

EUROPEAN PATENT APPLICATION

Application number: 82111599.5

Int. Cl.³: **F 02 B 43/10, F 02 M 25/12, G 21 K 1/00**

Date of filing: 14.12.82

Priority: 21.10.82 US 435889

Applicant: **Meyer, Stanley A., 3792 Broadway, Grove City Ohio 43123 (US)**

Date of publication of application: 02.05.84
Bulletin 84/18

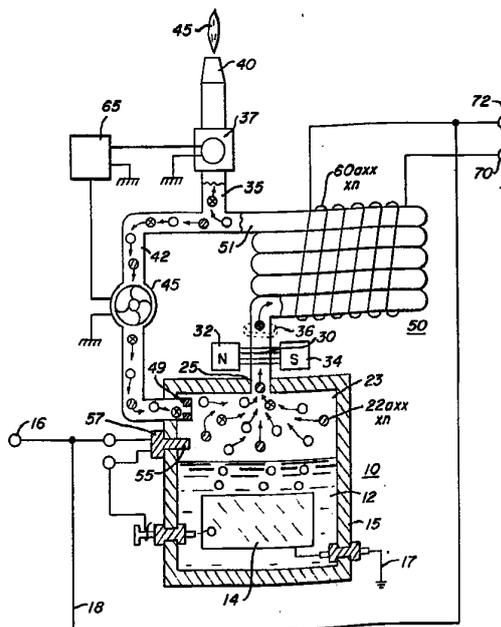
Inventor: **Meyer, Stanley A., 3792 Broadway, Grove City Ohio 43123 (US)**

Designated Contracting States: **AT BE CH DE FR GB IT LI LU NL SE**

Representative: **Wasmeier, Alfons, Dipl.-Ing. et al, Postfach 382 Greflingerstrasse 7, D-8400 Regensburg (DE)**

Gas electrical hydrogen generator.

A hydrogen gas generator system for converting water into hydrogen and oxygen gasses, in combination with a magnetic particle accelerator for voltage/current amplification. The hydrogen gas generator encompasses an array of plates immersed in water in a pressure tight enclosure. Direct current voltage applied to the plates causes the hydrogen/oxygen gasses to disassociate from the water molecule. The upper portion of the container is a hydrogen/oxygen collection chamber for maintaining a predetermined gas pressure. A hydrogen/oxygen gas mixture outlet means connected to the collection chamber of the generator includes a magnetic polarizer for establishing a magnetic field and thereby imparting a magnetic potential to the hydrogen gas and the oxygen gas atoms as they are being released from the collection chamber. Attached to the gas outlet means is a non-magnetic conductive loop of tubing. A coil wound around the tubing will have a voltage induced therein as the pressure velocity polarized magnetized gas particles pass therethrough. The induced voltage has utilization as an electrical power source. The hydrogen and oxygen gas may be utilized such as in a burner system or alternatively returned to the gas storage portion of the hydrogen generator in a closed-loop arrangement for recycling.



EP 0 106 917 A1

1 CROSS REFERENCE AND BACKGROUND:

2 There is disclosed in my co-pending patent application,
3 filed, September 16, 1981, Serial Number, 302,807, for,
4 Hydrogen Generator, a hydrogen gas generating system.
5 The apparatus comprises a pressure tight enclosure for a
6 water bath having immersed therein an array of plates.
7 The hydrogen and oxygen atoms are disassociated from the
8 water molecule by the application of a non-regulated, non-
9 filtered, low-power, direct current voltage potential to the
10 plates having water passing therebetween. The plates are
11 non-oxidizing and of similar metal to comprise a sub-atomic
12 action non-electrolysis system. The upper portion of the
13 container is a hydrogen/oxygen storage chamber for maintaining
14 a predetermined level.

