Evert Aether-Physics and -Philosophy

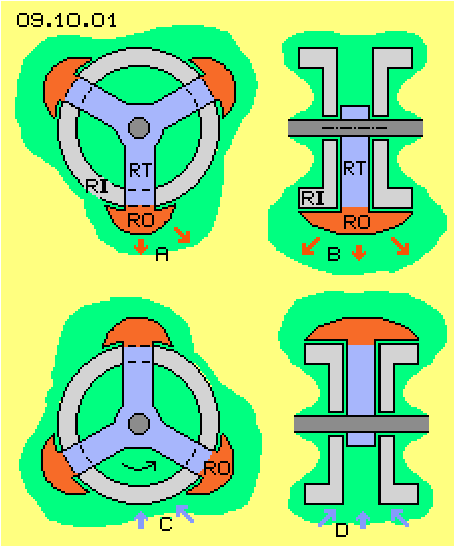
09. Aether-Electric-Technics

ap09be.pdf
with chapters 09.10. to 09.15.

Chapters **09.01. to 09.09.** are available as print-version **ap09ae.pdf**

09.10. Ballbearing-Motor/-Generator

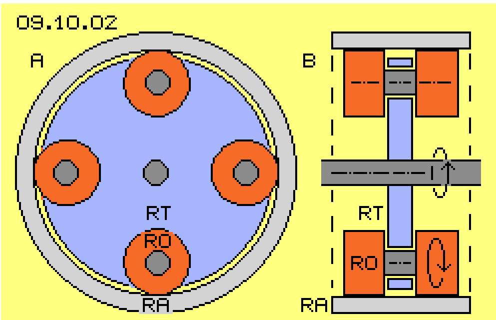
Railgun-Effect
At previous chapter were discussed the effects which occur at applications of railguns. This chapter now refers to these analyses several times. Besides others, railgun-machines are told to produce acceleration if projectiles are only gliding upon current-bearing rails (and are not rolling). This should be easy to rebuild also at a rotation system. At picture 09.10.01 a corresponding design schematic is sketched, left-upside by cross-sectional and right-upside by longitudinal view.



At a shaft (dark-grey) a rotor-arm (RT, blue) is installed, here e.g. in shape of three radial spokes. At each end of a spoke a rotor (RO, dark-red) is mounted, which is gliding along the outside face of an inside-ring (RI, light-grey). The whole system is electric charged, so at all surfaces exists electro-static charge, here marked by the light-green area. Each rotor reaches out upon the inside-ring in shape of a round hill and corresponding further outward reaches the charge. When the rotor is turning around the system axis, the charge is dammed-up in front of the rotor (here each left side of the rotor), as marked by the red arrows at A and B. The aether-movements are reaching even further outward.

At this picture below, the rotor did turn by 60 degree. The (generally stationary) aether of that place now can press-back the swinging motions nearer tot the inside-ring, like marked by the blue arrows at C and D. All around that machine thus the aether comes into a pulsating swinging motion in radial direction. If a corresponding pulsating current would flow e.g. from the left to the right inside-ring, accelerated rotation could come up. By input of strong current naturally one can achieve mechanical movements. Here however it´s the aim to generate rotation by minimum input of energy, e.g. simply by electrostatic charges - and this conception might not really match that aim.

Ballbearing-System
Nevertheless this system achieves pulsating swinging charge with minimum energy-demands, because practically only the friction of bearings must be compensated. As mentioned at previous chapter, an additional ´swirl´ of aether-movements is necessary. Previous rigid ´rotors´ thus should perform an additional rotation. A corresponding conception schematic is sketched at picture 09.10.02, left side by cross-sectional and right side by longitudinal view. At the shaft (dark-grey) now a disk (RT, blue) is installed (instead of previous spokes). At this disk here e.g. four cylinders (RO, dark-red) are mounted turnable. These rotors are rolling at the inner face of a stationary outside-ring (RA, light-grey).



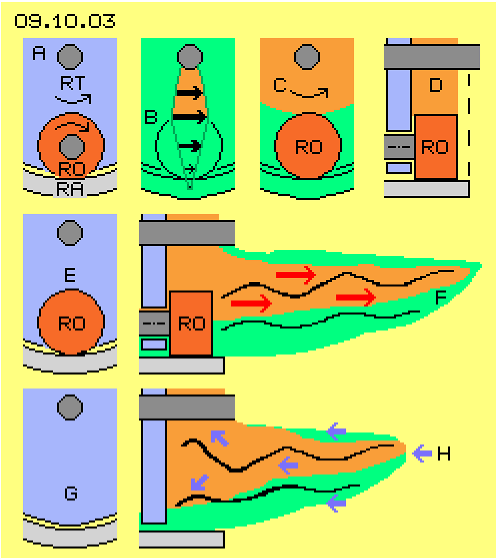
This construction in principle corresponds to a ballbearing and again energy-input is demanded only for compensation of friction at the bearings. However the ´balls´ here are not rolling between an outside- and an inside-ring. Instead of, the rotors (RO, dark-red) are guided by the disk (RT, blue). These bearings must allow the rotors to roll direct at the outside-ring (RA, light-grey), pressed onto that face by centrifugal forces.

Increased Swinging at the Centre
When that system is charged electrostatic, the charge ´sticks´ (see previous chapter) at the

surface of rotors, which are turning around the system axis and around their own axis same time. So the aether-swinging of charges are swirling twice, thus increased movements come up and thus also a wider aether-volume is involved. At following picture 09.10.03 only a section below the shaft (dark-grey) is drawn several times. This ´window´ represents the view from outside, e.g. of an ´indifferent onlooker´ respective the surrounding ´stationary´ aether (see previous chapter). Upside left at A this window-section of previous picture is drawn once more.

The system is working finally after an electrostatic charging. That´s why all surfaces at B are marked light-green. The system is working finally after it´s started to turn around. Then, the different mechanical parts are moving by different speeds within space. Within the aether these motions are rebuild by stroke-components of different strength. From the stationary outside-ring further inward, the motions of the rotors become faster, thus also the stroke-components become stronger. At B that fact is marked by green cone and the black arrows, which are longer towards inside.

The most fast mechanic motion exists at the inner rim of the rotor (here the upside rim). Again some further inward, the strong strokes of aether are not hindered. Finally at the shaft, that whirlpool is decelerated. So within that central area exist ´oversize aether-strokes´. At B this fact is marked by the wide red cone and at C these strong motions are marked by the light-red area. At longitudinal view at D this area between rotor (dark-red) and shaft (dark-grey) is also marked light-red (details see previous chapter).



Increased Charge-Swinging
At second row of picture 09.10.03 left side at E, the rotor (RO, dark-red) is positioned below at this window. The rotor is loaded by charge, which reaches far out into space aside. At the longitudinal view at right side, that charge is marked by light-green area. The multiple twisted black connecting-line represents the swinging of this charge.

These motions are overlaid by the aether-strokes, which come up by the turning of the rotor. The further inside, the stronger the stroke-components are. They build an additional swirl within the aether. Correspondingly, the additional movements reach out aside even wider. This enlarged area is marked light-red and the intensive charge-swinging is represented by the stronger twisted black connecting line (details again see previous chapter). So whenever a rotor is rolling through that window-area, aside of comes up an extension of the aether-swinging, like marked by red arrows F.

Axial pulsating Movements
At row below at this picture 09.10.03 left side at G, the chronological following situation is drawn. The rotor did roll off to right side and the following gap now appears within that window-area. Into that ´swirl-free room´ now the general aether-pressure can push-back the previous twisted-up vortices, like marked by the blue arrows H at corresponding longitudinal view right side. The intensive swinging thus is shifted from right to left. The aether-pressure however can not stop the intensive motions, but the swinging movements are pressed more broad, like marked by the diagonal blue arrows. At the one hand, previous enforced charge-swinging is shifted inward to the shaft and the disk of rotor-arm. At the other hand, the previous increased intensity of motions is shifted outward into the gap between the rotors.

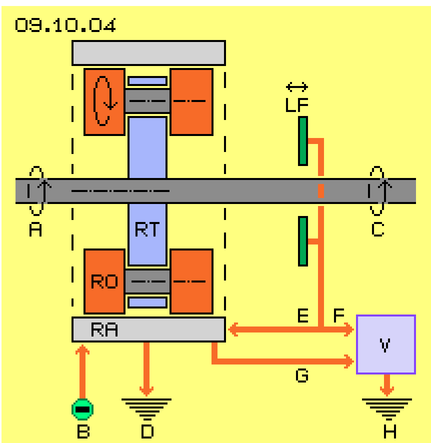
Into that window-area, at next moment, appears the next rotor with its charge at faces aside, and thus the previous process is repeated. So at this location the intensity of motions of the (generally stationary) aether is shifted outward aside and at next phase is shifted back into the following gap between the rotors. That pulsation is most aether-conform motion-pattern, especially with these multiple twisted and overlaying movements. The spiral connecting-lines of the charge-vortices are screwing around and same time are springy shifted to-and-fro in axial direction. Probably that pulsation comes up at its best, when the gaps between the rotors are likely to the diameter of rotors (opposite to ballbearings of previous chapter, where the balls were positioned near to the next).

Acceleration-Effect
At upside row of picture 09.10.03 at C and D was discussed, that and why ´oversized´ stroke-components exist at the central area between rotor and shaft. That whirlpool becomes decelerated in shape of a ´rigid vortex´ by the surface of shaft (dark-grey) and the inner part of the rotor-arm-disk (blue). Opposite: because the atoms of these material faces are moving relative slow within space, they get pushed into turning sense of system by these faster aether-movements.

The pulsating aether-swinging movements in axial direction are shifting the ´overheated´ charge-movements some inward and thus enforce the motions within the gaps between the rotors and there also radial inward. So also a thrust in turning sense of system is affecting at these relative slow moving material faces. In addition, that back-pulsating (at the picture marked by blue arrows H) is shifting the increased charge-vortices some outward. The atoms of rotors are moving slow within space at this radius. So the strong stroke-components accelerate the rotation of these mechanical elements.

Thus first, a strong stroke-component wanders all around at the central area (at C and D). Second, a strong swirl of charge comes up aside of the rotors, especially at their inside rim. This results an extension of charge-swinging into areas aside (see red arrows F). Third, at just that aether-area the intensive movements pulsate back into the rooms between the rotors (see blue arrow H). Decisive now is, the oversize-swinging respective the enforced strokes are shifted into areas, where material surfaces are turning ´too slow´ (the side-faces of rotor-arm-disk and the outside parts of rotors).

This thrust accelerates the turning of the shaft and the rotor-arm, however also the rotors are pushed faster around the system axis. The rotors become faster rolling at the stationary outside-ring - again resulting stronger swirls of the charge vortices. This acceleration-effect can speed-up a system to self-destruction (like discussed at previous chapter). However that risk does not exist here, based on the ´aether-adequate´ swinging into axial direction. Each rotor is followed by a gap, so the swinging motions are pulsating aside-outward and back again. So no ´endless´ extension of oversize aether-movements comes up, but that swinging to-and-fro balances itself within that local area. That motion-pattern, which is pulsating in-itself, is completely balanced. Resulting is a mechanical acceleration, because the fast aether-movements respective the strong stroke-components are shifted into areas, where material constructional elements are turning relative slow.



Functional Model
At picture 09.10.04 schematic is drawn a functional model of that conception. At the system-shaft (dark-grey) is fix mounted the rotor-arm (RT, blue). At the border of this disk are turnable mounted cylinder-shaped rotors (RO, dark-red). The rotors are rolling at the inner face of the stationary outside-ring (RA, light-grey). This arrangement

is stored within a housing, however no electric contact exists between these constructional elements and the housing (the housing is not drawn here). The red lines and arrows at this picture represent electric conductors. Depending on phase of operating mode, alternative currents are flowing at these conductors.

When starting the system, the shaft must be put turning (see arrow A). Only few energy-input will be demanded, because the mechanical elements can turn as free as a ballbearing. After starting the revolutions, whole system must be charged electrostatic, so negative charges exist at all surfaces (see minus-symbol at B). The system becomes accelerated by process discussed upside, so a mechanic turning momentum is available at the shaft (see arrow C). The system then is working autonomous as motor. The rotation of the system becomes decelerated and finally stopped, when the charge can flow off, e.g. if a switch allow the charge to flow into the ground via conductor D.

At the other hand the system works as a generator, because the originally fed charge becomes stronger by the additional swirls of the aether, resulting higher voltage. Like shown at previous chapters, the additional generated charge could be taken off by ´charge-catchers´ (LF, dark-green). Ring-shaped faces could be used, which might be shifted in axial direction, to ´suck-in´ more or less charge. As an alternative, rods could be used, which might be swerved more or less towards the centre. At any case, stronger charge-layers would be accumulated than once were fed at the outside-ring when starting the system.

Via conductor E, that additional charge could be re-loaded into the system. At the surfaces of the rotors thus aether-movements become even more intensive. The system is accelerated again, a stronger turning momentum is achieved, and in addition more charge respective higher voltage reaches to the charge-catchers. If no more back-charging via conductor E is necessary, the oversize-voltage could be guided to a consumer (V, blue) via conductor F and finally to the ground H.

Instead of these complex charge-catchers a simple solution might work as well. At the central area between the rotors and the shaft comes up ´oversize´ strokes of aether-movements. The charges at the side-faces of rotors become ´heated-up´ by the double overlaying revolutions. These intensive aether-vortices practically correspond to stronger charge. This is pressed towards material surfaces by the general aether-pressure all times. So the shaft and the disk of rotor-arm and the faces of the rotors will show stronger charges, which finally accumulates at the outside face of the outside-ring. Via conductor G that additional generated voltage can flow as an electric current to the consumer (V, blue) and finally into the ground H.

Constructional Variations

That system must be started mechanical and must be fed with electrostatic charge once at the beginning. Naturally it appears incredible, the system should go on working as a motor without further input of energy. However one must remind, all mechanic motions finally are motions within the aether. Within the gapless aether inevitably all movements must go on, especially within closed and ordered motion-pattern. The continuous rotation around the system axis produces a corresponding ´whirlpool´ (and finally this results the appearance of inertia or kinetic energy). The rotation of the rotors around their own axis produces an ordered overlay. Because the inner rim of rotors are turning much faster than the other mechanic parts, locally differing strokes of different strength come up. The sideward pulsation shifts the intensive motions into areas of relative slow turning. So the system becomes accelerated - however that thrust-energy does not get lost, because faster rotation again enforces all these aether-vortices.

Nevertheless it´s an open question, if this system is used as a motor at its best. If an external motor would be used for driving the system, only few energy-input is demanded, however the speed of revolutions can easy hold constant. So a constant amount of additional generated charge respective voltage is produced, which finally is available at the outside face of the outside-ring. So that variation represents a generator with good control of voltage respective strength of the current.

Previous picture 09.10.04 thus shows only the general conception and alternative ways for guiding the charges and currents. Depending on operation-mode, naturally additional electric elements are necessary, e.g. switches, rectifier, diodes, transistors, controllable resistors etc. for realizing working models. Probably also diverse modules could be installed at the shaft with rotors shifted. Opposite, a generator with vertical shaft and rotors installed only upside could show optimum performance, e.g. based on the general left-turning of electromagnetic appearances. This conception could also work with permanent magnets as rotors, just because the generally left-turning magnetic fieldlines, which here could be enforced by additional left-turning rotation and swirls. Nevertheless that solution with electrostatic charges should be preferred, just because it´s much easier to control (via additional charge or drawing-off the generated current). Naturally many further experiments must be done to find the best relations.

If ... then ...
If the reports about railguns and experiments with ballbearing systems of different kind are true (and I just must take this as starting point), then the appearing effects are not to explain by conventional understanding of electromagnetic processes. Then the decisive processes must occur within the real aether. Then my considerations of previous and of this chapter can not be totally false respective at any case these concrete aether-movements are much better appropriate to the facts than the Nothing and pure fictive fields of common sciences.

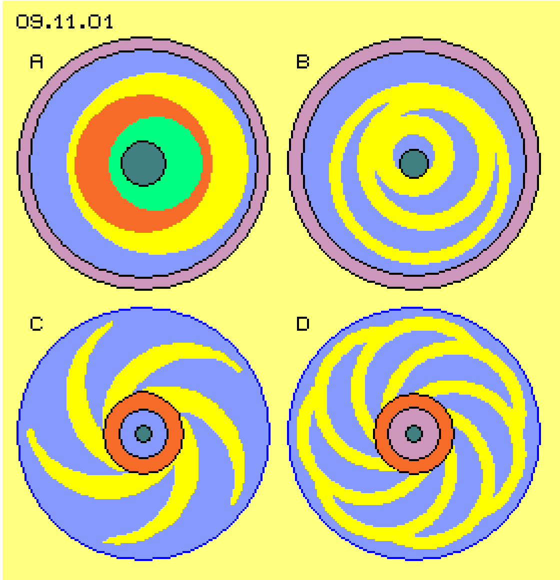
The Free Aether with its chaotic and light-fast motions represents an unlimited source of energy. It´s relative easy and possible by few efforts to impress the aether with an overlaying motion-pattern. Within the gapless aether all local swinging movements go on without losses. It´s absolutely possible to organize the aether-movements, so material particles are pushed forward or a given charge-layer becomes more intensive. Possibly previous considerations might animate some handcrafts to check these proposals by real models. Professional physicians and electric engineers won´t dare at the very moment to doubt the Nothing of common science - or even to think about using that ´Perpetuum Mobile´ of the continuous swinging aether by simple machines.

At first, naturally any ´normal brain´ doubts these claims. However remember, it needs only some rubbing a PVC-ruler to generate electrostatic charge, reaching far out into neighbouring space. This machine can be build with a diameter of only few centimetre and can drive 10000 rpm and beyond, by nearby null input of power. So the given charge is swirled up to high voltage. If current flows off, only the ´over-heated´ vortices are pushed along a wire towards the consumer. The same aether still remains within the system, still twisting in shape of the remaining charge. Especially if the current is allowed to flow off only by phases, each ´backstroke´ feeds up the system with vortices. So if … then … would be worth to be checked.

09.11. Crop-Circle-Generator

Crop Circles
Crop-circle-pictograms come up frequently since some years, especially in England and also in other countries. Naturally there are fakes, however some are designed by high quality only ´intelligent beings´ were able to produce. I do not want to convince anybody, however I assume the ´authentic´ crop circles are ´anybody´s´ essential messages. Unfortunately we mostly are too stupid to understand the coded information.

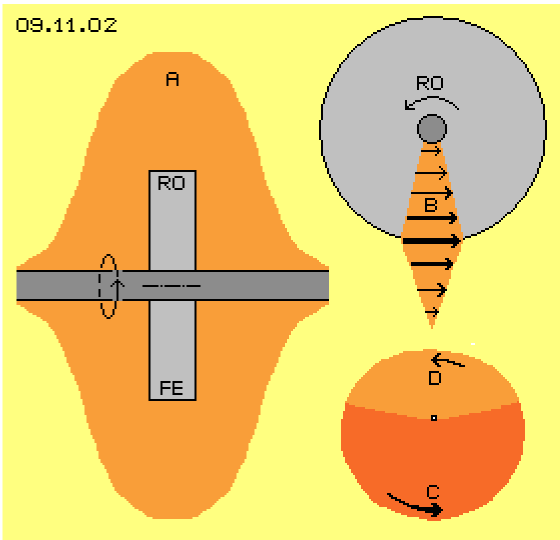
Around the turn of century, often came up motifs like shown at picture 09.11.01, where the elements are differed by some colours. At this time I studies rotor-systems in order to produce a turning momentum based on centrifugal- and/or gravity-forces (e.g. by embedded wheels and eccentric rings). Unfortunately no pure mechanical ´perpetuum mobile´ was successful up to now (even Johann Bessler alias Offyreus might have build a running wheel some hundred years ago).



