

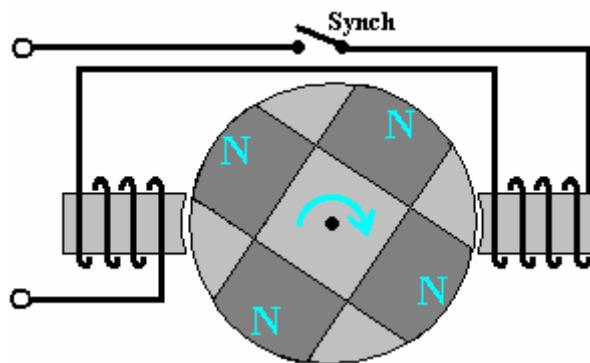
## ***THE MOTOR/GENERATOR OF ROBERT ADAMS***

WHEN HE WAS 70 YEARS OLD, ROBERT ADAMS OF NEW ZEALAND DESIGNED A VERY EFFECTIVE MOTOR/GENERATOR. HE WAS TOLD TO DESTROY HIS DEVICE OR HE WOULD BE KILLED. ROBERT DECIDED THAT AT HIS AGE, HE HAD VERY LITTLE TO LOSE AND SO HE PUBLISHED HIS DESIGN.

HIS MOTOR OVERCOMES THE LENZ'S LAW DRAG EFFECT AND THROUGH CLEVER ENGINEERING, ACHIEVES A POWER OUTPUT WHICH IS EIGHT TIMES GREATER THAN THE INPUT POWER. ALTHOUGH IT DOES NOT LOOK AS IF IT IS, HIS DESIGN IS ACTUALLY A PERMANENT MAGNET MOTOR.



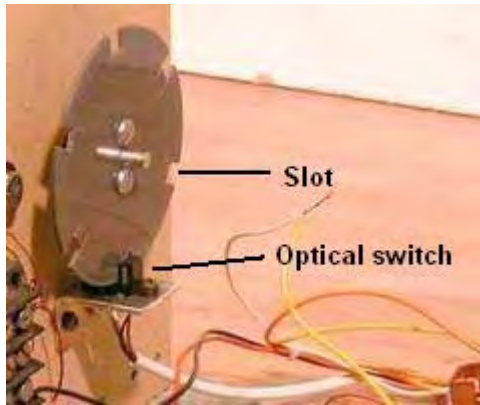
THE DIAGRAM OF HIS MOTOR WHICH IS SUPPOSED TO SHOW HOW IT WORKS IS THIS :



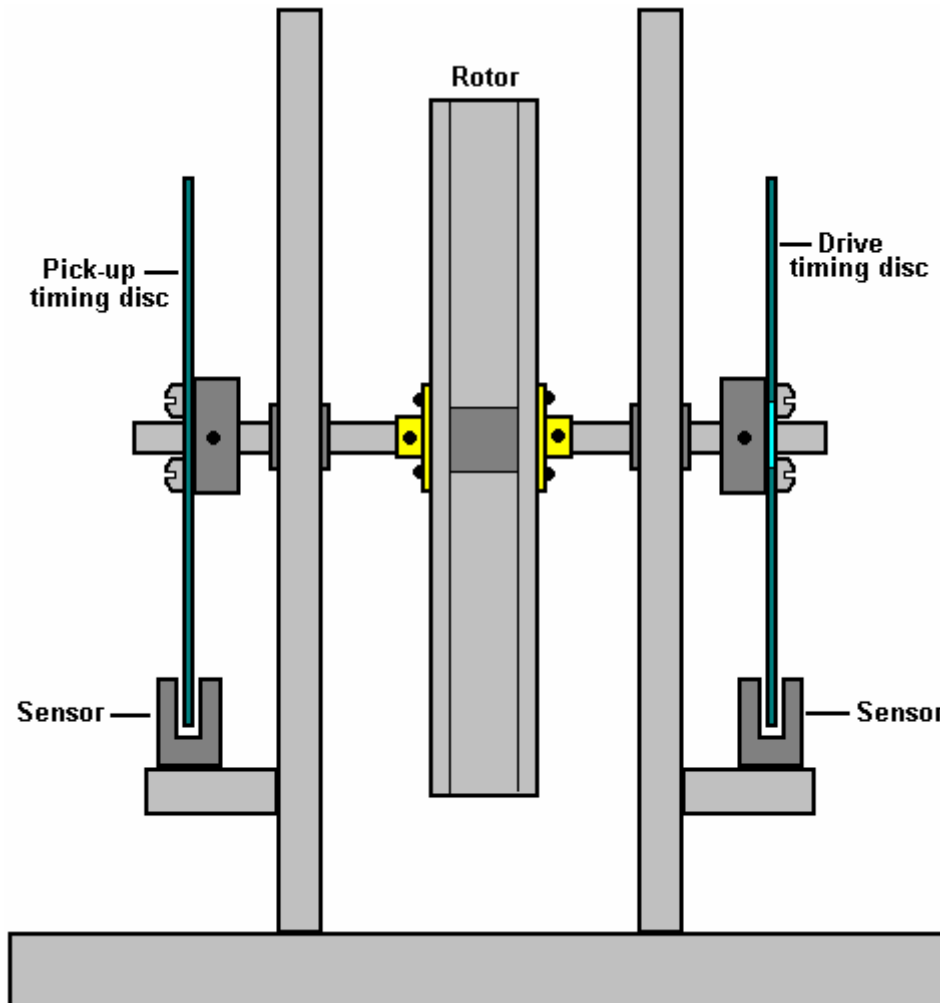
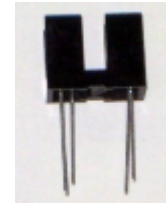
THIS GIVES THE IMPRESSION THAT THE ROTATION OF THE ROTOR CARRYING THE PERMANENT MAGNETS IS DRIVEN BY ELECTRICAL PULSES LIKE JOHN BEDINI'S FAMOUS MOTOR. IT ISN'T. THIS IS A PERMANENT MAGNET MOTOR AND THE ROTATION OF THE ROTOR IS CAUSED PRIMARILY BY THE MAGNETS IN THE ROTOR BEING ATTRACTED TO THE SOLID IRON CORES OF THE TWO "DRIVE" ELECTROMAGNETS SHOWN IN THE DIAGRAM ABOVE.

THE ELECTROMAGNETS CONFUSE PEOPLE AS THEY DON'T REALISE THAT THE LEVEL OF POWER APPLIED TO THEM IS SO LOW THAT IT ONLY JUST CANCEL'S THE BACKWARD DRAG OF THE MAGNETS AS SOON AS THEY PASS THE ELECTROMAGNET CORES. THAT HAPPENS FOUR TIMES PER ROTATION AND THE POWER IS ONLY SWITCHED ON WHEN THE ROTOR MAGNET IS EXACTLY ALIGNED WITH THE ELECTROMAGNET, AND THEN ONLY BRIEFLY.

THESE TWO ELECTROMAGNETS ALONG WITH THEIR VERY CAREFULLY TIMED ELECTRIC PULSES ARE THE ENTIRE DRIVE FOR THE GENERATOR. THE TIMING OF THE "DRIVE" COIL PULSES IS ARRANGED BY AN OPTICAL TIMING DISC OF THIS TYPE :



SENSOR :



LET'S CONCENTRATE ON THE DRIVE FOR THE MOMENT. AFTER MUCH EXPERIMENTATION, ROBERT FOUND THAT THE MOST EFFICIENT ARRANGEMENT IS WHEN THE CORES OF THE "DRIVE" ELECTROMAGNETS HAVE HALF THE CROSS-SECTIONAL AREA OF THE CROSS-SECTIONAL AREA OF THE ROTOR MAGNETS. SO, IF THE ROTOR MAGNETS HAVE A CIRCULAR CROSS-SECTION, THEN THEIR DIAMETER WOULD BE TWICE THAT OF THE DRIVE ELECTROMAGNETS.

ROBERT ALSO FOUND THAT THE BEST GAP BETWEEN THE ROTOR MAGNETS AND THE DRIVE ELECTROMAGNETS IS ABOUT HALF AN INCH WHICH IS 12mm.

A FURTHER TWEAK TO THE DRIVE SYSTEM IS THE FACT THAT THE DRIVE ELECTROMAGNETS ARE FED A CONTINUOUS STREAM OF ELECTRIC PULSES. WHEN A COIL IS POWERED UP AND THEN THE CURRENT SWITCHED OFF, THE COIL GENERATES A

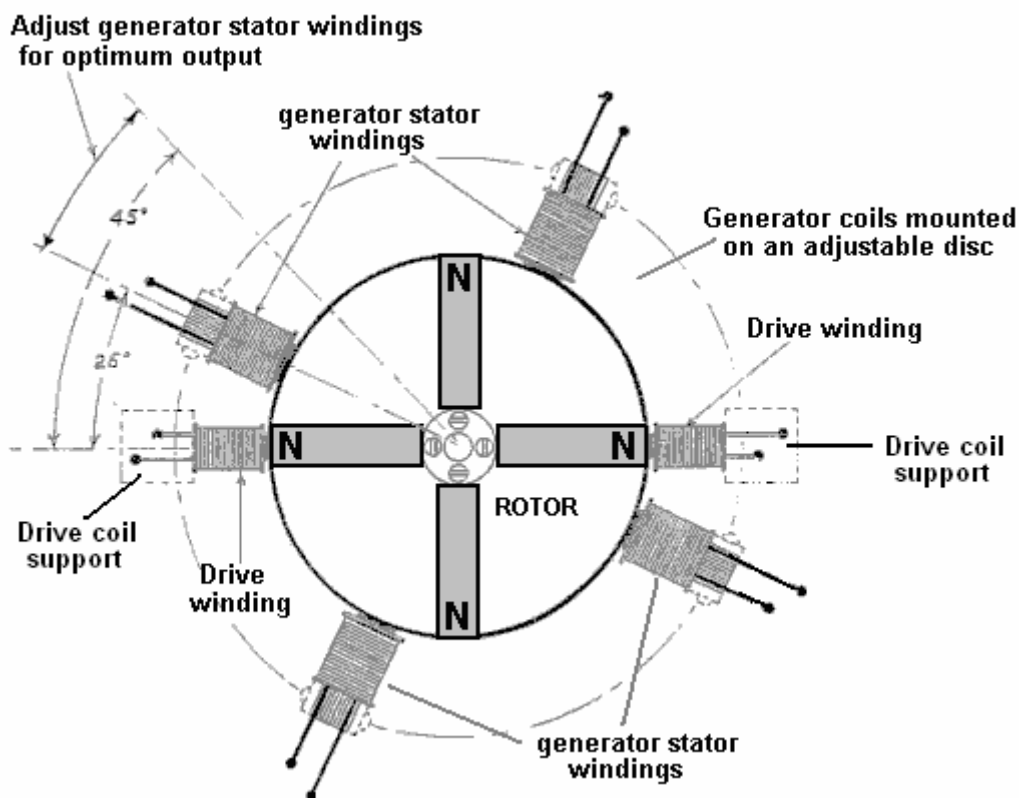
REVERSE VOLTAGE PULSE SOMETHIMES CALLED THE “BACK-EMF” PULSE. IN ROBERT’S MOTOR/GENERATOR THOSE BACK-EMF PULSES ARE USED TWICE.

FIRST, AS THE COILS WERE ENERGISED IN ORDER TO OPPOSE THE ATTRACTION BETWEEN THE ROTOR MAGNETS AND THE ELECTROMAGNET CORES, THE BACK-EMF BEING IN THE OPPOSITE DIRECTION, CAUSES THE REVERSE EFFECT, INCREASING THE ATTRACTION TO THE NEXT APPROACHING ROTOR MAGNET.

SECOND, ROBERT RECTIFIES THE BACK-EMF PULSES AND FEEDS THEM BACK TO THE DRIVE BATTERY AND THAT RECOVERS 95% OF THE CURRENT NEEDED TO MAKE THE GENERATOR WORK.

NOW WE COME TO THE POWER GENERATING SYSTEM AND ONE PERSON WHO REPLICATED THIS DEVICE HAS AN EXCESS OUTPUT OF 33 KILOWATTS AND THAT POWERS HIS HOUSE AND HIS BUSINESS.

THE POWER GENERATION IS THROUGH FOUR ADDITIONAL ELECTROMAGNETS WHICH ACT AS PICK-UP COILS. THIS IS ROBERT’S DRAWING OF HIS ARRANGEMENT :



NOTICE A NUMBER OF THINGS HERE : THE FOUR GENERATOR COILS ARE PHYSICALLY ATTACHED TO A DISC OR RING WHILE THE TWO DRIVE COILS ARE MOUNTED SEPARATELY. THIS MEANS THAT THE GAP BETWEEN THE GENERATOR COILS AND THE DRIVE ELECTROMAGNETS CAN BE ADJUSTED WHILE THE MOTOR IS RUNNING.

ALSO, THE WIDTH OF THE CORES OF THE GENERATOR COILS IS VERY MUCH GREATER THAN THE WIDTH OF THE CORES OF THE DRIVE COILS, AND THE GENERATOR COILS ARE NEARLY SQUARE IN THIS DRAWING.

NEXT, NOTICE THE PROPORTIONS OF THE ROTOR MAGNETS – THEY ARE VERY MUCH LONGER THAN THEY ARE WIDE, SEPARATING THE OUTER NORTH POLES FROM THE INNER SOUTH POLES.

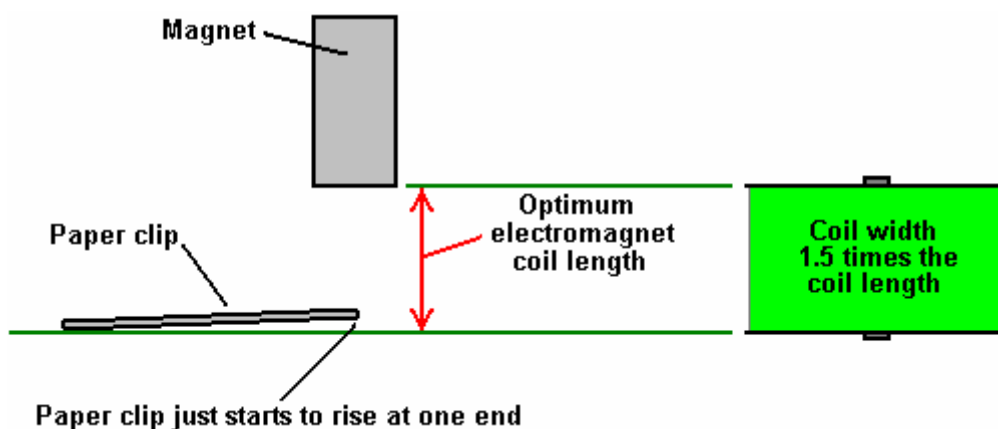
HOWEVER, A POINT WHICH SEEMS TO ESCAPE MOST PEOPLE IS THE FACT THAT A CRITICAL PART OF THE DESIGN IS THE TECHNIQUE OF CUTTING OFF THE OUTPUT POWER AT THE APPROPRIATE MOMENT. CUTTING OFF THE OUTPUT POWER SOUNDS ALL WRONG TO MOST PEOPLE AND YET IT IS A VERY IMPORTANT THING TO DO.

THE REASON IS THE SAME AS FOR THE DRIVE COILS. IF YOU DON'T CUT OFF THE ELECTRICAL CONNECTION, THEN THE ATTRACTION BETWEEN THE SOLID IRON CORES OF THE GENERATOR COILS AND THE ROTOR MAGNETS TRIES TO PULL THE ROTOR MAGNETS BACK TOWARDS THE FIXED GENERATOR COIL CORES – AN EFFECT CALLED “DRAG”. BUT, IF THE OUTPUT CURRENT GENERATED IN THE COILS BY THE PASSING MAGNETS IS CUT OFF AT JUST THE RIGHT INSTANT, THEN THE BACK-EMF GENERATED BY THAT CUT-OFF CAUSES A MAGNETIC FIELD IN THE GENERATOR COILS WHICH BOOSTS THE ROTOR ON ITS WAY INSTEAD OF DRAGGING IT BACKWARDS.

ROBERT ALSO RECTIFIES THAT BACK-EMF PULSE AND FEEDS IT BACK TO THE DRIVE BATTERY. SO FAR, THIS IS A HIGHLY EFFICIENT SYSTEM.

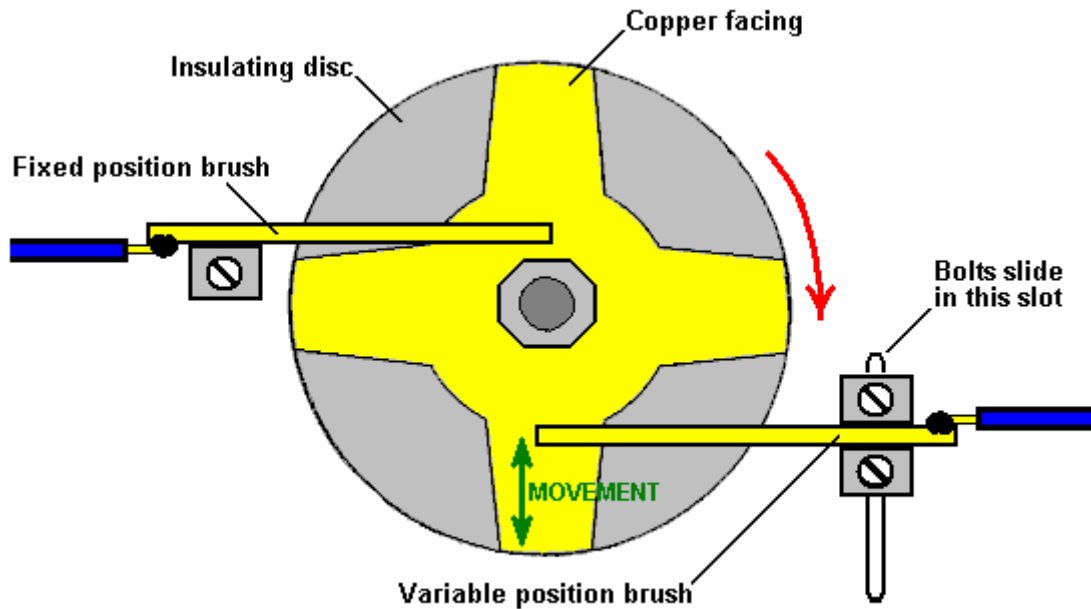
ROBERT'S DIAGRAM DOES NOT SHOW WHEN THE GENERATOR COILS ARE BEST SWITCHED ON OR OFF. A BUILDER WITH A FORUM ID OF “MAIMARIATI” FOUND OPTIMUM SWITCHING WITH SWITCH ON AT 42 DEGREES AND SWITCH OFF AT 44.7 DEGREES. THAT TINY 2.7 DEGREE PART OF THE ROTOR TURN GAVE HIM AN INPUT OF 27.6 WATTS AND AN OUTPUT OF 33.78 KILOWATTS WHICH IS A COP=1223 OR 122,300% WHICH IS SPECTACULAR.

IT IS SUGGESTED THAT A GOOD LENGTH FOR THE GENERATOR COILS IS SHOWN WHEN YOUR PARTICULAR ROTOR MAGNETS JUST START TO LIFT ONE END OF A 32mm PAPER CLIP OFF THE TABLE LIKE THIS :

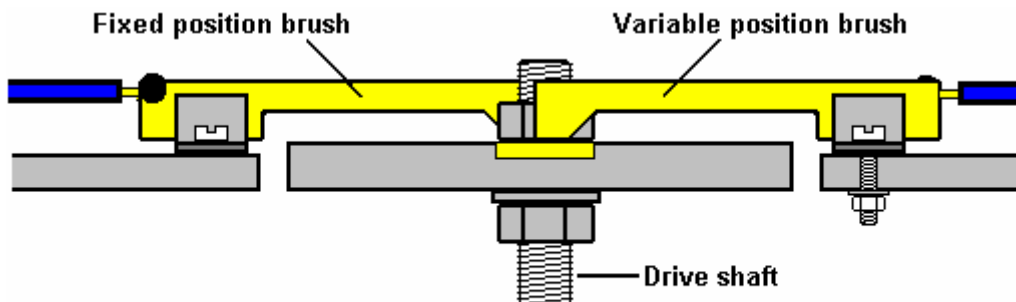


ROBERT TAKES HIS DESIGN FURTHER BY USING SHORT PULSES OF CURRENT.

THIS IS SOMETHING WHICH IS DONE AFTER THE ROTOR OPERATION HAS BEEN OPTIMISED USING CONTINUOUS BATTERY POWER, THAT IS, AFTER MOVING THE GENERATOR COILS ON THEIR DISC TO FIND THE VERY BEST PERFORMANCE POSITION. ROBERT PREFERRED TO USE MECHANICAL CONTACTS ON A ROTATING DISC AS SHOWN HERE :

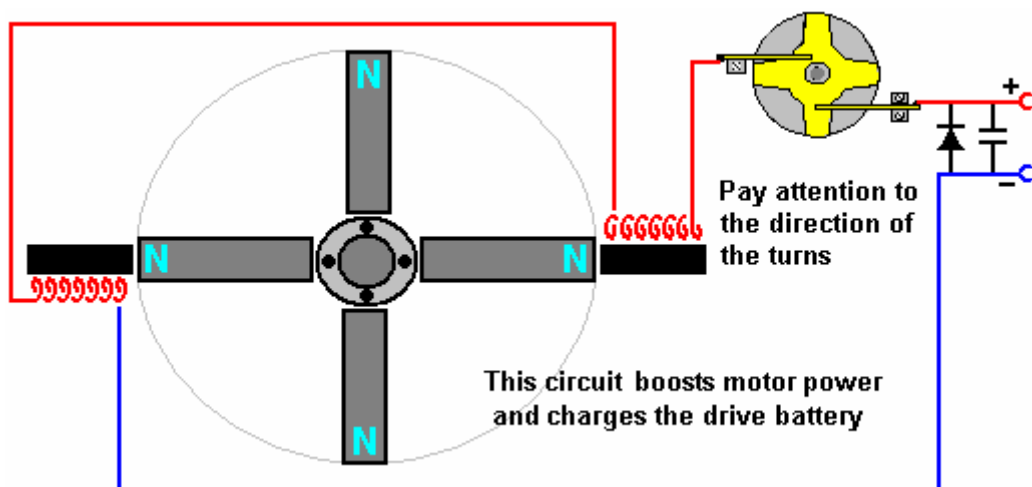


**TIMING GEAR - TOP VIEW**

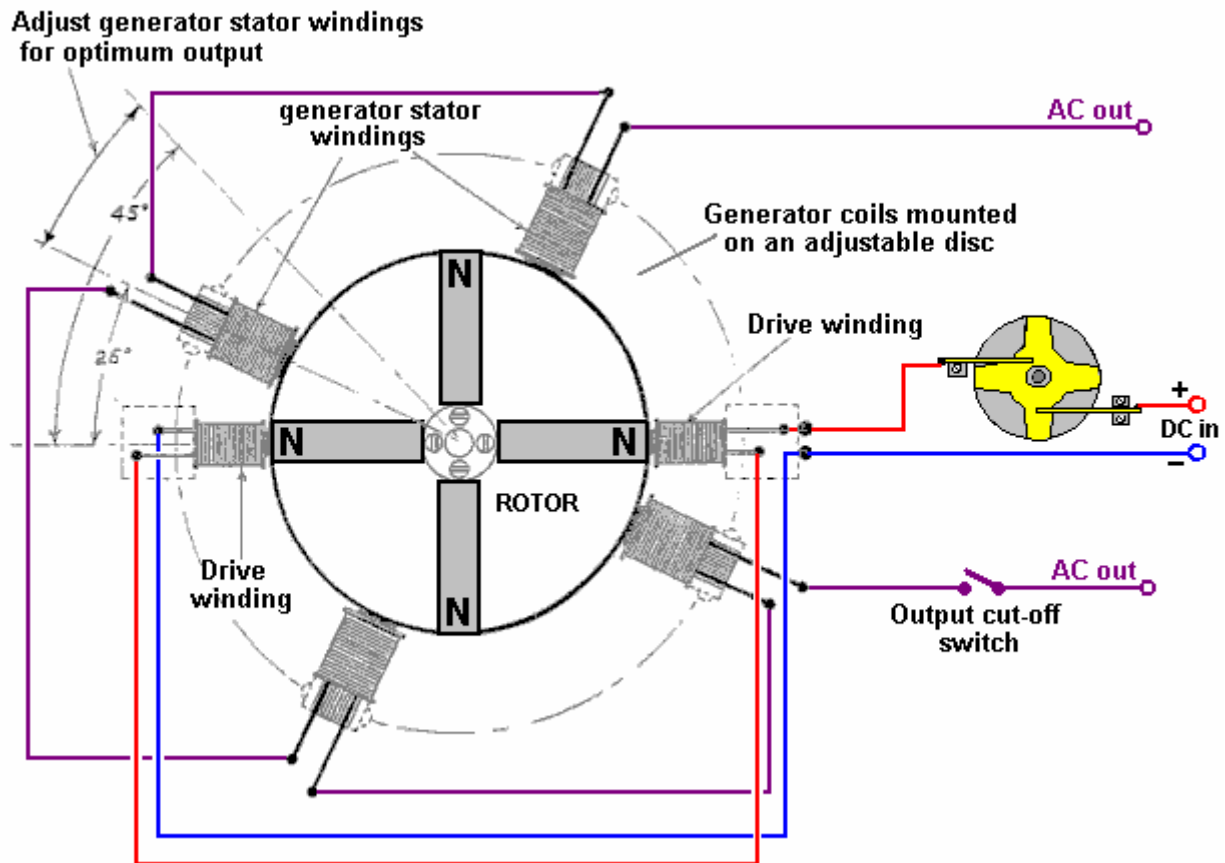


**TIMING GEAR - SIDE VIEW**

THE OBJECTIVE IS TO ADJUST THE VARIABLE POSITION BRUSH CONTACT TO GET THE INPUT POWER CONNECTED TO THE MOTOR/GENERATOR FOR ONLY ABOUT 25% OF THE TIME. THE TIMING DISC SHOWN ABOVE IS ATTACHED TO THE ROTOR SHAFT AND SO NO ADDITIONAL POWER IS NEEDED TO ACHIEVE THE SWITCHING, AND THE SWITCHING ALLOWS CURRENT FLOW IN BOTH DIRECTIONS WHICH IS CONVENIENT.



THE OVERALL ARRANGEMENT IS LIKE THIS :



**ROBERT ADAMS ADVISES THE FOLLOWING :**

1. USE ONLY PURE IRON FOR THE CORES OF THE DRIVE AND GENERATOR COILS.
2. WIND THE GENERATOR COILS WITH A RESISTANCE IN THE RANGE OF 10 TO 20 OHMS FOR A SMALL MODEL.
3. USE A VOLTAGE BETWEEN 12 VOLTS AND 36 VOLTS FOR A SMALL MODEL.
4. FOR A SMALL MACHINE, MAKE THE CONTACTOR STAR DISC 1 INCH MAXIMUM DIAMETER.
5. KEEP WIRING SHORT AND OF A LOW RESISTANCE.
6. FOR A SMALL MACHINE, USE A FUSE OF 500 MILLIAMPS TO 1 AMP.
7. INSTALL A SWITCH FOR CONVENIENCE AND SAFETY.
8. USE SMALL BEARINGS. DO NOT USE SEALED BEARINGS DUE TO THEIR GREASE DRAG.
9. USE ONLY SILVER CONTACTS FOR THE PULSE SWITCHING.
10. IF USING POWERFUL MAGNETS, VIBRATION BECOMES A PROBLEM.
11. THE AIR GAP IS NOT CRITICAL, BUT REDUCING IT INCREASES BOTH TORQUE AND INPUT POWER IN PROPORTION.
12. FOR HIGHER VOLTAGE AND LOWER CURRENT, CONNECT THE GENERATOR COILS IN SERIES.
13. IF THE DRIVE COIL WINDINGS ARE LOW RESISTANCE AND THE INPUT VOLTAGE IS HIGH, THEN IT IS ADVISABLE TO USE A TRANSISTOR TO ELIMINATE SPARKING.
14. TUNING THE POINTS IS VITALLY IMPORTANT UNLESS USING TRANSISTOR SWITCHING.
15. USE FERRITE MAGNETS FOR ALL INPUT VOLTAGES BELOW 120 VOLTS.
16. IF CONSTRUCTING A LARGE MODEL INVOLVING LARGE SUPER-POWER MAGNETS, THEN GREATER POWER IS NEEDED TO DRIVE THE MACHINE, THE GREATER THE

**TORQUE, THE GREATER THE VIBRATION, THE GREATER THE COPPER CONTENT, ETC.**

**PLEASE REMEMBER THAT ANY WIRING THAT YOU USE NEEDS TO BE ABLE TO CARRY THE CURRENT WITHOUT OVERHEATING. HERE ARE SOME CONTINUOUS CURRENT FIGURES FOR POPULAR WIRE SIZES :**

AWG	Dia mm	SWG	Dia mm	Max Amps	Ohms / 100 m
11	2.30	13	2.34	12	0.47
12	2.05	14	2.03	9.3	0.67
13	1.83	15	1.83	7.4	0.85
14	1.63	16	1.63	5.9	1.07
15	1.45	17	1.42	4.7	1.35
16	1.29	18	1.219	3.7	1.48
18	1.024	19	1.016	2.3	2.04
19	0.912	20	0.914	1.8	2.6
20	0.812	21	0.813	1.5	3.5
21	0.723	22	0.711	1.2	4.3
22	0.644	23	0.610	0.92	5.6
23	0.573	24	0.559	0.729	7.0
24	0.511	25	0.508	0.577	8.7
25	0.455	26	0.457	0.457	10.5
26	0.405	27	0.417	0.361	13.0
27	0.361	28	0.376	0.288	15.5
28	0.321	30	0.315	0.226	22.1
29	0.286	32	0.274	0.182	29.2
30	0.255	33	0.254	0.142	34.7
31	0.226	34	0.234	0.113	40.2
32	0.203	36	0.193	0.091	58.9
33	0.180	37	0.173	0.072	76.7
34	0.160	38	0.152	0.056	94.5
35	0.142	39	0.132	0.044	121.2

NOTES : <http://www.free-energy-info.com/Adams.pdf>

EBOOK : <http://www.free-energy-info.com/PJKbook.pdf>

VIDEO : <https://youtu.be/J2bPDDWqSvM>

**PLEASE UNDERSTAND CLEARLY THAT THIS PRESENTATION MUST NOT BE THOUGHT OF AS ENCOURAGEMENT THAT YOU SHOULD ATTEMPT TO CONSTRUCT ANYTHING SHOWN OR DISCUSSED HERE, AS THIS PRESENTATION IS FOR INFORMATION PURPOSES ONLY.**

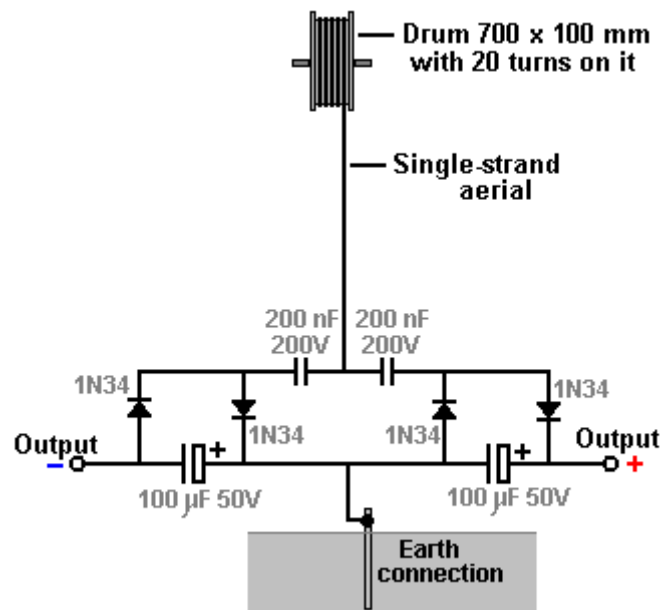
**WE LIVE SURROUNDED BY AN ENERGY FIELD OF EFFECTIVELY UNLIMITED POWER. WE CAN ACCESS THAT POWER FOR OUR OWN USE IN TWENTY DIFFERENT WAYS. A COPY OF THIS BRIEF INTRODUCTION CAN BE DOWNLOADED FREE FROM:**

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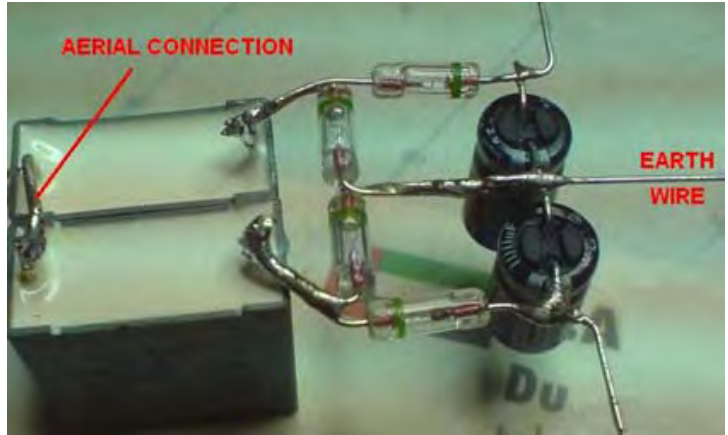
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**AS HAS ALREADY BEEN DISCUSSED, IT IS PERFECTLY POSSIBLE TO DRAW ENERGY FROM AN AERIAL / EARTH COMBINATION. YOU DON'T WANT TO HAVE A TUNED CIRCUIT LIKE A RADIO RECEIVER AS THAT RESTRICTS THE POWER TO LESS THAN THAT OF A RADIO STATION. INSTEAD, YOU WANT A WIDEBAND RECEPTION WHICH PULLS IN POWER FROM THE SUN-CHARGED IONOSPHERE AND FROM THE 200 LIGHTNING STRIKES PER SECOND AROUND THE WORLD. THERE ARE MANY EXCELLENT DESIGNS FROM DEVELOPERS SUCH AS JES ASCANIUS, ALEKOR AND DRAGAN KLJAJIC. A BASIC RECEPTION MODULE CAN BE :**



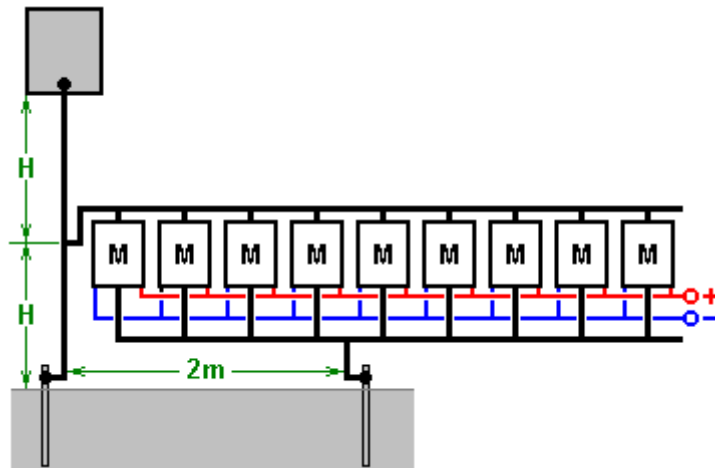
**JES ASCANIUS USES A SHINY, INSULATED METAL PLATE ACTS AS A GOOD RECEIVER ANTENNA:**



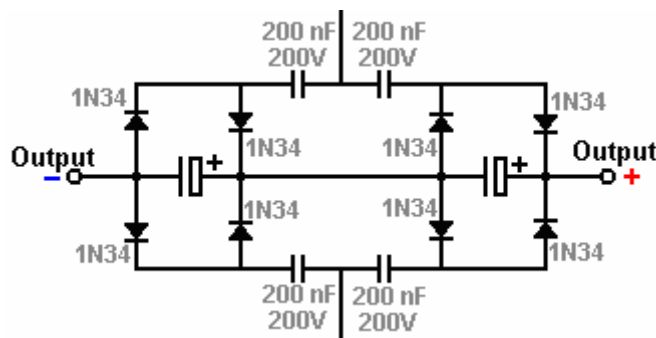


THIS ALUMINIUM PLATE IS 800 x 600 x 2 mm AND IS SUSPENDED INSIDE THE ATTIC WHERE JES LIVES. HE BUILT HIS RECTIFIER MODULES USING SALVAGED PARTS WHICH IS WHY HIS CAPACITORS ARE SO VERY LARGE.

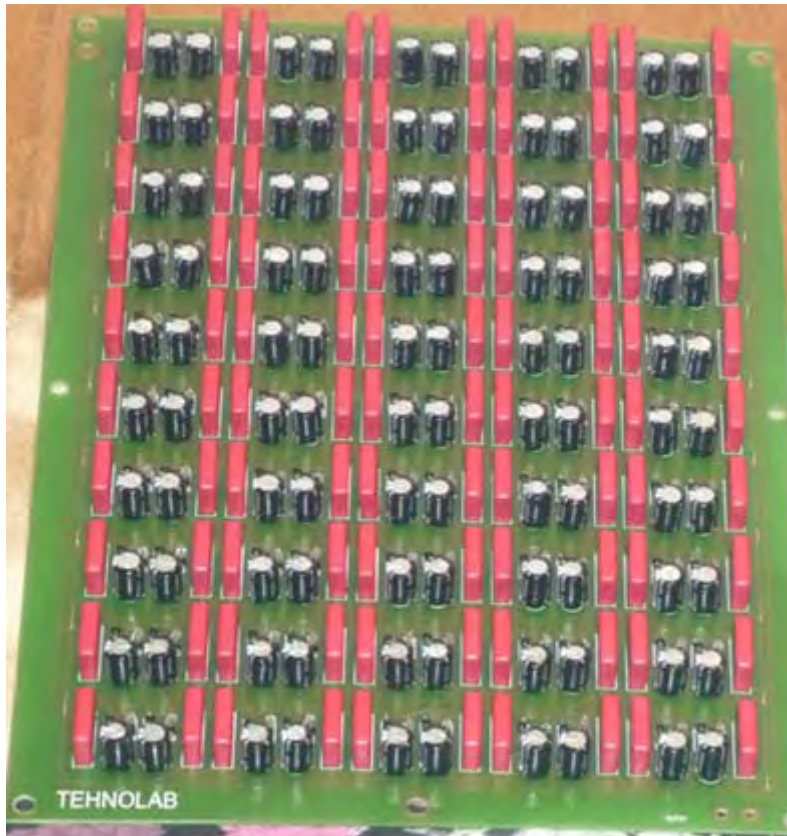
THE RECEPTION MODULES "M" ARE IDEALLY CONNECTED HALF WAY BETWEEN THE AERIAL AND THE EARTH AND THEY CAN BE ADDED LIKE THIS :



GERMANIUM DIODES ARE NORMALLY USED AND THE BASIC RECEPTION MODULE CAN BE IMPROVED LIKE THIS :

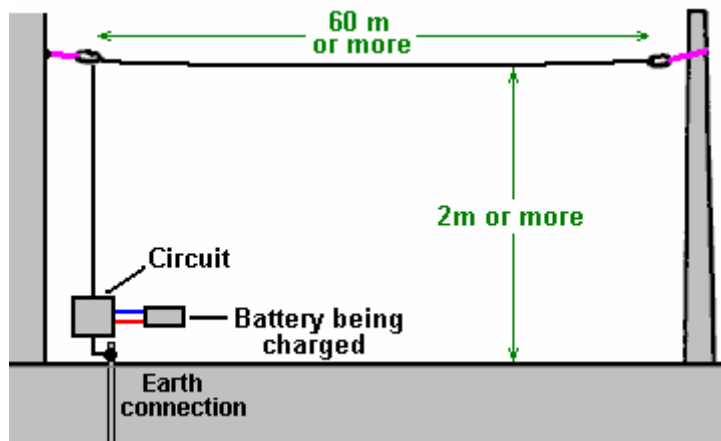


THIS ARRANGEMENT DOUBLES THE OUTPUT FOR EACH MODULE. DRAGAN PUT 100 OF THE ORIGINAL MODULES TOGETHER ON TWO BOARDS LIKE THIS AND GOT 100 WATTS OUTPUT FROM THEM :



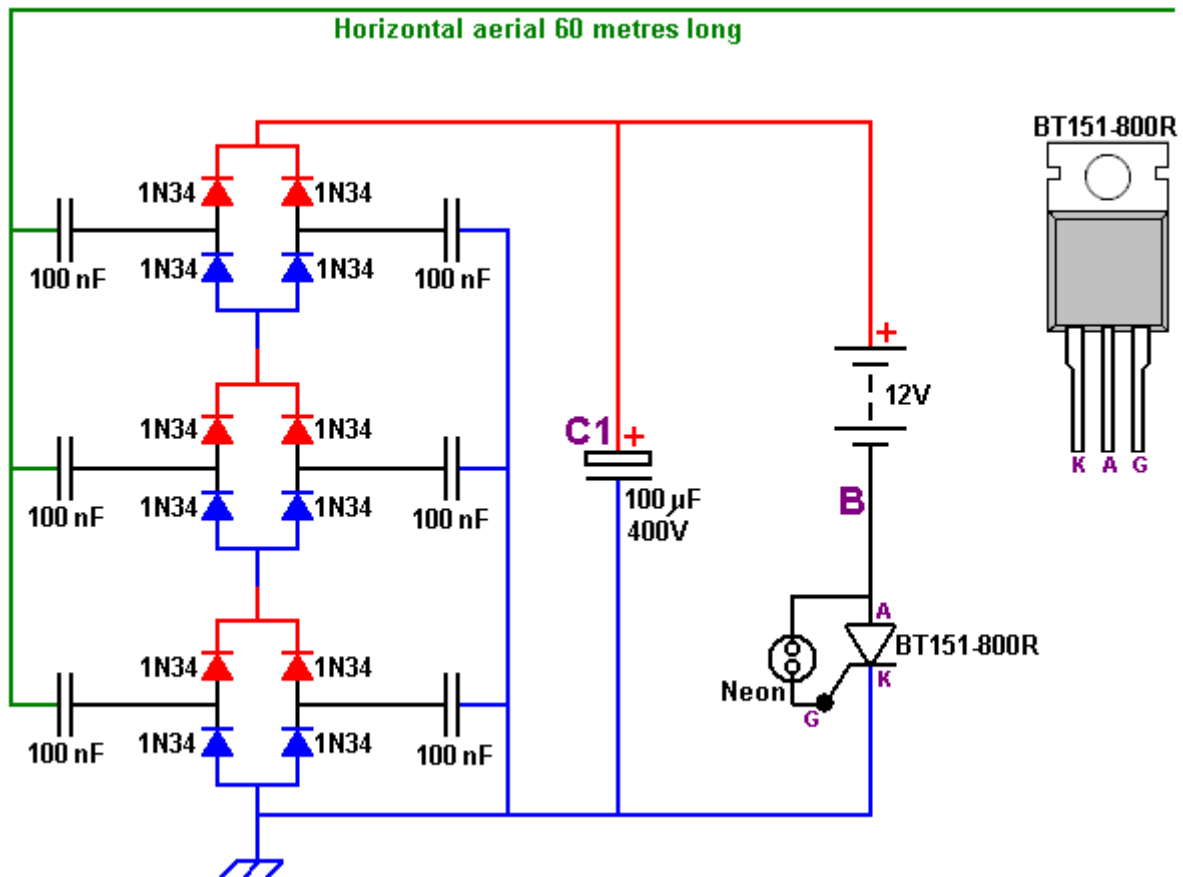
#### THE ALEXKOR AERIAL SYSTEM

ALEXKOR ALSO USES AN AERIAL TO CHARGE BATTERIES IN THE 1.5-VOLT TO 6-VOLT RANGE. HIS AERIAL IS MAINLY HORIZONTAL :



THE LONGER THE AERIAL OR THE GREATER THE NUMBER OF AERIALS USED, THE GREATER THE RATE OF CHARGING. IT IS SUGGESTED THAT THE AERIAL IS CONNECTED BETWEEN THE EAVES OF A HOUSE AND A NEARBY TREE. THE AERIAL WIRE SHOULD BE 0,5 mm DIAMETER OR THICKER AND IT NEEDS TO BE INSULATED FROM ITS SUPPORTS – PLASTIC CORD CAN BE USED FOR THAT.

A MORE POWERFUL VERSION OF HIS CIRCUIT WHICH CAN CHARGE 12-VOLT BATTERIES IS :



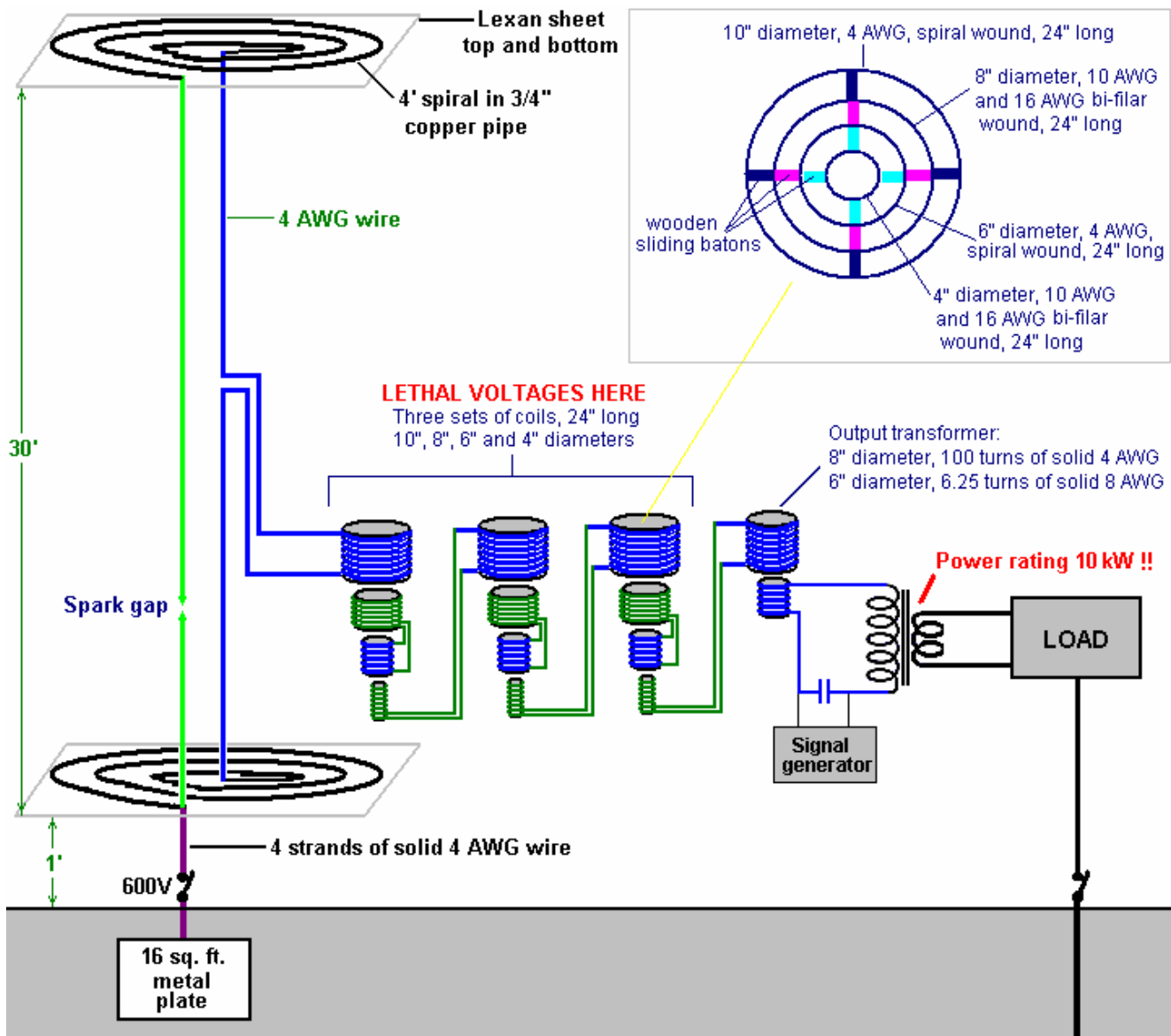
WITH A GOOD AERIAL, THE VOLTAGE ON CAPACITOR “C1” BUILDS UP UNTIL THE VOLTAGE AT POINT “B” GETS SO HIGH THAT THE NEON FIRES, DUMPING THE CHARGE ON CAPACITOR “C1” INTO THE BATTERY, CHARGING IT.

HOWEVER, **LAWRENCE RAYBURN** OF CANADA DEVELOPED A MUCH MORE POWERFUL AERIAL SYSTEM WHICH HE CALLS THE “TREC”. IT GATHERS 10 KILOWATTS OF POWER AND WITH THAT LEVEL OF POWER FLOWING IN THE CIRCUIT, IT IS POTENTIALLY DANGEROUS FOR PEOPLE WHO ARE NOT FAMILIAR WITH WORKING WITH HIGH-POWER HIGH-VOLTAGE CIRCUITS.

THIS AERIAL SYSTEM HAS TWO FOUR-FOOT (1220 mm) DIAMETER ARCHMEDIAN SPIRALS MADE FROM 0.75 INCH DIAMETER SOFT COPPER PIPE. EACH SPIRAL IS SANDWICHED BETWEEN TWO SHEETS OF “LEXAN” PLASTIC AND THEY ARE MOUNTED THIRTY FEET APART VERTICALLY.

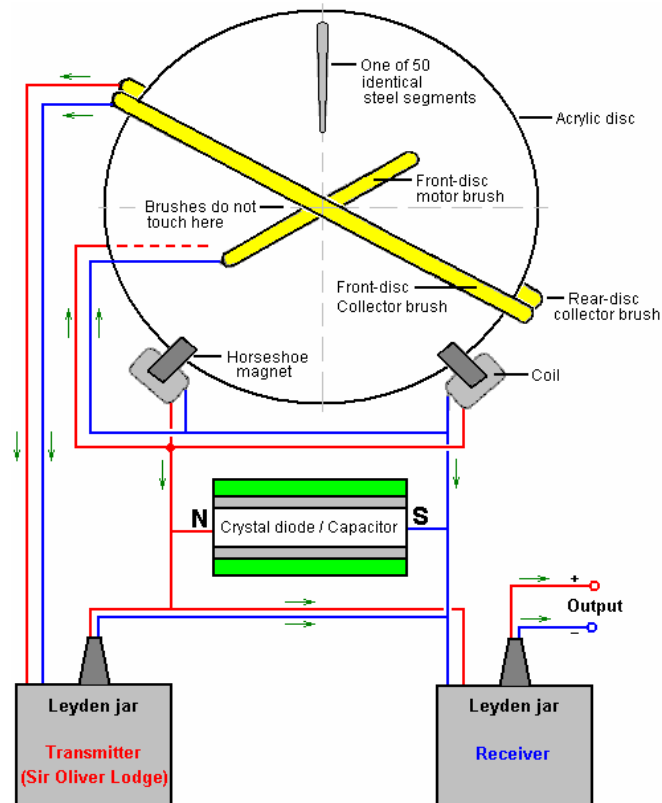
THE OBJECTIVE IS TO CREATE A TUNED PATH TO THE IONOSPHERE AND SO DRAW DOWN SOME OF THE MASSIVE AMOUNT OF EXCESS POWER THERE. THERE IS A SPARK GAP AND MULTIPLE TUNING COILS AND VOLTAGES OF 600 VOLTS GET GENERATED IN THE CIRCUIT BEFORE THE OUTPUT IS ADJUSTED TO WHAT IS CONVENIENT.

A SUBSTANTIAL EARTHING PLATE OF AT LEAST SIXTEEN SQUARE FEET IS NEEDED AND WIRE WHICH IS ABLE TO CARRY SERIOUS LOADS HAS TO BE USED. A SIGNAL GENERATOR IS USED TO MODULATE THE POWER AND GIVE THE DESIRED MAINS FREQUENCY. THE CIRCUIT IS LIKE THIS :



**THIS CIRCUIT IS HIGH POWER AND IT COULD KILL YOU, JUST AS YOUR MAINS WALL SOCKET CAN KILL YOU. THIS IS NOT A RECOMMENDATION THAT YOU SHOULD TRY TO BUILD ANY SUCH DEVICE.**

**HOWEVER, THIS INFORMATION, USEFUL AS IT IS, IS A VERY LONG WAY FROM EVERYTHING WHICH CAN BE KNOWN ABOUT THE SUBJECT OF A LOW POWER HIGH VOLTAGE SOURCE. FOR EXAMPLE, THE "THESTATIC" MACHINE DESIGNED BY PAUL BAUMANN OF SWITZERLAND IS A SELF-POWERED 3 KILOWATT OUTPUT GENERATOR WHICH USES THE ELECTROSTATIC OUTPUT OF A WIMSHURST MACHINE AS ITS INPUT.**



THE IMPORTANT POINT TO NOTE IS THAT THE WIMSHURST MACHINE USED BY PAUL BAUMANN IS SELF ROTATING DUE TO THE MOTOR STRIPS ANGLED AT 45 DEGREES. THE ROTATION IS APPROXIMATELY 60 RPM OR ONCE PER SECOND. IN 1991, DON KELLY STATED THE “SWISS M-L CONVERTER” IS A FULLY SYMMETRICAL, INFLUENCE-TYPE ENERGY CONVERTER WHICH IS BASED ON THE WIMSHURST ELECTROSTATIC GENERATOR WITH ITS TWIN COUNTER-ROTATING DISCS WHERE METALLIC FOIL SECTORS GENERATE AND CARRY SMALL CHARGES OF ELECTRICITY TO BE STORED IN MATCHING CAPACITORS. IN WIMSHURST UNITS, DIAGONAL NEUTRALISING BRUSHES ON EACH OPPOSITE DISC DISTRIBUTE THE CORRECT CHARGES TO THE SECTORS AS THEY REVOLVE, BUT IN THE M-L CONVERTER THIS IS CARRIED OUT BY A CRYSTAL DIODE WHICH HAS A HIGHER EFFICIENCY. THE TWO DISCS ARE MADE OF ACRYLIC AND THE METALLIC SEGMENTS ARE STEEL AND THE ELECTROMAGNETIC CONVERSION IS MADE AT THE RIM THROUGH PASSIVE ELECTROMAGNETS.

THE SELF-PROPULSION AFTER HAND STARTING THE DISCS IS ACHIEVED THROUGH THE POGGENDORFF PRINCIPLE IN WHICH SLANTED CONDUCTIVE BRUSHES PRODUCE SELF-ROTATION IN ELECTROSTATIC MOTORS (BUT NOT GENERATORS).

ANOTHER GERMAN, HERMANN PLAUSON, PRESENTS A GREAT DEAL OF PRACTICAL INFORMATION IN HIS 1925 PATENT US1,540,998 “CONVERSION OF ATMOSPHERIC ELECTRIC ENERGY”. HERMANN DESCRIBES A SYSTEM WITH 100 KILOWATTS OF OUTPUT AS A “SMALL” SYSTEM, BUT A SYSTEM OF THAT SIZE WILL ALMOST CERTAINLY HAVE MANY AERIALS PROVIDING THE INPUT. HE SAYS: “THE STATIC ELECTRICITY WHICH RUNS TO EARTH THROUGH AERIAL CONDUCTORS IN THE FORM OF DIRECT CURRENT OF VERY HIGH VOLTAGE AND LOW CURRENT STRENGTH IS CONVERTED INTO ELECTRO-DYNAMIC ENERGY IN THE FORM OF HIGH FREQUENCY VIBRATIONS”.

*Fig. 1.*

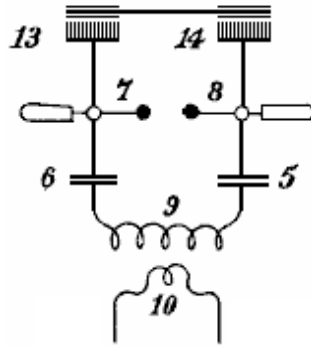
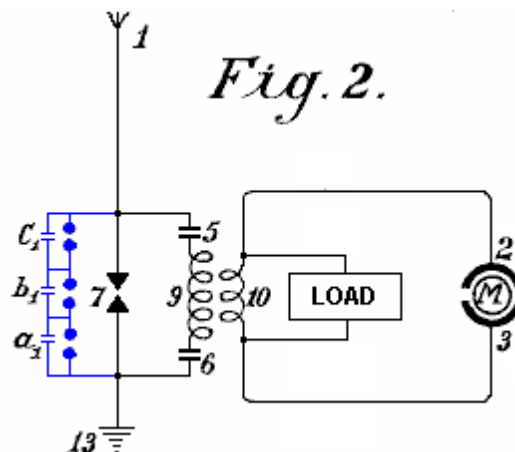


Fig.1 SHOWS A SIMPLE METHOD FOR CONVERTING STATIC ELECTRICITY INTO DYNAMIC ENERGY OF A HIGH NUMBER OF OSCILLATIONS. FOR THE SAKE OF CLARITY, A WIMSHURST MACHINE IS SHOWN AS THE INPUT RATHER THAN AN AERIAL ANTENNA.

ITEMS 13 AND 14 COLLECT THE STATIC ELECTRICITY, 7 AND 8 ARE SPARK-DISCHARGING ELECTRODES, 5 AND 6 ARE CAPACITORS AND 9 IS THE PRIMARY WINDING OF A STEP-DOWN TRANSFORMER. EACH SPARK GENERATES A LOWER VOLTAGE HIGHER CURRENT OUTPUT THROUGH 10, THE OUTPUT TRANSFORMER SECONDARY WINDING.

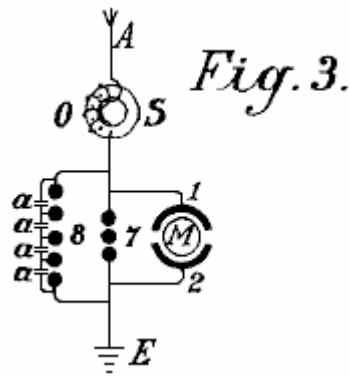
IN 1925 THERE WILL HAVE BEEN VERY FEW AIRCRAFT AND SO, TALL AERIALS WOULD NOT HAVE BEEN CONSIDERED A HAZARD. HERMANN CLEARLY HAD TALL AERIALS IN HIS INSTALLATIONS.



*Fig. 2.*

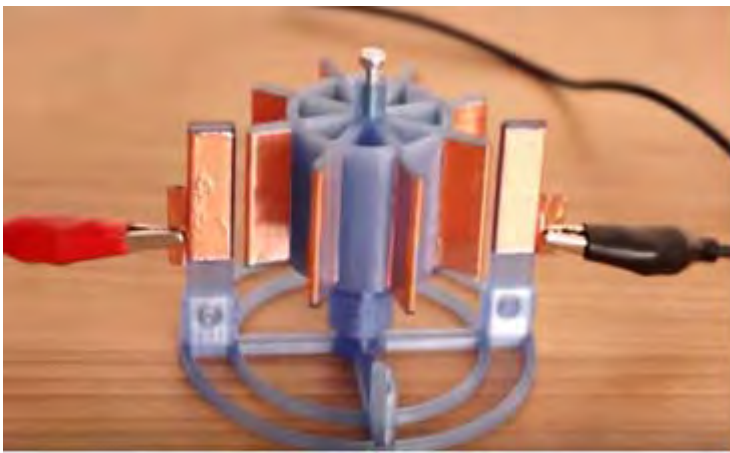
Fig.2 SHOWS AERIAL INPUT AND TWO SPARK GAPS IN PARALLEL ARE USED – THE WORKING GAP 7 AND THE MULTIPLE SPARK GAP SHOWN IN BLUE WHICH IS A SAFETY DEVICE AGAINST EXCESSIVE VOLTAGE. WITHOUT THIS SECOND SPARK GAP IT IS IMPOSSIBLE TO GATHER LARGE QUANTITIES OF ELECTRICAL ENERGY. SPECIAL MOTORS ADAPTED FOR WORKING WITH STATIC ELECTRICITY OR HIGH FREQUENCY OSCILLATIONS CAN BE CONNECTED AS AT POSITION 2 – 3.

THERE IS, OF COURSE, ALWAYS THE POSSIBILITY OF DIRECT OR NEARBY LIGHTNING STRIKES, AND SO CHOKING COILS IN THE AERIAL CONNECTION ARE USED:

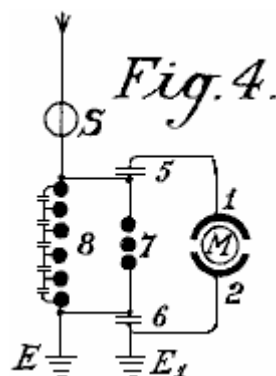


THESE ARE SHOWN AS "S" IN Fig.3 AND THE CORE IS MADE WITH THE THINNEST POSSIBLE SEPARATE LAMINATIONS. IN PLACES WHERE THUNDERSTORMS ARE FREQUENT, SEVERAL SUCH CHOKE COILS MAY BE CONNECTED IN SERIES OR IN SERIES PARALLEL. IDEALLY, THE CHOKE WINDING SHOULD BE MADE UP USING SEVERAL THIN PARALLEL WIRES WHICH TOGETHER MAKE UP THE NECESSARY CROSS-SECTIONAL AREA OF WIRE.

Fig.3 SHOWS THE MOST SIMPLE WAY OF CONVERTING ATMOSPHERIC ELECTRICITY INTO ELECTROMAGNETIC WAVE ENERGY BY THE USE OF STATIC-ELECTRICITY MOTORS :



THE POSITIVE ATMOSPHERIC ELECTRIC CHARGE COLLECTED BY THE AERIAL TENDS TO COMBINE WITH THE NEGATIVE ELECTRICITY CONNECTED VIA THE EARTH WIRE. IT TRAVELS THROUGH THE AERIAL AND CHOKE "S", FLOWING IN THE SAME DIRECTION AS THE DIRECT CURRENT. THE MOTOR "M" PROVIDES THE CAPACITANCE, INDUCTANCE AND RESISTANCE WHICH ARE NECESSARY FOR CONVERTING STATIC ELECTRICITY INTO ELECTROMAGNETIC WAVE ENERGY.



IN Fig.4, SPARK GAP 7 IS SHUNTED ACROSS CAPACITORS 5 AND 6 FROM THE MOTOR "M" AND THIS PROVIDES IMPROVED OVER-VOLTAGE PROTECTION FOR THE MOTOR AND UNIFORM EXCITATION THROUGH SPARK GAP 7.

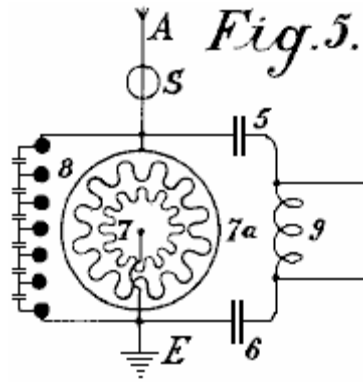


Fig.5 SHOWS AN ARRANGEMENT FOR PRODUCING LARGE CURRENTS WHICH CAN BE USED DIRECT WITHOUT MOTORS, TO PROVIDE HEATING AND LIGHTING. THE MAIN DIFFERENCE HERE IS THAT THE SPARK GAP CONSISTS OF A STAR-SHAPED DISC 7 WHICH CAN ROTATE ON ITS OWN AXIS AND WHICH IS ROTATED BY A MOTOR 7A (NOT SHOWN) INSIDE SIMILARLY SHAPED OUTER ELECTRODES. WHEN THE STAR POINTS FACE EACH OTHER, DISCHARGES TAKE PLACE, FORMING AN OSCILLATION CIRCUIT WITH THE CAPACITORS 5 AND 6. THE LOAD IS CONNECTED ACROSS INDUCTOR 9.

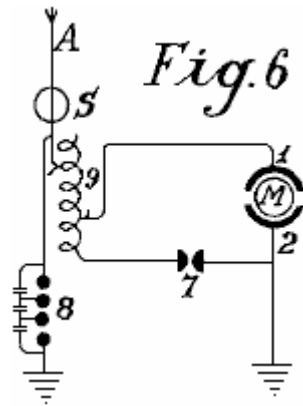


Fig.6 SHOWS HOW THE OSCILLATION CIRCUIT MAY HAVE A MOTOR CONNECTED VIA A VARIABLE INDUCTOR ("RHEOSTAT") TO IT. THE MOTOR OPPOSES ANY EXCESS VOLTAGES WHICH MIGHT BE APPLIED TO THE MOTOR. BY ADJUSTING THE RHEOSTAT, OPTIMUM MOTOR PERFORMANCE CAN BE ACHIEVED FOR ANY PARTICULAR AERIAL.



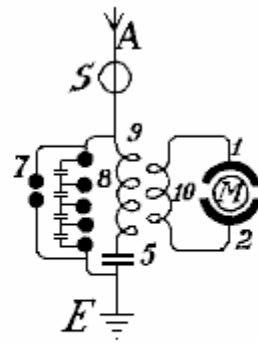
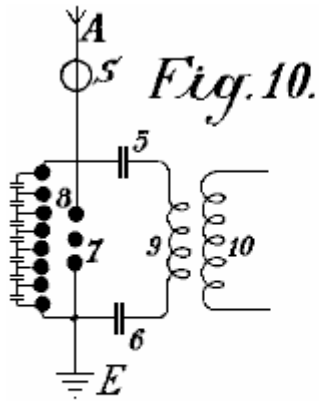


Fig. 11.

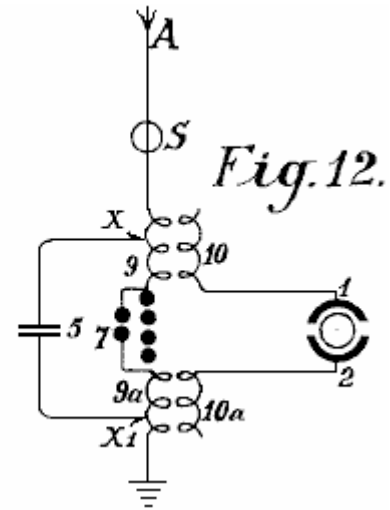


Fig.10 SHOWS A MOTOR CIRCUIT WITH PURELY INDUCTIVE COUPLING. THE MOTOR IS CONNECTED TO THE SECONDARY 10 OF THE TRANSFORMER AS CAN BE SEEN IN Fig.11 IN A SOMEWHAT MODIFIED CIRCUIT. THE SAME APPLIES TO THE CIRCUIT OF Fig.12.

THE CIRCUIT DIAGRAMS SHOWN SO FAR ALLOW MOTORS OF LOW TO MEDIUM STRENGTH TO BE OPERATED. FOR LARGE SYSTEMS, HOWEVER, THEY ARE TOO INCONVENIENT AS THE CONSTRUCTION OF TWO OR MORE OSCILLATION CIRCUITS FOR LARGE AMOUNTS OF ENERGY IS DIFFICULT, THE GOVERNING IS STILL MORE DIFFICULT AND THE DANGER IN SWITCHING ON OR OFF IS GREATER.

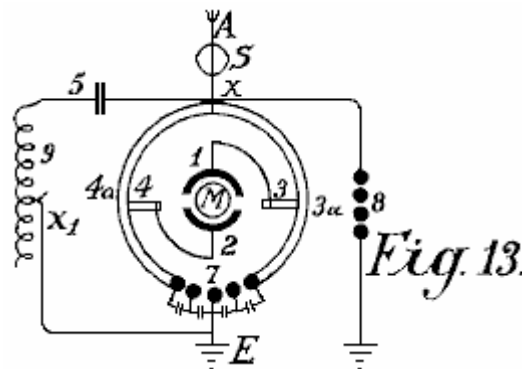
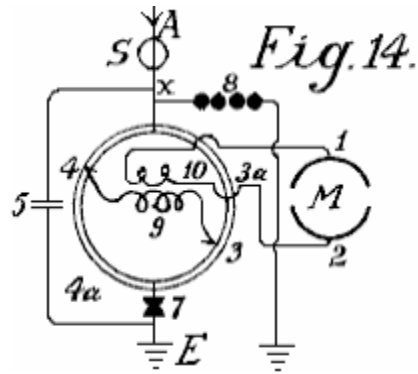


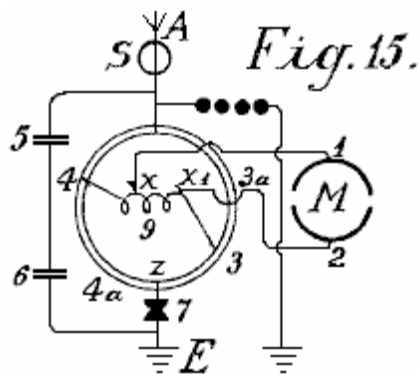
Fig. 13.

Fig.13 SHOWS A MEANS FOR OVERCOMING SUCH DIFFICULTIES. THE OSCILLATION CIRCUIT SHOWN HERE RUNS FROM POINT "x" OVER CAPACITOR 5, VARIABLE INDUCTOR 9, SPARK GAP 7 AND THE TWO SEGMENTS 3a AND 4a FORMING THE ARMS OF A WHEATSTONE BRIDGE, BACK TO x. IF THE MOTOR IS CONNECTED BY BRUSHES 3 AND 4 TRANSVERSELY TO THE TWO ARMS OF THE BRIDGE AS SHOWN IN Fig.13, ELECTROMAGNETIC OSCILLATIONS OF EQUAL SIGN ARE INDUCED IN THE STATOR SURFACES 1 AND 2 AND THE MOTOR DOES NOT REVOLVE. IF HOWEVER, THE BRUSHES 3 AND 4 ARE MOVED IN COMMON WITH THE CONDUCTING WIRES 1 AND 2 WHICH CONNECT THE BRUSHES TO THE STATOR POLES, A CERTAIN ALTERATION OR DISPLACEMENT OF THE POLARITY IS ACHIEVED AND THE MOTOR STARTS TO REVOLVE.

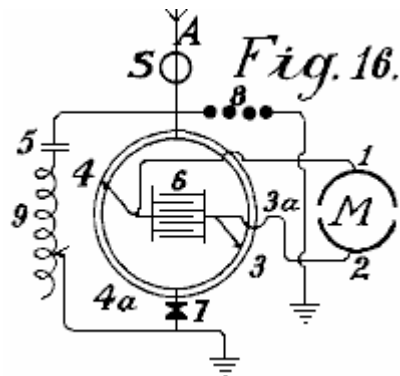
THE MAXIMUM ACTION WILL RESULT IF ONE BRUSH 3 COMES ON THE CENTRAL SPARKING CONTACT 7 AND THE OTHER BRUSH 4 ON THE PART x. IN PRACTICE HOWEVER, THEY ARE USUALLY BROUGHT ON TO THE CENTRAL CONTACT 7 BUT ONLY HELD IN THE PATH OF THE BRIDGE SEGMENTS 4a AND 3a IN ORDER TO AVOID CONNECTING THE SPARK GAPS WITH THE MOTOR OSCILLATION CIRCUIT.



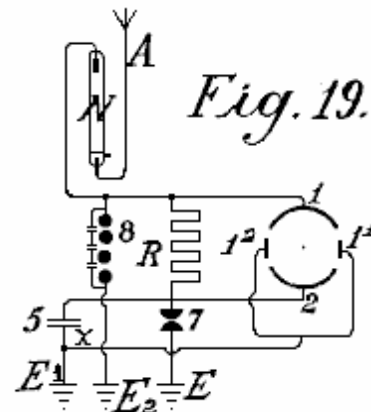
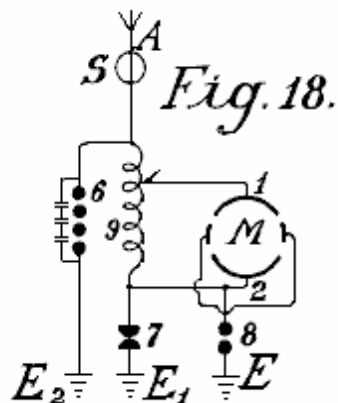
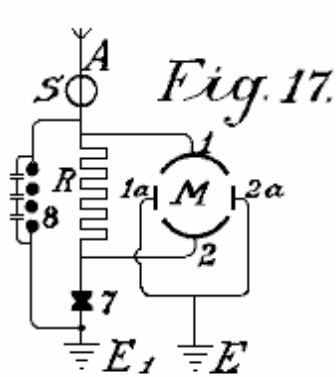
AS THIS PREVENTS THE WHOLE OF THE OSCILLATION ENERGY ACTING ON THE MOTOR, IT IS BETTER TO ADOPT THE MODIFICATION SHOWN IN Fig.14 WHERE THE MOTOR IS NOT DIRECTLY WIRED TO THE SEGMENTS OF THE COMMUTER, BUT INSTEAD IT IS WIRED TO SECONDARY COIL 10 WHICH RECEIVES INDUCED FROM PRIMARY COIL 9. THIS ARRANGEMENT PROVIDES A GOOD TRANSFORMING ACTION, A LOOSE COUPLING AND AN OSCILLATION CIRCUIT WITHOUT A SPARK GAP.



IN Fig.15, THE MOTOR IS WIRED DIRECTLY TO THE PRIMARY COIL AT x AND x1 AFTER THE PRINCIPLE OF THE AUTO-TRANSFORMER.



IN Fig.16, INSTEAD OF AN INDUCTOR, CAPACITOR 6 REPLACES THE INDUCTANCE AND IS INSERTED BETWEEN SEGMENTS 3a AND 4a. THIS HAS THE ADVANTAGE THAT THE SEGMENTS 3a AND 4a NEED NOT BE MADE OF SOLID METAL BUT MAY CONSIST OF SPIRAL COILS WHICH ALLOW A MORE EXACT REGULATION, AND HIGH INDUCTANCE MOTORS MAY BE USED.



THE CIRCUITS SHOWN IN Fig.17, Fig.18 AND Fig.19 MAY BE USED WITH RESONANCE AND PARTICULARLY WITH INDUCTION CAPACITOR MOTORS; BETWEEN THE LARGE STATOR INDUCTION CAPACITOR SURFACES, SMALL REVERSING POLE CAPACITORS ARE CONNECTED AND THEY ARE CONNECTED TO EARTH. SUCH REVERSING POLES HAVE THE ADVANTAGE THAT, WITH LARGE QUANTITIES OF ELECTRICAL ENERGY, THE SPARK FORMATION BETWEEN THE SEPARATE OSCILLATION CIRCUITS CEASES.

Fig.19 SHOWS ANOTHER METHOD WHICH PREVENTS HIGH FREQUENCY ELECTROMAGNETIC OSCILLATIONS FORMED IN THE OSCILLATION CIRCUIT, FEEDING BACK TO THE AERIAL. IT IS BASED ON THE WELL-KNOWN PRINCIPLE THAT A MERCURY LAMP, ONE ELECTRODE OF WHICH IS FORMED OF MERCURY, THE OTHER OF SOLID METAL SUCH AS STEEL, ALLOWS AN ELECTRIC CHARGE TO PASS IN ONLY ONE DIRECTION: FROM THE MERCURY TO THE STEEL AND NOT VICE VERSA. THE MERCURY ELECTRODE OF THE VACUUM TUBE N IS THEREFORE CONNECTED TO THE AERIAL AND THE STEEL ELECTRODE IS CONNECTED TO THE OSCILLATOR CIRCUIT. CHARGES CAN THEN ONLY FLOW FROM THE AERIAL THROUGH THE VACUUM TUBE TO THE OSCILLATION CIRCUIT AND NO FLOW OCCURS IN THE OPPOSITE DIRECTION. IN PRACTICE, THESE VACUUM TUBES MUST BE CONNECTED BEHIND AN AERIAL CHOKE AS ON THEIR OWN THEY DO NOT PROTECT AGAINST THE DANGER OF LIGHTNING.

AS REGARDS THE USE OF SPARK GAPS, ALL ARRANGEMENTS AS USED FOR WIRELESS TELEGRAPHY MAY BE USED. OF COURSE, THE SPARK GAPS IN LARGE MACHINES MUST HAVE A SUFFICIENTLY LARGE SURFACE. IN VERY LARGE STATIONS THEY ARE COOLED IN LIQUID CARBONIC ACID, OR BETTER STILL, IN LIQUID NITROGEN OR LIQUID HYDROGEN. THE SPARK GAP CASING MUST ALSO BE INSULATED AND BE OF SUFFICIENT STRENGTH TO BE ABLE TO RESIST ANY PRESSURE WHICH MAY ARISE. ANY UNDESIRABLE EXCESS SUPER-PRESSURE WHICH MAY BE FORMED MUST BE LET OFF AUTOMATICALLY. I HAVE EMPLOYED WITH VERY GOOD RESULTS, MERCURY ELECTRODES WHICH WERE FROZEN IN LIQUID CARBONIC ACID, THE COOLING BEING MAINTAINED DURING THE OPERATION FROM THE OUTSIDE THROUGH THE WALLS.

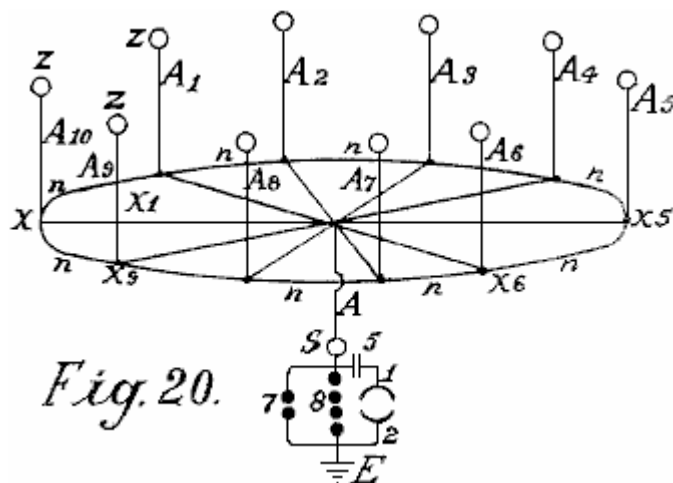


Fig.20 SHOWS ONE OF THE MOST SIMPLE FORMS OF CONSTRUCTION OF AN AERIAL NETWORK IN COMBINATION WITH COLLECTORS, TRANSFORMERS AND THE LIKE. E IS THE EARTH WIRE, 8 THE SAFETY SPARK GAP, 7 THE WORKING SPARK GAP, 1 AND 2 THE THE STATOR SURFACES OF THE

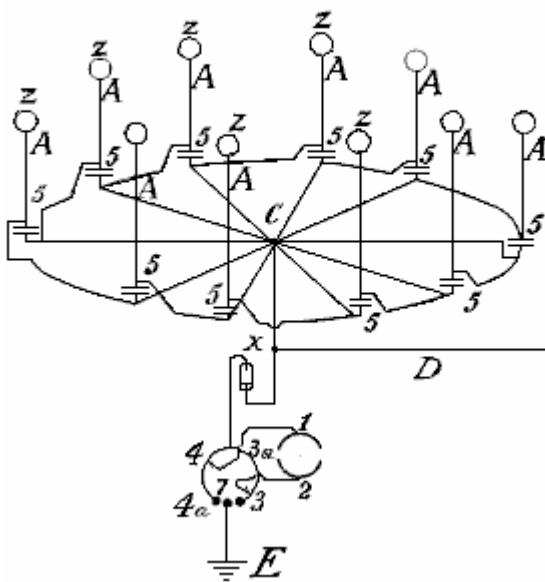
MOTOR, 5 A CAPACITOR BATTERY, S THE PROTECTIVE AERIAL CHOKE WHICH IS CONNECTED WITH THE COIL IN THE AERIAL CONDUCTOR, A<sup>1</sup> TO A<sup>10</sup> AERIAL ANTENNAE WITH COLLECTING BALOONS, N HORIZONTAL CONNECTING WIRES MANY OF WHICH CONNECT TO THE CENTRE.

THE ACTUAL COLLECTORS CONSIST OF METAL SHEATHS, PREFERABLY MADE OF AN ALUMINIUM/MAGNESIUM ALLOY AND ARE FILLED WITH HYDROGEN OR HELIUM AND ATTACHED TO COPPER-PLATED STEEL WIRES. THE SIZE OF THE BALOON IS SELECTED SO THAT THE ACTUAL WEIGHT OF THE BALOON AND ITS SUPPORTING WIRE IS SUPPORTED BY IT. ALUMINIUM SPIKES, MADE AND GILDED, ARE ARRANGED ON TOP OF THE BALOONS IN ORDER TO PRODUCE A CONDUCTOR ACTION. SMALL QUANTITIES OF RADIUM PREPARATIONS, MORE PARTICULARLY POLONIUM-IONIUM OR MESOTHORIUM PREPARATIONS CONSIDERABLY INCREASE THE IONISATION AND SO THE PERFORMANCE OF THESE COLLECTORS. IN ADDITION TO METAL BALOONS, FABRIC BALOONS WHICH ARE SPRAYED WITH A METALLIC COATING MAY ALSO BE USED.

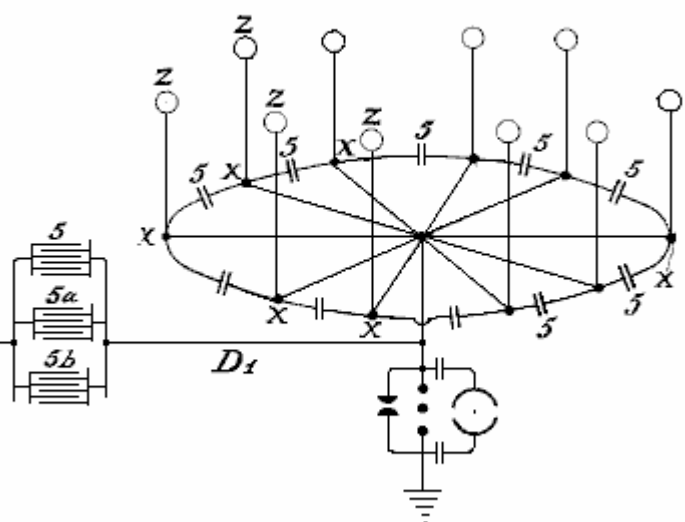
INSTEAD OF THE ORDINARY ROUND BALOONS, ELONGATED CIGAR-SHAPED ONES MAY BE EMPLOYED. IN ORDER ALSO TO UTILISE THE FRICTIONAL ENERGY OF THE WIND, PATCHES OR STRIPS OF NON-CONDUCTING SUBSTANCES WHICH PRODUCE ELECTRICITY BY FRICTION, MAY BE ATTACHED TO THE METALLISED BALOON SURFACES. THE WIND WILL IMPART A PORTION OF ITS ENERGY IN THE FORM OF FRICTIONAL ELECTRICITY, TO THE BALOON CASING, THUS SUBSTANTIALLY INCREASING THE COLLECTION EFFECT.

IN PRACTICE HOWEVER, VERY HIGH TOWERS OF UP TO 300 METRES MAY BE EMPLOYED AS ANTENNAE. IN THESE TOWERS, COPPER TUBES RISE FREELY FURTHER ABOVE THE TOP OF THE TOWER. A GAS LAMP SECURED AGAINST THE WIND IS THEN LIT AT THE POINT OF THE COPPER TUBE AND NETTING IS SECURED TO THE COPPER TUBE OVER THE FLAME OF THIS LAMP TO FORM A COLLECTOR. THE GAS IS CONVEYED THROUGH THE INTERIOR OF THE TUBE, UP TO THE SUMMIT. THE COPPER TUBE MUST BE ABSOLUTELY PROTECTED FROM MOISTURE AT THE PLACE WHERE IT ENTERS THE TOWER, AND RAIN MUST BE PREVENTED FROM RUNNING DOWN THE WALLS OF THE TOWER, WHICH MIGHT LEAD TO A BAD CASTROPHE. THIS IS DONE BY BELL-SHAPED ENLARGEMENTS WHICH EXPAND DOWNWARDS, BEING ARRANGED IN THE TOWER IN THE FORM OF HIGH VOLTAGE INSULATORS OF SIAMESE PAGODAS.

*Fig. 21.*

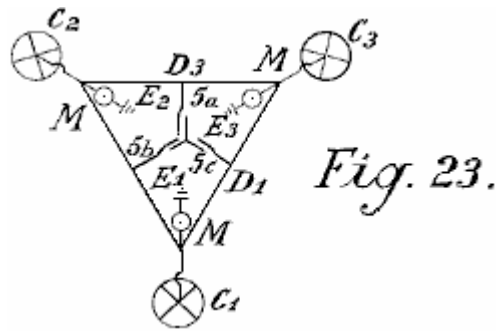


*Fig. 22.*



IN ORDER TO COLLECT LARGE QUANTITIES OF ELECTRICITY WITH FEW AERIALS, IT IS AS WELL TO PROVIDE THE AERIAL CONDUCTOR WITH SETS OF CAPACITORS AS SHOWN IN THE TWO METHODS OF CONSTRUCTION SHOWN IN Fig.21 AND Fig.22. IN Fig.21, THE SET OF CAPACITORS 5 IS CONNECTED BETWEEN THE AERIALS Z VIA LEAD A AND A RING CONNECTOR TO POINT C.

IF TWO SUCH AERIAL ARRAYS HAVE A LARGE VOLTAGE DIFFERENCE, THAT CAN BE DEALT WITH BY CONNECTING SUFFICIENTLY LARGE CAPACITOR SETS (5, 5a, 5b) BY MEANS OF STAR CONDUCTORS D AND D<sup>1</sup>. Fig.23, SHOWS A CONNECTION OF THREE SUCH RINGS OF COLLECTORS POSITIONED IN A TRIANGLE WITH A CENTRAL SET OF CAPACITORS.



THE CAPACITOR SETS OF SUCH LARGE INSTALLATIONS MUST BE EMBEDDED IN LIQUEFIED GASSES. IN SUCH CASES, A PORTION OF THE ATMOSPHERIC ENERGY MUST BE EMPLOYED FOR LIQUIFYING THESE GASSES. IT IS ALSO PREFERABLE TO EMPLOY PRESSURE. BY THIS MEANS, THE CAPACITOR SURFACES MAY BE REDUCED IN AREA AND STILL ALLOW THE STORAGE OF LARGE QUANTITIES OF ENERGY TO BE STORED SECURE AGAINST BREAKDOWN. FOR THE SMALLER INSTALLATIONS, THE IMMERSING OF THE CAPACITORS IN WELL INSULATED OIL OR THE LIKE, IS SUFFICIENT. SOLID SUBSTANCES CANNOT BE EMPLOYED AS INSULATORS.

THE ARRANGEMENT IN THE DIAGRAMS SHOWN EARLIER HAS ALWAYS SHOWN BOTH POLES OF THE CAPACITORS CONNECTED TO THE AERIAL CONDUCTORS. AN IMPROVED METHOD OF CONNECTION HAS BEEN FOUND TO BE VERY ADVANTAGEOUS. IN THIS METHOD, ONLY ONE POLE OF EACH CAPACITOR IS CONNECTED TO THE COLLECTING NETWORK. SUCH A METHOD OF CONNECTION IS VERY IMPORTANT, AS BY MEANS OF IT, A CONSTANT CURRENT AND AN INCREASE IN THE NORMAL WORKING VOLTAGE IS OBTAINED.

IF, FOR EXAMPLE, A COLLECTING BALOON AERIAL WHICH IS ALLOWED TO RISE TO A HEIGHT OF 300 METRES, SHOWS 40,000 VOLTS ABOVE EARTH VOLTAGE, IN PRACTICE IT HAS BEEN FOUND THAT THE WORKING VOLTAGE (WITH A WITHDRAWAL OF THE POWER AS DESCRIBED EARLIER BY MEANS OF OSCILLATING SPARK GAPS AND THE LIKE) IS ONLY ABOUT 400 VOLTS. IF, HOWEVER, THE CAPACITY OF THE CAPACITOR SURFACES BE INCREASED, WHICH CAPACITY IN THE ABOVE MENTIONED CASE WAS EQUAL TO THAT OF THE COLLECTING SURFACE OF THE BALOON AERIALS, TO DOUBLE THE AMOUNT, BY CONNECTING THE CAPACITORS WITH ONLY ONE POLE, THE VOLTAGE RISES, WITH AN EQUAL WITHDRAWAL OF CURRENT, UP TO AND BEYOND 500 VOLTS. THIS CAN ONLY BE ASCRIBED TO THE FAVOURABLE ACTION OF THE METHOD OF CONNECTION.

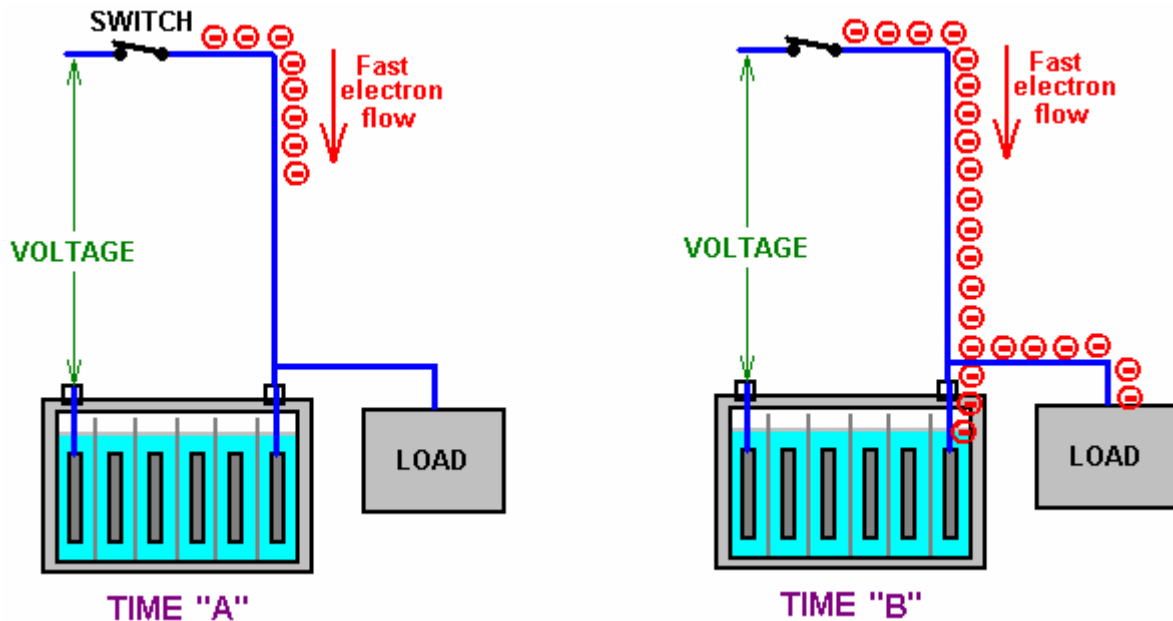
IN ADDITION TO THIS SUBSTANTIAL IMPROVEMENT, IT HAS ALSO BEEN FOUND TO BE PREFERABLE TO INSERT DOUBLE INDUCTANCES WITH CHOKES AND TO PLACE THE CAPACITORS PREFERABLY BETWEEN TWO SUCH CHOKES. IT HAS ALSO BEEN FOUND THAT THE USEFUL ACTION OF SUCH CAPACITORS CAN BE FURTHER INCREASED IF AN INDUCTION COIL IS CONNECTED AS AN INDUCTIVE RESISTANCE TO THE UNCONNECTED POLE OF THE CAPACITOR, OR STILL BETTER, IF THE CAPACITOR ITSELF BE MADE AS AN INDUCTION CAPACITOR. SUCH A CAPACITOR MAY BE COMPARED TO A SPRING, WHICH WHEN COMPRESSED, CARRIES IN ITSELF ACCUMULATED FORCE, WHICH IT GIVES OFF AGAIN WHEN RELEASED. IN CHARGING, A CHARGE WITH REVERSED SIGN IS FORMED AT THE OTHER FREE CAPACITOR POLE, AND IF A SHORT-CIRCUIT OCCURS THROUGH THE SPARK GAP, THE ACCUMULATED ENERGY IS AGAIN GIVEN BACK SINCE NOW, NEW QUANTITIES OF ENERGY ARE INDUCED AT THE CAPACITOR POLE CONNECTED TO THE CONDUCTOR NETWORK, WHICH IN FACT, CHARGES WITH OPPOSITE SIGN TO THAT AT THE FREE CAPACITOR POLE. THE NEW INDUCED CHARGES HAVE, OF COURSE, THE SAME SIGN AS THE COLLECTOR NETWORK. THE WHOLE VOLTAGE ENERGY IN THE AERIAL IS THEREBY INCREASED. IN THE SAME TIME INTERVAL, LARGER QUANTITIES OF ENERGY ARE ACCUMULATED THAN WOULD BE THE CASE IF SUCH CAPACITOR SETS WERE OMITTED.

THERE IS SUBSTANTIALY MORE ADVANCED INFORMATION IN THIS PATENT WHICH SEEMS TO BE MORE OF A TUTORIAL BASED ON EXTENSIVE EXPERIENCE RATHER THAN A CONVENTIONAL PATENT.

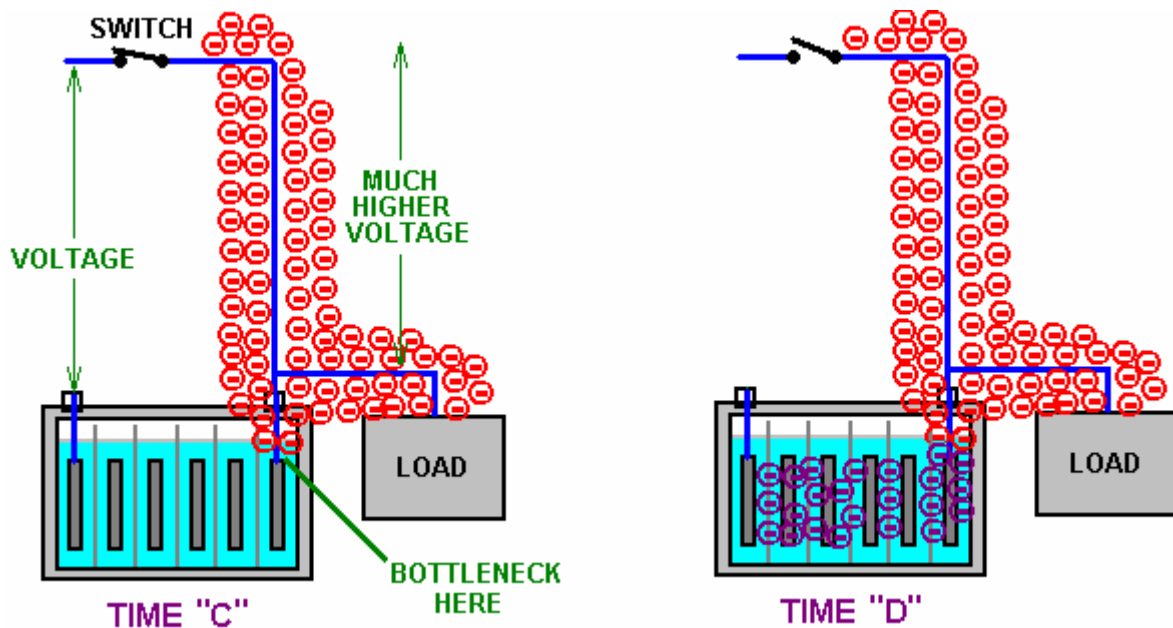
VIDEO : <https://youtu.be/elogl7qbFSI>

## BATTERY CHARGING SYSTEMS

BATTERIES ARE CHARGED BY APPLYING A HIGH ENOUGH VOLTAGE TO THEM. BUT THE RATE OF CHARGE IS NOT CONSTANT. IN THE FIRST SPLIT SECOND, THE VERY LIGHT ELECTRONS FROM THE CHARGING SOURCE RACE DOWN THE OUTSIDE OF THE CONNECTING WIRE AT THE SPEED OF LIGHT. WHEN THEY REACH THE BATTERY BEING CHARGED THERE IS A PROBLEM AND THAT IS THE FACT THAT THE CHARGING CURRENT INSIDE THE BATTERY IS CARRIED BY MUCH HEAVIER IONS AND THEY DON'T MOVE AT THE SPEED OF LIGHT :



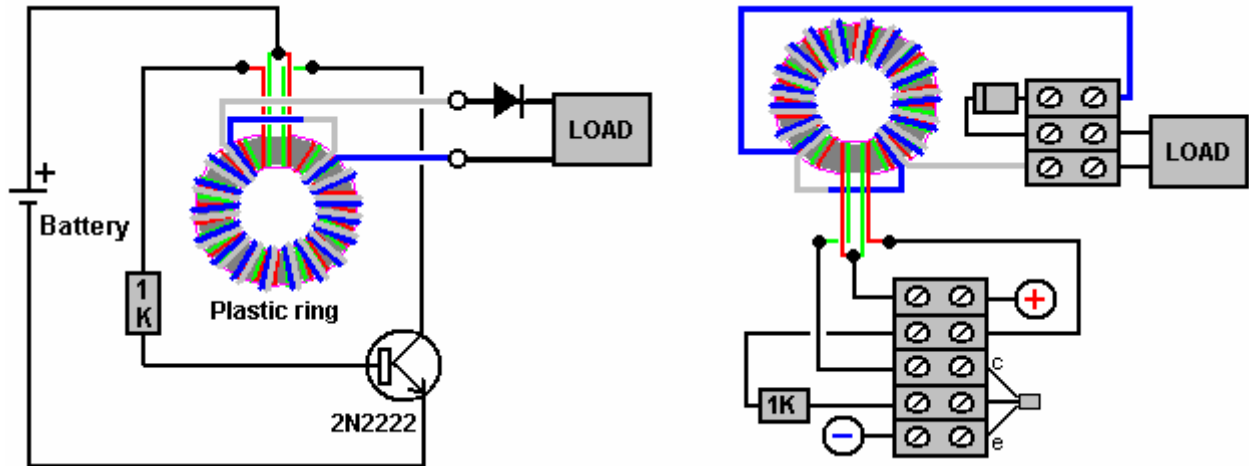
A TINY FRACTION OF A SECOND AFTER SWITCHING ON, THE ELECTRONS REACH THE BOTTLENECK OF THE HEAVY BATTERY IONS AND SO THEY PILE UP IN A GREAT CLUSTER :



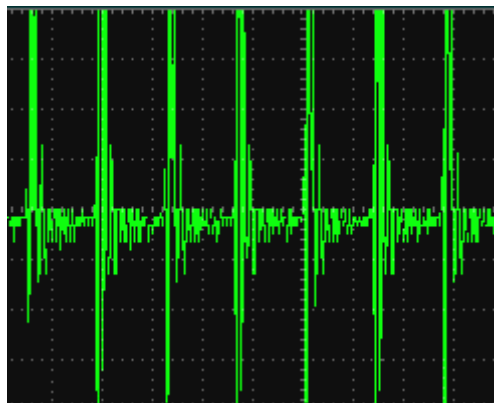
THIS HAS THE SAME EFFECT AS IF A MUCH HIGHER VOLTAGE SOURCE HAD BEEN CONNECTED TO THE BATTERY, CAUSING A MUCH GREATER RATE OF CHARGING. THIS EFFECT ONLY LASTS FOR A FRACTION OF A SECOND, AND IF YOU ARE USING A DC CHARGING SOURCE, IT ONLY OCCURS ONCE DURING THE CHARGING SESSION. HOWEVER,

IF WE CHOOSE, WE CAN ARRANGE OUR CHARGING CIRCUIT TO DO THIS SWITCH-ON STYLE OF CHARGING THOUSANDS OF TIMES EACH SECOND.

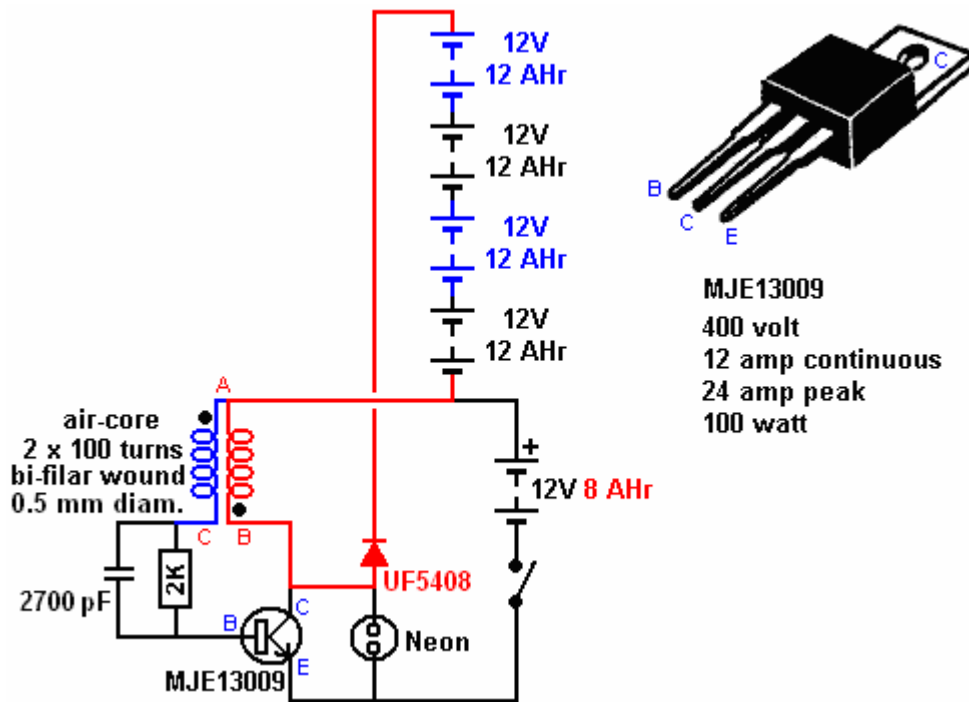
FOR EXAMPLE, LAWRENCE TSEUNG PRODUCED A CHARGING SYSTEM WHICH IS A MODIFIED JOULE THIEF CIRCUIT AND HE STATES THAT IT IS TEN TIMES MORE EFFECTIVE THAN ORDINARY CHARGING :



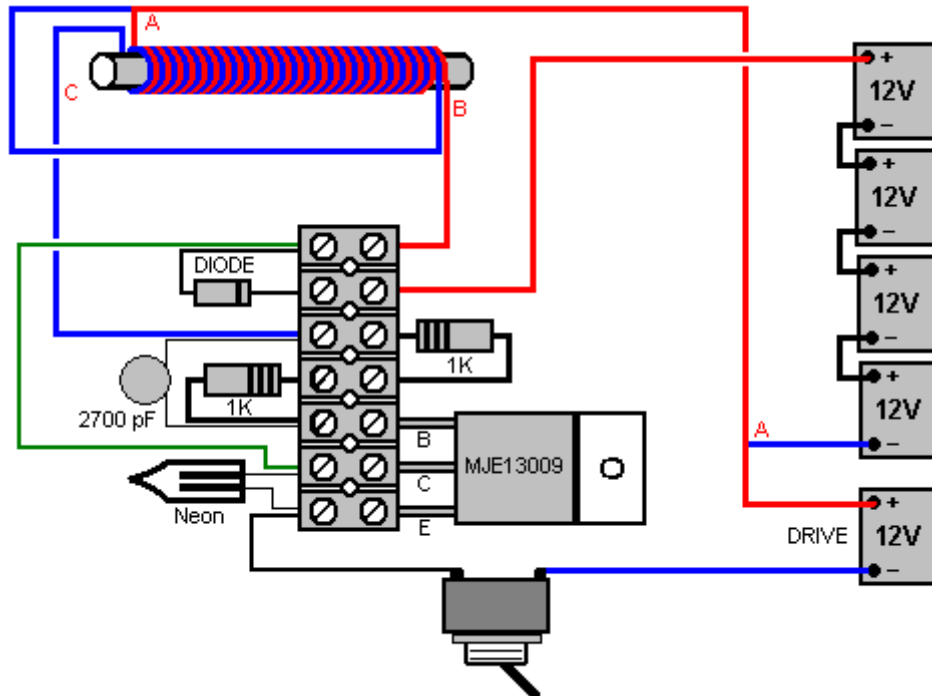
AND THIS CIRCUIT SWITCHES THE CHARGING VOLTAGE ON AND OFF VERY SHARPLY ABOUT 290,000 TIMES PER SECOND (104 MILLION TIMES PER HOUR) :



A MUCH MORE POWERFUL VERSION OF THIS STYLE OF CIRCUIT HAS BEEN PRODUCED BY "ALEXKOR" OF RUSSIA AND IN HIS VERSION A HIGH-PERFORMANCE TRANSISTOR GENERATES VOLTAGE SPIKES LARGE ENOUGH TO CHARGE FOUR BATTERIES FROM ONE DRIVING BATTERY :



THIS CIRCUIT IS AS SIMPLE AS YOU CAN GET. THE COIL IS JUST TWO STRANDS OF HALF-MILLIMETER ENAMELLED COPPER WIRE WOUND SIDE BY SIDE ON A CARDBOARD TUBE (PROBABLY 1.5 INCH DIAMETER). ONE RESISTOR TO FEED SOME BASE CURRENT, ONE CAPACITOR TO SET THE FREQUENCY AND ONE DIODE TO FEED THE CHARGING PULSES. THE NEON BULB IS ONLY THERE TO PROTECT THE TRANSISTOR. THE CHARGING CURRENT THROUGH ALL FOUR BATTERIES IS THE SAME AND THE LAYOUT MIGHT BE :



IT IS POSSIBLE TO RUN A LOAD OFF BATTERIES WHICH THEMSELVES ARE BEING CHARGED. ONE SYSTEM WHICH DOES THIS IS KNOWN AS THE "TESLA SWITCH" ALTHOUGH IT IS UNLIKELY THAT TESLA WAS EVER INVOLVED WITH THE CIRCUIT AS IT IS SHOWN IN THE CARLOS BENITEZ PATENT GB 14,311 OF 1916.

THE STAFF OF THE ELECTRODYNE CORPORATION OF AMERICA EXPERIMENTED WITH THIS CIRCUIT WHICH (SHOWN IN VOLUME 1 OF THE "MANUAL OF FREE ENERGY DEVICES AND

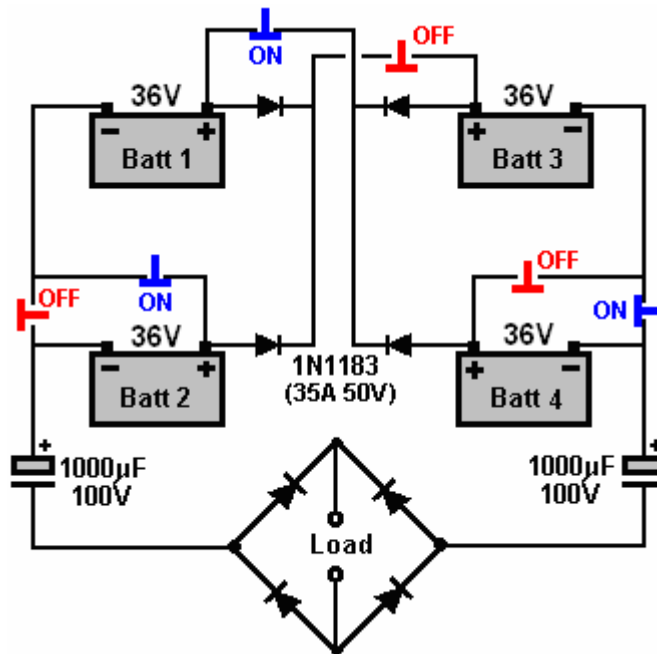


**SYSTEMS” 1986). THEY TESTED THE CIRCUIT FOR A PERIOD OF THREE YEARS USING ORDINARY 12-VOLT CAR BATTERIES. HOWEVER, THEIR TESTING ALTERED THE BATTERIES WHICH THEY WERE USING AND THOSE BATTERIES ENDED UP BEING 36-VOLT LEAD-ACID BATTERIES WHICH WERE “CONDITIONED”.**

**“CONDITIONED” BATTERIES OPERATE IN A VERY DIFFERENT WAY TO ORDINARY BATTERIES. THEY CHARGE MUCH FASTER, HAVE GREATER CAPACITY AND HIGHER VOLTAGE BUT LOSE THEIR CONDITIONING IF LEFT UNUSED FOR SOME TIME. A BATTERY BECOMES CONDITIONED IF PULSE-CHARGED AND THEN DISCHARGED REPEATEDLY. AFTER MANY SUCH CYCLES THE CONDITIONING CHANGE STARTS TO HAPPEN.**

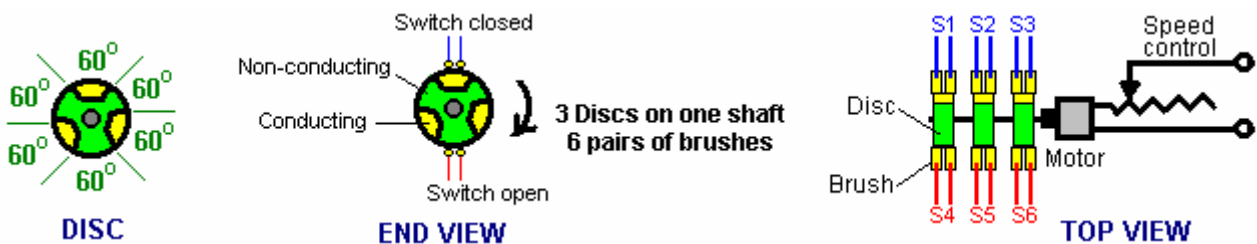
**SO, PLEASE BEAR IN MIND THAT THE ELECTRODYNE CORPORATION STAFF USED THEIR BATTERIES REPEATEDLY FOR THREE YEARS, AND AT THAT STAGE THEIR BATTERIES WERE 36-VOLT AND CONDITIONED – THAT IS PROBABLY WHY NOBODY ELSE HAS MANAGED TO GET THEIR CIRCUIT OPERATING AS THEY DESCRIBED IT.**

**THIS IS THE CIRCUIT WHICH THEY USED, AND IT NEEDS TO HAVE AN INDUCTIVE LOAD SUCH AS A MOTOR, BUT IT CAN OUTPUT THIRTY HORSEPOWER WHICH IS 22 KILOWATTS.**

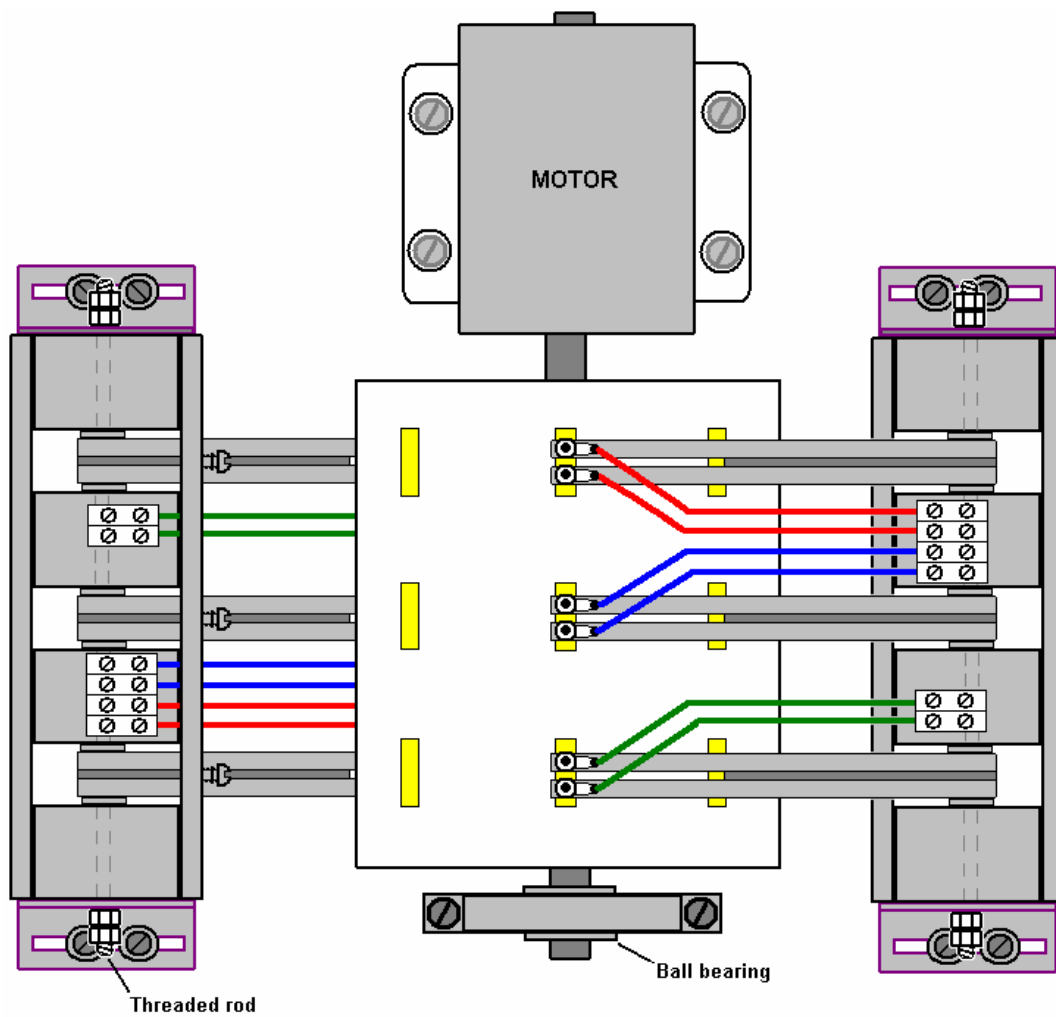


**THE DIODES USED ARE IMPORTANT AS THE 1N1183 DIODE BREAKS DOWN WHEN REVERSE BIASED, PASSING A SHARP VOLTAGE PULSE BACK TO THE BATTERY. BEING CONDITIONED, THE BATTERIES RECHARGE VERY RAPIDLY.**

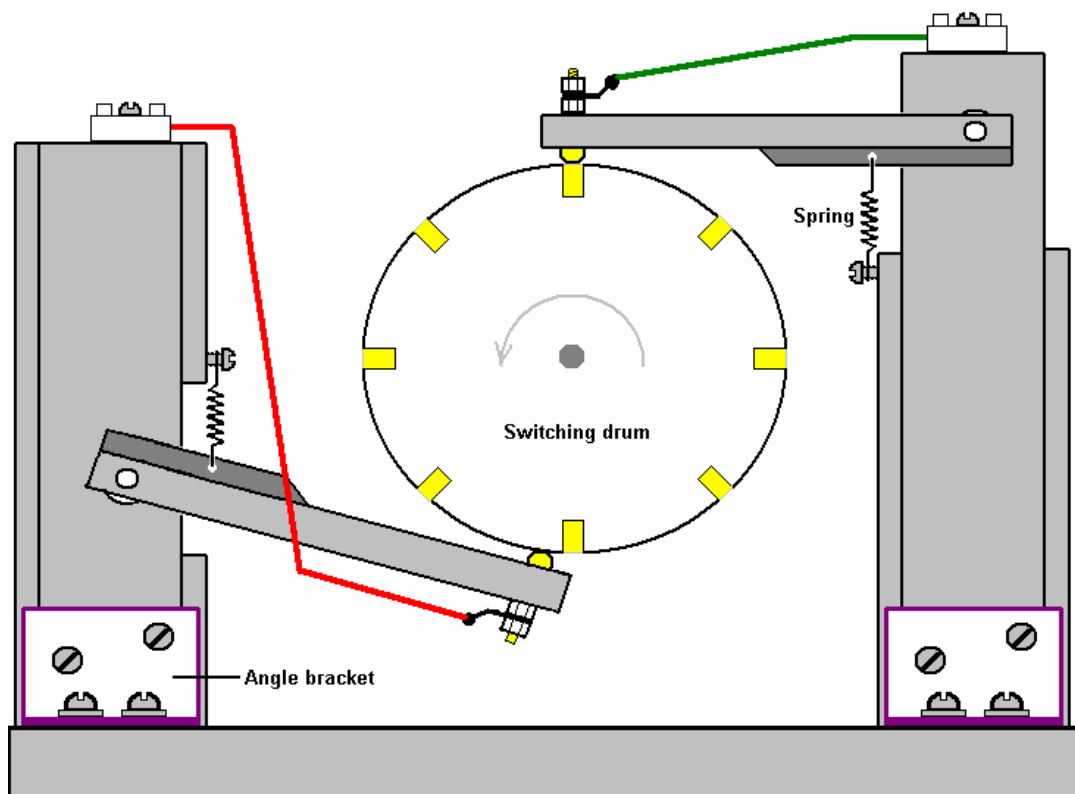
**SHARP SWITCHING IS ALWAYS IMPORTANT WITH FREE-ENERGY CIRCUITS AND THE ELECTRODYNE CORPORATION STAFF USED MECHANICAL SWITCHING :**



**IF MECHANICAL SWITCHING IS TO BE BUILT, THEN PERHAPS DOING IT LIKE THIS MIGHT BE A SUITABLE METHOD :**



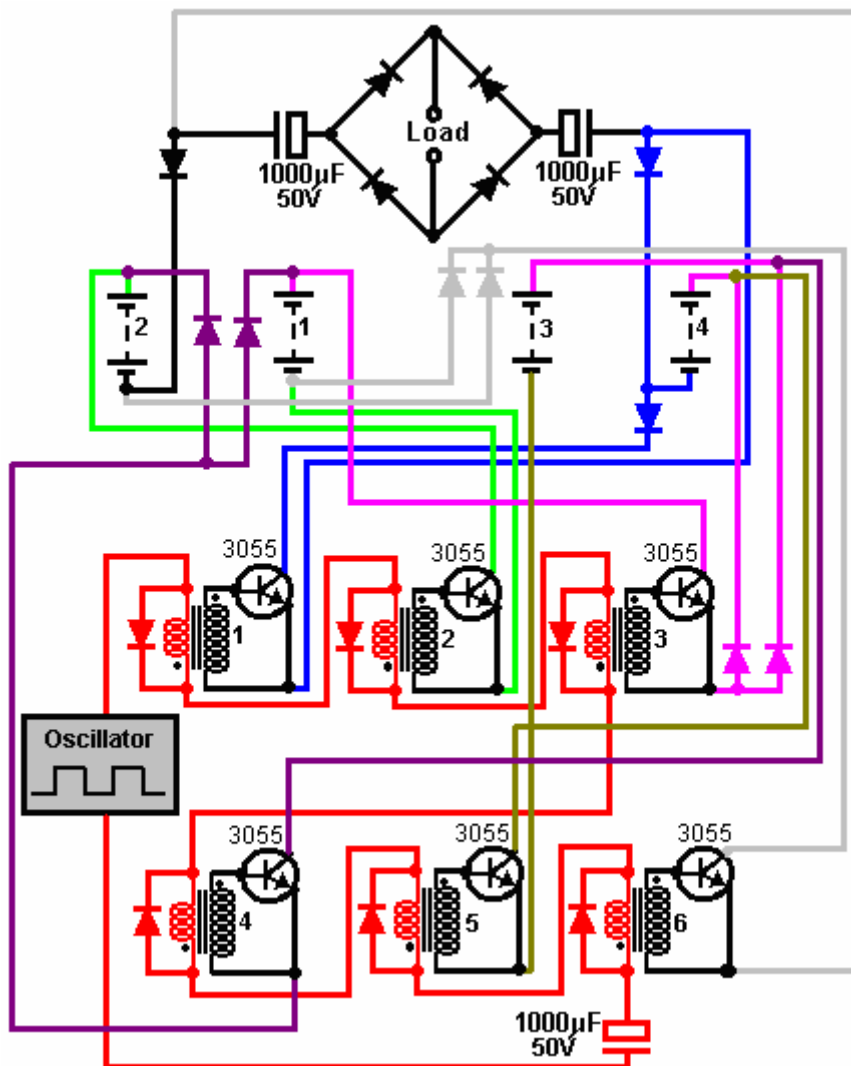
**TOP VIEW**



**SIDE VIEW**

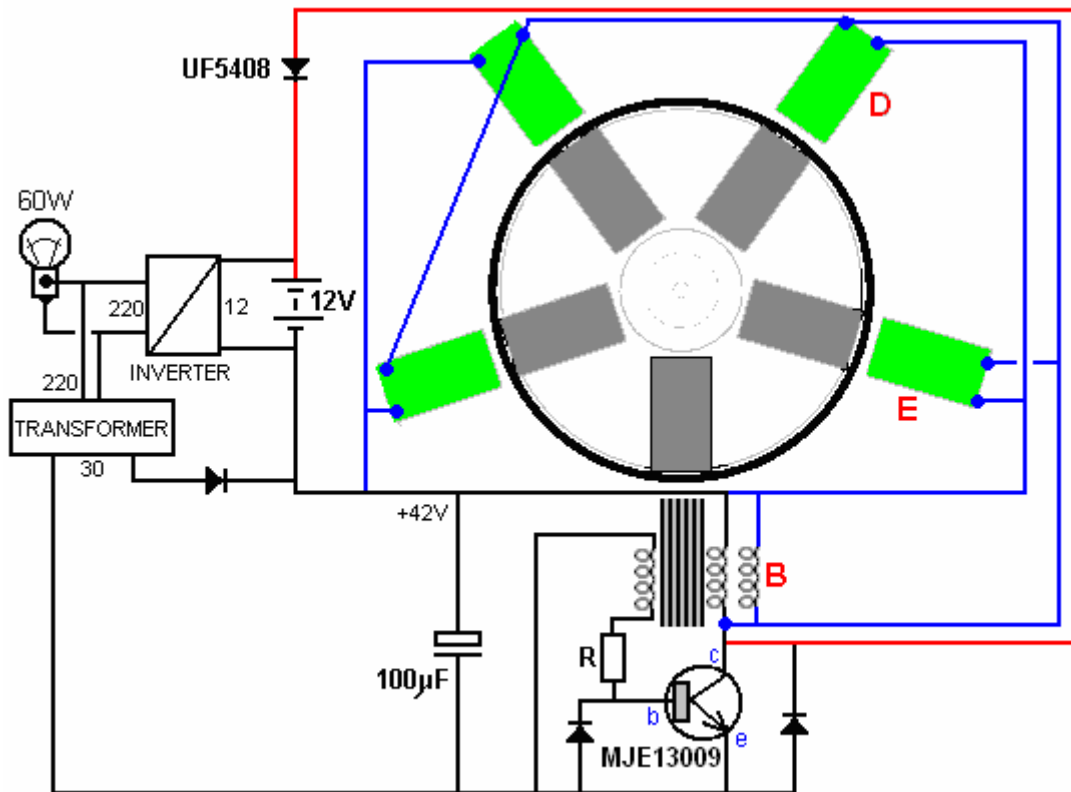
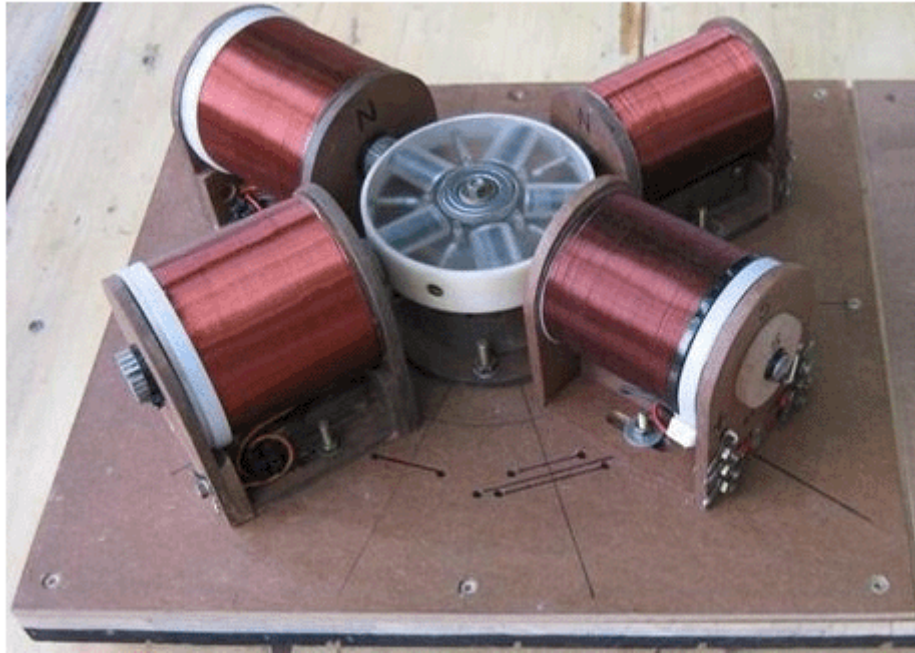
THIS DESIGN GIVES ON – OFF – PAUSE – ON – OFF – PAUSE ..... AND THE SWITCHING RATE IS RECOMMENDED TO BE BETWEEN 100 Hz AND 800 Hz AND THE ELECTRODYNE STAFF FOUND THAT THE LOAD COULD BE POWERED INDEFINITELY WITH THIS ARRANGEMENT.

HERE IS A SOLID-STATE VERSION OF THE CIRCUIT :



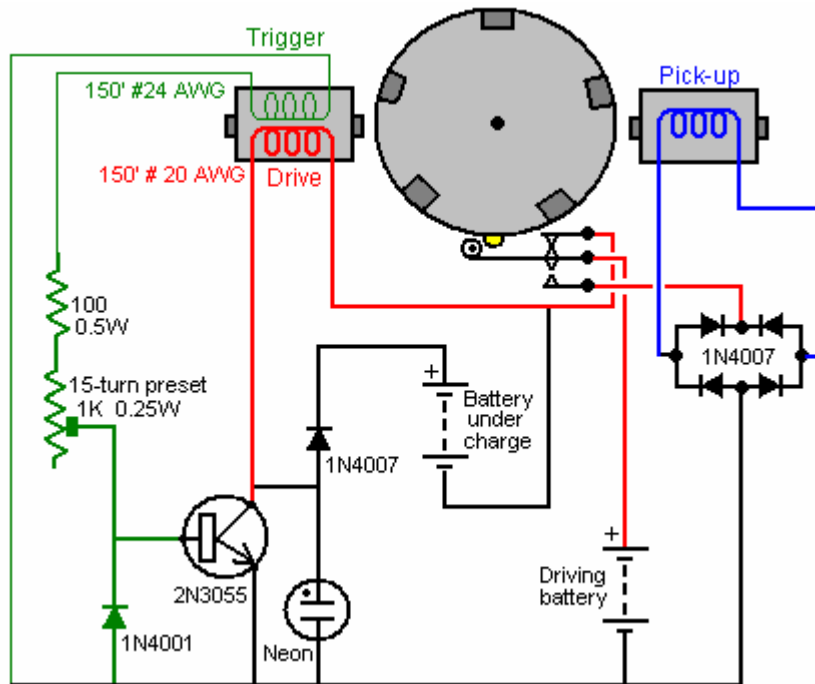
THE TRANSISTORS ARE TIP3055 AND ARE SWITCHED ON AND OFF BY AUDIO TRANSFORMERS (PERHAPS RADIO SHACK #273-1380) WITH THE DIRECTION OF THE DIODES SHOWN IN RED CONTROLLING THE ACTION, ALTHOUGH USING AN INVERTER FOR THREE OF THE TRANSFORMERS WOULD BE AN ALTERNATIVE. THE 1N4148 TRANSFORMER DIODES LIMIT THE TRANSFORMER VOLTAGE TO 0.7 VOLTS AND SO KEEP THE SWITCHING SHORT AND FAST. THE OTHER DIODES ARE 1N1183.

