ELECTRICAL ACHIEVEMENTS.

Production of Electrecity Directly From Coal Discussed by Edison.

THE ELECTRIC LIGHT VERSUS GAS

A New Marine Guide—Effect of Electric Light on Books—A New Electrical Device —Flashes.

The Pyromagnetic Dynamo.

Thomas A. Edison's paper on "The Pyromagnetic Dynamo; a Machine for Producing elecricity from Fuel," w read, in Mr. Edison's absance, by P. G. F. Barker, before the section in pha at the meeting of the American as in tion for the advancement of sg is an New York last Monday. Foll abstract:

The production of elect y directly from coal is a problem w the ablest inpied the closest attentio could the enorventors for many year al be made to mous energy latent i y by means of a appear as electric e apparatus, which simple transform ults with reasonable accomplishes its e conceded, probably economy, it wil cal methods of the en that the mech d be revolutionized therelire world w another of those grand by, and th ogress would be taken, of steps of which th nineteenth century so justly boasts.

The simple production of a potential difference by means of heat is as old as Leseck and Melloni. The science of thermo-electricity thus originated has been developed by Becquerel, by Peltier, by Thomson and by Tait, and the thermo-batteries of Clamoud and of Noe have found important practical uses. The results already attained in these generators have stimulated research marvellously, and many investigators have believed that in this direction lay the philosopher's stone. Our fellow-member, Moses G. Farmer, worked long and assiduously in this field, producing, it is believed, the most satisfactory results as regards economy which have everywhere obtained. But even these results were not very encouraging. He never succeeded in converting one per cent of the energy of the coal into electric energy. Quite recently Lord Raleigh has discussed with his well known ability the law of efficiency of the thermo-battery from the standpoint of the second law of thermodynamics. And he concluded from a copper-iron couple, working between the extreme limits of temperature possible for these methods a conversion of not more than one three hundredth part of the coal energy can be hoped for. As a heat engine, therefore, the thermo-cell appears to follow precisely the law of Carnot, and hence can have at the most no higher efficiency than the reversible engine of this eminen philosopher.

If, therefore, the result hoped for is to be attained at all, it must be looked for in some other direction. In considering the matter, another line of investigation [illegible] me the results of tion. It has long been known that the magnatism of the magnetic metals, and especially of iron, cobalt and nickel is markedly affected by heat. According to Becqerel, nickel loses its power of being magnatized at 100; iron at a cherry-red heat, and cobalt at a white heat. Since whenever a magnetic field varies in strength in the vicinity of a conductor a current is generated in that conductor, it occurred to me that by placing an iron core into a magnetic circuit, and, by varying the magnetizability of that core by varying its temperatures, it would be possible to generate a current in a coil of wire surrounding this core. This idea constitutes the essential feature of the new generator, which, therefore, I have called a pyromagnetic.

This principle of utalizing the variation of magnetizability by heat as the basis of electrical machines, though clearly applicable to the generators, was first applied to the construction of a simple form of heat engine which I have called a pyromagnetic motor. A description of this motor will help us to understand the generator subsequently constricted.

Suppose a permanent magnet, having a bundle of small tubes made of thin iron placed between its poles and capable of rotation about an axis perpendicular to the plane of the magnetic, after the fashion of an armature. Suppose, farther, that, by suitable means, such as a blast of a draught, hot air can be made to pass through these tubes so as to raise them to redness. Suppose that by a flat screne, symmetrically placed across the face of this bundle of tubes, and covering one-half of them, access of the heated air to the tubes beneath is prevented. Then it follows that if this screne be so adjusted that its ends are equidistant from the two legs of the magnet, the bundle of tubes will rotate about the axis, since the cooler and magnetic portions of the tube-bundle, that is, those beneath the screne, will be equidistant from the poles and will be equally attracted on the two sides. But if the screen is turned about the axis of rotation so that one of its ends is nearer one of the poles, and the other nearer the other, then rotation of the bundle will ensue, since the portion under the screen, which is cooler and, therefore magnetizable, is continually more strongly attracted than the other and heated portions. This device acts, therefore, as a pyromagnetic motor, the heat now passing through the tubes in such a way as to produce a dissymmetry in the lines of force of the iron-field, the rotation being due to the effort to make these symmetrical. The guard plate in this case has an action analagous to that of the commutator in an ordinary armature. The first experimental motor constructed on this principle was heated by means of two small Bunsen blowers, arranged with an air blast, and it developed about 700-foot pounds a minute. A second and larger motor is now about finished, which will weigh nearly 1,500 pounds, and is expected to develop about three-horse power. In both these machines electro-magnets are used in place of permanent magnates, thr current to energize them being derived from an external source. In the latter machine, the air for the combustion is first forced through the tubes to aid in cooling them, and then goes into the furnace at a higher temperature.