At previous chapters concerning the ball-bearing-effect, also appeared some rings and rolling cylinders, which reminded me the crop-circles. However here it´s not the aim to construct complex wheel-systems, but only to produce most intensive aether-swinging movement at conductor-surfaces, thus producing electric current directly. Optimum solutions mostly are based on simple principles and are using ´pretty´ shapes - e.g. like these crop-circles might present diverse impulses.

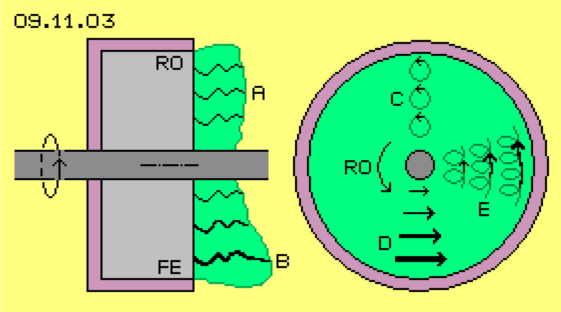
Simple Rotor, huge Aura
At picture 09.11.02 a simple disc is fix mounted at a shaft (dark-grey) and this rotor (RO, light-grey) is turning around the system axis. However in reality, no ´solid particles´ are moving within space. The atoms are only complex vortices of aether and only their motion-pattern are forwarded within the aether, which by itself is generally stationary. Strange appearances occur even by such simple constructions. If e.g. the disc is build by iron (FE) and is rotating fast and long time, the ´spin´ of the atoms becomes adjusted and the material becomes ´magnetic´. The real cause is the following: the vortices of atoms are not completely symmetric, the ´bulky´ parts stay back within the aether, so the whole vortex-assembly is aligned that kind, the resistance becomes minimum. If many atoms now are adjusted alike, also the aether between the atoms shows an ordered motion-pattern. If these aether-movements behave analogue to magnetic field-lines, the rotor-disc appears like a (week) magnet.

If the vortex-complex of an atom has passed an area of the stationary aether, afterward this region comes back to its original motion-pattern of Free Aether. If however many atoms repeatedly are crossing the area, the aether of that region does not come back completely to the neutral motion-pattern. The atoms practically leave a trace. The swinging becomes deformed, as it´s moving fast into direction of turning sense and coming back some slower. As all ather is a gapless whole, neighbouring aether must take also that stroke-component. Around the rotating disc thus appears a wide-ranged aura (A, light-red). This area of likely aether-movements is much wider than sketched here, especially if magnets are rotating. The aura e.g. around John Searl´s disc was even visible. At the experiments of Roschtschin (other spellings are Roschin or Rochtchin) and Godin, the effects were detected even at rooms aside and upside floors (see previous chapter). Diverse inventors used that side-effect of ´fly-wheels´, mostly without knowing that aether-background.



At this picture right upside, the rotor (RO) is drawn by cross-sectional view. The turning disc builds a rigid vortex with increasing speed from the centre outward. The stroke-component of the aether becomes corresponding stronger, with strongest intensity at the rim (see arrows at B). The aether of the environment takes also that stroke in turning sense, however decreasing towards outside, like at any potential-vortex. The balancing movements towards Free Aether occurs within a wide aura, into radial and also into axial direction (again much wider than drawn here).

At this picture right below, once more is repeated how that stroke-component comes up, e.g. by simple overlay of two circled movements. During one half of time, the aether is moving accelerated at a long way (dark-red section C). During the second half of time, it moves back slower at a shorter way (light-red section D). All aether is moving at a local narrow space, thus by that sense it´s ´stationary´. Details are described comprehensive at earlier chapters.

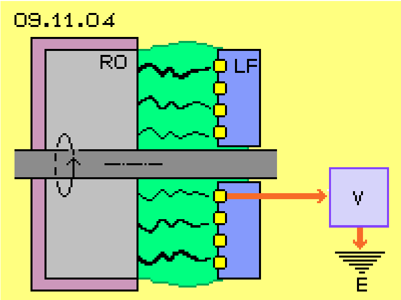


Charge at Rotor-Surface

Like the machines of previous chapters, the system must be charged for starting. So the second constructional element is the electrostatic charge at the surface of the rotor. Charge must exist only at one side-face of the disc. At picture 09.11.03 thus the rotor (RO, light-grey) is covered by an isolating material (pink) at the other faces. The rotor is build wider than necessary for the charge, so the aether-movements can build up most strong within the rotor-masses and the enclosing aura.

The charge by itself exists by synchronous swinging aether, here represented by multiple twisted black connecting-lines. Generally, the aether-pressure pushes an electrostatic charge (A, light-green) toward the surface by a layer of likely height - when the rotor does not turn. If however the rotor is turning, the charge-swinging becomes overlaid by the stroke-component of the rotation. The further outside towards the rim of the disc, the more intensive the swinging is, like marked by the thick black connecting-line at B. This strong swinging reaches further out into the space correspondingly (here towards right side).

This picture right side shows a view onto the charge at the surface of the rotor. When the rotor is resting, one can imagine the charge as swinging of neighbouring aether at likely and steady circle tracks, here marked by three circle-arrows at C. At running mode the rotor is rotating (see curved arrow RO). The atoms at the rim are moving most fast within space and analogue the stroke-component there is most strong, here marked by arrows at D. So the circle-movements of the charge are shifted some forward into turning sense of system. Resulting is a ´garland-shaped´ motion-pattern, here schematic sketched at E. Parallel to the turning of the material disc, thus the motion-pattern of the charge is moving forward. By that sense, the electrostatic charge ´sticks´ at the rotating surface.



Charge-Track

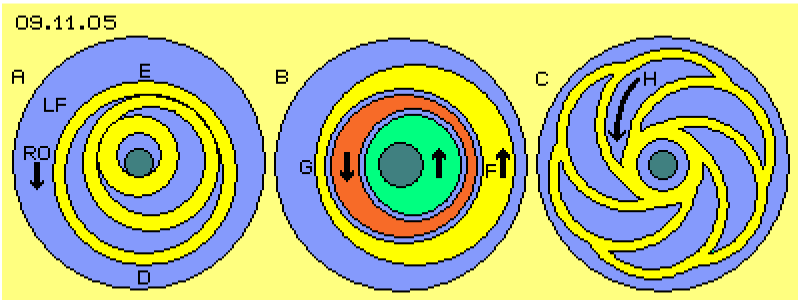
A most simple system is achieved if this simple rotor is the unique moving part. The charge of the rotor is parallel rotating to the disc. The stroke-component is added to the normal swinging of charge. Already at a disc with a diameter of few centimetre, the motion at the rim is much more intensive that at the centre. Now the aim is to spread that strong charge-swinging into whole inner room respective to guide it into wanted direction. This is the function of the third constructional element, which - analogue to earlier chapters - is called ´charge-catcher´.

At picture 09.11.04 these elements are sketched schematic. The charge-catcher (LF) is fix mounted within the housing, thus is stationary. It exists by non-conductive material (blue), within which are embedded some electric-conductive tracks (yellow). Electrostatic charge can exist also at non-conductors, like e.g. discussed by example of PVC-ruler. The surfaces of these amorphous materials are rough, so the connecting-lines of charge stick on tips or are caught into depressions. The electrostatic charge thus is mostly stationary respective no electric flow can come up at non-conductive materials.

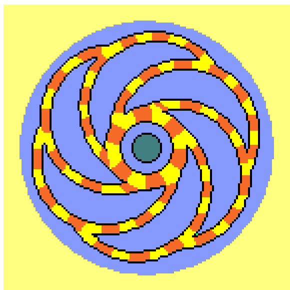
Opposite, the surfaces of conductors are smooth and thus ´slippery´ for charges. As a rule, the atoms of conductors are arranged by grids, so the charge e.g. can swing garland-shaped from one atom to the next. The charge-tracks of the charge-catcher now must show shapes to achieve a flow of charge into wanted directions.

Inward-Drift
Corresponding to previous sketched crop-circles, picture 09.11.05 shows three alternative arrangements of tracks at the charge-catcher (LF). The stator mainly exists by non-conductive material (blue). Embedded are conductive tracks (yellow). The rotor is left-turning and also its charge is moving left-turning over the faces of the stationary conductor-tracks (see arrow RO).

Left side at A the conductor-tracks are in shape of previous three rings, including each other. A part of the charge momentary is positioned e.g. at location D. It wanders inward to position E, driven by the thrust of the rotor-charge. The strong and fast strokes at the rim of the system (respective the intensive charge) thus is guided inward to a shorter radius - and there is turning faster than the rotor. Analogue the charges are shifted inward at the other track-rings.



At the middle of this picture at B, the general pattern of ´half-moon crop-circles´ is drawn. There are three conductive tracks (yellow, red, green), each with a wide and a narrow section. The charge of the wide section is pushed to the bottleneck, here e.g. from area F to G (and analogue at both other tracks). The charges are guided inward to a shorter radius - with their ´oversize´ speeds - and in addition are piled up at each narrow-pass.



Right side at this picture at C, the frequent graph of the ´flower-pattern´ is drawn. The borders of the ´flower-petal´ represent the conductive tracks (yellow). The left-turning stator-charge continuously is shifting inward the stator-charges, like marked by arrow H. The charge-tracks build a ring at the centre, where finally all charges are piled up. At this animation, separated sections of the charges are marked red. All charges wander inward and meet at the central ring, building a high layer of fast turning charge.

Steady Current
Once more I´ll underline these facts: here does not flow a current existing by ´charge-particles´ like electrons. Here does not occur a shift of ´charge-masses´. Only the motion-pattern of electric charges are forwarded within the basically stationary aether. Within that gapless medium, neighbouring aether must move analogue at its best. Here for example the motion-pattern of rotor-atoms are moving around the system axis. Correspondingly the

motion-pattern of the rotor-charge rotates around. Also the aether at the faces of the stationary charge-tracks take-over these charge-swinging motions. Unhindered and undiminished the rotor-charge-layer still turns around the system-axis. The generated movements at the charge-tracks can follow the stroke-component not completely (into the original tangential directions), however the charge-layer can slide inward along the tracks. Each inside neighbouring aether-areas take-over the stroke-component. As the rotor permanently crosses below the charge-catcher, finally all aether along the charge-tracks becomes swinging by that inward directed component.

The aether-movements accumulate at each shortest radius, what´s equal to high charge respective strong voltage - e.g. versus the normal-voltage of the ground. At previous picture 09.11.04 thus schematic is sketched, the high charge can flow off along a conductor (red) into the ground (E) and that permanent current is usable by a consumer (V, blue). Depending on the shape of construction, the current is removable at different spots, e.g. at the three simple rings from each inside part, at the three half-moons from each bottleneck, at that flower-pattern from the ring inside.

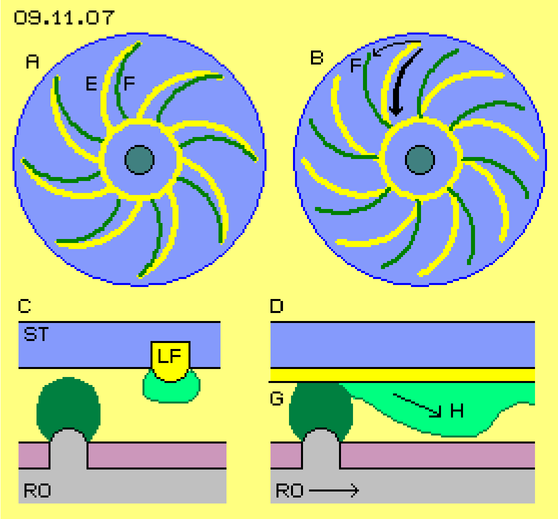
Source and Sink
A permanent electric flow ´from the nothing´ naturally is a provocative idea. However, also for the Faraday-Generator (and the other unipolar-generators of previous chapters) the source and cause of generated currents are inexplicable by common physical understanding of electricity. Also at a PVC-ruler and a wool-sheet no charge exists originally. Finally by the rubbing action the electrostatic charge comes up and can be taken-off e.g. by a copper-brush - and new rubbing produces new charge. Previous rotor could show a diameter of 10 or 15 cm and could drive 10000 or even 20000 rpm, so would ´rub´ along the stator by high speed. Instead of the wool-sheet, here the rotor-charge swirls up the aether at the stator-faces (also at their ´PVC-regions´). Instead of previous copper-brush here the charge-tracks build a conductive way along which the charge-vortices can flow-off.

Already the fast and steady rotation of a massive disc produces a wide aura of synchronous ´turning´ aether (in reality only that motion-patter with stroke-component all around into radial and axial directions). The unipolar-machines of previous chapters used magnets and their field-lines contributed an additional swinging motion-pattern. Here now when starting the system, the rotor-faces are covered with a charge-layer. Their ordered motion-pattern is added to the aether-aura of the rotating rotor. That intensive swinging is guided inward by the charge-tracks and is concentrated at the centre of the system. There is piled-up high charge-density, rotating around the system-axis by ´oversize´ speed (which could even result a self-accelerating effect).

Versus the environment thus exists a gradient of motion-intensity. This results from the motion-pattern of original rotor-charge, which is ´turned-up´ by the rotation of the rotor, and is guided inward along the stator-tracks. That motion-pattern of general electric charges represents high voltage. If a way towards areas of less motion-intensity is opened for that potential, a current runs along that conductor towards the ground, also through a consumer. This small unit produces strong swirls within the aether between the rotor and the stator. This local accumulation of ´stressing´ movements is pushed off by the general pressure of surrounding aether into the sink of normal charge-density - and as a side-effect the electric current is usable for a consumer.

Pulsating Current-Circuit
Instead of continuous current, naturally the voltage could be dammed up and flow-off intermittently. A variation for generating pulsating current is discussed at the following. The functions of this generator can be explained also by common understanding of electricity. This conception is based on the frequent crop-circle motif of ´sun-wheels´, e.g. like drawn at

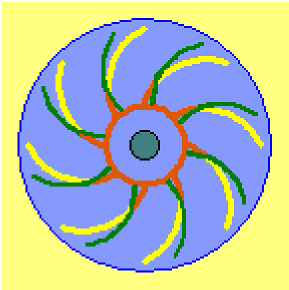
previous picture 09.11.01 at C. Here at picture 09.11.07 left side at A is drawn a sun-wheel, for example with eight spiral arms.



The edges of spiral-arms often are pointed out at the sun-wheel crop-circles. Here these edges are interpreted to exist at different axial levels, thus at the one hand as parts of the stator and at the other hand as parts of the rotor. The frontside-edges (E, yellow) thus are assumed to be charge-tracks of the stator, which are combined to a ring in the middle. The stronger curved backward-edges (F, green) represent areas of the rotor-charge. At this picture right side at B, the rotor did turn little bit (see thin arrow). The green rotor-edge F did pass the yellow stator-track. The crossing-point of both curves did move inward very fast (see thick arrow).

Below left side at C schematic is sketched a cross-section. The stator (ST) exists of non-conductive material (blue) and only some (spiral curved) charge-tracks (LF, yellow) reach some out of the face. Charge sticks at that radial spoke, here marked as light-green area. The rotor (RO) might exist by iron (grey), however its surface mostly is covered by a non-conductive layer (pink). Only some (spiral curved) spokes reach some out of the surface. At the (rounded) face of these spokes the strong rotor-charge is concentrated, here marked as dark-green area. As long as the rotor does not turn, no interaction between both charges exists.

Below right side at D the rotor is moving (see arrow) and thus the rotor-spokes are crossing below the yellow stator-spokes. The strong charge (G, dark-green) of the rotor pushes ahead the weaker charge of the stator. A charge-hill is piled up (see arrow H) and is shifted inward along the curved charge-track of the stator. This interaction between ´electric fields´ is commonly known. The reason and the basic movements of the real aether-background are discussed at chapter 09.04. ´Charge´ at picture 09.04.04.

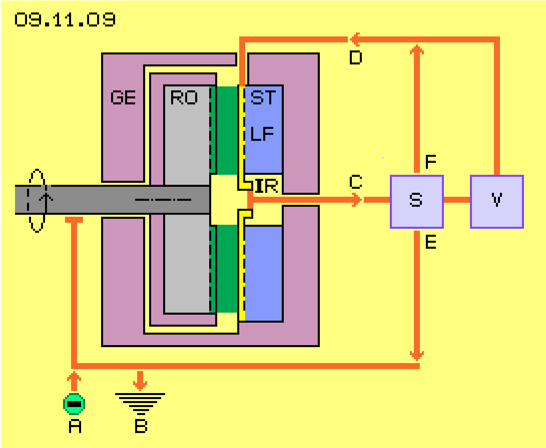


At the same moment the charge-hills of all charge-tracks arrive at the central ring and add-up to high potential. If at this moment a conductive way is opened, the voltage can relax by current-impulse flowing off. In reality, the high and intensive swinging charge-layer is compressed and levelled along the conductor down to the sink.

At this animation the rotor-charge-spokes (green) are crossing over the stationary charge-tracks. The original charge (yellow) is pressed inward at each crossing-point of both curves. The ´compression´ of charges here is marked by increasing dark-red colour. When the crossing-points arrived at the central ring, the charge-tracks are ´swept clean´. All charge is piled up at the inner ring. If a switch opens a conductor-way, the current flows off to a consumer. From there, next moment, it can flow back into the ´empty´ charge-tracks. The remaining current-strength builds the new charge-layer of the stator. That low charge is compressed again at next phase. So a pulsating circuit of current is running around within a closed conductive loop.

Function-Model
The conception in principle and previous processes are sketched schematic at picture 09.11.09. Within an isolated housing (GE, pink) the rotor (RO, grey) is turning. At one side-

face (here right side) the curved spokes reach some out of the surface and hold the strong rotor-charge (dark-green). Opposite of, the stator (ST, dark-blue) is installed, where curved spokes of charge-tracks (LF, yellow) reach some out of the surface. All charge-tracks meet at the middle at the inner-ring (IR, yellow). The alternative ways for electric flows are marked by red lines. There are also marked a consumer (V, light-blue) and a control-unit (S, light-blue). Its technical elements are not drawn in details, but its principle functions are verbal described at the following.



For starting the system, the rotor must be charged from an external source (A), e.g. by gliding-contact at the shaft. For stopping the system, the charge must be allowed to flow-off to the ground (B). This system might become self-accelerating. So that switch for discharge must be installed at any case.

At running mode, the charge along the charge-tracks is compressed into the inner-ring (IR, yellow). When maximum voltage is achieved, the control-unit must open the way C. The current is used by the consumer and flows back to the outside ends of the stator-spokes via conductor D. There the remaining charge spreads on the faces of the charge-tracks and the face of the inner-ring. The compression of charge occurs in relation of these surfaces. The original charge thus could rise e.g. to triple charge-density at the inner-ring. The rotor-charge must be at least comparable strong (rotating charges are intensive aether-vortices, thus always stronger than comparable charge at resting surfaces).

The charge of the rotor looses strength only by radiations. The control-unit could produce stronger voltage by a transformer and if necessary could balance the losses via conductor E (and the directions of all flows naturally must be controlled by diodes etc.). This function could also be used for first supply when starting the system or in running mode for increasing the voltages. Correspondingly also the original charge of the charge-tracks could be increased via transformer and conductor F (up to previous relation of charge-strength). So by suitable controlling this generator could produce current-flows of variable strength.

Constructional Variations

Naturally this principle can be realized by multiple variations. A mechanical drive is necessary at any case for running the system. Common generators use magnets with corresponding back-effecting forces. Here only electric fields respective charges are interacting, so the motor must overcome only the friction of bearings. Current-impulses are generated corresponding to the speed of revolutions.

If for example ten spiral spokes are installed, hundred current-impulses are available by only 600 rpm. This machine could show a diameter of e.g. 40 cm and thus wide faces for rotor-charge and stator-tracks are available. So this generator could produce a performance of usable size. Next chapter will show an other variation inclusive control by mechanic elements.

