

TWO POPULAR NOBLEWOMEN IN PARIS



The two most popular women of the aristocracy in Paris are the Baronne de Poliakoff (left), wife of the czar's adviser in French affairs, and the Countess de Montebello (right). Both are lavish entertainers of members of the "smart sets" of America and Great Britain and are noted for their charm and beauty.

but only one towards each other; the four extra guns on each ship throwing shells away from the other are not counterbalanced by any projectiles thrown in the direction of the other ship, and thus the two vessels, under the action of incessant firing, will gradually approach. The reaction drives the ships towards each other, and a similar reaction is incessantly at work among the heavenly bodies when an infinite number of particles of fine dust is expelled from them with the velocity of light and totally imperceptible to our senses. Thus gravitation is due to the action of repulsive forces in nature, and is really not an attraction after all.

A similar explanation to that made for gravitation is given of magnets, and the magnetism of the earth, which has puzzled philosophers for over three centuries, since Gilbert published his first work on magnets in the year 1600. The magnets are receiving and transmitting outwardly streams of minute corpuscles moving with the velocity of light, and the reaction thus arising gives rise to apparent attraction, the intensity being greatly augmented over that of gravitation because the molecular groups are so arranged as to direct the repulsion of the particles uniformly along certain lines, whereas in gravitation there is a haphazard arrangement of the molecular groups, and the reactions largely destroy each other, leaving only a feeble residue of attraction equal in all directions.

In the case of the earth, under the incessant orbital revolution of the sun, electrifying our globe for hundreds of millions of years, the streams of electrically charged particles containing iron and other substances running through it with almost the velocity of light, has converted our planet into a great magnet, thus confirming the old idea of Gilbert. In confirmation of this view, Professor See points out that the magnetic poles of the earth are essentially perpendicular to the ecliptic in which the sun revolves, showing a fundamental dependence. An intimate connection between the earth's magnetic storms and the sunspot disturbances has been known for three-quarters of a century; but the significance of the observations of John Allen Drown about 1845 that there is a magnetic tide in the earth depending on the moon and varying according to exactly the same law as the tides of the sea, has not been previously appreciated. This magnetic tide is direct observational proof that Weber's electro-dynamic law governs the universe, instead of the Newtonian law.

In conclusion Professor See pointed out that the electro-dynamic law of Weber accounts for all the known attractive phenomena of the heavens and the earth, and he therefore called Lord Raleigh that it is the fundamental law of nature, operating uniformly throughout the sidereal universe. Previous investigators could not see any mechanical basis for Weber's law; and even Weber himself (1804-1891) a contemporary and friend of Gauss at Göttingen, did not understand the basis of his law.

DISCOVERY THAT GRAVITATION IS CAUSED BY ELECTRICITY, ANNOUNCED

Prof. T. J. J. See, Government Astronomer at Mare Island, Upsets Newton's Law. He Claims, and Shows Gravitation Is Transmitted With the Velocity of Light, 186,000 Miles Per Second—Has Worked on Problem for Thirty Years.

San Francisco.—Prof. T. J. J. See, government astronomer at Mare Island, announced his discovery that gravitation is caused by electricity. He has upset Newton's law, he said, and shows that gravitation is transmitted with the velocity of light, 186,000 miles per second.

For 30 years Professor See has worked on the problems of light and gravitation. Able, impartial and experienced men of science, he said, assure him that the way is now opened for more important developments than any which have occurred in the physical sciences for two centuries. If he lives the work will occupy his attention for at least ten years to come.

So epoch-making does he consider his discoveries that he sent long cablegrams on the subject to Lord Raleigh, head of the Royal Society of London, on April 7 and April 14. He also telegraphed his discoveries to the navy department in Washington for transmission to President Wilson.

The discoveries are made public coincident with the discussion of the nature of gravitation before the American Philosophical Society at the annual general meeting in Philadelphia.

