



Sympathetic Vibratory Physics

The Moray Valve Manuscript

by

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This account will endeavor to give a brief explanation of the Moray Radiant Energy device whereby it is possible to utilize the vast stores of energy of the universe without a prime mover, but through ionic oscillations.

A brief description of the device. A brief description of what the device has done and of experiments of which hundreds similar ones have been made in the presence of hundreds reliable men, many of whom are highly trained and hold degrees in physics and electrical engineering. Also, a brief description of why the device works as given in the enclosed description on the oscillations of condensers. Right here I would like to state I do not believe in perpetual motion and while I have no quarrel with these who may, the operation of the Moray device is not perpetual motion, but it utilizes energy that exists and transforms it into useful forms. An electrical generator is in the true sense not a generator, as it creates nothing. Electricity is not made by the generator, it is merely pumped. From that standpoint, an electric generator might be referred to as an electric pump, and the Moray energy device as an electric syphon, or high speed oscillating turbine.

The device was enclosed in a box ten by ten and one-half by twenty-six inches. One wire leading from the device to a special balanced antenna and on other wire to a balanced ground connections. (This has now been replaced by a special tube.) The switch of the set is simply turned on and the device properly synchronized resonance established, and once it is operating the device "syphons" the energy from the air. A specially constructed high frequency transformer is used to control the voltage so that any desired voltage may be obtained.

On page seventeen of the "Nature of the world and of Men" (compiled by the technical staff, Chicago Institute of Technology), one finds it states that our planet is receiving energy from the sun continuously at the rate of 160,000 horse power per inhabitant of the earth at the present time.

In the "Physical Review", Dr. Gunn of the U. S. Navy Research Laboratories states that the earth itself is a huge dynamo, producing 200,000,000 amperes of electrical current. For more detail, read pages 335, 344, "Physical Review", July 15, 1939.

The following is taken from "Experiments With Alternate Currents of High Potential and High Frequency," by Nikola Tesla, page fifty-eight, written in 1904:

"Ere many generations pass our machinery will be driven by power obtainable at any point in the Universe - Is this energy Static or Kinetic? If Static, our hopes are in vain; if Kinetic, and this we know it is for certain, then it is a mere question of time when men will succeed in attaching their machinery to the very wheel work of nature."

The aurora borealis is considered to be very definitely an electrical phenomenon produced by the passage of electric charges through the rarified gases of the higher atmosphere.

The conversion of matter to energy in the stars is now very generally accepted as demonstrated, and reasoning from what occurs in radio-active disintegration, during which energy waves are radiated, we may conclude that energy waves of very frequency are sent out from the stars, one of which is our sun.

As in the reception of radio waves, so in this case the circuit is tuned by the right arrangement of inductances and capacities and oscillators by resonance to respond to the particular wave frequency "oscillations" of energy from the Cosmos. Moray uses a special valve to prevent return of the power to the outer circuit and forces it to go through the power application circuit.

All that is necessary to put the device in operation when properly assembled and connected is to start electric oscillations in the circuit, which as the difference of potential between ground and atmosphere into supersensitive oscillating tubes.

The frequency of the current is extremely high, as is shown by the brush discharge when either

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the antenna leading or the ground wire is disconnected from the machine. Certain difficulties of insulation inherent in high frequency currents are avoided by the ingenious operations of the oscillator tubes which reduce the frequency on the output side.

The electric light globes (standard articles bought in the open market), Tesla type could be used to advantage, become exceedingly hot in one spot about the size of a dime when operated on this current, due to the fact that the gas in the globes becomes incandescent under the influence of the very high frequency, and because of the incandescent gas the luminosity is much higher and whiter than with ordinary current. A variation of Tesla high frequency button type globe would be an ideal light globe to use with this device.

Ordinarily when a potential is applied to the terminals of a condenser a full charge is acquired almost instantaneously, but with the oscillators filling up somewhat as when water is poured into a bucket, the longer the voltage is applied, the greater the charge taken, up to the maximum capacity for the given potential and frequency.

Experiments have been made at different places many miles away from all power lines, one experiment being given at a point more than 50 miles from all power lines, and 26 miles from even a farmer's telephone. The places for these experiments were selected by the members of the party making the test and not by the inventor, and the places were not prearranged but selected by them as they drove along in their own car, not the car of the inventor, looking for a place to make the test.

The device on an endurance test was operated under standard R. R. seals for a total of 157 hours and 55 minutes, when the seals were broken and the device put under severe strain and tests for about an hour longer and then shut off.

Close examination of the device disclosed that all parts were in perfect shape and could have been run indefinitely. During the entire test the light burned evenly and brightly without flickering and there was no change in the brilliancy from day to day.

The quantity of current passing through the secondary of the transformer, Doctors of Science have asserted, is sufficient to burn up wire of that size if ordinary current were used, yet there is no heating of the transformer even though there is no circulation of air through it to cool it, as it is completely enclosed. All parts of the machine run absolutely cool, regardless of the length of time operated.

It makes no difference whether one fifty watt lamp is used or whether fifty of them are connected to the machine, the draft of current is adapted to the load.

This current has another scientific characteristic disclosed by the fact that photographing the lights operated by the Radiant Energy device the lights burn right into the film and later if one taken a photograph of a photograph the resulting film has the same characteristics so that prints made from this second film have the same characteristics, so that this film also burns into the print to such an extent one has to hold back dense portions in order to get a satisfactory picture. Yet the light from the R. K. device is whiter and less harsh, even to work or injured eyes. This is further proof the current is different from any coming from conventional sources in use today.

There is no sound from the machine when in operation, there being no moving parts. Electrical oscillations not prime mover operations.

The current cannot be derived from batteries, as it can be formed, and again Doctors of Physics have pronounced the current H. F. Only an alternating current can be so hundred, and battery current is direct current.

It cannot be induction from adjacent power lines, as an induced current is always of the same frequency, as the inducing current, and there is no line on earth carrying of the frequency of this. It is not radio power, being much too great; even to operate a loud speaker it is necessary to amplify a radio current many times, to say nothing of lighting a lamp or heating a flat iron, and further, the frequency of the incoming current is higher than radio currents.