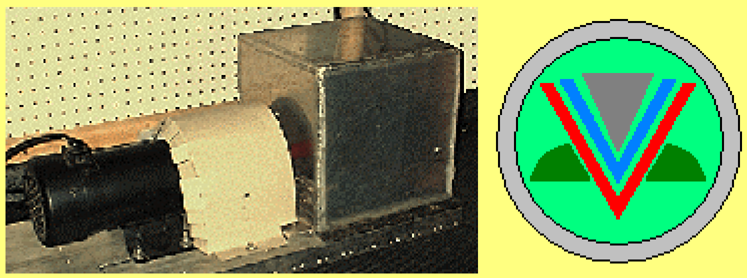
09.12. Tilley-Cone-Generator

Tumult and Disaster

Nashville, Tennessee, USA, 2002: a certain Carl Tilley caused excitement with the claims to drive his workshop without external power supply, to drive cars with electric units and same time charge the batteries. He announced to drive ships and airplanes to approve that autonomous power-supply. His invention thus would solve every energy-problem and he would sell it for ´only´ one billion dollar. Many peoples arrived to see and test the real machines. As usual, ´demonstration-effects´ occurred and no reliable measurement resulted. Nevertheless, investors gave money for further development ... promises, delays, accuses, interruptions, prosecutions, investigations, pursuits, denials, prison, bankruptcy ... the usual proceeding (especially in USA).

Many details are described at different websites. Nevertheless, everything about that Tilley-story still remains uncertain. Beforehand however one should give credit to any inventor, that he had detected an effect and at this case, he even was able to build suitable machines. As a rule however, remaining problems were not examined or even not noted (and I also know that ´self-deceive´ only too well). As long as one does not know the real cause of the decisive effect, as a rule no optimising is achieved. This is especially valid at these ´immaterial and mysterious phenomena´ of electricity. As long as an inventor can not show a perfect system, nobody believes. These inventors often run into financial problems and a promising idea finally ends at the huge garbage-mass of incapable inventions.

09.12.01

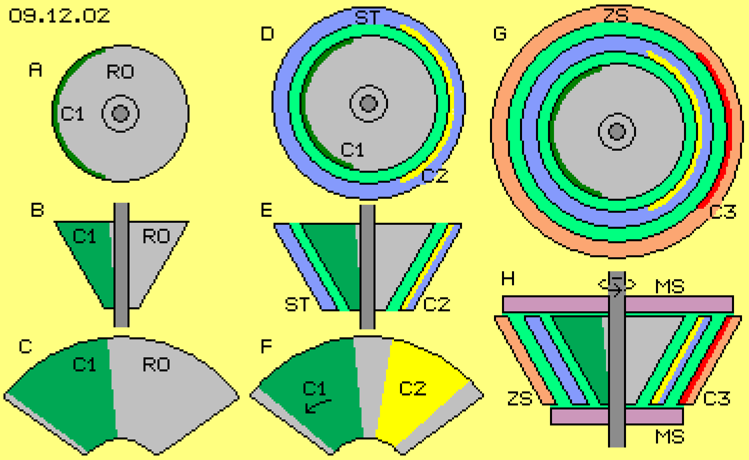


Spinner

The Tilley-secret is concentrated at a small ´black-box´. Left side of picture 09.12.01 shows a motor (black) and a coupling aside (covered light-grey). A shaft enters the alu-grey cube, with edges about 20 cm long. So inside exists any kind of turning element and thus that box is called ´spinner´. Tow cables reach into the box - and that´s all one knows generally.

Probably one might believe in Carl Tilley´s statement, "the system does not use back EMF, scalars, magnets, pulses in any form, waves or custom waveforms, no resonance, no frequency beyond the revolutions of the DC-motor, no high voltage electrostatics." So merely everything is excluded - besides e.g. electrostatics at the range of relative low voltage? Probably one might believe also in Carl Tilley´s remark, the logo of his company would represent the principles of his invention. As I remember (his original website is no longer available) that emblem did look like the graph at picture 09.12.01 right side: three V-shaped elements embedded within each other (here marked by different colours). Based on these statements, I try to find a solution for these problems at the following.

09.12.02



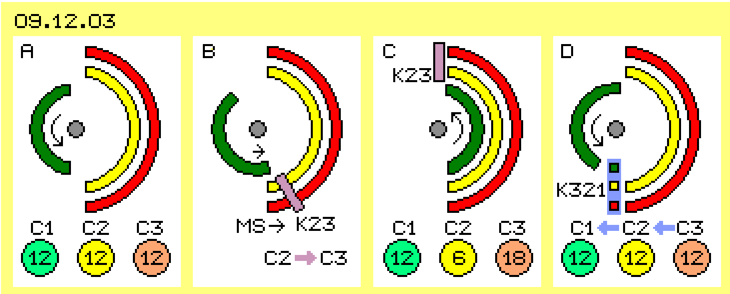
Cone

A rotating (truncated) cone shows the property like a flat disc: at increasing longer radius the surface moves increasing faster within space. The elements can be longer stretched at the cone-surface than at the disc-surface. Picture 09.12.02 upside at A shows a view onto the wide side-face of a cone-rotor (RO, grey). A side-view is sketched at B and the outside face is drawn at C.

Like at machines of previous chapters, the rotor mainly exists by non-conductive material. At the other hand must exist faces of conductive material, which are charged when starting the system. Here, the rotor-charge-face is signed C1. At most simple case, that green area covers some less than half of the side-face.

At the middle row at D and E additional cone-shaped shells are drawn around the rotor-cone (grey). This stator (ST) exists also by non-conductive material (blue) excepting a section of conductive material (yellow). Also this face C2 is charged when starting the system. Below at F, once more the side-face of the rotor is drawn with its charge-face C1. Opposite of, the stationary charge-face C2 is positioned. This is some smaller, so the rotating charge-face C1 temporary covers the stationary charge-face C2 completely.

Right side at this picture at G and H one more cone-shaped shell is drawn around previous constructional elements. Also this intermediate storage (ZS) exists by not-conductive material (light-red) excepting a section of conductive material (dark-red). Also that face C3 is charged when stating the system. All three faces (C1, C2 and C3) store electric charge and are (nearby) of likely size. At this picture below right at H, two discs (pink) are fix mounted at the shaft (dark-grey), which are used for mechanical control (MS) of the system.



Charge-Shifting

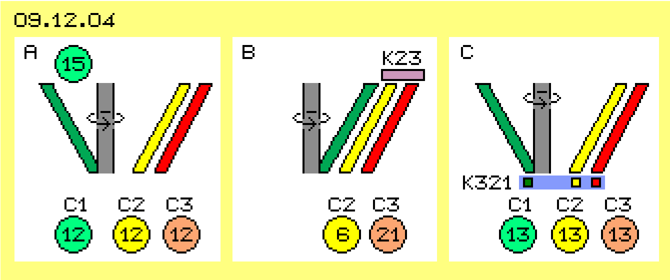
At picture 09.12.03 only these charge-faces schematic are drawn by a cross-sectional view. Each face is some shorter than a half-circle. The charge-face of the rotor (C1, green) is turning around the system axis. The charge-face of the stator (C2, yellow) is stationary and also the charge-face of the intermediate storage (C3, red) is a stationary constructional element. Left side at A, the situation at the start of system is drawn. All faces are charged, e.g. each by 12 V (in comparison with the normal charge of the ground respective earth).

At B the rotor-charge-face did turn so far, it begins to cover the stator-charge-face. Corresponding to the rotor, also the upside disc of the mechanical control (MS, pink) did turn some forward. Now a slide-contact (K23, pink) builds a conductive connection between C2 and C3, so the charge displaced from the stator can flow on the charge-face of the intermediate storage.

At C the rotor-face (green) covers the stator-face (yellow) completely. The slide-contact now is positioned outside of the stationary faces, so the connection between C2 and C3 exists no longer. The stator-face is ´pressed empty´ and finally shows few charge, e.g. corresponding to only 6 V. Accordingly at the intermediate storage, the density of charge did rise up to 18 V.

About one half revolution the charges keep separated, until the rotor-face completely did move off the area of the stator-face, like sketched at D. Also the below disc of mechanical control is turning with the rotor. At this situation, a slide-contact (K321, light-blue) builds a conductive connection between all three faces for a short moment. The previous separated charges become balanced, i.e. all show 12 V again, so the process can repeat.

Differing Charge-Layers



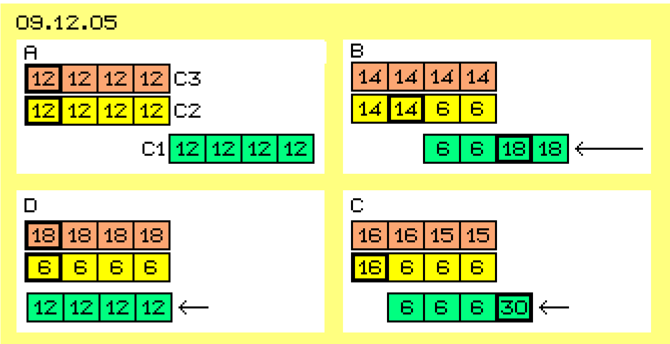
Up to now, that process is a ´null-game´ and the question comes up, how any additional benefit could be achieved. At picture 09.12.04 the positions of the cone-shaped charge-faces are drawn by cross-sectional view. At A the rotor-charge-face (C1, green) is positioned left side and both stationary faces (C2 and C3, yellow and red) are positioned right side. All faces are covered by charges of e.g. 12 V. As discussed at previous chapters, the aether-movements of the rotor-turning add to the aether-swinging of the charges. The charge-face at long radius of truncated rotor-cone is moving faster within space, so there the intensity of charge-swinging is stronger, e.g. representing a voltage of 15 V.

At B the rotor did turn by 180 degree, so now its charge-face covers the stator-face. Their charge-layer (C2, yellow) now is compressed and represents e.g. only 6 V. At upper part with the increased voltage, the rotor-charge affects even stronger pressure respective the charges are faster ´swirling´. The voltage of intermediate storage (C3) thus corresponds not only to previous 18 V, but 3 V stronger, thus showing 21 V.

Right side at C the rotor did go on turning and via slide-contact K321 the charges of all three faces are balanced - now each showing voltage of 13 V (versus the earth). So it´s well possible, that system increases the intensity of charge-swinging by itself, thus rising up the voltage. The normal swinging of charge becomes ´turned-up´ by the stroke-component of the aether, resulting from the continuous turning rotor (see previous chapters for details).

Changing Charge-Pressure

Nevertheless the question remains, how a charge of 12 V (or even 15 V) could pile up a voltage of 21 V. At picture 09.12.05 this aspect is explained by an example of theoretic numbers. All three faces are divided into four sections. At the beginning, all sections are charged by 12 V. At A the rotor charge-face (C1, green) is positioned right side of the stationary charge-faces (C2 and C3, yellow and red).



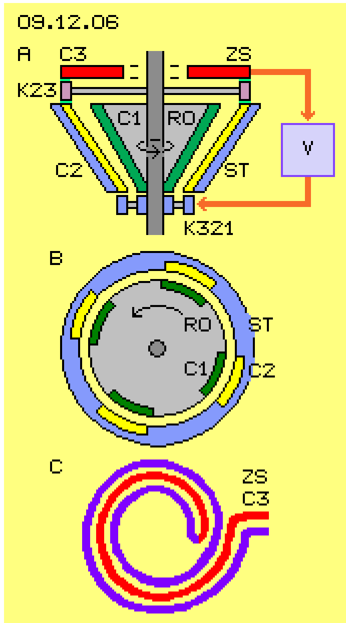
Right side at B, the rotor-charge-face did move two sections towards left. The charges there mutually compress each other to a level of each 6 V. At the rotor the ´excess´ parts of charge got spread to the remaining two sections, which now show stronger voltage of each 18 V. At the stationary faces, the ´pushed-off´ charges got spread on remaining six sections, thus each now showing voltage of 14 V. If the rotor-face goes on moving left, its 18 V are working against the 14 V of next stationary section.

Right side below at C now three sections mutually cover. From the original 4*12 V = 48 V of the rotor-face now exist 3*6 V at the left three sections and at the remaining right section the voltage rised up to 30 V. At the stationary faces the displaced parts of charge can spread onto more sections, which now show voltages of each 15 V to 16 V. That 16-V-voltage of left stator-section thus is opposed by the 30-V-voltage of the right rotor-section.

Below left at picture 09.12.05 at D, the rotor- and stator-sections cover completely - and ´stress´ comes up within the aether between C1 and C2. At the rotor-face the charge will spread again equal (with 12 V at each section). Probably the charge at stator-sections were compressed below that level of 6 V. So at the intermediate storage C3 will exist a charge-layer of at least 18 V. In order to avoid previous stress, the rotor-face should be some wider than the stator-face. The ´surplus´ voltage of the rotor will concentrate at the edges and thus will push-off the charge from the stator at its best.

The charge at stator-face thus becomes shifted to the face of the intermediate storage at least by half, so a voltage-difference of 18 - 6 = 12 V is achieved. This gradient results a current-impulse when both stationary faces are connected (at next phase, e.g. by previous slide-contact K321). This difference corresponds to the strength of the rotor-charge, which finally is unchanged. It´s only temporary used to compress the charge-layer of the stator down to 6 V and same time to pile up the charge-layer of the intermediate storage by 6 V to the level of 18 V. The shifting of charges is possible, because the rotor-charge can not ´escape´, the stator-charge however can spread onto wider surface.

Charge-Storage and Flow
At picture 09.12.06 this conception is sketched once more, upside at A by longitudinal- and below at B by cross-sectional view. As symmetrical shapes are advantageous, at least two charge-faces should be installed at the rotor and at the stator, here for example each four faces are drawn (C1 and C2, green and yellow). The air-gap between C1 and C2 should be some smaller below at the short radius, so upside at the long radius the charge is pressed from the stator to the intermediate storage.



The intermediate storage must not be a V-shaped cone-shell. Here for example, the intermediate storage (ZS respective C3, red) is drawn as a ring upside of rotor- and stator-cone. The disc of the mechanical control (light-grey) is turning with the shaft and the rotor. During the phase when charge is pushed off the stator-faces, the contact K23 builds a conductive connection, where the displaced charge-parts are pressed into the intermediate storage.

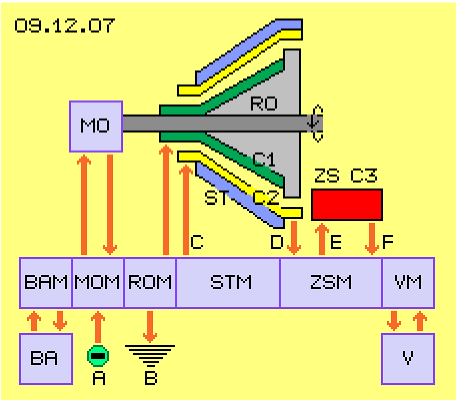
As soon as the rotor-faces did move off the stator-faces, below at the short radius a conductive connection between C3 and C2 starts. The voltage-difference results a current-impulse (within the light-red conductor-wires), usable by a consumer (V, light-blue). Short moment later, a contact to C1 could allow the balancing of voltages of all three faces. Here these contacts are simplistic drawn as K321 (light-blue). At any case that back-feeding should be done at the narrow end of the cones, because at the wide end the charges are stronger whirled up.

The upside mentioned statement of Carl Tilley excluded many elements - however not the usage of coils. Probably the green ring at his logo (picture 09.12.01 right side) could be interpreted as a coil. This picture here below at C shows a coil, which is bi-filar winded - usable as an alternative intermediate storage. Such coils can take great charge-volumes with few resistance. The general aether-pressure can push off the charge by an current-impulse likely effective. A V-shaped intermediate storage is hard to build, so as an alternative could be used a bifilar-coil or a massive ring, a sphere or a capacitor with variable capacity (capacitors, coils, induction etc. are discussed at later chapters in details).

Constructional Elements
Picture 09.12.07 shows previous constructional elements and basic functions schematic. Based on previous considerations, the ´Tilley-Blackbox´ contains a cone-shaped rotor (RO, grey). For holding the rotor-charge, nearby half of its outward-showing face is build by conductive material (C1, green), divided into several sections, however connected at the narrow end. The rotor is enclosed by a stator (ST, dark-blue) with similar charge-faces (C2, yellow), however some smaller. The stator-faces should be connected by a ring at both ends. An intermediate storage (ZS, dark-red) can be build by different variations. Its charge-face (C3) should correspond to the stator-faces (or could also have variable capacity).

A motor (MO, light-blue) must drive the rotor. The motor could be build wider than necessary respective additional mass could serve as a ´flywheel´, in order to build up an intensive aether-aura. Also permanent magnets could be embedded, just for increasing the vortices of the aura. Generally, the magnetic fields of the motor should be aligned parallel to the axis. Thus a ´stroke-component´ comes up at the surrounding aura, which indirectly increases the swinging motions of the charge.

The motor could drive constant or variable revolutions. According to the number of charge-sections results the frequency of generated current-impulses. For example, five sections and 1200 rpm produce hundred impulses each second. This simple rotor could even drive 24000 rpm and produce pulsating current by frequency of 2000 Hz. Even only few charge-volume is moved at each single phase, the performance as a whole will achieve quite usable size. At discussions about such machines, commonly one talks about COP 3 (coefficient of performance) and also Tilley mentioned that number. So one third of the generated performance is demanded for driving the system. As here no electromagnetic processes are used, no back-holding forces come up. Only the much weaker ´Coulomb-forces´ are working against the shifting of charges.



As the rotor is turning, charge-layers of different heights come up, thus voltage is piled up corresponding to the turning-speed. Afterward the voltage-difference becomes balanced, because the general aether-pressure - by speed of light - levels down the oversize charge-layer and thus pushes a current-impulse along the conductor-wires. At this picture the general ways (light-red) for flows of current schematic are drawn. Some more constructional elements (light-blue) are included, e.g. consumer (V) and batteries (BA) and a control-unit with diverse functions. The elements used at Carl Tilley´s system are listed and described in details at the web, e.g. by Jerry Decker at KeelyNet. At the following only verbal descriptions of the demanded functions may give an overview.

Controlling Functions
Tilley used eight or twelve 12-V-batteries for supply of components with 72 V to 144 V DC or AC. The system takes the current from batteries (BA) and feeds back the surplus of generated current into that storage. So suitable units for the battery-management (BAM) are demanded. For easier starting and testing the system, naturally other external current-sources (A) could be used. For controlling the motor a corresponding motor-management (MOM) must be installed.

Upside was described a mechanical control via slide-contacts. Naturally these functions could be done also by electronic control-units. As mentioned upside, the system even could build up high charge and voltage autonomously. So at any case a switch must be available to allow the rotor-charge flowing-off into the ground (B). It might be advantageous to control the rotor-charge by a separated rotor-management (ROM). All sections of the rotor-charge-faces should be connected by a ring at the narrow end of cone - and there probably a slide-contact will be necessary. The fed strength of charge at the rotor-faces determines the maximum achieved voltage between stator and intermediate storage. Instead of previous example of 12 V, one could work with 72 V or 144 V or even stronger voltages.

The charge of the rotor-face should be some stronger than the charge at the stator-face. The stator-charge determines the maximum displacement of charge-volume, thus determines the strength of the current. Charge may not be pressed ´backward´ at the faces and wires, not at the rotor and not at the stator. So suitable elements at all sketched current-ways must guarantee the wanted current-directions. In addition, the stator-management (STM) must open the back-flow (C) of the charge at the right moment. When testing the system or driving the system with variable charge-strength, the air-gap between rotor and stator should be variable, e.g. by axial shift of the stator.

The management of the intermediate storage (ZSM) has different functions. The connection between stator and intermediate storage (ways D and E) must guarantee the charge-flow only into that direction. Thus a rectifier there must hinder a ´back-slosh´. At the other hand, the flowing-off (F) from the intermediate storage must occur just at the right moment: when the rotor-charge-faces passed the stator-charge-faces, because only at that moment the stator-faces can take new charge. That current-impulse e.g. could run through the primary-coil of a transformer, thus via way C most direct back into the stator. Afterward, the ways C and F must be interrupted immediately, so the charge within the intermediate storage can be piled up again.