Electricity versus Gas.

New York World: A reporter interviewed Prof. Barrett to get some facts and figures as to the cost of lighting the city by electricity Prof. Barrett said: "It is safe to say that one electric light would displace seven gas lamps. But outside the thickly populated sections we would use tower lights, which would displace a much greater number. One tower would light a radius of one-fourth of a mile in the outer residence portions of the city. It would take about seventeen towers for the south side, and an equal number for the north side, and twice that number for the west side, or about fifty-eight in all. This would furnish about four-ninths of the light required for the city, leaving about 1,200 electric lamps required to light the remainder of the city. These lamps would furnish vastly more light to the city than it now gets from the gas lamrs, and for this reason: A gas light is only about fifteen candle-power, while an electric light is 2,000 candle-power, or more than a hundred times as great. There is now about to light the city, counting the 15,000 lamps and the 4,000 of lamps, the electric light plant I propose for the city will give 250,000 candle-power equal to fully ten times as much light as all the 2,500,000 candle-power.

Electrics—Within the last five years the business of supplying electric light to stores, etc., in towns of less than a thousand inhabitants has attained importance. The Edison system, as first in the field with a complete system, has naturally done the bulk of this business. Up to the present time it has more than eighty town plants in working, the oldest having been in operation four years.

The system of the Westinghouse company, which now has large plants in Pittsburg, Pa., New Orleans, La., Denver, Col., Minneaplis, Minn., and Trenton, N. J.—to mention but a few of its more important stations—differs radically from that of Edison. In the Edison system the electricity is conveyed directly from the dynamo to the lamp by copper wire. In order that the lamps may not be destroyed by a current of too high intensity, a "low" current is used, necessitating a large copper wire, the cost of the copper when long distances are to be coverod, forming an important item in the expense of instalment. The Westinghouse company starts out with a very small wire of comparatively trifling cost and a current of high electro-motive force or intensity. In order not to burn out its lamps with such a current, recourse is had to a "converter," an apparatus placed where the wires enter each building or group of buildings, and used to convert the high tension current into one just right for the lamps used. This converter works upon the induction principle—the strong current in the street wire inducing a weaker current in the house wire merely proximity; there is no direct connection between the two. Between the Edison and the Westinghouse companies, more than 100 towns in the United States now use the electric light, the total number of lamps in use at present being estimated at 300,000.

Music by Electricity.

Electrical Review: Organs, if used in theatrical performance, are placed in the scenes so that the organist cannot follow the movements of the conductor, and hence experiences a certain difficulty in accompanying a chorus. This inconvenience has been suppressed at the theater of Nantes. Thanks to the use of electricity proposed by M. Debierre the keyboard will be placed in the orchestra, while the pipes, etc., remain in the scenes. The stops will be regulated by electrical action.

A New Marine Guide.

San Francisco Call: Mr. Leon Sirieix, a music teacher and composer of this city, who devotes his spare moments to the study of the mysteries of magnetism, is the inventor of a compass, which it is said by a number of scientific gentlemen located here, must supercede the old style of mariners' compass now in use. In demonstrating the difference yesterday to a large number of persons he had the two compasses—one of each kind—mounted on an iron box to represent the sides of a ship, having a powerful magnet on each side, one with the positive and the other with the negative side neutralized. In the ordinary compass, the variations of the needle were as follows: With the ship on a northerly course, 48° a southeast course, northeast course 65° improved compass there was no variation. The magnetic variation in San Francisco is 20½° east.

Mr. Sirieix in explaining the principles of his compass said: This compass will compensate all influence derived from permanent magnetism and induced magnetism. It will protect the compass needle against the trouble known as "running crazy." The adjusting is rendered most easy, even for an inexperienced hand. It is also protected against atmospheric disturbances. The "heeling" error is also overcome. It will be found true in any state of temperature. Any load of iron put on board of or taken from the ship will not necessitate the displacing of any bars, but will require only the touch of a screw to readjust it, so as to allow the ship to continue her course. It can be set at any place on board ship; that is to say, there is no particular place an board where it must of necessity be set. It does away with vertical bars in front of the binnacle, magnets for compensation around the binnacle, iron correctors and boxes filled with chains outside the binnacle. In one word, it will be found that under all circumstances, it will point to the true magnetic north. When a vessel is on its way north or south, each degree passed creates a deviation, which must be corrected by the captian by means of a screw. The old compass cannot be corrected, but the captain has a table of deviations which keeps him busy making calculations.