15 In my co-pending patent application, Serial Number: 411,
16 977, for, Controlled Hydrogen Gas Flame, filed, August 25,
17 1982, there is disclosed a hydrogen gas burner. The nozzle
18 in that burner is connected to the storage area or gas collection
19 chamber via an appropriate line. The port in the nozzle has an
20 opening of a controlled size and configuration, related to the
21 size of the flame and the temperature and velocity of the burning
22 gas mixture.

23 Also, in my co-pending patent application, Serial Number
24 367,051, for Electrical Particle Generator, filed April 4,
25 1982, there is disclosed an electrical generating system.

1 The non-magnetic pipe is filled with the discrete gas
2 particles having a magnetic polarized field placed thereon.
3 The magnetic charged gas particles, proceed through the pipe
4 at a high velocity dependent on the pressure in the gas
5 generator storage chamber.

6 As the magnetic particles pass through the core of the
7 winding there is induced a voltage/current therein, that may
8 be utilized in the same manner as any other electrical source.

9 The hydrogen/oxygen gas mixture emitted from the opposite
10 end of the pipe is connected to a gas burner where the hydrogen/
11 gas mixture may be utilized such as for a flame as shown in my
12 copending application, Serial number, 411,977. When the flame
13 is not in use the gas is directed back by alternate means to
14 the storage chamber in the hydrogen generator in a closed loop
15 arrangement.

1 SUMMARY OF INVENTION:

2 The present invention utilizes the basic principle of a
3 particle accelerator and the principle of inducing a voltage
4 current in a secondary winding by passing a magnetic element
5 therethrough in combination with a hydrogen gas generator.
6 The particle accelerator utilizes the principles of my co-
7 pending application, Serial Number, 367,051, and the hydrogen
8 generator is particularly that of my co-pending patent applica-
9 tion, 302,807.

10 The structure comprises an electrical inductive winding,
11 having a large number of turns and an output for utilizing
12 the voltage current induced therein. The inductive winding
13 is positioned around an endless - closed loop, non-magnetic
14 pipe or tubing.

15 The hydrogen gas generator encompasses an array of plates
16 immersed in a pressure tight enclosure. Direct current voltage
17 applied to the plates causes the hydrogen/oxygen gasses to
18 disassociated from the water molecule. The upper portion of the
19 container is a hydrogen/oxygen storage chamber for maintaining
20 a predetermined gas pressure. A hydrogen/oxygen gas mixture
21 outlet means connects the non-magnetic tubing to the storage
22 chamber of the generator. Adjacent the outlet a magnetic
23 polarizer establishes a magnetic field and imparts a magnetic
24 potential to the hydrogen and the oxygen gas being pressure
25 released from the outlet.

1 The apparatus comprises a non-magnetic pipe in a closed loop
2 having a substantial amount of magnetized particles encapsulated
3 therein. A magnetic accelerator assembly is positioned on the
4 pipe includes an inductive primary winding with a low voltage
5 input. A secondary winding is positioned on the pipe opposite
6 to the primary winding. Upon voltage being applied to the
7 primary winding the magnetized particles accelerate through the
8 magnetic accelerator assembly with increase velocity. The
9 velocity accelerated particles induce an electrical voltage/
10 current potential as they pass through the secondary winding.
11 In a closed-loop system the process is continuous. The
12 increased secondary voltage current is utilized in a direct
13 current or alternate current amplifier arrangement.

1 OBJECTS:

2 It is a principal object of the present invention to
3 provide a hydrogen gas electrical generator capable of
4 producing a voltage/current much greater in magnitude here-
5 intofore possible.

6 Another object of the present invention is to provide
7 such a hydrogen gas electrical generator utilizing magnetized
8 elements and wherein the magnetized elements are charged gas
9 particles from a hydrogen generator.

.0 Another object of the present invention is to provide such
.1 a hydrogen gas electrical generator in combination with a control-
.2 led output hydrogen generator.

.3 Another object of the present invention is to provide
.4 such an electrical generator that may be utilized with a hydro-
.5 gen generator having another utility output for alternative
6 generation.

