THE REALM OF ELECTRICITY.

Review of the Latest Developments and Inventions.

RAILWAY ELECTRIC LIGHTS.

Electric Lighting for Private Residences-Mechanism for Balloons-Electric Bailway in Canada-A Brain Tester.

Train Lighting on the Continent. Electrical World: From recent acto give some description of two systems now in use on the continent in which the dynamo is carried on the train and power taken from an axle. Lighting trains by an electric current supplied by

rains by an electric current supplied by a dynamo carried on the train has been tried for some time in England, on the London, Brighton & South Coast, and there are now on that road four trains provided with this means of lighting.

For over two years there have also been important experiments made in this direction in Germany, and in consequence of the favorable results of the experiments in the electrical works in Canastatt in the spring of 1886, a passenger train on the route between Stuttgart and Hall, on the Royal Wurtemberg railrosd, has been lighted in this way. Since May of this year a passenger train on the Main-Neckar road, between Frankfort-on-the-Main and Heidelberg, has been lighted by the same syttem. has been lighted by the same syttem. The following conditions were im-

posed:

1. The lighting should be independent of the rate of speed and direction of the train, and particularly the stopping of the train must have no influence upon it.

2. The lighting must be independent of the company and the movement of the the locomotive, and the movement of the dynamo must also have no connection

with it.

3. It must be possible to separate the cars without affecting the light.

4. It must be possible, when necessary, to change cars belonging to an electrically lighted train for others, provided, of course, with electric lamps, but not charged for immediate use, and have them so arranged that they can be lighted at once. In the same way it must also be possible in case of emergency to add to a connected train extra cars to a certain extent without detriment to its lighting power.

5. The arrangement for the lighting

must not require an electrician to attend to it, but be manageable by the employes of the road.

The general disposition of the apparatus on the two trains already mentioned is as follows: In the baggage car are the dynamo and regulating apparatus. The dynamo is driven from the nearest axie, and the current generated abayes accumulators. Every car has charges accumulators. Every car has two accumulator batteries, each of eight accumulators (Khotinsky's system), one of which serves to supply the lamps, and the other is in reserve. By this means the lighting is made independent of the movement or velocity of the train, and fluctuation of the lights is avoided.

ta the earlier experiments the current passed from the dynamo directly to the lamps, and only when a certain speed was reached were reserve batteries inserted. This always caused fluctuations in the light. By the present arrangement of the accumulators, if the current is diminished in consequence of exhaustion, so that a diminution of the light is noticeable, the second charged battery can be attached to the lamps and the empty be attached to the lamps, and the empty one be connected with the dynamo. As the charging of the accumulators is sufficient for five hours, the train employe, after this, requires only a turn of the hand to make this connection.

As the dynamo follows the direction of the train, running first right, then left, a simple automatic contrivance brings the contact brushes to the right position, and at the same time controls the direction of the current. Other automatic regulators prevent a return current to the dynamo from the reserve batteries when running at low speeds, and also equalize the current from the dynamo to the batteries, making it independent of the number of

revolutions of the dynamo.

For the lighting, lamps are used of the Bernstein system, which are attached to the ceiling of the cars and protected by glass bells. In the third-class cars two lamps are used, each of three-candle power. In the first and second-class cars, three lamps of five-candle power each are used. In the first and second-class cars arrangements are also made to shade the light in an artistic manner.

The connection between the cars is ade by a cable, with contact surfaces. The coupling resembles that of the Westinghouse brake.

On the trains running between Stuttstorage battery is about 330 pounds, or 660 pounds to the car. As to the cost of this manner of light-

ing, a well-known electric factory gives the following figures: For fitting up a baggage car with dynamo, etc., from cannot yet be estimated from actual exerience, as the the time of trial is stil so short, can be calculated by supposing the life of the lamps to be 600 hours, and that of the accumulators three years, and charging 10 per cent per annum of the other expenses of fitting, which would amount to three-quarters of a cent per lamp per hour, while the cost of equivaient gas lighting may be reckoned at from .84 to 1.15 cents.

Private Electric Lighting.

Providence Journal: A system of elec-tric lighting for private residences has up to the present time been sought for by trical engineers without obtaining results either practical or economical. A Journal reporter yesterday saw an interesting exhibition of a method that will of a quality that large establishments historic alone have been able to afford economically. A little Bowners dynamo furnishes the current, and is run by a small Shipman engine of two horse-power. The dynamo itself is but little larger than an ordinary waste basket, and the engine coouples an insignificant corner of the proon, running automatically hour after hour without attention, maintaining the same pressure and speed. Fins little plant runs fifteen incandescent lamps of matter eandle-power each, of unusual ateen eandle power each, of unusual electric lighting in private honses is an accomplished possibility. In the same engine, is a similar dynamo, the Waterhouse, of a little larger size, that astonishes many tricians who have visited it by fur ishing with two horse-power four are ights of 2,000 candle-power each, for it as always been accepted as a fact that a the the two of twenty-five candle-power, two of twenty-five candle-power, two of the twenty-five candle-power, two of the two of 125, and one pare light, while it operates a sewing machine from a small electric motor with almost fierce rapidity. This dynamo is self-adjusting, and as the lights on the circuit are successfully turned off the remaining ones are not affected in brill ning ones are not affected in bril liancy or steadmess. The especial interest in these two electric systems centres in the fact that they afford a practical colution of the problem of lighting pri-