An experiment was given for a nationally known physicist, a professor in one of the greatest universities of the country, at which time he noted and mentioned the following: (And this was verified by another Dr. of Sciences.)

That when the oscillators are connected in the circuit, the condensers fill slowly, and the long-

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er the current is applied to charge them, the greater the charge they take, up to their maximum for the applied voltage, much as in filling a bucket by pouring the water into it, instead of taking the charge practically instantaneously, as is ordinarily the case with condensers."

"That the size of wire in the transformer could not carry the amperage passing through it without burning up, if ordinary current were used, yet the wires remained absolutely cool no matter how long the machine operated."

"The above points show that there is developed something which is entirely out of the ordinary, and cannot be accounted for on the basis of induction from existing power lines or current from batteries."

The above statement duly signed and verified.

Another short account follows.

Today Mr. Judd, Mr. Adams and Attorney Nebeker called at the Inventors laboratory in Attorney Nebeker's automobile. When the "Radiant Energy" device was packed in the auto we drove away. The three above mentioned gentlemen began then to discuss where they should go to make the test experiment. The inventor did not want to have any say in where the test should be made as he wanted the experiment made at a place selected by them and not him, or by his having anything to say about the location. As last the three mentioned decided to go up Emigration Canyon, as there are no power lines in that canyon. After driving about four miles up the canyon, they selected a place but changed their minds and selected another place a few hundred feet further up the canyon.

Mr. Judd stay in the car because of an injured foot, while Mr. Nebeker and Mr. Adams put up the "antenna and ground." The inventor then took the device out of the car and connected it up with the "antenna and ground." The switch on the device was opened and closed as in all former experiments time and time again, but no light appeared. The device was then "tuned in" as in all the former experiments that Mr. Judd had seen and then when the switch on the device was closed the lights came on. The "antenna wire" was momentarily disconnected, the light went out but came back when the "antenna" was again connected to the device. The same happened when the "ground wire" was disconnected and again connected in the same way as described above. (All this with Attorney Judd hopping around on one foot, he having gotten out of the car when the tuning the device was started.) All three gentlemen were very well satisfied and pleased with what they saw. It was dusk when they left the Canyon.

Dear Mr. Cooley:

This letter is being written you for your information and in order to make a record of the electrical demonstration made October 29th, 1926, by inventor T. H. Moray for Attorney Judd, Mr. Knight and myself.

As prearranged, I met Mosars, Moray and Judd at the Moray laboratory about 7:10 a.m. on October 29th, 1926. We loaded the electrical equipment into my car and left Mr. Judd's car in the Moray lot, as there were only three of us to make the trip from Salt Lake and to meet Mr. Knight at Oren, Utah.

I remember that the speedometer registered 19 miles at Charleston and 26 miles as we left the last electric line near the mouth of Daniels Canyon; also that speedometer registered 52 miles where we stopped to demonstrate, making the distance 52 miles from the nearest power line and 26 miles from the nearest one wire rural telephone line.

Moray requested that we select a place near a stream of water so that the ground pipe could be sunk in its bed and be more effective, as the ground in the mountain was frozen. He stopped at a place about 10 miles south-east of the Daniels-Strawberry summit and about 200 yards west of the main road to Duchesne, this location being almost due east from what Mr. Knight called Haystack Mountain and perhaps 3/4 of a mile east of the Strawberry Lake on a little stream which made a zig-zag course through a gently sloping grassy flat to the lake.

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The antenna wire was put up without any aid or instructions whatever from Moray, as it had been "balanced", except that Moray suggested that the wire be stretched tighter to prevent so much sag at the center. This was done and the wire then appeared to clear the ground by T or 8 feet at its lowest point.

The balanced ground rod was pointed at the end to make its driving into the creek bed easy.

The antenna wire was insulated from the poles with two quart glass insulators about six inches long. A piece of wire about two feet long connected each insulator with the pole. The lead-in wire was fastened to the antenna wire at a point about 10 or 15 feet from the east pole. I helped Moray solder the connection where the lead-in wire fastened on to the antenna wire and also helped him solder the ground wire to the rod. I stoped the distance between the two antenna poles and estimated it to be 87 feet as I took 29 stops intended to be three feet each.

Moray took this electrical equipment out of the automobile and placed it on the running board of the car. Two dry boards were laid on the ground and a rubber mat used under my office chair was placed on the boards for Moray to stand on as a precaution against electric shocks. The running board was lardly large enough for the equipment so we took the seat cushion out of the front seat and placed it on the mat and Moray transferred the equipment to the seat cushion and connected it up there.

Very light snowflakes fell occasionally and a tarpaulin was hung over the top of the auto doors, when opened, to protect the equipment from getting wet. When all of the wire connections were made, and the device synchronized in resonance by Moray, it was just 1:05 p.m. by my watch. Before "tuning in" he placed the key on the post he said it would be in contact with while the light burns but no light appeared. After "tuning in" for slightly more than 10 minutes the key or switch was put on the operating post and the light appeared immediately. It was slightly after 1:15 P.M. by my watch. MORay put the key, or switch, on the operating post two or three times before and during the tuning in operation but no light appeared until perfect "balance" was established.

"While the lights were burning, the antelle lead-in wire was disconnected from the apparatus and the lights went out. Connected again and the lights appeared." Moray disconnected the "ground wire" and the lights went out. He then connected it and the lights appeared again.

This letter signed by
E. C. JONson.
Salt Lake City, Utah

Your interest in the Moray invention to take electrical energy from the "air" and make it usable for light, heat and power purposes justifies me reporting to you a new demonstration which I saw of this principle on Saturday, February 21.

There were present a dozen people, including Paul Harsh, Mark Yuri, and Mr. Ferguson.

I first witnessed a demonstration of this device three months ago. The cabinet containing the machine has been simplified and improved. It was quite apparent there was no possible faking of the power produced.

The tuning in device was improved and the time required to bring in the energy was shortened from five minutes to less than a minute.

The operation was as simple as tuning in a well-equipped radio set. This was shown by a lady who was witnessing the demonstration for the first time operating the device as easily as Dr. Moray himself, after she had seen him "tune in" the energy.