ANOTHER DESIGN WHICH KEEPS A BATTERY FULLY CHARGED WHILE POWERING A (MUCH LOWER) LOAD IS SHOWN BY A SOUTH AFRICAN DEVELOPER. HIS DESIGN HAS A CONTINUOUS POWER OUTPUT OF 40 WATTS AND IT LOOKS LIKE THIS :



**IN THIS DESIGN, THE ROTOR IS DRIVEN AROUND BY POWERFUL PULSES OF CURRENT THROUGH THE TWO COILS MARKED "B". THE TRANSISTOR IS SWITCHED ON BY CURRENT PASSING THROUGH THE RESISTOR "R", CAUSED BY A PASSING ROTOR MAGNET.**

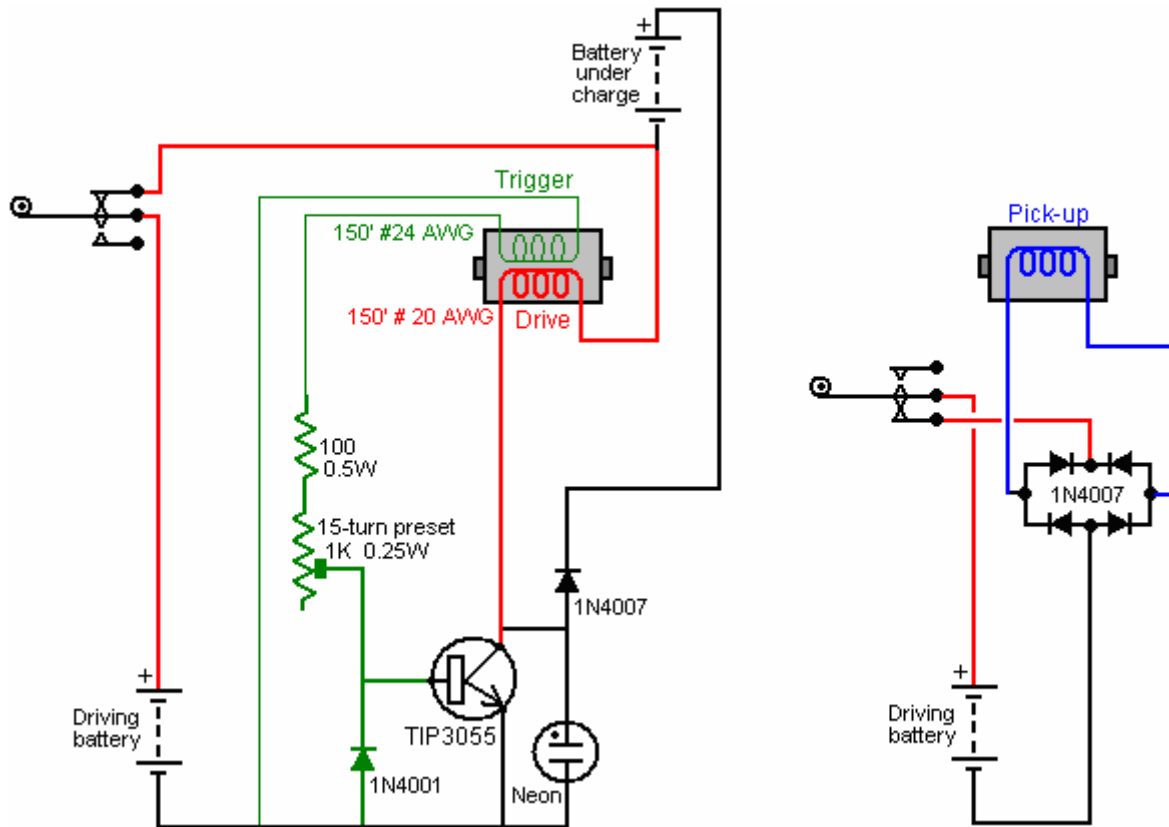
**A SIMPLE, MODIFIED JOHN BEDINI STYLE CHARGING CIRCUIT IS SELF-POWERED AS IT CHARGES ITS OWN BATTERY WHILE CHARGING A SECOND BATTERY :**



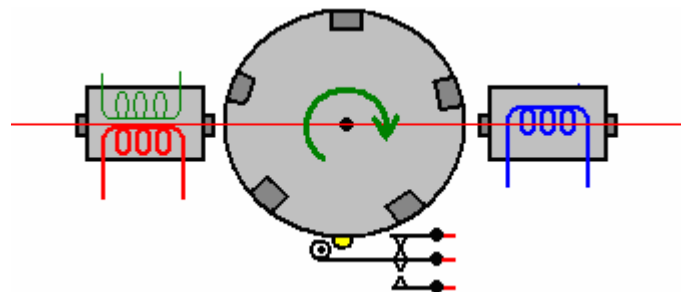
**THIS CIRCUIT IS SUBTLE. THE CIRCUIT ON THE LEFT FEEDS PULSES INTO THE BATTERY UNDER CHARGE FIVE TIMES PER REVOLUTION IN THE SAME WAY AS A BEDINI CIRCUIT. HOWEVER, ONCE PER REVOLUTION THE MICROSWITCH DUMPS CHARGE FROM ONE MAGNET PASSING THE BLUE PICK-UP COIL ON THE RIGHT, STRAIGHT INTO THE DRIVE BATTERY, MAINTAINING ITS CHARGE. THE MICROSWITCH LOOKS LIKE THIS:**



**IT IS PROBABLY EASIER TO UNDERSTAND THE CIRCUIT IF THE TWO PARTS ARE SHOWN SEPARATELY:**



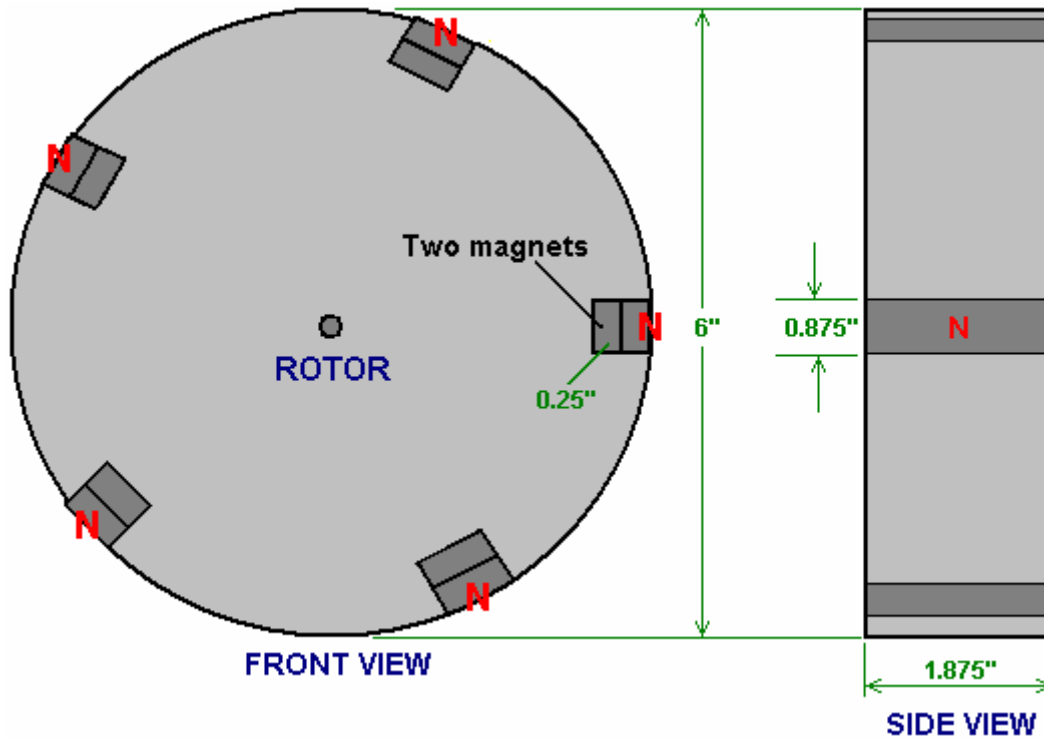
**BECAUSE THE PICK-UP COILS ARE ALIGNED AND THERE IS AN ODD NUMBER OF ROTOR MAGNETS, THE PULSES FROM THE TWO COILS ARE ALWAYS AT DIFFERENT TIMES:**



**CONSEQUENTLY, THE TWO PARTS OF THE CIRCUIT OPERATE INDEPENDENTLY AND SO THE MECHANICAL SWITCH CAN SELECT BETWEEN THEM.**

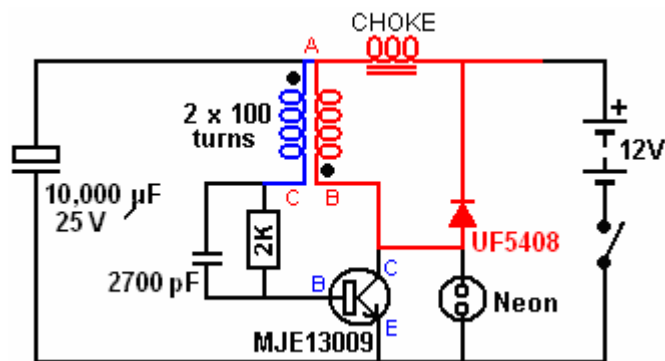
**ADDITIONAL OUTPUT COILS CAN BE POSITIONED AT 72-DEGREE ANGLES AROUND THE ROTOR WHICH IS 48 mm THICK AND WEIGHING 2 KILOGRAMS, BEING CONSTRUCTED FROM LAMINATE FLOORING MATERIAL AND HAVING A 6-INCH (150 mm) DIAMETER. THE ROTOR IS PUSHED AROUND WHEN THE TRANSISTOR SWITCHES ON IN RESPONSE TO THE SIGNAL FROM THE TRIGGER COIL CAUSED BY A MAGNET PASSING BY THE COIL.**

**HOWEVER, IT IS LIKELY THAT THE THICKNESS OF THIS PARTICULAR ROTOR WAS CAUSED BY THE USUAL FACTOR OF WHAT WAS TO HAND AT THE TIME AND THE DESIRE TO MATCH THE SIZE OF THE MAGNETS USED :**



**A SUGGESTION :**

I HAVE SELF-CHARGED A 12-VOLT 12 Amp-Hour LEAD-ACID BATTERY WITH JUST AN OSCILLATOR AND A CHOKE. THE CHARGING RATE WAS HIGH AND THE BATTERY CONTINUED CHARGING AFTER THE CIRCUIT WAS SWITCHED OFF. IT SEEMS LIKELY TO ME THAT THIS COULD BE REPLICATED USING A GOOD PULSE-CHARGER, SO PERHAPS THE ALEXKOR CHARGING CIRCUIT SHOWN EARLIER WOULD WORK WELL, WITH THE CHOKE BEING PERHAPS TWENTY TURNS OF REASONABLY THICK INSULATED WIRE CONNECTED LIKE THIS :



HERE, THE PULSING CIRCUIT HAS A SMOOTHED POWER SUPPLY FORMED BY THE CHOKE AND THE LARGE CAPACITOR AND THE CHARGING PULSES ARE JUST DIRECTED TO THE DRIVE BATTERY. I HAVE NOT YET TRIED THIS PARTICULAR CIRCUIT AND THIS IS NOT A RECOMMENDATION THAT YOU SHOULD TRY IT EITHER AS THIS PRESENTATION IS FOR INFORMATION PURPOSES ONLY.

NOTES : <http://www.free-energy-info.com/Batteries.pdf>

VIDEO : <https://youtu.be/LmqpyCuugNg>

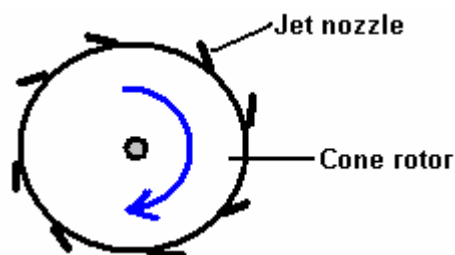
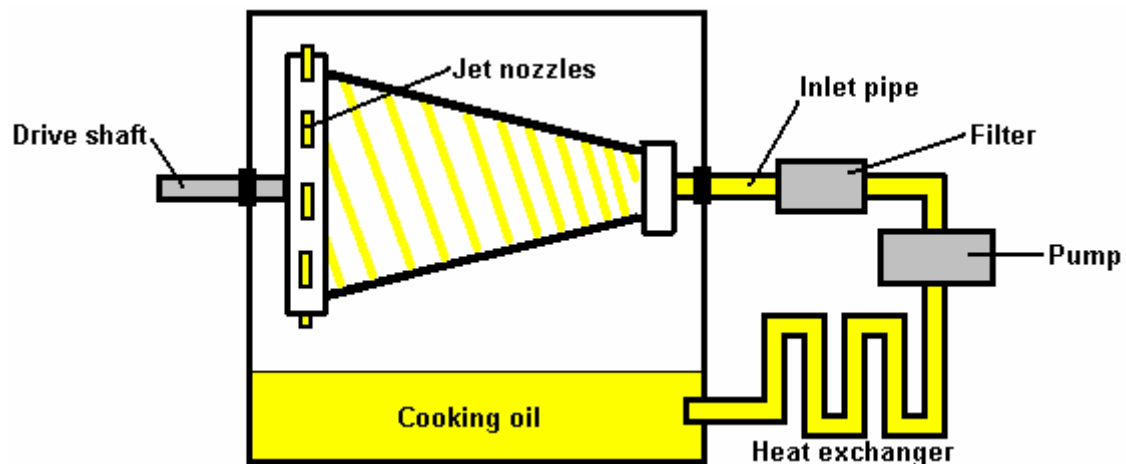
## *The Self-powered Generator of Donnie Watts*

IN 1992, RICHARD CLEM OF TEXAS, DEMONSTRATED A SELF-POWERED ENGINE OF AN UNUSUAL TYPE. THIS ENGINE WHICH HE HAD BEEN DEVELOPING FOR TWENTY YEARS OR MORE, WEIGHS ABOUT 200 POUNDS (90 KILOS) AND IT GENERATED A MEASURED OUTPUT OF 350 HORSEPOWER CONTINUOUSLY OVER THE FULL PERIOD OF A NINE-DAY SELF-POWERED TEST. ALTHOUGH THIS ENGINE RUNS FROM 1800 TO 2300 RPM AND SO IS ESPECIALLY SUITED TO POWERING AN ELECTRICAL GENERATOR, RICHARD DID INSTALL ONE IN A CAR AND ESTIMATED THAT THE CAR WOULD RUN FOR 150,000 MILES WITHOUT ANY NEED FOR ATTENTION AND WITHOUT ANY KIND OF FUEL. RICHARD SAID THAT HIS CAR HAD REACHED A SPEED OF 105 MPH.

JUST AFTER RECEIVING FUNDING TO PRODUCE HIS ENGINE, RICHARD DIED SUDDENLY AND UNEXPECTEDLY AT AROUND THE AGE OF 48. THE DEATH CERTIFICATE HAD "HEART ATTACK" WRITTEN ON IT AS THE CAUSE OF DEATH. HIS DEATH WAS REMARKABLY CONVENIENT FOR THE OIL COMPANIES WHICH WOULD HAVE LOST A MAJOR AMOUNT OF MONEY THROUGH REDUCED FUEL SALES IF RICHARD'S CAR HAD GONE INTO PRODUCTION.

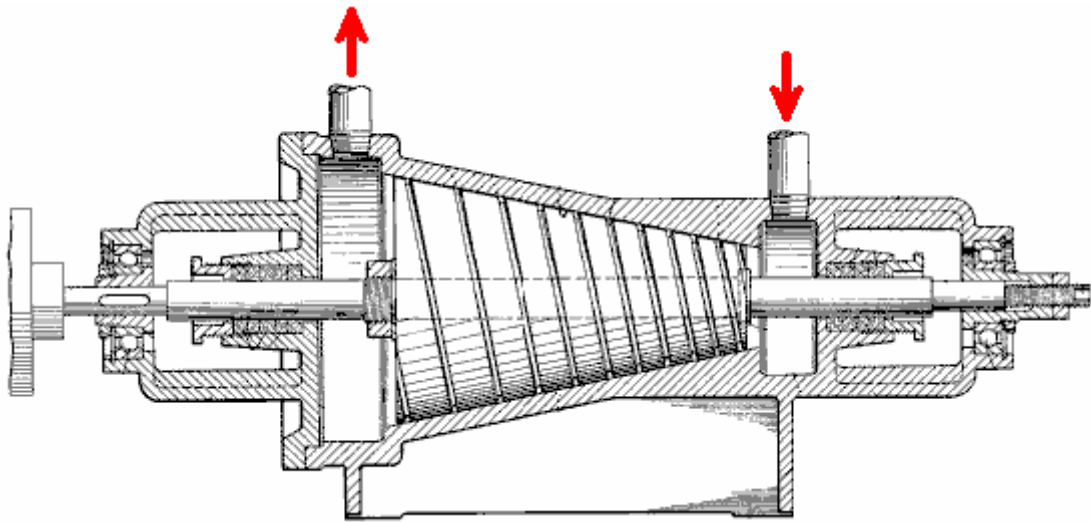
THE CLEM MOTOR IS UNUSUAL IN THAT IT IS A ROTARY TURBINE STYLE DESIGN WHICH RUNS AT A TEMPERATURE OF 300°F (140°C) AND BECAUSE OF THAT HIGH TEMPERATURE, USES COOKING OIL AS ITS OPERATIONAL FLUID DUE TO ITS HIGHER BOILING POINT. THE MOTOR IS UNUSUAL IN THAT IT IS A ROTARY TURBINE STYLE DESIGN.

IN BROAD OUTLINE, THE OIL IS PUMPED THROUGH A PIPE AND INTO THE NARROW END OF A CONE SHAPED ROTOR. THE ENGINE IS STARTED BY A PUMP PUMPING OIL INTO THE ENGINE UNTIL THE SELF-SUSTAINING ROTATIONAL SPEED IS REACHED. THE RAPID SPINNING OF THE CONE CAUSES OIL TO BE DRAWN UP GROOVES CUT INTO THE CONE (INSIDE THE OUTER CONICAL HOUSING) AND EXIT THROUGH ANGLED NOZZLES AT THE LARGE END OF THE CONE, PROVIDING SELF-SUSTAINING THRUST THERE.





THE OPERATING PRESSURE PRODUCED BY THE PUMP IS 300 TO 500 PSI. RICHARD DID NOT ATTEMPT TO PATENT HIS ENGINE AS US PATENT 3,697,190 OF 1972 WAS SO CLOSE IN DESIGN THAT RICHARD FELT THAT HE WOULD NOT BE GRANTED A PATENT.



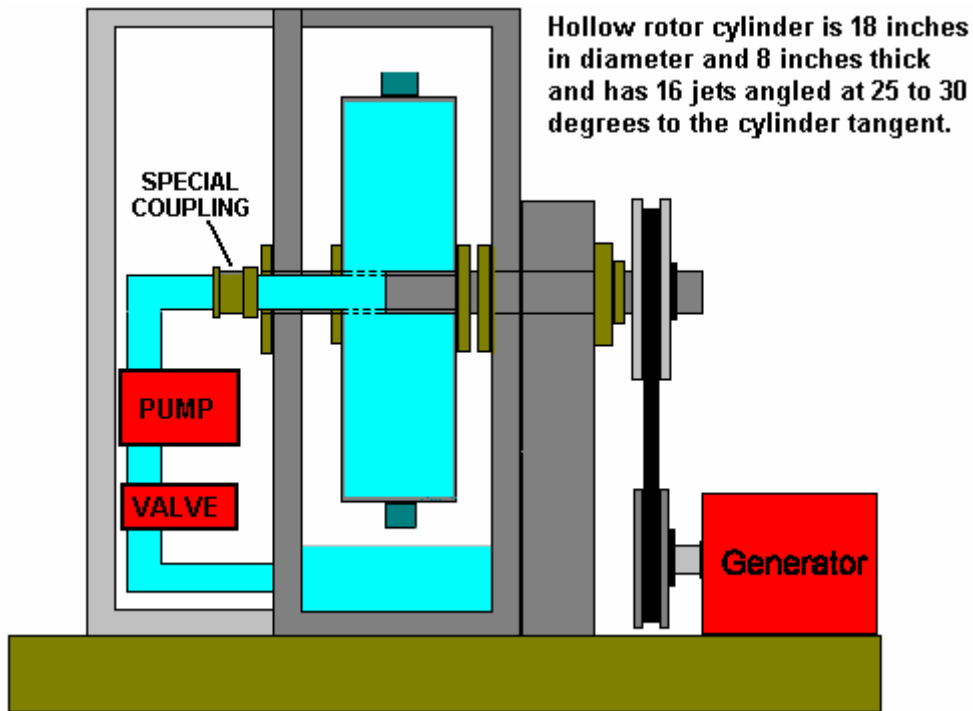
IT APPEARS THAT THE CLEM ENGINE COULD ALSO BE USED AS A HEATER OR IT COULD PROVIDE WATER PURIFICATION AS WELL AS GENERATING POWER.

A SIMPLIFIED VERSION OF THE CLEM ENGINE HAS BEEN PRODUCED BY DONNIE WATTS. HIS VERSION RUNS COLD AND IS SIMPLE ENOUGH FOR HOME CONSTRUCTION. THE REALLY IMPORTANT THING TO UNDERSTAND ABOUT DONNIE WATTS' ENGINE IS THAT IT IS AN **EXPONENTIAL** POWER ENGINE. THE OUTPUT POWER IS PROPORTIONAL TO THE **SQUARE** OF THE ROTATIONAL SPEED, SO IF YOU DOUBLE THE REVOLUTION SPEED THEN THE OUTPUT POWER QUADRUPLES. ALSO, THE POWER OUTPUT IS PROPORTIONAL TO THE **SQUARE** OF THE ROTOR DIAMETER, SO IF YOU DOUBLE THE DIAMETER OF THE ROTOR CYLINDER, THEN THE OUTPUT POWER QUADRUPLES.

THIS MEANS THAT IF YOU DOUBLE THE RPM AND DOUBLE THE DIAMETER, THEN THE OUTPUT POWER GOES UP BY A FACTOR OF SIXTEEN TIMES !! TO GIVE YOU AN IDEA OF THE POWER OUTPUT, A TINY 10-INCH (250mm) DIAMETER CYLINDER VERSION OF THE MOTOR CAN OUTPUT 7.5 KILOWATTS, SO IT CAN EASILY DRIVE A GENERATOR WHICH CAN POWER A HOUSEHOLD. BECAUSE THE OUTPUT POWER KEEPS GOING UP AS THE MOTOR INCREASES IN SPEED, IT IS VITAL TO FIT AND ADJUST A VALVE WHICH LIMITS THE RATE OF WATER FLOW INTO THE ENGINE. THIS IS A BASIC COP=4 MOTOR, THAT IS, THE OUTPUT POWER IS FOUR TIMES GREATER THAN THE INPUT POWER.

JUST LIKE STARTING A CAR ENGINE, IT IS NECESSARY TO START THE MOTOR WITH A 500-WATT WATER PUMP, BUT WHEN THE ROTATION REACHES 60 RPM THE SUCTION INSIDE THE CYLINDER IS ENOUGH TO OPERATE WITHOUT THE PUMP (ALTHOUGH THE PUMP CAN BE LEFT ON IF YOU WANT TO DO THAT). HOWEVER, IT IS VITAL TO HAVE A VALVE WHICH LIMITS THE RATE OF INFLOW OF WATER INTO THE MOTOR BECAUSE IF YOU DON'T THEN THE MOTOR WILL ACCELERATE CONTINUOUSLY UNTIL IT BREAKS DOWN FROM EXCESSIVE INTERNAL PRESSURE.

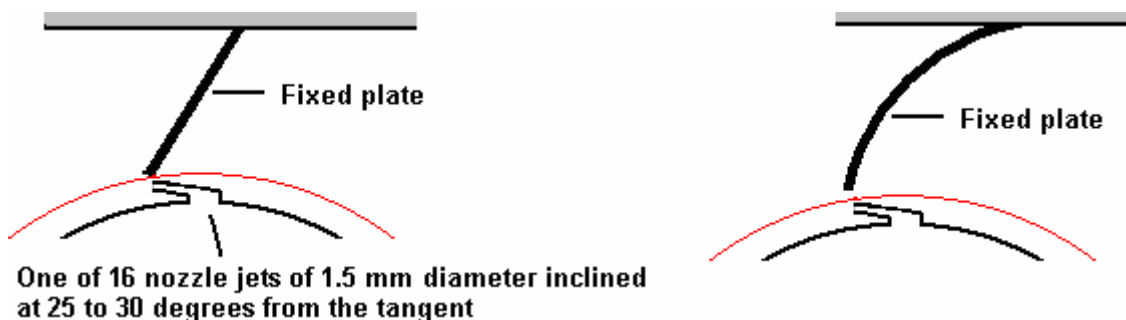
IN PRINCIPLE, THE MOTOR DESIGN IS LIKE THIS :



**MOST GENERATORS NEED TO BE SPUN AT 3000 RPM OR SLIGHTLY FASTER. THAT SPEED CAN BE ACHIEVED BY BELT GEARING BETWEEN THE MOTOR'S OUTPUT SHAFT AND THE GENERATOR'S INPUT SHAFT. A GENERATOR OF THAT GENERAL TYPE COULD LOOK LIKE THIS 6.5 KVA UNIT COSTING £325 IN 2017 :**



**HOWEVER, THE POWER OUTPUT OF THE MOTOR CAN BE INCREASED FURTHER BY THE INCLUSION OF STAINLESS STEEL THRUST BAFFLES ON THE INSIDE OF THE OUTER HOUSING. THE IDEA IS TO HAVE THE JETS OF WATER STRIKE A FIXED SURFACE AT RIGHT ANGLES TO THE JET OF WATER AND AS CLOSE TO THE JET NOZZLE AS IS POSSIBLE :**



**THE CURVED PLATE VERSION IS THEORETICALLY MORE EFFICIENT BUT THE DIFFERENCE IS SO SLIGHT THAT FLAT PLATES ARE OFTEN USED. THE MOTOR CAN BE BUILT IN VARIOUS CONFIGURATIONS :**



**THE DRAWINGS ASSOCIATED WITH THIS DEVICE WHICH DONNIE WATTS INSISTS ON CALLING A "CENTRIFUGAL ENERGY AMPLIFICATION AND CONVERSION UNIT" OR "CEACU" FOR SHORT, ARE NOT THE EASIEST TO ALLOW VISUALISATION OF THE FINISHED SHAPE AND HOW BEST TO CONSTRUCT IT.**

**THE PATENT APPLICATION BY DONNIE WATTS ON THE 25<sup>TH</sup> SEPTEMBER 1989 DESCRIBES THE OPERATION OF A RATHER LARGE VERSION OF THE DEVICE :**

## **DESCRIPTION AND WORKING DETAILS OF THE CENTRIFUGAL ENERGY AMPLIFICATION AND CONVERSION UNIT**

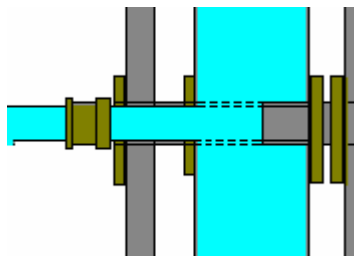
### **DESCRIPTION OF THE UNIT**

THE UNIT CONSISTS OF TWO CIRCULAR STEEL PLATES 3mm THICK AND FOUR FEET (1220mm) OR LARGER IN DIAMETER, FORMING THE OUTSIDE OF A WHEEL. THESE PLATES ARE PLACED SIX INCHES (150mm) APART ON A HOLLOW AXLE THREE INCHES (75mm) IN DIAMETER. BETWEEN THESE TWO PLATES ARE FOUR V-SHAPED PIECES OF SHEET METAL SPACED PRECISELY TO FORM SIX-INCH (150mm) SPOKES WHICH WILL DIRECT WATER FROM HOLES IN THE CENTRAL AXLE TO THE OUTER RIM, WHILE THE INSIDE OF THE V WILL FORM AIR POCKETS BETWEEN THE SPOKES. THE ENDS OF THE V MUST NOT BE CLOSER THAN TWO INCHES (50mm) TO THE OUTER RIM OF THE WHEEL. ALL FOUR V-SHAPED UNITS MUST BE PRECISELY PLACED IN BALANCE WITH EACH OTHER AND WELDED SECURELY TO KEEP THE AIR POCKETS AND WATER POCKETS SEPARATED.

THE OUTER RIM OF THE WHEEL IS MADE OF ONE PIECE OF 3mm THICK SHEET METAL SIX INCHES (150mm) WIDE, FORMED IN A PERFECT CIRCLE AND WELDED SECURELY TO THE EDGE OF THE CIRCULAR PLATES SO THAT THE AREA INSIDE IS COMPLETELY ENCLOSED. ON THIS OUTER RIM, DIRECTLY IN THE CENTRE, ARE PLACED BETWEEN FOUR AND FIFTY WATER JETS ABOUT THE SIZE OF A FOOTBALL NEEDLE, SLANTED SHARPLY TO ONE SIDE TO GIVE THE WHEEL A TURNING MOTION. (THE OPTIMUM NUMBER OF WATER JETS ON THE OUTER RIM DEPENDS ON THE APPLICATION, BUT THE VOLUME OF WATER BEING EXPELLED THROUGH THE JETS MUST NOT EXCEED 66% OF THE VOLUME OF WATER WHICH CAN PASS THROUGH THE OPENINGS IN THE CENTRAL AXLE. THE REASONS FOR THIS ARE :

1. THE WATER GOING OUT OF THE JETS WOULD BE GOING OUT FASTER THAN THE WATER ENTERING THE WHEEL AND THAT WOULD RESULT IN NO PRESSURE NEAR THE OUTER RIM – PRESSURE WHICH IS ESSENTIAL FOR THE RUNNING OF THE MOTOR.
2. THE WATER ENTERING THE WHEEL MUST GO IMMEDIATELY INTO A PUDDLE OF WATER – THE LONGER IT REMAINS AS A STREAM OF WATER RATHER THAN A PUDDLE OF WATER, THE MORE ENERGY IS WASTED.

BECAUSE THE WATER BEING EJECTED THROUGH THE EXTERIOR JETS IS ALWAYS LESS THAN THE AMOUNT OF WATER AVAILABLE TO THE JETS, A PRESSURE BUILD UP WILL OCCUR NEAR THE OUTER RIM. A SPRING-LOADED PRESSURE RELEASE JET (NOT SHOWN) MUST BE BUILT INTO THE EXTERIOR RIM ALONG WITH THE OTHER JETS, BUT FACING IN THE OPPOSITE DIRECTION TO KEEP THE WHEEL FROM OVER-SPINNING IF THE LOAD (GENERATOR) IS DROPPED OR DOES NOT TAKE ENOUGH POWER OFF TO KEEP THE WHEEL SPEED CONSTANT. THERE ARE SEVERAL OTHER WAYS TO CONTROL THE WHEEL SPEED.



THE CENTRAL AXLE HAS WATER GOING INTO IT AT ONE END AND AN ELECTRICAL GENERATOR ATTACHED TO IT AT THE OTHER END. TOUCHING THE WHEEL ON BOTH SIDES ARE ROBUST ROLLER BEARINGS OR BALL BEARINGS FULLY SUPPORTED SO THAT THE WHEEL IS HELD ONE FOOT (300mm) ABOVE THE FLOOR. WATER IS FORCED INTO THE AXLE BY A HIGH-VOLUME LOW-POWER CENTRIFUGAL FORCE PUMP OF ABOUT HALF OF A HORSEPOWER AND AT A RATE OF 20 US GALLONS PER MINUTE (75 LITRES PER MINUTE) DEPENDING ON SPEED AND POWER REQUIREMENTS. THE WATER PUMP IS INTENDED

**PRIMARILY TO START THE MOTOR BUT SINCE THAT POWER IS ADDED TO THE POWER OUTPUT OF THE BIG WHEEL, DONNIE WATTS PREFERS TO LEAVE THE PUMP RUNNING DURING OPERATION.**

**THE ENTIRE UNIT (DEPENDING ON APPLICATION) CAN BE PUT INTO A CONTAINMENT SHELL WHICH CAN BE PRESSURISED OR EVACUATED OF AIR. IF THE UNIT IS TO BE OPERATED IN AN OPEN FIELD, THEN THE OUTER SHELL CAN BE PRESSURISED AND THE STARTING PUMP CAN BE REMOVED OR TURNED OFF ONCE THE MOTOR IS RUNNING BY ITSELF. IF THE UNIT IS TO BE OPERATED IN A GARAGE OR NEAR A HOUSE, IT WOULD BE OPERATED AT ATMOSPHERIC PRESSURE OR IN A VACUUM, IN WHICH CASE IT IS NECESSARY TO LEAVE THE PUMP ATTACHED AND RUNNING SO THAT AIR BUBBLES DO NOT FORM NEAR THE CENTRAL AXLE.**

**ALSO, THE CONTAINMENT SHELL MUST BE ABLE TO COLLECT ABOUT TEN INCHES (250mm) OF WATER IN THE BOTTOM AS A RESERVOIR READY TO BE PUMPED BACK THROUGH THE WHEEL.**

**IMPORTANT NOTES :**

**1. THE SPEED AND HORSEPOWER CURVE OF A SELF-ENERGISED MOTOR IS EXACTLY THE OPPOSITE OF THAT OF A NORMAL MOTOR. A NORMAL MOTOR REACHES A POWER PEAK AND THEN STARTS DOWNWARDS. THE POWER CURVE OF A SELF-ENERGISED MOTOR STARTS WITH A SLOW UPWARD CLIMB AND THEN ACCELERATES RAPIDLY UNTIL THE POWER LINE IS ALMOST VERTICAL (JUST PRIOR TO DISINTEGRATION IF SPEED CONTROL IS NOT BEING USED).**

**THIS MOTOR WILL NOT GENERATE MORE ENERGY THAN IS PUT INTO IT UNTIL IT REACHES 60 TO 100 RPM, DEPENDING ON DESIGN AND SIZE.**

**2. AS SPEED INCREASES, AIR BUBBLES WHICH OCCUR IN THE WATER, WILL ACCUMULATE IN THE AIR POCKETS INSIDE THE WHEEL. THE AIR POCKETS SERVE ONLY TO HOLD THE PRESSURE STEADY AND GIVE A GENTLE PERSUASIVE PRESSURE THAT IS MULTI-DIMENSIONAL INSTEAD OF JUST CENTRIFUGAL, RESULTING IN A STEADY PRESSURE ON THE JETS. IT IS JUST NOT PHYSICALLY POSSIBLE FOR THE UNIT TO BLOW ITSELF APART BY ITS OWN POWER.**

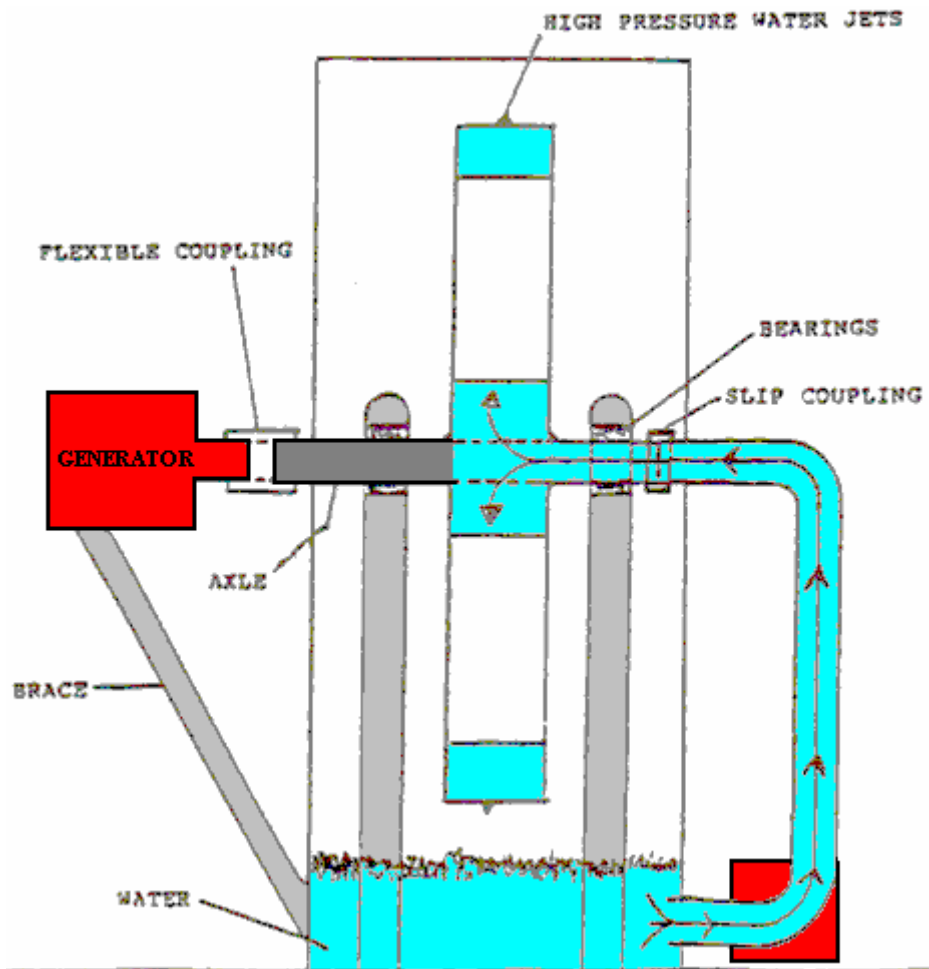
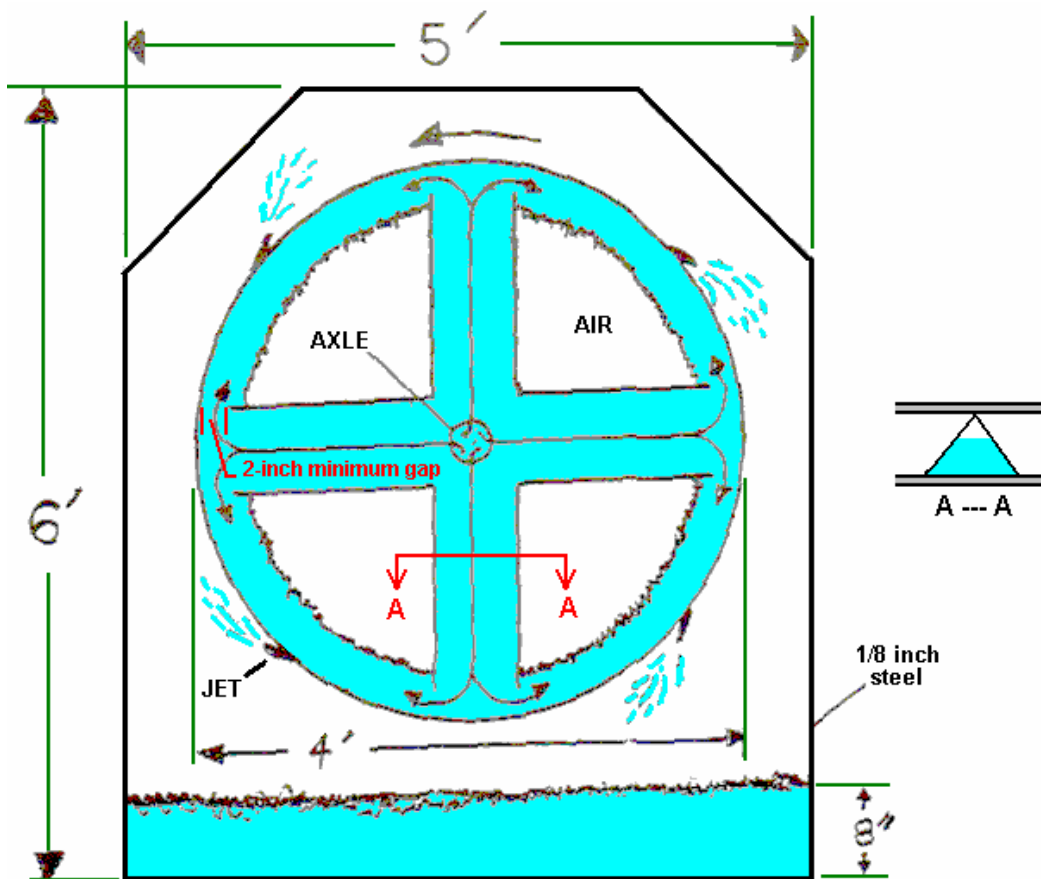
**3. THE PRESSURISED AIR IN THE OUTER RIM OF THE WHEEL IS ESSENTIAL BECAUSE IT PUSHES IN ALL DIRECTIONS AT ONCE, WHILE THE WATER PUSHES IN ONLY ONE DIRECTION. IN OTHER WORDS, CENTRIFUGALLY FORCED WATER IS NOT INTERESTED IN FINDING ITS WAY THROUGH THE JETS, IT IS ONLY INTERESTED IN PRESSING DIRECTLY AGAINST THE OUTER RIM. THE WATER HOLDS THE AIR IN PLACE AT THE SAME TIME THAT THE AIR IS FORCING THE WATER THROUGH THE JETS AND THE WATER COMING DOWN FROM THE AXLE KEEPS REPLACING THE EXPELLED WATER. THIS IS WHY DONNIE KEEPS SAYING OVER AND OVER AGAIN "MAKE IT BIG ENOUGH, MAKE IT BIG ENOUGH", OTHERWISE IT WOULD BE NO MORE WORKABLE THAN A SMALL DAM.**

**4. IN ORDER FOR THIS MOTOR TO WORK PROPERLY, THE WATER COMING DOWN THE SPOKES MUST NOT BE RESTRICTED IN ANY WAY UNTIL IT REACHES THE OUTER RIM. THIS IS WHY WE HAVE SIX-INCH SPOKES. THE WATER RESTING AGAINST THE OUTER RIM CANNOT BE MOVING ABOUT RAPIDLY; WE WANT THE WATER SITTING AS STILL AS POSSIBLE AND UNDER AS MUCH PRESSURE AS POSSIBLE.**

**5. THERE ARE TWO PRIMARY FACTORS WHICH MUST NOT BE ALTERED IN THE DESIGN OF THIS WHEEL, OTHERWISE IT WILL NOT WORK :**

**1. THE SPOKES MUST BE VERY LARGE AND FREE OF OBSTRUCTIONS, BECAUSE LIQUID IN GENERAL TENDS TO CLING TO ANYTHING IT GETS NEAR.**

- 2. THE SPEED OF THE WHEEL TURNING IS ESSENTIAL TO THE CENTRIFUGAL FORCE REQUIRED TO BUILD UP PRESSURE NEAR THE OUTER RIM AND FOR THAT REASON THE JETS IN THE OUTER RIM MUST BE SMALL IN DIAMETER AND IN LARGE NUMBERS SO THAT THE CONCENTRATION IS ON SPEED INSTEAD OF ON VOLUME (BUT THE VOLUME MUST NOT EXCEED 66% OF THE WATER WHICH CAN ENTER AT THE CENTRAL AXLE).**
  
- 6. REGARDING THE WORKING FLUID: ALTHOUGH IT HAS BEEN REFERRED TO AS “WATER”, THE WORKING FLUID CAN BE ANY KIND OF TRANSMISSION FLUID, OIL, HYDRAULIC FLUID, ETC., KEEPING IN MIND THAT THE WORKING FLUID MUST ALSO ACT AS A LUBRICANT FOR THE BEARINGS WHICH ARE EXPECTED TO LAST FOR TEN TO TWENTY YEARS. DONNIE RECOMMENDS REGULAR OFF-THE-SHELF TRANSMISSION FLUID, WHICH HE HAS SEEN USED ALONE IN A CAR ENGINE WITH LUBRICATION RESULTS QUITE COMPARABLE TO OIL.**
  
- 7. TO THE READER WHO WOULD SCOFF AT THE IDEA THAT ENERGY CAN BE DERIVED FROM PRESSURISED SYSTEMS, DONNIE OFFERS THE FOLLOWING FACTS :**
  - 1. SIX MONTHS AGO IT WAS DEMONSTRATED ON TV THAT A HIGH-PRESSURE STREAM OF WATER ABOUT THE SIZE OF A FOOTBALL NEEDLE WOULD CUT THROUGH A STEEL PLATE ONE INCH (25mm) THICK, ALSO A TWO-INCH THICK PHONE BOOK AND THE CUT WAS CLEAN NO MATTER HOW FAST THE MATERIAL TO BE CUT WAS MOVED.**
  
  - 2. ALSO, THERE IS A TURBINE AIR MOTOR MADE BY TECH DEVELOPMENT INC. OF OHIO. IT HAS AN OUTPUT OF 720 HORSEPOWER WITH AN INPUT AIR PRESSURE OF 321 PSI. THIS MOTOR IS ONLY 7 INCHES (178mm) IN DIAMETER AND 14 INCHES (355mm) LONG AND RUNS AT 8400 RPM. THIS IS NOT AN OVER-UNITY MOTOR NOR IS IT RELATED TO THE CEACU MOTOR IN ANY WAY, BUT IT IS AN INDICATION OF WHAT CAN BE DONE WITH PRESSURISED SYSTEMS.**
  
- 8. THE PRIMARY FUNCTIONAL DIFFERENCES BETWEEN MY MOTOR AND DAMMING UP A RIVER ARE : WE CREATE OUR OWN “GRAVITY” AND PRE-DETERMINE THE AMOUNT OF THAT GRAVITY BY TWO METHODS INSTEAD OF JUST ONE. THE GRAVITY IN A DAM CAN ONLY BE INCREASED BY INCREASING THE SIZE OF THE DAM, WHILE THIS MOTOR CAN ALSO INCREASE OUTPUT BY INCREASING THE RPM.**



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THE ONLY DIFFICULT PART OF THIS DESIGN APPEARS TO BE THE SLIP COUPLING WHERE A STATIONARY WATER PIPE IS JOINED TO A ROTATING WATER PIPE. WHILE WE ARE FAMILIAR WITH ROTATING LAWN SPRINKLERS WHICH ROTATE USING EXACTLY THE SAME PRINCIPLE OF IMPULSE JET ACTION AS SHOWN HERE :



THE KEY POINT IS THAT THE RATE OF ROTATION IS LOW. THAT IS ENTIRELY INTENTIONAL AS THE MANUFACTURER IS CONSIDERING THE WAY THAT THE VARIOUS STREAMS OF WATER REACH THE GROUND. THE FASTEST LAWN SPRINKLER IS LIKELY TO BE ROTATING AT UNDER 300 RPM WHICH IS VERY MUCH SLOWER THAN OUR MOTOR REQUIREMENT.

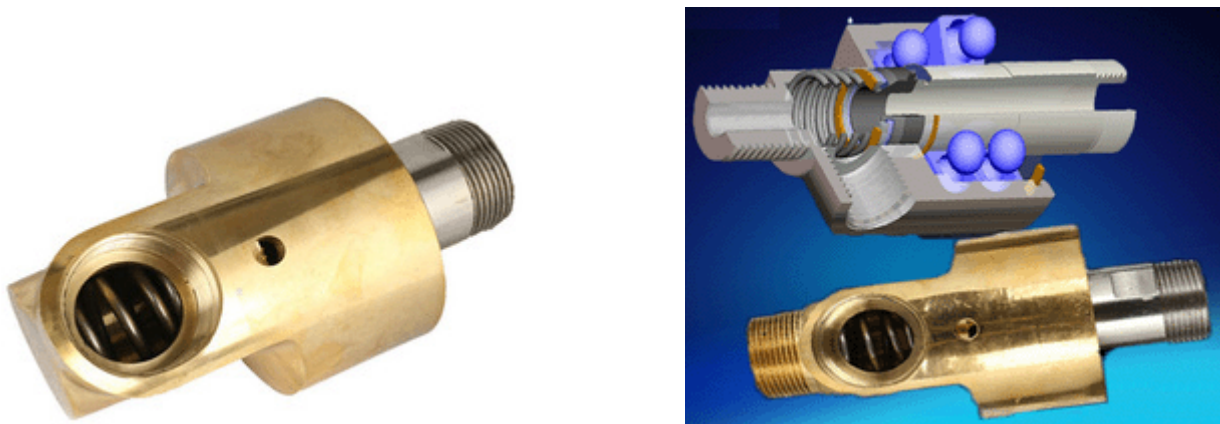
RESEARCHING THE VARIOUS COUPLINGS ON THE MARKET, THE MAXIMUM RATE OF ROTATION QUOTED IS TYPICALLY 400 RPM OR LESS, WHICH MAY BE WHY DONNIE WATTS QUOTES SUCH A LARGE ROTOR DRUM SIZE AND THREE-INCH DIAMETER AXIAL SUPPLY PIPE. SUITABLE COUPLINGS COULD BE :

[https://www.alibaba.com/product-detail/50A-npt-male-thread-brass-water\\_2009800594.html](https://www.alibaba.com/product-detail/50A-npt-male-thread-brass-water_2009800594.html)

OR

[https://www.alibaba.com/product-detail/Mechanical-brass-fitting-3-4-2\\_60520780545.html](https://www.alibaba.com/product-detail/Mechanical-brass-fitting-3-4-2_60520780545.html)

AS THEY CLAIM 2000 RPM CAPABILITY :



NOTES : <http://www.free-energy-info.com/Donnie.pdf>

VIDEO : <https://youtu.be/whoSCaF196w>



## ***EARTHSHIPS***

**THERE IS A FAMOUS AMERICAN ARCHITECT CALLED MICHAEL REYNOLDS. HE HAS A VERY LOW OPINION OF CONVENTIONAL HOUSING WHICH HE CONSIDERS TO BE A “COMPARTMENT” WHICH IS WHOLLY DEPENDENT ON OUTSIDE POWER SOURCES. HIS OPINION IS JUSTIFIED. HE PRODUCES BUILDINGS WHICH HAVE BEEN NAMED “EARTHSHIPS” BY HIS WIFE AND THAT NAME HAS CAUGHT ON WORLDWIDE.**

**THE OBJECTIVE IS TO MAKE A HOME WHICH HAS NO UTILITY BILLS AT ALL. A BUILDING WHICH COLLECTS ITS OWN WATER AND USES THAT WATER SEVERAL TIMES. GENERATES ITS OWN ELECTRICAL POWER. PROVIDES ITS OWN HEATING AND COOLING. GROWS SOME OF ITS OWN FOOD, AND USES MATERIALS MANY OF WHICH HAVE BEEN DISPOSED OF BY PREVIOUS OWNERS – VEHICLE TYRES, ALUMINIUM DRINK CANS AND GLASS BOTTLES. AN “EARTHSHIP” CAN BE A STYLISH AND COMFORTABLE HOME :**



**ALTHOUGH, OBVIOUSLY, THE OVERALL COST OF THE STRUCTURE AND FURNISHINGS DEPENDS ON THE QUALITY CHOSEN BY THE OWNER, THIS PARTICULAR EARTHSHIP IS ONE SHOWN IN THE FILM “BUILDING OFF THE GRID” WHICH CAN BE FOUND ON THE PEER-TO-PEER NETWORK. IT TOOK FIFTY VOLUNTEERS FOUR WEEKS TO COMPLETE THE BASIC STRUCTURE AND THEN ANOTHER TEAM OF WORKERS WHO WERE PAID TO SUPPLY AND INSTALL THE FITTINGS AND FIXTURES.**

**THE STRUCTURE FACES SOUTH AND HAS TWELVE LARGE SOLAR PANELS MOUNTED ALONG THE TOP OF THE GREENHOUSE AREA. ALTHOUGH THIS PICTURE DOES NOT SHOW IT, THERE IS A DRAINAGE DITCH ALONG THE BACK OF THE PROPERTY TO DIVERT HEAVY RAINWATER COMING OFF THE PROTECTING HILLSIDE BEHIND THE PROPERTY. NOTICE THE TWO VENTILATORS ON TOP OF THE GREENHOUSE.**



**THE WALLS OF THE PROPERTY ARE SEVEN FEET (2.13 METRES) THICK. THIS IS TO ALLOW THE USE OF FAIRLY SIMPLE MATERIALS AND MORE IMPORTANTLY, TO PROVIDE THERMAL MASS WHICH KEEPS THE INSIDE OF THE BUILDING WARM IN WINTER AND COOL IN SUMMER. THERE ARE NO SIGNIFICANT BILLS FOR HEATING OR COOLING AND NORMAL ELECTRICAL EQUIPMENT IS RUN FROM THE POWER PROVIDED BY THE SOLAR PANELS, A BANK OF BATTERIES AND A MAINS INVERTER.**

**THE DESIGN OF THE ELECTRICAL SYSTEM IS OLD-FASHIONED USING SOLAR PANELS TO CHARGE LEAD-ACID BATTERIES. INITIALLY, DURING CONSTRUCTION, THREE OF THE SOLAR PANELS WERE USED AND JUST PROPPED UP TO FACE THE SUN TO POWER A BATTERY BOX WITH A MAINS INVERTER :**





THE OVERALL DESIGN IS SET UP FOR CONSTRUCTION BY UNSKILLED WORKERS UNDER THE SUPERVISION OF A FEW EXPERIENCED PEOPLE, BUT LET ME POINT OUT THAT THIS IS A CIVIL ENGINEERING PROJECT AND SO A REASONABLE LEVEL OF UNDERSTANDING IS NEEDED BEFORE YOU BUILD ONE FOR YOURSELF.

FOR EXAMPLE, THE ROOF SPANS ACROSS THE GAP BETWEEN THE OUTSIDE WALLS. THE LOADING ON ANY SUCH BEAM INCREASES WITH **THE CUBE** OF THE DISTANCE BETWEEN THOSE WALLS. THAT MEANS THAT IF YOU WERE TO DOUBLE THE WIDTH OF A ROOM, THEN THE SUPPORT NEEDED TO HOLD THE ROOF UP, INCREASES BY A FACTOR OF **EIGHT TIMES**. THIS CAN, OF COURSE, BE ACHIEVED, BUT YOU REALLY NEED TO BE AWARE OF IT. IN THIS PARTICULAR BUILDING, THE ROOF IS HELD UP BY MANY TREE TRUNKS WHICH HAVE BEEN STRIPPED AND PREPARED FOR THE JOB :



**THESE BEAMS ARE VERY HEAVY AND ARE QUITE CAPABLE OF CAUSING SERIOUS INJURY IF NOT HANDLED CAREFULLY AND SENSIBLY. THEY FORM THE JOISTS WHICH SUPPORT THE ROOF AND AS THERE IS A GAP OF ONLY ONE FOOT BETWEEN THEM, MANY ARE NEEDED. THEY ARE ATTACHED TO THE TOP OF THE WALL BY STEEL RODS DRIVEN THROUGH THEM AND INTO THE TOP OF THE WALL.**

**THE MAIN CONSTRUCTION IS WITH VEHICLE TYRES AND ABOUT A THOUSAND ARE NEEDED FOR THE BUILDING. EACH TYRE IS FILLED WITH COMPACTED EARTH AND THEN THEY ARE STACKED IN A STAGGERED BANK AND GROUTED IN PLACE USING MORTAR. JUST TO CLARIFY :**

- 1. CEMENT IS A GREY POWDER.**
- 2. MORTAR IS A MIXTURE OF CEMENT AND SAND WETTED WITH WATER AND WHICH SETS INTO A SOLID.**
- 3. CONCRETE IS MORTAR WHICH HAS PEBBLES MIXED INTO IT.**
- 4. REINFORCED CONCRETE IS CONCRETE WITH STEEL BARS IN IT.**

**ALSO USED IN THESE CONSTRUCTIONS IS ADOBE WHICH IS MUD AND STRAW MIXED TOGETHER. PROPERLY MADE ADOBE DRIES INTO A SOLID BLOCK AND IS USED IN HOT, DRY COUNTRIES AS A MAIN BUILDING MATERIAL, BUT IT NEEDS TO BE WATERPROOFED AGAINST FUTURE RAIN.**



**THE TYRES ARE OVERLAPPED IN SUCCESSIVE ROWS, FORMING A STABLE STRUCTURE, AND THEN MORTAR GROUTING IS APPLIED BETWEEN THEM. THE OUTSIDE IS ENCLOSED IN AN EARTH BANK AND THE INSIDE IS SMOOTHED OVER.**

**THIS STYLE CAN BE SEEN AT THE BACK DOOR ALONGSIDE THE GREENHOUSE AREA :**



**THE CONSTRUCTIONAL DETAILS CAN BE FOUND IN THE BOOKS BY MICHAEL REYNOLDS "GARBAGE WARRIOR", "EARTHSHIP", "COMFORT IN ANY CLIMATE", ETC. OR FULL CONSTRUCTIONAL PLANS CAN BE BOUGHT DIRECT FROM MICHAEL.**

**WATER IS COLLECTED FROM THE ROOF, FILTERED AND THEN STORED IN MASSIVE PLASTIC TANKS WHICH HAVE A TOTAL CAPACITY OF 6000 US GALLONS (22,700 LITRES). THERE ARE NO PUMPS AS ALL WATER FLOWS UNDER GRAVITY. WATER USED FOR WASHING IS THEN USED FOR TOILETS AND THEN ON TO WATER THE PLANTS WHICH GROW AS FOOD.**



**THE POSITIONING OF THE TANKS IS IMPORTANT AS THEY HAVE TO BE JUST BELOW THE ROOF SO THAT RAINWATER FLOWS INTO THEM UNDER GRAVITY AND YET THEY HAVE TO BE HIGHER THAN SHOWER-HEADS FOR THE SAME REASON (UNLESS A PUMP IS USED FOR SHOWERS). A SIMPLE FILTER IS USED TO REMOVE ANY BLOWN MATERIAL WHICH FINDS ITS WAY INTO THE WATER INTAKE.**

**WHILE UNSKILLED PEOPLE CAN DO MOST OF THE WORK, THERE ARE A NUMBER OF TRADE SKILLS WHICH ARE NEEDED – PLUMBER FOR THE PIPING, ELECTRICIAN FOR THE ELECTRICS, ENGINEER FOR THE LEVELLING AND CONCRETE WORK, GLAZIER FOR THE DOUBLE GLAZING UNITS, ETC.**



**STEEL BARS CALLED “REBAR” ARE DRIVEN INTO THE WALLS AND POSITIONED TO THE EXACT HEIGHT AND THEN A REINFORCED CONCRETE RING IS CAST AROUND THE TOP OF THE WALLS TO GIVE OVERALL STRENGTH TO THE STRUCTURE BEFORE THE VERY HEAVY TREE TRUNKS ARE PLACED ON IT.**

**A NICE FEATURE OF THIS STYLE OF CONSTRUCTION IS USING COLOURED GLASS BOTTLES IN WALLS TO ALLOW LIGHT THROUGH THE WALL AND TO ALLOW ARTISTIC DESIGNS WHICH CAN GIVE THE IMPRESSION OF STAINED GLASS.**



**WHEN THE WALL IS FINISHED OFF AND THE BOTTLES POLISHED, THE EFFECT IS REALLY GOOD, ESPECIALLY SINCE THE GLASS BOTTLES ARE EFFECTIVELY FREE, BEING RECYCLED MATERIALS. HOWEVER, CHOOSING THEM AS PART OF YOUR LIVING ROOM IS A MATTER OF PERSONAL TASTE :**



**IT IS QUITE NORMAL TO HAVE CONVENTIONAL STYLES OF CONSTRUCTION :**







**THE IMPORTANT THING TO REMEMBER ABOUT THIS HOUSE IS THAT THE WALLS ARE THICK AND SO HAVE HIGH THERMAL MASS. THE 'GREENHOUSE' SECTION ALL ALONG THE SOUTH SIDE OF THE MAIN BUILDING FORMS A HEAT BUFFER AND WATER FILTRATION. THE ROOF IS SERIOUSLY EFFECTIVE AS IT IS A ONE-INCH THICK LAYER OF TIMBER WITH TARRED PAPER COVERING IT, AND THEN AN 8-INCH THICK LAYER OF POLYSTYRENE IS LAID ON TOP OF THAT, AND FINALLY A RIDGED METAL ROOF IS PLACED ON TOP AS THE EXTERNAL SURFACE. THAT IS A SERIOUSLY EFFECTIVE THERMAL LAYER.**

**THIS STYLE OF CONSTRUCTION IS CERTAINLY WORTH CONSIDERING AND WHILE I CERTAINLY APPROVE OF IT, IT CAN DEFINITELY BE IMPROVED. FOR EXAMPLE, THE EFFECTIVENESS OF THE 'GREENHOUSE' SECTION FOR GROWING FOOD COULD BE**

**FOUR TIMES GREATER IF SHAPED DIFFERENTLY. AS LES BROWN OF CANADA EXPLAINS, A PROPERLY PROPORTIONED PYRAMID HAS A MAJOR EFFECT ON GROWTH :**



**THIS IS THE PYRAMID WHICH LES USED. IT IS THIRTY FEET TALL AND FACES IN A NORTH—SOUTH DIRECTION AND SO WOULD MATCH PERFECTLY WITH AN EARTHSHIP. IN CANADA, IT PRODUCES SIX FULL CROPS PER YEAR AND THE COMPARISON BETWEEN PLANTS GROWN OUTSIDE (OR IN A CONVENTIONAL GREENHOUSE LIKE MICHAEL SHOWS) AND PLANTS GROWN INSIDE THE PYRAMID ARE :**

**TOMATOES: OUTSIDE; 12 TO 14 LBS PER PLANT, PYRAMID; 50 TO 60 LBS PER PLANT.**

**LETTUCE: OUTSIDE; NORMAL SIZE, PYRAMID; TWO TO THREE TIMES LARGER.**

**CABBAGE: OUTSIDE; 3 POUNDS, PYRAMID; 12 TO 13 POUNDS.**

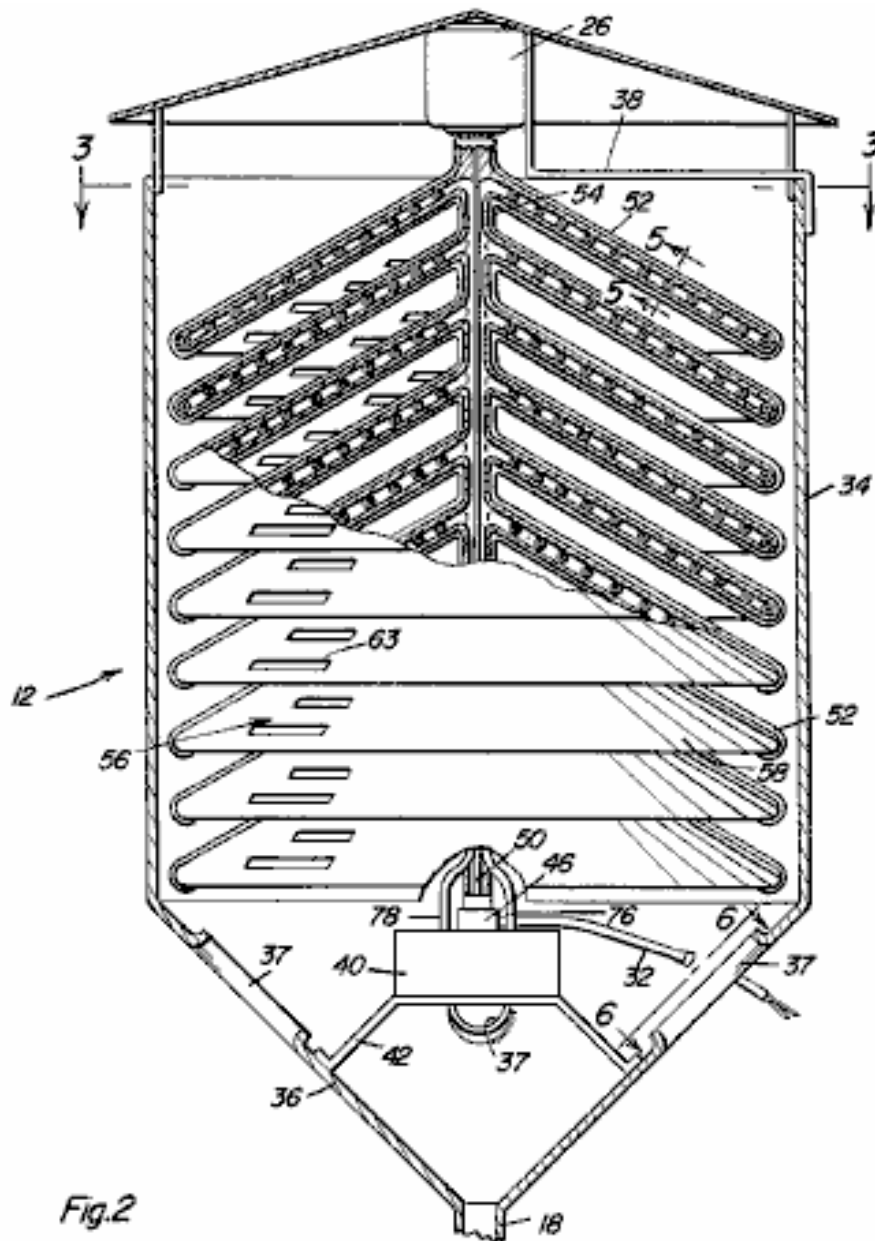
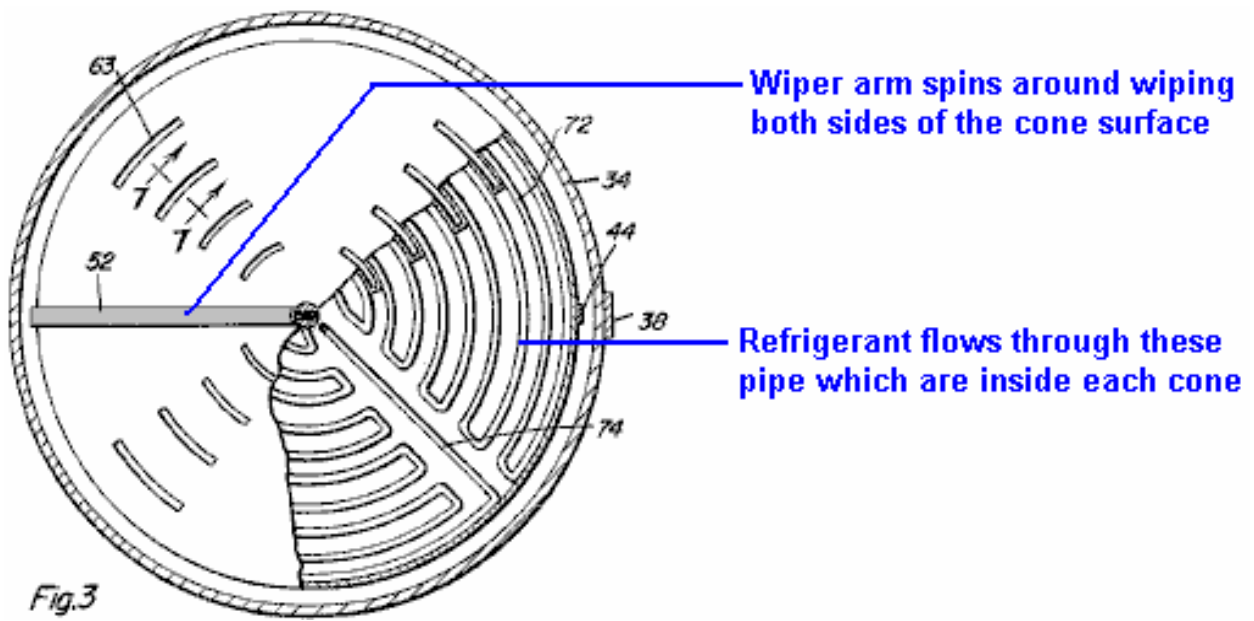
**RADISHES: OUTSIDE; THE SIZE OF A QUARTER, PYRAMID; FOUR INCH DIAMETER.**

**CUCUMBERS: OUTSIDE; 1 POUND, PYRAMID; 4 POUNDS.**

**A PYRAMID ORGANISES ITS OWN WATERING, DESTROYS PESTS, PRESERVES FOOD, GIVES MUCH BETTER FLAVOUR TO EVERYTHING AND PRODUCES CONTINUOUSLY ALL YEAR ROUND (ALTHOUGH IN THE BITTER CANADIAN WINTERS, IT NEEDS TO BE HEATED, POSSIBLY WITH A WOOD-BURNING STOVE FOR YEAR-ROUND PRODUCTION).**

**THEN THERE ARE THOSE MASSIVE RAINWATER TANKS WHICH REALLY ARE NOT NECESSARY. AN EFFECTIVE ALTERNATIVE IS THE DESIGN OF ELMER GRIMES IN 1961. THIS DEVICE PRODUCES MAJOR AMOUNTS OF CLEAN WATER FROM AIR.**

**ESSENTIALLY, IT IS A REFRIGERATOR WHICH CHILLS A METAL CONE WHICH HAS A CAR STYLE WINDSCREEN WIPER ABOVE AND BELOW, TO KEEP PUSHING THE CONDENSED WATER OFF THE CONE. FOR EFFICIENCY, SEVERAL CONES ARE STACKED IN A VERTICAL POSITION. SEEN FROM THE TOP IT LOOKS LIKE THIS, WITH SLOTS IN THE CONES TO ALLOW THE FREE FLOW OF AIR THROUGH THE STACK :**



THIS VERY EFFECTIVE WATER-MAKING SYSTEM COULD BE POWERED BY ONE OF THE MANY FREE-ENERGY DEVICES, SAY, THE CHAS CAMPBELL GENERATOR OR IT COULD BE POWERED BY THE EXPENSIVE SOLAR PANEL ARRAY ALREADY SUGGESTED BY MICHAEL. THE WATER OUTPUT IS SUFFICIENT TO SUPPLY A FARM IN TEXAS.

THEN WE HAVE ALL THOSE EXPENSIVE SOLAR PANELS. THE PROBLEM WITH THOSE (APART FROM THE COST OF BUYING THEM) IS THAT THEY CHARGE THE BATTERY BANK WITH CONVENTIONAL DC VOLTAGE AND SO THE BATTERIES WILL NEED REPLACING EVERY FOUR YEARS OR SO. ONE OF THOSE SOLAR PANELS WOULD EASILY POWER A GOOD MOTIONLESS BATTERY CHARGER CIRCUIT WHICH WOULD GIVE PULSED DC CHARGING AND KEEP THE BATTERY BANK UP TO SCRATCH INDEFINITELY. ALTERNATIVELY, A DONNIE WATTS GENERATOR WOULD PROVIDE ALL OF THE NECESSARY POWER WITHOUT NEEDING SOLAR PANELS OR BATTERIES.

SO, MY OPINION OF THE EARTHSHIP IS THAT IT IS GREAT, BUT IT COULD BE CHEAPER AND MUCH MORE EFFECTIVE.

THESE NOTES : <http://www.free-energy-info.com/Earthship.pdf>

VIDEO : <https://youtu.be/mT3d2zu1Tms>

OTHER VIDEOS :

<https://www.youtube.com/watch?v=QEzbOMvrIIA>

[https://www.youtube.com/watch?v=Vh4ppxZHC\\_U](https://www.youtube.com/watch?v=Vh4ppxZHC_U)

<https://www.youtube.com/watch?v=sEqfdyywd7E>

<https://www.youtube.com/watch?v=C6FWU0OqaLA>

<https://www.youtube.com/watch?v=x5I2eKeRTQ>

<https://www.youtube.com/watch?v=M0Hd-XT1mWY>

<https://www.youtube.com/watch?v=-9JF7Zifc-M>

<https://www.youtube.com/watch?v=-6AZ1Q81tHE>

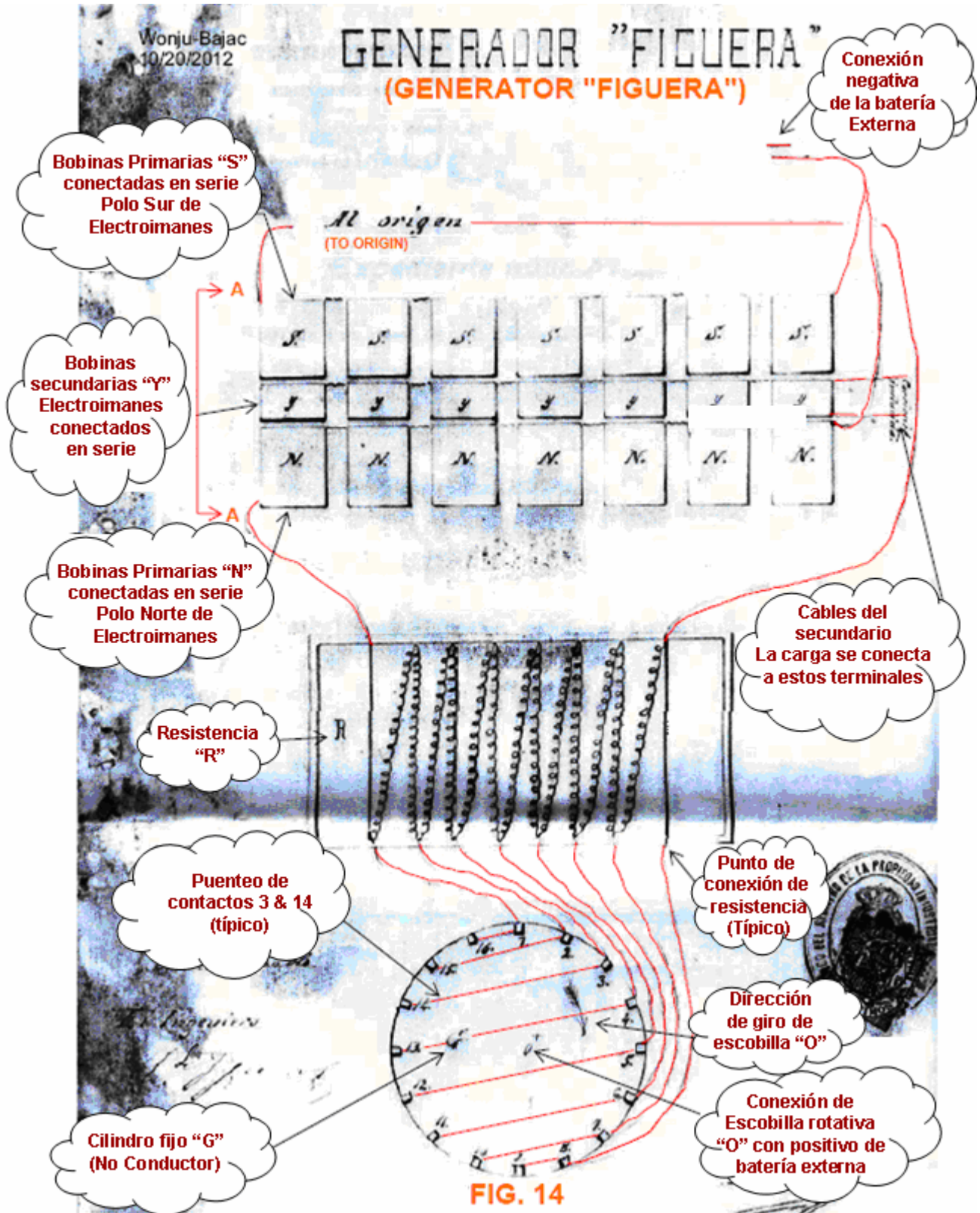
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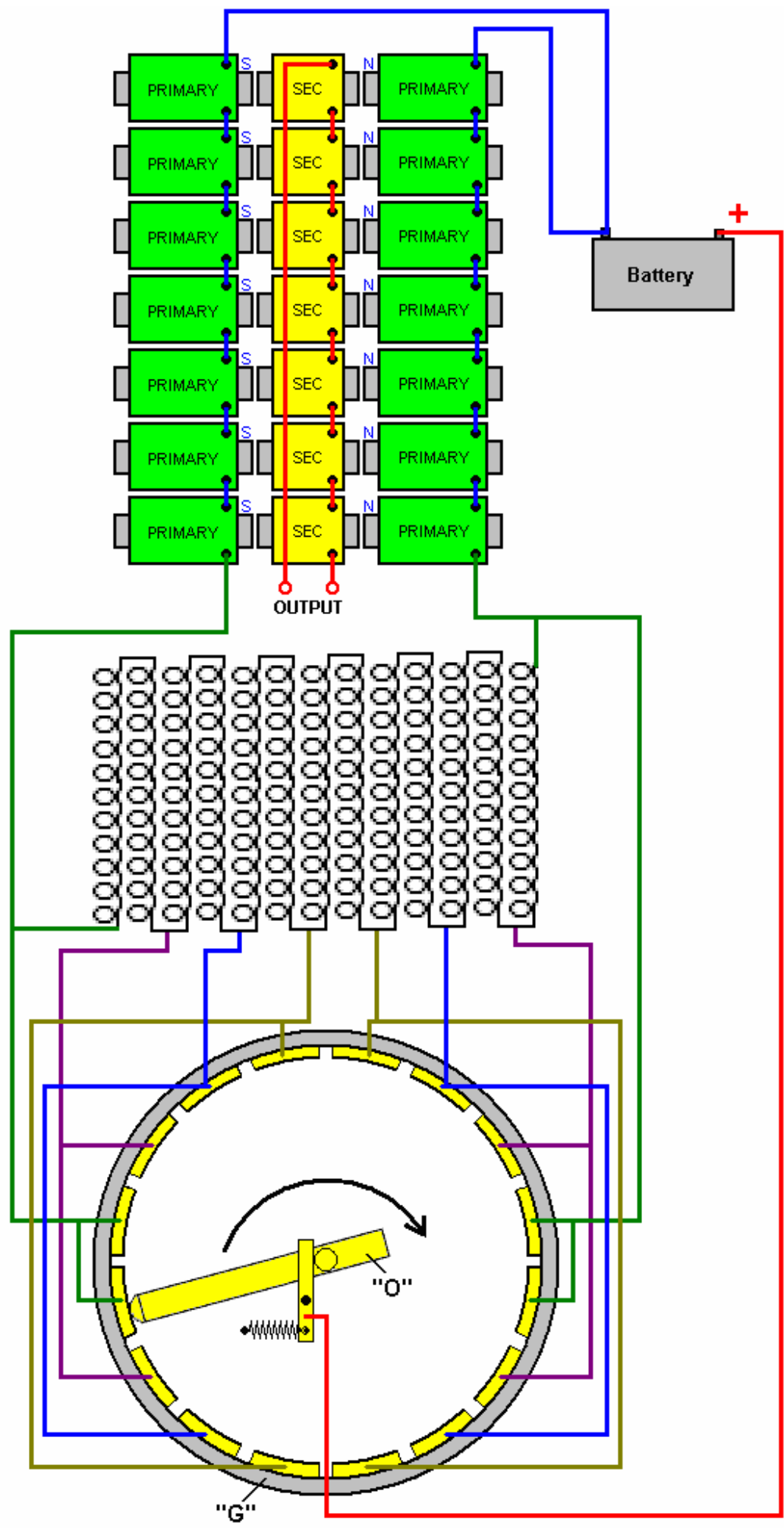
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# THE GENERATOR OF CLEMENTE FIGUERA

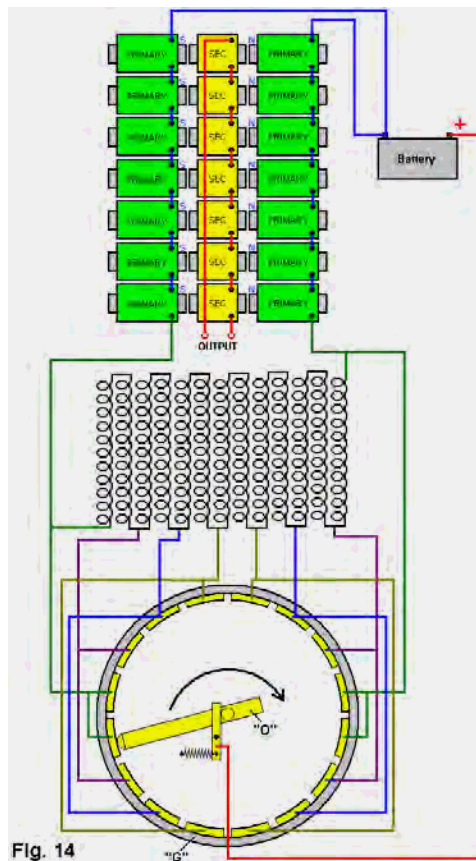
CLEMENTE FIGUERA WAS A HIGHLY RESPECTED MAN, AN ENGINEER AND A UNIVERSITY PROFESSOR. HE DIED IN 1908 JUST AFTER HIS PATENT WAS GRANTED. HIS PATENT FOR A FREE-ENERGY GENERATOR WAS DEGRADED THROUGH "WATER DAMAGE". AN ATTEMPTED RECONSTRUCTION OF HIS DRAWING IS THIS :



THE COLOURING IS PART OF THE "WATER DAMAGE". I UNDERSTAND THIS DIAGRAM TO BE THIS :



IN THIS ARRANGEMENT, A SMALL ELECTRIC MOTOR ROTATES THE CONTACT ARM "O" TO PROVIDE THE SWITCHING SEQUENCE 1, 2, 3, 4, 5, 6, 7, 8, 8, 7, 6, 5, 4, 3, 2, 1 REPEATEDLY. THE SWITCHING ARM IS ARRANGED TO BRIDGE THE GAP BETWEEN ANY TWO ADJACENT CONTACTS.



THE REASON FOR THIS UNUSUAL SWITCHING IS TO PROGRESSIVELY ALTER THE RATIO OF THE CURRENT FLOWING THROUGH THE TWO SETS OF (GREEN) PRIMARY ELECTROMAGNETS. THIS IS A CLEVER DESIGN WHICH AVOIDS THE LENZ'S LAW EFFECT AND BEING A SPLIT TRANSFORMER. THERE IS ALWAYS CURRENT FLOWING THROUGH EVERY PRIMARY ELECTROMAGNET AND THAT CURRENT NEVER CHANGES DIRECTION, NOR IS IT EVER INTERRUPTED, AND SO, THERE IS NEVER ANY BACK-EMF MAGNETIC FIELD TO DEAL WITH.

THE COILS IN THE MIDDLE OF THE DIAGRAM ARE WIRE-WOUND RESISTORS OF HIGH POWER AND THE POSITION OF THE SWITCHING ARM "O" DETERMINES HOW MANY OF THOSE RESISTORS ARE BETWEEN THE BATTERY AND EACH SET OF PRIMARY ELECTROMAGNETS. THAT CAUSES A REPEATING CHANGE IN CURRENT STRENGTH BETWEEN THE TWO SETS OF ELECTROMAGNETS.

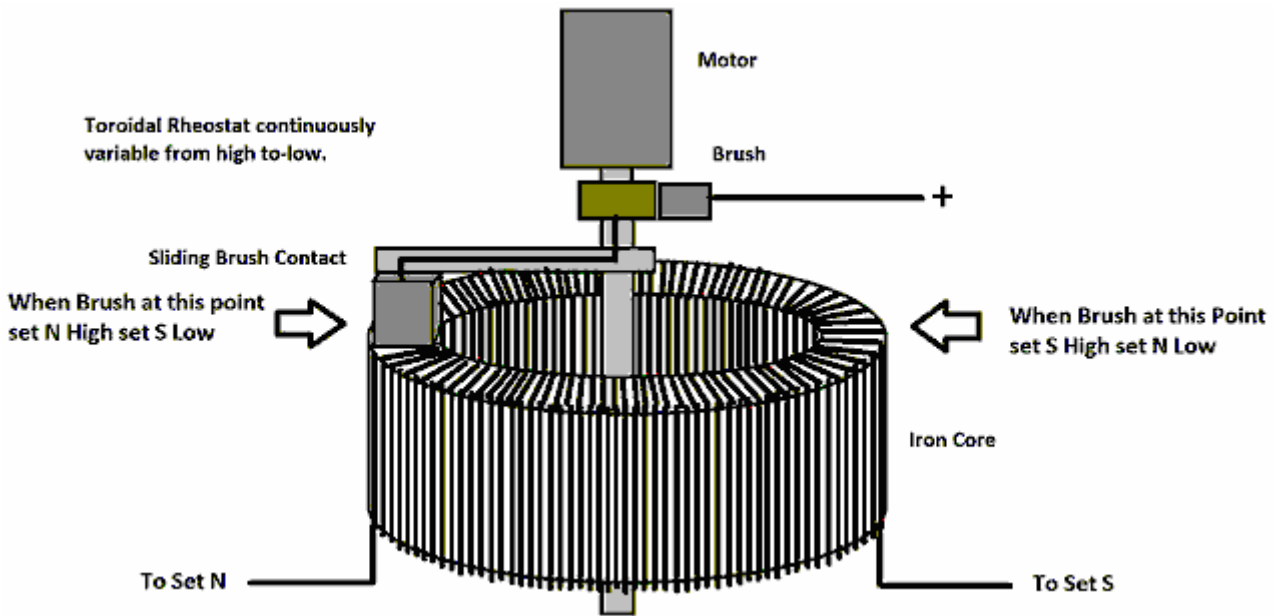
THE PATENT MARKS ONE SET OF ELECTROMAGNETS AS "S" AND THE OTHER SET AS "N" BUT THOSE REFERENCE LETTERS ARE MISLEADING AND DO NOT, REPEAT NOT, REFER TO MAGNETIC POLES. THE MAGNETIC POLES GENERATED WILL HAVE EITHER TWO NORTH POLES FACING EACH OTHER OR TWO SOUTH POLES FACING EACH OTHER. THE CHANGE IN CURRENT STRENGTH CAUSES A VARYING MAGNETIC FIELD IN THE CORE OF THE SECONDARY (YELLOW) ELECTROMAGNETS, AND THAT PRODUCES THE ELECTRICAL OUTPUT FROM THE GENERATOR. THAT OUTPUT WAS 500 VOLTS FOR FIGUERA'S PROTOTYPE.

YOU WILL NOTICE THAT THE PATENT DRAWING SHOWS SEVEN ELECTROMAGNETS IN EACH OF THE TWO CHAIN OF PRIMARY ELECTROMAGNETS. I ASSURE YOU THAT THE PERSON PREPARING THE PATENT DID NOT LOVE DRAWING SO MUCH THAT HE JUST HAD TO DRAW FOURTEEN ELECTROMAGNETS INSTEAD OF JUST TWO. NO, THERE IS A REASON THAT THERE ARE TWO SETS OF SEVEN. PERHAPS THIS IS JUST A WAY TO RAISE THE OUTPUT VOLTAGE AND OUTPUT POWER – YOU TELL ME.

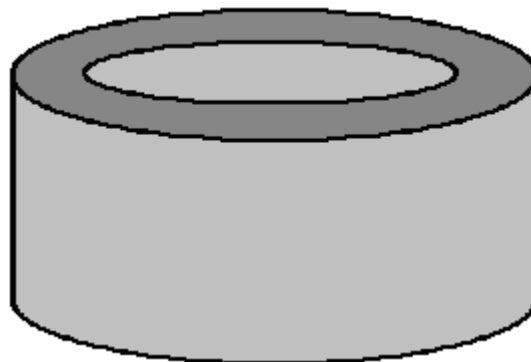
IN 1908, ELECTRONIC COMPONENTS WERE NOT READILY AVAILABLE LIKE THEY ARE TODAY. THEREFORE, IT IS NOW POSSIBLE TO USE AN ELECTRONIC CIRCUIT INSTEAD OF A MOTOR AND WIPER ARM. HOWEVER, THAT CHANGES THE QUALITY OF THE SWITCHING AND IT IS NOT AT ALL CLEAR WHAT EFFECT THAT MIGHT HAVE. BUT IT NEEDS TO BE STRESSED THAT THE COMMUTATOR

SHOWN IN THE PATENT IS ONLY FOR EXPLANATION PURPOSES AND SO DOES NOT ACTUALLY FORM PART OF THE DESIGN, AND INDEED, MAY HAVE BEEN INCLUDED AS DELIBERATE MISDIRECTION.

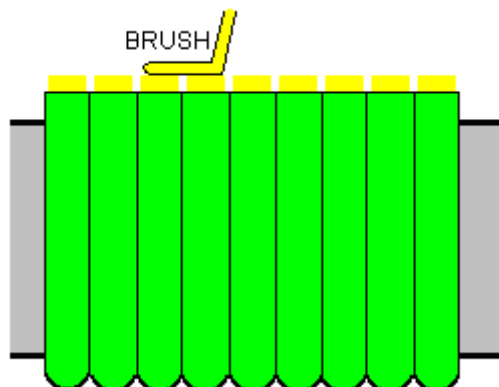
HOWEVER, IF WE DO INCLUDE THE COMMUTATOR, THE DESCRIPTION SHOULD HOLD AND SO THE GENERATOR SHOULD PERFORM AS DESCRIBED. IT HAS BEEN SUGGESTED THAT SWITCHING COULD BE PERFORMED LIKE THIS :



THIS IS A CONTINUOUSLY SWITCHING RHEOSTAT WOUND ON AN IRON CORE :

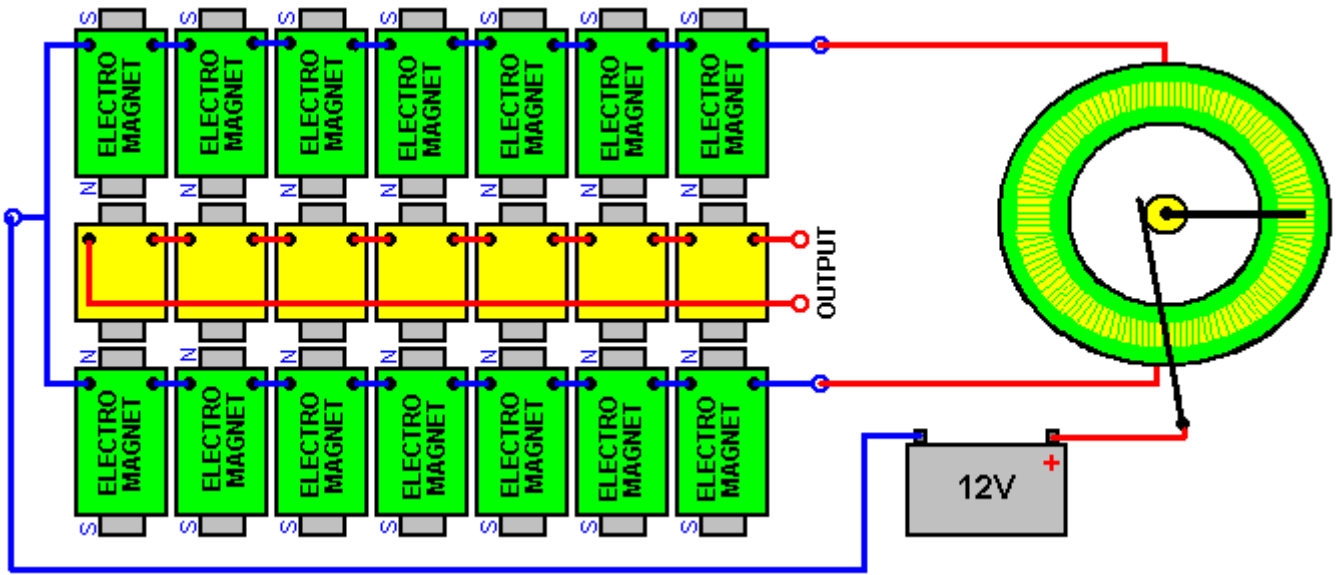


THIS CORE IS WOUND WITH THICK WIRE – PERHAPS AWG#10 OR 12 SWG (2.3 x 2.3mm SQUARE WIRE). THE TURNS OF WIRE SHOULD BE TIGHT, TOUCHING SIDE-BY-SIDE AND SITTING FLAT ACROSS THE TOP. THE INSULATION IS REMOVED FROM THE TOP STRIP SO THAT TWO TURNS CAN BE CONTACTED BY A SLIDING BRUSH :



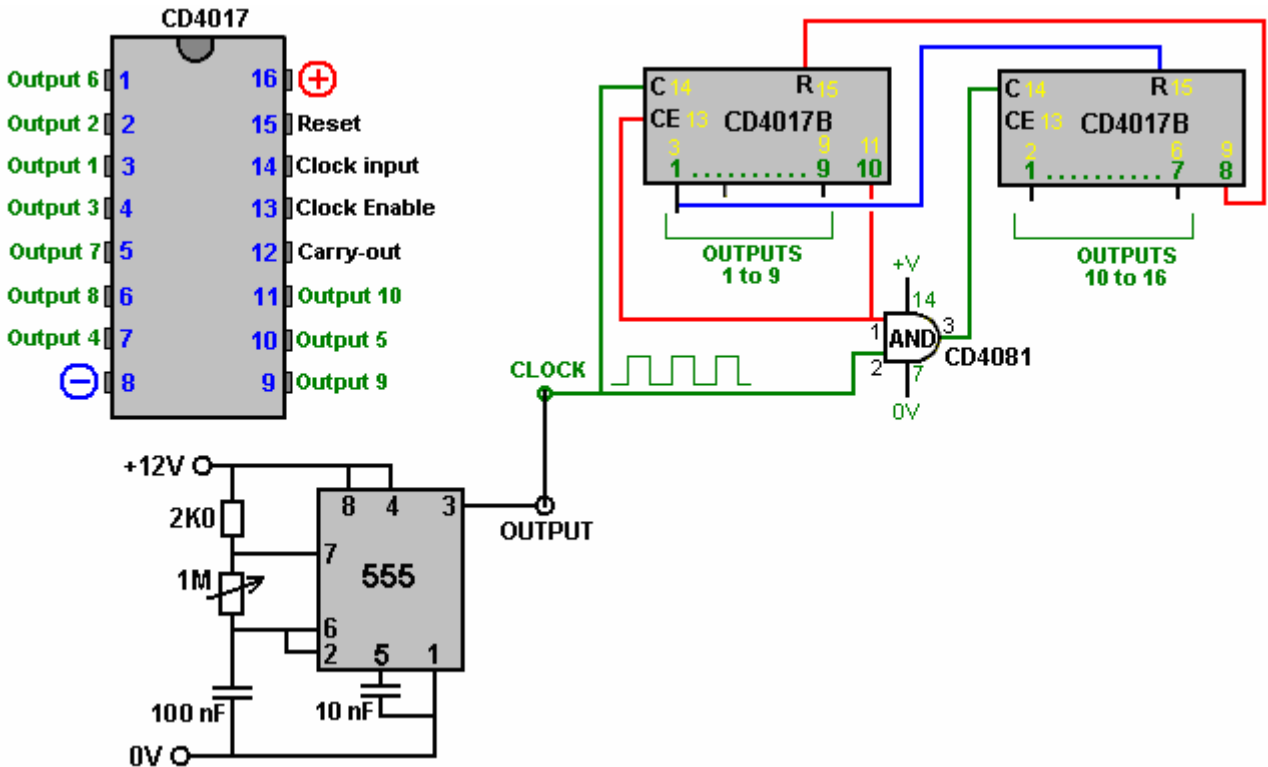


WITH THIS SYSTEM, THE OVERALL ARRANGEMENT IS LIKE THIS :



WHILE THE ABOVE SKETCH SHOWS A 12-VOLT BATTERY, THERE IS NO REASON WHY THE BATTERY SHOULD NOT BE 24-VOLT OR 48-VOLT, ESPECIALLY IF THE WIRE USED TO WIND THE ELECTROMAGNETS IS SMALLER DIAMETER. THE STRENGTH OF THE MAGNETIC FIELD PRODUCED BY AN ELECTROMAGNET IS NOT RELATED TO THE AMOUNT OF POWER FED TO THE ELECTROMAGNET – A LARGER NUMBER OF TURNS OF THINNER WIRE WITH A SMALL CURRENT FLOWING THROUGH THE WIRE CAN CREATE A STRONGER MAGNETIC FIELD THAN A FEW TURNS OF THICK WIRE WITH A LARGE CURRENT FLOWING THROUGH THOSE TURNS.

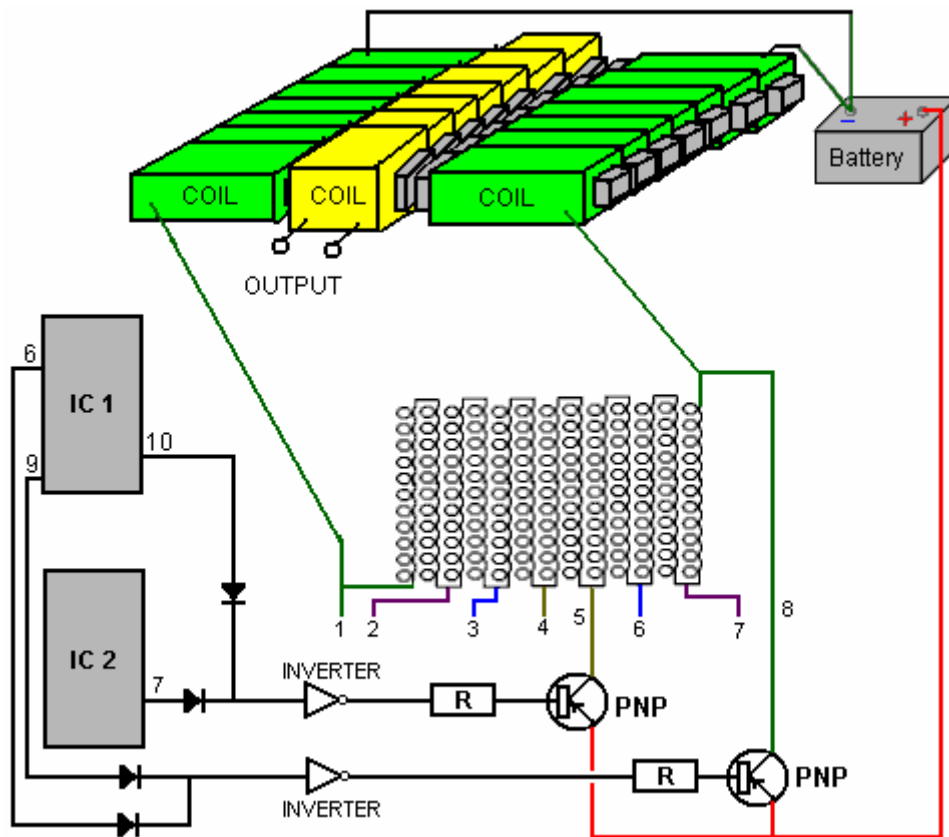
IT IS PERFECTLY POSSIBLE TO PRODUCE THE SAME SWITCHING USING SEMICONDUCTORS. IN SPITE OF THE WIRE-WOUND RESISTOR BANK HAVING ONLY EIGHT CONNECTION POINTS, THE SWITCHING HAS TO HAVE SIXTEEN OUTPUTS DUE TO THE BACKWARDS AND FORWARDS SWITCHING SEQUENCE WHICH IS USED. A SOLID-STATE 16-WAY SWITCHING MODULE CAN BE CONSTRUCTED FROM TWO CD4017 DIVIDE-BY-TEN INTEGRATED CIRCUITS LIKE THIS :



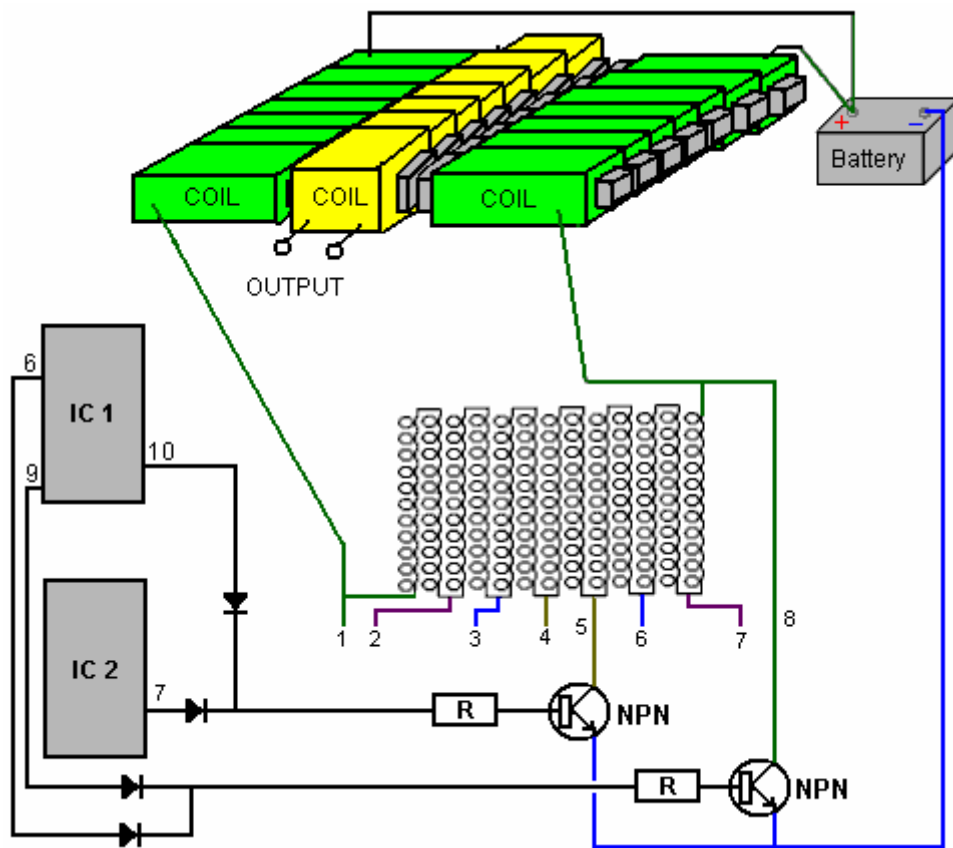
THIS ARRANGEMENT GIVES SIXTEEN OUTPUTS IN SEQUENCE, SO TWO OUTPUTS NEED TO BE CONNECTED TOGETHER IN ORDER TO MATCH THE MECHANICAL SWITCHING WHICH CLEMENTE SHOWED. I AM RELUCTANT TO CONNECT TWO OUTPUTS DIRECTLY TOGETHER AND SO AN ISOLATION DIODE (PERHAPS 1N4148) WOULD BE REQUIRED ON EACH OUTPUT.

Output Number	Chip and Pin Nos	Paired with Output	Resistor Connection Point
1	Chip 1 Pin 3	16 (Chip 2 pin 6)	1
2	Chip 1 Pin 2	15 (Chip 2 pin5)	2
3	Chip 1 Pin 4	14 (Chip 2 pin1)	3
4	Chip 1 Pin 7	13 (Chip 2 pin 10)	4
5	Chip 1 Pin 10	12 (Chip 2 pin7)	5
6	Chip 1 Pin 1	11 (Chip 2 pin 4)	6
7	Chip 1 Pin 5	10 (Chip 2 pin 2)	7
8	Chip 1 Pin 6	9 (Chip 1 pin 9)	8
9	Chip 1 Pin 9		
10	Chip 2 Pin 2		
11	Chip 2 Pin 4		
12	Chip 2 Pin 7		
13	Chip 2 Pin 10		
14	Chip 2 Pin 1		
15	Chip 2 Pin 5		
16	Chip 2 Pin 6		

EIGHT POWER TRANSISTORS CAN BE USED TO ENERGISE EACH RESISTOR CONECTION POINT IN THE SEQUENCE REQUIRED. AS MECHANICAL SWITCHING WAS USED BY CLEMENTE, IT DID NOT MATTER WHICH WAY ROUND THE BATTERY WAS CONNECTED. WE CAN MATCH THE SWITCHING EXACTLY BY USING PNP POWER TRANSISTORS OR P-CHANNEL FETs. THAT WOULD BE LIKE THIS :

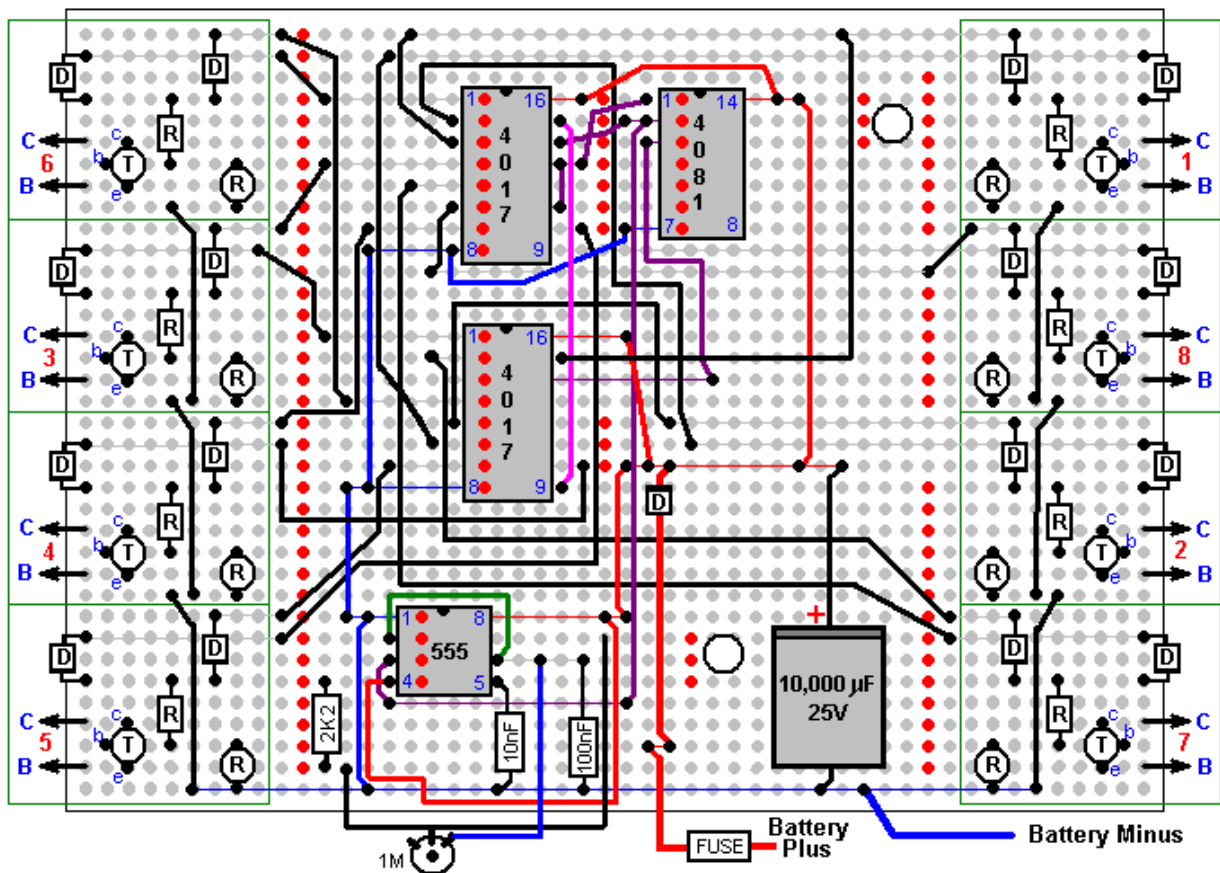


OR THE BATTERY CAN BE REVERSED FOR THE EASIER NPN OPTION :

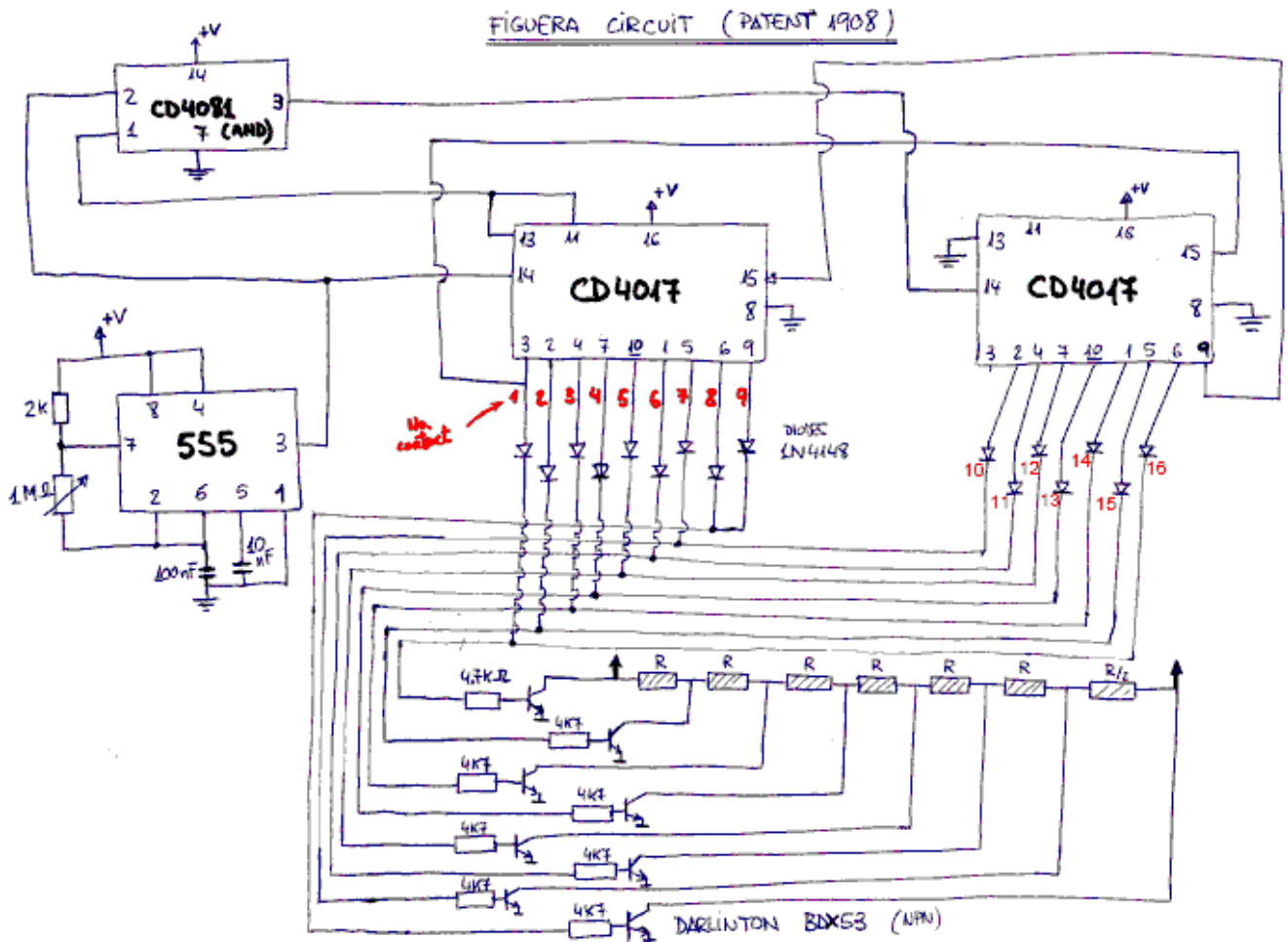


HERE IS A POSSIBLE PHYSICAL LAYOUT :

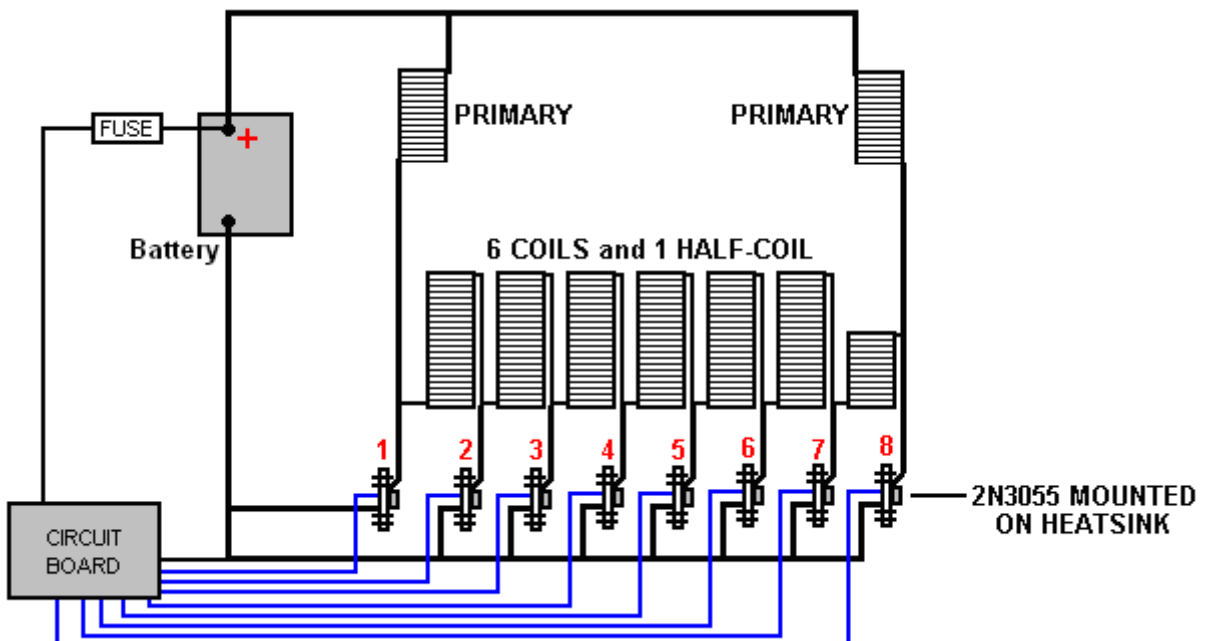
- T = 2N2222 Transistor    D = 1N4001 Diode    R = 4.7K Resistor
- C = Connection to 2N3055 Collector    → B = Connection to 2N3055 Base
- = Break in the copper strip on the underside of the board

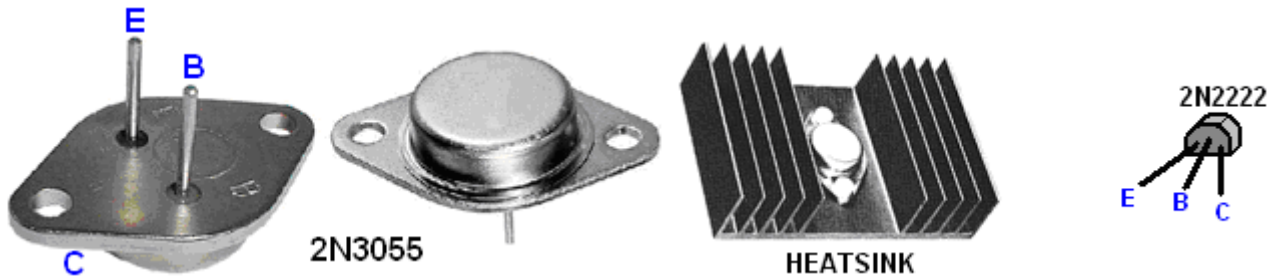


A CONTRIBUTOR WHO WISHES TO REMAIN ANONYMOUS DOES NOT LIKE THE CIRCUIT ARRANGEMENT SHOWN ABOVE AND HE PREFERRED THE FOLLOWING CIRCUIT WHICH HE HAS BUILT AND TESTED :



COMMENT : THE BDX53 TRANSISTOR IN THIS CIRCUIT IS NOT AVAILABLE EVERYWHERE AROUND THE WORLD (ALTHOUGH THE TIP 132 TRANSISTOR MAY BE AVAILABLE) AND IF SUPPLYS ARE DIFFICULT IN YOUR AREA THEN THE 2N2222 AND THE 2N3055 (OR TIP 3055) AS SHOWN ORIGINALLY WILL WORK JUST THE SAME.





EXPERIENCED EXPERIMENTER “WOOPY” HAS POSTED A VIDEO OF A QUICK EXPERIMENT TO TEST THE WORKING PRINCIPLE OF THIS FIGUERA DESIGN. HIS VIDEO IS AT : <http://www.youtube.com/watch?v=HIOGEnKpO-w&feature=g-u-u> AND IN IT HE SHORT-CIRCUITS THE SECONDARY WINDING, SHOWING THAT THE INPUT POWER IS TOTALLY UNAFFECTED BY THE CURRENT DRAW FROM THE SECONDARY.

IT IS REPORTED THAT CLEMENTE FIGUERA RAN A 20-HORSEPOWER MOTOR WITH HIS PROTOTYPE AND THAT IS 15 KILOWATTS IF THE MOTOR WAS FULLY LOADED – EASILY ENOUGH TO POWER A HOUSEHOLD.

PLEASE NOTE THAT THE CORES OF THE ELECTROMAGNETS ARE NOT LAMINATED BUT INSTEAD ARE SOLID IRON. IN 2012, A CONTRIBUTOR WHOSE ID IS “WONJU-BAJAC” STARTED A FORUM : [http://www.overunity.com/12794/re-inventing-the-wheel-part1-clemente\\_figuera-the-infinite-energy-achine/#.UXu9gzcQHgU](http://www.overunity.com/12794/re-inventing-the-wheel-part1-clemente_figuera-the-infinite-energy-achine/#.UXu9gzcQHgU) TO INVESTIGATE AND DEVELOP FIGUERA’S DESIGNS. MEMBER “HANLON 1492” HAS CONTRIBUTED ENORMOUSLY BY PRODUCING ENGLISH TRANSLATIONS OF FIGUERA’S PATENTS.

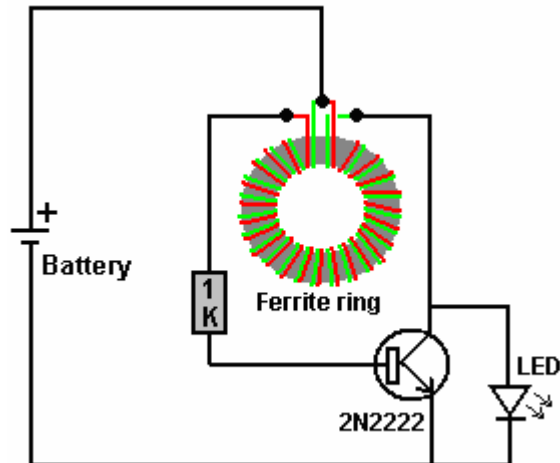
NOTES : <http://www.free-energy-info.com/Figuera.pdf>

VIDEO : <https://youtu.be/notqCACOQr4>

## THE "FLEET" CIRCUIT FROM LAWRENCE TSEUNG

IN 1999, THE MAGAZINE "EVERYDAY PRACTICAL ELECTRONICS" PUBLISHED THE "JOULE THIEF" CIRCUIT OF MR. Z. KAPARNIK. THAT CIRCUIT HAS RESULTED IN A MASSIVE AMOUNT OF INTEREST AND A VERY LARGE AMOUNT OF FURTHER EXPERIMENTATION BY PEOPLE ALL AROUND THE WORLD.

THE JOULE THIEF CIRCUIT WAS INTENDED TO LIGHT A LIGHT-EMITTING DIODE WITH A "DEAD" DRY-CELL BATTERY WHICH HAD BEEN DISCARDED. THE CIRCUIT IS REMARKABLY SIMPLE AND VERY EFFECTIVE :

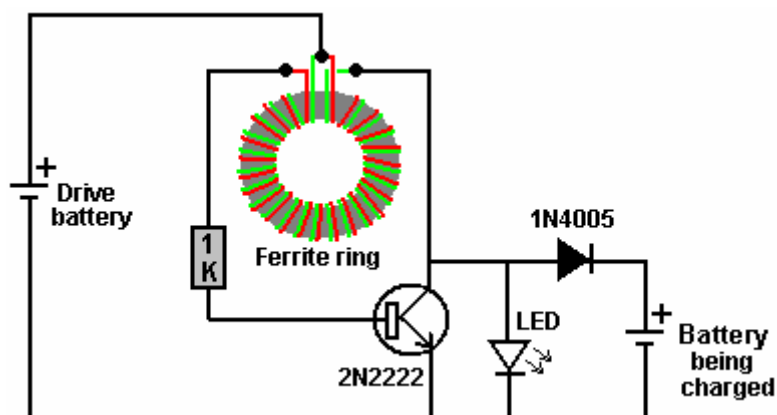


THE ACTIVE COMPONENT IS A TINY FERRITE RING OR 'TOROID' WHICH HAS BEEN WOUND WITH TWO SHORT LENGTHS OF ENAMELLED COPPER WIRE SIDE-BY-SIDE (AS ADVOCATED BY NIKOLA TESLA). NORMALLY ONLY ELEVEN TURNS OF THE PAIR OF WIRES ARE USED.

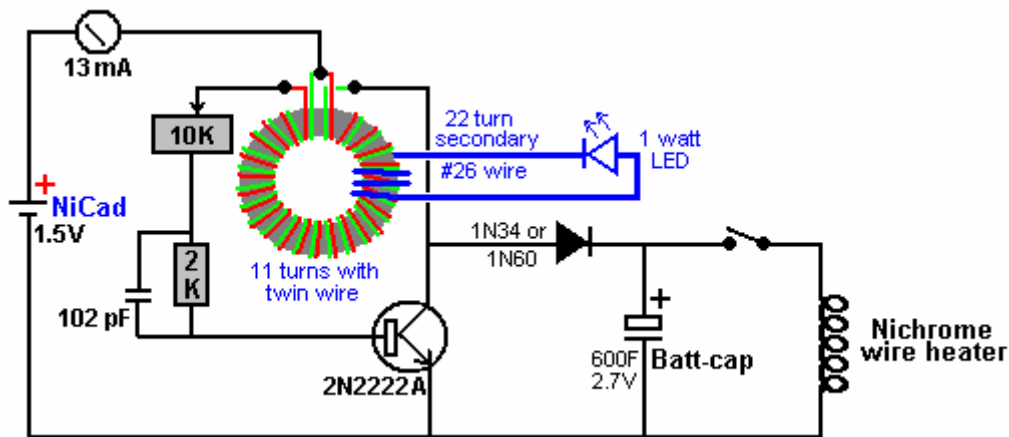
WHEN THE CIRCUIT IS POWERED UP BY CONNECTING THE "DEAD" BATTERY, THE INITIAL CURRENT PULSE GENERATES A HIGHER VOLTAGE IN THE WINDINGS ON THE FERRITE RING AND STARTS THE CIRCUIT OSCILLATING. THE OSCILLATIONS PRODUCE SHORT VOLTAGE PEAKS WHICH ARE HIGH ENOUGH TO LIGHT THE LED IN SPITE OF THE BATTERY VOLTAGE BEING FAR TOO LOW TO LIGHT THE LED DIRECTLY.

THE CIRCUIT WORKS WELL WITH A 1.5-VOLT BATTERY WHICH HAS ONLY 0.4 VOLTS REMAINING IN IT. THE TOROID IS WOUND WITH JUST ELEVEN PAIRS OF TURNS ON IT, BUT THE CIRCUIT HAS ONE MISTAKE IN IT, IN THAT THE OUTPUT TO THE LED IS TAKEN FROM THE COLLECTOR OF THE TRANSISTOR, AND THAT INCREASES THE CURRENT DRAWN FROM THE BATTERY.

THE CIRCUIT WAS ADAPTED BY BILL SHERMAN SO THAT IT CHARGED A BATTERY AS WELL AS LIGHTING THE LED. THIS WAS DONE BY ADDING JUST ONE DIODE :



“GADGETMALL” OF THE [www.overunity.com](http://www.overunity.com) JOULE THIEF FORUM HAS TAKEN THE CIRCUIT FURTHER AND FOUND A VERY INTERESTING SITUATION. HE HAS MODIFIED THE CIRCUIT AND USED A “BATT- CAP” WHICH IS A VERY HIGH CAPACITY, LOW LOSS CAPACITOR INSTEAD OF A BATTERY BEING CHARGED. HE ALSO WINDS A SECOND 22-TURN COIL ON TOP OF THE TOROID WINDINGS AND HE LIGHTS A 1-WATT LED FROM THAT WINDING. THIS IS HIS CIRCUIT WHICH DRAWS 13 MILLIAMPS OF CURRENT FROM THE BATTERY FOR FOURTEEN HOURS :



THE EXCEPTIONALLY INTERESTING THING ABOUT HIS CIRCUIT IS THAT THE BATT-CAP GAINS SO MUCH POWER IN THAT PERIOD THAT IT CAN RECHARGE THE 1.5 VOLT Ni-Cad BATTERY, EFFECTIVELY MAKING THE CIRCUIT SELF-SUSTAINING. EVEN AFTER RECHARGING THE Ni-Cad BATTERY, THERE IS SUBSTANTIAL POWER LEFT IN THE BATT-CAP.

THE EFFICIENCY OF THIS JOULE THIEF CIRCUIT HAS BEEN INVESTIGATED BY JENNA IN HER VERY INTERESTING VIDEOS :

<http://www.youtube.com/watch?v=Y4IMqDRGpHE>

<http://www.youtube.com/watch?v=1tVICJiuWH4>

<http://www.youtube.com/watch?v=y6pbzrhBR-8>

<http://www.youtube.com/watch?v=tNoZrV3w4f8>

<http://www.youtube.com/watch?v=XzhbsLBwc54>

<http://www.youtube.com/watch?v=4gj7IFCXw9Q>

LAWRENCE TSEUNG ALONG WITH A TEAM OF OTHER PEOPLE HAS MODIFIED THE JOULE THIEF CIRCUIT SO THAT IT HAS A SERIOUS OUTPUT. HE ASSESSES THE CIRCUIT PERFORMANCE AS BEING COP=10, THAT IS, TEN TIMES MORE POWER COMING OUT OF THE CIRCUIT THAN YOU HAVE TO PUT INTO THE CIRCUIT TO MAKE IT WORK.

THE TOROID HAS BEEN ENLARGED TO A MUCH GREATER DIAMETER AND FERRITE HAS BEEN REPLACED WITH JUST A PLASTIC RING, SAY, 170mm DIAMETER AND 45mm DEEP :



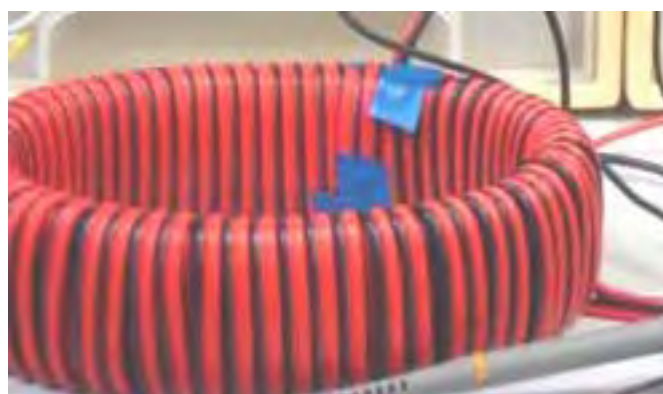
**THIS SECTION OF PIPE IS “BI-FILAR” WOUND WITH TWO WIRES SIDE-BY-SIDE. WHEN THE WINDING HAS BEEN COMPLETED ALL THE WAY AROUND THE PLASTIC RING, THEN THE START OF ONE WIRE IS CONNECTED TO THE END OF THE OTHER WIRE. THEN, THE WINDING IS COVERED WITH A LAYER OF ELECTRICAL TAPE TO HOLD IT IN PLACE AND TO PROVIDE AN EASY WORKING SURFACE FOR THE NEXT WINDING.**

**THE WIRE USED FOR THE WINDING IS A MULTI-STRAND “FIGURE OF EIGHT” TYPE CAPABLE OF CARRYING 2.5 AMPS OF CURRENT. IT MUST BE SIDE-BY-SIDE WIRE AND NOT ONE OF THE TWISTED VARIETIES. IT LOOKS LIKE THIS :**



**IF YOU CAN’T GET THIS FIGURE-OF-EIGHT WIRE WITH THE TWO WIRES CONNECTED LIKE THE PHOTOGRAPH ABOVE, THEN IT IS OKAY TO USE TWO SEPARATE MULTI-STRAND WIRES AND WIND THEM CAREFULLY SIDE BY SIDE – HAVING DIFFERENT COLOURS IS CONVENIENT.**

**THE SECOND WINDING IS MADE IN THE SAME WAY AND THE END OF ONE WIRE CONNECTED TO THE START OF THE SECOND WIRE, AND FOR THIS WINDING, THAT JOINT BETWEEN THE TWO WIRES IS INSULATED AS IT IS NOT CONNECTED TO ANYTHING ELSE. THE COIL MIGHT END UP LOOKING LIKE THIS :**

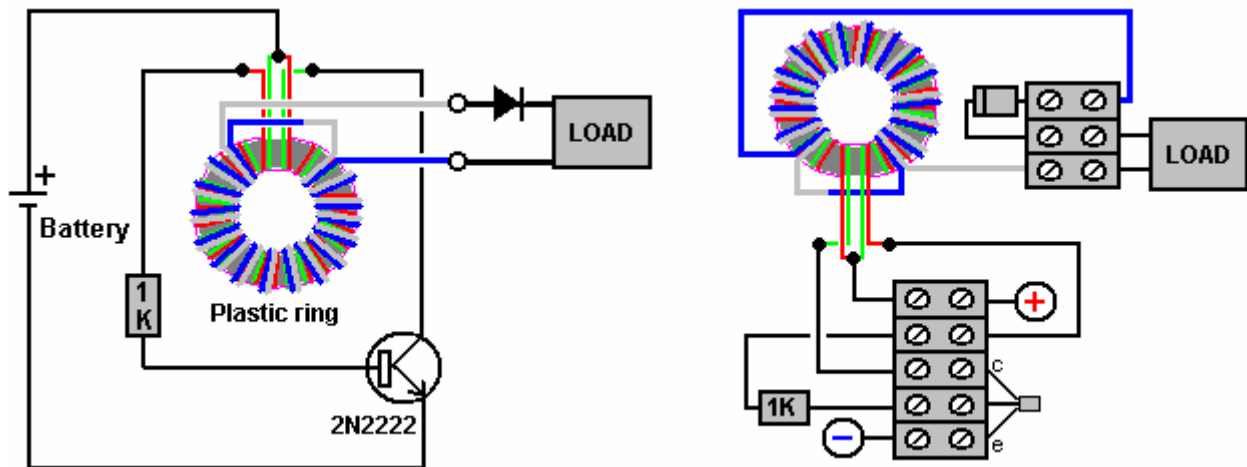


**THE INNER COIL IS CONNECTED AS A JOULE THIEF CIRCUIT AND IT OSCILLATES CONTINUOUSLY, CAUSING AN OSCILLATING MAGNETIC FIELD TO ENVELOPE THE SECOND WINDING. THE REALLY IMPORTANT THING ABOUT THIS ARRANGEMENT IS THE FACT THAT THE AMOUNT OF POWER COMING OUT OF THE CIRCUIT IS VERY MUCH GREATER THAN THE AMOUNT OF POWER NEEDED TO MAKE THE CIRCUIT OPERATE. LAWRENCE TSEUNG DESCRIBES THIS EXTRA POWER AS BEING “LED OUT” OF THE ENVIRONMENT AND HIS THEORY FOR THIS IS KNOWN AS THE “LEAD-OUT THEORY”. CONSEQUENTLY, THE CIRCUIT**



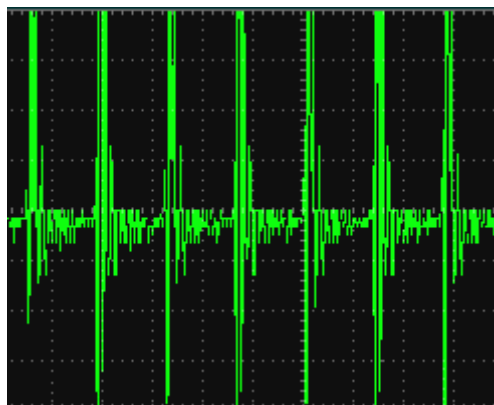
IS CALLED THE F.L.E.E.T. DEVICE WHERE F.L.E.E.T. STANDS FOR THE “FOREVER LEAD-OUT EXISTING ENERGY TRANSFORMER” EMPHASISING THAT THE EXTRA ENERGY HAS NOT BEEN CREATED BUT INSTEAD HAS JUST BEEN DRAWN INTO THE CIRCUIT FROM THE ENVIRONMENT WHERE IT ALREADY EXISTED.

THE OVERALL CIRCUIT LOOKS LIKE THIS :

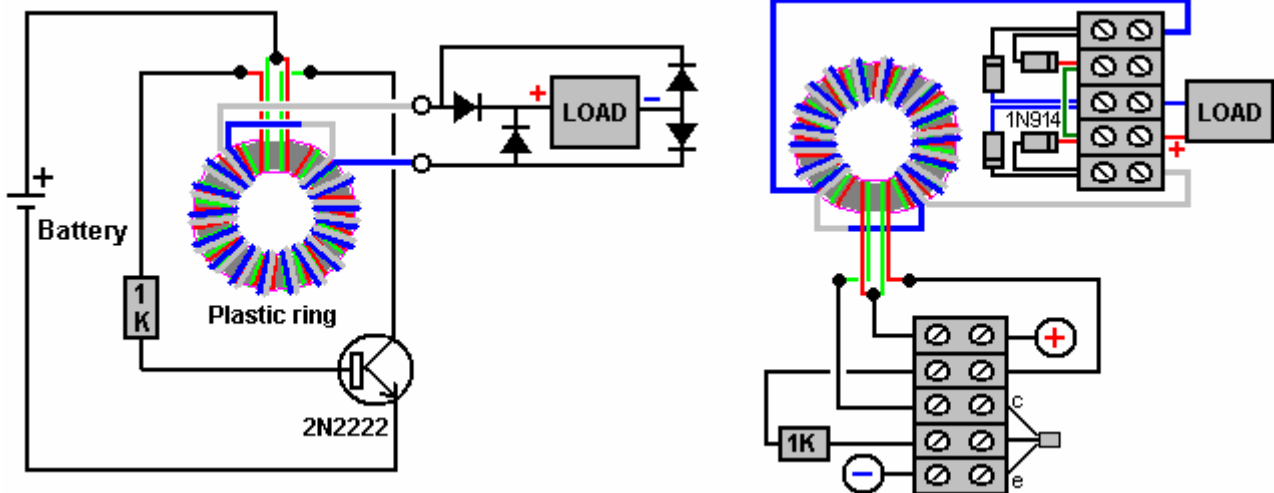


WHILE THE OUTER WINDING IS SHOWN HERE WITH THICKER WIRE OF A DIFFERENT COLOUR, THIS IS ONLY TO MAKE THE DRAWING EASIER TO UNDERSTAND. IN REALITY, THE OUTER WINDING IS MADE WITH EXACTLY THE SAME WIRE AS THE INNER WINDING, AND BOTH WINDINGS GO ALL OF THE WAY AROUND THE TOROID. THE TOTAL AMOUNT OF WIRE NEEDED TO MAKE THE WINDINGS IS ABOUT 70 METRES AND SO IT IS NORMAL TO BUY A 100-METRE REEL OF THE TWIN-CORE WIRE AS THAT IS ENOUGH TO MAKE BOTH WINDINGS AND STILL HAVE SOME OVER FOR OTHER THINGS.