Electrical Mechanism for Balloons Ricctrical World: It is announced that Captain Renard, chief of the military balloon service at the camp of Chalons, France, has invented a mechanism for alleon steering and propelling. The etrical World: It is announced that steering and propelling. The

rate houses cheaply and practically.

electric balloon made by him two years ago could not make headway against a current of the velocity of more than five meters a second; that is to say, against a light wind. It is affirmed that with his invention the balloon will be able to resist a current of double the strength. If it is true, it is a step forward which may render balloons really useful in times of war. Captain Renard is so confident of the success of his new propelling mechanism that, in order to prevent the secret being discovered, he is having each piece of the machine made in a different establishment and in various parts of France. When they are all finished they will be sent to him, and he himself will put them together. It is said that the macaine will be completed by about the end of September, when the invention will be put to a test without

delay. Electric Railway in Canada. Mr. J. H. Killey, of Hamilton, Ont., writes to the Ottawa Evening Journal, advocating the use of the great water advocating the use of the great water power of the Ottawa to generate current for electric lights and the street railways. Steps have in fact been taken in this direction. He adds: "An electric railway is now being equipped between St. Catharines, Ont., and Thorold. It is six miles in length. The dynamo will be run by water power from the Welland canal. An electric railway is also under construction at Niagara Falls, Ont. It will be near the water level in the gorge will be near the water level in the gorge from the suspension bridge to the falls. There will also be two electric double elevators and electric lights in cars and along the line of the railway, the writer having to superintend its construction, etc. The motive power to run the gen-erators will be steam." Why not water power in this case also?

Electric Brain Tester.

New York World: Wall street was treated to a new thrill the other day, compared with which the sensations caused by the recent startling occur-rences in that speculative centre were as water to ardent spirits. It was whispered about that Dr. William A. Hammond had been examining Jay Gould's head, and that he had made the examination with an instrument which faithfully reported everything that was going on inside, together with numerous valuable facts respecting the inter-cranial construction.

The instrument is the invention of Dr. J. S. Lombard, formerly of Harvard college, now of Leamington, England, where he has gone to live, and is a wonderfully delicate thermometer, whereon the heat is recorded by changing it into electricity, and by this means are most delicate differences of temperature indi-

Dr. Hammond explained the operation familiarly by saying that in all properly constituted right-handed men the right side of the head is the hotter. If the thermo-electric poles are applied to the two sides of the head, and this fact is not made clear, there is some improper accumulation of blood which brings about a different result. Similarly, the forehead in all healthy people is hotter than the back part of the head. If the calorimeter should indicate something different from this, then again there would be something wrong. Repeated experiments and observations will ordinarily show what the matter is. Variations from the standard temperature wil reveal the presence of incipient paralysis and other diseases of the brain.

Protecting Battery Wires.

A correspondent writing to the Elec-trical World asks: "I should like to inquire what causes the wires connected to the binding posts of a Leclanche battery to turn green and eat off when the battery is hermetically sealed, so that there is no chance for a creeping up of the hauld? Is there a possibility that the wire? If so, what is the best wire to use for such connections, and what besides paraffine can be applied to the wire to protect ity

ANSWER-Where the salt itself does not creep it is usually the ammonia gas escaping from the cell which attacks the wires and binding posts, especially when the cells are in a damp situation. Besides paraffine, shellac or asphalt varnish pplied to the bare copper will protect from corrosion.

A New Dental Mallet.

Electrical World: In the operation of filling teeth, dentists are much incon-venienced by the difficulty of obtaining a sufficiently hard blow, and at the same time striking the exact spot under treat-ment. To accomplish the purpose several forms of dental "pluggers" operated by electricity have been devised. In some of these the entire working apparatus of these the entire working apparatus instrument, thus making it somewhat bulky. In order to avoid this, Mr. Philip Helmer, of Clinton, Iowa, has recently devised an apparatus in which the circuit breaker is entirely separated from the plugger, and the construction of the latter gives increased power to the blow

Electricity Through Gases.

