NOTICE that the outer or valence shell becomes the fourth shell rather than the third.

Once the fourth shell established as the valence shell, the third shell can fill to its full capacity of 18 electrons.

That is precisely what dream one is saying, therefore, I had to accept that these dreams are workable dreams and not normal dreams as such.

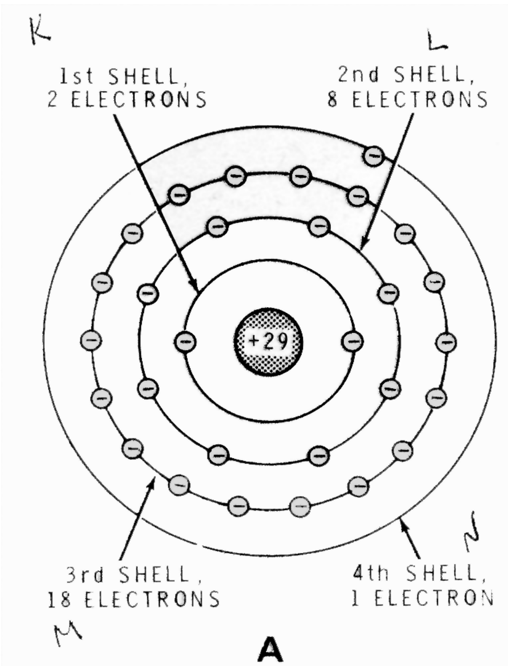


Figure 4A. Copper Cu 29

Clearly, the valence electrons are extremely important in electronics, as dream one is stating.

These easily freed electrons can perform useful functions.

To see why valence electrons freed easily, let us consider the structure of an atom of copper Cu 29, which I use in the S.E.G. structure.

Figure 4.A. shows how are the electrons distributed in the various shells.

In this case, the valence shell contains only one electron.

This electron is further away from the nucleus than inner shell of electrons.

From Coulomb’s Law we know that the force of attraction between charged particles decreases as the distance increases.

Therefore, the valence electrons experience less attraction from the nucleus.

For this reason, I know dream 1 is implying that these electrons can be easily dislodged from the atom.

B **C** **D**

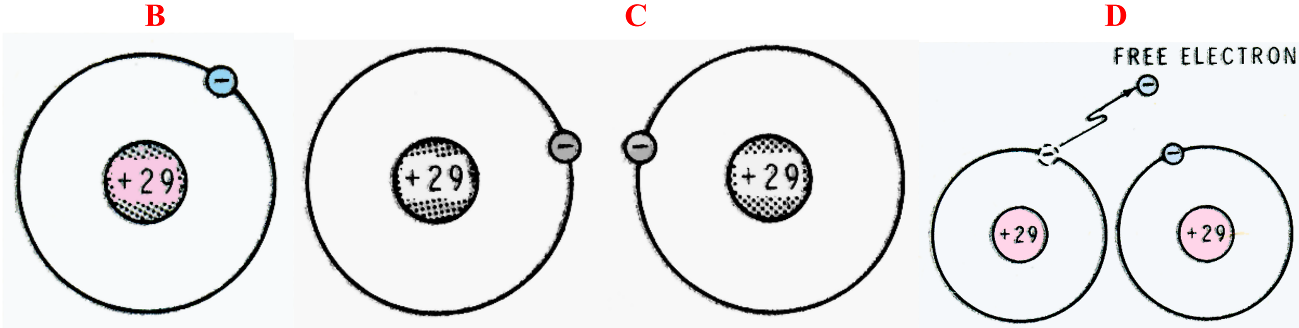


FIGURE 4A. Freeing an electron from a Copper Cu 29 atom.

At this moment in time, I am concerned primarily with the valence electrons and I need not show the inner electrons.

Instead, shown is the atom in the simplified form shown Figure 4A (B-C-D) above.

Figure 4-B, Figure 4-C and Figure 4-D use this simplified forms to illustrate one way to free electrons.

There are two Copper Cu 29 atoms shown as they might appear within copper wire.

Each valence electron held in orbit by the attraction of the nucleus.

However, the force of attraction is quite weak because the orbits are so far from the nucleus.

As I see it; if these two atoms are close together, the valence shells may be closer together than either electron is to its nucleus.

At certain points in their orbits, the two electrons may come very close together.

As I see it, when this happens the force of repulsion between the two electrons is stronger than the force of attraction exerted by the nucleus.

Thus, one or both of the electrons maybe forced out of orbit and wander out as a free electron.

NOTICE that when the electron leaves, the atom becomes a positive ion.

As a free electron wanders around through the atomic structure, a positive ion can captured it.

It may also come close enough to other valence electrons to force them from orbit.

This is the kind of action required within the Searl effect generator (S.E.G).

The point is that events like these occur frequently in many types of material.

Thus, it is that the Searl Effect Generator (S.E.G) has options of choice of materials to construct and not limited by one set of materials.

Thus, in a piece of Copper Cu 29 wire containing billions and billions of atoms, there are bound to be billions of free electrons. Flowerbower - please kindly take note that I am educating you; so you do not look like an imbecile on YouTube.

CONDUCTORS AND INSULATORS:

The role of valence electrons cannot be over emphasized, for it is an important part of the Searl Effect Generator (S.E.G) and the Inverse-Gravity-Vehicle (I.G.V).

Both the electrical and the chemical characteristic of the elements depend on the action of the valence electrons; clearly, that is what dreams one is stating.

An element’s electrical and chemical stability are determined largely electrons within the valence shell.

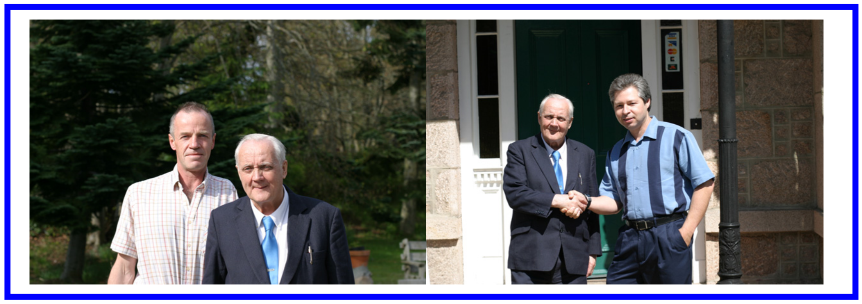
I have seen that the valence shell can contain up to eight electrons, precisely what dream 1 state’s with that hopscotch game, each square of that game represents an electron.

Yes – you can smile, as you know now that a self-taught boy knew in this manner and I am giving these so call experts a real spanking in public for saying otherwise.

Those elements with valence shells that are filled or nearly filled tend to be stable.

For example, the elements:

1) Neon Ne 10:
2) Argon Ar 18:
3) Krypton Kr 36:
4) Xenon Xe 54:
5) Radon Rn 86



Have eight electrons in their valence shell.

Clearly, they are completely filled valence shells. That is correct Flowerbower, just to save your brain from exploding trying to find ways to say that I don't know what I am talking about on YouTube.

As a result, these elements are so stable that they resist any sort of chemical activity.

They will not even combine with other elements to form compounds; at least so far to date no one has been lucky to achieve such success to my knowledge – but I cannot be absolutely certain that given time someone somewhere will achieve some success with these elements.

Unfortunate, I can only deal with known facts here.

These atoms are very reluctant to give up electrons. I can understand that from my own experience how reluctant I was about dropping my pants for the teacher to spank me; so she helped me by dropping them for me – so I would not be too surprised if one will help to drop an electron from one of these elements.

It appears to me that there is nothing impossible; except that the state of your mind makes it so: clearly, that is what my teacher proved to me.

All these elements have similar characteristics in that they are all inert gases.

Stable elements tend to have their valence shells almost filled, although they are not as stable as filled shells.

I know that these elements will strive to fill their valence shell by capturing free electrons.

Consequently, elements of this type have very few free electrons wandering around through the atomic structure.

Flowerbower, materials with few free electrons are termed: ***insulators.***

In addition to certain elements act as insulators, there are many compounds with few free electrons.

Thus, they act as insulators also.

By opposing the production of free electrons, these substances resist certain electrical actions.

Insulators are important in electrical and electronics work for this reason.

The plastic material on electrical wires is an insulator that protects us from electric shock.

All such issues must be address in designing any generator – let alone the S.E.G.

Elements in which the valence shell is almost empty have the opposite characteristics.

Those with only one or two electrons tend to give up these electrons very easily.

For example:

1) ***Copper*** ***Cu 29:***
2) ***Silver*** ***Ag 47:***
3) ***Gold*** ***Au 79.***

Each has one valence electron.

In these elements, the valence electrons dislodge very easily.

Consequently, a bar of any one of these elements will have a very large number of free electrons.

Substances that have a large numbers of free electrons are termed conductors.

In addition to Silver Ag 47, Copper Cu 29, and Gold Au 79, some other good conductors are Iron Fe 26, Nickel Ni 28 and Aluminium Al 13.

NOTICE that all of these elements are metals.

Most metals are good conductors.

Conductors are important because they carry electrical current from one place to another.

John Thomas Jr – he who expected to re-make the S.E.G. I know he did not accept my word that it costs a lot of something that is a GOD to most people and it is called MONEY – but give him credit. He set up DISC INC and saw to it that I had a computer, scanner and printer, so I could get started in re-writing newsletters and books including the software needed to make them which whom we all ought to be grateful.

His son Jason set up the first website upon this technology, which for that time was a great achievement because he had never experience what was involved within this technology.

I am glad to report that Dad and Son are both doing well.

Hi dad: you will soon see another happy birthday, which means that you are surely catching me up on orbits.

Some elements have halfway filled valence shells.

That is, there are four valence electrons.

Two examples of elements of this type are Silicon Si 14 and Germanium Ge 32.

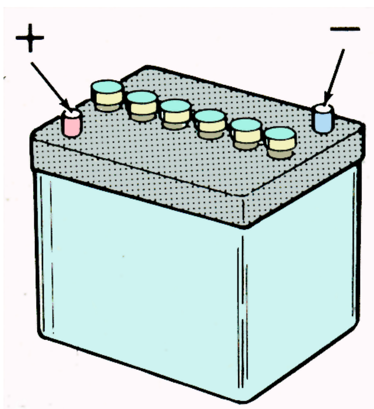
I will call these elements ***semiconductors*** because they are neither good conductors nor good insulators.

I will admit here that I have been thinking that they both might play a good part in an S.E.G. concept, but yet to be tested.

Semiconductors are important in electronics because transistors and integrated circuits are composed of these elements. (Added insert to original copy)

However, in this report, I will be concerned primarily with conductors and insulators.

THE BATTERY:



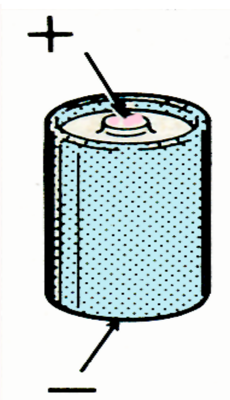


Figure A: Wet Cell, Figure B Dry Cell.

Figure A relates to a car battery; something which I would not experience seeing for another 2 years.

Figure B: This type of dry cell will also still be 12 months away; before having the experience of seeing one of these types of battery.

Today's generation will find that hard to understand as they see them everywhere now.

Current flow is the movement of free electrons from one place to another – which being no different to that of the Searl Effect generator (S.E.G).

Thus, to have current flow I must first have free electrons; Flowerbower, please kindly take note.

I have seen how valence electrons can be dislodged from atoms to form free electrons and positive ions.

This can be done by very simple means such as combing my hair or rubbing a glass rod (no I never tested that idea of what you are thinking of – nevertheless it's an interesting thought) with a silk cloth.

However, to perform a useful function, I must free very large numbers of electrons and concentrate them in one area.

This requires some much more sophisticated techniques.

My device does that but at this moment of time, it is the ordinary battery will do.

There are many different types of batteries, and I am not kidding upon that issue.

I will next how two familiar examples.

Figure B: shows a dry cell (today a common flashlight battery) unfortunate in my time we had carbon lamps; we had not even heard it in Thorndon, Suffolk, such devices had not reach that standard of battery requirements.

Yes indeed, I knew of dry cells, had to use one of those heavy ones with an output of 144 volts. I think it was then a 9-volt negative battery – so my radio had 3 different types of batteries. Being a right old sod took them apart and poking my nose in to see what they contained; thus it was that unexploded German bombs were not the only things I was taking apart to make fireworks out of their contents and they never failed to work, bless them.

Figure A shows the wet cell (being an automobile battery, which was unknown to me then), agree I knew of wet cells and I used one in my radio set that was 2 volts. It was termed an accumulator that had to be charge up at a shop in Ipswich 20 miles away once a week; that was the limit of my experience then, but all this will be explained at a later date.

I understand that these two types of batteries are of quite different construction, they do have several points in common.

In plain talk, it is no different to man and women, whom we all understand I hope, that there are lots of differences in construction, but we do have several points in common.

Both have two terminals or poles for connecting, to complete an electrical circuit.

Both employ a chemical reaction producing an excess of electrons at one terminal and a deficiency of electrons at the other.

The terminal at which the electrons congregate is termed the negative terminal; which to my mind makes sense.

Shown in Figures A and B indicates it by a minus sign,
The other terminal is goes by a plus sign and has a deficiency of electrons.

Next, we will see how the battery affects the free electrons in a conductor.

RANDOM DRIFT AND DIRECTED DRIFT:

I cannot help to wonder if you really are taking note of how the law of the squares holds true even in this document and how the law of the squares agrees with it.

Just to make you aware, the title above show 2 states of opposite functions; the law thus confirmed positively.

A conductor is a substance with large number of free electrons.

In a conductor, the free electrons do not stand still, rather are very active indeed.
Instead, they drift about in a random motion.

I hope to be able to explain this action in a drawing on the next page, but I am not an artist and cannot be everything. Nevertheless, will have a go at it and try my best for I am not no longer 14 years old but just on 77 years old. I am not young but a rather seriously handicap old man, but my love is science, flying and above all protecting my home, the planet earth. For there is no other home for us to date and to my mind its madness the way we are killing and destroying our home when there is no other to have.

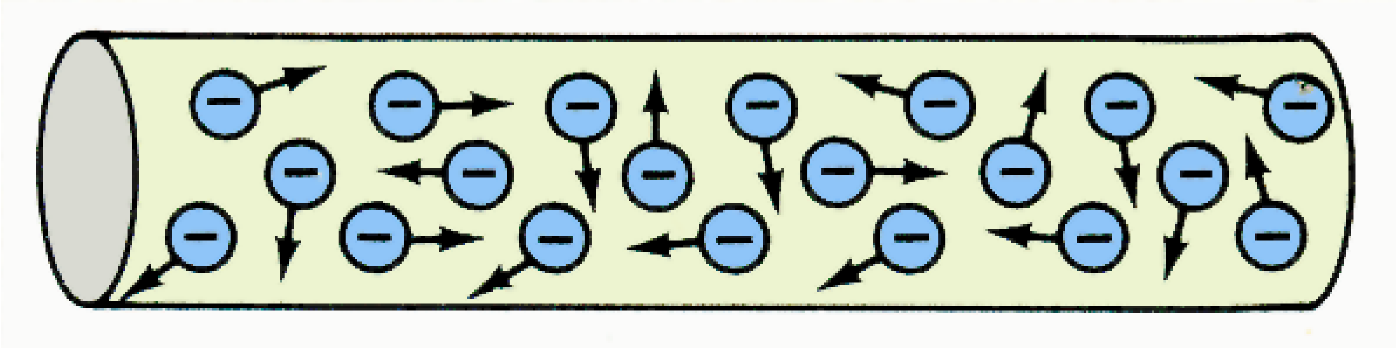


FIGURE RM1A.