FOR TECHNICALLY MINDED PEOPLE, THE OUTPUT WAVEFORM LOOKS LIKE THIS :



AND THERE ARE ABOUT 290,000 OF THOSE PULSES PER SECOND. AT AN EARLY STAGE, I DECIDED TO CONFIRM THAT FREE ENERGY EXISTED, AND SO I BUILT A FLEET CIRCUIT IN AN EVENING. I DECIDED TO USE TWO SMALL 12-VOLT LEAD-ACID BATTERIES FOR THE TEST AND I CHOSE TO USE FOUR DIODES IN A BRIDGE RATHER THAN JUST A SINGLE DIODE :



I CHOSE TO USE TWO BATTERIES AND STAY AWAY FROM ANY FORM OF MAINS INPUT SO THAT IT WOULD BE VERY CLEAR THAT NO CONVENTIONAL FORM OF ADDITIONAL POWER COULD UPSET THE RESULTS.

SO, I USED THE FLEET CIRCUIT POWERED BY ONE BATTERY TO CHARGE THE SECOND BATTERY. THEN I SWAPPED THE BATTERIES OVER AND USED THE SECOND BATTERY TO CHARGE THE FIRST. I DID THIS A COUPLE OF TIMES AND LET THE BATTERIES REST SO AS TO GET A RELIABLE READING FROM THEM. THE RESULT WAS A GENUINE GAIN OF REAL, USABLE POWER IN BOTH BATTERIES, SO I CONSIDERED THAT RESULT TO SHOW THAT FREE-ENERGY IS MOST DEFINITELY A FACT, ESPECIALLY SINCE LEAD-ACID BATTERIES WASTE 50% OF ALL OF THE POWER THAT YOU FEED INTO THEM WHEN CHARGING THEM, SO MY TEST HAD A CIRCUIT PERFORMANCE GREATER THAN COP=2.

THE EFFICIENCY OF THAT TEST WOULD PROBABLY HAVE BEEN VERY MUCH HIGHER IF I HAD CHARGED TWO OR MORE BATTERIES CONNECTED IN SERIES. THE COIL USED WAS WOUND ON A PLASTIC PIPE OFFCUT WHICH WAS TO HAND AT THE TIME. IT WAS 8 INCHES IN DIAMETER (200mm) AND 10mm X 12mm IN CROSS-SECTION AND THE WIRE WAS SINGLE-STRAND 6-AMP CAPACITY EQUIPMENT WIRE WHICH WAS AVAILABLE AT THE TIME.

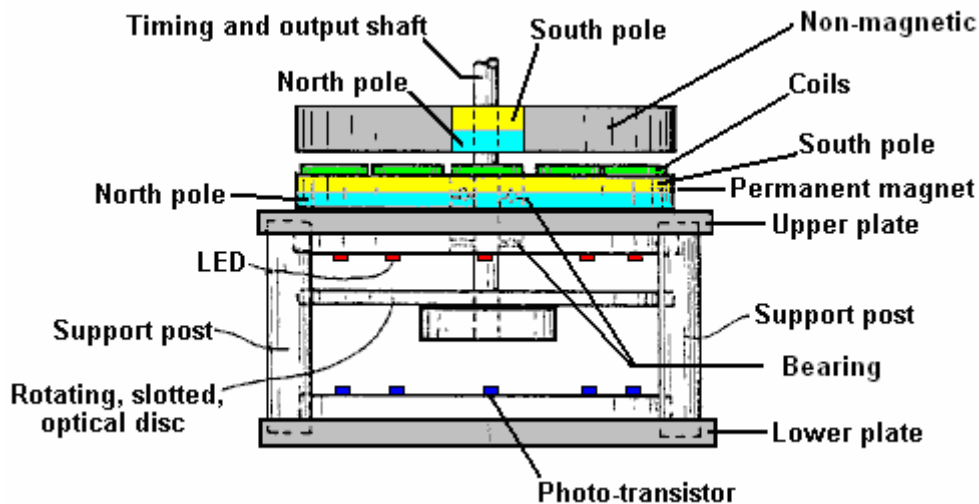
NOTES : <http://www.free-energy-info.com/FLEET.pdf>

VIDEO : [https://youtu.be/HO2B8\\_rDVjs](https://youtu.be/HO2B8_rDVjs)

## THE FLYNN PERMANENT MAGNET MOTOR

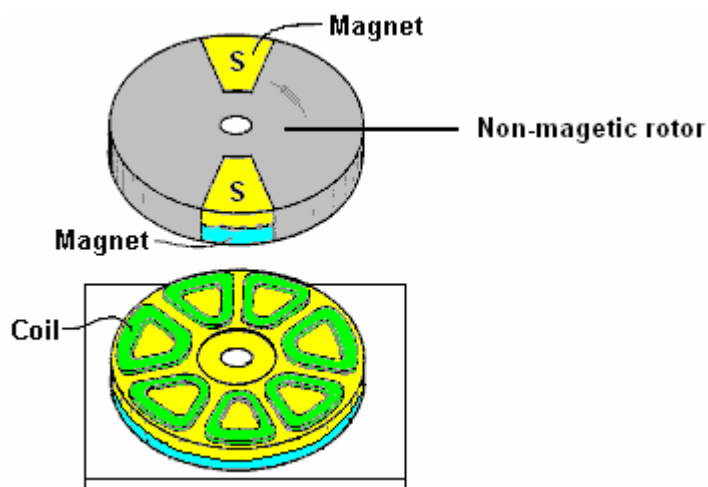
THE VERY IMPRESSIVE PERMANENT MAGNET MOTOR OF CHARLES FLYNN IS SHOWN IN PATENT US 5,455,474 OF OCTOBER 1995. THE PATENT STATES THAT THE MOTOR PRODUCES "A SUBSTANTIAL AMOUNT OF OUTPUT ENERGY AND TORQUE".

BECAUSE IT HAS A BATTERY YOU MIGHT MISTAKE IT FOR A MOTOR WHICH IS POWERED BY ELECTRICITY, BUT IT IS MOST DEFINITELY NOT. IT IS A MOTOR WHOSE POWER COMES FROM PERMANENT MAGNETS AND THERE IS ELECTROMAGNETIC SCREENING DRIVEN BY A 9-VOLT DRY BATTERY. WITH THAT DRY BATTERY, THE MOTOR REACHES 20,000 RPM. THE BASIC DESIGN IS BASED ON THIS ARRANGEMENT :



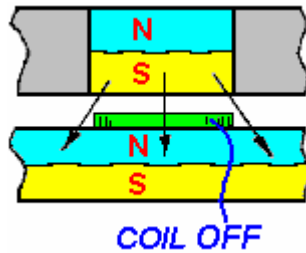
THE VERTICAL OUTPUT DRIVE SHAFT IS MOUNTED ON TWO BEARINGS ATTACHED TO THE "UPPER PLATE" AND THEY MAINTAIN THE GAP BETWEEN THE ROTOR AND THE RING MAGNET ATTACHED TO THE UPPER PLATE. THE MAGNET EMBEDDED IN THE NON-MAGNETIC ROTOR CONTINUOUSLY PULLS DOWN TOWARDS THE RING MAGNET.

AS DRAWN, THERE IS NOT THE SLIGHTEST INCLINATION FOR THE ROTOR TO ROTATE AS THE ROTOR MAGNET PULLS STRAIGHT DOWN. THE CHALLENGE IS THEREFORE TO PRODUCE A POWERFUL ROTATIONAL MOVEMENT FROM THE ARRANGEMENT. THESE ARE THE WORKING PARTS :



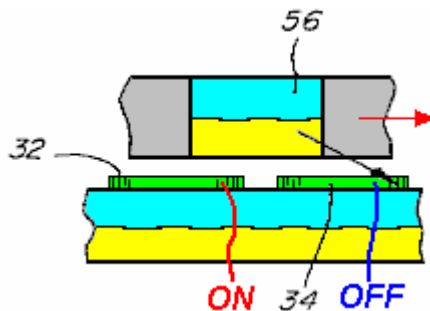
THE KEY FACTOR IS THE SET OF SEVEN COILS AND THE TWO ROTOR MAGNETS. IF ONE ROTOR MAGNET IS DIRECTLY OVER A COIL, THEN THE OTHER MAGNET WILL BE HALF WAY BETWEEN TWO OTHER COILS. THIS IS A CLEVER ARRANGEMENT.

WITH NO COIL POWERED UP, THE SITUATION IS THIS :



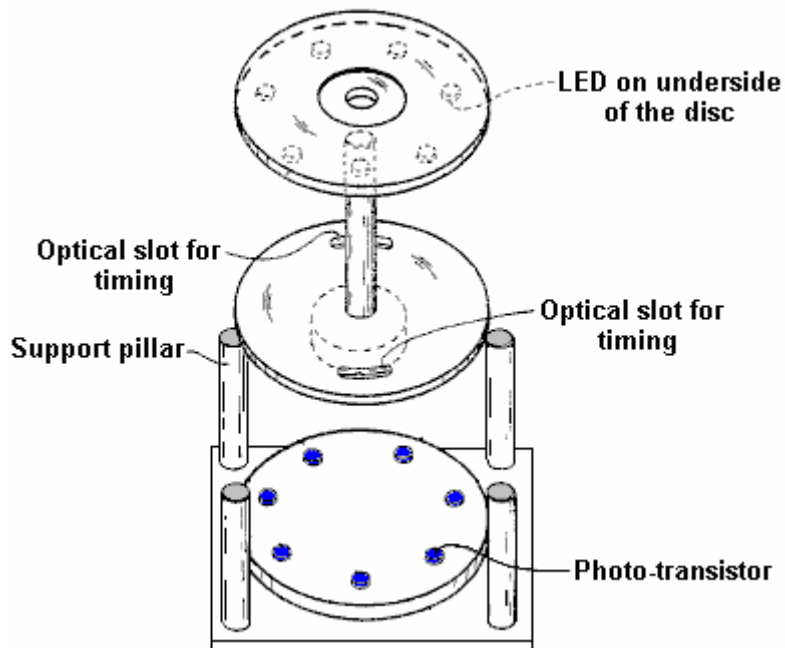
THE SOUTH POLE OF THE ROTOR MAGNET IS ATTRACTED TO THE NORTH POLE OF THE STATOR RING MAGNET. THE ATTRACTION IS MOST STRAIGHT DOWN, BUT THERE IS ALSO A PULL TO THE RIGHT AND A PULL TO THE LEFT BUT THESE BALANCE OUT SO THERE IS NO MOVEMENT.

HOWEVER, THE OPPOSITE ROTOR MAGNET STRADDLES TWO COILS :



AND IF WE WERE TO TURN ON MAGNET "32" IN SUCH A WAY THAT IT OPPOSES THE ATTRACTION BETWEEN THE ROTOR MAGNET "56" AND THE STATOR RING MAGNET, THEN THERE WILL BE A SIDWAYS PULL TOWARDS COIL "34" AND THE MAGNET WILL MOVE IN THAT DIRECTION AND THEN STOP.

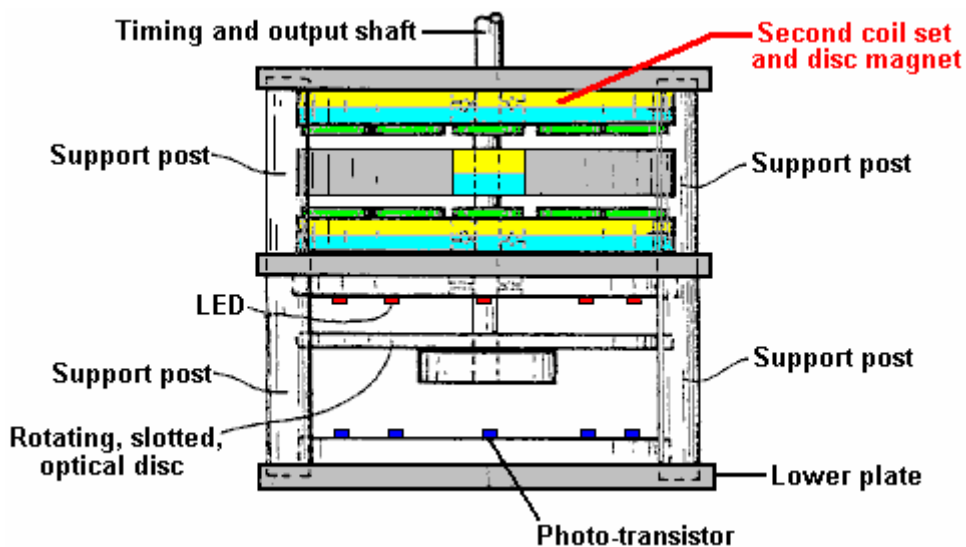
BUT WE DON'T WANT IT TO STOP, SO WE SWITCH ON COIL "34" AT JUST THE RIGHT MOMENT AND THE PROCESS REPEATS. THE SWITCHING ON IS DONE BY A TIMING DISC WHICH IS ATTACHED TO THE ROTOR :



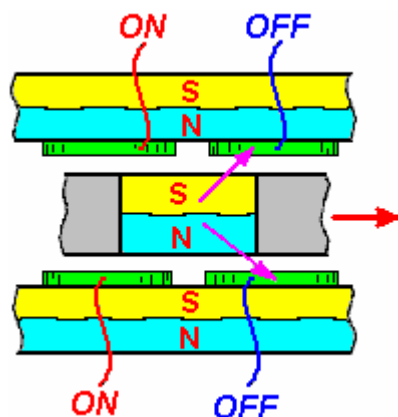
THE TIMING DISC HAS THREE PARTS. ONE HOLDS SEVEN LIGHT-EMITTING DIODES, ANOTHER HAS SEVEN MATCHING PHOTO-TRANSISTORS OR LIGHT-DEPENDENT RESISTORS (THESE ARE POSITIONED EXACTLY UNDER THE SEVEN COILS) AND FINALLY, THE OPTICAL DISC HAS TWO SLOTS CUT IN IT AND POSITIONED EXACTLY UNDER THE TWO ROTOR MAGNETS.

THE ROTOR IS THE ONLY MOVING PART IN THIS MOTOR. THE OPTICAL DISC IS ATTACHED TO THE ROTOR AND IT SWITCHES ON THE COIL CONNECTED TO THE PHOTO-TRANSISTOR BELOW IT WHEN LIGHT SHINES THROUGH THE SLOT. WITH SEVEN STATOR COILS, THE MOTOR IS SELF-STARTING, AND IN THE STYLE SHOWN SO FAR, ONLY ONE COIL IS POWERED UP AT ANY ONE TIME.

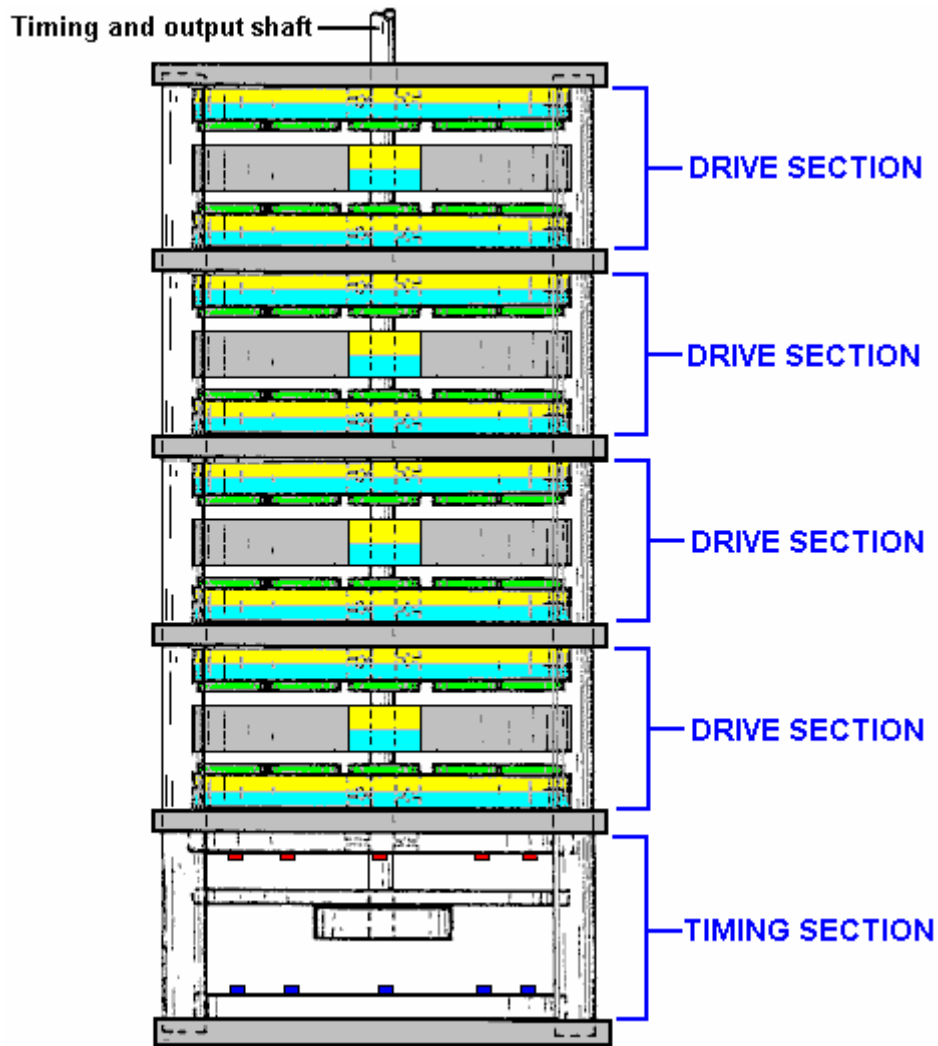
THE NEXT STEP IN THE DEVELOPMENT OF THE MOTOR IS TO ADD ANOTHER STATOR RING MAGNET ABOVE THE ROTOR, LIKE THIS :



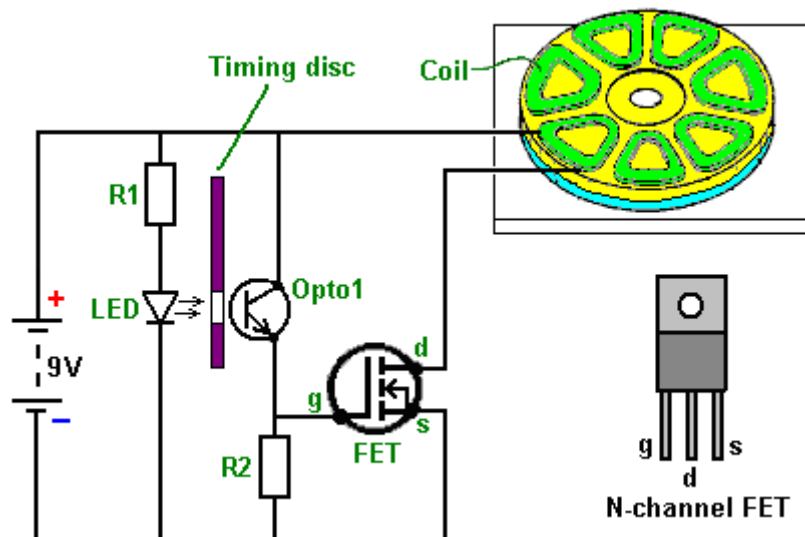
THE SWITCHING FOR THE EXTRA COILS IS IDENTICAL TO THAT OF THE LOWER SET OF COILS AND THE ROTOR RECEIVES A MUCH BETTER BALANCED AND LARGER THRUST :



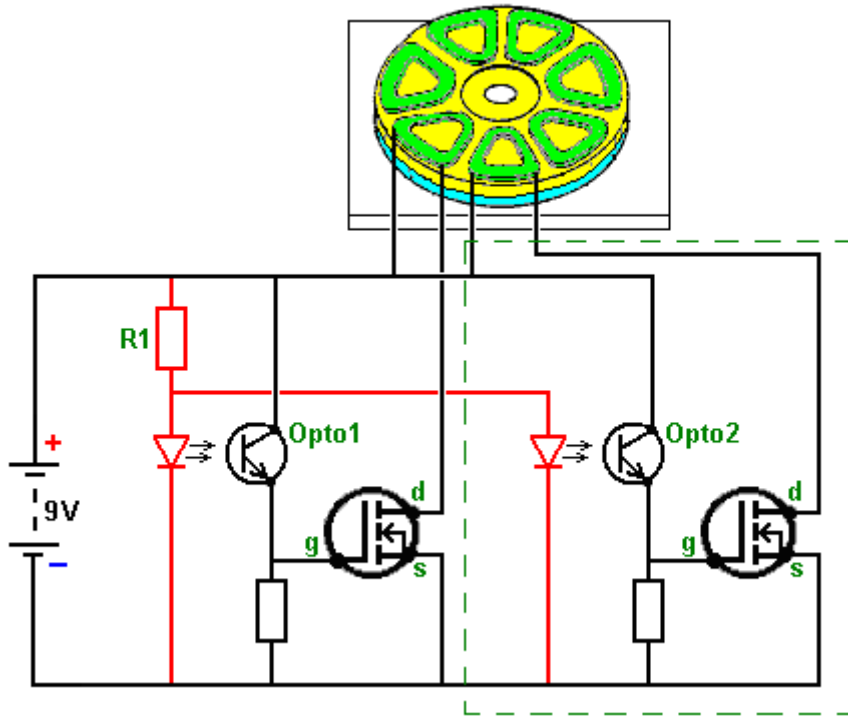
WITH THIS ARRANGEMENT, TWO COILS ARE POWERED UP AT ANY ONE MOMENT. BUT, OF COURSE, THIS SET-UP CAN BE REPLICATED AS MANY TIMES AS YOU WISH WITH THE MOTOR POWER INCREASING TO A MAJOR DEGREE WITH EVERY ADDED DRIVE SECTION. HERE IS AN ARRANGEMENT WITH FOUR DRIVE SECTIONS :



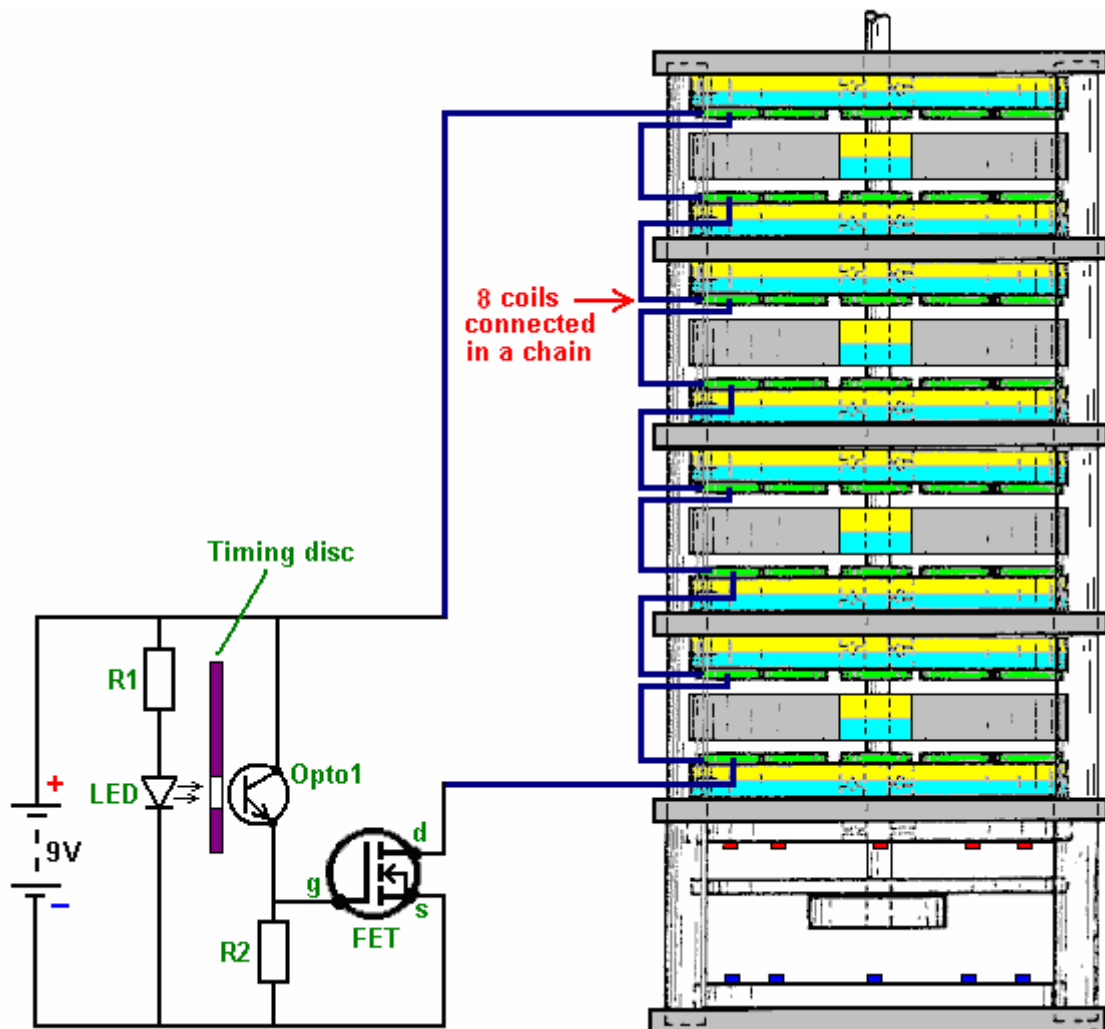
HERE IS CHARLES FLYNN'S' CIRCUIT FOR DRIVING ONE OF THE COILS :



THERE ARE SEVEN OF THESE CIRCUITS, ONE FOR EACH COIL :



IF, AS WOULD BE NORMAL, SEVERAL SETS OF MAGNETS ARE BEING USED, THEN THE COILS POSITIONED DIRECTLY ABOVE EACH OTHER CAN BE CONNECTED IN A CHAIN LIKE THIS :

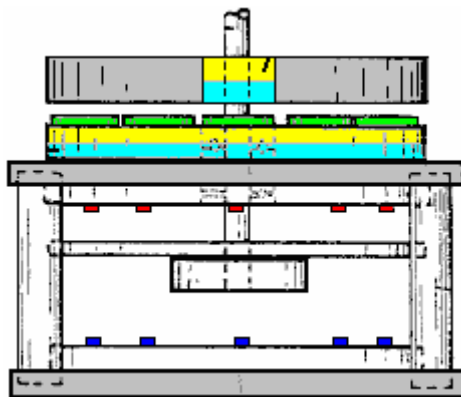


**THIS IS A VERY SIMPLE AND STRAIGHTFORWARD MAGNET MOTOR WITH ALL OF THE OUTPUT POWER COMING FROM THE MAGNETS AND NONE FROM THE BATTERY WHICH IS ONLY USED AS AN ELECTROMAGNETIC SHIELD TO PRODUCE UNBALANCED FORCES.**

**I KEEP GETTING ASKED “WHAT WIRE AND HOW MANY TURNS FOR EACH COIL?” BUT THERE IS NO ANSWER TO THAT. THE MAGNETIC EFFECT OF A COIL IS NOT RELATED TO THE POWER FED INTO IT AND A COIL WITH MANY TURNS OF FINE WIRE, DRAWING LITTLE CURRENT CAN EASILY HAVE A STRONGER MAGNETIC FIELD THAN A COIL WITH FEWER TURNS OF THICKER WIRE AND MUCH HIGHER CURRENT DRAW.**

**ALSO, MAGNETS VARY A GREAT DEAL IN THEIR STRENGTH AND THERE IS NO WAY THAT I CAN KNOW HOW POWERFUL YOUR MAGNETS ARE. FINALLY, THE GAP BETWEEN THE MAGNETS MAKES A MAJOR DIFFERENCE.**

**SO, I SUGGEST THAT YOU CONSTRUCT THE BASIC FIRST STEP OF :**



**WHERE THERE IS JUST ONE STATOR RING MAGNET, CHOOSE THE GAP BETWEEN THE ROTOR AND THE STATOR. THEN, CHOOSE A WIRE DIAMETER AND WIND A COIL TO SEE WHAT EFFECT IT HAS. TRY DIFFERENT COILS TO SEE WHAT WORKS REALLY WELL WITH YOUR MAGNETS AND THEN USE THAT COIL EVERYWHERE.**

**WHILE THE ROTOR MAGNETS ARE SHOWN AS TAPERED TOWARDS THE OUTPUT SHAFT, THAT IS NOT ESSENTIAL AND RECTANGULAR MAGNETS CAN BE USED.**

**NOTES :** <http://www.free-energy-info.com/Flynn.pdf>

**VIDEO :** <https://youtu.be/P4ElvBcFFXl>

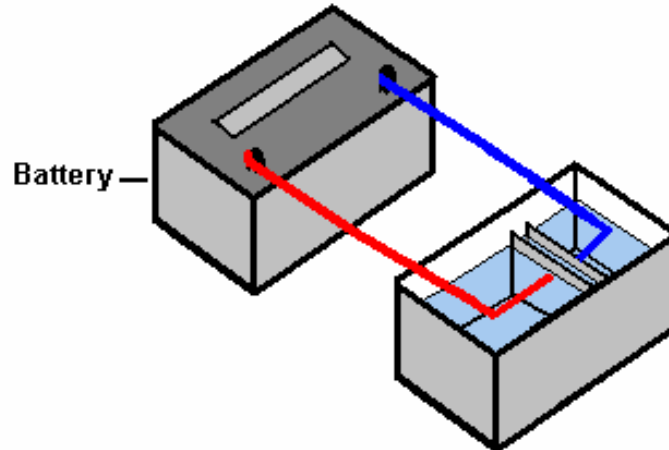
**EBOOK :** <http://www.free-energy-info.com/PJKbook.pdf>



# Running A Generator On Water

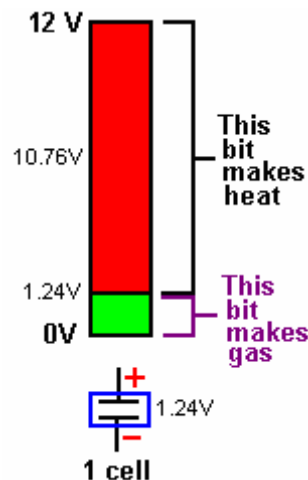
**Disclaimer:** This presentation is for information purposes only and must not under any circumstances be considered to be an encouragement that you should construct anything based on this information. Your actions are your responsibility and yours alone.

“HHO” IS A COMMON NAME GIVEN TO THE GAS MIXTURE PRODUCED DURING THE ELECTROLYSIS OF WATER. ELECTROLYSIS CAN BE ACCOMPLISHED BY PLACING TWO CONDUCTING ELECTRODES IN WATER AND APPLYING A SUITABLE VOLTAGE TO THOSE ELECTRODES :



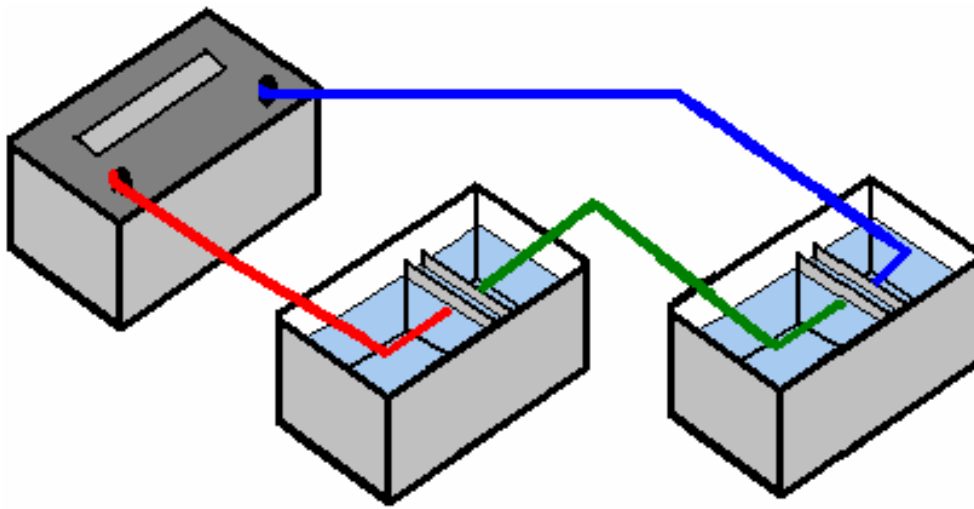
THE RESULT OF THIS IS BUBBLES OF GAS LEAVING THE LIQUID. THE VOLUME OF WATER DOES NOT APPEAR TO CHANGE MUCH BECAUSE ONE LITRE OF WATER PRODUCES AROUND 1750 LITRES OF GAS. MICHAEL FARADAY DID THIS AND DETERMINED HOW MUCH GAS WAS PRODUCED PER AMP OF CURRENT FLOWING BETWEEN THE ELECTRODES. “SCIENTISTS” ASSUME THAT FARADAY’S RESULTS ARE THE FINAL WORD ON THE SUBJECT. THEY AREN’T. BOB BOYCE OF AMERICA DOES NOT CONSIDER AN ELECTROLYSIS CELL READY FOR USE UNTIL IT EXCEEDS TWICE THE PERFORMANCE OF FARADAYS EXPERIMENTS.

WE HAVE A PROBLEM WITH THE ABOVE ARRANGEMENT. THE VOLTAGE WHICH PRODUCES GAS FROM WATER IS 1.24 VOLTS, AND SO, IF WE APPLY SAY, 12 VOLTS TO THE ELECTRODES, THEN THAT IS VERY INEFFICIENT :

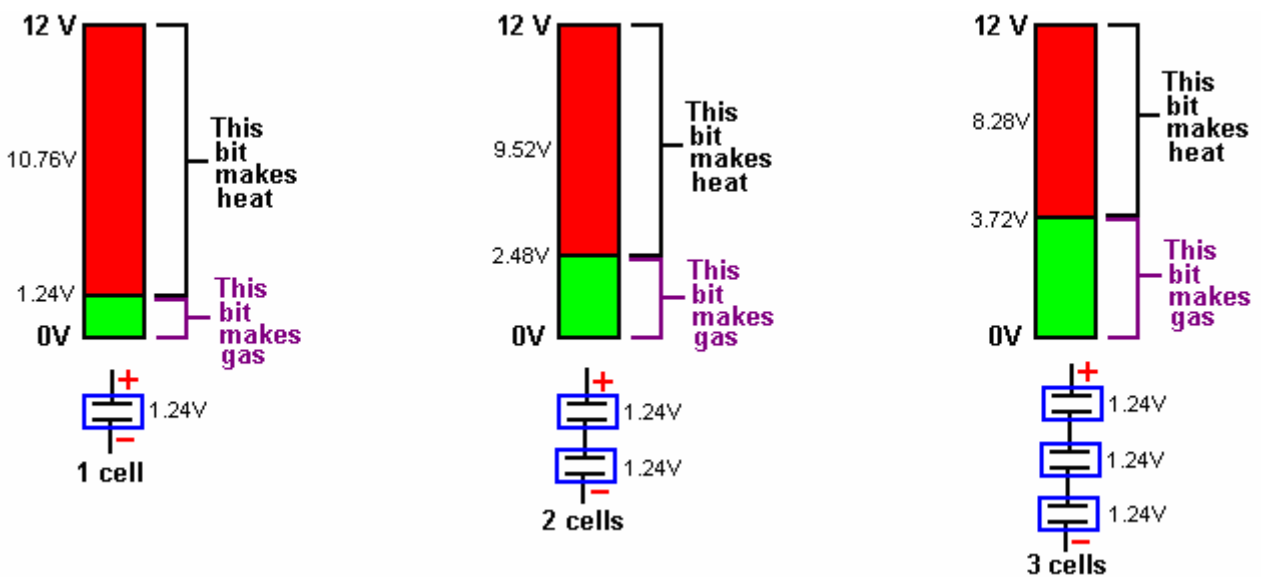


WITH 12 VOLTS APPLIED, 10.76 VOLTS DO NOT MAKE HHO GAS AND SO THE PROCESS IS ONLY ABOUT 10 PER CENT EFFICIENT AND 90 PER CENT OF THE POWER SUPPLIED ONLY HEATS THE WATER.

WE CAN IMPROVE ON THIS ARRANGEMENT BY USING TWO CELLS CONNECTED IN SERIES :



**THIS DOUBLES THE AMOUNT OF GAS PRODUCED AND IT DOUBLES THE OVERALL PERFORMANCE OF THE SYSTEM.**



**EXPERIENCE HAS SHOWN THAT USING SIX OR SEVEN PAIRS OF ELECTRODES WITH A VEHICLE'S ELECTRIC SYSTEM IS THE MOST EFFECTIVE COMBINATION.**

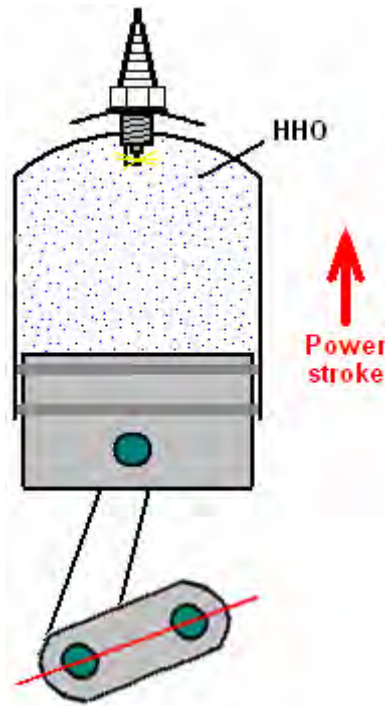
**HOWEVER, WATER DOES NOT EASILY BREAK DOWN INTO HHO GAS, AND SO USING A CATALYST IS AN IMPORTANT STEP FORWARD. THE TWO BEST KNOWN TRUE CATALYSTS ARE SODIUM HYDROXIDE (NaOH) AND POTASSIUM HYDROXIDE (KOH). THESE INCREASE THE CURRENT FLOW THROUGH THE WATER AND SO, INCREASES THE HHO GAS VOLUME PRODUCED. THE OPTIMUM SODIUM HYDROXIDE MIX IS 20% BY WEIGHT, AND FOR POTASSIUM HYDROXIDE 28% BY WEIGHT.**

**HOWEVER, THOSE CATALYSTS REACT WITH MANY ELECTRODE MATERIALS AND SO 316L-GRADE STAINLESS STEEL IS A GOOD CHOICE FOR THE ELECTRODE MATERIAL.**

**IT IS NOT REALISTIC TO USE THE ELECTRODE ARRANGEMENT SHOWN DUE TO ITS SHEER PHYSICAL SIZE. INSTEAD, ALL ELECTRODE PAIRS ARE PLACED INSIDE ONE CONTAINER, PERHAPS LIKE THIS :**



**THE FACT THAT HHO IMPLODES LEAVES US WITH TWO OPTIONS :**



**THE FIRST OPTION IS TO CHANGE THE SPARK TIMING DRASTICALLY AND MAKE THE IMPLOSION SUCK THE PISTON UPWARDS ON WHAT USED TO BE THE COMPRESSION STROKE. THIS IS NOT CONVENIENT ALTHOUGH IT HAS BEEN DONE SUCCESSFULLY IN SPITE OF THE VALVE OPERATION CHANGES NEEDED.**

**THE SECOND OPTION IS TO CHANGE THE IMPLOSION INTO AN EXPLOSION WHICH IS A GOOD DEAL EASIER THAN IT SOUNDS. THE TRICK IS TO USE THE HEAT OF THE IMPLOSION TO TURN WATER INTO STEAM AND THE FASTEST WAY TO DO THAT IS TO ADD COLD WATER MIST OR "FOG" TO THE INCOMING AIR. THAT RESULTS IN 'FLASH STEAM' WHICH PROVIDES A POSITIVE PRESSURE ON THE PISTONS JUST AS THE NORMAL FUEL WOULD DO. THIS MEANS THAT YOU CAN RUN A GENERATOR LIKE THIS ONE :**

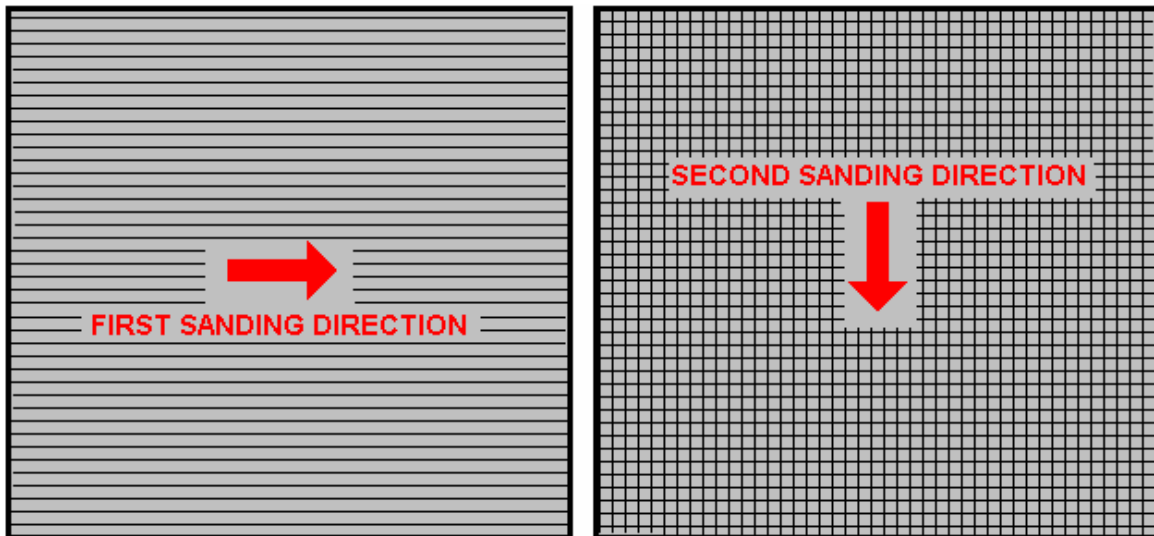


**WITHOUT USING PETROL. THE EFFICIENCY OF DC ELECTROLYSIS FOR USE WITH A GENERATOR CAN BE IMPROVED QUITE READILY. THE FIRST STEP IS TO USE AN ELECTRONIC PULSING CIRCUIT INSTEAD OF JUST AN ORDINARY DC SUPPLY. THESE PULSING CIRCUITS ARE SOLD AS "DC MOTOR SPEED CONTROLLERS" AND CAN LOOK LIKE THIS :**



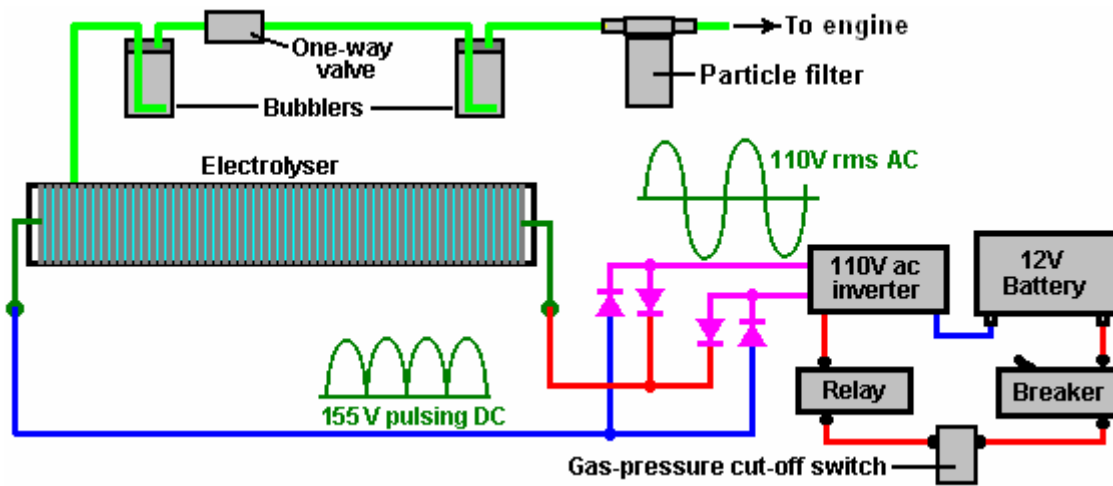
THE UNIT SHOWN HERE IS INTENDED TO PROVIDE UP TO 30 AMPS AND FANCIER UNITS ARE ALSO AVAILABLE.

BOB BOYCE IS THE MOST EXPERIENCED PERSON IN THE HHO FIELD AND HE STRESSES THE NECESSITY FOR CAREFUL ELECTRODE PREPARATION BEFORE USE. FOR THIS, THE 316L-GRADE STAINLESS STEEL ELECTRODE PLATES HAVE ALL TRACES OF OIL, GREASE OR OTHER CONTAMINANTS REMOVED FROM THEM AND ARE THEN SANDED WITH GRADE 80 SANDPAPER IN TWO DIRECTIONS WHICH ARE 90-DEGREES APART IN ORDER TO CREATE TINY PEAKS ON BOTH SURFACES OF EACH PLATE :



THEN, THE PLATES ARE WASHED WITH DISTILLED WATER AND ALL HAND CONTACT IS AVOIDED BY THE USE OF DISPOSABLE GLOVES. NEXT COMES THE 'CONDITIONING' PROCESS WHERE THE PLATES ARE INSERTED IN THE ELECTROLYSER AND CURRENT RUN THROUGH THE WHOLE SET OF PLATES FOR SEVERAL HOURS, USING A 20% SODIUM HYDROXIDE ELECTROLYTE. THE PLATES ARE THEN RINSED OFF AND THE PROCESS REPEATED UNTIL THE ELECTROLYSER PERFORMANCE IS AT LEAST DOUBLE THAT OF FARADAY. MORE PRECISE DETAILS FOR THIS PROCESS ARE GIVEN IN CHAPTER 10 OF [www.free-energy-info.com/PJKbook.pdf](http://www.free-energy-info.com/PJKbook.pdf) WHICH IS A FREE DOWNLOAD.

THE RATE OF GAS PRODUCTION CAN BE INCREASED BY INCREASING THE NUMBER OF PLATES IN THE ELECTROLYSER. BOB BOYCE CHOOSES TO DO IT THIS WAY :

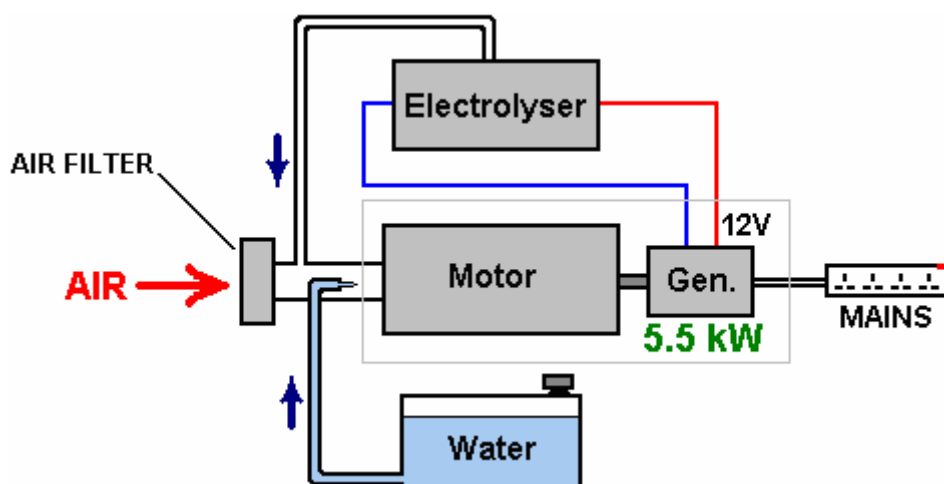


AS BOB IS AMERICAN, HIS DC INVERTER PRODUCES A NOMINAL 110-VOLTS AC WHICH RECTIFIES TO ABOUT 155 VOLTS OF PULSING DC. THIS ALLOWS AN ELECTROLYSER WITH 100 SEPARATE CELLS IN IT, (CREATED BY 101 ELECTRODE PLATES) TO BE USED. BOB'S PREFERRED PLATE SIZE IS 6-INCHES SQUARE (150 mm SQUARE). THE DC EFFICIENCY OF EACH CELL IS APPROXIMATELY 216% THAT OF MICHAEL FARADAY.

IT IS PERFECTLY POSSIBLE TO RUN AN ORDINARY, COMMERCIAL GENERATOR WITHOUT THE USE OF ANY CONVENTIONAL FUEL.

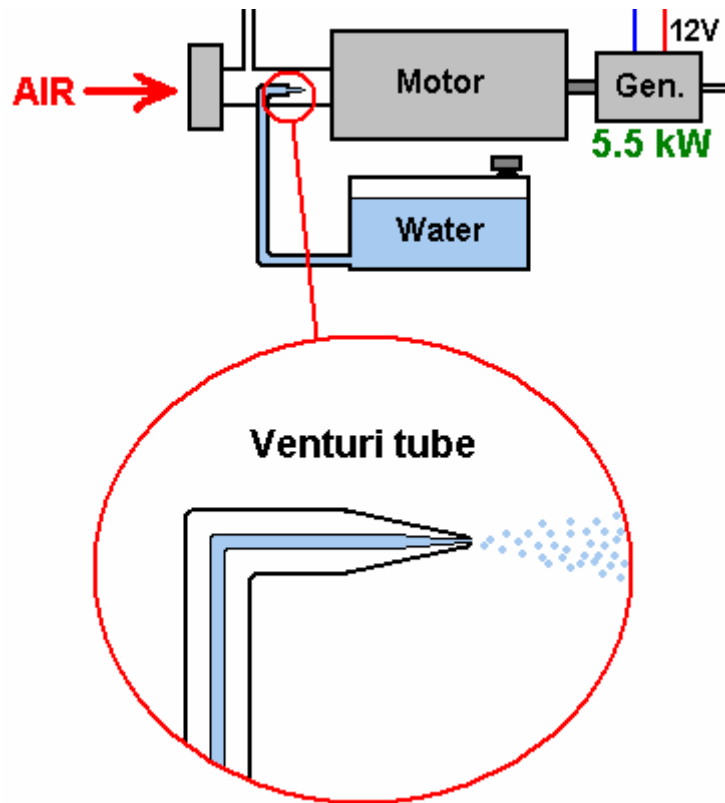


THE WAY THAT THIS IS DONE IS FAIRLY STRAIGHTFORWARD AND EASY TO UNDERSTAND :

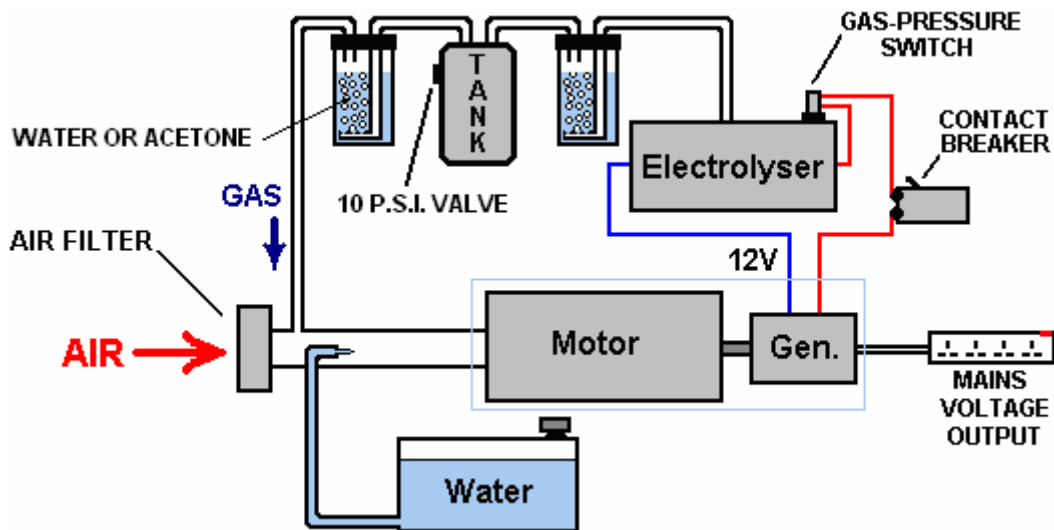


AS THE GENERATOR IS A GREAT SOURCE OF ELECTRICAL POWER, IT IS USED TO POWER THE ELECTROLYSER TO CREATE THE NECESSARY HHO GAS TO POWER THE MOTOR OF THE GENERATOR. THE ELECTROLYSER GAS IS FED INTO THE AIR STREAM ENTERING THE ENGINE AND AS HHO GAS IMPLODES, COLD WATER MIST IS ALSO FED INTO THE ENGINE.

THE COLD WATER MIST IS A STREAM OF TINY WATER DROPLETS WHICH CAN BE PRODUCED WITH A COMMERCIAL "POND FOGGER" FROM A PET SHOP OR A GARDEN CENTRE, OR JUST VERY SIMPLY WITH A VENTURI TUBE AS SHOWN HERE :

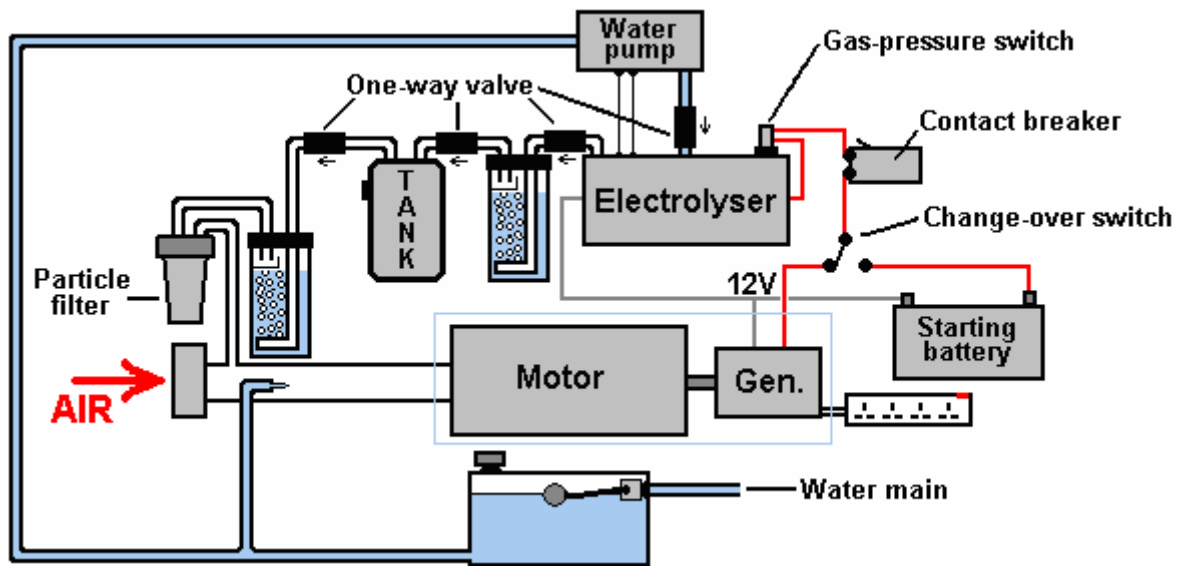


OBVIOUSLY, SOME SAFETY FEATURES ARE ADVISABLE AND WHILE THEY MAKE THE SYSTEM APPEAR TO BE MORE COMPLICATED, IT REALLY ISN'T :

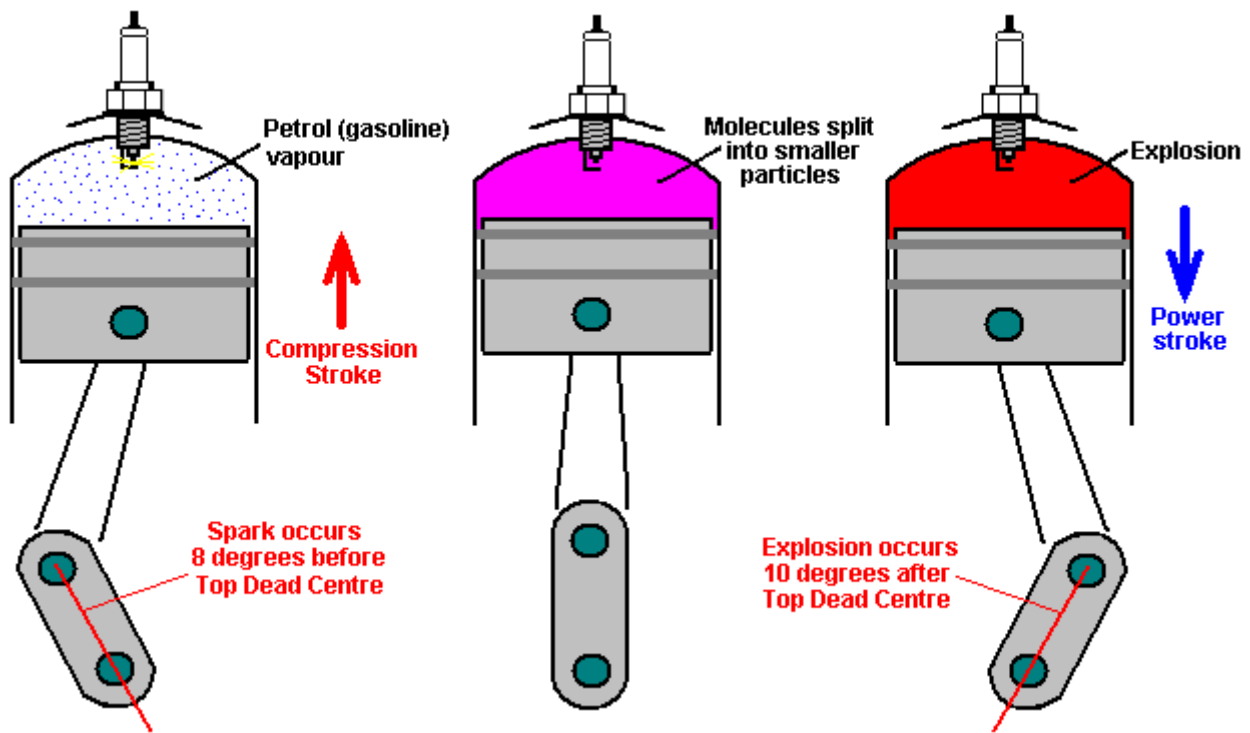


THE MAIN ADDITION IS TWO BUBBLERS BETWEEN THE ELECTROLYSER AND THE MOTOR OF THE GENERATOR. THESE ARE TO WASH OUT ANY SLIGHT TRACES OF ELECTROLYTE WHICH MAY HAVE CONTAMINATED THE HHO GAS GENERATED.

IT IS NORMAL FOR A SYSTEM LIKE THIS TO BE STATIONARY AND IF THAT IS THE CASE, THEN A LOCAL WATER SUPPLY CAN BE ATTACHED :

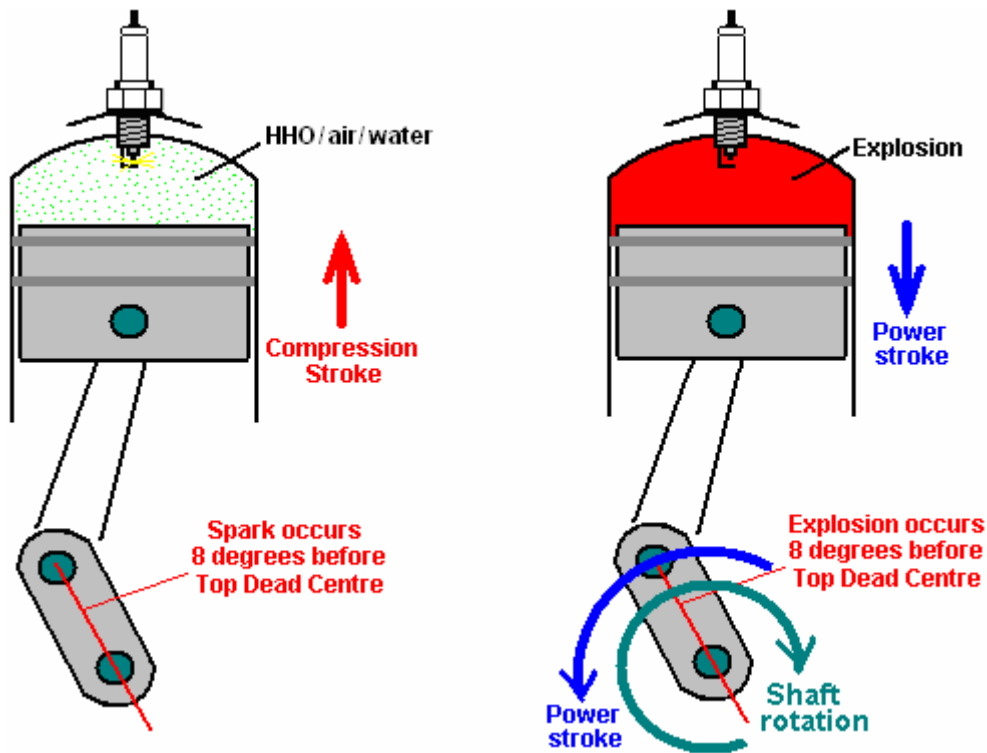


THE REASON FOR ALTERING THE TIMING OF THE SPARK IS THE SLIGHT DELAY BETWEEN THE SPARK AND THE COMBUSTION OF A PETROL / AIR MIX. THE COMBUSTION NEEDS TO HAPPEN A FEW DEGREES AFTER TOP DEAD CENTRE, WHEN THE PISTON IS STARTING ITS DOWNWARD MOVEMENT IN THE POWER STROKE. BECAUSE OF THE DELAY WHILE THE HYDROCARBON CHAIN IS BREAKING DOWN, A PETROL ENGINE SPARK OCCURS A FEW DEGREES **BEFORE** TOP DEAD CENTRE :



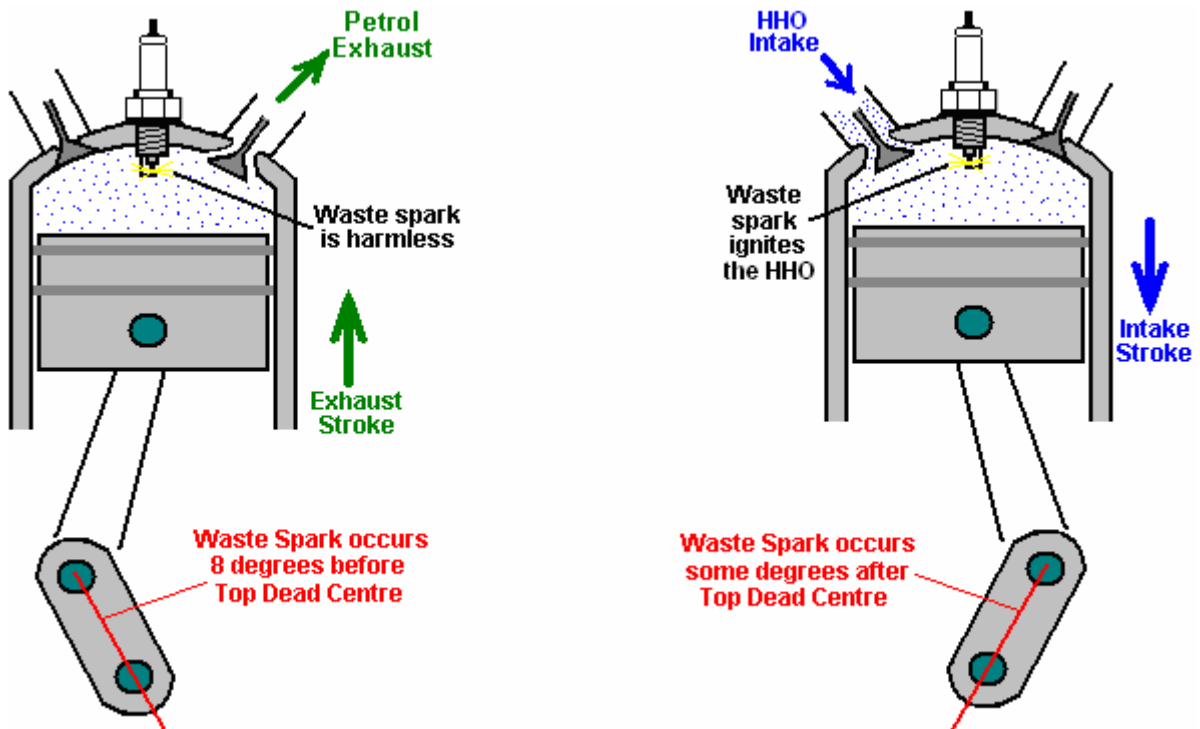
IF YOU JUST REPLACE THE PETROL VAPOUR WITH HHO GAS THEN THAT WOULD BE A MAJOR PROBLEM BECAUSE HHO IGNITES INSTANTLY AND THAT WOULD BE FAR TOO SOON BECAUSE OF THE WAY THAT THE GENERATOR IS MANUFACTURED FOR USE WITH PETROL :





USING JUST AN HHO-AIR-WATER MIX, THE COMBUSTION WOULD OCCUR BEFORE TOP DEAD CENTRE AND MIGHT WELL BREAK THE CONNECTING ROD WHICH MOVES THE PISTON, SO WE NEED TO DELAY THE SPARK BY ABOUT TEN DEGREES.

TO LOWER MANUFACTURING COSTS, SPARK TIMING IS OFTEN TAKEN OFF THE OUTPUT SHAFT, PRODUCING A SPARK ON EVERY REVOLUTION INSTEAD OF EVERY SECOND REVOLUTION AS IS ACTUALLY NEEDED. THESE EXTRA “WASTE” SPARKS DON’T MATTER WITH PETROL AS THEY OCCUR DURING THE EXHAUST STROKE, BUT WITH HHO FUEL THEY DO MATTER VERY MUCH DUE TO THE DELAYED SPARK TIMING :



THIS LEAVES US WITH TWO ESSENTIAL ADJUSTMENTS – TIMING DELAY AND WASTE SPARK SUPPRESSION. THERE ARE VARIOUS WAYS THAT THIS CAN BE DONE BUT AS EACH ENGINE DESIGN IS DIFFERENT IT IS DIFFICULT TO COVER EVERY POSSIBILITY. HOWEVER, THERE IS A TECHNIQUE

WHICH CAN BE USED WITH MANY ENGINES AND WHICH DEALS WITH BOTH ISSUES AT THE SAME TIME.

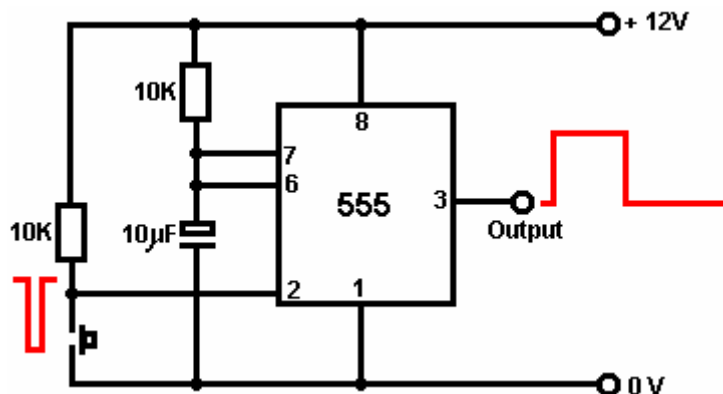
MOST GENERATOR ENGINES ARE FOUR STROKE ENGINES WITH INTAKE AND EXHAUST VALVES WHICH ARE PERHAPS SOMETHING LIKE THIS :



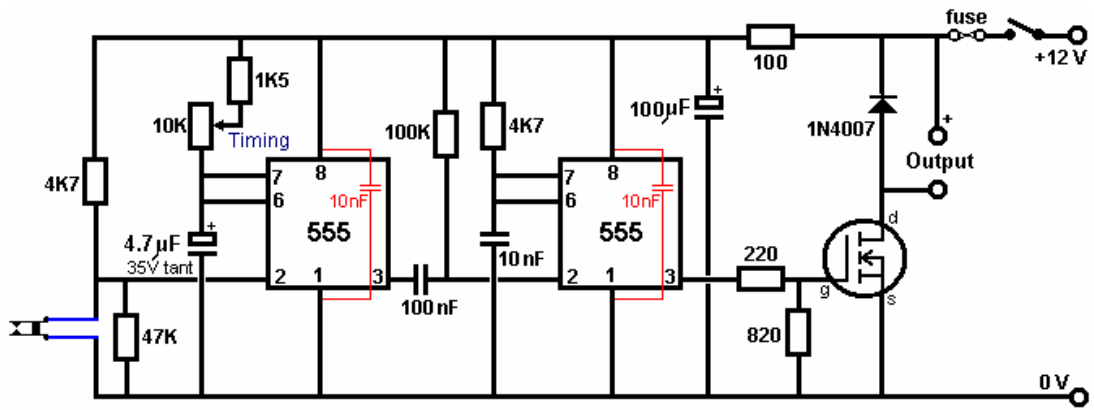
THE INTAKE VALVE (SHOWN ON THE RIGHT IN THIS ILLUSTRATION) IS PUSHED DOWN BY A CAM SHAFT, COMPRESSING THE SPRING AND OPENING THE INLET PORT. THIS ONLY TAKES PLACE EVERY SECOND REVOLUTION. IF A SWITCH IS MOUNTED SO THAT IT OPENS AND CLOSSES WITH THE INTAKE VALVE (AND THE ORIGINAL SPARK TIMING WIRING REMOVED), THEN AN ADJUSTABLE ELECTRONIC CIRCUIT CAN SET THE CORRECT SPARK TIMING :



THE SORT OF DELAY CIRCUIT NEEDED IS CALLED A "MONOSTABLE" MULTIVIBRATOR :



WE CAN USE TWO OF THESE CIRCUITS, THE FIRST TO GIVE THE NEEDED DELAY AND THE SECOND TO GIVE A BRIEF PULSE TO THE IGNITION CIRCUIT TO GENERATE THE SPARK :



**SELWYN HARRIS OF AUSTRALIA HAS KINDLY AGREED TO SHARE DETAILED INFORMATION ON HOW HE PERFORMS THE CONVERSION OF A STANDARD ELECTRICAL GENERATOR, AND HERE HE USES A GX4000i GENERATOR AS AN EXAMPLE. HIS CONVERSION DEALS WITH BOTH THE DELAYED SPARK AND THE WASTE SPARK :**



**THE FIRST STEP OF THE CONVERSION IS TO REMOVE THE FUEL TANK WHICH IS HELD IN PLACE BY FOUR BOLTS, AND THAT GIVES ACCESS TO THE CARBURETTOR WHICH IS REMOVED AS IT WILL NOT BE USED :**



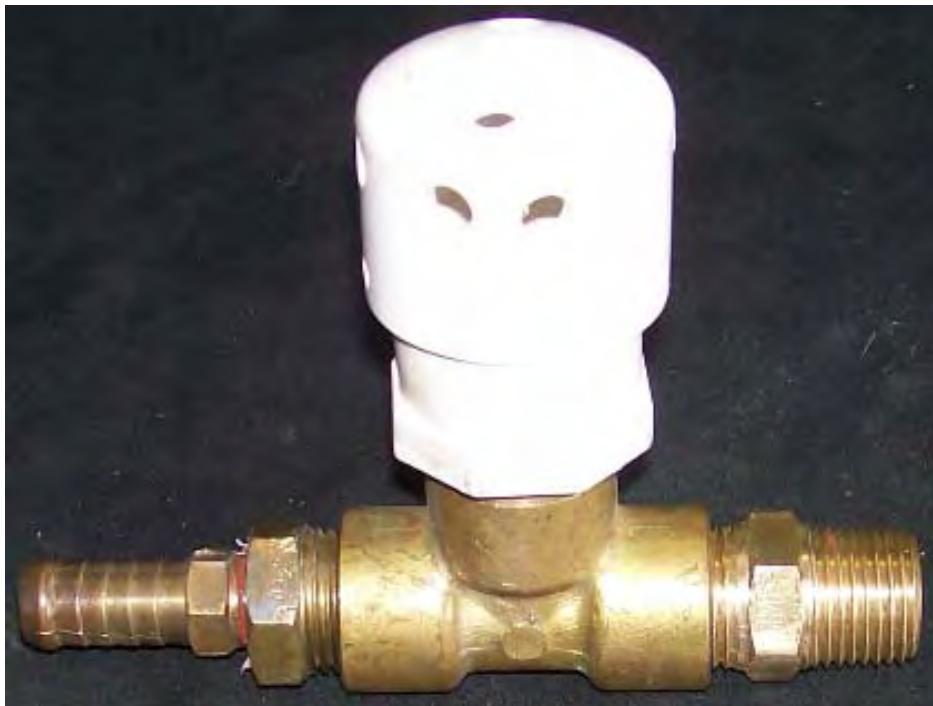
**THE NEXT STEP IS TO CONSTRUCT A PRESSURE-RELEASE VALVE. FOR THIS, PARTS ARE PURCHASED FROM THE LOCAL HARDWARE STORE. THE BRASS FITTINGS ARE A 12mm BARREL, A 12mm FEMALE T-FITTING AND A 12mm TO 9mm HOSE REDUCER AS SHOWN HERE :**



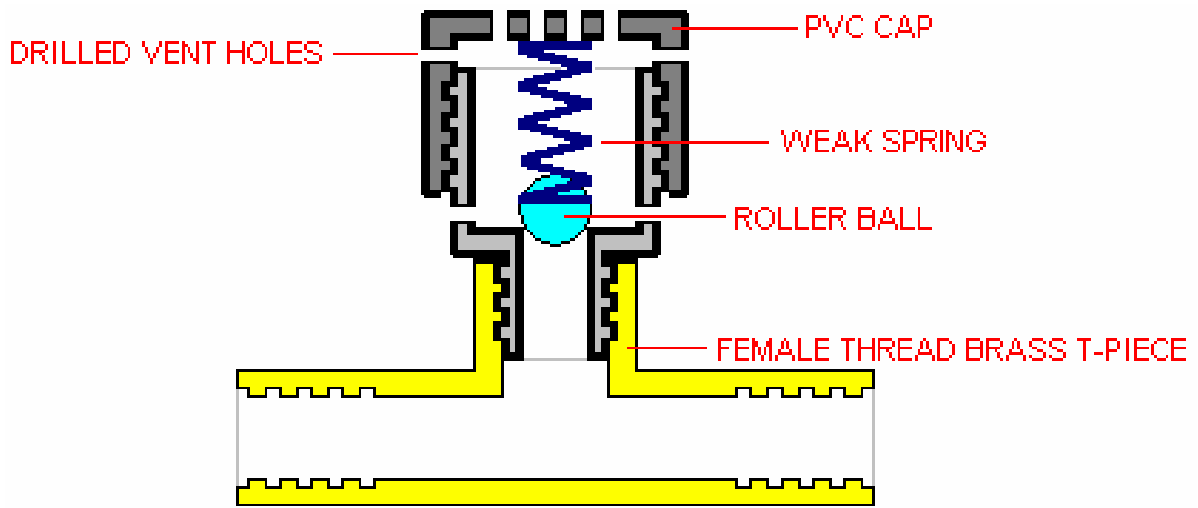
**THE PVC PLASTIC FITTINGS ARE A HALF-INCH TO ONE AND A QUARTER INCH REDUCER AND A ONE AND A QUARTER INCH END CAP. ALSO NEEDED ARE THE ROLLER BALL FROM AN OLD COMPUTER MOUSE (3-D PRINT ONE IF NONE IS AVAILABLE) AND A FAIRLY WEAK COMPRESSION SPRING TO HOLD THE BALL IN PLACE DURING NORMAL OPERATION WHERE THE GAS PRESSURE IS LOW :**



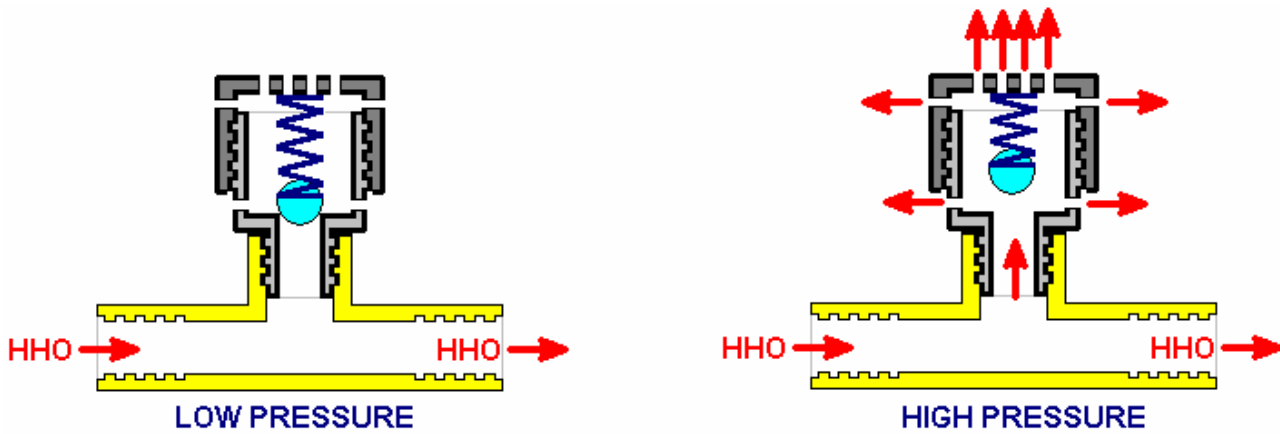
**THE CAP IS DRILLED WITH HOLES AND THESE COMPONENTS ARE THEN ASSEMBLED TO PRODUCE A PRESSURE-RELEASE VALVE :**



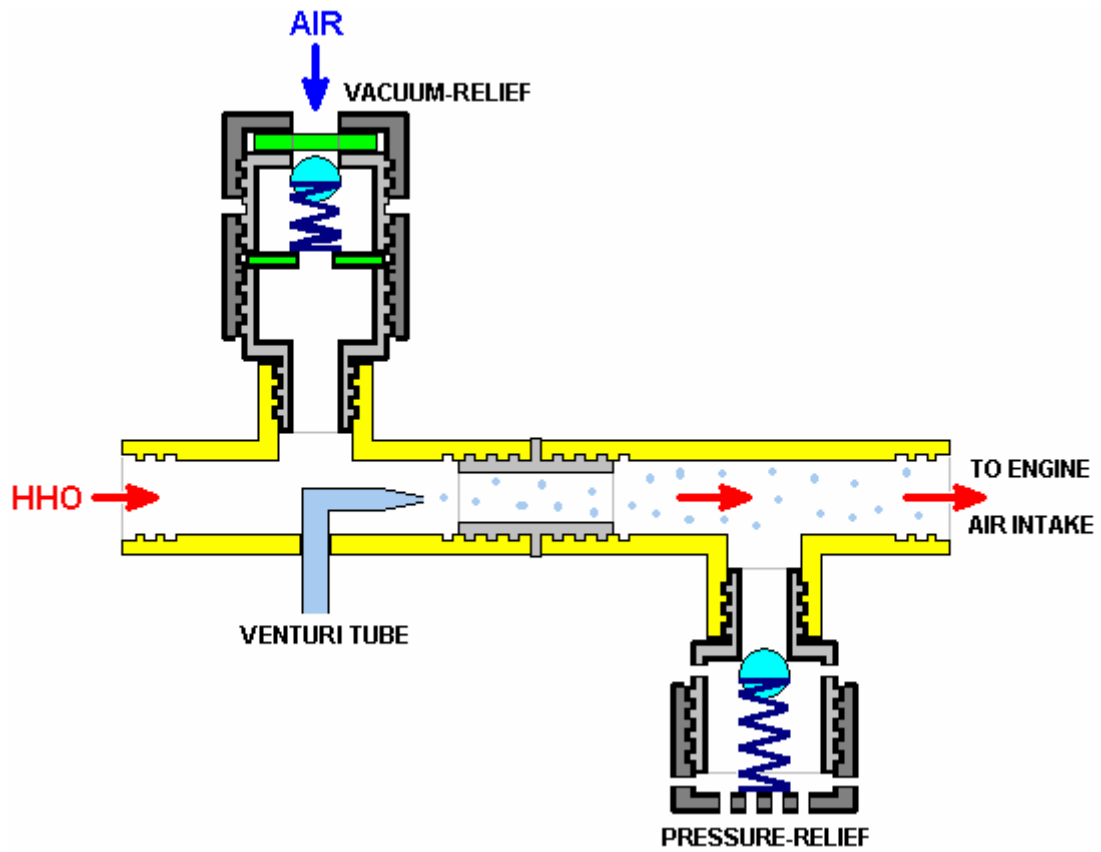
**THE INSIDE OF THE FLASH ARRESTOR LOOKS LIKE THIS :**



THE BALL IS HELD IN PLACE BY THE SPRING ALLOWING HHO TO FLOW PAST IT, BUT IF A SUDDEN INCREASE IN PRESSURE OCCURS THEN THE BALL IS FORCED UPWARDS, OPENING AN ESCAPE PATH THROUGH THE MANY HOLES DRILLED IN THE PLASTIC FITTINGS :



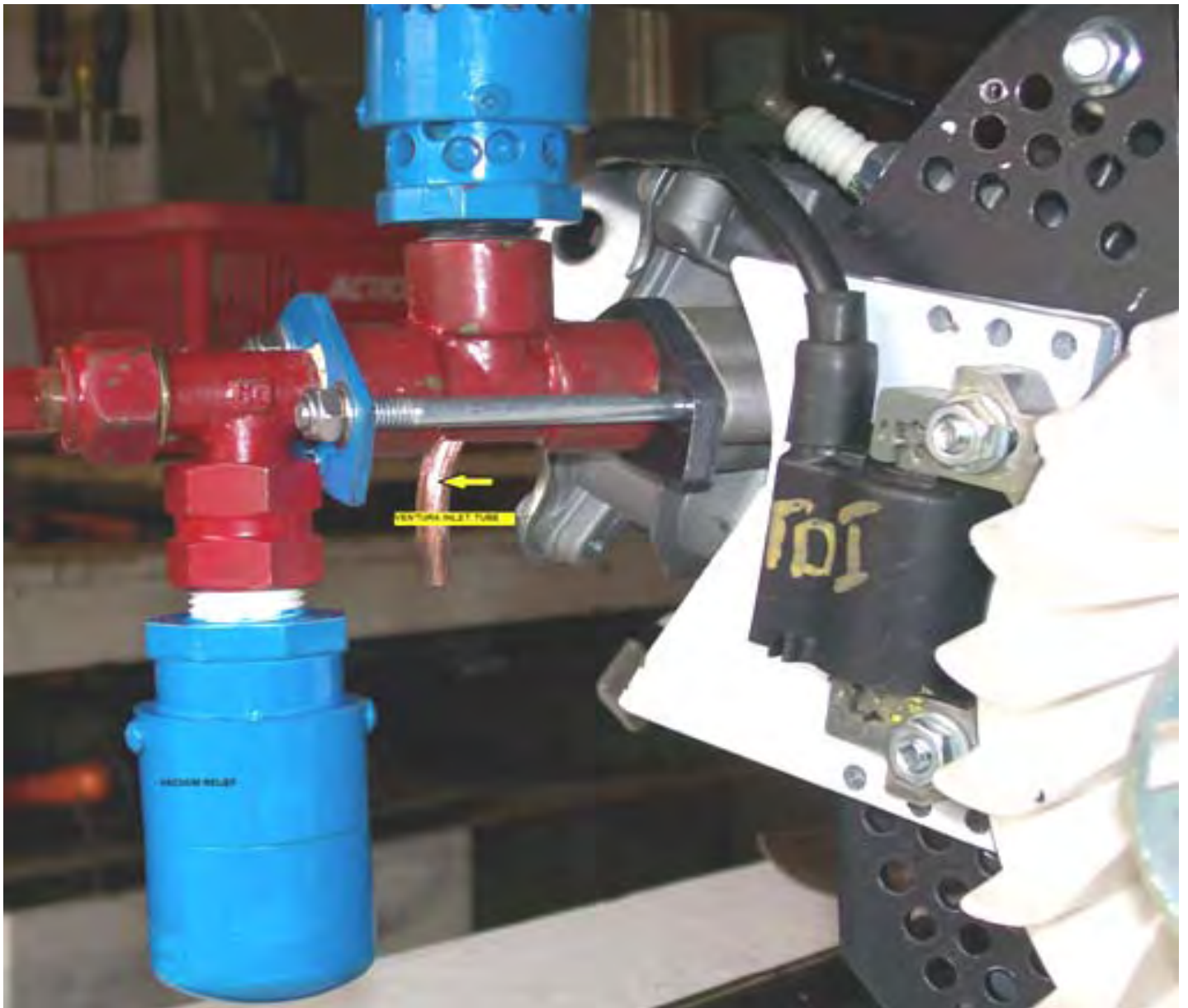
SELWYN ADDS AN ADDITIONAL SPRING-LOADED VALVE TO THE GENERATOR IN CASE THE ELECTROLYSER FAILS TO PRODUCE ENOUGH HHO GAS VOLUME. HE CALLS IT A "VACUUM RELIEF" VALVE BUT IT ACTUALLY OPERATES ON REDUCED PRESSURE RATHER THAN ON AN ACTUAL VACUUM. SELWYN USES A "HOGG" ELECTROLYSER (SHOWN IN CHAPTER 10) AND RECKONS THAT A HHO PRODUCTION RATE OF 4.5 TO 5 LITRES PER MINUTE IS SUFFICIENT TO RUN THE GENERATOR PROPERLY :



NEXT, A PIECE OF 6mm THICK ALUMINIUM PLATE IS CUT AND SHAPED TO BE THE SAME SIZE AND SHAPE AS THE CARBURETTOR GASKET (WHICH IS NOT SYMMETRICAL) :

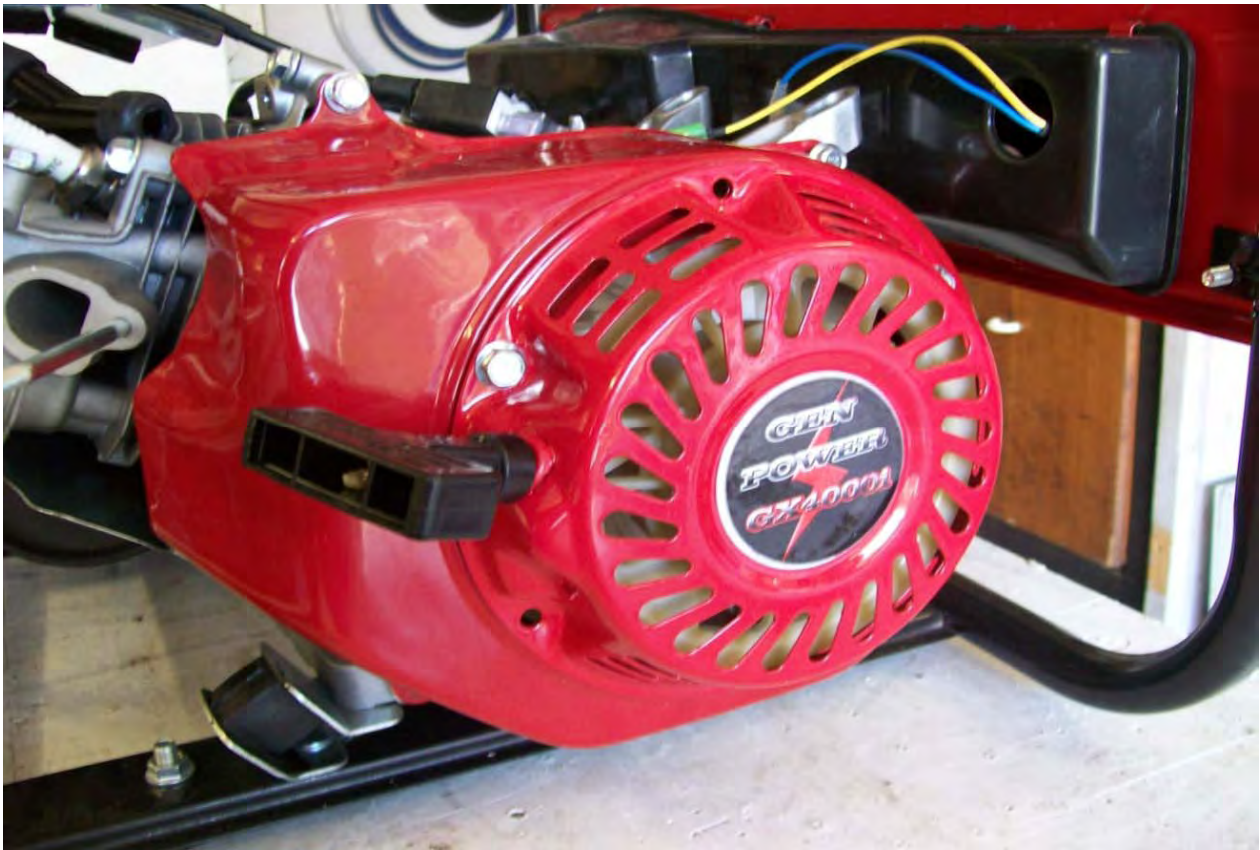


THE PIPES, BACKING PLATE, PRESSURE-RELIEF, VACUUM RELIEF, GASKETS, NUTS AND BOLTS ARE THEN ASSEMBLED AS SHOWN HERE – THE PAINT CONCEALS THE DIFFERENT MATERIALS BEING USED. AT THIS POINT, AN ELECTROLYSER ABLE TO PRODUCE AT LEAST 4.5 LPM OF HHO IS CONNECTED TO THE INTAKE.

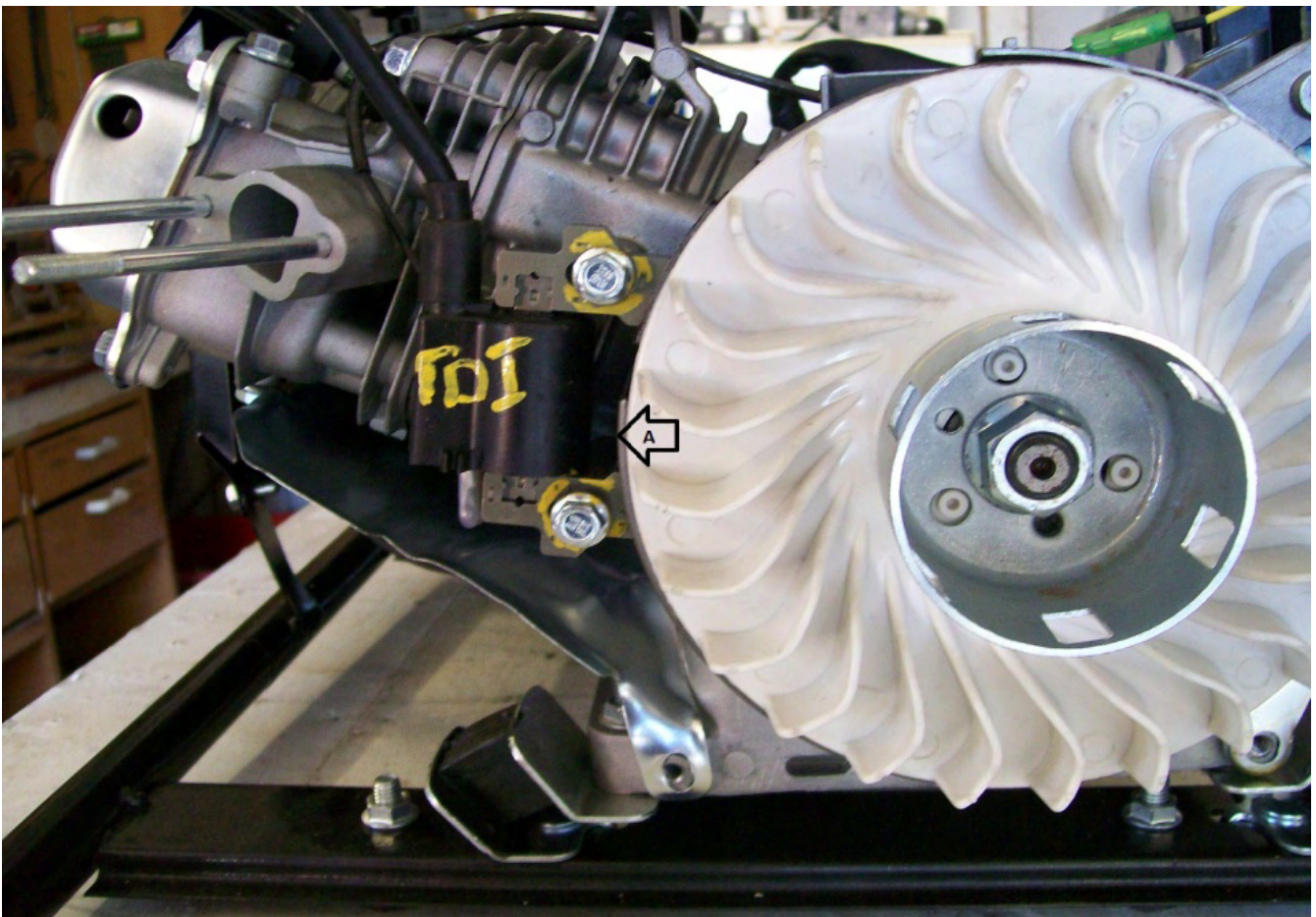


THE MANUAL PULL-START AND THE GENERATOR COVER ARE NOW REMOVED. IT IS ONLY NECESSARY TO UNDO FOUR OF THE BOLTS IN ORDER TO TAKE THE COVER OFF :



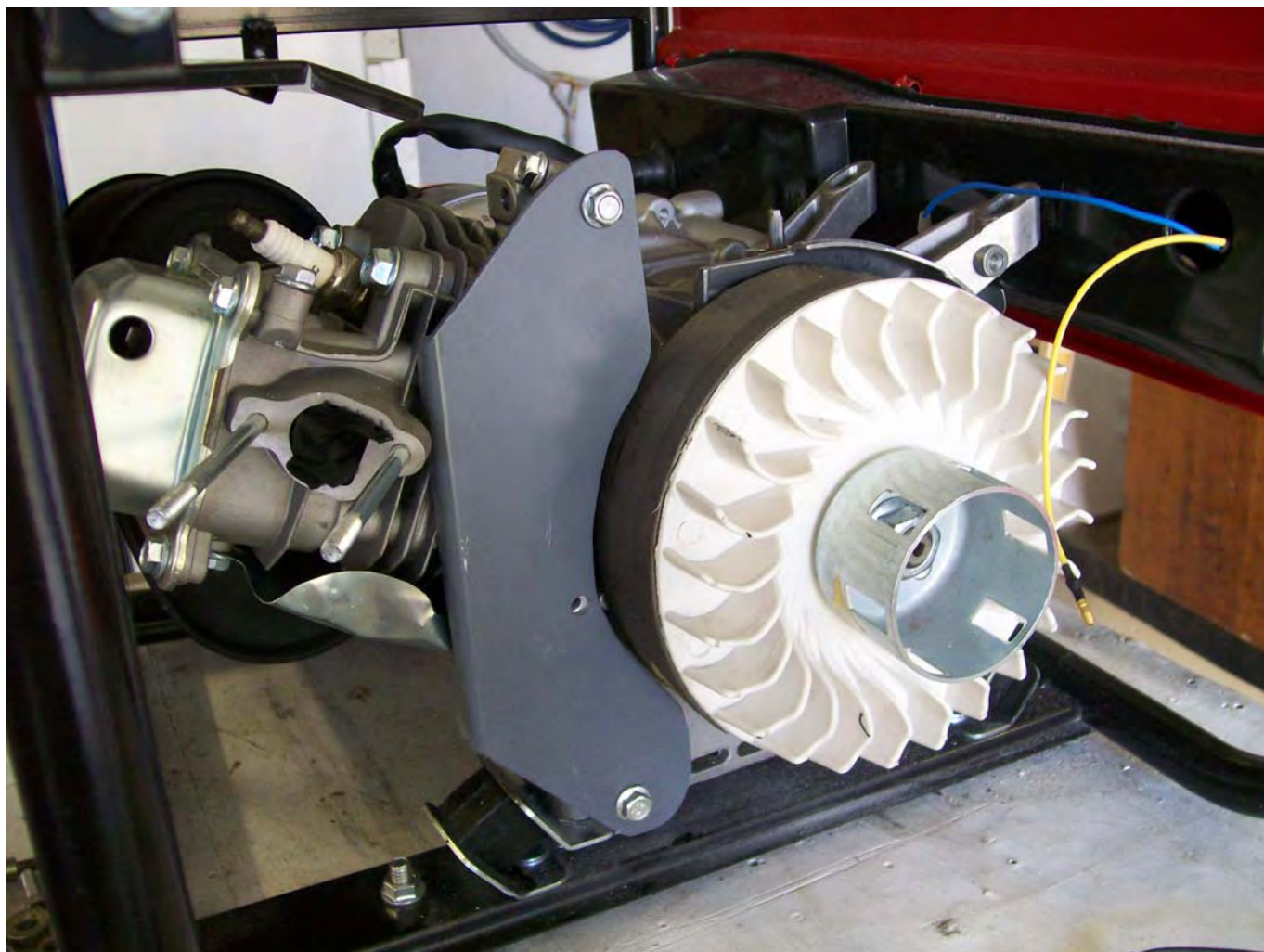


**THIS IS THE ENGINE WITH THE PULL-START AND THE BLOWER COVER REMOVED :**



**AT "A" YOU CAN SEE THE MAGNETIC PULSE TYPE TRANSISTOR DISCHARGE IGNITION ("TDI") PICK UP BOLTED IN PLACE IN ITS ORIGINAL 8-DEGREES BEFORE TOP DEAD CENTRE POSITION. THIS NEEDS TO BE REMOVED AND AN ALUMINIUM PLATE INSERTED TO ALLOW THE TDI TO BE MOUNTED IN ITS NEW POSITION. BECAUSE OF THE NEW FUEL, IT IS NECESSARY TO RETARD THE SPARK. TO MODIFY THE IGNITION TO TOP DEAD CENTRE.**

**THIS IS SELWYN'S 2mm THICK ALUMINIUM ADAPTOR PLATE READY FOR THE TIMING CHANGE :**



**IN THIS PICTURE, THE FUEL INTAKE PORT OPENING IS OBSCURED BECAUSE IT HAS BEEN TEMPORARILY BLOCKED OFF DURING THE CONSTRUCTION.**

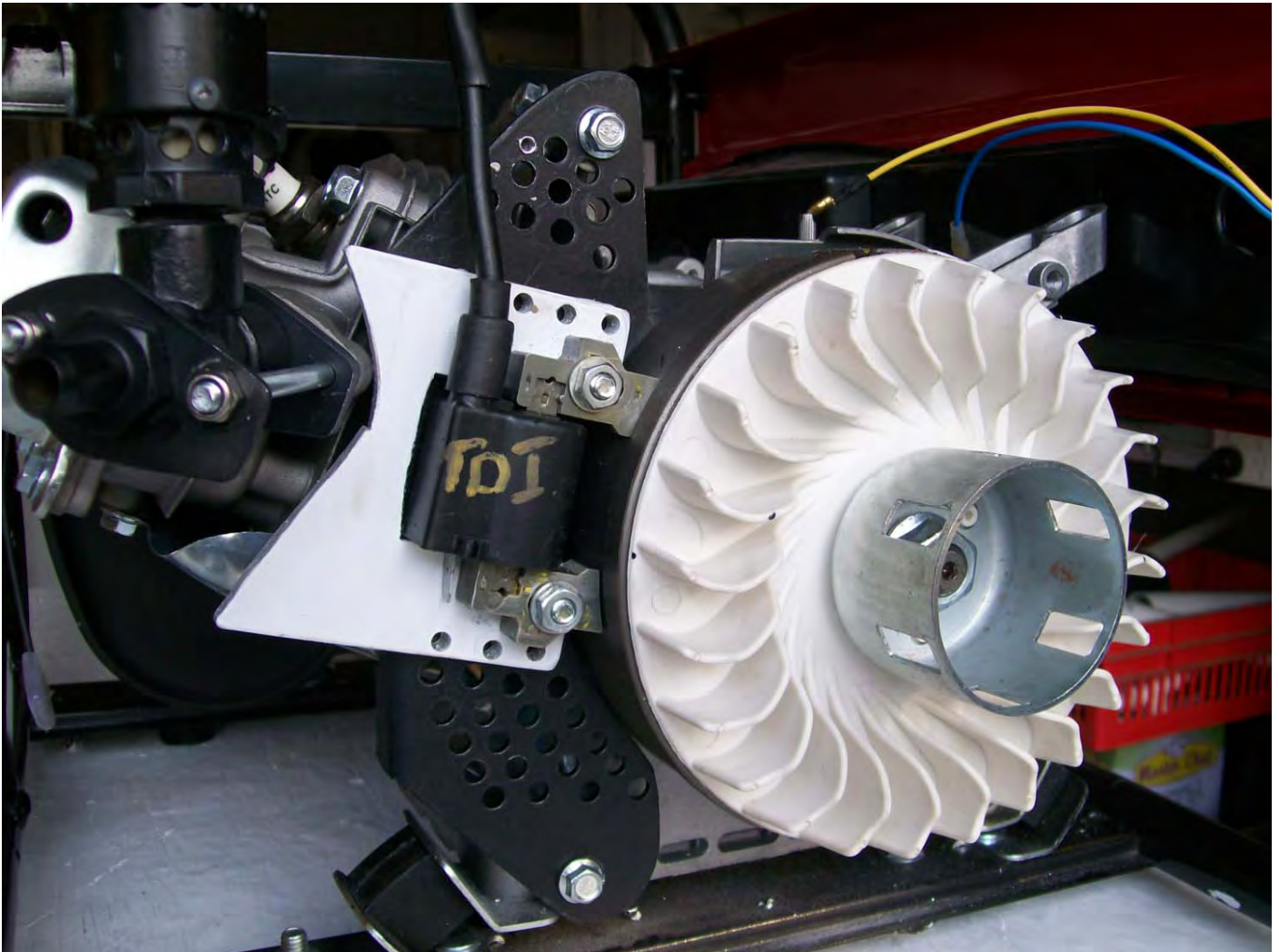
**THE TOOLS REQUIRED FOR CONSTRUCTING THESE COMPONENTS ARE A DRILL PRESS AND A JIG SAW FITTED WITH A METAL-CUTTING BLADE. SELWYN USED THIS TIMING ALTERATION METHOD ON HIS OWN SMALLER GENERATOR WHICH HAS RUN TROUBLE-FREE FOR A YEAR. THE OBJECTIVE IS TO DELAY THE IGNITION SPARK FROM 9 DEGREES BEFORE TOP DEAD CENTRE TO EITHER TOP DEAD CENTRE OR ONE DEGREE AFTER TOP DEAD CENTRE. THIS ALLOWS FOR A GOOD SPARK ON THE COMPRESSION STROKE AND WHEN THE WASTE SPARK OCCURS, THE INLET VALVE HAS NOT YET OPENED AND SO THERE IS NO HHO IN THE IGNITION AREA. THAT IS TO SAY, THE EXHAUST VALVE HAS JUST CLOSED AND THE INLET VALVE HAS NOT YET OPENED. THIS RESULTS IN A GOOD COMPRESSION STROKE FOR THE HHO AND DOES NOT TRY TO SEND THE PISTON BACKWARDS DUE TO PREMATURE IGNITION OF THE GAS MIX. THE PICTURE ABOVE SHOWS THE ALUMINIUM PLATE MOUNTED AND READY TO ACCEPT THE PICK-UP. THIS PLATE NEEDS TO HAVE AIR HOLES DRILLED IN IT IN ORDER TO ALLOW COOLING AIR TO FLOW OVER THE ENGINE FINS BEHIND IT.**

**THE TDI ADAPTOR PLATE LOOKS LIKE THIS :**



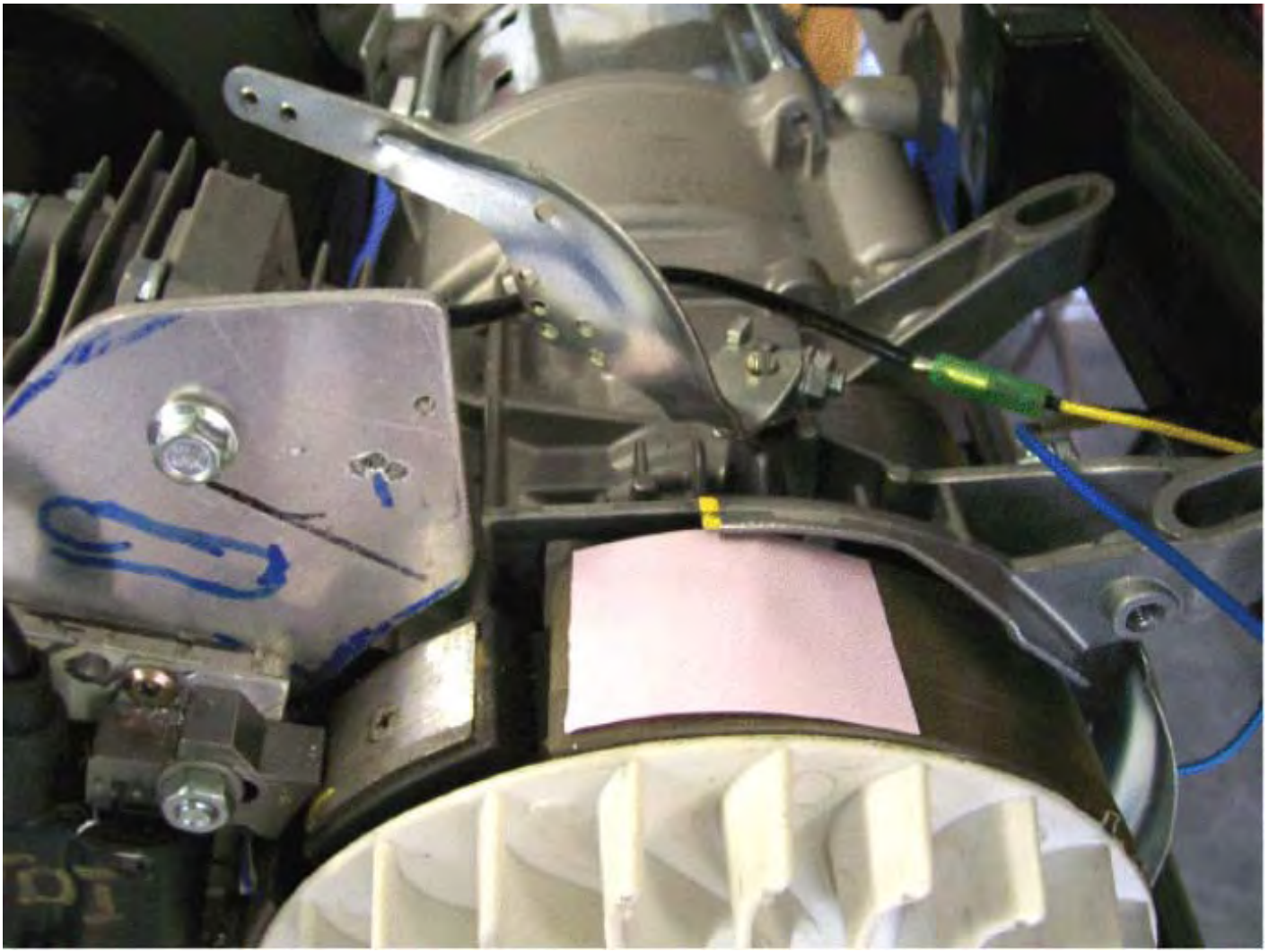
**AND AS SHOWN BELOW, THE SUPPORT PLATE IS DRILLED WITH THE VENTILATION HOLES. IN THIS PHOTOGRAPH THE ADAPTOR PLATE IS JUST RESTING ON THE SUPPORT PLATE. LATER, WHEN THE**

**TDC TIMING POSITION IS ESTABLISHED, THE ADAPTOR PLATE WILL BE BOLTED TO IT USING THE THREE HOLES TOP AND BOTTOM ON THE WHITE PLATE. THIS LOCKS THE TIMING TO THAT SETTING AND THE TIMING IS NEVER CHANGED. IN 2010, WHEN ADAPTING A PREVIOUS GENERATOR, AN EXPERIENCED MECHANIC WAS ASKED TO ESTABLISH THE TDI PLATE POSITION AND HE CHARGED SIXTY AUSTRALIAN DOLLARS FOR DOING THAT.**

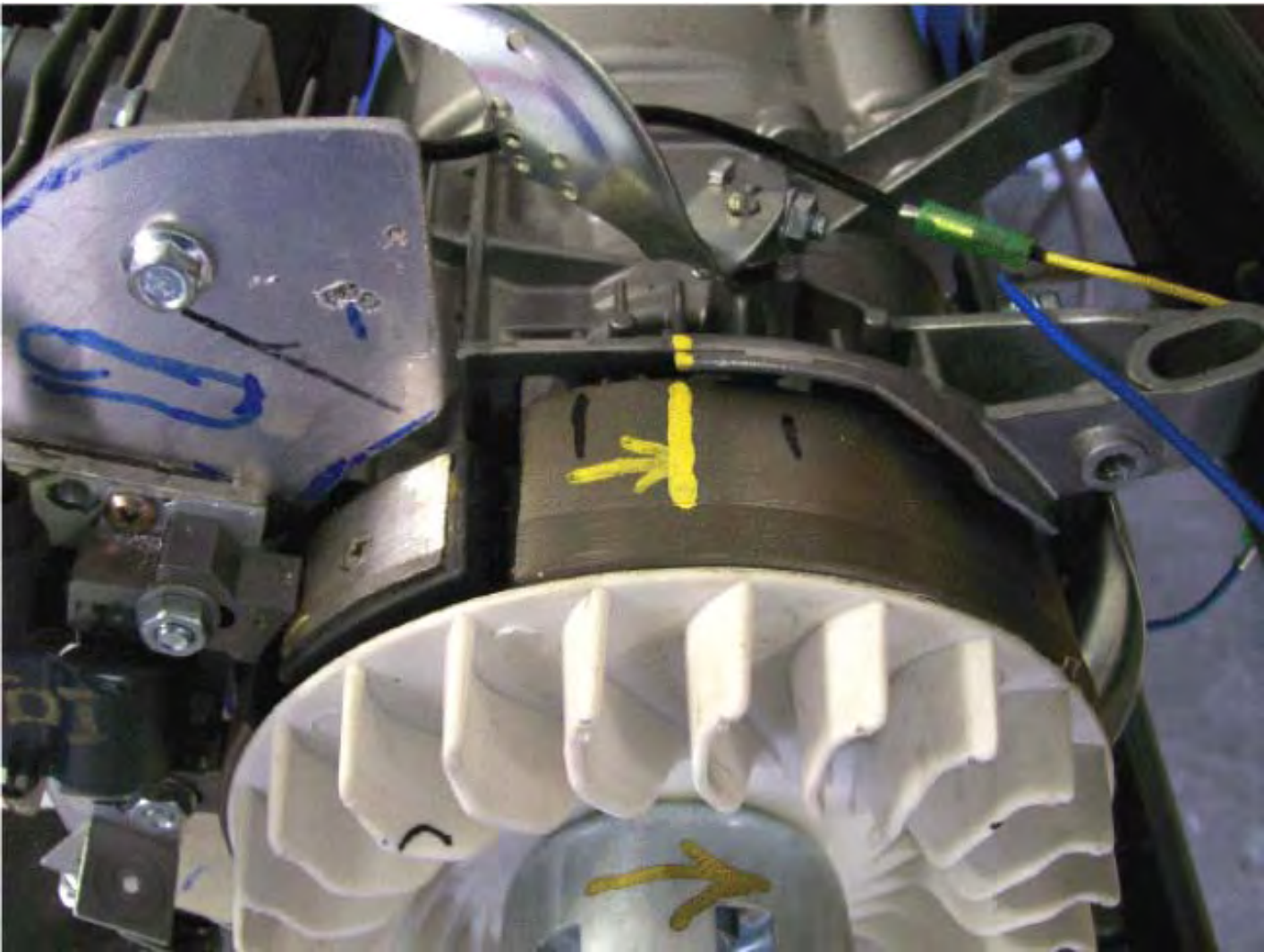


**FINALLY, THE COVERS AND THE STARTER HANDLE NEED TO BE BOLTED BACK IN PLACE. INSTEAD OF PAYING SOMEBODY ELSE TO SET THE NEW SPARK TIMING, IT IS PERFECTLY POSSIBLE TO DO THAT YOURSELF. ONE EFFECTIVE METHOD IS AS FOLLOWS :**

**1. MARK THE CASING OF THE ENGINE IN A CONVENIENT LOCATION AS SHOWN IN YELLOW IN THIS PHOTOGRAPH :**



- 2. REMOVE THE SPARK PLUG AND INSERT A LONG SCREWDRIVER UNTIL THE TOP OF THE PISTON IS FELT. MANUALLY ROTATE THE ENGINE (CLOCKWISE FOR THIS GENERATOR AS CAN BE SEEN FROM THE CURVED FAN PIECES ON THE FLYWHEEL) UNTIL THE SCREWDRIVER IS NO LONGER PUSHED UPWARDS. IT MAY TAKE MORE THAN ONE ROTATION TO FIND THIS POINT ACCURATELY. WHEN THAT POINT IS FOUND, MARK THE FLYWHEEL DIRECTLY IN LINE WITH THE CASING MARK WHICH YOU JUST MADE. THIS MARKING NEEDS TO BE VERY ACCURATE.**
- 3. CONTINUE ROTATING THE FLYWHEEL VERY SLOWLY UNTIL THE SCREWDRIVER STARTS TO GO DOWN AGAIN, AND MARK THAT POINT ON THE FLYWHEEL. AGAIN, THIS MARKING ALSO NEEDS TO BE VERY ACCURATE.**
- 4. MEASURE THE DISTANCE ALONG THE FLYWHEEL BETWEEN THE TWO FLYWHEEL MARKS WHICH YOU HAVE JUST MADE AND THEN MAKE A LARGER MARK ON THE FLYWHEEL EXACTLY HALF WAY BETWEEN YOUR TWO MARKS. IF ACCURATELY DONE, THIS NEW POINT IS WHERE THE FLYWHEEL IS WHEN THE PISTON IS EXACTLY AT TOP DEAD CENTRE, WHICH IS WHERE WE WANT THE SPARK TO OCCUR. THIS MARKING ON SELWYN'S FLYWHEEL IS LIKE THIS:**



5. NEXT COMES A BIT OF ARITHMETIC. THE DIAMETER OF THE FLYWHEEL IS 180mm WHICH MEANS THAT ITS CIRCUMFERENCE IS  $3.14159 \times 180 = 565.5\text{mm}$  AND AS THERE ARE 360 DEGREES IN EACH ROTATION OF THE FLYWHEEL, THEN THE OUTSIDE EDGE OF THE FLYWHEEL WILL MOVE 1.57mm FOR EACH OF THOSE DEGREES.

THE ENGINE SPECIFICATION STATES THAT THE SPARK TIMING IS 8 DEGREES BEFORE TOP DEAD CENTRE AND WE WANT THE SPARK TO OCCUR EXACTLY AT TDC, WHICH MEANS THAT WE WANT AN EXTRA  $8 \times 1.57 = 12.5\text{mm}$  OF THE FLYWHEEL CIRCUMFERENCE TO HAVE PASSED BY BEFORE THE SPARK OCCURS.

6. TO ACHIEVE THIS DELAY IN THE SPARK TIMING, THE TDI NEEDS TO BE MOVED 12.5mm IN THE DIRECTION IN WHICH THE FLYWHEEL ROTATES. YOU WILL NOTICE THAT FOR THIS MAJOR TIMING CHANGE THE TDI ONLY NEEDS TO BE MOVED JUST HALF AN INCH.
7. WHEN THE TDI ADJUSTMENT HAS BEEN MADE, THE TIMING CAN BE CHECKED USING AN AUTOMOTIVE TIMING LIGHT CONNECTED TO THE SPARK PLUG LEAD. THE ENGINE CAN BE SPUN USING AN ELECTRIC DRILL. AS THE FLYWHEEL IS SPINNING FAST AND THE FLASH OF LIGHT FROM THE TIMING LIGHT IS VERY SHORT, IT MAKES THE FLYWHEEL MARK APPEAR TO BE STATIONARY IN SPITE OF THE FACT THAT IT IS PASSING BY VERY RAPIDLY. IF THE TDI ADJUSTMENT IS CORRECT, THEN THE CENTRAL MARK MADE ON THE FLYWHEEL WILL APPEAR TO BE STATIONARY AND EXACTLY ALIGNED WITH THE MARK MADE ON THE CASING.

THIS IS EXACTLY WHAT HAPPENED WHEN SELWYN'S MOTOR HAD ITS TIMING ADJUSTED, BUT THE IMPORTANT FACTOR IS TO HAVE THE SPARK CLOSE TO THE TOP DEAD CENTRE POINT TO MAKE SURE THAT THE INLET VALVE IS FULLY CLOSED BEFORE THE SPARK OCCURS. TWO DEGREES AFTER TOP DEAD CENTRE IS A POPULAR POINT FOR THE SPARK WITH MANY OF THE EXISTING GENERATOR CONVERSIONS WHICH I HAVE BEEN TOLD ABOUT, POSSIBLY TO REDUCE THE LOADING ON THE PISTON'S CONNECTING ROD.

**HERE IS A PHOTOGRAPH OF SELWYN'S LATEST GENERATOR CONVERSION HAVING ITS NEW SPARK TIMING CHECKED OUT :**



- 8. MOST SMALL PETROL ENGINES HAVE THE SPARK TIMING SET BETWEEN 8 DEGREES AND 10 DEGREES BEFORE TOP DEAD CENTRE. IF IT HAPPENS THAT YOU DO NOT KNOW WHAT THE TIMING OF YOUR PARTICULAR GENERATOR IS, THEN COMPLETE THE FLYWHEEL MARKING PROCEDURE OF STEP 4 ABOVE, BUT MAKE THREE ADDITIONAL MARKS ON EACH SIDE OF THE TDC MARK. SPACE THOSE MARKS 1.57mm APART AS THEY WILL THEN MAKE A SCALE WHICH SHOWS EACH DEGREE FROM 3 DEGREES BEFORE TDC TO 3 DEGREES AFTER TDC. WHEN THE TIMING LIGHT IS USED, IT THEN SHOWS EXACTLY WHERE THE SPARK OCCURS AND IF THE ENGINE HAD AN ORIGINAL SPARK TIMING WHICH WAS NOT 8 DEGREES BEFORE TDC, THEN THE SCALE SHOWS IMMEDIATELY HOW MUCH FURTHER THE TDI NEEDS TO BE MOVED TO SET THE SPARK EXACTLY WHERE YOU WANT IT TO OCCUR.**

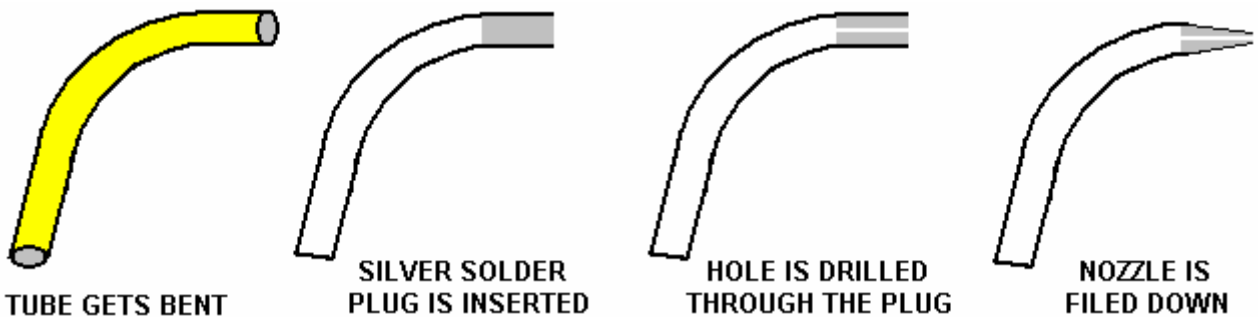
**GETTING THE FINE DROPLETS OF WATER INTO THE ENGINE CAN BE DONE WITH A VENTURI TUBE. YOU MAY NOT HAVE NOTICED IT, BUT THIS METHOD HAS BEEN USED EXTENSIVELY IN PERFUME SPRAYS AND IS VERY EFFECTIVE. THIS IS HOW SELWYN CONSTRUCTS A VENTURI TUBE :**

**A SHORT LENGTH OF 5mm OR 6mm DIAMETER COPPER TUBING IS USED. THIS IS GENERALLY AVAILABLE AS CENTRAL HEATING SUPPLIES AND IF THERE IS ANY DIFFICULTY IN GETTING SOME, THEN YOUR LOCAL GARAGE CAN PROBABLY DIRECT YOU TO A SUPPLIER (IF THEY DON'T JUST GIVE YOU THE FEW INCHES WHICH YOU NEED, FROM THEIR OWN STOCK).**

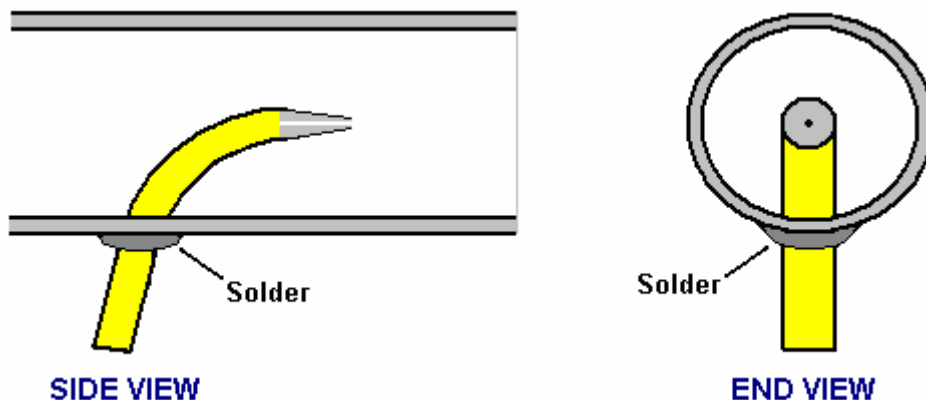


THE COPPER PIPE IS THEN HEATED WITH A PLUMBER'S GAS TORCH AND BENT VERY SLOWLY AND CAREFULLY TO THE SHAPE SHOWN ABOVE. SOME PEOPLE FIND IT HELPFUL TO INSERT A LENGTH OF SUITABLE FLEXIBLE MATERIAL, (SUCH AS THE COILED STEEL SPRING MATERIAL USED TO SUPPORT NET CURTAINS), BEFORE STARTING THE BENDING AS THAT HELPS TO KEEP THE COPPER PIPE FROM KINKING WHEN BEING BENT.

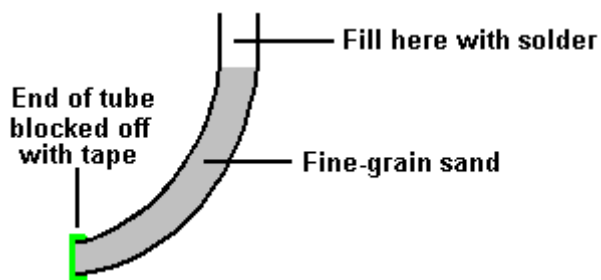
NEXT, THE END OF THE COPPER PIPE WHICH WILL FORM THE NOZZLE, IS FILLED WITH SILVER SOLDER AND THE END FILED FLAT. THEN, A SMALL DIAMETER HOLE IS DRILLED THROUGH THAT SILVER SOLDER PLUG – THE SMALLEST POSSIBLE DRILL BIT SHOULD BE USED FOR THIS, ALTHOUGH THE HOLE MAY NEED TO BE ENLARGED SLIGHTLY DEPENDING ON WHAT THE ENGINE REQUIRES (WHICH IS FOUND OUT BY SUCCESSIVE TRIALS). FINALLY, THE NOZZLE IS FILED DOWN TO MAKE A POINTED TIP :



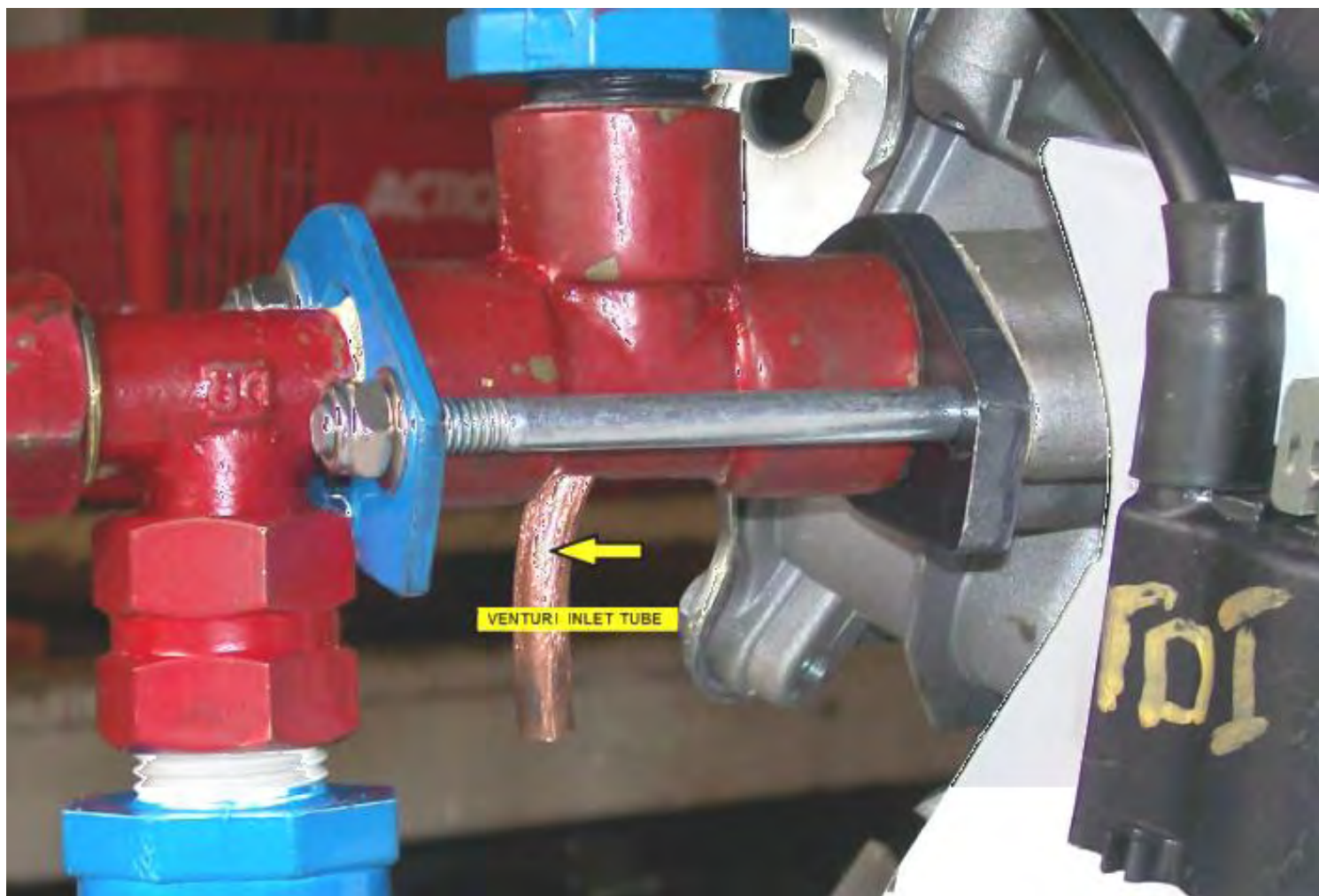
THIS VENTURI TUBE IS TO BE INSERTED INTO THE LAST BRASS FITTING BEFORE THE ENGINE, SO A 6mm DIAMETER HOLE IS DRILLED THROUGH THE BRASS AND THEN THE DRILL IS REMOVED VERY SLOWLY AT A SLIGHT ANGLE – THE ANGLE OF DRAG IS ALONG THE AXIS OF THE BRASS FITTING. THE COPPER VENTURI TUBE IS INSERTED THROUGH THE HOLE AND POSITIONED SO THAT THE VENTURI HOLE IS EXACTLY ON THE CENTRAL AXIS OF THE BRASS FITTING AND THEN SOLDERED IN PLACE.



THE WAY THAT THE SILVER SOLDER PLUG IS MADE IS TO BLOCK THE END OF THE TUBE AND FILL THE TUBE WITH FINE GRAIN SAND BEFORE APPLYING THE SOLDER :



AFTERWARDS, THE SAND CAN BE TAPPED OUT AND A PIPE CLEANER USED TO MAKE SURE THAT EVERY GRAIN OF SAND HAS BEEN REMOVED. THE INSTALLED VENTURI TUBE CAN BE SEEN HERE :



THE GENERATOR SHOULD RUN WELL WITH 5 LITRES PER MINUTE OF HHO (PLUS AIR AND WATER DROPLETS). A CAR BATTERY IS USED TO GENERATE THE HHO TO GET THE SYSTEM STARTED.

NOTES : <http://www.free-energy-info.com/Generator.pdf>

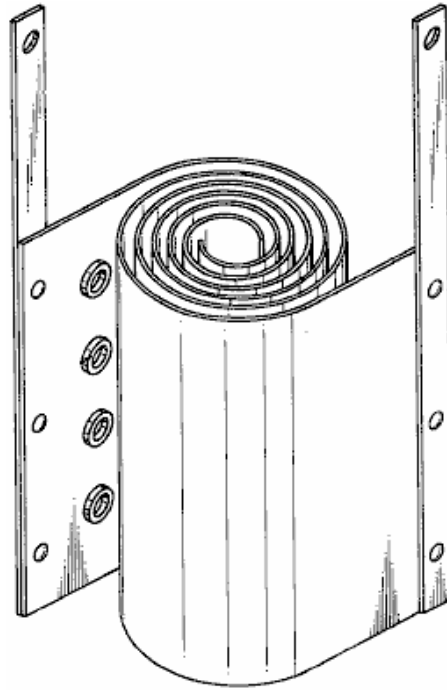
VIDEO : <https://www.youtube.com/watch?v=jjiqUWKrALE>



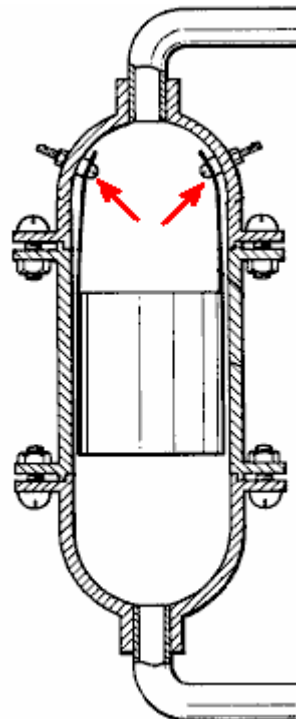
## ***The Shigeta Hasebe Electrolyser***

IN AUGUST 1978, SHIGETA HASEBE WAS GRANTED US PATENT 4,105,528 FOR AN ELECTROLYSER DESIGN. THE HHO PRODUCTION FROM HIS DC CELL WAS SEVEN LITRES OF HHO PER MINUTE FOR AN INPUT POWER OF JUST 84 WATTS, USING A SODIUM HYDROXIDE ELECTROLYTE.