Electrical World: In the number of the Proceedings of the Royal society which has just appeared, there will be found a paper by Professor Schuster, F. R. S. containing an important contribution to our knowledge of the phenomena of the discharge of electricity through gases. The principal result established by these researches, says the London Electrician, is the following: "A steady current of electricity can be obtained in air from electrodes at the ordinary temperature which are at a difference of potential of one-quarter of a volt only (and probably less); provided that an independent current is maintained in the same closes In other words, while a con tinuous discharge is passing through a erty of conducting crossways under an E. M. F., which, says the author, "I believe to be indefinitely small, but which the sensitiveness of the galvanometer I was using has prevented me from tracing with certainty below a quarter of a volt. He then shows that this leads to the important conclusion that "there cannot b a finite difference of potential between gas and a metal in contact greater than that amount." This conclusion has gen-erally been tacitly assumed in discussions of contact potential, and it is therefore the more satisfactory to obtain an experimental proof of its correctness. Pro lessor Schuster accounts for the observed facts upon the following theory: "If the two atoms of a gas making up the mole-cule are charged by opposite electricities, but are held together in addition by molecular forces, a finite force is required to overcome the latter. But as soon as that force is obtained and the atoms themselves are set free to diffuse and constitute a current, these atoms will be able to follow any electromotive force which we may apply. If then, we have auxiliary electrodes, these electrodes will establish their electric field, which we can never screen off completely from any other part of the vessel except by closed surfaces. The atoms, with their positive and negative charges, will diffuse across to the auxiliary electrodes and give off their electricity to them, No in the auxiliary electrodes, because even if there is work done in making an atom interchange its positive for negative electricity, that work is undone again at the other pole, where atoms of a similar kind interchange negative for positive

Nearly Killed by Electricity. New York Tribune: A small steam engine, in the rear of the National theatre in the Bowery, used to run an electric machine, and has been in charge of William Hart, a competent engineer Before the time for the theatre to oper last evening, Hart noticed that one of the electric lights above the boiler had

electricity.

been burned out, and he climbed on the boiler to place a new globe on the elec-tric wire. He used a pair of pliers to disconnect the globe. At that time the engine was going at full speed. The iusulating cover of the wire had been cut sulating cover of the wire had been cut through, and as the pliers closed on the wire Hart received a charge of electric-ity that knocked him senseless. He fell backward on the boiler and lay there writhing in convulsions, until a small boy who happened to be in the engine room called in men from Elizabeth street. They drauged him off the hot boiler and Policeman Beller ran to the Mulberry street police station to summon an ambulance.

an ambulance. The surgeon from St. Vincent hospital worked over Hart for nearly an hour before the engineer became conscious. Before that it required the strength of several men to hold him at times, so violent were the convulsions that racked his body. When Hart was able to talk he said he felt as if a million needles were sticking into him at the moment of getting the shock. He refused to go to the hospital, but after the ambulance went away he was attacked again by convulsions that lasted over an hour. Hart had been 'shocked' less violently on three previous occasions, and he said last night that the unpleasant sensations were off in a day or two. The Electric Search Lamp Under Fire

Some interesting experiments, according to the London Electrician, were recently made at Lydd camp with the electric search light. It was desired to work the light under the fire of the rifles and the Gardner guns of an enemy. The engine and apparatus which worked the light were placed under a casemate about 200 yards from where the light was actually seen. The light was so arranged as to be under cover and to throw the rays on to a reflector on the top of a parapet, by means of which the country round was scoured under a shower of bullets fired at it. The reflecting disk had a diameter of twenty-six inches, and it was found that, although it was struck by bullets several times, the damage was practically nil, the reflecting power being only diminished by the area of bullet holes. The reflector was worked by four temporary guy ropes, divided equally round its surface, two to give depression or elevation and the other two for lateral direction, all these move-ments being worked from the casemate. The difficulty in shooting at this bright light was found to be very great indeed. Aim could only be taken through a dark piece of oiled paper placed over the foresight. Ten marksmen of the East Surrey regiment and a Gardner gun were brought to bear upon the light. Several hundred rounds were fired at 1,000 yards and 600 yards. It was found, after two hours' sharp firing, that the reflector had been struck fifteen times without being seriously damaged. The light was shown at intervals of about a minute only.

Electricity and Cocoa. St. Louis Globe-Democrat: The use of electricity, cold and exercise are regarded as tonics by many. They all act in this way, there can be no doubt, but whether the first one named has any special tonic power is still not proven to the satisfac-tion of everyone. Electricity undoubt-edly causes muscular contraction, but it is not by reason of its being akin to or identical with nervous energy. It has the power of compelling a discharge of nervous force sometimes when it would not otherwise be developed. It is of immense value in exercising paralyzed muscles and preventing them from wast-ing away until the nervous system can right itself and resume control of them. Through the imagination it lights again the spark of hope in the discouraged sufferer, and occasionally enables the will to regain control of muscles whose use has been forgotten—as in total loss of voice in certain hysterical cases. As electricity is simply one of the forms of force, like heat and light, it can add nothing to the constituents of the body. It may stir up matters and hasten vital changes, and in this way, like exercise, massage, cold baths, shampooing, etc., it may indirectly act as a tonic. But the extravagant claims of some of its ad mirers are without foundation, in fact,

Lightning in a New Role. Electrical Review: The following abstract of a letter, addressed to Mr. Ch. D. Jenney, of Indianapolis, contains a most interesting statement as to the effects of lightning on an electric light plant at Greencastle, Ind.:

other than those just stated.

