of the industries related to this inven-
tion. It should be noted that the hot water supply pipe 11 is
communicated to the boiler 5 thru its bottom to prevent the
steam from flowing backward into the water pipe 11 and to
force the steam to get into the exit pipe 6 thru the top of the
boiler 5 in order to provide steam power to the steam turbine
25 engine 4. It is also hereby extremely emphasized that the boiler
5 is made elongated multiple branch heat absorber radiator
pipes, each pipe containing a hot smaller chimney pipe which is
one of the multiple branches of the hot chimney 15. It is also
30 further extremely emphasized that the boiler 5 is made inclined
or made vertical such that the water entrance pipe 11 is much
lower in elevation than the steam exit pipe 6, wherein the water
flows upward in reverse against the downward flow of the hot
chimney 15 --- purposely, as it is hereby extremely emphasized,
so that the upper hotter section of the chimney 15 is in touch
with the upper hotter section of the boiler 5 -- while the remain-

ing lower temperature heat energy in the downstream section the chimney 15 is in touch with the lower temperature in-coming water supply from the pipe 11. It is also hereby extremely emphasized that this inclined/vertical radiator pipe boiler is a
5 major highlight of this invention hereby applied for patent. The final superheating process to provide full superheat expanding power upon the compressed air is done by the fuel burner torch 26 which is in the form of various kinds of high pressure heat energy producers or suppliers, some of which are high pressure
10 deuterium/hydrogen electro-plasma torch, gas burner torch, fuel cells, powdered organic/carbon burner, oil burner, trash/wood burner, high pressure steam boilers, and geothermal steam -- to name a few, to super-pressurize the compressed air in its mission to kick/push/run the power turbine 2 which drives the electric
15 generator 3 together with the air compressor 1 which continuously drives fresh cold compressed air into the first stage heating air duct 10 that condense the steam of radiator 9, by which at this point completes the cycle of running the engine 1-2-3 which is a gas turbine engine, a piston engine -- part 23-27-28-29 of FIG.1, and a steam/sterling engine -- all of which are
20 externally heated engines. For further heat scavenger function, the fresh oxygen air intake 38 passes thru and submerged to pick-up some of the otherwise wasted heat energy inside the tailpipe 25 of the engine 2 for pre-heating of the fuel-air
25 mixture for more perfect burning at the time it comes out of the nuzzle of the torch 26A that fires the furnace 35 in order to melt the ore/sand 13 to produce the glass/ceramics/metals/ cleaned-coal 17 and 19 that exit thru and out of the annealing chamber 12 where the molten materials 17 slowly lose temperature due
30 to the circulating air as regulated by the throttle 38. The torch 26A is made to function on various kinds of fuel, one of which

is deuterium/hydrogen gas fuel which is ignited in hot fusion in the operation of the hydrogen-electro-plasma torch where the electric arc reacting with hydrogen requires the presence of the effective permanent grounding 40. The finished products from the annealing chamber 12, which are in the form of blocks, tiles, plates, bars, structural posts/beams/girders/frames/slabs, etc, whether metallic or glass/ceramic, are carried away to the storage areas by the cart 19A. The high pressure cold compressed air inside the heat collector multi-tube/multi-coil radiator 14, being hungry of heat in reverse flow opposite the movement of the exiting molten materials 17, picks up/recaptures the high temperature heat energy radiated by the molten materials 17 in the annealing chamber 12 and delivers the heat energy into the second stage compressed air heating duct 23 in the efforts to recapture/recycle the heat energy and to further energize the compressed air coming from the air duct 10. The fresh oxygen air getting into the annealing chamber 12, as regulated by the throttle 38, is made slow flowing to make the heat energy stay a longer time in chamber 12 to give more time for the heat absorbing radiator 14 to pick up more energy from the molten materials 17 while the heat insulator containment walls and roof 42 conserve the heat inside the chamber 12. The fresh oxygen air passing thru the annealing chamber 12 gets hot also in preparation to contribute hot oxygen for the oxidation of the fuel/gas fumes coming out but did not completely burned in the furnace 35 aside from contributing the heat energy recaptured from the annealing chamber 12 -- into the chimney 15. Additionally, the torch 26 being a clean deuterium/hydro-gen electro-plasma torch, the hot air expelled by the turbine 2 thru the exhaust chimney 25 is a clean hot oxygen air, hence, part of same air is used to contribute oxidation hot air thru the

air port 33 to completely burn the fuel gas fumes that had escape the fire in the furnace 35 -- in the great efforts to remove pollution aside from obtaining more heat energy out of the fuel -- as a further energy scavenger function. The fuel port 18, which is also preheated, is provided with regulating branch valves for more options for spraying fuel direct into the fire at the furnace 35. For further scavenger function, the hot tailpipe 26B coming out from various kinds of third outside engines, one of which is deuterium-hydrogen fueled internal combustion piston-type engines in which the deuterium is subjected to electric arc environment, is inserted to contribute the otherwise wasted heat energy into the tailpipe 25 of the main engine 2 in order to be recaptured by the low temperature compressed air in air duct 10 in contact with the hot radiator 27. The fuel-air port 38 is also used as entrance for various kinds of fuel, some of which are powdered carbon, powdered organics, evaporated organics/gas-fumes from the furnace 35, -- to name a few fuels in the efforts to fire the furnace 35. It should be noted that the kind of fuel used to fire the furnace 35 depends upon the kind of materials being smelted or kind of pollution being removed. The distilled water at the tank 7 is exited by the pump 37 thru the pipe 36 to build up pressure for the mist spray 8 at the intake of the compressor 1 to make the compress air heat-hungry in contact with the condensation radiator 9. The elevated water tank 20 is provided to maintain good pressure of the water being supplied to the community.

00063 FIG. 31 -- illustrates a new embodiment for a new design for a newly invented device for and in support of the various newly invented processes as has been illustrated by the herein FIG. 1 and FIG. 30, to implement this invention's mis-

sion in maximizing benefits from whatever heat energy available for conversion, and further to portray a clear view of the various heat exchangers in the efforts to provide a clear understanding of the maximization of heat energy recapture and recycle. By
5 inspection of the drawing, the zigzag lines represent both heat emitting and heat absorbing multiple branch and multi-coil radiator pipes/tubes in the efforts to maximize heat transfer at a minimum time. The groups of multiple tiny-little dots represent steam or water mist. The half circle lines represent jump-over of
10 pipelines or not connected to the other crossing pipelines. As has been explained in the preceding Fig. 30, the pipe 18 supplies fresh oxygen-air and fuel to the torch 26A that fires the furnace 35 in the process of smelting the materials 13 into molten materials 17. The excess smelting heat energy exits up
15 into the chimney-radiator 15 that boils the water 5 into super-hot steam that drives the steam engine/turbine 4 that expels the hot steam 9. The distilled water is brought up by the pipeline 36 out of the tank 7 from which the mist 8 is sprayed at the intake of the compressor 1 that drives the first cold compressed
20 air thru the centrifugal pump 1A outward into the radiator 10 and also drives the second cold compressed air into the first radiator 22. The pipeline 10 containing cold/heat-hungry compressed air spreads into heat absorbing multiple tube/pipe radiator 10 to provide maximum contact with the hot steam 9
25 expelled by the steam engine 4 to condense the steam into distilled water that drops down into the water tank 7, at the same time the cold compressed air inside the radiator 10 in reverse flow against the steam 9 flow is energized by the hot steam 9 by absorbing the heat energy contained in steam 9. The
30 heated compressed air moves on in the pipeline and into the radiator 10A to absorb additional heat energy from the heat

emitting radiator 15A. The already hot compressed air from radiator 10A moves further into pipeline 22 and into the radiator 23 and into the radiator 24 where it absorbs higher temperature heat energy from the radiator 27 which contains low pressure very hot air from the engine 2 exhaust 25 that has been further heated up by the exhaust tailpipe 26B air from other third engines. The already very hot compressed air moves on along the home run air duct where it is further super-heated up by the torch 26 to have the maximum expanding power as it exits thru the power turbine engine 2. The turbine engine 2 drives directly the electric generator 3 that produce deuterium-hydrogen, and simultaneously drives the compressor 1 and 1A all in one drive shaft. The centrifugal compressor pump 1A continuously drives the second cold compressed air into the first radiator 22 to pick-up the low temperature heat energy from the first radiator 28, which is downstream of the hot radiator 15A. The pump 1A further drives the third cold compressed air into the second radiator 22 to recapture another low temperature heat energy from the second radiator 28, which is downstream of the very hot radiator 27. The heated compressed air inside the second radiator 22 moves downstream and joins with the heated compressed inside the first radiator 22 and further made to flow jointly down stream into the pipe 21 to provide heating clean air into the house/building 21A, then exits thru the downstream pipe 21 and gets into the radiator 30 to impart low temperature heat energy to pre-warm the cold water 31, --as a mean of recapturing-recycling the last drop of heat energy in the chimney, and then finally exits as very low warm air into the atmosphere thru the chimney 39. The hot air in radiator 15, after boiling the water 5, moves up into the radiator 15A to further energize the compressed air in radiator 10A that came from the radiator 10,

then moves downstream into the first radiator 28 to pre-heat the cold compressed air in the first radiator 22, then moves further downstream into the radiator 29 to pre-heat the water 32 and finally exits free to the atmosphere thru the chimney 43. The centrifugal compressor 1A further drives the fourth cold compressed air into the radiator 14 inside the annealing chamber 12 in reverse flow opposite the movement of the exiting smelted materials to recapture the high temperature heat energy being radiated by the molten/smelted materials. It should be noted at this point that super-hot molten materials become cooler and cooler upon approaching the exit door of annealing chamber 12 -- *because heat emission or radiation is a cooling process. Therefore, the cooler compressed air in the upstream of the radiator 14 must be the one made to react with cooler smelted materials near the exit door of the annealing chamber 12 until it becomes cold finished product plate 19A loaded on the cart 19, while the hotter compressed air, as it moves downstream inside the radiator 14, must be the one made to react with the super-hot molten materials 17 in the efforts to maximize heat recapture.* The pre-heated compressed air from the radiator 14 then moves downstream and made to join the other pre-heated compressed air from the radiator 10A and from radiator 22 and all together get into the radiator 23 down to 24 to recapture high hot heat energy from the radiator 27. The high hot compressed air exiting from the radiator 27 then passes thru the super-heater deuterium-hydrogen torch 26 to provide super expanding power to the compressed air to kick/push the turbine/engine 2 as it exits thru the tailpipe 25. It is hereby extremely emphasized that the turbine 2 is made wide-face sail blades to make it highly efficient in impeding and deflecting the exiting compressed air, and for a better choice, the turbine 2 is made double

co-axial oppositely rotating turbine for maximum efficiency, as has been illustrated and explained in my preceding US Patent No. 6,327,994 B1 dated Dec. 11,2001. In the process of annealing, as vacuumed by the tall chimney 15-15A-28-29-43, the negative pressure atmospheric fresh-cold oxygen air -- gets into the annealing chamber 12 thru the throttle at a low flow to recapture the heat energy from the smelted materials, and then contributes some hot oxygen-air thru the multi-orifice 33 into the exit of the furnace 35 in the efforts to completely oxidize the gas fumes going up the chimney that escaped the fire in the furnace 35 -- in addition to converting the gas fumes into heat energy -- as a scavenger function and to prevent pollution. The negative pressure hot clean air then rise up into the radiator 15B and heat up the water 5A at the upstream section of the boiler, then rise up and joins the hot air from the radiator 15 and together get into the radiator 15A, down into the first radiator 28 and up into the radiator 29 to pre-heat the water 32 and finally exits free thru the chimney 43. The low pressure-low temperature hot air from the second radiator 28 also joins the hot air from the first radiator 28 and together get into the radiator 29 to preheat the water 32 -- as a means to recapturing-recycling the last drop of heat energy in the tailpipe/chimney. The solar trap 16, which has been explained in the preceding FIG. 30, is provided to take advantage of the free God's gift solar heat 16A during sunny days to contribute heat energy into the water being distilled and eventually help run the turbine engine 4 that produce hydrogen, help reduce the input of fuel at the pipe 18, and to help supply hydrogen to the torch 26. The preheated water 32 gets down thru the pipe 11 and thru the bottom into the upstream section of the water container as water 5A and moves to become water 5. The water mist 8 at the

intake of the compressor 1 introduces more matter that expands when heated up or that the compressed air is made more compact when mixed with water, hence, there is more potential for it to absorb or more hungry to capture more heat energy from the steam 9 being condensed. The steam radiator 9 is the form of multiple branches and coils of tubes/ pipes spread or inserted into the cold compressed air pipes to maximize contact between the cold air and the hot steam -- for more rapid condensation. The condensation radiator tubes/pipes are inclined downward towards to the compressor 1A to make the distilled droplets of water flow down to the storage tank 7.

00064 There many more available wide varieties of configurations of apparatus and assemblies of devices that can be thought of for the maximum utilization, applications, and commercialization of the new invented ideas herein presented of which the herein inventor reserves all the proprietary rights. It should be noted that the reader of this invention/presentation is supposed to be a person skilled in the arts, and that the components, materials, connectors, fasteners, and tools needed to build or assemble the inventions are already available in the open market, much more so with the availability of the hydrogen bomb and heavy water, and therefore, no need to invent the components and no need to explain the processes how to make the inventions.

THE CLAIMS

What I claim as new invention, for which I hereby apply for protection of proprietary rights by a grant of a Letters Patent, are as follows:

- Claim-1. A plurality of new processes for maximizing benefits from fuels and/or from heat sources/supplies, and a plurality of corresponding new devices in support of the new processes, all inter-related to form part/component for and appurtenant to and assembled into a power plant, for the production of electricity, hydrogen, deuterium, all kinds of fuels, glass, ceramics, metals, distilled water, drinking water, irrigation water, heating air, and other concomitant products,
- wherein, a heat-hungry cold humid compressed air is used serving as external heat energy collector and made to undergo thru low temperature first stage, thru high temperature second stage, and thru super-high temperature third stage scavenger heating processes before it is finally released to pass thru a gas power exhaust turbine, and exits thru a radiator chimney that interacts with second stage heaters to re-use the recaptured heat energy to drive the same power exhaust turbine;
- wherein, for its energy scavenger mission, and as a first stage heating-up of the compressed air while still cold, a plurality of low temperature heat emitting radiator tubes of: -- freezers, chillers/coolers, air conditioners, refrigeration units, dehumidifiers, food processing/cooking/barbecue ovens, stoves, and lamps, -- are submerged or inserted to crisscross the flow of compressed air inside heat absorbing radiator pipes/tubes which are also exposed to solar heat, solar traps, direct sunlight, warm water on the tropical ocean, warm atmospheric air of summer, warm air in the tropical regions, hot air from the fireplaces, hot air in the attic of houses, warm water from hot springs, warm waters from volcanic lakes, hot air created by all kinds of lamps, hot air created by the

kitchen stoves, warm waters/steam created by underwater detonation of hydrogen bomb or other bombs, condensation devices/towers, and other heat sources;

5 wherein, as a first stage heating of the compressed air while still cold, the cold compressed air is used to condense the hot steam expelled by fuel cells, by steam engines, and by steam turbines -- in reverse flow, by inserting individual steam exhaust heat-emitting tubes into/inside each corresponding heat-absorbing cold compressed-air radiator tubes, -- in order to recapture the heat energy from the steam, and to recycle the
10 distilled water into the boiler, into the electrolysis machine to re-feed the fuel cells and into drinking water;

wherein, as a first stage heating of the compressed air while still cold, a plurality of cold heat-absorbing radiator pipes/tubes are placed crisscrossing the air flow inside the downstream section of the exhaust
15 tailpipe/chimney of the subject power plant, --- in order to condense the steam, recapture the water that has been sprayed into the intake mouth of the compressor, and to recycle the heat energy;

wherein, the first stage cold compressed air duct/header pipe from a compressor of the power plant, has multiple branches, each provided
20 with shut-off gate valves, each branch communicated to a plurality of heat energy absorbing radiator pipes/tubes, -- for free selection of the various available heat sources of lower temperature at regulated air flow;

wherein, before compression, as a new process of making the air more
25 compact, more dense, more humid, more heat-hungry, more turbo-charged, and to have more expanding power, the air is passed thru cold foggy tunnels being mist sprayed with water, and distilled water is also mist sprayed at the intake mouth of the compressor;

wherein, for second stage heating of the compressed air, and for maximum
30 utilization and maximum commercialization of the created partnership between the turbine engine and the heat absorbing/collector pipes or

tubes of my prior arts, -- the heat collector pipes/tubes are used to absorb heat energy from: -- solar heat on land as well as on the ocean, solar heat from solar traps, heat energy from the fireplaces, trash burners, geothermal heat sources, cooking ovens, exhaust chimneys of power plants, exhaust tailpipes and hot-air/water of cooling systems of various kinds of engines, warm waters of the ocean, warm water of geothermal lakes, warm grounds of the desert, warm air of the summer atmosphere or tropical regions, warm air from inside the attic of houses, hot air/water from cooling systems of nuclear power plants, hot air from smelting plants, hot air from glass/ceramic smelting ovens, warm air from factories, hot water and steam created by underwater and underground detonation of hydrogen bombs, or other bombs, hot gases/steam created by electric plasma torch, hot gases created by fusion torch fueled by deuterium, hot gases created by air-blast burning of powdered organic matter, powdered charcoal, powdered cock, powdered wood/news-paper, dried grass/leaves, carbon, incinerators, and all other heat energy sources;

wherein, for maximum recovery/recapture/recycle from the various heat sources/ suppliers, the hot air/steam/water are confined/forced to run thru various types/kinds of tubes/pipes/conduits/air-ducts placed inside the heat absorbing pipes/tubes, -- in order that the heat energy is placed in close encounter/contact with the heat collector cold compressed air inside the pipes/tubes that absorbs the heat energy;

wherein, as a second stage heating of the compressed air, smelting plant furnaces are submerged in compressed air inside large pipes/tunnels, -- and the compressed air is in reverse flow against the flow of the annealing process to recycle the heat energy from the annealing chamber for distilling water and other industrial needs;

wherein, for maximum absorption of heat energy, the individual branches of heat emitting pipes/tubes that contain warm/hot air/steam/water are submerged in running cold compressed air inside each corresponding

individual heat absorbing radiator tubes/pipes in reverse flow;
wherein, for maximum absorption of heat energy, the hot upstream section
of the heat energy supply pipes/tubes are place inside the hot down
stream section of the heat energy absorbing pipe, while the downstream
5 low temperature section of the heat energy supply pipe is placed inside
the cold upstream section of the heat absorbing compressed air pipe in
reverse flow;
wherein, for maximum utilization of heat energy, the super-hot energy
supply is used to interact with materials/heat-collectors that need high
10 temperatures in smelting furnaces, while the lower temperature
downstream tail heat energy is used to interact with cold compressed
aid and materials/heat-collectors that need or able to absorb low
temperatures, like solar heat;
wherein, cold compressed air is used to condense water vapor, the steam
15 expelled by fuel cells, and the steam expelled by steam turbine/engine -
-- in producing distilled water -- to recapture and recycle the heat
energy contained in the hot steam, -- in combination with smelting,
power generation, and re-generation of hydrogen and deuterium;
wherein, the electric generator is made to produce direct current electricity
20 for use in the electrolysis of heavy water for production of deuterium,
triterium, and hydrogen for fuel in the smelting furnaces and internal
combustions engines where the deuterium is subjected to electric arc;
wherein, for easier construction, a plurality of hot radiator tubes containing
hot compressed air are coiled in zigzag form across the flow of cold
25 compressed air inside a large heat absorbing pipe, the hot zigzag tubes
being started at the down stream end of the heat absorbing pipe;
wherein, the various first stage branches of the heat collector radiator
pipes/tubes are communicated to a central header air duct/pipe which
serves as depository from the various first stage branches and which
30 also serves as hub for the second stage heat absorbing branches into the
higher temperature heat energy supplies and sources;

wherein, among the higher temperature second stage heat energy supplies and sources are: exhaust tailpipes of internal combustion engines, exhaust chimneys of gas turbine engines, smelting furnaces for metals, smelting furnaces for glass/ceramics, annealing lehr of glass, exhaust
5 pipes from fuel cells, Geothermal wells, exhaust pipes from engines fueled by hydrogen-deuterium-tritium, exhaust chimneys of fusion smelting furnaces fired by electro-plasma torches, exhaust chimneys from smokeless trash burners, exhaust chimneys fueled by coke, coal, wood, charcoal, and organics, hot steam from underwater detonation of
10 hydrogen bomb -- by means of electric arc, by means of confined dynamite into the liquid deuterium, and by means of compression by drop hammer, --- into which high temperatures, a plurality of heat absorbing radiator pipes/tubes are submerged and the hot radiator pipes are inserted inside the cold heat collector pipes, -- in the process of
15 collecting heat to energize the compressed air that run the gas turbine;
wherein, after the compressed air has been pre-heated thru the first stage, the heat collector air duct pipes/tubes are divided into plurality of routes, branches, and small tubes, and are exposed to higher temperature heat energy supplies listed in the preceding paragraphs,
20 including into the tail/pipe and exhaust chimneys of the same gas turbine engine to which the same heat collector pipe is in partner with;
wherein, all the second stage higher temperature heat collector pipes are communicated to deposit hot compressed air into a 3rd stage heating central header power duct/pipe, in which the hot compressed air is
25 further subjected to a hydrogen-deuterium-electro-plasma-fusion torch to provide more heat into the compressed air;
wherein, to prevent meltdown of the 3rd stage heating pipe, same pipe is enclosed/engulfed by a larger pipe which contains/supplies high pressure cold high humidity water-misted-air that gets into the down
30 stream end of the 3rd stage heating pipe, for more expanding power of the 3rd stage header power pipe;

- wherein, the hydrogen-deuterium fuel is super pre-heated thru the engines tail pipe and thru it's own plasma flames before it gets out from the fuel tube and then into exposure to electric arc environment at the plasma furnace to attain fusion firing in the third stage heating inside the central hot air header duct ;
- 5 wherein, in the effort to maximize benefit from hydrogen-deuterium as fuel, same fuel is passed thru fusion reaction processes instead of just reacting it with oxygen;
- wherein, in the effort to capture the heat energy produce by the hydrogen bomb, it is detonated in deep waters to trap the fusion heat into lower temperature in the water to produce steam and hot water, -- as means to create more heat sources;
- 10 wherein, the down stream end of the 3rd stage central hot air header duct is communicated into the intake of the exhaust Power Turbine to push the blades of the turbine in full power and effect, same turbine drives the compressor that supplies compressed air into the whole heat absorbing radiator pipes/tubes systems of the power plant, and same power turbine also drives a Direct Current electric generator, without regulating the voltage output -- hereby extremely emphasized ;
- 15 wherein, the electric generator is made to produce direct current used to run multiples of electrolysis machines which do not require a steady voltage, -- to re-supply the Power Plant with hydrogen-deuterium fuel which is stored for commercial world market for various engines, desalination, and other purposes, and for fuel of the succeeding fusion reactions in this subject power plant;
- 20 wherein, a major portion of the branches in the 2nd stage heating of the heat energy collector pipes are placed inside of and parallel with the main exhaust chimney, in multiple tubes, to recapture the heat expelled by the power turbine;
- 25 wherein, a plurality of tailpipes, from a plurality of internal combustion piston engines, are inserted into and made to expel hot gases into the
- 30

upstream section of the exhaust chimney of the gas turbine engine in order to recapture the tailpipe heat energy of the internal combustion engines;

5 wherein, the internal combustion piston engines, gasoline/diesel, are provide with at least two hybrid long electric arc sparkplugs in each chamber, and are fed with hydrogen/deuterium to attain fusion inside each chamber to produce more heat, and the electrolysis machines are driven by the engine's DC generators directly without voltage regulator to produce hydrogen/deuterium being fed into same engines to reduce gas/diesel consumption -- for more mileage per gallon of fuel;

10 wherein, the generated DC is directly passed thru the electrolysis machines for production of hydrogen/deuterium fuels, and also directly passed thru the coils of the magnets of the electric generators, -- before connection to the power-grid;

15 wherein, a plurality of heat absorbing radiator tubes/pipes are placed inside the exhaust chimney of the power plant: -- (1) to drive a reciprocating piston engines, which drives a compressor that supplies compressed air into its own heat collector pipes, -- such as a steam engine or a sterling engine, (2) to drive/run a secondary gas turbine engine that generates DC electricity, and (3) to provide hot air for heating buildings and houses;

20 wherein, a wood/trash distillation oven is placed inside the downstream section of the exhaust chimney of the power turbine and the distillate organic gas is superheated and fed as torch fuel to burn lumps of coal and lumps of organics into the combustion chamber inside the central hot air duct for 3rd stage heating;

25 wherein, a water boiler is placed into the downstream section of the exhaust chimney to distill heavy water for used in the electrolysis that produce deuterium for the fusion processes for the production of heat energy;

