

HEALTH ON THE CARS

St. Louis People Are Riding on the Electric Lines to Get the Benefit of the Current.

THE FAD PAYS THE COMPANIES.

A New Photographic Printing Machine That Will Give Ten Thousand Impressions an Hour.

TANNING THE HIDE OF ELEPHANTS.

A Method of Measuring the Speed of a Motor Car on the Tip of an Ear.

PREPARED FOR THE DISPATCH.

The ideas that people attach to the value of electricity and magnetism are often sadly erroneous. That electricity in the hands of the skilled medical practitioner may be of great benefit in the treatment of disease is beyond doubt, but it is also true, unfortunately, that people very frequently do themselves great injury by resorting to electrical remedies without the advice of a physician, simply upon their own judgment or the careless recommendation of a well intentioned, but ignorant, friend.

The superstitions that exist on this subject are of the most absurd nature. People talk of the curative effects of magnetism, while, as Sir William Thomson has shown, the highest magnet do not exert the slightest influence on any part of the human body. If the electrical current is to be used, let the family doctor be consulted first. It may be mentioned that in some parts of the country people are in the habit of picking up the little bits of coppered or light carbons that lie about the streets like cigar stumps, and of putting them in their pockets as a safeguard against rheumatism.

This notion has its match at the present time in St. Louis, where, it is said, hundreds of the citizens have taken to riding in the new electric cars to get rid of their lumbago and rheumatism, as well as other ailments. The managers of the road when appealed to by the local medical profession, and this mysterious subject have, of course, no information to impart, and meanwhile look with gratified composure on the development of a new class of travel. It is also said that one or two electric light stations have been steadily visited by valetudinarians who wished to saturate themselves, so to speak, in the revivifying electric atmosphere of the place, and to absorb some of the ozone which, as a matter of fact, results from the operation of the dynamo electric machines.

There has recently appeared reference in the papers to the use of small magnets in hypnosis. The experiments of Dr. Charcot in Paris have been cited to prove the magnet's mesmeric value. Now, it is true that this celebrated specialist did obtain some striking results with a sensitive hypnotic subject under the influence of a magnet. But it happens to be equally the fact, though by no means so well known, for the reason, perhaps, that the credulous never hurry to accept or circulate that which destroys their beliefs, that Dr. Charcot not long after repeated the same experiments with the same "subject," using, however, a dummy magnet made of painted wood instead of the real one he had used before. He obtained the same hypnotic results, showing very clearly and positively that electricity and magnetism had "nothing to do with the case."

Self-Expanding Life Belt.

A new life belt, invented by Signori Fratini and Ingarano, is made of the very best pure india rubber and double-sided in such a way as to contain gas or liquids. It may be made of any other flexible, waterproof, airtight material, but pure india rubber appears preferable, though in extreme climates its working life is somewhat shortened. The outside covering may be made of strong texture, or of any fanciful silk or muslin. The belt is divided into two or more sections, not only to allow of a free adjustment around the waist, but also to make sure of a sufficient floating power even should one part of the belt meet with accident. Each section is subdivided into two parts, which may be called cells. The manner of this division is very simple yet most important. Its combination, which includes spring clips and solvable links, forms the main feature of the belt. This division right across the width of the belt has two apertures or slits at its extreme ends, through which the cells have free communication with one another.

When these apertures or slits are closed by the spring clips all communications between the cells is completely cut off, and no gas or liquid can pass from one cell to the other. In their turn the clips are kept closed by specially prepared solvable paper links which are passed over the ends of the clips, made to project from the belt and protected by a small india rubber teat or by a gauze clap-net. Taking one section of belt an acid is charged in a state of solution in one cell, and in the other cell is an alkali, likewise in solution. When the belt is thrown into water the soluble paper link gives way immediately, and the spring link, having no retention, allows the solutions or liquids to the division to open, and straightway the chemical solutions intermingle and evolve gas. The inflation of the belt is said to follow almost instantaneously. This belt is said to have passed most successfully through a series of tests on the river Thames.

War Engines of the Future.