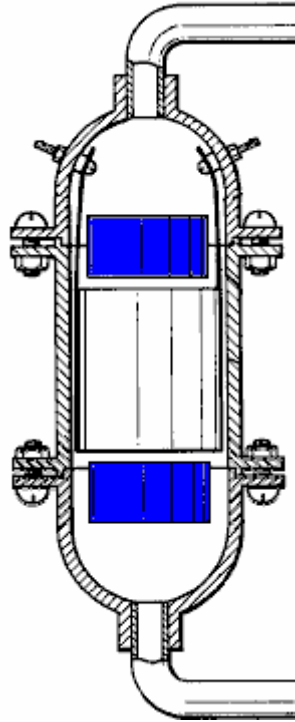
THE CELL CONSISTS OF TWO COILED ELECTRODES WITH SPACERS EVERY QUARTER TURN:



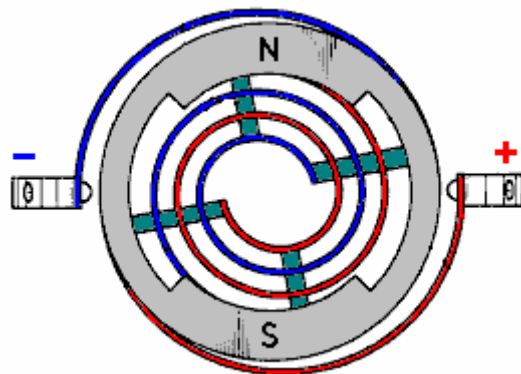
THESE ELECTRODES ARE SURPRISINGLY DIFFICULT TO MAKE BY HAND BUT THEY SHOULD BE VERY SIMPLE TO CONSTRUCT USING A 3-D PRINTER. THESE COILED ELECTRODES ARE THEN BOLTED TO A NON-CONDUCTING ENCLOSURE :



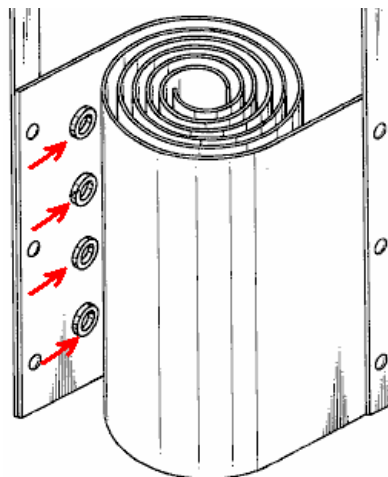
NEXT, TWO POWERFUL MAGNETS ARE MOUNTED IN THE CONTAINER, ONE ABOVE THE ELECTRODES AND ONE BELOW THEM :



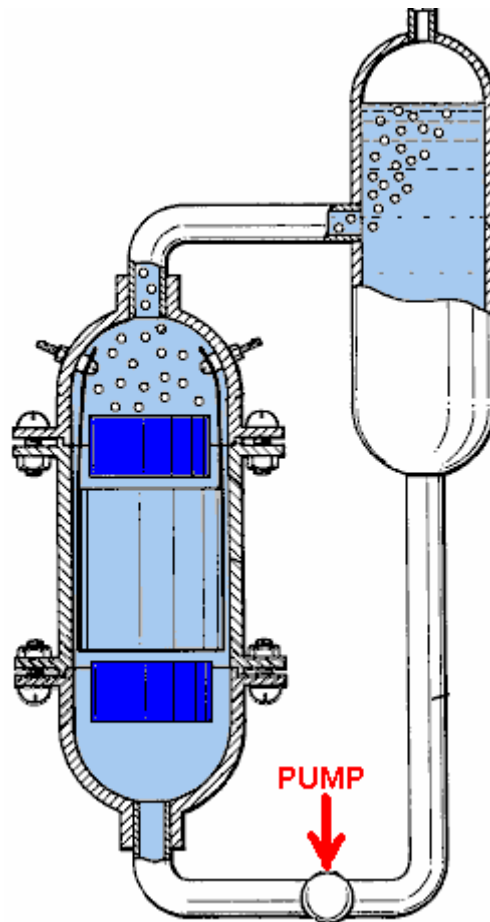
LOOKING DOWN ON THE MAGNETS AND ELECTRODES, THEY LOOK LIKE THIS :



THE MAGNETS ARE ARRANGED TO PRODUCE A MAGNETIC FIELD WHICH RUNS ACROSS THE AXIS OF THE ELECTROLYSER. THE SPACERS (SHOWN IN GREEN) ARE NOT CONTINUOUS BUT ARE QUITE SEPARATE, AND THEY ARE THERE TO CAUSE TURBULENCE AS WELL AS TO FORCE THE DESIRED ELECTRODE SPACING :



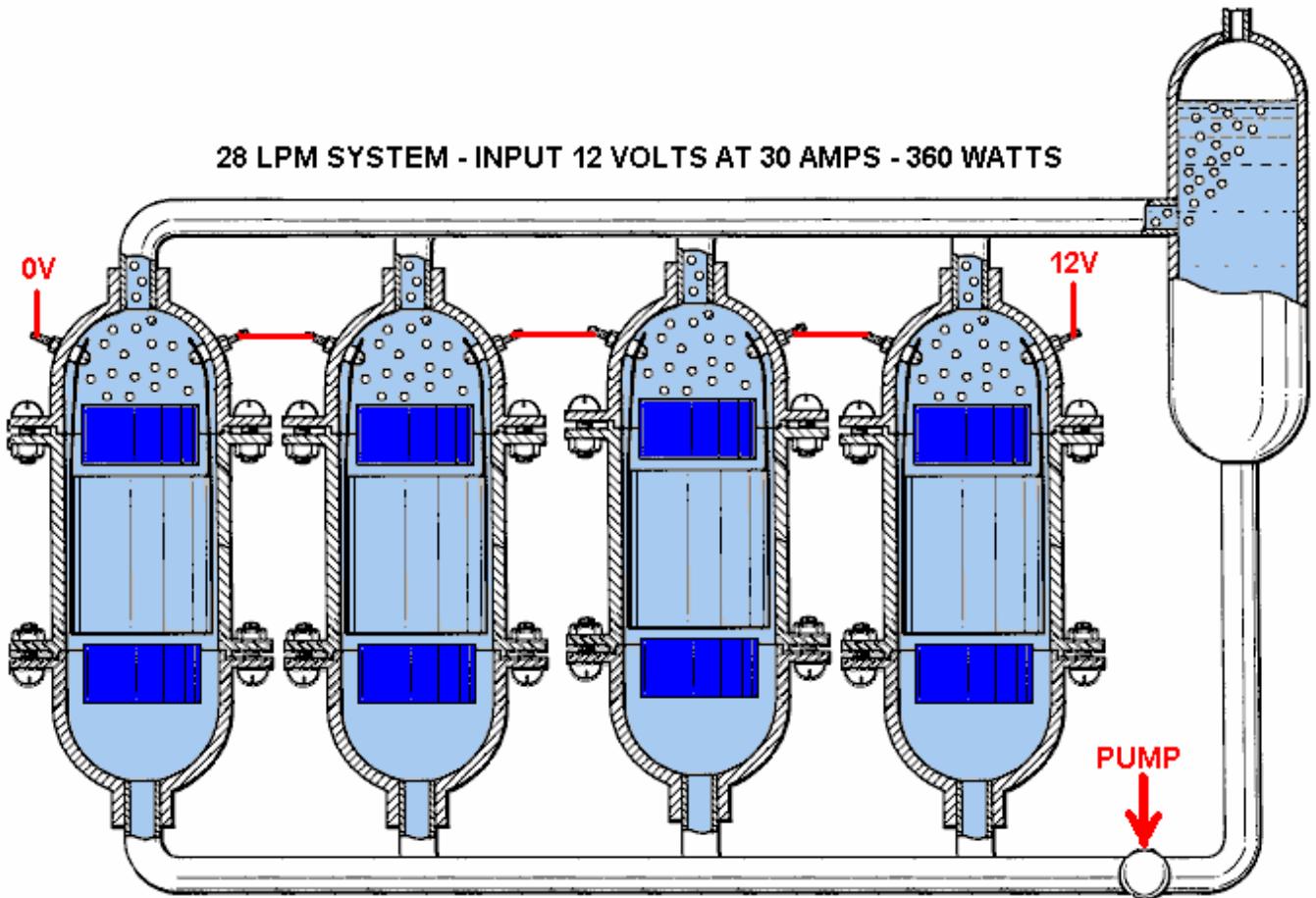
**THE ELECTROLYSER IS CONNECTED DIRECTLY TO A RESERVOIR OF ELECTROLYTE AND A PUMP IS USED TO CIRCULATE THE ELECTROLYTE WHICH BRUSHES BUBBLES OFF THE ELECTRODES :**



**THE OUTPUT PIPE OF THE ELECTROLYSER IS CONNECTED TO THE SIDE OF THE ELECTROLYTE RESERVOIR AND THERE THE BUBBLES FLOAT UPWARDS AND EXIT THROUGH A BUBBLER WHILE THE REMAINING ELECTROLYTE GETS CIRCULATED AGAIN BY THE PUMP.**

**THE TEST RESULTS FROM THIS DESIGN WERE 7 LITRES OF HHO PER MINUTE FROM JUST 84 WATTS OF INPUT POWER. THE INPUT POWER WAS 30 AMPS FROM A 2.8 VOLT POWER SUPPLY. SO, IT SHOULD BE POSSIBLE TO RUN FOUR FROM A 12-VOLT SUPPLY – THAT BEING A COMMON OUTPUT FROM A TYPICAL GENERATOR, OR ALTERNATIVELY, TWO FROM A 6-VOLT SUPPLY IF THAT IS AVAILABLE :**

28 LPM SYSTEM - INPUT 12 VOLTS AT 30 AMPS - 360 WATTS



AN ALTERNATIVE IS TO RUN JUST ONE USING A DC-DC STEP DOWN CONVERTER CIRCUIT AS A GENERATOR HAS A GREAT DEAL OF SPARE ELECTRICAL CAPACITY AND THE CONVERTERS ARE WIDELY AVAILABLE. A GENERATOR ONLY NEEDS ABOUT 5 LPM TO PROVIDE KILOWATTS OF EXCESS POWER TO RUN A HOUSEHOLD.

NOTES : <http://www.free-energy-info.com/Hasebe.pdf>

VIDEO : <https://youtu.be/v2q07YUv63g>

# *Home-based Treatments*

I MAKE NO CLAIMS THAT ANYTHING HERE CAN CURE ANY FORM OF ILLNESS. HOWEVER, THE VERY SIMPLE "COLLOIDAL SILVER" WHICH IS JUST VERY TINY CHARGED PARTICLES OF PURE SILVER SUSPENDED IN DISTILLED WATER HAS BEEN VERY HELPFUL IN THE PAST:

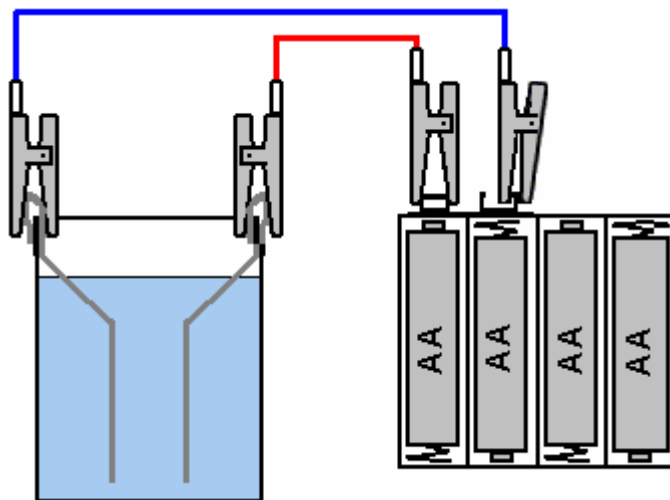
COLLOIDAL SILVER HAS CURED MANY 'TERMINALLY ILL' CANCER PATIENTS OF CANCER, IT HAS ELIMINATED SWINE 'FLU, LYME'S DISEASE, TYPHUS, MALARIA, CHOLERA AND AMOEBIC DYSENTERY. IT CONVERTS CANCER CELLS BACK INTO HEALTHY CELLS AND IT HAS BEEN SUCCESSFUL IN DEALING WITH OSTEOMYELITIS, DIABETES AND TISSUE DAMAGE. IT HAS NO SIDE EFFECTS AND IS EASY TO MAKE.

THE FIRST REQUIREMENT IS DISTILLED WATER AND A CHEAP 'PARTS PER MILLION' METER CAN CONFIRM THE QUALITY OF THE WATER :



THE SECOND REQUIREMENT IS 99.99% PURE SILVER WIRE, A BATTERY, A GLASS CONTAINER, A NON-METAL STIRRER AND TWO CONNECTING WIRES.

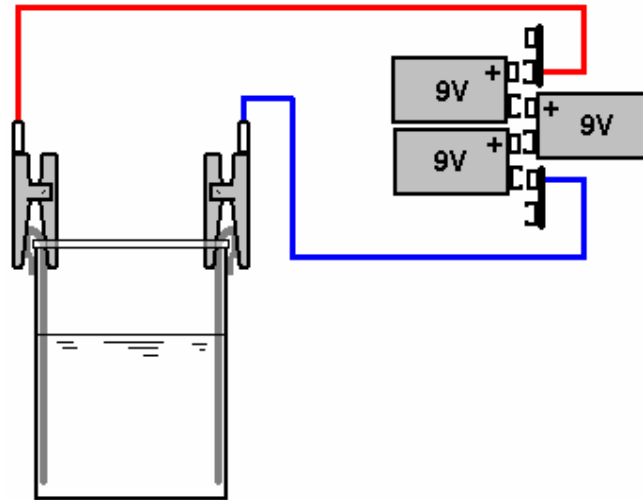
THE ARRANGEMENT IS SIMPLE :



THE WATER IS PLACED IN A GLASS CONTAINER AND TWO PIECES OF SILVER WIRE ARE CLIPPED TO IT SO THAT THEY FORM ELECTRODES WHICH ARE PERHAPS HALF AN INCH

(12 mm) APART. THE BATTERY IS CLIPPED TO THE ELECTRODE WIRES AND THE WATER IS STIRRED WHILE THE COLLOIDAL SILVER IS BEING CREATED.

THE BATTERY CAN BE ANY TYPE :



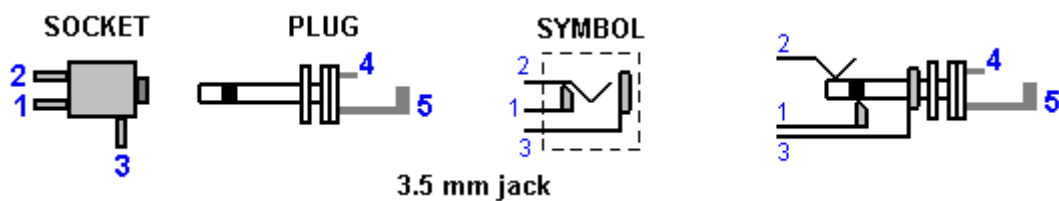
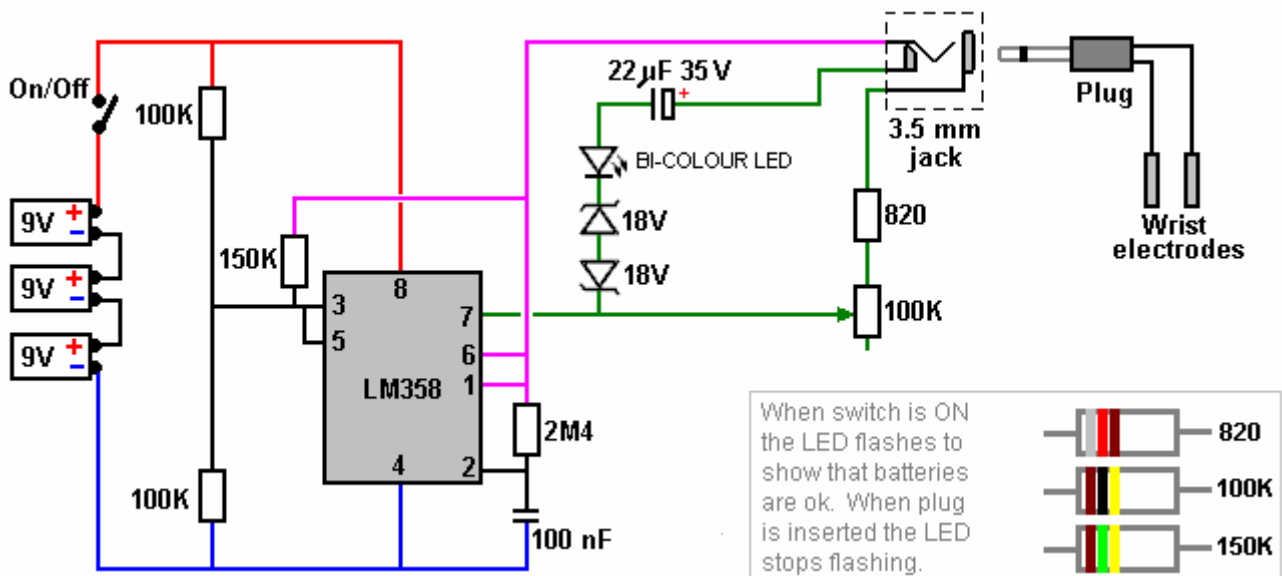
IT TAKES ONLY A FEW MINUTES TO MAKE THE COLLOIDAL SILVER AND THE WATER SHOULD BE STIRRED ALL THE TIME. THE TARGET IS 10 PARTS PER MILLION AND THE PPM METER SHOWS YOU WHEN YOU HAVE REACHED THAT CONCENTRATION. THE ELECTRODE CONNECTED TO THE BATTERY MINUS TERMINAL WILL BECOME COVERED WITH A BLACK DEPOSIT WHICH MAY NEED TO BE WIPED OFF WITH A FRESH TISSUE DURING THE PREPARATION. STORE THE SILVER WIRE AWAY FROM THE AIR SO THAT IT DOES NOT OXIDISE.

PLACING ABOUT 10 cc OF COLLOIDAL SILVER UNDER THE TONGUE FOR A PERIOD OF A MINUTE OR SO, SEVERAL TIMES PER DAY IS EFFECTIVE AS THE SILVER PARTICLES ENTER THE BLOODSTREAM AND TREAT EVERYWHERE IN THE BODY AT THE SAME TIME.

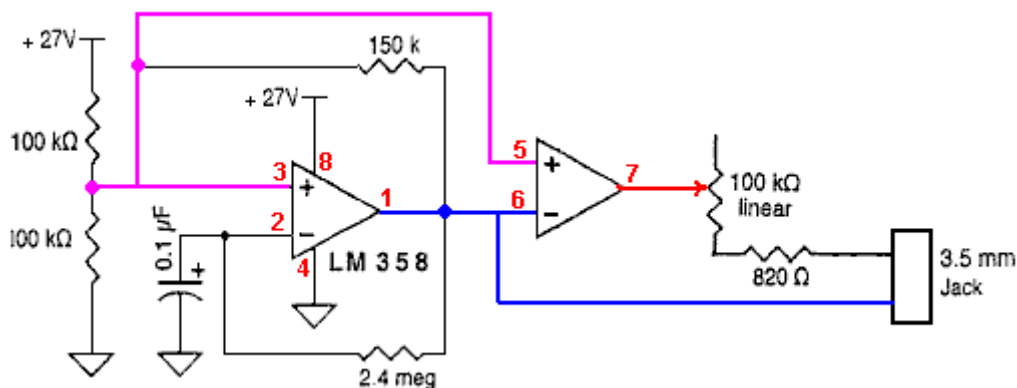
USING A NEBULISER IS ALSO EFFECTIVE WHEN TREATING A LUNG PROBLEM :



ANOTHER HIGHLY THOUGHT OF TREATMENT IS THE BOB BECK PROTOCOL WHERE HE SUPPLEMENTS TAKING COLLOIDAL SILVER WITH A LOW FREQUENCY ELECTRONIC PULSE APPLIED TO EACH WRIST. HIS DOCUMENT IS : <http://www.free-energy-info.com/Beck.pdf> AND HIS EQUIPMENT CAN BE CONSTRUCTED QUITE EASILY. HERE IS HIS CIRCUIT :

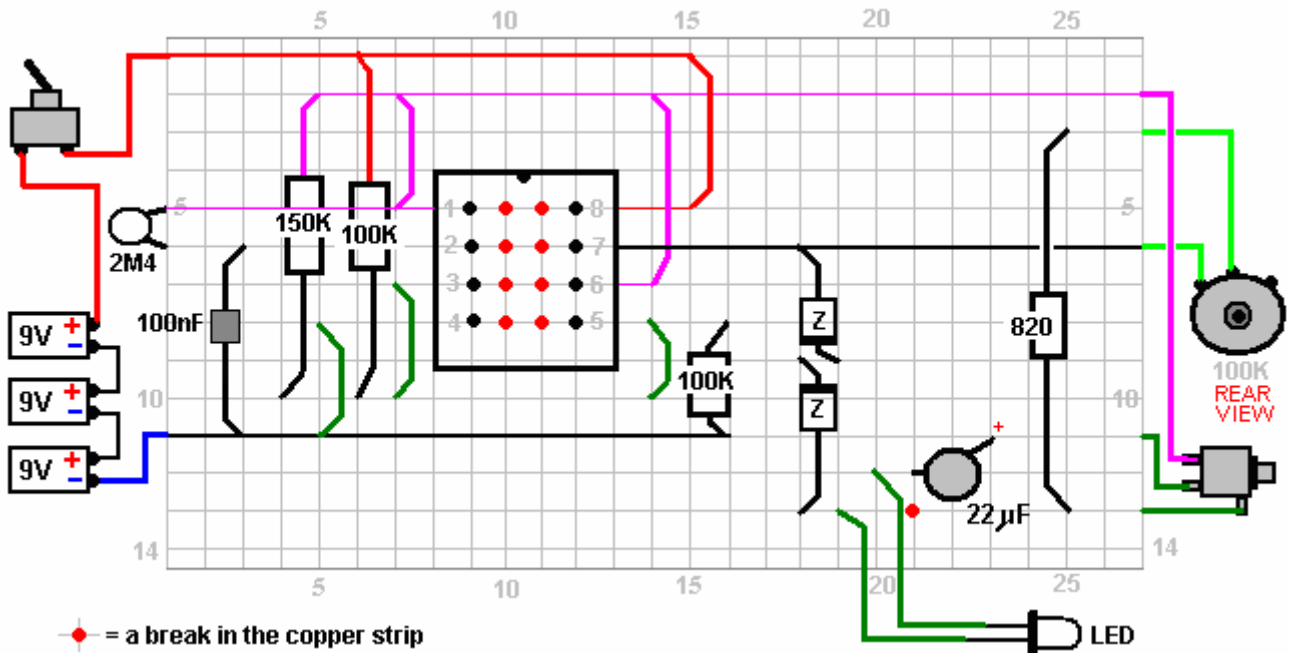


IT MAY BE EASIER TO UNDERSTAND THE CIRCUIT IF IT IS SHOWN LIKE THIS :



THE FIRST OPERATIONAL AMPLIFIER INSIDE THE LM358 CHIP ACTS AS A SLOW OSCILLATOR, SWITCHING ABOUT FOUR TIMES PER SECOND. THE SECOND OPERATIONAL AMPLIFIER PASSES THAT SIGNAL TO THE OUTPUT SOCKET THROUGH THE VARIABLE RESISTOR AND ITS MINIMUM-SETTING 820 OHM RESISTOR.

A PHYSICAL CONSTRUCTION LAYOUT MIGHT BE :



THIS DESIGN IS VERY NEAT AND CAN BE HOUSED IN A PLASTIC BOX 100 x 70 x 40 mm IN SIZE, INCLUDING THE BATTERIES, VARIABLE RESISTOR, LED AND On/Off SWITCH. IT GENERATES A SIGNAL WHICH IS FIFTY VOLTS PEAK TO PEAK AND YOU NEED TO ADJUST THE VARIABLE RESISTOR SO THAT YOU CAN FEEL THE PULSES BUT THEY DO NOT HURT.

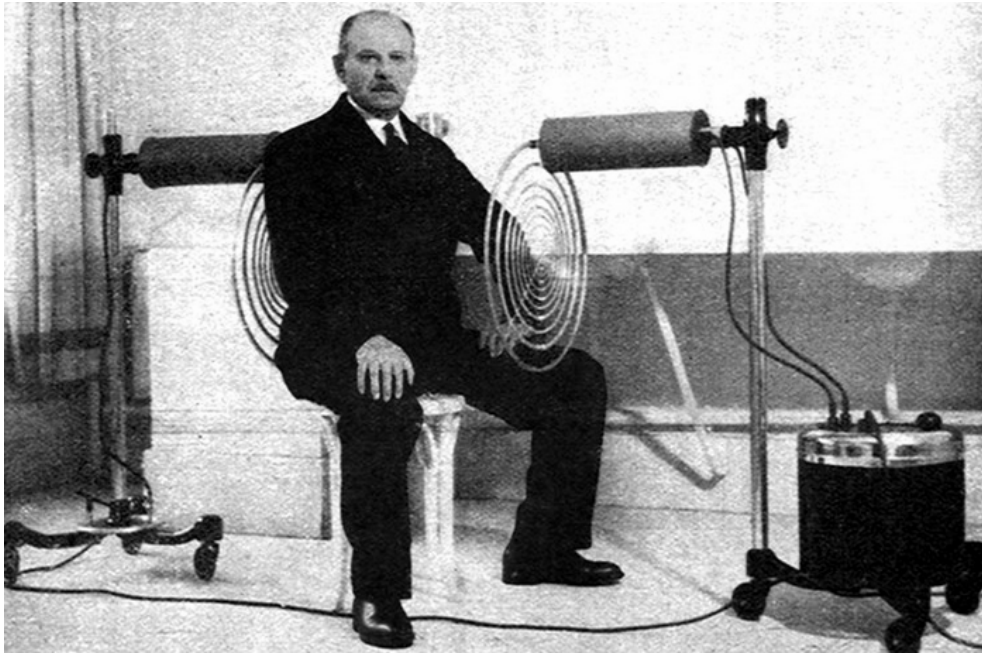
BROAD ELASTIC STRIP CAN BE USED IN A LOOP TO HOLD THE UNIT TO YOUR FOREARM AND TWO OTHER LOOPS TO HOLD EACH ELECTRODE TO EACH WRIST. TREATMENT IN TWO HOUR LONG SESSIONS IS RECOMMENDED.



AROUND 1920, GEORGE LAKHOVSKY PRODUCED A VERY EFFECTIVE TREATMENT METHOD. AN AMERICAN DEVELOPER HAS KINDLY SHARED THE METHOD WHICH HE USED TO REPLICATE THIS EQUIPMENT :

THE IDEA IS TO ARRANGE TWO AERIALS TO TRANSMIT HEALING FREQUENCIES TO THE PATIENT :



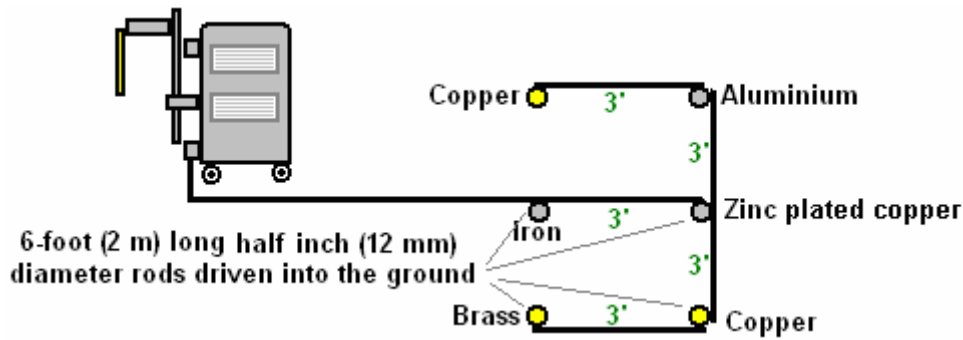


**THE FREQUENCIES OF THE WAVES TRANSMITTED BETWEEN THE AERIALS IS CONTROLLED BY THE LENGTHS OF THE AERIAL TUBES :**

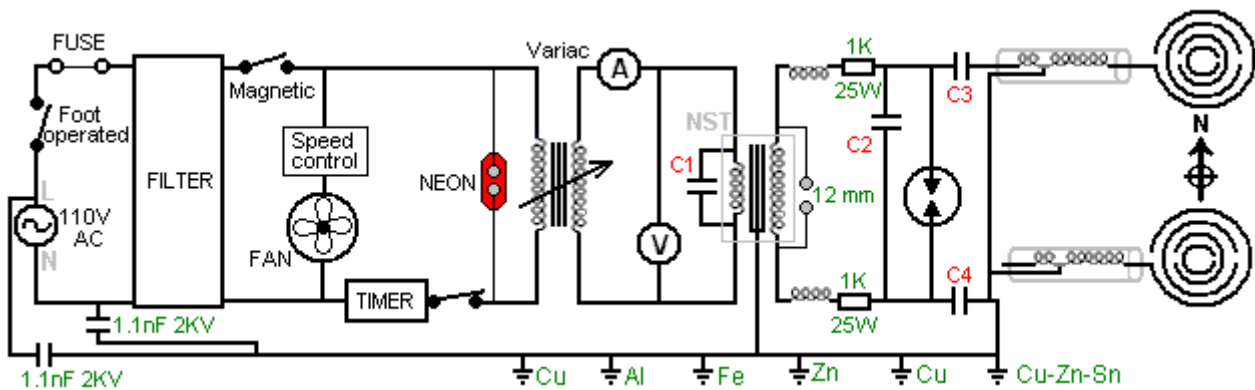


**THE TWO AERIALS ARE CONSTRUED FROM FLEXIBLE COPPER PIPE AVAILABLE FROM CHINA.**

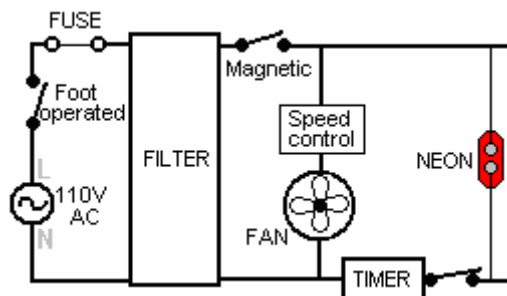
**IT IS IMPORTANT THAT A SYSTEM OF THIS TYPE HAS A VERY EFFECTIVE EARTH CONNECTION WHICH IS NOT PART OF THE MAINS SUPPLY SYSTEM. IN THIS CASE, SEVERAL DIFFERENT METALS ARE USED IN THE EARTHING :**



THE CIRCUIT USED LOOKS COMPLICATED BUT IT REALLY ISN'T AND IT IS EASIER TO UNDERSTAND WHEN BROKEN DOWN INTO PARTS :



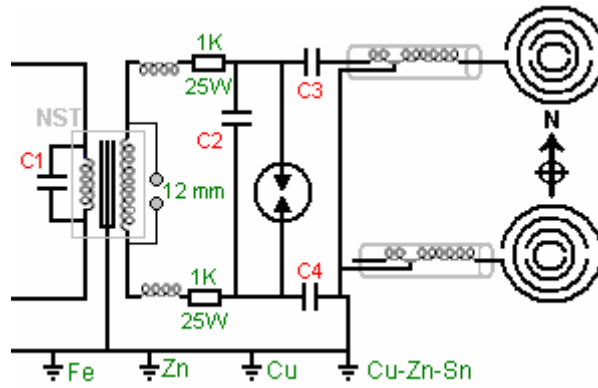
THE FIRST PART OF THIS CIRCUIT IS JUST THE POWER SUPPLY FROM THE MAINS ALONG WITH PROTECTION FEATURES :



THERE IS A FOOT-OPERATED SWITCH WHICH ALLOWS THE PATIENT TO SWITCH THE SYSTEM OFF INSTANTLY AT ANY TIME. THE FUSE PROTECTS AGAINST A SHORT-CIRCUIT ANYWHERE IN THE EQUIPMENT. THE FILTER CLEANS UP THE POWER SUPPLY AND THE MAGNETIC SWITCH IS MOUNTED ON THE OPERATOR'S CONSOLE SO THAT THE OPERATOR CAN SWITCH OFF THE EQUIPMENT INSTANTLY (ALTHOUGH I HAVE NEVER HEARD OF THAT BEING NEEDED).

THE FAN AND IT'S SPEED CONTROLLER ARE ONLY FOR KEEPING THE EQUIPMENT COOL AND THE TIMER ALLOWS A TREATMENT OF A FIXED PERIOD OF TIME TO BE SET (TYPICALLY 15 MINUTES). FINALLY, THE NEON BULB SHOWS THAT EVERYTHING IS WORKING UP TO THAT POINT. ALL THIS IS COMMERCIALY AVAILABLE AS CAN BE SEEN HERE :





THE “NST” IS A NEON SIGN TRANSFORMER AND IT STEPS THE VOLTAGE UP TO THOUSANDS OF VOLTS, SO THAT THERE IS A HIGH VALUE ON THE CAPACITOR “C2” WHEN IT PASSES THROUGH THE TWO CHOKES AND TWO RESISTORS. THE 12 mm SPARK GAP ACROSS THE SECONDARY WINDING IS A SAFETY FEATURE GUARDING AGAINST THE REMAINDER OF THE CIRCUIT BECOMING DISCONNECTED.

THE HIGH VOLTAGE ON “C2” CAUSES THE SPARK GAP TO FIRE AND THAT FEEDS A WHOLE SERIES OF FREQUENCIES TO THE TWO AERIALS. YOU WILL NOTICE THE RECOMMENDED MAGNETIC ORIENTATION WHERE THE TWO AERIALS ARE ON A NORTH – SOUTH LINE WITH THE TRANSMITTER AERIAL ON THE NORTH SIDE.

FOR A DESIGN OF THIS TYPE, THE PHYSICAL CONSTRUCTION IS A MAJOR FACTOR, AND THE MOST IMPORTANT PART IS THE AERIALS. THESE ARE VERY CAREFULLY DIMENSIONED :

- Ring 1: Diam 500 mm, width 14.5 mm, depth 8 mm, copper diameter 14 mm, buy 144”
- Ring 2: Diam 400 mm, width 12.3 mm, depth 7 mm, copper diameter 12 mm, buy 120”
- Ring 3: Diam 320 mm, width 10.3 mm, depth 6 mm, copper diameter 10 mm, buy 96”
- Ring 4: Diam 275 mm, width 8.2 mm, depth 5 mm, copper diameter 8 mm, buy 72”
- Ring 5: Diam 225 mm, width 6.2 mm, depth 4 mm, copper diameter 6 mm, buy 115”
- Ring 6: Diam 184 mm, width 6.2 mm, depth 4 mm, copper diameter 6 mm.
- Ring 7: Diam 143 mm, width 6.2 mm, depth 4 mm, copper diameter 6 mm.
- Ring 8: Diam 112 mm, width 6.2 mm, depth 4 mm, copper diameter 6 mm.
- Ring 9: Diam 81 mm, width 6.2 mm, depth 4 mm, copper diameter 6 mm.
- Ring 10: Diam 51 mm, width 3.1 mm, depth 3 mm, copper diameter 3 mm. buy 36”
- Ring 11: Diam 30 mm, width 3.1 mm, depth 3 mm, copper diameter 3 mm.
- Ring 12: Diam 14 mm, width 3.1 mm, depth 3 mm, copper diameter 3 mm.

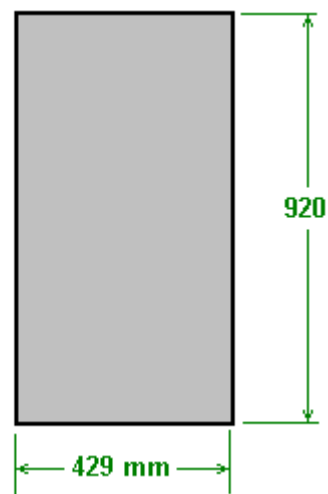
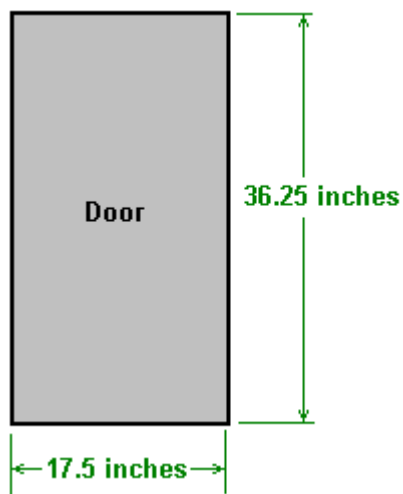
THESE DIMENSIONS ARE TO THE CENTRELINE OF EACH COPPER RING AERIAL.



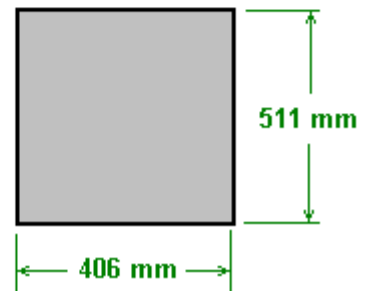
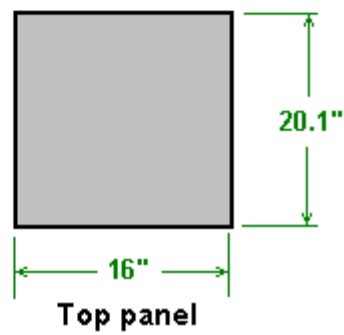
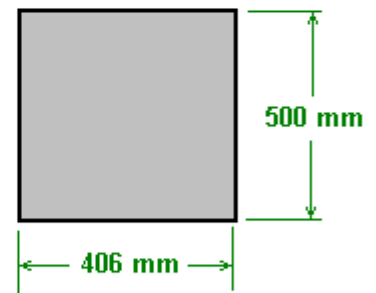
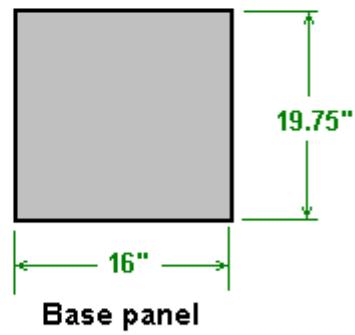
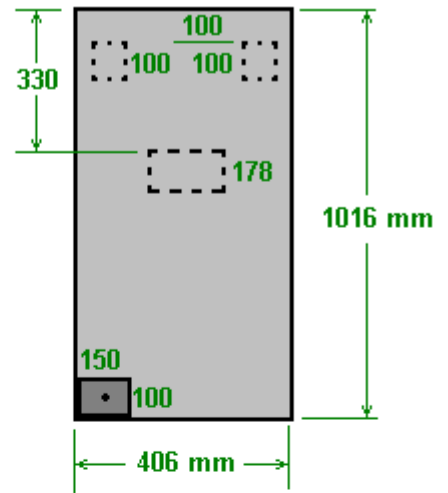
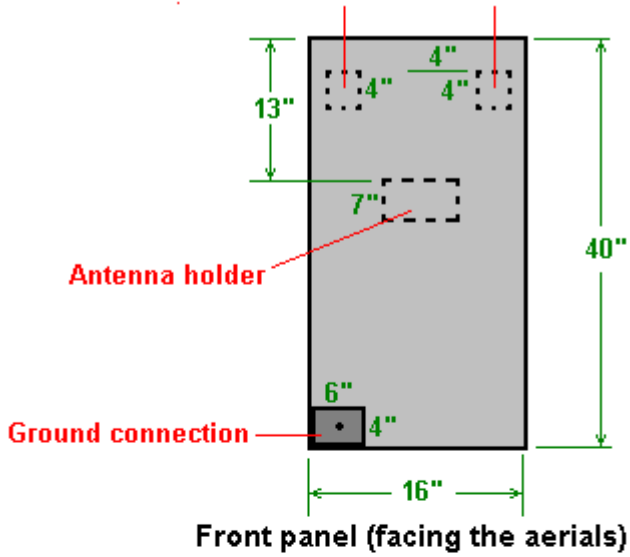


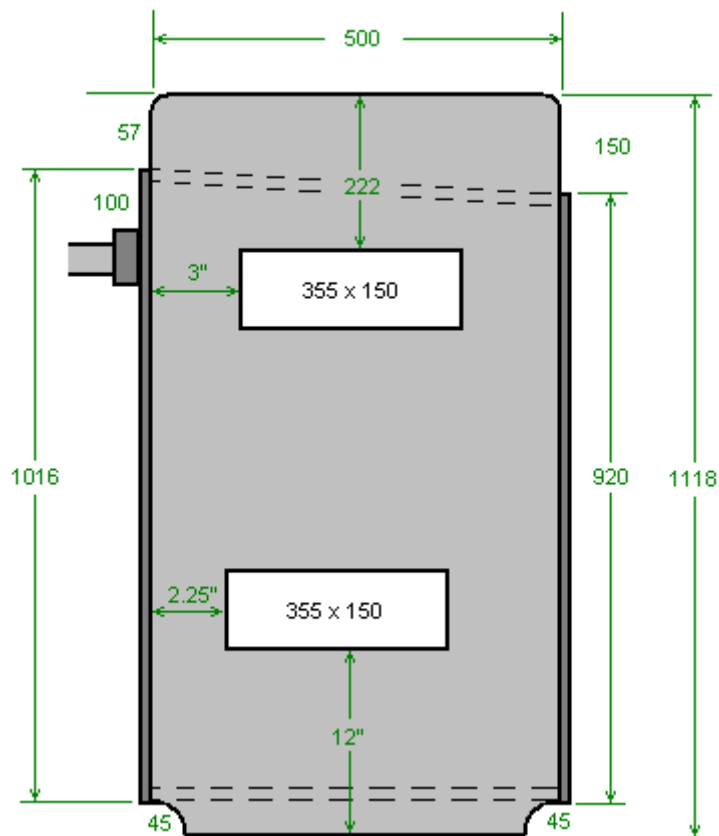
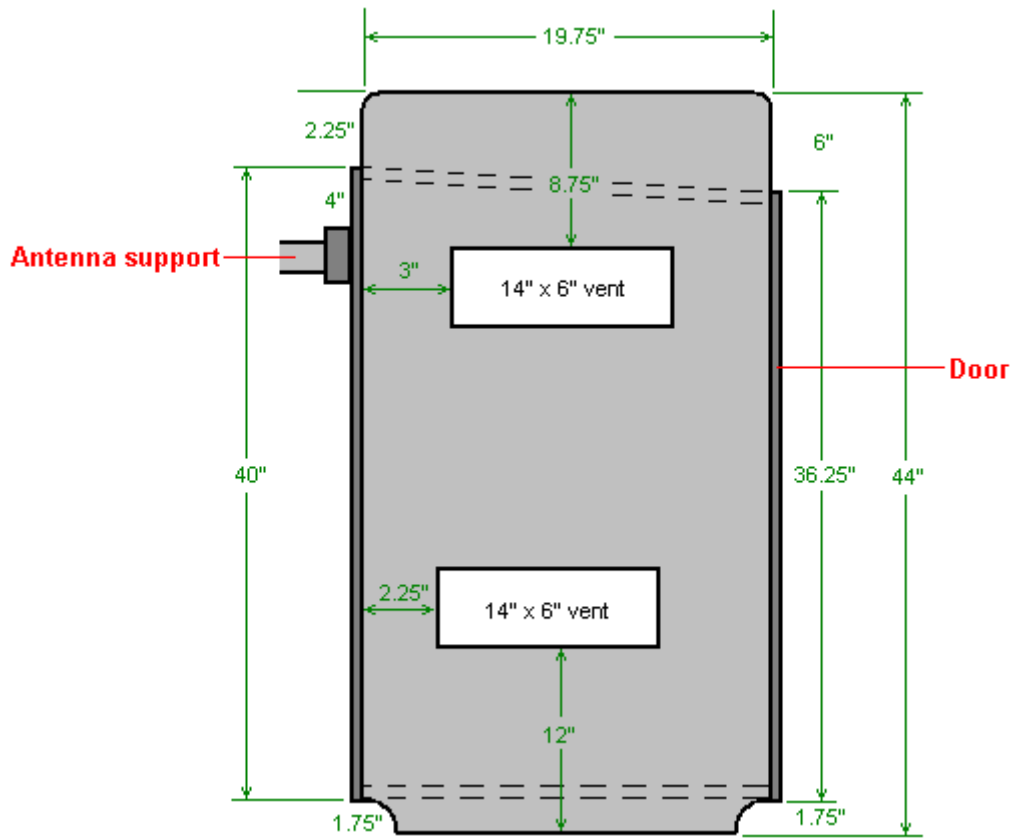
EACH CIRCLE OF COPPER PIPE RADIATES ITS OWN SPECIFIC FREQUENCY ACROSS THE SPACE BETWEEN THE TWO COMPLETED AERIALS, SO THE WAVEFORM USED TO BENEFIT THE PATIENT IS A COMPOSITE OF TWELVE DIFFERENT FREQUENCIES. THE FULL DETAILS FOR CONSTRUCTION AND USE ARE IN <http://www.free-energy-info.com/PJKbook.pdf> WHICH IS A FREE DOWNLOAD.

THE CONSTRUCTIONAL DETAILS ARE STRAIGHTFORWARD, RANGING FROM THE CASE :

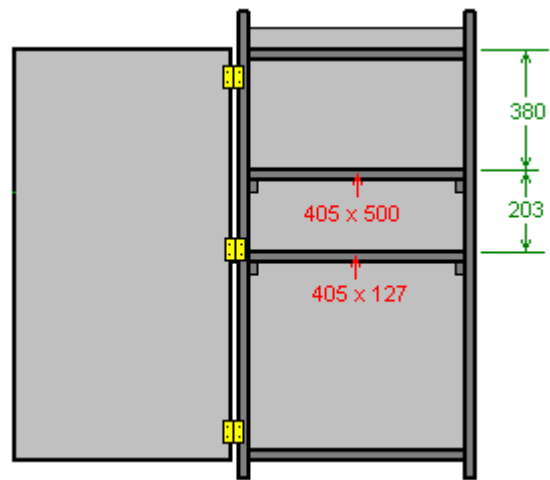
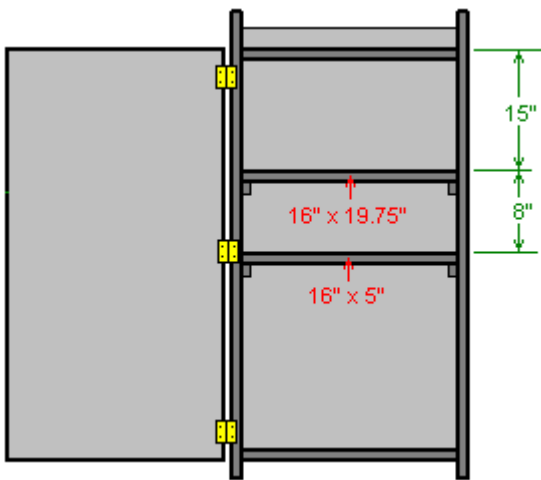
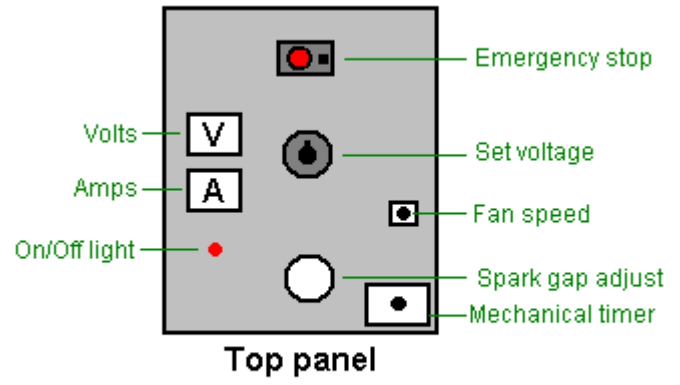
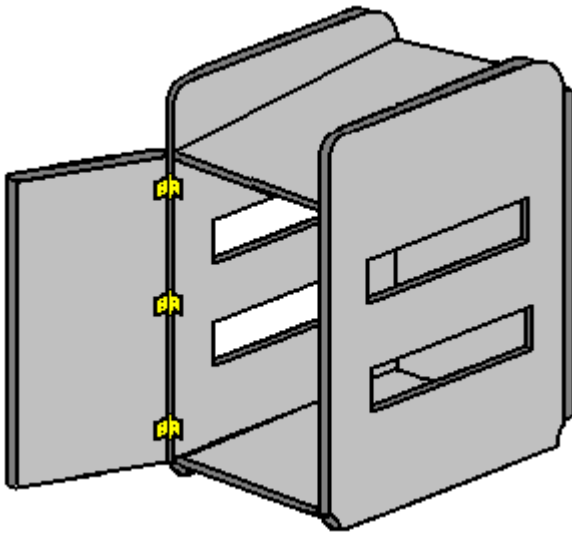


**Electrical connection box mounted on the outside**

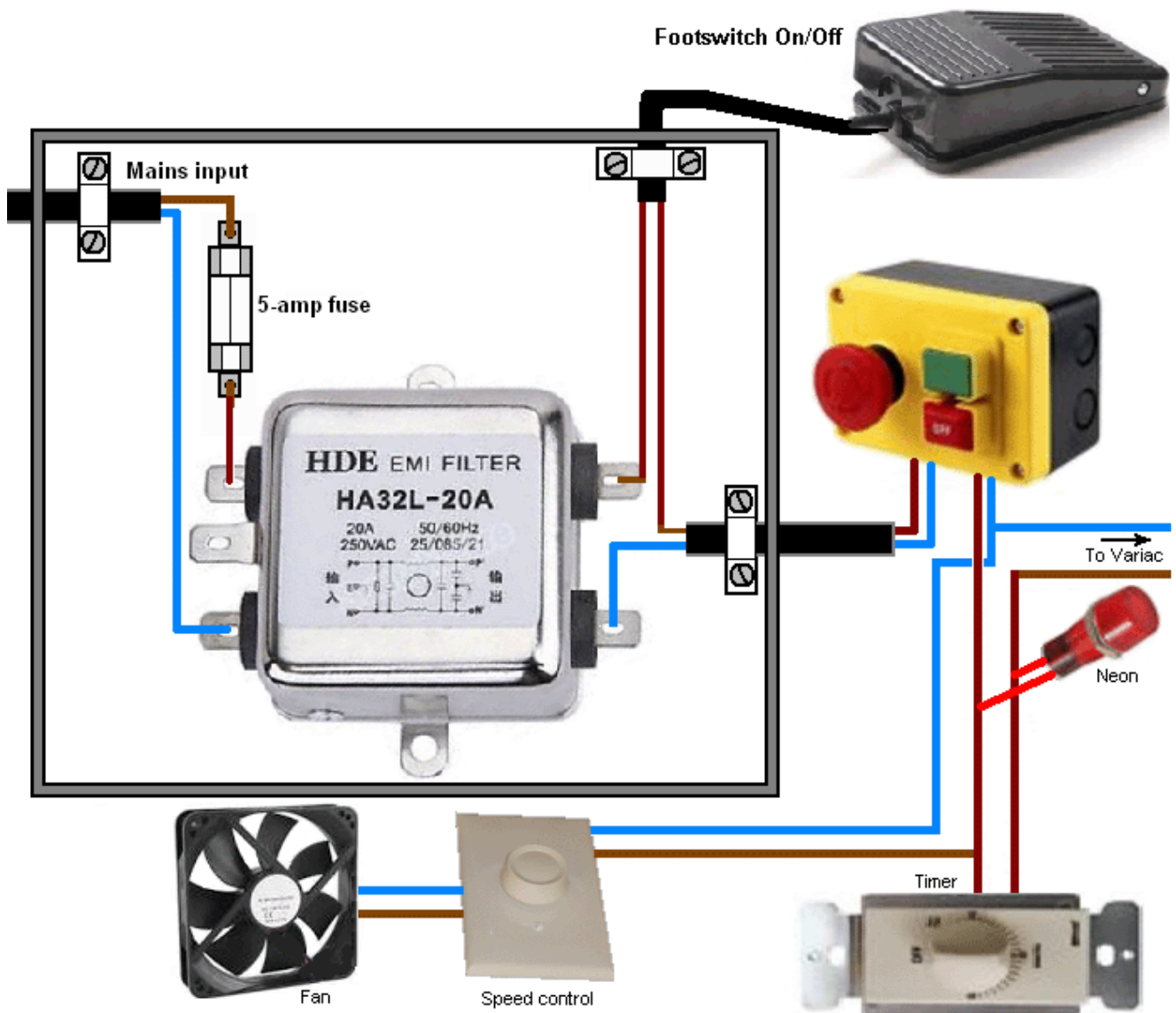




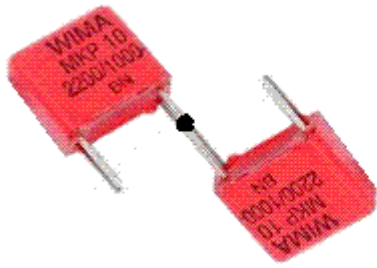




TO THE PHYSICAL WIRING :



VARIABLE AC  
TRANSFORMER # 116CU  
AC OUTPUT VARIAC 0-140VAC  
60HZ. @ 10AMPS 1.4KVA  
( 351375018893 )



10pcs - WIMA MKP10 2200P ( 2200PF 2.2nF 2,2nF) 1000V 5%  
pitch:7.5mm Capacitor

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Seller : [electriclee](#) (13665) ★ [me](#) 99.8% Positive feedback

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Item condition: **New**

Quantity:

89 available / 11 sold

Price: **US \$5.35**



Doorknob Capacitor, High  
Voltage Ceramic Capacitor  
30kV 100pF

( 151766918518 )

© high-voltage-hv



Doorknob Capacitor, High  
Voltage Ceramic Capacitor  
15kV 5300pF

( 361341199540 )

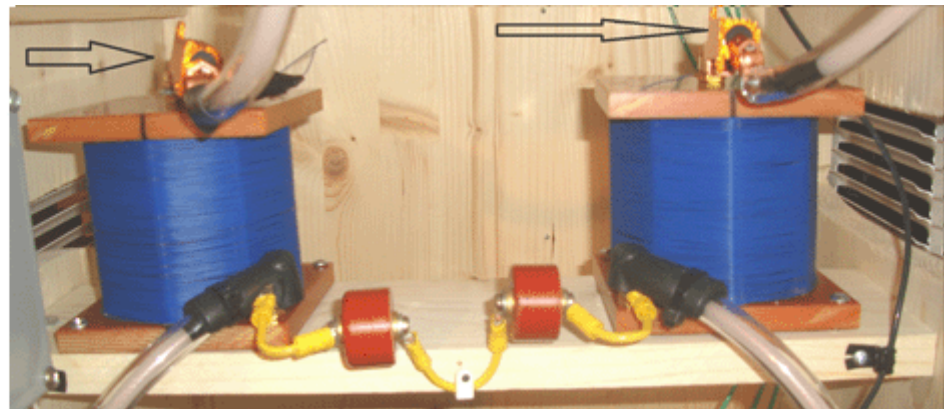
Quantity: 6

© high-voltage-hv

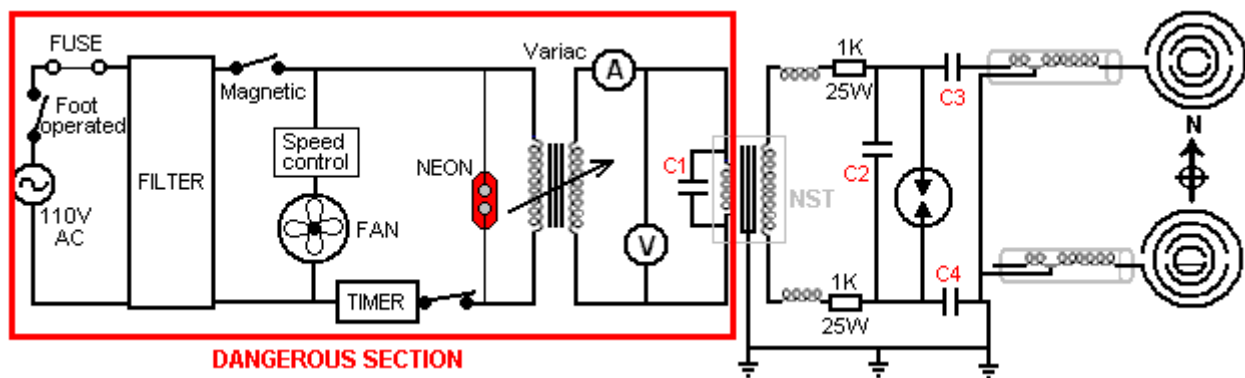
**AND THERE ARE SPECIFIC DETAILS ON HOW TO MAKE AND CONNECT THE COMPONENTS :**



Resistor  
1K 25W



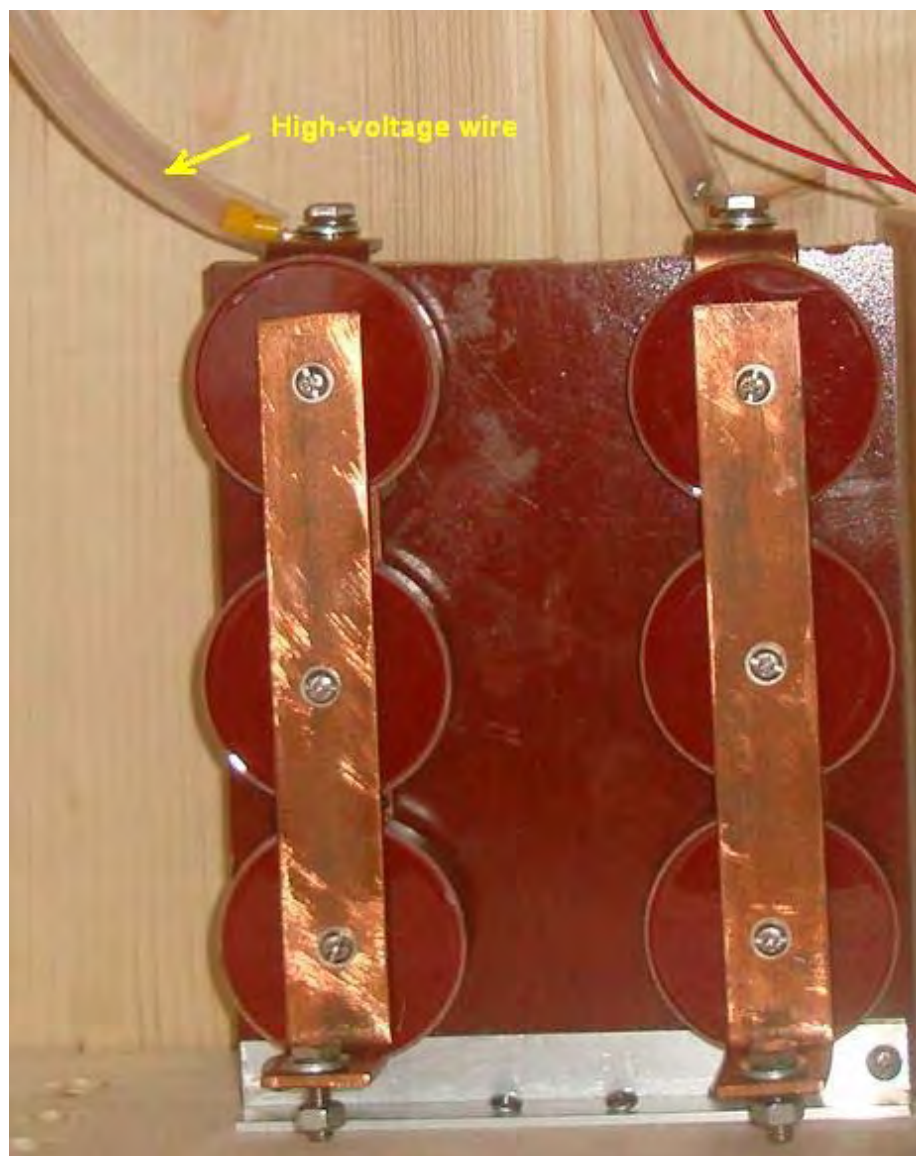
**HOWEVER, CARE NEEDS TO BE TAKEN WHEN WORKING WITH UNSHIELDED MAINS CONNECTIONS. FOR EXAMPLE :**



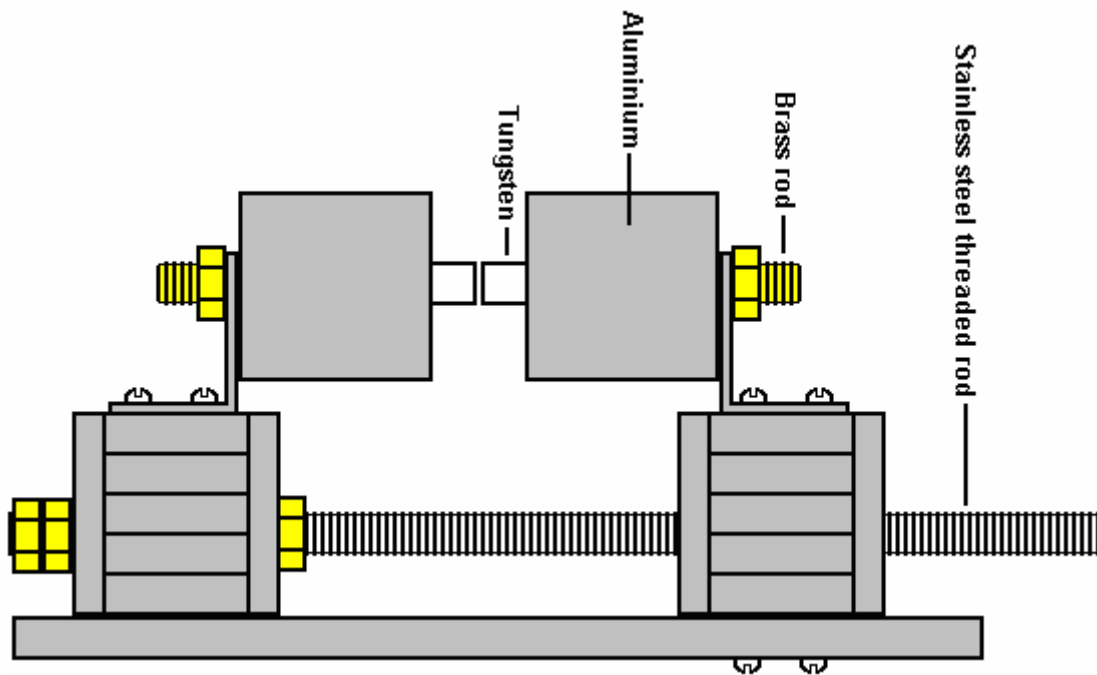
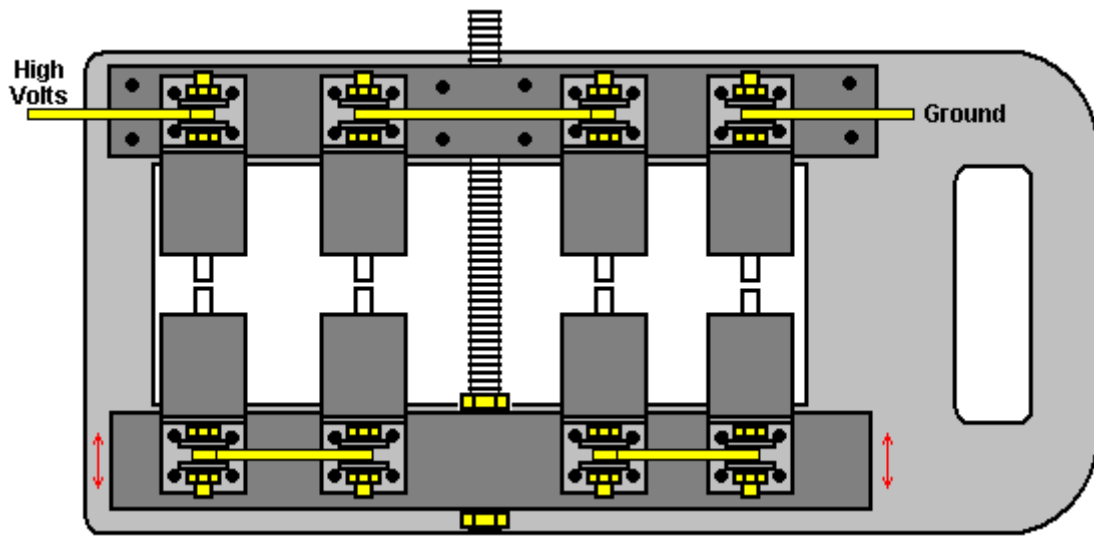
**DANGEROUS SECTION**

THE SECTION OF THE CIRCUIT INSIDE THE RED RECTANGLE HAS DANGEROUS LOW-FREQUENCY HIGH VOLTAGES WHICH COULD KILL YOU IF YOU ARE CARELESS. CONSEQUENTLY, **LET ME STRESS THAT THIS PRESENTATION IS FOR INFORMATION PURPOSES ONLY AND MUST NOT BE CONSIDERED TO BE A RECOMMENDATION THAT YOU SHOULD ACTUALLY CONSTRUCT THIS DEVICE.**

THE HIGH VOLTAGE CAPACITORS ARE BUILT UP USING THE CAPACITORS SHOWN ABOVE. THEY ARE ASSEMBLED LIKE THIS :



ALSO, THE SPARK GAP IS CONSTRUCTED ON A UHMWP (Ultra High Molecular Weight Polythene) PLASTIC CHOPPING BOARD WHICH IS CUT TO THE REQUIRED SHAPE :



THIS STYLE OF CONSTRUCTION ALLOWS ALL OF THE SPARK GAPS TO BE ADJUSTED SIMULTANEOUSLY. THE ACTUAL SPARK GAPS ARE MADE FROM TUNGSTEN RODS EMBEDDED IN ALUMINIUM CYLINDERS :

**(4) Pure Tungsten Rod Electrodes 1/4" dia x 1" long Tesla Coil Spark Gap**

☆☆☆☆☆ Be the first to write a review.

Seller: saturnind (1774 ★) 99.7% Positive feedback  
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Item condition: **New**

Quantity:  7 available / 8 sold

Price: **US \$28.60**

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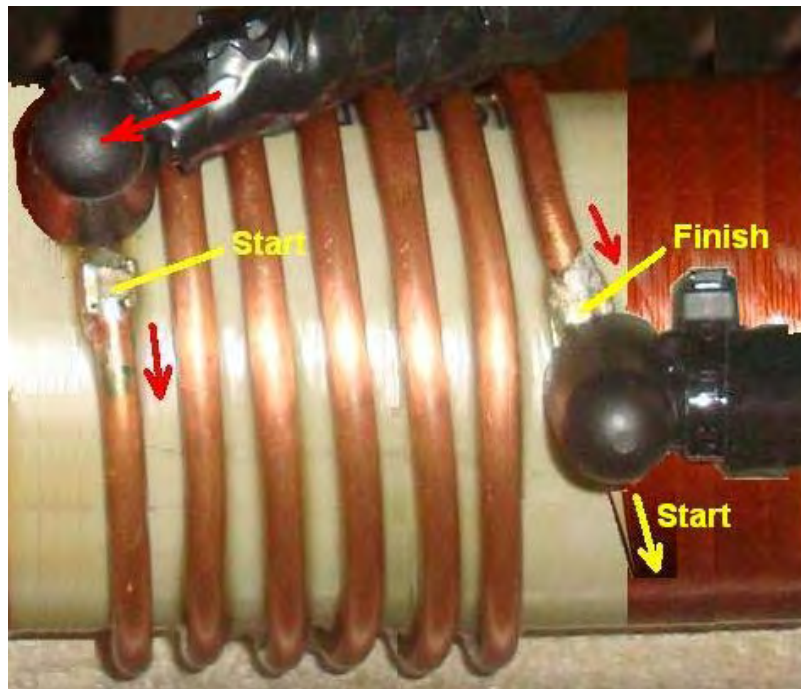


1-1/2" Diameter 6061  
Aluminum Round Rod 2"  
Length T6511 Extruded 1.5  
inch Dia  
( 322186173598 )  
Quantity: 10

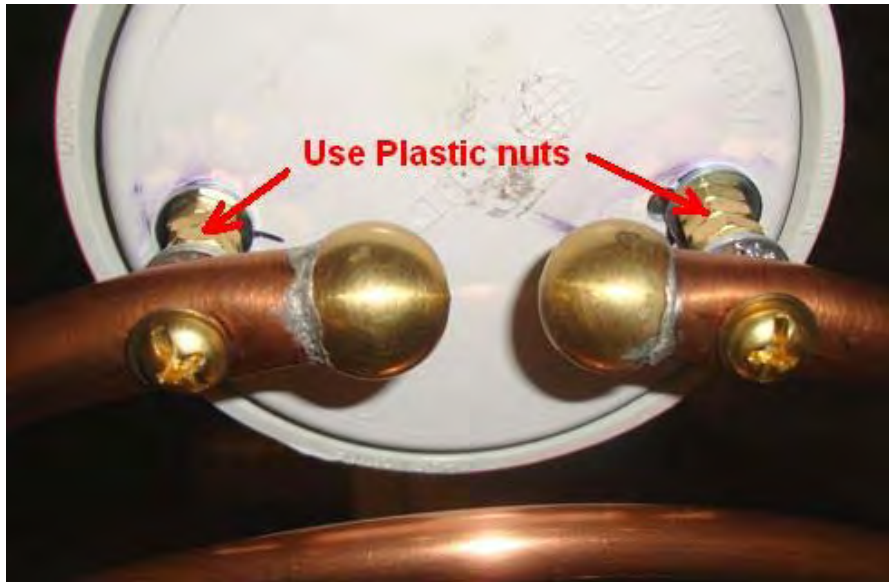
**THE COMPLETED UNIT LOOKS LIKE THIS :**



**THE COILS WHICH DRIVE THE ANTENNAS ARE MADE WITH TWO DIFFERENT WINDING MATERIALS, AND THEY ARE WOUND IN A CLOCKWISE DIRECTION :**



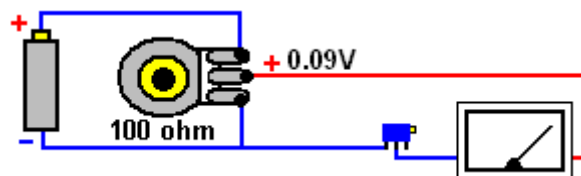
**AND THE CONNECTIONS TO THE ANTENNA NEED TO BE PARTIALLY INSULATED TO AVOID SPARKING WHEN IN USE :**



WHEN BEING USED, A WOODEN STOOL IS PLACED BETWEEN THE ANTENNAS :

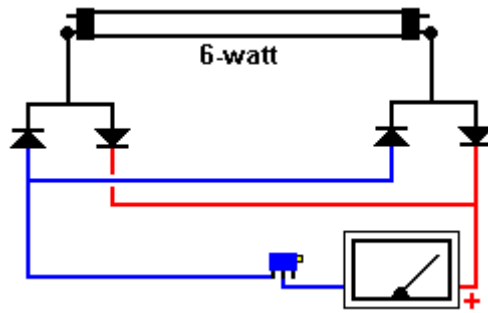


MOST TREATMENT SESSIONS ARE ABOUT 15 MINUTES LONG. HOWEVER, IT WOULD BE NICE TO KNOW THE LEVEL OF TRANSMISSION POWER BETWEEN THE AERIALS AND THAT CAN BE DETERMINED USING A SIMPLE METER. A PHILIPS TL6W/33 FLUORESCENT TUBE WHICH IS 220 mm (8.66 INCHES) LONG CAN BE USED FOR THIS. A 15-VOLT VOLTMETER IS SET UP TO SHOW FULL-SCALE DEFLECTION WHEN 0.09 VOLTS IS APPLIED TO IT:

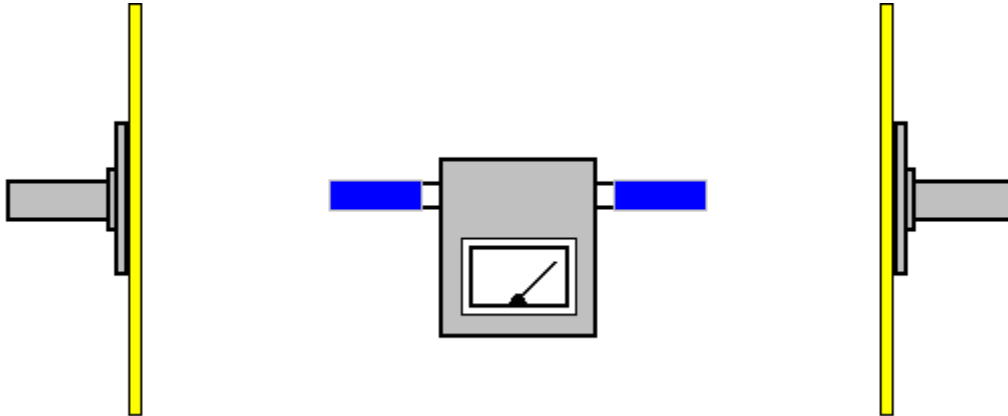


AND WHEN THE 100 OHM PRESET IS SET CORRECTLY, THEN THE CIRCUIT IS COMPLETED LIKE THIS :





AND THE UNIT CAN THEN BE PLACED ON THE CHAIR BETWEEN THE ANTENNAS AND THE WORKING VOLTAGE SET ON THE EQUIPMENT BEFORE TREATMENT IS COMMENCED :



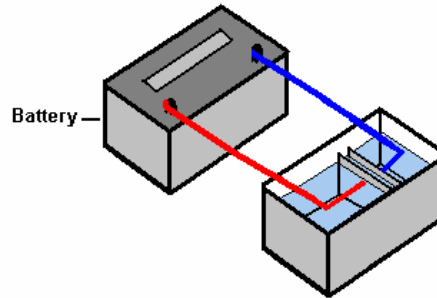
THESE VERY BRIEF PRESENTATION NOTES CAN BE DOWNLOADED FROM THE FOLLOWING LINK: <http://www.free-energy-info.com/Health.pdf> BUT A VERY MUCH GREATER LEVEL OF DETAIL ON BUILDING AND USING THIS EQUIPMENT CAN BE FOUND IN THE FREE EBOOK: <http://www.free-energy-info.com/PJKbook.pdf>

VIDEO : <https://youtu.be/KS7TxVeYPng>

# HHO Technology

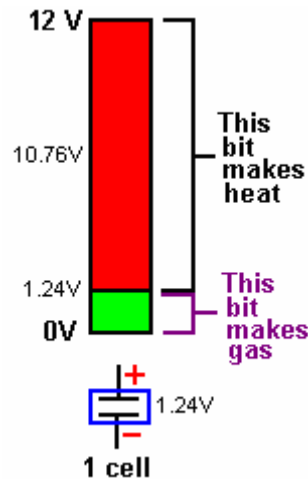
**Disclaimer: This presentation is for information purposes only and must not under any circumstances be considered to be an encouragement that you should construct anything based on this information. Your actions are your responsibility and yours alone.**

“HHO” IS A COMMON NAME GIVEN TO THE GAS MIXTURE PRODUCED DURING THE ELECTROLYSIS OF WATER. ELECTROLYSIS CAN BE ACCOMPLISHED BY PLACING TWO CONDUCTING ELECTRODES IN WATER AND APPLYING A SUITABLE VOLTAGE TO THOSE ELECTRODES :



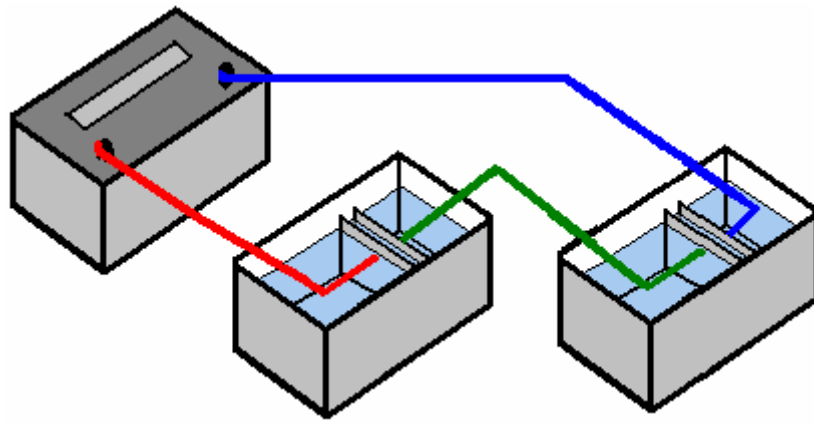
THE RESULT OF THIS IS BUBBLES OF GAS LEAVING THE LIQUID. THE VOLUME OF WATER DOES NOT APPEAR TO CHANGE MUCH BECAUSE ONE LITRE OF WATER PRODUCES AROUND 1750 LITRES OF GAS. MICHAEL FARADAY DID THIS AND DETERMINED HOW MUCH GAS WAS PRODUCED PER AMP OF CURRENT FLOWING BETWEEN THE ELECTRODES. “SCIENTISTS” ASSUME THAT FARADAY’S RESULTS ARE THE FINAL WORD ON THE SUBJECT. THEY AREN’T. BOB BOYCE OF AMERICA DOES NOT CONSIDER AN ELECTROLYSIS CELL READY FOR USE UNTIL IT EXCEEDS TWICE THE PERFORMANCE OF FARADAYS EXPERIMENTS.

WE HAVE A PROBLEM WITH THE ABOVE ARRANGEMENT. THE VOLTAGE WHICH PRODUCES GAS FROM WATER IS 1.24 VOLTS, AND SO, IF WE APPLY SAY, 12 VOLTS TO THE ELECTRODES, THEN THAT IS VERY INEFFICIENT :

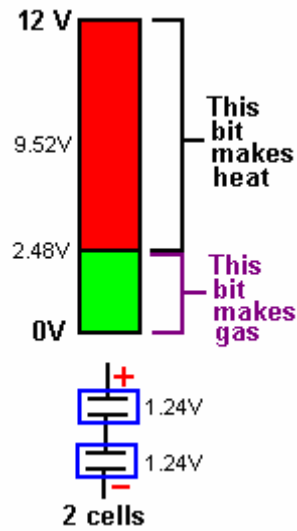


WITH 12 VOLTS APPLIED, 10.76 VOLTS DO NOT MAKE HHO GAS AND SO THE PROCESS IS ONLY 10 PER CENT EFFICIENT AND 90 PER CENT OF THE POWER SUPPLIED ONLY HEATS THE WATER.

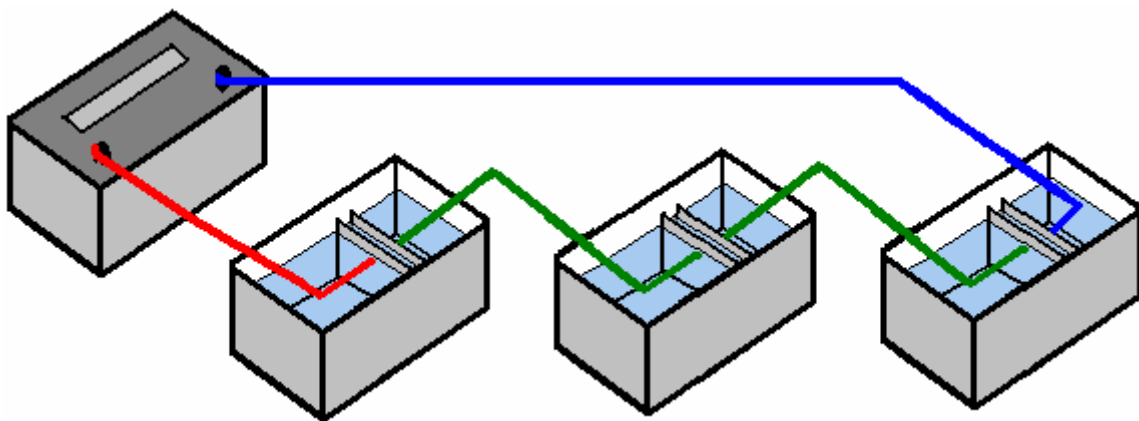
WE CAN IMPROVE ON THIS ARRANGEMENT BY USING TWO CELLS CONNECTED IN SERIES, LIKE THIS :



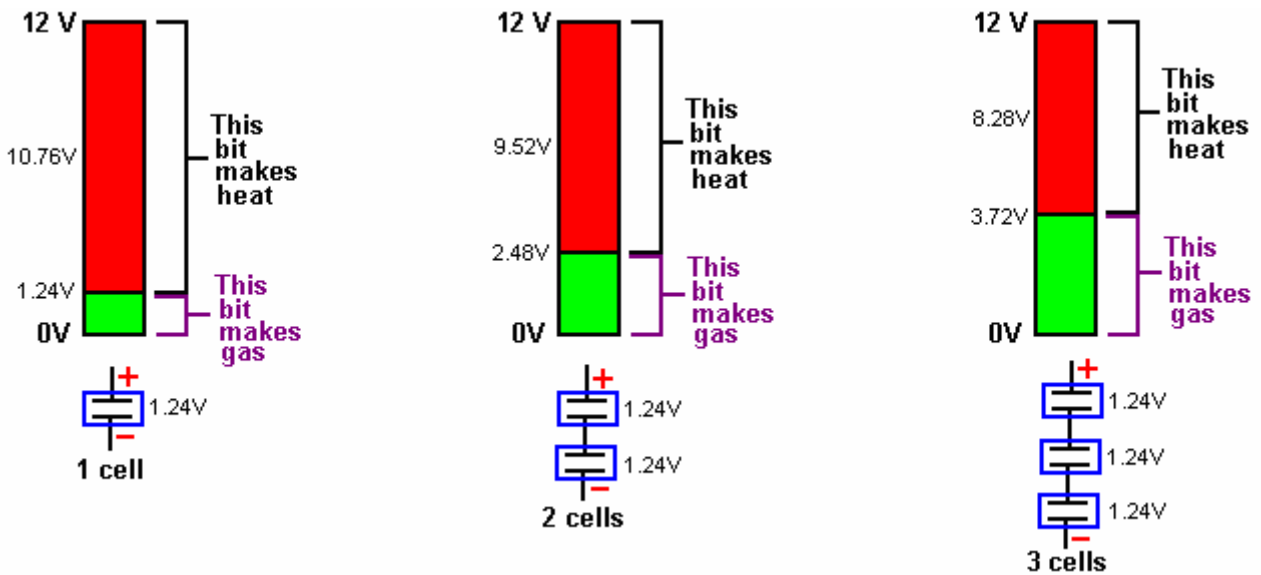
THIS DOUBLES THE AMOUNT OF GAS PRODUCED AND IT DOUBLES THE OVERALL PERFORMANCE OF THE SYSTEM :



OF COURSE, WE COULD USE THREE PAIRS OF ELECTRODES TO RAISE THE EFFICIENCY EVEN FURTHER :



AND THAT IS A CONSIDERABLE IMPROVEMENT :

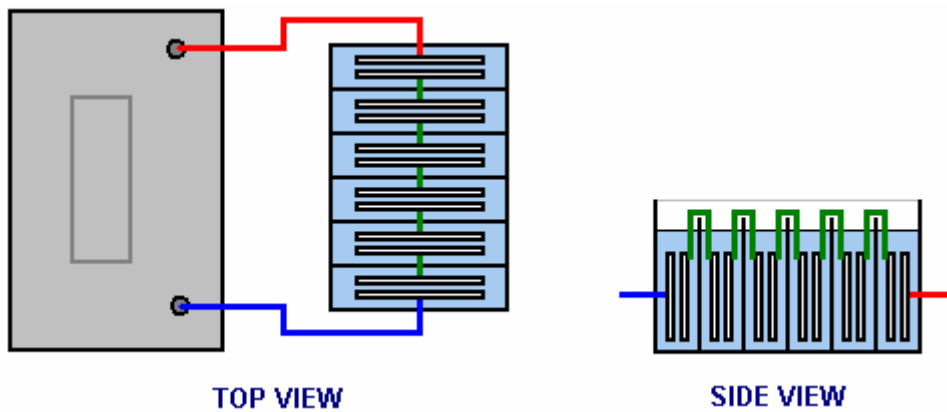


EXPERIENCE HAS SHOWN THAT USING SIX OR SEVEN PAIRS OF ELECTRODES WITH A VEHICLE'S ELECTRIC SYSTEM IS THE MOST EFFECTIVE COMBINATION.

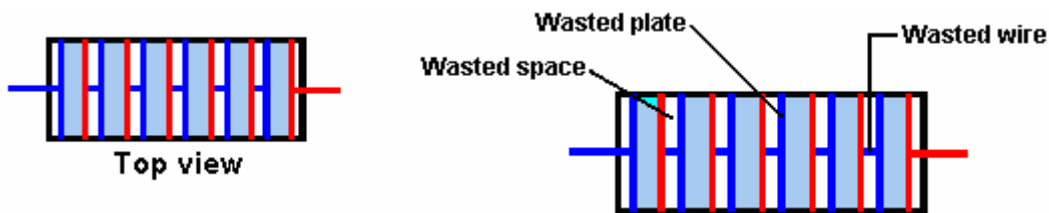
HOWEVER, WATER DOES NOT EASILY BREAK DOWN INTO HHO GAS, AND SO USING A CATALYST IS AN IMPORTANT STEP FORWARD. THE TWO BEST KNOWN TRUE CATALYSTS ARE SODIUM HYDROXIDE (NaOH) AND POTASSIUM HYDROXIDE (KOH). THESE INCREASE THE CURRENT FLOW THROUGH THE WATER AND SO, INCREASES THE HHO GAS VOLUME PRODUCED. THE OPTIMUM NaOH MIX IS 20% BY WEIGHT, AND FOR KOH 28% BY WEIGHT.

HOWEVER, THOSE CATALYSTS REACT WITH MANY ELECTRODE MATERIALS AND SO 316L GRADE STAINLESS STEEL IS A GOOD CHOICE FOR THE ELECTRODES.

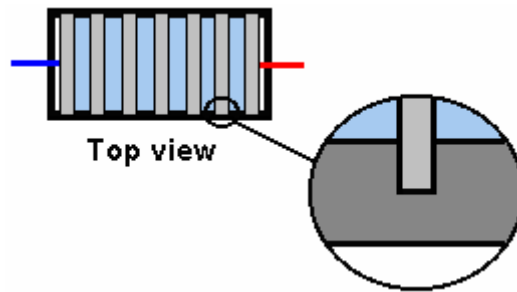
IT IS NOT REALISTIC TO USE THE ELECTRODE ARRANGEMENT SHOWN ABOVE AS SUFFICIENT SPACE IS NOT AVAILABLE IN VEHICLES. INSTEAD, ALL ELECTRODE PAIRS ARE PLACED INSIDE ONE CONTAINER :



WHILE THIS ARRANGEMENT WILL CERTAINLY WORK, IT IS NOT AS EFFICIENT AS IT COULD BE. THIS IS WHY :



SO, ALTHOUGH SOME PEOPLE FIND IT DIFFICULT TO SEE THE DIFFERENCE, THE COMMON METHOD OF SETTING UP AN ELECTROLYSER IS :

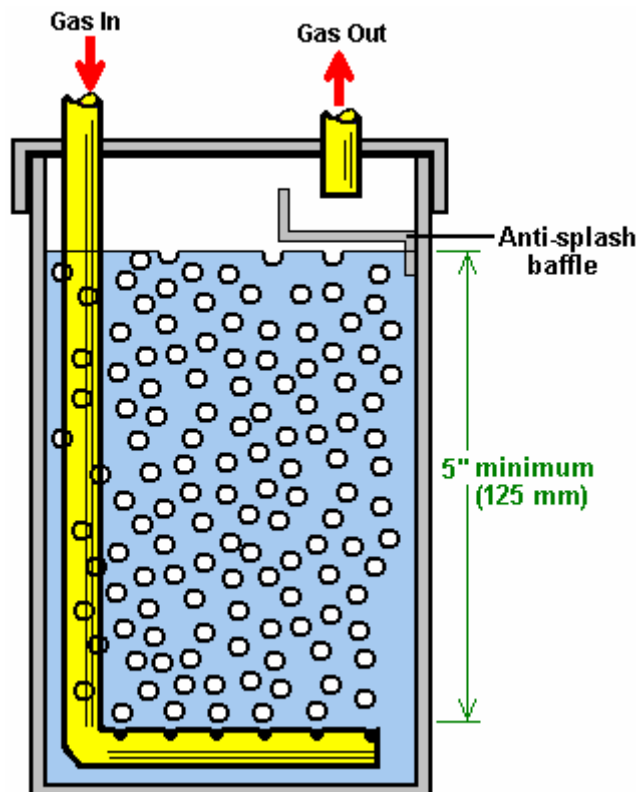


THIS TYPE OF CONSTRUCTION RELIES ON EACH ELECTRODE PLATE BEING EMBEDDED SECURELY IN THE SIDES AND BASE OF THE CASE. THE GAP BETWEEN THE ELECTRODES IS IMPORTANT AS THE SMALLER THE GAP, THE MORE GAS IS PRODUCED, BUT THE SMALLER THE GAP, THE HARDER IT IS FOR GAS BUBBLES TO ESCAPE. SO 3 mm IS CONSIDERED A GOOD SPACING AND THAT MEANS THAT THE CASE IS NOT ALL THAT LARGE.

ADDING HHO GAS TO THE AIR ENTERING AN ENGINE IS HIGHLY BENEFICIAL AS IT PROMOTES THE FULL BURNING OF THE FUEL BEING USED AND THAT OFFSETS THE NEED FOR A CATALYTIC CONVERTER AS WELL AS INCREASING THE MILES PER GALLON FROM ANYTHING FROM 20% TO 100% AND ONLY HALF OF ONE LITRE PER MINUTE OF HHO FLOW IS NEEDED FOR THAT.

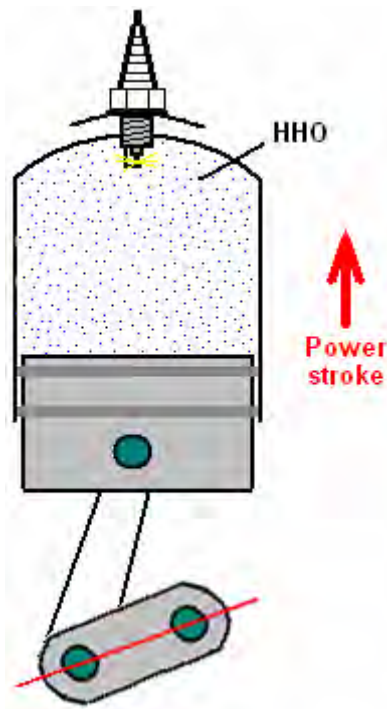
SOME PEOPLE ARE AFRAID OF HHO GAS AS THEY THINK THAT IT CAN EXPLODE. IT CAN'T. WATER EXPANDS SOME 1750 TIMES TO MAKE HHO GAS AND SO IF IT IGNITES AND RETURNS TO WATER, THEN IT WILL BE SOME 1750 TIMES SMALLER – THAT IS, IT IMPLODES. THAT CHANGE IN SIZE IS VERY FAST AND IT RELEASES A GOOD DEAL OF HEAT. A WORD OF WARNING : DO **NOT** IGNITE HHO GAS IN THE OPEN AIR AS THE BANG IS SO LOUD THAT YOU COULD DAMAGE YOUR HEARING AND BE DEAF FOR THE REST OF YOUR LIFE.

A VERY IMPORTANT DEVICE FOR WORKING WITH HHO IS THE BUBBLER :



THE IDEA IS TO HAVE A WATER BLOCK TO PREVENT ANY ACCIDENTAL IGNITION OF THE GAS FROM PASSING THROUGH. A LARGE NUMBER OF SMALL BUBBLES IS HELPFUL.

THE FACT THAT HHO IMPLODES LEAVES US WITH TWO OPTIONS :

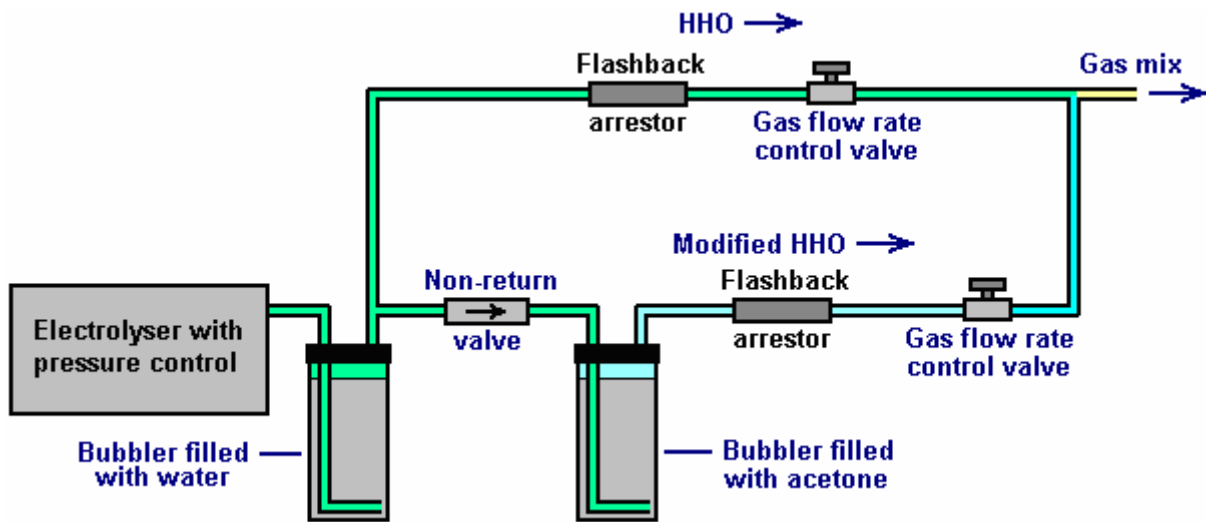


THE FIRST OPTION IS TO CHANGE THE SPARK TIMING DRASTICALLY AND MAKE THE IMPLOSION SUCK THE PISTON UPWARDS ON WHAT USED TO BE THE COMPRESSION STROKE. THIS IS NOT CONVENIENT ALTHOUGH IT HAS BEEN DONE SUCCESSFULLY IN SPITE OF THE VALVE OPERATION CHANGES NEEDED.

THE SECOND OPTION IS TO CHANGE THE IMPLOSION INTO AN EXPLOSION WHICH IS A GOOD DEAL EASIER THAN IT SOUNDS. THE TRICK IS TO USE THE HEAT OF THE IMPLOSION TO TURN WATER INTO STEAM AND THE FASTEST WAY TO DO THAT IS TO ADD COLD WATER MIST OR "FOG" TO THE INCOMING AIR. THAT RESULTS IN 'FLASH STEAM' WHICH PROVIDES A POSITIVE PRESSURE ON THE PISTONS AS THE NORMAL FUEL WOULD DO. THIS MEANS THAT YOU CAN RUN A GENERATOR LIKE THIS :



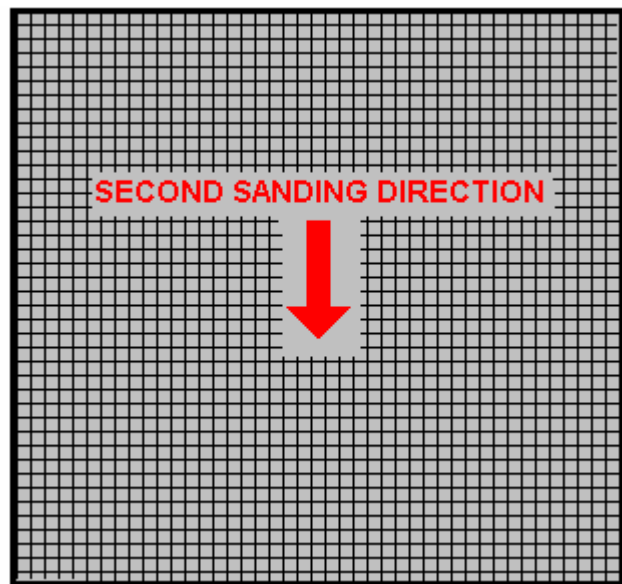
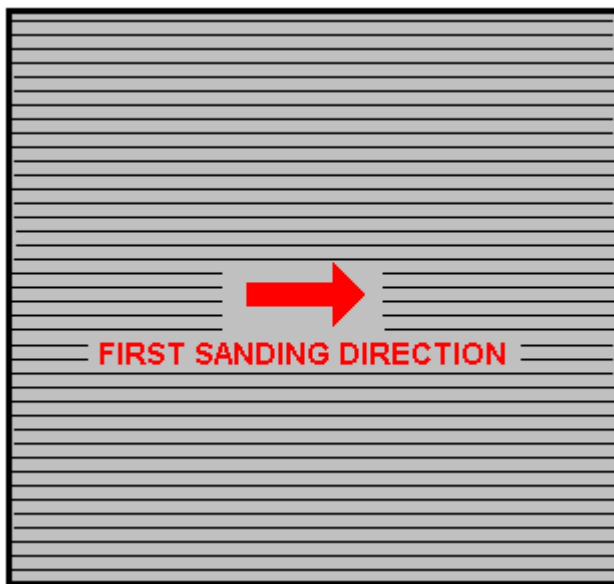
WITHOUT USING PETROL. FURTHER, YOU CAN AVOID HAVING TO ALTER THE TIMING OF THE GENERATOR IF YOU CHOOSE TO BUBBLE THE HHO GAS THROUGH ACETONE BEFORE FEEDING IT TO THE ENGINE. DAVID QUIREY OF NEW ZEALAND PREFERS TO USE AN ADJUSTABLE MIXTURE OF ORDINARY HHO AND ACETONE-TREATED HHO AS SHOWN HERE :



**HOWEVER, LEAVING THESE DETAILS ASIDE FOR THE MOMENT, AND WHILE USING DC ELECTROLYSIS FOR USE WITH A GENERATOR (OR USE AS A BOOSTER) THE GAS OUTPUT CAN BE IMPROVED QUITE READILY. THE FIRST STEP IS TO USE AN ORDINARY PULSING CIRCUIT INSTEAD OF JUST A BATTERY OR CAR ELECTRICS SUPPLY. THESE PULSING CIRCUITS ARE SOLD AS “DC MOTOR SPEED CONTROLLERS” AND CAN LOOK LIKE THIS :**

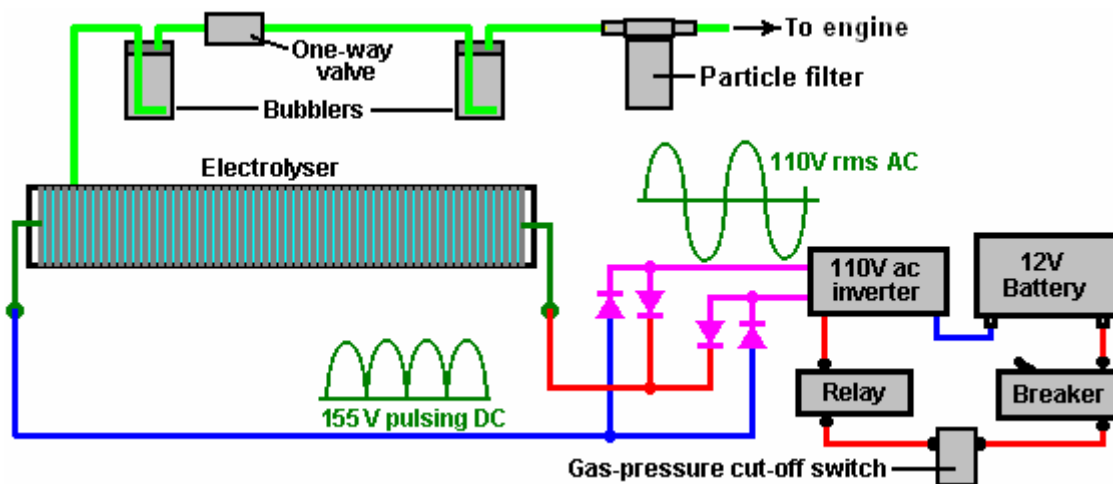


**THE UNIT SHOWN HERE IS INTENDED TO PROVIDE UP TO 30 AMPS AND Fancier units are also available. BOB BOYCE is the most experienced person in the HHO field and he stresses the necessity for careful electrode preparation before use. For this, the 316L-grade stainless steel electrode plates have all traces of oil, grease or other contaminants removed from them and are then sanded with grade 80 sandpaper in two directions which are 90-degrees apart in order to create tiny peaks on both surfaces of each plate :**



THEN, THE PLATES ARE WASHED WITH DISTILLED WATER AND ALL HAND CONTACT IS AVOIDED BY THE USE OF DISPOSABLE GLOVES. NEXT COMES THE 'CONDITIONING' PROCESS WHERE THE PLATES ARE INSERTED IN THE ELECTROLYSER AND CURRENT RUN THROUGH THE WHOLE SET OF PLATES FOR SEVERAL HOURS, USING A 20% NaOH ELECTROLYTE. THE PLATES ARE THEN RINSED OFF AND THE PROCESS REPEATED UNTIL THE ELECTROLYSER PERFORMANCE IS AT LEAST DOUBLE THAT OF FARADAY. MORE PRECISE DETAILS FOR THIS PROCESS ARE GIVEN IN CHAPTER 10 OF [www.free-energy-info.com/PJKbook.pdf](http://www.free-energy-info.com/PJKbook.pdf) WHICH IS A FREE DOWNLOAD.

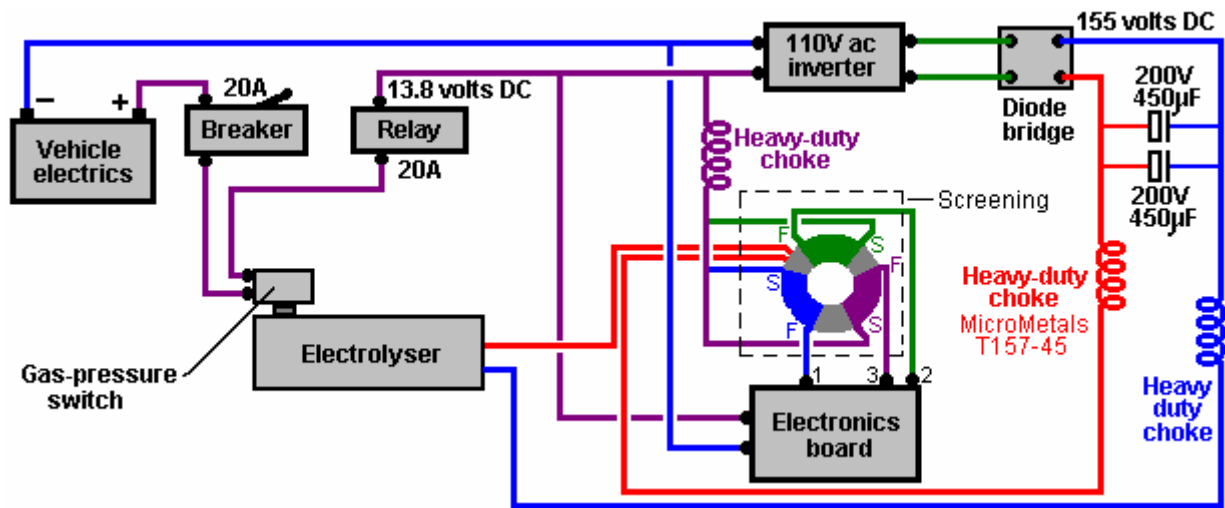
THE RATE OF GAS PRODUCTION CAN BE INCREASED BY INCREASING THE NUMBER OF PLATES IN THE ELECTROLYSER. BOB BOYCE CHOOSES TO DO IT THIS WAY :



AS BOB IS AMERICAN, HIS DC INVERTER PRODUCES A NOMINAL 110-VOLTS AC WHICH RECTIFIES TO ABOUT 155 VOLTS OF PULSING DC. THIS ALLOWS AN ELECTROLYSER WITH 100 SEPARATE CELLS IN IT, CREATED BY 101 ELECTRODE PLATES. BOB'S PREFERRED PLATE SIZE IS 6-INCHES SQUARE (150 mm SQUARE). THE DC EFFICIENCY OF EACH CELL IS APPROXIMATELY 216% THAT OF MICHAEL FARADAY.

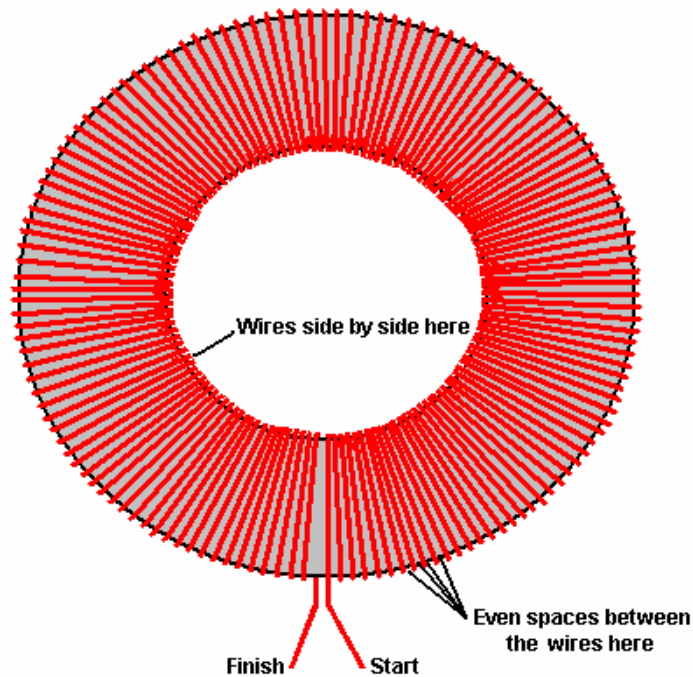
THE NEXT STEP FORWARD IS BY DRAWING ENERGY IN FROM THE ENVIRONMENT AND BOB HAS DEVELOPED A CIRCUIT WHICH DOES THAT AND THE RESULT IS A FURTHER FIVE OR SIX TIMES THE HHO OUTPUT, MAKING THE RESULT A MINIMUM OF 1000% BETTER THAN FARADAY'S EFFICIENCY (2.34 WATT-HOURS PER LITRE PER HOUR). THE CIRCUIT WHICH BOB DESIGNED FOR THIS USES THE MICROMETALS 6.5 INCH DIAMETER IRON-DUST CORE TOROID CONNECTED LIKE THIS :





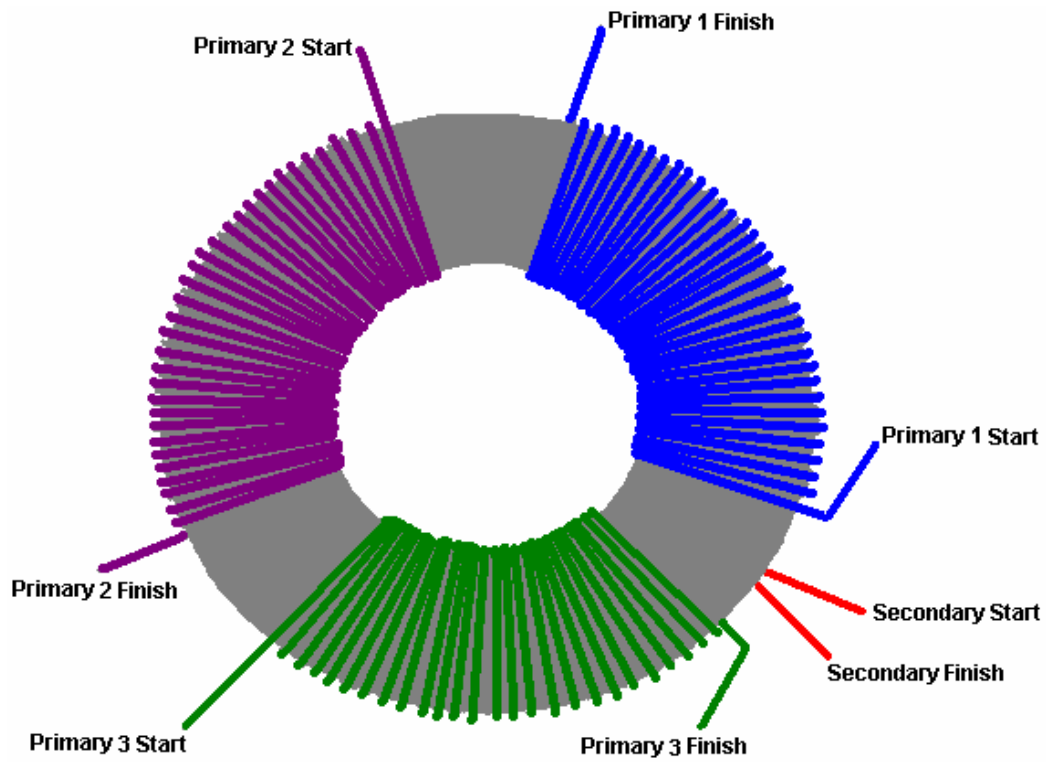
THE KEY PART OF THIS CIRCUIT IS THE VERY CAREFULLY WOUND TOROID, (USING SPECIFIC MATERIALS) AND THE ELECTRONICS BOARD WHICH DRIVES THE TOROID. IT IS ESSENTIAL TO WIND THE TOROID VERY ACCURATELY AS DESCRIBED IN THE EBOOK AND USING SOLID CORE COPPER WIRE WHICH IS COATED WITH SILVER BEFORE IT IS INSULATED WITH PLASTIC.

THE TOROID IS WOUND LIKE THIS. FIRST, THE SECONDARY WINDING IS MADE COUNTER CLOCKWISE AROUND THE WHOLE LENGTH OF THE TOROID AS SHOWN :



THE WINDING PRECISION HAS TO BE BETTER THAN MILITARY GRADE QUALITY. THIS WINDING IS COVERED WITH TIGHTLY STRETCHED PVC TAPE TO FORM A GOOD BASE FOR THE PRIMARY WINDINGS WHICH ARE WOUND ON TOP OF IT.

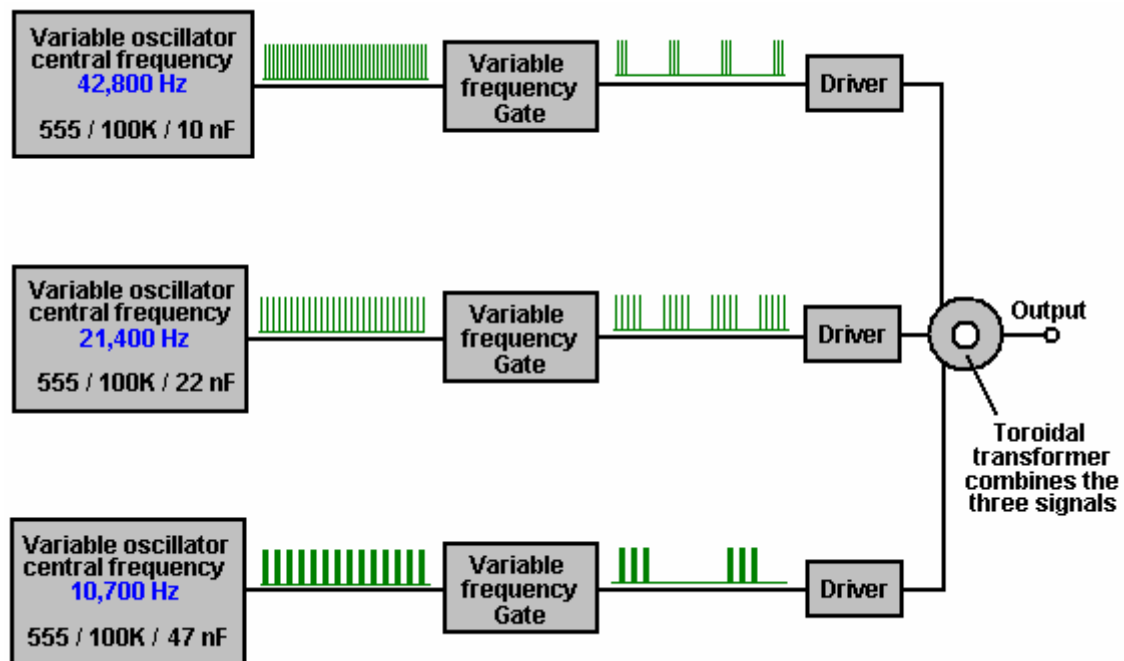
THERE ARE THREE COUNTER CLOCKWISE WOUND PRIMARY WINDINGS POSITIONED AS SHOWN HERE :



AGAIN, MAJOR CARE IS TAKEN WHEN MAKING THESE WINDINGS WHICH ARE THEN HELD IN PLACE WITH BEESWAX BEFORE BEING TIGHTLY WOUND WITH TAPE AND THE FINISHED TOROID PLACED IN A FARADAY CAGE TO CUT DOWN ANY TRANSMITTED WAVEFORM :

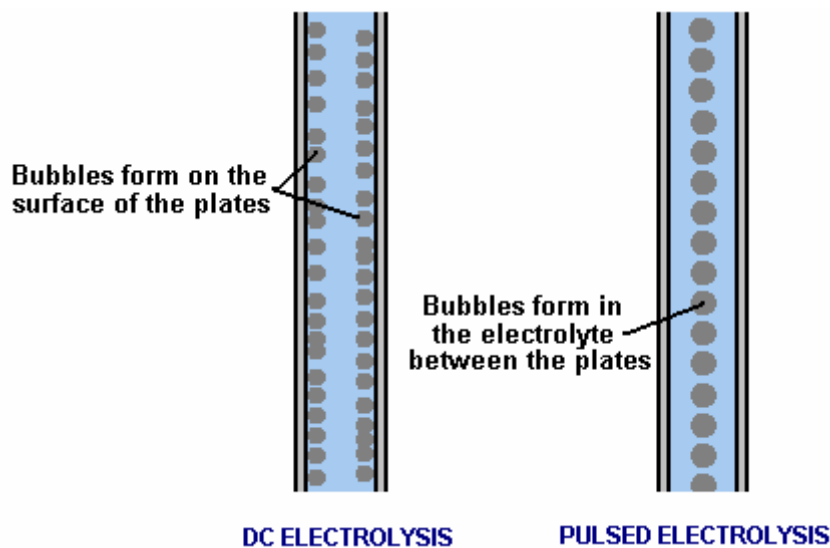


THIS TOROID HAS EACH PRIMARY WINDING DRIVEN BY ITS OWN SEPARATE, GATED SIGNAL GENERATOR :



THESE OSCILLATORS WORK BETTER THAN USING TWO DIVIDE-BY-TWO CIRCUITS. THE TOROID COMBINES THE SIGNAL AND IF THERE SHOULD BE A RUNAWAY, THEN THE EXCESS POWER PRODUCED IS FED TO THE ELECTROLYSER AND JUST MAKES MORE HHO GAS, SO THE ELECTROLYSER IS BOTH A LOAD AND A SAFETY DEVICE.

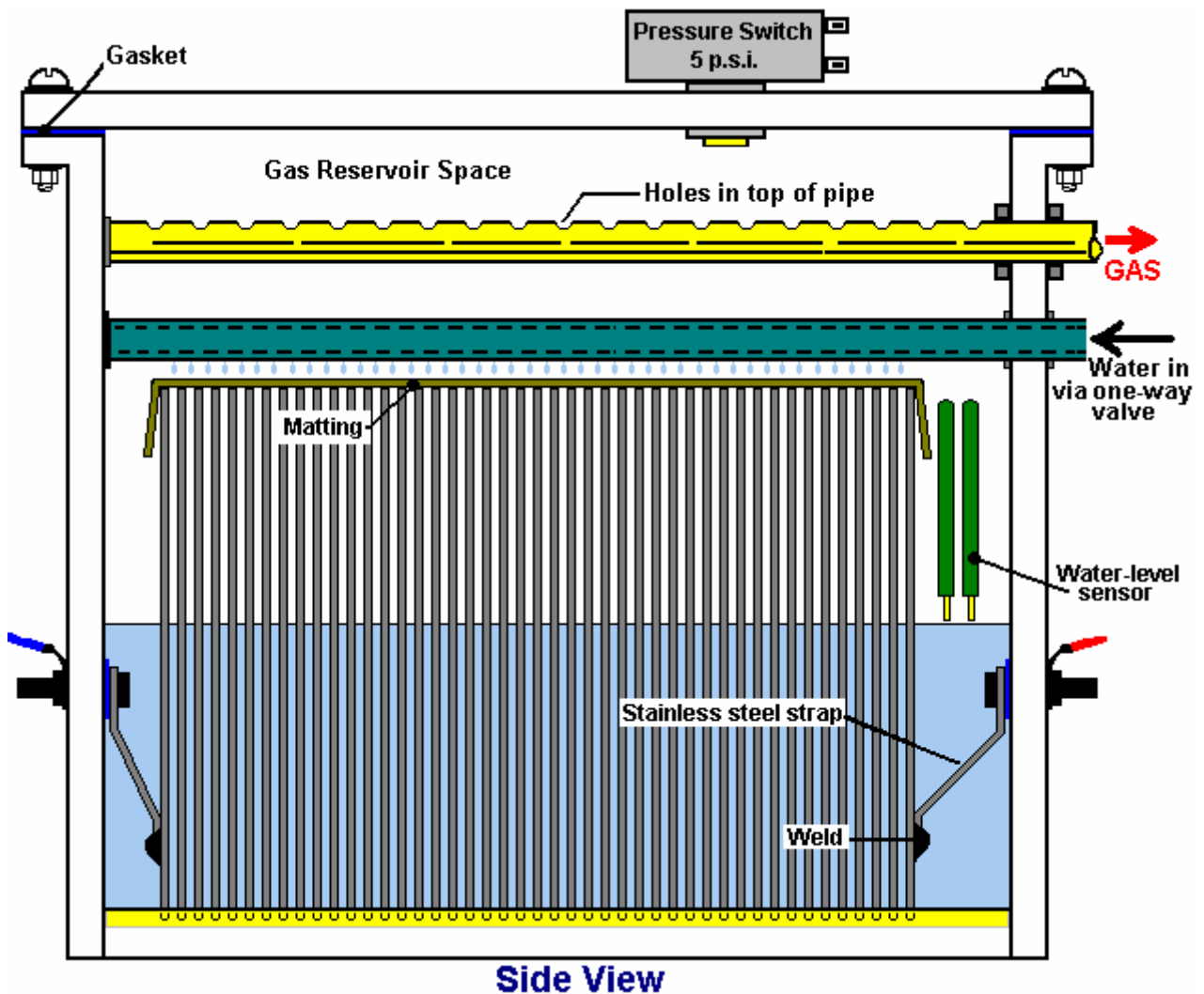
THERE IS A DIFFERENCE BETWEEN DC ELECTROLYSIS AND RESONANT PULSED DC RESONANCE :



BUBBLES IN DC ELECTROLYSIS FORM ON THE PLATES BUT WITH RESONANT PULSED DC ELECTROLYSIS THE BUBBLES FORM IN THE ELECTROLYTE BETWEEN THE PLATES. ALSO, THOSE BUBBLES ARE IN THE MUCH MORE ENERGETIC FORM KNOWN AS "CHARGED WATER CLUSTERS".

THE LARGE CELLS MADE BY BOB BOYCE HAVE THE PROBLEM OF GETTING REPLACEMENT WATER INTO THE MANY SEPARATE CELLS AND GETTING THE GAS OUT OF THE ELECTROLYSER. THESE PROBLEMS ARE BECAUSE THE VOLUMES ARE SO HIGH.

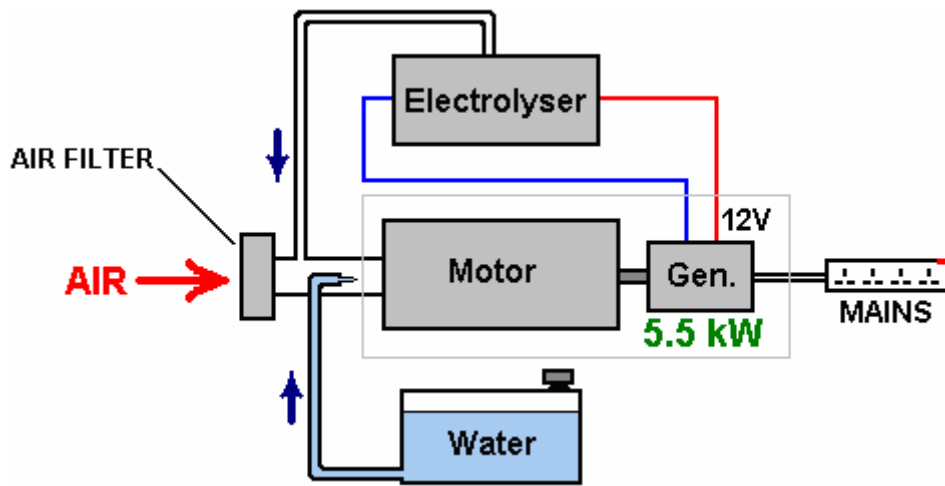
FEEDING REPLACEMENT WATER INTO THE CELLS IS ACHIEVED BY USING A SUPPLY PIPE WHICH HAS A HOLE ABOVE EVERY CELL, WHILE A GAS EXTRACTION PIPE HAS HOLES ALONG THE TOP OF THE PIPE :



**AS ALREADY MENTIONED, IT IS PERFECTLY POSSIBLE TO RUN AN ORDINARY, COMMERCIAL GENERATOR WITHOUT THE USE OF ANY CONVENTIONAL FUEL.**

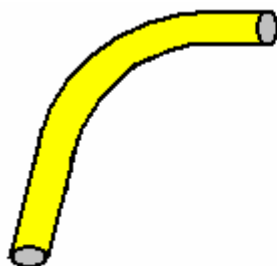
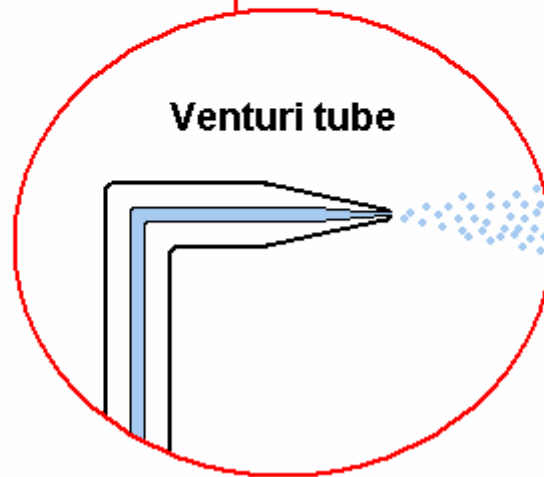
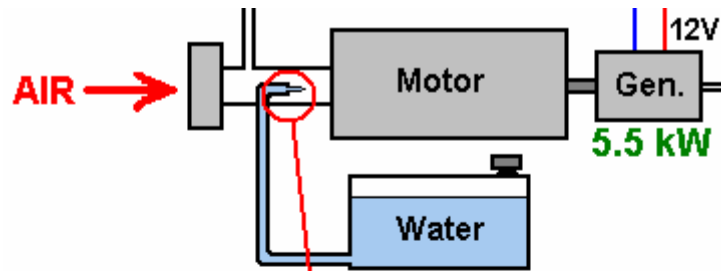


**THE WAY THAT THIS IS DONE IS FAIRLY STRAIGHTFORWARD AND EASY TO UNDERSTAND :**

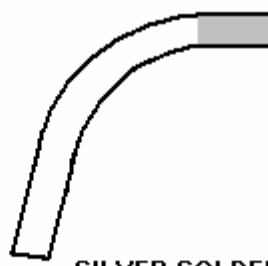


AS THE GENERATOR IS A GREAT SOURCE OF ELECTRICAL POWER, IT IS USED TO POWER THE ELECTROLYSER TO CREATE THE NECESSARY HHO GAS TO POWER THE MOTOR OF THE GENERATOR. THE ELECTROLYSER GAS IS FED INTO THE AIR STREAM ENTERING THE ENGINE AND AS HHO GAS IMPLODES, COLD WATER MIST IS ALSO FED INTO THE ENGINE.

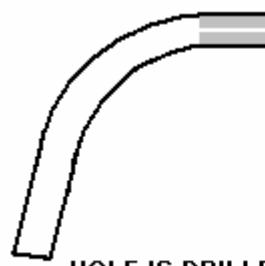
THE COLD WATER MIST IS A STREAM OF TINY WATER DROPLETS WHICH CAN BE PRODUCED WITH A COMMERCIAL "POND FOGGER" FROM A PET SHOP OR A GARDEN CENTRE, OR JUST VERY SIMPLY WITH A VENTURI TUBE AS SHOWN HERE :



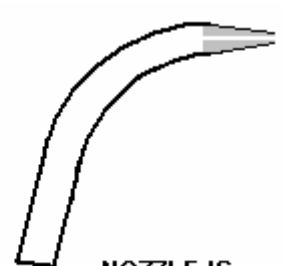
TUBE GETS BENT



SILVER SOLDER PLUG IS INSERTED

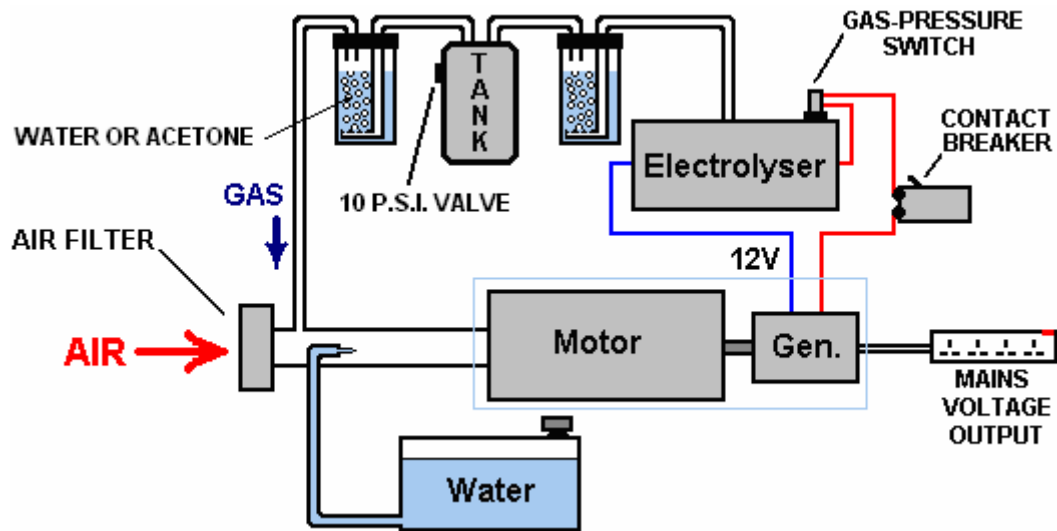


HOLE IS DRILLED THROUGH THE PLUG



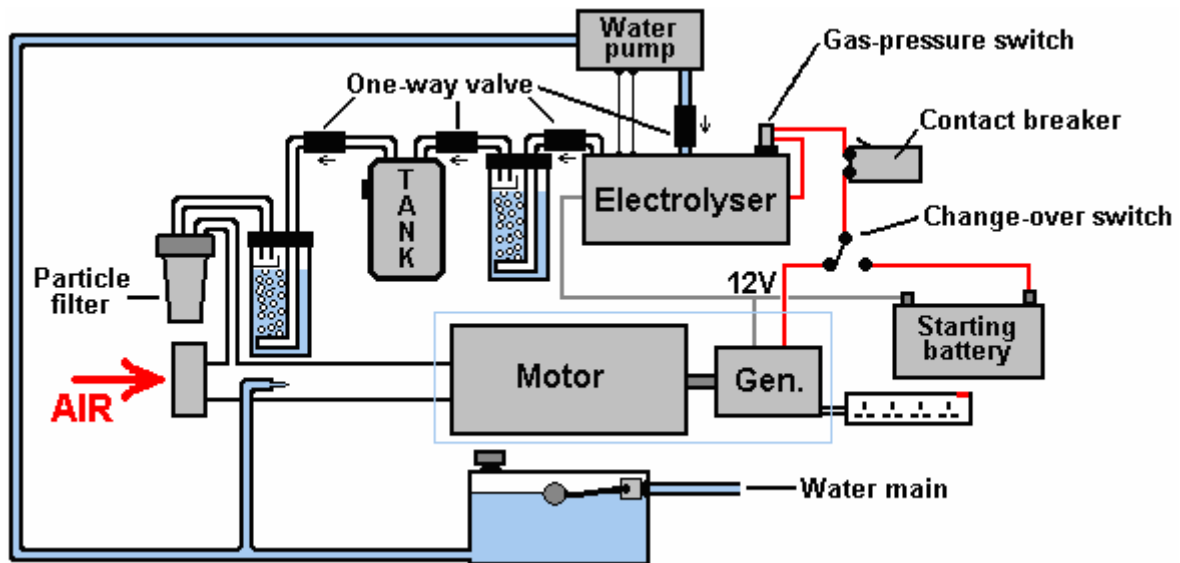
NOZZLE IS FILED DOWN

OBVIOUSLY, SOME SAFETY FEATURES ARE ADVISABLE AND WHILE THEY MAKE THE SYSTEM APPEAR TO BE MORE COMPLICATED, IT REALLY ISN'T :



THE MAIN ADDITION IS TWO BUBBLERS BETWEEN THE ELECTROLYSER AND THE MOTOR OF THE GENERATOR. THESE ARE TO WASH OUT ANY SLIGHT TRACES OF ELECTROLYTE WHICH MAY HAVE CONTAMINATED THE HHO GAS GENERATED. IF THE GENERATOR MOTOR SPARK TIMING IS NOT TO BE ADJUSTED, THEN THE SECOND OF THE TWO BUBBLERS IS FILLED WITH ACETONE AS THAT MODIFIES THE HHO GAS AND THE RESULTING MIX HAS A FLAME FRONT SPEED SIMILAR TO THAT OF PETROL.

IT IS NORMAL FOR A SYSTEM LIKE THIS TO BE STATIONARY AND IF THAT IS THE CASE, THEN A LOCAL WATER SUPPLY CAN BE ATTACHED :



THERE ARE OTHER WAYS TO PRODUCE HHO GAS AND ONE WELL-KNOWN WAY WAS DEMONSTRATED BY STANLEY MEYER WHO AVOIDED GIVING THE FULL DETAILS OF HIS DESIGN EVEN THOUGH IT WAS SHOWN ON THE TV DOCUMENTARY "IT RUNS ON WATER".