A pilot light on the cabinet first became illuminated. The switch was then moved connecting a light rack with the current. Instantly 3250-watt lamps and 5100-wat lamps were brilliantly lighted.

A regular Hot Point flat iron was then connected without ???????? the lights in the least. The inventor asserted that the result would have been the same had one hundred lights been used in

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place of the 35 on the light rack.

The lights and iron together were consuming more than four horse power of electric energy.

On account of the brilliancy of the light it was apparent that much more than the ordinary voltage was going into these lamps and the excessive heat developed in one spot made me feel that they would soon burn out, but they did not.

I confidently believe Dr. Moray is on the threshold of perfecting one of the most amazing fundamental inventions of history.

Very sincerely yours,
(Signed) Milton H. Welling
Secretary of the State of Utah

Many men of science have come from foreign countries and from the East and the West and have been shown experiments and not one of them has been able to find any fault with what they have seen or heard. (Names of these men of science will be furnished upon request.) These men have had the device opened for their inspection and have pronounced the experiments wonderful that the current is high frequency, the color of the light different, that the device carries many times as much current without even getting slightly warm as any other electrical device of like construction known to man today could do without bursting into flame. That the "tubes used are far more powerful than anything known to science today." The drawings, circuits and theory have been pronounced by leading men of science as scientifically, electrically, mechanically sound and correct.

It is generally accepted now by science, and Moray's device proves, there is energy coming from somewhere, that the earth is surrounded by such a field of energy.

This energy, or as Moray explains it -these oscillations of Energy are picked up by the Moray device and the oscillator tubes of the device itself. As stated, these surges or oscillations of Energy coming and returning to the Universe are picked up by the Moray Device because the Moray Device is tuned to oscillate in harmony with the oscillations of the universe just as musical instruments can be made to oscillate together. Every oscillation, whether large or small, is completed during the same interval of time, the heart beats of life, the oscillations of the Universe all prove the same great fact that oscillations are all governed by the same eye of time, or, as stated above, completed during the same interval of time, and as Moray stated years ago, these waves of energy have a regular beat note of time, coming and going as the waves of the sea, but in a very definite mathematical order of time, coming to the earth from every direction, stronger in the day time than at night, but always coming with a regular beat note that might be referred to as the Father of Time. The Sire of Gravitation.

This energy has a definite elastic rigidity and density, which is subject to displacement and strains. When the strain is removed, this medium will spring back to its old position and beyond, surging back and forth as the waves of the sea, and will continue to oscillate until the original pressure is used up. In the internal impedance is too great, there will be no oscillations, but it will merely slide back in a dead beat to its unrestrained state, cutting down the resistance to the minimum and by synchronous resonance of the device with the resonance of the Universe, recovery will be quicker and quicker until inertia will assert itself and lengthen out the time of final recovery by carrying the recoil beyond the natural oscillation and thus prolonging the vibrations by oscillation. When the recovery is distinctly oscillatory and ??????? or resonance sets in the oscillations will go on forever because of the oscillations of the Universe. These electric oscillations are not simple oscillations, but surges with a definite beat note of oscillations.

One will ask, how can you get steady energy from such surging having so great an amount of energy at such a terrific potential? Could not a steady flow of water be obtained from the surges of the sea?

The operation of the condensers need not be repeated here as it is believed they have been fully explained in the enclosed account.

It is not claimed that all of Moray's theory is proven, but it is claimed that the device works. The results are certain and that in the absence of better explanations as given elsewhere Moray's

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explanation is as good as any.

In explaining this theory to a well known and noted American Scientist, he said, "You go in your theory back of the law of gravitation."

In this day and age, it is not well to say anything is impossible, but what has been done in Radiant Energy has been and perhaps rightfully called "radical." Nevertheless, of the great number of learned men who have seen and heard of Moray's work, not one has been able to disprove his claims, theories or discoveries. Among those in question have been some of America's foremost in Science, although they have spent from five hours to days on the theory and claims and made test experiments. Hence this further explanation of the Moray theory, on which Moray has spent his time from boyhood.

Fully realizing that whatever the difficulties in discovering new truths, there are still greater difficulties in getting them recognized, for as Mark Twain said, "It takes many years to get a new idea fixed in the human mind," and one should be armed with but scant philosophy if they remained for long surprised at the attacks of some or at the exasperation of a certain number of worthy people, and at the silence of the greater number of the scholars, who have heard of these experiments, as it is hard for the average human mind to rid itself of inherited ideas, which so completely, although perhaps unconsciously control our line of thought. Franklin, Faraday, Cavendish and others were unable to always express themselves so that those of their day understood their inner meaning. They gave to the world their ideas in a form unintelligible to others of their day, yet their ideas have since become known facts.

The theory herein contained is not new in the main, nor is it contrary to ideas that science has accepted today. They are however, original with Moray in application and when Moray first advanced them years ago they were "killed" as it were by those who heard of them before they got very far. Be that as it may, Moray has taken "Radiant Energy" and found a means of using it. Heat, light, power and energy are not things in themselves, but sensations, or effects produced by this "Cosmic Power", directly or indirectly.

Electricity is vibrations or radiations. Where other (or if you do not like that name, call it what you will) is quiescent we use nothing. Light causes vibrations of this "other" and it is these vibrations which cause our eyes to detect. All substances are really combinations of one (primordial substance,) i. e. electricity, or, in other words, electricity is specifically modified other. Electrons in motion go to constitute an electric current. Ether waves in motion go to constitute an electric current. What electricity is to matter, so is electric force to common mechanical force, and electrical inertia to common inertia. By inertia, I mean the ratio of force to acceleration. Perhaps electric inertia might be defined as the ratio of electric motive force to the acceleration of electric displacement.

Below will be found excerpts from a few additional accounts of some experiments taken from some of the hundreds of accounts of tests made and also some excerpts from some scientific books.