That intermediate-storage-management (ZSM) generally must transform the arriving current-impulses (F) into suitable shape as demanded for the power-supply of all other components of the control-unit. If the external consumers need different frequencies, voltages, strengths or temporary varying demands, a separate unit of consumer-management (VM) could prepare the current in suitable shape.

Construction
This machine is based on a most simple principle - nevertheless demanding diverse controlling functions. Generally, that ´spinner´ contains only this rotor and its corresponding stator and any kind of intermediate storage – and Carl Tilley said one could buy the material for $ 25 at any craft-shop. These are relative simple constructional elements, nevertheless must be produced mechanically exact, especially for driving high revolutions.

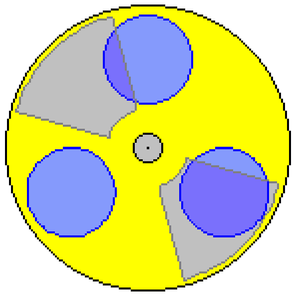
For me it was important to offer a logic convincing explanation for that ´blackbox´ - naturally by restriction of liability. Naturally my assumptions and considerations might be false – up to now however one can not find a better variation, at least at the web. One can build that system step by step, beginning with the emergency-switch and on own risk. It will soon become evident, whether and how much charge-back-flow comes up.

The pictures available at the web, at the one hand show that small spinner - and all around Carl Tilley obviously arranged a rather chaotic assembly of electronic elements. Many electro- and electronic-crafts have sufficient knowledge to understand and rebuild such a system. Now I really hope, many hobby-handicrafts want to convince themselves, that stuff is really working. Naturally that alternative solution might be very important for professional producer of electric generators. However this demands mental latitude to believe the possibility of COP > 1 - what´s actually the unique sense for all efforts.

Remember: any heat-pump is a surplus-machine - where the environment-heat delivers performance for free. Any wing of planes is a surplus-machine, demanding few input for drive to produce a pressure-difference within the air - and the general atmospheric pressure delivers much stronger lift-force for free. Here that shifting of charge generates a sink and a source in shape of voltage-potential – and the general aether-pressure delivers current-impulses, usable e.g. by electromagnetic processes with surplus-benefit for free.

09.13. Capacitor-Mystery

Objectives
In 2003 I made up a conception for an ´Electrostatic-Currentgenerator´ (see animation), where current should be produced by shifting charges. The capacitance and voltage of capacitors are changing, when a dielectric material is put between the plates. Thus within a rotating system, current should flow from the plate with momentary few capacitance to the plate of momentary wider ability for taking charge. Experts confirmed the correct application of valid laws, nevertheless that conception was a real flop. Since last year, I consider consequently the electric appearances as motion pattern of the aether, so now that capacitor problem must be analysed once more.



Today, capacitors are used in nearby any electric / electronic unit by diverse shapes and for most different functions. Obviously these constructional elements are working without problems, so the basic electric laws must not be questioned any longer. Nevertheless some properties and reactions of capacitors seem somehow ´mysterious´. Probably many readers will find their own questions of (non-) understanding at the following considerations. Starting base will be a ´handout for high-school diploma in physics 2011´, which was published by the authorities for Hamburg´s schools, with exact examples of tasks and precise solutions *(here qouted in italics)*. Afterward supposed contradictions at common doctrines of textbooks (or lots of at the web) are examined. Clear causality finally results by the view of aether and its motions. The final conclusions will allow the conception of real working current-generators, like discussed at the following chapter.

09.13.01

Physics-Graduate
The mentioned ´handout´ concerns the comparison of a modern capacitor (see picture 09.13.01 upside left) with a conventional plate-capacitor.
General part: a ´Goldcap´ is a capacitor with high capacitance, which shows rather small dimensions in comparison with a foil-capacitor. A certain type shows following data: capacitance 1.0 F, size of cylindrical housing: diameter 21 mm, height 10 mm.
Task 1.1: Calculate the size of a plate-capacitor, which has a capacitance of 1.0 F, where the distance between the plates is 50 µm. Calculate with the dielectric-constant of vacuum.

The solution is presented most

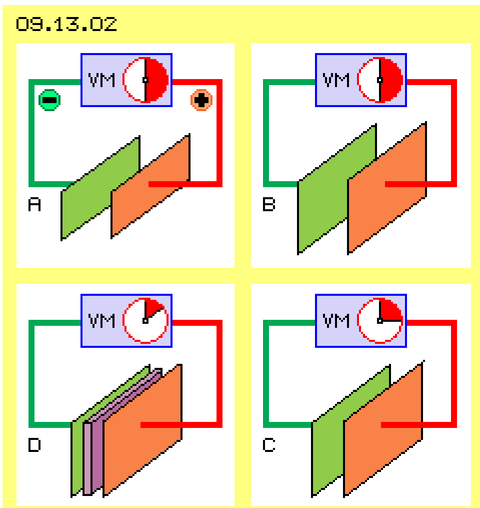
precisely: *Capacitance C = ε0*A/d, so the face A = d*C/ε0, so A = 50*10^-6*1.0/8.8542*10^-12 mVmAs/AsV respective A = 5.65 km^2.* It´s noted: *The result surely is unexpected concerning the size of the face*. So no typing-error nor calculation-error, even the experimental verification e.g. would need all runways of Hamburg-Fuhlsbüttel Airport (marked yellow upside right at the picture.

Task 1.2: *Calculate the volumina of mentioned Goldcap and the plate-capacitor of task 1.1, except the volume of the plate-material.* A simple calculation offers the result: *The volume of the plate-capacitor is 81 million times wider than the volume of the Goldcap*. Unexpected here only is, why the task concerns the distance between the plates and excludes at least one mm of the plate-material (and thus would result many billions instead of only few millions).

The third task is a clear comparison with known plate-capacitor (see photo of school-museum at picture 09.13.01 below left). Task 1.3: *At a school-experiment with a plate-capacitor the face of plates is 314 cm^2, the distance between is 2 mm and the voltage for charging is 5 kV. Compare the capacitance of that plate-capacitor, the charge at the plates and the energy stored with the Goldcap 1 F charged by 1.2 V.* Here again is asked the known capacitor-formula C= *ε0**A/d, calculating with the data 8.854*10^-12 and 314 cm^2 and 2 mm, resulting C=1.39*10^-10 F. The charge Q (in Coulomb respective Amperesecond) is capacitance C (in Farad) multiplied by Voltage (in Volt), so here Q=1.39*10^-10*5000 = 0.000000695 Coulomb respective 695 nC. For the energy stored is valid the formula W (in Joule resp. Ws) = 0.5 multiplied by capacitance (in Farad) multiplied by voltage by square, so here W=0.5*1.39*10^-10*5000^2 = 0.00174 Ws resp. 1.74 mWs. In spite of applied high voltage that old plate-capacitor obviously takes charge only in the size of micro-Coulomb and energy respective work only at the size of milli-watt.

For the Goldcap, the calculation is much simpler with its capacitance of 1 F and the voltage of 1.2 V. Charge = capacitance * voltage, so here Q=1F*1.2V=1.2 Coulomb. Energy stored is W=0.5*1.2F*1.2^2V = 0.72 Ws. So the Goldcap is clear winner with hundred-fold energy and million-fold higher charge and billion-fold higher capacitance.

What for such tasks are asked for graduation? To demonstrate the technical progress? Or to urge young people to learn by heart formula and data and to apply these most uncritical? I present these ´officially authorized correct calculations´, because I never would have dared to compare that Goldcap 1F 5.5V with a ´Fuhlsbüttel-capacitor´. That comparison can not be consistent: the copper surface of many square-kilometers can not be charged with some small batteries. That face would be a perfect grounding with practically unlimited capacitance. It would immediately ´suck-off´ all Hamburg power stations - by guaranty a super-GAU.



At modern electrolyt-capacitors also occur internal chemo-electric processes (and thus previous comparisons are questionable anyway). At the other hand, the laws of electricity where detected long times ago by using most simple equipment, just like that school-capacitor and even today can be replicated by such school experiments (however not quite harmless when using 5 kV). So the formula are suitable - and logically are matching, because all terms are defined by circle conclusions (as usual at physics). Also the measured results are fitting - because also the measurement equipment is standardized by mutual interdependence. So even this relative manageable subject of physics is investigated at its best, some appearances remain ´mysterious´. After that long time, could still remain some misunderstanding or misinterpretations?

Facts and Formula

At the following, only these simple plate-capacitors are discussed by investigating common doctrines of textbooks *(again quoted in italics)* in order to detect hidden contradictions. At picture 09.13.02 four capacitors are shown schematic. Upside left at A *one plate is charged negative (green) and the other positive (red)*. A voltmeter (VM, blue) shows the voltage between both plates. The charge Q can rise, the more capacitance C is available and the higher voltage U is applied (corresponding to formula Q=C*U). It´s obvious, a face twice as wide (upside right at B) will show double ability for taking charge. With likely voltage, thus the capacitor can take corresponding more charge.

Below right at this picture at C, both plates are moved together to half distance (everything else is unchanged). As a result, the measured voltage is also lowered to half. As the charge within that system is unchanged, the capacitance now must be double, according to Q=C*U. So it was concluded and defined, the capacitance is proportional to the face and inverse proportional to the distance between the plates (thus C=A/d is valid). That´s rather astonishing respective merely to understand: as the space becomes more narrow, yet the ability for taking charge should increase.

Below left at the picture at D, the space between the plates is filled up by a non-conductive material (dielectricum, violet). Now one could assume, that ´massive´ restriction would hinder the electric field and indeed, again the voltage is measured essentially lower. So the conclusion was, using a dielectricum again will rise up the capacitance of capacitors. At the other hand results the statement, *at given voltage the capacitor can take the more charge, the higher that capacitance*. The ´relative permittivity´ is included into the capacitance formula C=εr*A/d by a special factor. In comparison with vacuum respective air, diverse materials show different strength, e.g. Teflon with factor εr of about 2, paper 3, ABS 4, Epoxy 5, porcelain 6, glass 8 and special materials many times more. The effect is explained by shifting of (positive/negative) charge at the surfaces of the plates and the dielectricum or within the gaps between (what´s most questionable, see below).

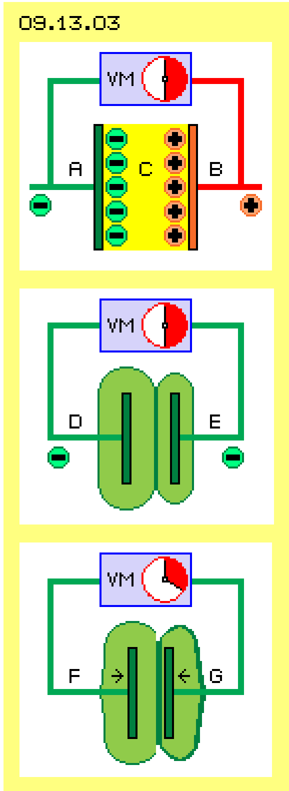
Contradictions

Once more from the beginning: *Capacitors are used in diverse shape for different purposes. Generally however a capacitor balances changes of voltage. Capacitors have the ability to store charge. That´s called ´electric capacitance´. Generally a capacitor is build by two electrodes, in simplest case by two copper-plates. As a rule, between the plates exists a layer of non-conductive material, called ´dielectricum´.*

These are common known facts, followed by dubious statements: *An electric current flows through the capacitor and charges one electrode positive and the other negative.*. This can not be true, because an isolator just prevents the current. Within a capacitor, some charge may ´slop´ back and fro, at its best. *The voltage is proportional to the charge stored*. That´s wrong in principle: a voltage of 2 Volt can result of 5002-5000 or 12-10 or 2-0, however never by the difference between +1 and -1. No matter how often it´s repeated at textbooks: no positive charge can exist, no ´positrons´ are existing, even at semiconductors exist only ´gaps resp. ´vacance-electrons´ (even school-graduates are told). That thinking by plus/minus is categorically wrong and results totally false ideas.

At picture 09.13.03 once more are sketched some capacitors, each with two plates and a voltmeter (VM, blue). Upside is drawn the conventional idea: one plate (A, green) is charged negative and other plate (B, red) is charged positive, as *´charge-carriers´ are sticking at the surfaces*. Between exists the *electric field (C, yellow)*, which has an attracting force into direction of the plus-electrode. If however no positive charge exists and no positive charge-carriers can exist at all, and one can not really imagine any attraction through the ´nothing of space´ - these ideas can not match the reality.

If one puts the plates of a charged capacitor nearer to each other (e.g. below at the picture the plates F and G)*, a certain force is demanded*. This contradicts the rule, that *plus and minus are attracting mutually*. Opposite, that counter-pressure is an indisputable approve for the fact, the charges at both plates must be negative (because likely charges indeed are mutually rejecting).



So at both plates can exist only negative charges. Normally both charges are different strong, i.e. each plate shows an other voltage versus the earth. The voltmeter between the plates shows the relative voltage between. It marks the power by which the general Aether-pressure would balance both charges, if both areas would be connected with a conductive wire (see chapter 09.04. Charge). So here only the statement is correct, that voltage is proportional to the difference of negative charges at both electrodes (no matter at which level). The smallest voltage versus the earth is null. However even that plate still is charged - just like the charge of every materia at this place near the earth ground at this moment.

At the middle of that picture 09.13.03 schematic is drawn the real situation after charging a capacitor. *Each charge generates an electric field within its environment.* These ´charge-clouds´ here are marked by light-green areas. The plate D is surrounded by a thick layer of charge, the plate E shows a smaller ´aura´. The difference is marked by the voltmeter. The noticed ´phenomenon´ now is, the voltage becomes lower if the plates are moved nearer to each other (see arrows at F and G). As mentioned upside, this would mean same time an increased capacitance. A simple and logic explanation is only possible when understanding the aether as a real substance and charge as a certain motion-pattern of aether within the aether.

Real Aether-Movements
Already the statement, *an electric charge is generating an electric field all around*, is questionable: the charge at the surface is not bound to the existence of free electrons, but the charge is identical with the electric field. The statement, *the field is a property of the space and does not nead a carrier for the effecting forces, thus can also exist within the ´empty space´,* is not tenable: materially affecting forces can not be transmitted through ´nothing´ (and by sure not the imaginary attraction-forces). Fields can only work through the real substance of aether (which indeed is the unique existing material stuff) and forces can only affect as internal movements within the aether.

Charge is not only a *´fictive field around a solid electron-particle´*. The charge by itself is an area of ordered aether-swinging (and electrons are only a ´round trop´ of corresponding motion-pattern). Opposite, the ´Free Aether´ of the environment has no certain structure, but its movements occur at short sections of varying tracks (e.g. resulting from the multiple overlays of all radiations running through the aether). That chaotic whirr rattles from outside towards the areas of ordered aether movements. Therefore the flat motion-pattern of charge is pressed onto the surface of the electrodes. The stronger the charge, the wider its motion-structure reaches outside into the aether-space. The general aether-pressure also affects a most even layer of charge at a material surface. That´s why e.g. voltage-differences become balanced in shape of current along conductors (as described in details at earlier chapters).

Charge is a synchronous swinging of aether above a conductor face. The intensity of movements becomes weaker from the face outward. Finally exists a smooth transition to the Free Aether. At previous picture these areas are marked light-green around the electrodes. There are marked dark-green borderlines, representing that smooth transition to the Free Aether. So between the capacitor-plates does not exist **one** electric field (between plus and minus) but there meet **two** (negative) charge-areas.

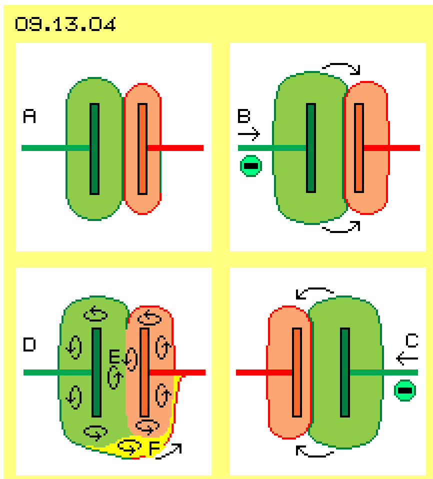
Charge is an aether-swinging with a left-turning stroke-component (details see earlier chapters). At the inner, opposite positioned faces both swinging motions are running by contrary directions. At the border between both areas comes up ´stress´ (because no contrary movements are possible nearby each other within the gapless aether). Both motion-pattern reject mutually (like known e.g. by two neighbouring negative ´spot-charges´ of common understanding).

Mis-Interpretation
If the distance between capacitor-plates decreases, also the voltage decreases. That effect schematic is drawn at picture 09.13.03 (see arrows F and G). That ´phenomenon´ is easy to explain: the stronger charge-volume of the left plate presses the weaker charge volume of the right plate to the backward face of the right plate. Its original relative small volume becomes wider and now it shows a wider surface. The Free Aether presses charge via conductive wire to the voltmeter in relation of both charge-surfaces. Their difference now is smaller and thus the voltmeter registers a smaller voltage.

A quite fitting example can help to understand that reaction: if two air-balloons are blown up by different strength and now are pressed towards each other, the internal pressures of both balloons become balanced. The volume of the previous smaller balloon becomes enlarged and thus the difference between both balloon-surfaces becomes smaller.

*If - at unchanged charges - the voltage between both plates decreases, the capacitance of that arrangement must increase, corresponding to capacitor-formula Q=C*U.* With that formula-bound thinking, that symptom of weaker voltage is interpreted totally false. The volume between the plates becomes smaller, so also the ability for taking charges at that area. The charge is unchanged, it´s only displaced within space, towards the ´bulge´ at the edges and towards the backward face of the plates and along the wires towards the voltmeter. That suggested ´capacitance-factor´ even is a yardstick for the limitation of charge-storage. If a *capacitor cushions the voltage-variations*, its ´electric capacitance´ even marks the ´degree of hardness of the spring respective shock-absorber´.

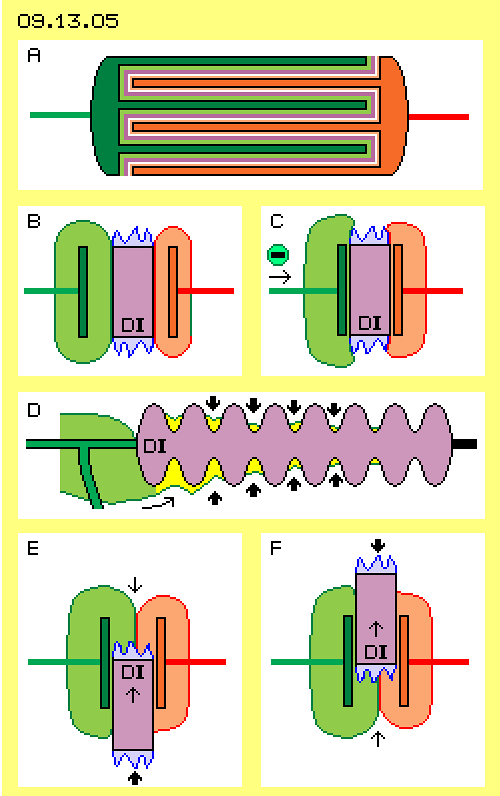
At picture 09.13.04 upside left at A, the initial situation is drawn. The left plate is stronger charged than the right one (here each weaker charge-aura is marked red). At B (upside right at the picture) the voltage from left side increased, so both charges were shifted some towards right. If afterward the voltage at left side decreases, both charges will spill back. That´s the procedure how voltage-peaks are cushioned within electric circuits.



If that capacitor is installed within an AC-circuit, subsequently will come up stronger voltage at right plate (see below right side at C) and both charges now are shifted towards left. So it looks like the current would run through that capacitor, alternating from left to right (at B) and back again (at C).