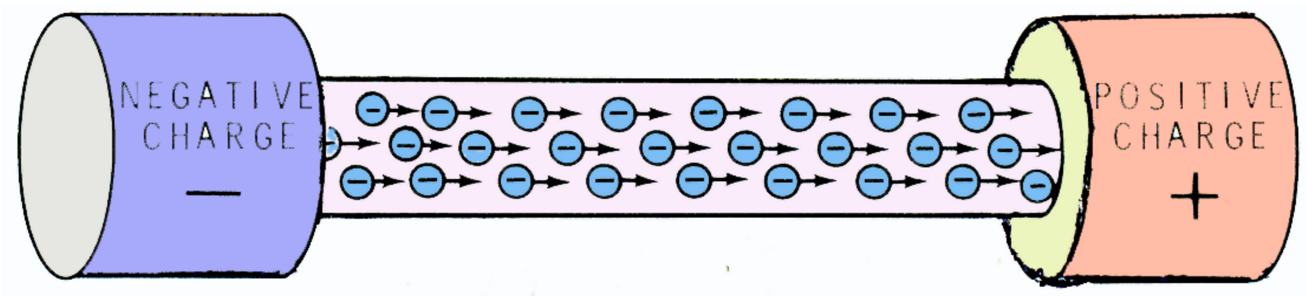


FIGURE RM1B.
Comparison of random and directed drift.

Figure RM1A represents a small section of a conductor containing many free electrons.

At any instant, the free electrons are drifting at random in all directions.

This motion is termed ***random drift;*** which makes sense to me.

This type of drift occurs in all conductors but it has little practical use.

To do useful work, the free electrons must drift in the same direction rather than random motion.

I can influence the drift of electrons so that all or most electrons move in the same direction through the conductor.

This is movement takes place by displacing electrical charges at opposite ends of the conductor.

Figure RM1B shows a negative charge placed at one end of the conductor while a positive charge at the other.

The negative charge repels the free electrons while the positive charge attracts them.

As a result all of the free electrons move or drift in the same general direction.

The direction is from the negative charge to the positive charge.

Here, the application of the electrical charges at the ends of the conductor has changed random drift to directed drift.

This directed drift of free electrons is termed ***current flow.***

We can say now, ***electrical current is flowing*** through the conductor.

If the electrical charges shown in Figure RM1B are isolated from one another, the flow of electrons will quickly cancel both charges and only a momentary current will flow – likewise within the Searl effect generator (S.E.G).

However, if potential differences caused battery, then the chemical action of the battery can maintain the two charges for some time.

That does not apply to the Searl Effect Generator (S.E.G), unless a force applied to stop it, it will continue regardless of line demand or loads. If such an instant arrived that there is no demand upon the S.E.G, then the unit will just cruise at slow RPM and the free electrons will go a wandering again, until demand again appears.

Therefore, a battery can maintain a continuous current through a conductor for a long period.

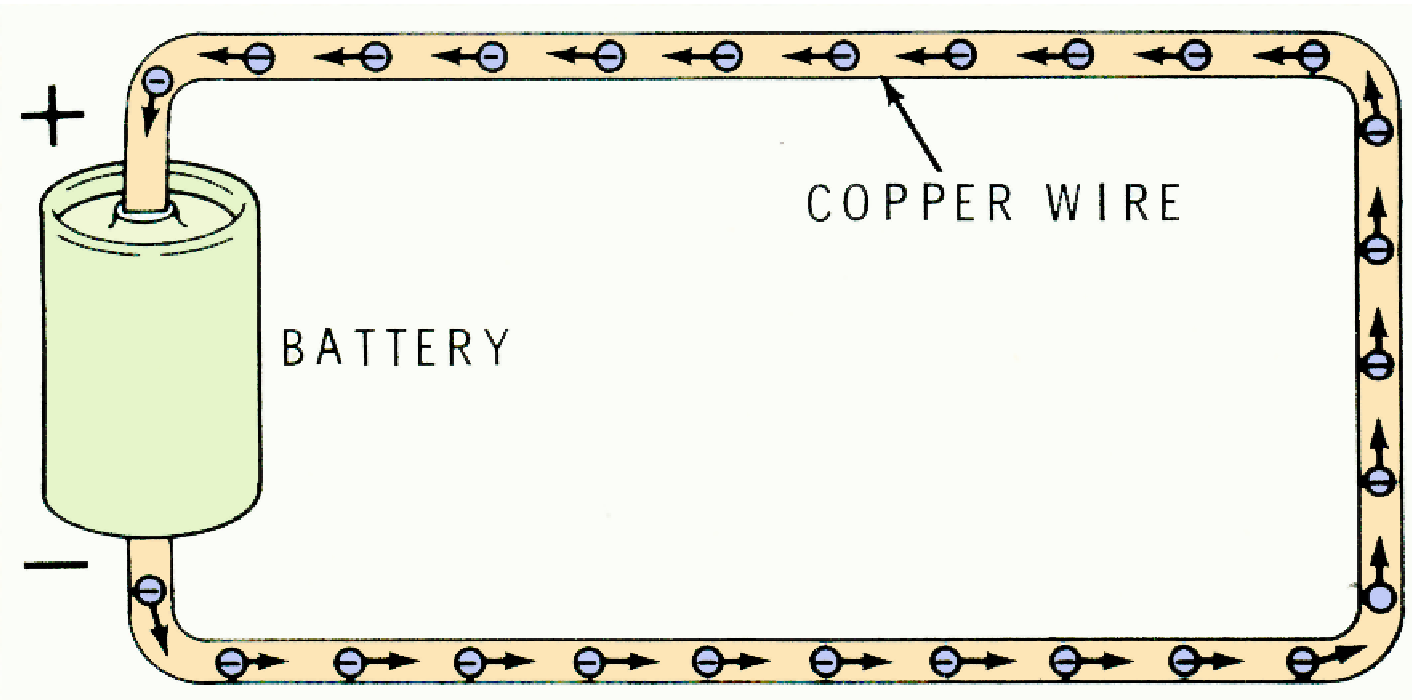


FIGURE 17.1: ***Current flows from the negative terminal to the positive terminal of the battery.***

A Copper Cu 29 wire is a good example of a conductor.

Figure 17.1 shows a length of Copper Cu 29 wire connected from one terminal to the other of a battery.

A heavy current will flow from the negative terminal of the battery to the positive terminal.

Recall that the negative terminal is a source of free electrons.

An electron repels by the negative charges and attract to positive charges at the opposite terminal.

Thus, the electrons flow through the wire as shown. What is this again - Flowerbower sleeping? You will have to report to my office after class for a lesson that will help you to stay awake for I am teaching you not to be an idiot on YouTube. I am certain that my cane will be delighted to greet your arse with an enjoyable welcome and I will not charge you for my time and service.

Just consider that yourself lucky to receive proper disciplinary action; most operators charge for such dedicated work on the bottoms.

When they enter the positive terminal of the battery, the positive ions capture them.

The chemical reaction of the battery is constantly releasing new free electrons and positive ions to make up for the ones lost by recombination.

I should pointed out that I have not nor is it recommended connecting a conductor directly across the terminals of the battery as shown in Figure 17.1

The heavy current would quickly exhaust the batter to say the least.

This is an example of a "short circuit", normally avoided at all cost Flowerbower.

<u>This example is shown here merely to illustrate the concept of current flow.</u>

I think that it is time for another programmed review of the question I had to answer – being a boy of 14 years studying to become an electrical engineer ought to interest you – I wonder how many of you can honestly answer them in reality?

33) ***Valence:***

These are the electrons which can be most easily freed from the atom.

However, the valences electrons in some elements are very difficult to dislodge while other elements they are freed easily.

The difference stems from the number of electrons in the ----------- shell.

34) ***Current is the flow of electric charges from one point to another.***

Since electrons carry electrical charges, current can also be defined as the flow of ----------.

35) ***Number:***

A conductor is defined as a substance which has a large number of free electrons.

Thus, elements which have only one or two electrons in their valence shell normally are good -------------.

36) ***Electrons:***

Before electrons can participate in current flow, they must first be freed from the atom.

Clearly, my next question will not fit in here without a break up in a line statement, which clearly will happen here if I continue; so I will continue this on the next page.

To continue from last page question 36:

When an electron is dislodged from the atom, the atom becomes a positive ---------

37) Ion:

Electrons are distributed around the atom in shells.

This shell is called the valence shell.

Also, the electrons in this shell are called ------------ electrons.

38) Positive:

Electrons which leave the negative terminal of the battery are replaced by other electrons which are released by the chemical reaction within the battery.

Thus, a battery can maintain a continuous flow of electrons through a conductor for a long period of time.

This flow of electrons is called current.

Electrons flow from a ------------- charge to a ---------- charge.

39) Conductors:

Elements such as gold Au 79, silver Ag 47, and copper Cu 29 have only one valence electron.

Therefore, these elements are very good ---------------.

40) Positive:

If one end of a conductor is connected to the negative terminal and the other end is connected to the positive terminal, Electrons will flow through the conductor.

In the conductor, electrons will always flow from the negative terminal to the -------------------- terminal.

41) Conductors:

On the other hand, an insulator is defined as a substance which has very few free electrons.

This situation occurs in elements which have their valence shells nearly full.

For example, elements with 6 and 7 valence electrons make good ------------------.

42) *The free electrons within a conductor drift around at random.*

To do useful work these electrons must be forced to drift in a desired direction.

I can influence the drift of electrons by connecting the conductor across a battery.

A battery is a device which has an excess of electrons at one terminal and a deficiency of electrons at the other.

The terminal with an excess of electrons is called the negative terminal.

The terminal with the deficiency of electrons is called the ---------- terminal.

THE ELECTRIC CIRCUIT:

In its simplest form, an electric circuit consists of a power source, a load, and conductors for connecting the power source to the load Flowerbower please take note; who knows one day you might appear intelligent.

Often the power source is a battery Flowerbower. The purpose of the power source is to provide the force necessary to direct the flow of electrons.

As I intend to show you in the next unit, this force is called ***VOLTAGE.*** Power sources produce voltage by creating a positive charge at one terminal and a negative charge at the other.

In Joy's own words WHY do they do that? That is an interesting point; ***WHY?***

The ***load*** is generally some kind of electrical device which performs a useful function; Flowerbower what would you suggest – a vibrator?

To my mind at least it might be a lamp which is useful to produce light, a motor which produces physical motion besides that vibrator, a horn which produces sound, or a heating element which produces heat to heat up the bed; before you get in it; can sure be useful to prevent you wetting the bed from the sudden cold attack.

Regardless of the type of load used, the load performs its useful function only when electric current flows through it Flowerbower.

I must not forget the third part of the circuit is the conductors, which are vital which allows me to connect the power source to the load.

They provide a path for current flow – Flowerbower – interesting if your brain is capable to learning that?

I appreciate that a number of you are feed up with Flowerbower's evil crap, which I thank you for that and ofcourse there will always be those who enjoy evil crap and thrive on it; the Law of the Squares statements it – how true!

The conductor may be length of Copper Cu 29 wire, a strip of Aluminium Al 13, the metal frame of an automobile, etc.

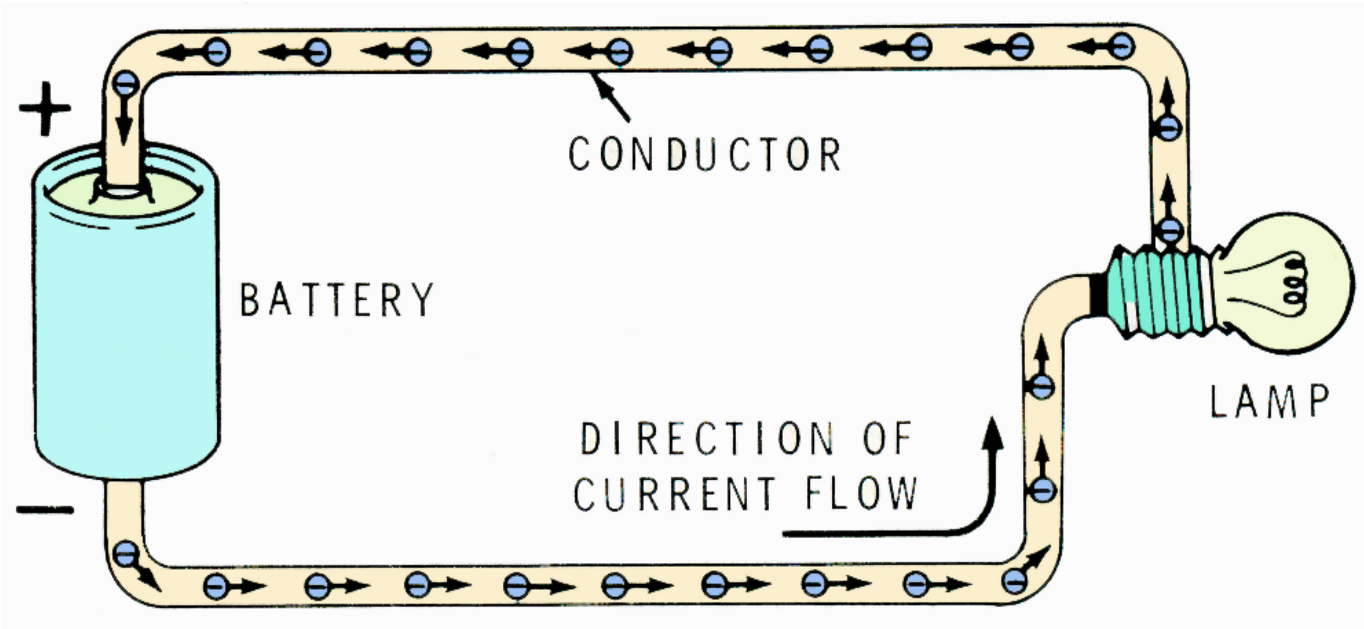


Figure 17.16. ***Simple electric circuit.***

Flowerbower – I expect that this circuit is far too technical for your brain based on your petty sarcasm; it does indicate a lack of understanding of the subjects and too bad your thesaurus will not help you there.

Figure 17.16 shows a pictorial representation of an electric circuit consisting of a battery, a lamp, and connecting Copper Cu29 wires.

The battery produces the force (***voltage***) necessary to cause the directed flow of electrons.

The force developed by the battery causes the free electrons in the conductor to flow through the lamp in the direction shown.

The free electrons repel by the negative charge and attracted by the positive charge.

Thus, the electrons flow from negative to positive to which I have no augment with; as I seen the proof at a cinema projection room: carbon rods gave me all the right answers; even if the projectionist believe otherwise.

The negative and positive charges in the battery constantly replenished by chemical action of the battery: I have no augment with that.

Therefore, the battery can maintain a current flow for a long time.

As the electrons flow through the lamp, they heat up the wire within the lamp. As the wire becomes hotter, the lamp emits light. The lamp will maintain a glow as long as a the currents are strong enough.

By the end of August 1946, I had accepted a fact that Dream 1 related to energy and that energy source would be electricity. That a great amount of weight and pressure would be involved to produce it.
For that required, conductors and magnetism would involve elements but that was just for starters, much more had to found.

We know experiences with flashlights that a battery cannot maintain a constant current flow forever.

As the battery is used, the chemical reaction within the battery slows down; like me, I guess.

Over a period of time, the force provided by the battery becomes weaker and less current is provided.

As a result, the lamp emits less light.

It becomes dimmer and dimmer and eventually no light at all.