7 A further object of the present invention is to provide
8 such an electrical generator that utilizes components readily
9 available are adaptable to the simplified embodiment.

0 Other objects and features of the present invention will
1 become apparent from the following detailed description when
2 taken in conjunction with the drawings in which:

1 BRIEF DESCRIPTION OF DRAWINGS

2 Figure 1 is a simplified illustration of the principles
3 of the invention, in crosssection showing the particles voltage/
4 current amplifier together with the hydrogen generator in a
5 preferred embodiment.

6 Figure 2 is a magnetic particle tubing, in an electrical
7 schematic circuit arrangement, illustrating the induced direct
8 and alternating current voltage.

9 DETAILED DESCRIPTION OF DRAWINGS:

10 Referring now to Figure 1 there is illustrated the inven-
11 tion of the preferred embodiment in a simplified schematic
12 arrangement. The generator 10 comprises an airtight pressure
13 enclosure/housing 15. The housing 15 is filled with water 12
14 to a predetermined level. Immersed in the water 12 is an array
15 of plates 14. In the preferred embodiment of the invention of
16 Figure 1, as disclosed in my co-pending application serial
17 number 302,807. The plates 14 are in pairs of similar non-
18 oxidizing metal. A negative voltage current potential and a
19 positive voltage current potential from source 16 is applied
20 to alternate plates of the array 14. The generation of hydrogen/
21 oxygen is a sub-atomic process, i.e., not electrolysis. That is,
22 the applied potential to the plates causes the hydrogen and
23 oxygen atoms to disassociate themselves from the water mole-
24 cule. Accordingly, the process is operative with any water
25 irrespective of its purity or amount of contamination.

1 It is understood, of course, that the hydrogen generator may be
2 that of the electrolysis process---although more costly and less
3 efficient. In that event the plates 14 would an anode and cathode
4 and the water would be distilled water with a chemical added.

5 The released hydrogen gas depicted as particles 20a xxx n
6 and oxygen gas particles 22a xxx n are collected and stored in
7 the chamber 23 together with other released gasses such as
8 nitrogen 21a xxx. The chamber 23 further includes switch means
9 57 to shut off the electrical source 16 to the generator system
10 when the pressure in the chamber 23 sensed by pressure gauge,
11 55, achieves a predetermined level.

12 In the operation of the hydrogen generator as a burner,
13 as disclosed in the co-pending patent application Serial Number
14 411,797, the outlet tube 25 is connected directly to the nozzle
15 40 to obtain the flame 45 upon ignition. The operation of the
16 gas burner is not altered in the present invention.

17 There is interposed in the line 25, a magnetic polarizer
18 30 having magnetic poles 32 and 34. The magnetic polarizer
19 30 may be a permanent magnet or an electrical magnet capable of
20 creating a magnetic field 36 across the non-magnetic tubing 25.
21 The magnetic field 36 in turn imparts a magnetic charge to the
22 gasses released from the storage chamber 33. The hydrogen gas
23 particles become positively magnetically charged and the oxygen
24 particles become negatively magnetically charged - producing a
25 magnetized gas - mixture.

1 Also interposed in the outlet tubing 25 adjacent to the
2 magnetic polarizer 30 is a series of loops of non-magnetic
3 tubing 50. The tubing in its loop configuration can be any
4 one of the arrangements illustrated in my co-pending patent
5 application, serial number supra. The opposite end 51 of the
6 loop 60 tubing is connected via a Y connection either to the
7 burner assembly 40, via line 35, or a return line 42 to the
8 storage chamber 23. As aforesaid, the storage chamber 23 is
9 maintained at a predetermined pressure; and once the pressure
10 is attained the gas particles will be expelled into outlet
11 line 25 with a substantial velocity. The pressure released
12 particles become charged by the magnetic polarizer 30 and pass
13 through the entire loop arrangement of tubing 50.