At this picture below left at D is sketched, why both negative fields reject each other. All charges swing synchronous left-turning all times, by view from the surface outward (like here marked by the circle-arrows). Between the plates (at E) both movements meet contrary. This results ´stress´ within the gapless aether, which is only to avoid, if both charge-areas move to a sufficient distance.

At the upside bulges, both charges swing likely left-turning. Finally some below at the ´bay´ between both charges, the movements become contrary turning. If however a current-peak comes up too strong (or if too much charge is pressed into the capacitor), a short-circuit will result. The extensions of the volumina aside build a common round face (marked yellow below at F). All charges now are left-turning aside each other and are swinging synchronous (see neighbouring circle-arrows there). Both charges suddenly become balanced respective a short occurs, where current immediately can flow from source to sink without resistance (see arrow at F).



Dielectricum
In order to achieve even higher ´capacitance´, multilayer-capacitors were build, like schematic shown at picture 09.13.05 upside at A. Several plates are installed at the electrodes, comb-like arranged and each separated by a dielectrical layer. Both sides of each plate can take charge, so rather wide conductive surfaces can be build within small constructional volume. As the distance between the plates is rather narrow, such capacitors show high capacitance according to the valid formula.

At this picture, the red plates are charged only ´by half´, so there is still some space (white) towards the dielectricum (violet). The green plates are charge ´full´, so the charge-layer reaches up to the dielectricum. The suggested higher capacitance thus realiter is a strong limitation for the ability to take charge. *Such capacitors of extreme high capacitance can work only within a narrow size of voltage, e.g. from 2.5 to 2.7 V*. If more charge is pressed into such capacitors, the necessary charge-layers become inflated - until the capacitor ´explodes´. *´The ´voltage-resistance´ thus is an essential criteria*. Naturally one can shift charge into the narrow gaps between the plates respective dielectricum. The ´elasticity´ concerning the balancing of voltage-peaks however is very small. If the capacitor is charged ´full´, the Free Aether has no ´point-for-attack´ to push-off the charge again. So a buffer for charge practically exists only at the outside faces and the wires towards the electrodes.

Left at this picture at B, a simple plate-capacitor is sketched, where a dielectricum (DI, violet) is included. By common understanding, its permittivity increases the electric capacitance and lowers the voltage between the electrodes. There are different attempts for suggested explanations. Logic and real is only that fact: also at the surface of an isolator exists charge. However at the amorphous surface can not come up homogeneous layers of swinging movements. Within the ´rugged valleys and hills´ exist spots of charge of different strength and direction. From these multiple small faces outward exists an jumble of aether-movements (here represented by the blue jagged peaks).

Right side at the picture at C, the space between the plates is filled up with a dielectricum nearby completely, so the swinging motion of the charge is most restricted. The charges are pressed off towards the outside faces of the plates. If now from left comes higher voltage (see arrows at C), the ´bulge´ can not arch towards right over the dielectricum. The ´elasticity´ for buffering voltage-variations thus is strong limited.

At this picture at D is sketchen an isolator (DI, violet) for high-voltage conductors. If the isolator would be build simply as a cylinder, charge could run towards right side at voltage-peaks. At that typical shape of ´pyramid-cake´, charge occasionally can swop over the first hurdle (see arrow). That part of charge is pressed into the ring-shaped depression by the general aether-pressure (see thick arrows). Occasionally parts of charge can also climb over the next ´hill´, where again they get trapped by the Free Aether. Finally these parts of charge will ´evaporate´, because their motion-structures at the isolator-surfaces are not homogeneous and not stable longterm. The Free Aether will it ´wear-away´, i.e. these areas will become unstructured motions like the aether of the environment.

Coulomb-Forces
´Universal Aether-Pressure´ is called that power, by which the Free Aether affects onto ordered motion-structures. The enormous power one can feel directly, if one holds north- and south-poles of two bar-magnets in short distance (see chapter 09.06. Magnets). If one feeds a dielectricum between both plates of a capacitor, a corresponding effect comes up. At picture 09.13.04 below at E a dielectricum (DI) is put between capacitor-plates from bottom up. Strange enough, the dielectricum is ´pulled´ into that gap (see thin upward-arrow). Opposite, some force is demanded for taking off again the dielectricum, e.g. at F towards upside (see thin upward-arrow).

The real cause of that ´Coulomb-force´ is as follows: at E both charge fields are positioned upside of the dielectricum. Further upside exists the smooth transition to the Free Aehter. The Free Aether thus can affect pressure only indirect onto the upside face of the dielectricum (see thin downward-arrow). Direct however the pressure of the Free Aether can affect onto the below face of the dielectricum at E. Within theses ´rugged faces and disorderly charges´ exist many spots of contrary movements with corresponding ´stress´ at the gapless aether. Corresponding strong affects the aether-pressure onto the below face of the dielectricum (see thick upward-arrow).

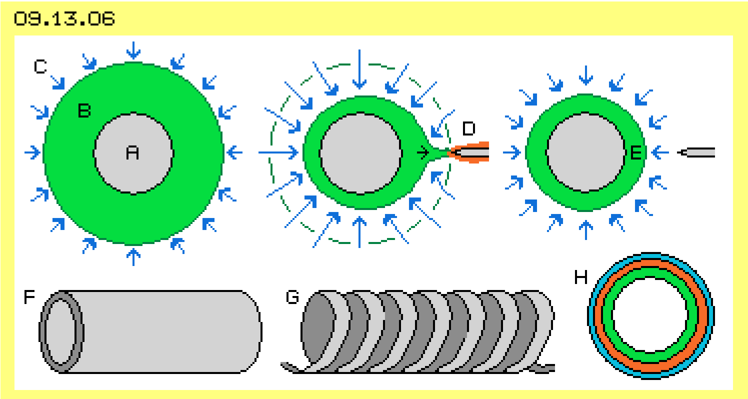
Below right side at F, the reverse situation is sketched: the dielectricum must be drawn off the plates against the strong pressure of the aether (which here is directed top down). So the dielectricum is not drawn into the gap between the plates by a suggested attracting force (by assumed positive / negative charge carriers), nor it is kept within the plates by a suggested attracting force. In reality, based on the real substance of the aether, only pressure forces are working all times. Here they shift the dielectricum into the gaps between the plates (at E) and hinder the taking-off (at F). Both forces neutralize each other. So as a whole, no input of power is necessary for moving a dielectricum through a capacitor.

This is a rather critical situation for commonly valid theories of physics: in total no power-input is demanded for shifting a dielectricum through a plate-capacitor. However this process changes the charge and/or the voltage, thus changes the energy stored, where the factor voltage acts by square, thus it comes up the ´danger´ situation, one could build a perpetuum mobile. Naturally that possibility is explained away, occasionally with the remark, the scale of forces anyway is negligible small (what theoretical still would be a clear violation of the law of energy-constant).

Sphere-shaped and round Capacitors
The theorists are also bothered with sphere-shaped charge-storages: *a free standing sphere is a special case as the counter-electrode is far off, e.g. build by the earth-potential. The capacitance of these constructional storages is very small* - if the general formula Q=A/d*U is applied. *In practice however the capacitance is higher, a sphere can be charged up to*

millions of volts, before a spark-discharge occurs. The sphere is no ´special case´ but its properties document most clear, the common formula does not match with the real processes.

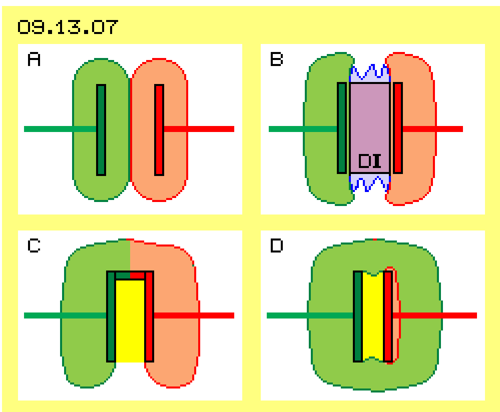
At picture 09.13.06 is drawn a sphere (A, grey) with conductive surface. When this sphere is charged, an area (B, light green) of synchronous swinging comes up all around. At the conductive face the swinging movements are intensive and they are weaker towards outside until the smooth transition to the Free Aether of the environment. Simplistic one can imaging a border respective a membrane (dark green): outside of exists chaotic motion, inside of exists ordered swinging. The aether is everywhere the same, only the characteristic of its internal movements are locally differing.



The sphere-shape is ideal for storage of charge, because the volume of ordered swinging is enclosed by a most small surface. The general aether-pressure (C, represented by the blue arrows all around) presses that motion-structure concentric at the sphere. As long as the enclosed motion shows a stabile structure, the outside pressure can not compress that volume further inward (or can not disperse it).

If however a conductor (D, grey, with less charge) come near to the ´charge-membrane´, the ordered motion-structure becomes disturbed. Charge (here marked red) flows off along the conductor and implosion-like the aether-pressure concentrates (see blue arrows). Extreme high voltage discharges via sparks. Short time later, that ´chaotic´ flow is cut off by the aether-pressure aside and the remaining charge again is pressed concentric at the sphere-surface (E). That spark-gap is wanted at some applications. If however a sphere should work ´soft´ as a capacitor, suitable ways for charging and discharging are demanded. An alternative e.g. could be a copper-pipe (F, with closed ends or at least round edges) or a coil (G, which anyway has a certain ´capacitance´).

At H is shown a cross-sectional view through a sphere respective a pipe. A first volume of charge (green) encloses the surface. If an additional ´charge-portion´ (red) is put at the surface, only a relative small extension of the ´border-face´ is necessary. Each further charge (blue) can be loaded at the face with less resistance against the ambient Free Aether. Opposite, the Free Aether can affect concentric pressure for discharging and the charge will flow off by high voltage most fast. So these round constructional shapes are most suitable for temporary storage of charge.



Double-Pack

Picture 09.13.07 shows an other extreme case: both plates are charged likely strong (at A, green and red marked only for differing the fields). So no (or only minimum) difference of voltage exists between both plates. Based on common formula, the capacitance should be nearby infinite. If in addition a dielectricum (DI, violet) would be included (at B), the capacitance theoretical should be once more increased. If no voltage between plates exists, they could also be connected by a conductor (like shown at C). A

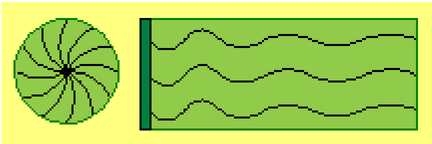
´Faraday-cup´ would result - with null capacitance for charge between the plates (marked yellow). Thus also this case clearly shows, the common capacitor-formula is not valid at all.

Below right sided at this picture at D, previous school-capacitor is drawn once more. The left plate was charged by 5 kV (green), while the right plate shows only minimum charge (red). The strong charge reaches far out and is sticked also at other near surfaces by the aether-pressure. The whole arrangement becomes embedded within a ´charge-cloud´. Even no conductive connection exists, the area between the plates actually builds a Faraday-cage (yellow). The voltmeter between both plates will show only few voltage - might be by size according to the (general wrong) formula. Few voltage means high capacitance (according to formula) - however the real capacitance between the plates is virtually null.

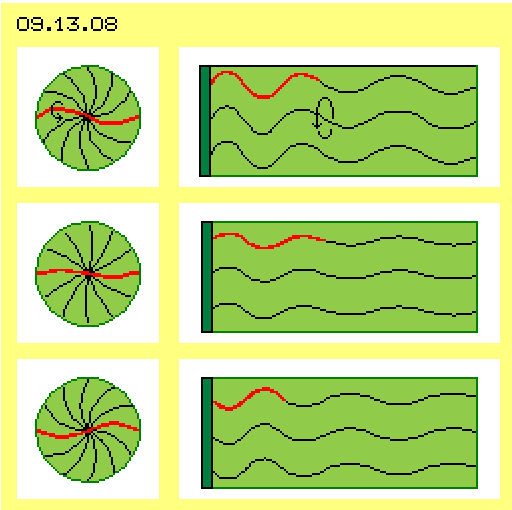
Misunderstanding

The capacitor-formula does not portray the real facts correctly. Quite clear is measured the decrease of voltage when the plates are narrowed, however the false conclusions were drawn from that symptom. Totally false ideas are resulting from the (on and on repeated) idea, any positive charge would really exist. Also one still believes, current would be based on the movement of electrons along the surface of conductors. The basic problem at capacitors is the conviction, the plate becomes charged by putting electrons at the conductive surface and afterward the electric field would be build.

That duality does not exist. Well, there are free electrons and their motion-pattern is sketched at picture 09.13.08 at the left column. The S-shaped connecting lines represent neighbouring aether-points, which are synchronous swinging all around (see arrow). Only by that motion structure, all movements within that volume are totally balanced. At the border of that symmetrical motion-sphere, the aether is ´resting´ respective there exists the smooth transition to the Free Aether. All cross-sectional views through that volume show identical characteristic. At this picture are drawn three phases of the movements (see red marked curves) and previous animation shows that process.



The motion-pattern of charge is sketched at the right column. There are likely S-shaped windings, which however show outward from the conductive surface (dark green) into the aether-space. All aether is swinging parallel to each other, where the amplitude of motions becomes smaller towards outside, until the smooth transition to the Free Aether.



If a conductive face becomes charged, no electrons are shifted onto the surface. However the aether around the conductor and at its environment is put into ordered swinging. The energy of that motion is identical to the electric field. The amount of 1.6 * 10^19 electrons is only the arithmetical pendant to the charge of one Coulomb.

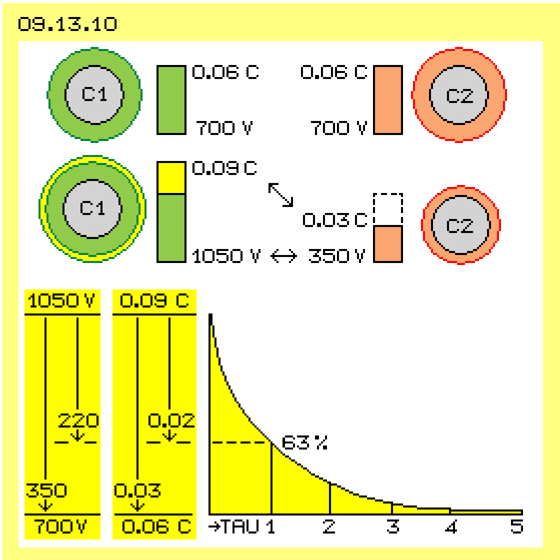
My grave misunderstanding probably was taking the term ´capacitance´ literally as ´ability for taking charge´. The terms ´charge/capacitance/voltage´ of capacitors however concern only the processes between the plates. They describe only the volume of ´sloshing-to-and-fro´ of charge respective are only index-numbers for the ´hardness´ for the cushion of voltage-peaks. Probably some of previous arguments will be useful for better understanding of real processes. Simply the vision of these two air-balloons might help also the experts to get reality-conform ideas.

For me, previous analyses resulted the insight, conventional plate-capacitors are not suitable for generating current. There are demanded charges as much as possible, which are stored at free standing and round faces at its best. At the other hand these considerations achieved the clear understanding, that and why and how one can manipulate these ´charge-clouds´ reaching out into the aether-space. For example, the ´space-for-motions´ can be diminished essentially be using a dielectricum (by minimum input of power). A strong interaction also comes up by using a second charged surface - until the total displacement of charge at a Faraday-cup.

Calculation Example

Upside school exam brought correct however most questionable calculations. Hopefully the following calculations will result a realistic scale of data. Based on expected figures of a discharge process, the necessary values for the charged status are estimated. Picture 09.13.10 shows facts and data, at the upper row at first the starting situation: two free standing (copper-) spheres (C1 and C2, grey) are used for storage of charge. Both are charged by 700 V (against the ground). So between the spheres momentary exists no voltage-difference. Each amount of charge is about 0.06 Coulomb (green and red area). So that first charging demands a current of two times 0.06 Ampereseconds.

The second row shows the second phase: one half of the charge of storage C2 is shifted onto the charge-storage C1 (marked yellow). By using a dielectricum and/or an other charged face, thus charge must be pushed off C2 and loaded onto C1. As discussed upside at picture 09.13.06, round storage faces are most suitable (and possible technical constructions are discussed at next chapter). After that charge-shift exists increased charge of 0.09 C at storage C1 and this corresponds to a voltage of 1050 V against the earth. Storage C2 now shows a decreased charge of about 0.03 C, corresponding to a voltage of only 350 V against earth. Between both charge storages thus momentary exists a relative voltage of 700 V and a charge-difference of 0.06 C.



At a third phase occurs the balancing of charges between C1 and C2, so afterward both charge storages again will show the starting status. The data and the discharge-curve are sketched below at this picture. By the act of discharging, a usable current should be achieved, for example a performance of 1000 W by commonly given 220 V. The wanted power of current is I=P/U, so here an amperage I=1000/220 = 4.5 A. The consumer could represent a resistance R=U/I, so here R=220/4.5 = 50 Ohm.

Based on the resistance (in Ohm) and the capacitance (in Farad) results the discharge-time (in seconds) by formula *tau*=R*C. After 5 time-units *tau* the balance is completely achieved. That time here should be limited at maximum 0.02 seconds. After the first time-unit *tau* already 63 % of the charge are flown off. That first part of time is valuable, because the main part of charge flows by high voltage. Thus one time-unit *tau* here should be previous 0.02/5 = 0.004 s long. By reorganisation of previous formula now the capacitance can be calculated: C=*tau*/R, so here C=0.004/50 = 0.00008 Farad. 1F=1As/1V, so 1As=1F*1V. For the wanted voltage of 220 V results a current-power I=0.00008*220 = 0.017 As. So about 0.02 Coulomb must flow within the first *tau*-time-unit.

At the beginning of the discharge-phase, the difference of voltage is 1050-350=700 V. At the end of discharge, both storages again show each 700 V (against earth), so no voltage between the storages. The simple average value is (700+0)/2=350 V. That decrease of voltage from 1050 V by 350 V to 700 V is marked below left at this picture. Within the first time-unit the decrease is 63 %, so about 220 V. Same time the difference of charges (0.09 C versus 0.03 C) becomes balanced (to 0.06 C at both storages). So flowing are 0.03 Coulomb, of them at first *tau*-time-unit about 0.02 Coulomb. Based on these figures result the wanted 700 V and 0.06 Coulomb as necessary first charge.

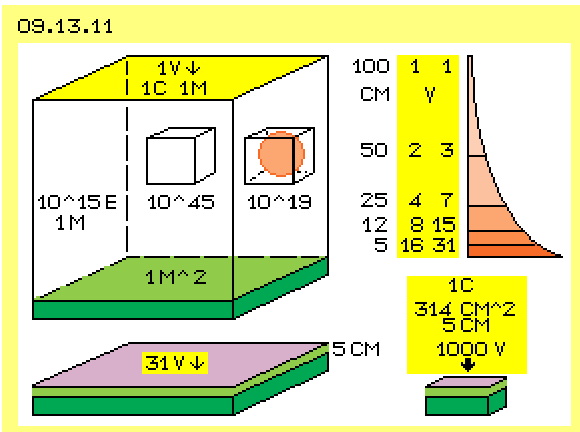
Naturally the check-calculations are matching with the initially demanded data. The power of current is I=Q/t, so here I=0.02/0.004 = 5 A (rounded, corresponding to previous 4.5 A). Also the performance P=U*I, so here P=220*5 = 1100 W corresponds to previous guideline (some rounded). Based on formula for energy W=0.5*C*U^2 for this potential are resulting W=05*0.02*220^2 = 480 Ws.

The first time-unit of discharge takes only few milli-seconds, the complete balance of charges however takes about two hundredth seconds. If one could achieve hundred of such current-impulses each second, four of these arrangements must work (each time-shifted). This would result 480*100 Ws or about 13 kWh, as an estimated cross amount for this example. That figure must be reduced by the demanded energy for drive, for losses by friction, at the conductors and for additional demanded constructional elements. So about 6 kWh could be achieved at its best. If these considerations are not totally wrong, usable performance could be achieved.