"On a recent night we were for over an hour in the midst of an electrical storm at this place. For half an hour of that time the are light machine, feeding thirty lights, was run entirely by the currents in the air. The lightning arrester showed for that time on arc of green light, which was as steady as a lamp. The regulator set the brushes over till they were neutral, so far that without the air current no lights would have shown. The lightning arrester on the series incandescent circuit showed a continuous line of light, but not so strong as the arc. The engineer said that he had to let the lire go down low to keep steam low enough. After the storm the regu-lator placed the brushes back in the field, and it required the usual power of the engine. The air was fairly ablaze with electricity from 9 to nearly 10:30 p. m.

Electricity as a Domestic Servant, The New York Mail and Express has a leading article on the electric bootblack, and remarks: "If one may black his shoes by electricity, why not brush one's hair and teeth by the same ever-ready agent? The same machine, if the wire were made long enough, would do for all three. Of course, there would have to be three different brushes, but that could be easily arranged. A little fur-ther extension of the same principle would give us an electric broom to sweet our floors, and an electric duster. A slightly different attachment being used one might put on a watch-key to the revolving part of the machine and wind up his Waterburyin an almost incredibly short time. The same "twirler," or whatever they call it, might be made to run an egg-beater or stir a bowl of cake while, by putting on a contrivance mod eled somewhat after the pattern of hay-tedder, bread might be kneaded as thoroughly as anybody might choose without the expenditure of a single foot-pound of muscular strength."

A Frightened Laborer. St. Paul Pioneer Press: I have a friend at the capital who dearly loves a joke, and he told me with much gusto an incident which took place in a lower town grocery store. In the basement of the store is the apparatus with which the proprietor generates the electricity for his own store lighting plant. A laboring man had occasion to go down stairs looking for something when my friend and the engineer were talking about the great drawing power of one part of the magnetic instrument. The laboring man was walking near to this magnet, which is of great power, when suddenly, as he moved around, his tin pail was snatched from his hand and drawn by the mys terious element whack up against the iron. With a yell like a Sioux Indian the frightened man turned, gave one glance at that tin pail hugging the black iron and broke for the stairs on the dead run

Electrical Brevities. The use of electric light on public buildings at Washington has led to a great increase in the number of spiders webs. The lights attract multitudes of insects, and these, in turn, attract the

An electric light plant has been ordered for Kobe, Japan. Activity is noticeable everywhere the department of applying electricity to street railway propulsion, and every in-dication points to the early execution of

some very heavy and important work in this field.

Preparations for the electrical exhibition of the New York Electrical society are now going on on all sides, and before the month is out a very creditable display will be laid before the public of New York, where nothing of the kind has ever been attempted before.

The subject of train lighting by electricity continues to attract a large share of public attention, and will be the more pressing now that the days grow shorter and the use of artificial illumination be-comes more necessary.

Italy and England are joining France in the movement for lighting all the theatres by electricity, and in Spain also the electric light is being resorted to for securing greater safety in public halls, theatres, cafes, etc.

Russell Sage is quoted as saying that the Western Union is master of the tele-graph situation, and will not pay more than \$3,000,000, if that much, for the Bal-timore & Ohio Telegraph company. It is stated that the electric light of the Statue of Liberty in New York harbor is proving very attractive to large numbers of small birds and bats. They fly against the thick glass, and being stunned by the shock fall to the ground below.

The Bell telephone people know nothing about the proposed Wharton Baker \$50,000,000 telephone and banking syndicate of China. Telephone patents do not hold in China, and outside of small European and American colonics the telephone could not be introduced into China. The government is secretly op-posed to all foreign enterprises and underhanded in its methods of defeating them. No reliance can be placed even on its concessions.

The American Institute of Electrical Engineers held its first meeting and din-ner for the present season on Tuesday evening, September 20, in New York. The title of the paper read was: "On Electric Street Cars, with Special Refer-ence to Methods of Gearing." The author was Mr. Anthony Reckenzaun,

Mr. C. A. Breck, proprietor of the Electric Light Engraving company, of New York city, proposes to equip his gallery with actual 2,000 candle-power focussing lamps, and has ordered from the American Electric Manufacturing company a specially wound dynamo for this purpose, with the required focussing lamps, the whole to be operated so as to produce a daylight effect by concentrating the light at a given point. This will result in a more rapid means of photo-graphing, irrespective of the condition

CONNUBIALITIES.