The principle is collecting all of the magnetism on board the ship, either of vessel or cargo, and neutralizing those forces, thus allowing the needle to follow its natural direction of magnetic north.

Electric Lighting in Europe.

Electrical World: The prospects of electric lighting in Europe are brighter than they have been for some time. There is a demand for apparatus in Spain, activity prevails in Austria, some large installations are progressing in England, while in the land of the "unspeakable Turk" a "powerful syndicate" has been formed to push electric lighting, beginning with a 50-years' monopoly in Constantinople. In England, especially, important work is ahead: and we judge, from the stray accounts of the work being done at Leamington, that the plant there will be an unusually large one. It is high time that England had several central electric lighting stations; and their construction is evidently nearer at hand than seemed possible a few months ago.

Effect of Eectric Light on Books.

Prof. Wiesner of Vienna has just called attention to an inconvenience attending the use of electric light in libraries. It has been found that a large number of work in the library of the Technical School had become very yellow, and this led the director of the establishment to ask Dr. Wiesner to ascertain the cause of it. Experiment has shown that the coloration is due to light, but that it occurs only with paper containing ligneous substances, such as wood, straw, and jute, and that it does not take place when, through some chemical process, the lignine that forms the essential part of the wood is removed. The yellowing is due to a phenomenon of oxidation. Solar light acts more energetically than dispersed daylight, which itself exerts but a very slight action when it is much diffused, and especially in a very dry room. Gaslight is nearly harmless, by reason of the few refrangible rays that it contains. On the contrary, as the arc electric light, and, in general, all intense luminous sources, emit numerous refrangible rays, they favor the yellowing. As regards the preservation of papers, then, it will be well to choose gas rather than the electric light for the illumination of libraries.

A New Electrical Device.

New York World: The omnipresent aggressiveness of applied electricity is one of the most startling features of modern science. Not content with creating a revolution in the useful arts, electricity has entered the domain of sport. A device has been perfected in England whereby an angler is no longer obliged to watch his tackle nor keep his fingers on the fish-line. A small electrical contrivance is so arranged that a slight pull closes the circuit and rings the bell. The fisherman is thus enabled to flirt, take a nap, read a novel or even play poker with no danger of losing his fish.

But will the true sportsman care to make use of this remarkable invention? Will he be willing to pose as a central office to be "called up" at intervals by tinny victims at the other end of the line? Anglers are, as a rule, a conservative class and will hesitate, doubtless, to make an ally of electricity in their piscatorial sports. In fact, the present administration at Washington has protested indirectly against what may be called progressive ideas in angling. Mr. Cleveland, it will be remembered, never uses manufactured flies when he fishes for trout, but loyally baits his hook with worms. It is probable, therefore, that he will look with favor on a device so radically modern as an electric bell attached to a fish-line. And, indeed, it would hardly be dignified for the president of this great republic to sit on a bank and, like a messenger boy, feel obliged to answer a sudden summons from a bell near at hand.

Altogether, there seems to be little doubt that the new device will fail to find a footing in this country, unless an iconoclastic regime at Washington should succeed that which now sets the piscatorial fashions of the country.

IMPIETIES.

When a man attends service and squares himself for a good snooze when the preacher commences his sermon, especially if it is one he delivered a few Sundays previous, he is not going to regard the whimpering of a baby in an adjoining pew as a musical treat.

"And now," concluded the clergyman, after a long discourse, "we have seen that millions on millions of people have been benefited by following this scriptural injunction." Just then Lawyer Stubbs woke up long enough to say in a sleepy manner: "Move that the injunction be made permanent."

"Where did you get all those buttons?" asked a lady of a little boy who had 10 or more on a string. "Why," was the reply, "don't you know pa is a minister?" "Yes," returned the lady, "but what has that got to do with it?" "Everything," said the boy; "because he has the sorting of the collection basket."

A clergyman calling on a Washington street family was ushered into the parlor, where Miss Betty was seated at the pianoforte. He asked the young lady, a member of his bible class, to "play one of her favorites." "I'm not playing favorites any more," she said. "I'll take the field against them every time."

Clergyman—"How is your health this summer? I trust you have been well during the sultry weather." Undertaker—"pretty well, thank you." Clergyman—"And how is business?" Undertaker—"Poor, poor. I havn't buried a living soul for weeks."

"Come, Bobby," said the old gentleman, "you must go to church this morning. When I was a boy, your age, I had to go to church twice every Sunday." "I s'pose I'd go to church twice every Sunday, too," said Bobby, beginning to get ready—"if I had to."