NOBODY MANAGED TO COPY STAN'S SYSTEM UNTIL DAVE LAWTON OF WALES DECIDED TO REPLICATE IT. DAVE TRIED FOR A FULL MONTH WITHOUT ANY SUCCESS AND THEN SUDDENLY, DAVE'S CELL BURST INTO LIFE, SHOWING THAT A VITAL OMITTED DETAIL IS THE FACT THAT THE ELECTRODES NEED TO BE INSULATED :



**Dave Lawton**



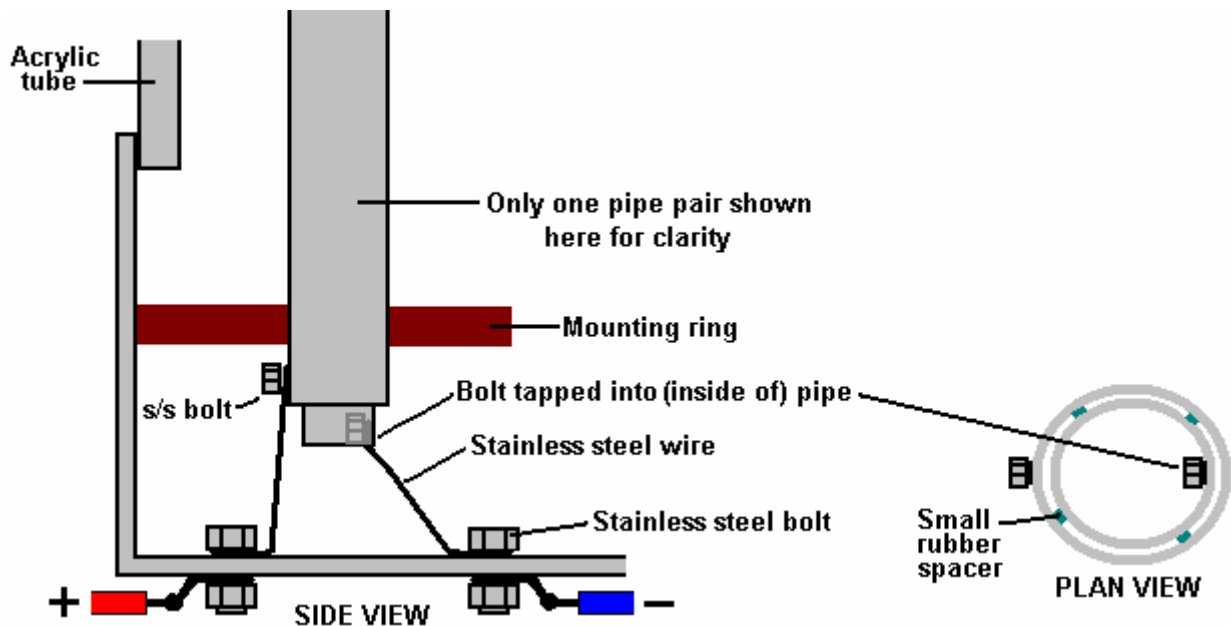
**THIS WATER-SPLITTING CELL USES PAIRS OF TUBULAR ELECTRODES ARRANGED IN PAIRS, ONE INSIDE THE OTHER :**



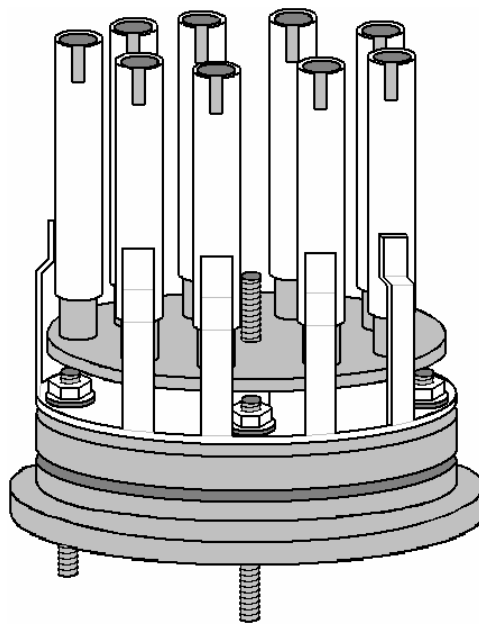
**WHILE STANLEY MEYER USED 15-INCH (300 mm) LONG TUBES OF STAINLESS STEEL (WHICH HE MISLEADINGLY DESCRIBED AS “ALLOY” TUBES), DAVE USED COPPER PIPES OF ONLY SIX INCHES IN LENGTH.**

**STAN MEYER USED TAP WATER. UNFORTUNATELY, TAP WATER IS COMPLETELY DIFFERENT FROM PLACE TO PLACE AROUND THE WORLD AS IT DEPENDS ON THE LOCAL GEOLOGY AND THE TREATMENT METHODS USED BY THE SUPPLIER. DAVE USES SPRING WATER.**

**THE METHOD OF CONSTRUCTION USED BY DAVE IS LIKE THIS :**



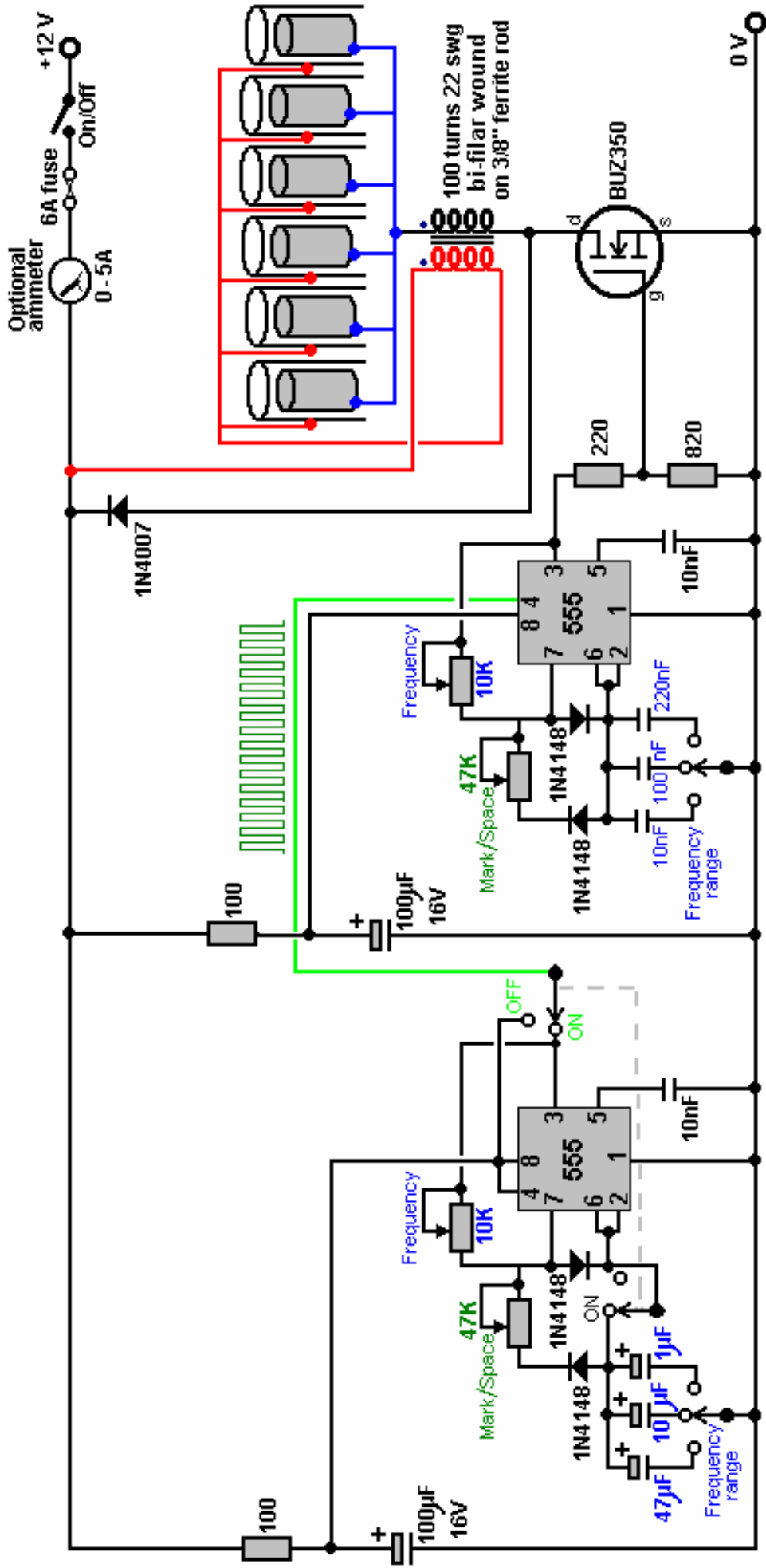
WHILE THIS IS A PRACTICAL METHOD OF CONSTRUCTION, IT IS SOMEWHAT DIFFERENT FROM THE METHOD USED BY STAN MEYER WHO WELDED THE OUTER PIPES TO ARMS COMING UP FROM A COMMON BASE PLATE. STAN ALSO USED THE TECHNIQUE OF GERMAN ORGAN MAKERS, CUTTING A SLOT IN THE TOP OF THE OUTER TUBE IN ORDER TO GET A COMMON RESONANT FREQUENCY :



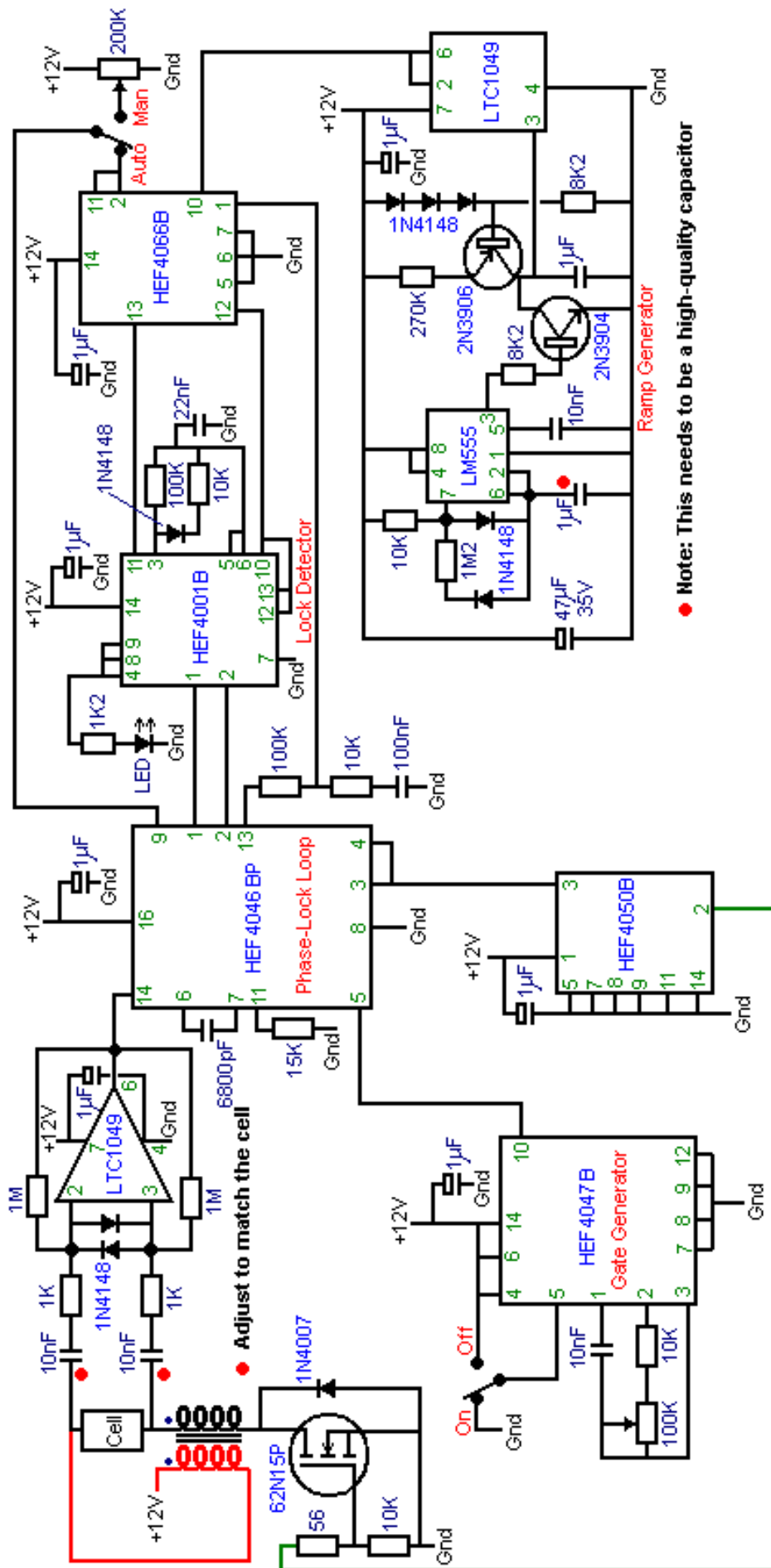
THE PROBLEM WITH A DESIGN OF THIS TYPE IS THE FACT THAT IT IS A RESONANT SYSTEM AND THE COMMON RESONANCE CHANGES WITH TEMPERATURE AND/OR WATER LEVEL. THE CHALLENGE IS THEREFORE TO FIND AND HOLD THE RESONANT FREQUENCY, ESPECIALLY SINCE THE RESONANT FREQUENCY IS A VERY NARROW BAND AND SO THE DRIVING FREQUENCY NEEDS TO BE CONTROLLED ACCURATELY.

DAVE USED SIMPLE PULSING CIRCUITS TO ACHIEVE REASONABLE OPERATION, BUT THE IDEAL IS A PHASE-LOCK-LOOP CIRCUIT WHICH WILL FIND AND LOCK ON TO THE RESONANT FREQUENCY. STAN MEYER PRODUCED ONE OF THESE CIRCUITS BUT KEPT THE DETAILS CONFIDENTIAL. DAVE LAWTON ALSO BUILT AND TESTED SUCH A CIRCUIT AND HE PUBLISHED THE DETAILS. HERE IS DAVE'S SIMPLE MANUAL CIRCUITRY :





AND HERE IS HIS PHASE-LOCK-LOOP CIRCUIT :

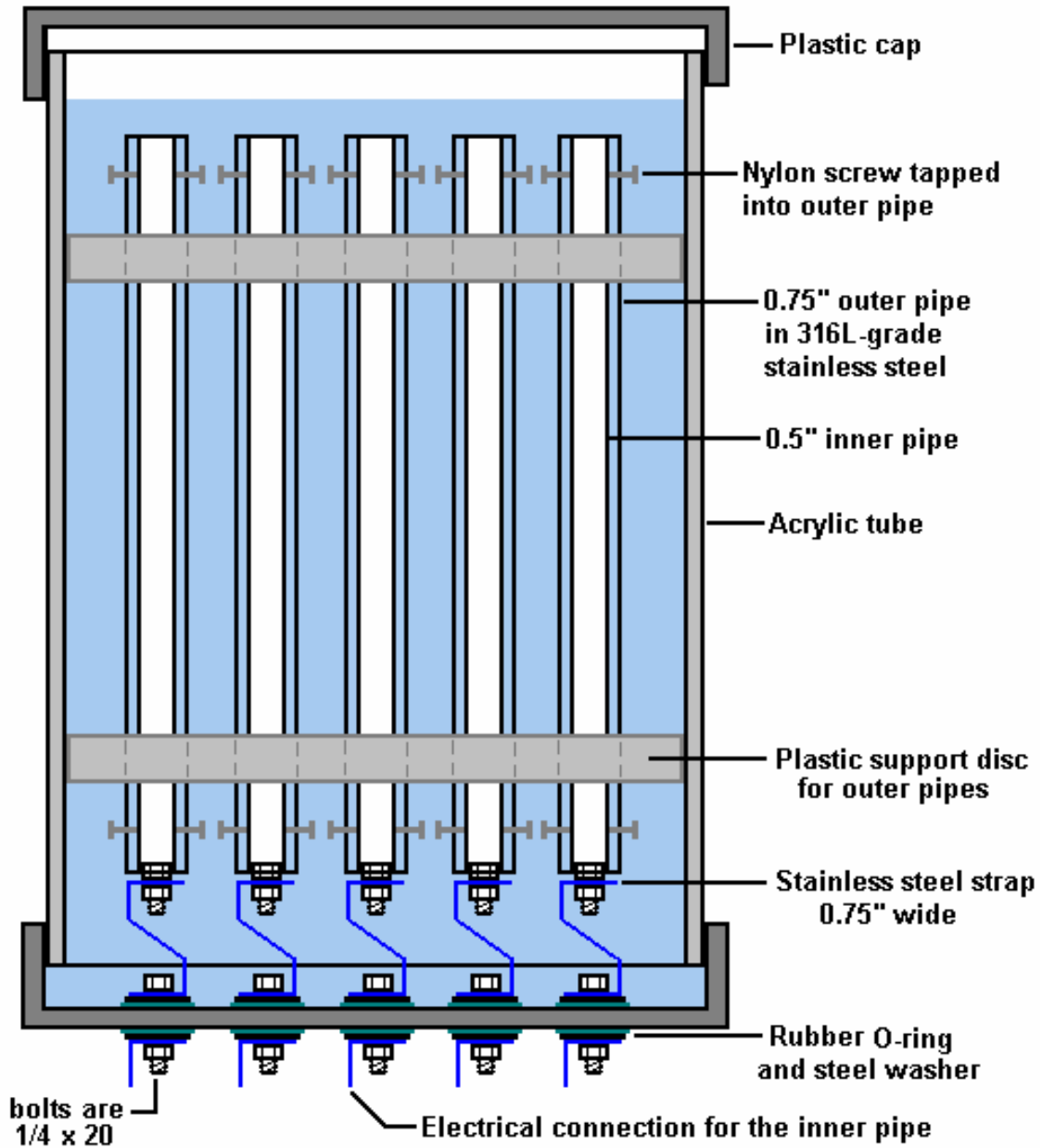


Capacitors are tantalum 35V. Resistors are carbon film 5% 0.33W. Variable resistors are presets (RadioSpares 154-2072 and 154-2094) Radiospares Part Numbers: LTC1049: 545-5607, HEF4046BP: 306-645, HEF4001B: 333-3303, HEF4066B: 333-1470, 2N3904: 294-312, 2N3906: 294-328, 62N15P: 194-316, 1N4148: 446-8551, 1N4007: 348-5397,

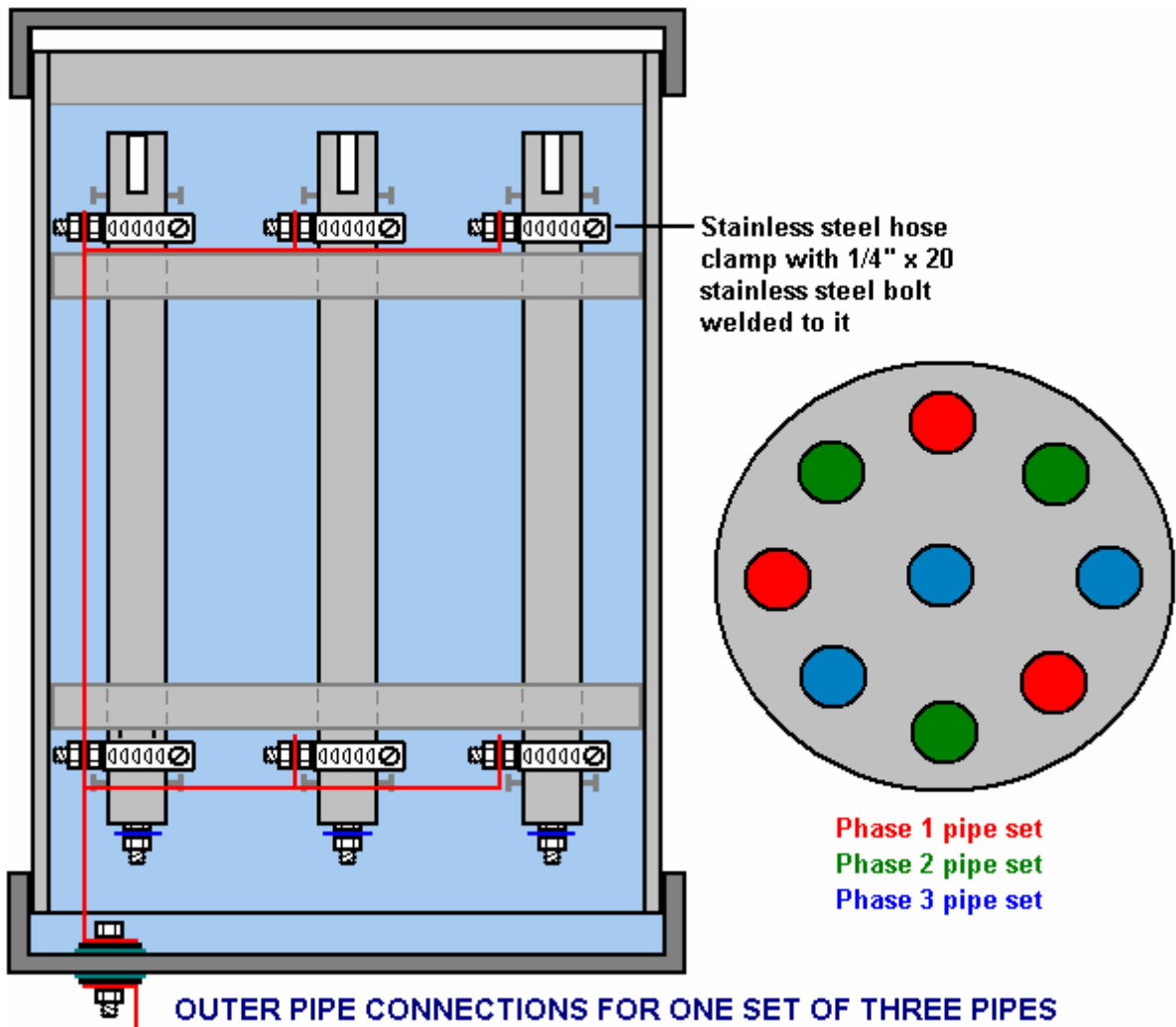
DR. SCOTT CRAMTON ALSO WORKED ON THIS STYLE OF WATER-SPLITTER CONSTRUCTION.



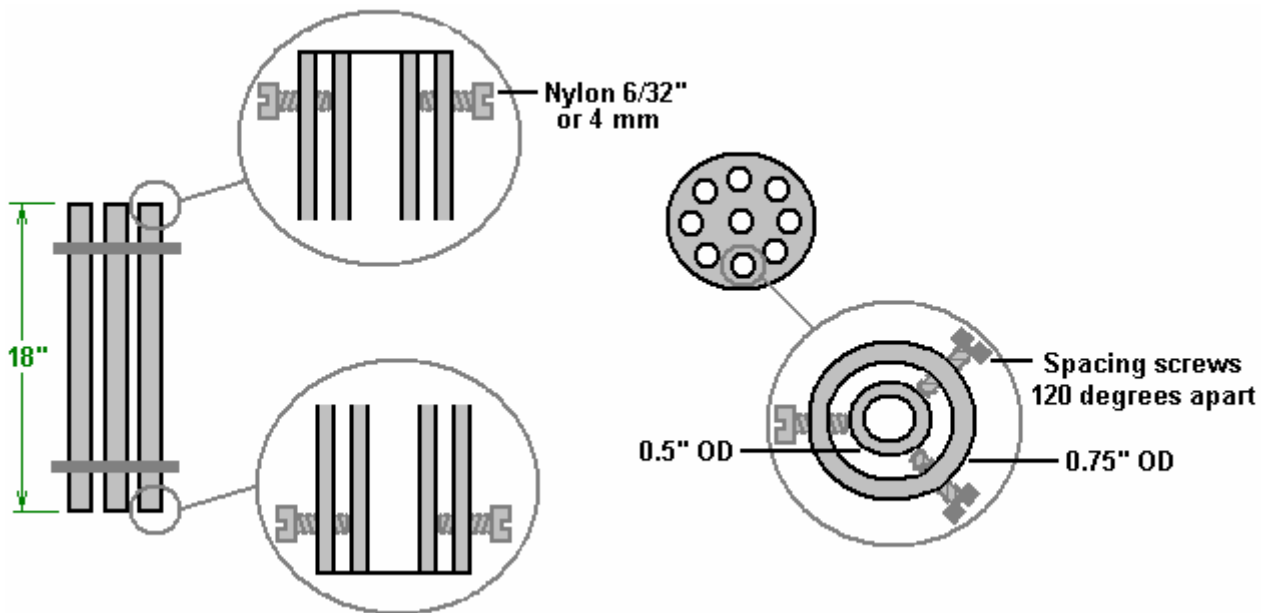
THE CONSTRUCTION METHOD WHICH HE USED IS LIKE THIS :



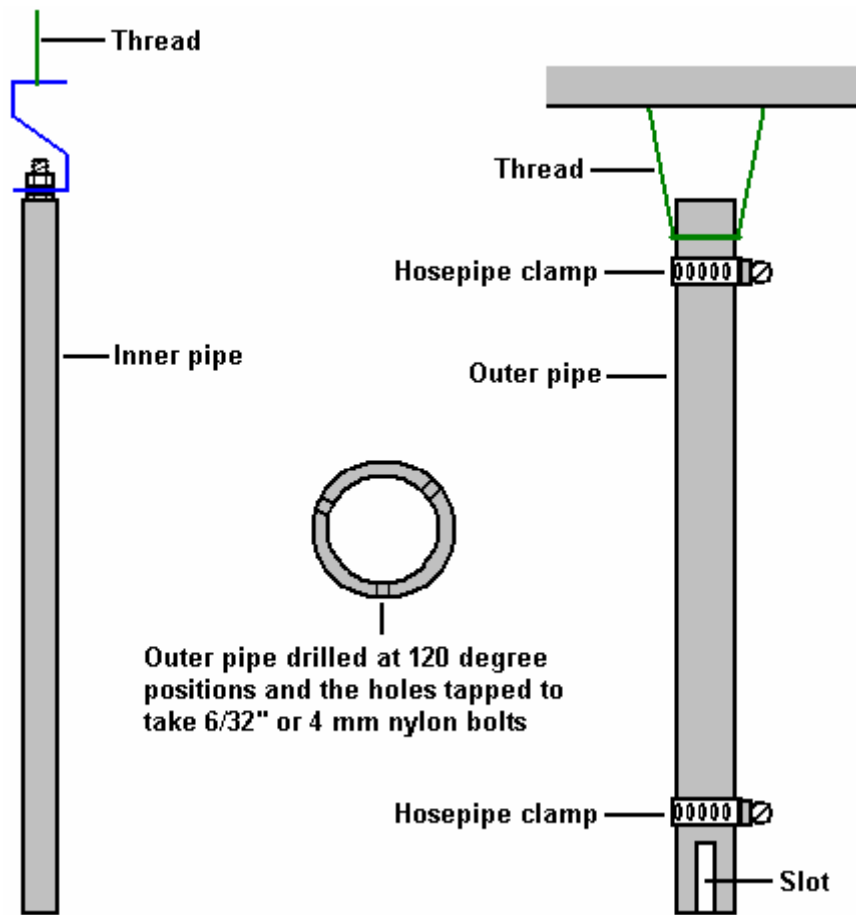
HERE, THERE ARE TWO SUPPORTING DISCS FOR THE OUTER PIPES, WHILE THE INNER PIPES ARE SUPPORTED INDIVIDUALLY ON A SERIES OF Z-SHAPED BRACKETS EACH OF WHICH CARRIES ITS OWN SEPARATE ELECTRICAL SUPPLY, BUT AS DR. CRAMTON CHOSE TO USE A THREE-PHASE SUPPLY, THEY ARE CONNECTED LIKE THIS :



THE INNER PIPES ARE HELD IN THE CORRECT SPACING BY PLASTIC SCREWS :



DR. CRAMTON ALSO FOUND THAT THE PIPE RESONANT FREQUENCIES NEEDED TO BE WITHIN 5 Hz OF EACH OTHER. HIS METHOD FOR DETERMINING THE FREQUENCIES WAS TO SUSPEND THE COMPONENTS ON THREAD AND STRIKE THEM TO DETERMINE THEIR RESONANT FREQUENCIES :

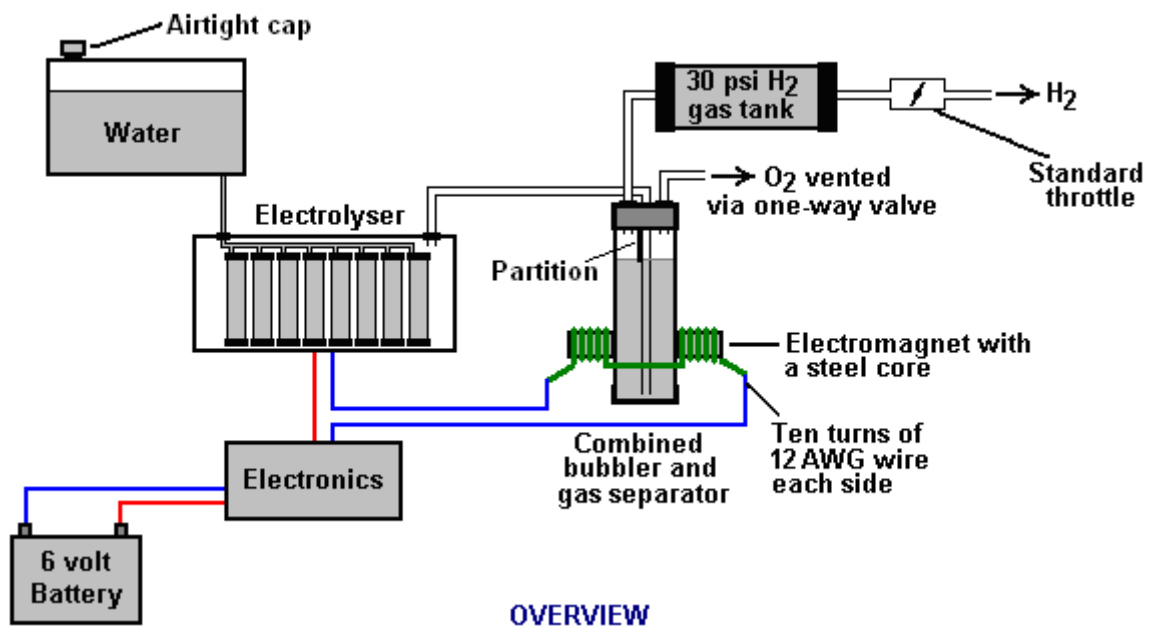


**DR. CRAMTON HAS STATED THAT HE CAN REDUCE THE DIESEL REQUIREMENT OF ANY DIESEL ENGINE OF ANY CAPACITY BY 60% THROUGH THE ADDITION OF HHO GAS.**

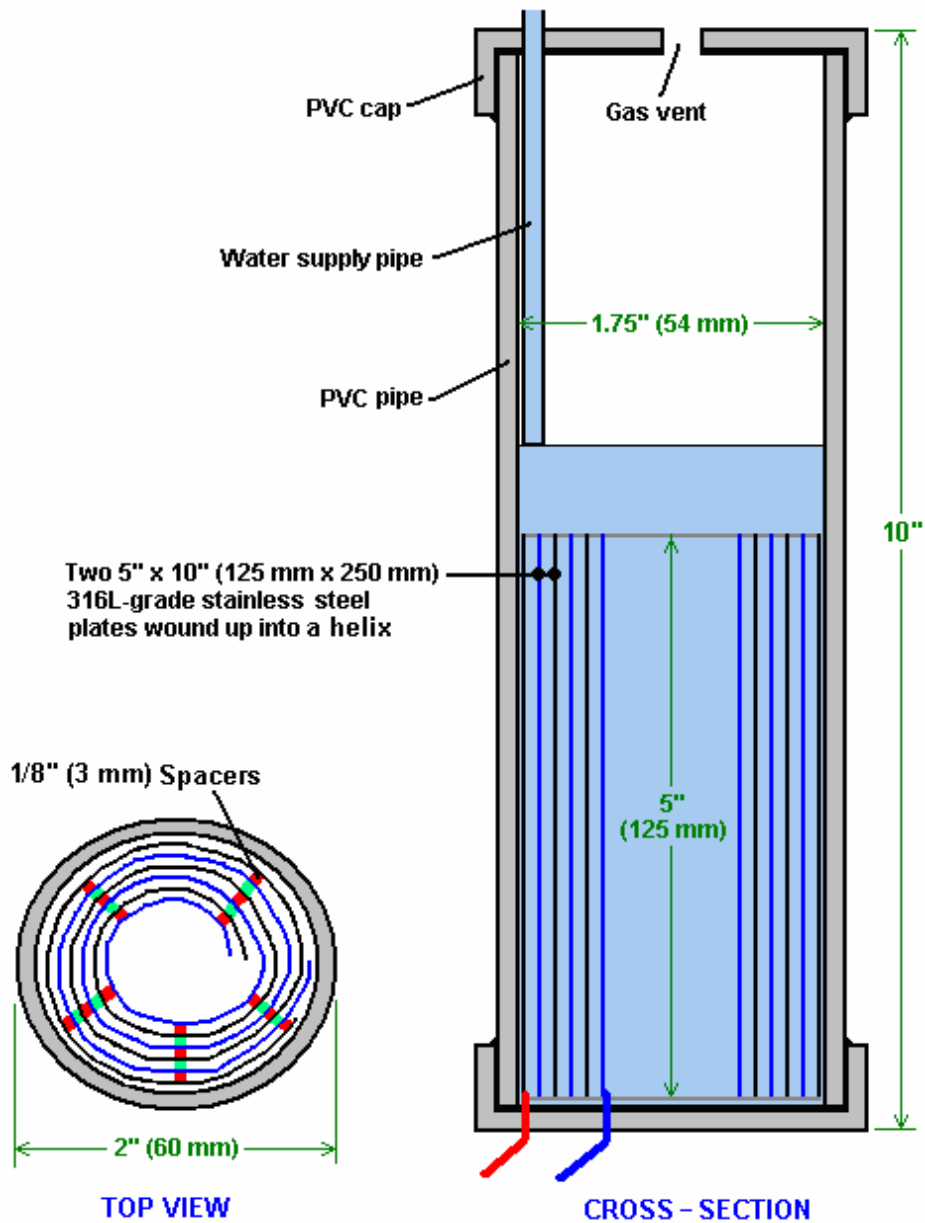
**THE BOB BOYCE TOROID CELL, THE DAVE LAWTON WATER-SPLITTER CELL AND DR. CRAMTON'S WATER-SPLITTER CELL ARE HIGH-TEC SYSTEMS, BUT GOOD WORKING SYSTEMS CAN BE MADE WITHOUT GETTING INVOLVED IN ANY KIND OF ADVANCED TECHNOLOGY.**

**FOR EXAMPLE, CONSIDER THE SYSTEM DEVELOPED AND USED BY ZACH WEST OF AMERICA. ZACH RAN A 250 cc MOTORCYCLE ON PUBLIC ROADS, USING JUST HHO AS THE FUEL. I SUPPOSE THAT LOOSELY SPEAKING, YOU COULD DESCRIBE HIS MOTORCYCLE AS RUNNING ON WATER ALONE, ALTHOUGH THAT IS NOT STRICTLY TRUE EVEN THOUGH IT LOOKS LIKE IT.**

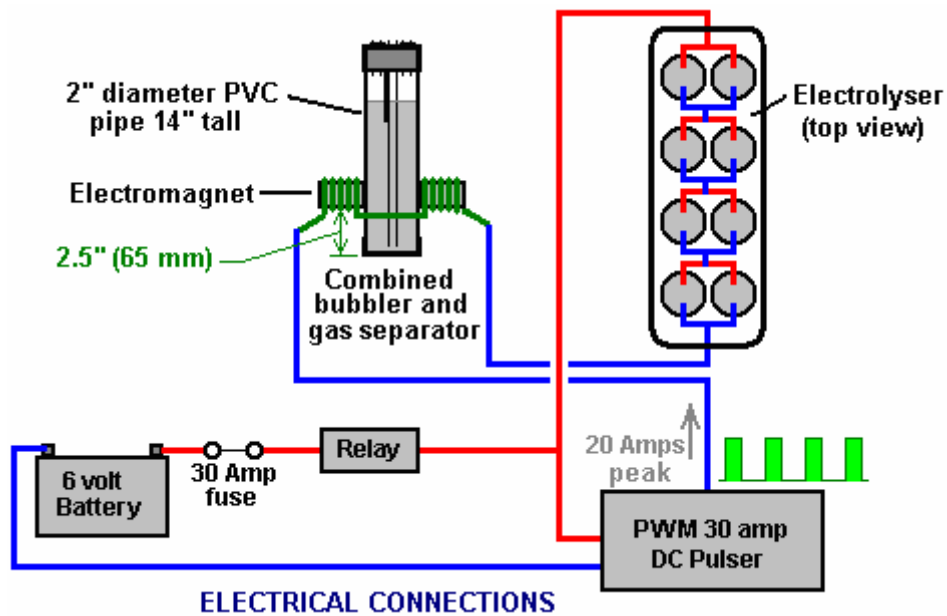
**HE PERFORMS ELECTROLYSIS OF WATER USING HIS HOME-BUILT ELECTROLYSER. HE THEN BLEEDS OFF MOST OF THE OXYGEN, MAKING THE GAS FAR LESS VOLATILE AND HE STORES SOME IN A TANK READY FOR INCREASES IN LOAD SUCH AS ACCELERATING AWAY FROM TRAFFIC LIGHTS. HIS SYSTEM IS LIKE THIS :**



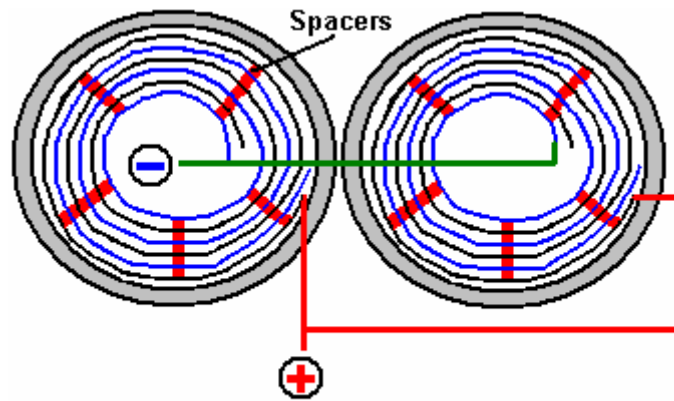
ZACH'S ELECTROLYSIS IS CARRIED OUT IN A SERIES OF THESE INDIVIDUAL UNITS :



THESE UNITS ARE CONNECTED IN PAIRS AND FED WITH PULSED DC :



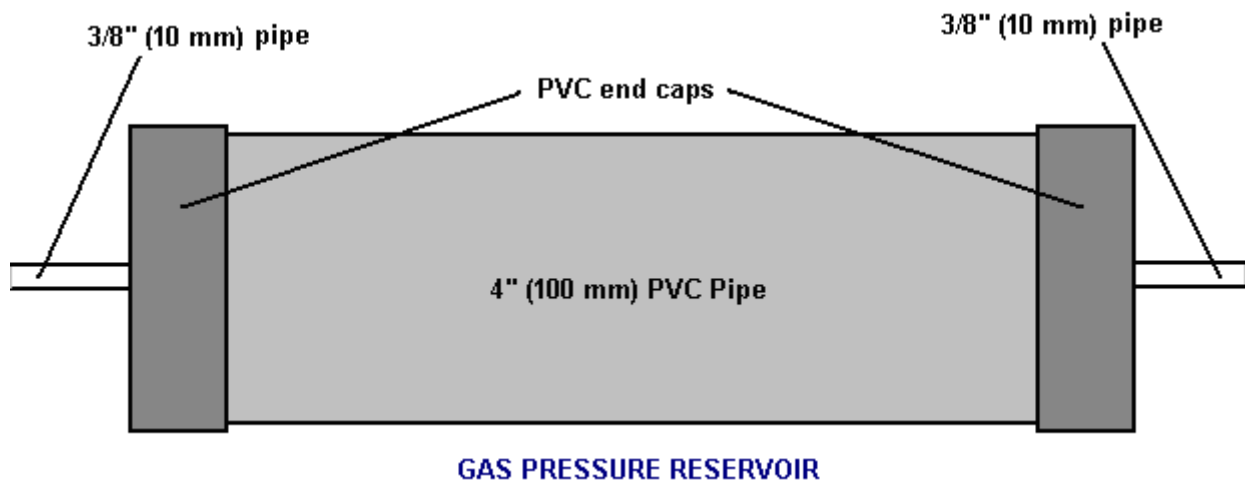
ZACH CONNECTS HIS ELECTROLYSER CELLS IN PAIRS LIKE THIS :



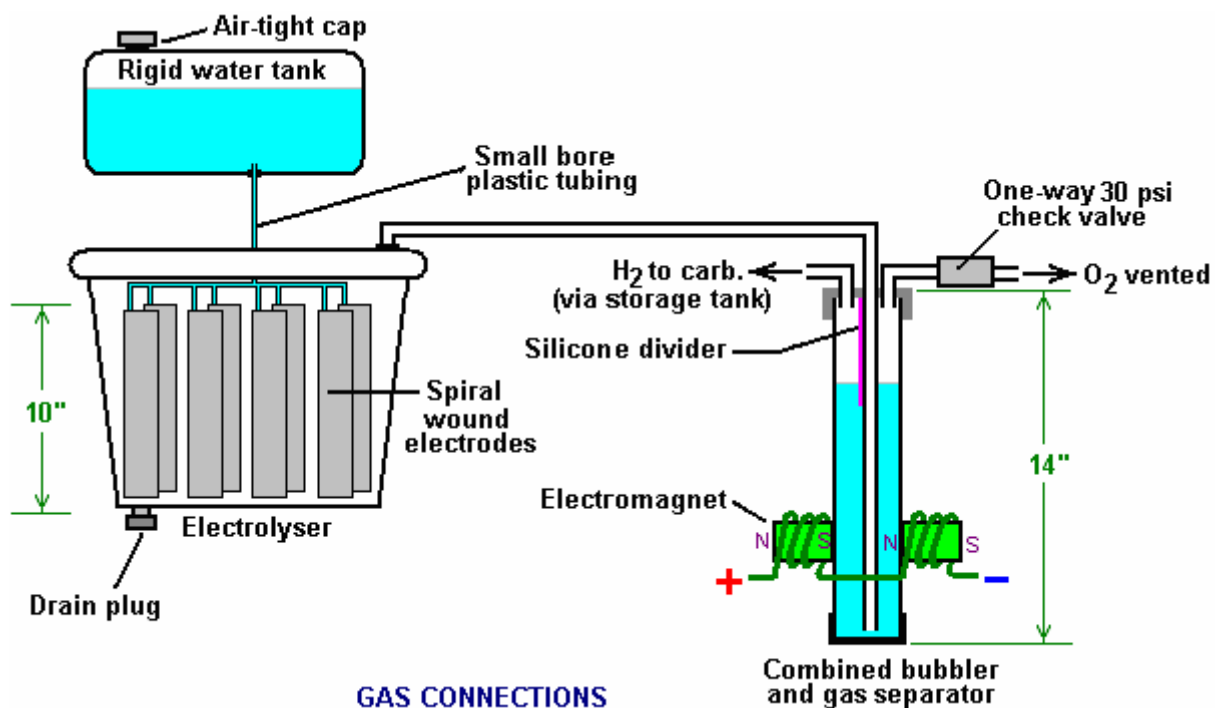
AND HIS 30-AMP COMMERCIAL PULSER LOOKS LIKE THIS :



AND THE GAS RESERVOIR IS CONSTRUCTED LIKE THIS :



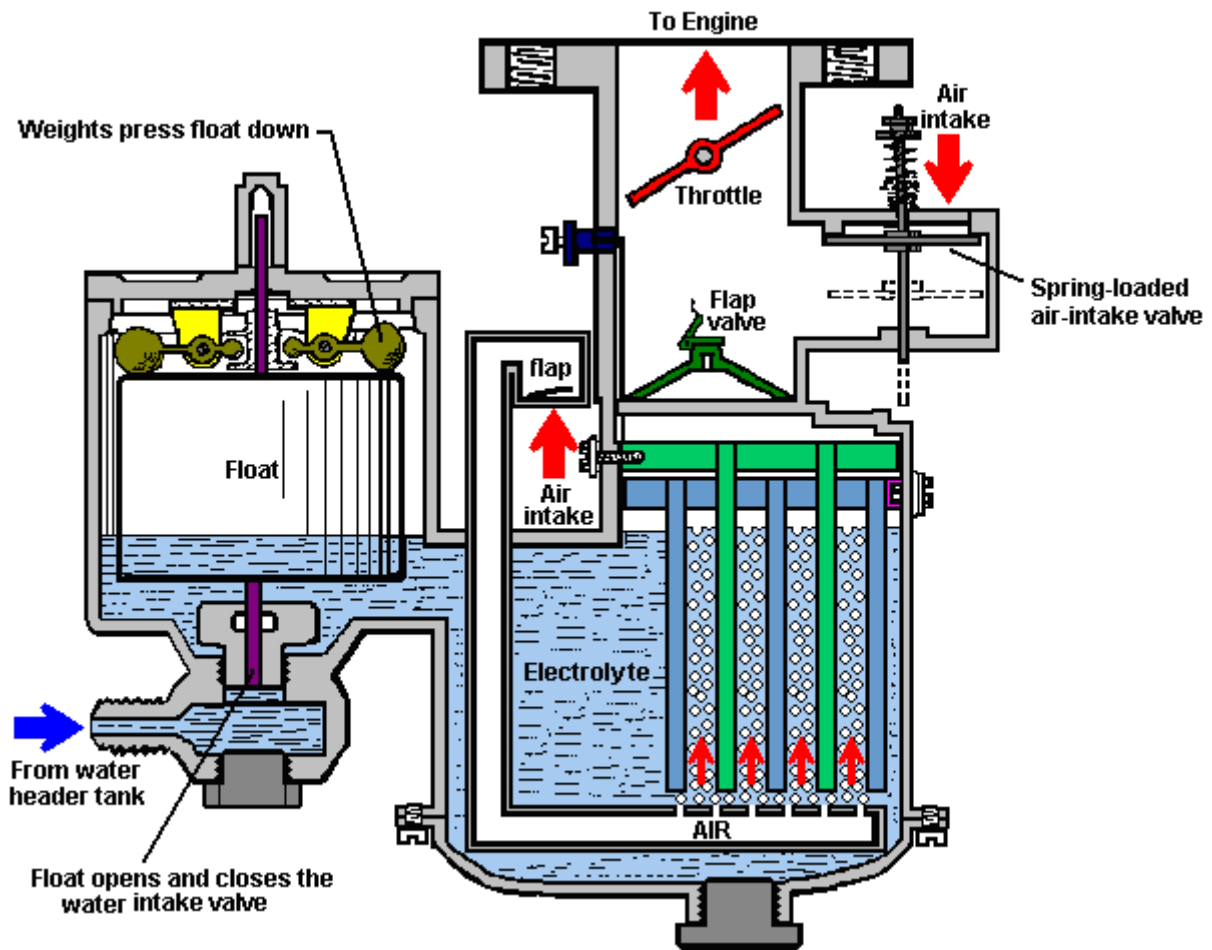
ZACH'S OVERALL SYSTEM IS BASICALLY VERY SIMPLE:



IT IS PROBABLE THAT THIS SYSTEM WHICH CAN POWER A MOTORCYCLE, IS NOT SELF-POWERED AS MOTORCYCLE ELECTRIC SYSTEMS ARE GENERALLY VERY LOW PERFORMANCE. HOWEVER, IF AN ADDITIONAL BATTERY IS CARRIED, THE SYSTEM CAN BE KEPT GOING BY CHARGING THE BATTERIES USING A SOLAR PANEL, MAKING THE MOTORCYCLE EFFECTIVELY A SOLAR POWERED VEHICLE AND ESSENTIALLY, FUEL-LESS IN OPERATION.

CHARLES GARRETT'S ELECTROLYSER WAS PATENTED IN 1935. HE USED IT TO RUN HIS CAR ON WATER ALONE. CARS IN 1935 WERE MUCH LIGHTER, HAD MUCH SMALLER ENGINES AND HAD 6-VOLT ELECTRICAL SYSTEMS.



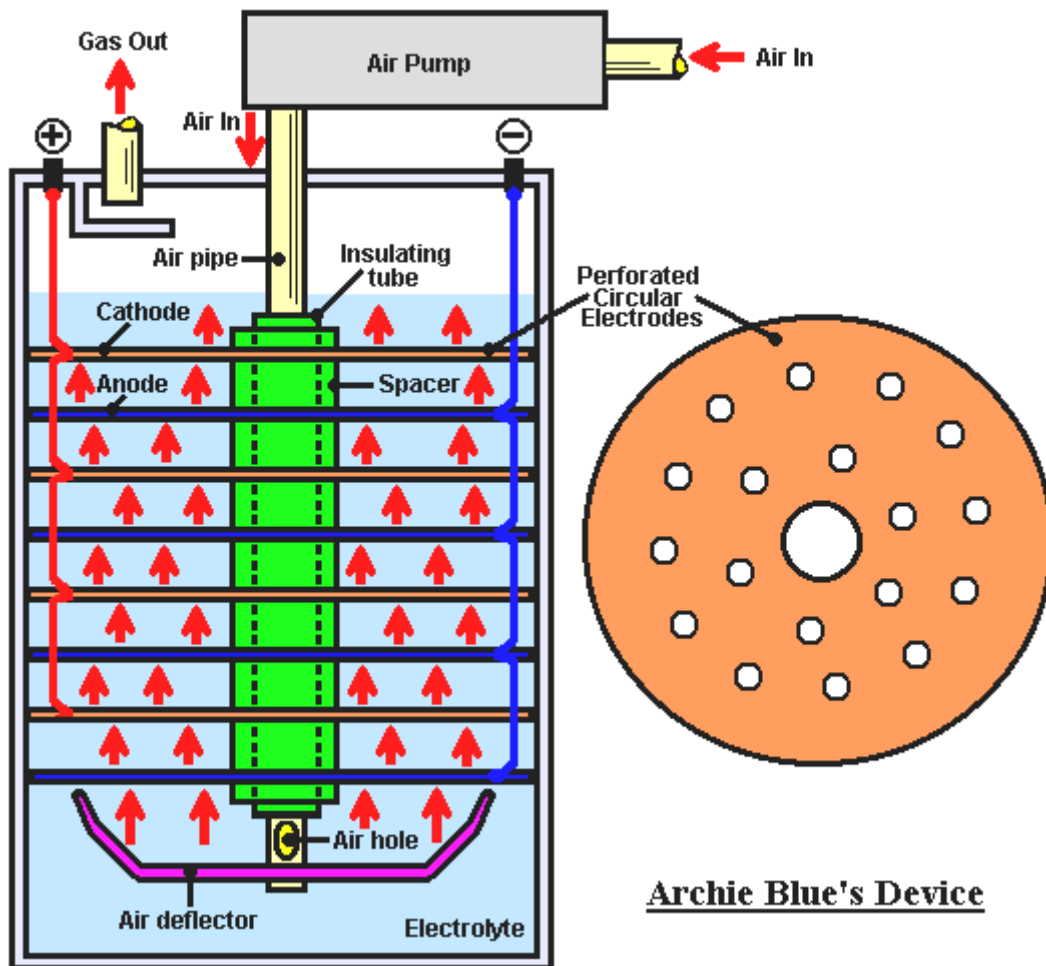


CHARLES ADDED A SECOND 6-VOLT ALTERNATOR TO HIS CAR AND HE USED A CHANGEOVER SWITCH FROM TIME TO TIME TO CONNECT THE ELECTRICAL POWER TO THE OPPOSITE ELECTRODE PLATES JUST TO EVEN THE 'WEAR'. HIS ELECTROLYTE WAS JUST A FEW DROPS OF HYDROCHLORIC ACID IN WATER.

THE AIR ENTERING THE ENGINE WAS PASSED BETWEEN THE ELECTRODE PLATES IN ORDER TO DISLODGE THE HHO BUBBLES AND FEED THE ENGINE AIR PLUS HHO PLUS WATER VAPOUR. HE USED A FLOAT AND NEEDLE VALVE TO FEED EXTRA WATER INTO THE ELECTROLYSER WHEN IT WAS NEEDED.

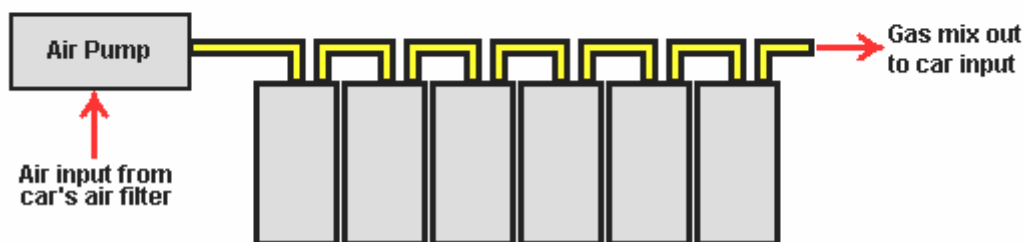
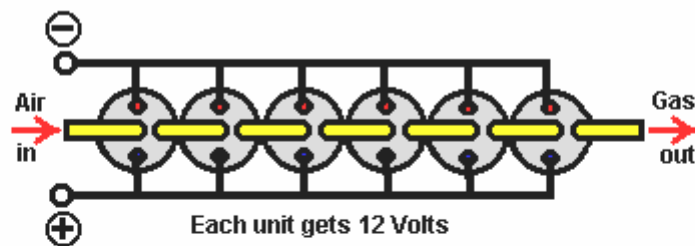
FIFTY YEARS AFTER CHARLES GARRETT, ARCHIE BLUE PRODUCED A FAIRLY SIMILAR ELECTROLYSER WHICH HE CLAIMED, RAN HIS CAR. THE CONSTRUCTION IS FAIRLY SIMPLE AND LIKE CHARLES GARRETT'S ELECTROLYSER, ARCHIE DRAWS AIR THROUGH THE UNIT ON ITS WAY TO THE ENGINE, AGAIN FEEDING AIR PLUS HHO PLUS WATER VAPOUR.

THE ELECTROLYSIS CELL OF ARCHIE BLUE LOOKS LIKE THIS :



Archie Blue's Device

AIR IS PUMPED IN FROM THE TOP AND IS THEN FORCED TO FLOW UPWARDS THROUGH HOLES IN THE ELECTRODE PLATES WHICH ARE CIRCULAR IN THIS DESIGN. WITH SEVEN CELLS IN HIS ELECTROLYSER AS OPPOSED TO THE FOUR CELLS OF CHARLES GARRETT'S ELECTROLYSER, I SUSPECT THAT ARCHIE BLUE WAS USING A 12-VOLT CAR IN 1985. SEVERAL CELLS CAN BE CONNECTED IN A CHAIN LIKE THIS :



AND THAT ARRANGEMENT GIVES PROGRESSIVELY STRONGER HHO GAS WITH EACH CELL AS WELL AS PRODUCING A LARGER OVERALL VOLUME.

IN 2017, THE UK GOVERNMENT STATES THAT NEW PETROL AND/OR DIESEL ENGINE CARS WILL BE PROHIBITED IN A FEW YEARS TIME. HOWEVER, USING A "BOOSTER" (WHICH IS A SIMPLE

ELECTROLYSER) CUTS HARMFUL EMISSIONS TO NEAR ZERO AND INCREASES THE MILES COVER PER GALLON.

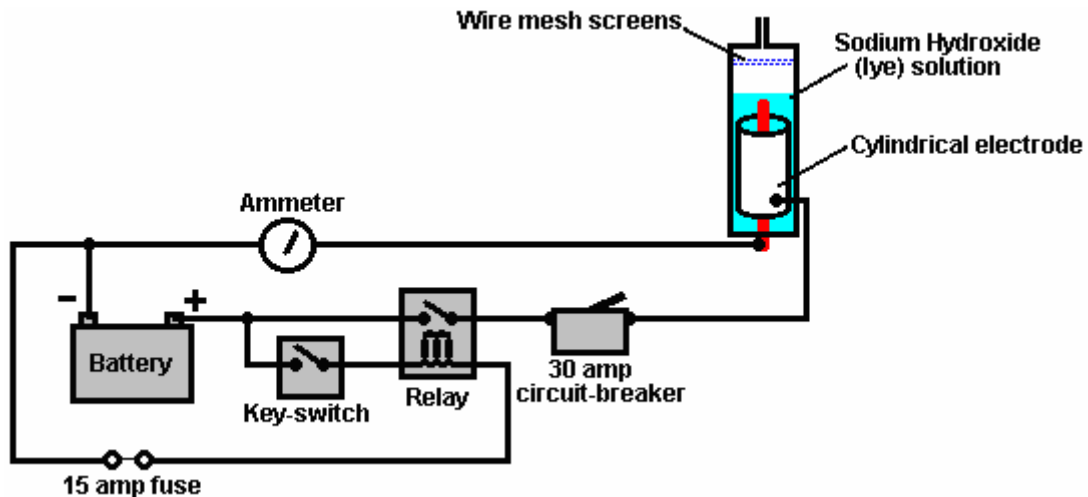
ONE DESIGN OF BOOSTER WHICH HAS WORKED VERY WELL WITH AMERICAN CARS WITH THEIR 5-LITRE CAPACITY ENGINES AND TERRIBLY LOW MPG FIGURES, THE DESIGNER OF THIS BOOSTER GOT A 50% INCREASE IN MPG ON HIS 5-LITRE 1992 CHEVY CAPRICE GOING FROM 18 MPG TO 27 MPG. THE CURRENT FLOW THROUGH THIS STYLE OF BOOSTER IS CONTROLLED BY USING AN ELECTROLYTE WITH LESS CATALYST IN IT.

THE MAIN UNIT LOOKS LIKE THIS :

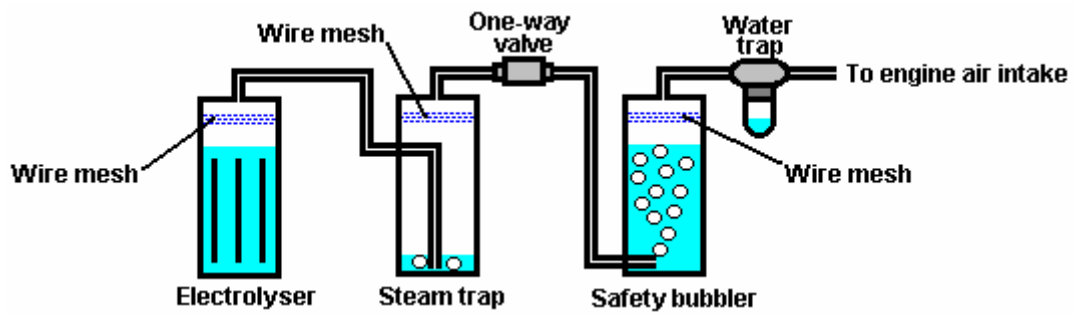


**Caution: This is not a toy. If you make and use one of these, you do so entirely at your own risk. Neither the designer of the booster, the author of this document or the provider of the internet display are in any way liable should you suffer any loss or damage through your own actions. While it is believed to be entirely safe to make and use a booster of this design, provided that the safety instructions shown below are followed, it is stressed that the responsibility is yours and yours alone.**

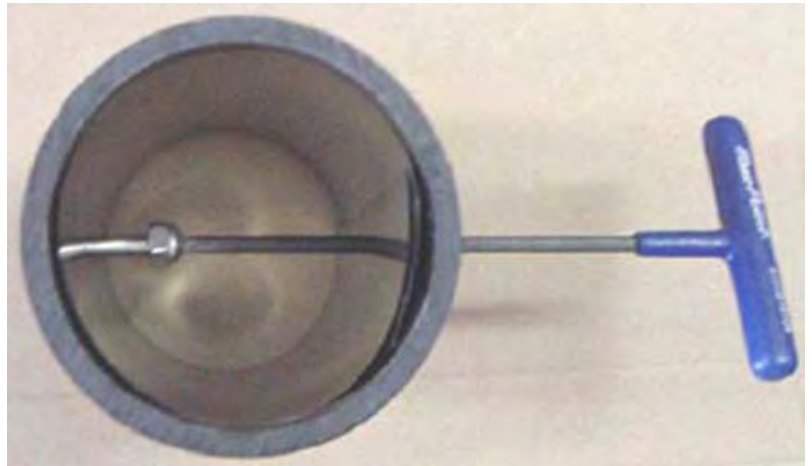
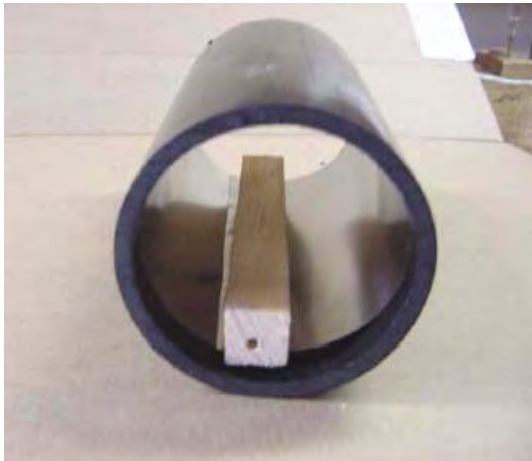
THIS BOOSTER DRAWS 15 AMPS WHEN IN USE AS THE ELECTROLYTE IS ONE TEASPOON OF SODIUM HYDROXIDE ("RED DEVIL" LYE IN AMERICA) IN EIGHT LITRES OF WATER. THE BODY IS ABS PLASTIC WITH A CENTRAL STAINLESS STEEL NEGATIVE ELECTRODE AND THE POSITIVE ELECTRODE FORMING A STAINLESS STEEL CYLINDER AROUND IT :



THE HHO OUTPUT IS THEN PASSED THROUGH A STEAM TRAP, A BUBBLER AND A WATER TRAP BEFORE BEING FED TO THE AIR INTAKE OF THE VEHICLE ENGINE :



THE [www.free-energy-info.com/PJKbook.pdf](http://www.free-energy-info.com/PJKbook.pdf) EBOOK HAS FULL CONSTRUCTIONAL DETAILS IN THE APPENDIX, INCLUDING A PARTS LIST AND MANY PHOTOGRAPHS :





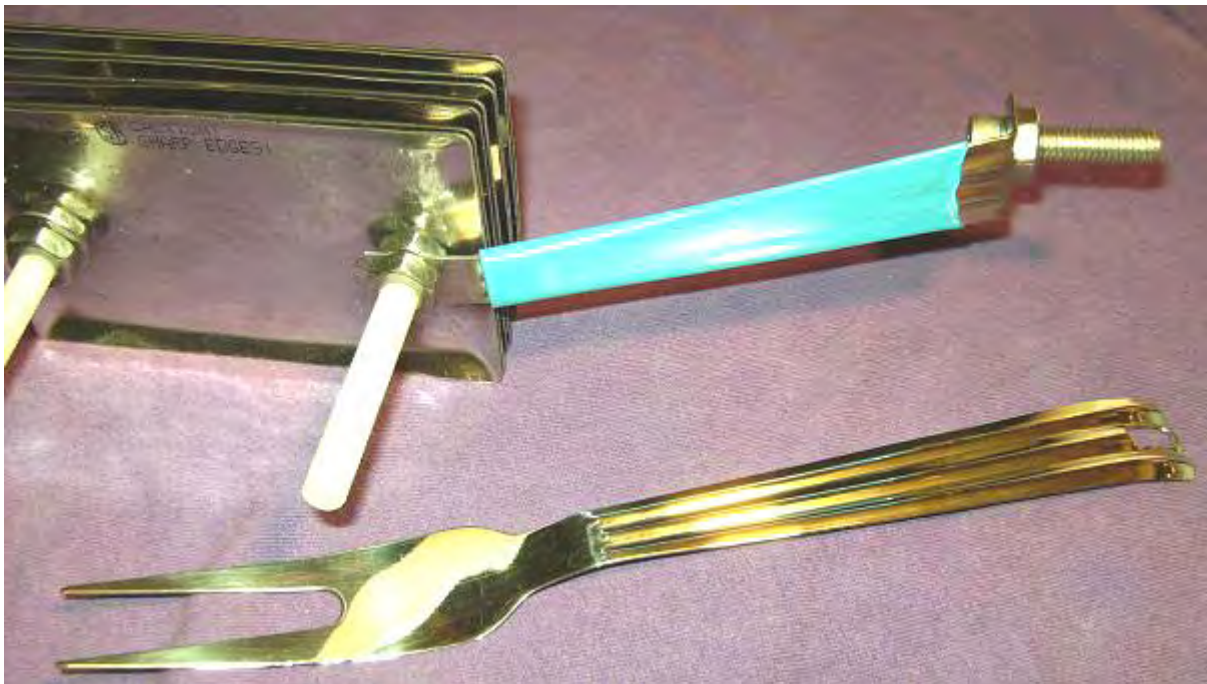
**ANOTHER VERY POPULAR BOOSTER IS KNOWN AS THE “SMACK’S BOOSTER” AND IT IS COMPACT AND EFFECTIVE. IT IS EXPECTED TO GIVE AT LEAST 20% IMPROVEMENT IN MPG AS WELL AS CUTTING HARMFUL EMISSIONS DRASTICALLY. IT LOOKS LIKE THIS :**



**THE ELECTRODES ARE CHEAP WALL SWITCH PLATES OR THEY CAN BE CONSTRUCTED FROM 316-L-GRADE STAINLESS STEEL. THE BODY, BUBBLER AND TUBES ARE PLASTIC.**



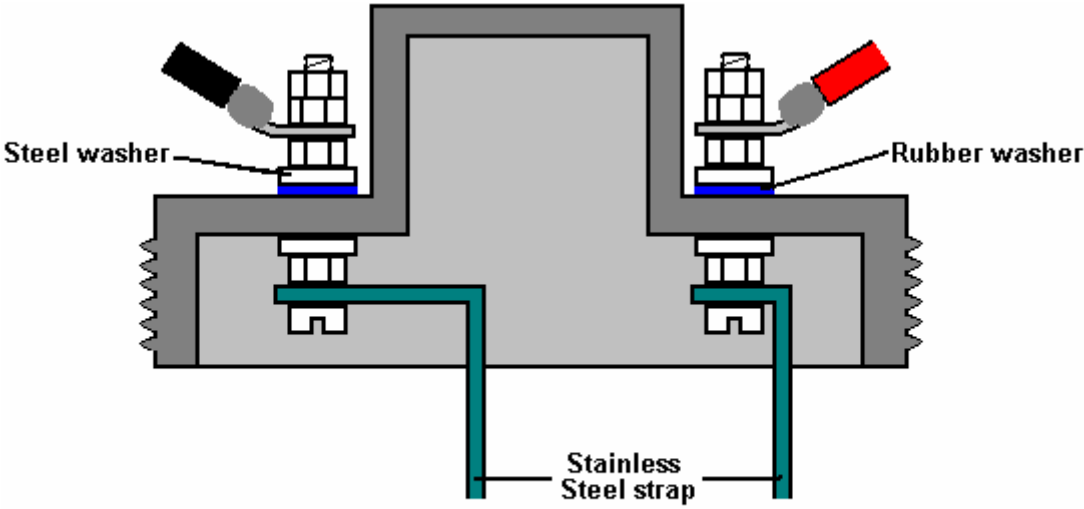
**CONNECTING STRAPS ARE MADE OF BRASS (POSSIBLY CUT FROM TABLEWARE) AND CONNECTING BOLTS ARE PLASTIC.**



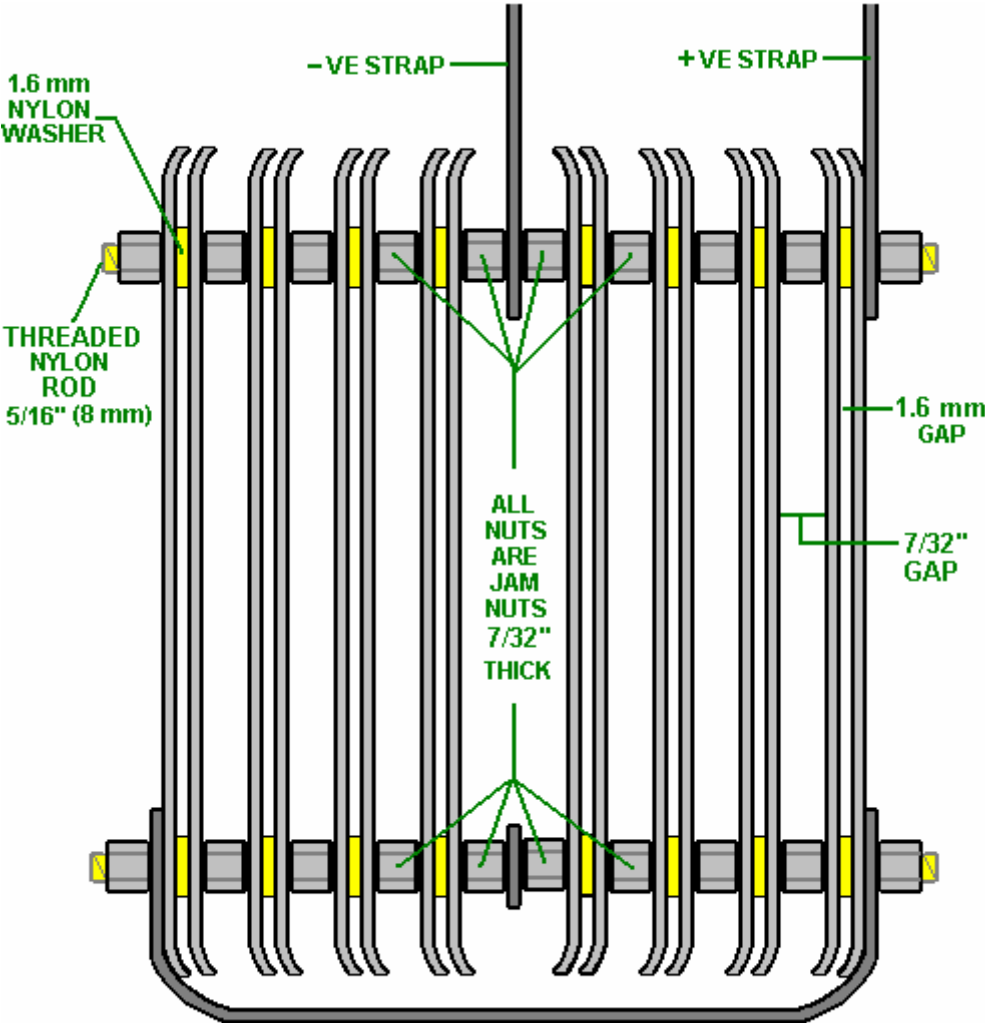
**THE PLATES ARE CLEANED AND CROSS-SANDED CAREFULLY AND DRILLED ACCURATELY :**



THE BATTERY CONNECTIONS ARE DRILLED THROUGH THE CAP :

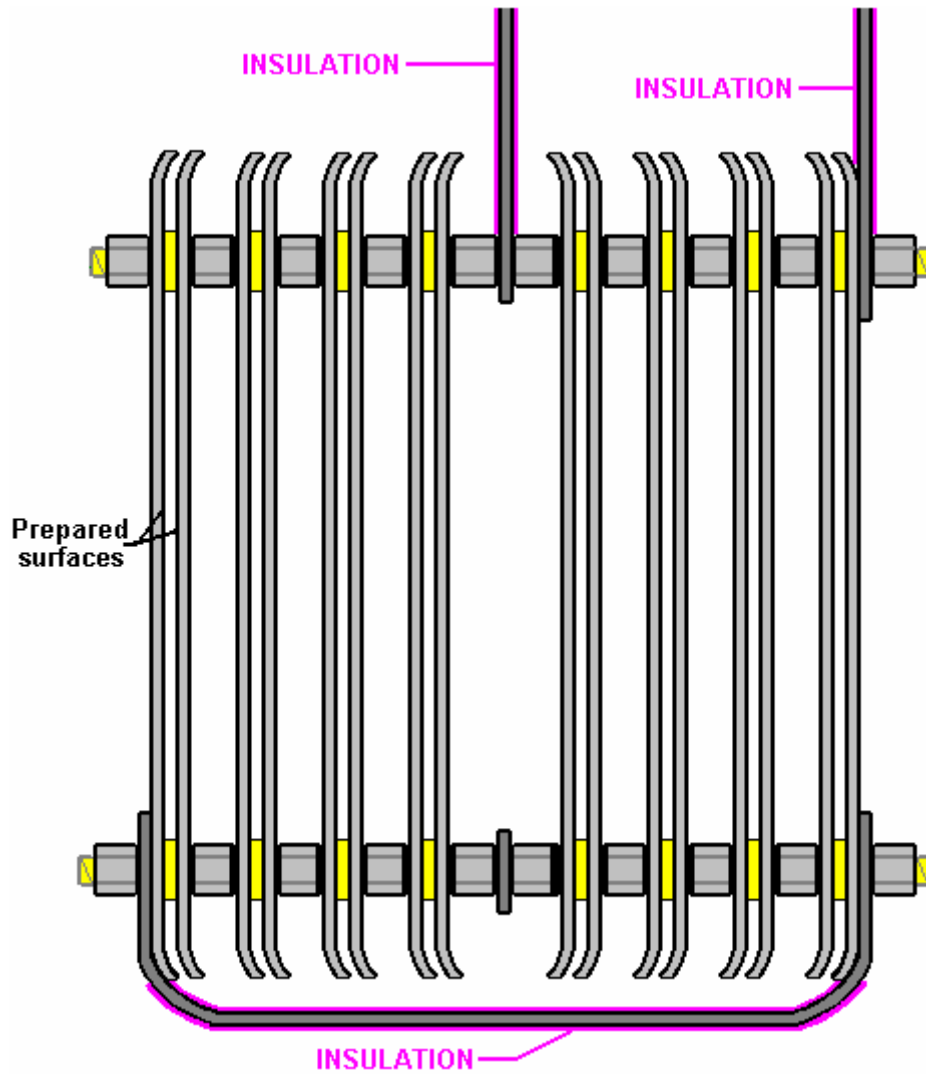


CROSS-SECTION THROUGH CAP

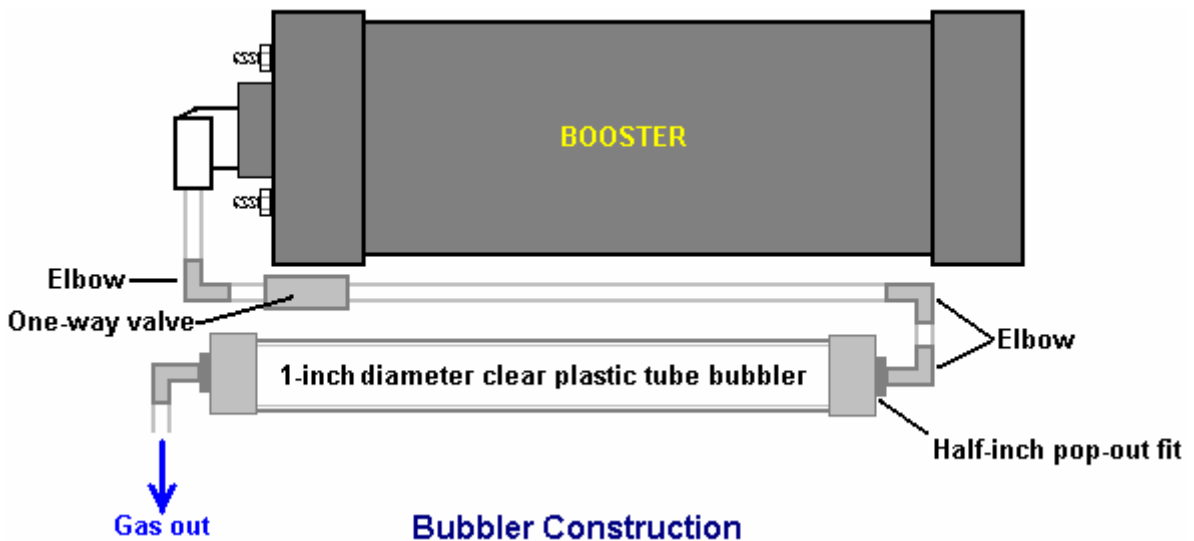


SIDE VIEW OF PLATE ARRAY

ALSO, INSULATION IS APPLIED TO PARTS OF THE PLATES ARRAY AS SHOWN HERE :

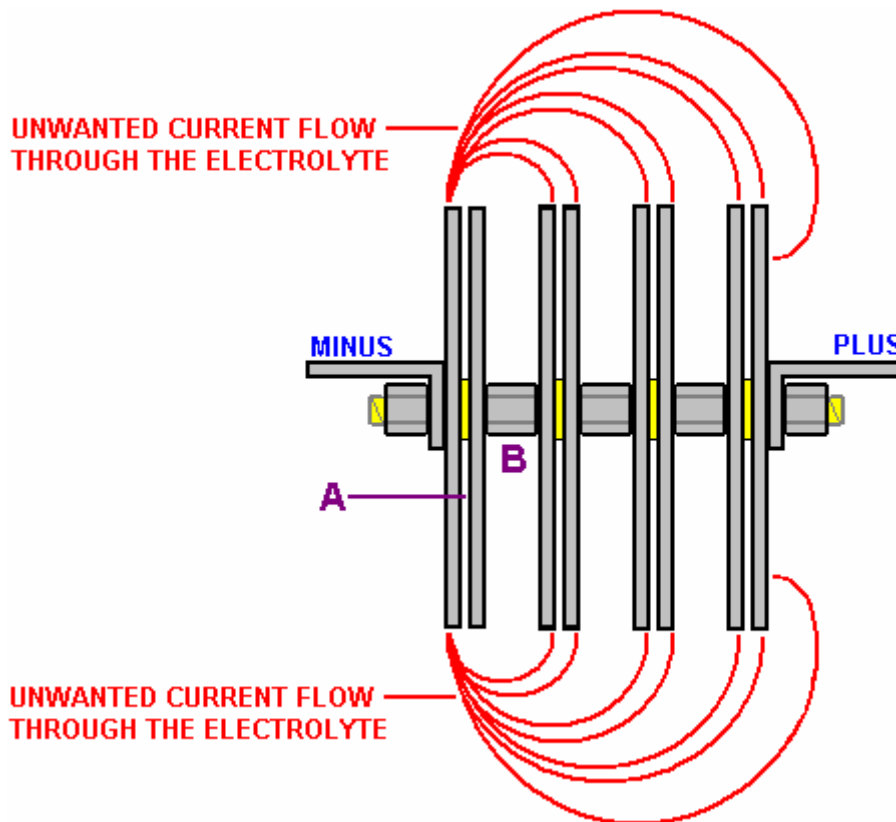


THE BOOSTER HAS AN INTEGRAL, VERY NEAT AND SEE-THROUGH BUBBLER :

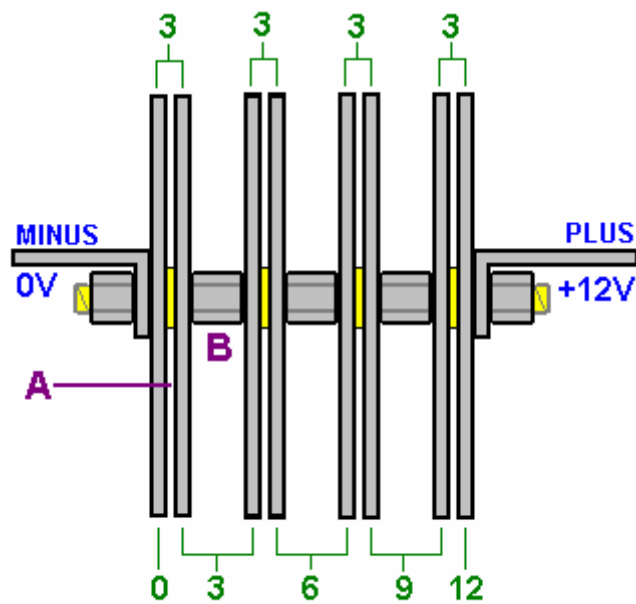


HOWEVER, WHILE PUSHING FOR SIMPLE CONSTRUCTION, THE ELECTRODE PLATES ARE ALL IMMERSSED IN A SINGLE BODY OF ELECTROLYTE, AND THAT DOES NOT MAKE FOR TOP EFFICIENCY AS CURRENT TENDS TO FLOW PAST THE CENTRAL PLATES RATHER THAN THROUGH THOSE PLATES AS IS NEEDED FOR HHO PRODUCTION. IN A BOOSTER, THAT IS NOT A CRITICAL MATTER.



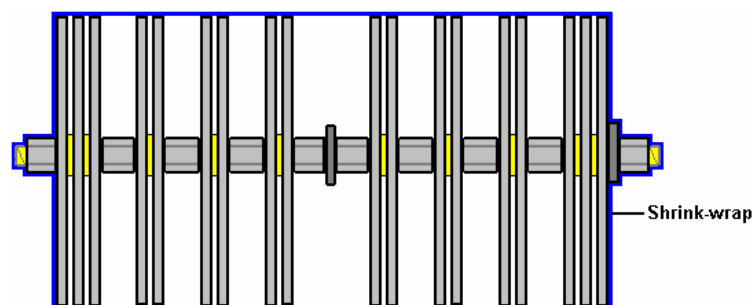


THERE SHOULD BE AN EQUAL VOLTAGE DROP ACROSS EACH SET OF ELECTRODE PLATES :

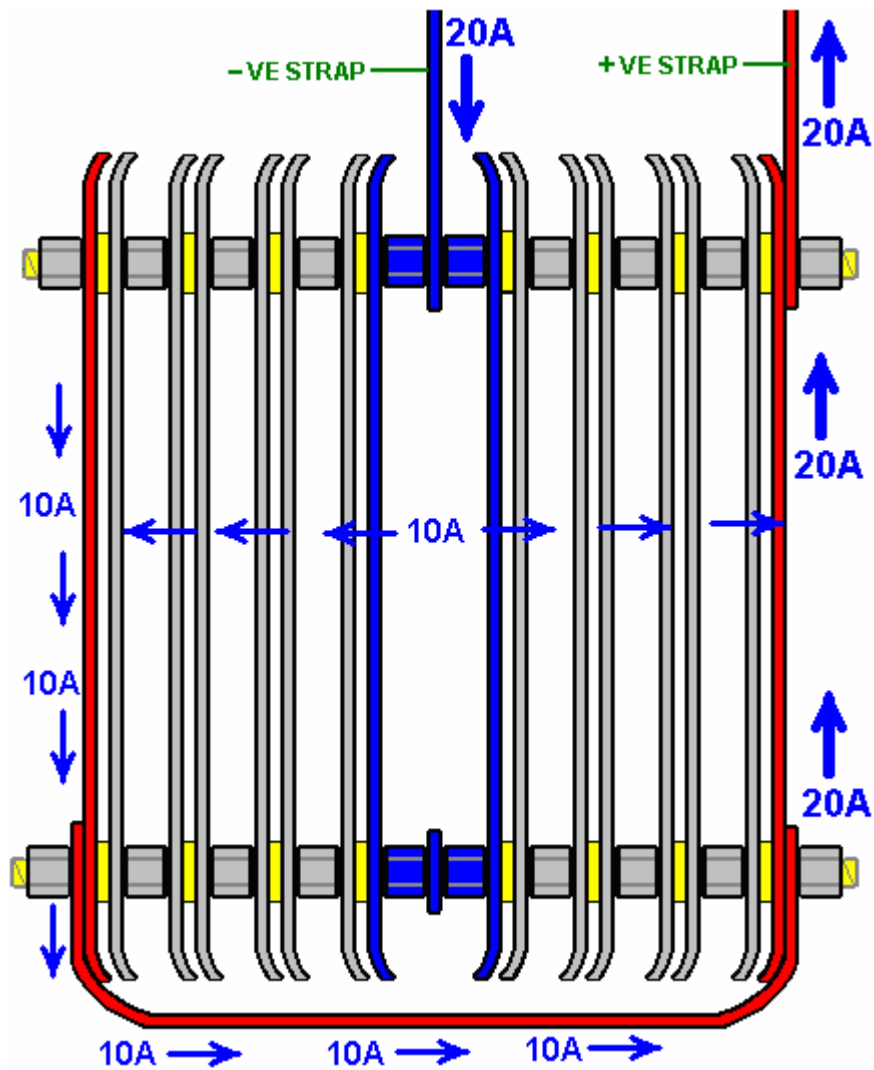


VOLTAGE DROPS FOR A 12-VOLT SUPPLY

IT HELPS TO A FAIR DEGREE IF YOU WRAP INSULATING TAPE OR SHRINK-WRAP AROUND THE SET OF ELECTRODES :



THE ELECTROLYTE IS DISTILLED WATER AND EITHER SODIUM HYDROXIDE OR POTASSIUM HYDROXIDE IN SUFFICIENT CONCENTRATION TO GET AN OVERALL CURRENT FLOW OF TWENTY AMPS :



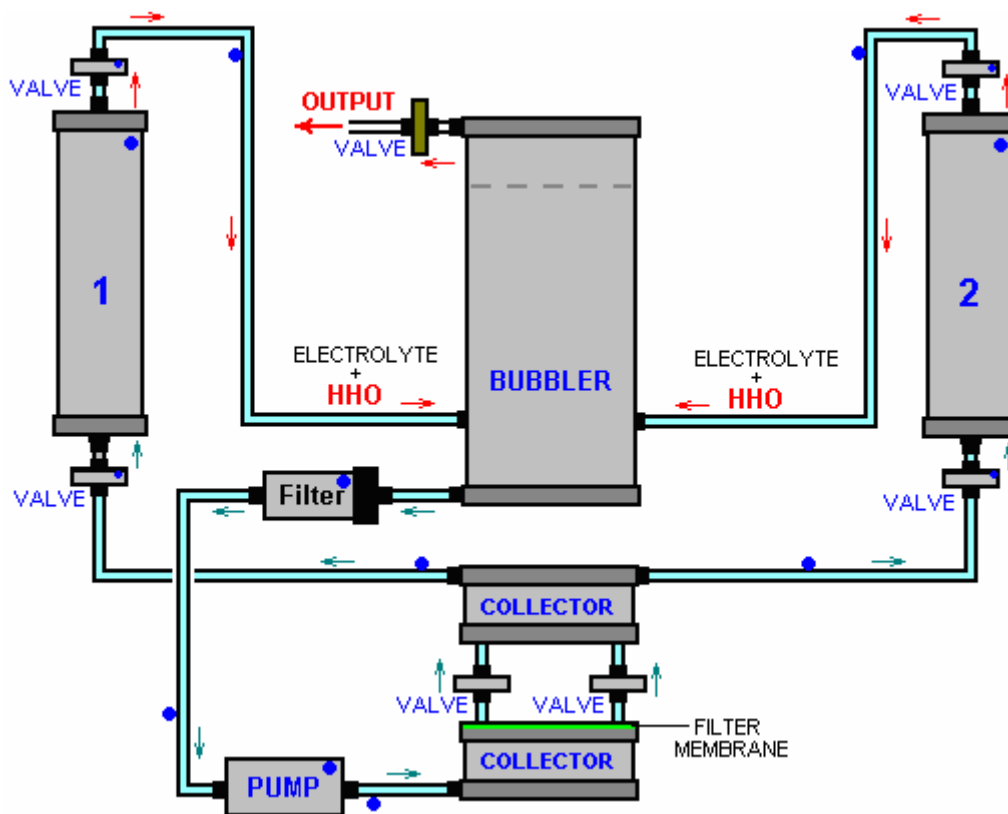
IN CASE THEY MIGHT BE USEFUL, THESE NOTES ARE AVAILABLE AS A FREE DOWNLOAD FROM [www.free-energy-info.com/HHO.pdf](http://www.free-energy-info.com/HHO.pdf)

VIDEO : <https://youtu.be/Ljm8m85p6T0>

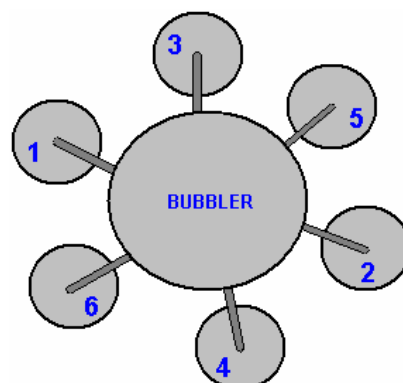
## THE "HOGG" ELECTROLYSER

SELWYN HARRIS OF AUSTRALIA INTRODUCES THE "HOGG" ELECTROLYSER WHICH PRODUCES 4.5 OR 5 LITRES OF HHO PER MINUTE AND SO IS CAPABLE OF RUNNING A MODIFIED GENERATOR TO PRODUCE KILOWATTS OF EXCESS ENERGY.

A HOGG ELECTROLYSIS CELL HAS TWO STAINLESS STEEL MESH ELECTRODES COILED AROUND EACH OTHER. THIS GIVES A LARGE ELECTRODE SURFACE AREA IN A VERY COMPACT CONTAINER. IN THIS DESIGN THERE ARE SIX IDENTICAL CELLS ALL OF WHICH FEED INTO A LARGE BUBBLER. FOR CLARITY, ONLY TWO OF THOSE SIX CELLS ARE SHOWN HERE :



THE ITEMS MARKED WITH A BLUE DOT FORM JUST ONE OF THREE IDENTICAL SETS, THAT IS, THREE FILTERS FAN OUT FROM THE BOTTOM OF THE BUBBLER, THE FLOW THROUGH THEM BEING CAUSED BY THREE SEPARATE PUMPS AND THE TWO ELECTROLYSER CELLS MARKED "1" AND "2" ALONG WITH THEIR ASSOCIATED PIPES AND FOUR ONE-WAY VALVES, ARE REPLICATED TO GIVE ELECTROLYSER CELLS "3" TO "6" WHICH ARE NOT SHOWN IN THIS DIAGRAM. THOSE THREE IDENTICAL SETS ARE CONNECTED TO THE CENTRAL BUBBLER AND THEY ARE SPACED EVENLY AROUND IT AT 120-DEGREE POSITIONS HORIZONTALLY AS SHOWN IN BROAD OUTLINE HERE :



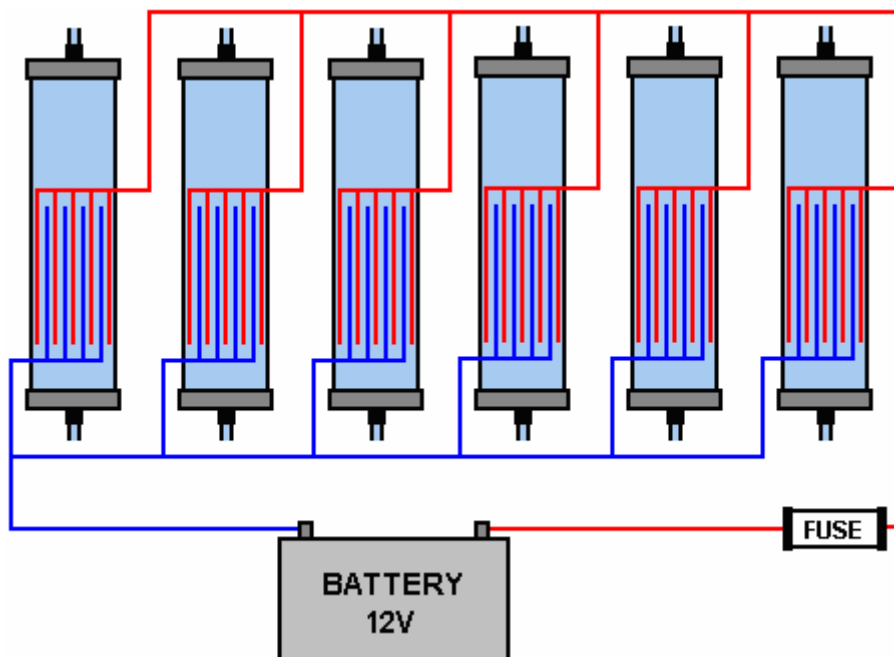
RAINWATER IS CIRCULATED THROUGH THE SET OF CELLS USING THREE SMALL PUMPS AND THERE ARE TWO WATER COLLECTORS BUILT ON TO THE BOTTOM OF THE BUBBLER. EACH ELECTROLYSIS CELL IS COMPLETELY FULL OF 'ELECTROLYTE' AND SO IT IS A STREAM OF 'ELECTROLYTE' WITH HHO BUBBLES IN IT WHICH IS FED INTO THE BUBBLER.

EACH OF THE THREE PUMPS HAS ITS OWN FILTER TO TRAP ANY PARTICLES, AS EXPERIENCE HAS SHOWN THAT RAINWATER CAN CONTAIN A GOOD DEAL OF ADDITIONAL MATERIAL. THE FILTERS ARE STANDARD IRRIGATION IN-LINE FILTERS MADE FROM TRANSPARENT PLASTIC TUBE AND FILLED FOR THREE QUARTERS OF THEIR LENGTH WITH FINE PLASTIC SPONGE MATERIAL.

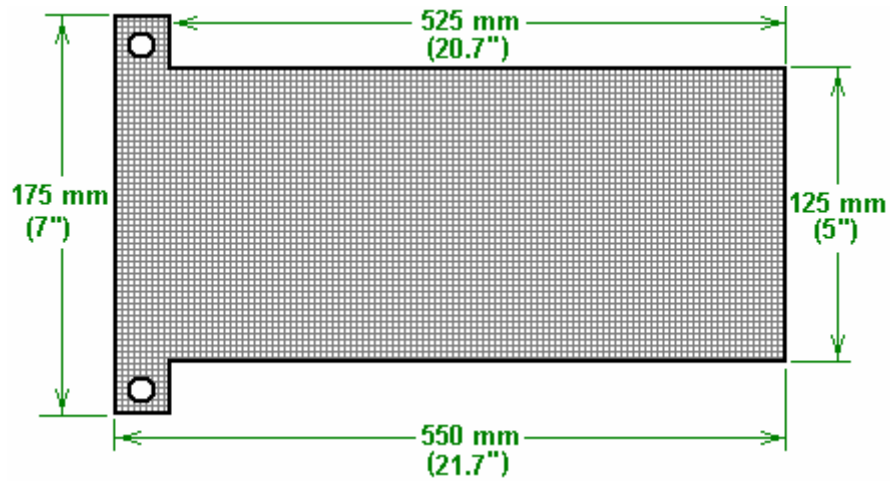
A KEY FEATURE OF THIS CELL DESIGN IS THE USE OF TWO POWERFUL NEODYMIUM MAGNETS PER CELL. THESE ACT DIRECTLY ON THE WATER AND THAT CAUSES A MAJOR INCREASE IN THE GAS PRODUCTION RATE. THE MAGNETS HAVE THEIR NORTH POLE FACING TOWARDS EACH OTHER.



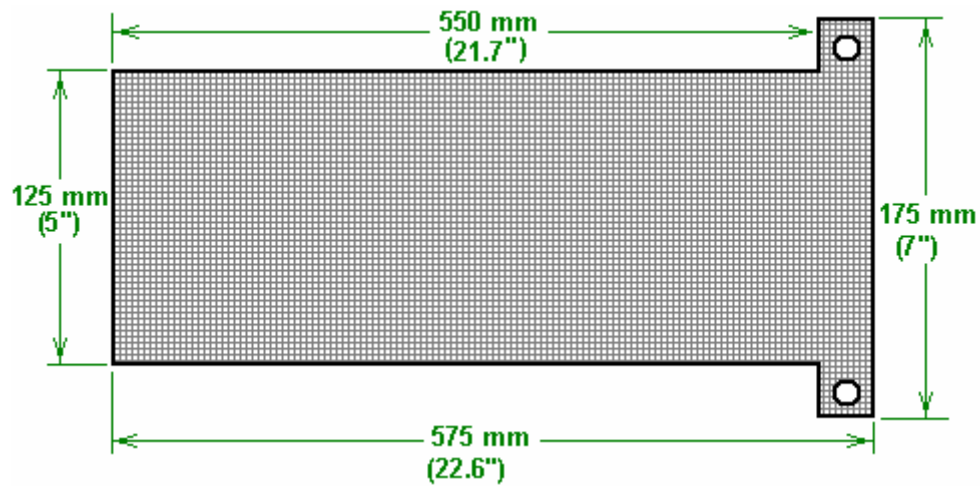
THE TWO MESH ELECTRODES ARE MADE FROM STAINLESS STEEL WIRE OF 0.32mm DIAMETER AND WOVEN TO GIVE 2mm HOLES BETWEEN THE WIRES AND A 0.65mm OVERALL SHEET THICKNESS. THESE DIMENSIONS ARE IMPORTANT AS OTHER MESH SIZES AND STYLES DO NOT GIVE SO GOOD A PERFORMANCE. THE ELECTRODES ARE WIDER AT ONE END IN ORDER TO FORM A CONNECTION TAB WHICH ALLOWS EASY ELECTRICAL CONNECTION TO EACH ELECTRODE. THE ELECTRODES ARE THEN WIRED IN PARALLEL SO THAT EACH CELL GETS 12-VOLTS ACROSS IT AS SHOWN HERE :



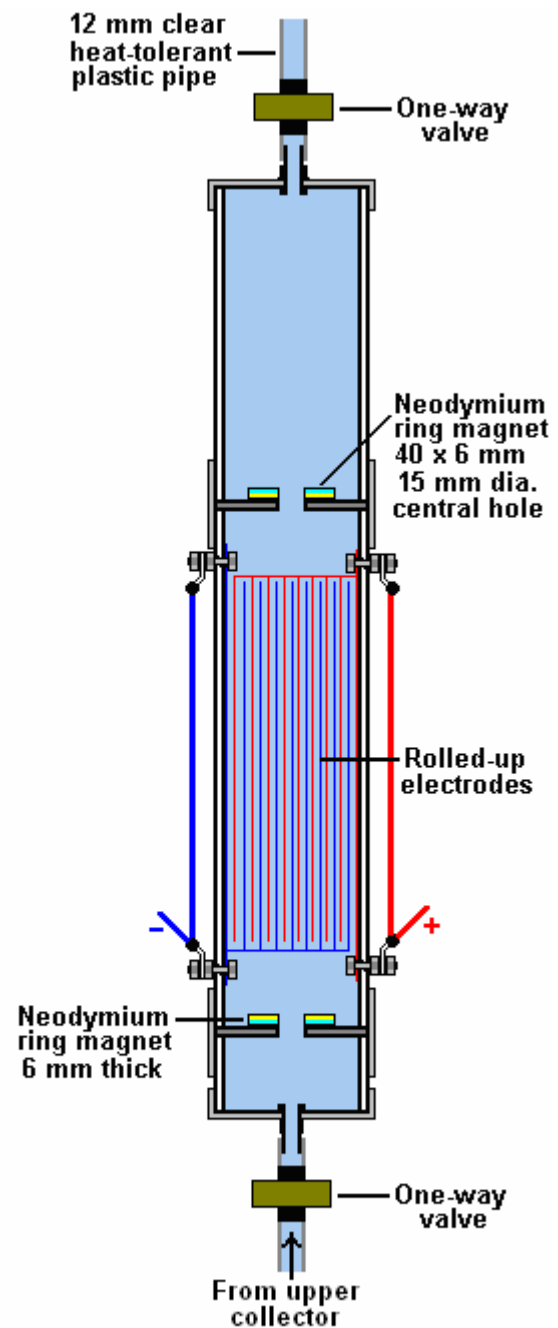
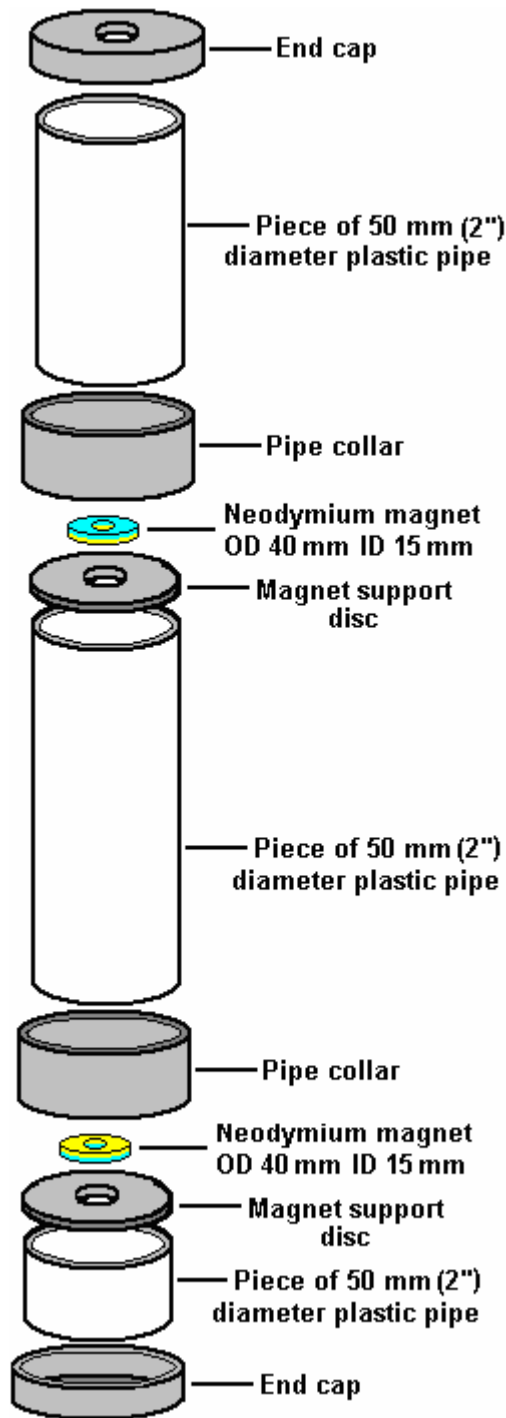
THE TWO MESH ELECTRODES ARE CUT LIKE THIS :



AND THIS :

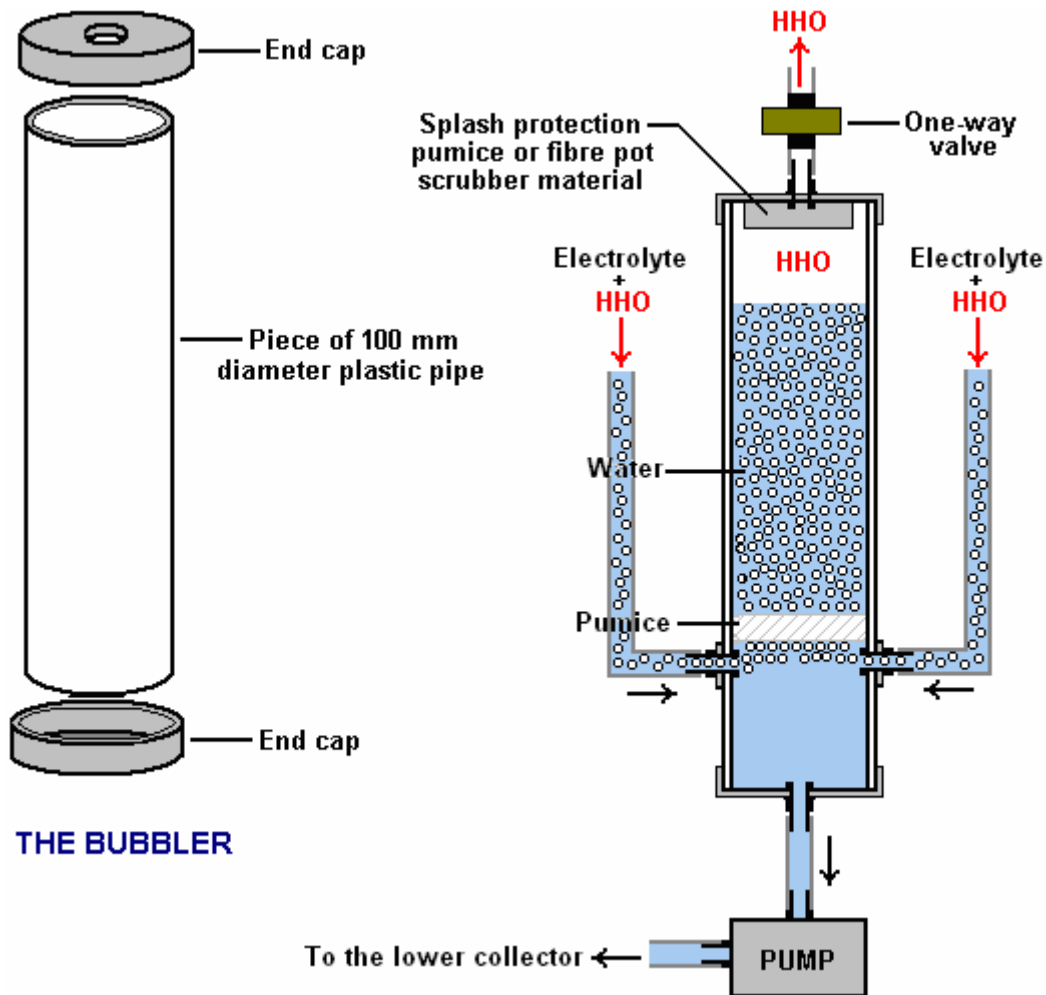


THE SIX ELECTROYSER CELLS AND THE SINGLE LARGE BUBBLER ARE CONSTRUCTED USING STANDARD PLASTIC PLUMBING MATERIALS :



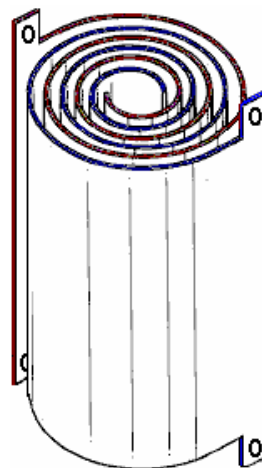
**ONE ELECTROLYSER CELL**

THE CONNECTING PIPES ARE HEAT-TOLERANT CLEAR PLASTIC AND ARE 12mm (HALF-INCH) DIAMETER. THE BUBBLER FABRICATION IS ALSO ACCOMPLISHED USING PLASTIC PLUMBING MATERIALS CONNECTED LIKE THIS :



**THE BUBBLER**

AS SOME PEOPLE HAVE DIFFICULTY IN VISUALISING THE WAY IN WHICH THE ELECTRODES ARE COMBINED, THIS SKETCH MAY HELP :



THE TWO ELECTRODES ARE KEPT SEPARATED BY SMALL FIBRE WASHERS HELD IN PLACE BETWEEN THEM AT STRATEGIC PLACES USING SUPER GLUE. THE MESH ITSELF IS THEN TREATED BY BEING IMMERSSED IN CITRIC ACID IN ORDER TO MAKE IT WORK WELL WITH RAINWATER WHICH IS THE 'ELECTROLYTE'.

THERE ARE THREE PAIRS OF ELECTROLYSER CELLS, EACH PAIR BEING CONNECTED TO THE UPPER COLLECTOR RESERVOIR. THE WATER BEING PUMPED OUT OF EACH CELL IS PASSED THROUGH ONE OF THE THREE FILTERS BEFORE ENTERING THE COLLECTOR RESERVOIR WHICH FEEDS THE SMALL PUMP WHICH KEEPS THE WATER CIRCULATING,

WHICH IN TURN, KEEPS REMOVING ANY PARTICLES WHICH HAVE GOT INTO THE RAINWATER.

WHEN USED WITH RAINWATER FROM A BARREL, THIS ELECTROLYSER DRAWS 1.4 AMPS PER CELL, GIVING A TOTAL INPUT OF ABOUT 115 WATTS WHEN BEING RUN ON A 12-VOLT ELECTRICAL SUPPLY. WHILE RAINWATER IS SUPPOSEDLY PURE, THE REALITY IS THAT IT SELDOM IS, AND ITS ABILITY TO CARRY CURRENT VARIES DRAMATICALLY FROM PLACE TO PLACE AND EVEN MORE WIDELY FROM COUNTRY TO COUNTRY. IF YOU DECIDE TO BUILD THIS ELECTROLYSER AND FIND THAT YOU DO NOT GET ANYTHING LIKE 1.4 AMPS FLOWING THROUGH ANY ONE CELL, THEN YOU MAY WELL HAVE TO ADD A SMALL AMOUNT OF ELECTROLYTE TO THE WATER IN ORDER TO GET THE CURRENT FLOWING.

A WORD OF WARNING – DO **NOT** IGNITE ANY HHO GAS IN THE OPEN AIR AS THE SOUND SHOCK WAVES CREATED COULD DAMAGE YOUR HEARING PERMANENTLY, LEAVING YOU DEAF FOR THE REST OF YOUR LIFE.

NOTES : <http://www.free-energy-info.com/Hogg.pdf>

VIDEO : <https://youtu.be/s7A8GkYzcUM>



**WE LIVE SURROUNDED BY AN ENERGY FIELD OF EFFECTIVELY UNLIMITED POWER. WE CAN ACCESS THAT POWER FOR OUR OWN USE IN TWENTY DIFFERENT WAYS. A COPY OF THIS BRIEF INTRODUCTION CAN BE DOWNLOADED FREE FROM:**

**<http://www.free-energy-info.com/Lighting.pdf>**

**MUCH MORE DETAIL IS AVAILABLE IN THE FREE DOWNLOAD :**

**[www.free-energy-info.com/PJKbook.pdf](http://www.free-energy-info.com/PJKbook.pdf)**

**FREE-ENERGY MEANS DRAWING POWER FROM SOURCES FOR WHICH WE DO NOT HAVE TO PAY. DAYLIGHT AND SUNSHINE ARE THOUGHT OF AS BEING “RENEWABLE” ENERGY AND THAT IS A COMMON ERROR AS THEY COME FROM THE ZERO-POINT ENERGY FIELD, OR AS SOME PREFER TO CALL IT “THE AMBIENT BACKGROUND ENERGY”.**

**A COMMON MISCONCEPTION IS THAT SOLAR PANELS ARE ONLY FOR RICH PEOPLE AS THE PANELS ARE VERY EXPENSIVE. WHILE THERE IS SOME TRUTH IN THAT, IT CERTAINLY DOES NOT MEAN THAT SOLAR PANELS ARE NOT VERY USEFUL, READILY AVAILABLE DEVICES.**



**THIS SIMPLE INSTALLATION HAS 21 PANELS AND THE COST OF THOSE PANELS IS HIGH, NOT TO MENTION THE COST OF MOUNTING THEM AND WIRING THEM. HOWEVER, WE CAN DO A GOOD DEAL WITH A LOW-COST ALTERNATIVE.**

**A SOLAR PANEL IS A VERY LOW-EFFICIENCY DEVICE WITH THE BEST BEING ONLY 17% EFFICIENT – THAT IS, ONLY 17% OF THE LIGHT ENERGY REACHING THE PANEL IS CONVERTED TO ELECTRICITY. BUT FROM AN ENERGY POINT OF VIEW, THAT 17% EFFICIENT SOLAR PANEL HAS A COEFFICIENT OF PERFORMANCE (“COP”) OF INFINITY BECAUSE YOU DON’T HAVE TO SUPPLY ANY INPUT ENERGY SINCE THE LIGHT ARRIVES ALL ON ITS OWN AND DOES NOT DEPEND ON YOU.**

**SO, WE ARE BEING OFFERED SOLAR PANELS WITH INFINITE COP AND SOME OF THEM ARE VERY REASONABLY PRICED. HOWEVER, NOT ALL SOLAR PANELS ARE THE SAME EVEN THOUGH THE SELLERS MAY DESCRIBE THEM THE SAME WAY. THE DIFFERENCE IS THE NUMBER OF SOLAR CELL MODULES WHICH ARE CONNECTED TOGETHER TO GIVE THE OUTPUT. A GOOD PANEL WILL GIVE THE RATED OUTPUT IN POOR LIGHT WHILE A POOR PANEL HAS TO HAVE BRIGHT**

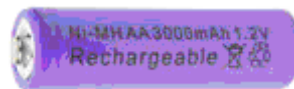
**SUNLIGHT TO DO THAT, AND THAT IS A MAJOR DIFFERENCE WHEN YOU ARE USING THEM. THIS PANEL IS 337 x 205 x 18 mm IN SIZE AND IS A GOOD DESIGN :**



**THIS PRESENTATION IS ABOUT PRODUCING GOOD LIGHTING FROM A SOLAR PANEL. BUT UNFORTUNATELY, WE WANT LIGHTING WHEN THERE IS NO DAYLIGHT OR SUNSHINE. THEREFORE WE HAVE TO STORE ELECTRICAL ENERGY IN SOME FORM OF STORAGE DEVICE – SUPERCAPS OR BATTERIES. BECAUSE OF COST, WE WILL OPT FOR BATTERIES.**

**A VERY WELL KNOWN BATTERY IS THE LEAD-ACID BATTERY, BUT IT IS NOT A GREAT CHOICE FOR THIS TASK AS IT IS EXPENSIVE, VERY HEAVY AND IT IS ONLY 50% EFFICIENT, IN OTHER WORDS, IT WASTES HALF OF ALL OF THE ELECTRICITY THAT YOU PUT INTO IT, AND THAT IS PATHETIC.**

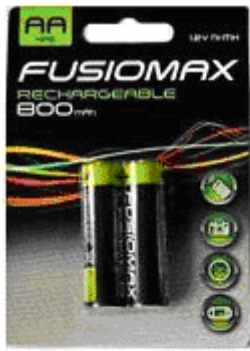
**LITHIUM BATTERIES ARE EXCELLENT BUT THEY HAVE CHARGING PROBLEMS AND ARE TOO EXPENSIVE FOR THIS PROJECT. SURPRISINGLY, THE MOST SUITABLE BATTERY APPEARS TO BE THE SMALL, LIGHT, CHEAP NICKEL-MANGANESE (“NiMh”) BATTERY :**



**THESE ARE AVAILABLE IN CAPACITIES UP TO 2.85 AMP-HOURS, AND THEY CAN BE USED IN BATTERY BOXES LIKE THIS :**



**THESE BOXES ALLOW ALMOST ANY BATTERY VOLTAGE TO BE PROVIDED. HOWEVER, PLEASE DON'T BE FOOLED BY WHAT THE SELLER SAYS. I HAVE RUN TESTS ON THESE BATTERIES :**



Fusiomax 800



Digimax 2850



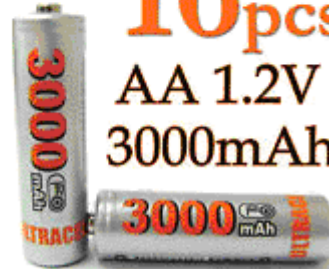
Duracell 2400



SDNMY 3800



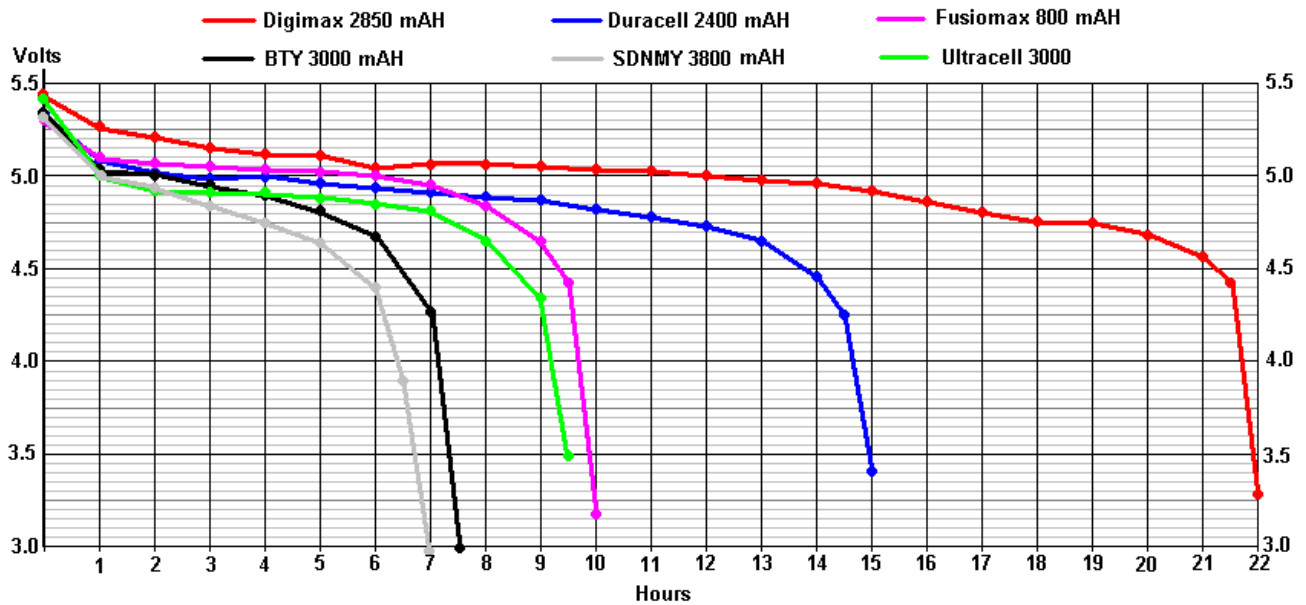
BTY 3000



Ultracell 3000

16 pcs  
AA 1.2V  
3000mAh

AND LOOKING AT THE PACKAGING, YOU WOULD EXPECT THE SDNMY 3800 TO BE THE MOST EFFECTIVE, BUT HERE ARE THE RESULTS OF A CONTINUOUS 50 MILLIAMP CURRENT DRAW WITH A 4-BATTERY PACK :



THE VERY CHEAP 50-PENCE FUSIOMAX “800 MILLIAMP-HOUR” BATTERIES FROM POUNDLAND REMAINED ABOVE 4.5 VOLTS FOR MORE THAN 9 HOURS WITH ONLY TWO OTHER BATTERIES DOING BETTER THAN THAT (THE DURACELL 2400 AND THE DIGIMAX 2850). THE IMPRESSIVELY PACKAGED “SDNMY 3000” BATTERIES WERE PATHETIC, NOT EVEN REACHING 6 HOURS. NONE OF THE BATTERIES MARKED “3000” WERE AS GOOD AS THE CHEAP 800 mAHr BATTERIES. SO, YOU NEED TO BE VERY CAREFUL WHAT BATTERIES YOU BUY.

NICKEL-MANGANESE BATTERIES ARE 66% EFFICIENT, THAT IS, THEY WASTE ONE THIRD OF THE ELECTRICITY THAT YOU FEED INTO THEM WHEN CHARGING THEM. ALSO, THE MAXIMUM RATE OF CHARGE FOR A 3000 mAhr NICKEL-MANGANESE BATTERY IS 300 MILLIAMPS, AND THAT NEEDS TO BE PAID ATTENTION TO WHEN DESIGNING A LIGHTING SYSTEM.

TESTS WHICH I HAVE RUN SHOW THAT A VERY REALISTIC LEVEL OF 1000-LUX LIGHTING CAN BE PROVIDED WITH JUST 1.5 WATTS OF ELECTRICAL INPUT. THE BEST SOURCE OF LIGHTING WHICH I HAVE FOUND IS THE G4 STYLE, LED ARRAYS OF THE "5050" CHIP TECHNOLOGY. THESE ARE CHEAP AND HAVE A VERY HEAVILY NON-LINEAR LIGHT OUTPUT FOR ANY GIVEN ELECTRICAL INPUT AND THAT IS A FACT THAT WE CAN USE TO OUR ADVANTAGE. THEY COME IN "COLD WHITE" OR "WARM WHITE" VERSIONS AND THOSE CAN BE MIXED TO GIVE A WIDER LIGHTING FREQUENCY IF YOU WISH. THEY LOOK LIKE THIS :



WITH A DIAMETER OF 30 mm AND PINS WHICH ARE EASY TO CONNECT TO, THESE ARE VERY CONVENIENT DEVICES WITH AN EXCELLENT LIGHTING ANGLE OF 160 DEGREES AND A LIGHT OUTPUT OF 165 LUMENS FOR 1.2 WATTS OF ELECTRICAL INPUT.

HUMAN EYES ARE VERY BAD AT ASSESSING LIGHTING LEVELS AS THEY HAVE AUTOMATIC LIGHT SENSITIVITY ADJUSTMENT. USING TWO LED ARRAYS SIDE BY SIDE IN A LIGHT BOX CONTAINING A LIGHT METER GIVES SOME VERY INTERESTING, VOLTAGE/CURRENT DRAW/ LIGHT PRODUCED RESULTS WHEN USING 1.2 VOLT NiMH BATTERIES :

9 batteries 11.7V 206 mA 1133 lux: 2.41 watts 470 lux per watt  
(the manufacturer's intended performance)

8 batteries 10.4V 124 mA 725 lux 1.29 watts 562 lux per watt

7 batteries 9.1V 66 mA 419 lux 0.60 watts 697 lux per watt (a very realistic performance level)

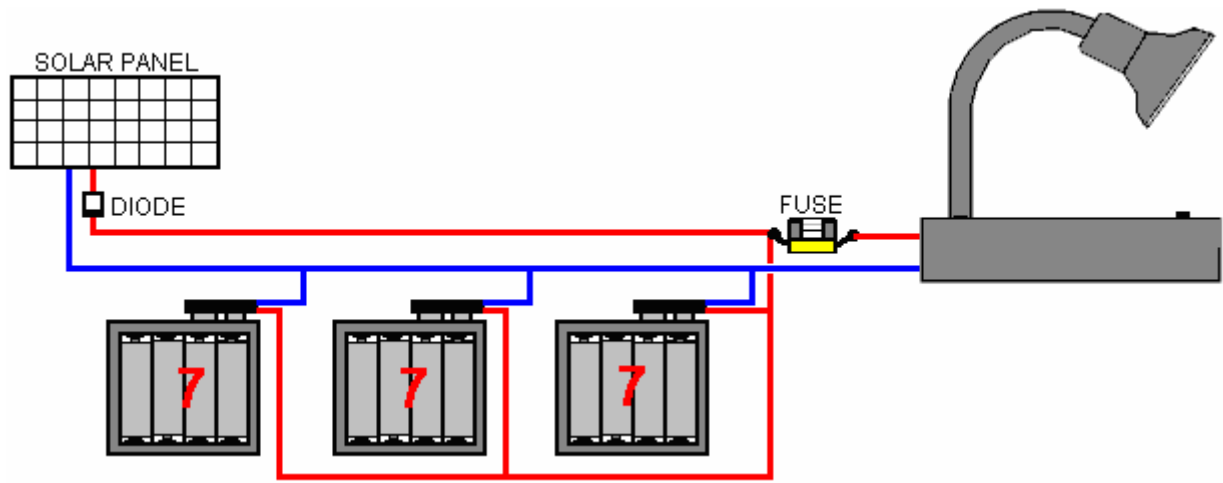
6 batteries 7.8V 6 mA 43 lux 0.0468 watts 918 lux per watt

THIS SHOWS THAT ONE OF THESE LED ARRAYS FED WITH JUST 33 MILLIAMPS CAN PRODUCE VERY IMPRESSIVE 210 LUX LIGHTING AT A WIDE ANGLE OF ILLUMINATION. TO PUT THAT ANOTHER WAY, FEEDING FIVE LED ARRAYS WITH 9 VOLTS GENERATES A VERY ACCEPTABLE 1000 LUX LIGHTING LEVEL FOR JUST 165 MILLIAMPS, WHICH IS ONLY 1.5 WATTS. THAT IS SPECTACULAR PERFORMANCE.

EQUALLY IMPRESSIVE IS THE FACT THAT AS THE BATTERY VOLTAGE DROPS, THE LED ARRAY LIGHT OUTPUT EFFICIENCY RISES AND EVEN AT THE RIDICULOUSLY LOW 3 MILLIAMP INPUT CURRENT THE ARRAY PUTS OUT 21 LUX, SO IF THE BATTERIES STARTS TO RUN DOWN, THE LIGHTING DOES NOT DROP AS FAST AS WOULD BE EXPECTED.

TO AVOID CHARGING THE BATTERIES TOO FAST, WE NEED TO USE THREE SETS OF BATTERIES CONNECTED IN PARALLEL, AND THAT GIVES EIGHT HOURS OF 1000 LUX LIGHTING EVERY NIGHT FOR JUST TWO HOURS FORTY MINUTES OF GOOD LIGHTING DURING THE DAY, EVEN WITH 66% EFFICIENT BATTERIES.

SO, USING SETS OF 7 BATTERIES, THE ONLY MOVING PART IS THE ON/OFF SWITCH AND THE CIRCUIT COULD NOT BE ANY MORE SIMPLE THAN THIS :



ALL SOLAR PANELS NEED A DIODE TO PREVENT THE PANEL DRAWING CURRENT FROM THE BATTERIES DURING THE HOURS OF DARKNESS. MOST PANELS HAVE A DIODE ALREADY FITTED. PERSONALLY, I WOULD CONSIDER THE FUSE SHOWN TO BE UNNECESSARY, BUT IT IS STANDARD PRACTICE TO FIT ONE.

THE BATTERIES ARE INSTALLED IN A BASE BOX WHICH SUPPORTS THE SOLAR PANEL AND THEIR WEIGHT MAKES FOR A VERY STABLE LAMP. FIVE LED ARRAYS ARE WIRED IN PARALLEL AND FITTED INTO A SUITABLE LAMP HOUSING SUCH AS THIS ONE :

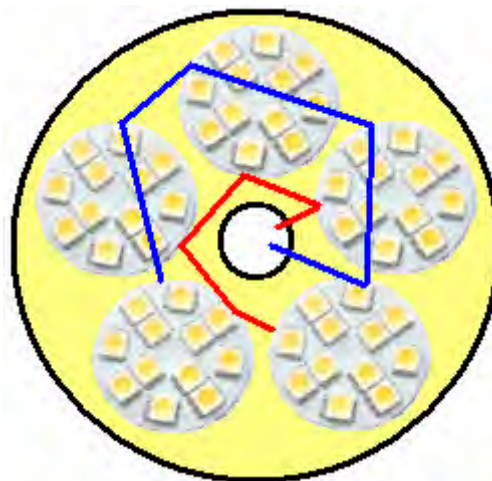


ONLY THE FLEXIBLE STEM, 120 mm DIAMETER LAMPSHADE AND THE ON/OFF SWITCH ARE USED. THIS IS AN EXCEPTIONALLY SIMPLE AND ROBUST DESIGN WHICH IS AN AFFORDABLE UNIT WHICH CAN GIVE YEARS OF COST-FREE LIGHTING AT A VERY SATISFACTORY LEVEL. THE PROTOTYPE LOOKS LIKE THIS :



THIS IS, OF COURSE, A PERFECTLY ORDINARY AND QUITE STANDARD TYPE OF A SOLAR POWERED LIGHT. THE DIFFERENCE HERE IS THAT THE LIGHT LEVEL IS GOOD AND LASTS FOR MANY HOURS EVERY NIGHT.

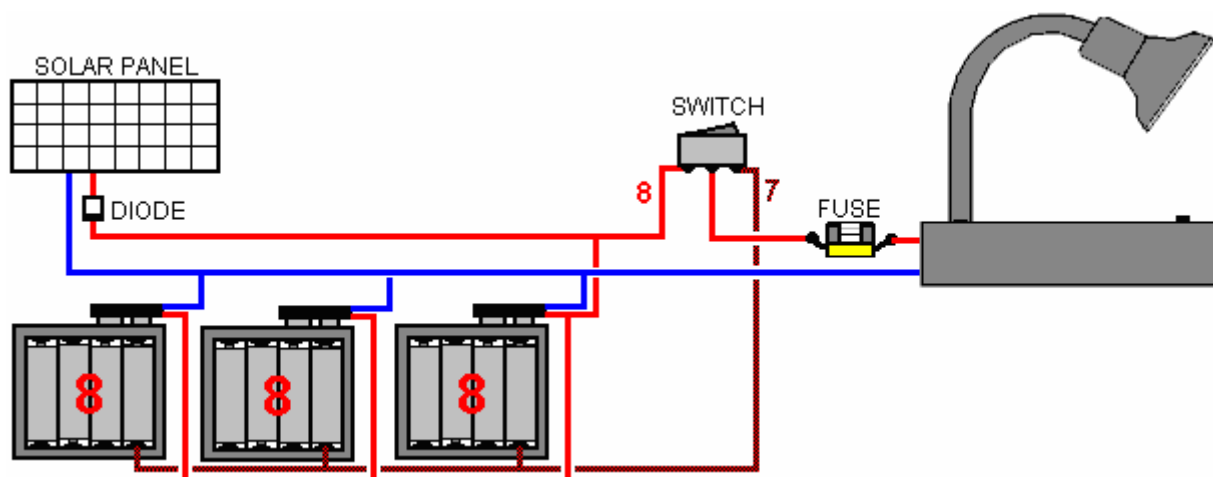
AT THE HIGHER VOLTAGES, THE LED ARRAYS ARE DAZZLINGLY BRIGHT, AND SO IT IS ADVISABLE TO USE A LAYER OF 'FROSTED PERSPEX' PLASTIC TO COVER THEM. SUPPLIERS CAN BE FOUND ON EBAY. THE ARRAYS ARE MOUNTED ON A CIRCULAR PIECE OF 3 mm THICK MDF (OR SIMILAR) MATERIAL, WITH THE DIAMETER BEING SLIGHTLY LESS THAN THE LAMPSHADE SO THAT IT CAN BE GLUED JUST INSIDE THE LIP OF THE LAMPSHADE :



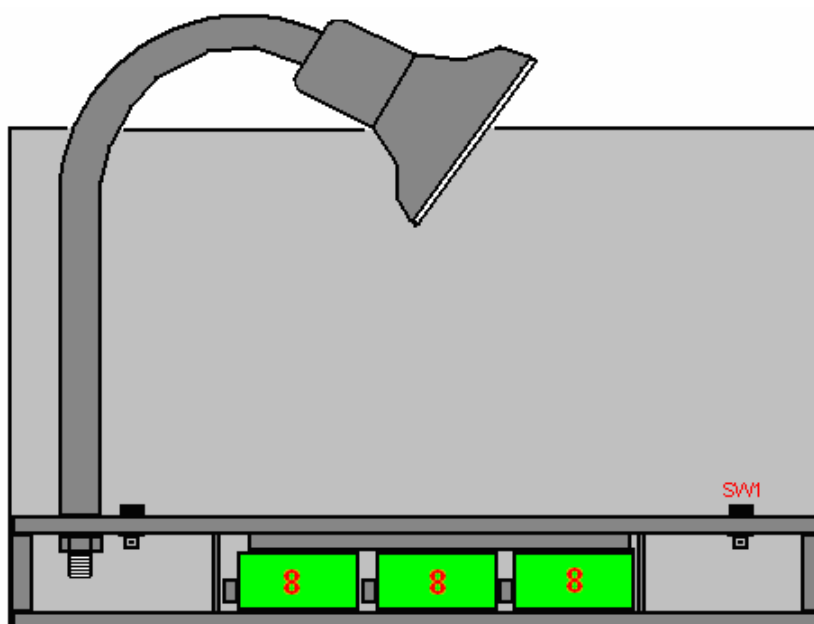
THE WIRES FROM THE LED ARRAYS RUN UNDERNEATH THE LEDS RATHER THAN ABOVE THEM AS SHOWN FOR CLARITY, AND THEY ARE FED DOWN THROUGH THE FLEXIBLE SHAFT OF THE LAMP, READY TO BE CONNECTED IN THE BASE OF THE UNIT AFTER THE LAMP STEM IS FITTED TO THE BASE BOX.

THE LIP OF THE LAMPSHADE IS USED TO MARK AROUND ON THE FROSTED PLASTIC BEFORE CUTTING IT OUT WITH A COPING SAW AND GLUING IT TO THE LAMPSHADE.