"ASTRONOMY", by Robert H. Baker, Ph. D. Professor of Astronomy, University of Illinois, page 303:

"Another problem relates to the apparent lavish expenditure of this radiation. Of all the energy that pours forth from the sun, less than one part in 200 million is intercepted by the planets and their satellites. The remainder spreads through interstellar space with little chance, so far as we know, of being recovered. The suggestion that the sun shines only in the direction of material that can intercept it makes an appeal from the point of view of economy, but appears to have little else to recommend it. It would seem that nature is squandering its resources of energy so prodigally that it must end in bankruptcy, but we doubtless have at present an imperfect account of the situation."

"FOUNDATIONS OF THE UNIVERSE" by M. Luckiesh, D. Sc., Director of Lighting Research Laboratory, General Electric Company, printed in 1925, pag. V.

"In the far-off stellar crucibles we see the same laws being obeyed as in our laboratories. As we trace down to the almost infinitesimal constituents of the extremely minute atom we find that apparently it does not exist at all as the realistic matter which we have supposed it to be. There

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at its vevry foundation it seems to consist of electric changes which probably simulate the motions of celestial bodies. It is becoming more and more certain that the apparent complexity of nature is due to our lack of knowledge. As the picture unfolds it promises a marvelous simplicity."

Again quoting from "Foundations of the Universe" by Dr. Luckiesh of General Electric, pages 41-43:

"The great success of the atomistic principle as it is involved in the kinetic theory of matter is one of the wonders of the modern scientific age. It is to be expected that it has found other applications equally fascinating and promising. It is now being proceed further into the service of explaining the structure of matter."

"When Maxwell (1873) propounded the electromagnetic theory of light (radiations), his achievement was epochal. The exact manner in which the radiant energy traversed space was not known, and the next epochal event was the founding by Planck (1900) of the quantum theory. Here we have the atomistic principle applied to energy instead of being confined to the material of the universe as it had been. In other words, in the quantum theory we have the atomistic idea applied to physical processes. We now have the atom of matter, the atom (electron) of electricity, and the atom (quantum) of action (a produtc of energy and time). Planck assumet the emission of radiation (from the sun, a lamp filament, est.) to occur discontinuously. He conceived elements of energy of equal magnitude analogous to the equality of electrons, or atoms of a given element. Radiation or radiant energy is emitted of various wave lengths or frequencies which must be taken into account in laws of radiation. Now the physicist uses quanta as commonly as he does electrons and atoms and molecules. Bodies are build of molecules, the molecules of atoms, and the atoms of electrons (and Protons). Here we see the atomistic principle applied to "material" (matter) and then to electricity (What shall we call it?). Finally, a physical process-the radiation emitted by the electrons-is divided into quanta, with such pictures of the Universe being constructed we may cease to be surprised at anything, but our interest and admiration will grow.

"One of the most marvelous relationships that has ever been revealed in the entire science of physics is that between light and electricity. Knowing what to do at the present time in regard to the structure of atoms, this relationship is not quite so surprising. However, considering the total absence of knowledge, a half century ago, pertaining to the existence of electrons in atoms of matter, the sudden revelation that light (and radiation in general) was an electrical phenomena was very startling and revolutionary. Even today those persons who are unfamiliar with fundamental physics ????? it difficult to believe that energy traveling from yonder star to the eyes is electromagneticin nature. But that it is so has been apply proved. The atoms in those distant stellar crucibles have moving electrons which are emitting electromagnetic waves of many wave lengths or frequencies. Here on earth we have many 'receiving stations' which are tuned to certain ranges of wave lengths."

"RADIANT ENERGY" by Edgar Lucien Larkin, Director Lowe Observatory, ??????????????, California, printed in 1903, at page 17"

"Radiant here means proceeding from a center in straight lines in direction. Energy is internal and inherent. Professor Barker, Physics, page four, says: ' Energy is defined as a condition of matter in virtue of which any definite portion may effect changes in any other definite portion.' This was written in 1892, and discoveries since confirm it. Energy then, is a state of matter, or rather, the result of a particular state of conditions in which matter may be when any observed phase of energy appears."

"These two matter and energy, or possibly one, is the sun total of all that has been found during three centuries of incessant research in all that portion of the Universe visible in a forty-inch telescope armed with the most owerful spectroscope over made."

It is the belief of the writer that all this space is saturated with inconceivably minute corpuscles of energy: Those discovered by Professor J.J. Thomson. These are doubtless either electricity in its ultimate refinement, or very closely allied to it, or its immediate carriers. The earth and sun, all suns and dark bodies in space, all granular matter move through the primordial cosmical

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mass of electrical corpuscles as would a wire screen through water. The wide space in diamond, glass, steel, flint or anything else allow these "Bodies smaller than atoms," as Thomson calls them, to pass through."

Pages 18-19:

"From the definition of energy it is the potential of the Universe. When matter is in a phase allowing it to be active, it effects other quantities of matter at a distance. The method of transfer is known to be by means of wave motion. Each impulse moves from the emitting to the receiving mass on a rigorously straight line. One continuous set of oscillations in this right line is called a ray. Each negative or Thomsonian corpuscle makes a double vibration to and fro like a pendulum straight across the direction of the ray-i.e., at right angles to it, the corpuscles moves over and returns to its original position had before the excursion. Since the corpuscles are negative and can be drawn out of their original straight path by the action of magnetism, the entire wave motion of the Universe is electro-magnetic. This is what Maxwell prophesied many years ago. Thomson fulfilled the prophecy."

"After one corpuscle makes an oscillation across the direction of the ray and return the next does likewise, and the next, and so on. After the first corpuscle makes swing, another distant from it 186,000 miles in the same straight line will also make a vibration at the end of the first second of time."