Minister's wife (packing the trunk for vacation)—"Now, dear, give me all the heavy articles first, as I want to put them in the bottom of the trunk." Minister—"All right. O, by the way, here are my sermons, which I am going to take along; where will you put them?" Wife—"Well, I guess I'll put them in the bottom."

Ideas of duty differ according to the atmosphere in which we are living. It is reported in a Richmond paper that the manager of a wrestling match in the Pavilion thertre opened the exercises by saying: "I want all of you people to enjoy yourselves, and as we are passing on through life's journey toward eternity it is our duty to indulge in recreation and pleasure. I hope you will all remain quiet." We have frequent reasons to observe that general religious work among all classes of the community has greatly increased familiarity with religious ideas and [illegible] much incongruity that [illegible] or absurd.

PEPPERMINT DROPS.

When cigarettes their vapors blow
In people's throats and choke them,
It is some comfort slight to know,
They kill the dudes that smoke them.

There is no use crying over spilt milk. It may be three paris water.

A New York dog lunches on tacks. He must be a pointer by this time.

A half grown shark is said to be good eating. The full grown is admitted to be a good eater.

Fine feathers in a chicken salad are apt to make a man at dinner feel down in his mouth.

Animals have pretty much the same gait. They all walk, trot, run or lope, but there's only one goat.

A school-girl upon being asked by the teacher to define a hollow mockery, promptly repiled, "a bustle."

While the summer girl is at Nantasket breasting the wave her good old mother stays at home and stems the currant.

The most economical man has been heard from. He tried to pawn a coat of tar and feathers, the gift of his neighbors.

A Colorado girl mistook her lover for a bear and filled him with shot. He weighs more than he did, but is not handsomer.

"John," said the wife of a Kentucky editor, "your patent combination pocket knife is all rusty—all but the corkscrew part."

Some of these days the American toy pistol will be introduced into French duelling warfare, and then somebody will get hurt.

A man in Clare, Mich., was told that dogs would not come mad if given plenty of water. He threw his neighbor's dog into the well.

An Indiana woman put her foot down and prevented a railroad company building on her property. This speaks well for the Indiana foot.

If we would annex Canada, where would our cashiers go? It would make some of them seasick to cross the ocean, to say nothing of the expense.

A Spanish officer has invented a war boat that will stay under water four days. Our navy can beat that. We have boats that can stay under water for months.

The raliroad man who loses his position because of "color blindness," will not be sent to the store by his wife to match silks, and that will afford him some consolation, anyway.

It never rains but it pours on the farm of Myron Huskings, of Maple Grove, Mich. The other day Mrs. Huskings gave birth to triplets, two of his ewes to uve lamps, and the family cat to seven kittens.

Owing to the persistent call for "white meat, please," at the summer resorts, a down east farmer is practicing on his chickens in hopes of inventing a breed of fowls that are double-breasted in the back.

Early citizen—Horrible murder across the street during the night, wasn't it? Police (who is supposed to have been on all night)—Don't know anything about it; I haven't seen the morning papers yet.

A machine has been invented that will sew on 3,000 buttons in a day. No one seems to know yet whether or not a marriage license for that sort of a machine costs more than one for the other kind.

The foolish virgin in the scriptures came with no oil in her lamp. Now she comes with a four-gallon can of kerosene to pour on the kitchen fire, and her funeral expenses are added to the loss of the oil.

"My friends," said a temperance lecturer, lowering his voice to an impressive whisper, "if all the grog-shops were at the bottom of the sea, what would be the result?" And the answer came: "Lots of people would get drowned!"

They were talking about expenses and how come men get rich. Said one: "My butcher and baker have made money enough out of me to build themselves splendid houses." Responded the other: "The barkeepers I patronize have built whole blocks out of what I owe them."

A Dakota paper thus stabs its hated rival: "A man living about twelve miles from here died from poisoning Monday afternoon. It seems he ate a lunch that had been wrapped in a copy of our loarhed and disgusting contemporary, and it killed him. Others should take warning."

An Iowa editor closes an rhapsodical eulogium of his state in the following style: "When the roll call is sounded on the judgment day, and the heavens are rolled together as a scroll, and the reverberations of wrecked and ruined worlds peal forth the fiate of eternal rest, I want to hang my weary bones on the gally-rack of immortality and register in four-line pica as a man from Iowa."

GHOSTS, SPOOKS AND DREAMS.

Results of Occult Influence or Talented Liars.

PRESENTMENTS AND WARNINGS.