14 The loop arrangement of tubing 50 has wound thereon a
15 substantial number of turns 60a xxx n in a winding 60. The
16 number and size of the turns is related to the tubing config-
17 uration and voltage current output. The magnetically charged
18 gas particles traveling with a high pressure velocity pass through
19 the tubing 55. As the magnetically charged gas particles pass
20 through the core of the winding 60, there is induced a voltage
21 current therein through its inductive field. The output voltage
22 current is utilized via terminals 70-72.

23 Upon demand for the flame, (such as for heat) from demand
24 circuit 65, the valve 37 is opened causing the gas mixture to go
25 to the nozzle 40 and provide the flame 45 upon ignition.

1 Upon satisfaction of the demand, the valve 37 will close
2 and thereby cause the gas mixture to return to the collection
3 chamber 23 via close loop line 42. In this arrangement the
4 pump 45 will turn on and cause a continuous circulation of the
5 gas through the closed loop. One way check valve 49 assures
6 that no gas enters line 42 when the pump 45 is quiescent. If
7 the gas in the collection chamber is of the preset pressure,
8 as sensed at gauge 55, the voltage via terminal 16 will be cut-
9 off discontinuing the generation of gas.

10 With particular reference to Figure 2 there is illustrated,
11 partly in schematic and partly pictorial, the preferred embodi-
12 ment of the invention.

13 Initially it is noted that the pump 45 of Figure 1 has been
14 replaced by the particle accelerator 46. The accelerator 46
15 is a non-mechanical/no moving part element and therefore not
16 subject to wear. It is to be recalled the hydrogen and oxygen
17 gasses have placed there on a magnetic field potential. Hence,
18 as the magnetized gasses approach the accelerator 46 they are
19 attracted and as they pass the center of the accelerator and
20 they are propelled therethrough.

21 Other propulsion means in lieu of the pump 45 of Figure 1 or
22 the accelerator 46 of Figure 2 may be utilized.

23 The volume of the hydrogen/oxygen gas as dictated by the
24 storage area 23 and the pressure of the hydrogen/oxygen gas
25 stored therein determines the magnetic field strength. The

1 greater the pressure, the greater the velocity; and, in turn,
2 the greater the voltage/current output.

3 As noted in the aforesaid co-pending patent application,
4 the induced current/voltage can be, at the output 70-72, either
5 direct current, or alternating current, or both. With reference
6 to Figure 2, the simplified schematic illustrates a direct cur-
7 rent voltage 4 parallel winding and an alternating current 75
8 in serial winding.

9 The number of coils 74a xxx n of direct current windings of
10 coil 74 will determine the ripple frequency of the direct current
11 voltage and its amplitude. Similarly, the number of alternating
12 current windings 75a xxx n will determine the alternating fre-
13 quency of the alternating current voltage and its amplitude.

14 More importantly, the aforesaid ripple frequency of the single
15 polarity voltage of coil 74 and alternating frequency of the
16 alternating voltage of coil 75 can be altered, varied, and
17 controlled. That is, the frequency is a function of the number of
18 discrete windings of the coils times the velocity of the gas per
19 second. The velocity of the gas, in turn, is varied by varying
20 its magnetic field; and the magnetic field is varied by varying
21 the pressure of the gasses in the chamber 23.

22 Further, it has been found that the increase in pressure
23 of the gasses in chamber 23 increases the velocity of the gas
24 exponentially. Simply, an arithmetical increase in pressure
25 of the gasses released results in a geometrical increase in

1 frequency and amplitude of the output voltage from either the
2 direct current winding 74 or the alternating current winding 75.

3 There will be instances where an increase in velocity
4 (pressure) is needed to increase the output voltage of the
5 electrical generator but the generation of more hydrogen gas may
6 be undesirable. That is, for instance, the flame 45 is a con-
7 trolled gas mixture flame. The addition of more hydrogen will
8 increase the temperature of the combustibility of the mixture
9 and will increase its velocity. The utility of the flame, if
10 not quenched, will be affected proportionately.