"ATOMS AND RAYS" by Sir Oliver Lodge, Fellow of the Royal Society of Science and holder of five or six Doctors degrees from colleges, with honors from a score more and has held offices of President in a dozen or more Scientific Societies, printed in 1924:

"The term 'light' strictly speaking, means that kind of etherical radiation which is able to affect the eye. But it is common knowledge that there are many other varieties of radiation besides those to which the eye is sensitive. It is not clearly known why the eye is sensitive to some kinds of etherical radiation, and not to other kinds. That, no doubt, can be ascertained; it is a question for physicists and physiologists in collaboration. But the eyes of animals and insects as well as of man, all appear to be sensitive to a limited range of etherical radiation, which is therefore called light. Other kinds of radiation can affect a photographic plate; other kinds, again, can stimulate the chemical actions going on in the leaves of plants, and thereby supply the energy needed for vegetable growth. Another kind-a rather deeper harmonic as it were-supplies everything on earth with warmth, and by evaporating water contributes to most of the phenomena of weather. Other kinds, again, are omitted when individual electrons, traveling at a high speed in a vacuum, encounter the obstruction of a target, this kind of invisible radiation being called X-rays. And, at the opposite end of the scale, another kind of radiation is emitted by great aeries, and is known as the Hertzian waves employed in radio."

"In speaking of these kinds of radiation as different, we are not speaking quite accurately. They differ only as treble notes differ from bass notes; they differ in rapidity or rate, or vibration or wave-length. They do not differ in any other essential particular. Through the whole range-from telegraphic waves, which may be a mile long, to X-rays, of which the wave-length is actually smaller than atoms, and only expressible in billionths and inch-they all travel at precisely the same speed, the only speed at which the Ether is able to transmit energy. They are all of the same electromagnetic character; they are all subject to the same laws of interference, of reflection, and polarisation, which have long been studied in the department of physics known as optics."

Moray would qualify the above statement by saying there are speeds greater than the speed of light.

Pages 41-44:

"Whatever an electric charge is, or is not, it is certainly a focus of energy. And if we could imagine an Ether vortex, containing the known mass of the electron and circulating with the velocity of light, its energy would be equal to that of the electric field in the space surrounding the electron. This coincidence, if it be a coincidence, can hardly fail to have some meaning. And there are those who are beginning to think that the whole material universe is built up of Ether in vari-

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ous states of self-contained or intrinsic motion, by which adjectives it is intended to discriminate between rotatory motion, like that of a top or a whirlpool, and ordinary locomotion, or whifing from place to place. Locomotion is not to be attributed to the Ether, which is the most stationary thing we know, perhaps the only stationwey thing that exists, but it may be full of what is sometimes called "stationary motion," a paradoxical term appropriate to the condition of a sleeping top."

"Those who hold this view of the Universe are strengthened in their position by the expression of Einstein of energy in general. It is well known that all the ordinary energy we are acquainted with, such as the motion of railway trains, or oket balls, and much like, in merely relative-relative to the earth, or to some other piece or matter. There is noting absolute about it. But Einstein gives an expression for what one might be inclined to call absolute energy, in which the only relevant velocity is the velocity of light. And all the phenomena we observe in nature, at any rate in inorganic nature-omiting the phenomena of Life and MInd for who present, as lying outside our physical ken-may be regarded as due to, and as demonstrating slight modifications of the portion affected by this reat etherial velocity, in form which enable it to appear to our animal-derived senses. For the spinning motion itself is impalpable and beyond the ken of our instruments, until it partially exhibits itself as transmitted waves in the form of radiation."

"All the light that we experience can be resolved into vibrations or tremors in the Ether. That is how we first knew about the Ether. But all electric and magnetic phenomena, and therefore, all chemical activity, are likewise known to be modes of manifestation, all chemical activity, are likewise known to be modes of manifestation of the Ether of Space, the complete manner and meaning of which have still to be worked out.

"So the question arises, What is Matter? Is that too a manifestation of some peculiar properties in the Ether? We know now that matter is built up of protons and electrons. But when we come to analyse these into their fundamentals, we kind far more than a hint that they are but special modification in the all-pervading ether, and are essentially resolvable into etherial energy of a specific kind. Hence we are beginning to think that matter itself is form of energy."

"Energy in the chief thing in the physical universe that directly appeals to us. We apprehend it under a great variety of forms. And it is becoming prosable that what we call matter is one of those forms. Most of the forms of energy that we know are convertible one into another. The energy of motion turns into heat; so does the energy of electric currents, unless it is converted into the energy of chemical separation or electric charge. Conversion from one form to another, without loss, is the sign-natural of energy. And the proof that matter is a form of energy will not be clinched until it can be demonstrated that matter too is convertible into other forms of energy.

"Such a process has not yet been performed in our laboratores, (or has it?) though it is believed to be occurring in the giant stars, the interior of which is at an altogether exceptional temperature and pressure, and constitute a laboratory where results can be beyond the scope of our present manipulation. IN the light from those stars, we see some small residual outcomes of this production of energy at the expense of matter. In their motions, we probably see the same thing. That which we ordinarily recognize as the locomotive energy of bodies, seems now to be the more overflow or surplus of the violent constitutional energy within-energy which at present seems inaccessible to us, which we have no means of getting at, but which is possessed in enormous amount by the very constitution of the atoms of matter. Fortunately. a few of those atoms have given us the hint. They have spontaneously emitted of their energy. We call it radioactivity; and it is only the heavy atoms of fission material, and other substances at that end of the series, which still retain the property of spontaneous disintegtrion. The other more familiar atoms seem to have lost that power, and settled down into apparent stability and quiescence. They show no obvious sign of possessing any, but to the eye of science it is there; and means have been sought, rather than as yet suggested, for getting at it."

"Combination of atoms into molecules, and the interaction of molecules generally, has long been known to give rise to various forms of energy. Witness ordinary combustion, and the power of explosives. Simple atoms, like those of hydrogen, can be packed together so as to form the more complex atoms, of higher elements, such a process will liberate vast stores of energy, much

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greater than could be obtained from ordinary kinds of chemical combination. It is highly unlikely that this will go on spontaneously or uncontrollably or dangerously, under such conditions as we are familiar with on the earth. They may be violent enough under the conditions in the interior of stars, including perhaps our sun. But here, on the earth, they are tractable, guided and controllable, and will not run rampant, and do not damage, except by reason of bad or malevolent arrangements; and even then only on a relative small scale.

"How soon energy of this kind may become commercial, no one can say. The practical way is by using Energy from the Cosmes; RE. not by so called fission material.