A Safe Burglary Seen in Sleep—Picturesque Spook Story From Denmark—How the Devil Looks —Fragrant Angels.

A Burglar Seen in a Dream.

Chicago Mail: "I'm no believer in spiritualism, and I'm not superstitious," said Dr. F. B. Ponda, of Jefferson park, "but the warning given me about the burglary of my safe is something I can not explain at all. Twice this summer I have been prostrated with the heat, and last week from Thursday until Sunday, I was quite ill, and confined to my house. These abnormal conditions probably predisposed me to receive the warning. Saturday night I dreamed three times hand running that I caught a man stooping over the back of my prescription desk. I dreamed that I got hold of him and turned his face up. I saw his face but did not recognize him in my dream. My daughter, who is also my bookkeeper, was away on her vacation, and I had a young man named Thomas acting in her stead.

"Sunday morning I came down to the drug store to help him straighten out the cash, which had got in a snarl. During the afternoon I was consulting with Lawyer Mark Reynolds about some papers which he had drawn up for me, when I felt the drug clerk an impulse to go down to go down to the store, and said, 'I must go down to the store, I feel wrong with the safe.' 'Oh, nonsense,' said he.

"Then I told him about my dreams and he laughed at me, but nothing would do but I must go down to the story. On the way I met Mr. Louis Goven, and he wanted to stop and talk for a minute, but somehow I couldn't. I found the front door locked. I opened it, and just as I entered I saw a man's head over the top of the counter. I thought it was Mr. Thomas, the clerk, so I said: 'Hello, Lou, what are you doing here?' He made no answer. I said: 'What did you lock yourself in for?' Still no reply. I went back and found a man crouching behind the counter with his hands full of money just in the attitude I had seen in my dreams. I turned him around, and there was the same face I had seen. I was so taken aback that I didn't know what to do, and she man broke away from me. Reynolds caught him, and with the assistance of some gentlemen who were passing by he was secured.

"He was my own hostler, Charles Williams, whom I had n my employ for two years. He declared that he and my bookkeeper were in 'collogue,' and that the bookkeeper had given him the combination, and that they were to divide up. That is an infamous attempt to ruin the reputation of a good honest young man. The safe was on the quarter turn, and a man didn't need to know the combination to get it open. I went on Thomas' bond myself when he was arrested on suspicion. Williams was taken to jail yesterday. All the money stolen, $211.67 in cash, and about $100 in notes, was recovered and all right. The marvel though, will be my wonderful impression of the event. I'm not a prophet nor the son of a prophet, and never have taken any stock in mediums or 'astrologists,' who, according to their advertisements, 'foretell the past, present and future.'"

Denmark Spooks on the Rampage.

The Medium and Daybreak contains the following from the pen of H. L. Hansen, of Kjoge, Denmark: The haunted house in Ny Tolbodgade is, perhaps, destined to act a similar, if not superior, part as a matter of sensation, as was the case some years ago with the well known house in Laxegade, where 'the devil was loose.' There, if we are correct, the haunting only lasted for some days; but in Ny Toldbodgade it has now gone on for months, goes on till this day, and the story of the little boy, amusing himself by chiming the door-bells and then running away, is now unanimously declared to be apochryphal. Almost every evening and every night the family in the said house are troubled with strange sounds, partly in the rooms, partly on the staircase. Knockings are heard in the walls, loud scratchings apparently issuing from the same; pieces of furniture are hurled about all on a sudden, two iron chairs, which stand on the landing, are literally flung up and down stairs, etc. The inhabitant of the house is a goodly situated merchant, Norwegian by birth. Several witnesses have been present, among them people of indisputable veracity, who most positively confirm the truth of these mystical phenomena. A high policeman has on one occasion been present and heard various sounds mentioned, and he himself saw one of the iron chairs being hurled down stairs by an invisible power. He was accompanied by a spiritualist. This person invoked the 'spirits' and made them manifest their presence through various sounds, knocking, scratching, etc. The policeman set watchmen around the house and investigated personally the different phenomena without discovering any natural cause whatever. He then sent the said 'spirit-conjurer' off together with all present, and how he himself communicated with the 'spirits' and got their answers through knocking, etc. The Norwegian gentleman tells horrible things of what he has witnessed. One night came suddenly a large and heavy iron stand from an adjoining room, floating through mid-air into his and his wife's bedroom. He arose, and moved with some difficulty the rather curious night-bird back to its place. Both his wife and two children witnessed this occurrence. What here has been told will, of course, seem highly incredible to the readers, but we repeat that fully reliable eye-witnesses have given confirmatory report as to the facts. The hauntings have caused quite a rumor, and are discussed everywhere and by everybody. It is said that circumstantial precautions will be arranged for fully penetrating into this mystery.