The law of universal gravitation was established by Sir Isaac Newton in 1686, and has been the basis of our knowledge of the heavenly motions for over two centuries. Newton himself repeatedly declared during his life time that while he had formulated the law of attraction and explained its application to the sun and planets, the earth and the moon, he did not know the cause of gravitation. "Hitherto I have not been able to discover the cause of gravitation from phenomena, and I frame no hypotheses," said Newton; and he added, "but for us it is enough that gravitation does really exist, and acts according to the laws we have explained, and abundantly serves to account for the motions of the heavenly bodies and of our sea."

Professor See's announcement is that Newton's law of attraction is not strictly correct, except for bodies revolving in circular orbits, and thus experiencing no relative change of distance; but that the true law of nature is what is known as Weber's electro-dynamic law, which will apply to bodies revolving in orbits of any shape. Gravitation comes to the earth from the sun in about eight minutes.

Hitherto astronomers have not understood the nature of gravitation and nothing has been known about its velocity of propagation. Laplace tried to investigate the velocity of transmission over a century ago, and reached the conclusion that velocity was at least fifty million times greater than that of light. On account of the high authority of Laplace in astronomy, it was a long time before anyone attempted to further investigate the nature and velocity of gravitation. But for some years it has been known that method of calculation employed by Laplace was faulty; and a good many would have believed the velocity of gravitation similar to that of light, if they could have discovered any mechanical basis for such a theory.

Recently Professor See was able to show that all electric currents carry solid matter with the electricity; in fact electricity cannot be separated from matter, and an electric current as it runs along a wire curls around it in corkscrew fashion, and in this helical motion throws off at every step millions of particles of solid matter moving with the velocity of light. These solid particles are charged with electricity, and go right through the

insulation of the wire, the clothing and bodies of men and animals, as in case of the emission of the X-ray apparatus. The particles of metal carried away, as the current revolves round the wire, have mass, and when expelled and driven away into space with the velocity of light there is an equal reaction of "kick back," and often times the "kick back" is so strong as to twist up the wire. Electricians do not seem to have understood either the twisting of a wire by an escaping current, or why it is so destructive to life, and so powerful mechanically. After a careful examination of the problem Professor See claims that it is all because of the small amount of solid matter carried in the current, with the enormous velocity of light—the energy being as the square of the velocity, and thus enormous even for very small masses.

In dealing comprehensively with the wave theory of light, Professor See discovered that light is not really due to waves in the so-called Aether, but is really caused by electrically charged particles shaped like eggs, revolving about the shorter axis, and giving by their revolution an impression of wave motion which deceived many eminent philosophers of the past century. Thus by penetrating into the nature of light Professor See was able to restore Newton's theory largely, at the same time retaining the advantages of the Aether wave theory, without its manifest and admitted disadvantages, and fantastic and violent assumptions. By this daring and skilful innovation he puts the whole theory of light on a new basis, and in line with modern knowledge of electricity.

The particles of light are similar to the particles carried away in electric currents, but much smaller in size; and the whole theory of Aether is abandoned as having no real existence. This elimination of the luminiferous Aether represents a milestone in modern progress, and is sure to awaken lively discussions in the scientific circles of Europe and America. In April, 1911, quite a discussion was carried on at the annual meeting of the American Philosophical Society in Philadelphia, and it was then agreed, by numerous physicists in attendance, that the doctrine of the Aether was essentially wrong, but no one was able to substitute a better explanation.

Coming to a popular exposition of the cause of gravitation, Professor See said it was really only an apparent attraction between bodies, due to repulsion from them in all directions of minute particles moving at the speed of 186,000 miles a second, and thus driving them together. Owing to the fact that each body acts as a screen to the other, more of these rapidly moving particles come from without than from the direction of the other body, and thus the bodies are forced together, and the planets retained in their orbits round the sun.

It had been recognized by philosophers, he said, that if such rapidly moving particles could be shown to exist, they would explain gravitation; but it was only when he got rid of the hypothetical Aether, and proved that light is due to electrically charged corpuscles of solid matter in line with other modern electrical discoveries, that a true mechanical basis for gravitation had been discovered and this force shown to be transmitted with the velocity of light.