At this time the battery is said to be dead, burned out, or run down.

In this condition the battery like us, cannot produce the force necessary to push enough electrons through the lamp to cause the lamp to light.

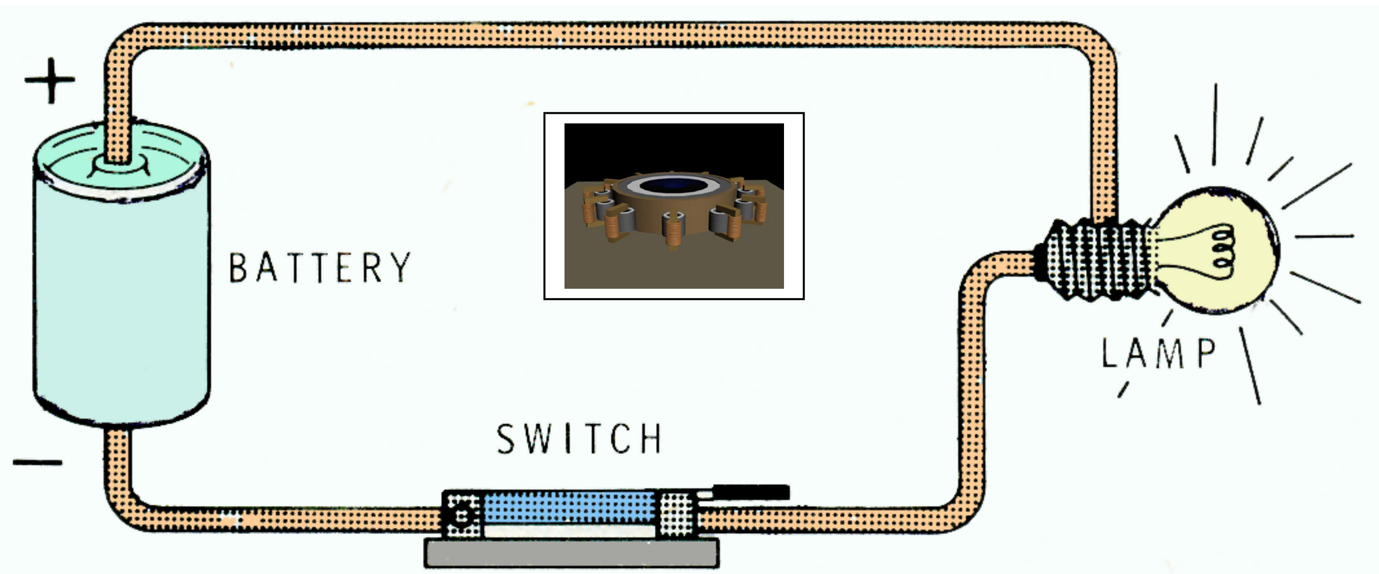


Figure 17.17a   Circuit with switch closed.

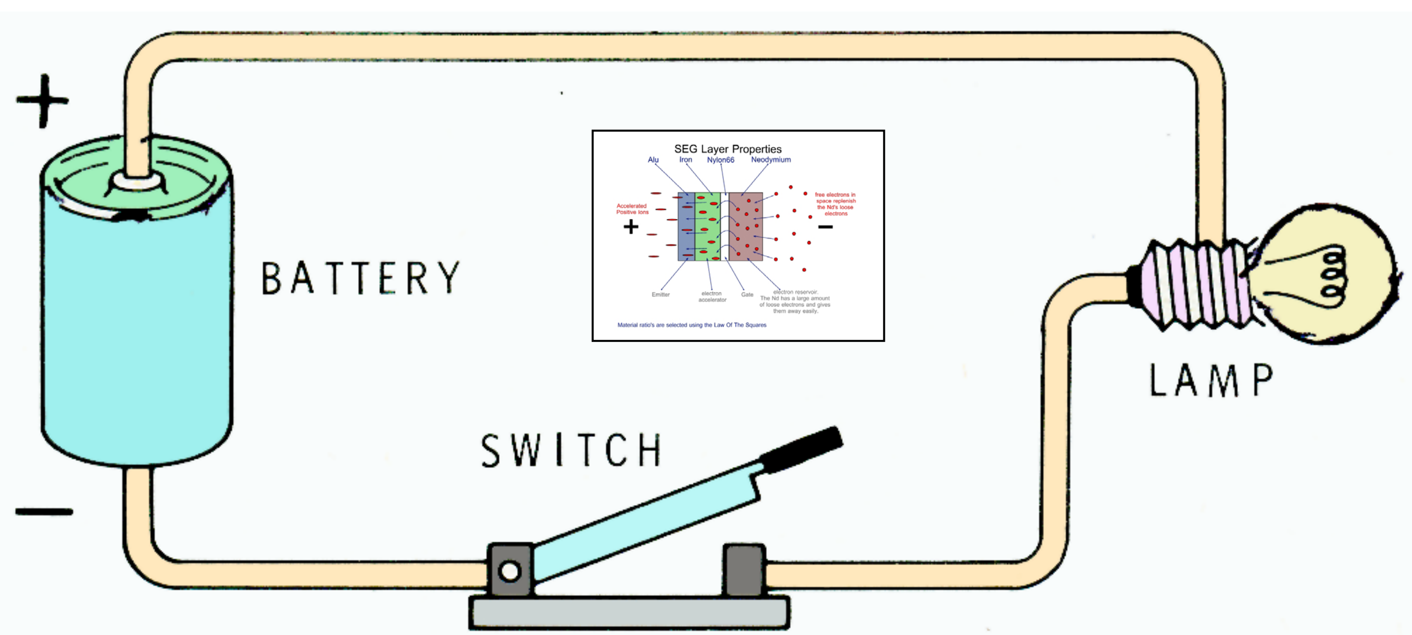


Figure 17.17b   Circuit with switch open.

The circuit in Figure 17.16 is much more practical by adding one additional component.

This component is a switch, providing a simple method of turning the lamp on and off.

In Figure 17.17, shows the circuit with and added switch.

For simplicity, a knife switch is shown but there are many types that are available that could be used.

It consists of two metal contacts to which conductors may be connected, a metal arm opened and closed on a base. I can certify as correct as I have used many of this type class of switch over time in my home research work and with great success.

Current cannot flow through the base of the switch because an insulator material is used.

Current can flow only through the arm and then only if the arm is closed.

In Figure 17.17a, the switch is shown closed.

With the switch closed, there is a path for current flow fro the negative terminal of the battery through the switch and lamp to the positive terminal.

Now you can say let there be light; and behold the lamp lights up because current flows through it.

When the switch is opened, as shown in 17.17b, the path for current flow is broken.

Thus, it's useless to say let there be light, because the lamp does not glow, simple because it's not happy due to the fact that there is no current flowing through it.

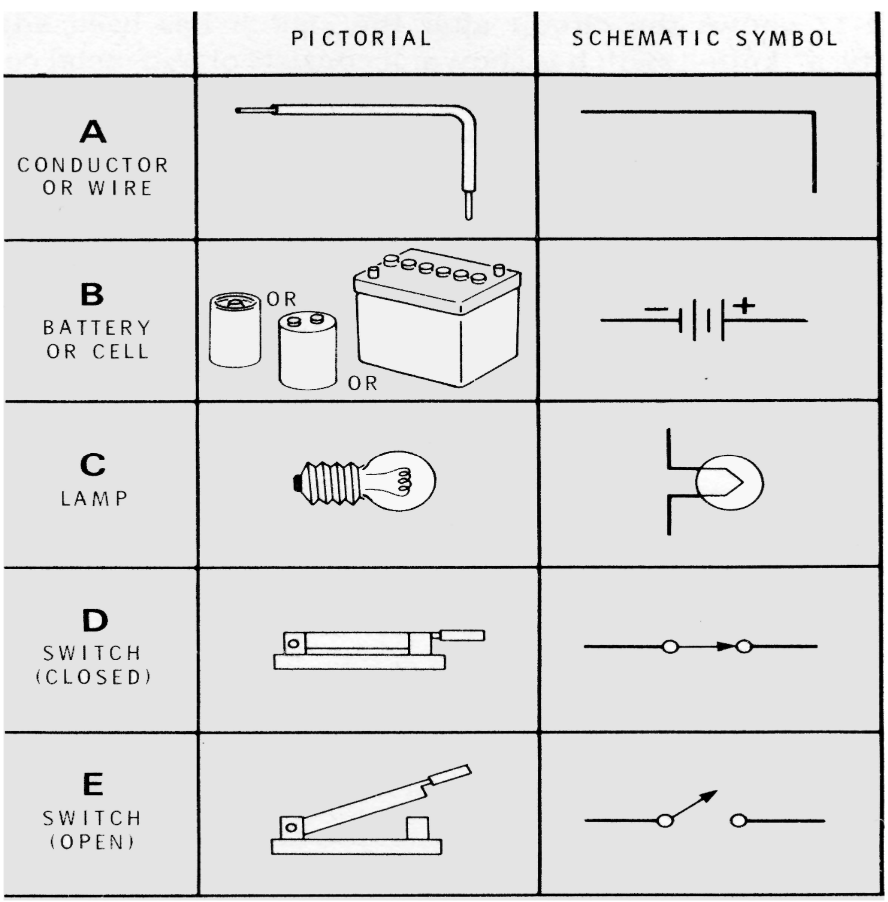


FIGURE 17.18.

Pictorial representations compared with the schematic symbols.

Well Flowerbower I wonder if you can understand these details –if you do that is sure proof that God moves in mysterious ways. Strange, that I do not believe in god, just far too many facts to support my views.

So, you cannot expect me to believe that you are capable of understanding what's written within this book.

Have a great day Lover!

While simple circuits can be drawn as shown in Figures 17.17 and 17.18, it would be very difficult to draw complex circuits in this manner.

For this reason, the ***schematic diagram*** was developed.

A schematic diagram is a drawing in which symbols are used to represent circuit components.

Thus, the first step to understanding the schematic diagram is to learn the symbols for the various components used – of course that was easy in my days – now so long ago – today, I agree it is a different world of symbols – which has vastly increased in numbers – very difficult for me to be able to keep abreast of them – I understand that you think that being 77 years that I am past it – sorry that is not true; I am not past it – it's the shear cost to keep up to date with change that is my problem, one needs to be a millionaire to keep paste with today's changing world.

I would loved to keep up to date upon all subjects regardless what: for my interest in this planet and you is beyond that of most people interest; that from this book should be clearly seen by any one with intelligence.

Figure 1718 compares the schematic symbol with the pictorial representation of the circuit components I have so far used up to this point.

The conductor is represented by a single line in the schematic.

Also, the picture of the battery is replaced by a series of long and short lines.

The long line represents the positive terminal while the short one represents the negative terminal.

The same symbol can be used regardless of the type of battery.

The symbols for the lamp and switch are also shown.

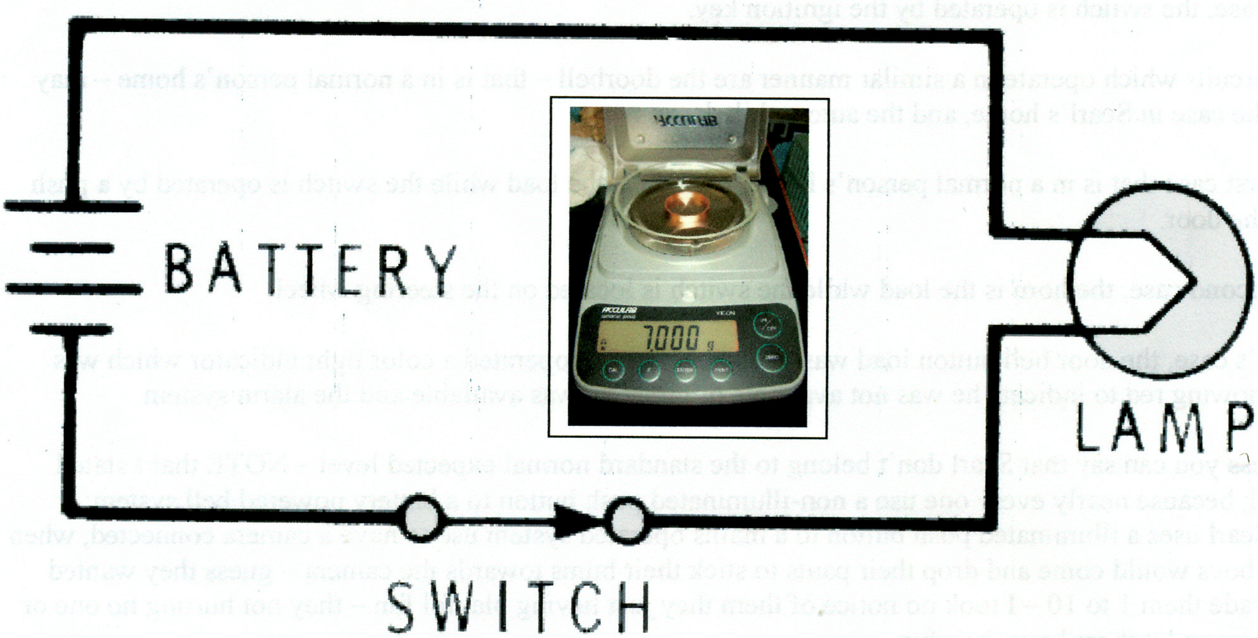


Figure 17.19A ***CLOSED.***

Figure 17.19A is the schematic diagram for the pictorial drawing shown earlier in Figure17.17A.

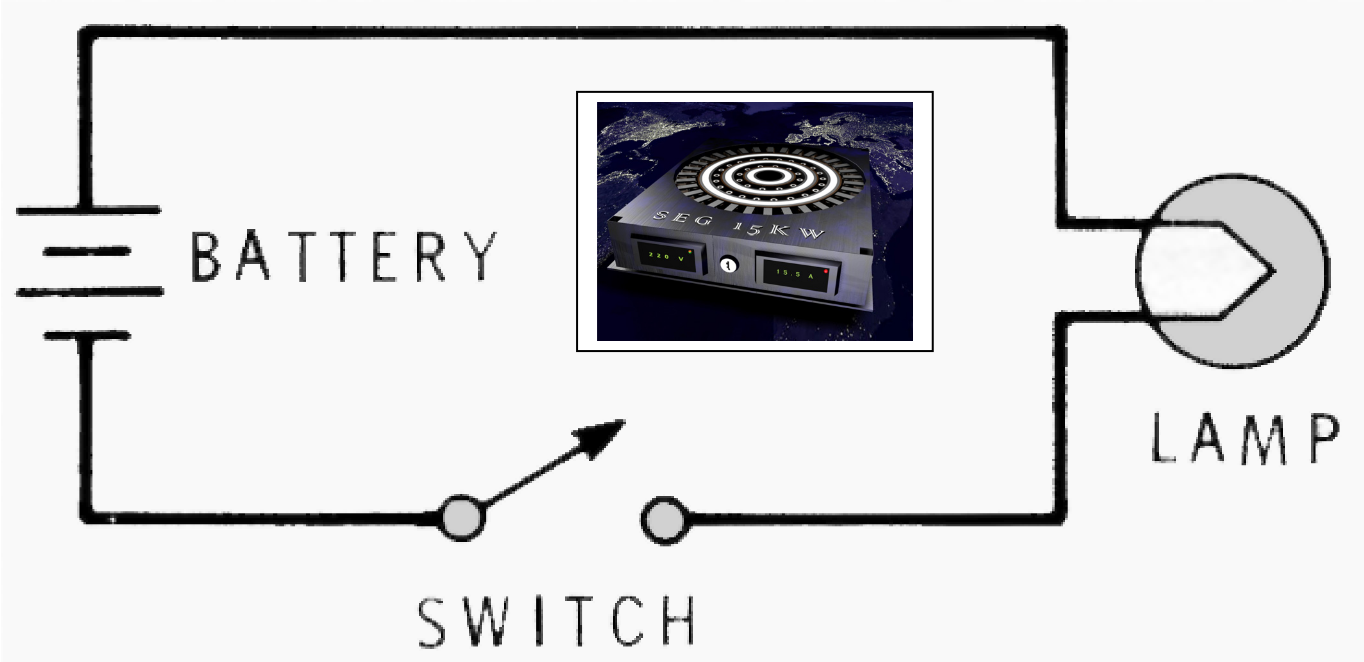


Figure 17.19B. ***OPEN.***

Figure 17.19B is a schematic diagram of the pictorial shown in Figure 17.17B.