The Devil Seen at Last.

Pittsburg Dispatch: One man in this country is hourly expecting the destruction of the world. His name is Franz Keiner, and he lives at Allentown. Franz is a man of more than ordinary intelligence, and has been employed for more than a quarter of a century in working about breweries, at gardening and at other kinds of labor that would enable him to sustain the large number of children he has.

His story, as told in the presence of at least twenty other reputable persons, is one of the strangest on record. About a year ago he was employed in leveling off the estate of a man named Barshlager, in West Liberty. On a bright summer morning he went out to rake a section of this place. He worked along, according to his own testimony, until 9 o'clock in the morning. At that hour, as he was fixing up a pile of fallen rails, he was startled by a sulphurous smell and the appearance of an individual he had not known before. Mr. Keiner's description of this individual is better than the statement of any chronicler. said he "I was working peacefully away when the apparition came. It was first clothed in flames of a color unknown to me. Out of these came a voice saying to me: 'Franz, follow me.' When in my stupefied condition I made no endeavor to carry his request into effect a change came over the individual. All supernatural evidences vanished, and for moments it revealed itself to me as being perfectly natural. It could not, however, which at first unnerved me. When I approached closer I found that this emanated from one of the feet and head of the indefinable thing. Upon close scrutiny I ascertained that, though its garments varied with the moment they disappeared at the apex and extremity mentioned. I was induced by this fact to almost come in contact with the thing, and learned that however zealous was the endeavor of the spirit, his apparel was consumed at one foot and at the head by fire. As often as this occurred a cloven foot and horns were disclosen. In desperation I asked him what he wanted of me. He replied, 'Thy soul,' extending while doing so a hand, the palm of which was nearly filled with gold.

"In anguish I cried out, 'Are you the devil' and he answered 'Yes.' Dropping on my knees I prayed to heaven for him to depart. When I finished my appeal he said: 'I will go if you promise to meet me again.' Rather than endure his presence I gave my consent, asking him when he would come again. He replied: 'Soon, and to tell you that the world will be destroyed.' He thought to embrace me as he uttered these words. I fled and fell prostrate at least two miles outside of the woods. Since that time the demon has haunted me and I believe he will come again."

The men employed at Nussen's malt house, on the Brownsville road, say that Mr. Keiner has told them of this daily for the past year, and warned them to make ready for the final destruction of the earth. One of them told the reporter that Mr. Keiner had induced him to go off one night and dig for gold, saying that a spirit had come to him and told him where the potent stuff could be found. All night they had labored, the person in question being the first to give up, saying that ashes were more numerous than nuggets of wealth. When lately questioned by the reporter, as to whether he actually underwent the experiences related, Mr Keiner said: "I will raise three fingers to heaven and swear it is true. I marked the day and date of the appearance of his satanic majesty on one of the trees in the woods in weich he appeared io me. I am expecting him every hour, and am prepared to ward off his approach by things known to myself, but not to be revealed."

A Presentiment.

Cincinnati Enquirer: While in company with a number of neighbors who had gathered at a country funeral, and were intending to convey the remains to the village of Patterson, O., for burial, the daughter of the deceased lady, who had just arrived from her home in Indiana, broke upon the silence of the occasion with the statement that the death of her mother had come to her in a presentiment the night before she received the telegram announcing it. She had been unusually sad all day, and she could not shake from her mind the impression that she was going to have trouble. She attended to her work with a heavy heart, and received visitors in a formal, listless manner. Thus the day dragged on and dusk arrived. She was sitting alone at last in her room, and wondering when her husband would return.

All at once her little son came running to her and sat down by her side. He was prattling gleefully, when her mother's form, slothed in a dark shroud slowly passed in from another room, and approaching the child threw her arms about him and before the daughter could overcome her bewilderment the sable form had vanished. The young lady knew that her mother was not within 100 miles of home and she at once imagined that she would soon hear something explanatory. When she recovered the telegram announcing her mother's death it was just what she expected, and after she arrived at the side of her mother's corpse the very shroud resembled what the shadow had worn in the presentiment. The relatives were much impressed with the statement and regarded the incident as remarkable.

THE CHAUTAUQUA CIRCLE.

The Aims, Methods and Prospects of a Great Educational Enterprise.

PLANS OF THE LOCAL CIRCLE.

The Course of Reading for 1887-8 —How and When to Begin— How Great Results Can be Accomplished.