11 Accordingly, to increase the gas pressure in chamber 23 other
12 non-combustible gasses 21a xxx n, such as nitrogen are added
13 via pressure inlet means to the mixture.

14 Although certain and specific embodiments are shown and
15 described, alternatives and modifications may be had without
16 departing from the spirit and scope of the invention.

1 CLAIMS:

2 1. In combination, a hydrogen/oxygen electrical generator
3 comprising:

4 a housing having a water reservoir for retaining natural
5 water therein and a gas collection chamber maintaining a preset
6 volume of gas under pressure,

7 a pair of similar non-oxidizing plates positioned in said
8 water reservoir,

9 a direct current voltage source connected to said plates to
10 cause a sub-atomic force-type action on said water,

11 said action disassociating the hydrogen atoms and oxygen
12 atoms from said water molecules; and

13 a non-magnetic tubing for passing magnetic lines of force,
14 connected at one end to said collection chamber via said outlet,

15 a magnetic polarizer positioned adjacent to said one end
16 of said tubing for magnetically charging said hydrogen and
17 oxygen gas atoms pressure expelled from said outlet,

18 an inductive winding positioned over said tubing; and

19 wherein the flux lines of said magnetized gas passing through
20 said tubing and traversing said inductive winding induce a
21 current/voltage in said inductive winding, and,

22 said winding having means for utilization of said induced
23 voltage/current.

- 1 2. The combination of Claim 1 further comprising:
2 gas utilization means connected to the other end of said
3 tubing for utilizing said generated hydrogen/oxygen gas mixture.
- 1 3. The combination of Claim 1 further comprising:
2 a nozzle connected to the other end of said tubing, of a
3 predetermined size and configuration, having a port for ex-
4 pelling said mixed gasses, and
5 means for igniting said gasses.
- 1 4. The combination of Claim 1 further comprising:
2 control means for maintaining a predetermined gas pressure
3 in said collection chamber.
- 1 5. The combination of Claim 1 further comprising:
2 a pressure gauge for determining the pressure in said col-
3 lection chamber, and
4 switch means connected to said direct current voltage source
5 to terminate the generation of hydrogen/oxygen gasses upon said
6 collection chamber attaining a predetermined pressure.
- 1 6. The combination of Claim 1 further comprising:
2 a gas line tubing connected to the other end of said non-
3 magnetic tubing and to said collection chamber in a closed loop
4 arrangement.

7. The combination of Claim 1 further comprising:

a gas line tubing connecting the other end of said non-magnetic tubing to said collection chamber in a closed loop arrangement, and

means in said gas line tubing for maintaining said polarized hydrogen and oxygen atoms circulating through said non-magnetic tubing.

8. The combination of Claim 1 further comprising:

a gas line tubing connected to the other end of said non-magnetic tubing to said collection chamber in a closed loop arrangement, and

a unidirectional valve connected to the end of said gas line tubing connected to said collection chamber.

9. The combination of Claim 1 further comprising:

a gas line tubing and gas utilization means,

a Y-type connector for alternately connecting said gas line tubing to said gas utilization means and said collection chamber in a closed loop arrangement.

10. The combination of Claim 1 further comprising:

a gas line tubing and gas utilization means,

a Y-type connector for alternately connecting said gas line tubing to said gas utilization means said collection chamber in a closed loop arrangement,

two directional valve means, and

a demand circuit connected to said valve means for selectively connecting said gas line tubing to said gas utilization means or said collection chamber in response to pre-determined conditions.