30 wherein, in the process of condensation, the heat energy from the hot water

vapor is recaptured by the first-stage heat absorbing pipes to pre-heat the cold compressed air of the power plant;

wherein, a conveyor being loaded with trash is placed inside the downstream section of the chimney to dry the trash -- that serve as fuel for the power plant;

wherein, in order to detonate a hydrogen bomb underwater to produce more heat for the power plant, the liquid deuterium is confined in a glass capsule provided with multiple electrodes, and the glass is enclosed by strong steel container without air gap, and the electrodes are connected by highly insulated electric wire conductors to the main high voltage DC electric source, in order to fire abundant electric arc thru and across the liquid deuterium by remote control, the glass serving as insulator;

wherein further, in order to detonate a hydrogen bomb underwater in the efforts to produce more heat to run the power plant, the liquid deuterium is contained in a soft metal container wrapped by reinforcing fiber glass rope/strings, and is surrounded by abundant charge of dynamite which is in turn contained by a strong steel container of about 6 to 12 inches thick, and then the dynamite is blasted by remote control wires, -- to effect *violent implosion* upon the liquid deuterium;

wherein, in order to detonate a hydrogen bomb, liquid deuterium in soft metal container is compressed by a drop hammer that blast a dynamite on top of the deuterium, -- in the efforts to create more heat supplies for the power plant;

wherein further, in order to detonate a hydrogen bomb underwater to produce more heat energy to run the power plant, the distilled heavy water is confined in a forced electrolysis chamber without air gap/space to make sure there is zero chance of expansion during the process of electrolysis, and the water is colored so that the separation line of the liquid deuterium above the water is visible, and then the liquid

deuterium is heated up by electric arc until fusion is attained;

wherein further, water and mercury are used serving as sealant to confine

and to seal hydrogen, deuterium and tritium in a container -- order to prevent the gasket at the outlet from being dissolved by the hydrogen; wherein, the water vapor from the underwater detonation of hydrogen bomb is condensed into drinking water and into irrigation water -- by the heat collector pipes/tubes, while the helium gas is compressed inside pressure container;

5 wherein, in the efforts to produce more heat energy to run the power plant, a ball of compacted charcoal, graphite, and carbon, enclosed/wrapped in soft metal, is placed at the lower section of the liquid deuterium before detonation -- in order to melt and compact the carbon during the fusion blast and solidify into crystals of diamonds upon cooling, the diamond serving as among the principal by-products of hydrogen bomb detonation in deep waters;

10 wherein, in the effort to used the ocean for deep water hydrogen bomb detonation, the power plant/house is made floating on the ocean, carried by/ridding on an ocean platform made of crisscrossing empty pipes/bamboos, and crisscrossing stiff walls with top cover plate forming an empty box to trap air and to contain various kinds of air containers, empty bottles, sausages of air containers, pipes and bamboos, same platform serving also as carrier for agricultural lands, power house, habitation homes/buildings, and for floating ocean windmill farms;

15 wherein, a secondary gas turbine engine, run by recaptured heat from the exhaust chimney or tail pipe of the main engine, is used to compress air to turbo-charge the main engine and to produce more hydrogen/deuterium fuels;

20 wherein, the cold water at the ocean bottom is used to cool the air before getting into the compressor, and then, the warm waters on the ocean's surface is used to pre-heat the compressed air after coming out of the compressor by means of the heat absorbing radiator tubes and pipes, --

25 as means to provide more heat energy supply to the subject power

30

plant;

wherein, a solar trap covers the ocean surface to hold more solar heat into the ocean waters and to prevent the wind from stealing the heat energy from the ocean, serving as means to provide more heat energy for the power plant, the solar trap made up of at least two levels of transparent
5 sheets of roof to allow the solar heat to get in;

wherein, an array of a plurality of shinny narrow strip reflectors are each spacedly laid on one edge, disposed at North - South orientation on top of the solar trap's roof, held by a controlling device that timely
10 manipulates and tilts the reflectors according to the morning and the afternoon sun -- in order to maximize solar penetration into the solar trap, -- to provide solar power on land or on the ocean;

wherein, to produce more heat energy supplied to the power plant, hydrogen bombs are detonated underwater in sustained firing by a submarine
15 boat loaded with abundant torpedoes that carry hydrogen bombs which are fired upon an underwater target impact wall in regular succession to boil the ocean water directly under the floating power plant;

wherein, in the efforts to produce more heat energy supplied to the power plant, underwater detonation of hydrogen bombs in regular sustained
20 firing is done by an underwater large cannon gun fixed in place which regularly fires large deuterium bullet bombs upon an underwater target impact wall built deep in the river bank or sea coastline.

wherein, further, in the efforts to produce more heat supply for the power plant, the deuterium bullets are made into regular size bullets that fits a
25 hand gun or a machine gun which fires to detonate fusion bullets at regular intervals upon a target impact wall in a dry enclosed oven into which a pump shoots liquid deuterium or capsules upon the fusion fire to maintain continuous fusion flame inside the furnace;

wherein, further, in the efforts to produce more heat supply for the power plant, an electro-fusion plasma torch in a non-electric conductor
30 container is submerged in a non-conductor distilled water to prevent

- short circuit of the high voltage DC supply and to prevent meltdown of the torch serving as boiler while in the process of smelting various kinds of materials -- including molded/cast large sections of chambers, house/building components and house cubicles made of glass, to name
5 a few, and the smelting heat energy is recaptured by the heat absorbing compressed air in radiator pipes/tubes;
- wherein, further, to produce more heat energy for the power plant, a pump-gun shoots high pressure deuterium just in time into the fusion flame created inside the fusion plasma torch to subject the new deuterium to
10 the high temperature to attain continuous fusion reaction without too much electric arc consumed;
- wherein, further, to produce more heat energy for the power plant, hydrogen gas jet is blown upon a molten sand/rock and/or metallic ore to reduce the materials into pure/refined form of glass/ceramics or metals, in
15 which smelting process, the hydrogen is oxidized by grabbing the oxygen from the ore, thereby producing large amounts of heat which is absorbed by the heat-absorbing radiator pipes;
- wherein, further, to produce more heat energy for the power plant, the oxygen air supply for a trash burner is pre-superheated thru tubes
20 submerged into the fire before the oxygen air is released near the fuel by pressure nuzzles at the end or at the top of the trash, the oxygen tubes having multiple side nuzzles to distribute the oxygen around the combustion chamber to burn all gas fumes;
- wherein, further, to produce more heat energy for the power plant, a catalytic
25 converter oven heated by the hydrogen/deuterium electro-plasma torch -- is made to form part of the main third stage heating power pipe before the power turbine, -- to recapture the heat energy produced by the catalytic converter;
- comprising:
- 30 a power exhaust turbine, as prime mover, connected to a drive shaft, having an air inlet and an air outlet connected to a main exhaust chimney;

a turbine compressor driven by the power turbine thru the drive shaft,
having an air intake mouth and an air outlet;
an electric generator driven by the power turbine thru the drive shaft, having
magnets with variable magnetic field, made to produce direct current,
5 placed in-between the turbine compressor and the power turbine;
the power turbine, by way of the drive shaft, drives the compressor and the
electric generator, thereby forming a power plant assembly;
a main first stage header cold air duct having an inlet communicated to the
outlet of the turbine compressor, serving to contain cold compressed air
10 produced by the compressor, and having a plurality of outlets branches;
a plurality of major pipe branches, each having control gate valves, each
having an inlet and an outlet, and each inlet connected to the
corresponding outlet of the main header cold air duct;
an assembly of parallel, multiple, first stage heat absorbing radiator pipe
15 tubes, having an inlet communicated to the outlet of each major pipe
branch, and having an outlet;
a steam engine and a fuel cell communicated to contribute hot exhaust steam
into a common steam header tail pipe having multiple outlets;
a plurality of heat emitting hot steam tubes, each tube having inlets
20 connected to each outlet of the header tail pipe, serving as branches of
the steam engine's tail pipe, each having a downstream end;
each hot steam tube inserted into the downstream end of each corresponding
individual heat absorbing compressed air radiator tube in reverse
airflow, and coming out at the upstream end of each heat absorbing
25 tube, -- in order to condense the steam into distilled/drinking water ;
a distilled water receiving header pipe communicated to the downstream
ends of the hot steam tubes, having an outlet;
a distilled water storage tank communicated with the outlet of the distilled
water header pipe, serving as distilled water storage which supplies
30 distilled water to a boiler of the steam engine, and to a water misting
device at the air intake mouth of the compressor, for turbo-charging;

- 5 a plurality of low temperature heat energy supplies, some of which are solar, warm water of the ocean, warm grounds and air of the desert, exhaust from chillers, freezers, fireplaces, geothermal heat, including but not limited to hot water created by under water detonation of hydrogen bomb, to name a few, into which the first stage heat absorbing radiator tube assemblies in the other branches are exposed to;
- a hot main second stage header air duct having a plurality of inlets into which the outlets of the assemblies of the first stage heat absorbing radiators are communicated to, and having a plurality of outlets;
- 10 a plurality of assemblies of second stage heat absorbing radiator pipes/tubes having inlets communicated to each corresponding outlet of the hot main second stage header air duct, serving as second stage branches, and each having an outlet;
- 15 a plurality of high temperature second stage heat energy supplies and sources, some of which are already listed in the preceding paragraphs, including but not limited to, hot steam from underwater detonation of hydrogen bomb, hot air from smelting plants, hot air from organic trash smokeless burners, hot air from engines and power plants main exhaust chimneys, etc., -- into which, each corresponding branch assembly of
- 20 second stage heat absorbing radiator pipes/tubes is exposed to;
- a plurality of the second stage heat absorbing radiator pipes placed inside of, parallel to, and along the length of the main heat exhaust chimney in reverse air flow, -- to collect energy from the chimney and made to discharge hot air into the third stage heating header hot air duct;
- 25 a third stage header hot air duct, having multiple inlets communicated to the outlets of the second stage heat absorbing radiator pipe assemblies, and having an outlet;
- 30 a plurality of high temperature heat energy suppliers, some of which are charcoal/ coke/coal burners, powdered carbon blast burners, gas/oil/organic gas burners, hydrogen/deuterium electro-plasma fusion reactor, --- placed inside the third stage header hot air duct for final

super-heat up and power boasting upon the compressed air;
the outlet of the third stage header hot air duct connected and
communicated to the air inlet of the power exhaust turbine;
a multi-coil main heat exhaust chimney, having an inlet connected and
5 communicated to the air outlet of the exhaust power turbine, serving as
exhaust main tailpipe of the power plant, and having an outlet;
a reciprocating piston hot gas engine driving a push and pull electric
generator, having;
a piston rod interconnecting a larger power piston with a smaller
10 compression piston driven by the larger piston;
each piston fitted with appropriate size of chamber, each chamber
having reciprocating valves, and having an inlet and an outlet;
an assembly of heat absorbing radiator tubes placed inside the
main exhaust chimney, having a header inlet pipe and a header
15 outlet pipe;
the inlet header pipe pierces the chimney and communicated to
the outlet of the compression chamber;
the outlet header pipe pierces the chimney upstream of the inlet
header pipe and communicated to the inlet of power chamber;
20 the hot air exhaust from the power piston is communicated to the
second stage header hot air duct for recycle of the heat
energy;
a plurality of hybrid internal combustion engines fueled with hydrogen-
deuterium, made to produce more heat energy for the power plant,
25 provided with long-arc sparkplugs, made to produce hydrogen-
deuterium fuel, each having a hot tailpipe that pierced into the main
exhaust chimney to contribute hot gases into the chimney for heat
energy recycle;
at least one hybrid sparkplug, having multiple prong anode adjusted to have
30 long-arc jump of about one centimeter spark arc jump or no anode at
all, -- installed in each combustion chamber of the IC engines to create

fusion fire by the deuterium fuel, --- to produce more heat energy for the power plant;

at least two of the longitudinal second stage heat absorbing pipes made to discharge hot compressed oxygen-air into the charcoal/coke/cool burning chamber;

5 an assembly of heat absorbing radiator tubes, placed inside the chimney, having an inlet and an outlet header pipe, each header pipe pierces out thru the chimney and correspondingly communicated to an outside turbine compressor and to an outside power turbine. --- to run a secondary, power plant;

10 an assembly of heat absorbing radiator pipes, placed inside the chimney, having an inlet and an outlet header air duct, each header air duct pierces out thru the chimney, the radiator supplied with cold compressed air thru the inlet duct by a compressor of a third gas turbine engine, the compressed air heated/energized inside the radiator then moves out thru the outlet header duct which delivers the heated compressed air that kicks/pushes the exhaust power turbine of the third gas turbine engine that drives the compressor, and a plurality of air ducts tightly communicated to the exhaust of the power turbine serving

15 to distribute heating air into houses/buildings near the power plant;

20 a distractive distillation chamber for wood and organics placed inside the chimney, having an inlet door and an outlet pipe that pierced out thru the chimney to exit organic vapor supply by pipe for torch fuel into the trash, coke, coal burner, -- to produce more heat energy for the power plant, and as a heat recycle process;

25 the wood distillation chamber produces charcoal used in the smelting plants for glass and steel to further produce heat energy for the subject power plant;

a horizontal axis carousel bucket looped chain conveyor loaded with trash for drying, --- placed inside the down stream end of the chimney --- for more fuel;

30

- an upper inlet door and a lower exit door at the elbow bend of the chimney,
made for loading trash on the carousel, and for unloading trash down
into a bin;
- 5 a plurality of hybrid cyclone dust separators having in inlet air duct air-
tightly connected and communicated to the main chimney's outlet thru
a common header air duct connector, and having an outlet;
- each cyclone dust separator comprising;
- 10 a vertical axis drum body, having a top lip, a bottom lip located at
a distance equal to its own diameter below its top lip, and
having an inside wall;
- a top cover plate air-tightly fastened to the top lip of the drum,
having a large central hole, and a bottom face;
- 15 a vertical air exit chimney, serving as a continuation of the main
exhaust chimney, having an open bottom below the top of the
drum at about at least two thirds of the height of the drum, air
tightly attached thru the center hole of the top cover plate,
having an open top end air outlet;
- 20 a spacious bottom chamber created by a bottom cover air tightly
fastened to the bottom lip of the drum, having a bottom door
exit for dirt;
- 25 a plurality of spaced radial vertical instilling walls, having a top
edge attached to the bottom face of the top cover plate, an
outer vertical edge attached to the inside walls of the drum, a
bottom edge attached to the bottom cover of the drum, and an
inner vertical edge set backed at about at least four times the
diameter of the vertical air exit chimney;
- the instilling walls having a horizontal width of at least two-third
of its height to make a spacious instilling chamber for the dust
to settle down; and
- 30 a plurality of outwardly inclined floors attached to and in-between
the radial vertical walls, in multilevel floors;

- a horizontal zigzag smoke cleaning chimney, having an elbow inlet air-tightly communicated to the open top end air outlet of the cyclone's exit chimney, and having an air outlet, and serving as continuation of the main chimney, comprising:
- 5 a flat floor, a flat roof, and side walls interconnecting the floor with the roof, forming a box air-duct;
- a series of roof air deflector walls, spacedly attached hanging from the roof across the air flow, with at least two feet clear from the floor;
- 10 a series of floor air deflector walls erected on the floor and in-between the roof deflector walls, across the air flow, with at least two feet clear from the roof;
- a rough surface sheet attached to the roof facing down, serving as ceiling;
- 15 a rough surface sheet facing the air flow attached to the walls and floors;
- a high pressure water pipe attached to the ceiling lengthwise, having multiple transverse branches and multiple downward branches;
- 20 a plurality of water mist spray nuzzles facing the rough surface walls and ceilings, spacedly communicated to the branches of the water pipe;
- the floor inclined to one side, having a waste water collection gutter that drops the water down thru a drain hole;
- 25 a horizontal spiral chimney, serving as dust collector and smoke cleaner that makes the exhaust air executes a spiral flow inside the chimney, having an inlet air-tightly communicated to the air outlet of the zigzag chimney, comprising:
- a large elongated air pipe/duct, made long enough depending upon
- 30 the quality of exiting air out from it, having an outlet;
- a spiral fin attached to and around a central straight closed pipe

that serve as support structure of the fin, forming a fin assembly;
the fin assembly inserted and placed centrally and longitudinally
inside the large air pipe;

5 a plurality of pressurized longitudinal water pipes, having misting
nuzzles attached to every quarter along the central pipe
structure, to wet all the internal walls of the spiral chimney, to
catch the smoke and dust;

a tall vertical chimney to create vacuum, having an inlet air-tightly
communicated to the outlet of the spiral chimney, and having
10 an outlet serving as final exit of the waste air of the power
plant;

a plurality forced electrolysis machines, without allowance for gas
expansion, that produce liquid deuterium directly without compressor,
driven by the DC current output by the power plant -- to supply
15 deuterium to the electro-plasma torch inside the 3rd stage heating duct
of the power plant; and

a hybrid bottle/container serving to store the liquid deuterium produced by
the force electrolysis machine, having water and mercury serving as
sealant at the inlet and outlet, and having a bent outlet pipe manipulated
20 with an inlet submerged in/out of water/mercury, --- to remove leakage
of hydrogen fuel, --- as hydrogen dissolves all organic seals.

Claim-2. A new process of maximizing benefits from hydrogen-deuterium
fuel in accordance with claim-1, wherein, the engine is improved and
25 the hydrogen-deuterium fuel is subjected to an abundant electric arc at
top-dead-center in the combustion chamber of a gasoline and a diesel
internal combustion piston type engine, --in order to convert the
deuterium into fusion energy, instead of just combining it with oxygen.

30 Claim-3. A new hybrid of sparkplug serving to maximize benefits from
hydrogen-deuterium fuel by producing fusion energy, in accordance

with claim-1 or claim-2, wherein, the spark plug is enlarged in diameter and provided with multiple prong anodes bent away from the central cathode in order to produce at least one centimeter long electric arc from all directions to the center cathode of the spark plug, -- in order to subject the deuterium fuel to abundant electric arc in the combustion chamber -- to attain fusion reaction in the chamber.

Claim-4. A new hybrid internal combustion engine, whether gasoline or diesel engine, used for maximizing benefits from hydrogen-deuterium fuel, in accordance with claim-1, wherein, the engine is improved by at least two or more hybrid spark plugs are installed in each combustion chamber in order to provide abundant electric arc action upon the deuterium fuel to obtain fusion energy captured in the chamber.

Claim-5. A new hybrid internal combustion engine used for maximizing benefits from hydrogen-deuterium fuel, in accordance with claim-1, or claim-4, wherein, the engine is improve by enlarged or additional water pumps and water cooling radiators to speed-up the engines water circulation inside the engine, - - in order to prevent over heating of the engine and use it to drive various kinds of transportation.

Claim-6. A new hybrid internal combustion fusion engine used for maximizing benefits from hydrogen-deuterium fuel, in accordance with claim-1 or claim-4, wherein, the engine is further improved by making the cooling-heat emitting radiator much enlarge to at least five times in the form of a plurality of branches made of small tubes submerged into the cold compressed air inside each individual heat absorbing radiator pipes, in order to prevent over heating of the engine, and further, in order to recapture/recycle the otherwise wasted heat energy to drive an additional engine that produces additional hydrogen/deuterium fuel serving to refuel with deuterium-hydrogen all the engines in the

assembly and sell the extra produced fuel .

5 Claim-7. A new hybrid internal combustion engine used for maximizing benefits from fuels, in accordance with claim-1 or claim-6, wherein, the whole first engine is enclosed by a jacket by which the first engine is submerged in cold running compressed air of a first stage heating of a heat absorbing radiator system of another gas turbine second engine, -- in order to prevent over heating of the first engine and to recycle heat energy.

10

Claim-8. A new hybrid internal combustion engine used for maximizing benefits from fuels, in accordance with claim-1 or claim-6, wherein a second engine is submerged in cold compressed air inside at least one of the branches of the cool first stage heating header air duct/pipe to capture the heat energy of the second engine's hot body to prevent over heating, and to recycle heat energy.

15

Claim-9. A new hybrid internal combustion engine used for maximizing benefits from fuels, in accordance with claim-1 or claim-6, wherein, its tailpipe is subdivided into a plurality of branches of small hot pipes/tubes, each of which is inserted inside each corresponding branches of the heat absorbing radiator cold pipes which are connected/communicated to drive another gas turbine engine that is used to turbo-charge the internal combustion engine which is used as prime engine for transportation vehicles.

20

25

Claim-10. An internal combustion engine used to maximize benefits from fuels, in accordance with claim-1, wherein, the ordinary engine of a transportation vehicle is improved to generate more DC current to run an electrolysis unit on a distilled water or heavy water loaded in the vehicle and the produced hydrogen-deuterium is feed into the engine in

30

addition to its ordinary fuel to increase the mileage per gallon of the ordinary fuel.

5 Claim-11. A hybrid internal combustion engine used to maximize benefits from fuel, in accordance with claim-1 or claim-10, wherein, as it is hereby extremely emphasized to removed the need for storage of hydrogen-deuterium fuel, the electric generator of the engine of a transportation vehicle is made larger to produce more DC electric current, and additionally, the turbo-charger gas turbine engine of
10 Claim-9 driven by the tailpipe's heat energy is also made to produce abundant DC electric current, and both electric currents from the engine and from the gas turbine are made to run an electrolysis unit loaded in the vehicle to produce abundant hydrogen-deuterium fuel being simultaneously fed into the engine of the transportation in order
15 to run the vehicle by fusion energy.

Claim-12. A hybrid engine used to maximize benefits from fuel in accordance with claim-1 or claim-11, wherein, in order to run by fusion energy, an electric generator engine, having spark plugs, is made
20 to run a plurality of electrolysis units to produce abundant deuterium, some of which is channeled to fill up all the fuel needs of the engine in order to run on fusion energy.

Claim-13. A new process of capturing and harnessing the fusion energy produced by a hydrogen bomb, in the efforts to maximize benefits from
25 deuterium fuel, in accordance with claim-1, wherein, the bomb is detonated in deep waters to catch the fusion flames into the water and a plurality of heat absorbing radiator pipes are placed into the hot waters and above the water in order to run a gas turbine engine that drives an
30 electric generator which in turn runs multiple electrolysis machines in the efforts to produce more hydrogen-deuterium fuel for more bombs

and for export.