A man named Day recently mairied Miss Week in Minneapolis. There are now two Days to the Week in that family. A frontier agent of the government has married a Cree Indian maiden. These Indian

agents are a graceless lot, and more of them should be Cree-mated.

Prof. F. J. H. Merrill, of Columbia college, was married recently, the bride being Miss Edgertob, of Ripon, Wissonsin, the first woman graduate of that institution. Judge Walton, of Corsicana, Texas, has performed the marriage ceremony for 785 couples during the last eighteen months. His revenue from this source exceeds \$6,000.

A rural bridal couple got married in Free-port the other day and went to a restaurant for the wedding feast, which consisted of pumpkin pie and two bottles of pop. The bride wore a long white veil.

A young man and woman numted all over the town of Reading a few evenings since, without finding a preacher to join them to-gether. It was near midnight when she com-promised on a justice of the peace. The poker craze has hit Dakots very badly.

The poker craze has nit Dakota very charry.
The other day Frank Moxie was to have been married. The bride was there, and the parson and friends, but the bridagroom was missing. The parson went after the delinquent and found him playing a big game of poker with some prospectors and winning all before him. He did not chide him, but got into the game, and there was no wedding that day. "Business before pleasure," they said, and stuck to the game.

A young couple of Hardin county, Ken-tucky, wanted so much to get married in spite of parental opposition that they started from home on a recent Sunday afternoon, walked in the broiling hot sun twenty miles across the country to Upton station, where they caught a train late at night for Louisville. When they arrived in Jeffersonville they were so thickly coated with dust and coal soot that they were thought to be negroes, but they washed up and married. oite of parental opposition that they started A young couple called at Judge White's

house in Chicago one evening and asked him to matry them. They looked like working people. As he stepped to one side to make some preparations the young man came up and whispered in his ear, "I say, Judge, I hain't got no stuff to night, she's got the stuff them has been been all like the stuff them. there in her bag, I'll bring it to you to-nor-row, but I don't think it would look we'l to begin on her in that way to-night, do you?" The ceremony proceeded and next merning the young man was on hand with the stuff.

Some time in June Henry Puris, a whole-sale grocer of Chicago, began taking baths at the Rammelsburg, Ark., hot springs, where he has been a frequent bather until Monday. About five weeks ago Katie L. Edwards, a colored girl, came there for a few days as a substitute. Puris met her and lost his heart. substitute. Puris met her and lost his heart. Tuesday night he secured his license and Wednesday night they were married by the Rev. W. B. Carson, the pastor in charge of the African Methodist Episcopal church there tuking the train at once for Chicago. Puris made his wife a wedding present of \$10,000 cash and his check for \$5,000. Katie has married and divorced from a negro hus-

A couple who hadn't been married more than ten minutes, and who were as oblivious to the world as the newly married usually to the world as the newly married usually are, furnished sport for passengers on an Arizona village horse-car. They were making their wedding journey, and the street railway was the line which they patronized. The bride was clad in a blush and white dreas, and used her back to conceal the groom's right arm, while she amused herself by playfully trying on his gloves. The husband had occasion to converse with his wife in a whisper, and every time he whispered he left a kiss on her neck. Finally the conductor became nervous, and stopped the car with a jerk. Somebody said "rats," and all hands sot off, that is, all except the two who had been made one. They went to the end of the route, gave another nickel, and rode back again.

EDUCATIONAL

Mrs. Martha H. Moore has bequeathed to Colby university \$5,000 to be applied for the purchase of a library. Harvard opens September 29. It is expected that there will be fully 2,000 students in the various departments.

The youngest daughter of Mr. Gladstone is principal of the college for young women at Newnham, near Cambridge.

Wellesley college opened Thursday. Six hundred and fitteen students registered, o whom 180 are members of the freasman class Iowa Wesleyan university receives \$10,000 from the citizens of Mount Pleasant, which insures the erection of a greatly needed new building.

A state university for colored people is to be built in Montgomery, Aia. The city has given \$5,000 and three acres of land to the institution.

President McCosh, of Princeton, has announced that applications for the degrees of Pn. D., B. D., D. Sc. and Litt D. would now Charles It. Perkins, Ph. D., late of John Hopkins university at Baltimore, has been placed in charge of the department of physic, recently added to the Bryn Mawr col

Dr. Coggswell and his wife have given a million dollars for the establishment of a technic school, where youths will be taught the mechanic arts gratuitously, in San Fran-

A Yaie diploma 122 years old was recently picked up at an auction sale in New York it belonged to the Rev. Elam O. Potter-who was graduated in 1765, under President The number of students enrolled at the uni

versity of Leipsic for the summer semester is 3,054, of whom 1,446 are Saxons. Last win-ter the whole number of students in attendance was 3,25L The theological seminary at Andover opened a few days ago. Dr. Egbert Smyth really in charge, although nominally dis-

GREAT AUCTION SALE!