1 11. In combination, a gas electrical generator comprising:
2 a gas generator housing having a gas collection chamber
3 for maintaining a preset volume of gas therein under pressure,
4 an outlet attached to said gas collection chamber,
5 a non magnetic tubing connected to the opposite end of said
6 outlet,
7 a magnetic polarizer positioned adjacent to said outlet
8 between said chamber and said tubing for magnetically charging
9 said gas pressure expelled from said outlet,
10 an inductive coil positioned over said non-magnetic tubing
11 and wherein the flux lines of said magnetized gas passing
12 through said tubing and traversing said inductive coil, induce
13 a current/voltage therein,
14 means connected to said coil for utilization of said
15 induced voltage/current.

1 12. The gas electrical generator of Claim 11 wherein:
2 said gas is a combustible gas, and utilization means
3 connected to the opposite end of said non-magnetic tubing for
4 utilizing said gasses.

1 13. The combination of a gas electrical generator as set forth
2 in claim 11 wherein:
3 said coil comprises a plurality of windings wound in para-
4 llel, and wherein said induced voltage/current therein is of a
5 single polarity.

1 14. The combination of a gas electrical generator as set forth
2 in Claim 11 wherein:
3 said coil comprises a plurality of windings wound in series,
4 and wherein said induced voltage/current therein is of
5 alternate polartips.

1 15. The combination of a gas electrical generator as set
2 forth in Claim 11 wherein:

3 said coil comprises a plurality of windings and wherein
4 the number of said plurality of windings is determinative
5 of the frequency of the said induced voltage/current therein.

1 16. The combination of a gas electrical generator as set
2 forth in Claim 11 further comprising:

3 means for varying the pressure of said gas in said col-
4 lection chamber to vary the output frequency of said induced
5 voltage in said coils.

1 17. The combination of a gas electrical generator as set forth
2 in Claim 11 further comprising:

3 means for varying the generation of said gas to vary the
4 pressure of said gas in said collection chamber to vary the
5 output frequency of said induced voltage in said coils.

1 18. The combination of a gas electrical generator as set forth
2 in Claim 11 further comprising:

3 means for adding non combustible gasses to said collection
4 chamber to vary the pressure of said gas in said collection
5 chamber to vary the output frequency of said induced voltage
6 in said coils.