- Claim-14. A new apparatus used for maximizing benefits from deuterium fuel by detonating a hydrogen bomb in deep water in accordance with claim-1 or claim-13, wherein, an abundant electric arc is passed thru
- 5 across the liquid deuterium, comprising;
- a hydrogen bomb of liquid deuterium contained in a glass and ceramics, and non-conductive container having at least two holes on opposite sides;
- 10 a metallic electrical conductor, molten and baked as plug into each hole, serving as positive-negative electrodes, and serving as electrical contact points at both sides of the container;
- a pair of rail wheels attached to each side of the container serving to carry it on rails;
- 15 a pair of heavy steel inclined rail track, serving to carry the bomb by its wheels and to conduct electric direct current, and having at least one electrical contact points at each lower end of the rails which extends to the middle of the detonation water;
- a feeding underwater port made of large pipe containing the rail track,
- 20 having two spaced alternating air tight gate values thru which the bomb are successively fed by rolling down the rail, and down to the detonation spot;
- an electrical insulator in the form of rubber/ceramics/glass baked-coated around each rail to prevent short circuit thru the water;
- 25 a vertical dry service manhole communicated to the feeding port, having stairways and high voltage power supply heavy cable wires and an elevator, serving as access to the feeding port;
- a heavy current main switch, above the manhole and above the water, serving to detonate the bomb upon it gets to the contact points at the
- 30 ends of the rail;
- a large high voltage capacitor connected to the electric cable wires

- supporting electric power for the electric arc inside the bomb;
- a heat insulator flexible containment wall surrounding the detonation water, having embedded empty air containers, to make the wall float on water, and serving as support posts to the upper structures;
- 5 a corrugated multi-hole/perforated flame distributor dome placed in the deep detonation water but spaciouly above the detonation spot and within the containment walls;
- a deepwater platform, serving as containment floor, upon which the heat insulator walls, and the distributor dome are erected, placed
- 10 well below the detonation spot, serving as heat insulator separating the hot water from the ordinary cold water in the deep;
- a plurality of rubber tubes with compressed air attached/laid on the middle section of the floor made flexible to absorb the shock of the blast;
- 15 a crisscrossing array of salt resistant walls, forming boxes under the floor, serving as main structure of the water platform in which glass is used as among the salt resistant materials for the walls, some in the form of pipes for floating;
- a heat insulator laid on top of the floor surrounded by the containment
- 20 wall;
- a metallic/glass/ceramics plate, resistant to salt action, placed and air-tightly attached to cover the top of the boxes formed by the criss-crossing walls;
- the boxes having no air leaks, serving as floater for the whole
- 25 apparatus;
- a plurality of empty waste bottles, bamboos, pipes, and other air containers, -- all filled up with compressed air, placed inside the boxes to make sure there are floaters even the air escapes out of the boxes;
- 30 the underwater platform/floor extended outside the containment walls serving as anti-oscillation wide-face device against the action of the

- water waves;
- a rain water and distilled water placed to fill up the tank formed by the containment walls, serving as electrical insulator for the electric arc, and also serving as catcher for the fusion flames;
- 5 an air inlet and air release valve provided on each floater pipe in the underwater platform, to adjust the submergence of the apparatus;
- a gas turbine engine, having an exhaust power turbine, that drives a turbine air compressor, and also drive electric generator that produce direct current, the power turbine and the compressor
- 10 turbine having an inlet and an outlet;
- an electrolysis machine that produce deuterium and hydrogen in liquid form directly by confined electrolysis,-- which is run by the direct current and connected to the generator;
- a header cold compressed air pipe having an inlet communicated to the
- 15 outlet of the turbine compressor, and having multiple outlet branches;
- a plurality of multi-coil pipes heat absorbing radiator above the water, having lower coil and upper coil, each having an inlet communicated to some of the branches of the header pipe and filled up with
- 20 compressed air by the compressor, and having an outlet communicated to exit the heated compressed air thru the exhaust power turbine;
- a plurality of the heat absorbing radiator pipes, having an inlet communicated to some of the outlet branches of the cold compressed air
- 25 header pipe, and extended down into the hot boiling waters, and having an outlet;
- a hot air header pipe having an inlet communicated to the outlets of the heat absorbing radiator pipes, and having an outlet communicated to the inlet of the exhaust power turbine;
- 30 an exhaust header tailpipe from the exhaust power turbine, having branches communicated to multi-pipe heat emitting radiator pipes;

a plurality of multi-coil pipe heat emitting radiator pipes correspondingly coiled and individually inserted into inside each of the heat absorbing radiator pipes, --- in reverse air flow;
an upward exhaust chimney outside the radiators, communicated to and
5 serving as terminal header pipe for the heat emitting radiator pipes;
an electro plasma fusion oven installed into the down stream end section of the heat absorbing header radiator pipes, to add power to the compressed air before exiting thru the power turbine;
the multi-coil heat absorbing radiator pipes extended over and above the
10 boiling hot water above the detonation spot, wherein the lower are exposed directly to the rising steam, while the cooler upper coils are exposed to the upper cooler steam;
an extension of the containment wall above the water, enclosing the rising steam, pierced on one side by the heat absorbing radiator
15 pipes, serving as a steam chamber, having a top cover;
a multiple hanger structure supporting the heat absorbing radiator pipes attached to the top cover of the steam chamber;
a least one lower temperature steam concentration header pipe communicated thru the top cover of the steam chamber, having an outlet
20 serving as low temperature steam exit into a condensation device that supplies a distilled water tank;
a distilled water supply tank, outside the steam chamber, elevated above the ocean water, having an upper inlet connected to the condensation chamber, and having a lower outlet main pipe
25 communicated to the boiler detonation chamber by piercing thru the containment wall;
an automatic water supply valve regulated by a floater pipe, placed floating in the boiler chamber;
the floater pipe contains water to have enough weight to pull up the water
30 supply valve by a rope thru pulleys above the tank;
a plurality of carrier floaters in the form of sausages of empty bottles, air

containers, bamboos, and pipes, -- attached to carry the whole apparatus and the water supply tank above the ocean water;

a plurality multi-coil condensation pipes communicated to the outlet of the steam exhaust header pipe, exposed to the cold wind

5 having multiple bottom coil water outlets;

each condensation coil pipe having an outlet;

a condensation box chamber communicated to the outlets of the condensation coil pipes, having a bottom outlet, lower side end outlet for steam, and an upper side end outlet for helium and having

10 a plurality of perforations on two side walls facing the wind;

a water receiving pipe communicated to each bottom coil water outlet of each condensation pipe, and having an outlet communicated to the condensation box chamber;

a plurality of horizontal wind pipes piercing thru the perforations of and

15 across the condensation box chamber serving to further condense the excess steam;

the wind pipe attached to the perforated side walls by welds and clamp-knots to prevent water leaks;

a compressor pump communicated to the upper outlet of the box to suck

20 and to compress helium from the condensation box, having an outlet;

a helium tank communicated to the outlet of the compressor pump, serving to receive helium gas produced by the hydrogen bombs, having a regulated shut-of value;

25 a water drop-off having a gate value communicated to the bottom water outlet of the condensation box, having an outlet;

a distilled water tank, having a top communicated to the outlet of the drop-off pipe, and having a gated bottom outlet pipe communicated to the upper inlet of the water supply tank;

30 at least one electrolysis machine producing deuterium fuel for the succeeding hydrogen bombs; and

an underwater DC transmission line feeding a step-up transformer coupled with an inverter to match the power to the utility grid.

5 Claim-15. A glass/ceramics smelting plant use to maximize benefits from
hydrogen-deuterium fuel in accordance with claim-1, wherein, sand,
gavel/stones, and other glass materials are molten into liquid by means
of deuterium electro-plasma fusion torch, and the heat energy from the
furnace and annealing Lehr is recaptured by submerging the whole
furnace and annealing Lehr into a flowing cold compressed air inside a
10 first large heat absorbing air duct which branches out to supply some of
the resulting hot oxygen air by a control valve into another organic
trash smokeless burning furnace used to smelt another group of
glass/ceramics inside a second heat absorbing large containment
compressed air duct chamber, which smokeless burning furnace
15 supplies the resulting hot combustion air into an engine's tailpipe/
chimney which engulfs to heat-up the high compressed air heat-
absorbing radiator pipes from a gas turbine compressor being driven by
a power exhaust turbine; -- and wherein, the remaining portion of the
heated compressed air from the other branch of the first large heat
20 absorbing air duct and the heated compressed air in the second large
heat absorbing air duct are supplied into the final stage heated
compressed air power duct to drive the power turbine of the gas turbine
engine.

25 Claim-16. A new process of producing fusion energy used for maximizing
benefits from hydrogen-deuterium fuel in accordance with claim-1 or
claim-14, wherein a dynamite is detonated inside the liquid deuterium
which is contained inside a strong steel chamber of at least 6" to 12"
thick.

30

Claim-17. A new process of producing fusion energy used for maximizing

benefits from hydrogen-deuterium fuel in accordance with claim-1 or claim-14, wherein, the liquid deuterium is enclosed in a soft metal container, and a dynamite is detonated outside the liquid deuterium, and wherein, the dynamite surrounds the deuterium, while a heavy steel
5 container of "6 to 12" thick surrounds/encloses the dynamite.

Claim-18. A new process of producing fusion energy used for maximizing benefits from hydrogen-deuterium fuel in accordance with claim-1 or claim-14, wherein, a liquid deuterium in a soft metal container is
10 compressed by a drop hammer which detonates upon impact a dynamite placed on top of the deuterium container,-- in order to detonate the deuterium in fusion process.

Claim-19. A new process of maximizing benefits from hydrogen-deuterium
15 fuel in accordance with claim-1 or claim-11, wherein, the hydrogen-deuterium fuel tank is removed and the need to store hydrogen-deuterium is remove by making the engine's electric generator run an electrolysis machine to supply deuterium directly into the fuel intake of same engine while it is running.

20 Claim-20. A new process of producing fusion energy used for maximizing benefits from hydrogen-deuterium in accordance with claim-1, wherein, the liquid deuterium is contained in a container of high electrical insulation ability, one of which is glass, having multiple
25 metallic electrodes on opposite points serving as positive and negative electrodes which are highly insulated from each other, having a strong containment jacket of 6 to 12 thick, into which the container is tightly molded, -- to have no air gaps, and then, from a large capacitor, a heavy multiple electric arc is passed across the liquid deuterium until
30 overheated in order to make a fusion detonation.

- 5 Claim-21. A new process of producing fusion energy used for maximizing benefits from hydrogen-deuterium fuel in accordance with Claim-1 or claim-20, wherein, in an electro-plasma fusion furnace, the tube containing deuterium fuel supply is passed thru super-preheating systems before the fuel is released to burn, and the electric arc starts from an anode at the inner most fuel nuzzle going out to the cathode beyond the outlet mouth of the combustion chamber in order to create an electro-plasma fusion flame by a long high voltage electric arc.
- 10 Claim-22. A new process of producing cold fusion energy used for maximizing benefits from fuel in accordance with claim-1, wherein, a pair of intercommunicated transparent glass chambers with electrodes are filled up full without air gap with colored distilled heavy water and all outlets are sealed to prevent leaks or expansion, and wherein, the
15 anode is placed at the port of the oxygen chamber while the cathode is placed at the port of the hydrogen-deuterium chamber into which the liquid deuterium rise up while the colored water drops down in a force electrolysis process that leads to fusion detonation after the temperature has risen by electric arc, -- a new break through in cold fusion.
- 20 Claim-23. A new process of producing diamonds and hot water used for maximizing benefits from hydrogen-deuterium fuel in accordance with Claim-1, wherein, a compacted carbon/charcoal/ graphite contained in soft metallic wrapper/container is placed inside the liquid deuterium
25 and then the hydrogen bomb is detonated in deep water where there is porous net and cloth laid on the ocean floor to catch the diamonds and debris, as a secondary product in addition to catching the fusion heat energy into the water for electric power generation.
- 30 Claim-24. A new process of producing diamonds and hot water used for maximizing benefits from fuel in accordance with claim-1 or claim-23,

wherein, the compacted charcoal/graphite is placed at the bottom of the liquid deuterium to prevent the diamonds being blown/scattered upward, and then the bomb is placed on a steel basket lined with fire bricks and detonated in deep water to catch the diamonds on the steel basket and to catch the fusion heat energy into the water, --- for electric power generation.

Claim-25. A new process of producing hot water on the ocean used for obtaining maximizing benefits from fuel in accordance with claim-1 or claim-14, wherein, the hydrogen bomb is placed in deep water inside a strong steel basket in the form of perforated horizontal steel pipe made spacious enough not to be destroyed by the blast,-- serving to distribute the fusion flames horizontally thru the water to catch all the flames in few seconds into the water,--- for electric power generation.

Claim-26. A new apparatus for obtaining maximizing benefits from fuel in accordance with claim-1, wherein, the heat energy exhaust from oil/kerosene/lamps/stoves, one of which is brand named Petromax, the heat energy exhaust from any internal combustion engine, and the heat energy exhaust from smokeless trash/coal/ coke/charcoal/wood burner, --- are all made to contribute heat energy into a common exhaust tailpipe/chimney, --- in order:

- (1) to heat up ovens for baking/cooking foods;
- (2) to heat up the heat absorbing radiator pipes of an energy recycle gas turbine engine;
- (3) and down the line, the main chimney and the tailpipe of the heat recycle gas turbine engine jointly heat up the boiler of a water distillation apparatus for producing drinking water, and for production of heavy water.

Claim-27. A new apparatus for maximizing benefits from fuel in accor-

- 5 dance with claim-1, wherein, the oxygen air supply is pre-supper heated and distributed into the flames and into the trash fuel by a plurality of multi-nuzzle burner pipes tapering into the combustion chamber, and wherein, the trash is burned from the top or from one end of the trash pile, comprising:
- 10 a combustion chamber drum made wide enough to accommodate an array of oxidizer-burner pipes, having oxygen inlet perforations at its upper/outer section, having a trash-end lip, an air inlet end with perforated cover plate, and a side exhaust hot air outlet;
- 15 a plurality of elongated oxidizer-burner tapering perforated pipes arranged parallel together vertically or horizontally in even spacing, having an inlet communicated to each corresponding perforation hole of the cover plate of the combustion chamber, and each having an end outlet nuzzle;
- 20 a fresh oxygen air supply duct/pipe spaciouly surrounding the combustion chamber, having a bottom air inlet way down below the combustion chamber, having an outlet made spaciouly beyond the cover plate of the combustion chamber, and having a trash entrance door;
- 25 a heat insulator outside the oxygen-air supply duct/pipe around the vicinity of the combustion chamber;
- 30 a plurality trash burning container/drum, each having an outer lip fitted to air-tightly cover the trash-end lips of the combustion chamber, having closed bottom plate and filled up with compacted trash;
- a conveyor and merry-go-round carousel spacedly holding the trash containers in individual holders equipped with feeding arms which successively push each trash container to cover the trash-end lip of the combustion chamber, and to pull out the trash drum when empty;
- a trash loading been at the other side of the carousel serving to load and compact trash on each trash drum;

a gas torch tube coiled around the combustion chamber containing gas fuel from distilled wood/organics, serving to start firing the trash until ignition is sustained; and

5 a heat energy exhaust duct/pipe/manifold having an inlet communicated to the heat exhaust outlet of the combustion chamber, and having an outlet communicated to a common chimney with other heat energy supplies.

10 Claim-28. A new process of storing electric power in the efforts of maximizing benefits from fuels in accordance with claim-1 or claim-11 or claim-22,

wherein, electric power is stored in the form of hydrogen-deuterium fuel by using DC electric power generated by an engine to produce the fuel for same engine thru the process of electrolysis;

15 wherein, the distilled water or heavy water is placed inside a force electrolysis apparatus without allowance for expansion so that the evolving deuterium is directly in the form of liquid, with out spending additional energy to compressed it, same liquid rising up above the water into the storage chamber which is an up-side-down large glass bottle;

20 wherein, a shut-off valve or plug is provided at the neck of the bottle and a fine release needle in an outlet pipe with gate valve is installed piercing the neck of the bottle above the shut-off valve ;

25 wherein, the shut-off value and the outlet pipe are submerged in water and mercury serving as sealant, as it is hereby extremely emphasized, to isolate the organic seals at the valves from being dissolve by the hydrogen-deuterium;

30 wherein, the inlet section of the outlet pipe is sufficiently made adjustable to hide the inlet mouth into the water/mercury sealant by moving the inlet mouth down into same sealant; and

wherein, the hydrogen-deuterium is reconverted back into electric

power thru fusion reaction in the engine's chamber, thereby the electric power used in producing the deuterium is recovered 1000 times more energy, ---hereby extremely emphasized.

5 Claim-29. A new process for maximizing benefits from fuels in accordance with claim-1 or claim-15, and in the efforts to maximize benefits from hydrogen-deuterium fuel, wherein, the energy of a fusion plasma electric torch is used first to smelt glass/ceramics/metals in a furnace having a heat energy exhaust contained/surrounded by a third stage
10 heating power air duct that contains a running compressed air to absorb all the heat energy into the power turbine; and wherein, the molten glass is poured into molds:

1. to produce extra-large bottles/cubicles, having windows/doors, --- used for homes, houses, and buildings;
- 15 2. to produce large structural parts/sections for houses and buildings walls, roofs, floors, large post, girders, structural beams, stairways, -- with embedded and post-tensioned reinforcing steel bars/ropes;
- 20 3. to produce extra-large containers, including, water tanks, swimming pools, fishponds, floating swimming pools on the ocean, vacuum chambers for water desalination, food processing and various industrial functions, underwater chambers for ocean housing human settlement, chambered underwater/floating train transportation for people/gas/water/fuel/food, sub-surface/underwater
25 shuttle buses, floating pipe hulls for double hull boats, floating sea walls, water waves energy traps/converter, and carrier floaters for floating airports, floating platforms, and floating windmill platforms and power plants, and --- the annealing heat is recaptured by compressed air pipes.

30

Claim-30. An new ocean platform used to maximize benefits from fuel

in accordance with claim-1 or claim-29, wherein, the otherwise wasted used empty bottles, used containers and pipes for which energy has been already spent in manufacturing, -- are used to fill up baskets, sausages, large bags of net, metallic baskets, wire nets, boxes form by
5 crisscrossing walls and crisscrossing stack of bamboos/pipes, ---to form a wide platform that carry fertile soil into agricultural land, power plants, and human settlement over the wide ocean.

Claim-31. A new solar heat collector used for maximizing benefits from
10 heat energy supplier/sources, in accordance with claim-1,
wherein, a transparent roof is spacedly laid over above another transparent roof to have a good air space in between, so that the cold blowing wind is prevented to touch the lower roof -- to prevent the wind from steal the solar heat that got into a heat
15 storage box below the transparent roofs; and
wherein, a plurality of metallic/plastic, 2-sided mirrors, or sunlight reflectors in the form of narrow strips are spacedly laid standing on one edge at a North-South orientation, each held by a mechanism assembly so that the mirrors are tilted to the East in
20 the morning and tilted to the West in the afternoon -- in order to increase the sunlight incidence into the transparent roof to harvest more solar heat, --- this apparatus being named solar trap/box in my preceding patents, where the heat energy absorbing radiator pipes are exposed to, and which trap is used to make the ocean
25 water, the house attic/roofs, and earth grounds warmer/hotter.

Claim-32. A new apparatus used to maximize benefits from fuels in accordance with claim-1, or claim-31,
Wherein, a trash dryer, in the form of a wide conveyor made of wire
30 mess or interlinks, driven horizontally in a long loop by array of cylindrical pulleys, is thinly loaded with trash by rotating

toothed cylinder below a rectangular trash bin bottom outlet;
Wherein, the wide conveyor is installed inside a solar trap box
covered by a couple of spaced transparent roofs over lain by
adjustable sunlight shinny reflector; and

5 Wherein, the hot air exhaust of a gas turbine power plant, that feeds
on trash, is communicated into the trash dryer in reverse flow
against the movement of the conveyor, in order to dry the trash
even there is no sunlight.

10 Claim-33. A new structural design for constructing an ocean platform that
carry various kinds of power plants including fusion energy and
solar heat, and further serving to carry transmission power lines,
ocean windmills, ocean homes and buildings, desalination
apparatus, agricultural/human settlements, and solar traps, -- in
15 the efforts to maximize utilization of the heat energy of the
warm waters of the ocean, the solar heat, and for maximum
benefits from fuel, -- in accordance with claim-1 or claim-31,

wherein, a plurality of parallel pipes/chambers laid side by side as first
layer are inter-clipped together by another layer of pipes/
20 chambers laid side by side on top of and perpendicular to the
first layer of pipes, thereby forming a crisscrossing rigid floater
pipe platform;

wherein, the upper layer of pipes is over-lain by transparent plates,
glass/concrete slabs and metal plates, serving as rigid floor
25 for airports, and serving as transparent roof for the solar trap;

wherein, the assembled platform further serves as transportation
carrying various kinds of loads, including those already listed
above and agricultural lands;

wherein, the layers of pipes and the floor are made transparent to allow
30 the solar heat radiation heat-up the layers of pipes and also heat-
up the ocean water, the layers of pipes and floor serving as solar

trap;

wherein, additionally, the crisscrossing pipes also serve as vacuum-water-mist evaporation chambers for distillation process in the production of distilled water;

5 wherein, a plurality of air-cooling pipes are submerged in cold water brought-up by water pumps from the ocean deep;

wherein, the cold air, after being mist sprayed with water, is feed into a compressor which drives the cold compressed air into the layers of floater pipes and into a plurality of heat absorbing radiator pipes submerged into the warm waters on the surface of

10 the ocean to provided heat-expanding power to the compressed air;

Wherein, the resulting hot compressed air is accumulated to a hot header pipe communicated to the inlet of a power exhaust turbine that drives the compressor and an electric generator,

15 thereby forming a power plant;

Wherein, a hydrogen-electro-plasma torch is fired inside the hot header pipe to provide more expanding power of the compressed air;

Wherein, the exhaust chimney from the power turbine is coiled

20 underwater below the solar trap to heat up the water that heats up the compressed air inside the heat absorbing radiator pipes;

Wherein, the transparent roofs that trap the solar heat into the ocean water are in the form of transparent empty pipes and thin transparent bottles floating on the water laid close to each other

25 side-by-side to exclude the cold wind from touching the warm ocean water;

Wherein, a plurality of evenly spaced strips of shinny solar reflectors laid on one edge, disposed North-South, and adjustably attached on top of the solar trap roof are manipulated to drive the sunlight

30 down into the trap and down into the ocean water, -- by tilting East in the morning and tilting West in the afternoon;

Wherein, the heat absorbing pipes are set into the warm waters of the ocean below the solar trap pipes; and
Wherein, the power plant is loaded on the ocean platform.

- 5 Claim-34. A new structural design for an ocean transportation used as a shuttle boat in the efforts to maximize benefits from fuel and maximum utilization of the hybrid fusion engine of Claim-1 or Claim-2, and from the heat energy of the warm waters of the ocean as source of heat energy, in accordance with claim-1 or claim-33,
- 10 comprising;
- a plurality of horizontal bamboos vertically stacked and clipped together to a vertical thin rear post on one side, and another similar stack of bamboos clipped together on the other side of same post, with all butts on same post, serving as hull for a boat;
- 15 a pair of boards or metal/plastic plates disposed vertically inclined, having each outer edge jointed together and the inner edges disposed apart and attached enclosing the vertically stacked butts of the bamboos, -- serving as pointed nose at the rear of the boat;
- a front thin post located at the two-third point of the bamboos,
- 20 serving to clip together the two stacks of bamboos near the tips;
- a flat rope and multiple string/wire clip tied near the tips of the bamboos to form a pointed hull of a boat;
- a pair of vertical thin flat plates disposed face to face, serving as clip and as post to hold in place the assembled stacks of bamboos,
- 25 serving as alternative assembling device for the bamboo hulls;
- a strong rope/wire attached to the wire clip near the tip and tautly attached to the post clip at the butt of the bamboos, in order to bend-up the tip of the bamboos to form a first bent-up bamboo hull, having a top and a butt;
- 30 a second hull similar to the first hull, coupled with the first bamboo hull;
- a rear transverse structure inter-connecting the two hulls together at the

rear post by the top of the hulls;
a front transverse structure interconnecting the two hulls together at the
two-thirds point front post by the top of the hulls; and
a flat deck made of bamboos laid on top of the transverse structures
5 inter-connecting the two hulls, -- thereby making a low cost double
hull boat that can be easily made by the poor fishermen; and
the boat used for carrying passengers, water, and other cargoes by
providing it with a hybrid fusion engine in accordance with Claim-1
or Claim-2 for power propulsion, and by attaching to it a flying kite
10 as sail, -- in the efforts to service the ocean floating power plants
and floating communities or ocean human settlements.

Claim-35. A new design for a home/house/building for humans and
livestock in the efforts to maximize benefits from fuels, and to
15 maximize the utilization and benefits from the hybrid fusion engine in
accordance with claim-1 or claim-33,
wherein, to meet the requirement to have cold air and high humidity
air in order to make the air more hungry for heat energy and to
provide more expanding power for the compressed air, the building/
20 house is used as a cooling and humidifying vacuum chamber tunnel;
wherein, all the windows and doors are closed and made sure that there
are no in-coming air leaks thru the walls, windows, doors, floors,
roofs and ceiling;
wherein, a misting port/chamber is created at one end of the building
25 having a window provided with air throttle to limit entrance of fresh
air, --in order to create a partial vacuum effect inside the building/
house to speed up evaporation and to speed up cooling process in
the house/building;
wherein, an outlet port is created at the opposite end of the building to
30 which the air intake manifold, of a turbine vacuum and compres-
sor pump for a home electric generator unit, -- is air tightly fitted

with and attached to, --- in order to suck-vacuum the air from the building and to make the whole house/building cool and dry in a fast pace;

wherein, the heat-hungry cold compressed air output from the compressor is used as scavenger to pick up heat energy from a heat source for conversion into mechanical energy to power the vacuum/compressor pump;

wherein, a plurality of air partial vacuum air ducts branching out from the misting port are made to discharge cold humid air into the various rooms in partial vacuum;

wherein, a sump serving as brine/salt collector is provided into the misting port/chamber; and

wherein, the house/building is built to be structurally strong against implosion, supported by arc structures, inflated arc structures, or the building made into large cylindrical chambers.

Claim-36. A new device for conservation of heat energy to support the efforts for maximizing benefits from fuel and sources of energy in accordance with Claim-1, wherein, granulated/powdered charcoal serving as a low cost heat insulator material with high melting point, is used as filling material in-between a hot surface and a cold surface to prevent seepage/leakage of heat energy in the efforts of conserving heat energy.

Claim-37. A new process for producing oil and for removing the outward pressure of hydrogen-deuterium to support the efforts for maximizing benefits from hydrogen, deuterium, and from organic fuels in accordance with Claim-1, wherein, powdered/granulated organic matters, among which are trash, wood, plastics, dried leaves, dried grass, animal manure, are placed inside the container of liquid/high pressure hydrogen-deuterium which dissolves and fuses with the

organics into oil, and wherein, the resulting oil is used as fuel in internal combustion and gas turbine engines.