The repulsion of minute particles from the earth and sun force them together, by reaction, just as would happen if two parallel moving battleships each had six guns directed outwardly,

PLAY HOAX ON THE KAISER?

Constant "Discoveries" Revive the Story of Planted Relics to Fool the Emperor.

Berlin.—Considerable amusement has been caused here by the daily bulletins of the archaeological activities of the kaiser at Corfu.

Every time an ancient relic is discovered by the excavators, working under the emperor's eye, exhaustive accounts are circulated in the German

press by the faithful official telegraph agency.

Roland von Berlin, the society weekly, repeats a story, first published a year or two ago, that the relics are carefully planted at Corfu that they may be discovered by the kaiser.

Roland quotes a remark, said to have been made at the Potsdam Military Casino by Crown Prince George of Greece, in a convivial moment last year: "People are busy at Corfu the whole

COMMUTES ACROSS THE SEA

Son of Viscountess Sombreuil Loves Paris, Daughter America, Forcing Mother to Travel to See Them.

New York.—Viscountess De Villeneuve Sombreuil, who arrived here aboard the steamship Oceanic, has two children, a son and a daughter. The son loves Paris more than any other city on the map, and Egle, the daughter, thinks there is no such place as America. The son will not



Viscountess De Villeneuve Sombreuil.

leave Paris, and the daughter will not leave America; so, the mother is compelled to commute across the ocean in order that she may be with one or the other of her children for a certain period. The mother was joyously greeted by the daughter when the former arrived at the pier.

Northwestern Co-Ed Under Restraint. Chicago.—Northwestern co-eds have been forbidden to give chafing dish parties and make fudge for lingering young swains in the dormitories at midnight.

Deer Wrecks a Kitchen. Cold Springs, N. Y.—Frightened by dogs, a deer bounded into Albert Spangler's kitchen, wrecked the place and escaped.

Winter putting old trash into the proper place.

Boys Beat Girls at Biscuit Making. Newport, R. I.—Two boys out of a class of eight, won a biscuit making contest against a class of 16 girls at Rogers high school.

Cruelty Charged to Husband. Atlantic City, N. J.—Mrs. Thomas Damed charged that her husband tied her to a chair and made her daughter hurl knives at her.

The Mode in Gowns of Taffeta



NO MATTER what the variation of style, the smart gown of taffeta follows the lines as set forth by Kurzman in the full model shown here, with more or less fidelity—usually less. For great is the ingenuity which has been brought to bear in adapting the French modes to that trimness of expression which Americans admire in their clothes.

For a slender figure the taffeta gown pictured is altogether good style. It is not to be considered by any other, but embodies little touches and details useful to anyone who contemplates joining the throng that is taffeta clad.

The rather low cut of the bodice shows the influence of the comfortable and graceful Chinese collar, and its border of three thicknesses of folded net is beautifully soft and becoming. The kimono blouse shows the sleeves smaller and worn without an undersleeve.

The fullness of the skirt at the front has been dispensed with in many American models. It is suggested by a flat plait or replaced by three horizontal plaits in a plain front. But on a slim figure the bunchiness

Charming Hats for the Baby Girl



THREE charming hats for the little miss who is not far beyond the dignity of her first hat are shown in the illustration given here. They are of the simplest kind, and the home milliner can hardly fail if she chooses to copy the style and trimming.

When the child has been fitted with a shape, here are shown three attractive styles of trimming from which to choose in finishing it. At the bottom of the picture a shape is shown to which a velvet crown has been applied. The crown is made by cutting a circle from silk or velvet, from 14 to 16 inches in diameter (or a little longer for an older girl). This is gathered about the edge and sewed to the base of the crown of the shape with its fullness distributed evenly. Messaline satin ribbon five to six inches wide is arranged in a wreath of shallow loops about the base of this crown. Between the loops, across the front, small chiffon roses are placed in little

clusters. There is a bow with ends at the side, and the hat is lined with a thin wash silk and kept on the head by a flat elastic cord.