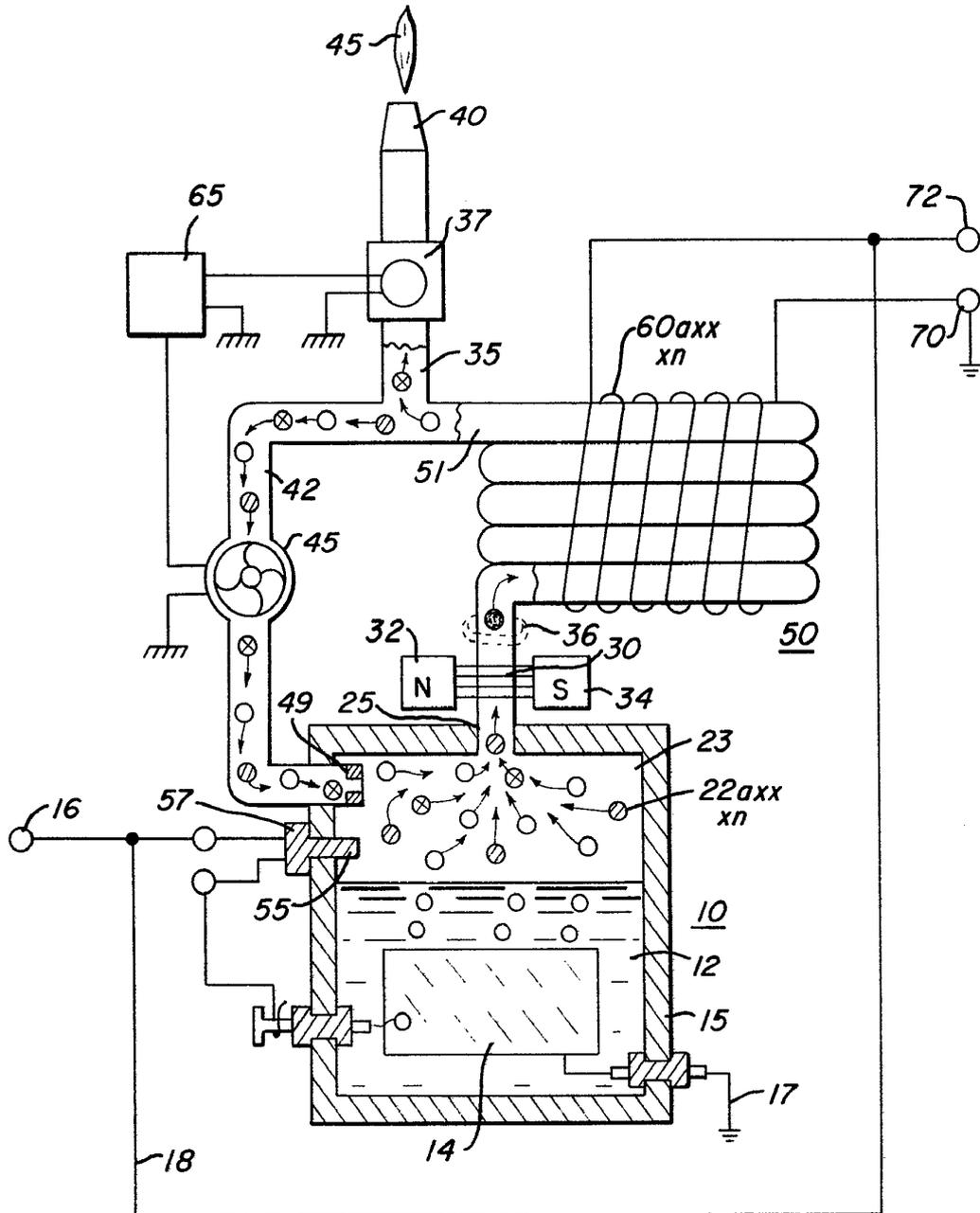
1 19. The gas electrical generator of Claim 11 wherein:

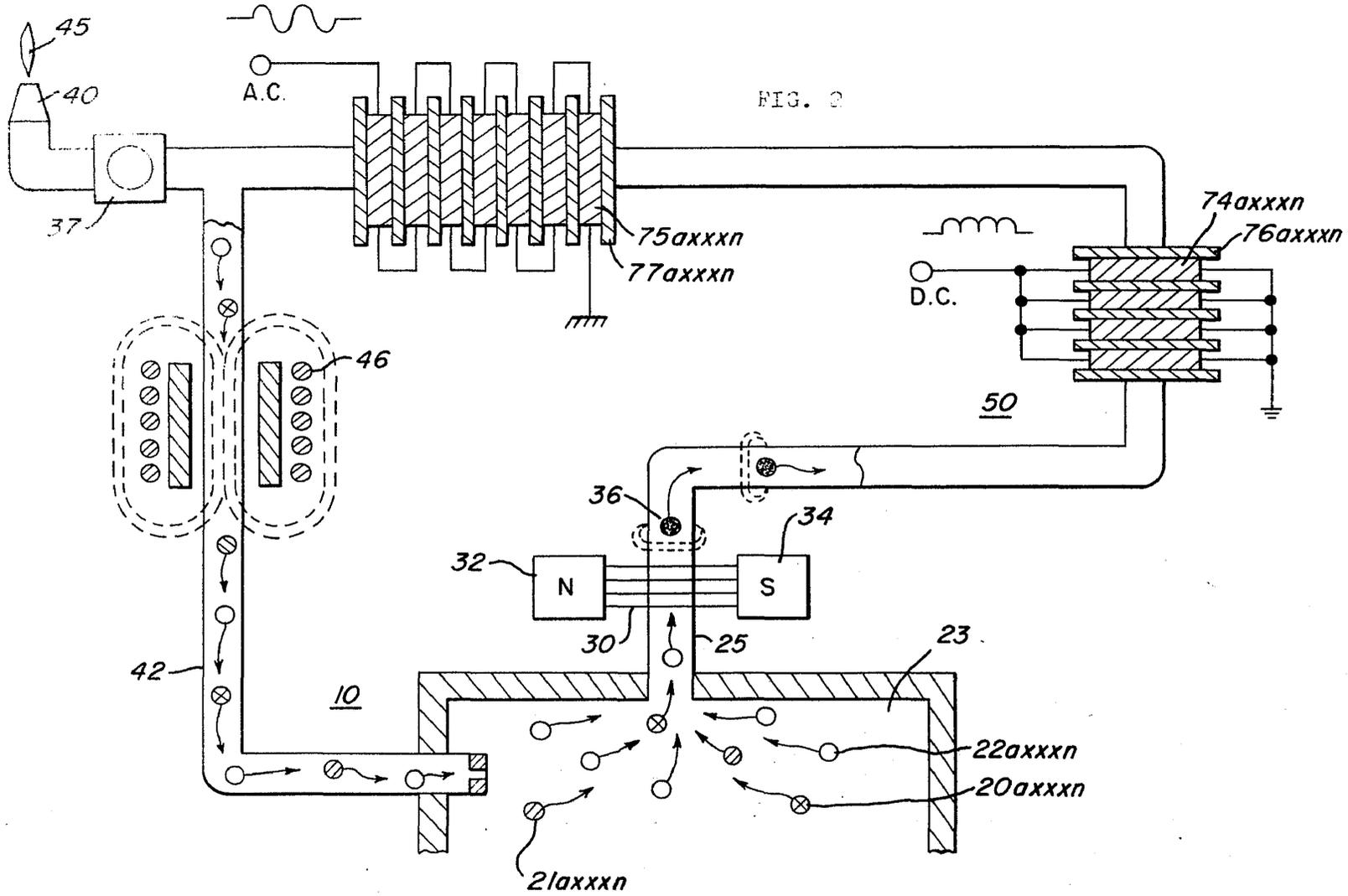
2 said non-magnetic tubing further comprises means connected
3 thereto for returning said magnetized gas to said collection
4 chamber, and

5 means for recirculating said gas through said chamber,
6 said non-magnetic tubing and said last named means.

1 20. The gas electrical generator of Claim 11 wherein:
2 said non magnetic tubing further comprises means connected
3 thereto for returning said magnetized gas to said collection
4 chamber,
5 a particle accelerator for recirculating said gas through
6 said chamber, said tubing, and said last named means.

0106917





0106917

0106917



European Patent
Office

EUROPEAN SEARCH REPORT

Application number

EP 82 11 1599

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 7)
E	EP-A-0 086 439 (MEYER) * Figures 1,2; claim 1 *	1,2	F 02 B 43/10 F 02 M 25/12 G 21 K 1/00
Y	GB-A-1 549 738 (BELL) * Page 1, lines 1-90 *	1,2	
Y	FR-A- 987 506 (DEVAUX) * Page 1 *	1,11	
A	DE-A-2 817 501 (NEIDLEIN) * Page 2, paragraphs 1-7 *	1,2	
A	FR-A-2 296 770 (BEESTON) * Page 22, line 38 - page 24, line 35 *	1,2	
A	FR-A-1 348 373 (COMMISSARIAT A L'ENERGIE ATOMIQUE) * Page 1, left-hand column *	1	
A	EP-A-0 042 571 (KYBUTZ) * Claims 1,8-10 *	1	F 02 B F 02 M G 21 K
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl. 7)
Place of search THE HAGUE		Date of completion of the search 09-01-1984	Examiner WASSENAAR G.
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		& : member of the same patent family, corresponding document	