5 Claim-38. A new process for converting organic liquids into high grade fuel used for various kinds of engines to support the efforts in maximizing benefits from organics fuel, and from hydrogen-deuterium fuels in the efforts to produce more heat energy for the engines in accordance with Claim-1 or Claim-37, wherein, fermented organic liquids, among which are alcohol, formaldehyde, and vinegar
10 to name a few, are mixed with liquid/high pressure hydrogen-deuterium to upgrade the molecular hydrogen composition of the organic liquids into active fuel, -- for use as fuel, in all kinds of engines.

15 Claim-39. A new device for obtaining maximum benefits from hydrogen-deuterium fuel and for maximum commercialization of the new process involved in accordance with claim-1, wherein, a thermo-nuclear reactor plasma torch is provided with elongated nuzzle which is submerged in water --- is used as a jet propulsion rocket engine for
20 all kinds of transportation purposes including space travel, and wherein, the water boils into steam that gets into the downstream section of the reactor which ejects the steam to the rear violently thereby pushing the transportation forward.

25 Claim-40. A new device for obtaining maximum benefits from hydrogen-deuterium fuel and for maximum commercialization of the new process discovered and/or invented, in accordance with Claim-1,
 wherein, the hydrogen-deuterium fuel is made to undergo thermonuclear
 fusion reaction process thru a plasma torch device instead of
30 burning same fuel by ordinary oxidation, -- in order to maximize heat energy produced out of the fuel;

wherein, to prevent short circuiting of the high voltage electric arc supply, the thermonuclear fusion chamber plasma torch is constructed out of non-electric materials, some of which are glass, and ceramics, to name a few;

5 wherein, distilled water is used as electric insulator that surrounds the plasma fusion reactor chamber and at the same time acting as cooling agent for the chamber by boiling into steam;

wherein, the reactor boils the cooling distilled water, and the steam of which is used to heat up compressed air for the engine by means of radiator heat exchangers;

10 wherein, additional deuterium is injected into the fusion chamber while the fusion fire is still in the chamber in order to sustain the fusion fire without additional electric arc; and

wherein, the fusion fire is directed to melt various materials in a smelting process, some of which are glass and ceramics for molding large sections of structures, containment/vacuum chambers and cubicles for houses and buildings, in a monolithic pour, --- see FIG. 26.

Claim-41. A new device for maximum benefits from fuel and maximum commercialization of the hybrid fusion engine in accordance with Claim-1, wherein, a new apparatus forming a floating swimming pool is made having a salt water tank and a fresh water tank, having a sand filter at the bottom floor to let-in new sea water regularly, having a suspended tent covering the whole swimming pool, and having a fusion engine to power the whole facility/apparatus, and set floating on the sea/ocean to be safe from sharks, jelly fish, and dirty debris, and wherein, waste containers, pipes, bamboos, and inflatable devices are used to float the swimming pool, -- see FIG. 17.

30

Claim-42. A new device for maximum benefits from fuel and maximum utilization of the hybrid fusion engine, in accordance with Claim-1, wherein, the fusion fire is used to smelt glass/ceramics and poured into molds monolithically formed into chambers, cubicles and structural sections of houses and building;
5 wherein, the molded glass cubicles are assembled to form houses and buildings having roof tops with upward monolithic walls formed to hold water into fishponds and agricultural lands filled up with live fish and water plants on the roof tops, comprising:
10 a smelting plant for glass/ceramics, having various kinds of molds for the production of chambers, building cubicles/ structures;
a fusion plasma torch fueled with deuterium, installed and set up to fire and melt gravel and sand for molding into various shape;
15 a horizontal net is framed and stretched at least one foot above the floor to prevent the fishes from agitating the mud and waste matters on the floor to keep the water clear/clean; and
wherein, a fusion engine is used to filter the water, remove the waste materials dropped by the fish, and the waste materials are used to serve as fertilizer for the farmland, -- see FIG. 21.
20

Claim-43. A new device for maximum benefits from fuel and maximum utilization of the hybrid fusion engine in accordance with Claim-1, wherein, a water agricultural shallow tank/box bed for growing
25 algae coupled with a shallow filter tank is constructed floating on water or freshwater lake, carried by various kinds of floater devices, and having an underwater floor filled up with fertile soil or fish/chicken manure, for the production of algae, comprising:
a larger tank/box bed filled with a layer of fertile soil, enclosed by
30 water-tight walls/floor to prevent intrusion of outside muddy water and to prevent escape of the clear water;

- a water made brackish and diluted with small percent of salt placed filling the tank to a deep of at least two feet;
- a second smaller tank with water tight floor and walls, integrally attached to the larger tank, having a floor filled up with layers of coarse gravel, pea gravel, sand, and fine soil, serving as water filter;
- a water gate between the two tanks allowing filtered clear water to get back to the larger tank;
- the floor of the larger tank being continuous and extended to and serving as floor of the smaller tank, and having a bottom face;
- a plurality of crisscrossing walls under-laying the floor and air-tightly attached to the bottom face of the floor, -- forming a plurality of box air tanks -- as floaters carrying the tanks;
- a water pump, a plurality of suction pipes, and a plurality of discharge pipes, -- all assembled together to transfer/filter the water to make it clear and returned back to the larger tank;
- a good appropriate variety of algae and water plants planted on the fertile soil/mud on the floor for food production;
- a compressor assembled with discharge pipes set up to supply atmospheric compressed air to the under-laying box air tanks thru distribution nipples, and to supply carbon dioxide to the algae;
- a plurality of cages filled with fish and placed into the water around the suction perforated nipples to supply carbon dioxide for the growing algae;
- a plurality of vacuum chambers attached to the side walls of the tanks, serving to carry the tanks, and further serving vacuum food dryer to dry the algae; and
- a hybrid fusion engine set up to drive the compressors, water pumps, and the vacuum pumps, -- see FIG. 27.

Claim-44. A new device for maximum benefits from fuel and for maximum utilization of the hybrid fusion engine, in accordance with Claim-1, wherein, an agricultural shallow bed floating on water for growing algae is made having screen/net sidings to allow the algae to grow outward thru the screen to enable the fish to eat the tips of the algae protruding outside the screen;

wherein, the soil floor of the bed is submerged at more or less one foot under the water surface to exposed the fertile soil bed for abundant sunshine and atmospheric air for carbon dioxide supply;

wherein, the water is supplied with carbon-dioxide for growing the algae and with oxygen for growing the fishes by introduction of the tiny bubbles of compressed air from the atmosphere;

wherein, the beds are arranged row-by-row at an even spacing such that a maintenance man can paddle his small boat in between the beds to harvest the algae and to plant some more algae; and

a hybrid fusion engine set up to drive an air compressor to supply aeration into the water to supply oxygen for the fishes and carbon dioxide for the algae, -- see FIG. 29.

Claim-45. A new device for maximum benefits from fuel and maximum utilization of the hybrid fusion engine in accordance with Claim-1, wherein, carbon is molten at high pressure to convert it into diamond and the heat used is recaptured to run a fusion engine, comprising:
a ball of compacted carbon enclosed by compacted fire brick/clay materials;
a thick strong spherical steel, having a top and opposite sides, serving as pressure containment enclosing the clay, and snugly sited on a solid footing;
a dovetail hole made on opposite sides of the steel containment;
a dovetail/frustum glass/ceramic electrical insulator bushing fitted thru each dovetail hole;

- a high melting point metal electrode fitted thru and into each bushing;
each electrode extended inward holding the carbon in a compacted state;
- 5 a high melting point metallic cylindrical piston, having a top, tight-fitly piercing thru the top of the spherical steel container, and extended down to press compress the molten carbon;
- a solid heavy weight sitting on top of the cylinder piston, serving to push down the piston in the effort to compact the molten carbon while in the process of cooling and crystallization;
- 10 a large block of capacitor sitting on the solid weight serving as energy bank of DC power, and as additional weight;
- a couple of large heavy cable conductor wire inter-connecting the terminals of the capacitor with the electrodes to drive heavy electric current/arcs across the compacted carbon; and
- 15 a large pipe containing cold compressed air engulfing the steel pressure containment sphere, to recapture the heat energy during the process of annealing, -- see FIG. 16.

- Claim-46. A new device for maximum benefits from fuel and maximum
20 utilization of the hybrid fusion engine in accordance with Claim-1, wherein, a floating platform serves as human settlement floating on water with complete utilities and food production industries, comprising:
- a deep water tank coupled with a shallow water tank carried by various
25 kinds of floaters, including bamboos, empty used containers, pipes, and crisscrossing walls, to name a few, made floating on a body of water or ocean;
- a higher elevation platform integrally connected to the water tanks, serving as support base for a house or building as home on the
30 ocean;
- a hybrid fusion engine installed beside the building on the higher plat-

- form supplying power for the whole platform;
- a plurality of selected species of fishes are placed to grow into the deep water tank, making it a fishpond;
- a sand filter placed on the floor of the shallow water tank;
- 5 a fertile soil made up of waste matters from the fish and other manures placed on the sand filter of the shallow tank;
- a assembly of perforated pipe covered by a layer of gravel serving to return the filtered water back into the fishpond;
- a selected species of algae and water plants planted on the soil of the shallow water tank, producing food for the fishes;
- 10 a floor having valleys and ridges installed at the bottom of the fishpond, the valleys of which serving to accumulate droppings or waste matters from the fish;
- a horizontal screen net framed and stretched about one foot above and across the floor of the fishpond preventing the fish from agitating the muddy waste matters on the floor;
- 15 a wide-face bladed windmill erected between the fishpond and the algae pond serving to pump out turbid water and waste matter from the fishpond and transfer it into the algae pond for fertilizer and clearing of the fishpond water;
- 20 the windmill further serving to save fuel for the fusion engine during strong winds;
- a water wave vertical impact wall attached to one side of the platform facing the water waves;
- 25 a water wave energy converter, having a chamber, valves, and power turbine, attached to the upper section of the impact wall, helping to produce energy for the whole platform; and
- an anchor attached to the ocean floor, holding the platform against

30 Claim-47. A new apparatus for obtaining maximum benefits from hydrogen-deuterium and from other fuels and for maximum utiliza-

tion of the hybrid fusion engine in accordance with Claim-1,
wherein, a plurality of deuterium fueled fusion engines are used to
power giant air-compressors and air blowers that drive strong
concentrated upward winds that carry sprayed waters up in the sky
5 for purposes of rapid evaporation and desalination for the
production of irrigation and drinking water;
wherein, a plurality of giant propellers/air blowers are horizontally
arranged side-by-side a few feet above the water and disposed to
drive large quantities of strong concentrated upward winds;
10 wherein, a plurality of evenly spaced water atomizer nuzzles are
horizontally arranged above the air blowers and disposed to spray
low grade or salt water along with the upward wind;
wherein, the giant air compressors are connected by pipes to supply
compressed air into each of the atomizer nuzzles;
15 wherein, each of the nuzzles are communicated by pipes to suck from
the low grade/salt water;
wherein, the whole apparatus is set floating on a body of water and
supported by means of low cost platforms resting on low cost
floaters, among which are wasted containers, bamboos, empty
20 pipes, inflated devices, and crisscrossing walls, to name a few;
wherein, the resulting cloud/water vapor is enclosed by balloon walls
floating up in the sky or inflated tents/tunnels, and is collected by
large inflated suction trunks/pipes made floating up in the sky;
wherein, the water vapor is driven by compressors and released as high
25 pressure tiny bubbles into cold waters to effect rapid
condensation; and
wherein, the resulting upward strong wind is utilized by sky gliders
and parachuters for sky lifting and gliding down in a merry-go-
round going back to the upward strong wind to get lifted again
30 and again, -- for purposes of tourist attraction in a resort.

Claim-48. A new food production apparatus on land for obtaining maximum Benefits from hydrogen-deuterium and other fuels and for maximum utilization of the new hybrid deuterium fueled fusion engine, in accordance with Claim-1,

5 wherein, a plurality of jointed flat impervious sheets are laid on flat grounds, having outer edges raised a few feet above the ground, serving as water container and forming a water pool, a fishpond, and a water filter;

10 wherein, the fishpond is formed into a circular pool serving as a vortex dirt separator by driving the water in a merry-go-round circular motion to concentrate the dirt and waste matters from the fish into the center of the pool for easy collection by a suction pipes;

wherein, an air compressor is installed and set to provide aeration in the form tiny bubbles into the ponds;

15 wherein a water pump is installed to collect, by suction pipes set at the center of the pool, the waste matters dropped by the fishes, and discharges the waste matters on the filter pond;

wherein, the filter pond is underlain by an impervious layer/sheet to return the clean filtered water back into the fishpond; and

20 wherein, the filter pond is used for planting and growing water plants and algae to produce feed back to the fishpond; and

wherein, a hybrid deuterium fusion engine is installed to provide power for the whole facility;

25 wherein, wide-face bladed windmills are used as supplementary power for the facility, and used to produce deuterium fuel, -- see FIG. 19.

Claim-49. A new device for obtaining maximum benefits from fuel and for maximum utilization of the hybrid fusion engine in accordance with Claim-1,

30 wherein, in the efforts to produce heat to energize the hybrid of Claim-1 and for purposes of desalination and distillation of water, -- the

fusion plasma torch is submerged underwater to serve as boiler for the production of steam which is used to heat up the compressed air radiator pipes of the engine in reverse flow for initial condensation into distilled water; and

5 wherein, the uncondensed steam is further directed to rise into a condensation tower box which is pierced across by a plurality of atmospheric wind pipes to further condense the steam, --- see Fig. 26.

10 Claim-50. A new device for obtaining maximum benefits from fuel and for maximum utilization of the hybrid fusion engine in accordance with Claim-1,

wherein, a chamber in the form of a fish is provided with wheels and with a fusion fueled engine and the fish is used as transportation
15 for gas/liquid/grain and for live fish aquarium, to name a few;

wherein, the fish is provided with water propeller serving as a mobile home/house/transportation under water and above the water;

wherein, the chamber is made into an elongated underwater large cylinder with compartments and further provide with compressor-ventilation air ducts extended above the water by floaters, in order
20 to serve as a versatile underwater home; and

wherein, a plurality of the elongated underwater cylindrical chambers are link together into a form of an underwater train transportation,
-- see FIG. 28.

25

Claim-51. A new apparatus for obtaining maximum benefits from hydrogen-deuterium fuel by the maximum efforts to produce heat to energize the hybrid fusion engine in accordance with Claim-1, wherein, hydrogen bombs are detonated underwater by means of torpedoes
30 successively fired from a submarine war boat against an underwater impact wall target located below an array of

assembled heat absorbing radiator pipes containing compressed air that powers a gas turbine engine; and
wherein, an underwater perforated roof is provided above the detonation spot and impact wall to distribute the fusion flame to a wide area of the water to maximized capture and absorption of the heat energy by the water, --- see Fig. 22.

Claim-52. A new apparatus for obtaining maximum benefits from hydrogen-deuterium fuel by the maximum efforts to produce heat to energize the hybrid fusion engine in accordance with Claim-1,
wherein, large hydrogen-deuterium canon bullet bombs are successively detonated underwater, fired by a large underwater canon gun installed in an underwater pit against an underwater impact wall target in order to trap the fusion heat into the water to produce hot steam;
wherein, an underwater perforated roof is disposed a few feet above the detonation spot to spread the fusion flame into a wide area of the water in order to attain maximum capture and retention of the fusion heat energy into the water; and
wherein, a plurality of assembled heat absorbing radiator pipes containing compressed air, are installed on the water and above the water to provide heat power for a gas turbine engine,
see FIG. 23.

Claim-53. A new apparatus for obtaining maximum benefits from hydrogen-deuterium fuel by the maximum efforts to produce heat to energize the hybrid fusion engine in accordance with Claim-1,
wherein, a high caliber machine gun, piercing a solid wall, successively fires deuterium bullet bombs at an impact wall target inside a detonation pit/tunnel/oven constructed in a rocky dry land or enclosed by solid walls, to detonate small scale hydrogen bombs

in order to produce fusion flames; and
wherein, the detonation pit/tunnel/oven is airtight closed bottom with a
small exhaust opening, -- so that the fusion fire/flame is con-
served and does not rise upward and the high temperature stays
5 for a long time inside the oven, -- thereby all the heat energy in
the oven is absorbed to the maximum in time by the heat
absorbing radiator tubes that powers the hybrid fusion gas turbine
engine; and
wherein, a high pressure super-preheated deuterium fuel is jet injected
10 into the fusion fire/flame thru a high melting point metal tube
exposed to the fire, -- in order to attain continuous fusion fire
without additional detonation of bomb bullets, -- see FIG. 24.

Claim-54. A new apparatus for obtaining maximum benefits from
15 hydrogen-deuterium fuel and other fuels and for maximum utilization
of the hybrid fusion engine, in accordance with Claim-1,
wherein, to make a house/home/building self sufficient in energy, the
old house/building is retro-fitted with the hybrid fusion powered
engine illustrated in Claim-1;
20 wherein, the roof of the house is overlain with a heat reflective metal
sheet, one of which is aluminum sheet;
wherein, to create additional heat source, a solar trap box oven is
constructed above the roof, comprising:
a lower/inner transparent water proof hot sheet that prevents hot air
25 from escaping out from the solar trap box oven;
a upper/outer transparent water proof cold sheet, exposed to the
wind, that prevents the wind from touching the lower/ inner
sheet and from stealing the heat from the solar box;
the solar trap box further encloses part of the house's side
30 more often exposed to the sunlight, -- creating a hot room;
wherein, a gas turbine hybrid fusion engine of Claim-1, having a power

- exhaust turbine driving an electric generator and further driving a turbine compressor, -- is installed inside the hot room, the compressor being elevated at the eve of the roof but lower than the power exhaust turbine;
- 5 wherein, a high efficiency smokeless trash burner is installed inside the hot room and resting on the ground, and being fed with various kinds of fuel easily available including trash;
- wherein, a plurality of heat absorbing radiator pipes/tubes containing the cold compressed air from the compressor are made to pass
- 10 thru under the heat reflective metal sheet and following the roof to the ridge, -- to make the house cool;
- wherein, the cold heat absorbing radiator pipes are continued back down to the roof's eves in the form of larger pipes in the form of horizontal multi-coils laid on the roof's reflective sheet;
- 15 wherein, the hot air exhaust from the power turbine is contained in a multiple hot tubes/pipes horizontally coiled and placed inside each corresponding heat absorbing cold coils of compressed air pipe, --- in a reverse air flow -- to preheat the compressed air;
- 20 wherein, some of the cold compressed air pipe engulf the hot exhaust tail pipes in multi-coils from the solar trap oven in reverse air flow, -- to preheat the compressed air;
- wherein, the preheated compressed air then proceeds inside heat absorbing multi-coiled pipes in multi-branches laid at the
- 25 upper section space of the solar trap oven for final super-heating;
- wherein, the downstream sections of the final heating pipes are disposed at the highest space of the solar trap oven, same highest space being of the highest temperature;
- 30 wherein, the downstream ends of each final heating pipe are communicated into a hot header pipe communicated to drive the

- the exhaust power turbine;
- wherein, a fusion plasma fusion torch is made to fire fusion flames inside the downstream end of the hot header pipe approaching the power turbine;
- 5 wherein, a plurality of perforated air nuzzles are disposed downward inside the upper section of the smokeless trash burner to superheat the in-coming oxygen air blowing downward, thereby burning the trash fuel from the top and distributing superheat oxygen out from the perforations to the fumes flying
- 10 around the oven and into the exit chimney;
- wherein, a deuterium plasma torch is made to fire fusion flames into the exit chimney of the trash burner serving as catalytic converter oven;
- wherein, the exit chimney of the trash burner discharges into and inside
- 15 the solar trap oven to contribute heat therein, and, as it is hereby extremely emphasized, to recapture the heat energy spent in running the catalytic converter;
- wherein, some of the hot air exhaust from the power turbine, it being a hot oxygen air, is contributed into trash burner to perfectly
- 20 burn the trash fuel by passing thru the perforated oxygen distributor nuzzles; and
- wherein, the electric generator is made to produce DC electricity used in running an electrolysis machine thereby producing hydrogen/ deuterium fuel used into the trash burner and into the plasma
- 25 torch catalytic converter for the trash burner.

Claim-55. A new device for maximum benefits from fuel and maximum utilization of the hybrid fusion engine in accordance with Claim-1, wherein, a capsule of hydrogen/deuterium is shot into the fusion flame,

30 to become subjected to extremely high temperature for fusion reaction, -- to avoid continuous expenses of electric arc.

Claim-56. A new device for maximum benefits from fuel and maximum utilization of the hybrid fusion engine in accordance with Claim-1, wherein, liquid mercury and water are used as sealant to prevent the escape of hydrogen and deuterium fuel from a container.

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Claim-57. A new device for maximum benefits from hydrogen and deuterium in accordance with Claim-1, or Claim-55, wherein hydrogen is encapsulated into a bullet and is continuously fired to produce heat in an oven/furnace or to melt an armor in a combat.

10

Claim-58. A new device for maximum benefits from fuel in accordance with Claim-1, wherein, the plasma torch chamber is made of wide diameter to create long electric arc in the fusion torch chamber having an exit submerged in low-grade water for purposes of producing irrigation and drinking water by distillation process.

15

Claim-59. A new device or apparatus assembled for obtaining maximum benefits from fuel in a scavenger process, in accordance with Claim-1, for the production of abundant smelted hardware/materials, abundant distilled water, and abundant hydrogen-deuterium fuel,

20

wherein, in the process of smelting and manufacturing various kinds of materials/hardware products, the chimney of the smelting furnace is totally communicated to a hot multi-branch/multi-coil radiator pipes/tubes submerged into a steam boiler to drive a steam engine -- as second engine that generates DC electricity for the production of hydrogen-deuterium fuel thru electrolysis, thereby the otherwise wasted furnace heat is harnessed/recycled to produce distilled water and abundant hydrogen-deuterium fuel;

25

wherein, in a first stage heating of cold compressed air from a first engine's compressor, the steam expelled by the steam engine is