At the top, val lace in a dainty pattern is gathered in two rows about the crown at its base. Velvet ribbon, an inch and a half wide, is laid in flutings (that is shallow round loops) in a wreath between the two rows of lace.

Little bouquets of roses and "snow flowers" are placed at each side where the bridle of velvet, that goes under the chin, terminates. Colored velvet is usually chosen for children's hats.

Simplest, but most unusual of all, the little hat at the right is trimmed with silk-covered buttons, rings, and silk tassels applied to a plain collar of velvet an inch wide, which is laid about the crown of the baby's little shape.

are strikingly real. Both Russian and Parma violets, scented, are made up in the correct-sized bouquet. The self-swinging, bright-hued wooden parouquet that is used for prizes or as a children's toy is to be had in this shop also.

To stiffen children's hair ribbons and make them look like new, dip in slightly sweet sugar and water and iron. The sweetened water gives just enough body to the ribbons to make them look well.

AS IN MIDDLE AGES AFTER SUFFERING TWO LONG YEARS

German Executions Conducted as in Ancient Times.

Ax and Block, Long Superseded Elsewhere, Still Used in Prussia—Descriptions of Decapitations Are Not Published.

A widespread agitation is now being started in Germany to abolish the use of the ax and the block in the execution of criminals, a New York Tribune's Berlin correspondent writes. As is well known, Germany is the only civilized country which has retained this barbarous form of executing the death sentence of the law. The human butcher block has been suppressed in France, in England and even in Russia, while in other countries, like Belgium, the death penalty, though still written in the law, is never turned into fact, and always means lifelong hard labor.

In Germany the law provides that the sentence of death must be executed through decapitation. Moreover, advocates of the present system contend that the glistening ax and the black draped block are a greater and more efficient symbol of the terrible final act of the law than any of the apparatus used in other countries.

Still, a number of the German states have abolished the ax and the block. Its use is now confined principally to Prussia and the old Prussian provinces of Brandenburg, including Berlin, Silesia, Pomerania, Posen, Saxony and East Prussia, Hesse, Hanover and Westphalia, the latter Prussian provinces, use the French guillotine. In Bavaria, because of the repugnance of the late Prince-Regent Luitpold and his son, King Ludwig, to capital punishment, a death sentence was seldom passed. When judges did impose it the prince-regent almost invariably commuted the sentence to life imprisonment.

Prussians of the aggressive, ruthless type, who made Prussia the main factor in the empire, oppose the abolition of the medieval executions. They claim that the German ax and block method is no more gruesome or inhuman than the form of executions in other countries. They assert that things have been known to go wrong with mechanical appliances such as used in guillotining, hanging and electrocution, while an accident is practically impossible with an ax in the hands of a public executioner who knows his business. It is actually contended by some that the ax is more humane than the rope.

In German beheadings the condemned has little opportunity to see anything of his executioner or of the means employed. In Berlin the executions take place in the courtyard of the Ploetzensee penitentiary. A large, flat flagstone, on which the headman stands in order to have a firm footing, marks the spot. When the hour arrives warders enter the cell of the condemned man and quickly cut away the collar of his shirt, in order to leave the neck bare. He is led outside. As he enters the courtyard through a small door he is quickly wheeled about, so that his back is toward the fatal spot, and faces two officials, who read to him that the sentence of the law is about to be executed.

Immediately and quickly he is seized by two strong warders, who half carry, half drag him backward several yards to the "block." This latter, at least in Berlin, differs from the old English headman's block. Instead of being forced to kneel down in front of it, the condemned man is thrown face down on a long, heavy log, a benchlike "block" to which he is strapped. His chin and head fit into a semicircular hole in the end of the "block." The headman, immaculately clad in black evening suit, who until now has been invisible, suddenly steps forward with a huge ax in his hands. He does not "swing" the ax to his shoulders with wood chopping motion—the ax is almost too heavy for that—but walks quickly to the victim, poises the instrument for a moment about two and a half feet above the end of the log block and with unerring aim drops it upon the neck. It is over. The ax is of such razorlike sharpness and is so heavy that its edge sinks deep into the log block with a crunching sound. The execution consumes less time than is necessary to read this description of it.