OF TOWN LOTS AT

GRAND ISLAND, NEB., SEPT.

AT 2 O,CLOCK P. M.

160 LOTS WITHOUT RESERVE IN THE BEAUTIFUL ADDITION OF

WEST VIEW!

This is beautifully located and view in all directions fine. One dollar invested here will return ten. Grand Island has a population of 12,000, is the end of a division of the U. P. railway and terminus of the St. Joseph & Grand Island railroad. The O. & R. V. railroad starts from Grand Island, penetrating the North Loup country. The B. & M. railroad passing through Grand Island toward the great agricultural, coal and

cattle country of the great northwest. This makes Grand Island the Gate City to the great northwest, a country rich in agricultural and mineral resources.

The Union Pacific shops, of solid stone, the finest in the state, are located here, capable of employing 800 hands. The new brick canning factory, employing 150 hands, has just completed its first season's work. The Soldiers' Home, a chair factory, a number of two and three story brick blocks, a four-story brick hotel (costing \$75,000) and many fine residences. The operation of three and one-half miles of new street railway, the completion of our new \$80,000 gas works, making two gas and electric light companies; the extension of our \$45,000 system of waterworks now in operation; the erection of extensive stockyards by the U. P. railroad company, all evidence a steady and permanent growth which promise the doubling of our population in the next twelve months.

Seven fine lots given away to purchasers and those present as the sale progresses. Railroad fare refunded to those purchasing one or more West View lots who come not to exceed 50 miles

to the sale. Railroad fare refunded to those purchasing \$200 or more worth of West View property who come not to exceed 100 miles to the sale. Railroad fare refunded to those purchasing \$400 or more worth of property who come not to exceed 200 miles to the sale.

PAU & RHOADES, Lincoln,

have been making investigations preliminary to the establishment of a mountain observa-tory there as an adjunct of the Cambridge

Institution.

Prof. E. L. Nichols, who has taken the chair of physics which Prof. Anthony resigned, at Cornell, is himself a Cornell man, having graduated there in 1875. He then went to the University of Berlin, studying under Helmholz and Kirchhoff to obtain the degree of Ph. D. For a year he held a fellowship at John Hopkins university, and for a time he experimented in Mr. Edison's laboratory at Menio Park. He now goes to Cornell from the University of Kansas, where his work in the department of physics was notably brilliant and successful.

SINGULARITIES.

A North Branch, Mich., hotel dog takes a bell in his mouth each morning and rings at every door along the hall, and failing to get

a response bangs the bell against the door until he does get it.

An eight ounce male child, born five days ago in the family of Kingman White, of Waterford, N. Y., died yesterday. Hundreds of people have seen the little specimen of humanity since its birth.

An apple tree on the premises of Joseph F. Plummer, in Upper Swampscott, Mass., has a rose grafted on it that blossomed beautifully this season. It was pure white and had

A cherry tree of the white oxheart variety on the premises of John Capura, of Oreville,

C.i., bore this season 3.800 pounds of fruit. It is eighteen years old, is sixty feet high, and is six feet in circumference.

A Mrs. Johnson diel near Ithaca, Mich., thee years ago. The household clock supper with her heart. It has been still as death till a day or two ago, when it struck

and commenced going again; without human

Ed Hanley, residing near Burns, Ore., informs the Harney Valley Items that after harvesting his barley, which was a magnifi-

cent crop, the second growth from the roots i now two feet high, nicely headed, and bids fair to ripen and make a good crop.

A Jackson, Mich., justice of the peace owns an intelligent spaniel that is cunning. Whenever he is wandering abroad without his muzzle and spies an officer he hies himself to the nearest siley and puts at in can over his nose, keeping it there until the policeman passes by and the danger is over.

The Grass Valley Tidings say: At the

pavilion is placed on exhibition a curiosity in the shape of a segment of oak, in which is encased a stone weighing at least live pounds. This was taken from the heart of a tree eight feet in diameter, and the rings denote that the tree was over three hundred years old. The stone is in fragments, recken as departments, and the growing recken as departments.

oken, no doubt, by pressure of the growing

tree.

There lives in Troy, Mo., a little girl about eight years old, whose head is almost an iron gray, and it is steadily and preceptibly grower graver, and the present indication are that long before she reaches womanhood her once raven black hair will have become snow white. Some three years ago the child was frightened almost into convulsions by a fire which broke out in to town where she lived. The morning after the fire her mother noticed the change in the child's hair.

A "madstone" taken from the stomach of

noticed the change in the child's hair.