30

condensed into distilled water by recapturing its heat content to heat-up a first branch cold compressed air that drives a power exhaust turbine of a gas turbine engine -- as first engine that generates DC electricity, -- thereby the otherwise wasted steam's heat drives the first engine and helps produce more hydrogen-deuterium fuel;

wherein, a second branch of the cold compressed air from the first engine's compressor is pre-heated by further recapture of the chimney's heat at downstream past the boiler, thereby the otherwise wasted low heat of the downstream chimney also help drive the first engine and further harnessed to produce more hydrogen-deuterium fuel;

wherein, the chimney's heat at its last downstream section is further recaptured by pre-heating cold water before it gets into the boiler, thereby the lower temperature chimney's last drop of heat also help in driving the two engines by helping produce more steam, and further harnessed to produce more distilled water, and further harnessed produce more hydrogen-deuterium fuel;

wherein, solar heat thru a solar trap is availed-of to pre-heat the cold water at day time before it gets into the boiler, thereby solar heat is harnessed and contributes heat energy in driving the two engines, and helps in producing more hydrogen-deuterium fuel by helping the boiler produce more steam without increasing the heat output of the furnace;

wherein, a third branch of the cold compressed air gets into a heat collector radiator placed inside the annealing chamber where the compressed air recaptures and get heated-up by the heat energy being given-up/radiated in annealing process and communicated into the main compressed air power air duct -- to help drive the first engine that generates DC electricity, thereby the otherwise

wasted annealing heat energy is also harnessed to help produce additional more and more hydrogen-deuterium fuel;

wherein, the low temperature heat energy in the chimney getting out of the annealing chamber is harnessed by a radiator submerged into the upstream section of the boiler to pre-heat the water before it gets into the boiling section, thereby the otherwise wasted low heat from the annealing chamber also helps in the production of more steam, more distilled water and more production of additional hydrogen-deuterium fuel;

wherein, majority of the hydrogen-deuterium fuels produced by the two engines is fired by thermonuclear fusion into the smelting furnace to limit the use of oxygen or stop production of NOX and most importantly to slow down the flow of hot fusion gas inside the chimney, to make the hot fusion flame stay more time inside the furnace to effectively melt down more materials being smelted and to prevent oxidation of the materials being smelted -- a major break-through, and to make the fusion hot gas stay more time inside boiler -- in order to produce more steam, more distilled water, and more hydrogen-deuterium fuel, and ultimately more smelted hardware produced, -- in an endless energy recycle process -- a major break-through;

wherein, a lesser part of the hydrogen-deuterium fuels produced by the two engines is fired by thermonuclear electro-plasma fusion into the last downstream section of the compressed air pipe/duct to super-heat-up the compressed air and to provide super power upon the exhaust power turbine of the first engine -- serving as a third stage heating of the compressed air, -- in the mission to produce more DC electric power for the production of more and more hydrogen-deuterium fuel for the smelting furnace and more and more distilled water;

wherein, as a second stage heating-up of the compressed air, the

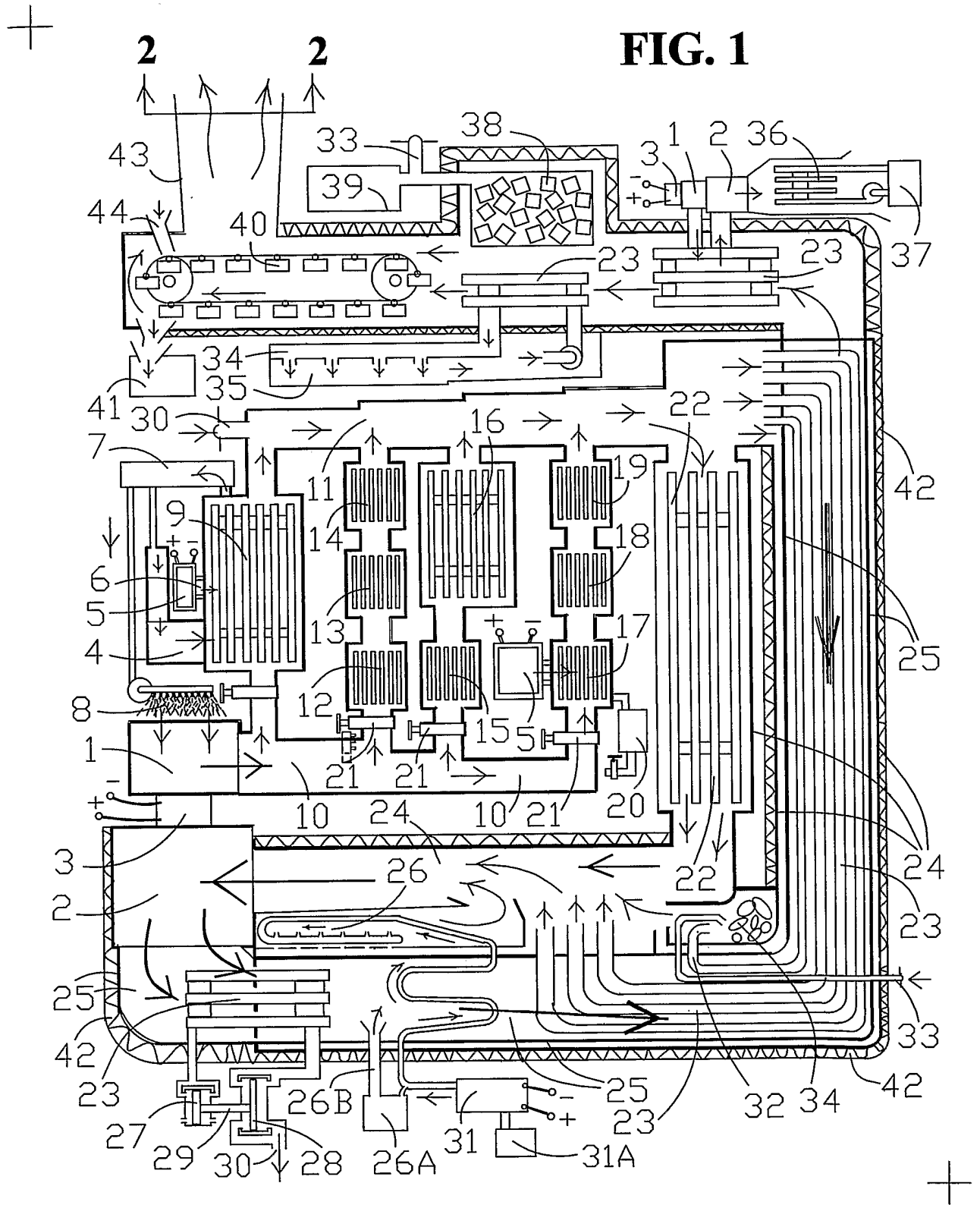
super-hot air expelled by the first engine into its tailpipe is communicated into a multi-branch/multi-coil tubes/pipes heat emitting radiator, each pipe inserted inside each corresponding heat absorbing radiator pipes containing the already pre-heated compressed air, contained in the mid-section of the compressed-air duct, in reverse air flow opposite the hot air to further heat-up/energize the compressed air, -- in the efforts to recapture the tailpipe heat energy and recycle/harness it back to drive the exhaust power turbine again and again, -- thereby the otherwise wasted tailpipe heat energy is further harnessed to produce more and more hydrogen-deuterium fuel for the furnace for the production of more and more distilled water;

wherein, the lower temperature heat energy contained in the waste air inside the down stream mid-section of the first engine's tailpipe is made to interact and recaptured in first stage heating by the second branch cold compressed air, -- in order to help drive the first engine in a heat recycle process;

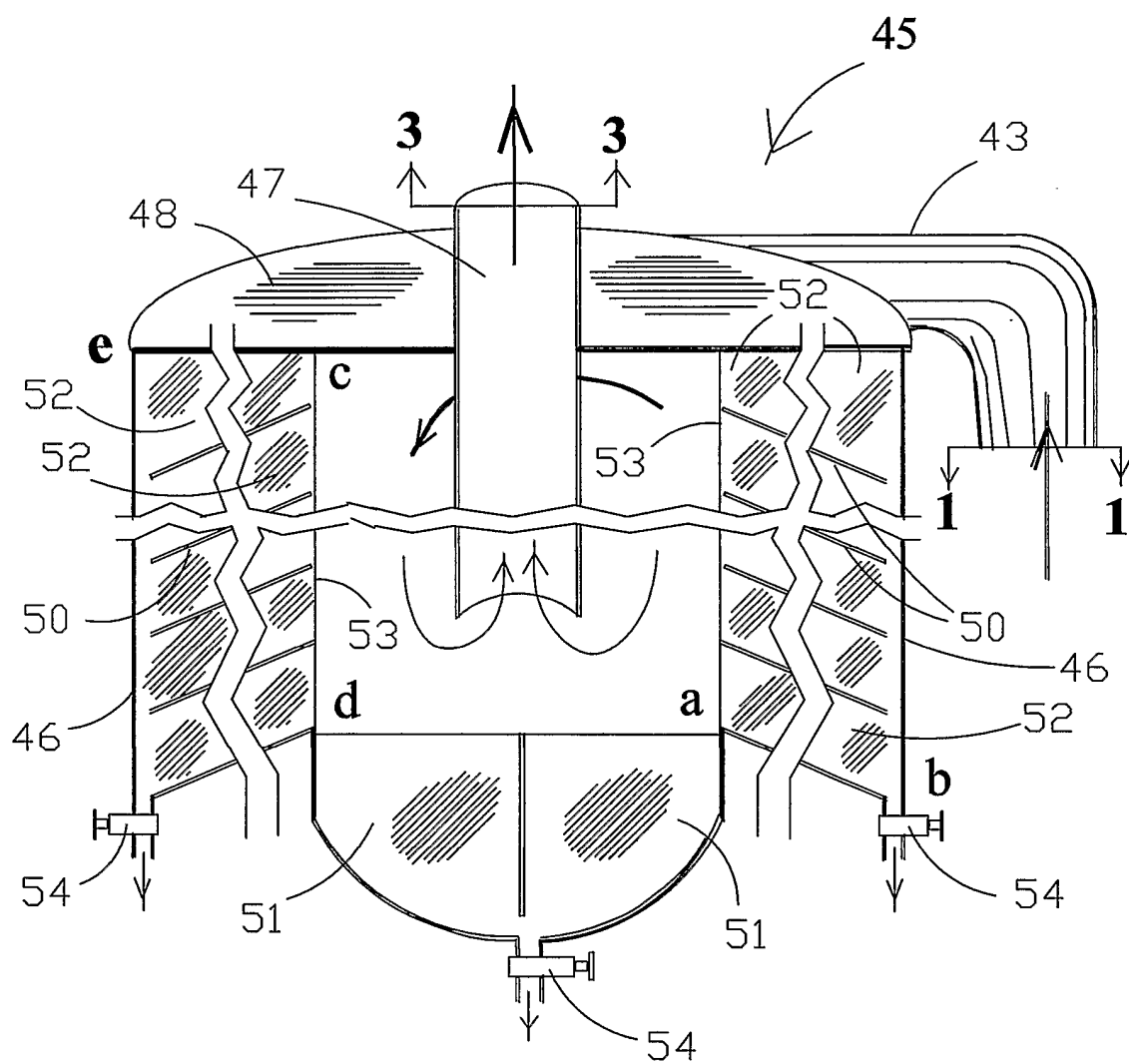
wherein, the low temperature last drop of heat energy in the last downstream section of the first engine's tailpipe is harnessed to pre-heat the cold water before its gets down to the boiler;

wherein, the low temperature heat energy contained in the air inside the annealing chimney past the boiler --- is recaptured by the cold compressed air in a first stage heating process, then used to pre-heat the cold water before it gets down to the boiler; and

wherein, some of the pre-heated cold clean compressed is diverted to provide clean heating air into a house or building, and the downstream warm air, after it exit from the building, is used to pre-heat the cold water before it gets down to the boiler, -- a heat recycle process, -- see FIG. 30 and FIG. 31.



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FIG. 2

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FIG. 3

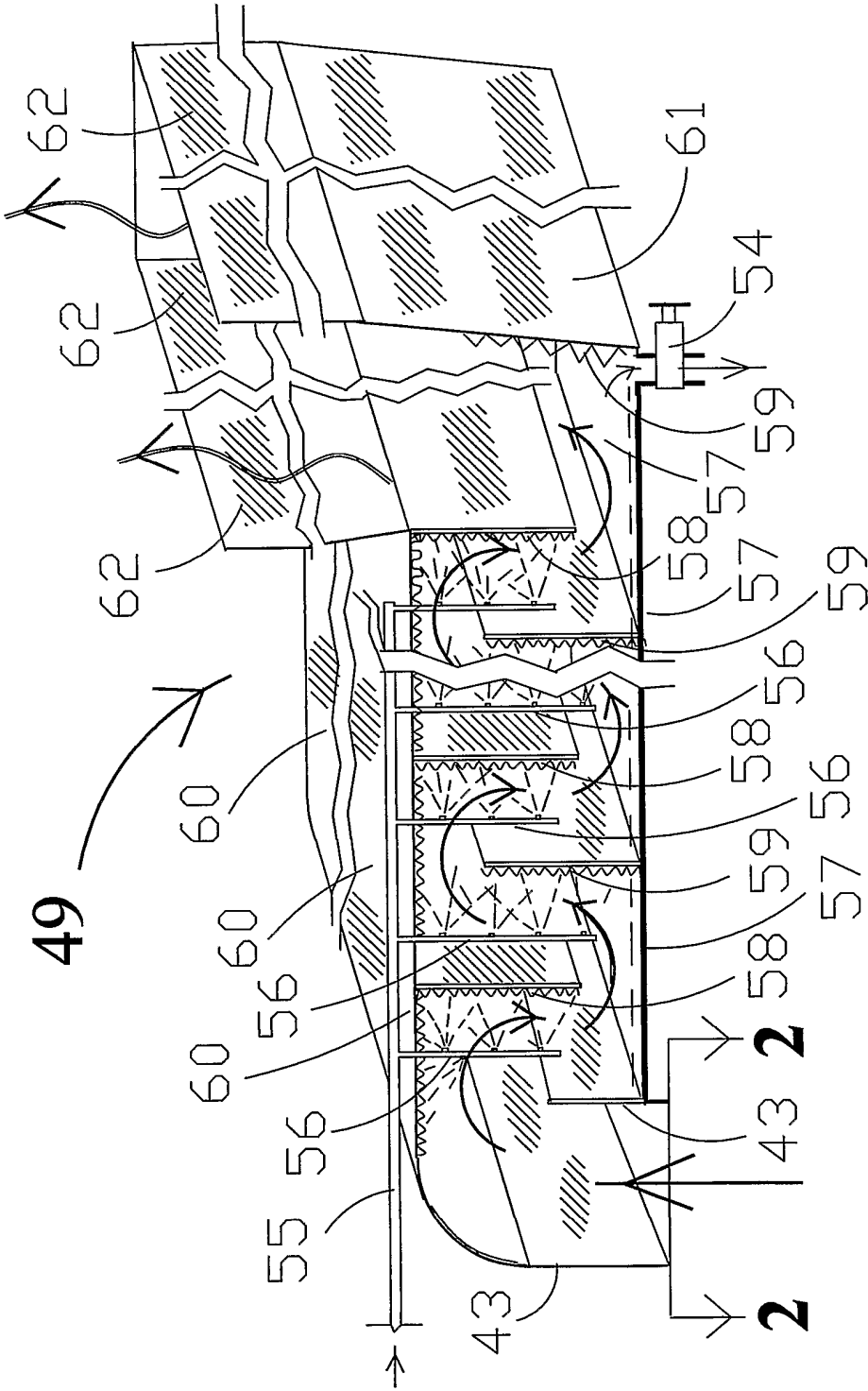


FIG. 4

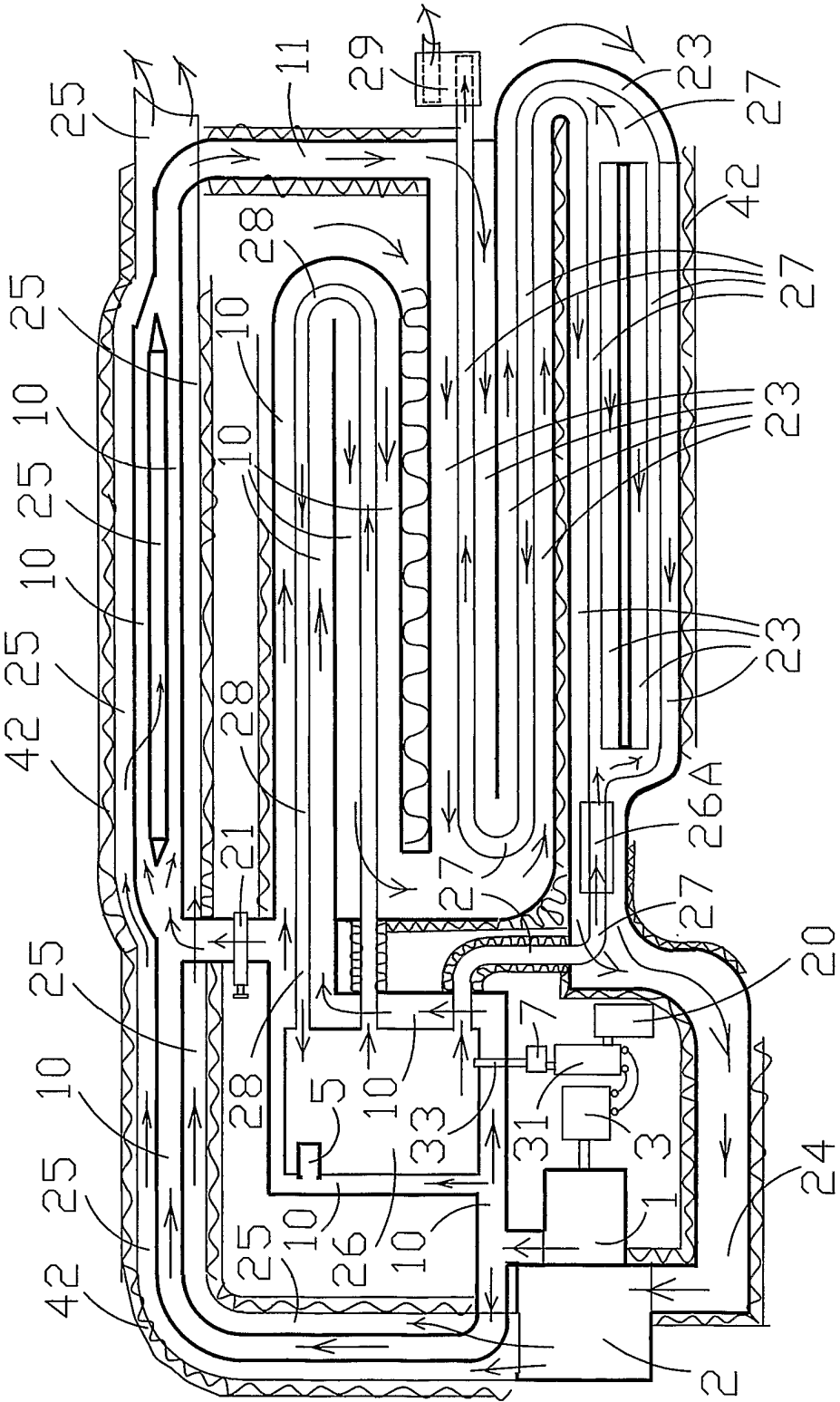
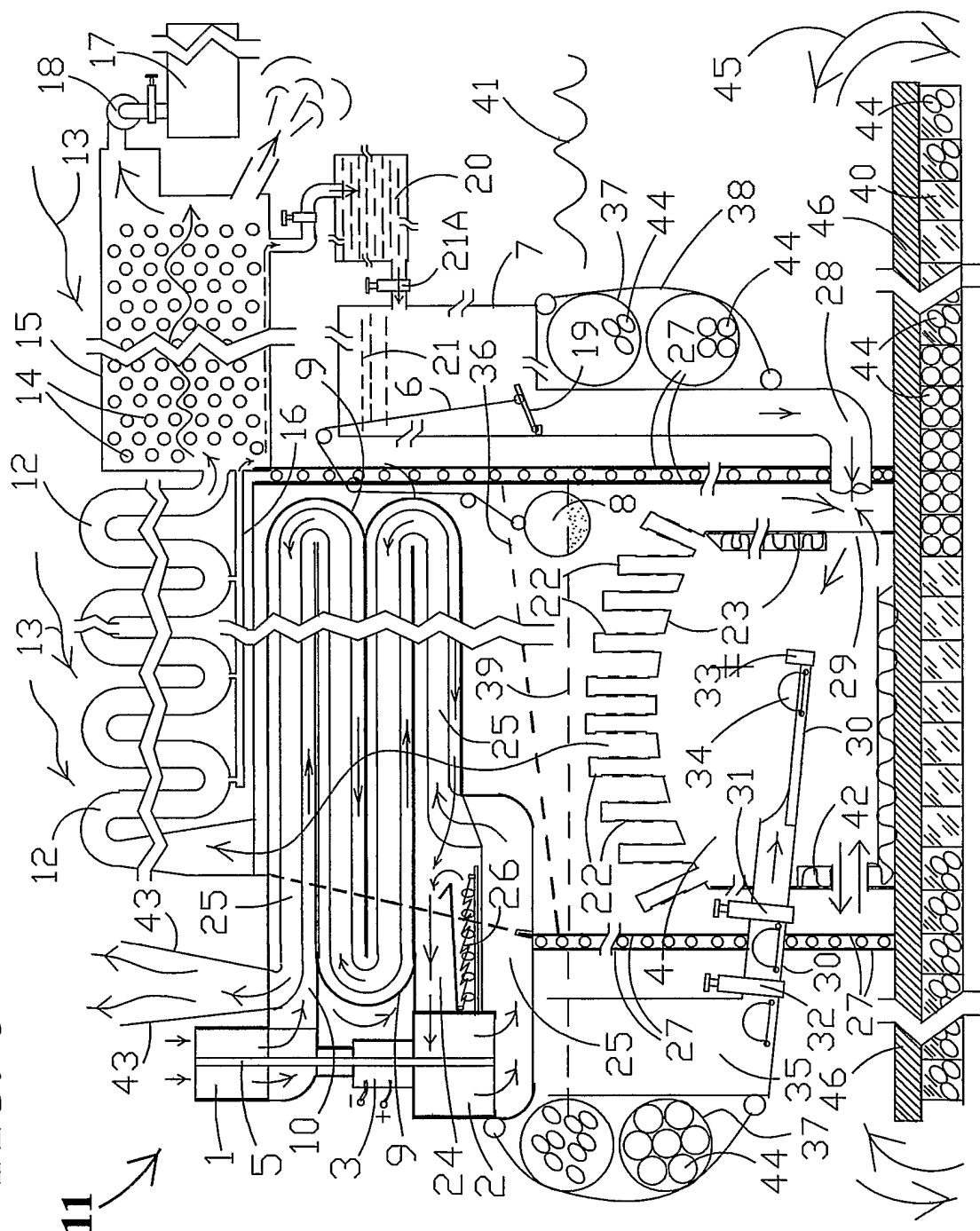