Perhaps one reason that there has been no movement before toward the abolition of the ax and block lies in the fact that details of executions are never printed in the German press. Usually an execution is told in two or three lines, reading: "So-and-so was executed today for the murder of So-and-so."

A Century Ago.

One hundred years ago the battle of Toulouse was fought between the British forces under Lord Wellington and the French led by Marshal Soult. Neither of the commanders knew at that time that the allies had taken Paris and that Napoleon had abdicated the throne of France. After 12 hours of severe fighting the French were forced to retreat. The British lost more than 4,500 men in the engagement. Two days later the allied British and Spanish armies entered the city of Toulouse and at the same time learned that hostilities between France and allied nations had ceased. For his success ending with the victory at Toulouse Wellington was rewarded with the title of duke.

All in the Vision.

Some people think that everything in the world is twisted and corrupt, and that no human being can be trusted. Others who are wiser feel very differently about it. As Ruskin says: "In all things throughout the world the men who look for the crooked will see the crooked, and the men who look for the straight will see the straight."

More than one-half of the fuller earth produced in the United States comes from Florida.

Mrs. Aselin Was Restored to Health by Lydia E. Pinkham's Vegetable Compound.

Minneapolis, Minn.—"After my little one was born I was sick with pains in my sides which the doctors said were caused by inflammation. I suffered a great deal every month and grew very thin. I was under the doctor's care for two long years without any benefit. Finally after repeated suggestions to try it we got Lydia E. Pinkham's Vegetable Compound. After taking the third bottle of the Compound I was able to do my housework and today I am strong and healthy again. I will answer letters if anyone wishes to know about my case."—Mrs. JOSEPH ASELIN, 628 Monroe St., N.E., Minneapolis, Minn.

Lydia E. Pinkham's Vegetable Compound, made from native roots and herbs, contains no narcotics or harmful drugs, and today holds the record of being the most successful remedy we know for woman's ills. If you need such a medicine why don't you try it?

If you have the slightest doubt that Lydia E. Pinkham's Vegetable Compound will help you, write to Lydia E. Pinkham Medicine Co. (confidential) Lynn, Mass., for advice. Your letter will be opened, read and answered by a woman, and held in strict confidence.

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The hardest task many a man has is trying to keep his dead past buried.

Dr. Pierce's Pleasant Pellets cure constipation. Constipation is the cause of many diseases. Cure the cause and you cure the disease. Easy to take. Adv.

That's What. "These fellows who won't take an answer generally get what is coming to them." "Yes, they usually marry the girl."

All Right in This Case. A clergyman in a country church gave out the following notice: "The ladies of the parish intend to prepare a fowl supper on Friday evening for the benefit of the church. It is hoped that there will be a large attendance."

After service 'one of the men present was heard to remark: "I suppose it will be all right to pay for your 'foul' supper with 'tainted' money?" "Why, certainly," was the reply. "The guest of honor is to be 'filthy lucre,' so you see we're not a bit particular."

Must Have Pleased Whistler. Richard A. Canfield, who has parted with his superb collection of Whistler paintings and pastels for \$300,000, said the other day in New York: "It would be a wise criticism to state my Whistler collection is the best in the world. And this reminds me of the unwise criticism going—a criticism that a pretty English girl made to Whistler about my Whistler portrait of Count Robert de Montesquiou Fezensac.

"This pretty girl, gazing at the famous portrait with enthusiastic eyes, cried in a gushing voice: "Oh, Mr. Whistler, I do think your foreshortening of the skin tints is perfectly wonderful!"

Simplified Breakfasts

Make for good days

From a package of fresh, crisp

Post Toasties

fill a bowl and add cream or milk.

Then, with some fruit, a cup of Instant Postum, and a poached egg or two if you like, you have a simple breakfast that is wholesome and satisfying.

Toasties are bits of corn carefully cooked, delicately seasoned, and toasted to an appetizing "brown" without being touched by hand. They look good, taste good, and

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