The circuit shown in 17.19 is the schematic diagram of a flashlight.

It is also the diagram for the headlight system in an automobile.

In fact, it can present any system which contains a battery, a lamp, and a switch.

If the lamp replaced with a motor, the circuit becomes that of the starter system of a car.

In this case, the switch is operated by the ignition key.

Other circuits that operate in a similar manner is the doorbell at a normal person's home – maybe not the case in Searl's home since tend to be an automobile horn.

In the first case that is in a normal person's home, the bell is the load while the switch operated by a push button the door.

In the second case, the horn is the load while the switch is located on the steering wheel.

In Searl's case, the doorbell button relays the load that operated a color light indicator that was either showing red to indicate he was not available or green.

So I guess you can say that Searl don't belong to the standard normal expected level – NOTE that I stated standard; because nearly every one use a non-illuminated push button to a battery powered bell system. Searl uses a illuminated push button to a mains operated system a camera connected. When its dark boys would come and drop their pants to stick their bums towards the camera – guess they wanted me to grade them 1 to 10. I took no notice of them they just having playful fun – they not hurting no one or themselves so let them have their fun.

Better then children keep pressing your doorbell and running off; I have to live in the world of reality!

Reality is all about being natural – every young animal must have time to play, fun with their parents or other members of the group to develop into a healthy adult.

We earthlings are no different – we are animals and nature expects us to accept the same behaviour pattern to create a perfect adult, as all other species.

But clearly this is not the case for our young, as adults we force them into a unnatural child pattern that often back fires when they are adults because you have create a earthling mutant: not a natural one that is why today there is so much killing going on.

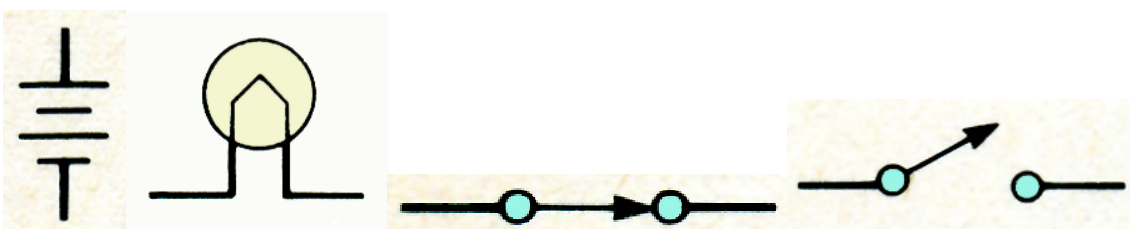
Adults must change back to normal behaviour to bring peace to the world, cut out all this crap that exists that I am better then you, I am stronger then you, I am more intelligent then you. Just being a human being for that is just what I am, I am not stronger, I am not better then you and I am not more intelligent then you. Nevertheless, by unfortunate action of two adults, I am not here by choice or desire, but will to try to improve this planet status, so all can live in a better world as one.

One man cannot create a paradise alone, it takes the power of us all to achieve that status and it can done, but you have to change to make it happen.

Sorry; boys bums looking at you; took me off the subject I was dealing with – nevertheless they were enjoying themselves that is the key issue, they are many women you will do the same mainly because they are bored and need to stir their life up a bit which is only natural. The youngest have fun, for life is short, soon you too will have the worry to exist as an adult and I would not change your young world for anything because that is your right.

Now is the hour to return to the issue of using that grey matter which has been termed a brain by arbitration.

Programmed review:

44) 

A. ***B.*** ***C.*** ***D.***

Shown above are the schematic symbols for four different components.

Identify each one.

A, ------------------.
B. ------------------.
C. ------------------.
D. ------------------.

45) Figure 17.19 shows a complete electrical circuit.

When the switch is closed, electrons flow from the ----------- terminal of the battery through the lamp to the --------------- terminal.

I will continue the review on the next page.

Do not forget this is 1946 being discussed here, as it relates to a 14 year old boy who "experts" claim had no formal education.

46) An electric circuit consists of a power source connected to a load.

The power source provides the force which causes electrons to flow.

This force is called voltage.

In a flashlight the power source is a -------------.

47) The symbol for the battery has a short line at one end and a long line at the other.

The short line represents the --------------- terminal.

48) The load performs its function when current flows through it.

Most loads do not perform continuously.

Instead the current is turned on and off by some kind of ----------.

49) The load is a device which performs some useful function.

The loads may be to produce light, sound or motion.

Thus, lamps, horns, vibrators, and motors are examples of ------------------.

50) Schematic diagrams are used as a shorthand method of drawing electric circuits, which I can promise you will be coming your way soon.

The schematic diagram differs from a pictorial presentation in that the components are drawn as --------------.

Now I done a review Flowerbower, just to make certain that I have done all that is possible in the effort of educating you about my life in 1946 which no doubt you were still using nappies then for your happy events. Looking at your crap on YouTube, you must had been well loaded – good for you!

MEASURING CURRENT:

Current is the flow of electrons from negative to a positive charge.

To measure current flow, we must measure the number of electrons flowing past a point in a specific length of time.

Before I discuss how current is measured, I must first define the unit of electrical charge and the unit of current, otherwise I cannot move forward in this domain; as there is now a demand for an input from me being some value which is by arbitration that will be used to define these values.

THE COULOMB:

I have seen that charge on an object is determined by the number of electrons the object loses or gains.

If the object loses electrons, the charge is positive Flowerbower.

However, an object which gains electrons has a negative charge Flowerbower.

The unit of electrical charge I accept is called the ***coulomb.***

The coulomb is equal to the charge of 6.25 x 10^{18} electrons – **WOW** – Flowerbower do you know how many that is?

Looking at your crap on YouTube I guess that you do not know the answer – you sure need a damn good spanking, something I would enjoy administrating for sure. That is why my nick-name is “spanker4u”.

Sorry to say Flowerbower you will have to wait for a few minutes before I will explain that value to you – daddy will not forget your needs to learn.

For those who are like Flowerbower, not used to expressing numbers in this way, I understand your position that you would like to understand and that is why I write this book to help those who are sincere to learn simply because I never had that option as a child myself.

For all of you who are sincere I will give that value here:

6,250,000,000,000,000,000

An object which has gained 6,25 x 10^{18} (***6,250,000,000,000,000,000***) electrons has a negative charge of one coulomb.

I can well understand one wondering how that figure has been arrived at, to that you are not alone.

What puzzles me is how many coulombs we lose in day to those we gain in a day?

Could be the answer to why I have lost height and weight.

On the other hand, an object which has given up 6.25 x 10^{18} (***6,250,000,000,000,000.000***) electrons has a positive charge of one coulomb.

POWERS OF TEN AND SCIENTIFIC NOTATION:

A word about powers of ten and scientific notation may be helpful at this point.

The number 6,250,000,000,000,000,000 can be expressed as 6.25 x 10^{18}.

This number is read “***six point two five times ten to the eighteenth power***” ***WOW!***

The expression Flowerbower “ten to the eighteenth power” means that the decimal place in 6.25 ***should be moved 18 places to the right in order to convert to the proper number.*** A number of communications have requested me to explain in more details what I mean, as they have not had the education in mathematics.

The theory is that it is easier to write and remember 6.25×10^{18} than it is to write and remember 6,250,000,000,000,000,000.

This shorthand method of expressing numbers is known as powers of ten or scientific notation.

I guess that is true, just like that old saying that some mothers do have them – how true – Flowerbower is a perfect example of that.

It is often used in electronics to express very large and very small numbers; therefore you must expect to see them used within this book I am writing to this site.

Very small numbers Flowerbower: are expressed by using negative powers of ten; there goes the law of the squares again – did you notice – a product that has two faces, one positive and the other is negative – which are precisely opposite to each other.

For example, 4.2×10^{-8} is scientific notation for the number 0.000000042.

Here, "ten to the minus eighth power Flowerbower move "the decimal place in 4.2 eight places to the left"

To be sure you have the idea, let me present some examples of both positive and negative powers of ten:

POSITIVE POWERS OF TEN:

7.9×10^{4} = 79,000
9.1×10^{8} = 910,000,000
1.0×10^{12} = 1,000,000,000,000
1.0×10^{21} = 1,000,000,000,000,000,000,000

NEGATIVE POWERS OF TEN:

7.9×10^{-4} = 0.000,79
9.1×10^{-8} = 0.000,000,091
1.0×10^{-12} = 0.000,000,000,001
1.0×10^{-21} = 0.000,000,000,000,000,000,001

Flowerbower study these examples until you get the idea of this system of writing numbers.

If you feel you need additional explanation Flowerbower; kindly drop in I do have a cane that will kindly give you that additional explanation.

To all of you intelligent people; I will supply later in this book additional explanation to help you to understand me.

And it is programmed instructions sequence designed to teach powers of ten and scientific notation in much greater details – well that is what I am hoping it will achieve – but nothing is guarantee except taxes and death, thus, I can only hope that it will help viewers to this site to follow what is stated.

Sorry about this Flowerbower, indeed a big pain in the arse and adds nothing of worth to help to improve this planet, only determined to stop those who are devoted to saving this planet.

The Ampere:

The unit of current is the ***ampere.***

The ampere is the rate at which electrons move past a given point.

As I have mentioned above, 1 coulomb is equal to 6.25×10^{18} (6.250,000,000,000,000,000) electrons.

An ampere is equal to 1 coulomb per second.

That means Flowerbower my dear: that if 1 coulomb (6.25×10^{18} (6.250,000,000,000,000,000) electrons flows past a given point in 1 second then the current is equal to 1 ampere.

Coulombs indicate numbers of electrons; amperes indicate the rate of electron flow or coulombs per second.

When 6.25×10^{18} (6.250,000,000,000,000,000) electrons flow through a wire each second, the current flow is 1 ampere.

If twice this number of electrons flows each second, the current is 2 amperes.

This relationship is expressed by the equation:

$$\text{amperes} = \frac{\text{Coulombs}}{\text{seconds}}$$

If 10 coulombs flow past point in two seconds, then the current flow is 5 amperes.

Now that was easy for you all, except for Flowerbower, but I do appreciate the fact that all this could become a problem for some readers. We entered into different domains of presentation of this relationship and for them, I will try to present how they might through this book come across other statements which they cannot understand exactly; don't worry about that I know the feeling far too well from experience.

The name ampere is often shortened to ***amp*** and is abbreviated ***A.***

Many times the ampere is too large a unit.

In these cases metric prefixes are used to denote smaller units.

The ***milliampere (mA)*** is one thousandth ***(0.001)*** of an ampere.

The ***microampere (µA)*** is one millionth ***(0.000001)*** of an ampere.

In other words Flowerbower, there are 1000 milliamperes or 1,000,000 microamperes in an ampere.

I change from amperes to milliamperes by multiplying by 10^3.

Thus, 2.8 amperes is equal to 2.8×10^3 milliamperes.

I am still dealing with this boy of 14 years in the year 1946 relating to the question that he was not educated enough to create the SEG concept. This document is filed to show what he knew at that time and how he got that information from which he built up his concept.

I change from amperes to microamperes by multiplying by 10^6.

Therefore, 2.8 amperes is equal to 2.8 x 10^6 microamperes.

As I have already stated that for those who need it, a more detailed explanation of metric prefixes will give later on.

THE AMMETER:

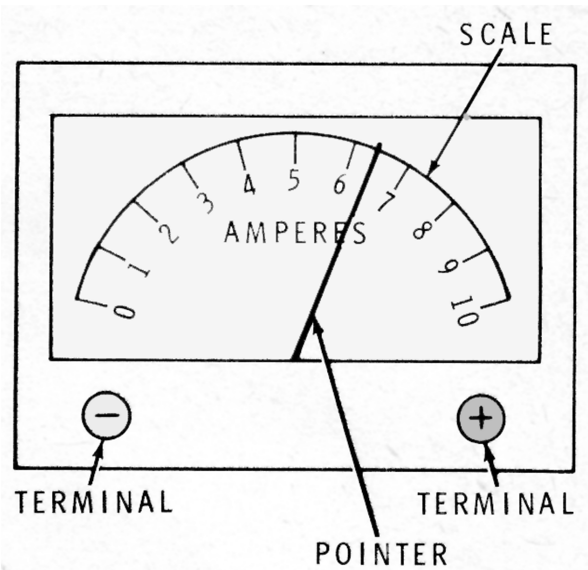


Figure 17.21 Ammeter.

A device for measuring current flow is the ammeter.

The name ammeter is a shortened form of the name ampere meter.

Figure 17.21 shows a diagram of an ammeter.

It has a pointer which moves in front of a calibrated scale.

In this figure, the scale is calibrated from 0 to 10 amperes.

The movement of the pointer is proportional to the amount of current flowing through the meter.

Therefore, Flowerbower an accurate indication of the amount of current flowing in a circuit is obtained by reading the pointer against the scale.

This meter is presently displaying a reading of just over 6 amperes.

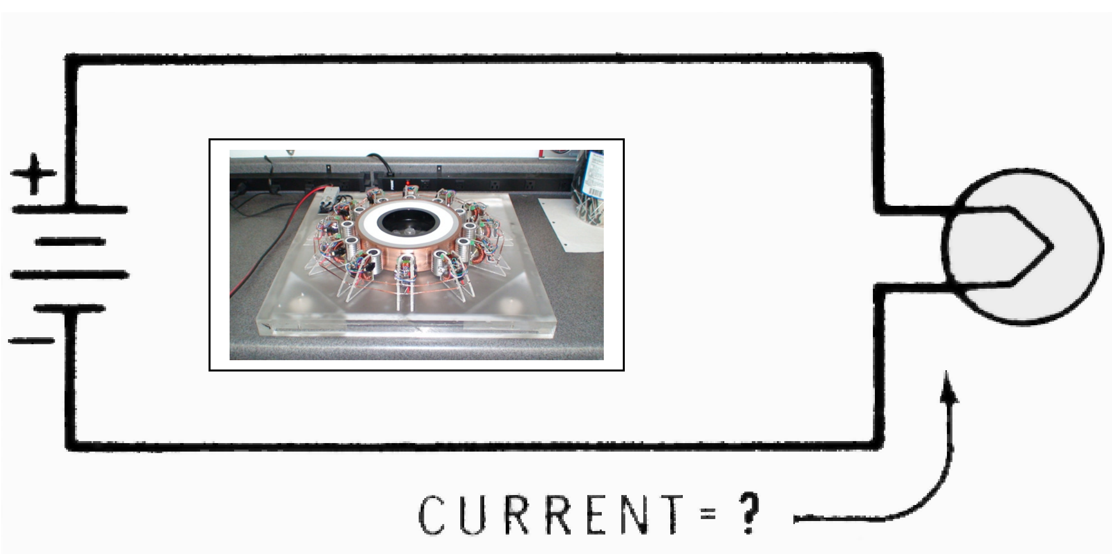


Figure 17.22A ***Measuring current.***

Flowerbower take note now, that this boy of 14 years is really struggling to keep his job and do you know why?