FIG. 5



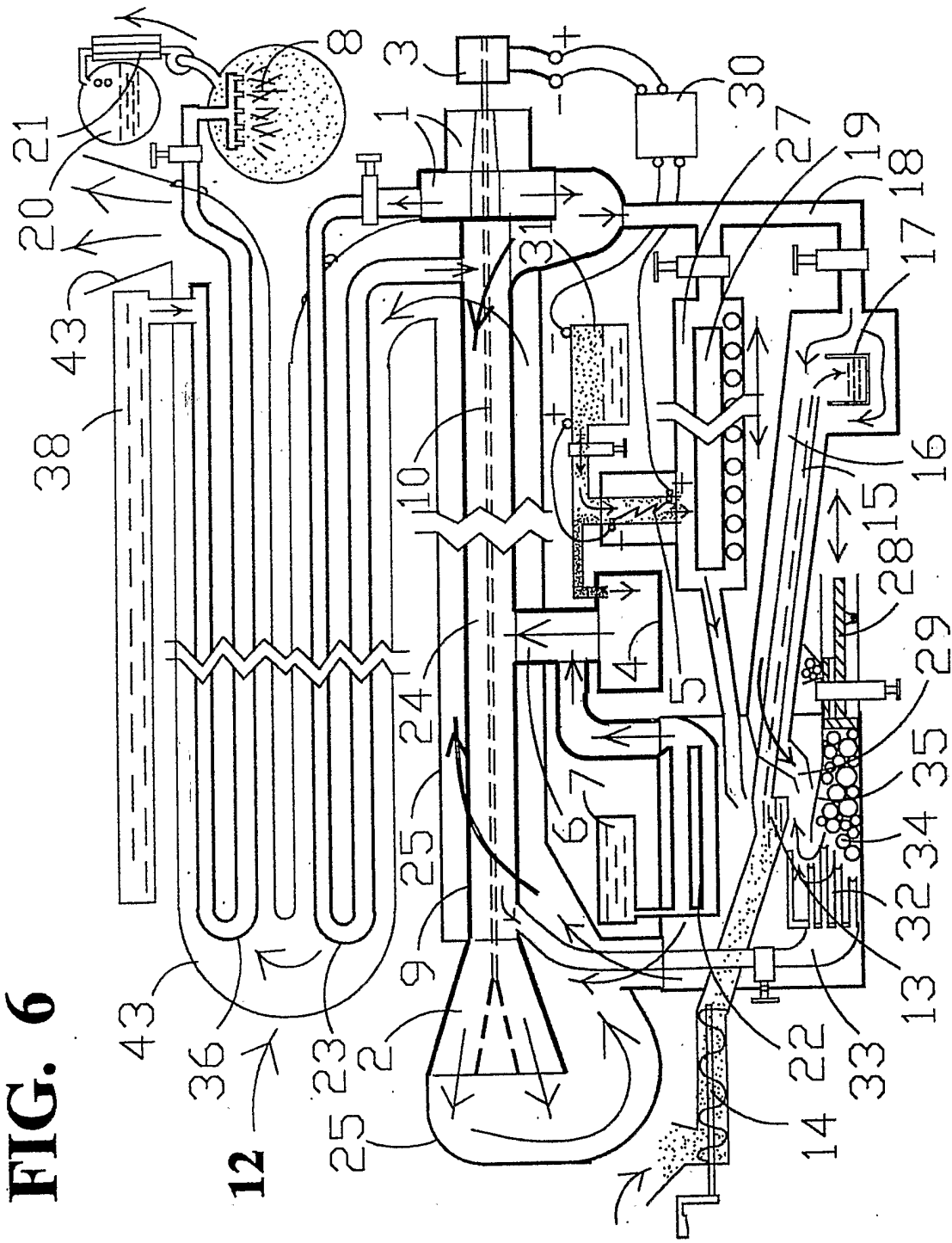


FIG. 7

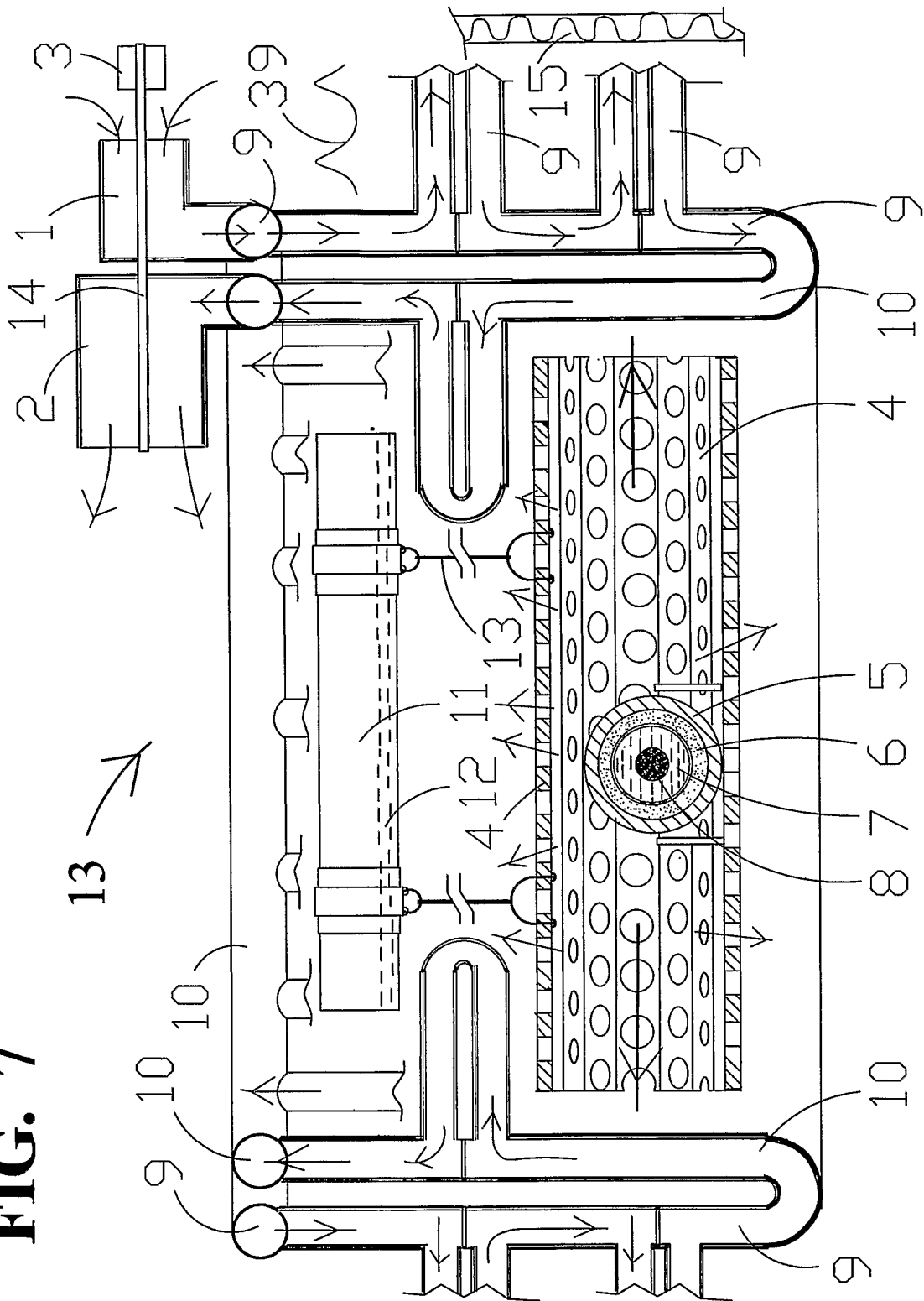


FIG. 8

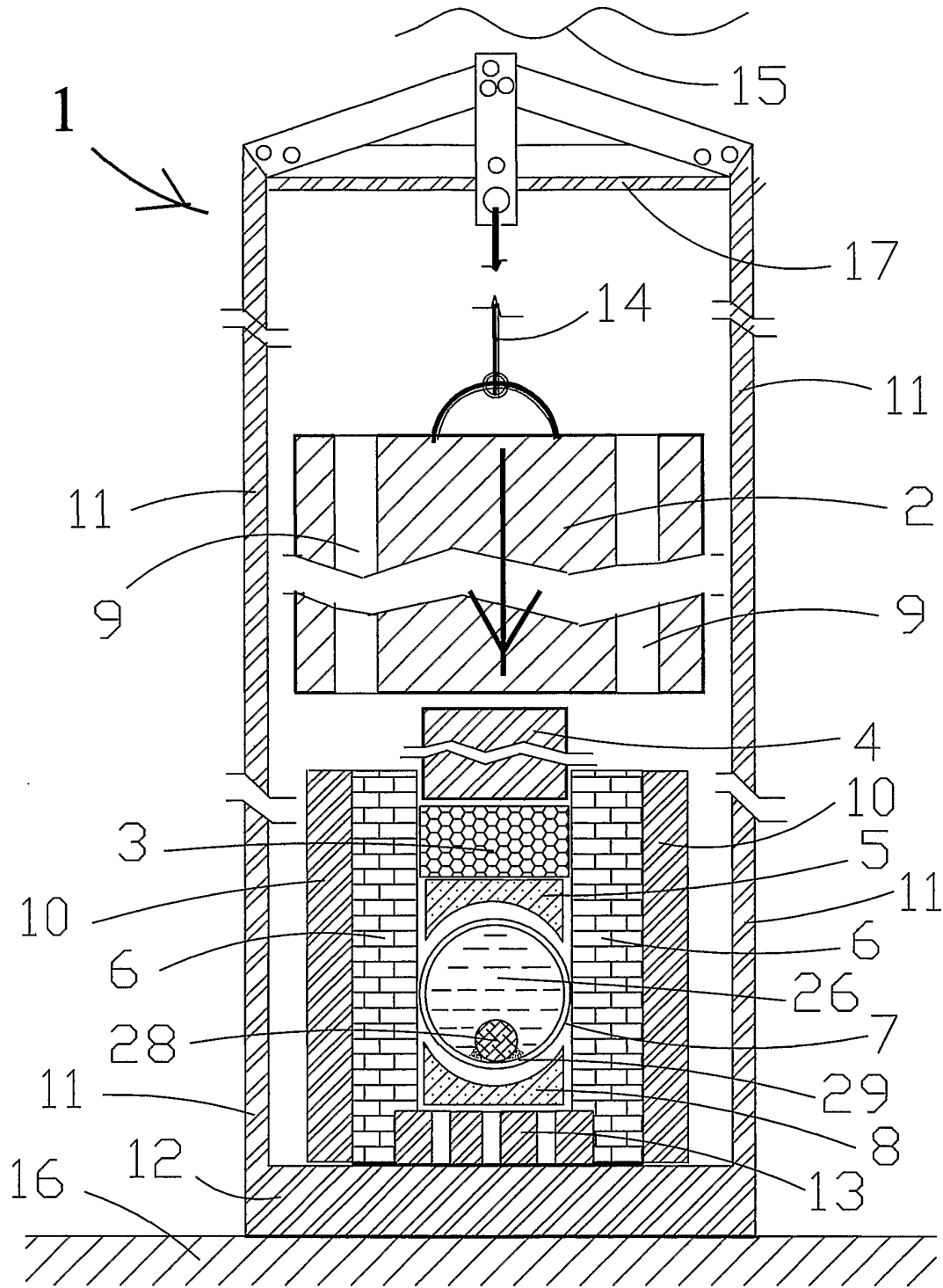
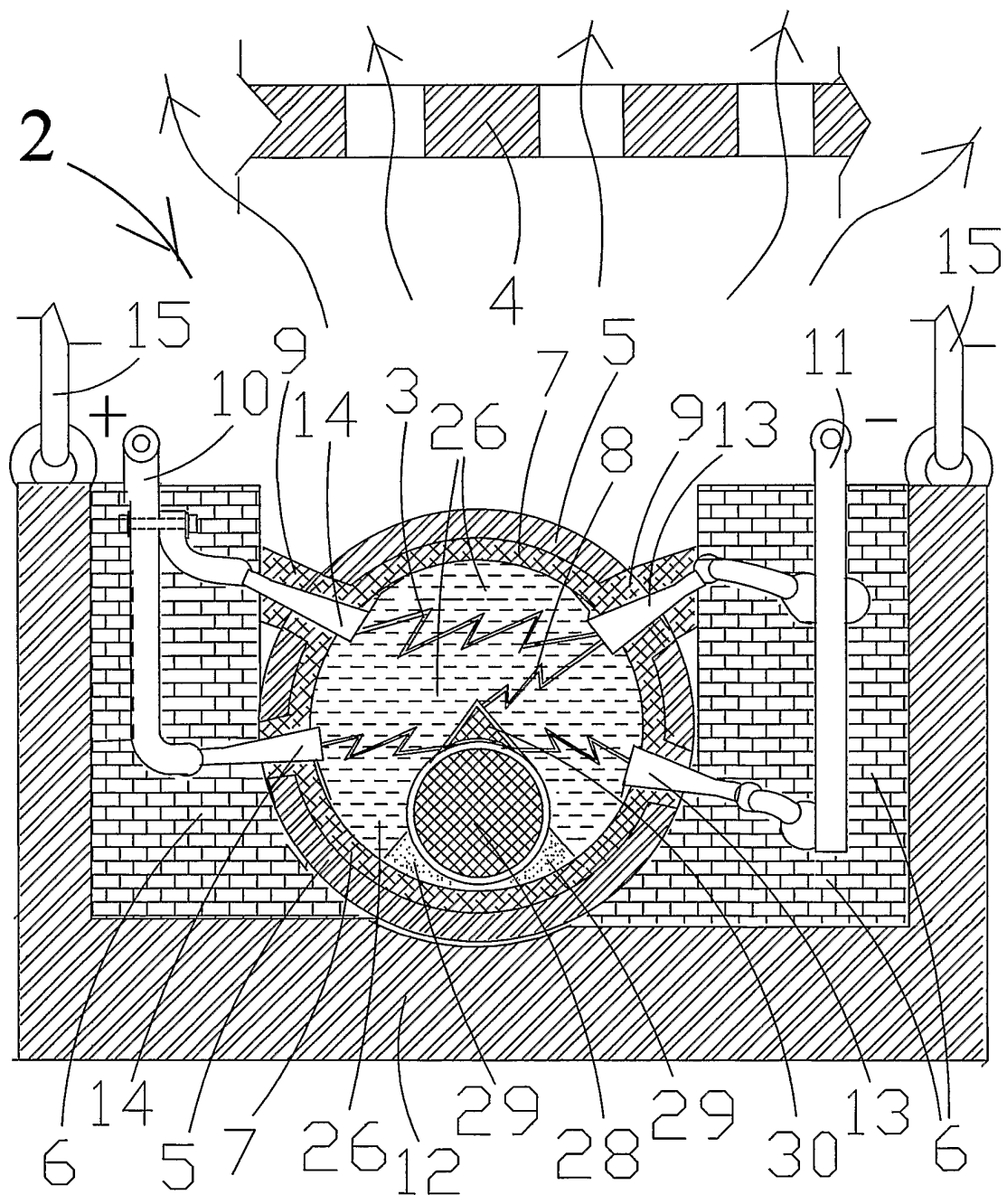
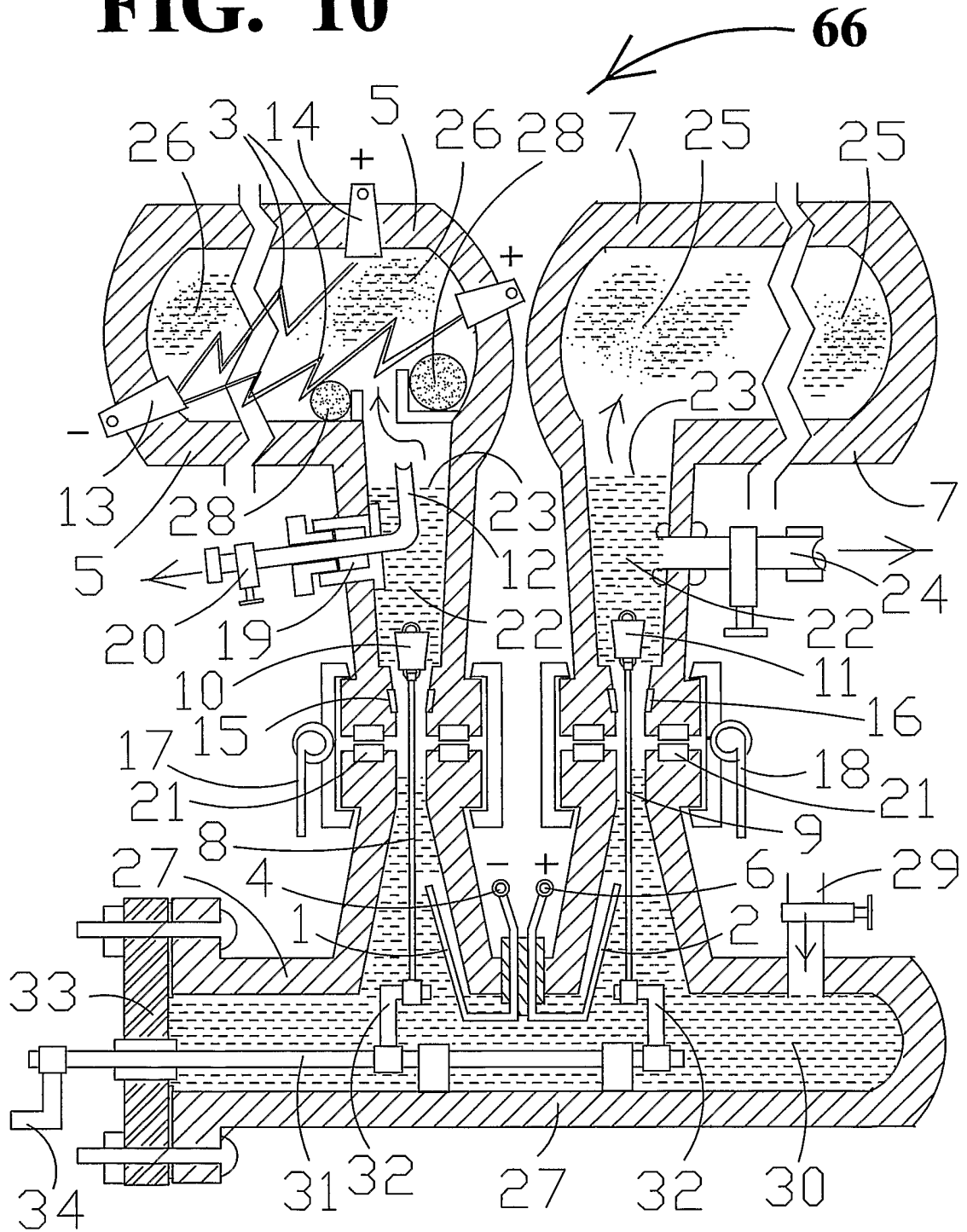


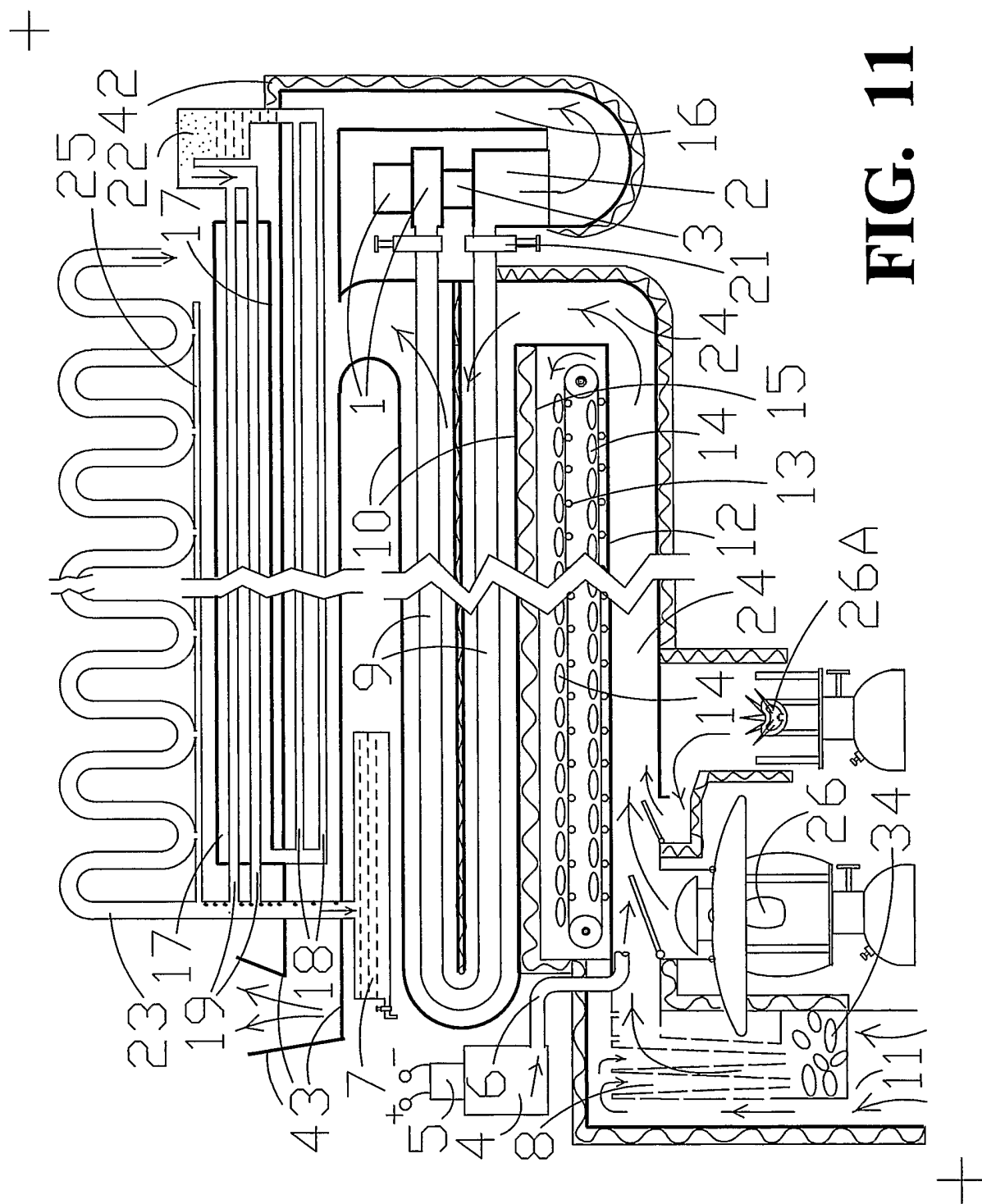
FIG. 9



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FIG. 10

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FIG. 12

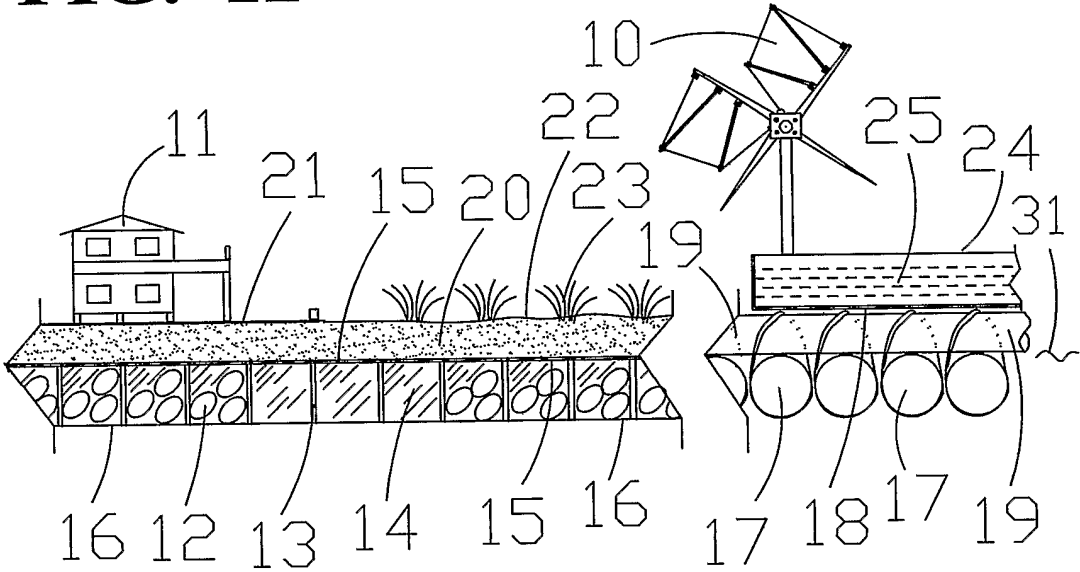


FIG. 13

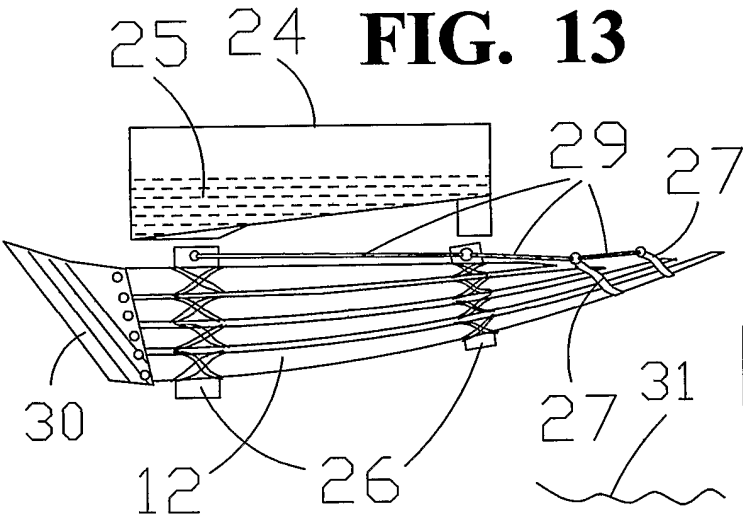
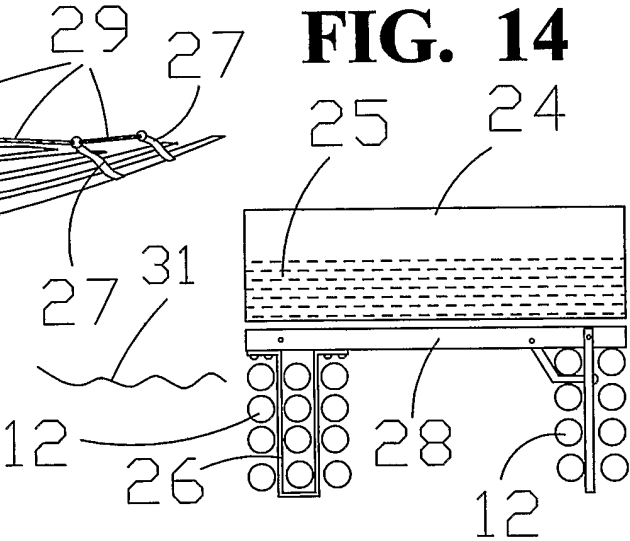
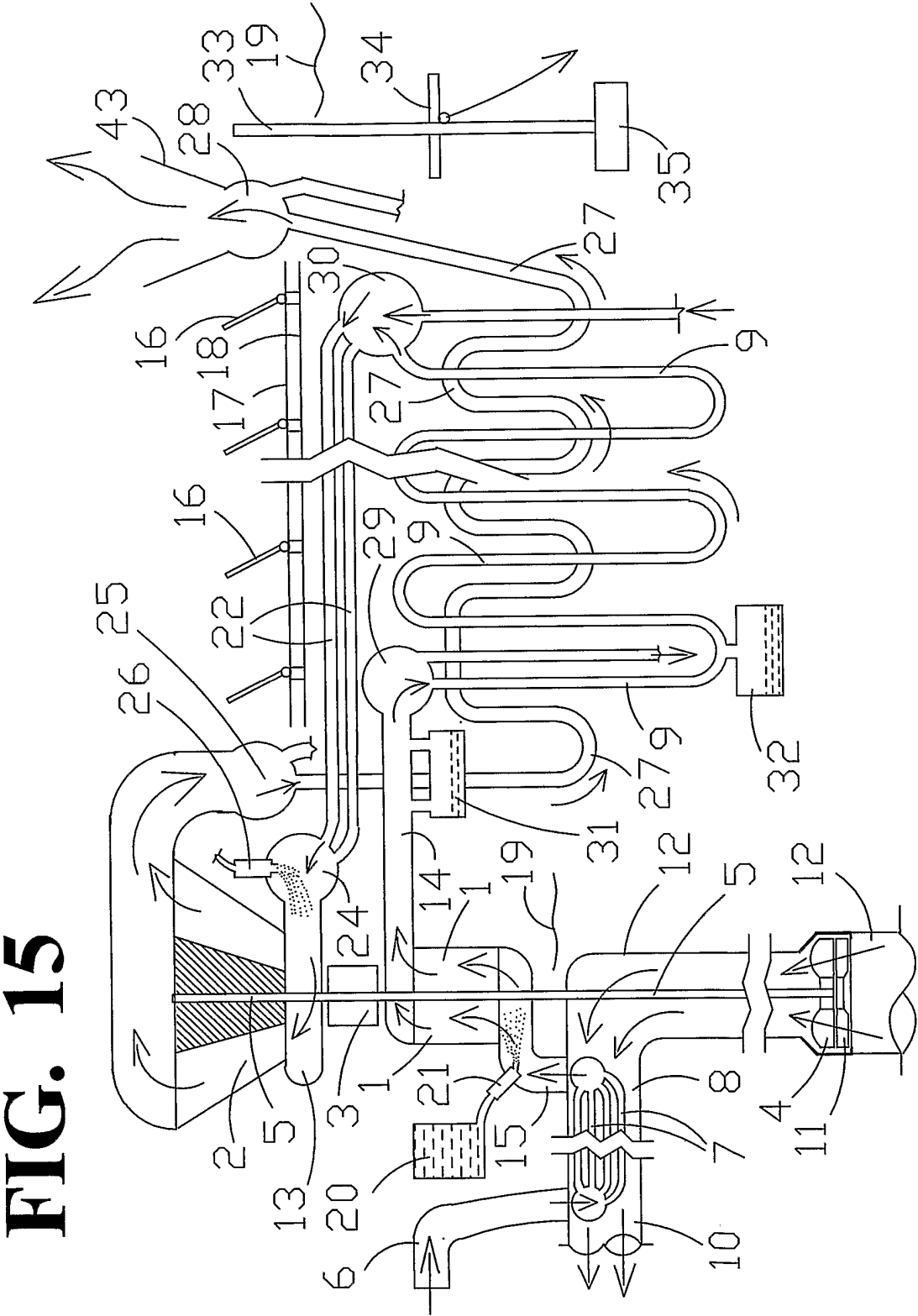