"TO WHOM IT MAY CONCERN:

This is to certify that on the evening of March 16, 1929, in connection with Dr. Wilkinson, of Cedar City, I witnessed a demonstration at the laboratory of T. Henry Moray, Salt Lake City, Utah.

Dr. Moray claims to have devised and invented an apparatus that will produce electrical energy without the use of a prime mover, and this is the apparatus demonstrated on the occasion above referred to.

The subjects of this article will be treated in the following order:

1. Description of Apparatus
2. Demonstration
3. Objections that I have heard
4. Tests
5. Conclusion

1. The apparatus consists of an antenna specially balanced or arial capacitor and a special ground wire. These are connected to the terminals of a switch. Two wooden boxes were placed on a table. On one of these boxes was a high-frequency transformer and in the other box were two sets of condensers, ten large condensers in one set and ten small condensers in the other set; two composition cylinders, each about 1 1/8 inches in diameter and four inches long, each of these weighed about three or four ounces; and another box approximately hemispherical in shape about two inches in diameter and weighing about two ounces; and coils of wires and other equipment. These pieces of apparatus were connected by a number of wires by which the hook-up was connected.

Two of these wires were led out to the switch. One was attached to the blade of the switch and the other the jaw of the switch so that when the switch was open the antenna, lead-in, apparatus in the boxes, and ground wire, were all in series.

The other wires leading out of the box were connected to six 100 watt lamps connected in multiple during part of the demonstration, and to a flat iron during part of the demonstration.

2. Demonstration

During the demonstration the apparatus was connected in series as above described, except that a small switch connected in series with the coil was left open.

Dr. Moray energized and synchronized the device and in three or four minutes; the lamps were lighted and remained bright as long as the circuit was left closed, which was about 60 minutes. He then connected an electric flat iron. In a short time the iron was hot. When the "ground wire" was disconnected and then the lead-in was disconnected, the lights went out.

3. Objections that I have heard;

1. That the power is obtained by a hidden wire from the electric lighting current.
2. That the power is obtained from batteries.

4. Tests.

Before and after the demonstration I closed the big switch which connects or shorts the antenna and ground and made other tests. If the antenna or lead-in were connected to the lighting circuit this would have produced a short circuit. I further tested by closing and opening the switch several times to see if any sparks appeared, but there were no sparks. I placed my wet finger between the blade and the jaws of the switch and could not feel any electricity. I touched my hand

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to both sides of the switch and the wall to check for ground but could not feel anything. We turned the table over and examined it carefully for hidden wires but found none. With the apparatus all connected as when operating the lights, the contacts with the switch were moved but produced no arcing. This indicates that the circuit was dead.

While the demonstration was being conducted and the lamps were receiving the energy through the apparatus the main switch that controls the lights in the building was opened. All lights on the house circuit went out but the light on the Radiant Energy circuit were not altered-were neither brighter nor dimmer at that time. Thus the lights could not have received their power from that source.

The condensers were thoroughly tested. The terminals were shorted, the positive to the negative. If they had been batteries they would have showed a spark, but no sign of spark appeared. They were then tested by connecting them to the electric terminals. After thus being charged the large condensers gave a vigorous discharge, showing a brilliant strong arc and a loud snappy sound showing a sudden discharge as condensers are supposed to do and batteries never do.

The small condensers were less vigorous in discharging but the same snappy discharge a condenser and not a battery discharges. These tests proved positively that condensers and not batteries were in the cases supposed by some to contain batteries. Besides no batteries of such size could produce such power. The boxes were completely emptied thus leaving no possible place for batteries to be stored. Besides the boxes were not large enough to hide batteries in.

During the time that the lights were burning the connections with the big switch was moved along the switch and vigorous arcing occurred, thus proving that electrical energy was passing through this apparatus.

5. Conclusions.

The electric lamps receiving energy from some source and during the demonstration, which lasted for more than an hour, the lights were brilliant at all times, just as bright at the last as at the first of the demonstration.

The lights on demonstration were a different color and brighter and whiter than those on the house circuit.

The electric energy that lighted the lamps and heated the flat iron was not received from the house circuit.

One is therefore forced to the conclusion that the electric energy was received from some other source and difficult as it is to understand, with our present knowledge generation, no other conclusion can be drawn from the demonstration as above described than that the energy was received by and through the apparatus as claimed by Dr. MORAY.

(Signed) T. J. YATER."
KE N. E.

Quotation from letter of R. E. Crockett, Ex-Secretary of State of Utah:

"In regard to the MORAY Radiant Energy discovery, I have had it demonstrated to me to my full satisfaction and have read the reports of many reliable experts and have heard others express themselves favorably about what they have seen. One of these M. T. J. Yates, is a nationally known electrical expert, a graduate from Cornell, with a Masters Degree, and a man of high character who has had many year's experience in the electrical field, some of his position being Assistant Superintendent of Power Stations of the Utah Power and Light System, Superintendent of City Electric Service of the Utah Power and Light. He had charge of the Research and Experimental work of the American Smelting and Refining Company. He was Chief Engineer of the Utah Radio Products Company and a consulting engineer for many years."

"Salt Lake City, Utah

To all Whom it May Concern:

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It is now more than two years since I first became acquainted with Dr. T. H. Moray and the work he is carrying on, and in that time he has demonstrated inventive ability of an exceptional order.

Perhaps the most wonderful of his inventions is a device whereby he is able to draw electric power from the Cosmos. This energy is not derived by induction from power lines, as has been suggested by some, nor is it derived from radio stations, as has been demonstrated by taking the apparatus more than 50 miles from the nearest power line and over a hundred miles from the nearest radio station and showing that it operates just as well as anywhere else. This device was subjected to an endurance test in which it was operated continuously for a week, and at the end of that time a 100 watt lamp was lighted simultaneously with the heating of a 575 watt standard hot-point flat-iron, making a total of 675 watts, it is very evident that no batteries could sustain such a drain as this. Besides the current is high frequency.

He has also invented a very sensitive sound detector whereby it is possible to hear conversations carried on in an ordinary tone of voice at a distance of several blocks.

He has also worked out numerous radio hook-ups which eliminate many of the parts now considered necessary for good reception, yet there is no apparent diminution in quality or volume; in fact, there is a notable elimination of interference from static when some of these are used.