Because he wants to survive in this mad world, so not only is he only learning from on-the-job experience at his place of employment, he is also learning fast in his digs, not only reading but creating and experimenting.

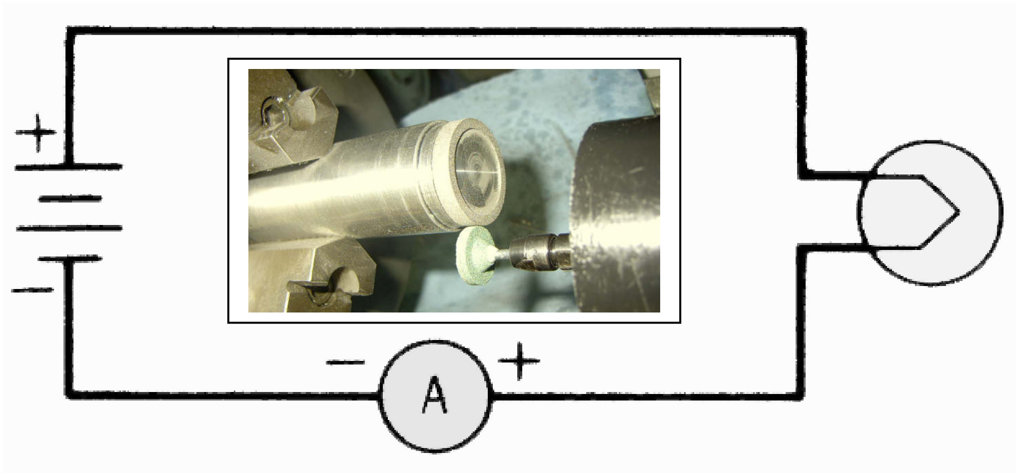


Figure 17.22B *Measuring current.*

Figure 17.22A shows a circuit in which an unknown amount of current is flowing.

I can measure this current Flowerbower by inserting an ammeter into the circuit as shown in Figure 17.22B; Flowerbower it was not a question if I can, but a question of having to do it or look for another job.

NOTICE that the schematic symbol for the ammeter is a circle with the letter **A.**

Before the ammeter can measure current, it must be in the circuit in such a way that the current I wish to measure actually flows through the meter.

I say that the ammeter is connected in series with the circuit elements; well I never...that Law of the squares has just popped in again, bet you Flowerbower never saw that coming.

Incidentally, a circuit like the one shown in Figure 17,22B is termed a ***series circuit.***

A series circuit is one in which the same current flows through all the elements in one continuous loop.

The current maximum of an ammeter is indicated by the numbers on the scale.

The highest current that the ammeter in Figure 17.21 can safely measure is 10 amperes.

This is termed a full-scale reading. Many current meters are much more sensitive.

Some I am aware of have a full-scale reading of 1 milliampere.

Others provide a full-scale reading with only 50 microamperes flowing through them.

Flowerbower also take note that ammeters are delicate instruments and can be destroyed if the current applied greatly exceeds the full-scale reading of the meter.

For this reason, I must exercise certain precautions when using the ammeter.

To protect myself and the meter, a definite procedures must be followed when using an ammeter.

The first step is to insure that the ammeter I am using is heavy duty enough for the job.

As I have mentioned above, if the current rating is exceeded, the meter may be damaged.

The second step is to remove power from the circuit to be tested.

If is battery powered circuits, this can be done by disconnecting one of the battery leads.

The purpose of this step is to protect me from electric shock as I connect the ammeter.

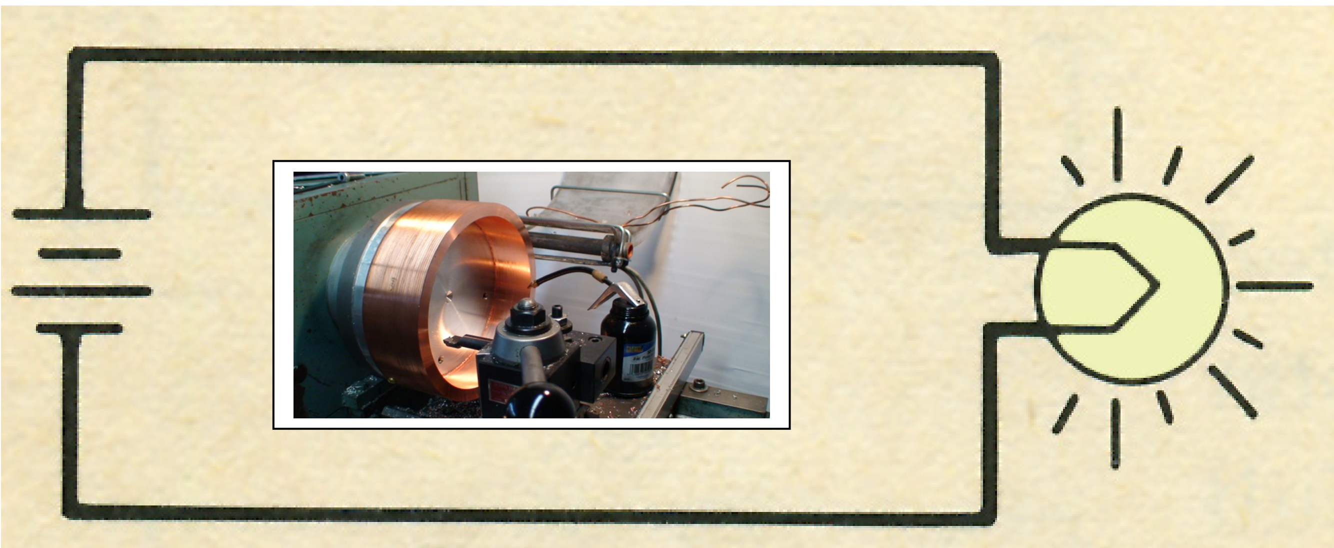


Figure 17.23A: Circuit in which current is to be measured.

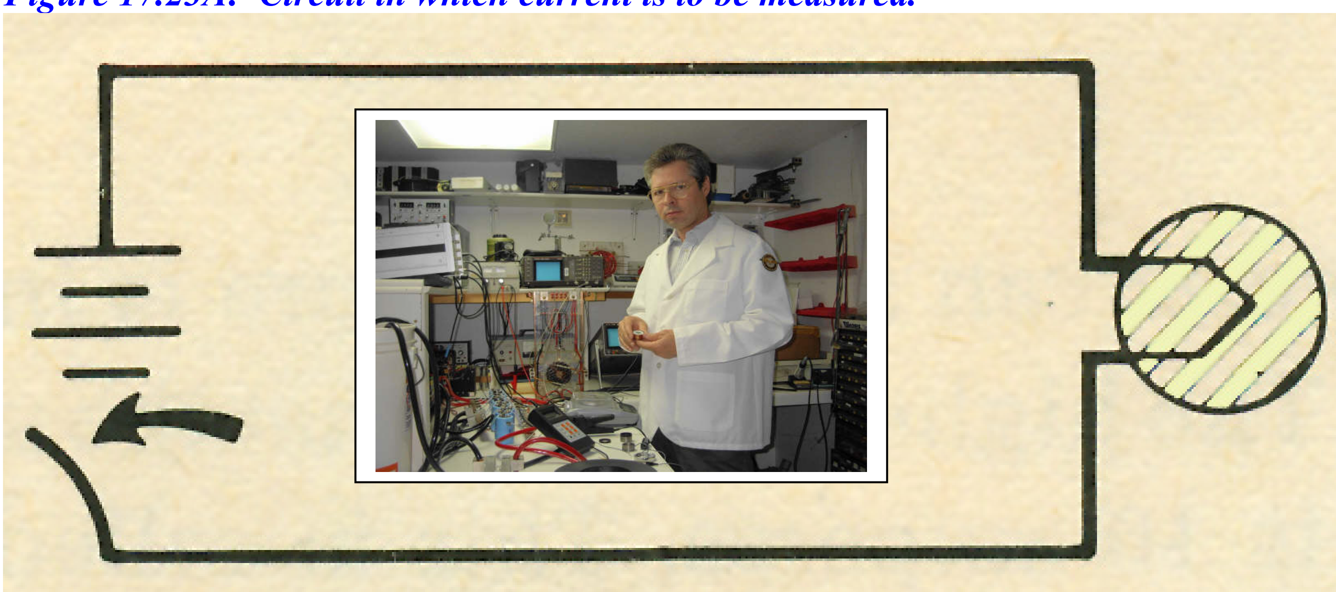


Figure 17.23B: Remove power by disconnecting one side of battery.

The third step is to break the circuit open at the point of current measurement.

The circuit must be broken op3n because the ammeter must be placed in series with the circuit.

Figure 17.23C: ***Break circuit at point where current is to be measured.***

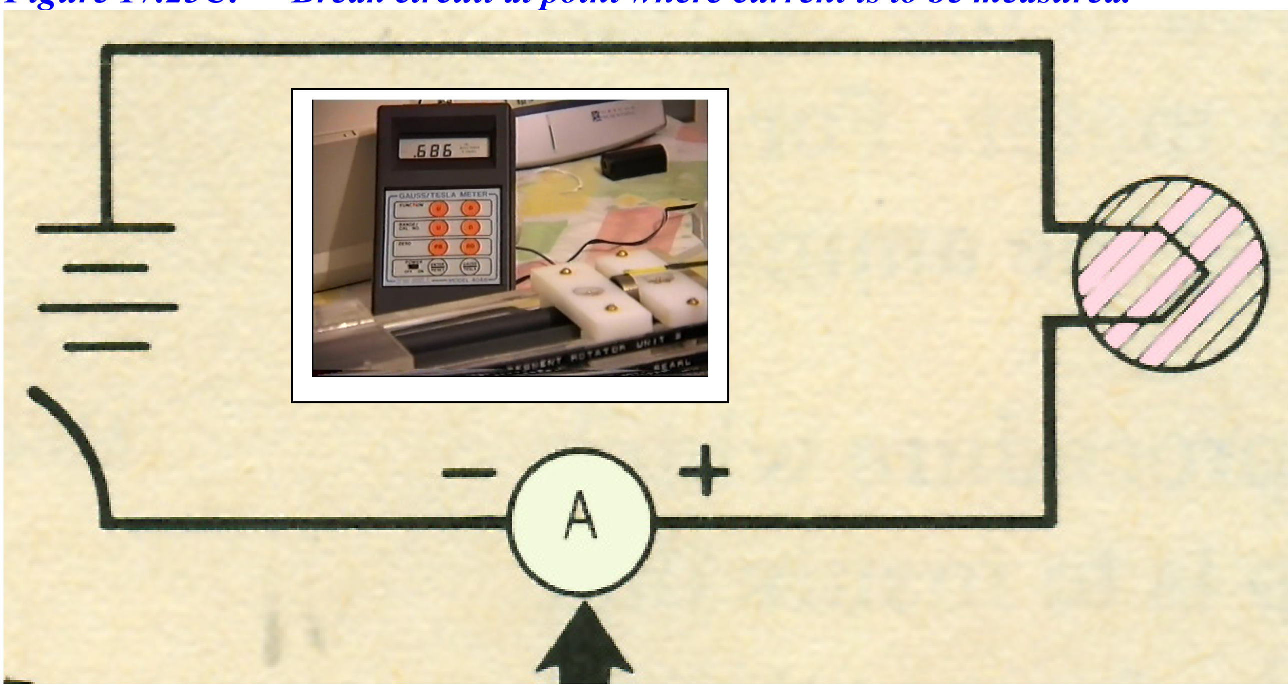


Figure 17.23D: ***Connect meter and observe the polarity.***

Fourth, the connect ammeter to the circuit while observing polarity.

The ammeter has two terminals labelled negative and positive.

Current must flow through the ammeter from the negative terminal to the positive terminal.

Thus, the wire from the negative terminal of the battery must lead to the negative terminal of the ammeter.

If the ammeter connects backwards, the pointer will attempt to deflect backwards and may end up bent or broken.

Observing polarity simply means that the negative terminal of the ammeter goes to the wire that leads to the negative terminal of the battery – if a battery is the source of the power.

Naturally, the positive terminal of the ammeter is connected to the wire that leads to the positive side of the battery.

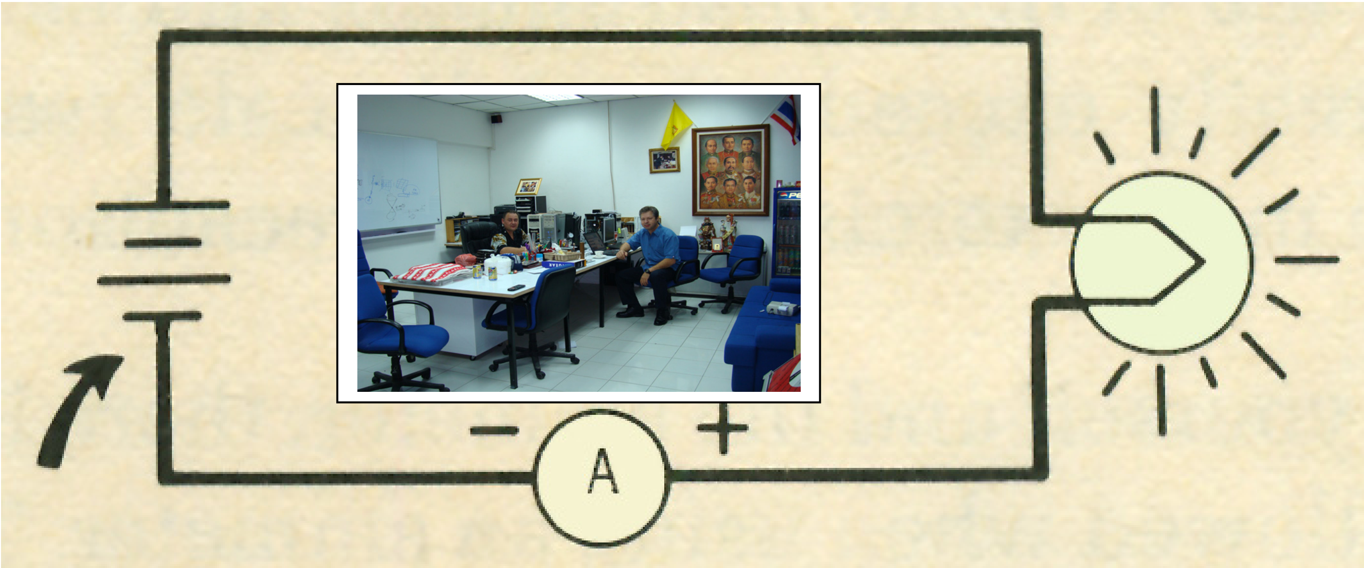


Figure 17.23E: Restore power and read current.

You have been looking at the procedure expected of young searl to perform with meter measuring and readings of current during 1946.

Finally, apply power to the circuit and read the current from the amp-meter.

Something that you never do is to use your finger to see if current is flowing, if you do your eyes will light up, hair will stand up – and your balls with hit the floor with a thump – so take heed before its late – always apply an ammeter to check, never a volt meter to read current.

Before proceeding forward; its time for a programmed review:

51) In addition, I must observe polarity when connecting the ammeter in a circuit.

This means that the negative lead of the ammeter connects to the wire leads to the negative side of the battery.

Also, the positive lead must be connected to the wire that leads to the ---------- side of the battery.

52) The unit of current is the ampere.