FIG. 14

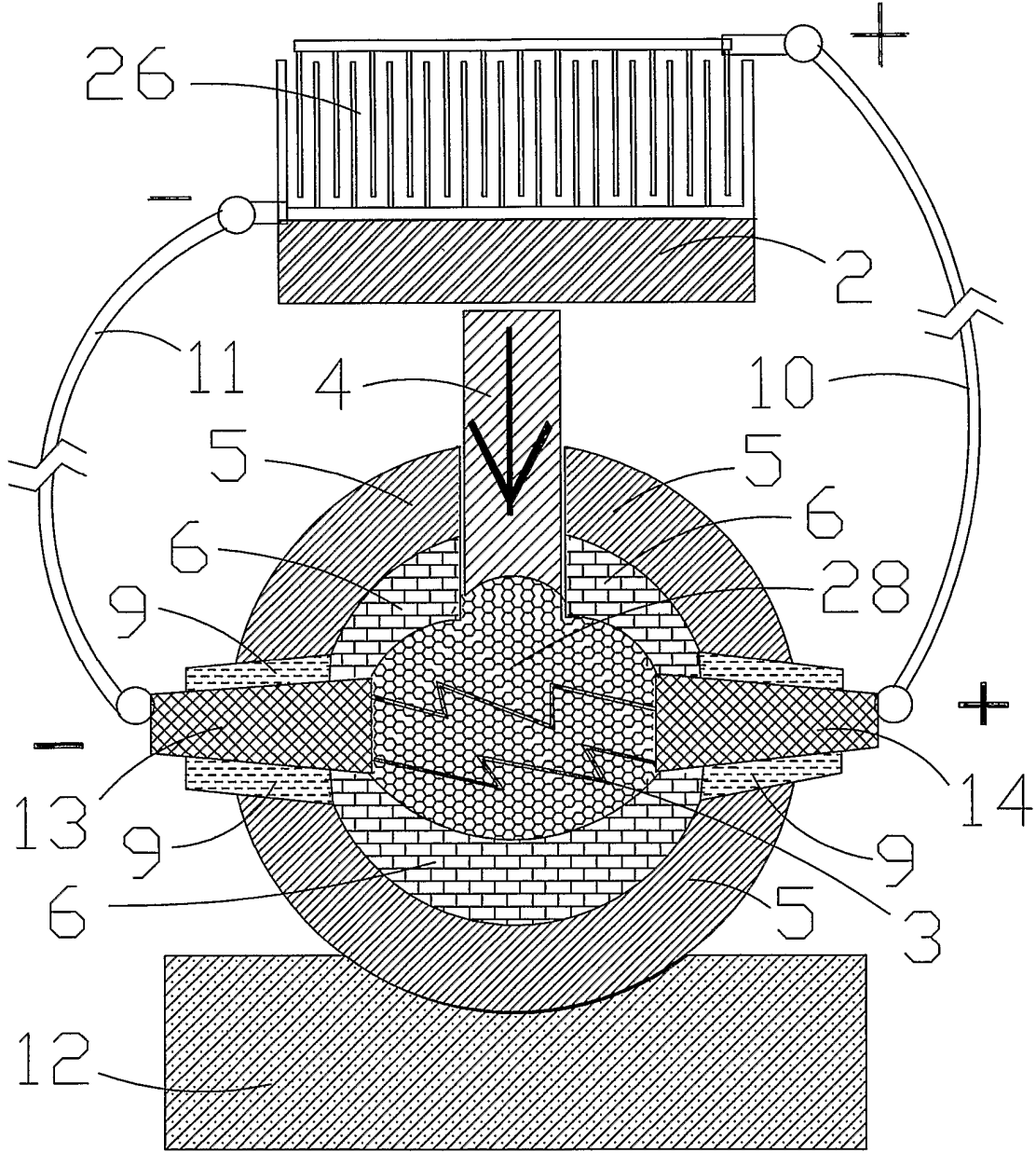


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FIG. 16



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FIG. 17

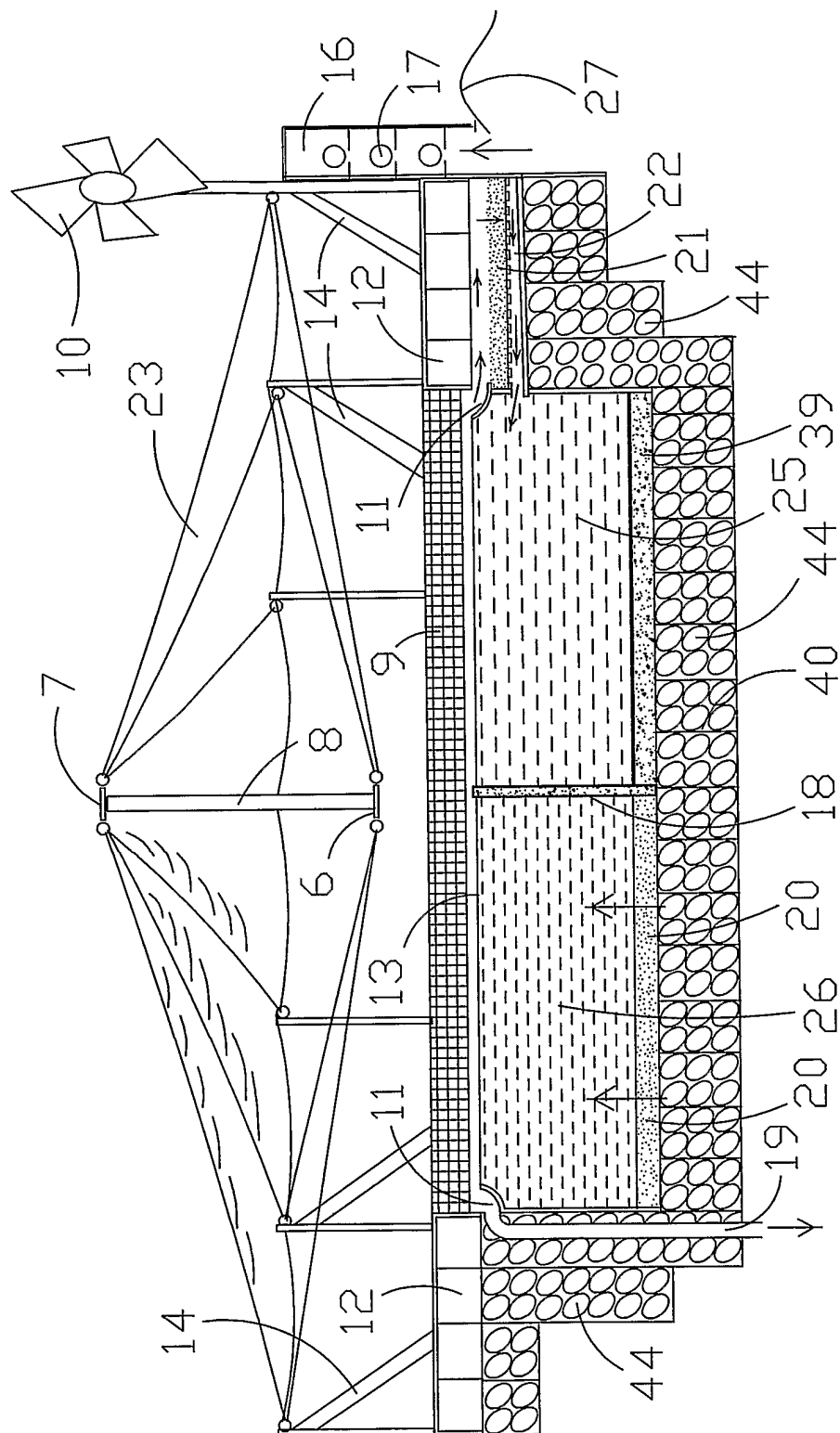
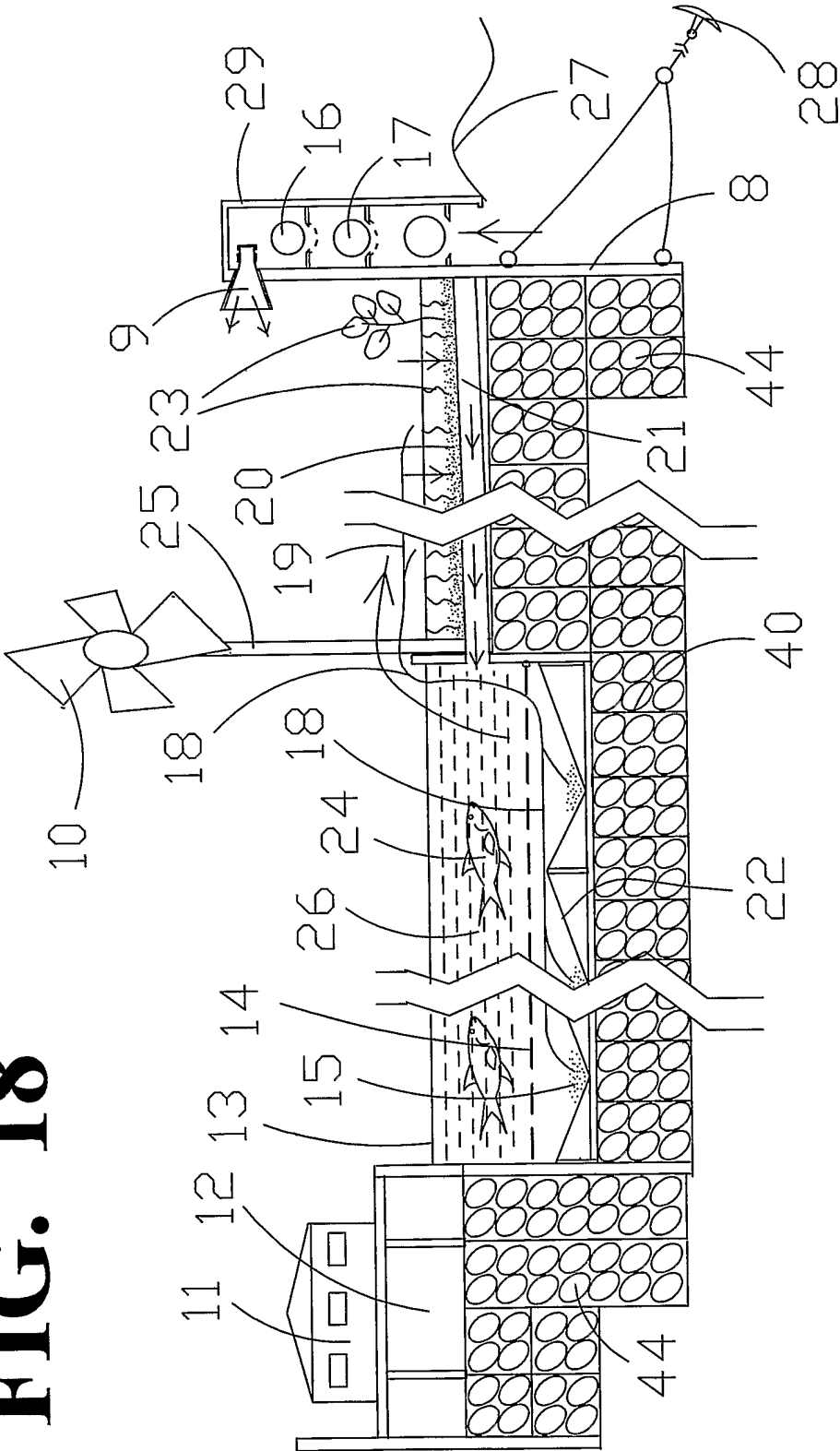


FIG. 18



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FIG. 20

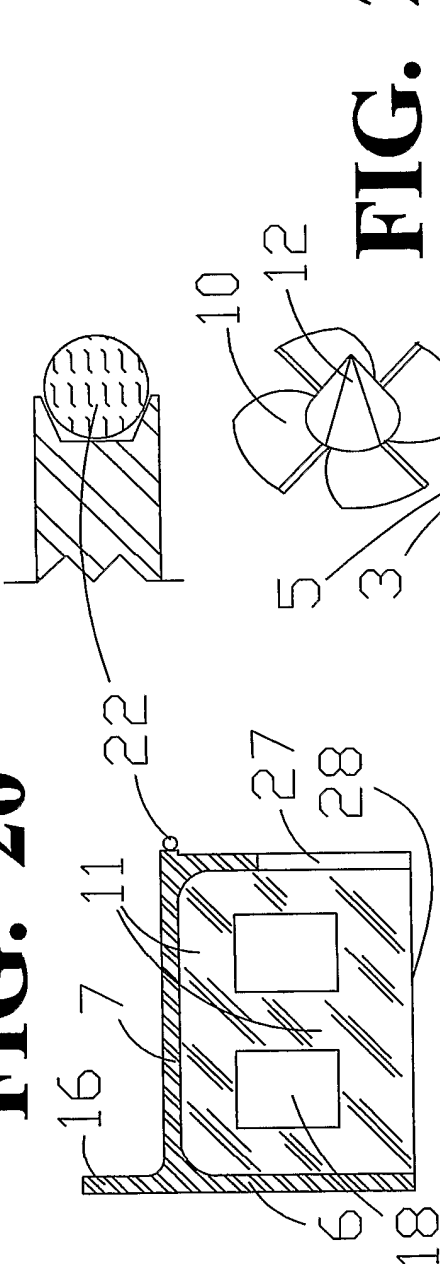
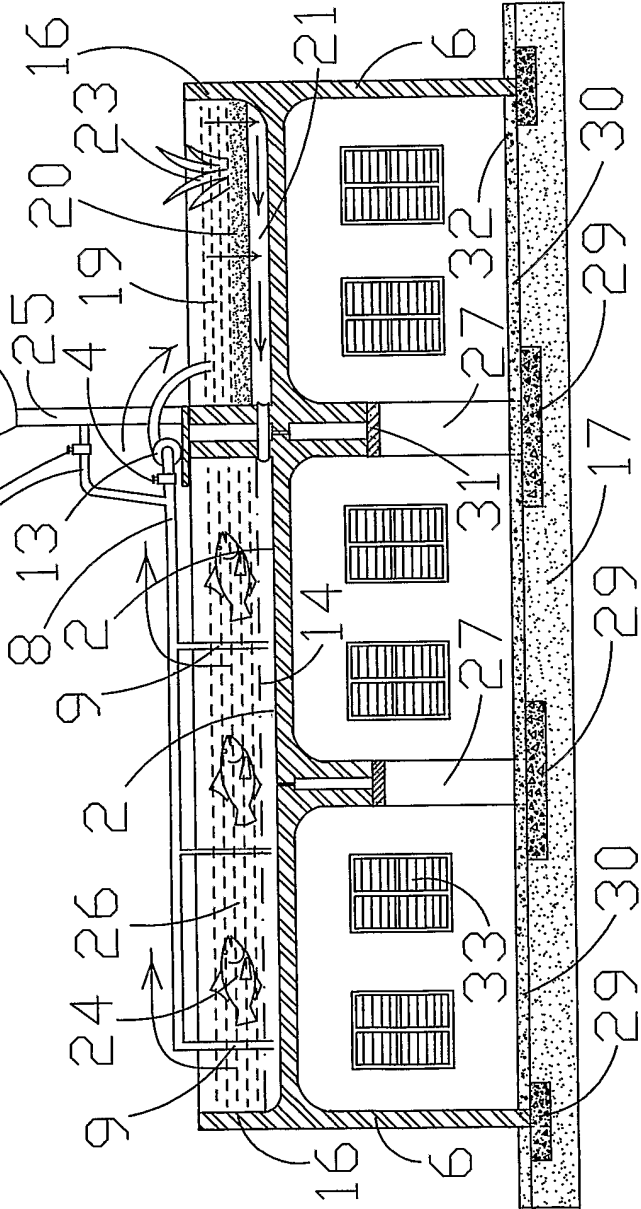