He has devised a means by which he is able to measure with some degree of accuracy the energy evolved during mental activity; that is, he gets definite, variable deflections of the needle of a sensitive galvanometer which appeared to be related to the rigor of mental activity.

There are a great many other equally remarkable things that he has done such as reducing old rubber or from truck tires to the state of a viscous fluid which is readily vulcanizable without the addition of smoke sheet as is necessary with other processes; also a high frequency therapeutic device, and numerous other devices which show great ingenuity.

Murray O. Hayes
PhD.

"Salt Lake City, Utah

Mr. W. H. Lovesey
City

Dear Mr. Lovesey:

Pursuant to my promise to you at our recent discussion, I am writing to make of record the extent of my acquaintance with the construction and operation principles of the Moray device for utilizing cosmic energy.

You are already aware that I have seen many demonstrations of what this mechanism will do and that I have seen the parts of which it is built. Recently Dr. Moray has shown to me the wiring diagram of the assembly, and I am free to say that I can find no inconsistencies in it, not anything which does not appear to be logical and sound. While this hook-up appears to be very complicated, when looking at the machine, it is in reality very simple in essence, and based on reorganized laws of electricity. When all is explained. There are many features which appear to be incidental, but they are in reality of basic importance.

He has also shown to me and explained the detector which he uses. In this he has applied a fundamental principle of electric circuit which, I believe, would not be noticed unless pointed out by him. This element of his device also, as above mentioned in respect to the circuit, has numerous features which appear incidental but are the heart of the matter and of first importance.

He connected his detector in a crystal set for receiving radio, in place of the crystal, and obtained better reception than with the Erla crystal, though the antenna was merely one of the bell type, in my own home. He also took a lump of lead treated according to the process which he

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has invented and used in its place of the crystal, and got wonderful reception or radio-loud enough in fact, to operate an old fashion horn speaker of the type put out of R C A about 1923.

I was recently present when an electrical engineer representing a foreign government, the Russian Government was given an experimental demonstration of the energy machine. He at first said that amplification of radio wave accounted for what he saw, although it would be a real achievement to amplify such waves sufficiently to light six one hundred watt lights at one time, and also to heat a flat iron of the standard five hundred seventy-five watt type; when he had seen the inside of the device he admitted that it could not have been what he had supposed. He remarked many times. "It is very interesting."

This machine has been operated in my presence so many times, under so many different conditions of weather and of season that I am positively convinced that it is what its inventor claims it to be, and that its commercial adaptation is feasible. I believe that Dr. Moray has explained all to me without reservation, and I am sure that this is a revolutionary and epoch making invention.

Sincerely yours,
(Signed) Murray O. Hayes, Dr."

Dr. Moray O Hayes, who makes above statement, has Educational Record and qualifications as follows:

"A. B. with major in physics under Dr. Harvey Fletcher;
M., S. including graduate courses in physics and mathematics;
Ph. D. in geology;
Five years in examining corps, U. S. Patent Office.
To take Bar examination soon.

Acting head of department of physics, Brigham Young University, 1922-23, vice Carl F. Byrning, who was finished work for doctorate."

"Washington, D. C.

T. H. Moray,
2484 So. Fifth East
Salt Lake City, Utah.

Dear Henry:

For your information I wish to report what I have done in the matter of your radiant energy machine since coming here.

We arrived here Friday, July 10. On Monday July 13, I spent the whole day in the search room of the Patent Office, and examined every patent issued by the U. S. on devices for the reception of radiant energy. Most of them were so obviously dissimilar to your invention that they did not consume much time, and not one is there which shown, on reading, even the remotest resemblance to your radiant energy machine. Not one mentions such as idea.

Neither is there any patent which suggests anything like your oscillator tubes. I feel perfectly safe in saying that there is not one chance in a hundred thousand that the Examiner will find any disclosures that will restrict your claims. I have always felt certain that you would obtain broad protection on your radiant energy invention, but now I know it.

You may use this letter in any way that you see fit.

Very truly yours,
Murray O. Hayes."
Dr. of Science and registered patent attorney.

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"TO WHOM IT MAY CONCERN:

I witnessed a demonstration of the apparatus invented by Dr. T. H. Moray by which he produces electrical energy. A report of that visit has already been made.

I now have, about two years later, witnessed a second demonstration of the same set; some changes in the apparatus were noted although a great improvement was made in the performance. The condensers, coils and other parts noted at the previous test were now in one small box about 10" x 10" x 30". To start the set operating, a faster and better means of starting the device has been devised, and once the set is put in operation, it will continue to charge itself.

The lamp rack which formerly held six 100-watt lamps is now displaced by a larger rack which holds 32 50-watt lamps, 3 100-watt lamps and a receptacle to receive an extension plug and cord. On the other end on this cord was a 575-watt electric iron. During this test, all of the electric lamps were lighted one time and were whiter and more brilliant than other lights in the room, which were supplied from the house circuit. When the lights were on bright-, the electric iron was plugged in. There was no noticeable blinking or sudden diminution of lights as in usual in house lighting systems when an electrical iron was on. The lights were as bright as before the iron was out in. The iron heated quite rapidly and in about 2 1/2 minutes was hot enough to be used for ironing.

I made a thorough and careful examination of the entire system to see if it were possible for the electricity to have been introduced on the system from some other source. Every part of the system was inspected by me, all wires were checked; the switch was removed and examined; and leads from the switch to the box containing the condensers and coils; the box itself was lifted and examined, the leads from the box to the lamp rack; the lamp rack was lifted and examined and the ground wire from the switch to the water pipe on which it was grounded; not an inch of space was overlooked where it would be possible to introduce any metal that would carry the power and I am prepared to say that no such connection existed from which power could be had from any other system.

A crystal radio set was out in on the lead-in wire from the antenna on one side and to the ground wire on the other side and perfect reception was had. If there had been power from other sources on the antenna or lead-in, by connecting the radio set to the ground wire, reception would not have been possible but a loud, humming sound would be produced. This was demonstrated by connecting the radio set to the house lighting system. When the system was working, the lights were burning bright. The terminal attached to the antenna was disconnected. A vigorous arcing occurred and the sparks jumped over an air gap as much as eighteen inches. This would indicate that the power was high voltage and the nature of the sparks indicated a high frequency.