The ampere is a measure of the rate at which electrons pass a point at a specific length of time.

The ampere is one coulomb per second.

If one coulomb per second flows through a wire, the current in the wire is one ----------------.

This document covers Searl work period of 1946 and expected of him to be able to do.

53) The unit of electrical charge is the Coulomb.

The coulomb is equal to the charge of 6.25×10^{18} electrons.

Thus, if an object has an excess of 6.25×10^{18} electrons, it has a negative charge of one ---------.

54) A device for measuring current is the ammeter.

The ammeter must be placed in the circuit so that the current to be measured flows through it.

That is, the --------------- must be connected in series with the circuit.

55) On the other hand, an object which has given up 6.25×10^{18} electrons has a ------------ charge of one coulomb.

56) The abbreviation for ampere is A.

Smaller units of current are the milliampere (mA) and the microampere (μA).

The milliampere is equal to 10^{-3} or 0.001 amperes while the microampere is equal to 10^{-6} or 0.000001 ampere.

Stated another way the milliampere is one-thousandth of an ampere while the microampere is one - -------------- of an ampere.

The following is a summary of the important points young Searl had to achieve during the year 1946 in this document.

If you have a question on any point presented here, reread that portion of the text covering the point.

1) Electronics is that science which controls the behaviour of electrons so that some useful functions is performed – this we know Searl is telling the truth from where he work and the amount of equipment the homes had to move after he increased the ventilation of his accommodation.

2) Matter is anything with weight and occupies space.

3) All matter is composed of one or more of the elements.

4) A compound is a substance composed of two or more elements.

5) The smallest particle of a compound is a molecule.

6) A molecule consists of two or more atoms bond together.

Continue summary upon what Searl had to know for his job during 1946.

7) *The atom is the smallest particle into which an element can be divided.*

8) *There are 92 different types of atoms occurring in nature.*

9) *Another dozen or more have been artificially made by man.*

10) *Atoms are composed of electrons, protons, and neutrons.*

11) *The nucleus contains protons and neutrons.*

12) *Electrons orbit the nucleus.*

13) *The type of atom is determined by the number of electrons, protons, and neutrons.*

14) *Electricity is a property that electrons and protons have which cause them to behave in certain predictable ways.*

15) *The electron has a negative electrical charge.*

16) *The proton has a positive electrical charge.*

17) *An electrostatic field surrounds every charged particle.*

18) *Coulomb's Law describes the action of charged particles. It states that like charges repel, while unlike charges attract.*

19) *An atom has a neutral charge when it contains the same number of electrons and protons.*

20) *An atom which has a net electrical charge is called an ion.*

21) *Electrical charges can be produced with certain materials by friction.*

22) *An electrical charge can be partially transferred from a charged object to an uncharged object by touching the two objects together.*

23) *An electrical charge can be induced into a neutral object by bringing a charged object near it.*

24) *In electronics, current is defined as the flow of electrical charge from one point to another.*

25) *Before an electron can participate in current flow, but it must be freed go leave the atom.*

26) *The centrifugal force of the orbiting electron is exactly offset by the attraction of the positive charge in the nucleus.*

27) *Electrons are distributed in shells.*

28) *The outer shell is called the valence shell.*

29) *Valence electrons are the ones important in electronics because they are the ones free to contribute to current flow.*

Continue summary upon what Searl had to know for his job during 1946.

30) The number of valence electrons determines if an element is a conductor or an insulator.

31) A conductor is a substance which has a large number of free electrons.

32) An insulator is a substance which has very few free electrons.

33) Most metals are good conductors.

34) A battery is a two-terminal device which produces an excess of electrons at one terminal and a deficiency of electrons at the other.

35) Free electrons normally drift around in a random pattern. However, they can be forced to flow in a desired direction.

36) Current flow is the directed drift of free electrons.

37) Electrons flow from negative to positive charges.

38) A schematic diagram uses symbols to represent electronic components.

39) The unit of electrical charge is the coulomb.

40) The coulomb is equal to 6.25×10^{18} electrons.

41) Current is the rate at which electrons flow past a point.

42) The ampere is the unit of current.

43) The ampere is equal to one coulomb per second.

44) A milliampere is one thousandth of an ampere.

45) A microampere is one millionth of an ampere.

46) A device for measuring current is the ammeter.

47) The ammeter must be connected in series with the circuit under test.

48) Polarity must be observed when connecting an ammeter to a circuit.

That is the summary of Searl's knowledge late 1946; and no doubt some of you might wonder how he could learn so much in such a short time.

The answer is simple – the bulk of this he already knew from dream1, over the six years of dreams to add what he learnt at the naval school; all his learning up to then had been pictorial. All he had to do was to learn about the schematic side which will become important to him and what terms to use for what component and how it functioned; certainly not a big deal after all. He learned by experimenting the names of components and how each function. By the end of September, he was well versed in the subject of electricity and magnetism. He had achieved this at an age most boys of 14 years have never achieved.

This concludes the summary of Searl's knowledge during 1946.

When you are certain that you understand all these points, you can check questions that he was given to answer. Don't forget this is a boy of 14 years with no formal education if you accept the expert's claims.

SCIENTIFIC NOTATION:

In electrons Searl quickly learnt, it is common to deal with both very large and very small numbers.

An example of a very large number is the speed at which electricity travels.

It travels at the speed of light which is approximately 1,000,000,000 feet per second or about 300,000,000 meters per second – ***WOW*** Flowerbower what about that my god that means it would be up your arse and out of the top of your head before you can break wind on youtube!

As for very small numbers, consider the size and weight of an electron.

It is believed that the electron has a diameter of approximately 0.000,000,000,002,2 inch and a weight of about 0.000,000,000,000,000,000,000,000,9 gram; that is amazing because that fits the law of the squares group one class perfect Flowerbower; what about that?

Sometimes, I perform arithmetic with numbers such as these; more precisely that was the only way that I could do it until I started my first job at BR Ltd.

Therefore, there is no argument that Searl had to learn to simplify his arithmetic, to a shorthand method which had been developed to express such numbers.

Searl had no option but to learn this shorthand method which is called ***scientific notation.***

The following programmed instruction sequence will serve to show you how Searl learnt by the question put to him in a test.

1) ***5 to the third power are the same as saying 5 x 5 x 5 = -------------.***

2) ***Scientific notation is a shorthand method of expressing numbers.***

   While any number can be expressed in scientific notation, this technique is particularly helpful in expressing very large and very --------------- numbers.

3) ***In mathematics, a number is raised to a power by multiplying the number times itself one or more times.***

   Thus, I raise 5 to the second power by multiplying 5 times itself.

   That is, 5 to the second power are 5 x 5 = --------------.

Sorry to say that this PC does not like the word IS it is determined to replace it with ARE – to me the term IS should be the correct word used here – the expert in this program say ARE is the correct word – so I leave it up to you to which is the correct term for these statements above – and bless you all for your effort to solve this puzzle of software grammar; I normally accept the expert terms but some of you don't agree – strange that your verdict is the same that I wanted to use. Another issue is that USA English spelling is different to UK English spelling that is a major problem in writing, thus, it's impossible for me to please everyone.

Continue questions that Searl had to answer 1946.

4) Scientific notation based on a concept called powers of ten.

Thus, in order to understand scientific notation I should first learn what is meant by powers of ------------.

5) The power to which the number is raised is called the exponent.

If 6 are raised to the third power, then the exponent is 3.

In the same way, if 5 is raised to the sixth power, then 5 is the base while 6 is the ------------.

6) Thus, 5 can be raised to any power simply by multiplying it times itself the required number of times.

For example: 5 x 5 x 5 x 5 = 625.

Consequently, 5 raised to the ------------ power is equal to 625.

7) This above example use power of five.

However, any number can be raised to a power by the technique of multiplying it times the required number of times.

Thus, the powers of two would look like this:

2 to the second power equal 2 x 2 = 4

2 to the third power equal 2 x 2 x 2 = 8

2 to the fourth power equal 2 x 2 x 2 x 2 = 16

2 to the fifth power equal 2 x 2 x 2 x 2 x 2 = 32

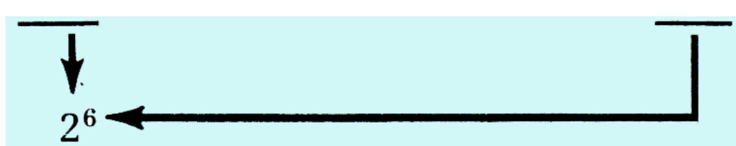
2 to the sixth power equal 2 x 2 x 2 x 2 x 2 x 2 = ----------------.

8) There is a shorthand method for writing "2 raised to the sixth power."

It is:

$$2^6$$

NOTICE that the exponent is written as a small number at the top right of the base.



The number 2 is the base while the number 6 is the exponent.

Therefore in the example 3^4, 3 is the ---------- while 4 is the ---------------.

Continue with the questions which Searl had to answer in 1946.

First let me recap upon a point here, you remember that it was an exponent on a docket for the stores which triggered the dream one into action. Such a simple thing created an unexpected result called “the Law of the Squares” which in turn generated the S.E.G. concept. It involved a child’s game called hopscotch, but only through an eye of child could that hidden knowledge viewed and only that child could possibly bring it out into the open for all to see; regardless of what experts claim to the opposite.

9) ***In mathematics, the number raised to a power is termed the base.***

If 5 is raised to the third power, 5 is considered the -------------.

10) ***This illustrates one of the advantages of power of 10.***

It is easier to write and remember 10^{21} ***than its equivalent number: 1,000,000,000,000,000,000,000.***

Try it yourself and see if it isn’t easier to write 10^{33} ***than to write its equivalent number of: --.***

11) ***The number*** 3^4 ***is read “3 raised to the fourth power”.***

It is equal to:

$$3 \times 3 \times 3 \times 3 = 81.$$

The number 4^6 ***is read -------------------------------------.***

12) ***Multiplication by 10 is extremely easy since all I have to do is add one zero for each multiplication.***

Another way to look at it is that multiplication by ten is the same as moving the decimal point one place to the right.

Thus, I can find the equivalent of 10^2 ***by multiplying 10 x 10 = 100; or, simply by adding a 0 after the 10 to form 100; or by moving the decimal point one place to the right to form 10.0. = 100.***

In any event, 10^2 ***are equal to -------------------.***

13) ***Scientific notation uses powers of ten.***

Several powers of ten are listed below:

10^2 = ***10 X 10 = 100***
10^3 = ***10 X 10 X 10 = 1000***
10^4 = ***10 X 10 X 10 X 10 = 10,000***
10^5 = ***10 X 10 X 10 X 10 X 10 = 100,000***
10^6 = ***10 X 10 X 10 X 10 X 10 X 10 = ---------------------.***

To get this question in on this sheet, I had to squeeze them in; but I guess as long as you can read the details make it acceptable.

This is still dealing with Searl in the year 1946 – and you might guess covers those extra samples he promise to do for those who have requested help with the maths side of the work.

14) ***There is a simple procedure for converting a number expressed as a power of ten to its equivalent number.***

I simply write down a 1 and after it write the number of zeros indicated by the exponent.

For example, 10^6 are equal to 1 with 6 zeros after it.

In the same way 10^{11} is equal to 1 with ------------ zeros after it.

15) ***Any base number with an exponent of 1 is equal to the base number.***

Any base number with an exponent of 0 is equal to 1.

Thus, X^1 = ------------ and X^0= ------------.

16)

Group A	Group B	Group C
$10^6 = 1,000,000$	$1000 = 10^3$	$10^7 = 10,000,000$
$10^2 = 100$	$10,000 = 10^4$	$10^9 = 1,000,000,000$
$10^9 = 1,000,000,000$	$100 = 10^2$	$10^{11} = 10,000,000,000$

To be sure you have the right idea, study each of the groups above.

Which group contains an error? ------------------------.

17) ***The other special case is 10^0.***

Here the exponent is 0.

Once again I follow the procedure outlined in Question 14.

Here again I write down a 1 and add the number of zeros indicated by the exponent.

However, since the exponent is 0, I add no zeros.

Thus, the equivalent number of 10^0 is 1.

That is 10^0 = ----------.

18) ***Now let's see how I convert in the opposite direction.***

Remember the numbers must be expressed using 10 as the base with the appropriate exponent.

The exponent is determined simply by counting the zeros; which fall on the right side of the 1.

Continue with question Searl had to be able to answer in 1946.

19) ***There are two special cases of powers of 10 which require some additional explanation.***

The first is 10^1.

Here the exponent of 10 is 1.

If I follow the procedure developed in question 14 I find that $10^1 = 10$.

That is, I put down a 1 and add the number of zeros indicated by the exponent.

Thus, 10^1 = ----------------.

20) ***A brief study of this list will show that this simply a continuation of the list shown earlier in question 13.***

If the two lists are combined in a descending order, the result will look like this:

10^6	=	**1,000,000**
10^5	=	**100,000**
10^4	=	**10,000**
10^3	=	**1,000**
10^2	=	**100**
10^1	=	**10**
10^0	=	**1**
10^{-1}	=	**0.1**
10^{-2}	=	**0.01**
10^{-3}	=	**0.001**
10^{-4}	=	**0.0001**
10^{-5}	=	**0.00001**
10^{-6}	=	----------

21) ***Positive exponents represent numbers larger than 1.***

Thus, numbers such as 10^2, 10^{23}, and 10^{30} are greater than 1 and require ---------- exponents.

22) ***Some of the negative powers of 10 are listed below:***

10^{-1}	=	**0.1**
10^{-2}	=	**0.01**
10^{-3}	=	**0.001**
10^{-4}	=	**0.0001**
10^{-5}	=	---------- .

NOTE that these extra test question which I had to undertake are being reproduced here mainly for those who have ask me to explain the maths in more details as they don't have the training in that domain; I hope now they are getting a better understanding of the maths involved in this work – I will show a few more to help.

23) In the examples give above, the exponents have been positive numbers.

For simplicity, the plus sign has been omitted.

Therefore, 10^2 are the same as 10^{+2}.

Also, 10^6 are the same as ---------------.

24) Numbers smaller than 1 are indicated by negative exponents.

Thus, numbers like 0.01, 0.0001, and 0.00001 ate expressed as negative powers of ten because these numbers are less than -------.

25) In the same way, I can write 5,000 as 5×10^3.

Some other examples are:

200	=	2×10^2
1500	=	15×10^2
22,000	=	22×10^3
120,000	=	12×10^4
1,700,000	=	17×10^5
9,000,000	=	----------.

26) I can think of the negative exponent as an indication of how far the decimal point should be moved to the left to obtain the equivalent number.

Thus, the procedure for converting a negative power of ten to its equivalent number can be developed.

The procedure is to write down the number 1 and move the decimal point to the left the number of places indicated by the negative exponent.

For example, 10^{-4} becomes 0.0001.

NOTICE that the -4 exponent indicates that the decimal point should be moved ---------- places to the ----------.

27) Up to now I have used powers of 10 to express only those numbers which are exact multiples of 10 such as 100, 1000, 10,000, etc.

Obviously, if these were the only numbers which could be expressed as powers of ten, this method of writing numbers would be of little use.

Actually, any --------------- can be expressed in powers of ten notations.

I hope that this is helping you, if you thought that I was not interested in you – you are mistaken.

I shall continue with a few more Science notations examples of how to deal with them as promised a few pages back.

28) ***The technique by which this is done can be shown by an example.***

If 1,000,000 can be represented by 10^6, then 2,000,000 can be represented by 2 x 10^6.

That is, I express the quantity as a number multiplied by the appropriate power of ten.