FIG. 21



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FIG. 22

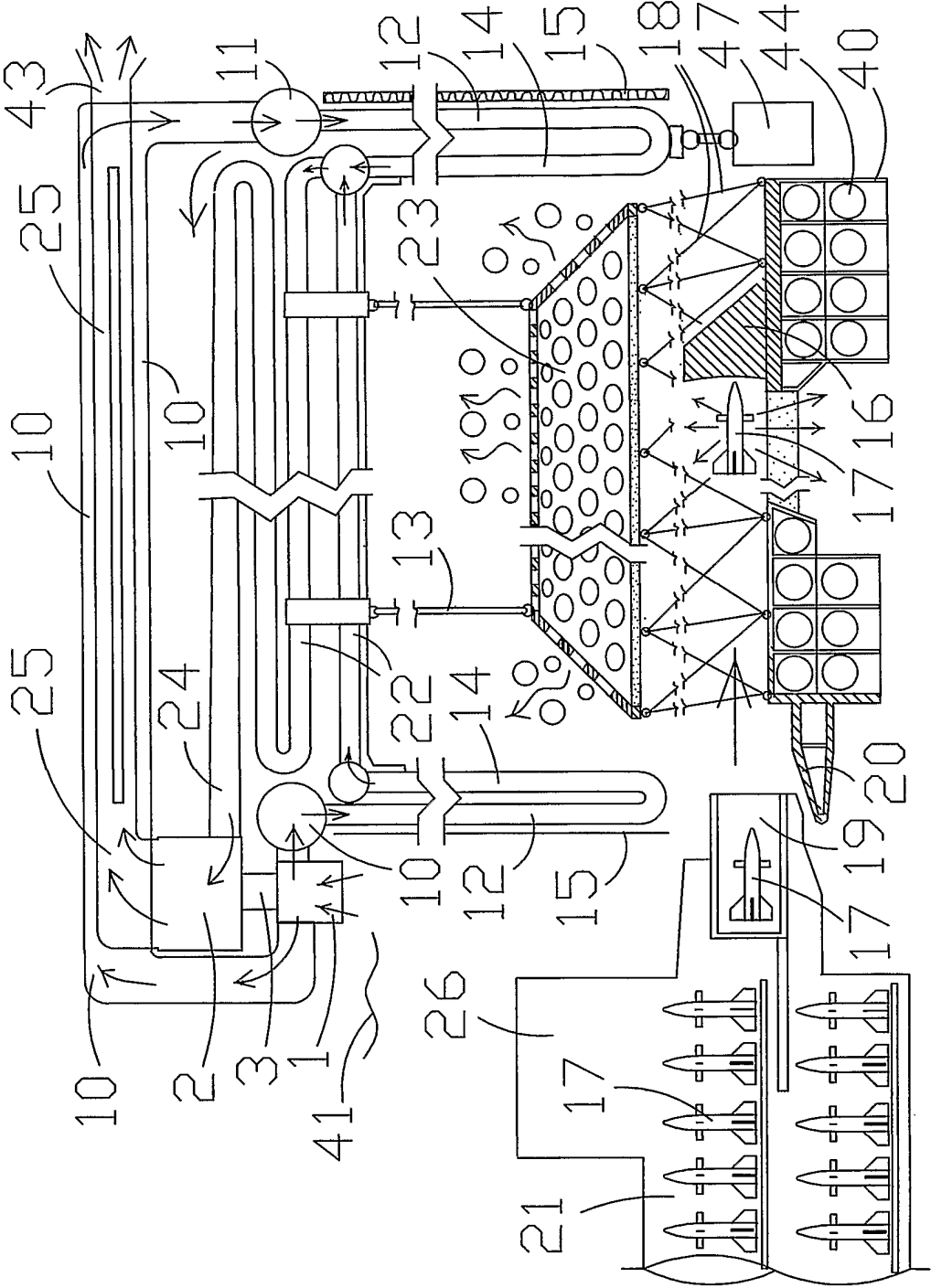


FIG. 23

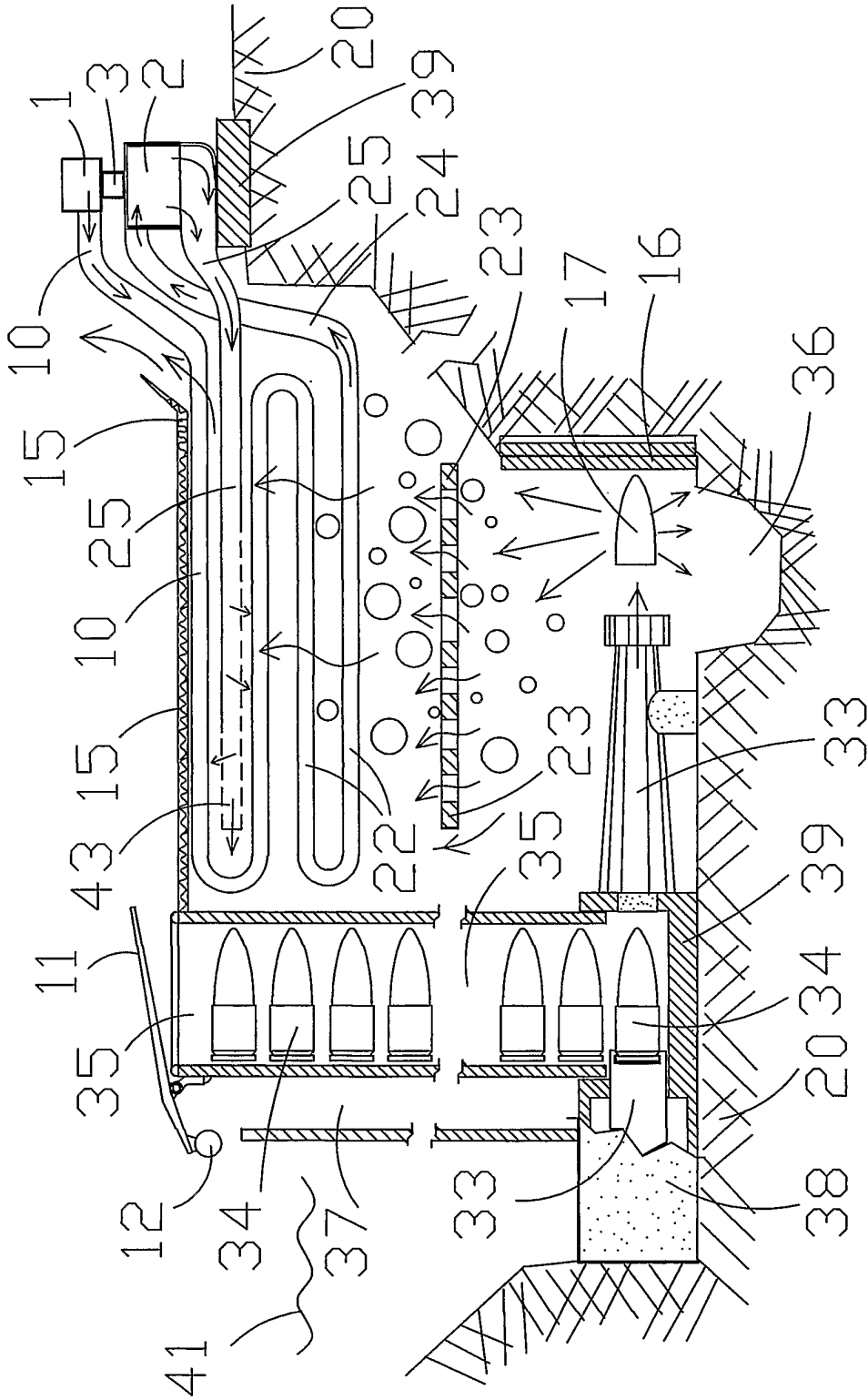
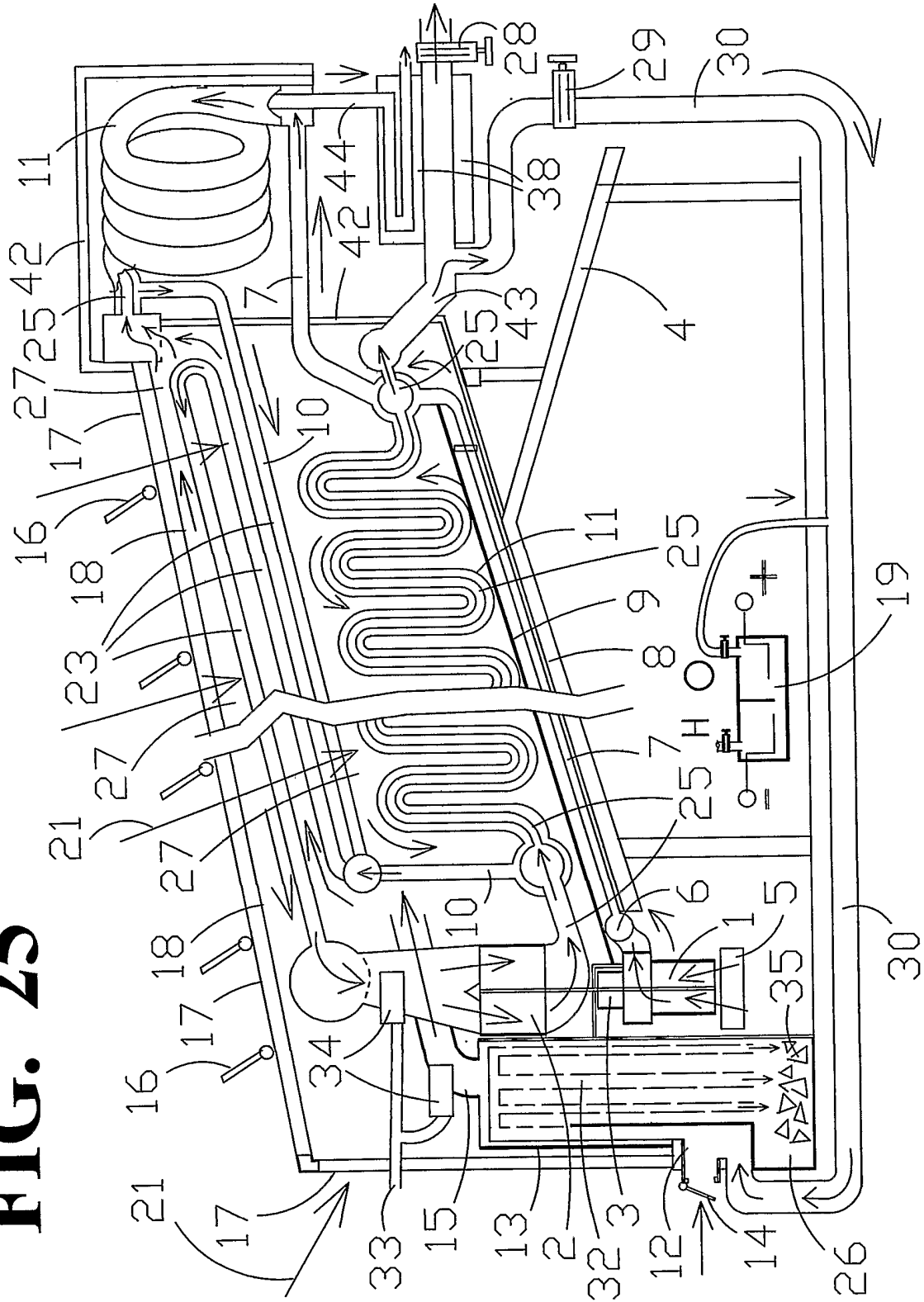
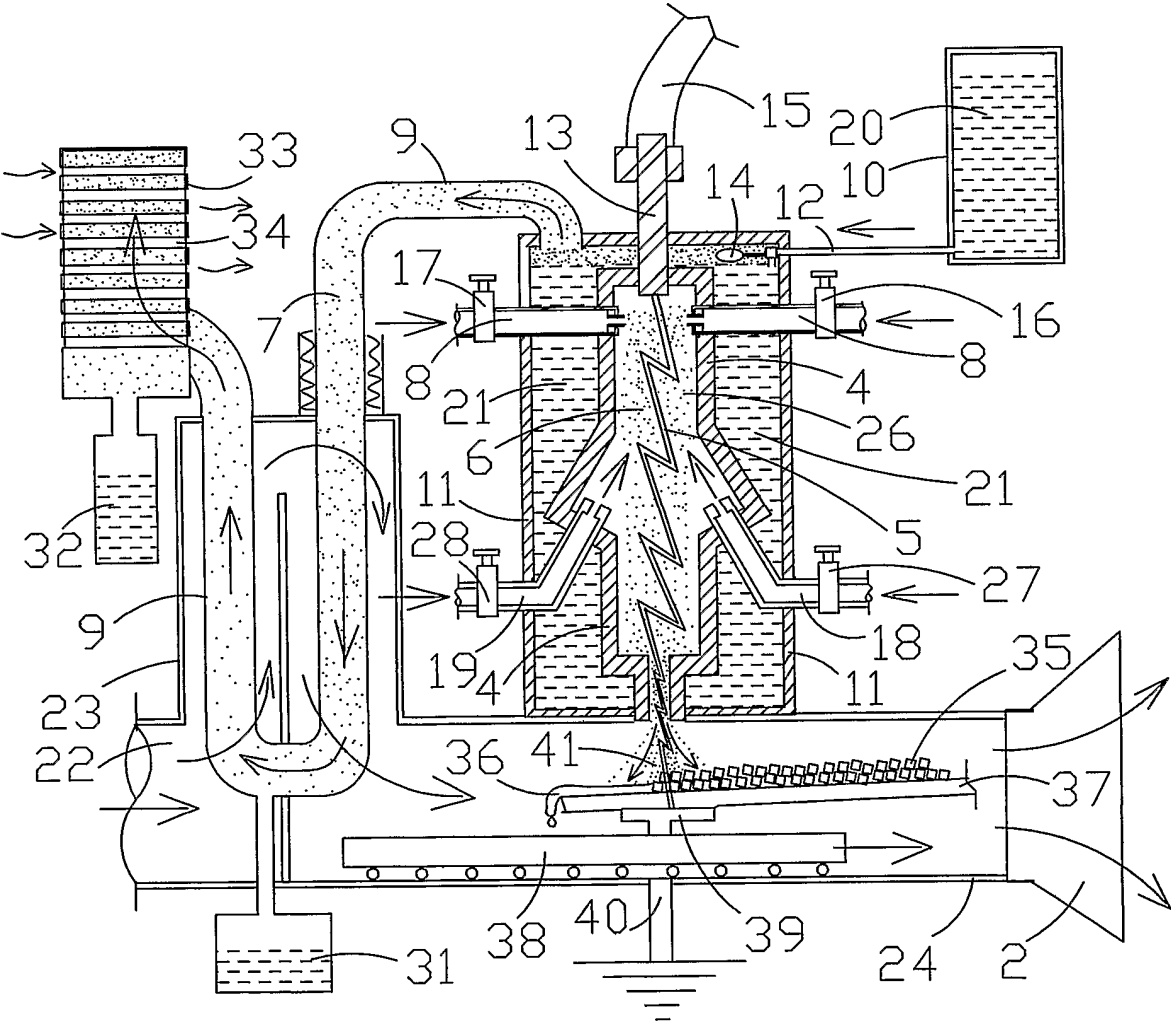


FIG. 25

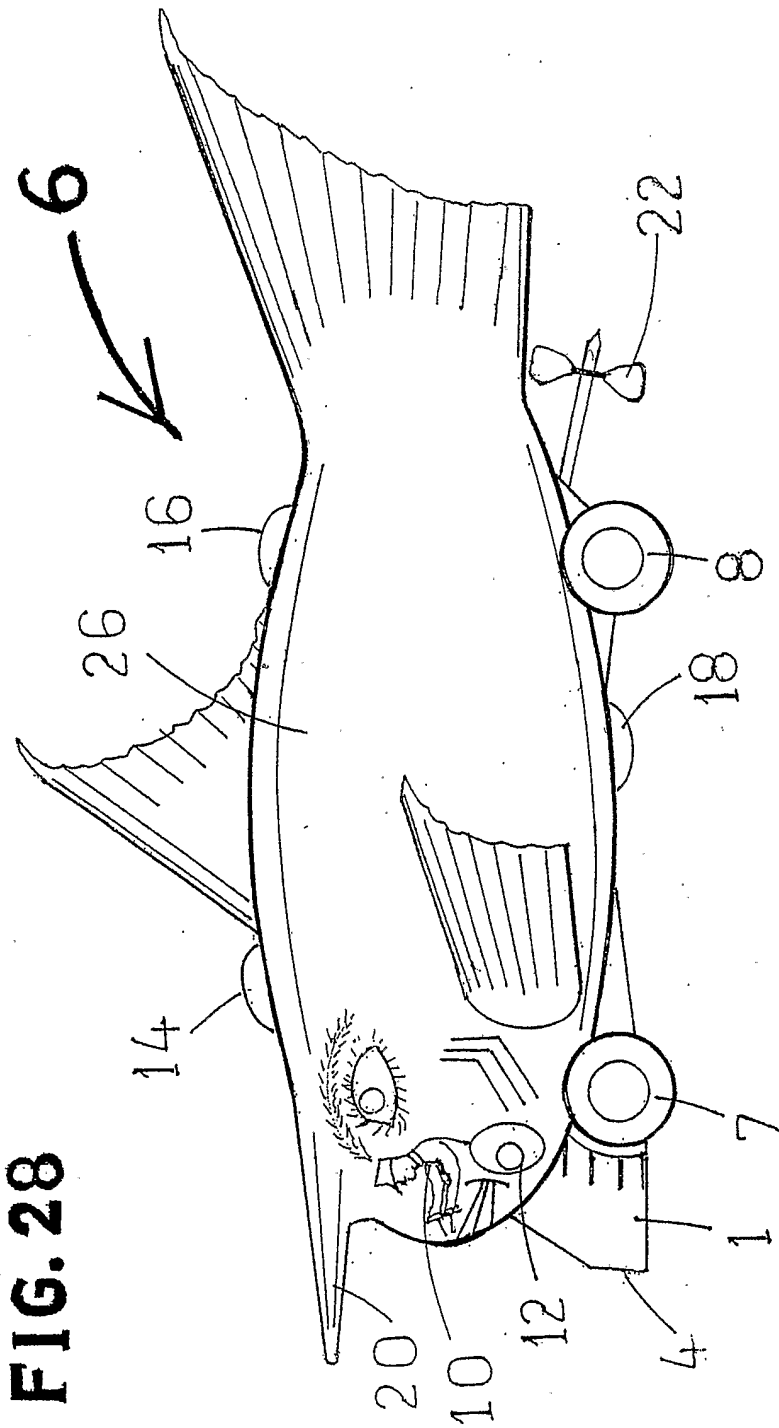


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FIG. 26



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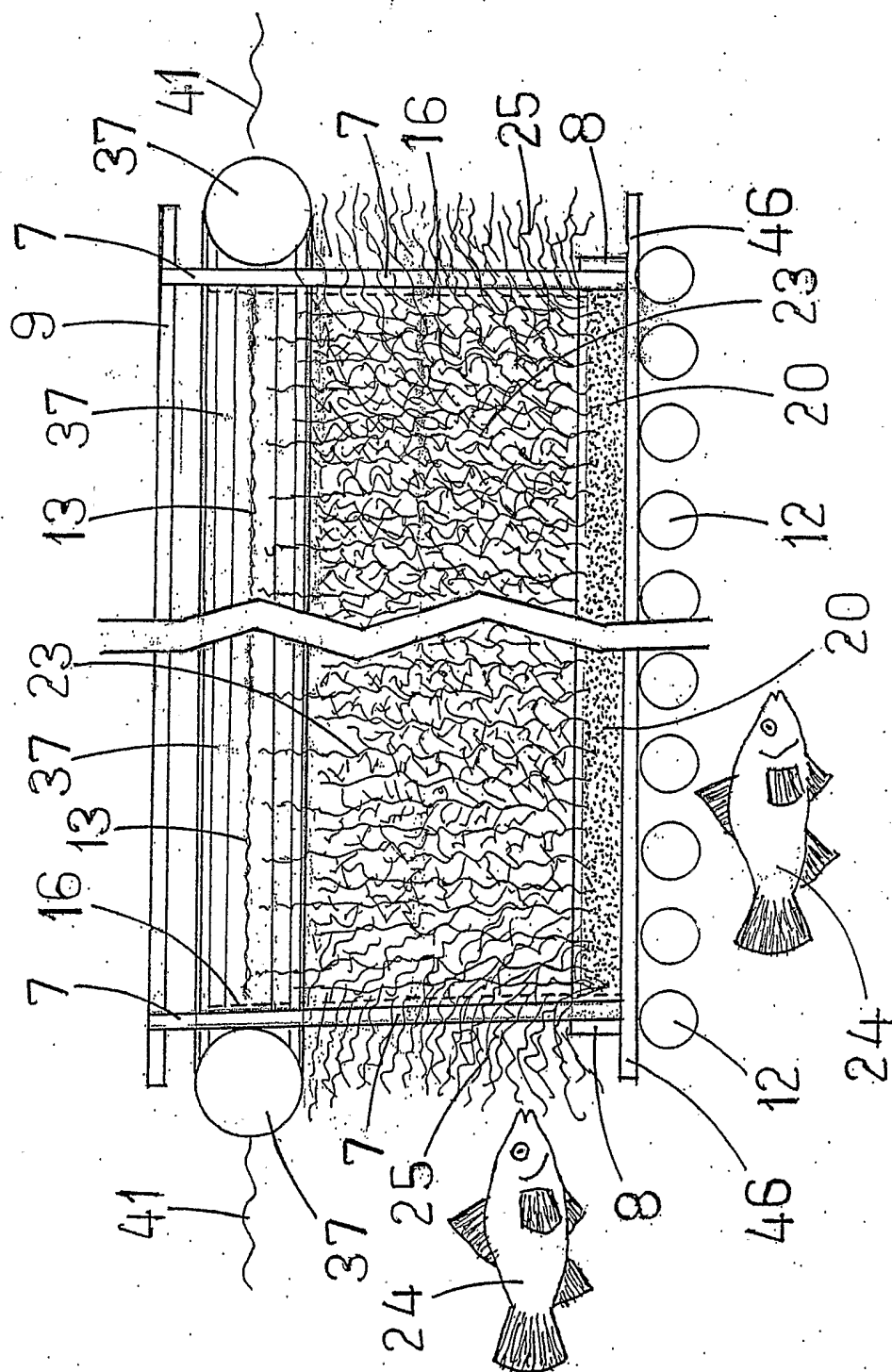


FIG. 30

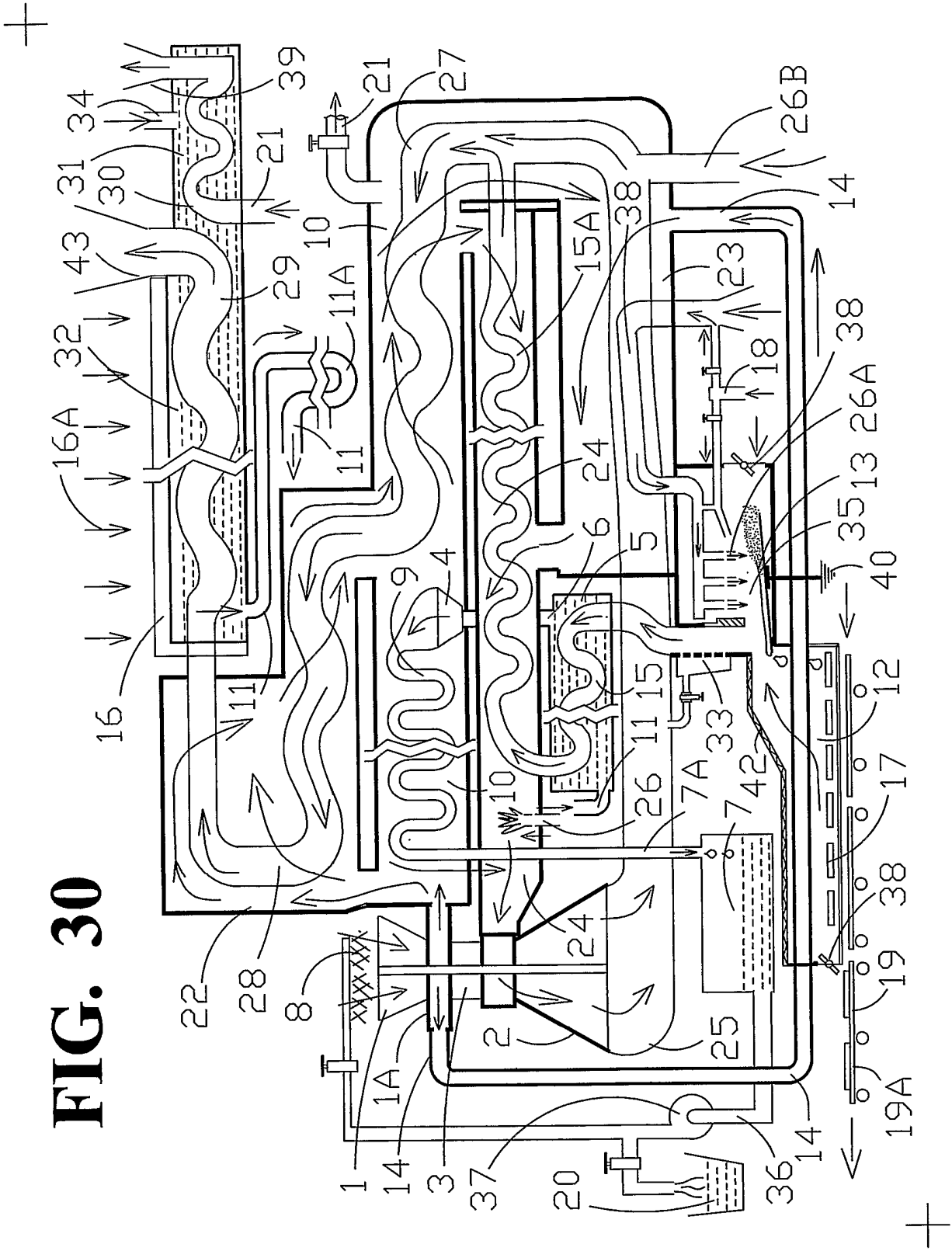
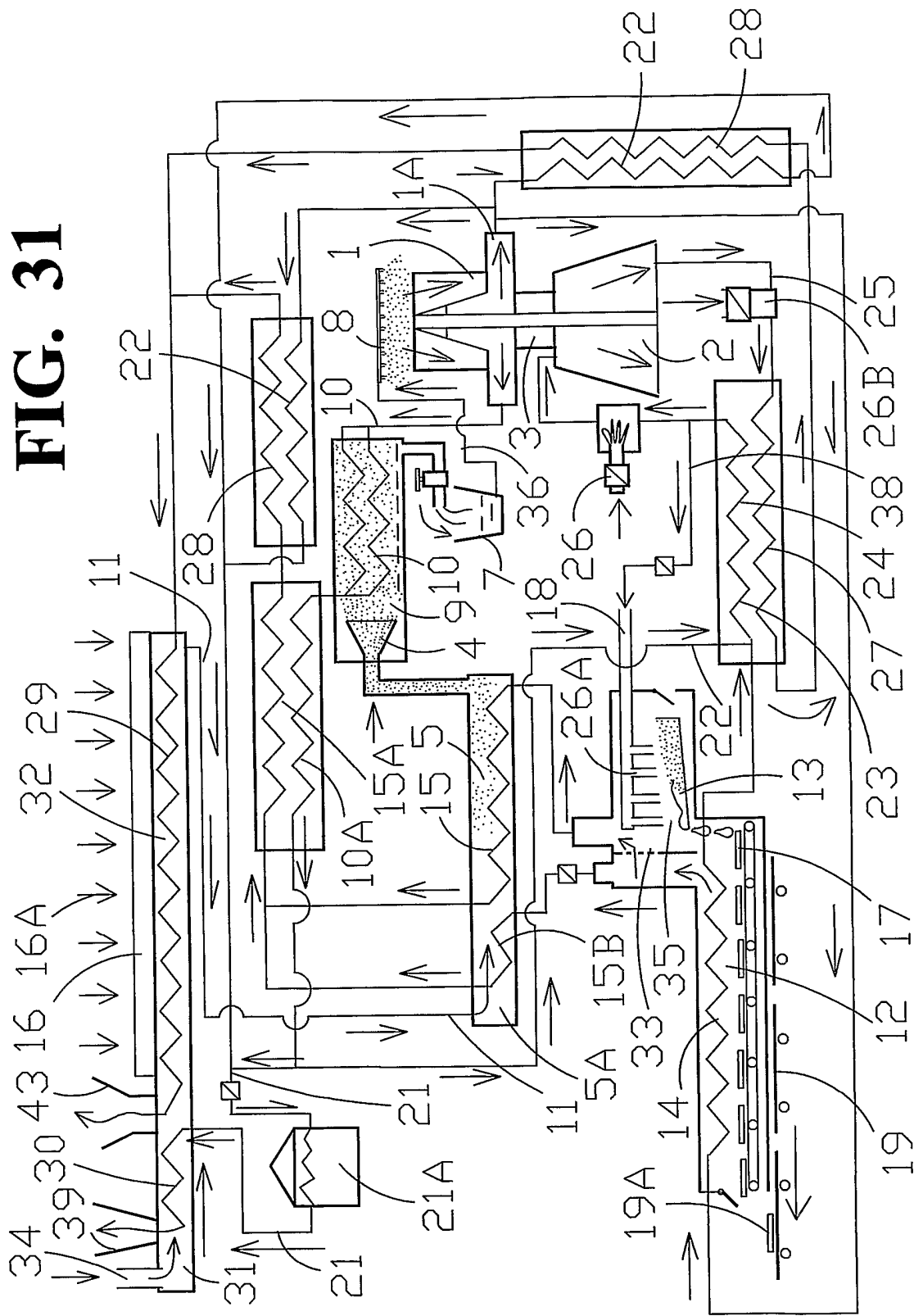


FIG. 31



Sheet No. ... 7 ...

Box No. VIII (v) DECLARATION: NON-PREJUDICIAL DISCLOSURES OR EXCEPTIONS TO LACK OF NOVELTY

The declaration must conform to the standardized wording provided for in Section 215; see Notes to Boxes Nos. VIII, VIII (i) to (v) (in general) and the specific Notes to Box No. VIII (v). If this Box is not used, this sheet should not be included in the request.

Declaration as to non-prejudicial disclosures or exceptions to lack of novelty (Rules 4.17(v) and 51bis.1(a)(v)):

In relation this international application No. PCT/ _____,

GAUDENCIO AQUINO LABRADOR declares that the subject matter claimed in this international application was disclosed as follows:

- (i) kind of disclosure
 - (b) patent application in the US on Jan. 20, 2005, No. US11/039,624;
 - (b) patent application in the Philippines -- Mar. 25, 2004, No. 1-2004-000148
amended Dec. 10, 2004
- (ii) date of disclosure
 - PH -- Mar. 25, 2004 **amended Dec. 10, 2004**
 - US -- Jan. 20, 2005
- (iii) title of disclosure
 - PH -- HEAT ENERGY RECYCLE AND RECAPTURE AND ITS NEW APPLICATIONS
 - US -- HEAT ENERGY RECAPTURE AND RECYCLE AND ITS NEW APPLICATIONS
- (v) this declaration is made for the purposes of
 - (a) all designations.

☐ This declaration is continued on the following sheet, "Continuation of Box No. VIII (v)".

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/26793

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : F01K 23/10

US CL : 60/618, 698, 914

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)

U.S. : Please See Continuation Sheet

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6327994 B1 (Labrador) 11 December 2001 (11.12.2001), all	1-6, 10, 11, 13-15, 20-24, 26, 27, 29, 31-34 and 36-59

☐

Further documents are listed in the continuation of Box C.

☐

See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"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

11 October 2005 (11.10.2005)

Date of mailing of the international search report

17 APR 2006

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-3201

Authorized officer

Sheldon J. Richter

Telephone No. (571) 272-3750

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/26793

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☒ Claims Nos.: 7, 8, 9, 12, 16, 17, 18, 19, 25, 28, 30 and 35
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of any additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

- Remark on Protest**
- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
 - ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
 - ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/26793

Continuation of B. FIELDS SEARCHED Item 1:

60/618, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 914