A "madstone" taken from the stomach of a deer, has been presented to ex-Governor Walker, of Tallahassee. The stone is oblong in shape, being an inch and a half in length and of a grayish color. One end tapers to a blunt point, while the other end is flat, with an aperture from which may be seen that the stone is filled with a pithy substance. This end is applied to the wound and its pithy center is said to absorb the poison. It is said the stone will adhere to the wound as Jong as there is a particle of the virus in the system.

PEPPERMINT DROPS.

When Lo the Brave in daubs of paint

"A great title covers a multitude of sins."

History of the Indian war-Ute. Brute, hoot, Scoot.

It is now time for the English sparrow to begin masquerading as a reed bird.

Gamblers are said to frequent oceam steamers because guits are very thick at sea.

If a crazy man is called a maniac, why houldn't a crazy girl be called a gwilac?

"Freight on coal is coming down but con-sumers will not find it out by their coal bills."

A stock broker cannot expect to feel bully when he has more trouble than he can bear.

"No," remarked the tramp, "I don't think I'd like Kansas. I never could get along very well in a dry climate."

the clothes he wears, but they might give you some idea of his credit.

DA sportman who can't bag anything alse

can bag his trousers by crawling on his hands and knees behind fences.

They have arrested aman in Rowan county.

Ky., for carrying a concealed pistol. His
mistake was in concealing it.

The game laws are very rigidly enforced at the west. If a man is caught cheating at poker, he is shot across the table.

There is no doubt that the average college

You can't judge of a man's character by

Most grimly doth appear, He may be said to give us then A little Sioux-veneer.

the fragrance of the apple.

JUSTICE & PETERSON. Auctioneers. Grand Island, Neb., Managers.

posed. All the old students are back, save last year's graduating class, and there are a large number of new applicants.

The High Normal school at Tokiy, Japan. under the direct patronage of the emperor, has made a three-years' engagement with Mrs. Straight, who was for several years a teacher in Colonel Parker's normal school at Formal Park, Ill.

As winter is approaching it is time to commence thinking and looking for

FALL AND WINTER CLOAKS AND SUITS

New Jersey appears to be badly off for educationa ifacilities. Thirty-eight thousand children, between seven and twelve years of age, do not attend school, chiefly for want of school accommodations, and nearly thirty-live thousand attend less than twenty weeks in the year. We will give below a very meagre memorandum of the many Prof. E. C. Pickering, director of Harvard observatory, and Mr. W. H. Pickering, his assistant, who has charge of the special astronomical work now in process in Colorado, have returned from that region, where they bargains in this department:

\$43, \$50, \$55.
Ladies' Plush Short Wraps, \$18, \$20, \$25, \$30, \$32
\$50, \$67, \$40 and \$45.
Ladies' Astrochan and Boucle Short Wraps, \$10, \$12, \$15, \$17, \$40 and \$45.
Ladies' Astrochan and Boucle Short Wraps, \$10, \$12, \$15, \$18, \$20, \$22 and \$25.
Ladies' Plush Jackets at \$18.50, \$20, \$22, \$25 and \$25.
Ladies' Black and Colored Silk Suits \$27, \$30, \$35 and \$40.

Beaver Shawls, at \$1.50, \$2, \$2.50, \$3, \$3.50, \$4, \$5, \$6, \$7, \$8, \$9, \$10, \$12, \$15, \$16 and \$18. Heaver Snawls, at \$1.50, \$2, \$2.50, \$3, \$3.50, \$4. Ladies' Hush Sacques at \$20, \$25, \$3), \$35, \$40. \$7, \$8, \$7, \$8, \$9, \$10, \$12, \$15, \$16 and \$18. Persian Shawls at \$2.50, \$3, \$4, \$5, \$5.50, \$6, \$0.50, \$7 and \$8.

A large and complete line of Childrens' and Misses' Cloaks

and Jackets in all sizes and qualities and at prices that will please the closest buyers. Call and examine our goods and we will convince you that

we sell good goods cheap.

THOMPSON, BELDEN & CO., 1319 Farnam Street.

Couldn't help seeing how green he is.

Young Napof Finance—"I have just failed for six millions, but, my dear boy, lend me five cents. I would purchase one little corner in pie?"

When Sampson had his hair taken off he lost his strength. What's the matter with trying this operation on the boarding-house When you see a man trying in vain to uproot a lamp post, you may be sure of one of two things: either the post is tight, or the

"Here, bub," cried Gubbins, with his face purple with exertion, "which is the quickest way for me to get to the railway station?" "Run like the devil."

"I say, Jim, have you got a dollar you don't want?" "Yes, here's one." "But this is a counterfeit." "Of course; and that's the reason I don't want it." "Now, how must I do with this wedding cake to dream on it?" asked a gushing dam-sel of a matter-of-fact young man. "Just eat it; that's all," was the reply.