As another example, 2,500,000 = 2.5 x 10^6

Also, 3,000,000 = -------------------.

29) ***You may have notice, which I sincerely hope you did: that when I use powers of ten there are several different ways to write a number – which I can understand if you are confused at a much higher level – it confuses me – that makes two of us.***

For example, 25,000 can be written as 25 x 10^3 because 25 x 1000 equals 25,000.

However; it can also be written as 2.5 x 10^4 because 2.5 x 10,000 equals 25,000; that is amazing Flowerbower, or is that well over your head.

What is even more amazing Flowerbower that it can even be written as 250 x 10^2 since 250 x 100 = 25,000.

In the same way, 4.7 x 10^4, 47 x 10^3, and not forgetting 470 x 10^2 are all three different ways of writing the number -----------------.

30) ***As you can see there are several different ways in which a number can be written as a power of ten.***

Scientific notation is a way of using powers of ten so that all numbers can be expressed in a uniform way.

You may also wonder why I use a value of 6 as an exponent so often; agree that is quite an interesting question.

You see the Law of the Squares is just one face of a natural cube; which to my knowledge contain 6 faces; not only that in the flight side I use 6 elements – 5 of which are single elements and one contains more than on element, by arbitration is given the term insulator.

To see exactly what scientific notation is, consider the following examples of numbers written in scientific notation:

6.25 x 10^{18}	4.0 x 10^2	3.9 x 10^{-6}	2.7 x 10^3	22 x 10^3
3.7 x 10^6	6.8 x 10^{-4}	2.2 x 10^{-12}	64 x 10^{22}	32 x 10^{15}

NOTE that the exponent values are those commonly used in the materials construction of this work.

NOTICE that the numbers range from a very large number to an extremely small number.

I will now continue with this session to help those who have asked me to explain maths in more details, this is also for the benefit of Flowerbower who makes it clear that lacks education.
How strange that Flowerbower claims to be educated, and I state that I was not; certainly not by the same means... THANK HEAVEN!

And yet, all these numbers are written in a uniform way, just as my squares are done to get correct results every time.

This method of writing numbers is called scientific ----------------.

31) By the same token, I can convert in the opposite direction.

Thus, 2×10^5 becomes $2 \times 100,000$ or 200,000.

Also please note Flowerbower that $2.2 \times 10^3 = 2.2 \times 2,200$.

And, 66×10^4 = -----------------.

32) Numbers smaller than one is expressed as negative powers of ten in much the same way; to which I agree make sense.

Thus, 0.0039 can be expressed as 3.9×10^{-3}; 39×10^{-4}; or 0.39×10^{-2}.

Also, 6.8×10^{-5}; 68×10^{-6}; and not forgetting 0.68×10^{-4} are three ways of expressing the number ------------- which again proves to me that the Law of the squares is precise and can be accepted as a tool to work with.

33) To be sure you have the idea look at the groups of numbers below.

Group A	Group B	Group C
6.25×10^{18}	1.11×10^{11}	6.9×10^{10}
3.75×10^{-9}	-3.1×10^{2}	3.4×10^{7}
4.20×10^{1}	-3.1×10^{-2}	39.5×10^{2}
7.93×10^{0}	2.00×10^{2}	6.0×10^{4}

Which of the following groups contains a number expressed properly in scientific notation? ----------------.

34) You have asked me to teach you and that is precisely what I am here to do.

The rules for writing number in scientific notation are quite simple Flowerbower.

First, the decimal point always placed after the first digit on the left is not zero.

Therefore, the final number will appear in this form: 6.25; 7.3; 9.65; 8.31; 2.0; 64.12 and so forth: Flowerbower please take note this is for your benefit to help to make you appear intelligent, which I wonder if that is really possible to achieve.

It must never appear in a form such as: .625; 73; 96.5; .831 or 20.

Thus, there is always one and only one digit on the ------------- side of the decimal point.

35) *Finally, the magnitude of the exponent is determined by the number of places that the decimal point is moved.*

For example, 39,000.0 is expressed as 3.9 x 10^4 because the decimal point must be moved 4 places in order to have only one digit to the left of it Flowerbower you sweet little dandelion, please kindly take note I am trying so hard to make you look intelligent: if that is actually possible to do; which I doubt.

Using this rule, 6,700,000,000 are expressed as 6.7 x ------------------.

36) *The second rule involves the sign of the exponent.*

If the original number is greater than 1, the exponent must be positive.

As all elements must be 1; nature does not deal in fractions of 1.

You cannot cut one Gold Au 79 atom in half and still have Gold; nature will not work in that manner.

Likewise you cannot take the magnetic layer and cut a fraction of material from it to find the secret of the Searl Effect; nature will not allow you to do so.

Likewise, if 67,000 require a positive exponent but 0.00327 requires a ---------- exponent.

37) *The number 0.00327 is expressed as 3.27 x 10^{-3}.*

Here the decimal point is moved 3 places in order to have one digit which is not zero to the left of the decimal.

Likewise 0.00027 is expressed as 2.7 x --------------.

38) *Listed below are numbers which are converted to scientific notation.*

Group A	Group B	Group C
$2{,}200 = 2.2 \times 10^3$	$119{,}000 = 1.19 \times 10^5$	$119 = 1.19 \times 10^2$
$32{,}000 = 3.2 \times 10^4$	$1{,}633{,}000 = 1.633 \times 10^6$	$93 = 9.3 \times 10^1$
$963{,}000 = 9.63 \times 10^5$	$937{,}000 = 9.37 \times 10^4$	$7.7 = 7.7 \times 10^0$
$660 = 6.6 \times 10^2$	$6{,}800 = 6.8 \times 10^3$	$131.2 = 1.312 \times 10^2$

Which one of these groups contains an error? -----------.

Yes Flowerbower, which one is it? This being part of your education given freely from my heart to my loving Flowerbower whose bum I would love to change its colour all for the better!

I shall continue with this education session with a few more samples in relation to scientific notation. This will play a critical part in reports upon this technology and I cannot be seen in public to ignore those who have been unfortunate not to have the chance to learn while young; like me, so I do understand your problem.

I am sincerely hoping that this section of my book does in fact help you in understanding my work.

39) ***The number 39.5 x 10^2 is not written in scientific notation, because there are two digits on the left side of the decimal point.***

That is correct Flowerbower, that is something you never do – NO, NO, NO, never do that.

The minus signs in group B in example 33 page 17.137 may have confused you.

Although it has not been mentioned, unless I have and forgotten (if I have, due to over work and underpaid problems) that negative numbers can also be expressed in scientific notation.

Thus, a number like -8.200,000 becomes -8.2 x 10^6.

All the rules previously stated hold true except that now Flowerbower a ----------- sign is placed before the number.

40) ***937,000 convert to 9.37 x 10^5 and not to 9.37 x 10^4.***

Group A	Group B	Group C
$0.00037 = 3.7 \times 10^{-4}$	$0.44 = 4.4 \times 10^{-1}$	$.37 = 3.7 \times 10^{-1}$
$0.312 = 3.12 \times 10^{-1}$	$0.0002 = 2.0 \times 10^{-4}$	$.0098 = 9.8 \times 10^{-3}$
$0.068 = 6.8 \times 10^{-2}$	$0.0798 = 7.98 \times 10^{-2}$	$.00001 = 1.0 \times 10^{-5}$
$0.0092 = 9.2 \times 10^{3}$	$0.644 = 6.44 \times 10^{-1}$	$0.0075 = 7.5 \times 10^{-3}$

Which of the groups above contains an error? ------------.

41) ***Small negative numbers are handled in the same way.***

Thus -0.0092 becomes -9.2 x 10^{-3}.

The minus sign before the number indicates that this is a negative number.

The minus sign before the exponent indicates that this number is less than ------------.

42) ***The final number in group A of question 40 requires a negative exponent.***

Which of the groups below contains an error? ------------.

Sorry, there is not enough space here to list those values, I would like to do; so will carry on with this question on the next page.

42) ***Continue***

Group A	Group B	Group C
$3{,}700{,}000 = 3.7 \times 10^{6}$	$9440 = 9.44 \times 10^{3}$	$20 = 2.0 \times 10^{1}$
$-5{,}500 = -5.5 \times 10^{3}$	$-110 = -1.1 \times 10^{2}$	$0.02 = 2.0 \times 10^{-2}$
$0.058 = 5.8 \times 10^{-2}$	$0.0062 = 6.2 \times 10^{-4}$	$-200{,}000 = -2.0 \times 10^{5}$
$-0.0034 = -3.4 \times 10^{-3}$	$-0.0123 = -1.23 \times 10^{-2}$	$-0.000200 = -2.0 \times 10^{-4}$

43) A kilowatt is equal to 10^{3} watts while a megawatt is equal to -------- watts.

44) 0.0062 is equal to 6.2×10^{-3}.

Match the following:

1. 16	***a.***	***1.6×10^{-3}***
2. .0016	***b.***	***1.6×10^{4}***
3. 160.000	***c.***	***1.6×10^{0}***
4. 1.6	***d.***	***1.6×10^{1}***
5. .016	***e.***	***1.6×10^{-2}***
6. 16,000	***f.***	***1.6×10^{5}***

45) One thousand watts can be termed a kilowatt.

Also, one million watts can be termed a ---------------

46) Another concept that goes hand in hand with powers of ten and scientific notation is metric prefixes.

These are prefixes such as mega and kilo which when placed before a word change the meaning of the word.

For example, the prefix kilo means thousand.

When kilo and meter combined, the word kilometre used.

This word means 1000 meters.

In the same way, the word kilogram means ---------------- grams.

I shall carry on the next page with this session of teaching those who find it hard to follow maths in this book that I am writing to the website.

47) *Since kilo means 1,000, I can think of it as multiplying any quantity times 1000 or 10^3.*

Thus, kilo means 10^3.

Another popular metric prefix is mega.

Mega means million.

Thus, a megaton is one million tons or 10^6.

In the same way one million volts Star ship Explorer will produce for flight is referred to as a --------------- volt.

48) *Kilo is often abbreviated by the letter K.*

Thus, 100 kilowatts may be expressed as 100K watt.

Mega is abbreviated M.

Therefore 10 megawatts may be expressed as ------------------ watts.

49) *One volt is equal to 1000 millivolts or 1,000,000 microvolts.*

Or, 1 volt equals 10^3 millivolts and 10^6 microvolt's.

Expressed another way, 1 milliovolt equals .001 volt while 1 microvolt equals .000001 volt.

Thus, 1 millivolt equals 10^{-3} volts while 1 microvolt equals --------------- volt.

50) *Often it is convenient to convert from one prefix to another.*

For example, since a megaton is 10^6 tons and a kiloton is 10^3 tons, a megaton equals 1000 kilotons.

And, since a megaton is one thousand times greater than a kiloton, the kiloton is equal to .001 megaton.

Now, consider the quantity 100,000 tons

This is equal to 100 kilotons or ----------- megatons.

51) *There are also prefixes which have values less than one.*

The most used are:

Milli- which means thousandth .001 or 10^{-3}.

Micro- which means millionth .000,001 or 10^{-6}.

One thousandth of an ampere is termed a milliamp.

Also, one thousandth of a volt is called --------------.

52) Powers of ten allow me to express a quantity using whichever metric prefix I prefer.

For example, I can express 50 millivolts as 50 x 10^{-3} volts simply by replacing the prefix milli with its equivalent power of ten.

In the same way 50 microvolts is equal to 50 x -------------- volts.

53) If a second is divided into one million equal parts each part is called a microsecond.

Also, the millionth part of a volt is called a -------------------.

54) The quantity 5 K volts are 5 kilovolts or 5000 volts.

Also, 5 M volts are 5 megavolts or ------------------volts.

55) Additional aspects of powers of ten, scientific notation, and metric prefixes will be discussed at another time.

56) Match the following:

1. M watt	*a. $10^{-}3$ watts*
2. K watt	*b. 10^{-6} watts*
3. m watt	*c. 500 x 10^{-3} watts*
4. μ watt	*d. 10^{6} watts*
5. .5 watt	*e. .5K watts*
6 500 watts	*f. 10^{3} watts*
7. 500,000 watts	*g. .5M watts*
8. .00005 watts	*h. .05 K watts*
9. 50 watts	*i. 5 m watts*
10. .005 watts	*j. 50 μ watts.*

The eyes of this boy conceived the concept of the S.E.G. and the I.G.V. and no other persons involved thereof.

A boy who without formal education (which so-called experts are so quick to point out), did through his young days conceive the concept and that is known today as the Searl Effect without expert assistance.

I do agree that over time many skilled workers were involved in assisting in its constructions, experiments, investigations and development work; to that, he has no argument. The question is, were you one of them and who gave time to assist free of charge?

To all of you who wrote me for help in learning, I thank you for your faith in hoping that I would help you.

I sincerely hope that this part of this book will play a major role in helping you to understand what is herein stated.

I can only give you one more example for the time being; as I need to do a short examination of this first unit to follow by my answers to these questions – I hope that I can remember what they were.

57) When writing abbreviation for the prefix milli the letter small m is used.

A small m is used to distinguish it from mega which use a capital M.

Obviously, the abbreviation for micro cannot also be m.

To represent micro the Greek letter μ – pronounced mu – is used; bless them for their efforts to solve the problem; of course by arbitration as usual.

For the last time in this section comes the question.

Thus, 10 millivolts is abbreviated 10 m volts while 10 microvolts is abbreviated 10 μ volts.

Remember, m means 10^{-3} while μ means ------------.

Now that is the end, it is now up to you to vote if Flowerbower is operating a hate campaign against me in the effort to stop my success with this research and development or is this person just insane? Perhaps has nothing better to do or not forgetting there is the possibility that mind altering drugs explains the insanity.

Never has Flowerbower produce anything of worth that would help to speed up success in this field of research and development, nothing but hate and evil spewing out of the mouth like diarrhoea from a cows arsehole. This person that collects anything in the press which is aimed at selling the papers and short on truth, just to impress those who are stupid enough to listen to him and that he is some expert; I agree, that is in the field of bullshit. For that, I would award a first class honour degree bachelor of bullshit.

At the start the hate campaign, some good people informed me that Wayne was the one but to what purpose would he gain in running such an attack, when he was using my name to raise money; that would be insanity.

So I can remove his name, I need to look at all the facts which then reduce the heap of possible to a very few people.

Yes, agree the man involved in the Daytime Live show is anti towards inventors who do not fit in his domain with their claims. I am aware that I don't fit in his domain, nevertheless he made an allowance for the possibility that I might have something and prefer to wait and see what happens.

So I can remove his name from the files as not a suspect for the time being. Why, because if he is employed at a university in a good position financially, why a risk in loosing the job by being a poison pen writer? To slander another person so open on the net, I doubt that a normal person would be that insane, than again he was on the show to do just that...

We have to take a deeper look at why should any one run a hate attack on another person in a public forum.

MY EXAMINATION.

UNIT ONE.

CURRENT.

A boy just gone 14 years, studying to become an electrical Engineer as an apprentice and expected to undertake study at home.

This section has repeated what he studied then in 1946 and now is the time to give you an insight of his first test examination accepted experts of the day with those questions:

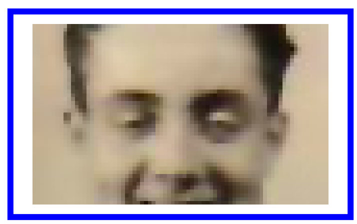
Here you judge if his education was far better then you had been brainwashed to believe by experts of hate.

The following multiple-choice examination designed to test Searl's understanding of the material presented in this unit.

What he had to do was to place a check beside the multiple-choice answer (A, B, C, or D) that he feels is most correct.