Charge and Voltage

At common capacitors mostly exist extreme small values of charge, capacitance or voltage. So it´s the question, whether these free standing charge faces can provide the necessary high capacitance and voltage. Picture 09.13.11 shows some figures by graphs. Starting point is a conductor-face (dark green) of 1 m^2 and above a space of 1 m height. Within that volume of 1 m^3 a charge of 1 Coulomb shall exist in shape of synchronous swinging aether. At the upper face of that volume ´lasts´ the general aether-pressure of 1 V (upside yellow face). So opposite is valid: if that conductive face is charged by 1 V, the charge of 1 C is put onto that face and the field above is still measurable at the height of 1 m.

As an equivalent for 1 C is defined the amount of 1.6*10^19 free electrons. An idea of these ´astronomic´ numbers might show following comparison: the radius of an electron is assumed by about 10^-15 m, i.e. at the length of 1 m could take place 10^15 electrons (theoretical, one beside the other). If that cubic meter would be a huge store, 10^45 places for electrons would be available. However only 10^19 places would be occupied (for this one coulomb) and thus besides each electron would exist 10^26 free places. In reality, the field exists not by separated electrons but is a swinging pattern of all aether within that cubic meter. These ordered movements of charge thus are an extreme ´soft´ swinging within that gapless substance.



The charge is not spread equal within the volume. Near to the conductive surface, the intensity of swinging is most strong and decreases (probably) with the square of the distance (see red faces upside right at this picture). If one lowers down the ´lid´ of that space to 50 cm (e.g. by a dielectricum, yellow), the voltage is doubled. Based on common formula e.g. at 5 cm distance already would exist 20 V. I suggest one should accumulate the increasing voltages of that compression (at each half of the distance e.g. 1+2+4+8+16), so at 5 cm about 31 V would result. So one needs about 31 V to put a charge of 1 Coulomb into that space of 100*100*5 cm = 50 liter (below left at this picture, dielectricum ´lid´ violet).

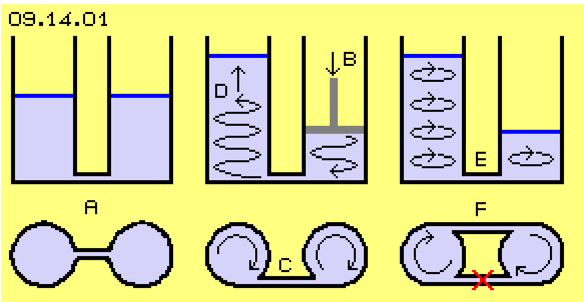
A further compression into vertical direction is not suitable because the voltage increases exponentially (and the charge is pressed off aside, up to the effect of a Faraday-cage). Or at the other hand, much less charge could be stored by likely voltage within that narrow space. If one wants to manipulate the charge, the major part of charge-swinging exists anyway up to 5 cm above the conductive face (and even more when using an isolating lid).

By lowering that cover, the sum of all energy of the aether-swinging keeps constant. The previous sketched spiral lines (picture 09.13.07 right side) become shorter and corresponding wider become the amplitudes (actually like a spring would be compressed like a screw). The swinging however still is rather soft and allows further (linear) compression, e.g. by reduction of that face of 1 m^2 to these 314 cm^2 of previous school-capacitor. That face is about 32 times smaller and correspondingly denser is the swinging motion (visually spoken: more ´spiral-springs´ fit into the volume, when they are arranged some shifted in vertical direction). The voltage-pressure rises to 31*32, so up to about 1000 V (see picture below right side). So within that volume of about 1500 cm^3 respective 1.5 liter, the charge-amount of 1 Coulomb can be stored by charging with 1000 V.

This is much more than the two, three or nine hundredth Coulomb by voltage of 220 up to 1050 V of previous example calculation. So one does not need 565 km^2 for one Farad or 5kV for tiny small charge amount at the school-capacitor. Already with 1000 V one can store 1 C at a small conductive face (with few centimetre room-to-move for the swinging motions of the aether). Afterward one can shift the charge to-and-fro with few input of power (as approved by previous discussed shifting of a dialectricum between the capacitor-plates). That´s no *´unexpected´* result, because e.g. 1 Ampere by 220 V is running along each normal conductive wire without problem, respective the corresponding charge is shaked to-and-fro by 50 Hz at common power supply. Based on these considerations, new points of view and described facts, the technical realisation can be discussed at the following chapter.

09.14. Electric-Ring-Generator

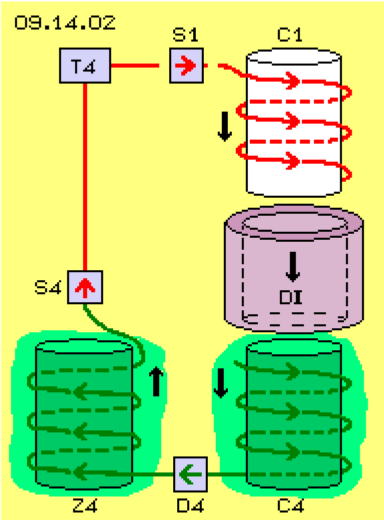
Objectives
Previous chapter 09.13. ´Capacitor-Mystery´ did show relevant points of view for storage of charge. Now here are discussed the technical possibilities for building a corresponding electrostatic current generator. The essential characteristics of that solution are quite different to common electrostatic machines. Only the Testatika (the only really working Free-Energy-Generator) shows similar functions. At the following, the constructional principles are developed step by step.



Like Water
The behaviour of the electric current is often compared with liquids, e.g. concerning the charge-balance between two free standing charge-storages. Accordingly at picture 09.14.01 left side at A are drawn two tanks filled up with water (light blue). Below, both tanks are connected with a pipe, so likely water-levels (dark blue) exists within both

tanks. At B, a piston (grey) presses down the water of the right tank, so the water-level of left tank rises up correspondingly. The ´obtuse´ pipe-connection at A would result much resistance. If however a tangential connection C is used, the water can flow off the right tank without resistance. Within both tanks comes up a turning movement. The additional water can enter and ´screw-up´ with the turning motion of the left tank by minimum resistance.

Also when the pump-process stops, the water will go on turning within both tanks. So in addition to the potential-difference (of different height), now did come up the kinetic energy of these rotating movements (by reduced resistance). At E, the piston is put off, so the water-levels will balance. Also that current should be guided through a tangential connection F, which however must be installed into opposite direction. The turning motion becomes more intensive. That process of building a potential-difference with following balancing can be repeated - with smallest possible friction losses. The motions of electric currents should be organised likely ´fluid-like´.



Charge-Interim-Storage
The behaviour of a fluid is really comparable with the electric charge. However the charge does not exist by chaotic movements of particles but it´s an area of ordered aether-swinging. Also, the charge does not exist within a tank but the universal aether-pressure ´sticks´ that motion-layer at a material surfaces. At picture 09.14.02 below right side is sketched a round cylinder shaped charge-storage C4 (dark green) where all around exists an aura of the charge (light green).

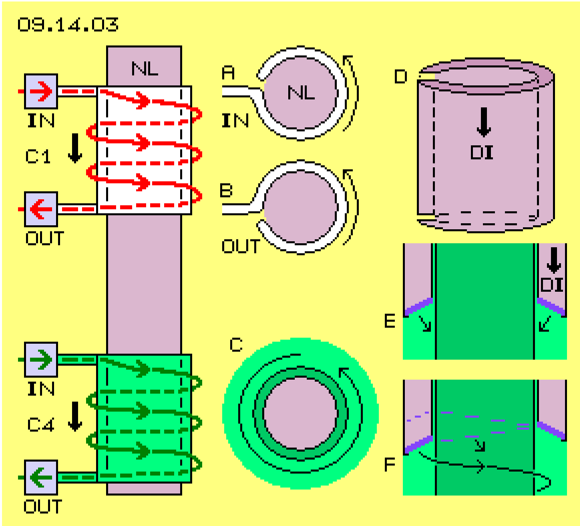
The ´pump´ here is represented by a dielectricum (DI, violet) in shape of a hollow round cylinder, which is put over the charge-storage C4 from upside down (see thick black arrow). It´s well known respective it´s explained by previous chapter, why the moving of a dielectricum along (capacitor-) faces demands only few power. The dielectricum pushes down the charge along the surface of C4 (at least by parts). The basic law of electric movement is ´forward-left-turning´ (here always by view of the real direction of electric-current, thus from minus to plus). So the charge should turn (by view top-down) counter-clock-wise, thus screwing down (see spiral arrows). Below exists a tangential connection towards left to an interim-storage Z4 and at its surface, the charge is flowing upward (again left-turning by view into that upward-movement).

The diode D4 prevents back-flowing. The charge momentary can flow only up to the switch S4. The round shape of that interim-storage is advantageous because enclosing a charge-volume by most small surface. Additional charge demands only a relative small extension (counter the general aether-pressure) of the surface. Analogue to the rotation at previous water-tanks, also here the transport of charge is running by minimum resistance. If a charge already exists around that interim-storage, it can still take additional charge from storage C4. Also at the end of that ´pump-process´, the charge will go on turning around the cylinder-face of the interim-storage Z4 (and also the remaining charge around the storage C4).

Potential-Gradient
Analogue to the example of previous water-tanks, here the ´dielectricum-piston´ produces a relative ´empty´ storage, like here e.g. the charge-storage C1 (marked white). If now the switches S4 and S1 allow a conductive connection, the charge from interim-storage Z4 will flow into the storage C1 until the potential is balanced. The balancing flow of water through upside connection-pipe F can merely be used, e.g. because a water-turbine needs a continuous flow. Opposite, a transformer works only by impulse-like currents, like here

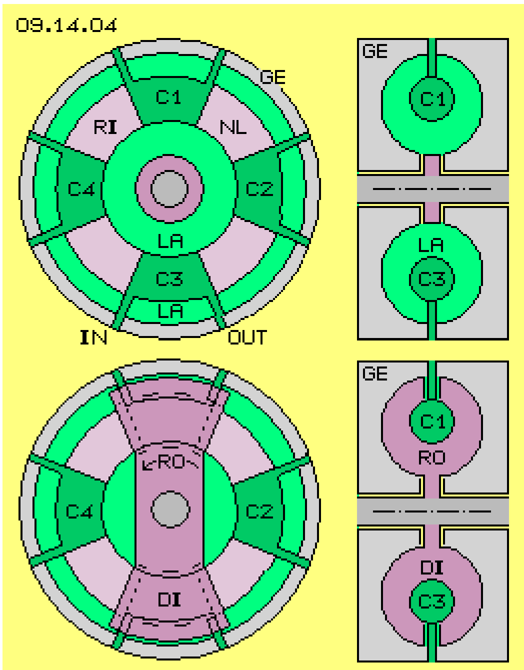
coming up by that abrupt charge-exchange. So usable current is generated within the secondary coil of transformer T4.

Naturally the outlet flow of interim-storage Z4 and the inlet-flow to storage C1 must be left-turning. After the balancing of potentials the charges around the surfaces will go turning. That process can be repeated - by minimum resistance. That´s not only important at ´coarse-matter´ movements (e.g. of upside water-tanks) but also at all electric processes. At both cases the appearance of ´mass and inertia´ finally is based on the resistance of the aether versus chances of movements and locations. At conventional capacitors, the charge is pushed into a ´dead-end-street´ and from still-stand must be accelerated into contrary direction. Opposite, a ´fluid-conform´ steady flow of charge is organised by the charge-storages used here. Especially advantageous is the round cylinder-shape for strong and fast outlet flow off the interim-storage, because the surrounding Free Aether can push off the charge by concentric pressure.



Steady Flowing and Turning
At picture 09.14.03 left side are sketched both charge-storages (C1, white, relative empty and C4, green). Along both surfaces the charge is flowing downward and left-turning. Each storage has one conductive connection for the inlet and one for the outlet (IN and OUT). As charge exists only at the outside faces, the round cylinders can be hollow respective are connected with a non-conductive material (NL, grey) inside. At the middle row at A schematic is sketches, how the conductive inlet connection tangentially ends at the cylinder. Analogue at B the tangential outlet is drawn. At C is marked, how the charge is turning around the cylinder at the middle part, even if no forward-motion momentary exists.

Upside right at D is shown, that the dielectricum (DI, violet) can not be a complete hollow-cylinder, but must have a gap (marked yellow) for the inlet- and outlet-connections. The dielectricum should be funnel-shaped at the frontside, so charge is pressed onto the surface at its best (see arrow at E) and finally is shifted into the interim-storage. In addition, that front-face should be twisted in order to affect trust into turning sense (see arrow F). The inclination of that ´screw-face´ might be relative small, because all charges anyway are left-turning at all storage-faces.

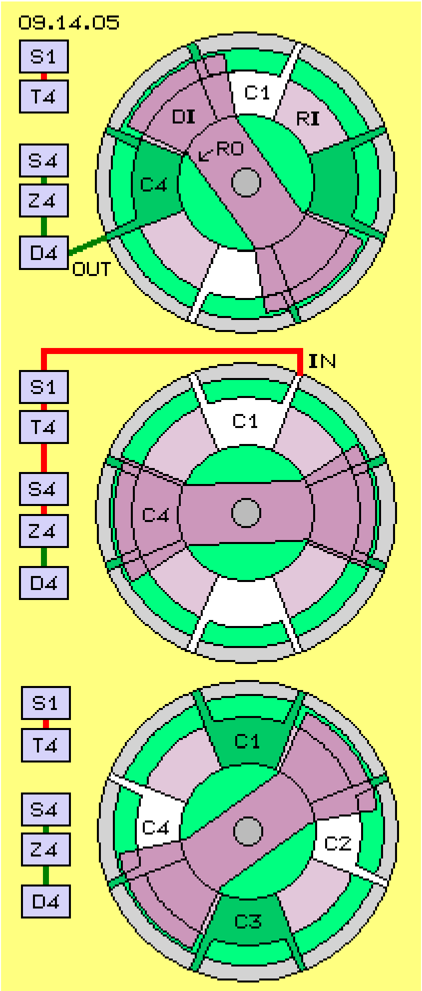


The face at the frontside should be a conductive material (blue). The ´pump-piston´ is moving within areas of charge all times. So charge will soon stick also at that face. As only negative charges exist, that face will affect a push onto the charge at the storage-surfaces. Both are ordered motion-pattern, so the charge is transferred into the interim-storage by most few power. Opposite, the rear-face of that piston should be dielectric material, thus the Free Aether can affect most strong pressure onto that face of ´disorderly motions´ (like explained at previous chapter).

Ring-Shaped
Picture 09.14.04 shows why that conception is named ´ring-generator´: four charge-storages (C1 to C4) are arranged ring-shaped (see cross-sectional view upside left). Each storage is build by a curved pipe. The sections are connected by a ring (RI, grey) of non-conductive material (NL). Each storage has two conductive connections towards outside, each one for the inlet and one for the outlet (IN und OUT). The housing (GE, grey) builds an area for the charge (LA, light green) around the storage (see longitudinal cross-sectional view upside right).

At this picture below right side, that area of charge is filled up by the dielectricum (DI, violet) completely. So at this position, charge momentary is pushed off the storages C1 and C3. The storages are about 45 degrees long. The dielectricum is some longer, e.g. about 55 degree, because the front-face is funnel-shaped. Both dielectricum-pistons are connected by a cross-beam (see below left) and that beam is fix installed at the shaft (dark grey). Based on the turning of that rotor (here all times left-turning) charge is pushed off the storages all around and previous discussed processes continuously are repeated. Especially advantageous is the fact, all charges and flows are running only within the stator, so the rotor is a relative simple constructional element.

Phases
Picture 09.14.05 shows the rotor (RO, violet) at three positions during its (left-) turning. Upside at the picture, the rotor momentary is positioned between charge-storages C1 and C4. The dielectricum (DI, violet) will push off charge from C4 by further turning. That charge flows off the outlet-connection (OUT, green) and through the diode D4 into the interim-storage Z4. Momentary the conductive connection is ending at switch S4 (see green conductive way).

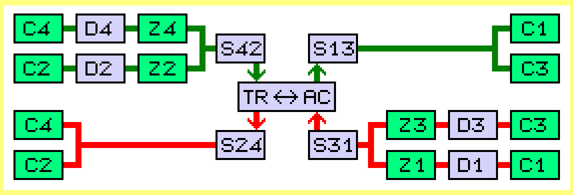


After that first phase of charge-displacement follows the second phase of charge-balancing, like shown at the middle of this picture. When the rotor completely covers the storage C4, exists only the remaining rest of charge at C4 and same time, the interim-storage Z4 is charged at its maximum. A minimum charge also shows the storage C1 (white) which was ´swept clean´ at an earlier phase. Thus a charge-potential respective a voltage-difference exists between Z4 and C1. If now the switches S4 and S1 offer a free conductive connection, suddenly occurs a balancing flow (see red conductive way up to inlet IN of storage C1). That impulsive movement flows through the transformer T4. The generated secondary current is available for external usage (here not drawn).

That second phase ends when the rotor did turn further 35 degree (at this example), like shown at this picture at the bottom. Now the storage C1 again shows normal charge (green) and also the charge of the interim-storage Z4 is lowered down to the average strength. The previous process is repeated, where now the charge C1 gets pushed off (at analogue conductive ways and constructional elements, here not drawn).

To the end of the second phase, charge could be fed into the system from an external source (here not drawn). By that procedure, all storages are charged when starting the system and at running mode, possible charge-losses could be restored. If higher performance is demanded, additional charge can be put into the system at this phase or opposite, by lowering the charge one can drive down the system. So at the end of the balancing phase, the system can be controlled by adjustment of the charge-level.

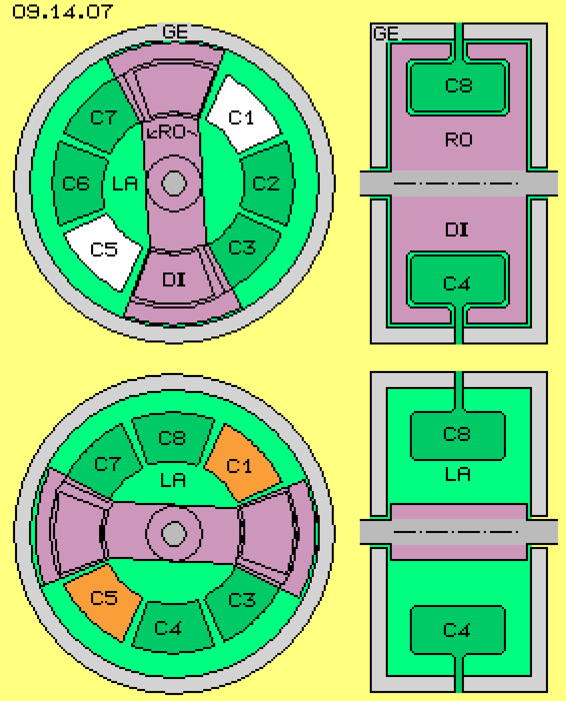
09.14.06



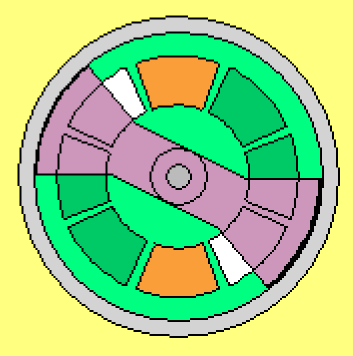
AC-Transformer
The rotor is a rather simple constructional element. It should be build symmetric to avoid uneven momentum. This means, each two opposite storages are at same process-phase all times. At picture 09.14.06 all previous elements are marked. The upside row shows previous discussed way (green) from storage C4 to storage C1. At likely phase is running the charge transport from C2 to C3 (see second row). Both movements could be put together by switches S42 and S13. The combined (charge-) current flows through the transformer TR from left to right side.