I do not understand the principle by which Dr. Moray produces the electric energy. The condensers and the coils of wire are common. The cylinders called "oscillators" and the small conical shell called the "detector" are the only things not commonly known, but the system works.

It produces electric power in abundance and does all that Dr. Moray claims for it.

I do not own any stock or interest in Moray's work. My only purpose in issuing this statement is in the interest of the advancement of science. I consider this development a great advance in the science of producing electrical energy.

Very truly yours,

In witness to the above I hereunto sign my name.

(Signed) Thomas J. Yates, E.E., M.E.

STATE OF UTAH
COUNTY OF SALT LAKE

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Thomas J. Yates, being first duly sworn, deposes and says: That he has read the foregoing statement and acknowledges that he wrote and signed the same as above set up.

(SEAL)

(Signed) Thomas J. Yates

Subscribed and sworn to before me this 18th day of December, 1930.
My Commission expires
May 7, 1934

(Signed) R. J. Chapman
Notary Public - residing at
Salt Lake City, Utah.

"Murray O. Hayes

W. H. Loveay,
Salt Lake City,
Utah.

Dear Mr. Loveay:

This letter is in compliance with your request for some facts relating to the Moray radiant energy invention.

A short time ago a demonstration was given for a nationally known physicist a professor in one of the greatest universities of the country, at which time he noted and mentioned the following:

That when the oscillators are connected in the circuit the condensers fill slowly, and the longer the current is applied to charge them the greater the charge they take, up to their maximum for the applied voltage, much as in filling a bucket by pouring water into it, instead of taking the charge practically instantaneously as is ordinarily the case.

That the lights are much hotter than is ever the case with any current used at the present time, due to the incandescence of the gas in the globes under the influence of the very high frequency.

That the size of wire in the transformer could not carry the amperage passing through it without burning up, if ordinary current were used, yet the wire remained absolutely cool no matter how long the machine operated.

The above points show that there is developed something which is entirely out of the ordinary, and cannot be accounted for on the basis of induction from existing power lines or current from batteries.

I believe the above, in addition to the presentation made in the letter whereof I gave you a copy a few days ago will enable anyone to form a reliable opinion as to this device.

Very truly yours,
(Signed) Murray O Hayes," Ph. D.

Dr. Hayes has made similar statements under oath.

"UTAH OIL REFINING COMPANY
Salt Lake City, Utah

W. H. LOVESY,
Purchasing & Traffic

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Mr. T. Henry Moray
2484 South 5th East
Salt Lake City, Utah

Dear Henry:

I have handed you the original letter of Murray O Hayes, in which he advised of his being shown and having explained to him the wiring diagram of the assembly, and also the fundamentals of the detector, and in which he stated plainly that while it would not have been noticed unless pointed out by you, at the same time he had become familiar with all of the detail of the construction of your device for utilizing cosmic energy, and added that you had applied only fundamental principles of electric circuits.

There is attached a second letter in which Mr. Hayes furnished me a detail of his educational record.

The memorandums on the face of these two original documents were made by me at the time I was consulting with Murray O Hayes in any office and, at the time, he definitely advised me that he had been shown every detail of your invention and argued that he could make one of the machine himself from the information that had been given him.

Murray O. Hayes made these similar statements to me several times, and it may be from my determination in having him repeatedly make the declaration that he had been shown every detail of the invention that would give him the impression that I had a doubt about the invention.

Personally, I have never had a doubt, but I thought the real detail secrets of the invention were held only by yourself and after my conference at New York with Dr. Harvey Fletcher and Fr. Carl Eyring, at the Bell Laboratories, -having agreed with them that I would endeavor to induce you to give the detail of your invention to Murray O Hayes if he could duplicate your machine, and in every instance his answer was emphatic and to the effect that he could do so.

Your truly,
(Signed) W. H. Lovesy.

WHL/T

Salt Lake City, Utah

To Whom It May Concern:

I have worked in electricity all my life, was with the Utah Power and Light Company for thirteen years, and worked in all departments including sub-stations. I have been with the Koarns Corporation over seventeen years; and have charge of all the electrical work for the Tribune and Telegram Publishing Company, and in Kearns and Tribune Buildings.

In December last, I witnessed a demonstration at Dr. MORay's laboratory of his electrical marvel box. He let me see inside this box and there was transformer H. F. some of his cold tubes and some condensers. Dr. Moray connected this box to a special balanced arial and ground wire from the outside and two of us held a counter poise antenna attached to glass insulators in the room and when he connected the box to this counter poise antenna I saw the same results.

During this demonstrations and while the lamp and appliances were on I shorted the arial and ground wires. There was no spark, it just turned off the power from the box. I then took hold of both of these wires. There was no feeling and they were both cold.

He then took a larger box, about 18 x 30 x 15 and connected it to the outside arial and ground wire. From this box he lighted about fifty 100-watts, 120-volt lamps, ran a small motor especially wound at great speed, an original electric iron, and a 500-watt glow heater.

Dr. Moray then disconnected the appliances and lamp, and attached two long wires to the box

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and we pulled the main line Utah Power and Light Company service switch for his building. We attached the wire from the box to the building side of the switch and he lighted his building, hoated ironsheators; in fact, everything the Utah Power and Light Company service would do except run motors which I understand have to specially wound.

Standard globes were used but they seemed to give a softer whiter light which was more day-light.

I am satisfied myself from my experience in electricity that there was no fake of an kind of concealed batteries, or wires. Everyting was in the open so I could see every operation. I did not see the inside of the larger box.

It was a very remarkable demonstration and one which I will always remember.

(Signed) Geo. R. Pyper
Geo, R. Pyper."

Let us urge the reading of the paper filed at the Naval Research Laboratory, Washington D.C., June 4, 1929, By. Dr. Ross Gunn on "A Theory of Permanent Magnetic Fields of the Sun and Earth."

Also the paper by B. O Hulburt of June 6, 1929.