Among all the educational movements of the present day none have become more widely known or accomplished better results than the Chautauqua literary and scientific circle.

This organization aims to promote habits of reading and study, in nature, art, science and in secular and sacred literature, in connection with the routine of daily life; to give college graduates a review of the college course; to secure for those whose educational advantages have been limited the college student's general outlook upon the world and life, and to develop the habit of close, connected, persistent thinking.

It proposes to encourage individual study in lines and by text-books which shall be indicated; by local circles for mutual help and encouragement in such studies, by summer courses of lectures and "students' sessions" at Chautauqua and by written reports and examinations.

It is for busy people who left school years ago, and who desire to pursue some systematic course of instruction.

It is for high school and college graduates, for people who never entered either high school or college, for merchants, mechanics, apprentices, mothers, busy [illegible] farmer boys, shop-girls, and for people of leisure and wealth who do not know what to do with their time.

Many college graduates, ministers, lawyers, physicians, and accomplished ladies are taking the course. They find the required books entertaining and useful, giving them a pleasant review of studies long ago laid aside. Several of the members are over eighty years of age; comparatively few are under eighty.

More that sixty thousand names are enrolled in this so-called "People's College." Although not a college at all, it has put educational influence, atmosphere, and ambition into the homes of the people, which will lead many thousands of youth to seek the education which colleges and universities supply.

Beginning in a small way some fourteen years ago, the society has spread in all directions, until now the great majority of intelligent people are more or less familiar with the chautauqua movement, and while some hesitate to commit themselves to so large an enterprise as a few year's course of systematic reading, still many thousands of busy men and women have profited by wisdom and the disinterested labor of the founders of chautauqua. The circle has received the hearty endorsement of Wilham Cullen Bryant, Bishop Simpson, Dr. Mark Hopkins, President Seelge, of Amhurst, Dr. Lyman Abbott, and other leading educators of America.

All members of the circle, as well as others who may wish to know something of the course of reading, will be interested in following outline of studies for 1887-8.

History of the United States. By Edward Everett Hale, D. D.

American Literature. By Prof. H. A. Beers, A. M., of Yale university.

Physiology and Hygiene. By Dr. M. P. Hatfield.

Philosophy of the Plan of Salvation. By J. B. Walker, LL.D.

Readings from Washington Irving.

Classic German Course in English. By Dr. W. C. Wilkinson.

History of the Mediæval Church. By J. F. Hurst D. D. LL.D.

Readings in The Chautauquan. A series of papers on the following subjects:

1. American industries: The Manufacture of Salt, Flour, Glass, Pottery; Oil Producing and Refining, Car Works, Electric Lights, Ship-Building, and Cloth-Making.

2. Questions of Public Interest: What are Pure Politics? Civil Service Reform, Co-operation, Municipal Government, Duties of Citizenship, Monopolies, The Apprentice System.

3. Current Literature: American, two papers; English, two papers; French, one paper; Scandinavian, one paper; German, one paper; Russian, one paper; Italian, one paper.

4. Homes of American Authors: New England Authors, New York and Vicinity, The South, The West.

5. Botany: 6. History and Literature of the Far East, 7. Great Events of the Middle Ages; 8. Life and Manners; 9. Health Papers; 10. Out-of-Door sports; 11; Sunday Readings.

The course embraces simple, entertaining and instructive reading in ancient and modern history and literature, in physical mental and moral science, and in all matters that pertain to a true life—physical, intellectual, industrial, domestic, social, political and religious. It is unsectarian and unsectional, promoting good fellowship and fraternity, inspiring help to the home, the church, and the state. All are alike welcome to its fellowship.

Four years ago the movement gained an organized existence in Omaha by the formation of the "Omaha C. L. S. C." The members of the class of 1887 are now numbered among the list of graduates, but they will long remember the pleasant hours spent at the Chautauqua round table, at their homes, and at memorial and other special services. Some '87s will read the after-course and keep up their connection with the local circle. The places of others will be filled by new readers, and these, with the classes of 1888, 1889 and 1890 will continue the organization. An effort will be made to have the coming year more successful than any that have gone before. The year's reading will begin the 1st of October. Before that time a meeting will be called for organization. The cost of books and the magazine for the year will be $6.50. All readers are urged to send in early orders for books, and thus be prepared to begin the work promptly, and follow through the year the reading recommended for each particular week. To fall behind at the start is a source of discouragement which is not sufficiently appreciated.

Those wishing further information, or desiring to order books with the circle, are invited to communicate with the president, Mr. H. F. Bundy, Room 25, Omaha National bank building.