A trafo functions based on increasing and decreasing currents into contrary directions. So the dislocation of charges from C3 to C4 (third row) and from C1 to C2 (forth row) should run through the transformer at opposite ways (here from right to left). So the generated secondary current will be AC. This is the normal mode of a trafo (TR-AC), here driven by displacement of charges in alternating directions.

09.14.07



Eight-Storage-Ring
Naturally, this constructional principle can be build by many variations. As an example, picture 09.14.07 shows a ring of eight charge-storages (C1 to C8). The rotor (RO, violet) again is build as a symmetric beam. Each storage is 40 degree long, each dielectricum (DI) some longer with about 50 degree (for the ´funnel´ at their frontside). Each two storages momentary are working at likely phase. Upside at this picture, momentary the storages C8 and C4 are completely covered by the dielectricum. Short time before, the storages C1 and C5 were ´swept clean´ (marked white). So these storages now can take charge from the interim-storages (here not drawn).



Below at the picture, the rotor did turn about 80 degree. So there is sufficient time for the charge-balance phase, e.g. to fill up C1 and C5 (now marked red). At this arrangement of two times four storages, each storage is acting within a dedicated phase: from one storage momentary the charge is pushed off into its interim-storage. The storage behind (in turning sense of system) momentary has minimum charge and can take the strong flow at the begin of balancing process. At the third storage that balance-flow comes to an end. At the forth storage can run controlling functions: reloading possible charge-losses, primary charging for starting the system, increasing the voltage for stronger performance or releasing charge for driving-down the system. This animation shows that circuit process.

This picture right side shows schematic longitudinal cross-sectional views through the system. The cross-sections of the storages are here not drawn round but rectangle with round edges. The charge respective current can still run around. This construction allows wider storage-surfaces by relative small volume of the housing. The calculations of previous chapter are repeated for this example at the following.

Questional Performance
The storages reach from radius of 6 cm to 10 cm and are 8 cm wide. Each storage thus has a face of about 100 cm^2, both opposite storages of likely phase thus about 200 cm^2. At previous chapter a face of 314 cm^2 was charged by 1000 V up to 1 Coulomb. At these 200 cm^2 thus 1000 V could store about 0.6 Coulomb, and same charge-volume onto the corresponding interim-storage.

It´s strongly depending on the dielectricum used, how much charge is pushed off the storages. One could use glass (relative permittivity 8), china (about 6) or ABS (about 4). The shifting of charge however mainly will be done by the metallic ´funnel´ at the frontside. Decisive however will be the distance of the gap between that ´pump-piston´ and the storage-face, e.g. only 1 mm or 0.5 mm are possible. The performance of the system is extremely depending how much charge can be transferred into the interim-storages.

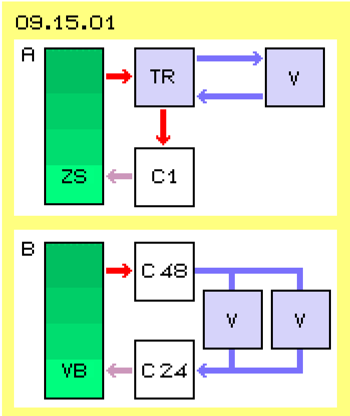
If e.g. only one tenth is pushed off, the storage-pair of original 1000 V and 0.6 C would show only 900 V (versus the earth) and 0.54 C. The interim-storages would rise up to 1100 V and 0.66 V. The potential-difference between that interim-storage and the ´empty´ storage will be 200 V resp. 0.12 C at the beginning of the balancing phase. The difference to complete balance however are only these 100 V and 0.06 C. Only these 63 % of first time-unit are valuable, thus only about 63 V with some 0.038 C. The stored energy resp. work is generally calculated by formula W=0.5*C*U^2, so here W=0.5*0.038*63^2 = 75 Ws. Each full turning of the rotor delivers an impulse of four storage-pairs. If the system is running 1500 rpm, 25 turns are done each second, i.e. impulse/seconds come up. The performance thus would be 75*100/3600 = about 2 kWh - as a cross-number.

If a shift-rate of 15 % is assumed, that theoretic performance rises up to about 7.5 kWh. If fifth part of charge could be pushed off, a gross-performance of about 15 kWh could be achieved. These numbers must be reduces for diverse losses. At the other hand, several modules could be installed at one shaft. So it´s absolutely an open question, which usable performance could be achieved by that conception - and only real experiments will show the answer.

Decisive Characteristics
One point however will be valid for any kind of electrostatic machines: sufficient wide faces must be used. So probably these ´Crop-Circle-Generators´ discussed at earlier chapter 09.11. show too small faces and might not really work. One essential characteristic here was the steady flow of charge into likely directions. The charge may not be ´static´ but e.g. must wind around the storage-elements - what e.g. happens at the Testatika-machine. There are also uses the interim-storages in shape of large capacitors (where however all plates are connected. That´s makes no sense by common understanding of plus/minus-thinking, but it´s an absolute approve, only more/less negative charges exist). I introduced these interim-storages first time at pervious chapter 09.12. ´Tilley-Cone-Generator´. These characteristics will examined once more at the following chapter, including some additional points of view.

09.15. Volt-Booster

Objective
Recently rumours came up about ´power-boosters´ where the voltage was increased - by constant amperage. Such a machine could take more performance e.g. from a car-battery. Already Tilley did drive electric vehicles, where the batteries still showed the original voltage at the end of the trip (probably, see chapter 09.12. ´Tilley-Cone-Generator´). Objective of this chapter thus is the conception for a ´volt-booster´ and an autonomous running system. The base for the following considerations is previous chapter of the ´Electro-Ring-Generator´. Additional points of view are included from the ´Testatika´ (which completely will be discussed at a separate chapter some later).

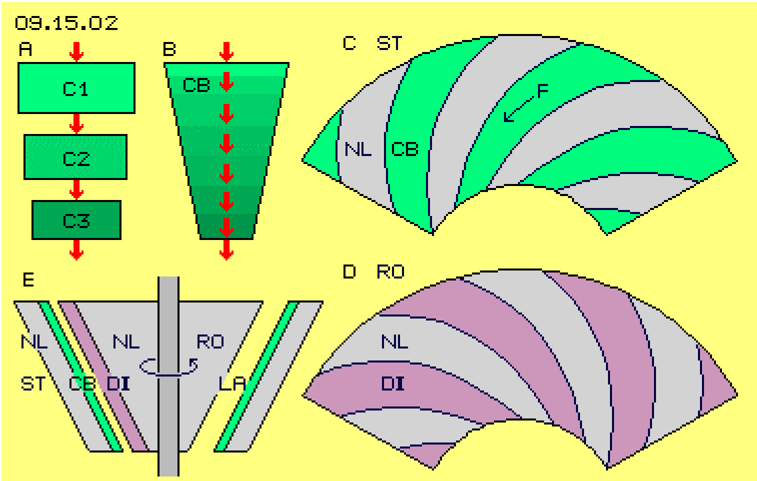


The general principle of previous ´Ring-Generator´ is sketched at picture 09.15.01 at A upside. A charge-storage (C1, white) and an intermediate storage (ZS, green) are charged at same level. At a first phase, a part of the charge from C1 is pushed into the intermediate storage ZS. At the following phase occurs the balancing of voltage by a current-impulse running through a transformer (TR, blue). The generated secondary current is usable by a consumer (V, blue). That procedure is repeated.

Below at this picture at B, the general principle of that new ´booster-conception´ is sketched. From a charge-source of low voltage (C24, white), the current is guided into the ´volt-booster´ (VB, green), where the voltage rises up and the current respective charge is shifted into a high-voltage-storage (C48, white). The following current for balancing the voltage-difference is usable for consumers (V, blue).

Compress on smaller Face
Previous chapters explained why charge can be shifted from one storage to an other by usage of a dielectricum. If now each next storage has a smaller surface, the charge becomes compressed, i.e. stronger voltage results. At picture 09.15.02 upside left at A that´s roughly sketched by storages C1, C2 and C3.

That compression could also be done continuously, e.g. if the storage is shaped like a band with decreasing width. That storage-band CB (with differing green) is sketched at this picture at B. The reduction in size is given e.g. when the storage-band is arranged at a cone - and this remembers at previous mentioned ´Tilley-Cone-Generator´ (if my interpretation of his vague hints is correct).



At this picture below left at E, such a cone-trunk is sketched. The housing as stator (ST, grey) is build by non-conductive material (NL). At the inner side of that hollow cone, several storage-bands (CB, green) are installed. Also the rotor (RO, grey) is build by non-conductive material. At its surface, at least two bands of dielectric material (DI, violet) are arranged. Between these bands, an empty room exists, like schematic here shown at right part of the longitudinal cross-sectional view. The swinging motions of the charge (LA) reach into that room - if momentary they are not pushed forward by the dielectricum.

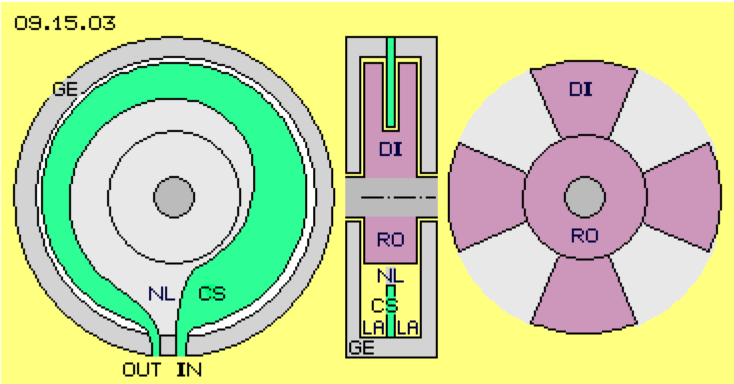
Upside right at C, the jacket-face of the cone-trunk of the stator (ST) is drawn. On the non-conductive material (NL, grey), here e.g. four storage-bands (CB, light green) are arranged. At the wide end of the cone, they are rather wide and they become smaller to the narrow end of the cone. The bands are arranged diagonal. From the wide to the narrow end of the cone, they show forward into turning sense of system (here assumed all times left-turning).

Below right at D, the jacket-face of the rotor (RO) is drawn (here by likely size, really however it´s little bit smaller). Dielectricum-bands (DI, violet) are installed at the non-conductive material (NL, grey), some above the surface. Here are drawn four bands. Their contours are similar to the storage-bands. They are also arranged diagonal, however the dielectricum-bands are in front (in turning sense) at the wide end of the cone. Both bands thus are positioned right-angles to each other. As the rotor is turning, the charge at the storage-bands is shifted to their narrow ends (see arrow upside at F). As the rotor-cone-trunk is build by non-conductive material, these dielectricum-bands could exist by same material, i.e. build by ribs (or bars) some above the cone-surface.

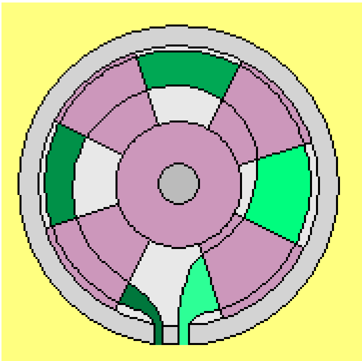
Tilley well could have achieved stronger performance from the batteries by that conception, when charge is compressed onto each smaller face and thus the voltage is pushed up. He mentioned, one could buy the material for that ´spinner´ at any store for little money - fitting to that simple construction. He mentioned, most problems would make the isolation of the housing. Obviously he had losses by radiation of charge. One reason could be, the backward faces of the storage-bands are embedded within non-conductive housing, nevertheless the charge there could move-off during the compression.

Storage-Disc

The arrangement, sketched at picture 09.15.03, avoids such problems and works much more effective. Previous storage-bands here are arranged disc-shaped and radial (at right angles) to the system axis. Charge sticks at both sides of the disc. The dielectricum glides aside the disc-faces with narrow distance, so charge is shifted forward in turning sense of the system.



That picture left side shows a cross-sectional view through the housing (GE, grey). Previous storage-band here stands cross to the longitudinal axis in shape of a disc (CS, light green). This storage-face is installed ring-shaped along the inner side of the housing. The storage-face has one connection towards outside for the inlet and one for the outlet (IN and OUT). Near to the inlet, the face reaches far inside, so there the surface is relative wide. In turning sense, the surface becomes smaller and decreases to the half near to the outlet. That disc can be fixed direct at the housing. However the turning rotor swirls air around the inner room. So the storage-disc preferably should be embedded within a disc of non-conductive material (NL, light grey), building a plane surface over all.



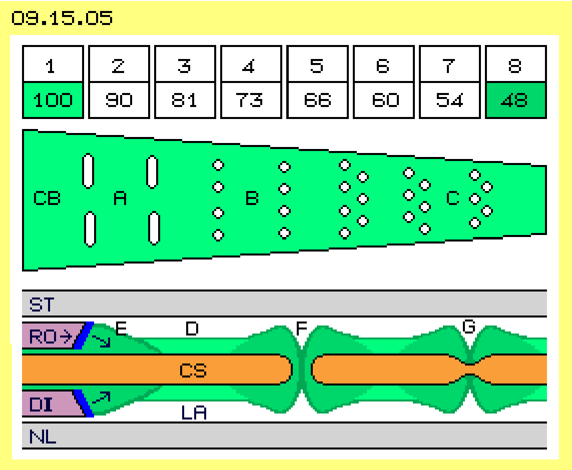
At the middle of the picture, a longitudinal cross-sectional view through the system axis is drawn (one situation at half upside, an other situation at the half below). Upside, both sides of the storage-disc momentary are covered by the dielectricum (DI, violet). When the rotor (RO) is turning, aside the storage-disc exists free space. Into that space reaches the swinging motion of the charge (LA). That situation is sketched below at that schematic longitudinal view.

This picture right side shows the rotor. Here for example, it´s drawn with four arms of dielectricum (DI, violet). These arms enclose the storage-disc at both sides and glide along by most possible small distance. Charge is shifted forward on each smaller faces and thus the charge-density and voltage increases. The animation shows that compression, marked by different green colours.

Seven Modules, eight Sections
One module of that volt-booster will show a diameter of 25 to 30 cm, however only about 3 cm width. The storage-disc is build by copper- or aluminium-sheet, which will be stable enough by about 2 mm thickness. As only small voltages exist (e.g. starting with 24 V) the distance aside of 6 mm will give space enough for the charge-clouds. Within that room, the dielectricum might be about 4 mm thick. The isolating walls of the housing must also be only some millimeter thick. Thus within a round cylinder of about 25 cm length e.g. seven modules could be installed, one besides the next at the system shaft.

Upside the rotor was drawn as a four-arm star. So all times, four sections are covered by the dielectricum and at four sections the charge can reach into the room aside of the storage-disc. The sections (numbers 1 to 8 at first row of picture 09.15.05) must show each smaller surface. If the width of each section decreases by 1/10 (e.g. from 100 to 90 and 81 etc., finally to 48, see second row of the picture), at the very end the width of the band respective the face will be half. When the dielectricum glides (here from left to right) over that storage-band (CB, light green) of decreasing size, the charge becomes compressed and at the outlet will exist double voltage.

In order to avoid ´fading´ (backward wandering charge) the storage-band (CB, light green) should be divided into sections, e.g. by bottle-necks build by slots (like sketched at A). That constructional characteristic is adopted from the Testatika, where such slots are arranged within the storage-faces (and the inventor Baumann underlined, that would be most important). The sections could also be build by a row of holes (like sketched at B), also by several rows and some shifted (like sketched at C). These holes could be 1 to 2 mm wide, with rounded edges and separated one from the next by about 3 to 5 mm distance (however the optimum must be found by experiments).
The importance of that ´perforation´ is explained by lower part of that picture.



Perforation
There is drawn a cross-section through the storage-disc (CS, here marked red). At its side-surfaces exists charge (LA, light green). If these surfaces momentary are not covered by the dielectricum (at D), the swinging motions of the charge reach out into the space aside. The housing respective the stator (ST, grey) of non-conductive material (NL) builds the borders for that room. Normally, the general pressure of Free Aether presses down all charges to likely level at a surface (here marked by dark-green lines, see e.g. at D).

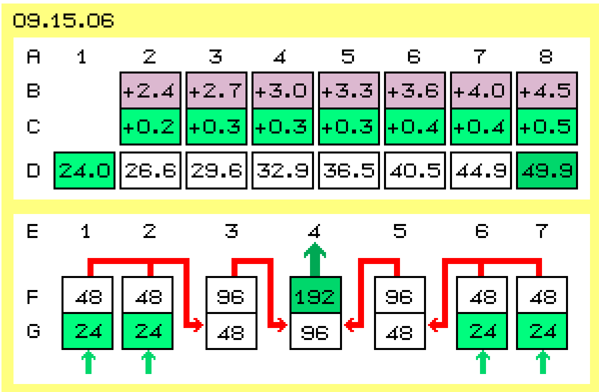
Left side at this picture is drawn a part of the rotor (respective the dielectricum, RO and DI, violet), moving to right side (see arrow). It´s frontside should be ´plough-shaped´ and build by metal (blue), like discussed at previous chapter: this constructional element rotates within an area filled up by charge and it´s gliding along charged storage-faces all times. Soon it will become charged by itself, the metallic frontside and whole dielectric part as well (e.g. like a PCV-ruler). This constructional element (by its materia and in addition by its own charge) affects pressure onto the storage-surface (see diagonal arrows). The charge at the storage-surface is piled up (at E) and transported forward.

At F is a hole within the storage-sheet. However, there won´t be a gap within the charge. Opposite, contrary swinging charge-motions meet at the inner sides of the hole, so aether-´stress´ comes up at the border-line between (dark-green lines). The hole practically builds a Faraday-cup, so at its border the charge is compressed and accumulated (dark green areas). Already a depression within the storage-surface (at G) causes the building-up of a ´hill´ within the charge-layer.

Stronger Thrust
The displacement of charge by a dielectricum is depending essentially on the distance of the gap to the conductive surface. That rotor here is a rather simple construction, at previous example with length and diameter of only about 25 cm. Nevertheless that rotating part will show swinging motions, so the gap between dielectricum and storage-disc could be 0.5 mm at its best. However, just near to the surface exists the main and most intensive part of charge-swinging movements.

If now the dielectricum arrives at a hole or depression, the previous piled-up charge (marked by arrow at F) is pushed into that deepening. A reflection occurs and that whirl-up again increases the charge-hill. Thus the dielectricum can sweep-away a most greater part of the charge. At the other hand, that impulsive crash of aether-motions into the gaps of holes or depressions affects a ´shock´ on the atoms of the conductor. At its outer regions thus comes up a ´material´ motion - i.e. not only the charge-displacement but also current are achieved (like discussed at following chapters).

That ´perforation´ of the conductive surface enforces extremely the effect of charge-shifting and thus of generating electric current. So this technology should also be used at the ´Electric-Ring-Generator´ of previous chapter. The possible result is shown at following picture 09.15.06.



Charge Accumulation
At row A again the sections of the storage-disc are listed by 1 to 8. All sections (at row D) at first are charged by a strength corresponding to 24 V (against the earth). It´s assumed, only 1/10 of charge is transported forward, when the dielectricum glides over the storage-disc (so here from left to right). From these 24 charge-units of section 1 thus 2.4 units are moved to section 2 (see row B, violet). There exists 1/10 less surface for that volume, so the charge of section 2 again is increased by 0.2 units (row C, light green). The charge of section 2 thus now shows 24.0 + 2.4 + 0.2 = 26.6 units.

Analogue, from each following section 1/10 of its charge is shifted forward and there that part of charge is compressed by 1/10. After short time the sections from left to right will show increasing charge-units. At this soft inclination, no ´fading´ respective back-flow occurs: if e.g. 3.0 units of section 3 are pushed forward by the dielectricum, it leaves behind an ´empty´ section 3 of 29.6 - 3.0 = 26.6 units. This corresponds exact to the charge-splash which is pushed forward by the next dielectricum from section 2 into section 3. So the charge-transports from one section to the next are done by minimum resistance.