If the men who make tobacco signs had any originality they would dress their Indian effigies in plug hats and government blankets, and thus make them appear something like the modern brave,

The man who is down on his beam ends should remember that the shark has to turn on his back to bite, and that many a bull-dog sails to victory with his spinal column in the dust and another dog twice his size on top of A citizen of Cincinnati went off to Europe

and left four gas jets biazing away in his house for four months. He has offered the gas company \$800,000 to settle the bill, but they want an even million, and he'll probably THE SEASON IN MONTANA.

Losses of Stock Which the Round-Up Revealed-Helena's Prosperity. Montana Correspondence: Our giorj-

followed by a winter of discontent such as the last. The fact is that last winter's ioss of stock was the heaviest blow our territory ever received from any source. The magnitude of the loss was not known even by our stock men until they under-took as usual to round-up their stock and brand their calves. It then turned out that there was little stock to round-up and very few calves to brand. We have hear1 conservative eattle men estimate the stock loss of Montana last winter as high as \$20. 000,000. In some parts there was a considerable loss of sheep, but not near in the same proportion and in horses still less. Among the cattle the greatest fa-tality was among the heifers, cows and bulls and it falls in a shape to make recovery slow. The probability is that range-cattle industry will never revive. There will be more cattle in Montana in a few years than ever before, but they will be owned in small lots, be choicer stock, and they will be provided with shelter and food. Ranchmen will fence in lands, acquire government title if they can, raise grain and hay and not take the desperate chances of losing in one year all that they have made in five The season has been a good one for all

purposes in Montana. Rain has been so abundant and well-timed that very little irrigation has been found necessary. There never was a better growth of grass the stock of all kinds is rolling fat. The dearth is of stock to eat the grass this sea-son. Our territorial frir was held in this city last week. It was too early for agri-cultural products, but was a success as a horse race. Betting is a fine art here and and about \$200,000 went into the pool box

freshman is color blind. Otherwise he during fair week, and for the first time

since its organization our fair association got out of debt. would be natural to expect after such heavy losses of stock that business of all kinds would be greatly depressed. Such an effect is not noticeable in this city. On the contrary, there has been a

continuous boom throughout the season and real estate is full as high on our Main street to-day as it is in Springfield. It is our mines and railroads that are cre-It is our mines and railroads that are creating the boom for us. The greatest event of the season for Montana has been the construction of the Manitoba railroad from the Dakota line, north of the Missouri river, up Milk river valley by Fort Assingboine, then southwest almosts in a straight line to this city. Here is a space of between 500 and 600 miles, on nearly of between 500 and 600 miles, on nearly all of which not a shovel of dirt had been moved when spring opened. Now the grading is all done and the laying of 200 miles more of track will bring the cars into Helena. No such feat of railroad construction has ever been witnessed. In good weather it has averaged five miles per day by the week, and one day when a special effort was made, over eight miles were laid. In about two months more the road will be here and the Northern Pacific will have a steady competitor in the heart of the territory, in the very center of our mines. The North-ern Pacific has not been idle in view of competition. It has been pushing work on at least six branch lines, four of which radiate from this city to mining centers. The Manitoba is constructing as many branches. By another year there will be a dozen lines centering in Helena. Our city valuation has increased probably three millions this year. A Boston company is putting a haif-million into water-works as a private investment. Water is ous summer is ended, we hope not to be

works as a private investment. Water is still used to a limited extent as a beverage, and will be more so when we get better water.

Our legislature is now in extra session in this city. Last winter this legislature unwarily offered a bounty of five cents for ground squirrel skins and ten cents for ground squirrel skins and ten cents. for prairie dogs. In about six months these bounties ran up to \$50,000. It drained every dollar we had and threatened us with bankruptcy. Hence the extra session. Ground squirrels did it, Isn't it funny?

Mrs. Donnelly's Rebuke.

wife, who is very much attached to him and who is brilliant in social life. Mrs. Donnelly was at a northern lake resort during the summer, and a week or ten days ago two gentlemen came in and occupied the same table at breakfast. The Donnelly Shakespearean theory came up and one of the gentlemen asked the other: "Who is this man Donnelly?" the other: "Who is this man, "he's "O," returned the other carelessly, "he's "Atlana crank by profession; he wrote 'Atlantis' and 'Ragnarock.' The lady said nothing. That evening, however, in the parlor, the gentlemon who made the remark was introduced to Mrs. Donnelly, but her name escaped his ear. As an excuse for finding out the name he brought the conversation round so the question could be put as to her nusband's occupation. The little lady's eyes sparkeled as she modestly answered: "He's a crank by profession and wrote 'Atlantis' and 'Ragnarock.' The gentleman rec-ognized the expression, and his feelings may be better imagined than described. He did not prolong the conversation any longer than he could politely lead up to the remark: "Good evening."

Ignatius Donnelly has a charming little