EDUCATIONAL.

The only chair of sanitary engineering said to exist has just been established at the Imperial university of Japan.

Dr. Mary Taylor Bissell, sister of the president of Vassar, is interested in the project of a college of phyvical training for girls, and, though nothing is definitely concluded, the outlook is fauorable.

The Meadville theological seminary has conferred the degree of bachelor of arts upon Miss Marion Murdock, pastor of the Humboldt (Kas.) Unitarian church. She is thirty-six years of age.

The terms of the draft charter for a new university, to be named the Albert university of London, and designed to include a district of fifteen miles' radius from Somerset house, have been agreed upon by the councils of University and King's colleges.

The Hungarian anatomist, Prof. Louis Arabyl, died recently at the age of seventy-five. He became a professor of pathological anatomy in the univkrsity of Pesth as early as 1884, and wrote a number of worke on topographical and descriptive anasomy, as well as one on "Typoplastik."

Apropos of the present general move to introduce into schools the steady of alcohol in its relation to physiology, let us suggest a wider application of the notion. According to a wide-spread doctrine, most diseases are due to the presence of germs. Let children, then, be taught all about ferments and microbes, schyzomycetes and bacteria.

The public free library has come to stay with us. It will soon be reckoned as necessary for public education as the common school, and will be as generously supported from the general funds, where individual generosity has not endowed them. They will greatly enlarge and improve the reading of the community, broaden the general intelligence and quicken the inventive spirit of our active and intelligent nation.

Miss Marian E. Sheldon, daughter of W. E. Sheldon, has recently admitted to the girl school of which she is principal in Adabezar Turkey, the first Molsem girl who ever entered the lists for a regular education. Miss Sheldon began teaching in the language after being in the country five months. She has translated two American text books into the Armenian. Adabazar, where she is located is 100 miles east of Constantinople. The Turkish government of the province has, through the agency of Miss Sheldon become much interested in the education of girls.

A special meeting of the board of trustees of Princeton college has just been held at Princeton to accept and put into operation a number of additional fellowships. At the last meeting of the board the whole system of instruction and study at Princeton was so shaped as to give practical effect to President McCosh's long cherished views in respect to a typical American university. The system in short, involves the introduction either in the undergraduates or post-graduate course of all the branches taught in any of the universities of the world, but without undue disturbance of the time honored curriculum.

RELIGIOUS.

Sam Jones receives $500 for three days' work at Round Lake, N. Y., during which time he preached nine round sermons.

The summer school of christian philosophy is holding sessions this year at Key East, New Jersey, from August 16 to August 25.

Russia will celebrate the 900th anniversary of the introduction of christianity by the baptism of the Grand Duke Vladimir on July 15, 1788.

Bishop Perry of Iowa, has been chosen by the Church of England Provincial Synod at Hailfrx to the vacant bishopric of Nova Scotia.

Bishop Walker, of the Episcopal church, since going to Dakota one and a half years ago, has built eleven new churches. He reports his church as prospering.

The general synod of American Lutherans has condemned the "International Sabbath School Lessons" because they do not recognize the church festivals of that denomination.

Fourteen thousand openly professed Protestants belong to the sixty Protestant organizations in Spain. It is just eighteen years since the first Protestant chapel was opened in Madrid.

The national association of local preachers of the Methodist Episcopal church will hold its thirtieth annual session in Harrisburg, Pa., September 17-20, in the Ridge Avenue Methodist Episcopal church.

Over $100,000 has been contributed by Catholics over the country to make needed repairs on church property in Charleston, South Carolina, damaged by the earthquake. There was $7,229.36 raised in New York city and $4,507.77 in Brooklyn.

BENTONVILLE, Ark., August 12.—Sam Jones and his brother John have caused to be made a definite postponement for a meeting at Elm Springs, twelve miles south of this place, on Friday, September 9. This will occasion the assembling of one of the largest crowds ever seen in Northern Arkansas.

Some of the newspapers having spoken of the Order of Deaconesses as having been recently revived by a prominent clergyman in New York state, Bishop A. Cleveland Coxe makes in a Buffalo paper the following statement, with reference to the subject: "Deaconesses," he says, "have been in charge of the Church Home in this city, Buffalo, for many years, and are recognized by the canons as an institution of the church. The order exists among the French Protestants and the Lutherans of Germany. They have long existed in Long Island and other dioceses. Thirty years ago, the writer, then a clergyman in Baltimore, took an active part in the establishment of deaconesses there, and Mrs. Tyler, a lady of family and culture, was the first deaconess ordained by the bishop of Maryland, at that time."