IT IS ALSO POSSIBLE TO EXTEND THE DESIGN VERY SLIGHTLY TO PROVIDE AN EVEN LONGER PERIOD OF LIGHTING, OR IF PREFERRED, A PERIOD OF EVEN BRIGHTER LIGHTING BY USING EIGHT BATTERIES IN EACH HOLDER. A CHANGEOVER SWITCH CAN BE USED TO SWITCH IN THE EXTRA BATTERIES WHENEVER THE USER CHOOSES. THE CIRCUIT THEN BECOMES :

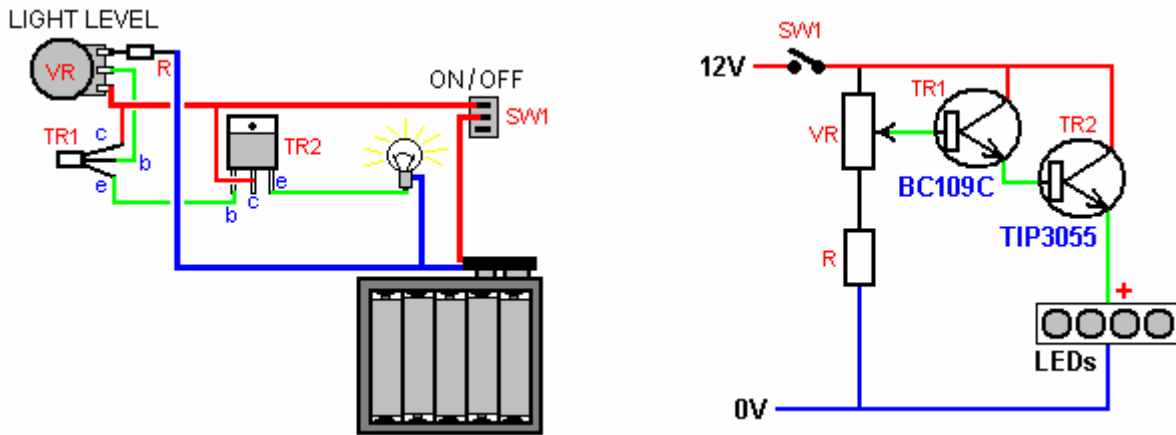


WHEN THE BATTERIES ARE BEING CHARGED, ALL EIGHT BATTERIES IN EACH BATTERY BOX ARE CHARGED, NO MATTER WHAT POSITION THE CHGOVER SWITCH IS IN. THE PROTOTYPE LOOKS LIKE THIS :

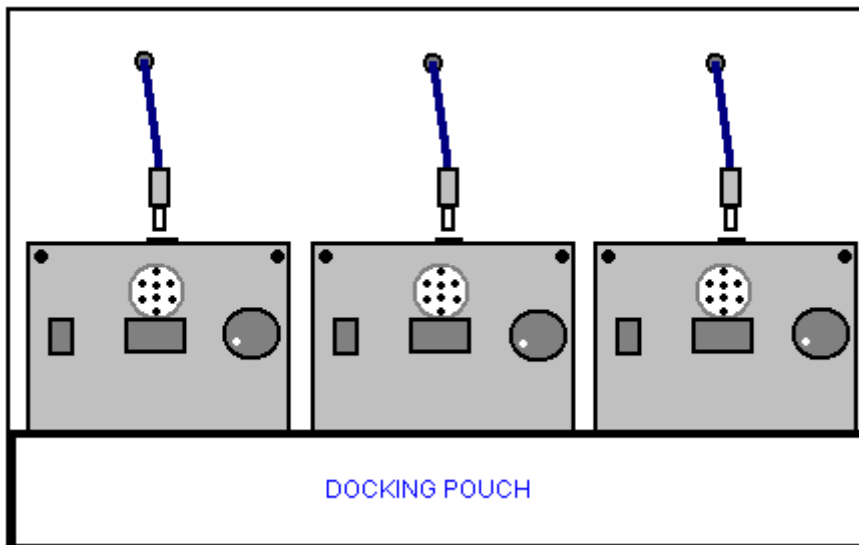


[www.free-energy-info.com/PJKbook.pdf](http://www.free-energy-info.com/PJKbook.pdf) HAS FULL CONSTRUCTIONAL DETAILS WITH DIMENSIONS, ETC.

IF YOU WANT TO BE FANCY, YOU CAN USE VERY SIMPLE CIRCUITRY TO GIVE FULLY DIMMABLE LIGHTING WITH EITHER FIVE OR PERHAPS TEN LED ARRAYS :

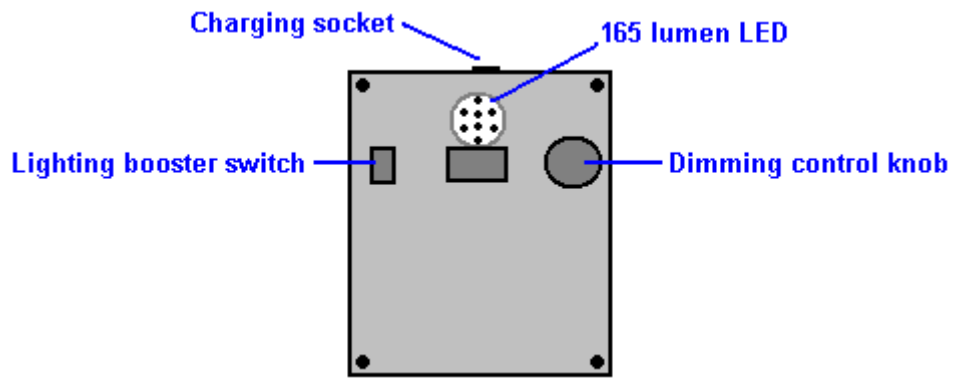


HOWEVER, WITH OR WITHOUT DIMMING, THERE ARE OTHER WAYS OF MAKING A VERY USEFUL SOLAR LIGHT. INSTEAD OF CONNECTING THE THREE BATTERY PACKS TOGETHER WHEN LIGHTING IS BEING USED (BUT NOT WHEN CHARGING) ALLOWS THREE SEPARATE LIGHTS TO BE USED AT DIFFERENT POINTS IN A ROOM OR IN DIFFERENT ROOMS :

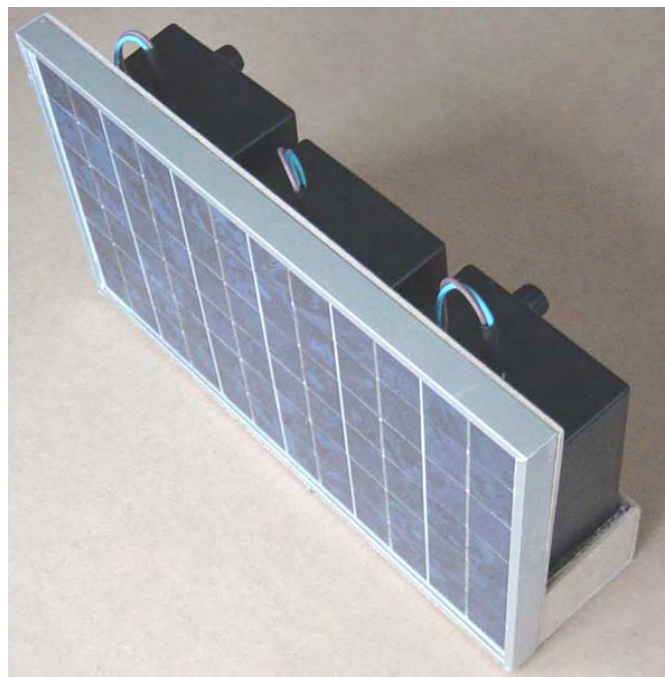


THE THREE IDENTICAL UNITS ARE EFFECTIVELY JUST SOPHISTICATED SOLAR TORCHES WITH ADJUSTABLE, WIDE ANGLE BEAMS. ALL THREE ARE CHARGED SIMULTANEOUSLY FROM A SINGLE 10-WATT SOLAR PANEL. EACH UNIT CAN STAND SECURELY DUE TO THE BATTERY WEIGHT AND IS ROBUST IF KNOCKED OVER OR DROPPED.

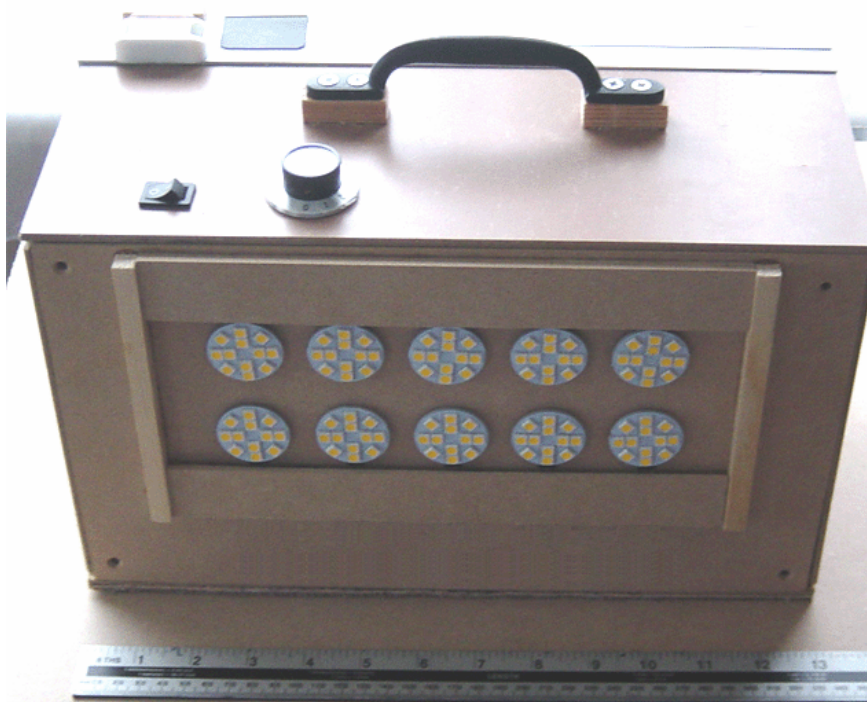
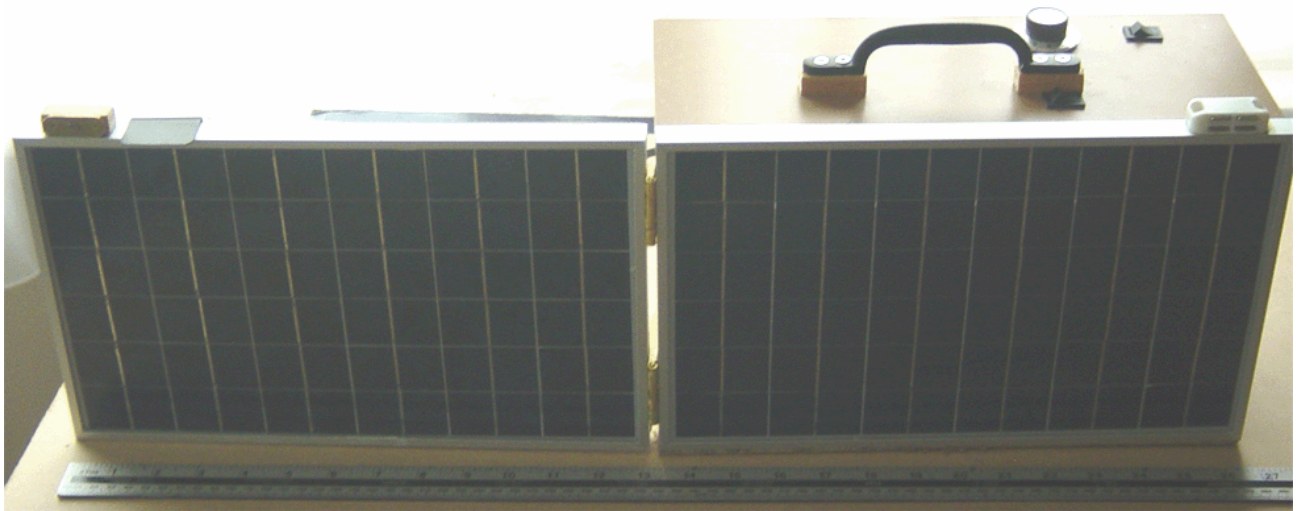
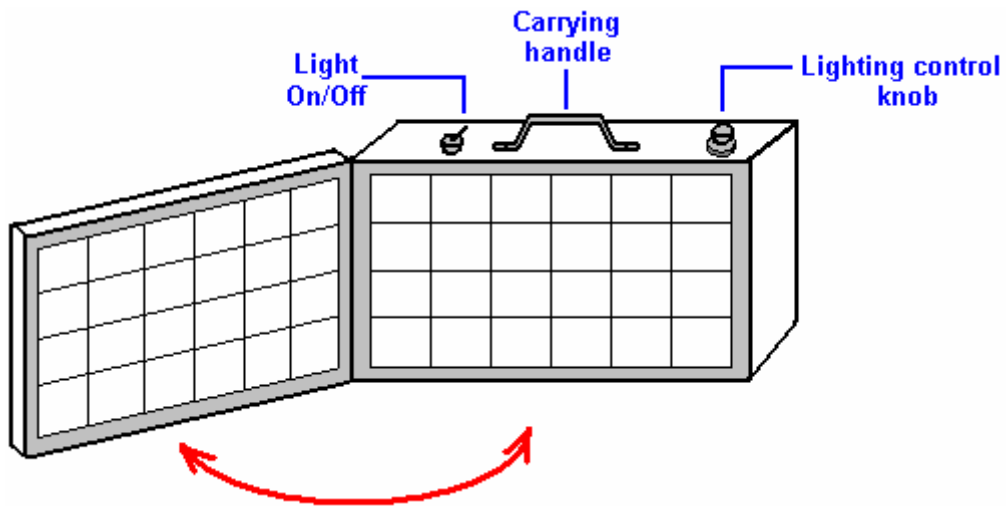




THE PROTOTYPE LOOKS LIKE THIS:



THESE SINGLE UNITS WORK VERY WELL AND LIGHT A ROOM TO A GOOD LEVEL. IT IS ALSO POSSIBLE TO MAKE A TWIN SOLAR PANEL UNIT WHICH DRIVES TEN LED ARRAYS :



**WITH FULLY CHARGED BATTERIES, THIS UNIT PUTS OUT MORE LIGHT THAN A MAINS-POWERED 100 WATT BULB AS THIS POTENTIAL USER DISCOVERED IN DAYLIGHT :**



**THIS UNIT GIVES EXCELLENT WIDE-ANGLE ILLUMINATION FOR WALKING ALONG AN UNLIT, UNFAMILIAR ROAD AT NIGHT.**

**THESE UNITS ARE NOT DIFFICULT TO BUILD NOR ARE THEY PARTICULARLY EXPENSIVE. HOWEVER, IF LIKE ME, YOU LIVE WELL AWAY FROM THE EQUATOR, THE TENDENCY IS TO THINK IN TERMS OF LIVING IN A TYPICAL HOUSE WITH GLASS WINDOWS. THIS IS NOT THE CASE FOR A LARGE PERCENTAGE OF WORLD POPULATION. FOR EXAMPLE, TAKE AFRICA :**

**Anna Brüderle's "Solar Lamps – Africa" MARKETING RESEARCH PUBLISHED BY GIZ GmbH UGANDA HAS RAISED MANY FACTS WHICH SUGGEST PHYSICAL CHANGES IN CONSTRUCTION :**

- 1. USING A SOLAR PANEL INDOORS IS NOT POSSIBLE DUE TO LACK OF WINDOWS AND MAJOR ROOF OVERHANG.**
- 2. USING A SOLAR PANEL OUTDOORS FOR RECHARGING IS LIKELY TO HAVE IT STOLEN.**
- 3. USING AN OUTSIDE SOLAR PANEL CONNECTED BY A WIRE IS LIABLE TO BE DAMAGED AND/OR CAUSE CHILD INJURY WHEN CHILDREN ARE PLAYING.**

**LIFESTYLE IN THE SURVEY AREA HAS THE FOLLOWING CHARACTERISTICS :**

- 1. SEVEN PEOPLE LIVING IN ONE BUILDING IS NOT UNUSUAL AND SO, 360-DEGREE LIGHTING IS PREFERRED.**
- 2. THE KITCHEN IS NORMALLY SEPARATE AND HAS NO WINDOWS AND YET NEEDS MEAL-PREPARATION LIGHTING.**
- 3. BURNING A FUEL FOR LIGHTING IS LIABLE TO CAUSE POOR HEALTH FROM THE FUMES PRODUCED.**
- 4. CHILD EDUCATION IS HINDERED BY LACK OF LIGHTING.**
- 5. LIGHT USAGE IS USUALLY 3 OR 4 HOURS AT NIGHT PLUS 2 HOURS IN THE MORNING.**
- 6. TESTS WITH 100 LUMEN LIGHTING HAVE BEEN CONSIDERED TO BE SATISFACTORY.**
- 7. LAMPS ARE NORMALLY PLACED ON THE DINING TABLE DURING MEALS AND HUNG FROM THE CEILING AT OTHER TIMES.**
- 8. WHEN CARRIED OUTSIDE, A NARROW FORWARD LIGHTING ARC OF SAY, 90 DEGREES, IS PREFERRED FOR SAFETY.**

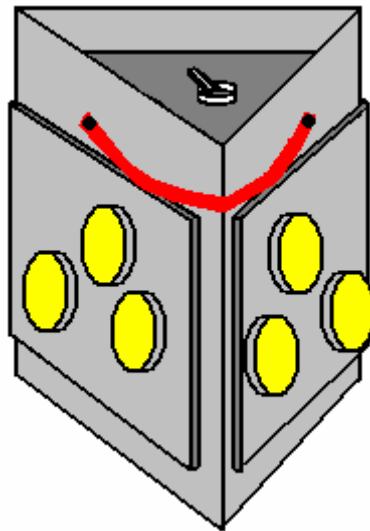
**9. UNITS WITH VARIABLE LIGHTING LEVELS ARE PREFERRED BUT WHY IS NOT SPECIFIED – PROBABLY LIGHT DURATION.**

**IN THESE HOUSES, THERE CAN BE INTERNAL WALLS WHICH DO NOT REACH THE CEILING AND SO, LIGHT IN THE CENTRAL ROOM SPILLS OVER INTO THE ADDITIONAL ROOMS.**

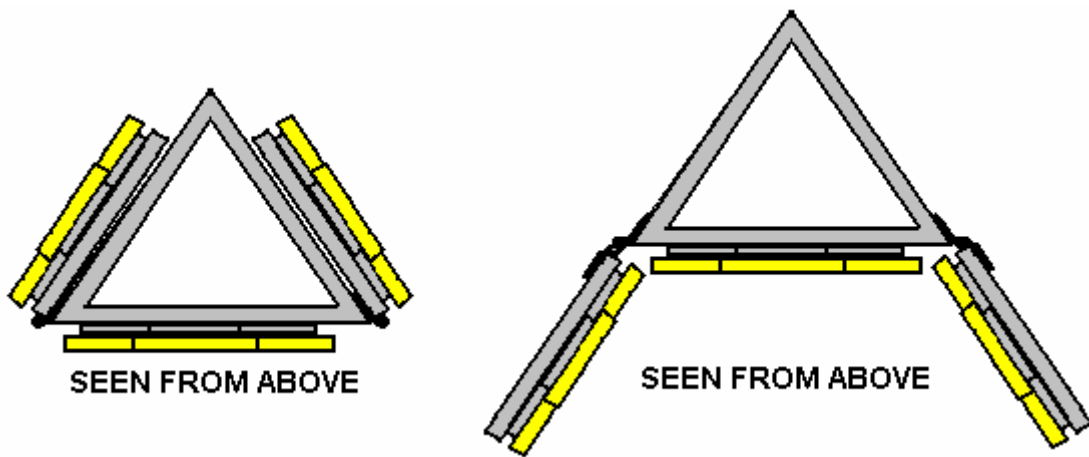
**THESE FEATURES CALL FOR A LIGHTING UNIT WHICH IS :**

- 1. ABLE TO PROVIDE 360-DEGREE ILLUMINATION.**
- 2. ABLE TO GIVE A RESTRICTED 90-DEGREE LIGHTING ARC WHEN USED OUTSIDE.**
- 3. STABLE WHEN STANDING ON A HORIZONTAL SURFACE.**
- 4. ABLE TO BE CARRIED COMFORTABLY.**
- 5. ABLE TO BE SUSPENDED FROM A CEILING.**
- 6. ABLE TO PROVIDE CONSIDERABLY MORE THAN 100 LUMENS FOR THE LIGHTING PERIOD USED.**
- 7. IS CHEAP ENOUGH TO BE BOUGHT.**
- 8. IS VERY ROBUST.**
- 9. IS FREE OF ANY GLASS COMPONENTS AS HURRICANE LAMP ACCIDENTS ARE MAINLY CUTS FROM BROKEN GLASS.**

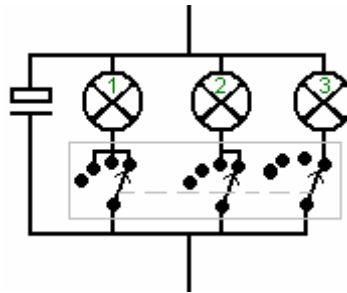
**IT IS POSSIBLE TO DESIGN A LAMP WHICH MEETS ALL OF THESE REQUIREMENTS ALTHOUGH LOW COST IS THE MOST CHALLENGING REQUIREMENT. TO MEET THE USER'S NEEDS, IT MIGHT BE POSSIBLE TO USE A HOUSING LIKE THIS :**



**THE TRIANGULAR SHAPE MAKES FOR EASY CONSTRUCTION AND IS VERY ROBUST FROM AN ENGINEERING POINT OF VIEW. IT ALSO CUTS DOWN THE NUMBER OF FACES NEEDED FOR 360-DEGREE LIGHTING TO JUST THREE. THE VERSATILITY IS INCREASED GREATLY IF TWO FACES ARE HINGED :**

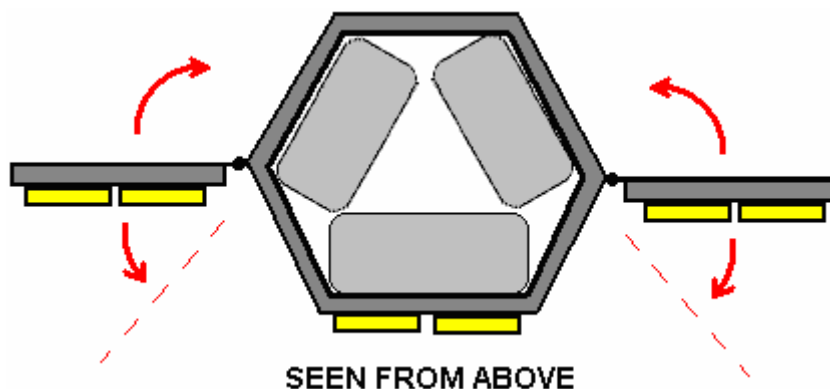


THIS ARRANGEMENT ALLOWS TWO FACES TO BE ALIGNED WITH THE FIXED FRONT FACE GIVING A VERY BRIGHT ARRANGEMENT WITH ALL OF THE LIGHT GOING IN ONLY ONE DIRECTION. THE TWO FACES CAN BE MOVED FURTHER AROUND TO GIVE THE NARROW FORWARD BEAM WANTED FOR WALKING OUTSIDE AT NIGHT. IF WANTED, THE LIGHTING LEVEL CAN BE CONTROLLED BY MAKING THE ON/OFF SWITCH A THREE-POLE FOUR-WAY ROTARY SWITCH :

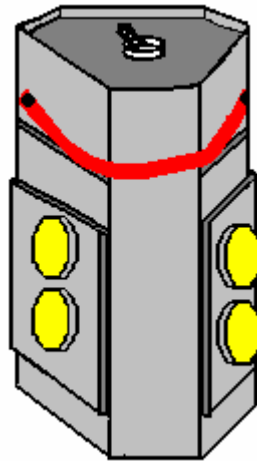


THIS ARRANGEMENT GIVES OFF, ONE PANEL, TWO PANELS, OR THREE PANELS OF ILLUMINATION, BUT IT COULD EQUALLY WELL BE CHANGED TO GIVE ONE LED LIT PER PANEL, TWO LEDs LIT PER PANEL, OR THREE LEDs LIT PER PANEL.

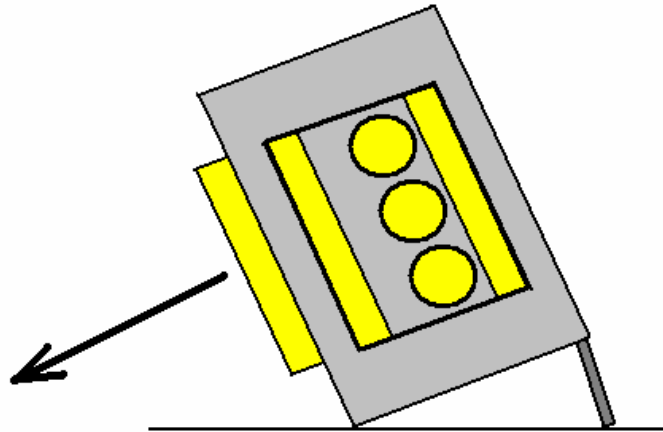
IF ORDINARY 10-BATTERY HOLDERS ARE USED, THEN THE LAMP HOUSING CAN BE MADE MORE COMPACT AS THE CORNERS OF THE TRIANGLE ARE NOT NEEDED. THE BATTERY PACKS FIT IN LIKE THIS :



THIS GIVES A COMPACT HEXAGONAL SHAPE WHICH IS STRONG AND WHICH HAS THE SAME VERSATILE LIGHTING CAPABILITIES. THE SIDES EXTEND ABOVE THE TOP AND BELOW THE BASE SO THAT THE UNIT CAN STAND SECURELY EITHER WAY UP ON A FLAT HORIZONTAL SURFACE. THE HINGES NEED TO BE STIFF SO THAT THEY HOLD THEIR POSITION WHEN SET TO THE DESIRED ANGLE. EACH PANEL CAN HAVE ONE, TWO OR THREE LED ARRAYS MOUNTED ON IT.



THE ADDITION OF A SIMPLE HINGED FLAP TO THE BASE ALLOWS A TILTED POSITION WHICH IMITATES THE DOWNWARD LIGHTING STYLE OF A DESK LAMP :



IT MAY WELL BE POSSIBLE TO CHARGE AN EXTRA BATTERY WHEN THE LIGHTS ARE ON AND THEN, WHEN THE LIGHTS ARE OFF TO RECHARGE THE MAIN BATTERY PACKS – THIS CALLS FOR A COP>>1 CHARGING CIRCUIT. ALTERNATIVELY, A 10-WATT SOLAR PANEL CAN BE USED THROUGH A LENGTH OF LOW-RESISTANCE CABLE TO RECHARGE THE BATTERIES VIA A PLUG AND SOCKET.

THERE IS ALSO THE POSSIBILITY OF PROVIDING A USB SOCKET FOR RECHARGING MOBILE PHONES WHEN THE BATTERIES ARE BEING CHARGED. THE PROTOTYPE WORKED VERY WELL INDEED WHEN CARRIED OUT OF DOORS IN A TOTALLY UNLIT AND UNFAMILIAR PLACE.

IF THE SUSPENSION CORD IS MADE LONGER AND AN ADDITIONAL HOOK IS PROVIDED NEAR THE BASE, THEN THE UNIT CAN BE SUSPENDED INDOORS WITH ALL OF THE LED ARRAYS FACING DOWNWARDS, WHICH WITH THEIR 160-DEGREE ANGLE OF ILLUMINATION GIVES GOOD 360-DEGREE LIGHTING.

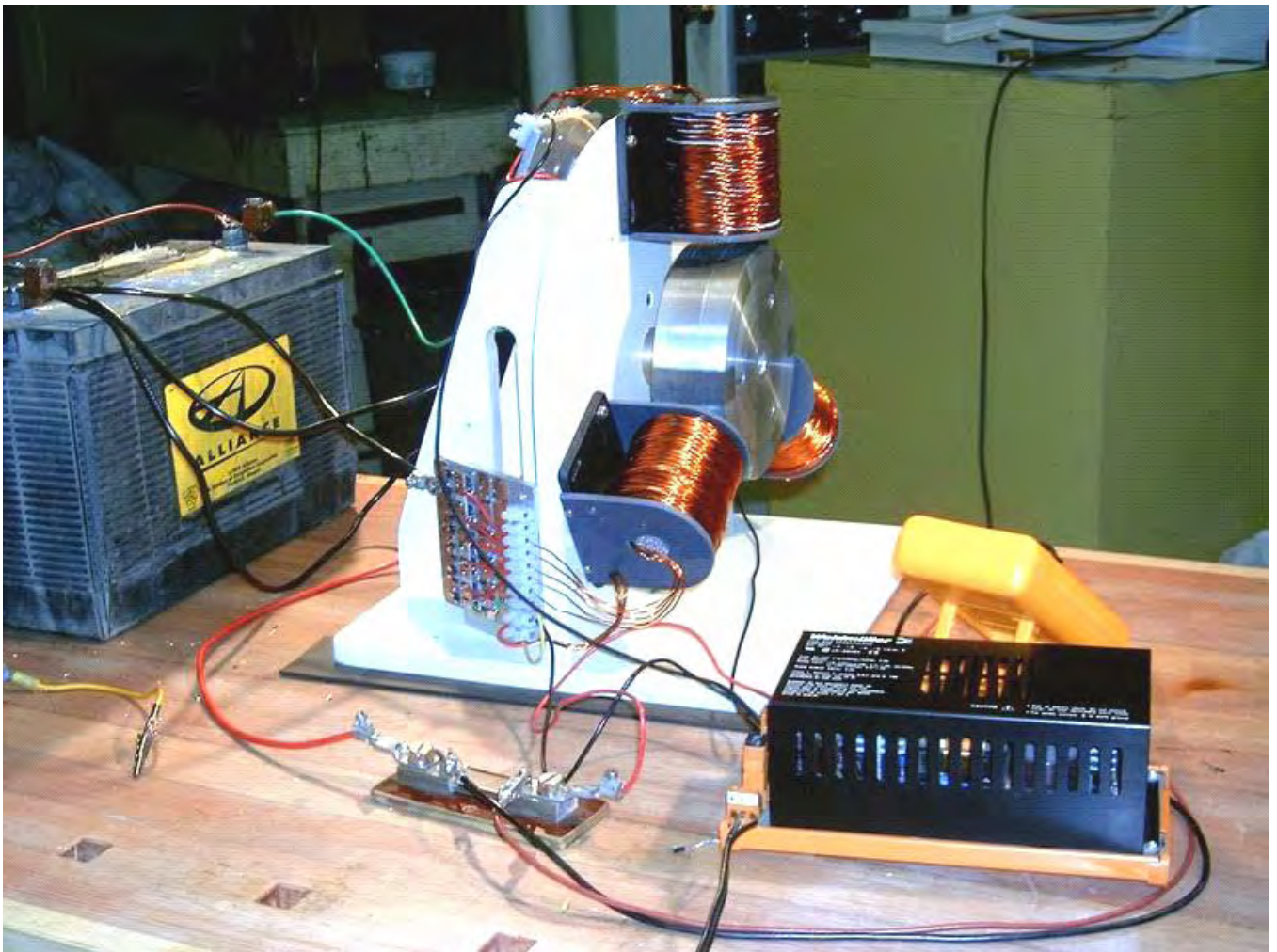
VIDEO : [https://youtu.be/j3\\_AWHfn5ow](https://youtu.be/j3_AWHfn5ow)

## ***THE BATTERY CHARGER OF RON PUGH***

THANKS IS DUE TO RON PUGH WHO HAS KINDLY SHARED THE CONSTRUCTION DETAILS OF HIS VERY SUCCESSFUL BATTERY CHARGER WHICH IS COP=13 WHEN OPERATING AT 24 VOLTS.

**IF YOU DECIDE TO BUILD ONE OF THESE DEVICES THEN PLEASE UNDERSTAND CLEARLY THAT YOU DO SO AT YOUR OWN RISK AND YOU, AND ONLY YOU, ARE RESPONSIBLE FOR YOUR ACTIONS. THIS PRESENTATION IS FOR INFORMATION PURPOSES ONLY.**

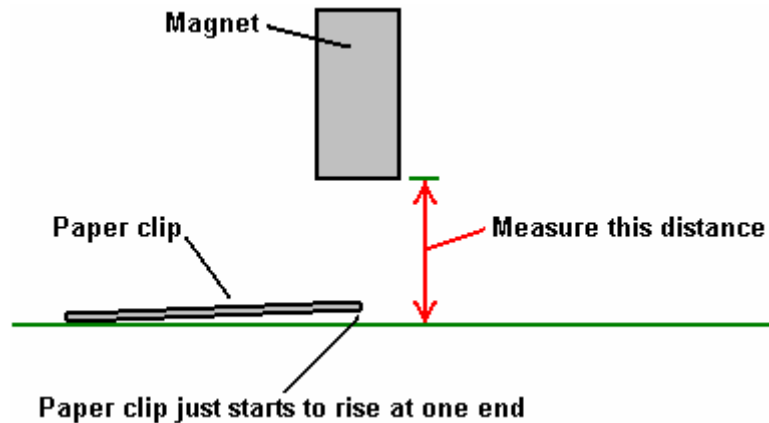
RON'S DEVICE IS MUCH MORE POWERFUL THAN THE AVERAGE BATTERY CHARGER IN THAT IT HAS FIFTEEN COILS AND PERFORMS MOST IMPRESSIVELY. HERE IS A PHOTOGRAPH OF IT ROTATING AT HIGH SPEED - THE MAGNETS EMBEDDED IN THE ROTOR CAN'T BE SEEN AS THEY ARE PASSING BY TOO FAST FOR THAT :



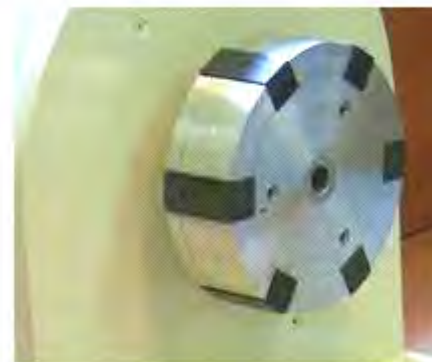
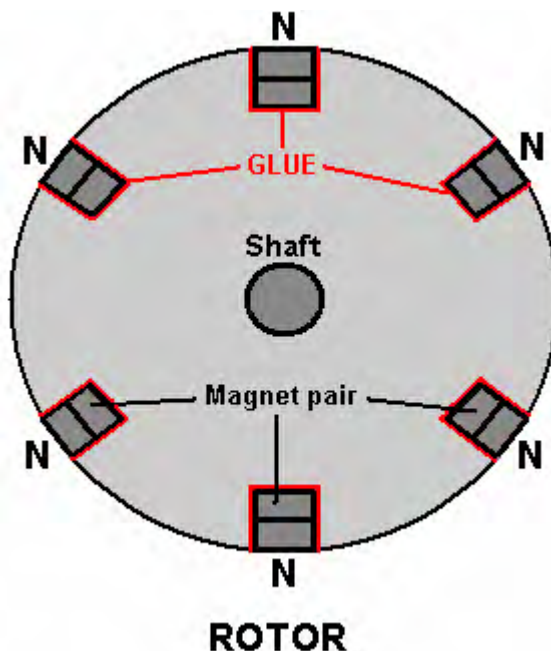
THIS IS NOT A TOY. IT DRAWS SIGNIFICANT CURRENT AND PRODUCES SUBSTANTIAL CHARGING RATES. HERE IS HOW RON CHOSE TO BUILD HIS DEVICE. INTERESTINGLY, CONSIDERING THE MAJOR MAGNETIC EFFECT THAT ALUMINIUM HAS, THE ROTOR IS CONSTRUCTED OF ALUMINIUM WHICH RON'S EXPERIENCE INDICATES IS A VERY SUITABLE MATERIAL FOR THE ROTOR.

THE ROTOR HAS SIX MAGNETS INSERTED IN IT. THESE MAGNETS ARE SPACED SIXTY DEGREES APART WITH THE NORTH POLES FACING OUTWARDS. THE MAGNETS ARE CERAMIC 47 x 22 x 10mm IN SIZE AND THEY ARE USED IN PAIRS SO THERE IS A TOTAL OF TWELVE MAGNETS IN THE CONSTRUCTION.

THE MAGNETS ARE PAIRED TOGETHER TO MATCH THEIR MAGNETIC STRENGTHS AS CLOSELY AS POSSIBLE. HAVING BOUGHT SEVERAL SPARE MAGNETS, RON GRADED THEM ALL IN ORDER OF THEIR MAGNETIC STRENGTH WHICH VARIES A BIT FROM MAGNET TO MAGNET. RON DID HIS GRADING USING A GAUSS METER BUT AN ALTERNATIVE METHOD IS TO USE A PAPER CLIP OF ABOUT 30mm IN LENGTH AND MEASURE THE DISTANCE AT WHICH ONE END OF THE PAPER CLIP JUST STARTS TO RISE OFF THE TABLE AS THE MAGNET IS MOVED TOWARDS IT :



HAVING GRADED THE MAGNETS IN ORDER OF STRENGTH, RON THEN TOOK THE TWELVE STRONGEST MAGNETS AND PAIRED THEM OFF PLACING THE WEAKEST AND STRONGEST TOGETHER, THE SECOND WEAKEST WITH THE SECOND STRONGEST, AND SO ON. THIS PRODUCED SIX PAIRS OF MAGNETS WITH FAIRLY CLOSELY MATCHING MAGNETIC STRENGTHS. THE PAIRS OF MAGNETS WERE THEN GLUED IN PLACE IN THE ROTOR USING SUPER GLUE :



THE CLEARANCE BETWEEN THE MAGNET FACES AND THE COILS IS ABOUT 6mm WHEN THEY ARE ADJUSTED FOR OPTIMUM PERFORMANCE BY SLIDING THE COILS NEARER TO OR FURTHER AWAY FROM THE ROTOR.

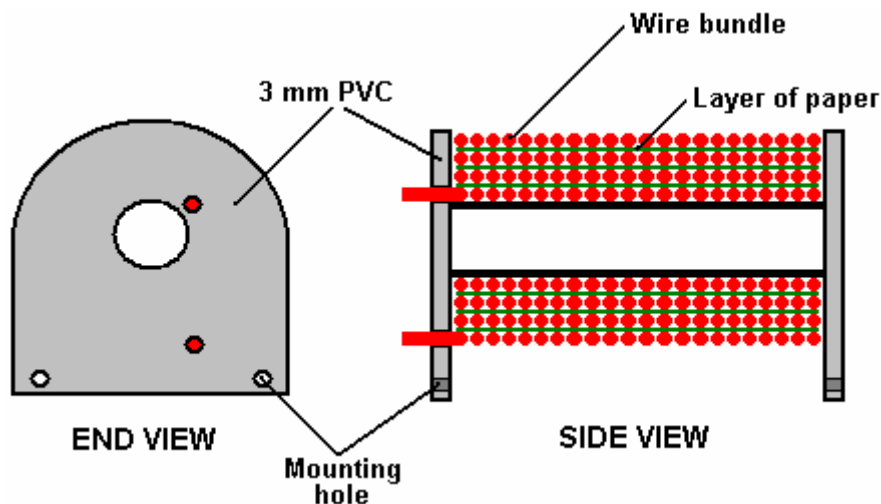
THE COILS ARE UNUSUAL IN THAT THEY HAVE FIVE SEPARATE STRANDS OF WIRE IN EACH COIL SPOOL. THE STRANDS OF WIRE ARE TWISTED TOGETHER BEFORE THE COIL IS



WOUND, EFFECTIVELY MAKING EACH COIL SPOOL A FIVE-COIL COMBINATION OF ELECTROMAGNET, TRANSFORMER AND PICK-UP COILS. THERE ARE THREE OF THESE COIL SPOOLS EACH BEING ABOUT 75mm LONG AND WOUND WITH FIVE STRANDS OF #19 AWG OR 20 SWG WIRE (0.912mm DIAMETER). THE COIL SPOOLS WERE MADE FROM PLASTIC PIPE OF 7/8 INCH (22mm) OUTER DIAMETER WHICH RON DRILLED OUT TO AN INNER DIAMETER OF 3/4 INCH (19mm) WHICH GIVES A WALL THICKNESS OF 1.5mm. THE END PIECES FOR THE COIL SPOOLS WERE MADE FROM 3mm THICK PVC WHICH WAS FIXED TO THE PLASTIC TUBE USING PLUMBER'S PVC GLUE.

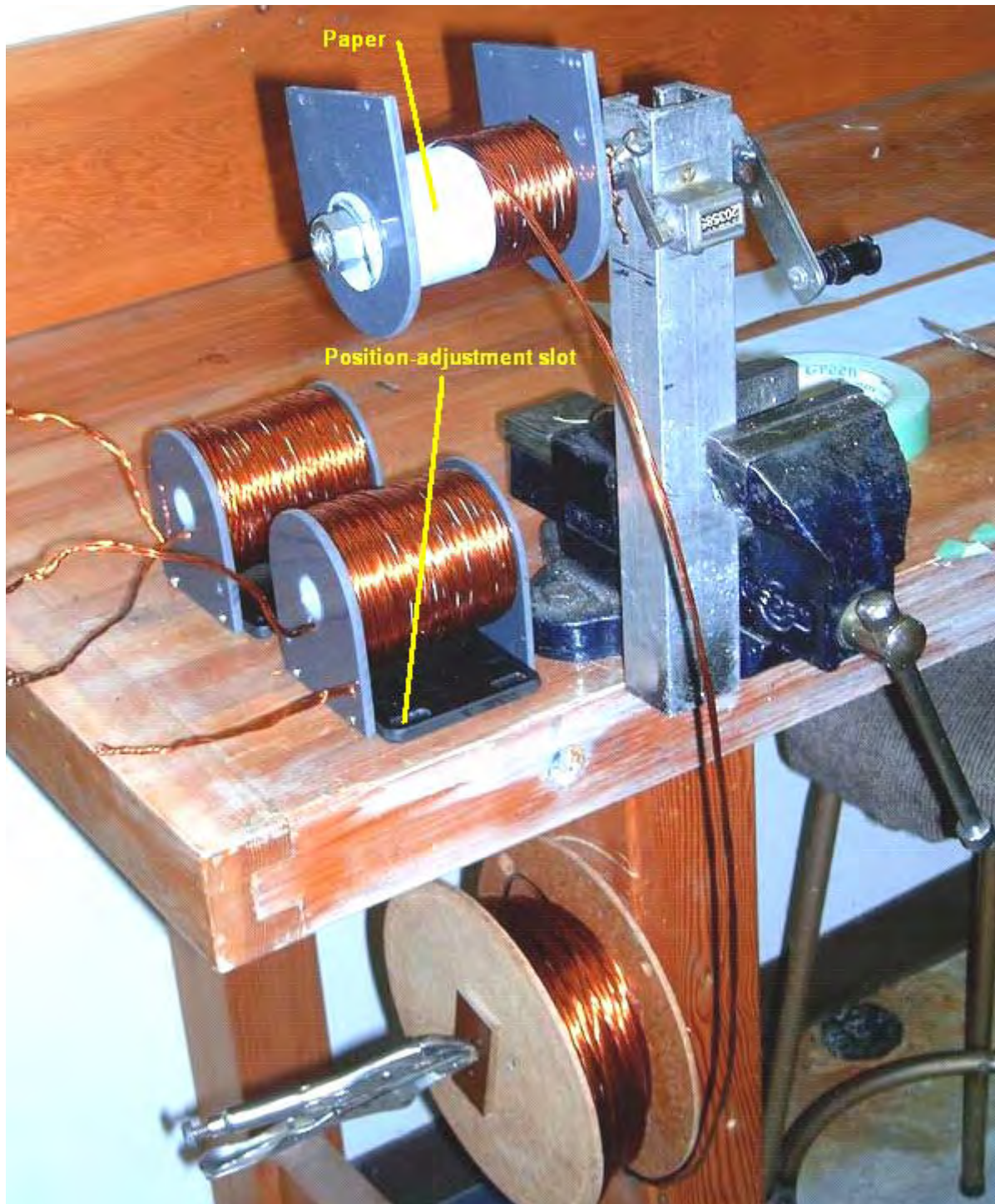
BEFORE WINDING THE COILS, THE FIVE WIRES WERE TWISTED TOGETHER BY CLAMPING THE ENDS OF THE WIRES TOGETHER TO FORM A 120-FOOT LONG BUNDLE OF WIRES WHICH WAS STRETCHED OUT AND KEPT CLEAR OF THE GROUND BY PASSING IT THROUGH THE OPENINGS IN A SET OF PATIO CHAIRS.

A BATTERY POWERED DRILL WAS ATTACHED TO ONE END AND OPERATED UNTIL THE WIRES WERE LOOSELY TWISTED TOGETHER. THIS TENDS TO TWIST THE WIRES TOGETHER MORE TIGHTLY AT THE END, LEAVING THE SET OF WIRES LOOSER IN THE MIDDLE. SO THE PROCEDURE WAS REPEATED, TWISTING THE OTHER END OF THE BUNDLE (THE DRILL TURNS IN THE SAME DIRECTION FOR THIS). THE TWISTED WIRES ARE COLLECTED ON A LARGE DIAMETER DRUM AND THEN USED TO WIND ONE OF THE COIL SETS FOR THE CHARGER.



THE COILS ARE WOUND WITH THE END PLATES ATTACHED AND DRILLED READY TO SCREW TO THEIR 6mm PVC BASES WHICH IN TURN ARE BOLTED TO THE 18mm THICK MDF SUPPORTING STRUCTURE. IT IS EASY TO WIND A COIL WITH WIRE THIS THICK AND AT THE END OF EACH FULL LAYER OF WINDING, A LAYER OF PAPER IS ATTACHED AND THAT MAKES THE NEXT LAYER EVEN EASIER TO WIND.

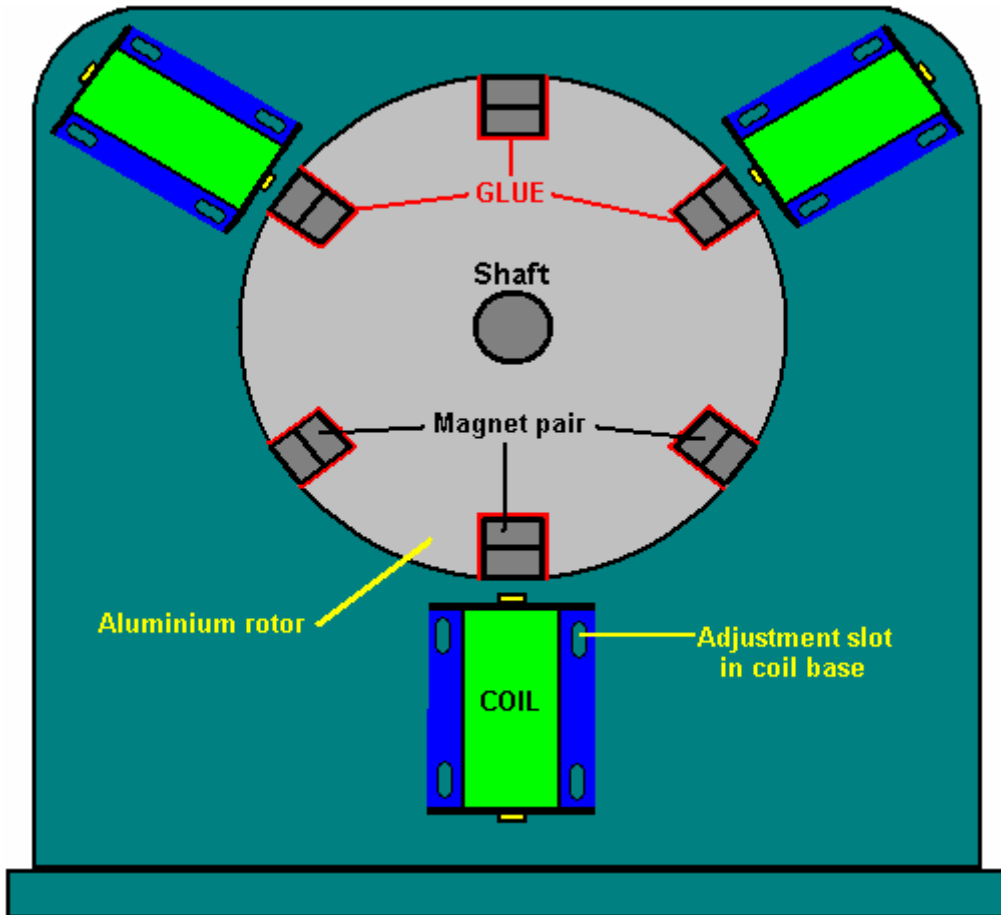
RON'S CONSTRUCTIONAL WORK IS OF VERY HIGH QUALITY AND HE USES THE EQUIPMENT SHOWN HERE :



**THE THREE COILS PRODUCED THIS WAY WERE THEN ATTACHED TO THE MAIN SURFACE OF THE DEVICE. THERE IS AN ADJUSTABLE GAP BETWEEN THE COILS AND THE ROTOR SO THAT THE OPTIMUM SPACING CAN BE FOUND.**

**THE MAGNETIC EFFECTS ARE MAGNIFIED BY THE CORE MATERIAL OF THE COILS. THIS CORE IS MADE FROM LENGTHS OF OXYACETYLENE WELDING WIRE WHICH IS COPPER COATED. THE WIRE IS CUT TO SIZE AND COATED WITH SHELLAC TO PREVENT ENERGY LOSS THROUGH EDDY CURRENTS CIRCULATING INSIDE THE CORE.**

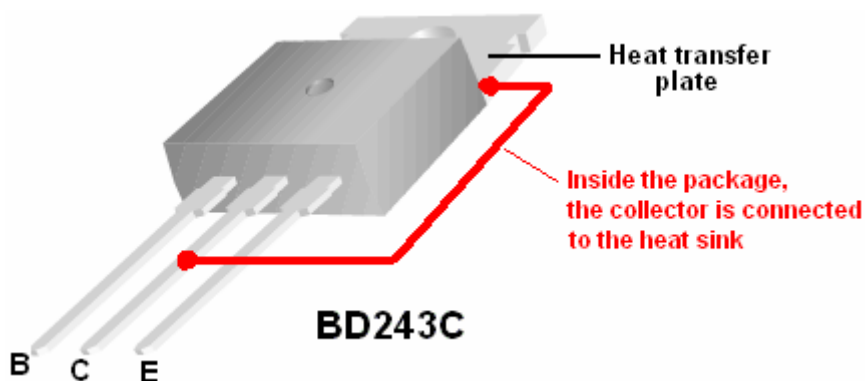
**THE COILS ARE POSITIONED AT EQUAL INTERVALS AROUND THE ROTOR AND SO ARE 120 DEGREES APART. THE END PIECES OF THE COIL FORMERS ARE BOLTED TO A 6mm BASE PLATE WHICH HAS SLOTTED MOUNTING HOLES WHICH ALLOW THE MAGNETIC GAP TO BE ADJUSTED, AS SHOWN HERE :**



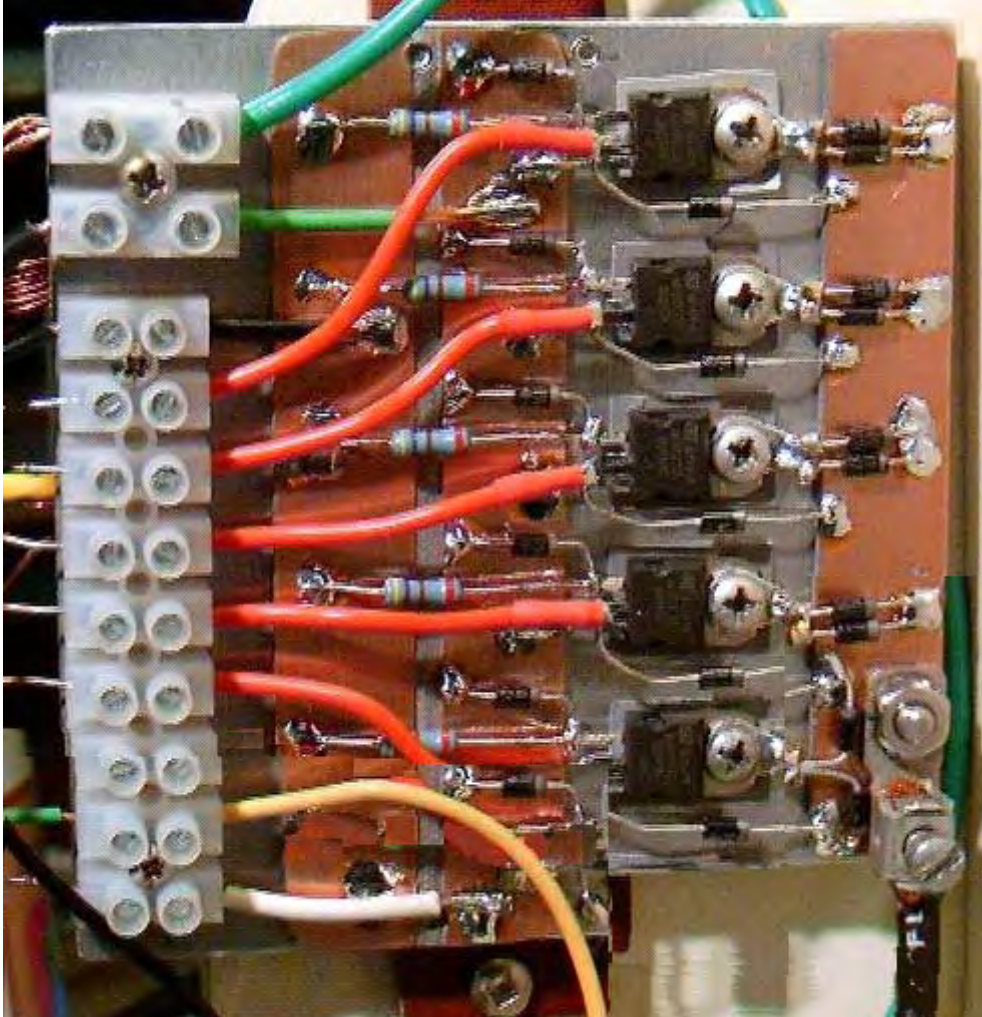
THE THREE COILS HAVE A TOTAL OF FIFTEEN IDENTICAL WINDINGS. ONE WINDING IS USED TO SENSE WHEN THE ROTOR MAGNETS REACH THE COILS DURING ITS ROTATION. THIS WILL HAPPEN SIX TIMES DURING EACH ROTATION AS THERE ARE SIX EVENLY SPACED MAGNETS IN THE ROTOR.

WHEN THE TRIGGER WINDING IS ACTIVATED BY THE MAGNET, THE ELECTRONIC CIRCUIT POWERS UP ALL OF THE REMAINING FOURTEEN COILS WITH A VERY SHARP PULSE WHICH HAS A VERY SHORT RISE TIME AND A VERY SHORT FALL TIME. THE SHARPNESS AND BREVITY OF THIS PULSE IS A CRITICAL FACTOR IN DRAWING EXCESS ENERGY IN FROM THE SURROUNDING ENVIRONMENT. THE ELECTRONIC CIRCUITRY IS MOUNTED ON THREE ALUMINIUM HEAT SINKS EACH ABOUT 100 x 100mm IN SIZE. TWO OF THESE HAVE FIVE BD243C NPN TRANSISTORS BOLTED TO THEM, AND THE THIRD HAS FOUR BD243C TRANSISTORS MOUNTED ON IT.

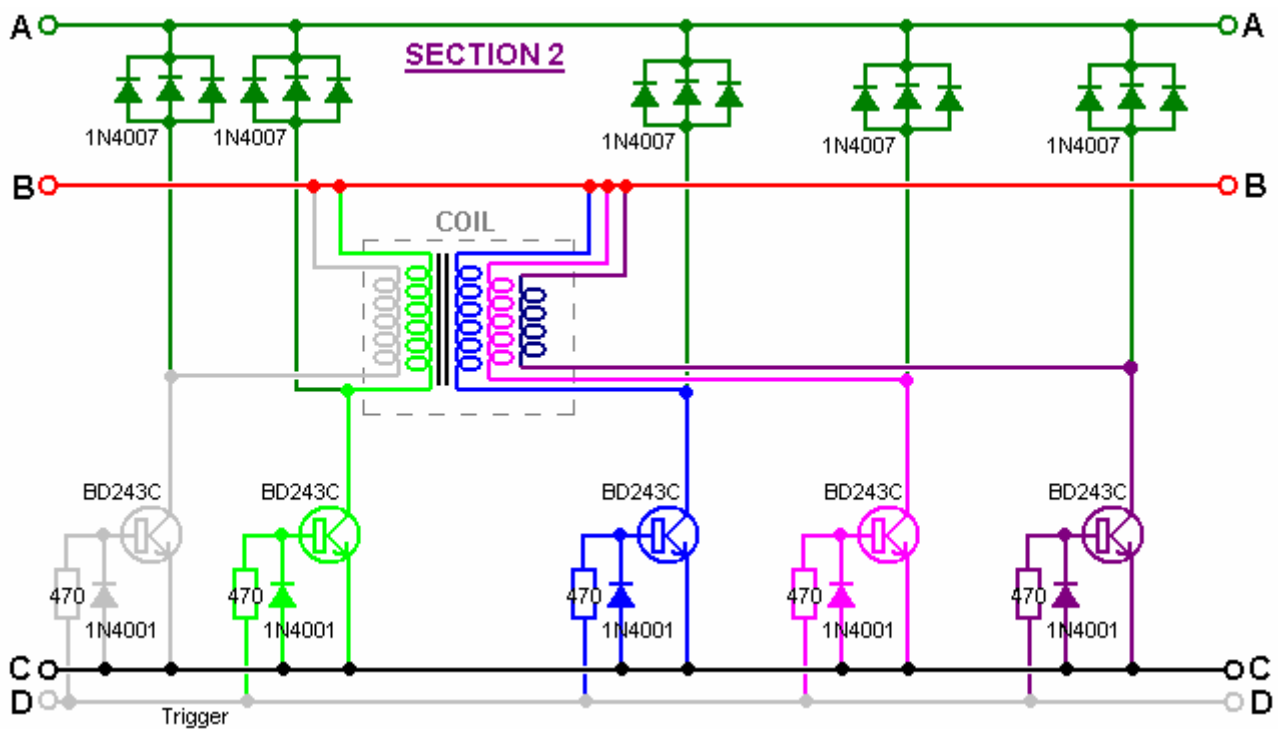
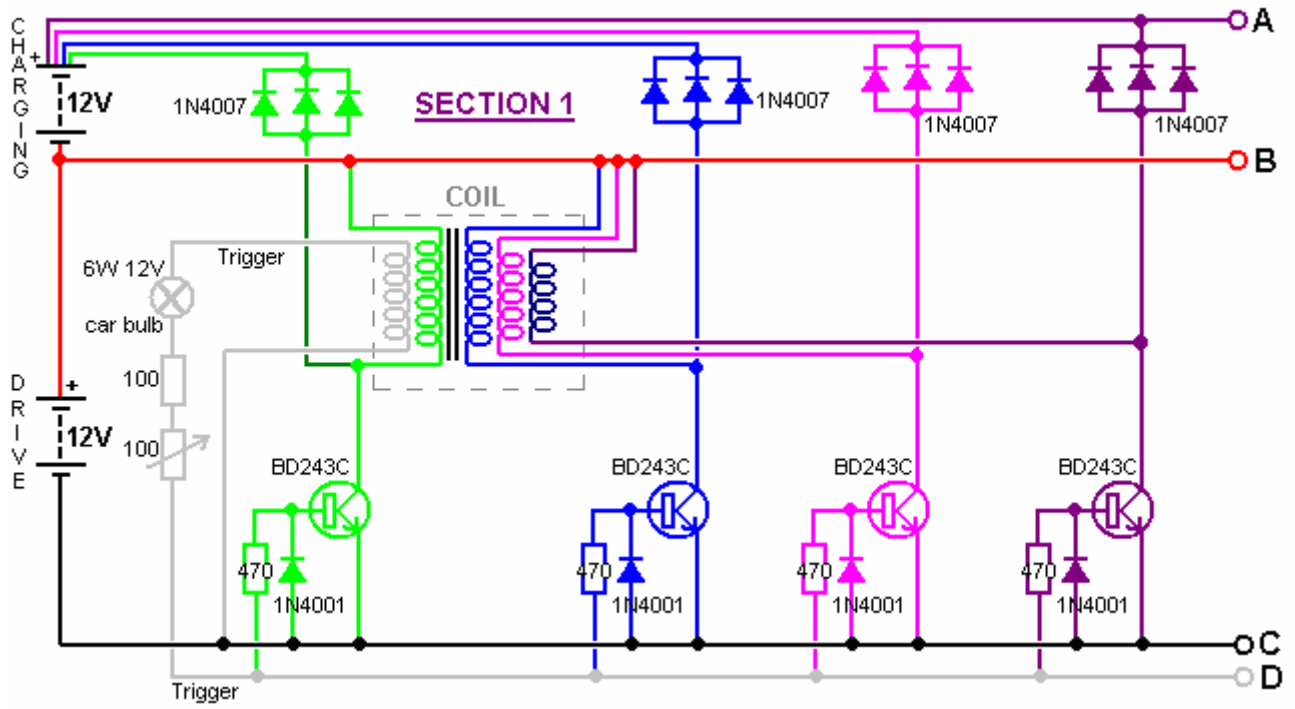
THE METAL MOUNTING TAB OF THE TRANSISTOR ACTS AS ITS HEAT SINK AND THAT IS WHY IT IS BOLTED TO THE ALUMINIUM PLATE. THE BD243C TRANSISTOR LOOKS LIKE THIS :

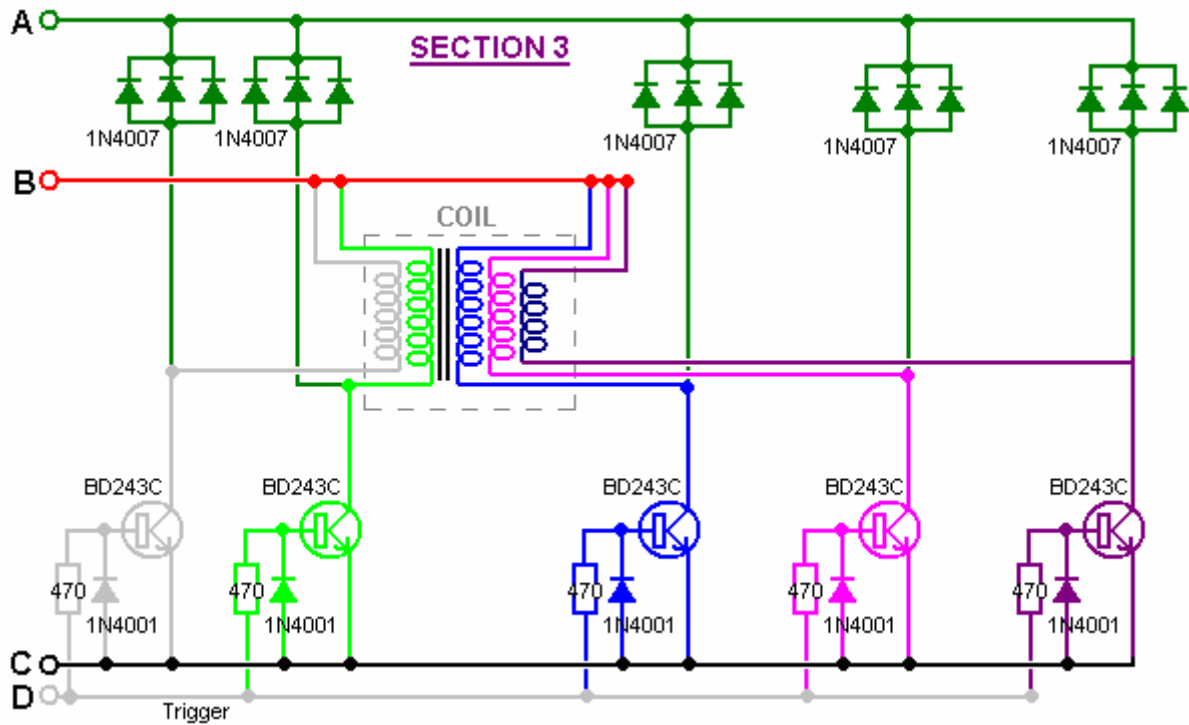


**MICA WASHERS ARE PLACED BETWEEN THE TRANSISTORS AND THE ALUMINIUM PLATE AS THAT ALLOWS HEAT TRANSFER BUT NOT ELECTRICAL TRANSFER. THIS AVOIDS UNWANTED CONNECTIONS BEING MADE TO THE OTHER ELECTRONIC COMPONENTS. ORDINARY, HARDWARE STORE SCREW CONNECTOR BLOCKS ARE USED FOR THE WIRE CONNECTIONS :**

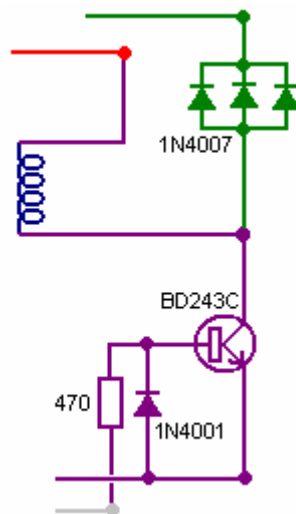


**THE CIRCUIT USED FOR THIS DEVICE IS SIMPLE, BUT AS THERE ARE SO MANY COMPONENTS INVOLVED, THE CIRCUIT DIAGRAM IS SPLIT INTO PARTS WHICH FIT ON A PAGE. DIAGRAMS OF THIS KIND ARE USUALLY DRAWN WITH JUST ONE WIRE GOING TO THE TOP OF THE BATTERY WHICH IS BEING CHARGED, BUT IT NEEDS TO BE UNDERSTOOD THAT DRAWING IT THAT WAY IS JUST FOR CONVENIENCE AND BETTER PERFORMANCE IS ACHIEVED IF EACH CHARGING CIRCUIT HAS ITS OWN SEPARATE WIRE GOING TO THE BATTERY BEING CHARGED AS SHOWN IN SECTION 1 HERE :**





**THIS LOOKS LIKE A FAIRLY LARGE AND COMPLICATED CIRCUIT, BUT IT ACTUALLY IS NOT. YOU WILL NOTICE THAT THERE ARE FOURTEEN IDENTICAL CIRCUIT SECTIONS AND EACH OF THOSE IS QUITE SIMPLE :**



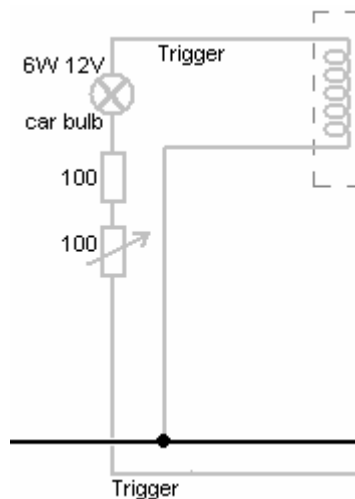
**THIS IS A VERY SIMPLE TRANSISTOR CIRCUIT. WHEN A MAGNET PASSES THE COIL, THE GREY TRIGGER WIRE GOES POSITIVE AND THE TRANSISTOR GETS SWITCHED ON HARD, POWERING THE COIL WHICH IS CONNECTED THROUGH THE RED WIRE TO THE DRIVING BATTERY. THE TRIGGER PULSE IS VERY SHORT AND SO THE TRANSISTOR SWITCHES OFF ALMOST IMMEDIATELY. THE SUDDEN SWITCHING OFF OF THE TRANSISTOR CAUSES A MAJOR BACK-EMF VOLTAGE SPIKE TO BUILD UP ACROSS THE COIL. THIS PUSHES THE TRANSISTOR COLLECTOR VOLTAGE UP AND IF IT WERE NOT FOR THE CONNECTION TO THE CHARGING BATTERY, THAT VOLTAGE WOULD REACH HUNDREDS OF VOLTS.**

**HOWEVER, AS THE VOLTAGE PASSES THE VOLTAGE OF THE CHARGING BATTERY, CURRENT STARTS TO FLOW INTO THE BATTERY BEING CHARGED. THE HIGHER THE VOLTAGE GOES, THE GREATER THE CURRENT FLOWING INTO THE BATTERY. THE COIL HAS LIMITED BACK-EMF POWER AND SO IT CAN'T GET TO TOO HIGH A VOLTAGE AS THE**

**CURRENT FLOW INTO THE BATTERY LIMITS IT. THAT MEANS THAT YOU DON'T WANT TO HAVE THE CIRCUIT RUNNING IF THE BATTERY BEING CHARGED IS NOT CONNECTED**

**YOU WILL NOTICE THAT THE CURRENT FED TO THE CHARGING BATTERY GOES THROUGH THREE DIODES INSTEAD OF JUST ONE DIODE. THIS IS GOOD PRACTICE AS IT LOWERS THE RESISTANCE BETWEEN THE TRANSISTOR AND THE BATTERY, RAISES THE CURRENT HANDLING CAPACITY OF THE COMPOSITE DIODE, AND THEN, AS ALREADY MENTIONED, EACH COIL HAS ITS OWN CHARGING WIRE GOING TO THE BATTERY.**

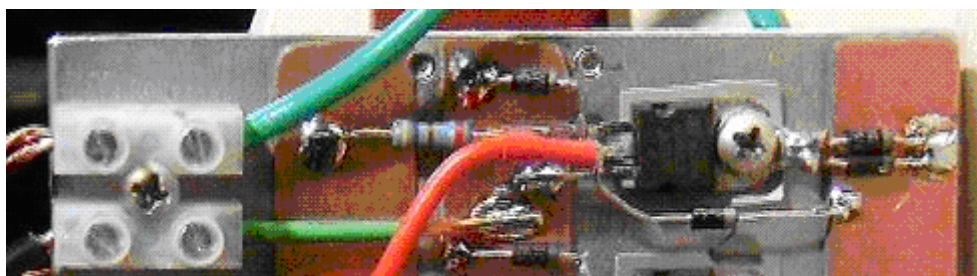
**THE ONLY OTHER PART OF THE CIRCUIT IS THE SECTION WHICH GENERATES THE TRIGGER SIGNAL WHICH SWITCHES ALL OF THE TRANSISTORS ON TOGETHER :**



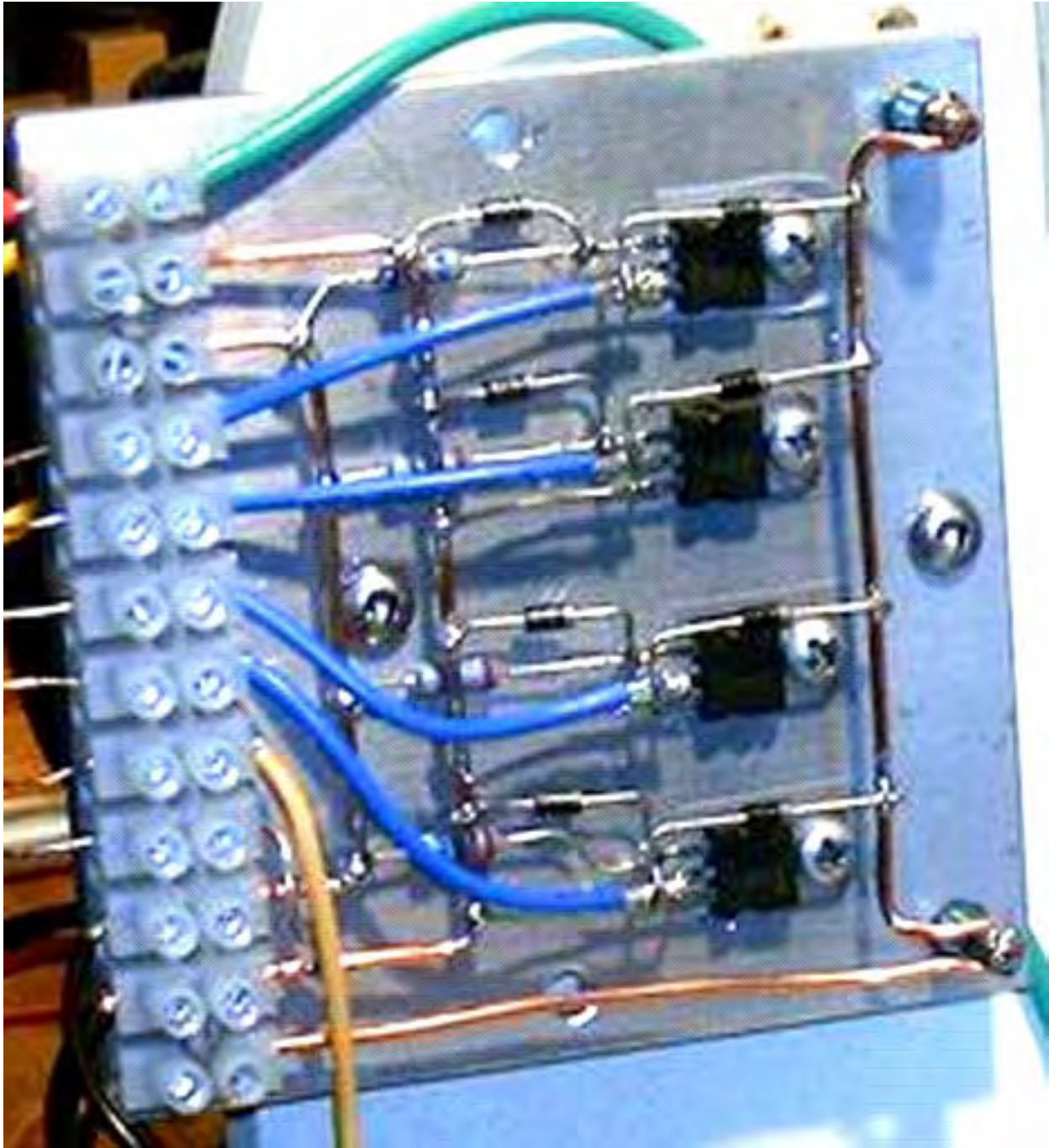
**WHEN A MAGNET PASSES THE TRIGGER WINDING, IT GENERATES A VOLTAGE IN THE WINDING. THE STRENGTH OF THE SIGNAL IS KEPT DOWN BY PASSING IT THROUGH A TWELVE VOLT CAR BULB AND THEN A VARIABLE RESISTOR WHICH VARIES BETWEEN 100 OHMS AND 200 OHMS.**

**THE BULB HAS MORE THAN ONE FUNCTION IN THAT AS WELL AS LIMITING THE CURRENT, IT ALSO GLOWS DIMLY WHICH IS A VERY USEFUL INDICATION OF THE OPERATION OF THE CIRCUIT AS A WHOLE. THE TRIGGER CIRCUIT THEN FEEDS CURRENT TO EVERY TRANSISTOR THROUGH THEIR 470 OHM BASE RESISTORS.**

**THERE ARE VARIOUS WAYS OF CONSTRUCTING THIS CIRCUIT. RON SHOWS TWO DIFFERENT METHODS. THE FIRST IS TO USE STRIPS OF PAXOLIN PANEL ABOVE THE HEAT SINK IN ORDER TO INSULATE THE COMPONENTS :**



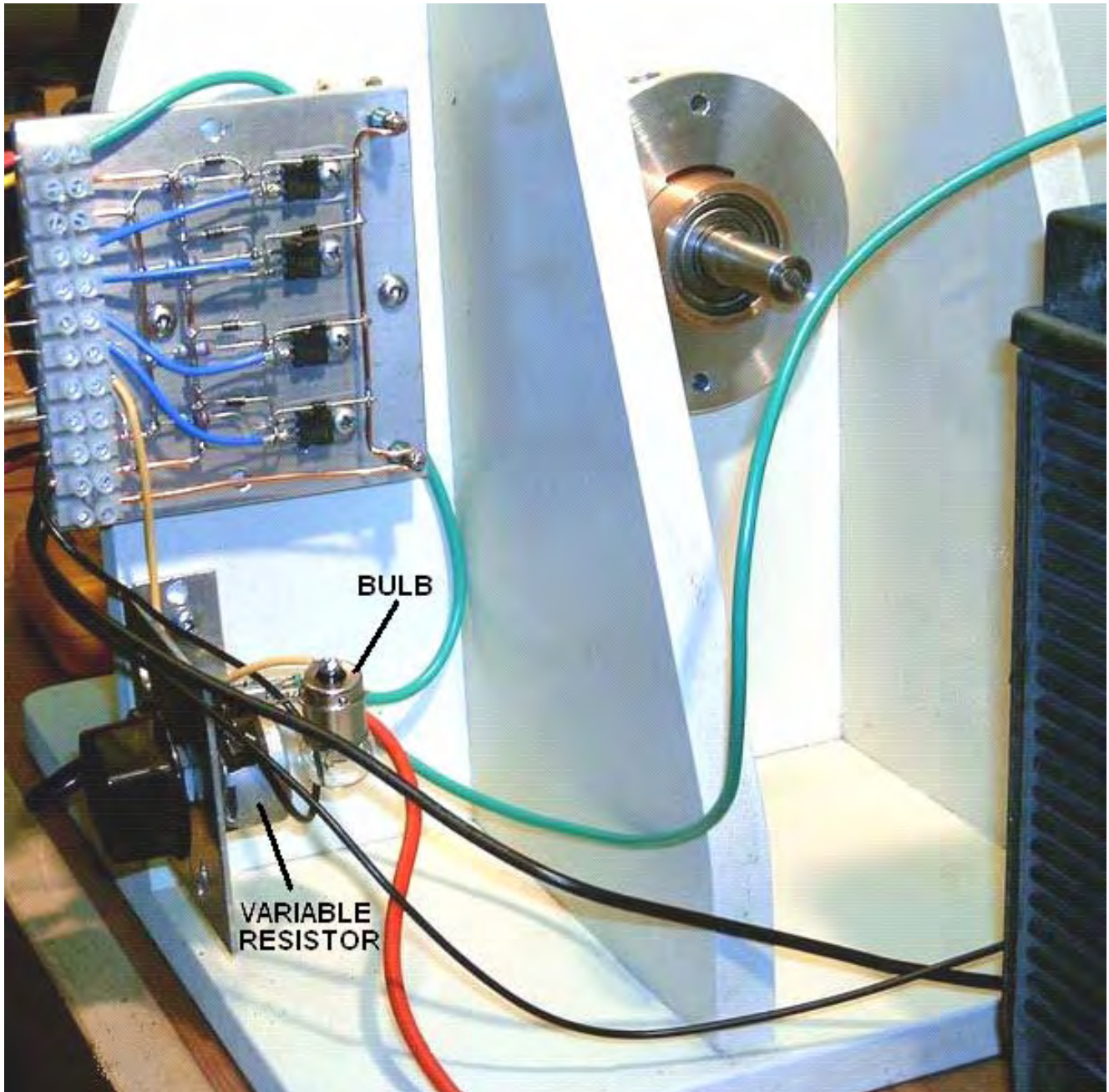
**THE SECOND METHOD WHICH IS EASY TO SEE, USES THICK COPPER WIRES HELD CLEAR OF THE ALUMINIUM, TO PROVIDE A CLEAN, LOW-RESISTANCE, SECURE MOUNTING FOR THE COMPONENTS AS SHOWN HERE :**



IT IS IMPORTANT TO REALISE THAT THE COLLECTOR OF A BD243C TRANSISTOR IS CONNECTED INTERNALLY TO THE HEAT SINK TAB WHICH IS USED TO MOUNT THE TRANSISTOR. WHILE THE PHOTOGRAPH ABOVE GIVES THE IMPRESSION THAT METAL SCREWS ATTACH THE TRANSISTORS TO THE ALUMINIUM PLATE, THAT IS MOST DEFINITELY NOT THE CASE. INSTEAD, THE METAL BOLTS GO INTO PLASTIC TEE NUTS WHICH PREVENT ANY ELECTRICAL CONNECTION. MICA WASHERS ARE ALSO USED HERE AND THEY ARE AVAILABLE FROM THE SUPPLIERS OF THE TRANSISTORS.

THIS CIRCUIT BOARD IS CONNECTED AT THE REAR OF THE UNIT AS CAN BE SEEN HERE :





**ALTHOUGH THE CIRCUIT DIAGRAM SHOWS A TWELVE-VOLT DRIVE SUPPLY, WHICH IS A VERY COMMON SUPPLY VOLTAGE, RON USUALLY POWERS HIS CHARGER WITH A MAINS OPERATED POWER SUPPLY WHICH DRAWS A PRETTY TRIVIAL 43 WATTS, AND HE CHARGES HIS 24-VOLT BATTERIES USING THE CIRCUIT.**

**RON USES A VERY NEAT SHEARS ARRANGEMENT FOR CUTTING EXACT LENGTHS OF WELDING ROD WHICH ARE THEN GROUPED TOGETHER TO FORM THE CORE FOR ONE OF HIS 5-STRAND COILS. THAT SHEARING ARRANGEMENT IS SHOWN HERE :**



**THE DISTANCE BETWEEN THE SHEARS AND THE METAL CLAMPED TO THE WORKBENCH MAKES EACH CUT LENGTH OF WIRE EXACTLY THE SIZE REQUIRED, WHILE THE PLASTIC CONTAINER COLLECTS THE CUT PIECES READY FOR COATING WITH CLEAR SHELLAC OR WITH CLEAR POLYURETHANE BEFORE USE IN THE COIL CORES.**

**EXPERIENCE IS PARTICULARLY IMPORTANT WHEN OPERATING A CHARGER OF THIS KIND. THE 100 OHM VARIABLE RESISTOR SHOULD BE A WIRE-WOUND TYPE AS IT HAS TO CARRY SIGNIFICANT CURRENT. INITIALLY, THE VARIABLE RESISTOR IS SET TO ITS MINIMUM VALUE AND THE POWER APPLIED. THIS CAUSES THE ROTOR TO START MOVING. AS THE RATE OF SPIN INCREASES, THE RESISTANCE IS GRADUALLY INCREASED AND A MAXIMUM SPEED WILL BE FOUND WITH THE VARIABLE RESISTOR ABOUT THE MIDDLE OF ITS RANGE, THAT IS, AROUND 50 OHM RESISTANCE.**

**THE NEXT STEP IS TO TURN THE VARIABLE RESISTOR TO ITS MINIMUM RESISTANCE SETTING AGAIN. THIS CAUSES THE ROTOR TO LEAVE ITS PREVIOUS MAXIMUM SPEED OF 1700 RPM AND INCREASE ITS SPEED AGAIN. AS THE SPEED INCREASES, THE VARIABLE RESISTOR IS TURNED GRADUALLY, INCREASING THE RESISTANCE ONCE AGAIN. THIS RAISES THE ROTOR SPEED TO ABOUT 3800 RPM WHEN THE VARIABLE RESISTOR REACHES ITS MID POINT AGAIN.**

**THIS IS PROBABLY FAST ENOUGH FOR ALL PRACTICAL PURPOSES, AND AT THIS SPEED, EVEN THE SLIGHTEST IMBALANCE OF THE ROTOR SHOWS UP QUITE MARKEDLY. TO GO ANY FASTER THAN THIS REQUIRES AN EXCEPTIONALLY HIGH STANDARD OF**

**CONSTRUCTIONAL ACCURACY. PLEASE REMEMBER THAT THE ROTOR HAS A LARGE AMOUNT OF ENERGY STORED IN IT AT THIS SPEED AND SO IT IS POTENTIALLY VERY DANGEROUS. IF THE ROTOR BREAKS OR A MAGNET COMES OFF IT, THAT STORED ENERGY WILL PRODUCE A HIGHLY DANGEROUS PROJECTILE. THAT IS WHY IT IS ADVISABLE, ALTHOUGH IT IS NOT SHOWN IN THE ABOVE PHOTOGRAPHS, TO CONSTRUCT AN ENCLOSURE FOR THE ROTOR. THAT COULD BE A U-SHAPED CHANNEL BETWEEN THE COILS, AND IT WOULD CATCH AND RESTRAIN ANY FRAGMENTS SHOULD ANYTHING BREAK LOOSE.**

**IF YOU WERE TO MEASURE THE CURRENT DURING THIS ADJUSTMENT PROCESS, IT WOULD BE SEEN TO REDUCE AS THE ROTOR SPEEDS UP. THIS LOOKS AS IF THE EFFICIENCY OF THE DEVICE IS RISING. THAT MAY BE SO, BUT IT IS NOT NECESSARILY A GOOD THING IN THIS CASE WHERE WE WANT TO PRODUCE RADIANT ENERGY CHARGING OF A BATTERY BANK. IT HAS BEEN SHOWN THAT SERIOUS CHARGING TAKES PLACE BETWEEN 3 AMPS TO 5 AMPS OR MORE CURRENT DRAW AT MAXIMUM ROTOR SPEED AND NOT A MISERLY 50 MILLIAMP CURRENT DRAW WHICH CAN BE ACHIEVED BUT WHICH DOES NOT PRODUCE GOOD CHARGING. THE POWER CAN BE INCREASED BY RAISING THE INPUT VOLTAGE TO 24 VOLTS OR EVEN HIGHER. SOME PEOPLE OPERATE AT 48 VOLTS RATHER THAN 12 VOLTS.**

**THE DEVICE CAN BE FURTHER TUNED BY STOPPING IT AND ADJUSTING THE GAP BETWEEN THE ROTOR AND THE COILS AND THEN REPEATING THE START-UP PROCEDURE. THE OPTIMUM ADJUSTMENT IS WHERE THE FINAL ROTOR SPEED IS THE HIGHEST.**

**THESE NOTES :** <http://www.free-energy-info.com/Pugh.pdf>

**VIDEO :** <https://youtu.be/Ue2ckMnQ4Bs>

## **PYRAMIDS IN AGRICULTURE**

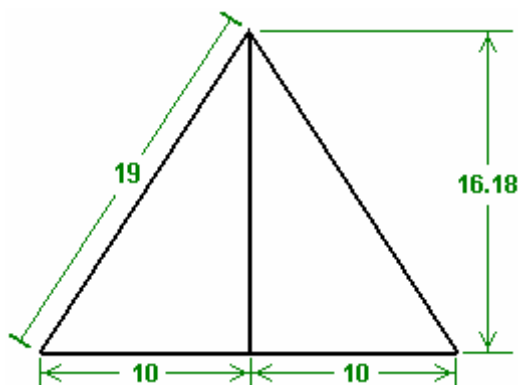
I HAVE BEEN ASKED TO PRODUCE A VIDEO ON THE EFFECTS OF A PYRAMID ON AGRICULTURE. I AM NOT AN EXPERT ON EITHER SUBJECT.

ON 4<sup>TH</sup> NOVEMBER 1949, A RADIO ENGINEER CALLED KAREL DRBAL TURNED UP AT THE PATENT OFFICE IN CZECHOSLOVAKIA WITH A PATENT APPLICATION FOR A CARDBOARD PYRAMID WHICH KEPT RAZOR BLADES SHARP. HE WAS TOLD TO GET LOST AND NOT COME BACK UNTIL HE COULD PRESENT A THEORY AS TO WHY A PYRAMID COULD DO THAT. UNDETERRED, KAREL WORKED ON A THEORY FOR YEARS AND WAS EVENTUALLY AWARDED A PATENT IN 1959, NOT BECAUSE HIS THEORY WAS SO GOOD, BUT BECAUSE THE CHIEF PATENT OFFICER TOOK A PYRAMID HOME AND TESTED IT, ONLY TO FIND THAT IT DID EXACTLY WHAT KAREL SAID IT DID.

KAREL ESTIMATED THAT WITHOUT THE PYRAMID, A RAZOR BLADE WOULD PROVIDE FIVE SHAVES BUT WITH THE PYRAMID THE BLADE WOULD GIVE FIFTY SHAVES. THIS IS INTERESTING AS IT CONFIRMS WITH AN INDEPENDENT TEST THAT A PYRAMID SHAPE CAUSES AN EFFECT, EVEN IF IT IS NOT POSSIBLE TO SAY WITH ABSOLUTE CERTAINTY WHAT THAT EFFECT IS AND HOW THE PYRAMID SHAPE MANIPULATES THAT ENERGY.

THOMAS TRAWOEGER HAS A GOOD DEAL OF EXPERIENCE IN USING PYRAMIDS AND HE HAS EVEN MANAGED TO GET AN ELECTRICAL POWER OUTPUT FROM A PYRAMID. SURPRISINGLY, HE RECOMMENDS THAT THE PYRAMID BE POSITIONED WITH A CORNER POINTING TOWARDS MAGNETIC NORTH, WHILE MOST OTHER PEOPLE THINK THAT ONE OF THE BASE EDGES SHOULD FACE NORTH, WHICH IS 45-DEGREES AWAY FROM WHAT THOMAS SAYS.

FOUR SOLID PIECES LIKE THIS JOIN TOGETHER TO MAKE A PROPERLY PROPORTIONED PYRAMID :



THE GREAT PYRAMID OF EGYPT WAS BUILT WITH BASE EDGES FACING EXACTLY NORTH-SOUTH. PYRAMIDS ARE NOT THE ONLY SHAPE WHICH HAS A MAJOR EFFECT AND A CONE SHAPE IS ALSO EFFECTIVE AND IT HAS THE ADVANTAGE THAT THERE IS NO QUESTION OF ITS ORIENTATION WHEN YOU ARE USING ONE.

THERE IS NO NEED FOR THE PYRAMID FACES TO BE SOLID AND IN FACT, IT IS RECOMMENDED THAT NOT ALL FACES SHOULD BE SOLID AND EVEN JUST THE SLOPING EDGES CAN WORK ON THEIR OWN.

SO, WHAT CAN A PYRAMID DO? WELL, ACTUALLY, NOTHING, EXCEPT FOR DIRECTING AND POSSIBLY FOCUSING THE ZERO-POINT ENERGY FIELD (SOMETIMES CALLED "ORGONE"). PERHAPS THE QUESTION SHOULD BE "WHAT EFFECTS CAN BE CAUSED BY USING A PYRAMID?"

THE ANSWER HAS TO INCLUDE THAT IT BOOSTS THE LIFE FORCE ENERGY IN PEOPLE, ANIMALS AND PLANTS. AS SEEN ABOVE, THOMAS TRAWOEGER HAS GOT A CONTINUOUS ELECTRICAL OUTPUT FROM A PYRAMID FOR A PERIOD OF AT LEAST THIRTY DAYS. HOWEVER, LOW-TECH INVESTIGATORS HAVE NOTED THAT AN EFFECT CAUSED BY A PYRAMID MAY BE REPEATED NINE TIMES IN A ROW BUT THEN INEXPLICABLY, ONE DAY IT WILL NOT WORK.

HOWEVER, WHAT HAS BEEN FOUND REPEATEDLY IS :

1. LIVING THINGS PLACED UNDER A PYRAMID SHAPE ARE BOOSTED IN HEALTH AND GROWTH. AN EXAMPLE OF THIS IS GIVEN ON THE WEBSITE :

<http://www.motherearthnews.com/Sustainable-Farming/1977-11-01/Raising-Rabbits.aspx>

WHERE JAMES BROCK OF TEXAS REPORTS ON TESTS WHICH HE HAS RUN ON A GROUP OF RABBITS. IT WOULD BE INCREDIBLY EASY TO FAKE THIS KIND OF INFORMATION, SO YOU NEED TO MAKE UP YOUR OWN MIND, AND IDEALLY, RUN SOME TESTS OF YOUR OWN.

JAMES STATES THAT HE BUILT A PYRAMID-SHAPED HUTCH OF TIMBER WITH 4-FOOT LONG SLOPING EDGES, AND HE ALSO BUILT A RECTANGULAR HUTCH :

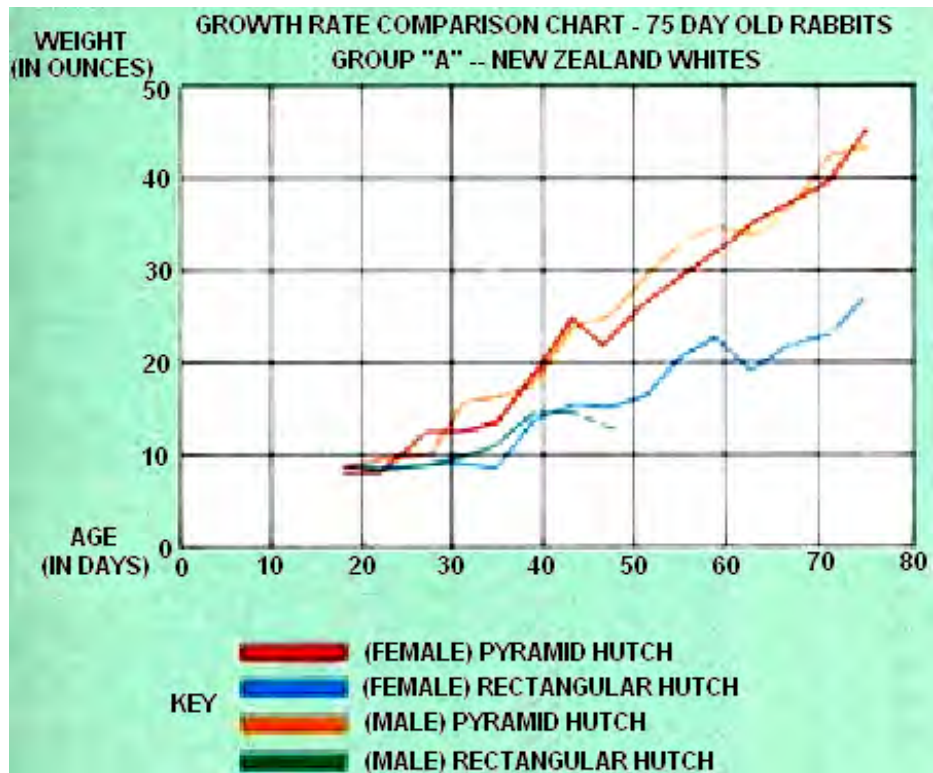


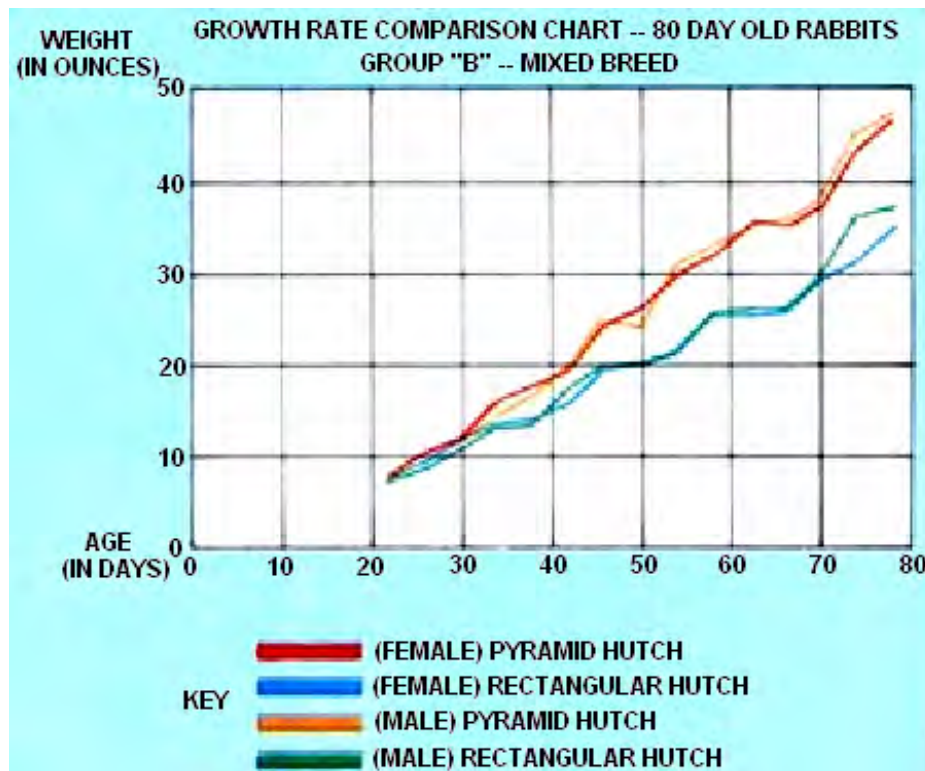
EACH OF THE HUTCHES HAD A TRANSPARENT DOOR. HE THEN BORROWED EIGHT RABBITS ABOUT TWENTY DAYS OLD, TAKEN FROM TWO DIFFERENT LITTERS, AND PLACED THEM IN MATCHED GROUPS OF FOUR IN EACH HUTCH. HE FED THEM EQUALLY AND WEIGHED THEM EVERY FOUR DAYS.

BY THE END OF THE EXPERIMENT 57 DAYS LATER, THE RABBITS WHICH HAD BEEN HOUSED IN THE PYRAMID HUTCH WEIGHED AN AVERAGE OF 46.5 OUNCES COMPARED TO AN AVERAGE OF 34.5 OUNCES FOR THOSE IN THE RECTANGULAR HUTCH. THAT IS, THE RABBITS IN THE PYRAMID HUTCH WERE NEARLY 35% HEAVIER AND SIDE BY SIDE THEY LOOKED LIKE THIS :



JAMES PRESENTS THE RESULTS LIKE THIS :





**JAMES INVITES YOU TO RUN THIS TEST FOR YOURSELF TO VERIFY THAT THIS DOES INDEED OCCUR.**

**2. PYRAMID USERS ALSO STATE THAT THEY FIND THE FOLLOWING EFFECTS ON A CONSISTENT BASIS (PROVIDED THAT THE PYRAMID IS KEPT AWAY FROM STRONG MAGNETIC FIELDS, SO DO NOT PUT A PYRAMID ON TOP OF A TV SET OR A REFRIGERATOR).**

- (a) **FRUIT IS PRESERVED. WHEN A PURCHASE OF FRESH FRUIT OR VEGETABLES IS MADE, IF THEY ARE PLACED UNDER A PYRAMID FOR ABOUT AN HOUR AND THEN STORED AS THEY NORMALLY WOULD BE STORED, IT IS SAID THAT THEY STAY FRESH FOR AT LEAST TWICE AS LONG AS THEY NORMALLY WOULD AND THE FLAVOUR IS IMPROVED. IT IS BELIEVED THAT UNHELPFUL MICRO-ORGANISMS ARE KILLED BY THE PYRAMID. IF FRUIT AND VEGETABLES ARE KEPT INDEFINITELY UNDER A PYRAMID, THEY EVENTUALLY DRY UP INSTEAD OF ROTTING.**
- (b) **FOOD QUALITY IS ENHANCED. IF FROZEN MEAT, FISH OR FOWL IS THAWED OUT UNDER A PYRAMID, THE QUALITY OF THE MEAT IS SAID TO BE NOTICEABLY IMPROVED.**
- (c) **COFFEE QUALITY IS IMPROVED. IF A CUP OF COFFEE IS LEFT UNDER A PYRAMID FOR ABOUT TWENTY MINUTES IT IS SAID TO GAIN A MUCH MORE MELLOW FLAVOUR. LEAVING GROUND COFFEE OR A JAR OF INSTANT COFFEE UNDER A PYRAMID OVERNIGHT, IS SAID TO CHANGE THE COFFEE SO THAT THE COFFEE MADE FROM IT IS OF A MUCH HIGHER QUALITY.**
- (d) **A GLASS OF WINE PLACED UNDER A PYRAMID FOR TWENTY MINUTES IS SAID TO UNDERGO A DISTINCT CHANGE WITH GREAT IMPROVEMENT SEEN IN BOTH THE TASTE AND THE AROMA. OTHER ALCOHOLIC DRINKS ARE ALSO SAID TO BE IMPROVED BY THIS PROCESS.**

- (e) A TWENTY TO THIRTY MINUTE TREATMENT OF FRUIT JUICES IS SAID TO REDUCE THE ACIDIC "BITE" OF THE DRINK AND IN MANY CASES, ALTER THE COLOUR OF THE JUICE.
- (f) ANY ITEM PICKLED IN VINEGAR, SUCH AS OLIVES AND PICKLES, GAIN A GREATLY ENHANCED NATURAL FLAVOUR AND ARE GREATLY MELLOWED BY THE PROCESS.
- (g) THE RAPID GROWTH OF MOULD ON CHEDDAR CHEESE CAN BE OVERCOME BY THE CHEESE BEING KEPT UNDER A PYRAMID AT NORMAL ROOM TEMPERATURE. IT IS RECOMMENDED THAT THE CHEESE IS WRAPPED IN PLASTIC TO REDUCE THE RATE AT WHICH THE CHEESE DRIES OUT.
- (h) RICE AND WHEAT CAN BE KEPT IN OPEN JARS UNDER A (12-INCH OPEN WIRE FRAME) PYRAMID FOR AT LEAST FOUR MONTHS WITHOUT ANY FORM OF DETERIORATION OR INFESTATION BY FLIES OR INSECTS AS THEY ARE REPELLED BY THE ENERGY INSIDE THE PYRAMID. A TEST WAS RUN OUTDOORS WITH A PYRAMID WITH A SIX-FOOT BASE AND WHICH HAD FOOD PLACED IN THE CENTRE TO ATTRACT ANTS. IT WAS FOUND THAT ANTS HEADING FOR THE FOOD FOLLOWED A CURVED PATH OUT OF THE PYRAMID WITHOUT EVER REACHING THE FOOD.
- (i) WATER LEFT UNDER A PYRAMID IS ALTERED. CUT FLOWERS PLACED IN IT TEND TO LAST 30% LONGER THAN NORMAL, WHILE GROWING PLANTS WATERED WITH IT GROW MORE STRONGLY AND ARE HARDIER. THE WATER APPEARS TO HOLD THE ENERGY INDEFINITELY, A GLASSFUL TAKES TWENTY MINUTES, A QUART (TWO PINTS) TAKES ONE HOUR AND LARGER AMOUNTS SHOULD BE LEFT OVERNIGHT. ANIMALS GIVEN THE CHOICE OF PYRAMID WATER OR UNTREATED WATER ALMOST ALWAYS CHOOSE THE TREATED WATER.

3. IN THE 1940s, VERNE CAMERON OF AMERICA DISCOVERED THAT THE BENEFICIAL PYRAMID ENERGY COULD BE TRANSMITTED. HE PLACED A PYRAMID AT EACH END OF A ROW OF PLANTS, CONNECTED A WIRE TO THE APEX OF EACH PYRAMID AND RAN THE WIRE UNDERNEATH THE PLANTS WITH A CLUMP OF STEEL WOOL ON THE WIRE UNDER EACH PLANT. THE PYRAMIDS WERE ALIGNED NORTH-SOUTH AND HE FOUND EVEN BETTER RESULTS WERE OBTAINED IF THE ROW OF PLANTS WAS ALSO ALIGNED IN A NORTH-SOUTH DIRECTION.

4. THERE ARE REPORTS OF INSTANCES WHERE DOGS SUFFERING FROM OLD AGE, LAMENESS AND HAIR LOSS HAVE BEEN CURED AND REJUVINATED IN ABOUT SIX WEEKS BY THE USE OF A PYRAMID.

LES BROWN EXPERIMENTED EXTENSIVELY WITH PYRAMIDS AND RELATED DEVICES. IT SHOULD BE STRESSED AT THIS POINT THAT WHILE VARIOUS FACTS HAVE BEEN OBSERVED, THE EFFECT CAUSED BY A PYRAMID IS NOT FULLY UNDERSTOOD AT THIS TIME, AND NO "LAWS" HAVE YET BEEN DEDUCED. WE HAVE TO WORK ON THE BASIS OF "THIS IS WHAT WAS DONE, AND THESE ARE THE RESULTS". BECAUSE OF THIS, THE FOLLOWING EXTRACT FROM THE WORK OF THE LATE LES BROWN IS REPRODUCED HERE AND YOU MUST DECIDE FOR YOURSELF IF WHAT HE SAYS IS TRUE AND WHETHER OR NOT IT MIGHT BE WORTH YOUR WHILE TRYING OUT SOME OF WHAT HE SAYS :



**IN CONDUCTING PYRAMID EXPERIMENTS, YOU SHOULD LOOK DAILY FOR SIGNS OF CHANGE AND NOTE THEM METICULOUSLY, AND ABOVE ALL BE PATIENT. DON'T PLANT A SEED ONE DAY AND EXPECT TO HAVE A PLANT SIX FEET TALL THE VERY NEXT DAY. A PLANT TAKES JUST AS LONG TO DEVELOP INSIDE A PYRAMID AS IT DOES OUTSIDE,**



**BUT IN TIME YOU WILL SEE THE TREMENDOUS DIFFERENCE IN SIZE. ALSO, DON'T KEEP MOVING PLANTS AROUND INSIDE YOUR PYRAMID DURING AN EXPERIMENT – LEAVE POTS STATIONARY SO THAT YOU CAN SEE WHAT THE RESULTS ARE.**

**YOU CAN MAKE YOUR OWN PYRAMIDS. THEY CAN BE CONSTRUCTED ENTIRELY FROM INEXPENSIVE MATERIALS. CARDBOARD, WIRE, PLYWOOD OR ANYTHING RIGID ENOUGH TO RETAIN THE PYRAMID SHAPE WILL DO. THE PYRAMID DOES NOT NECESSARILY HAVE TO BE SOLID – IN EXPERIMENTS, JUST THE OUTLINE SHAPE IS SUFFICIENT PROVIDED THAT IT IS JOINED AT ALL CORNERS AND AT THE APEX.**

**REMEMBER THAT WITH ALL TYPES OF PYRAMID, POSITIONING IS ALL IMPORTANT. ONE OF THE SQUARE BASE SIDES MUST POINT TOWARDS MAGNETIC NORTH. USE A COMPASS TO DETERMINE THE DIRECTION OF MAGNETIC NORTH. SEVERAL PYRAMIDS CORRECTLY ORIENTATED AND STACKED ON TOP OF ONE ANOTHER WILL PRODUCE INCREASED ENERGY, CELL ACTIVITY AND GROWTH.**

**USING PYRAMIDS, I SINCERELY BELIEVE THAT I CAN GROW 36 TIMES MORE AND BETTER PLANTS IN A GIVEN AREA THAN ANY FARMER OR MARKET GARDENER CAN IN THE SAME AREA USING CONVENTIONAL METHODS.**

**WHEN ALL FOUR SIDES ARE PUT TOGETHER, YOU MUST HAVE A PYRAMID WHICH IS LEANING IN AT 51 DEGREES, 51 MINUTES, 14 SECONDS. IF YOU GROW A PLANT INSIDE A PYRAMID, IT ABSORBS ENERGY AT A HIGH INTENSITY AND SO THE RESULT IS ENORMOUS GROWTH. WHEN THIS IS APPLIED TO VEGETABLES AND FRUIT, THE PLANTS AS WELL AS THEIR PRODUCTS ARE IMMENSELY OVERSIZED. MY OWN EXPERIMENTS HAVE CONVINCED ME THAT THIS ENERGY CREATES A SPECIAL REACTION IN THE LIVING CELLS OF PLANTS, RESULTING IN LARGER BLOOMS, LEAVES AND FRUITS ON WHATEVER PLANTS ARE PROPAGATED WITHIN THE PYRAMID.**

**THE NORMAL LIFE CYCLE OF LETTUCE, FOR INSTANCE, FROM SEED TO MATURITY, IS SIX TO EIGHT WEEKS. GROWN UNDER A PYRAMID, THE LIFE CYCLE IS STILL THE SAME BUT THE PLANT IS CONSIDERABLY LARGER. IF YOU ALLOW THE VINE TYPE OF TOMATO TO MATURE TO SIX OR SEVEN TRUSSES UNDER A PYRAMID WHILE SIMULTANEOUSLY ALLOWING AN IDENTICAL PLANT TO DO THE SAME OUTSIDE THE PYRAMID, GIVING BOTH OF THE PLANTS THE SAME FEEDING AND WATERING, A STARTLING DIFFERENCE IN YIELD OCCURS. I SHOULD MENTION THAT IF YOU PUT YOUR OUTSIDE PLANT TOO NEAR THE PYRAMID, IT WILL REACH FOR, AND RECEIVE, SOME OF THE PYRAMID'S ENERGY, SO KEEP IT WELL AWAY TO GET A FAIR COMPARISON. THE OUTSIDE TOMATOES WOULD WEIGH OUT AT APPROXIMATELY 10 TO 14 POUNDS PER PLANT, WHILE THE PLANT GROWN IN THE PYRAMID WOULD PRODUCE BETWEEN 50 AND 60 POUNDS OF TOMATOES. NOT EVERY TYPE OF PLANT GROWN UNDER A PYRAMID WILL PRODUCE THIS INCREASE; THIS IS THE AVERAGE WHICH I HAVE COME TO EXPECT FROM TOMATOES.**

**A FEW MORE AVERAGES WHICH I HAVE OBTAINED REPEATEDLY WERE: LETTUCE TWO TO THREE TIMES LARGER THAN AVERAGE; BEANS 25 INCHES LONG BY 1.25 INCHES WIDE; CABBAGE – WHEN CONTROLS WERE 3 POUNDS EACH, THE PYRAMID GROWN PLANTS WERE 12 TO 13 POUNDS PER HEAD; RADISHES THAT NORMALLY WOULD BE THE SIZE OF A QUARTER WERE FOUR INCHES IN DIAMETER, CONTROL CUCUMBERS THAT AVERAGED 14 INCHES IN LENGTH AND WEIGHED UP TO ONE POUND NORMALLY, WERE 21 INCHES LONG AND WEIGHED UP TO FOUR POUNDS WHEN GROWN IN A PYRAMID.**

**ENERGISED AIR IN THE PYRAMID ALSO APPEARS TO REPEL SMALL INSECTS, SO THERE IS NO NEED TO USE PESTICIDES WITHIN ITS GLASS WALLS. PEST-FREE PLANTS GROW**

TO MATURITY INSIDE, WITH NONE OF THE SETBACKS PLANTS SUBJECT TO NORMAL ATTACK FROM PESTS SUFFER IN THE GARDEN OUTSIDE. THIS ALSO MEANS THAT PYRAMID-GROWN VEGETABLES NEED NO WASHING UPON HARVESTING. THE MERE APPEARANCE OF SUCH PLANTS IS MORE APPETISING THAN THAT OF THOSE GROWN NORMALLY. GREENS ARE MORE VIVID AND MANY LEAVES HAVE A SHEEN WHICH IS NOTICEABLY ABSENT FROM PLANTS IN KITCHEN GARDENS.

AN EGG BROKEN OUT OF ITS SHELL AND LEFT INSIDE A PYRAMID WILL GRADUALLY CONGEAL AND BECOME LIKE PLASTIC AS THE PYRAMID ENERGY WORKS ON IT'S CELLS – HARMLESSLY. THE CELLS DO NOT DIE NOR INDUCE PUTRIFICATION. AFTER A PERIOD OF WEEKS OR MONTHS, THESE CONGEALED EGGS CAN BE RECONSTITUTED IN WATER TO THE POINT WHERE THEY CAN BE EATEN WITH COMPLETE SAFETY, AND THEY TASTE EVEN MORE DELICIOUS THAN EGGS PREPARED IN THE USUAL WAY.

ONE PECULIAR PHENOMENON WHICH I HAVE OBSERVED UNDER MY LARGE PYRAMID IS THE FORMATION OF DEW ON THE PLANTS INSIDE IT. THIS HAPPENS EARLY IN THE MORNING. DURING ALL MY YEARS OF EXPERIENCE WITH GREENHOUSES, I NEVER NOTICED DEW FORMING ON ANY PLANTS IN CONVENTIONAL GREENHOUSES. THIS DEW DISSIPATES GENTLY AS THE SUN GROWS STRONGER, EXACTLY AS IT WOULD OUTSIDE. ALSO, AFTER A RECENT THUNDERSTORM, MY PYRAMID CUCUMBERS GREW TWO TO TWO AND A HALF INCHES IN A MATTER OF HOURS.



I BUILT A PYRAMID PURELY FOR RESEARCH PURPOSES. FOR LARGE SCALE PRODUCTION, A PYRAMID WHICH IS MUCH GREATER IN SIZE WOULD BE NEEDED. WHEN BUILDING THE PROTOTYPE, I ENCOUNTERED AND OVERCAME VIRTUALLY ALL THE PROBLEMS ONE CAN EXPECT TO MEET IN A CONSTRUCTION OF THIS TYPE. BUILDING A PYRAMID IS NOTHING LIKE BUILDING A HOUSE, AND WHILE A SLIGHT DIFFERENCE IN MEASUREMENT CAN BE OVERCOME WHEN BUILDING A HOUSE, IT IS NOT POSSIBLE TO MAKE A MISTAKE IN A PYRAMID AND JUST CARRY ON BUILDING. THE PARTICULAR PIECE CONTAINING THE ERROR MUST BE PULLED OUT AND REPLACED CORRECTLY, AS ANY MISTAKE IS TRANSFERRED ALL THE WAY AROUND THE PYRAMID.

MY TEST PYRAMID IS 30 FEET HIGH AT THE PEAK. THE SIDES FROM BASE CORNER TO PEAK MEASURE 44 FEET 4.5 INCHES WITH A BASELINE OF 46 FEET 10.5 INCHES. IT CONTAINS TWO ADDITIONAL FLOORS ABOVE THE GROUND LEVEL, AND THE SUM OF THE AREAS OF THESE TWO FLOORS IS EQUAL TO, OR GREATER THAN, THAT OF THE GROUND FLOOR. THUS, THE TWO ADDITIONAL FLOORS VIRTUALLY DOUBLES THE GROWING AREA.

MY FIRST FLOOR IS 12 FEET ABOVE THE GROUND AND THERE IS A REASON FOR THIS. I CALCULATED THAT WHEN THE SUN WAS AT ITS HIGHEST POINT, THE FIRST FLOOR WOULD HAVE TO BE AT 12-FEET HIGH TO ALLOW THE SUN TO SHINE ON TO THE BACK NORTH EDGE OF THE GROUND FLOOR. THE 12-FOOT HEIGHT WAS PERFECT, BUT NOT ABSOLUTELY NECESSARY AS THERE ARE AS MANY PLANTS THAT GROW WELL IN SHADE AS THERE ARE THAT PREFER THE SUN. IN FUTURE, MY PYRAMID FLOORS WILL ALL BE 8 FEET APART AND I WILL PUT MY SUN-LOVING PLANTS IN THE SOUTHERN HALF AND MY SHADE-LOVING PLANTS IN THE BACK, NORTHERN HALF.

BY PLACING THE FLOORS AT EIGHT-FOOT INTERVALS THERE IS MUCH MORE GROWING AREA. WITH FLOORS INSIDE A PYRAMID, THE HIGHER UP THE FLOOR, THE HIGHER THE TEMPERATURE THERE. FOR EXAMPLE, IF THE GROUND FLOOR IS AT 75 DEGREES F. THEN THE SECOND FLOOR WOULD BE 90 DEGREES F. AND THE THIRD FLOOR WOULD BE ABOUT 105 TO 115 DEGREES F. AND EACH OF THE HIGHER FLOORS WOULD ALSO HAVE HIGHER HUMIDITY. THE GROUND FLOOR IS PERFECT FOR SUCH CROPS AS RADISHES, LETTUCE, CARROTS, BEETS, TOMATOES, ETC. THE SECOND FLOOR IS IDEAL FOR CUCUMBERS, SQUASH, PEPPERS AND PLANTS WHICH LIKE IT HOTTER AND MORE HUMID THAN THE GROUND FLOOR. THE TOP FLOOR CAN BE USED FOR LEMONS, ORANGES, FIGS, AND ESPECIALLY ORCHIDS.

THE PYRAMID DRAWS IN ITS OWN WATER ON THE GROUND FLOOR; I HAVE NEVER HAD TO WATER THAT LEVEL WHICH IS BUILT DIRECTLY ON THE GROUND. IT NEVER DRAWS TOO MUCH OR TOO LITTLE WATER, ALWAYS JUST THE RIGHT AMOUNT FOR GROWTH. NATURALLY, I HAVE TO PUMP WATER TO THE UPPER FLOORS, BUT BECAUSE THE GROUND FLOOR PROVIDES ITS OWN WATER SUPPLY, AT LEAST HALF OF MY PYRAMID IS WATERED AUTOMATICALLY FOR NO COST. I GROW RIGHT IN THE GROUND ON WHICH THE PYRAMID STANDS, BUT UPSTAIRS I HAVE PLACED WOODEN PLANTING TROUGHS ALL AROUND THE FLOORS, LEAVING ROOM TO WALK, AND I GROW PLANTS IN THESE. IT IS A MAJOR JOB GETTING SOIL TO THE UPPER FLOORS INITIALLY, BUT IT IS ONLY A ONE-TIME TASK. THE TROUGHS ARE 14 INCHES WIDE AND 16 INCHES DEEP AND HAVE A BOTTOM.

SPACE IN THE PYRAMID IS USED TO THE UTMOST. AT THE PERIMETER OF THE LOW AREAS I PLANT THE KIND OF PLANTS THAT NEED LITTLE HEADROOM, AND THEN PLANT THE BIGGER CROPS TOWARDS THE MIDDLE. THIS IS A MATTER OF COMMON SENSE, BUT USING VINE TYPE TOMATOES AND STRINGING THEM UP, ONE CAN WORK BETTER BETWEEN THE ROWS, AND IF THE LOWER LEAVES ARE REMOVED, THERE IS SUFFICIENT SPACE TO GROW LETTUCE, CABBAGE OR ANY LOW-LYING CROP IN BETWEEN THE TOMATO PLANTS. THE TRUSSES MAY BE LEFT ON THE TOMATOES AS THEY WILL NOT SHADE THE LOW-LYING PLANTS.

TO ENSURE A STEADY SUPPLY OF FOOD, IT IS WISE TO PLANT ONLY A FEW PLANTS OF EACH VARIETY AT INTERVALS, WHICH MEANS THAT IN THE BEGINNING IT WILL TAKE SEVERAL WEEKS TO REAP A FULL HARVEST, BUT AFTER THAT THERE WILL BE A CONTINUOUS YIELD. BY PLANTING IN SUCH A MANNER, THE GROWER WILL REAP ABOUT SIX FULL CROPS EACH YEAR. THIS METHOD APPLIES ONLY TO AN ENCLOSED PYRAMID, WHICH WOULD ALSO NEED HEATING IN THE WINTER. THE MEANS OF HEATING IS UP TO THE INDIVIDUAL. PERSONALLY, I USE A WOOD-BURNING STOVE BECAUSE I HAVE MY OWN SUPPLY OF WOOD. HOWEVER, A WOOD AND OIL COMBINATION IS BEST BECAUSE IT ALLOWS ONE TO BE AWAY FOR A COUPLE OF DAYS WHEN NECESSARY AND THEN IF THE WOOD FIRE GETS LOW, THEN THE OIL BURNER TAKES OVER.

IN ADDITION TO FOOD GROWTH, THE PYRAMID ALSO HAS APPLICATION IN FOOD PRESERVATION. I HAVE READ STATISTICS WHICH STATE THAT 40% OF ALL FOOD GROWN IN MY HOME COUNTRY OF CANADA IS LOST TO PUTRIFICATION, WHETHER AT THE PLACE OF STORAGE, IN TRANSPORT, IN WHOLESALE OR RETAIL, OR FINALLY IN THE HOME. REGARDLESS OF HOW THIS SPOILAGE OCCURS, THIS STATE OF AFFAIRS CAN BE REMEDIED. THE ENERGY OF THE PYRAMID WHICH GROWS PLANTS SO AMAZINGLY WELL CAN ALSO BE USED FOR THE MUMMIFICATION OF FOOD, WHICH CAN BE DEHYDRATED AND KEPT IN STORAGE FOR AN INDEFINITE PERIOD WITHOUT LOSING ANY OF IT'S TASTE OR NUTRITIONAL PROPERTIES. THERE ARE ABSOLUTELY NO ILL EFFECTS ON ANY FOOD STORED IN A PYRAMID. IN FACT, IN MANY INSTANCES IT IS FAR BETTER WHEN RECONSTITUTED THAN IT WAS IN THE FIRST PLACE. IT HAS THE WATER TAKEN OUT OF IT, BUT IT ALSO REPELS BACTERIA AND AS A RESULT, NOTHING WILL ROT IN A PYRAMID. FOR INSTANCE, I CANNOT MAKE A COMPOST HEAP INSIDE MY PYRAMID; I HAVE TO DO IT OUTSIDE, OTHERWISE THE INGREDIENTS IN THE COMPOST ALL REMAIN IN GOOD SHAPE AND WILL NOT BREAK DOWN. THE GRAIN GROWN IN MANITOBA TODAY IS A DIRECT DESCENDANT OF THE GRAIN FOUND IN THE GREAT PYRAMID, GRAIN THAT HAD BEEN THERE FOR CENTURIES AND HAD KEPT PERFECTLY.

MY PYRAMID IS MADE FROM ROUGH-SAWN TIMBER (NOT PLANED ALL OVER), CUT ON AND NEAR MY PROPERTY AND MILLED BY A NEIGHBOUR. BUT IT IS NOT NECESSARY FOR PYRAMIDS TO BE MADE OF WOOD. THEY CAN BE MADE OF ANY RIGID MATERIAL WHICH WILL SUPPORT PERMANENT GLAZING: CARDBOARD, STRONG WIRE, SHEET STEEL OR METAL, ANGLE IRONS, LOGS – ANYTHING WHICH WILL NOT CURVE AND WHICH CAN BE MEASURED PRECISELY AND FITTED.

PYRAMIDS DO NOT HAVE TO HAVE SOLID FACES. FOR MANY USES, OPEN-SIDED SHAPES WILL DO, SO LONG AS ALL THE CORNERS ARE JOINED AND THE ANGLES ARE CORRECT. MY PRESENT PYRAMID IS MADE OF TIMBER AND COVERED WITH HEAVY-GAUGE PLASTIC SHEET. FUTURE ONES WILL BE SHEATHED IN FIBREGLASS, ACRYLIC OR GLASS. THEY WILL BE CLOSED PYRAMIDS SOLELY BECAUSE I PROPOSE TO GROW FOOD DURING THE DEPTHS OF CANADA'S FRIGID WINTERS. MY PYRAMID FRAME IS BUILT MAINLY OF WOOD MEASURING TWO INCHES BY FOUR INCHES AND TWO INCHES BY EIGHT INCHES ROUGH SAWN. PYRAMIDS CAN BE BUILT ANY SIZE AS LONG AS THE PROPORTIONS ARE CORRECT.

THERE IS A VIDEO OF LES BROWN LECTURING ON THE WEB AND IT IS AT :  
<http://www.youtube.com/watch?v=P7VN6B2GjVI>

THESE NOTES : <http://www.free-energy-info.com/Pyramids.pdf>

VIDEO : <https://youtu.be/1p6BfulvmxU>

## ***THE TORQUE GENERATOR OF WILLIAM F. SKINNER***

IN 1939, WHICH WAS THE START OF WORLD WAR TWO, WILLIAM SKINNER OF MIAMI IN FLORIDA DEMONSTRATED HIS FIFTH-GENERATION SYSTEM WHICH WAS POWERED BY SPINNING WEIGHTS. HIS DEMONSTRATION CAN STILL BE SEEN AT <http://www.britishpathe.com/video/gravity-power> WHERE HE SHOWS HIS DESIGN POWERING A TWELVE FOOT LATHE, A DRILL PRESS AND A POWER HACKSAW, ALL SIMULTANEOUSLY.

THE NEWSREEL COMMENTATOR STATES THAT THE OUTPUT POWER WAS 1200% OF THE INPUT POWER, WHICH IS  $COP=12$ , BUT IT IS HIGHLY LIKELY THAT HE SHOULD HAVE SAID "TWELVE HUNDRED TIMES" RATHER THAN "1200%" BECAUSE HE THEN SAYS THAT WITH 746 WATTS OF INPUT POWER IT COULD POWER 3,500 HOMES. IF IT WERE  $COP=12$ , THEN EACH OF THOSE 3,500 HOMES WOULD RECEIVE LESS THAN 2.6 WATTS WHICH IS CLEARLY WRONG. AT THE MUCH MORE LIKELY  $COP=1200$ , EACH HOUSEHOLD WOULD RECEIVE ON AVERAGE, 255 WATTS, WHICH MIGHT JUST BE POSSIBLE IN 1939 WHEN FEW APPLIANCES WERE ELECTRIC.

ANYWAY, SKINNER'S IMPRESSIVE EQUIPMENT WAS BEING DRIVEN BY A SINGLE COTTON THREAD LOOP POWERED BY A 1/8 HORSEPOWER (93-WATT) ELECTRIC MOTOR, AND IT WAS POWERING HIS WHOLE WORKSHOP. IT LOOKED LIKE THIS :



THIS DESIGN HAS FOUR NEARLY VERTICAL SHAFTS, EACH BRACED TO GIVE ADDITIONAL RIGIDITY. THESE ROTATING SHAFTS PASS THEIR ROTATING POWER TO THE MECHANICAL OUTPUT DRIVE BELT SEEN ON THE LEFT. EACH OF THESE ROTATING SHAFTS HAS A HEAVY WEIGHT IN THE FORM OF A THICK, SHORT CYLINDER MOUNTED HIGH UP NEAR THE TOP OF THE SHAFT, AND WHAT IS PROBABLY AN EVEN HEAVIER WEIGHT IN THE FORM OF A LONG NARROWER CYLINDER ATTACHED NEAR THE BOTTOM OF THE SHAFT, AS SEEN JUST TO THE RIGHT OF THE OUTPUT DRIVE BELT. THESE FOUR IDENTICAL SETS OF SHAFTS WITH

**THEIR PAIRS OF WEIGHTS, SPIN TWO OR THREE TIMES PER SECOND AND PRODUCE THE WHOLE OF THE OUTPUT POWER.**



**AS FAR AS I AM AWARE, SKINNER NEVER PATENTED HIS DESIGN OR DISCLOSED HOW IT WORKED. HOWEVER, THE OPERATING PRINCIPLE IS VERY SIMPLE INDEED ALTHOUGH IT MAY TAKE YOU A WHILE TO GRASP HOW IT WORKS. YOU CAN CHECK THIS OUT FOR YOURSELF QUITE EASILY IF YOU HAVE ACCESS TO AN OLD-FASHIONED CHAIR WITH FOUR RIGID LEGS LIKE THIS ONE :**



**IF YOU TILT THE CHAIR OVER SO THAT IT IS BALANCED ON ONE LEG, YOU WILL NOTICE THAT THERE IS ALMOST NO EFFORT NEEDED TO KEEP IT IN THAT POSITION AS ALL OF ITS WEIGHT IS SUPPORTED BY THE FLOOR THROUGH ONE OF THE LEGS. NOW MOVE THE TOP OF THE CHAIR BY A VERY SMALL AMOUNT AND KEEP IT IN THAT POSITION. YOU WILL NOTICE TWO THINGS, FIRST, VERY LITTLE EFFORT WAS NEEDED TO MAKE THAT MOVE AND SECOND, THE CHAIR NOW SWINGS ROUND AND BECOMES STATIONARY UNDER THE NEW POSITION OF THE TOP OF THE CHAIR.**

**NOTICE TWO OTHER THINGS: THE CHAIR SWUNG ROUND BECAUSE OF YOUR MOVING THE TOP SLIGHTLY, AND YOU DID NOT SWING IT AROUND. IF THE CHAIR IS HEAVY, THEN THE**

AMOUNT OF ENERGY IN THE CHAIR SWINGING AROUND IS VERY MUCH GREATER THAN THE AMOUNT OF ENERGY WHICH YOU USED TO MOVE THE TOP OF THE CHAIR.

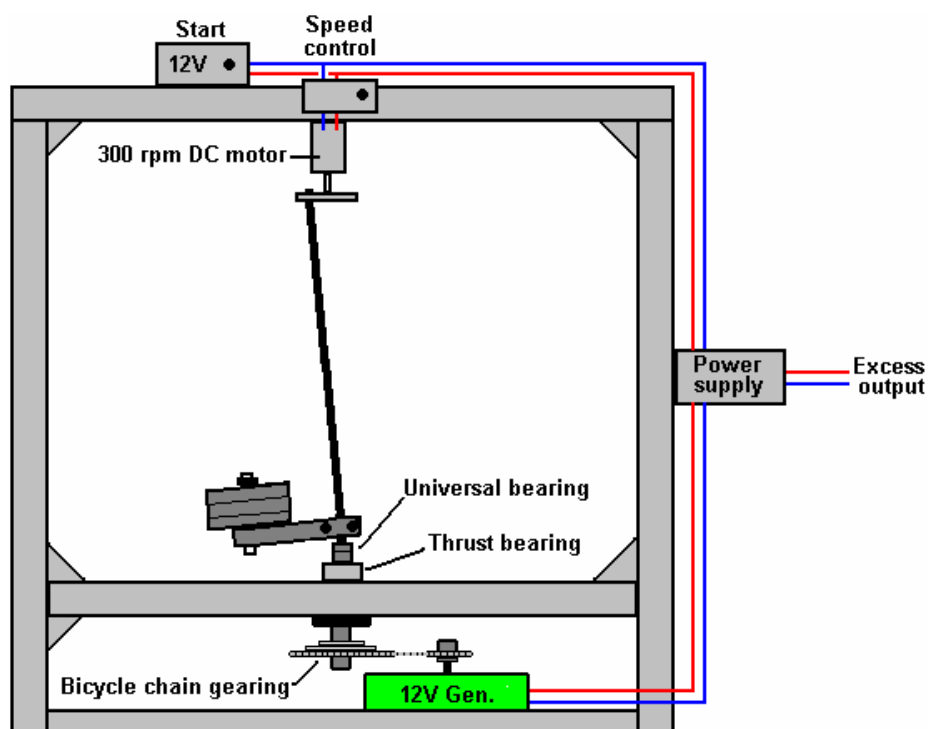
IF YOU KEEP MOVING THE TOP IN A TINY CIRCLE, THE CHAIR SPINS ROUND AS LONG AS YOU KEEP MOVING THE TOP. THE AMOUNT OF ENERGY IN THE SPINNING CHAIR IS VERY MUCH GREATER THAN THE ENERGY NEEDED TO MAKE IT SPIN. SO, WHERE IS THAT EXTRA ENERGY COMING FROM?

WHAT IS HAPPENING IS THAT THE CHAIR SWINGS ROUND UNDER GRAVITY. BUT BEFORE IT GETS THERE, YOU MOVE THE TOP OF THE CHAIR FURTHER AROUND AND SO THE CHAIR HAS TO SWING FURTHER,...BUT BEFORE IT GETS THERE YOU MOVE THE TOP FURTHER, ..... NO MATTER HOW HEAVY THE CHAIR IS, VERY LITTLE EFFORT IS NEEDED TO MOVE THE TOP – TRY IT FOR YOURSELF IF YOU DON'T BELIEVE ME.