A simple request: how to answer test questions.

1. A positive ion is produced when an atom:



A. Loses an electron.
B. Gains an electron.
C. Loses a proton.
D. Gains a proton.

2. Which of the following statements is true?

A. The electron has a positive charge; the proton has a negative charge; and the neutron has no charge.
B. The electron has a negative charge; the proton has a positive charge; and the neutron has no charge.
C. The electron has a negative charge; the proton has no charge; and the neutron has a positive charge.
D. The electron has a positive charge; the proton has no charge; and the neutron has a negative charge.

3 Which of the following statements is true?

A. An electron attracts another electron.
B. An electron attracts a negative ion.
C. A proton repels an electron.
D. An electron repels another electron.

There is not enough room for another question; so you will have to wait to see what the next page produces; these are easy questions for adults – but this is a boy of 14 years trying to secure his future to survive on planet earth and he did survive for that boy is "I".

Examination continue:

4. *There are two objects which have a deficiency of electrons.*

The two objects are:

A. Negatively charged and will repel each other.
B. Positively charged and will repel each other.
C. Negatively charged and will attract each other.
D. Positively charged and will attract each other.

5. *An atom has a neutral charge when it has the same number of:*

A. Electrons as neutrons.
B. Electrons as protons.
C. Protons as neutrons.
D. Electrons as ions.

6. *Current is defined as a flow of:*

A. Protons from a negative charge to a positive charge.
B. Protons from a positive charge to a negative charge.
C. Electrons from a negative charge to a positive charge.
D. Electrons from a positive charge to a negative charge.

7. *A substance which has a few free electrons is called:*

A. An insulator.
B. A conductor.
C. An element.
D. A compound.

8. *The unit of electrical charge is the:*

A. Volt.
B. Ampere.
C. Valence.
D. Coulomb.

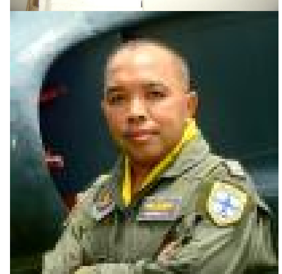
9. *The unit of current is the:*

A. Volt.
B. Ampere.
C. Valence.
D. Coulomb.

10. *The ampere is equal to:*

A. One volt per second.
B. One coulomb.
C. One thousand microamperes.
D. One coulomb per second.



Through the eyes of a child, the S.E.G. was conceived.

Like the acorn the mighty oak grows.

Examination continues:

11. One milliampere is equal to:

- ***A. 0.001 amperes.***
- ***B. 1000 amperes.***
- ***C. 0.000,001 amperes.***
- ***D. 1,000,000 ampere.***

12. One ampere is equal to:

- ***A. 1000 microamperes.***
- ***B. 0.001 microamperes.***
- ***C. 0.000,001 microamperes.***
- ***D. 1,000,000 microamperes.***

13. Which of the following shows an ammeter connected properly for measuring the current through the lamp?

- ***A. Figure 17.1A.***
- ***B. Figure 17.1B.***
- ***C. Figure 17.1C.***
- ***D. Figure 17.1D.***

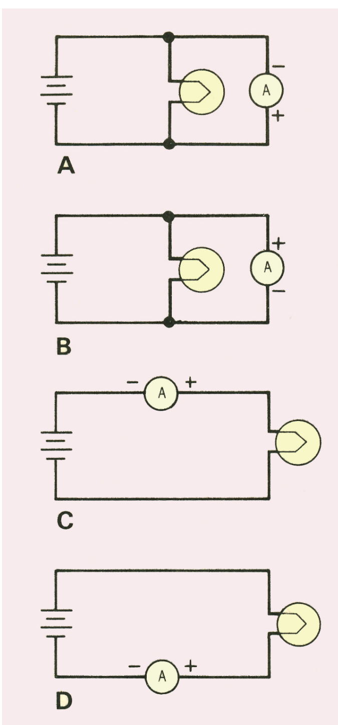


Figure 17.1

Which of the following shows
An ammeter connected properly
for measuring the current
through the lamp?

S.E.G calls for team work, without a team there will never be any S.E.Gs.

Tomorrow is the future and our children depend upon us to do our duty to create it and not simply destroy it!

Without our help planet earth will die, one man cannot save planet Earth, it takes all of us to save it!

14. Which of the following is the correct schematic diagram of a closed switch, a battery, and a lamp connected in series?

A. Figure 17.2A.
B. Figure 17.2B
C. Figure 17.2C
D. Figure 17.2D

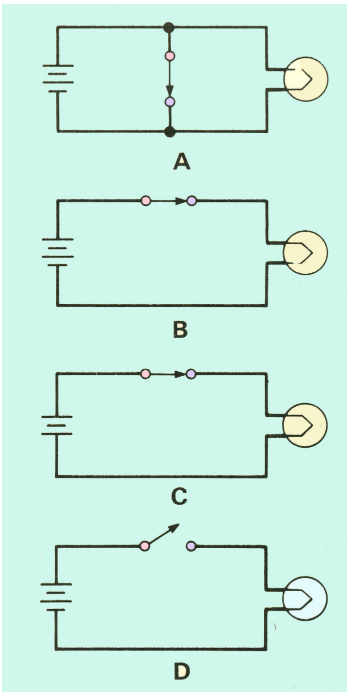
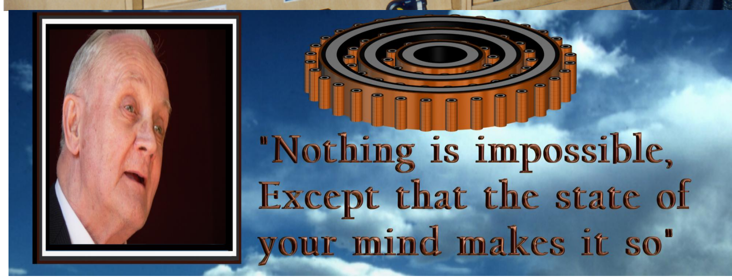


Figure 17.2.
Which of the following is
The correct schematic diagram
Of a closed switch, a battery,
And a lamp connected in
Series?



Man has been bent on damaging this planet for greed – Time that man start the task of cleaning up his mess. The Searl Technology can only help to clean up the Environment; if you do your part to prevent further damage to it, it's up to you to help now!

That is the end of Searl's first examination, and I agree that adults should have found that extremely easy to undertake.

Well I must state that Searl succeeded to get through it without any lost of hair in the process. Just for the records, he also was studying under Prof. Law on mathematics, through another institution.

He might have been self educated but certainly not stupid Flowerbower!

The time has arrived to see how Searl answers those questions and check if your answers actually match his.

ANSWERS SEARL GAVE IN UNIT ONE UPON THE SUBJECT OF CURRENT:

1. A. The electron has a negative charge which is normally offset by the positive charge of a proton.

When the atom loses an electron, it loses a negative charge and, therefore, has a net positive charge.

ANSWER SEARL GAVE TO HIS FIRST EXAMINATION IN 1946:

2. B. The electron has a negative charge.

   The proton has an equal but opposite – positive – charge.

   The neutron has no charge at all – ***the Law of the Squares holds true.***

3. D. All electrons have negative charges.

   Since like charges repel, one electron will repel another.

4. B. Objects with too few electrons have positive charges.

   Since they have like charges they repel each other.

5. B. To have a neutral charge, the negative charge of each electron must be cancelled by a positive charge of a proton.

6. C. Since electrons have a negative charge, they must flow from negative to positive charges.

7. A. Without free electrons, a substance cannot support current flow.

   A substance with few free electrons is an insulator.

8. D. The unit of electric charge is a coulomb.

9. B. The unit of current is the ampere.

10. D. The ampere is equal to one coulomb per second.

11. A. A milliampere is one thousandths of an ampere.

    One thousandths is equal to 0.001.

12. D. A microampere is one millionth of an ampere.

    Thus, there are one million microamperes in an ampere.

13. D. This is the only diagram in which the ammeter is connected in series and polarity is observed.

14. B. In (A) the switch is not in series with the other two components.

    In (C) the symbol for the battery is incorrect.

    In (D) the switch is shown open.

These are John Searl's answers to his first examination dealing with current. This shows that Searl had his heart and soul on his job; he work hard, long hours to learn. Unknown to him that his push to learn was for something completely different and very soon he will become involved with that something now called the S.E.G. THE SEARL EFFECT GENERATOR! Boldly he walked where no man dares to go, into the world of the unknown which experts term IMPOSSIBLE!

News that the Hollywood DVD part 1, is already appearing on planet Earth, and plans for part 2 is already in the thinking pot; if it takes, it will take place in Thailand.

You can all now enter openly www.searlsolution.com and see all the news as it happens.

We are on the march to success and that means to the marketplace from where over the years I have been block by evil minds who want to own the technology.

This means they blocked you from having it as millions of people have died who should not had died. The technology was not available but it should had been. The problem is the Searl Effect Technology is only as good as your effort to help make it happen and to clean up this mess.

Governments must stop the destruction of forest for money gain and no longer be tolerated it because we have already gone far beyond the safety barrier. We must turn back and put in place the safety barriers so our planet can survive those odds events of nature.

If you want a better world for your children's sake and their children's sake, then we must set that foundation now for such a condition to develop.

It will never happen by itself – you must make it happen.

I can only lead you to that promise land of good health, clean power, clean fast transportation systems you can be proud of and it will never happen without you; you are the key to success of the Searl Technology.

The answers I gave in 1946 to my first unit based on Current: of my home training course, at least one of the courses of which I was studying; will be shown in this chapter 17 of my book; from around page 151 at this time is planned.

Doing this chapter in blocks of 50 pages makes it easy for you to download. Thus, so far you have 2 blocks of 50 pages creating 100 pages upon my life and work.

I expect that it will have 500 pages to the complete chapter or more precise I hope to make 500 pages of it so by reading should have a better understanding of the truth that is involved within this technology.

There is much to discuss and in my case due to the objectives which are planned within my companies that will be going straight to the marketplace.

What we are undertaking is a massive program, and it will take time before you will see the results from it.

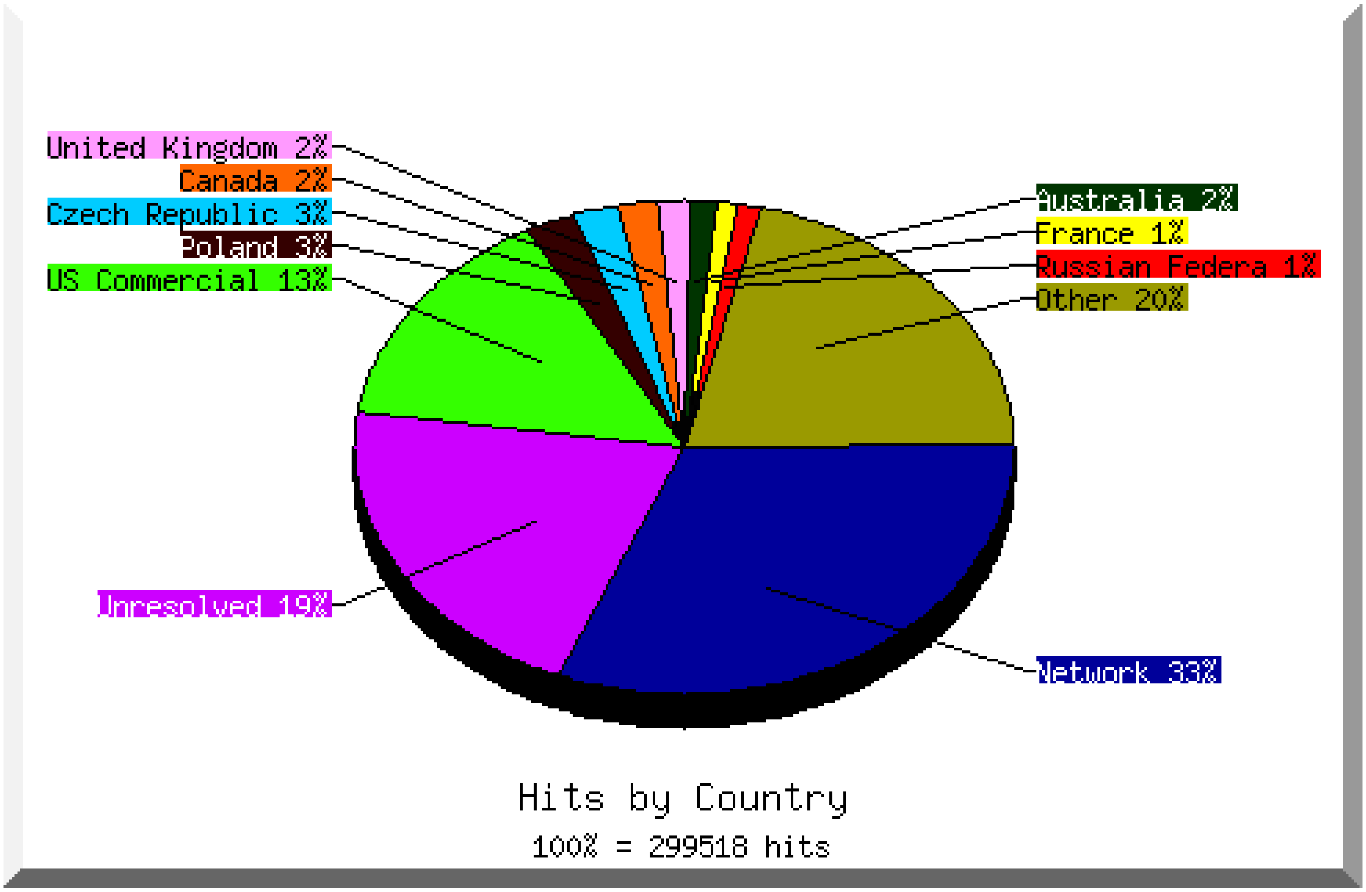
If funds really do poured in, then things would speed up, as material can be obtain in larger bulk to work with. Then this new magnetiser needs time to bring up to full power to check that all parts work regardless of the power setting involved. So far I understand that the tests that have been undertaken have worked as expected and I hope will be the case as the power is increased.

The power levels now I understand enough to print the roller segments.

The plate are still under test to see if the 12 sections could be done in one go; instead of 12 individual times.

Slowly but surely is the best motto for the cost today is so high that we cannot afford waste in a rushing. We shall get there at the minimum cost possible, but each step taken is paving way to future requirements and solutions. This is ideal for companies like us to create our future plans so no hold ups occur when the time to move to the market place happens.

Here is the latest information I have received about this site for your interest.



This a pie chart on www.searlsolution.com which gives an indication on the operation taking place on it. Taking all things in consideration, that is not bad for a young website under development and preparing for the future progress.

For me 1946 was exciting, mainly because I was facing new challenges and travelling on the underground daily was a new experience for me. Each day learning to strip motors, rewinding the coils and replacing them was all unknown to me and was proving facts that I would need to understand for the S.E.G technology.

So I had got the first bit of data for the SEG, also saw that in this work a strange sign was used that went by a strange name of exponent and that was the master key to the Law of Squares. That in turn clicked in the child's game termed hopscotch, from that the door was open to me and I was hooked with no escape route in sight as it was all done without my conscience mind being aware of it; but my subconscious mind had clicked on it.

I would be using it to give me the instructions of what to do and how to do it. Yes, so simple go to square 4, but you see I had no knowledge about square four then, or what it meant. That story belongs to another section of this book.

This document hereby released to the public by the authority of:

Prof. John Roy Robert Searl.
Searl Technology Ltd.
Tomorrow's Energy and Transportation Systems.
Head of R & D.