Finally at section 8 a charge-volume is accumulated corresponding to 49.9 Volt (against the earth). As here is assumed, only the small part of one tenth of each charge is pushed forward and that part is compressed into a face only 1/10 smaller, after eight steps the double voltage is achieved. If really only the half (1/20) could be achieved, the factor would by 1.5, thus increasing 24 V up to 36 V. If however 15 % of the charge could be involved, factor 3 would result, transferring 24 V up to 72 V.

Multistage Compression
Upside was mentioned, the volt-booster could be build by seven modules one aside the next at one shaft. These modules are numbered 1 to 7 at row E. Row G represents the inlet of the modules and row F represents their outlet. All modules are constructed likely.

Modules 1 and 2 are fed with charge corresponding to 24 V (marked light green). Based on previous procedure, at the eighth section respective at the outlets the voltage rises up to 48 V. Both charge-volumes are guided into the inlet of section 3. Its first section can take that charge without problems, because its surface has double size (of section 8 at first level). At that second stage, the charge is transferred from 48 V to 96 V at the outlet. Analogue process occurs right side at the modules 7, 6 and 5 (see red arrows). At third stage, the charges from modules 3 and 5 once more are combined into the inlet of module 4. At its outlet finally all charges are available with the voltage of 192 V (see green arrow).

Only real experiments can show which voltage of charges are achieved in reality. If that shifting takes these 10 percent, that three-stage ´pump´ results eight-fold performance (24-48-96-192). If only five percent could be involved, about three-fold voltage would be achieved (24-36-54-81). If however 15 percent of the charges could be seized, factor 3 would result with much higher values (24-72-216-648).

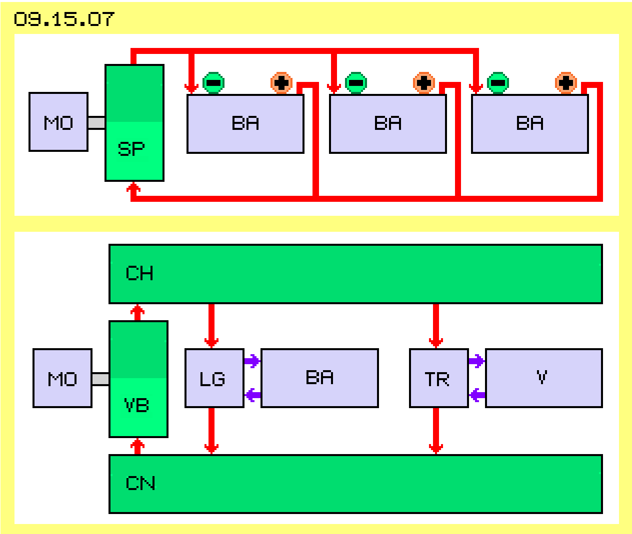
Performance Surplus
One can produce an amperage of 24 V with a normal generator, or 48 V or 96 V. However one needs double or four-fold input, because the mechanic energy is transferred only 1:1 into electric energy. One can transform the voltage of 24 V to 48 V or 96 V with a normal transformer, however the amperage will decrease correspondingly. The electric performance P=U*I keeps constant. That volt-booster however produces an increased voltage by unchanged amperage. If previous multistage ´pump´ compresses the input-voltage of 24 V up to output-voltage of 192 V, results an eight-fold performance.

As an example, the dielectricum pushes forward 1/10 of the 24 charge-units of section 1, thus moving off 2.4 units. Section 1 remains ´empty´ resp. now has only the charge corresponding to 21.6 units. So these 2.4 units must be reloaded, four times into previous modules 1 and 2, also into modules 6 and 7, at same time, by 24 V voltage. The amperage fed into the input is transported through the whole system and the same amount of amperage leaves the system via the outlet of module 4, at same time sequence, however by 192 V output-voltage. So the decisive performance-surplus in comparison with a normal transformer comes up, because the same amperage is available, however with stronger voltage. The decisive difference in comparison with a normal generator comes up, that volt-booster needs much less power for the mechanical drive.

Charge must be shifted within this system, however moving forward the dielectricum along a conductive surface is nearby force-neutral (as explained at previous chapter ´Capacitor-Mystery´). When current is flowing through that storage-disc, also electro-magnetic forces come up (all times forward-left-turning). Here however, no contrary forces exist. There is only charge respective current running, well protected by the non-conductive isolating housing, all times forward into same direction. The essential part of the performance is done by the Free Aether, as it pushes the compressed charge to the consumer by increased force. Tilley stated, one third of the energy is necessary for keeping the system running, so two third of the energy are available for driving a car or electric tools or lightning. That third is also mentioned at other comparable systems, e.g. also at heat-pumps which draw additional energy from the environment.

General Design
At picture 09.15.07 upside is sketched how Tilley might have used his ´spinner´ (SP, green) for charging batteries (BA, blue). The spinner draws ´electrons´ from the plus-pole, transforms them to stronger voltage and pushes them back into the minus-pole. Here are drawn three batteries: one for the motor (MO, blue) for driving the spinner (and control-units for internal processes), two for external usage (e.g. for driving vehicles or tools or for lightning etc.). Probably he also used batteries parallel for stronger voltage. Depending on energy-demand, the batteries are reloaded, even alternating.

However this simple conception won´t work. The electrons won´t leave the plus-pole ´voluntary´, e.g. for starting the procedure. The current from a battery must flow within a closed loop all times, normally from minus- to plus-pole. However also when charging batteries, the internal chemical processes need a constant relation between surplus and lack of electrons. That´s why that system needs additional elements, especially for starting the system, e.g. some capacitors or intermediate storages.

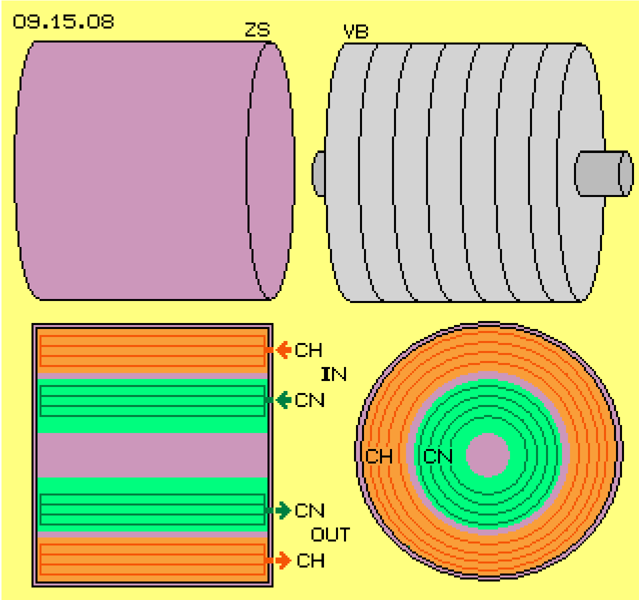


These problems are avoided if generally the input and the output of the volt-booster comes from / runs into an intermediate storage. This principle design is shown below at this picture. Into the volt-booster (VB, green) flows charge from an intermediate storage (CN) of low voltage and pressed the charge into an intermediate storage (CH) of high voltage. The voltage-difference between both storages can be used as a current-flow via conductive connections. A battery (BA, blue) can be charged by a battery-charger unit (LG, blue). At least one accumulator must be available for the motor (MO, blue) and internal control-units. A transformer (TR, blue) can build demanded shape of current for consumers (V, blue).

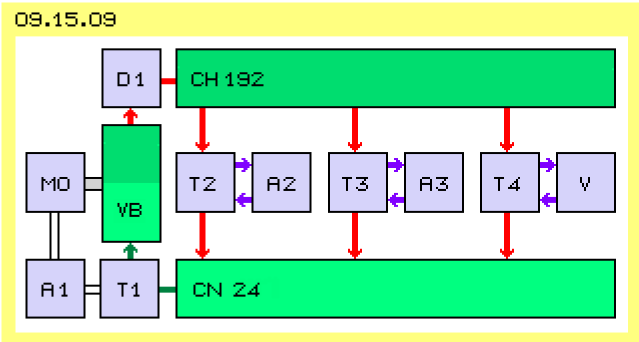
With these intermediate storages one is no longer bound to the obligatory closed circuit when using batteries. Changing demands for current are better to manage when using wide intermediate storages. Recharging the storage of high voltage (CH) must not run totally synchronous to demanded current, but can be done some time-shifted. Depending on demand, the volt-booster can work with varying speed and / or different input-voltage. Opposite, one can stock-up the storage of high voltage in advance. The wider the intermediate storages are, the more stabile and flexible the system can be controlled.

Large Intermediate-Storage
Picture 09.15.08 upside right shows the round cylinder of a volt-booster (VB) with seven modules. At previous example, its length and diameter would be some 25 cm to 30 cm. An intermediate storage (ZS, upside left) could also be a round cylinder of comparable size. A longitudinal cross-sectional view schematic is drawn below left side and its cross-section below right side.

The storage-faces are build by bare round copper- or aluminium-pipes with radius of 4, 5, 6 and 7 cm (see green rings). There is enough ´air-space´ for the charge at both sides of each pipe. The Free Aether needs that room for working effective. In order to differ the charges, between the hollow copper cylinders should be installed thin isolating pipes (here not drawn). By the length of about 25 cm, a surface of about 0.7 m^2 is available for the storage of low voltage (CN, green).



Within same housing could be installed the storage for high voltage (CH, red) by pipes with diameter of 9, 10, 11 and 12 cm. Both sides of these pipes build a surface of about 1.3 m^2. At both storage-areas (CN and CH) here are drawn an inlet and an outlet (IN and OUT). All pipes of an area are conductive connected. So this storage has an area of low and an area of high voltage, however this might not be mixed up with a common capacitor. Also the Testatika used big ´Leidener-Bottles´ with internal connected faces. That´s rather difficult to understand for experts, because it makes no sense based on the idea of positive / negative charges. However these pipes are advantageous round storage-faces - for exclusive existing negative charges. How much Coulomb by which voltage one finally can store at these free storage faces - no expert dared to tell me (because here the common capacitor-formula are not valid).



Running Mode
At picture 09.15.09 previous principle design is added by some functional elements. Generally, for starting the system all storages and accumulators must be charged. At running mode, the volt-booster (VB, green) pushes charge into the storage of high voltage (CH192, dark green). A diode (D1, blue) must avoid back-flowing (from CH192 to VB), e.g. if the volt-booster is not working momentary. Based on the high potential-gradient to the storage of low voltage (from CH192 to CN24), current will flow as soon as a conductive connection is available.

Opposite, between the storage of low voltage and the inlet of the volt-booster (between CN24 an VB) exists only a small gradient. The average level of section 1 is about 24.0 V (against the earth). One tenth is transferred into section 2. The dielectricum leaves behind an ´empty´ section 1 with 24.0 - 2.4 = 21.6 V. So the difference to the storage of low voltage are only these 2.4 V. Probably no sufficient balancing-flow will come up, because the charge should run ´by itself´ from CN24 into section 1 of the volt-booster within relative short time.

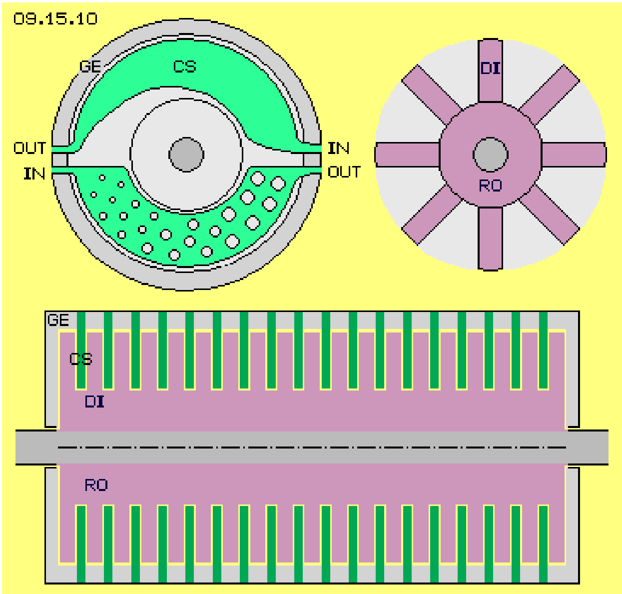
This charge-process could be ensured by an transformer (T1, blue, below left). It should press the secondary-current from storage CN24 with few increased voltage into section 1, at the very moment when the inlet is opened. This transformer T1 is supplied by an accumulator (A1, blue, below left), which also supplies the mechanical drive (MO, blue) of the volt-booster.

Performance-Input and -Output
The volt-booster of previous example takes charge into four modules (1 and 2 plus 6 and 7) e.g. of one ampere with a voltage of about 24 V, every second. The performance is P=U*I, so

here the input is (4*1)*24 = 96 W. The volt-booster at the outlet of module 4 delivers these 4 ampere also each second, now however with the voltage of 192 V, so here the output is 4*192 = 768 W. For continuous running mode, the performance taken from the storage of low voltage must be reloaded. No matter which way, thus 4 ampere with 24 V, corresponding to 96 W, must be fed into the storage of low voltage. Also the consumption from accumulator A1 must be replaced same time, e.g. by recharging a second accumulator by an other transformer (T2 and A2, blue, at the middle of the picture, where A2 could also be identical with A1.

So keeping up the running mode demands about one third of the cross-performance (see Tilley). Remaining are about 500 W for external usage. These could be used for charging further accumulators (T3 and A3), which might drive other external consumers. The remaining performance could also be adapted for demands of other consumers (T4 and V). The performance of that volt-booster depends on the charge-volume fed into the storage-faces. Probably the input-voltage of these 24 V is too weak. The performance surplus could be ten times higher, if e.g. 220 V would be used as basic input (by practically unchanged efforts for the construction and energy for mechanical drive). Following additional points of view might also result quite different performance.

Alternative Storage-Discs
Generally the processes before and behind the volt-booster are done with known technologies. New however is the technique of the volt-booster by itself. The optimum for its diverse elements might be found only by experiments. At previous storage-disc for example, the decreasing size of the surface was assumed by halves. However it must be checked, which compression will show the best results. An essential element e.g. is the ´perforation´ of the storage faces. It must be checked, which kind of deepening are the optimum. Instead of dividing into eight sections, the deep spots could be spread continuously at the storage disc. It´s also necessary to check how wide the free room for the charge aside of the disc should be.



At picture 09.15.10 upside left are drawn alternative arrangements of the storage-disc (CS, light green). The assembly of the machine would be most easier, if the stator is build by two half-shells. This would demand also two storage-discs, each only one half-circle long. At the rim, thus also two inlet and outlet connections (IN and OUT) are necessary. At the upside half of the cross-sectional view, the size of the face decreases continuously from the inlet to the outlet. As an alternative, at the half below the storage disc is drawn with constant width. The reduction of available face could be achieved by the number, the size and the distance of the holes.

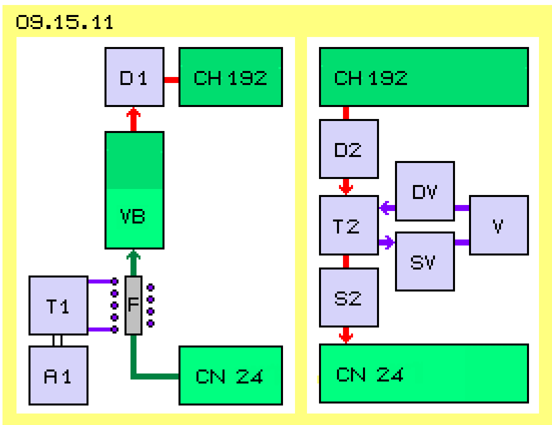
Alternative Rotor
That concerns also the optimum design of the rotor, e.g. which material should be used as dielectricum, especially the material and shape of its front face. Upside, the rotor was drawn as a four-arm star. Probably only two arms might be sufficient. Opposite, the dielectric faces could be smaller and six or more arms could be installed. At picture 09.15.10 upside right a rotor (RO, violet) is drawn with eight dielectricum-arms (DI) and thus the frequency of charge-throughput increases. If the rotor is running e.g. with 1500 rpm, previous four arms deliver 100 impulses each second. If one uses double storage-bands, double arms and

double revolutions, the performance increases eight-fold (in comparison with upside example).

If the assumed charge-compression can not be achieved, two stages, previous three stages or even four stages must be used to achieve the wanted outlet-voltage. If however at first stage already a sufficient increasing voltage can be achieved, many modules could be installed one beside the next and thus the charge-throughput would increase. At previous picture below, for example 18 modules are sketched at the shaft and this booster-cylinder might be about 60 cm long. The modules could be shifted by 20 degree, thus at the outlet would exist nearby continuous DC. At the other hand, thus also the flow into the inlets would be a rather steady stream.

Alternative Feeding
As mentioned upside, the feeding of charge into the inlet of the volt-booster is a critical point. At the upside picture, the transformer T1 was used. As an alternative, the feeding could occur direct from the storage of high voltage CH192 via controllable resistor. This would also allow to drive variable inlet-voltages. As an other alternative could be used a generator, even mounted direct at the shaft, for pushing charge from the storage of low voltage CN24 into the booster-inlet at the right phases. If necessary, this generator could be used for starting-up the system from the beginning, where the source of charge could be the body of a vehicle or even the basic potential of the earth.

At the picture 09.15.11 left side is sketched an other possibility. Below left are drawn the server-accumulator A1 and the transformer T1. The connection from the storage of low voltage towards the booster (from CN24 to VB) is partly build by iron-material (F, grey) with a coil around. The transformer (or a ´trigger´) delivers only short and weak impulses into that coil, however all times into same direction. Thus the iron will become magnetic. The charge is pulsating ´pumped´ through that element. That ´Inverse-Trafo´ will be described in details at later chapter ´Mystery of Induction´, and follow ´Ram-Trafo´ too.



Alternative Trafo
This picture 09.15.11 right side shows the flow from the storage of high voltage towards the storage of low voltage (from CN192 to CN24) and its usage via transformer T2. The current may flow only for short phases, which are controlled by switch S2. It´s important, that switch is installed behind the transformer. So the primary-coil is exposed to the high voltage all times.

As long as current is flowing, an electromagnetic field builds up around the coil. If the switch S2 cuts off the current, a ´jam´ comes up around the area of the primary coil. Based on ´inertia´ the following current still presses into that area. The electromagnetic field becomes blown up, against the general aether-pressure of the environment. That additional flow come to standstill by the increasing counter-pressure of the aether onto that enlarged surface of the field. A diode D2 hinders the current to flow back into the storage CH192.

Analogue to the ´Hydrostatic Ram´, that abrupt stop of the (water- respective current-) flow results an enormous rise-up of pressure, here in shape of the expansion of the electromagnetic field around the coil. Up to that moment, also the conductive connections of the secondary coil (to and from the consumer V) should be interrupted, at the one hand by a diode and at the other hand by a switch (DV and SV, blue). Finally when that switch opens the way to the consumer, the blown-up field ´implodes´. The ambient aether compresses that motion-cloud. Because momentary the only exit exists towards the consumer, the whole jammed-up motion-potential runs off as an extreme strong current-impulse.

Alternative Storages

It´s also to check which capacity the intermediate storages will fit best. One should notice, that the charges do not only stick ´static´ at the faces, but keep their forward-motion (e.g. rotating around round faces, see previous chapters). Probably also air-coils with wide diameter could make sense, just for that pulsating DC.

Today, cars with electric drive show a range of about 200 km and their accumulators deliver hundreds of ampere. Only a small part of would be necessary, complemented by additional charge-storages of previous discussed shape. In combination with that volt-booster likely performance would be achieved with unlimited range - and no recharging at power-points would be necessary. Also the wall-sockets at home naturally could deliver unlimited current by a corresponding unit. I hope these perspectives will encourage many experts to check these proposals seriously.

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