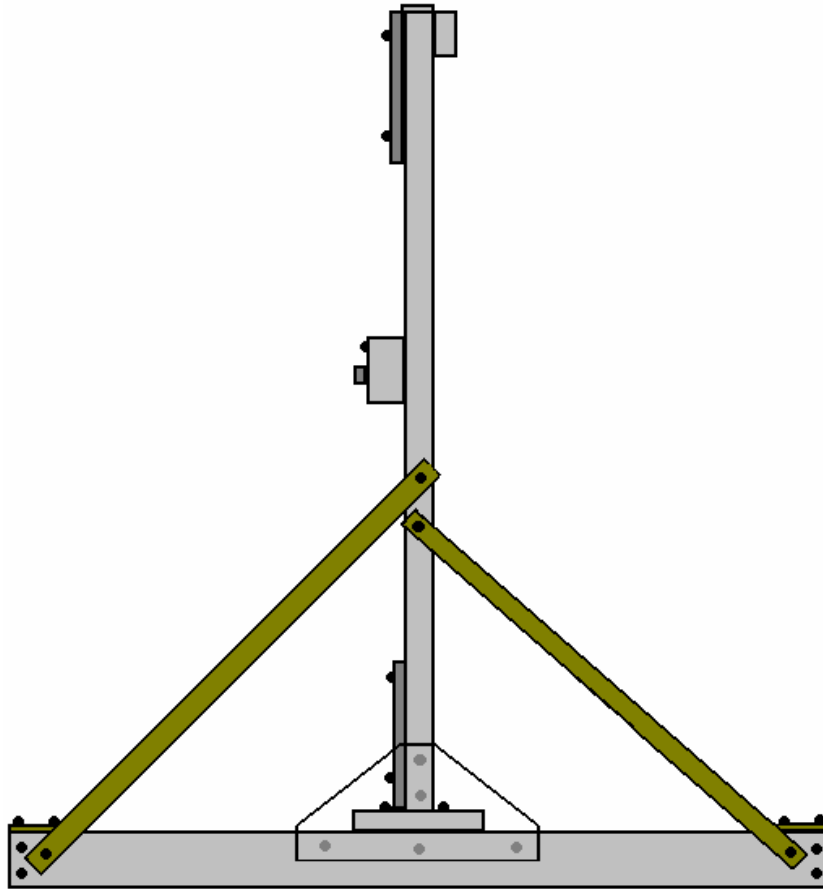
WILLIAM SKINNER HAD A MECHANISM AT THE TOP OF EACH OF HIS VERTICAL SHAFTS AND THAT MECHANISM KEPT MOVING THE TOP OF THE SHAFT IN A SMALL CIRCLE WHILE ALLOWING THE SHAFT TO ROTATE FREELY AT ALL TIMES. WHILE SKINNER USED A MOTOR OF ABOUT 100 WATTS, VERY LITTLE OF THAT MOTOR POWER WAS ACTUALLY USED AS THE DRIVE BAND WAS JUST A LOOP OF THREAD.

SKINNER'S DESIGN LOOKS COMPLICATED AND THAT IS BECAUSE HE KEPT RE-DESIGNING AND IMPROVING HIS DEVICE OVER AND OVER AGAIN. I THINK THAT THE FIRST THING THAT HE FOUND WAS THAT IF HE KEPT INCREASING THE SIZE OF THE WEIGHTS IN ORDER TO INCREASE THE OUTPUT POWER, THAT THE WHOLE STRUCTURE WOBBLLED, SO HE ADDED A SECOND SHAFT TO BALANCE OUT THE WOBBLING EFFECT. THEN IT OCCURRED TO HIM THAT HE COULD ADD ANOTHER TWO SHAFTS TO MAKE FOUR IN ALL, AND THAT WOULD DOUBLE THE OUTPUT POWER. THEN IT OCCURRED TO HIM THAT MOVING THE TOP OF A SHAFT WOULD BE EASIER IF THERE WAS AN INVERTED, BALANCING MECHANISM ABOVE THE TOP. THAT IS WHY THE DESIGN SHOWN IN THE VIDEO IS HIS FIFTH VERSION OF THE DEVICE.

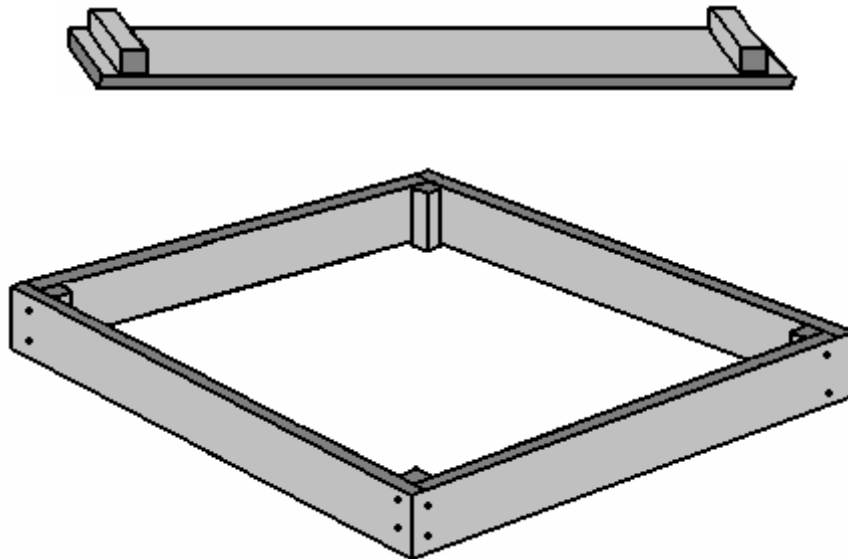
IT IS NOT NECESSARY TO TRY TO REPLICATE SKINNER'S FIFTH VERSION AS HIS FIRST VERSION IS PROBABLY QUITE ENOUGH TO BE USEFUL. I HAVE NOT BUILT ONE OF THESE, SO WHAT FOLLOWS IS JUST MY SUGGESTIONS ABOUT BUILDING SOMETHING WHICH MIGHT BE USEFUL. I WOULD SUGGEST SOMETHING LIKE THIS :



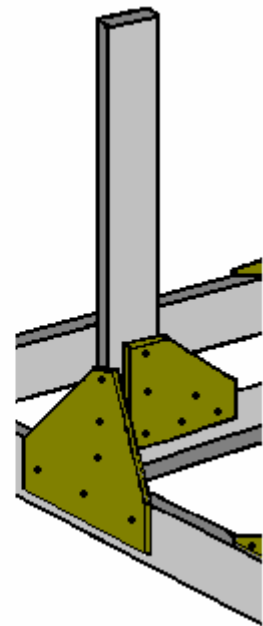
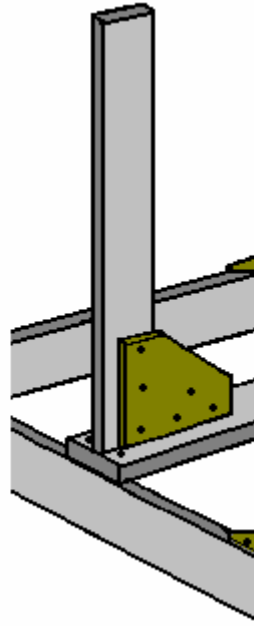
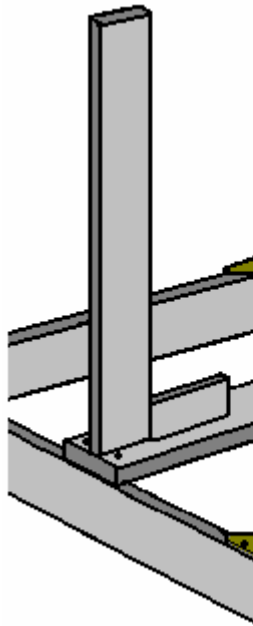
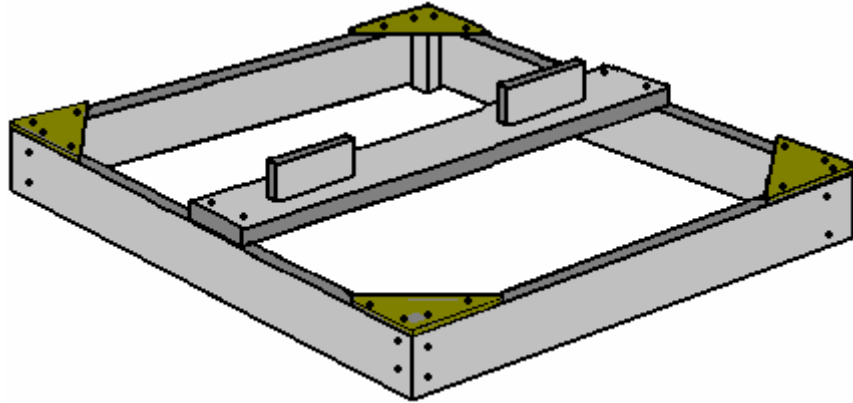
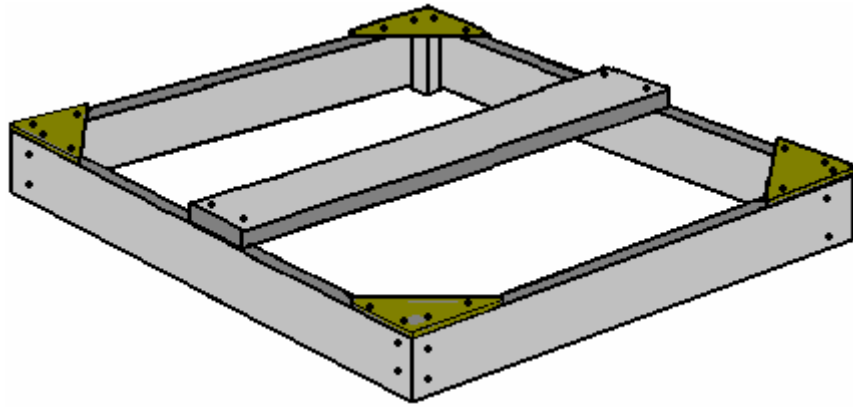
THE OBJECTIVE IS TO SPIN A GENERATOR TO PRODUCE AN OUTPUT WHICH IS LARGE ENOUGH TO POWER THE UNIT AND PROVIDE USEFUL EXCESS ELECTRICAL POWER TO OPERATE OTHER EQUIPMENT. FOR THIS, WE CAN BUILD A SIMPLE FRAME :

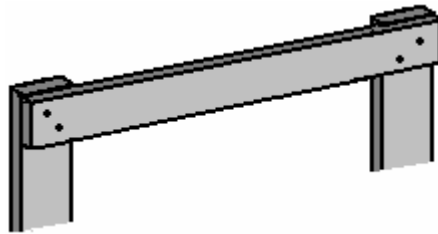
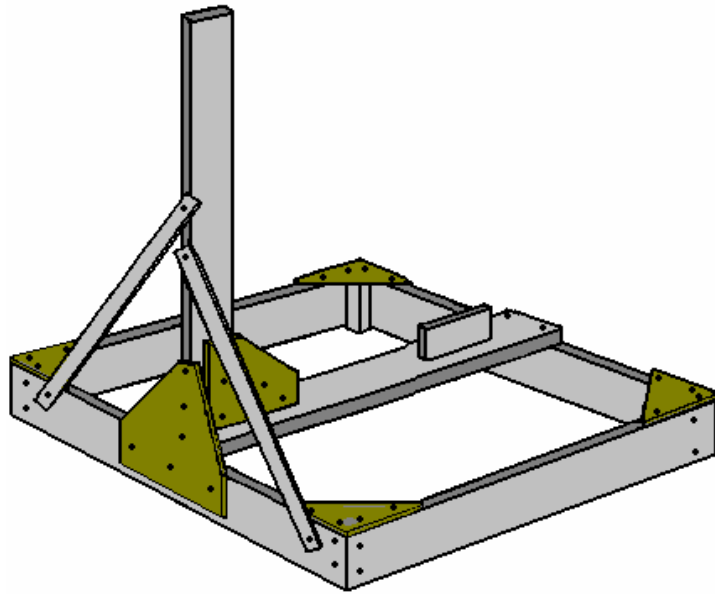


THE SUGGESTED MATERIALS AND DIMENSIONS ARE COVERED IN THE EBOOK WHICH IS AT <http://www.free-energy-info.com/PJKbook.pdf> BUT THE SUGGESTED CONSTRUCTION IS VERY SIMPLE :

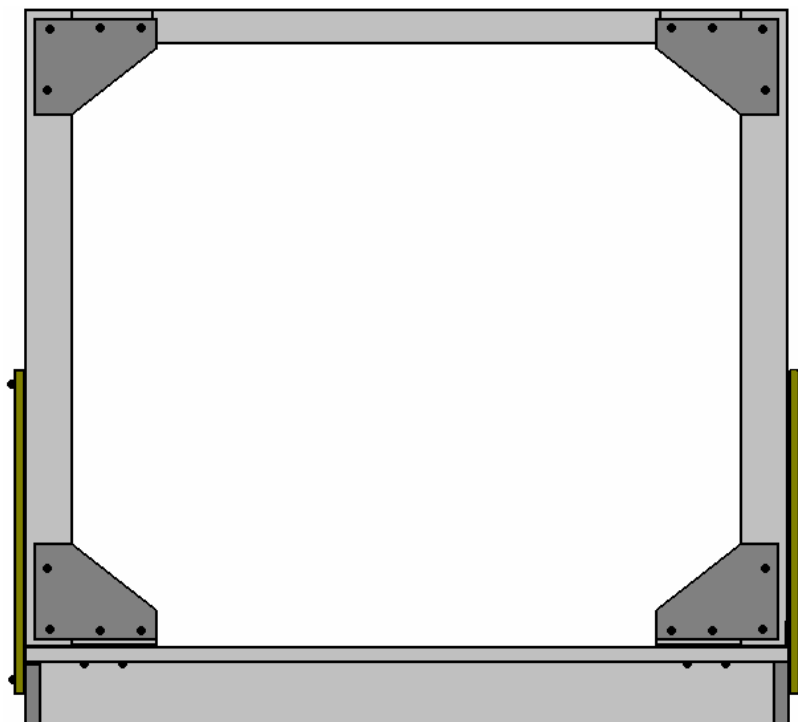


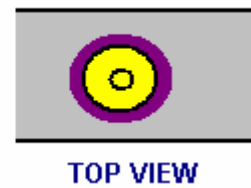
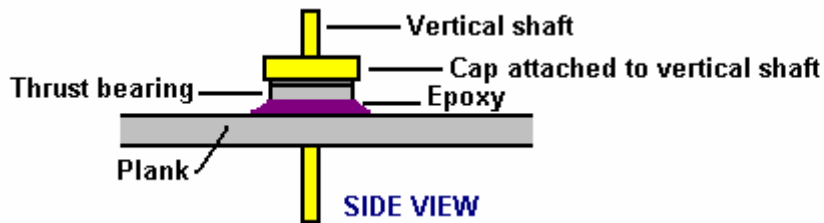
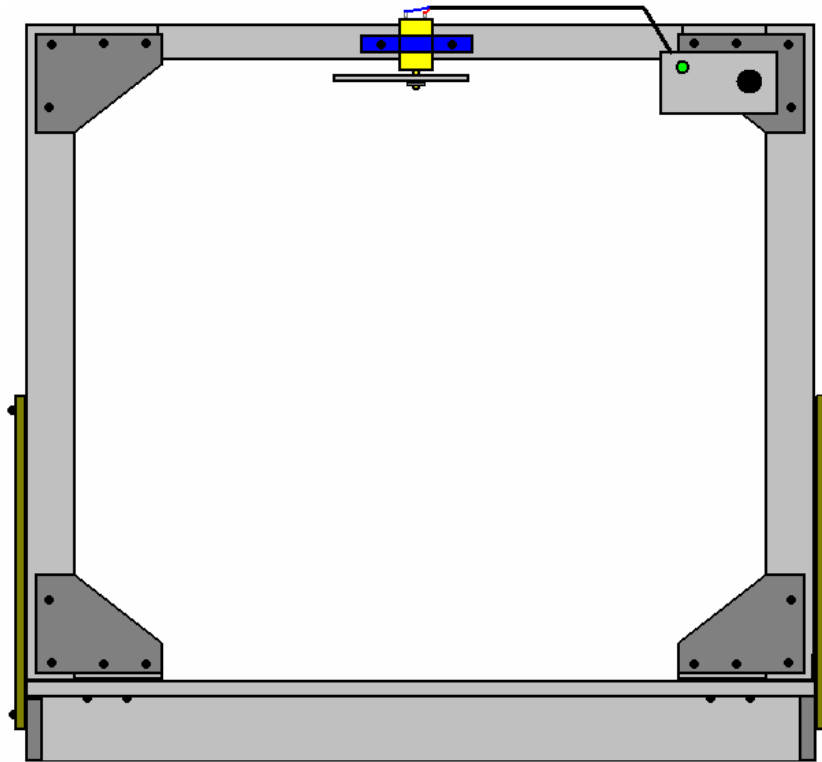






SEEN FROM ABOVE

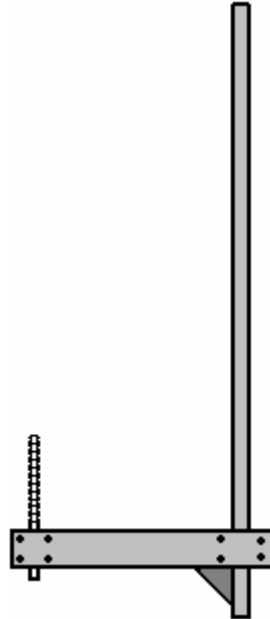




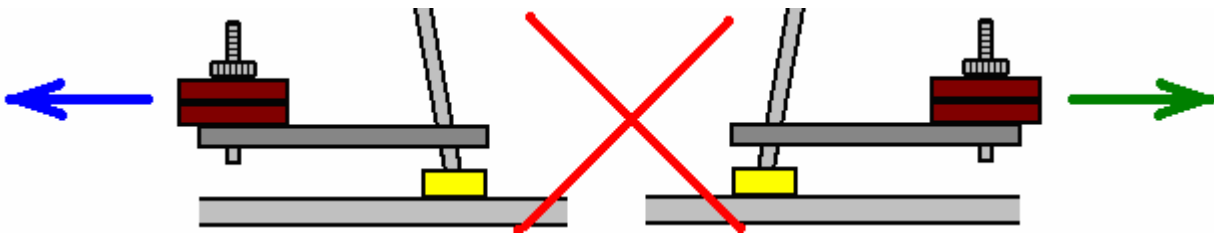
**HOWEVER, WE NEED A CHEAP AND READILY AVAILABLE SERIOUS WEIGHT TO BE SPUN AROUND AND THOSE ARE AVAILABLE AS EXERCISE EQUIPMENT :**



THEY CAN BE MOUNTED ON A STRONG ARRANGEMENT LIKE THIS :



I SUGGEST THAT THIS LEVER ARM IS MADE FROM STEEL BUT THAT IS CERTAINLY NOT ESSENTIAL. THERE IS A FEELING THAT A SPINNING WEIGHT WILL CAUSE A MAJOR SIDEWAYS FORCE LIKE THIS :

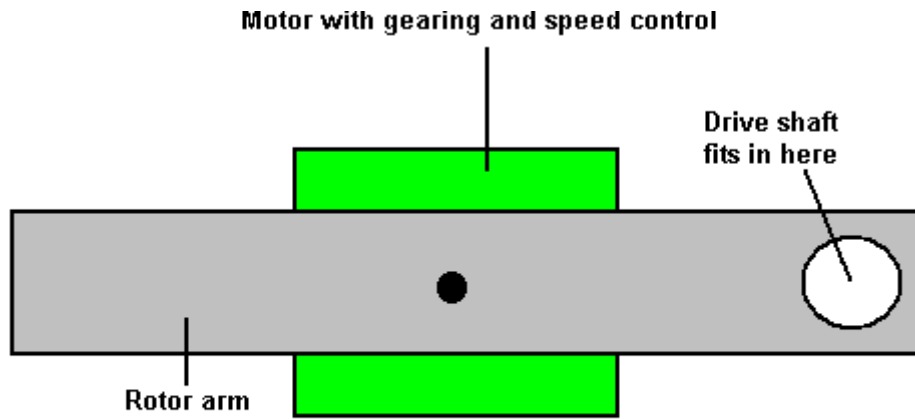


BUT THAT ONLY HAPPENS WHEN THE WEIGHT IS BEING SWUNG AROUND BY THE SHAFT. IN THIS CASE, THE WEIGHT IS ALWAYS 'FALLING' UNDER ITS OWN WEIGHT. THIS IS ACTUALLY QUITE DIFFICULT TO UNDERSTAND AS THE NORMAL REACTION IS THAT FOR SOMETHING TO FALL IT HAS TO GET CLOSER TO THE GROUND, BUT IN THIS CASE THE WEIGHT IS CONTINUOUSLY FALLING BUT IT FALLS SIDEWAYS RATHER THAN STRAIGHT DOWN.

TO GET THE TOP OF THE SHAFT TO ROTATE, A SMALL MOTOR CAN BE USED :

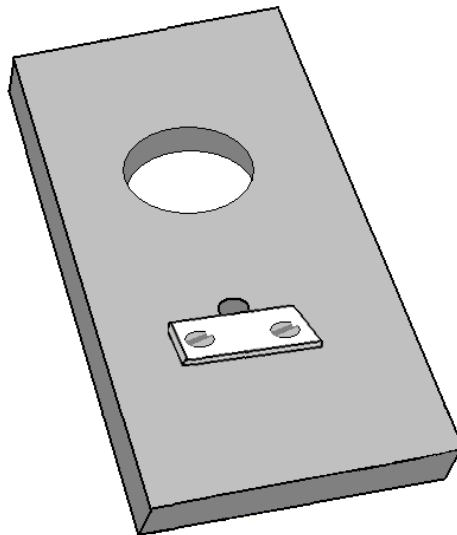


AND THAT MOTOR CAN TURN A SMALL ARM WHICH ATTACHES TO THE TOP OF THE DRIVE SHAFT LIKE THIS :



SEEN FROM UNDERNEATH

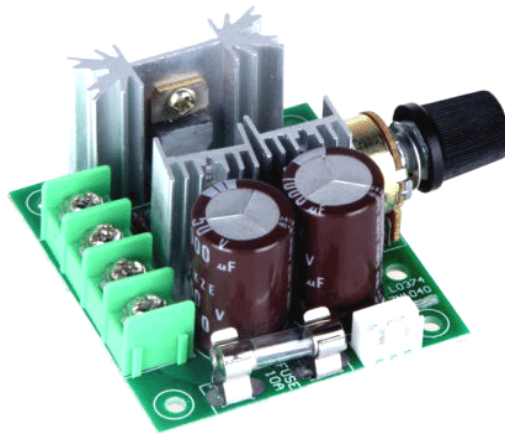
THERE IS NO NEED FOR A BEARING WHERE THE DRIVE SHAFT FITS INTO THIS DRIVE ARM AS THE ANGLE BETWEEN THE SLOPING DRIVE SHAFT AND THIS MOTOR ARM IS FIXED FOR ANY GIVEN SPEED OF ROTATION.



THE BOTTOM OF THE DRIVE SHAFT RESTS IN A THRUST BEARING AND A UNIVERSAL JOINT IS USED TO PASS THE TURNING POWER OF THE SLIGHTLY ANGLED DRIVE SHAFT THROUGH TO THE ELECTRICAL GENERATOR :



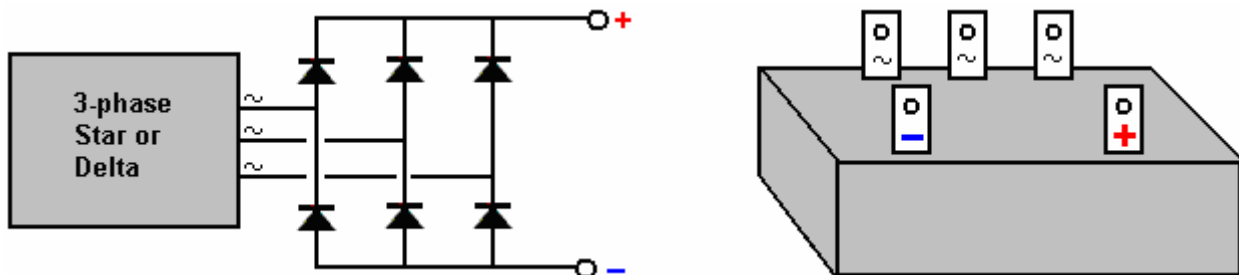
THE SPEED OF THE ROTATION OF THE TOP OF THE DRIVE SHAFT CAN BE CONTROLLED USING AN ORDINARY “DC MOTOR SPEED CONTROLLER” MODULE, AND THAT CAN TAKE THE STARTING SPEED GRADUALLY UP FROM STATIONARY TO THE DESIRED SPEED.



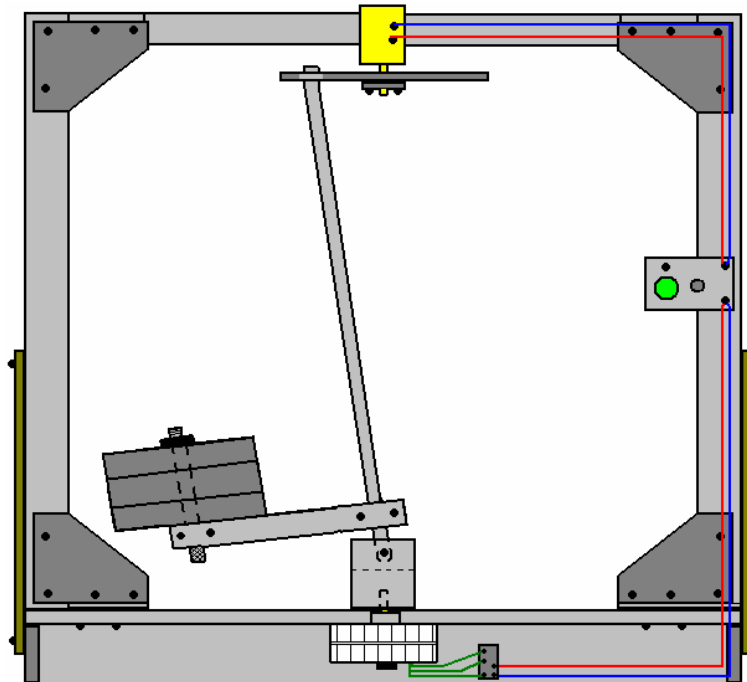
THE BEST GENERATOR IS PROBABLY ONE INTENDED FOR USE WITH A WIND-POWERED SYSTEM :



THIS ONE HAS A THREE-PHASE OUTPUT AND WHILE THAT SOUND A BIT DAUNTING IT IS EASILY HANDLED BY USING A THREE-PHASE DIODE LIKE THIS :

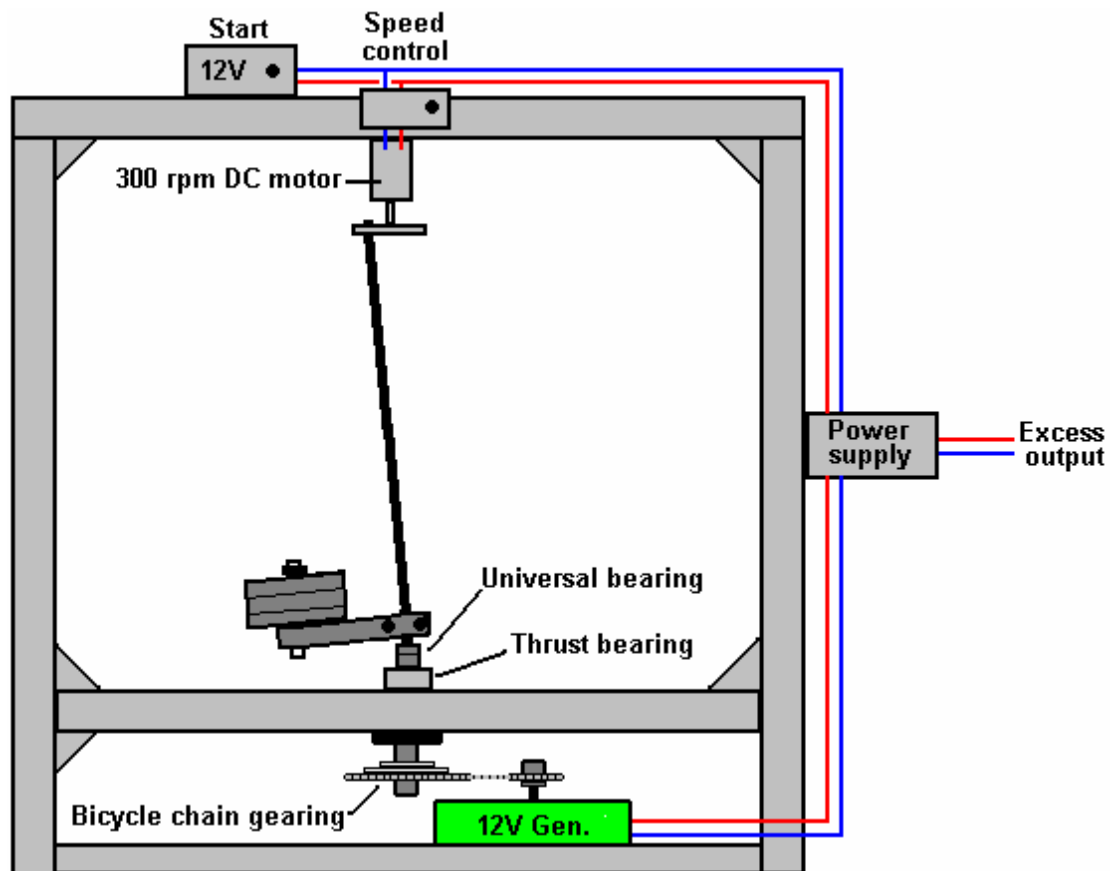


THREE-PHASE WIRING IS GENERALLY USED BECAUSE IT IS MORE EFFICIENT THAN THE MORE FAMILIAR SINGLE-PHASE SYSTEMS. IT CAN BE CONNECTED LIKE THIS :



THE GENERATOR OUTPUT PASSES TO THE DC SPEED CONTROLLER AND THEN ON TO THE SMALL MOTOR WHICH MOVES THE TOP OF THE DRIVE SHAFT.

HOWEVER, THE FASTER THE GENERATOR IS SPUN, THE GREATER THE ELECTRICAL OUTPUT, SO GEARING UP THE SPEED OF THE SHAFT ROTATION IS A GOOD IDEA, AND BICYCLE GEARING CAN BE USED FOR THAT :



THE SYSTEM NEEDS A BATTERY TO GET STARTED AS THE GENERATOR DOES NOT HAVE AN OUTPUT WHEN IT IS STATIONARY, SO A BATTERY BOX WITH TEN 1.2 NiMH AA-SIZE BATTERIES IN IT CAN BE USED.

**PLEASE REMEMBER THAT THIS IS ONLY A SUGGESTION AND I PERSONALLY HAVE NOT BUILT AND TESTED A UNIT OF THIS TYPE.**

**NOTES :** <http://www.free-energy-info.com/Skinner.pdf>

**VIDEO :** <https://youtu.be/YDMDZc8Trkc>



## MOTIONLESS FREE ENERGY

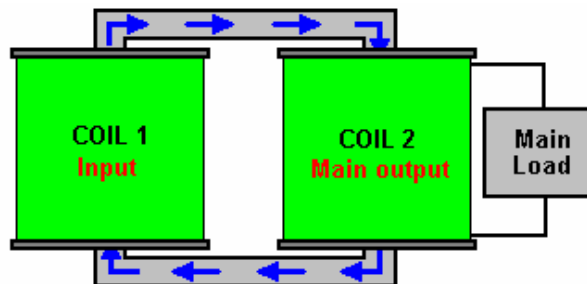
“THERE IS NO SUCH THING AS A FREE MEAL” IS A FAMOUS PHRASE. IT COMES FROM TWO TYPES OF PEOPLE : 1. BARE FACED LIARS OR 2. REALLY, REALLY IGNORANT PEOPLE. IT IS AS CORRECT AS STATING “WATER IS NOT WET” AND IT IS PART OF A CAMPAIGN WHICH HAS BEEN WAGED AGAINST US FOR MORE THAN 100 YEARS NOW. ONE OF THE MAIN DEVICES INTENDED TO FOOL US IS THIS :



THIS IS A TYPICAL TRANSFORMER AS USED IN MAINS POWER SUPPLIES, AMPLIFIERS, TELEVISIONS, ETC. AND IT REALLY IS INTENDED TO FOOL YOU INTO DISREGARDING OBVIOUS SOURCES OF FREE ENERGY SUCH AS SUNLIGHT, RAIN, WIND, GRAVITY . . . .

THE CUNNING PART OF A STANDARD TRANSFORMER IS THAT IT IS SYMMETRICAL AND SO IT IS FORCED TO OPPOSE ITSELF WHEN YOU TRY TO USE IT. BECAUSE IT OPPOSES ITSELF, AND ONLY *BECAUSE* IT OPPOSES ITSELF, IT CAN NEVER BE MORE THAN 100% EFFICIENT. WE ARE SURROUNDED BY IGNORANT PEOPLE AND LIARS, BOTH OF WHOM ASSURE US THAT MORE THAN 100% EFFICIENCY IS “IMPOSSIBLE”. THAT IS RIDICULOUS. IT IS TRUE FOR SYMMETRICAL TRANSFORMERS BUT ONLY FOR SYMMETRICAL TRANSFORMERS.

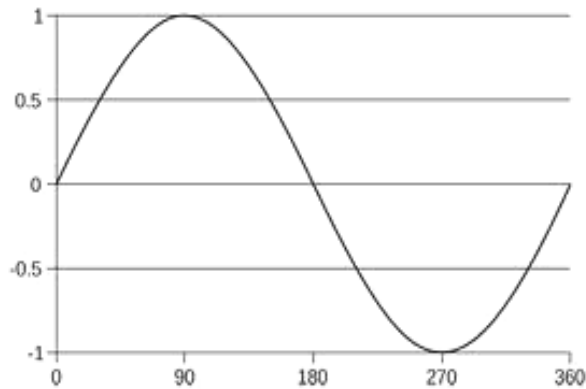
LET’S EXAMINE THE FACTS. THIS IS HOW A SYMMETRICAL TRANSFORMER WORKS :



WHEN AN ELECTRICAL PULSE OF INPUT POWER IS APPLIED TO COIL 1, IT CREATES A MAGNETIC WAVE, SHOWN BY THE BLUE ARROWS. THAT MAGNETIC WAVE FLOWS AROUND THE MAGNETIC FRAME OR “YOKE” AS IT IS CALLED.

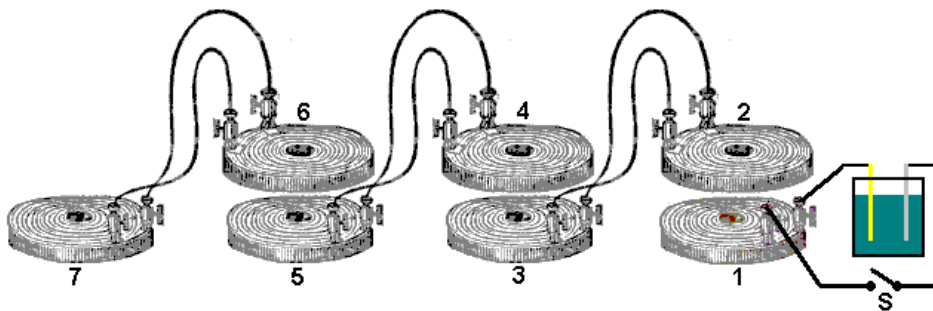
THAT MAGNETIC WAVE PASSES THROUGH THE CENTRE OF COIL 2 AND GENERATES A VOLTAGE IN COIL 2 WHICH IT PASSES ACROSS TO THE MAIN LOAD, PROVIDING IT WITH POWER.

UNFORTUNATELY, THIS ONLY HAPPENS WHEN THE VOLTAGE APPLIED TO COIL 1 IS CHANGING, AND SO, A TRANSFORMER IS FED “ALTERNATING CURRENT” WHICH CHANGES CONTINUOUSLY LIKE THIS:



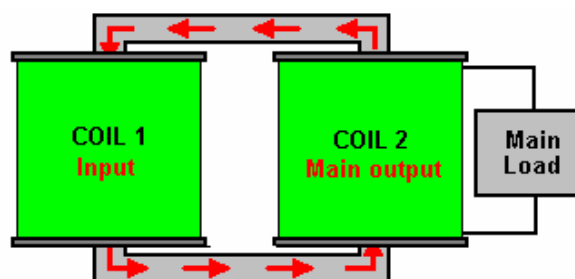
THIS IS A SINE WAVE AND FOR HALF OF THE TIME IT IS POSITIVE AND HALF OF THE TIME IT IS NEGATIVE. TRANSFORMERS ARE USED WITH THIS SORT OF CONTINUOUSLY CHANGING VOLTAGE.

IN HIS 1842 BOOK "MANUAL OF MAGNETISM" (<http://www.free-energy-info.com/Davis.pdf>) DANIEL DAVIS POINTS OUT THAT WHEN CURRENT FLOWING THROUGH A COIL IS CUT OFF, IT PRODUCES A BACK-EMF VOLTAGE PULSE WHICH CAN BE CASCADED THROUGH SEVERAL COILS, EACH COIL HAVING THE REVERSE DIRECTION CURRENT FLOW THROUGH IT COMPARED TO IT'S NEIGHBOURS :



THIS REVERSE PULSE FROM ANY COIL WHICH HAS CURRENT CUT OFF IS VERY IMPORTANT AND WHILE WE CAN USE IT VERY USEFULLY IN PULSE-CHARGING BATTERY CIRCUITS SUCH AS THOSE FROM 'Alexkor' OF RUSSIA, IT IS A MAJOR PROBLEM FOR A TRANSFORMER.

IN A TRANSFORMER, THAT MAGNETIC BACK-EMF PULSE RUNS BACK THROUGH THE TRANSFORMER FRAME AND OPPOSES THE OPERATION OF COIL 1, REQUIRING THE INPUT POWER TO HAVE TO BE BOOSTED TO OVERCOME IT. THAT BACK-EMF MAGNETIC FLOW IS SHOWN BY THE RED ARROWS IN THIS DIAGRAM :



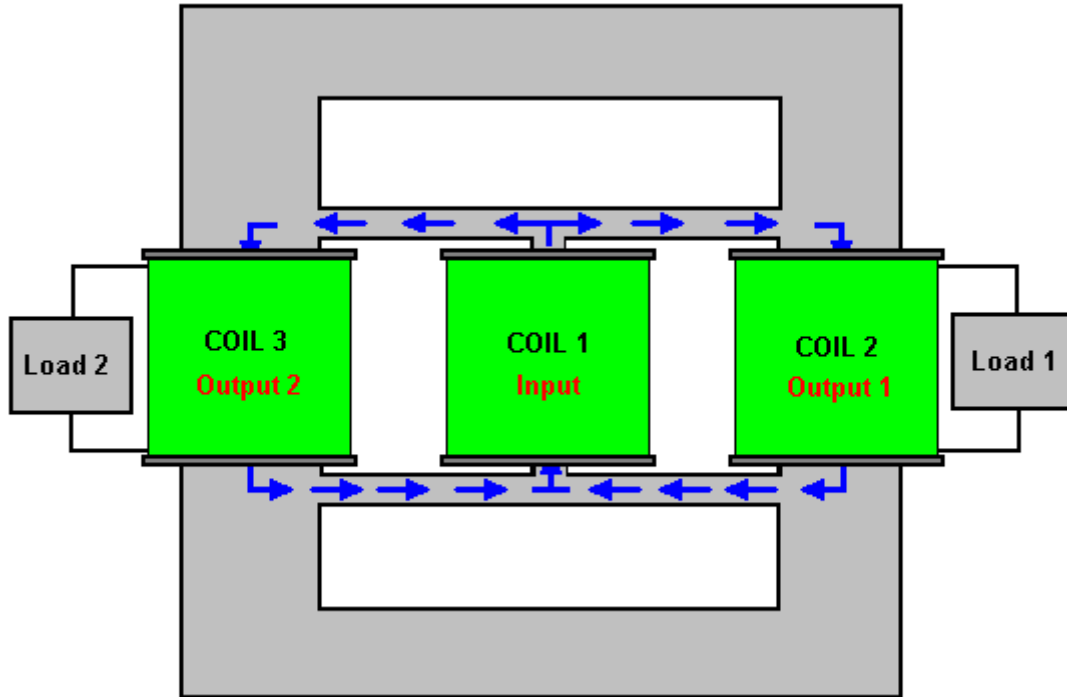
THE LARGER THE CURRENT DRAWN FROM COIL 2 TO POWER THE LOAD, THE LARGER THE INPUT POWER TO COIL 1 HAS TO BE. THAT IS STUPID TRANSFORMER DESIGN.

LIKE THE FLOW OF ELECTRICITY, MAGNETIC FLOW PASSES ALONG EVERY POSSIBLE FLOW PATH AVAILABLE. THE AMOUNT OF MAGNETIC FLOW ALONG ANY PATH DEPENDS ON THE MAGNETIC RESISTANCE OF THAT PATH, SO IF THE PATH HAS A LARGE CROSS-SECTIONAL AREA AND THE MATERIAL IS SUITABLE, THEN MAJOR MAGNETIC CURRENT WILL FLOW THROUGH IT.

THANE HEINS HAS MADE A HOME-BUILT ASYMMETRICAL TRANSFORMER AND SHOWN THAT IT HAS A POWER OUTPUT WHICH IS 39 TIMES GREATER THAN ITS INPUT POWER.

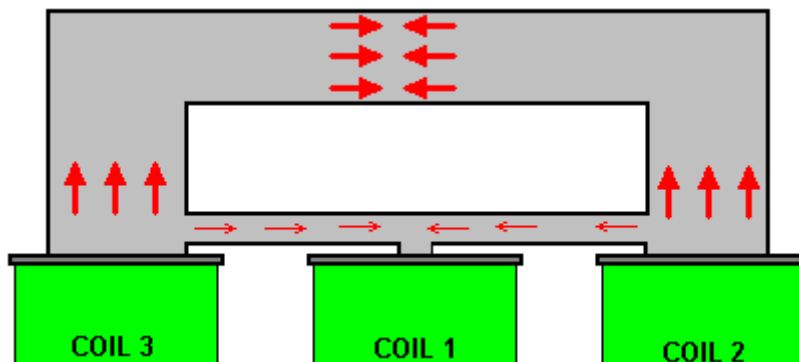
THINK ABOUT THAT CAREFULLY. YOU HAVE A UNIVERSITY PROFESSOR TELLING YOU THAT A TRANSFORMER HAS TO HAVE AN EFFICIENCY LESS THAN 100%, AND THEN YOU HAVE THANE HEINS DEMONSTRATING THIS TRANSFORMER PUTTING OUT 39 TIMES MORE POWER THAN IT IS SUPPLIED WITH. WHAT DOES THAT TELL YOU ABOUT WHAT THE UNIVERSITY PROFESSOR SAYS? OUR GOOD PROFESSOR IS EITHER VERY IGNORANT OR HE IS TELLING DELIBERATE LIES.

ANYWAY, LET'S EXAMINE THE TRANSFORMER OF THANE HEINS :



IT DOESN'T LOOK ALL THAT MUCH DIFFERENT. WE HAVE COILS 1 AND 2 AS BEFORE, BUT NOW WE HAVE AN ADDITIONAL OUTPUT COIL 3 AND A SECOND LOAD DRAWING CURRENT. AS BEFORE, A POWER PULSE INTO COIL 1 CAUSES MAGNETIC FLOW THROUGH COILS 2 AND 3 - VERY STRAIGHTFORWARD.

BUT, THE BIG DIFFERENCE COMES WITH THE BACK-EMF PULSE WHICH USED TO OPPOSE THE INPUT TO COIL 1. THAT MAGNETIC FLOW IS SHOWN BY THE RED ARROWS IN THIS DIAGRAM :



THE REVERSE MAGNETIC FLUX COMING OUT OF COIL 2 IMMEDIATELY ENCOUNTERS A JUNCTION IN THE FRAME. ONE PATH IS LOW RESISTANCE TO MAGNETIC FLOW AND THE OTHER PATH HAS A HIGHER MAGNETIC FLOW RESISTANCE. CONSEQUENTLY MOST OF THE UNWANTED MAGNETIC FLOW GOES ALONG THE OUTER, LOW-RESISTANCE PATH AND FAR LESS THAN USUAL GOES BACK TO COIL 1. THE RESULT IS SPECTACULAR.

HERE IS THANE'S HOME-BUILT TRANSFORMER :

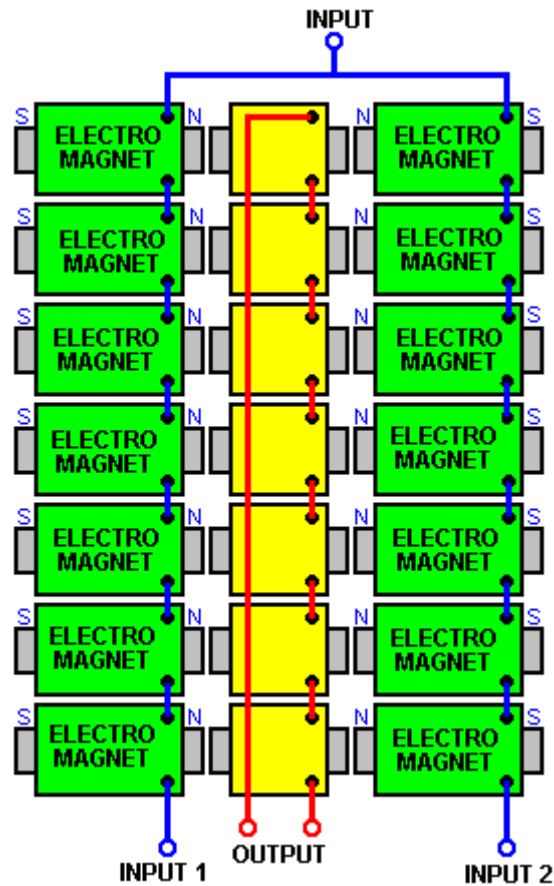


THE COIL 1 RESISTANCE IS 2.5 OHMS AND CARRIES 0,29 WATTS OF POWER. THE COIL 2 RESISTANCE IS 2.9 OHMS RECEIVING 0.18 WATTS OF POWER. RESISTIVE LOAD 1 HAS 180 OHMS, RECEIVING 11.25 WATTS OF POWER. COIL 3 HAS 2.5 OHMS AND RECEIVES 0.06 WATTS OF POWER. RESISTIVE LOAD 2 IS 1 OHM, RECEIVING 0.02 WATTS OF POWER.

OVERALL, THE INPUT POWER IS 0.29 WATTS AND THE OUTPUT POWER IS 11.51 WATTS, AND THAT IS A Coefficient Of Performance = 39.6 IN SPITE OF THE SIMPLE TRANSFORMER CONSTRUCTION.

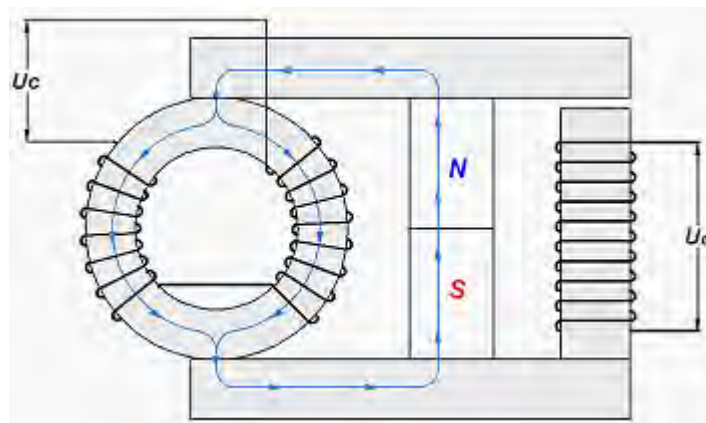
THAT IS AT VERY LOW POWER LEVELS. RAISING THE POWER LEVEL SOMEWHAT CAUSES A DROP IN THE PERFORMANCE, PRESUMABLY DUE TO THE TRANSFORMER FRAME NEEDING TO BE BIGGER. WITH AN INPUT POWER OF 106.9 MILLIWATTS IT PRODUCES AN OUTPUT POWER OF 403.3 MILLIWATTS WHICH IS 3.77 TIMES GREATER.

THE METHOD USED BY THANE HEINS IS NOT THE ONLY WAY TO AVOID THE BACK-EMF FEEDBACK OPPOSING THE INPUT POWER. AN EXCELLENT WAY WAS PRODUCED BY CLEMENTE FIGUERA WHO SPLIT THE TRANSFORMER INTO TWO PARTS, AND HIS TECHNIQUE HAS RECENTLY BEEN CONFIRMED BY A BENCH TEST, WHICH SHOWED THAT THE COUTPUT CURRENT HAS NO EFFECT AT ALL ON THE INPUT CURRENT. CLEMENTE'S ARRANGEMENT IS SHOWN HERE :

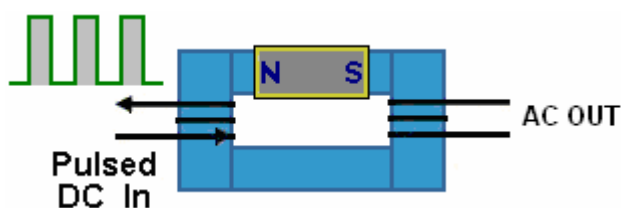


EACH EXTRA SET OF GREEN/YELLOW/GREEN ELECTROMAGNETS RAISES THE OUTPUT VOLTAGE AND CLEMENTE RAN HIS HOUSE ON THAT ARRANGEMENT, GETTING 500 VOLTS AS THE BASIC OUTPUT VOLTAGE.

ALSO, VALERI IVANOV OF BULGARIA HAS A DESIGN FOR A TRANSFORMER WHICH HAS A COP=2.4 ALTHOUGH HE USES A MAGNET :

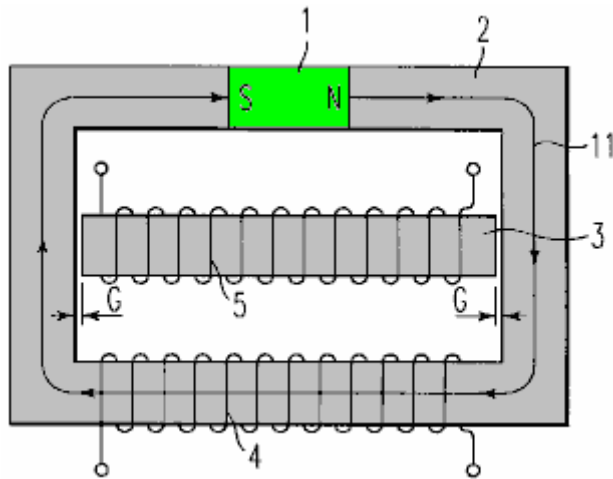


ALSO, USING A MAGNET IN JUST A SINGLE FRAME, IS LAWRENCE TSEUNG, WITH COP=1.5 OR MORE :



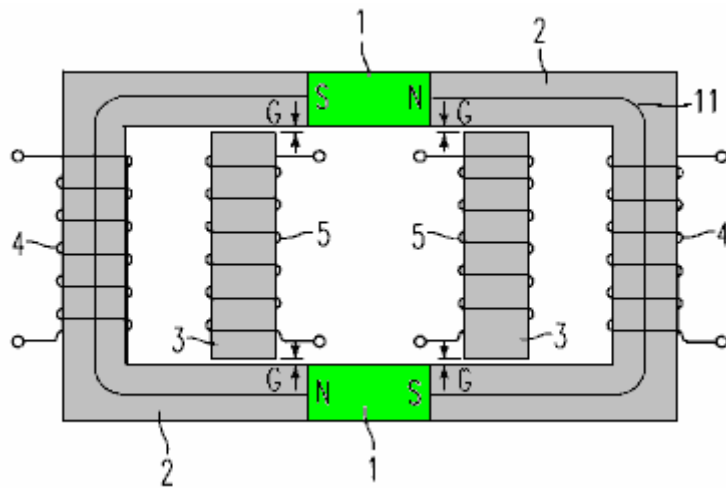
Permanent Magnet  
Enhances Magnetic  
Flux: COP > 1

KELICHIRO ASAOKA HAS A 1999 PATENT ON SEVERAL INVENTIVE TRANSFORMER DESIGNS :

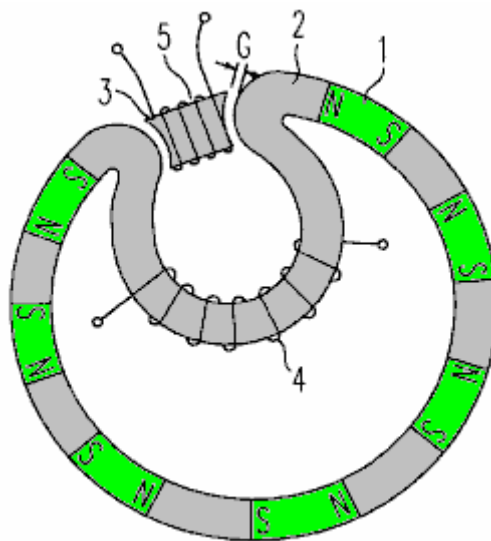


AGAIN, USING A MAGNET AND THIS TIME WITH TWO AIR GAPS IN THE PATH TO THE SECONDARY COIL "5", THIS IS AN EFFECTIVE DESIGN.

ALSO, WITH TWO MAGNETS (TWO YEARS BEFORE THE MEG DESIGN) :



OR THIS UNUSUAL DESIGN :



CERTAINLY, MAKING SYMMETRICAL TRANSFORMERS IS DEFINITELY NOT NECESSARY.

Video : [https://youtu.be/Z\\_-3Nz1ZuSI](https://youtu.be/Z_-3Nz1ZuSI)

**PLEASE UNDERSTAND CLEARLY THAT THIS PRESENTATION MUST NOT BE THOUGHT OF AS ENCOURAGEMENT THAT YOU SHOULD ATTEMPT TO CONSTRUCT ANYTHING SHOWN OR DISCUSSED HERE, AS THIS PRESENTATION IS FOR INFORMATION PURPOSES ONLY.**

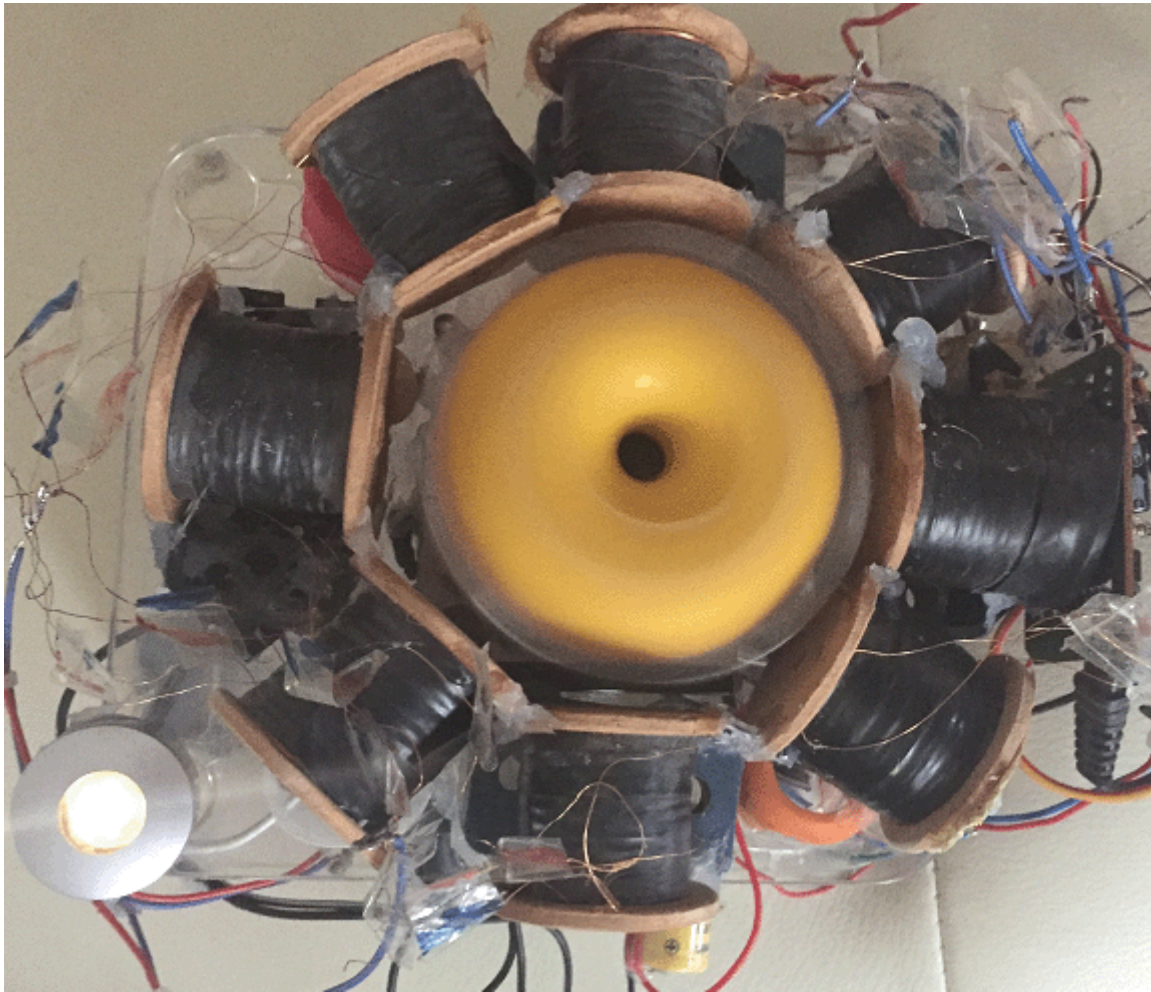
**WE LIVE SURROUNDED BY AN ENERGY FIELD OF EFFECTIVELY UNLIMITED POWER. WE CAN ACCESS THAT POWER FOR OUR OWN USE IN TWENTY DIFFERENT WAYS. HOWEVER, IF THE METHOD OF ACCESSING THAT ENERGY IS A PASSIVE ONE, THEN PLEASE UNDERSTAND THAT YOU, YOURSELF CAN AND WILL AFFECT THE FLOW OF POWER. THAT EFFECT IS CALLED THE "YOU" FACTOR.**

**A COPY OF THIS BRIEF INTRODUCTION CAN BE DOWNLOADED FREE FROM:**

**<http://www.free-energy-info.com/FESIG2.pdf>**

**MUCH MORE DETAIL ON ALL OF THE DEVICES MENTIONED IN THIS SUMMARY IS IN THE FREE DOWNLOAD : [www.free-energy-info.com/PJKbook.pdf](http://www.free-energy-info.com/PJKbook.pdf)**

**THE DENIS SABOURIN GENERATOR :**

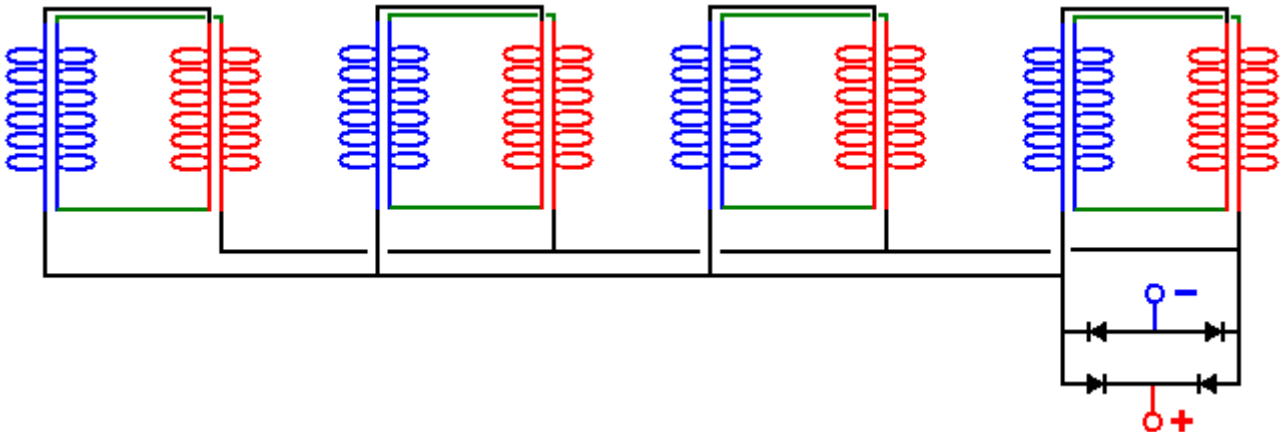


**THIS IS AN ULTRA-SIMPLE SELF-POWERED GENERATOR WHICH CAN CHARGE A CELL PHONE BATTERY. THE PLASTIC FLOAT FROM A COMMERCIAL FISHING NET IS USED AS THE ROTOR AND IT HAS FOUR N-52 GRADE NEODYMIUM 20 mm DIAMETER MAGNETS GLUED TO IT :**

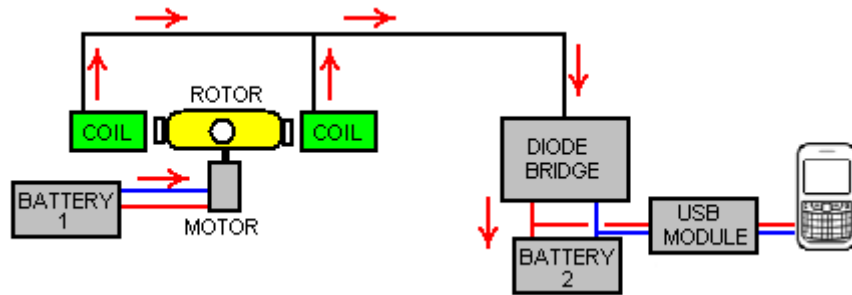




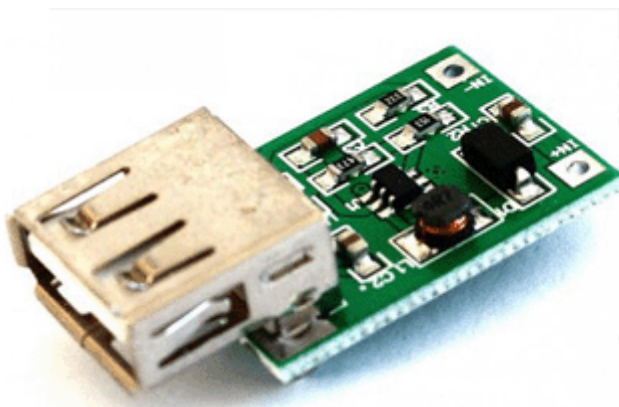
THE FLOAT IS GLUED TO A TINY MOTOR WHICH IS UNDER-RUN IN ORDER TO CUT THE DRIVE CURRENT TO A MINIMUM, AND THE MOTOR/FLOAT ASSEMBLY IS SURROUNDED BY EIGHT COILS, EACH OF WHICH HAVE BEEN WOUND WITH TWO STRANDS OF 50 GRAMS OF 0.19 mm DIAMETER ENAMELLED COPPER WIRE AS SHOWN ABOVE. THE COILS ARE CONNECTED IN PAIRS IN A MOST PECULIAR WAY :



EVEN WITH THE ROTOR ONLY SPINNING AT 60 RPM, THESE COILS HAVE A SUBSTANTIAL OUTPUT.



THIS IS USED TO CHARGE A 3-VOLT LITHIUM BATTERY WHICH POWERS A COMMERCIAL MODULE WHICH PRODUCES A USB OUTPUT. THAT OUTPUT SUITS THE MOBILE PHONE WITH ITS BATTERY PROTECTION CIRCUITRY AGAINST OVER CHARGING.



0.9-5V to 5V 600mA DC-DC Step Up Boost Voltage Converter Module with USB Output

BUY ANY 3 items/packs - get it with 1st CLASS MAIL FREE

★★★★★ 1 product rating

Condition: New

Quantity:

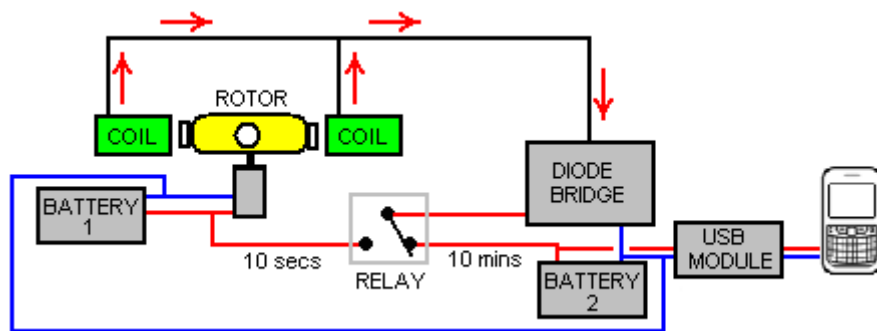
More than 10 available  
626 sold

£1.88

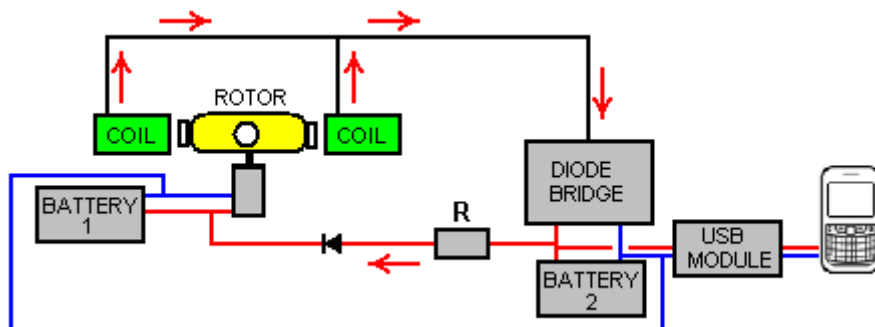
Buy it now

THE PROBLEM HERE IS THAT THE 3-VOLT LITHIUM BATTERY WHICH RUNS THE ROTOR DRIVING MOTOR IS DISCHARGING STEADILY, ALTHOUGH THAT BATTERY CAN SUSTAIN THE DRIVE MOTOR FOR A VERY LONG TIME.

MR. SABOURIN DEALT WITH THAT PROBLEM BY DIVERTING THE CHARGING CURRENT TO THE BATTERY AND FEEDING IT TO BATTERY 1 ABOVE FOR 10 SECONDS EVERY TEN MINUTES :



HOWEVER, THAT REQUIRES A SWITCHING BOX FOR WHAT IS A VERY SIMPLE TASK, AND SO HE CHANGED THE ARRANGEMENT TO FEED A SMALL AMOUNT OF THE CHARGING CURRENT CONTINUOUSLY TO THE DRIVE BATTERY, ELIMINATING THE SWITCHING BOX :



ENDING UP WITH A VERY SIMPLE ARRANGEMENT WHICH IS SELF-POWERED AND WHICH CAN CHARGE MOBILE PHONE BATTERIES. THE ROTOR IS MOUNTED ON A 5-VOLT FAN :



Tested For ASUS A8H A8He A8J A8Ja A8Jc Series  
CPU Cooling Fan KFB0505HHA

£7.34

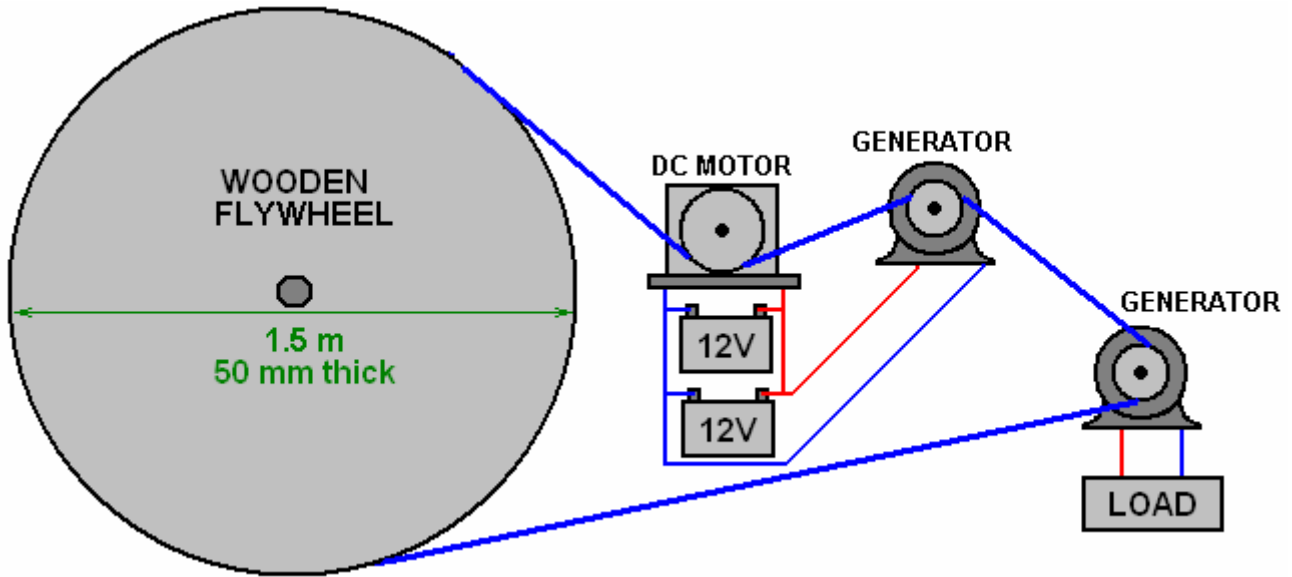
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THIS DESIGN WAS THOUGHT UP AND BUILT BY A MAN WHO DOES NOT UNDERSTAND ELECTRONICS AND WHO REFUSES TO WIND ANY COILS. HE TENDS TO USE COMPONENTS SALVAGED FROM OLD EQUIPMENT AND TOYS. THIS DESIGN RELIES ON THE BATTERY CHARGING PROTECTION CIRCUITS INSIDE THE MOBILE PHONE AS THEY USE LITHIUM BATTERIES WHICH ARE VERY HARD TO CHARGE SAFELY.

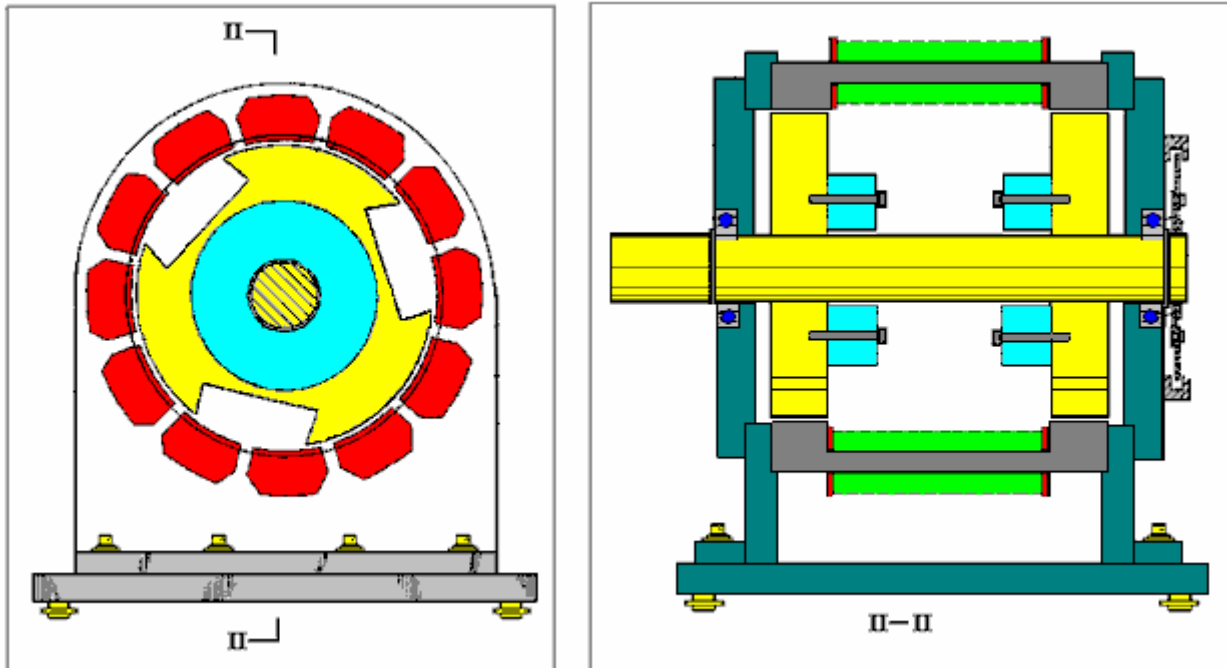
AROUND 1990 Mr WILSON OF TEXAS CASUALLY TRIED TO LINK SOME CAR COMPONENTS WITH AN OLD TABLE AND FOUND THAT WHAT HE HAD WAS VERY USEFUL :



THE TABLE WAS FIVE FEET IN DIAMETER AND TWO INCHES THICK AND SO WILL HAVE WEIGHED AT LEAST 60 KILOGRAMS WHICH IS MORE THAN CHAS CAMPBELL'S VERY EFFECTIVE FIRST FLYWHEEL SYSTEM. Mr WILSON USED A VERY CASUAL AND INEFFECTIVE METHOD OF CONNECTING THE DRIVE BAND TO THE TABLE TOP AS HE JUST TAPPED IN A FEW NAILS AT AN ANGLE TO FORM A ROUGH V-SHAPED CHANNEL. HIS GENERATOR RAN SELF-POWERED FOR THREE DAYS BEFORE THE NAILS FELL OUT.

**TERUO KAWAI'S ELECTRIC MOTOR (Patent US 5,436,518 July 1995)**

**THIS IS AN INTERESTING DESIGN WITH TWELVE STATOR ELECTROMAGNETS SURROUNDING A ROTOR WHICH HAS THREE MAGNETIC POLES.**

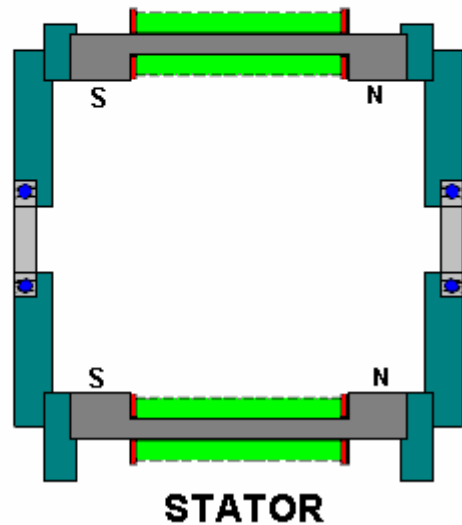
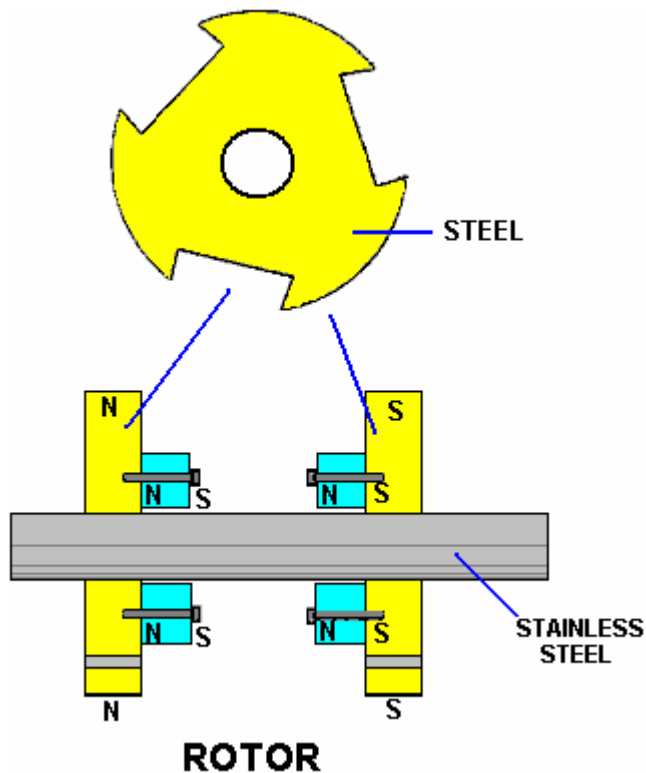


**THE LEFT HAND DIAGRAM SHOWS THE FRONT FACE OF THE MOTOR WITH ITS TWELVE RED ELECTROMAGNETS SURROUNDING AN UNUSUALLY SHAPED STEEL ROTOR COLOURED YELLOW.**

**THE RIGHT HAND DIAGRAM SHOWS A CROSS-SECTION THROUGH THE MOTOR. THE BLUE RECTANGLES ARE PERMANENT MAGNETS WHICH TERUO DESCRIBES AS BEING "A RING OF MAGNETS" ALTHOUGH IT IS NOT IMMEDIATELY OBVIOUS WHY A RING MAGNET SHOULD NOT BE USED. PERHAPS NONE WERE AVAILABLE WITH THE NECESSARY DIAMETERS. HE ALSO SAYS THAT THE MAGNETS ARE BOLTED TO THE ROTORS.**

**THE FRAME MATERIAL SUPPORTING THE BALL BEARINGS AND ELECTROMAGNETS IS ANY SUITABLE NON-MAGNETIC MATERIAL, AND WHILE ALUMINIUM IS MENTIONED, I WOULD STRONGLY RECOMMEND THAT NEITHER ALUMINIUM NOR COPPER IS USED, ESPECIALLY SINCE PLASTIC CHOPPING BOARD MATERIAL IS VERY CHEAP AND VERY ROBUST.**

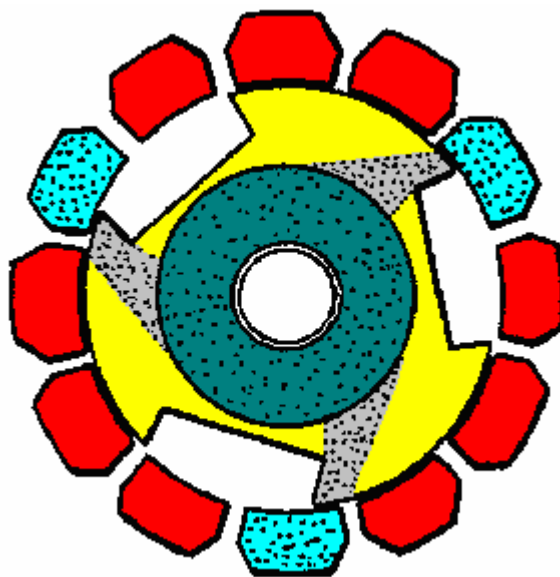
**THE ROTOR AND STATOR ARE SOMEWHAT UNUSUAL :**



BECAUSE OF THE INNER MAGNETS, EACH OF THE STEEL ROTORS HAVE THREE POLES EACH – THREE NORTH POLES AT ONE END AND THREE SOUTH POLES AT THE OTHER END. THE AXLE OF THE MOTOR IS GOOD QUALITY STAINLESS STEEL AS THAT IS BOTH ROBUST AND NON-MAGNETIC.

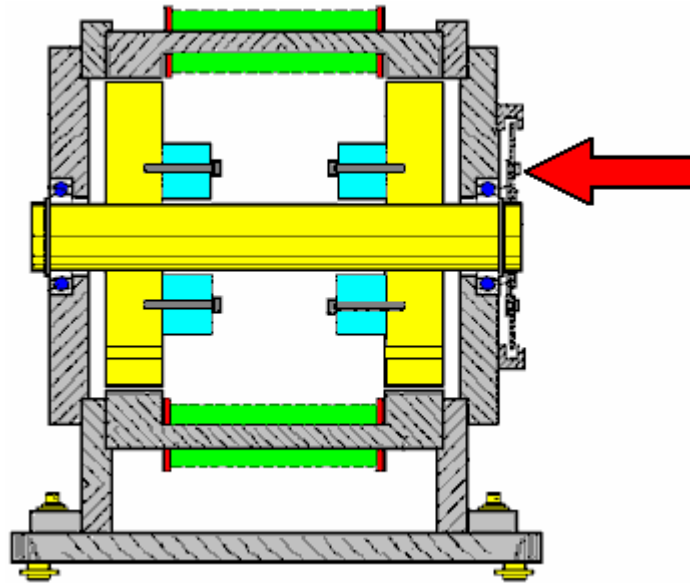
THE SWITCHING OF THE SUPPLY CURRENT IS SIMILAR TO THAT OF THE CHARLES FLYNN MAGNET MOTOR AND TERUO'S MOTOR HAS BEEN MEASURED WITH COP>3 WHICH MEANS THAT THE OUTPUT POWER IS MORE THAN THREE TIMES THAT OF THE INPUT POWER.

THE INPUT POWER SWITCHING OCCURS FOUR TIMES PER REVOLUTION AND IT OCCURS JUST AS THE LEADING EDGE OF A ROTOR ARM APPROACHES AN ELECTROMAGNET :



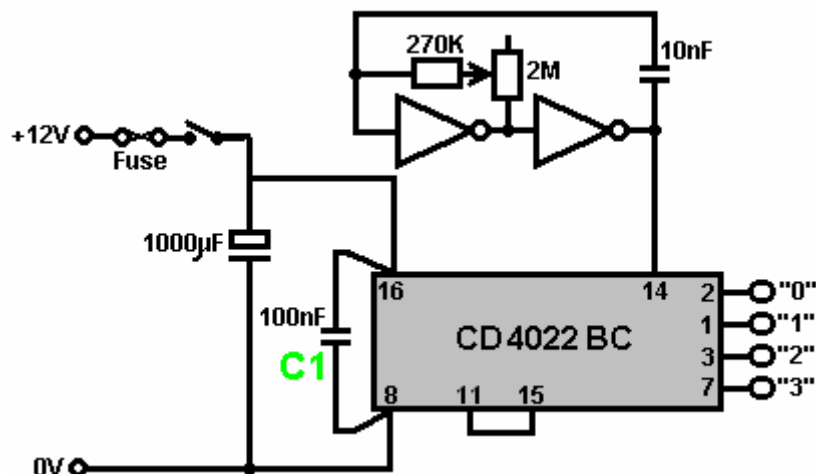
HERE, THE ELECTROMAGNETS SHOWN IN BLUE HAVE JUST BEEN POWERED UP AND THIS DRAWS THE YELLOW ROTOR ARMS IN A CLOCKWISE DIRECTION TOWARDS THE POWERED UP ELECTROMAGNETS. THE MAGNETIC FORCE IS IN ATTRACTION MODE AND WHILE THIS IS SLIGHTLY LESS POWERFUL THAN REPULSION MODE, IT DOES NOT HAVE AN ADVERSE EFFECT ON THE MAGNETS.

THE SWITCHING SUGGESTED IS THE SAME AS FOR THE CHARGES FLYNN MOTOR, NAMELY, AN OPTICAL TIMING DISC MOUNTED ON THE AXLE SHAFT :



WHILE TERUO SHOWS VARIOUS ALTERNATIVE VERSIONS OF THE MOTOR, HE STATES THE RESULT OF A TEST RUN ON THE MOTOR : "PURE STEEL WAS USED AS A MAGNETIC MATERIAL. IT WAS 30 mm THICK WITH 'TEETH' OF 218 mm DIAMETER AND NOTCHES OF 158 mm DIAMETER. A 1000 GAUSS FERRITE MAGNET WAS USED AS THE PERMANENT MAGNET. ELECTRIC POWER OF 19.55 WATTS WAS APPLIED TO THE ELECTROMAGNETS (17 VOLTS AT 1.15 AMPS). THIS PRODUCED 100 RPM WITH A TORQUE OF 60.52 Kg-cm AND AN OUTPUT OF 62.16 WATTS."

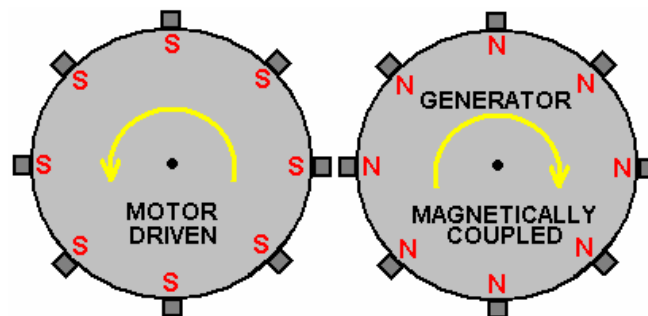
WHILE AN OPTICAL SWITCHING DISC CERTAINLY WORKS WELL, IT WILL PRODUCE A ROTATIONAL SPEED WHICH IS DETERMINED BY THE POWER SUPPLY AND THE LOAD. I SUGGEST THAT A SIMPLE POWER SUPPLY WOULD GIVE SPEED CONTROL :



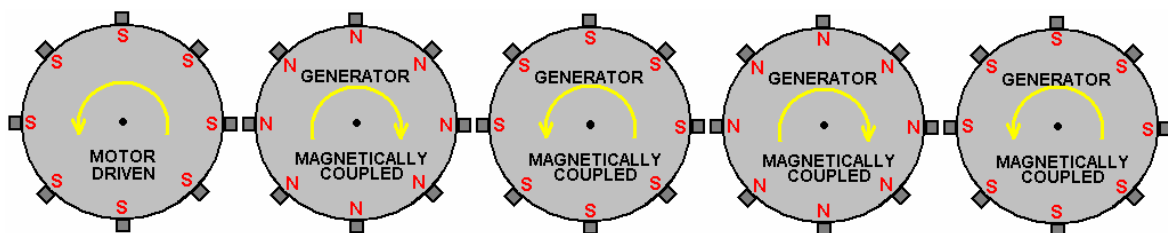
**RAOUL HATEM HAS POWERED HOTELS WITH HIS ARRANGEMENT OF EQUIPMENT BUT “SCIENTISTS” DISPUTE HIM BECAUSE THEY SAY THAT WHAT HE DOES IS “IMPOSSIBLE”.**



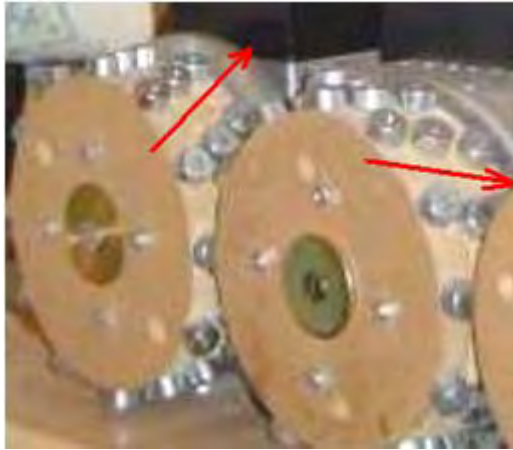
**IN 1955 RAOUL COUPLED A MOTOR WITH 36 RARE EARTH MAGNETS TO A GENERATOR WITH A SIMILAR 36 RARE EARTH MAGNETS. HE CLAIMS THAT THE SPINNING MAGNETS CREATE A COP=10 FREE ENERGY GAIN. HIS SYSTEM IS SHOWN HERE :**



**THE RAPIDLY ROTATING MAGNETIC FIELD DRAWS IN EXTRA ELECTRONS FROM THE SURROUNDING ENVIRONMENT, AND THE RAPID SERIES OF PULSES WHICH EACH ROTOR RECEIVES ALSO DRAWS ENERGY FROM THE GRAVITY FIELD. THE REALLY BIG GAINS ARE GOT WHEN ONE MOTOR DRIVES SEVERAL GENERATORS :**



**THE ROWS OF MAGNETS ARE ANGLED IN OPPOSITE DIRECTIONS ON EACH ROTOR SO THAT THEY MATCH PERFECTLY, MAGNET ON MAGNET IN EVERY ROW :**



**WHILE THE MAGNETS ARE EXPENSIVE, THIS IS A VERY SIMPLE WAY TO ACCESS FREE ENERGY.**



**THE THREE KILOWATT EARTH BATTERY**

**WE AUTOMATICALLY THINK OF NEW HIGH-TECH DESIGNS BEING NEEDED FOR ACHIEVING HIGH LEVELS OF USABLE POWER NOT CONNECTED TO THE MAINS SUPPLY GRID, BUT THAT IS NOT ALWAYS THE CASE. HERE IS A DESIGN WHICH IS LOW-TECH BUT YET IS VERY EFFECTIVE, IT COMES FROM FRENCHMAN MICHAEL EMME IN HIS 1893 PATENT :**

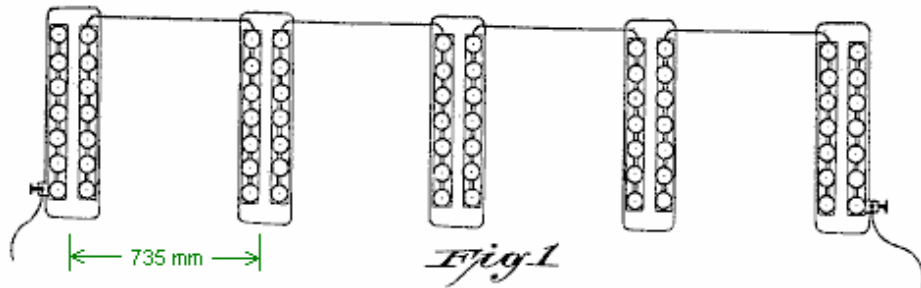


Fig. 1 shows five elements connected in a chain. This view is from above with the rectangles indicating holes in the ground where each hole contains seven separate pairs of electrodes.

**EACH ELEMENT IS BURIED IN ITS OWN PREPARED BODY OF EARTH AND PROVIDED THAT THE GAP BETWEEN THE ELEMENTS IS MUCH SMALLER THAN BETWEEN SEPARATE CHAINS OF ELEMENTS ONE PIECE OF GROUND CAN ACCOMMODATE MANY CHAINS WHICH CAN THEN BE CONNECTED IN SERIES FOR GREATER VOLTAGE OR IN PARALLEL FOR GREATER CURRENT.**

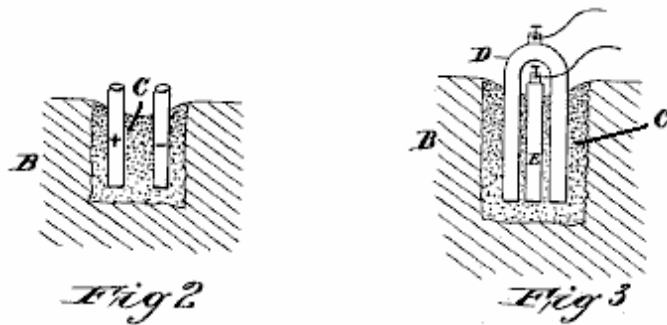


Fig. 2 and Fig. 3 show how individual electrodes are inserted into the prepared soil "C" which is surrounded by untreated ground "B". Electrode "D" is made of iron and "E" is made of carbon.

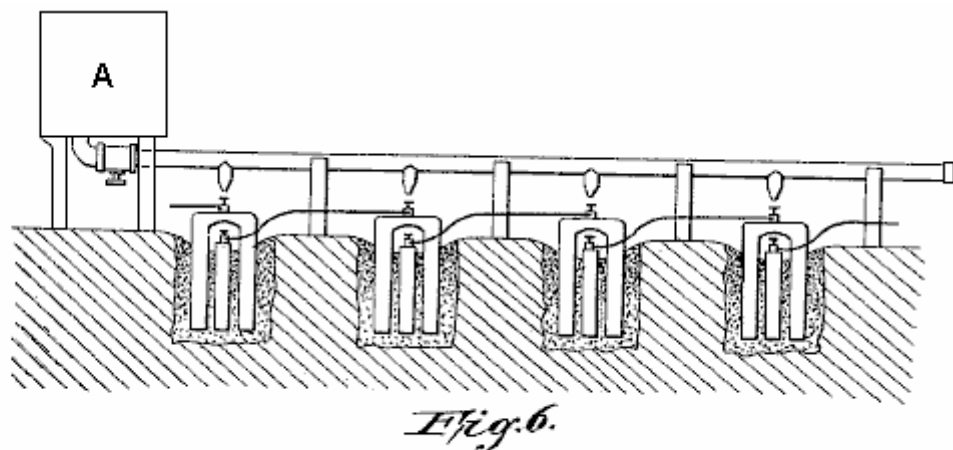


Fig. 6 shows a convenient method for periodically moistening the prepared soil areas.

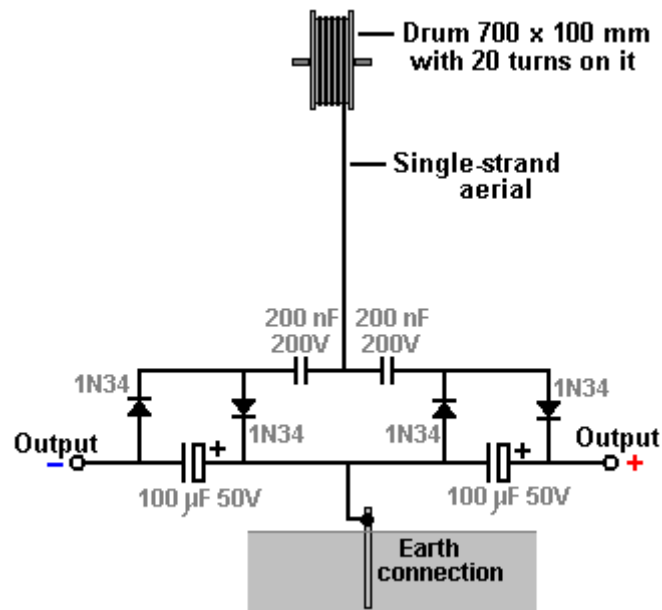
**THE GROUND AROUND THE STEEL AND CARBON ROD ELECTRODES IS SATURATED WITH A SOLUTION WHICH IS RICH IN OXYGEN, CHLORINE, BROMINE, IODINE OR FLUORINE OR WITH A SALT OF AN ALKALI.**

**IF THE STEEL ELECTRODES ARE REPLACED WITH MAGNESIUM THE RESULT IS EXCELLENT WITH EACH CELL PRODUCING 2.25 VOLTS.**

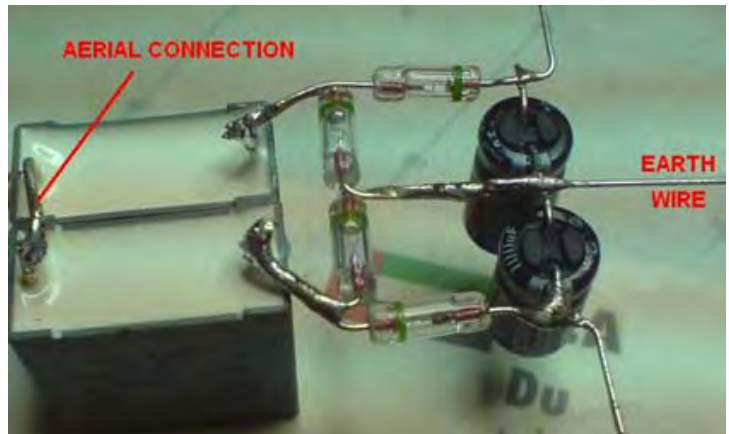
**WITH 12 VOLTS OR 24 VOLTS BEING THE DESIRED TARGET VOLTAGE, A POWERFUL INVERTER CAN OPERATE HEAVY LOAD HOUSEHOLD EQUIPMENT SUCH AS A WASHING MACHINE OR TUMBLE DRYER.**

**THE GROUND AROUND THE ELECTRODES NEEDS TO BE KEPT WET BY OCCASIONAL ADDITIONAL AMOUNTS OF ELECTROLYTE.**

IT IS PERFECTLY POSSIBLE TO DRAW ENERGY FROM AN AERIAL / EARTH COMBINATION. YOU DON'T WANT TO HAVE A TUNED CIRCUIT LIKE A RADIO RECEIVER AS THAT RESTRICTS THE POWER TO LESS THAN THAT OF A RADIO STATION. INSTEAD, YOU WANT A WIDEBAND RECEPTION WHICH PULLS IN POWER FROM THE SUN-CHARGED IONOSPHERE AND FROM THE 200 LIGHTNING STRIKES PER SECOND AROUND THE WORLD. THERE ARE MANY EXCELLENT DESIGNS FROM DEVELOPERS SUCH AS [JES ASCANIUS](#), [ALEXKOR](#) AND [DRAGAN KLJAJIC](#). A BASIC RECEPTION MODULE CAN BE :

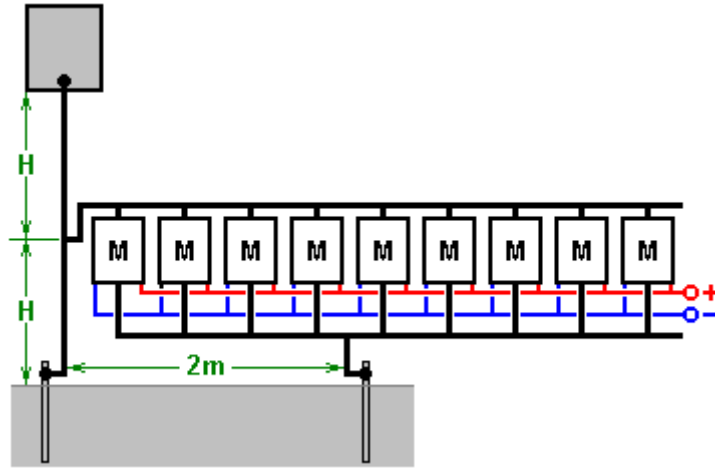


JES ASCANIUS USES A SHINY, INSULATED METAL PLATE ACTS AS A GOOD RECEIVER ANTENNA:

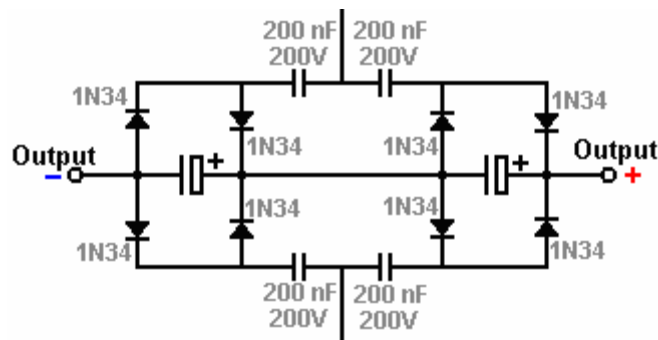


THIS ALUMINIUM PLATE IS 800 x 600 x 2 mm AND IS SUSPENDED INSIDE THE ATTIC WHERE JES LIVES. HE BUILT HIS RECTIFIER MODULES USING SALVAGED PARTS WHICH IS WHY HIS CAPACITORS ARE SO VERY LARGE.

THE RECEPTION MODULES "M" ARE IDEALLY CONNECTED HALF WAY BETWEEN THE AERIAL AND THE EARTH AND THEY CAN BE ADDED LIKE THIS :



GERMANIUM DIODES ARE NORMALLY USED AND THE BASIC RECEPTION MODULE CAN BE IMPROVED LIKE THIS :

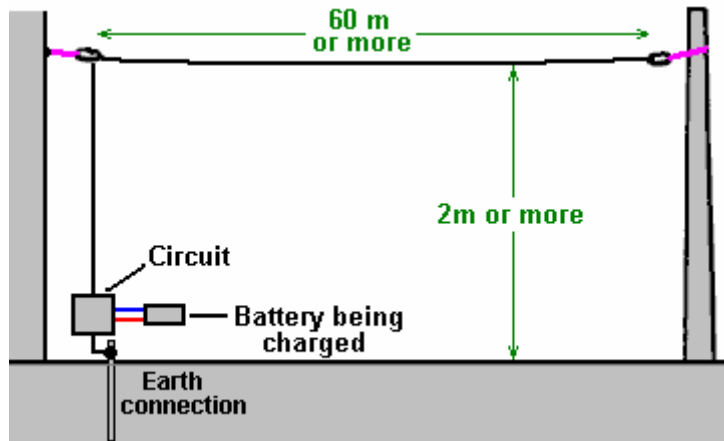


THIS ARRANGEMENT DOUBLES THE OUTPUT FOR EACH MODULE. DRAGAN PUT 100 OF THE ORIGINAL MODULES TOGETHER ON TWO BOARDS LIKE THIS AND GOT 100 WATTS OUTPUT FROM THEM :



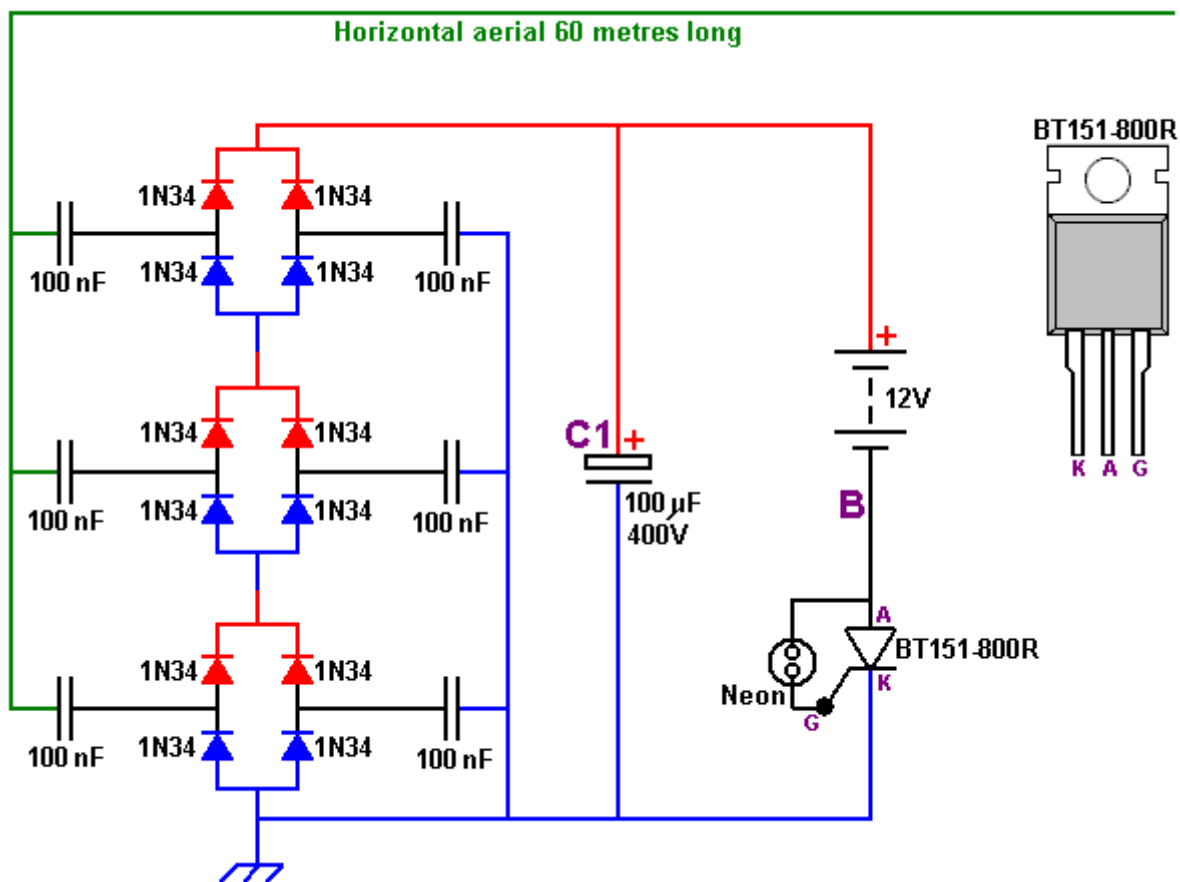
**THE ALEKOR AERIAL SYSTEM**

ALEKOR ALSO USES AN AERIAL TO CHARGE BATTERIES IN THE 1.5-VOLT TO 6-VOLT RANGE. HIS AERIAL IS MAINLY HORIZONTAL :



THE LONGER THE AERIAL OR THE GREATER THE NUMBER OF AERIALS USED, THE GREATER THE RATE OF CHARGING. IT IS SUGGESTED THAT THE AERIAL IS CONNECTED BETWEEN THE EAVES OF A HOUSE AND A NEARBY TREE. THE AERIAL WIRE SHOULD BE 0,5 mm DIAMETER OR THICKER AND IT NEEDS TO BE INSULATED FROM ITS SUPPORTS – PLASTIC CORD CAN BE USED FOR THAT.

A MORE POWERFUL VERSION OF HIS CIRCUIT WHICH CAN CHARGE 12-VOLT BATTERIES IS :



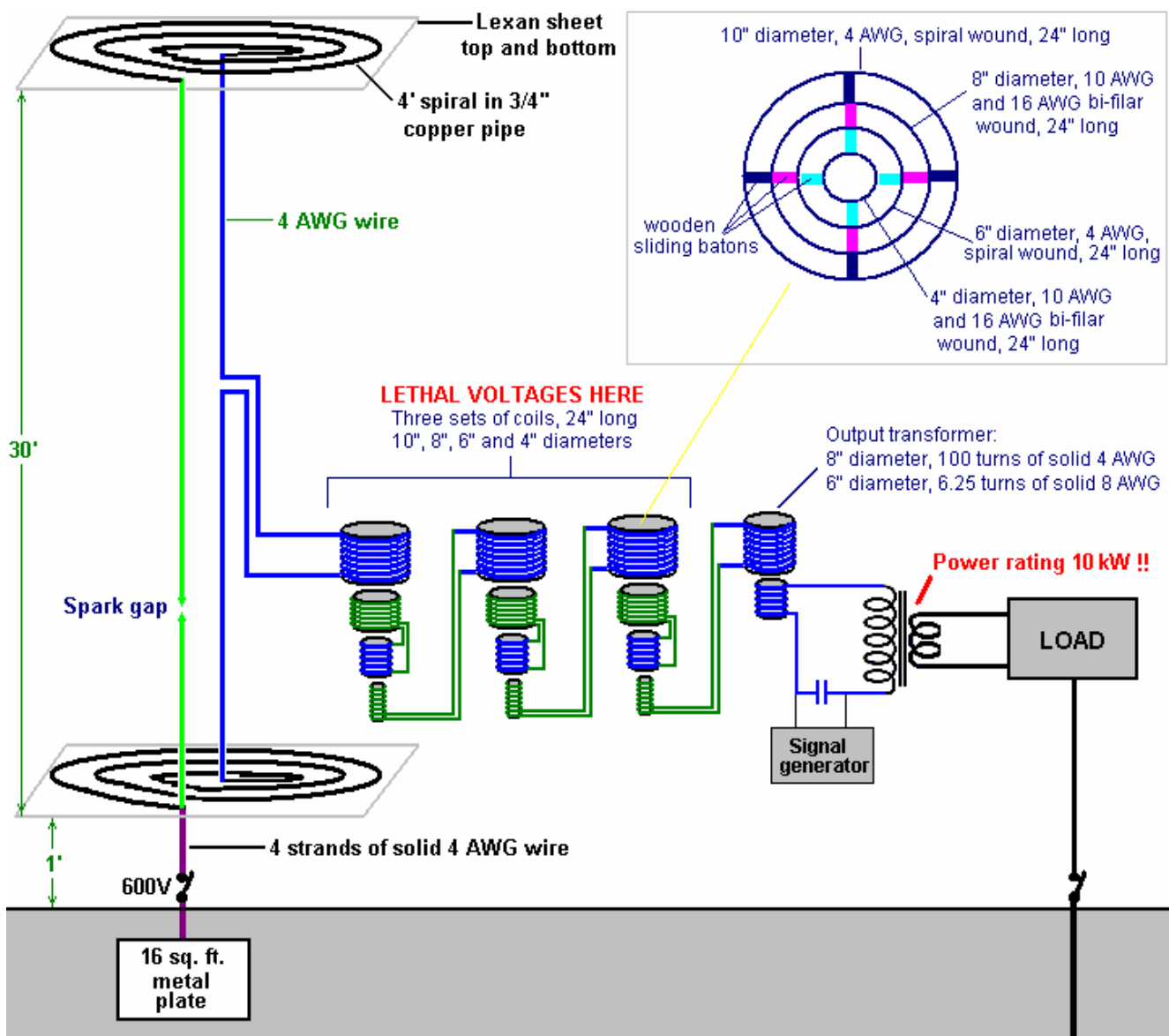
WITH A GOOD AERIAL, THE VOLTAGE ON CAPACITOR "C1" BUILDS UP UNTIL THE VOLTAGE AT POINT "B" GETS SO HIGH THAT THE NEON FIRES, DUMPING THE CHARGE ON CAPACITOR "C1" INTO THE BATTERY, CHARGING IT.

HOWEVER, **LAWRENCE RAYBURN** OF CANADA DEVELOPED A MUCH MORE POWERFUL AERIAL SYSTEM WHICH HE CALLS THE "TREC". IT GATHERS 10 KILOWATTS OF POWER AND WITH THAT LEVEL OF POWER FLOWING IN THE CIRCUIT, IT IS POTENTIALLY DANGEROUS FOR PEOPLE WHO ARE NOT FAMILIAR WITH WORKING WITH HIGH-POWER HIGH-VOLTAGE CIRCUITS.

THIS AERIAL SYSTEM HAS TWO FOUR-FOOT (1220 mm) DIAMETER ARCHMEDIAN SPIRALS MADE FROM 0.75 INCH DIAMETER SOFT COPPER PIPE. EACH SPIRAL IS SANDWICHED BETWEEN TWO SHEETS OF "LEXAN" PLASTIC AND THEY ARE MOUNTED THIRTY FEET APART VERTICALLY.

THE OBJECTIVE IS TO CREATE A TUNED PATH TO THE IONOSPHERE AND SO DRAW DOWN SOME OF THE MASSIVE AMOUNT OF EXCESS POWER THERE. THERE IS A SPARK GAP AND MULTIPLE TUNING COILS AND VOLTAGES OF 600 VOLTS GET GENERATED IN THE CIRCUIT BEFORE THE OUTPUT IS ADJUSTED TO WHAT IS CONVENIENT.

A SUBSTANTIAL EARTHING PLATE OF AT LEAST SIXTEEN SQUARE FEET IS NEEDED AND WIRE WHICH IS ABLE TO CARRY SERIOUS LOADS HAS TO BE USED. A SIGNAL GENERATOR IS USED TO MODULATE THE POWER AND GIVE THE DESIRED MAINS FREQUENCY. THE CIRCUIT IS LIKE THIS :



**THIS CIRCUIT IS HIGH POWER AND IT COULD KILL YOU, JUST AS YOUR MAINS WALL SOCKET CAN KILL YOU.**

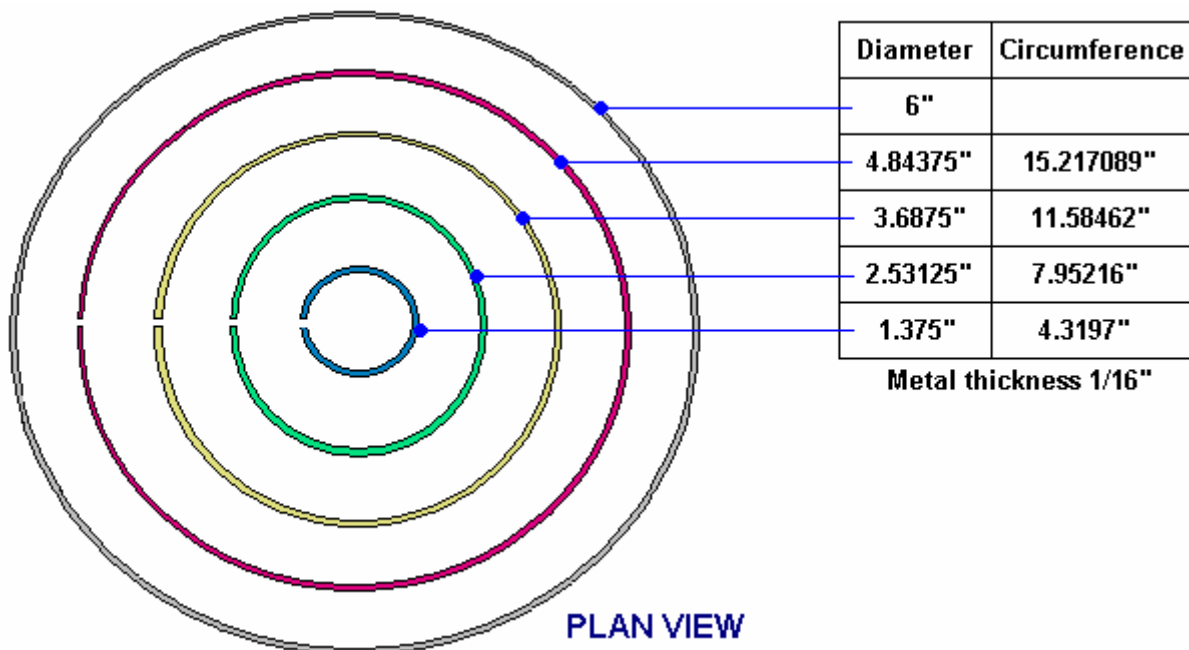
**AERIAL SYSTEMS ARE PASSIVE, GENERALLY NEEDING NO FORM OF USER-SUPPLIED INPUT POWER. THE SAME APPLIES TO A RANGE OF ORGONE DEVICES SUCH AS THE FAMOUS "JOE CELL" NAMED AFTER JOE NOBEL OF AUSTRALIA WHO, WITH GRAHAM COE AND PETER STEVENS POPULARISED THE DEVICE IN 1992. JOE NOBEL DID NOT INVENT THE DEVICE AS HE WAS WORKING FROM AN EARLIER PATENT. ORGONE DEVICES ARE STRONGLY AFFECTED BY PEOPLE NEAR THEM. A JOE CELL CAN RUN AN ENGINE WITHOUT THE NEED FOR FUEL AS IT CONCENTRATES OUR SURROUNDING ENERGY FIELD AND FEEDS IT INTO THE ENGINE. BILL WILLIAMS OF AMERICA HAS RUN HIS FORD PICK-UP TRUCK FOR MANY MILES WITHOUT NEEDING ANY FORM OF 'FUEL' :**

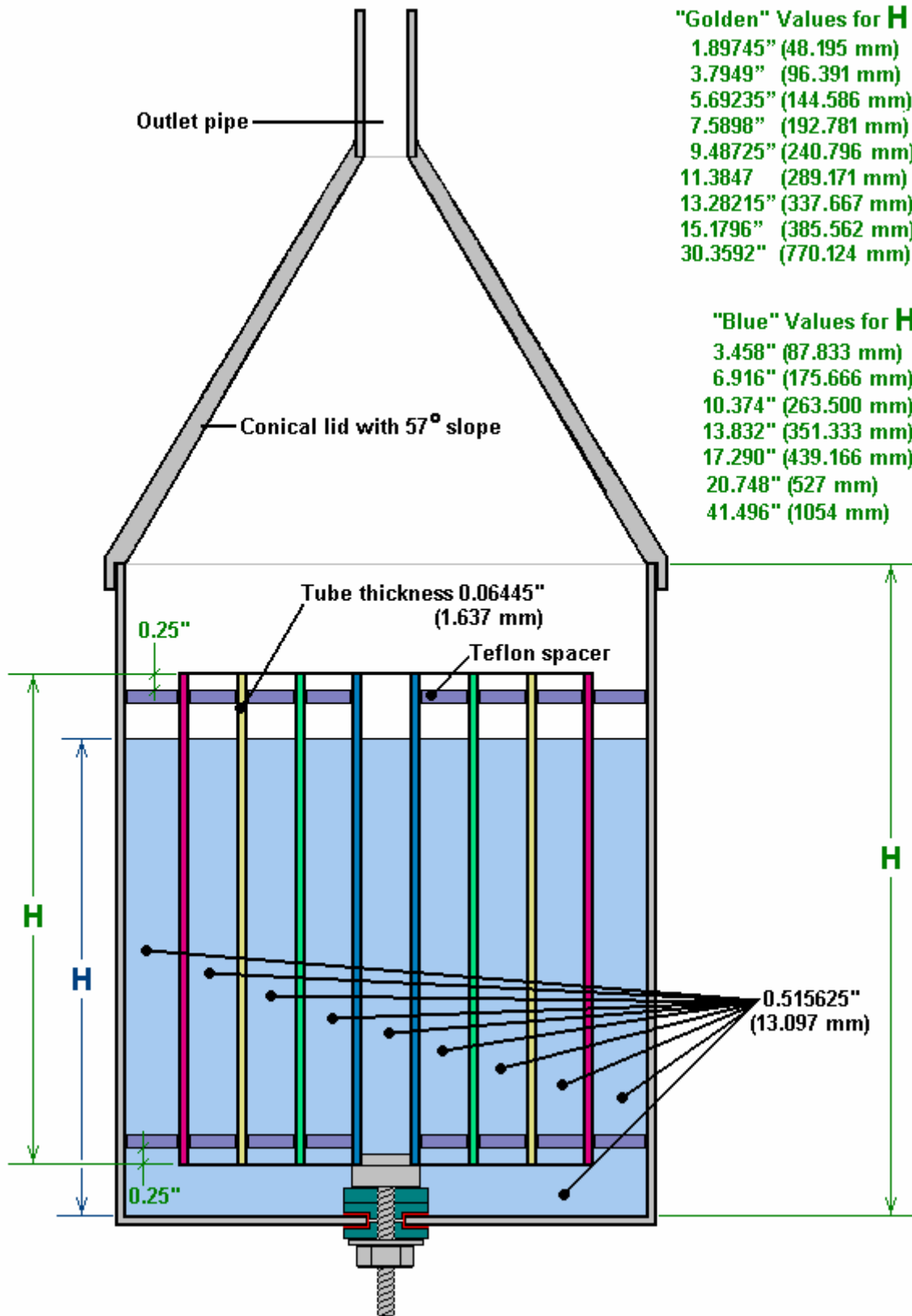


**JOE NOBEL WAS EXPERIMENTING AND USING STAINLESS STEEL COMPONENTS AVAILABLE AT A LOCAL FACTORY. TODAY, IF YOU WANT TO BUILD A JOE CELL, THEN PLEASE USE THE SPECIFIC DIMENSIONS SHOWN BELOW.**

**THE JOE CELL USES WATER (PROBABLY THE MOST COMPLEX SUBSTANCE ON THE PLANET) AND WITH JOE'S INCORRECT DIMENSIONS IT TAKES A GREAT DEAL OF EFFORT TO GET THE WATER TO THE CORRECT STATE. WITH THE CORRECT DIMENSIONS, TAP WATER GOES IMMEDIATELY TO THE CORRECT STATE.**

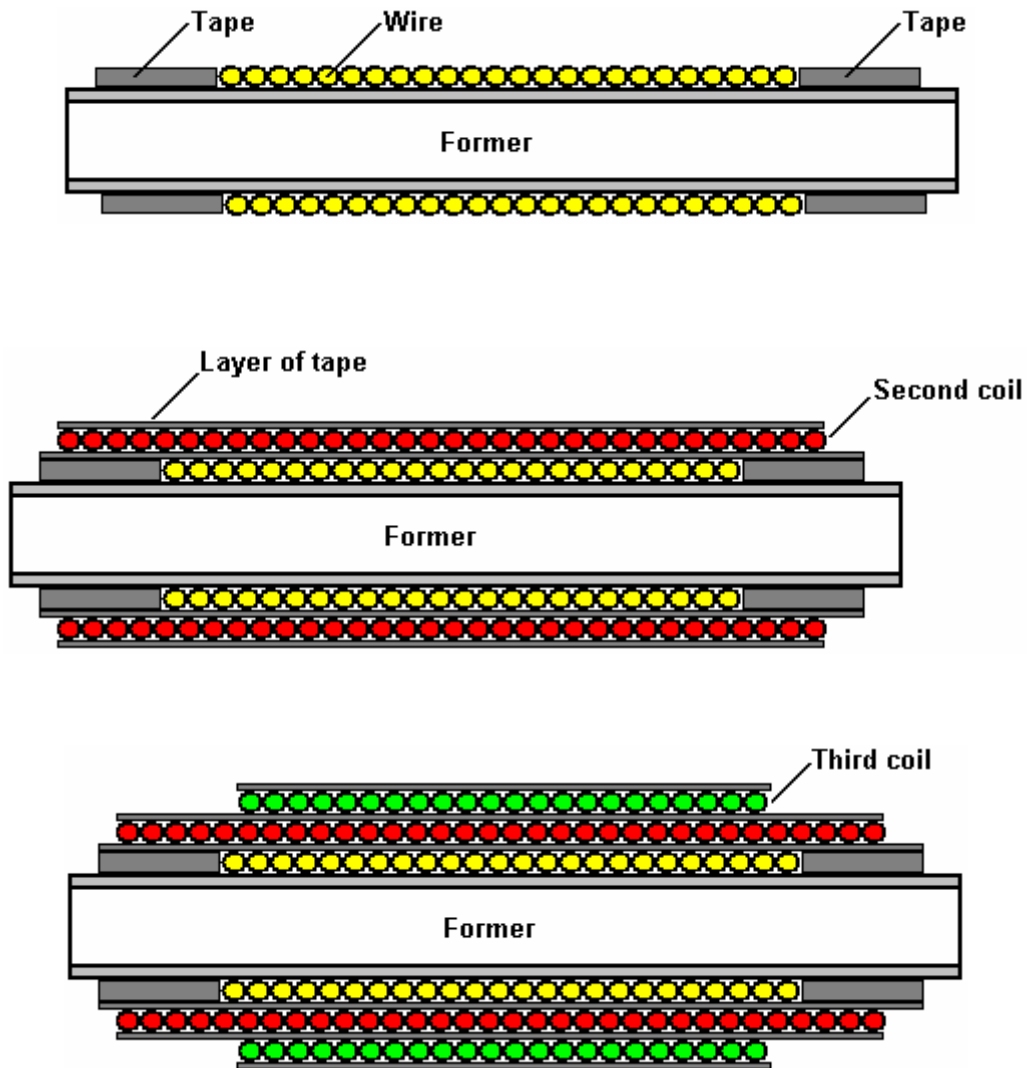
**THE CONTAINER MATERIAL IS ALWAYS STAINLESS STEEL AND THE ENGINE OF ANY VEHICLE TO BE USED WITH IT CAN TAKE A WEEK TO GET ALIGNED TO THE ENERGY FLOW. SUITABLE DIMENSIONS ARE :**







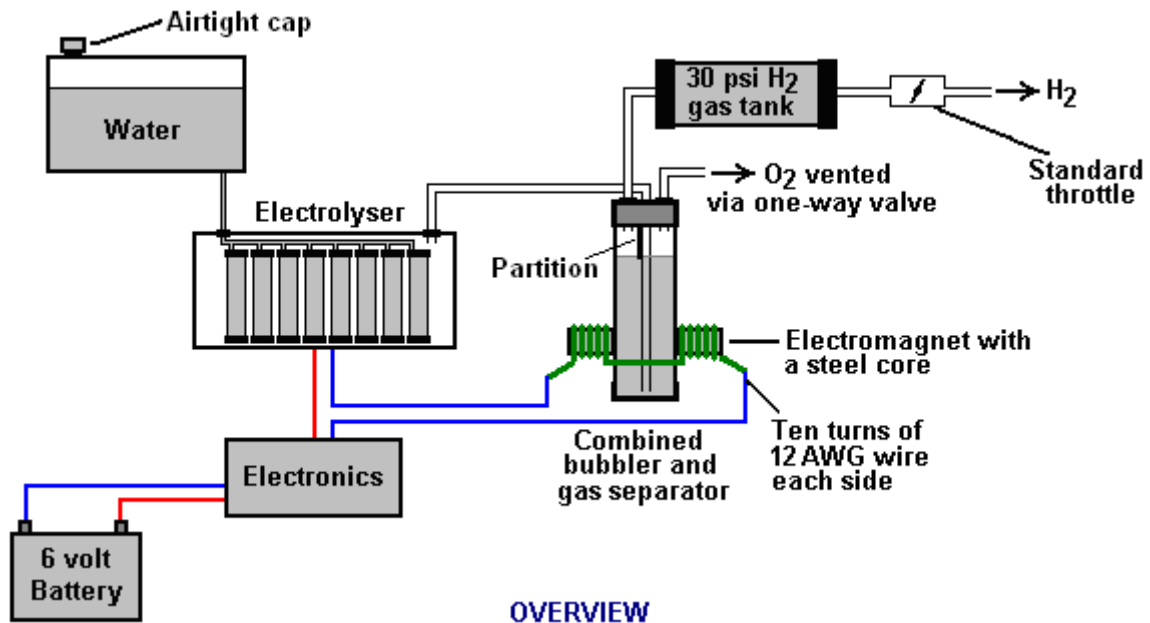
BASED ON JOE CELL TECHNOLOGY, THERE IS A SIMPLE DEVICE WHICH IS THREE CONCENTRICALLY WOUND "TORSION FIELD" COILS, WOUND WITH 2 mm DIAMETER WIRE AND PLACED ON A NON-FERROUS PIPE :



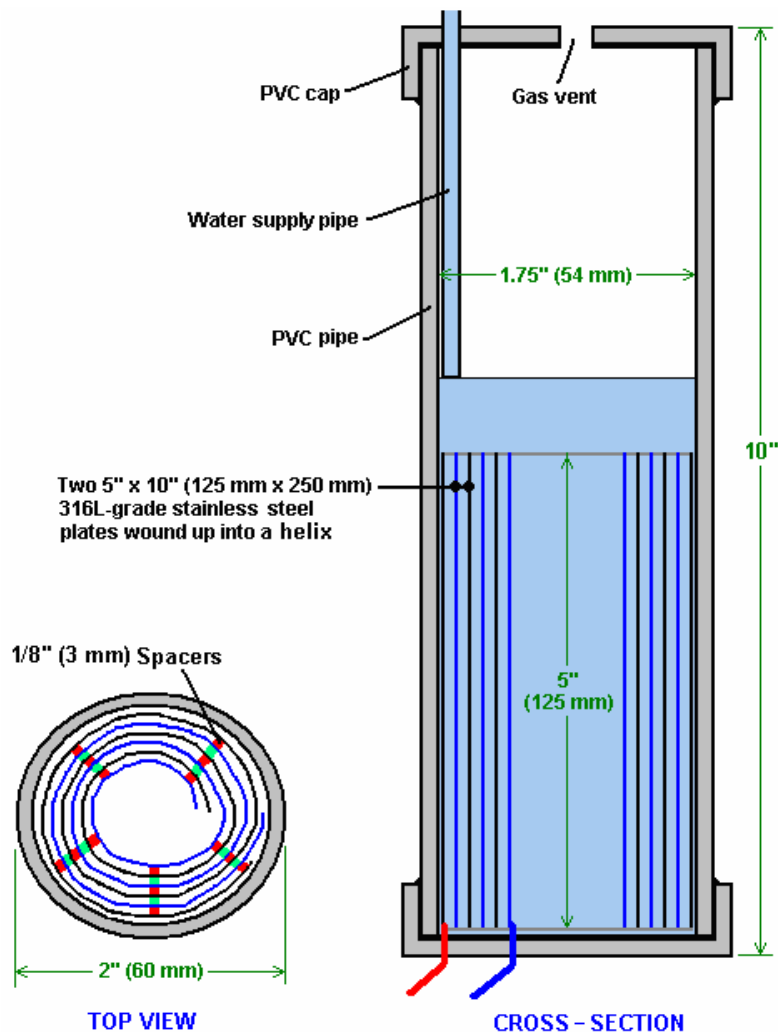
THIS COIL SET IS CONNECTED BETWEEN THE ENGINE CHASSIS AND A WIRE WHICH GOES DOWN INTO THE OIL. DETAILS ARE IN CHAPTER 9 OF THE EBOOK WHERE WIRE LENGTHS ARE GIVEN.

THE CONTRIBUTOR OF THIS INFORMATION WAS GETTING A 20% IMPROVEMENT IN HIS CAR'S MPG PERFORMANCE BUT IT IS QUITE POSSIBLE THAT THIS COIL ARRANGEMENT CAN RUN A CAR WITHOUT ANY FUEL BEING NEEDED. DEVELOPMENT IS CONTINUING.

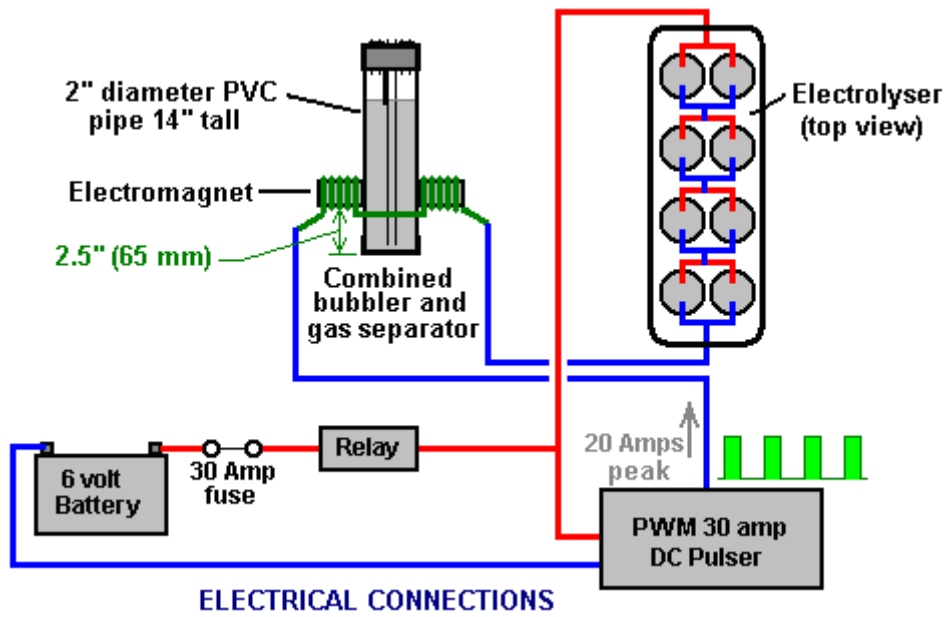
**ZACH WEST** IN AMERICA HAS RUN A 250 cc MOTORCYCLE WITHOUT USING PETROL. HE PERFORMS ELECTROLYSIS OF WATER USING HIS HOME-BUILT ELECTROLYSER. HE THEN BLEEDS OFF MOST OF THE OXYGEN, MAKING THE GAS FAR LESS VOLATILE AND HE STORES SOME IN A TANK READY FOR INCREASES IN LOAD SUCH AS ACCELERATING AWAY FROM TRAFFIC LIGHTS. HIS SYSTEM IS LIKE THIS :



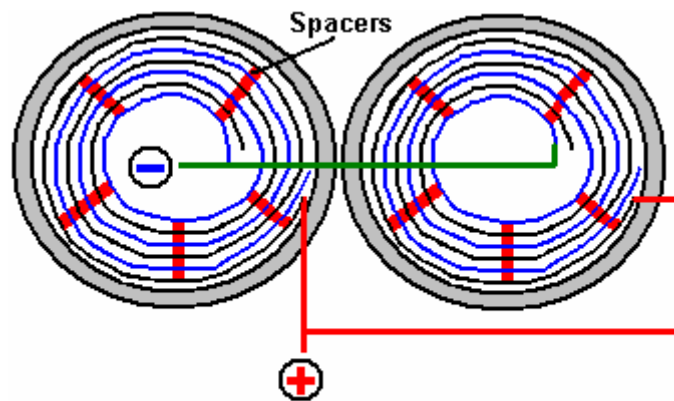
ZACH'S ELECTROLYSIS IS CARRIED OUT IN A SERIES OF THESE INDIVIDUAL UNITS :



THESE UNITS ARE CONNECTED IN PAIRS AND FED WITH PULSED DC :



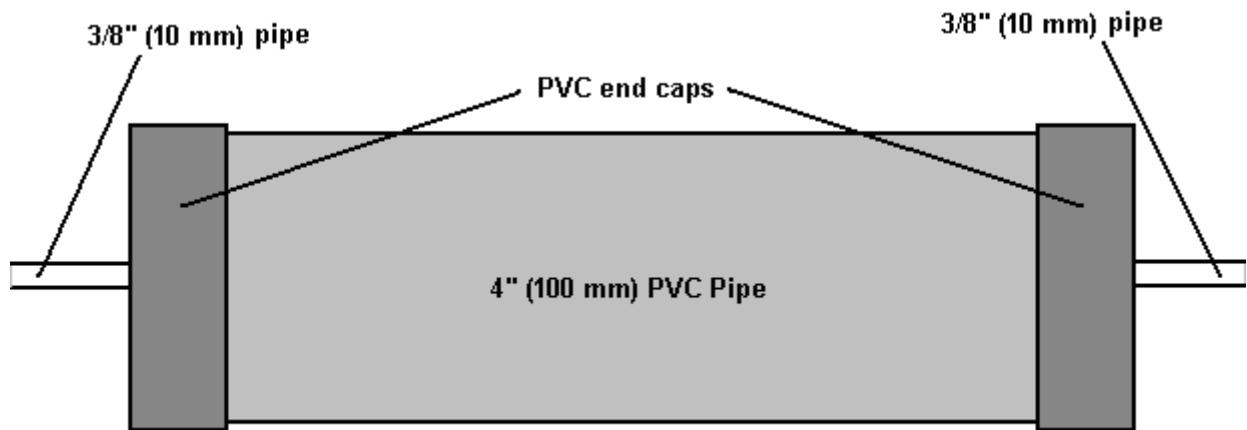
ZACH CONNECTS HIS ELECTROLYSER CELLS IN PAIRS LIKE THIS :



AND HIS 30-AMP COMMERCIAL PULSER LOOKS LIKE THIS :

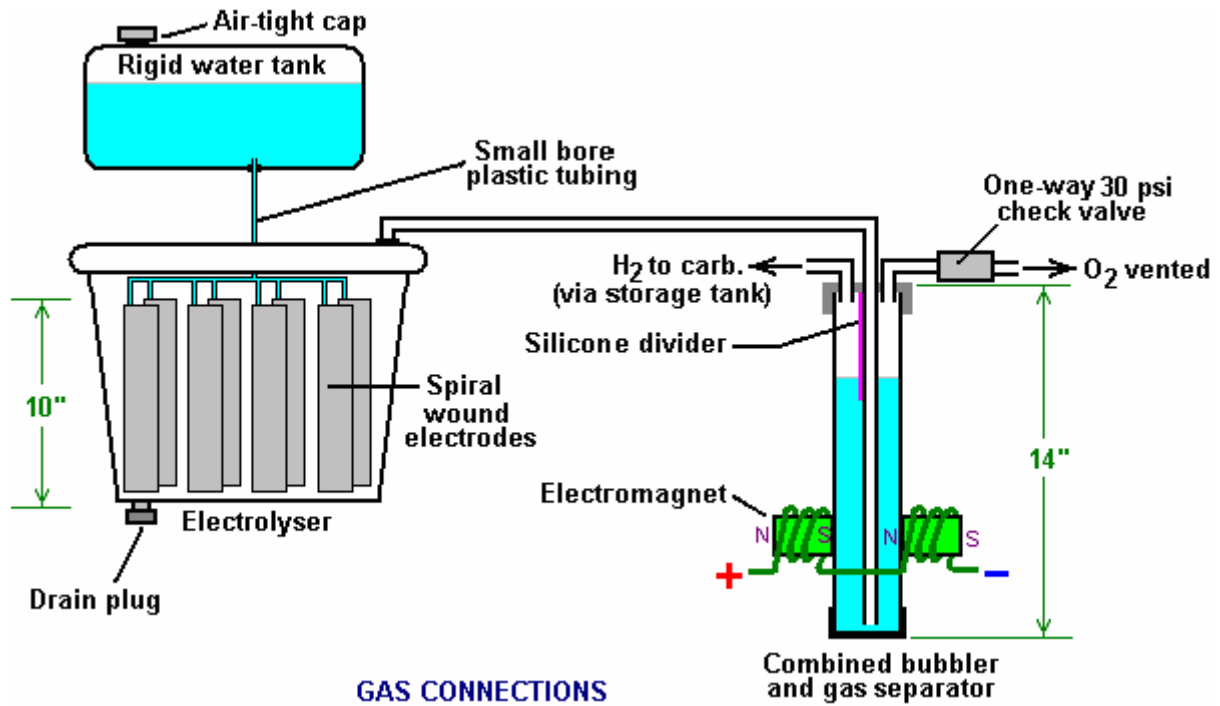


AND THE GAS RESERVOIR IS CONSTRUCTED LIKE THIS :



**GAS PRESSURE RESERVOIR**

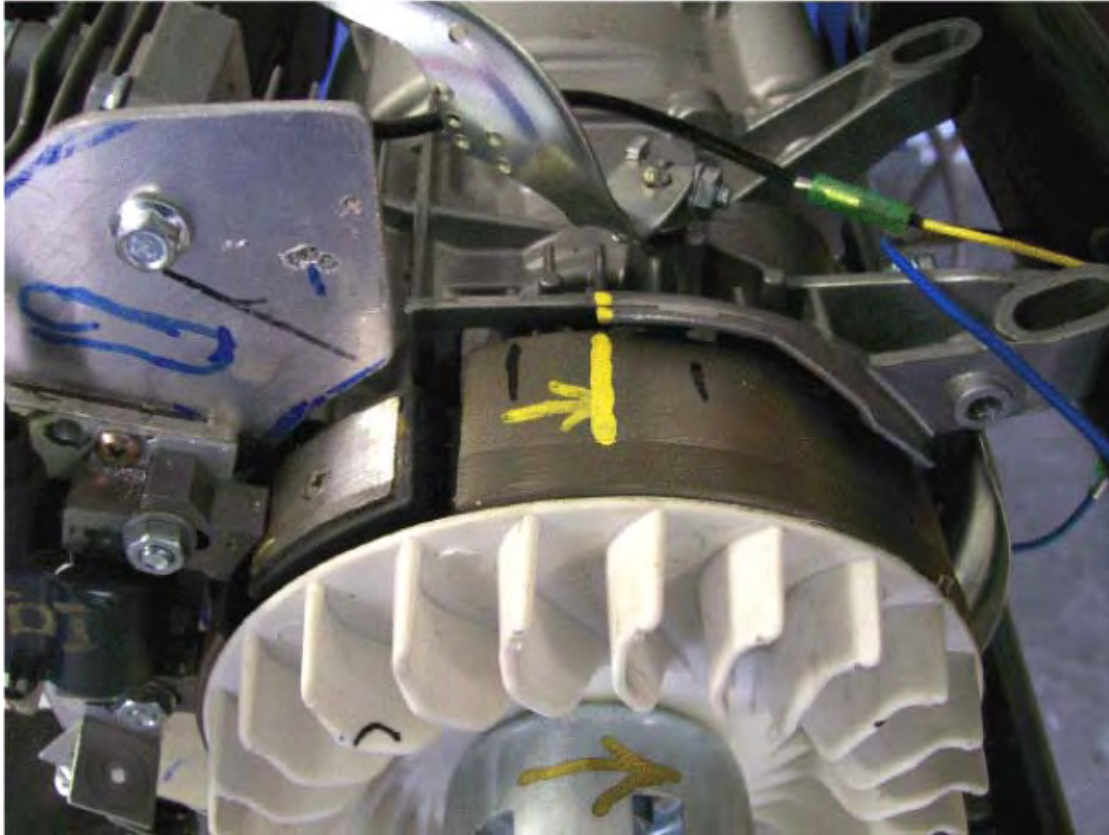
ZACH'S OVERALL SYSTEM IS BASICALLY VERY SIMPLE:



IT IS PROBABLE THAT THIS SYSTEM WHICH CAN POWER A MOTORCYCLE, IS NOT SELF-POWERED AS MOTORCYCLE ELECTRIC SYSTEMS ARE GENERALLY VERY LOW PERFORMANCE. HOWEVER, IF AN ADDITIONAL BATTERY IS CARRIED, THE SYSTEM CAN BE KEPT GOING BY CHARGING THE BATTERIES USING A SOLAR PANEL, MAKING THE MOTORCYCLE EFFECTIVELY A SOLAR POWERED VEHICLE AND ESSENTIALLY, FUEL-LESS IN OPERATION.

IT IS ALSO QUITE POSSIBLE TO SELF-RUN PORTABLE GENERATORS WITH WATER APPEARING TO BE THE ONLY FUEL. THIS CAN BE DONE IN TWO DIFFERENT WAYS WHEN YOU POWER AN ELECTROLYSER WITH PART OF THE ELECTRICAL OUTPUT FROM THE GENERATOR.

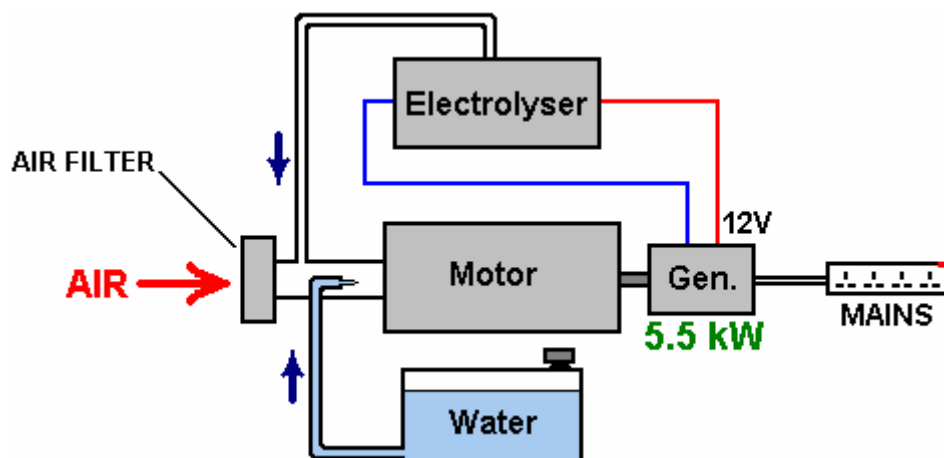
1. YOU CAN DELAY THE SPARK TIMING TO ALLOW FOR THE FACT THAT HHO IGNITES A THOUSAND TIMES FASTER THAN PETROL (AND SO THE SPARK MUST COME LATER). YOU ALSO ADD COLD WATER MIST BECAUSE THAT TURNS INTO FLASH-STEAM INSIDE THE CYLINDER AND MAKES THE GENERATOR OPERATE AS AN INTERNAL COMBUSTION STEAM ENGINE.



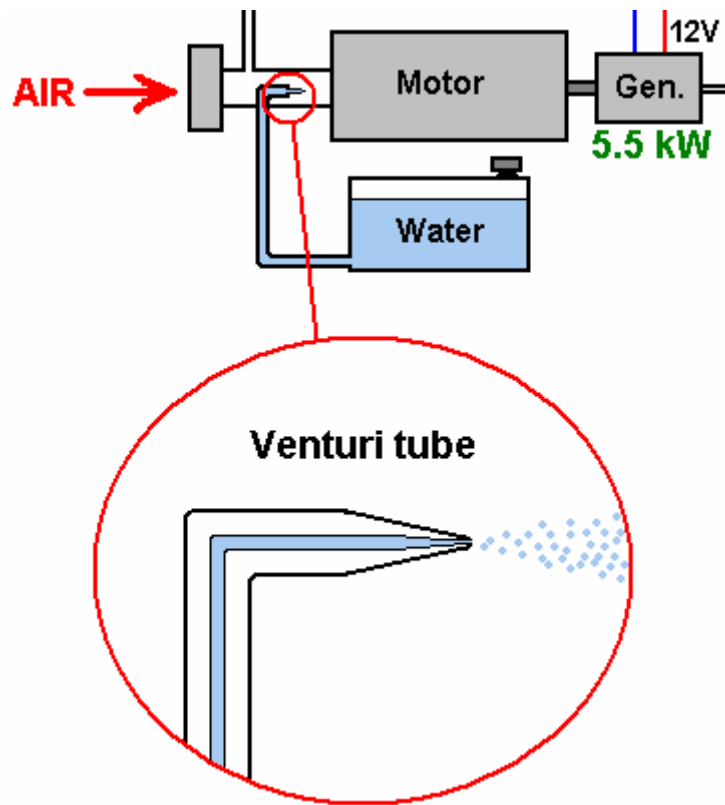
OR

2. YOU BUBBLE THE HHO THROUGH ACETONE SO THAT THE SPARK TIMING DOES NOT NEED TO BE ALTERED, AND ADD COLD WATER MIST AS BEFORE.

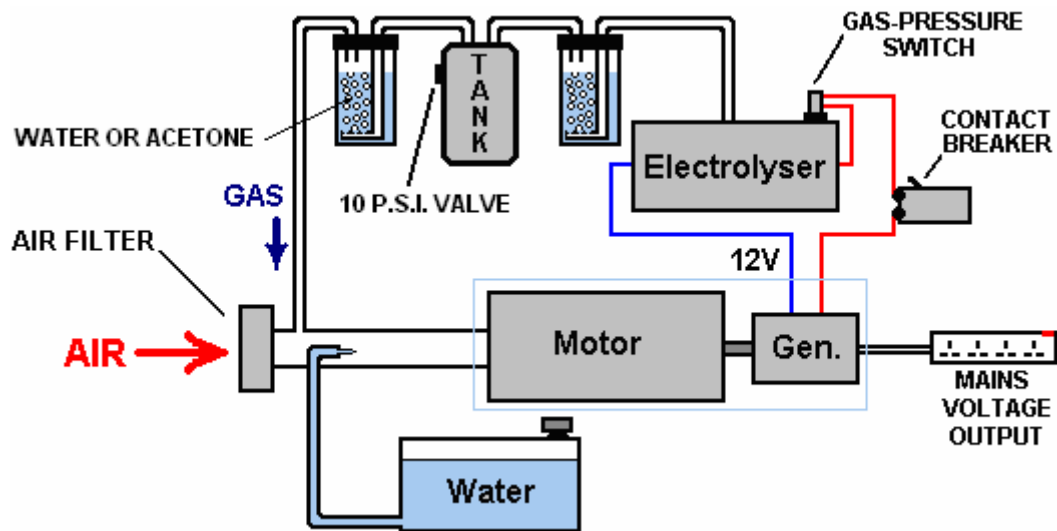
THE OVERALL CONCEPT IS LIKE THIS :



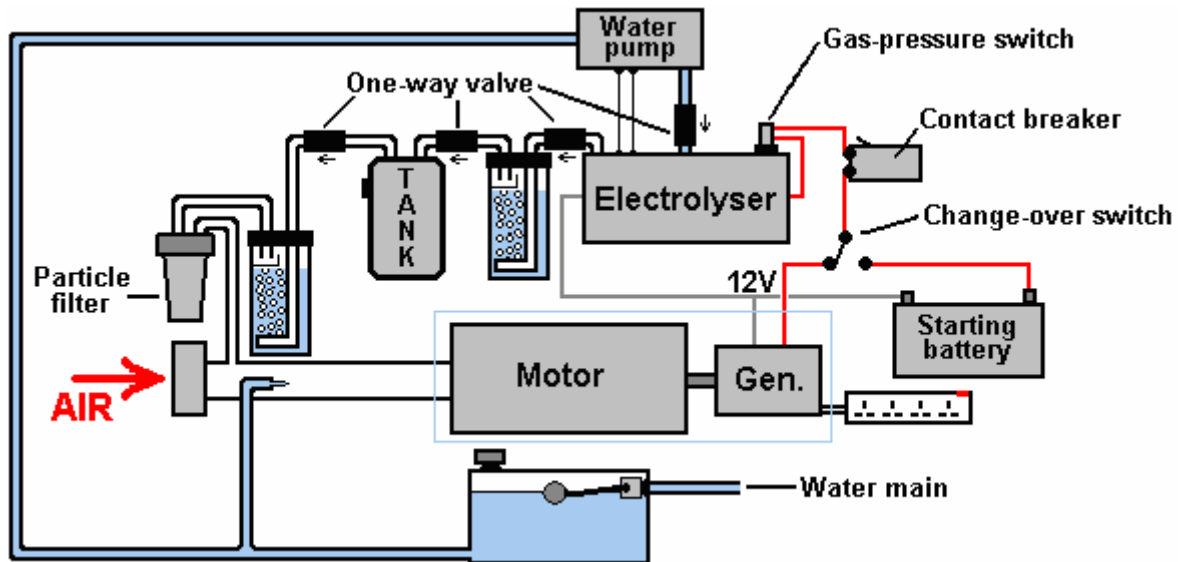
ALTHOUGH THIS LOOKS SIMPLE, IT IS CAPABLE OF SUPPLYING KILOWATTS OF EXCESS ELECTRICITY WHERE THERE IS NO ELECTRICAL GRID. A SIMPLE VENTURI TUBE CAN PRODUCE THE DESIRED COLD WATER MIST :



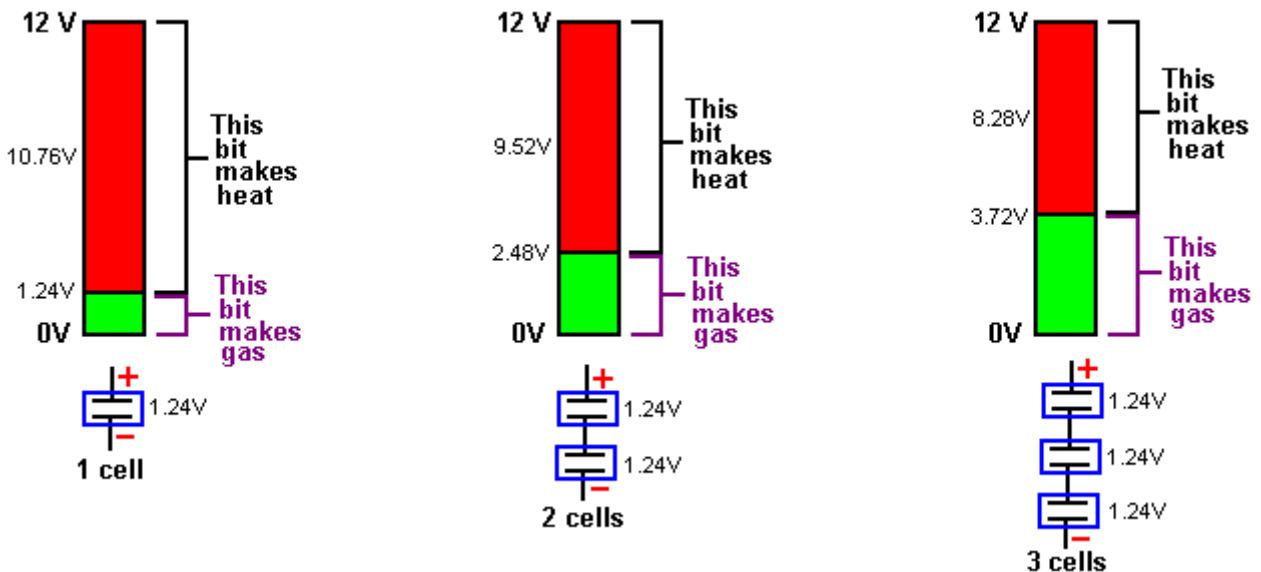
IN MORE DETAIL, THE SYSTEM LOOKS LIKE THIS :



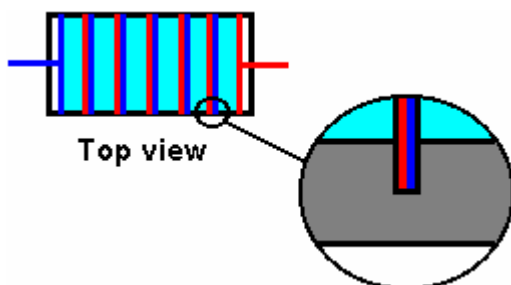
AND IF IT IS A STATIONARY SYSTEM, THEN IT WILL END UP LIKE THIS :



THE EBOOK HAS DETAILED INFORMATION ON THIS WITH [SELWYN HARRIS](#) OF AUSTRALIA SHOWING HOW TO ALTER THE TIMING OF A GENERATOR AND [DAVID QUIREY](#) OF NEW ZEALAND SHOWING HIS UNMODIFIED GENERATOR RUNNING ON WATER. YOU CAN MAKE YOUR OWN ELECTROLYSER IF YOU WISH AND ALL OF THE RELEVANT INFORMATION IS IN [www.free-energy-info.com/PJKbook.pdf](http://www.free-energy-info.com/PJKbook.pdf) **CHAPTER 10**. BUT IN BRIEF OUTLINE, A PROPERLY BUILT ELECTROLYSER WILL HAVE MORE THAN TWICE THE EFFICIENCY THAT MICHAEL FARADAY ACHIEVED. IN PRACTICAL TERMS, IF YOU PLACE TWO ELECTRODES IN A BODY OF WATER, AND APPLY 12-VOLTS ACROSS THEM, THEN ONLY 1.24 VOLTS WILL BE USED IN DC ELECTROLYSIS AND THE REMAINDER OF THE POWER JUST GOES TO HEAT THE WATER :

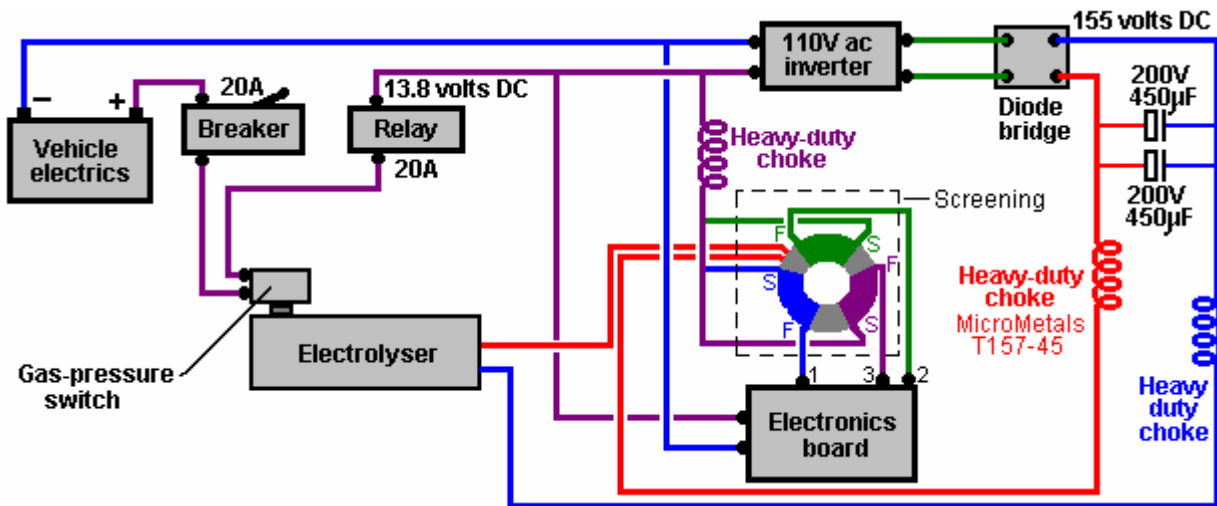


SO, FOR MAXIMUM EFFICIENCY DC ELECTROLYSIS, YOU USE SIX CELLS IN SERIES FOR 12-VOLTS OR SEVEN CELLS FOR THE 14-VOLTS PRODUCED BY A CAR'S ALTERNATOR :





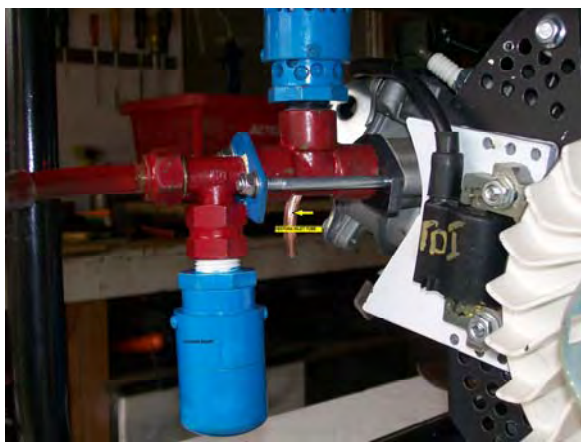
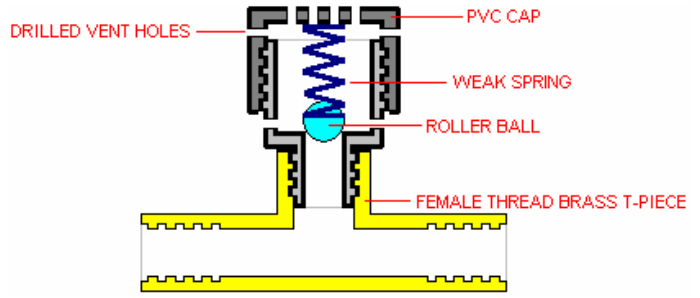
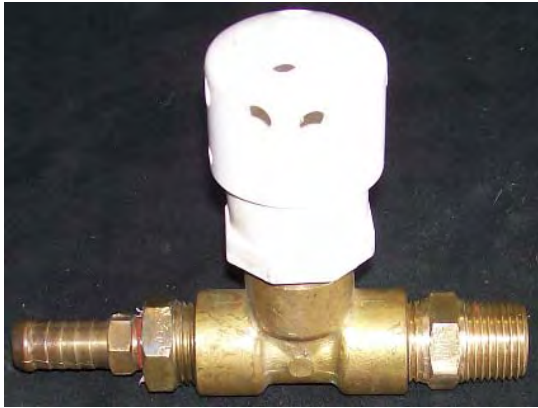
A SUPER HIGH EFFICIENCY ELECTROLYSER OF THE TYPE DESIGNED BY BOB BOYCE OF AMERICA CAN GENERATE UP TO 100 LITRES OF HHO PER MINUTE (1200% FARADAY'S EFFICIENCY) BUT HAS TO BE PULSED AT RESONANT FREQUENCY WHICH IS NOT EASY :



(FULL CONSTRUCTIONAL DETAILS ARE IN THE PJKbook.pdf DOCUMENT) BUT FORTUNATELY, A WELL MADE DC ELECTROLYSER IS SUFFICIENT FOR RUNNING A GENERATOR ON WATER ALONE AS THE GENERATOR PRODUCES KILOWATTS OF ELECTRICAL POWER AND THAT MEANS THAT THERE IS PLENTY OF ELECTRICAL POWER AVAILABLE FOR THE ELECTROLYSIS. THE ELECTROLYTE IS 28% BY WEIGHT OF POTASSIUM HYDROXIDE (KOH) IN DISTILLED WATER AND GRADE 316 STAINLESS STEEL ELECTRODES ARE USED FOR ALL ELECTROLYSIS (AFTER CROSSHATCH SCORING AND PLATE CONDITIONING BEFORE USE).

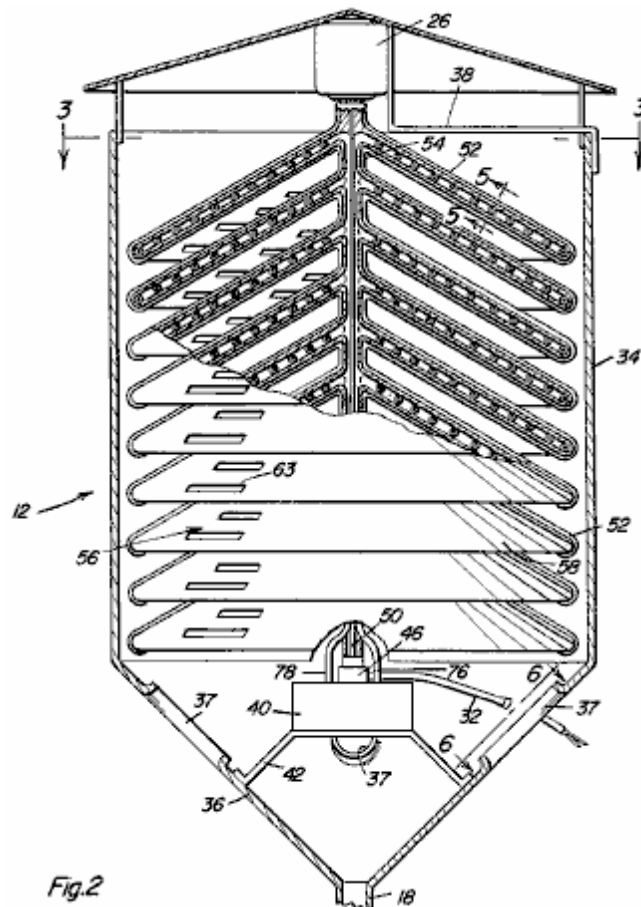
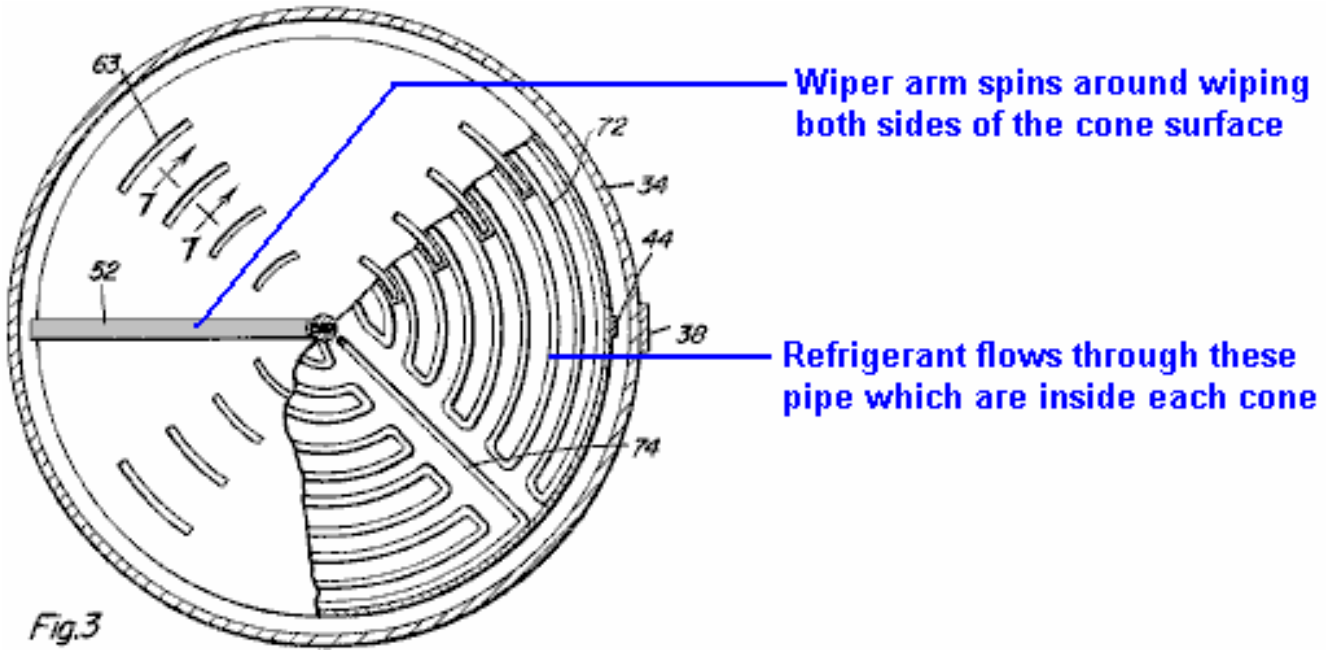
AS SELWYN HARRIS OF AUSTRALIA POINTS OUT, IT IS NOT ALL THAT DIFFICULT TO ALTER THE TIMING OF A SMALL GENERATOR AND HE PROVIDES INSTRUCTIONS WITH PHOTOGRAPHS TO SHOW EXACTLY HOW :





AN IMPORTANT NON-FREE ENERGY DEVICE IS THE **ELMER GRIMES** 1961 PATENTED DESIGN FOR LARGE SCALE EXTRACTION OF WATER FROM AIR (US 2,996,897). THIS IS SO EFFECTIVE THAT IT CAN BE USED IN DESERTS AND ONE HAS SUPPLIED A WHOLE RANCH IN TEXAS IN A DRY YEAR.

ESSENTIALLY, IT IS A REFRIGERATOR WHICH CHILLS A METAL CONE WHICH HAS A CAR STYLE WINDSCREEN WIPER TO KEEP PUSHING THE CONDENSED WATER OFF THE CONE. FOR EFFICIENCY, SEVERAL CONES ARE STACKED IN A VERTICAL POSITION. SEEN FROM THE TOP IT LOOKS LIKE THIS :

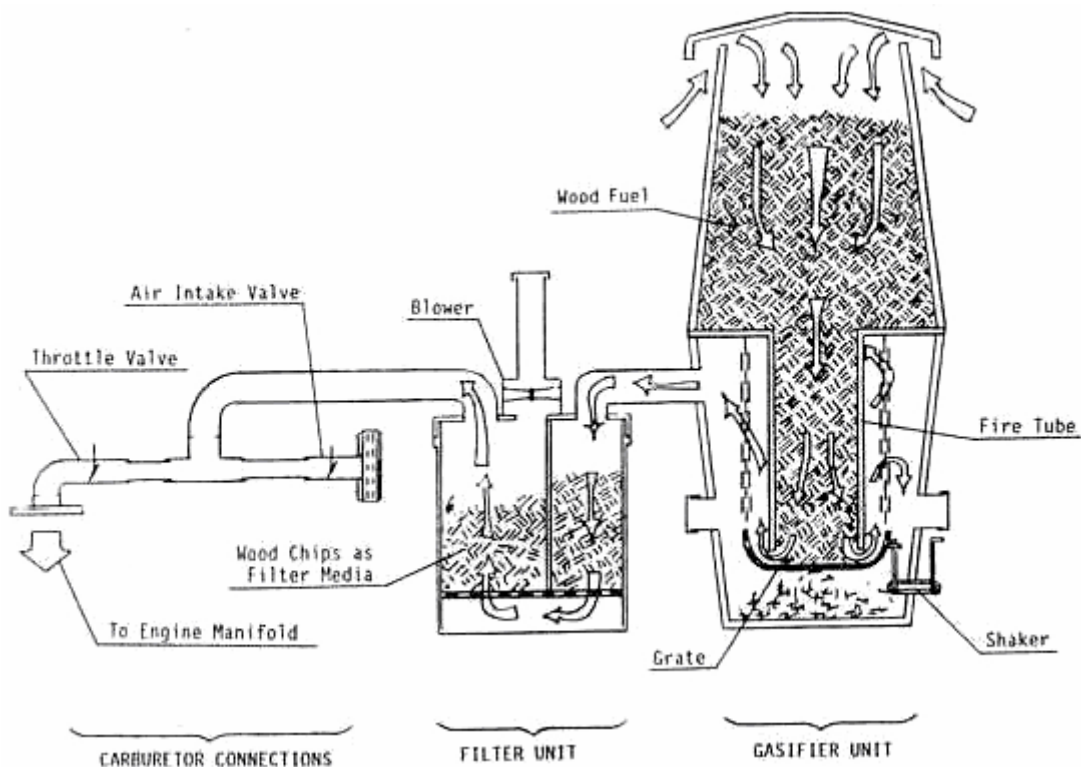


THIS WATER-MAKING SYSTEM COULD BE POWERED BY ONE OF THE FREE-ENERGY DEVICES, SAY, THE CHAS CAMPBELL GENERATOR.

IT IS PERFECTLY POSSIBLE TO RUN A VEHICLE ON SOLID FUEL SUCH AS WOOD-CHIPS OR COKE.



THIS WAS DONE EXTENSIVELY DURING WORLD WAR TWO WHEN PETROL WAS IN SHORT SUPPLY. THIS CAN BE DONE BY BURNING THE SOLID FUEL IN INSUFFICIENT AIR, PRODUCING HYDROGEN, CARBON MONOXIDE AND METHANE ALL OF WHICH CAN BE BURNT IN AN INTERNAL COMBUSTION ENGINE :



HOWEVER, THIS IS A POTENTIALLY DANGEROUS ARRANGEMENT WHEN FUELLING IS NEEDED, DUE TO THE CARBON MONOXIDE BEING PRODUCED, SO A MORE CONVENIENT SIMPLE ALTERNATIVE TO PETROL OR DIESEL IS TO BE PREFERRED.

ALL OF THE NECESSARY CONSTRUCTION, USE AND MAINTENANCE DETAILS ARE IN THE APPENDIX OF MY EBOOK PJKbook.pdf ALONG WITH DIAGRAMS AND PHOTOGRAPHS :

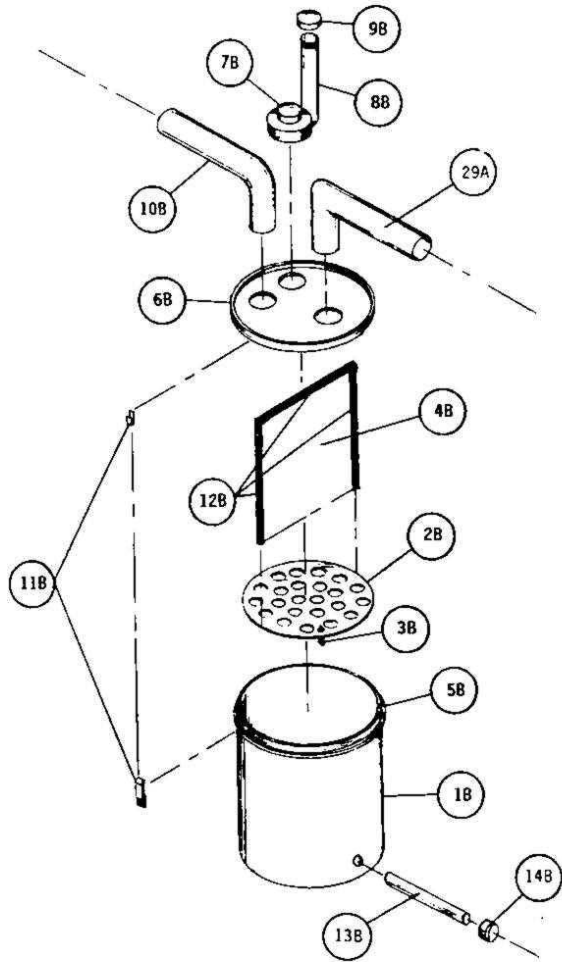


Fig. 2-15. Exploded, schematic diagram of the filter unit.

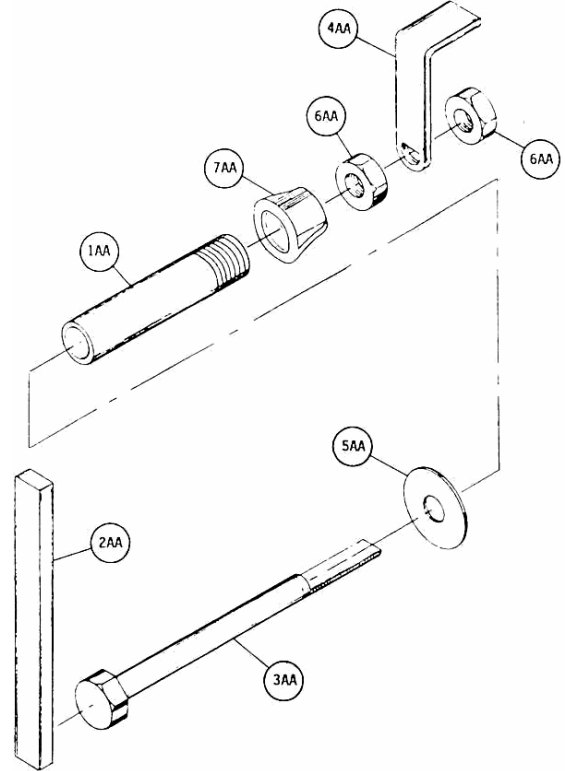
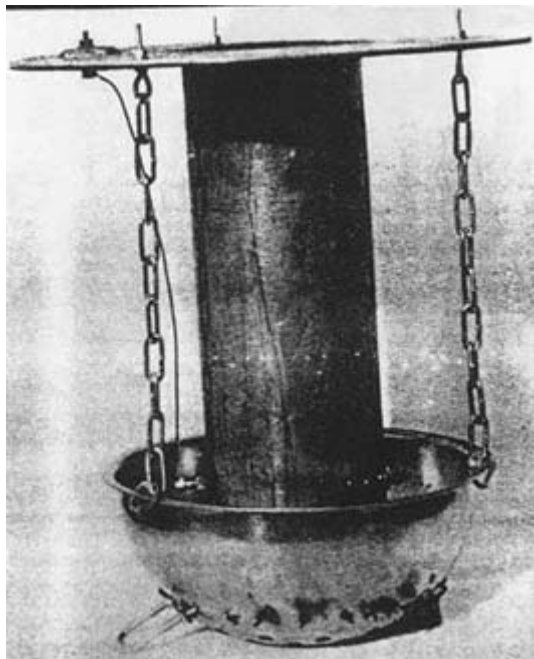
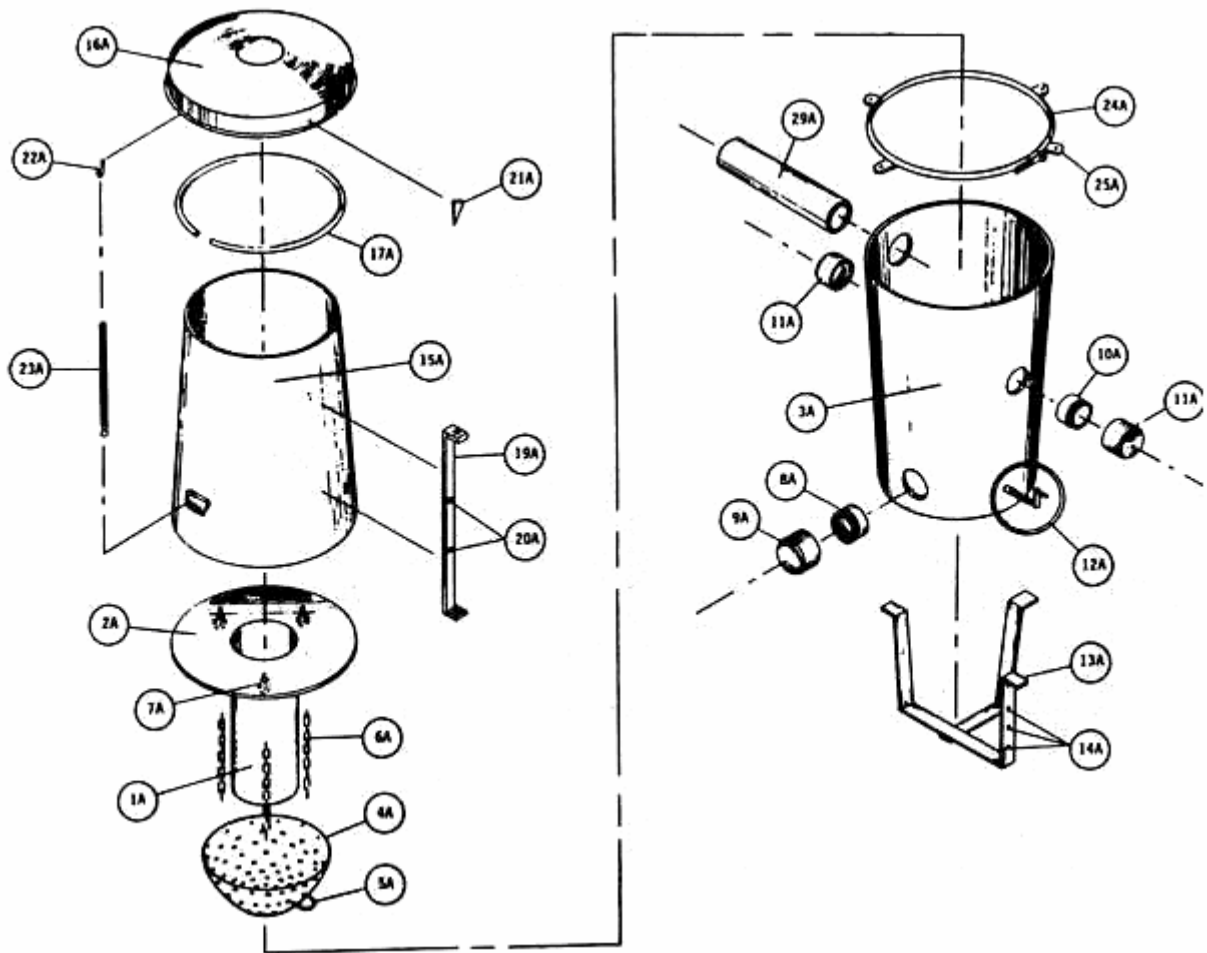
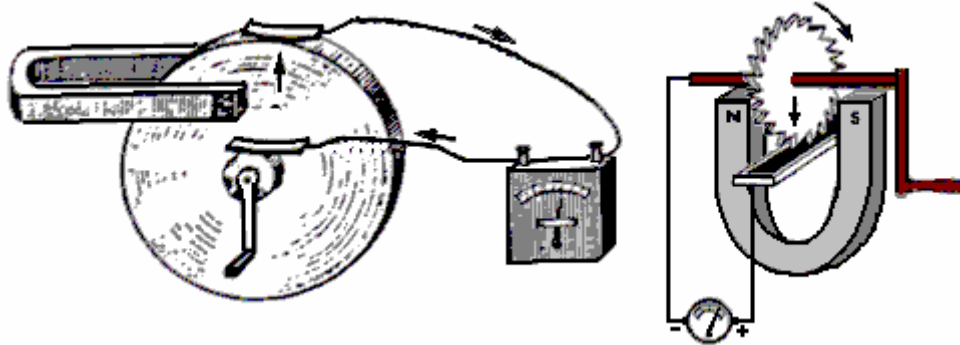


Fig. 2-8. Exploded, schematic diagram of the grate shaking mechanism.





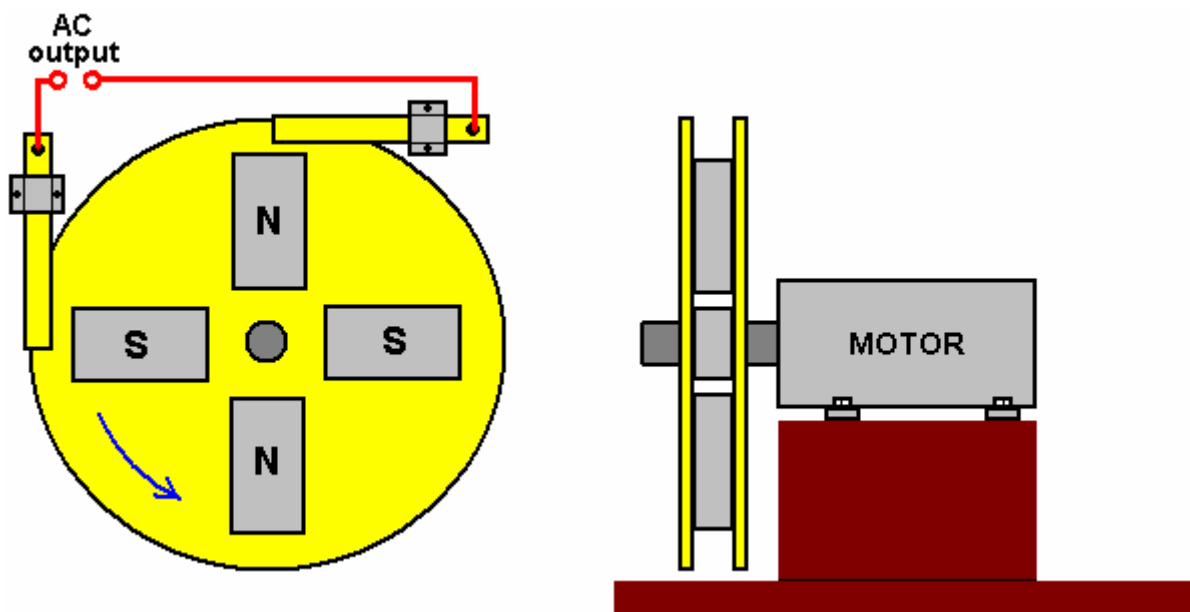
THE HOMOPOLAR OR N-MACHINE OF **MICHAEL FARADAY** (1831) HAS THE PROBLEM OF VERY LOW DC OUTPUT VOLTAGE OF LESS THAN ONE VOLT, ALTHOUGH THE OUTPUT CURRENT CAN BE UP TO 1000 AMPS. THAT COMBINATION SUITS SIMPLE ELECTROLYSIS BUT LITTLE ELSE. FARADAY'S ARRANGEMENT WAS :



WITH THIS ARRANGEMENT, A COPPER DISC IS ROTATED IN A MAGNETIC FIELD AND THAT CAUSES A VOLTAGE DIFFERENCE BETWEEN THE AXLE AND THE OUTER EDGE OF THE DISC. THIS ARRANGEMENT ALSO WORKS IF THE MAGNET IS ATTACHED TO THE COPPER DISC AND ROTATES WITH IT.

THE MAIN PROBLEM IS THAT IT IS VERY DIFFICULT TO PROVIDE A RELIABLE ELECTRICITY TAKE OFF CONTACT FOR THE DISC. HOWEVER, IN 1987, THREE OF THE BORDERLAND SCIENCE TEAM, **MICHAEL KNOW**, **PETER LINDEMANN** AND **CHRIS CARSON** DISCOVERED A VERSION WHICH PRODUCED SAWTOOTH AC OUTPUT. AN AC OUTPUT ALLOWS A STEP-UP TRANSFORMER TO BE USED, RAISING THE OUTPUT VOLTAGE AND LOWERING THE OUTPUT CURRENT.

THEIR DESIGN HAS FOUR FERRITE PERMANENT MAGNETS GLUED BETWEEN TWO METAL DISCS AND FOR ADDITIONAL MECHANICAL STRENGTH, COPPER WIRE WAS WOUND AROUND THE OUTER EDGES OF THE MAGNETS AGAINST FAILURE OF THE GLUE BOND. THE CONSTRUCTION LOOKS LIKE THIS :

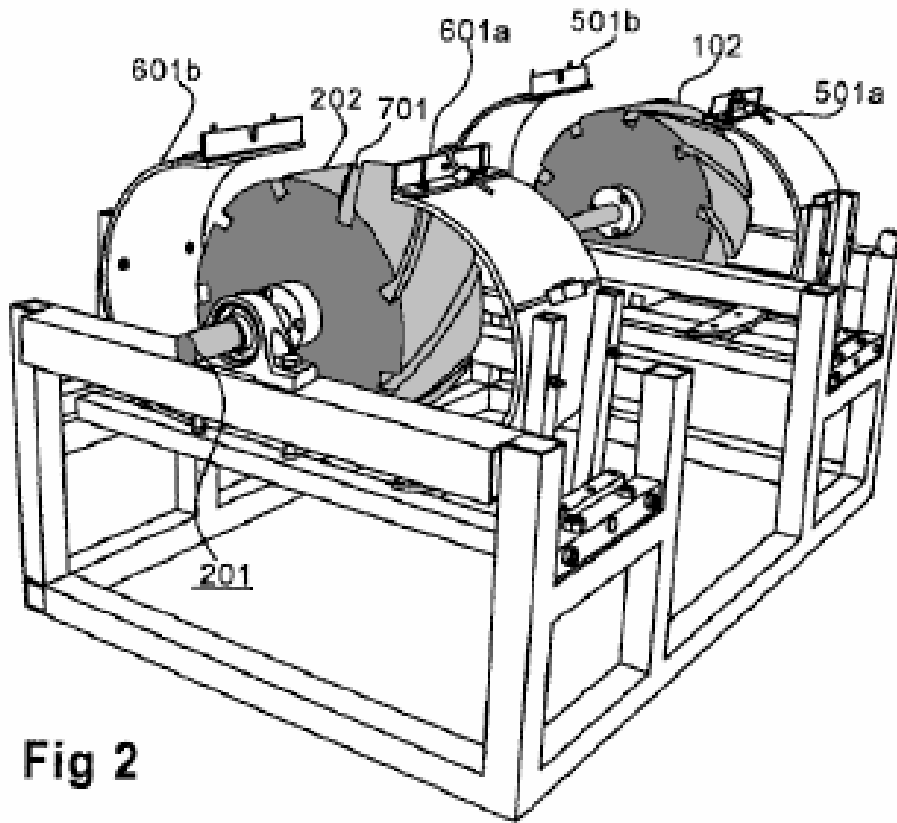


THE OUTPUT CURRENT WAS ESTIMATED AT 100 AMPS. THE OUTPUT VOLTAGE WAS NOT AFFECTED BY THE SPEED OF ROTATION BUT THE FREQUENCY OF THE OUTPUT AC WAS. IT SEEMS IMPOSSIBLE THAT THERE SHOULD BE A VOLTAGE DIFFERENCE ACROSS THE DIRECT SHORT-CIRCUIT ACROSS A SHORT SECTION OF COPPER DISC, BUT THAT JUST DEMONSTRATES OUR LACK OF KNOWLEDGE.

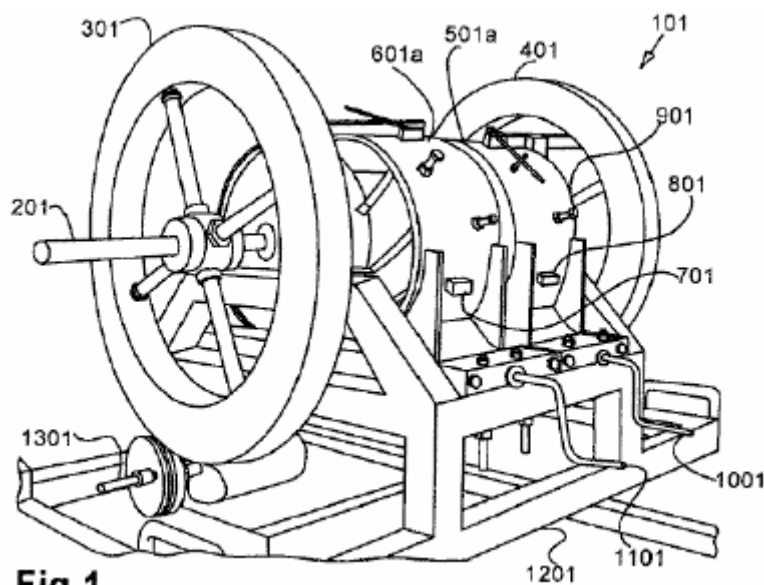
A SPINNING COPPER CYLINDER EXERTS A LARGE SIDWAYS FORCE ON A PERMANENT MAGNET PLACED NEAR IT. THIS DOES NOT HAPPEN WITH CYLINDERS MADE FROM OTHER METALS.

**THE VICTOR DIDUCK PERMANENT MAGNET MOTOR.**

POWERFUL PERMANENT MAGNET MOTORS ARE VERY DIFFICULT TO BUILD AND GET OPERATIONAL. GENERALLY SPEAKING THERE IS NOT ENOUGH INFORMATION TO GET AN IMMEDIATELY WORKING MOTOR, NOT NECESSARILY BECAUSE THE INVENTOR DOES NOT WANT YOU TO BUT GENERALLY BECAUSE ALL MAGNETS ARE DIFFERENT AND CONSTRUCTIONAL MATERIALS MATTER A GREAT DEAL. HOWEVER, THE DIDUCK MOTOR APPEARS TO BE POWERFUL AND HAVE ENOUGH SPECIFIC INFORMATION TO GET YOUR REPLICATION WORKING SATISFACTORILY.



**Fig 2**



**Fig 1**



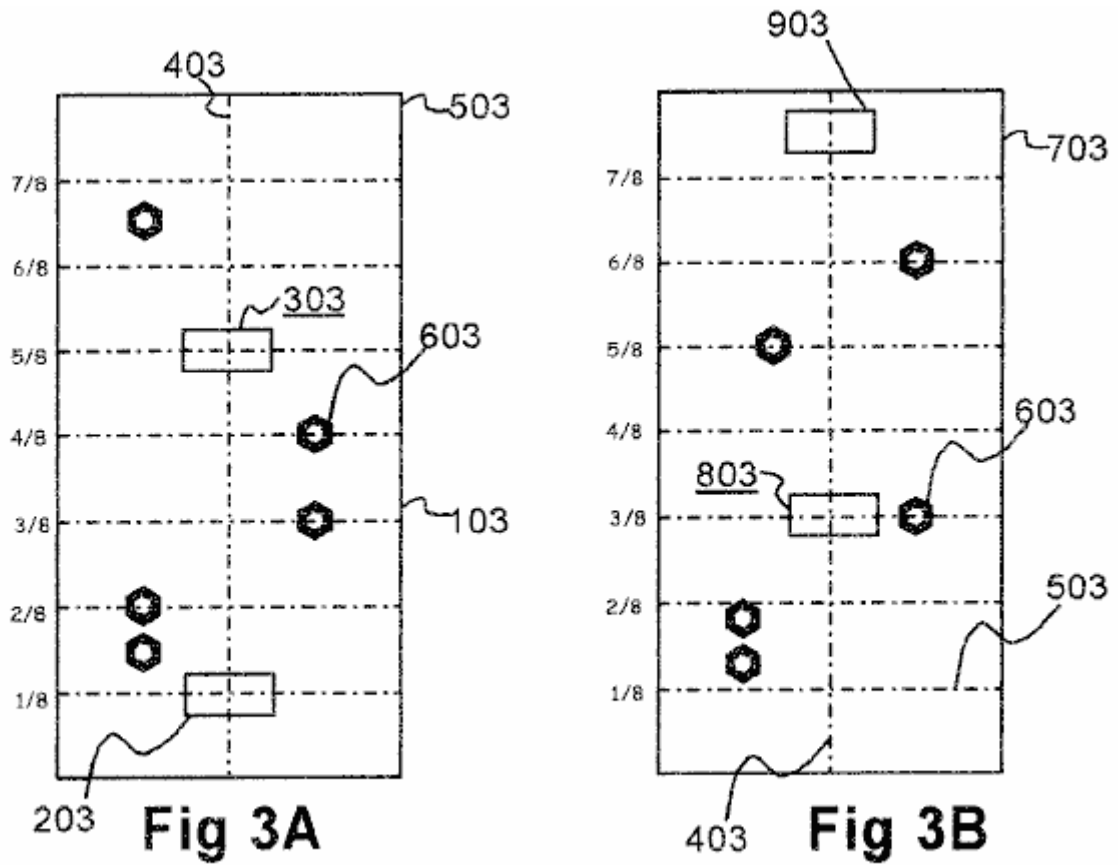
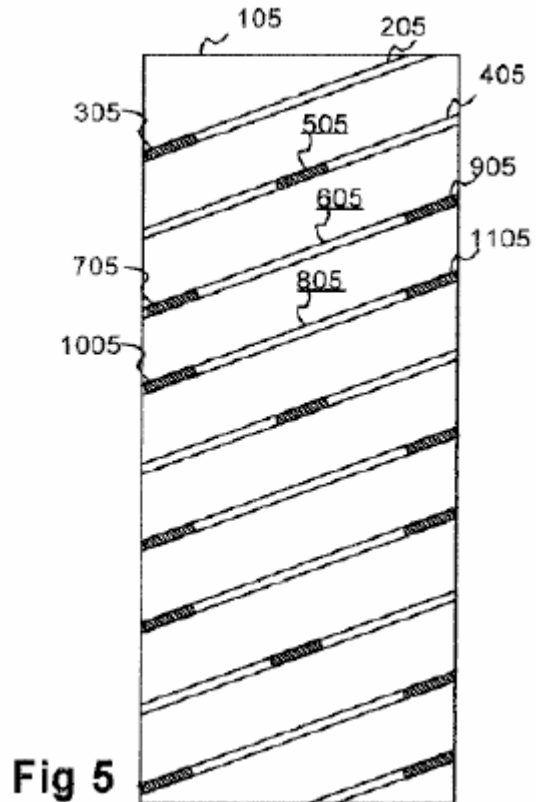
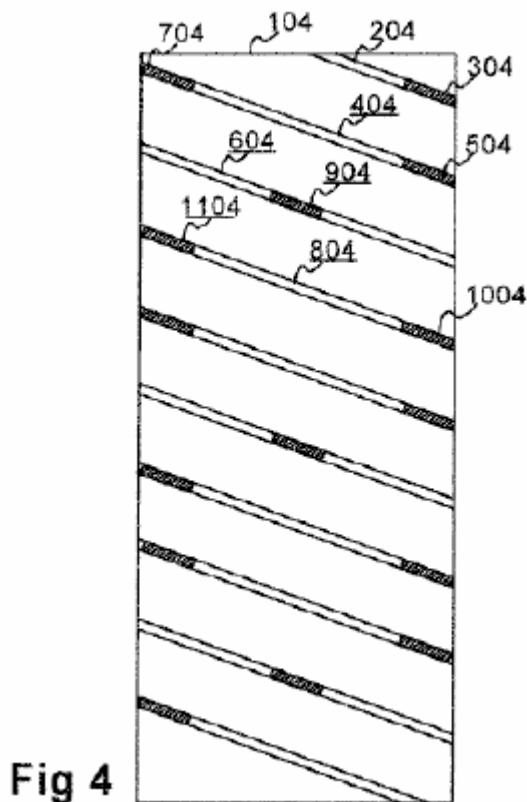


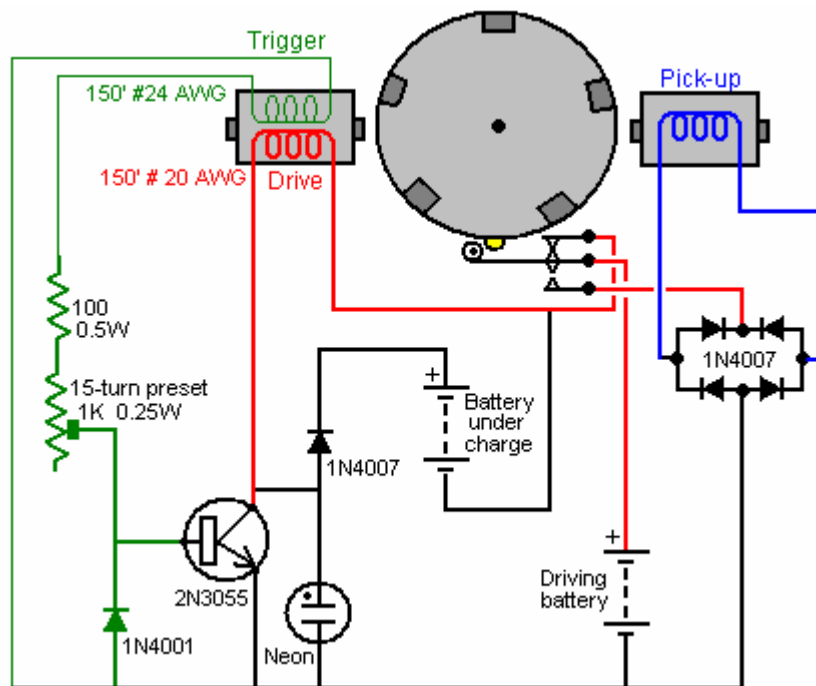
Fig.3 is a diagram of the magnet placement on the cowling.

**A VERY INTERESTING FEATURE IS THE USE OF FERROMAGNETIC BOLTS '603' AND THEIR EXACT POSITIONING TO ELIMINATE MAGNETIC 'DEAD' SPOTS, ALONG WITH THE EXACT MAGNET POSITIONS IN THE ROTOR :**



**THE SELF-CHARGING BATTERY CHARGER. THIS IS A BASIC STARTER-LEVEL JOHN BEDINI STYLE BATTERY CHARGER WITH ONE SMALL ADDITION TO MAKE IT SELF-POWERED.**

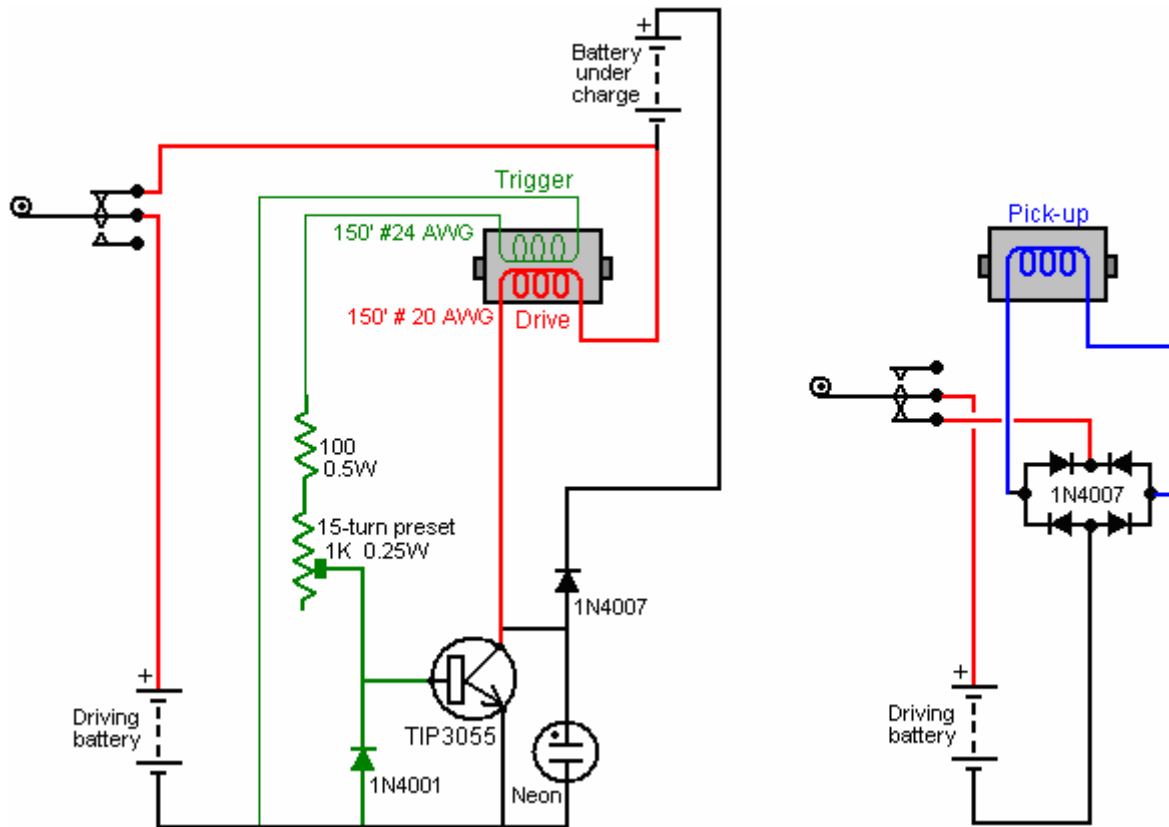
**MOST BATTERY CHARGERS HAVE THE PROBLEM THAT THEY RUN THEIR DRIVE BATTERY DOWN WHEN THEY OPERATE. USUALLY, THE BATTERY BEING CHARGED HAS TO BE AT A DIFFERENT VOLTAGE LEVEL IN ORDER TO AVOID DRAINING THE DRIVE BATTERY DIRECTLY INTO THE BATTERY BEING CHARGED INSTEAD OF POWERING THE CHARGING CIRCUIT (JOHN BEDINI'S SIMPLE SCHOOLGIRL CHARGER BEING AN EXAMPLE OF THAT). THE FOLLOWING BATTERY CHARGER MANAGES TO CHARGE ITS OWN BATTERY AS IT GOES ALONG :**



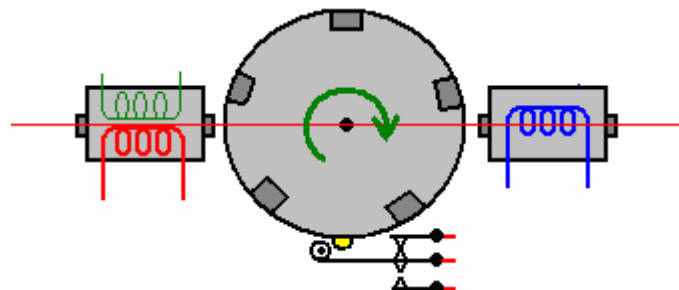
**THIS CIRCUIT IS SUBTLE. THE CIRCUIT ON THE LEFT FEEDS PULSES INTO THE BATTERY UNDER CHARGE FIVE TIMES PER REVOLUTION IN THE SAME WAY AS A BEDINI CIRCUIT. HOWEVER, ONCE PER REVOLUTION THE MICROSWITCH DUMPS CHARGE FROM ONE MAGNET PASSING THE BLUE PICK-UP COIL ON THE RIGHT, STRAIGHT INTO THE DRIVE BATTERY, MAINTAINING ITS CHARGE. THE MICROSWITCH LOOKS LIKE THIS:**



**IT IS PROBABLY EASIER TO UNDERSTAND THE CIRCUIT IF THE TWO PARTS ARE SHOWN SEPARATELY:**



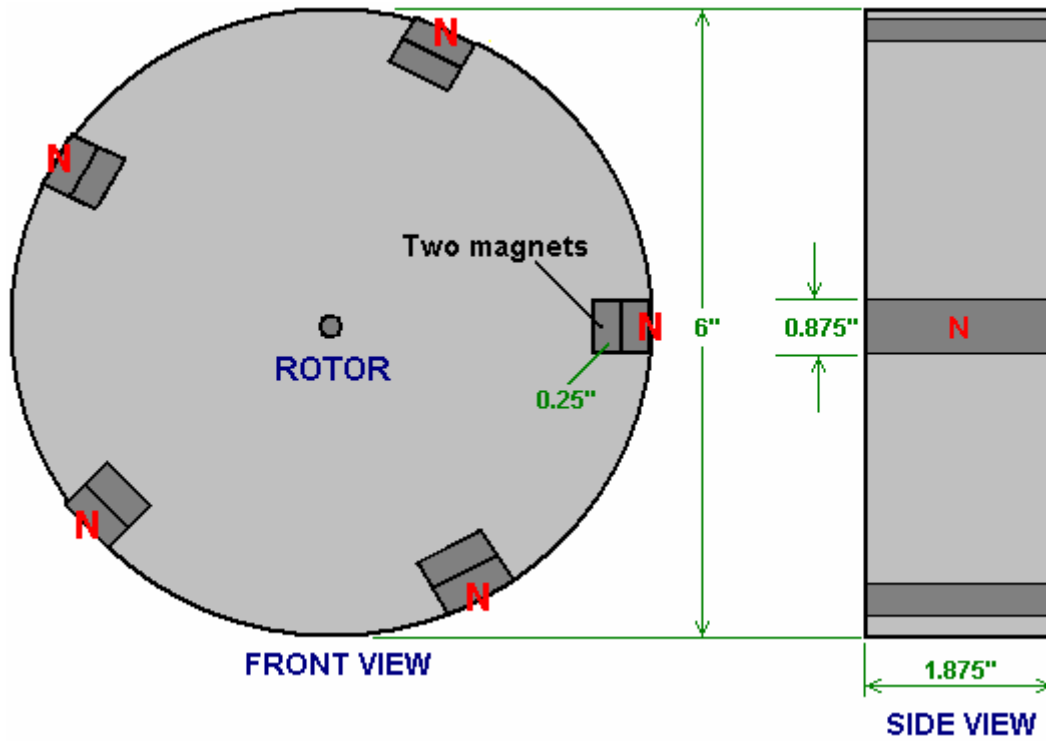
**BECAUSE THE PICK-UP COILS ARE ALIGNED AND THERE IS AN ODD NUMBER OF ROTOR MAGNETS, THE PULSES FROM THE TWO COILS ARE ALWAYS AT DIFFERENT TIMES:**



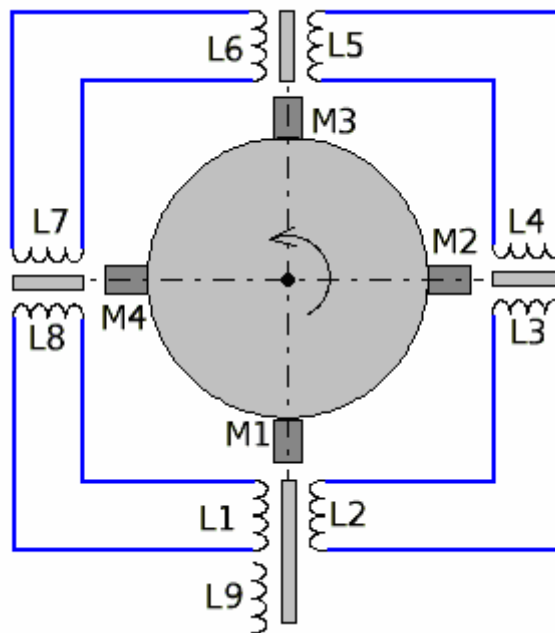
**CONSEQUENTLY, THE TWO PARTS OF THE CIRCUIT OPERATE INDEPENDENTLY AND SO THE MECHANICAL SWITCH CAN SELECT BETWEEN THEM.**

**ADDITIONAL OUTPUT COILS CAN BE POSITIONED AT 72-DEGREE ANGLES AROUND THE ROTOR WHICH IS 48 mm THICK AND WEIGHING 2 KILOGRAMS, BEING CONSTRUCTED FROM LAMINATE FLOORING MATERIAL AND HAVING A 6-INCH (150 mm) DIAMETER. THE ROTOR IS PUSHED AROUND WHEN THE TRANSISTOR SWITCHES ON IN RESPONSE TO THE SIGNAL FROM THE TRIGGER COIL CAUSED BY A MAGNET PASSING BY THE COIL.**

**HOWEVER, IT IS LIKELY THAT THE THICKNESS OF THIS PARTICULAR ROTOR WAS CAUSED BY THE USUAL FACTOR OF WHAT WAS TO HAND AT THE TIME AND THE DESIRE TO MATCH THE SIZE OF THE MAGNETS USED :**

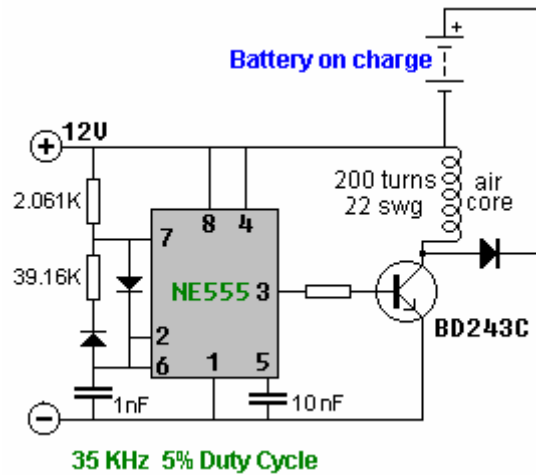


WHILE NOT PART OF THIS ACTUAL DESIGN, IT IS SUGGESTED BY THE RUSSIAN EXPERIMENTER "VIKNEI" THAT A MUCH GREATER EFFECT CAN BE HAD FROM ANY SIMILAR SYSTEM IF THE STATOR COILS ARE WOUND WITH TWO STRANDS OF WIRE AND CONNECTED LIKE THIS :



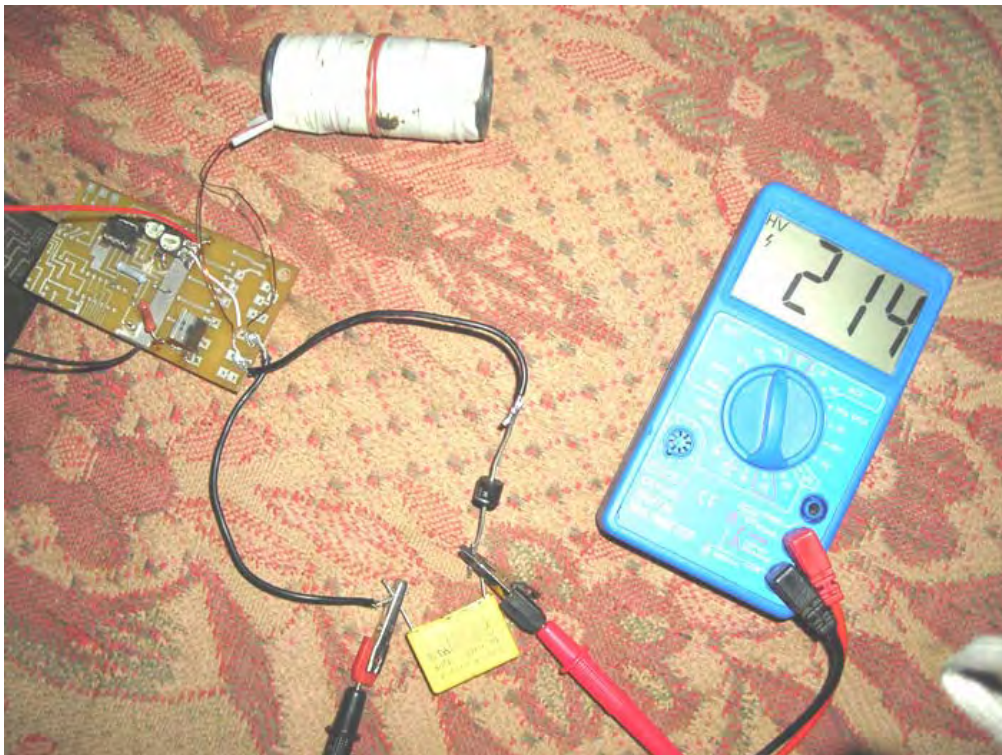
**ALEXKOR'S FIRST BATTERY CHARGER.**

**ONE READER USED TO CHARGE HIS BATTERY THROUGH A STANDARD MAINS CHARGER. HE BUILT THIS CIRCUIT, POWERED IT WITH HIS MAINS CHARGER AND FOUND THAT HIS BATTERY CHARGED FULLY IN HALF THE TIME. HERE IS THE CIRCUIT :**



**YOU WILL NOTICE THAT THIS CHARGER MATCHES THE COLD ELECTRICITY SPECIFICATIONS OF HOWERD HALAY IN BOTH FREQUENCY AND VOLTAGE AS WITHOUT THE BATTERY BEING CHARGED IT PRODUCES 200-VOLT PULSES AS SHOWN ON THE METER BELOW.**

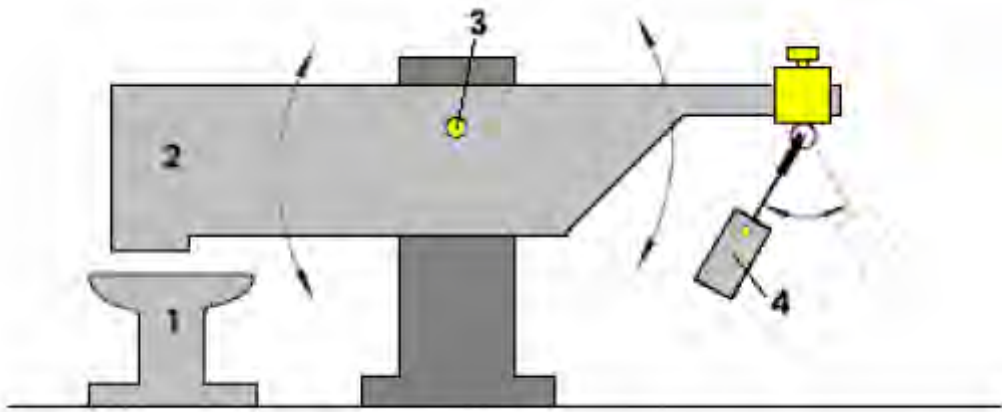
**ALEXKOR BUILT THE CIRCUIT VERY SIMPLY :**



**THE CIRCUIT IS VERY EFFICIENT BECAUSE THE 555 TIMER IS SET TO VERY SHORT, VERY FAST PULSES WHICH DRIVE THE 1.5-INCH AIR CORE COIL ONLY VERY BRIEFLY. ALEXKOR DOES NOT SAY SO, BUT I SUGGEST THAT IT WOULD BE GOOD FOR THE OUTPUT DIODE TO BE A FAST-ACTING DIODE SUCH AS THE UF5408 DIODE WHICH IS A 1000-VOLT 3-AMP LOW COST DIODE. THIS CIRCUIT COULD CHARGE FOUR BATTERIES CONNECTED IN SERIES (IN A CHAIN).**

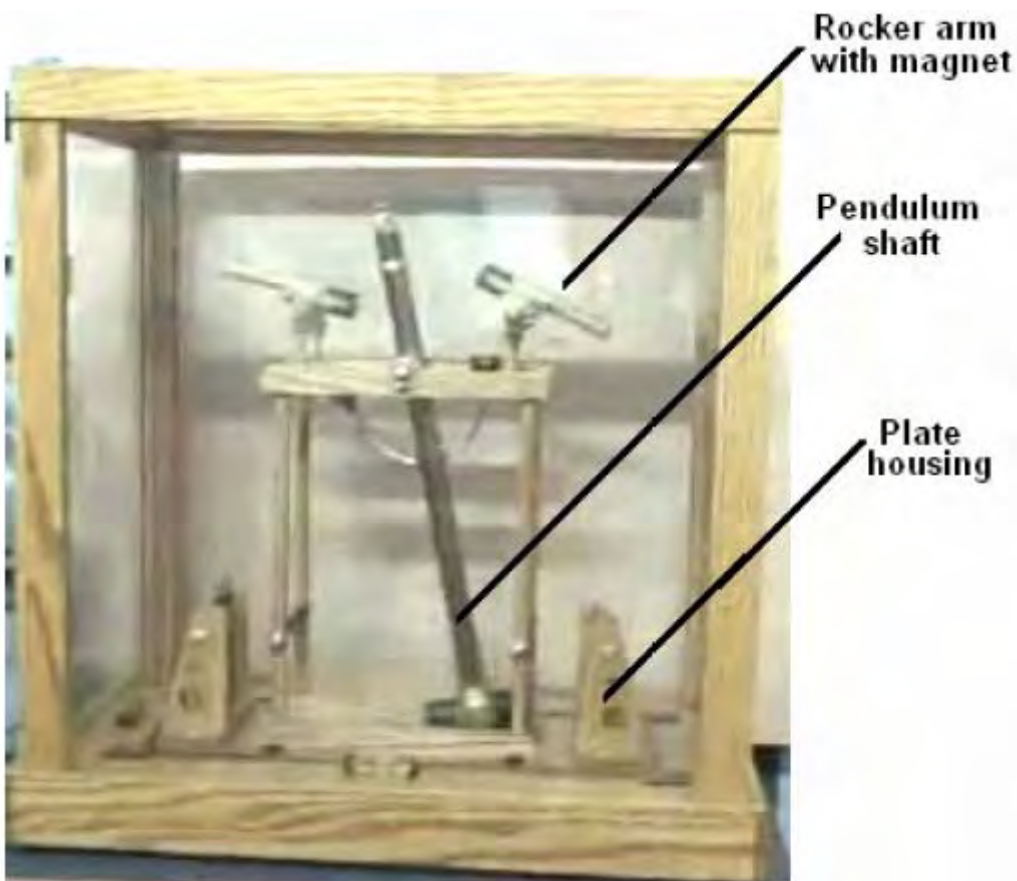
**VELJKO MILKOVIC** DESIGNED A MECHANICAL FREE ENERGY DEVICE WITH A COP=12.

HIS DESIGN IS A COMBINATION OF LEVER AND PENDULUM :



THIS ALLOWS THE TIRING TASK OF PUMPING WATER IN A HOT CLIMATE TO BE MUCH MORE EASILY ACCOMPLISHED BY MERELY PUSHING A PENDULUM OCCASIONALLY WITH ONE FINGER.

THE FOLLOWING PENDULUM HAD BEEN RUNNING CONTINUOUSLY FOR TWO YEARS WHEN THIS PHOTOGRAPH WAS TAKEN :

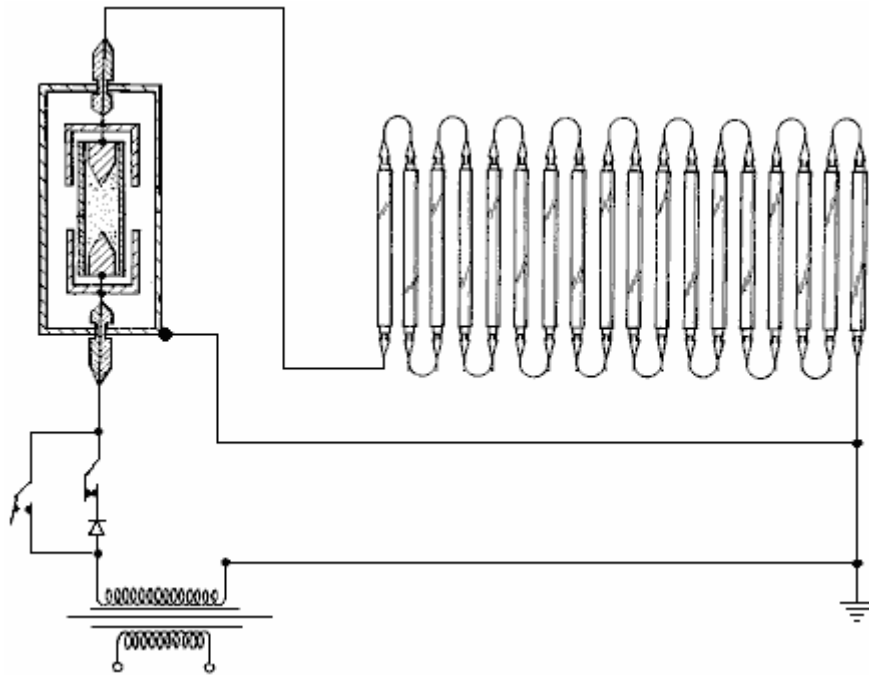


IT GIVES ITSELF A SLIGHT ADDITIONAL PUSH ON EVERY SWING BY DROPPING A MAGNET PLATE DOWN TO PUSH AWAY THE MAGNETS OF THE PENDULUM 'WEIGHT'.

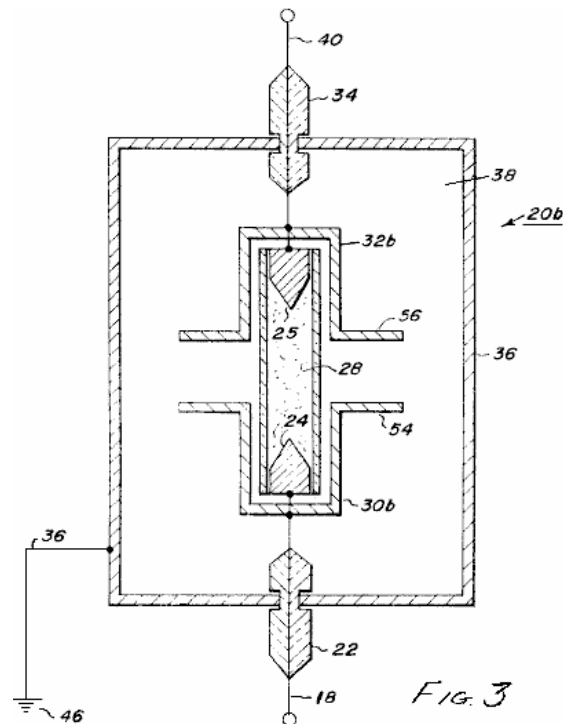


**THE TIPPING OF THE LEVER ARM DROPS THE MAGNETIC PLATE DOWN INTO A STATIONARY SLOT AND THE APPROACHING PENDULUM MAGNET STORES ENERGY IN THE MAGNETIC FIELD BETWEEN THEM. THEN THAT ENERGY IS RETURNED TO THE PENDULUM AS THE PENDULUM MAGNET MOVES AWAY AND THAT SUSTAINS THE PENDULUM SWING INDEFINITELY.**

IN THE 1970s, **PAVEL IMRIS** PATENTED AN OPTICAL AMPLIFIER WHICH HAS A GAIN OF MORE THAN NINE TIMES. HE ACHIEVED THAT WITH A QUARTZ ENVELOPE WHICH HAS TWO POINTED ELECTRODES IN IT. THE QUARTZ ENVELOPE CONTAINS XENON GAS UNDER PRESSURE AND A DIELECTRIC MATERIAL. THE HIGHER THE XENON PRESSURE, THE HIGHER THE OVERALL GAIN.



THE PATENT INCLUDES TABLES OF BENCH TEST RESULTS WHERE FLUORESCENT LAMPS WERE TESTED AS THE LOAD. FROM THE POINT OF VIEW OF ANY INDIVIDUAL LAMP, WITHOUT USING THIS DEVICE IT REQUIRES 40 WATTS OF ELECTRICAL INPUT POWER TO GIVE 8.8 WATTS OF LIGHT OUTPUT (THE REST BEING CONVERTED TO HEAT). THAT IS AN EFFICIENCY OF ABOUT 22%. DURING THE BENCH TESTS EACH LAMP REQUIRED 0.9 WATTS OF INPUT POWER IN ORDER TO PRODUCE 8.8 WATTS OF LIGHT OUTPUT. THAT IS A LAMP EFFICIENCY OF MORE THAN 900% AND THE POWER INPUT WAS ONLY 2.25% OF THE ORIGINAL 40 WATTS REQUIRED. THAT IS QUITE AN IMPRESSIVE PERFORMANCE FOR SUCH A SIMPLE DEVICE.





**DON SMITH** PROMOTED THE MAGNETIC TRANSMISSION OF POWER WHICH IS PARTICULARLY ATTRACTIVE IN THAT MANY COPIES OF THE OUTPUT POWER CAN BE TAKEN WITHOUT INCREASING THE INPUT POWER IN ANY WAY :



HERE, THE CENTRAL COIL IS THE TRANSMITTER WITH THE PRIMARY COIL WELL UP THE SECONDARY COIL. THE BLACK STRIPS ARE JUST INDUSTRIAL GRADE SCREW CONNECTORS. THE THREE NEARER COILS ARE THREE IDENTICAL RECEIVER COILS AT IDENTICAL DISTANCES FROM THE TRANSMITTER COIL. EACH RECEIVER COIL HAS A CAPACITOR AND AN ADJUSTABLE SMALL CAPACITOR FOR EXACT TUNING. THE TRANSMITTER TESLA COIL IS DRIVEN BY A NEON TUBE DRIVER MODULE :

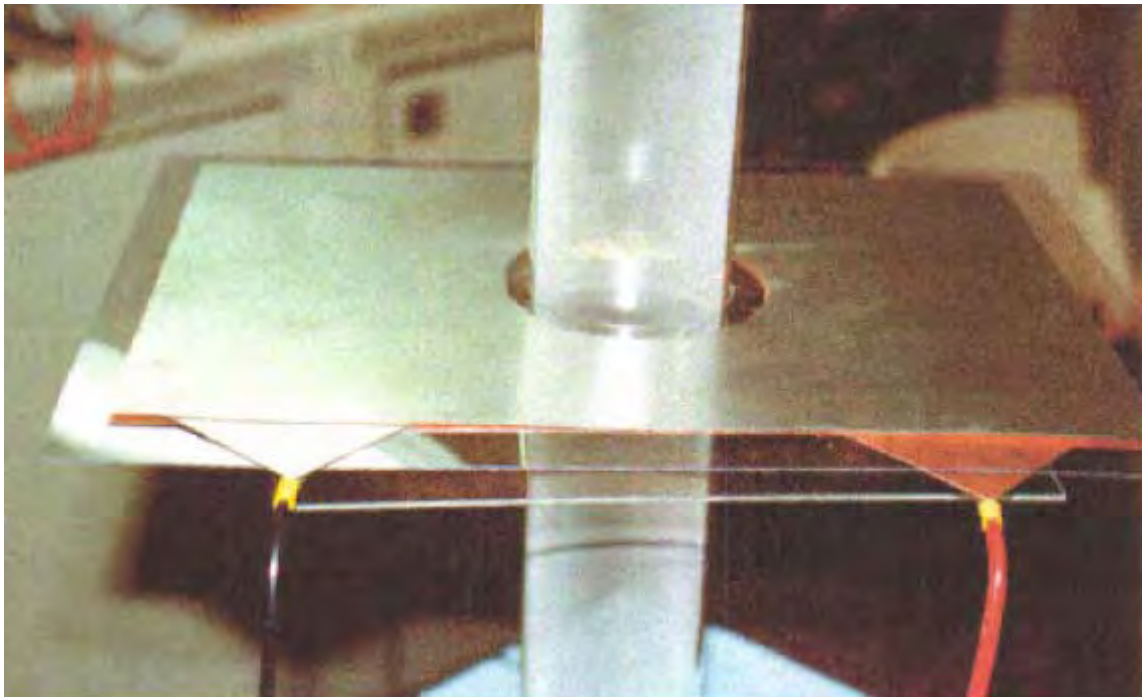
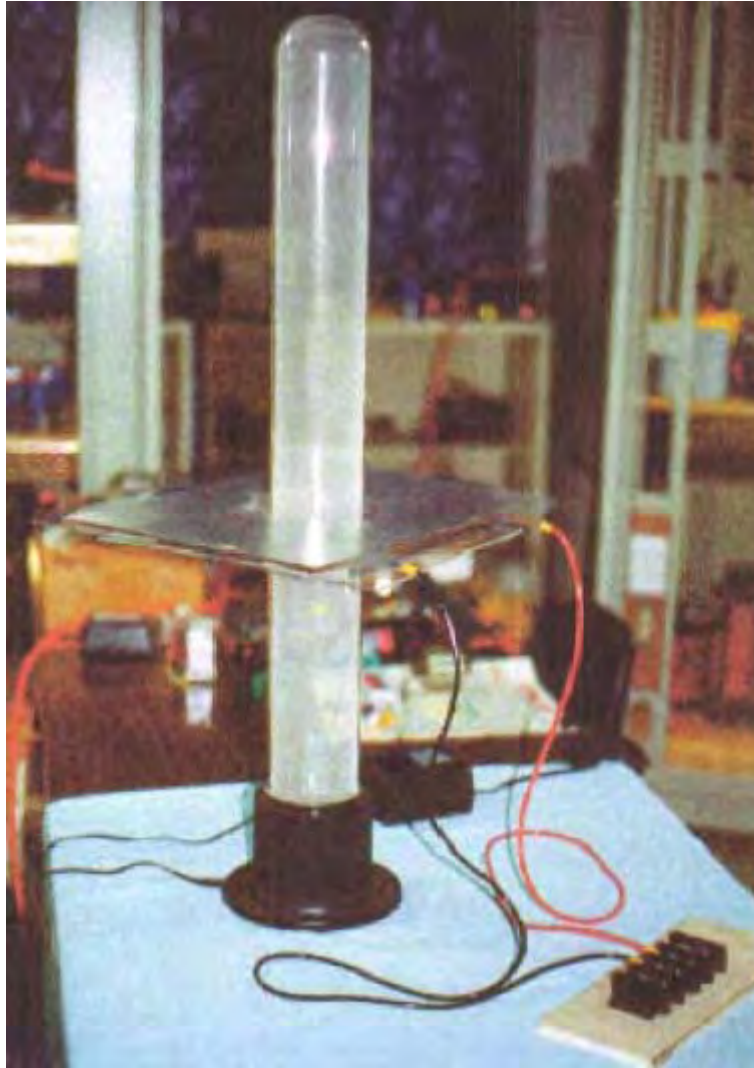


THIS IS AN **EXPONENTIAL** SYSTEM BECAUSE THE OUTPUT IS THE **SQUARE** OF THE VOLTAGE AND THE **SQUARE** OF THE FREQUENCY, SO, DOUBLE THE FREQUENCY AND DOUBLE THE VOLTAGE AND THE OUTPUT INCREASES BY A FACTOR OF SIXTEEN TIMES.

IN HIS DESIGNS, DON RAISES THE FREQUENCY FROM AROUND 50 CYCLES PER SECOND TO ABOUT 35,000 CYCLES PER SECOND WHICH IS A FACTOR OF 700, GIVING AN OUTPUT POWER GAIN OF 490,000 AND HE RAISES THE VOLTAGE TO 9,000 VOLTS WHICH IS FORTY TIMES GREATER THAN THE MAINS VOLTAGE, GIVING AN OUTPUT POWER GAIN OF 1,600 TIMES. TOGETHER, THE OUTPUT POWER GAIN OVER THE INPUT POWER IS 784 MILLION ON EACH OUTPUT !!

THE GAP BETWEEN THE TRANSMITTING COIL AND THE RECEIVING COILS IS CHOSEN CAREFULLY AS THAT DISTANCE HAS A MAJOR EFFECT ON THE SIGNAL RECEIVED BY THE RECEIVING COIL.

**DON SMITH'S PLASMA TUBE IS ONE OF HIS MORE CONVINCING INVENTIONS :**



DON WAS ACTUALLY AWARDED A PATENT FOR THIS DESIGN. ESSENTIALLY, IT IS TWO CAPACITOR PLATES WHICH HAVE A PLASMA TUBE INSERTED THROUGH THE MIDDLE OF THEM. THE UPPER PLATE IS ALUMINIUM AND THE LOWER PLATE IS COPPER AND THEY ARE SEPARATED BY A SHEET OF PLASTIC. HIS PATENT SAYS :

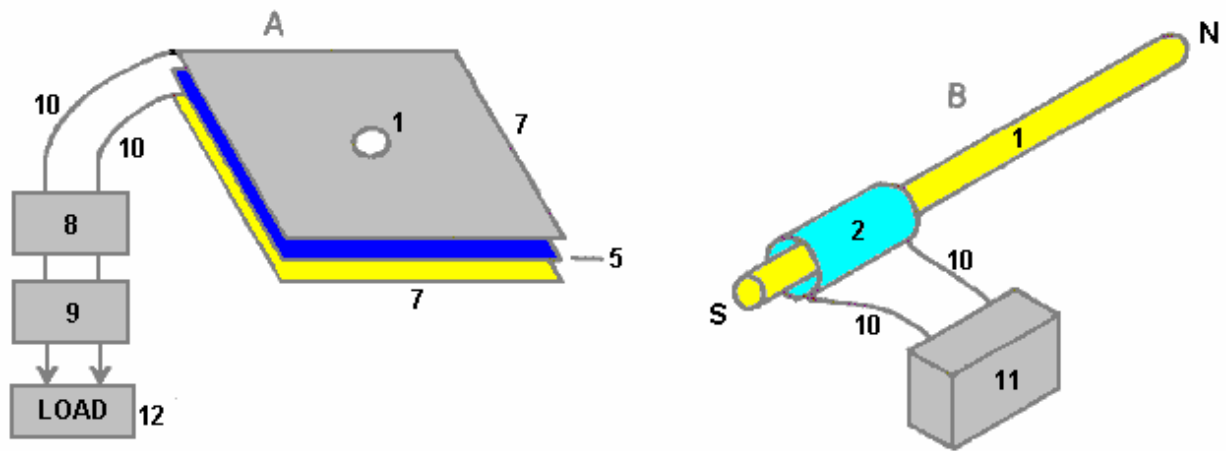


Fig.2 has two parts A and B.

In Fig.2A 1 is the hole in the capacitor plates through which the Dipole is inserted and in Fig.2B it is the Dipole with its North and South poles shown. 2 is the resonant high-voltage induction coil surrounding part of the Dipole 1. The dielectric separator 5, is a thin sheet of plastic placed between the two capacitor plates 7, the upper plate being made of aluminium and the lower plate made of copper. Unit 8 is a deep-cycle battery system powering a DC inverter 9 which produces 120 volts at 60 Hz (the US mains supply voltage and frequency, obviously, a 240 volt 50 Hz inverter could be used here just as easily) which is used to power whatever equipment is to be driven by the device. The reference number 10 just indicates connecting wires. Unit 11 is a high-voltage generating device such as a neon transformer with its oscillating power supply.

THE PRODUCTION MODEL HAS 21 PLATES AND 20 INSULATOR LAYERS:

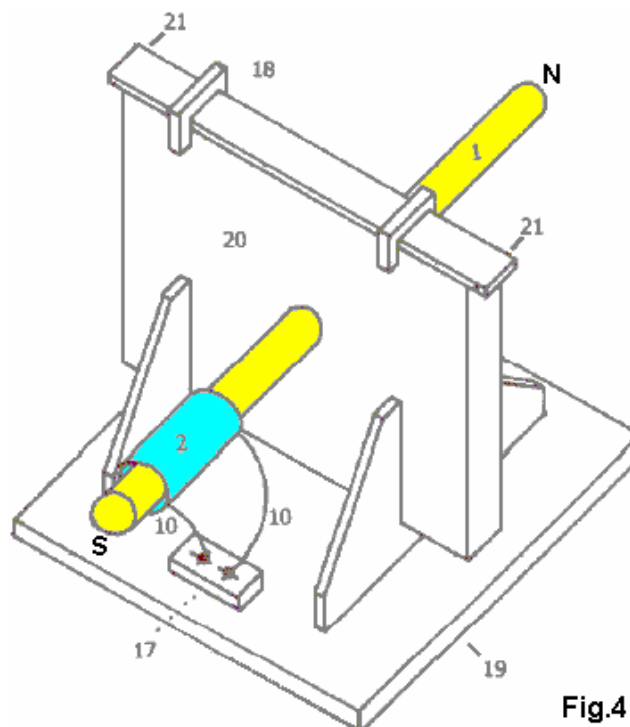
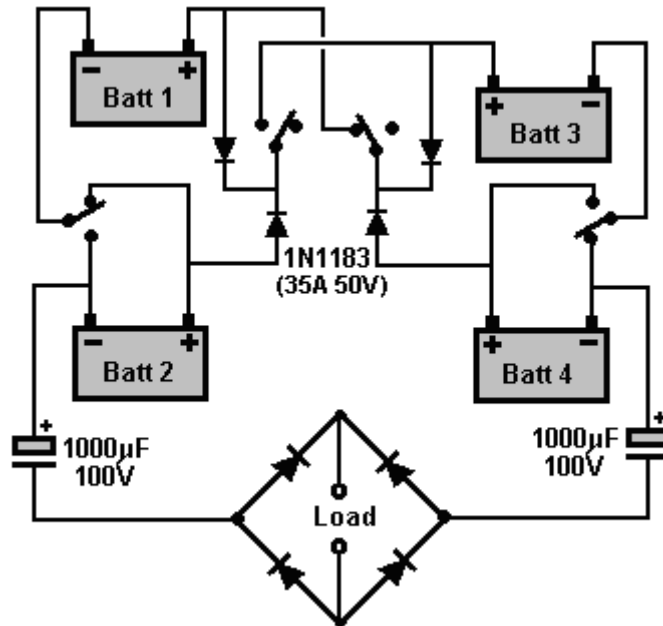


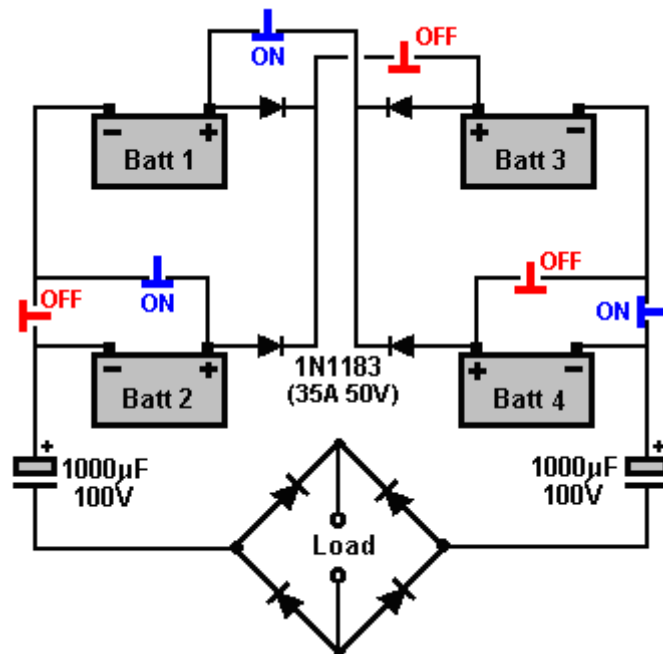
Fig.4

**THE "TESLA" SWITCH PATENT BY CARLOS BENITEZ :**

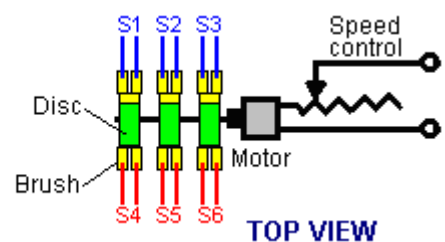
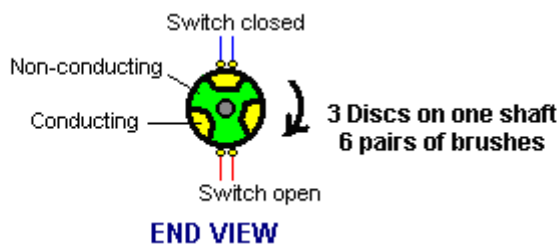
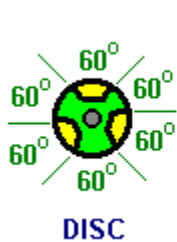
THE TESLA SWITCH WAS MADE FAMOUS BY THE STAFF OF ELECTRODYNE CORP. WHO BUILT AND TESTED IT FOR THREE YEARS (ALTHOUGH ELECTRODYNE CORPORATION DENIES THAT FACT). THEIR CIRCUIT, WHICH USES 36-VOLT CONDITIONED "12-VOLT" BATTERIES WAS :



OR WITH MECHANICAL SWITCHING :

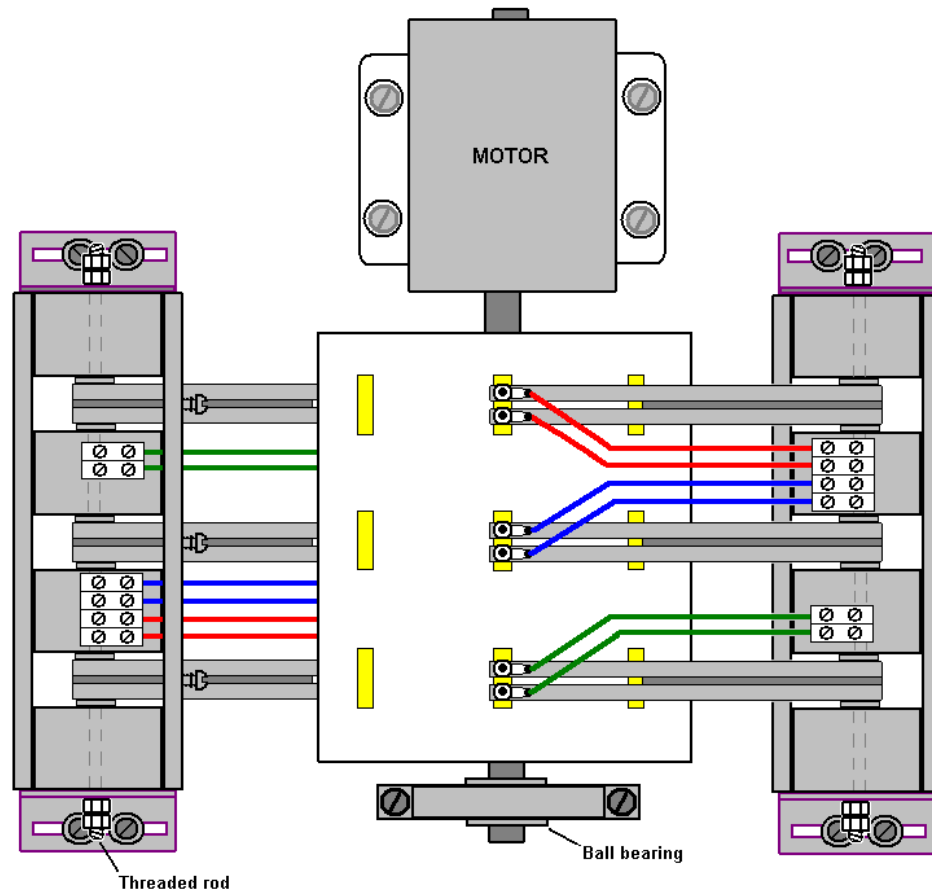


THE SWITCHING BEING ACHIEVED BY A MOTOR DRIVEN ROTARY 6-SWITCH ARRANGEMENT :

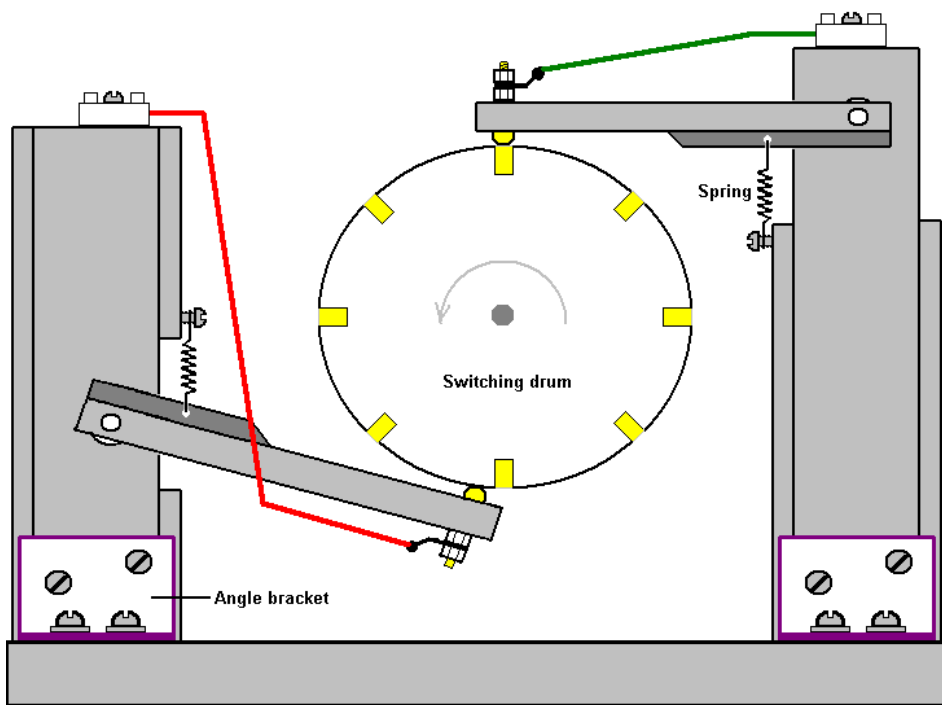


WITH SWITCHING SPEEDS OF 100 TO 800 SWITCHES PER SECOND, THE OUTPUT WAS QUITE REMARKABLE WITH A 30 HORSEPOWER OUTPUT, CAR BATTERIES WHICH CHARGED HAPPILY TO 36-VOLTS EVENTUALLY AND FULLY DISCHARGED BATTERIES WHICH RECHARGED FULLY IN JUST ONE MINUTE.

IF MECHANICAL SWITCHING IS TO BE USED, THEN PERHAPS THIS STYLE OF CONSTRUCTION WOULD SUIT :

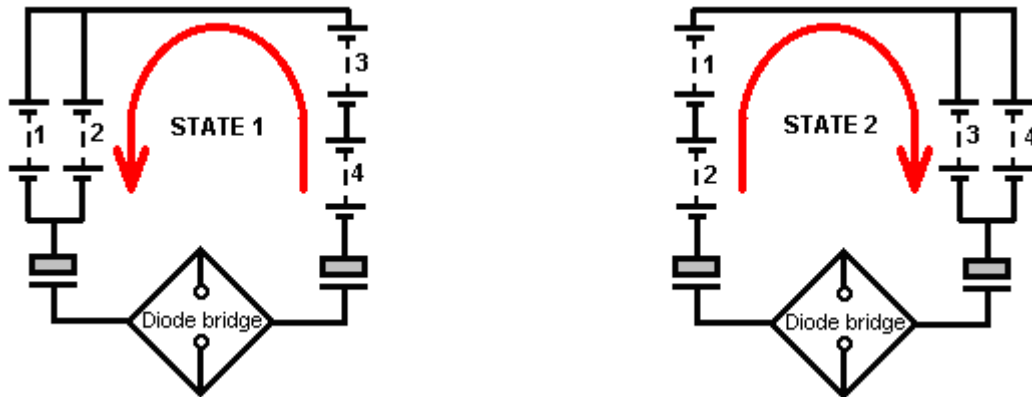


TOP VIEW



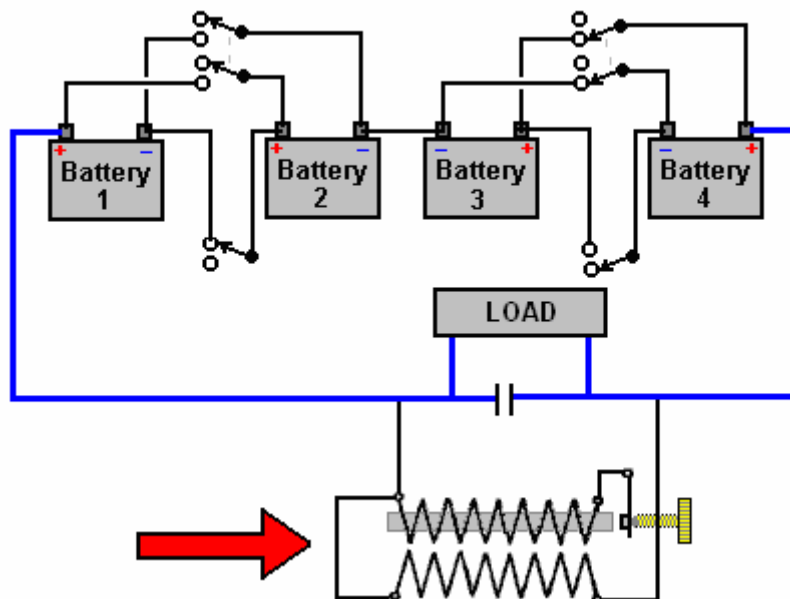
SIDE VIEW

THE SYSTEM OPERATES BY PUTTING THE BATTERIES REPEATEDLY IN SERIES AND THEN IN PARALLEL, SO THAT THE SERIES BATTERIES CHARGE THE PARALLEL BATTERIES :



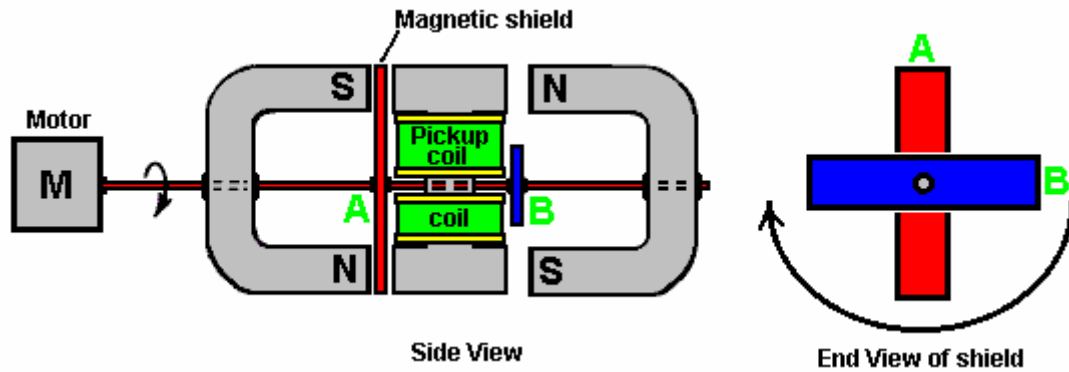
THE LOAD SHOULD BE AN INDUCTIVE LOAD SUCH AS A MOTOR, AND THE DIODES USED SHOULD BE THE 1N1183 AS THEY BREAK DOWN WHEN REVERSED BIASED, FEEDING A SHARP VOLTAGE PULSE TO THE BATTERIES. THE SWITCHING SPEED NEEDS TO BE FAST FOR THIS CIRCUIT TO OPERATE SELF-POWERED.

CARLOS BENITEZ'S 1916 CIRCUIT HAS NO DIODES BUT IT DOES HAVE AN INDUCTION COIL GENERATOR IN ADDITION TO THE BATTERY SWITCHING :



CARLOS ALSO PATENTED A 2-KILOWATT GENERATOR WHICH RUNS OFF A BATTERY AND CHARGES AN IDENTICAL BATTERY WHILE IT DOES SO AND THAT PROVIDES 2 kW OF CONTINUOUS FREE ELECTRICAL SUPPLY.

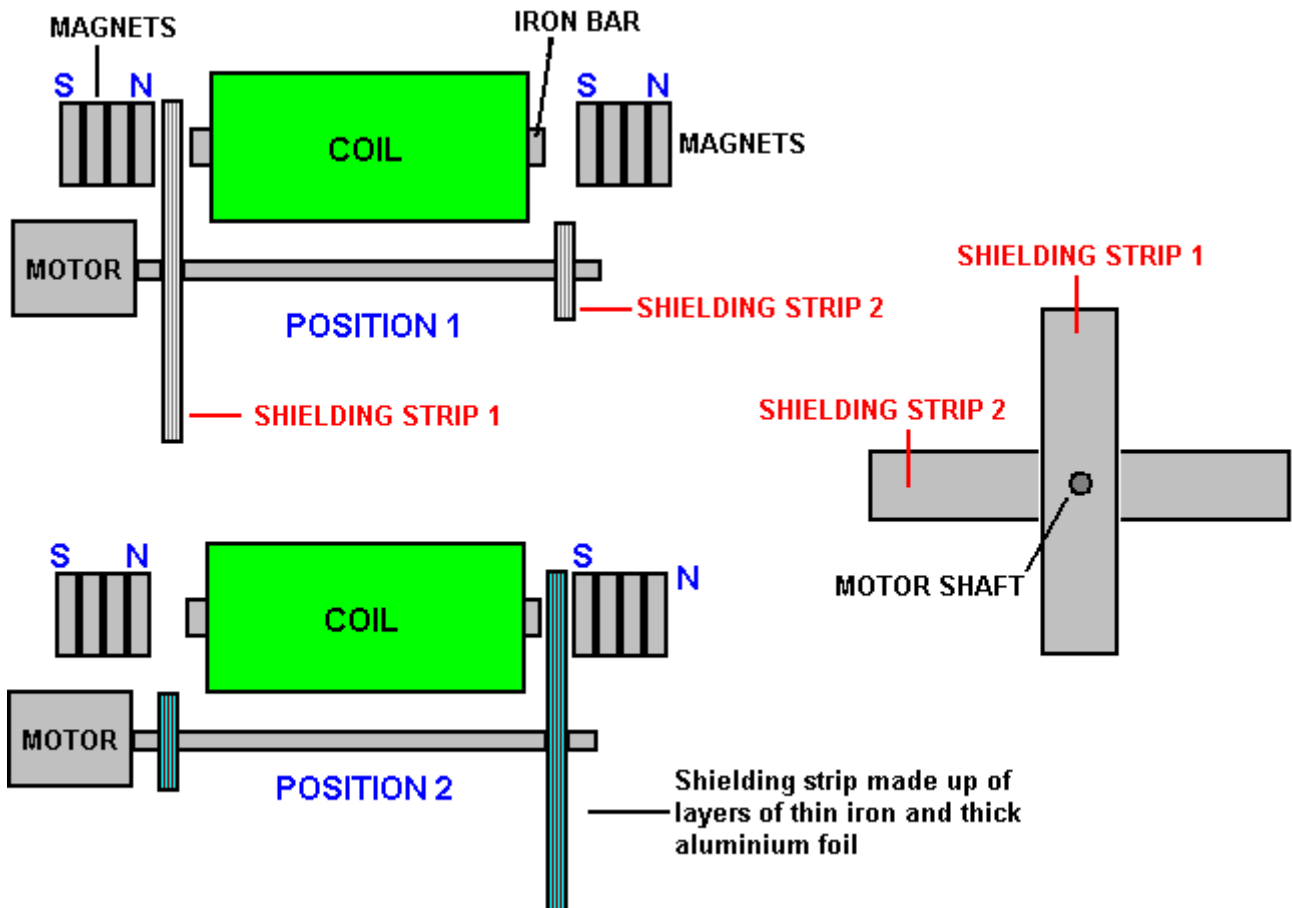
THE **ECKLIN-BROWN** MAGNETIC GENERATOR IS AN INTERESTING CONCEPT. IT PRODUCES AN ALTERNATING MAGNETIC FIELD BY USING A ROTATING MAGNETIC SHIELD :



IN THE ILLUSTRATION ABOVE, THE RED ARM OF THE MAGNETIC SHIELD REDUCES THE STRENGTH OF THE HORSESHOE MAGNET ON THE LEFT AND SO THE MAGNET ON THE RIGHT INFLUENCES THE I-SHAPED CENTRAL SECTION WITH ITS OUTPUT COILS. WHEN THE SHIELD ROTATES THROUGH 90-DEGREES, THE BLUE ARM BLOCKS OFF THE RIGHT HAND MAGNET AND CLEARS THE LEFT HAND MAGNET, REVERSING THE MAGNETIC SITUATION.

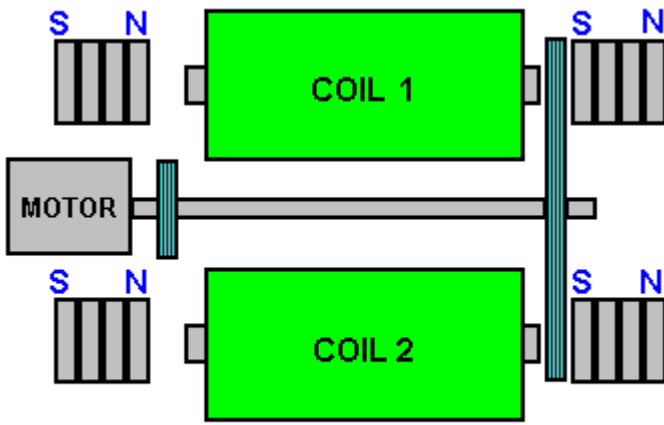
MAGNETIC SHIELDING MATERIAL IS GENERALLY THOUGHT TO BE MU-METAL WHICH IS A VARIETY OF STAINLESS STEEL. ECKLIN USED INSULATED LAYERS OF IRON. THICK ALUMINIUM SHOULD ALSO BE SUITABLE ALTHOUGH IT IS NOT AT ALL EASY TO BLOCK MAGNETISM.

I SUGGEST THAT THE BASIC WELL-KNOWN ECKLIN-BROWN ARRANGEMENT CAN BE UPGRADED A BIT:

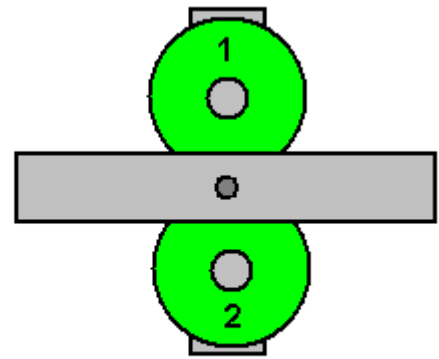


THERE COULD BE TWO COILS :



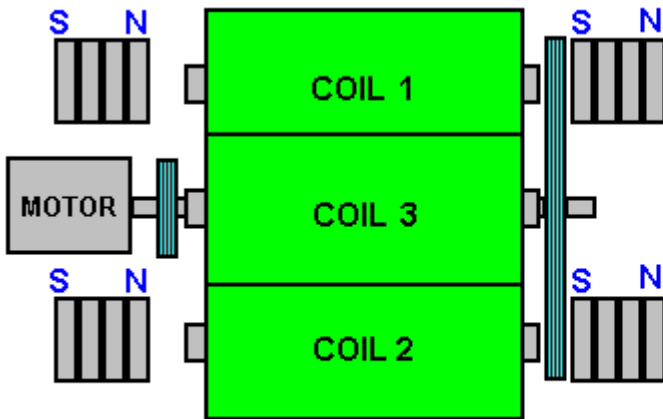


SIDE VIEW

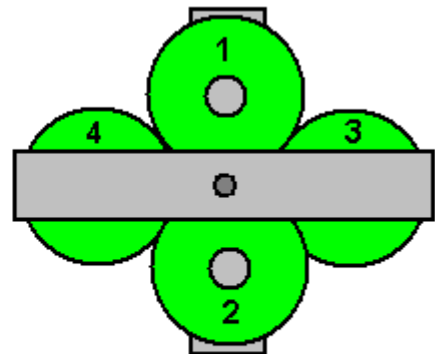


END VIEW

OR THERE COULD BE FOUR COILS :

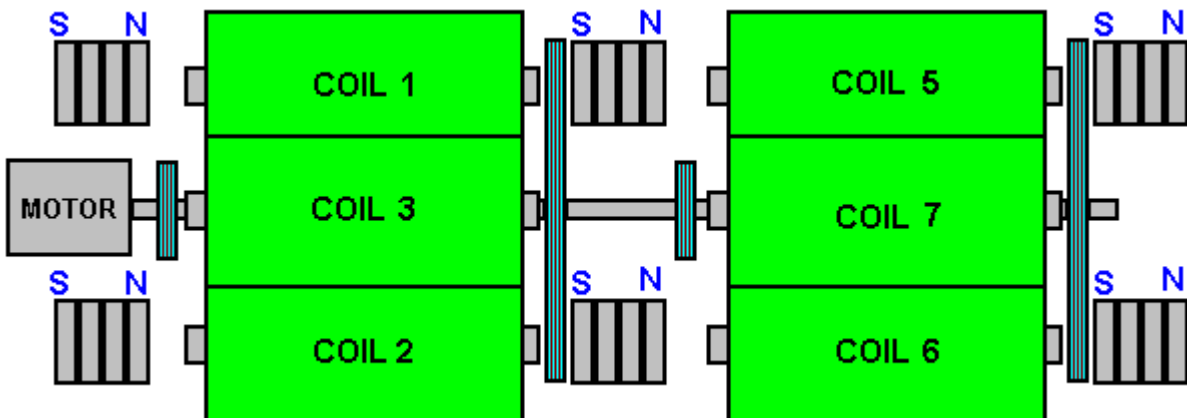


SIDE VIEW



END VIEW

OR THERE COULD BE EIGHT COILS :



MUCH MORE DETAIL ON ALL OF THE DEVICES MENTIONED IN THIS SUMMARY IS IN THE FREE DOWNLOAD : [www.free-energy-info.com/PJKbook.pdf](http://www.free-energy-info.com/PJKbook.pdf)



FREE-ENERGY COILS ARE OFTEN WOUND USING ENAMELLED COPPER WIRE, AVAILABLE FROM SUPPLIERS SUCH AS <https://www.scientificwire.com/acatalog/ec-wire.html> OR [https://www.esr.co.uk/electronics/products/frame\\_cable.htm](https://www.esr.co.uk/electronics/products/frame_cable.htm) (£3.50 POSTAGE) AND THE "SOLDERABLE" VERSION ALLOWS SOLDERED JOINTS TO BE MADE WITHOUT CLEANING THE ENAMEL OFF THE WIRE AS THE PAINT JUST BURNS AWAY AT SOLDERING TEMPERATURES.

NEODYMIUM MAGNETS AND GENERAL ELECTRONIC COMPONENTS CAN BE FOUND ON eBay :



Qty 10: Standard Miniature Neon Bulb, Glow Lamp  
(120842272137)  
Quantity: 2



10 x Vishay FES8HT-E3/45 Fast Rectifier Diode, 8A, 500V, 50ns, 2-Pin TO-220AC  
(321712114130)



Method	Examples
1. Using an aerial	Alexkor's aerial 100 watts, chapter 7 Lawrence Rayburn's TREC aerial 10 kilowatts, chapter 7 Thomas Henry Moray demonstrations up to 50 kilowatts, chapter 7
2. Gravity	William Skinner – powered his workshop in 1939, chapter 4 James Kwok 100 to 1000 kilowatts, chapter 4 Mikhail Dmitriev's pushed weights, 100 watts, chapter 4
3. A spinning rotor	Teruo Kawai self-powered electric motor cycle, chapter 2 Robert Adams kilowatts, chapter 2
4. Motionless circuit	Carlos Benitez 2 kilowatts, chapter 5 Lawrence Tseung's magnetic frame 100 watts, chapter 3 Valeri Ivanov's magnetic frame 100 watts, chapter 3 Rosemary Ainslie's heater 100 watts, chapter 5
5. Efficient magnetic transfer	Thane Heins' 100 watts, chapter 3 Tewari Paramahansa's 20 kilowatts, chapter 2 Clemente Figuera's 20 kilowatt transformer, chapter 3
6. Efficient electrolysis for heating and powering generators	Dave Lawton, chapter 10 Dr Scott Cramton, chapter 10 Bob Boyce, chapter 10 Selwyn Harris, chapter 10 David Quirey unmodified generator, chapter 10
7. Effective battery charging	Motionless: Lawrence Tseung's FLEET, chapter 5 Alexkor's many systems, chapter 6 Moving: John Bedini / Ron Pugh, chapter 6
8. Permanent magnets only	Muammer Yildiz's motor, 300-watts, chapter 1 Dietmar Hohl's motor, 100 watts, chapter 1 Howard Johnston's motor, 1 kilowatt, chapter 1 ShenHe Wang's generators, 1 to 100 kilowatts, chapter 1 Mini Romag / J L Naudin generator, 35 watts, chapter 13
9. Permanent magnets with electricity	Robert Adams' generator, multi kilowatt, chapter 2 Charles Flynn's motor, unlimited, chapter 1 Steven Kundel's motor, 100 watts, chapter 1 Donald Kelly's motor, 100 watts, chapter 1
10. Passive devices	Dr Oleg Grietschevitch's Toroid 1500 kilowatts, chapter 5 Bill Williams/Joe Nobel's Joe Cell, unlimited, chapter 9
11. Inertia	John Bedini's pulsed flywheel, chapter 4 James Hardy's water-jet generator, chapter 2 Chas Campbell's self-powered flywheel, chapter 4
12. Ground energy	Barbosa and Leal 169 kilowatts, COP=102.4, chapter 3 Frank Prentice 3 kilowatts, COP=6, chapter 5 Michael Emme's Earth Battery, 3 kilowatts, chapter 6
13. Radioactive	Colman / Seddon-Gillespie's 1 kilowatt, 70-year battery, chapter 3 Tesla's generator (spark gap alternative), unlimited, chapter 11
14. Isotope exchange	Meyer and Mace using isotopes of iron, 1 kilowatt, chapter 3
15. Splitting the Positive	Clemente Figuera's 5 kilowatt generator (avoids back-EMF), chapter 3
16. Magnetic Coupling	Raoul Hatem's multi-generator system, unlimited, chapter 2
17. Inert-gas motors	Josef Papp (Volvo 90 HP engine @300 HP 40 min. demo), chapter 8 Robert Britt, unlimited, chapter 8.
18. Optical amplification	Pavel Imris' optical amplifier, multiplier of 9 times, unlimited, chapter 3
19. Friction	Paul Baumann's Thestatika (Wimshurst machine), 3 kilowatts, chapter 13
20. Piezo electricity	Michael Ognyanov's semiconductor battery, 10 watts, appendix

Not included in this list:

Andrea Rossi's Cold fusion, 1 kilowatt modules,  
Floyd Sweet's motionless magnetic system (COP=1,500,000 at 500 watts),  
Steven Mark's self-powered toroid, hundreds of watts,  
Tariel Kapanadze's 1 kilowatt to 100 kilowatt generators,  
Don Smith's high kilowatt designs,  
Alfred Hubbard's 35 HP engine,  
Richard Clem's 300 HP self-powered engine,  
John Searle's power generator,  
Dan Cook's self-powered motionless generator,  
Joseph Newman's motor  
and many others.

**VIDEO :** <https://www.youtube.com/watch?v=tE-omwpJf4A>