General W. N. Hutchinson has published a series of letters in which he shows that balloons and submarine boats are likely to become the war engines of the future. He thinks that their power will so vastly exceed that of all weapons, that the manufacture of large ordnance and construction of iron clads, as well as expensive fortifications, will ere long be discontinued. He suggests not only that strenuous exertions should be made to increase the efficiency of the submarine boat, but that care and exhaustive tests should be made in order to determine the true mechanical and mathematical principles upon which the construction of navigable balloons should be based.

One method suggested by General Hutchinson for developing the efficiency of submarine boats in war is to offer prizes to chemists for the best means of maintaining the purity of the air in such vessels during a long period. He inclines to the opinion that the development of submarine vessels would be the means of abolishing armor clads. With a view to encouraging inventors and others, he proposes that prizes be given for designs for propelling cylinders and navigable balloons with the lightest machinery, combined with the least consumption of fuel or other driving agent. He believes strongly in the advantage of large as compared with small navigable balloons and he prefers them to be made of a cylindrical form with taper points to enable them to pass easily through the air. In some instances he thinks that the navigable balloons might destroy ships at anchor and forts by dropping shells containing high explosives on them. General Hutchinson's views may be somewhat advanced, but there is no doubt that the result of recent experiments both in submarine navigation and in ballooning encourage the belief that they are not beyond the range of possibility.

English Conservatism.

The careful and conservative spirit which characterizes much of the work done in England is shown in connection with the recent splendid piece of work, the City and South London Railway, recently described and illustrated in THE DISPATCH. While

many of the details of the line are carried out with the perfection of modern electrical skill, there are some points in connection with it which are so much behind modern progress as to appear in a measure inconsistent with the enterprise which characterizes the rest of the work. It appears that the elevators leading to the underground stations are operated by hydraulic power. There is a good deal of dissatisfaction that electricity has not been used for this purpose. Nothing could be better adapted for working lifts than motors, and the savings in expense would have been considerable. Unless the elevators are balanced there is a plunging volume of high pressure water wasted which is a great loss of power, whereas if the motors were employed the generator would need supply little more than the power wasted in general friction.

Another lift which has been freely criticized is the use of an air brake where electric power is available. It has been urged that the block system arrangements, and the effect of the supply from a moving train in case of necessity are objections to its use. If these are obstacles they can be easily overcome, and the special leads which supply the carriage lamps could supply the motive power for the brakes. It is argued that this combination in the same plant of hydraulic distribution, compressed air and electric traction is a somewhat anomalous one.

Photographic Printing Machine.

A new device is the application of photography to the work of the letter press printer. A machine is now used either for the production of book illustrations, or for turning out a complete illustrated newspaper, and is capable of printing 10,000 impressions per hour. A panoramic machine camera is used in conjunction with the printing process, and the pictures are printed continuously at the rate of four per second, is capable of producing street scenes with all their life and motion, or a long process of events, and is capable of printing a machine is likely to do away with all the tedious sketching and the troublesome block process, which occupies so much time and which costs so much. A well known person's photograph, with his letter, could be copied by photography and printed by light much more quickly than by the ordinary method. It is also said that a machine could be made which would take the block for the likeness, which would take days. It would not then be so perfect as it would come out when printed by light alone, but the texture and detail which could be secured by the new process would be impossible by the block process.

The machine prints upon bands or webs of sensitized paper, which pass under the negative, a momentary pause being made while the light is acting. Only gas light has been used to print with hitherto, but it is expected that the electric light will give a much greater speed of operation can be attained. After the bands leave the negative they are quickly passed through the necessary developing, fixing, washing and drying operations. The heavy cost of the sensitizing silver salts requisite to the successful workings of a machine of this nature has hitherto been a serious obstacle, but a substitute has now been found in a form so cheap that the preparation of the paper will cost but little, and the possibilities in the way of printing by photography will be largely increased.

Municipal Control of Electric Plants.

The experiment of establishing the municipal control of electric plants, which has been tried in several cities in this country, is in almost every case a proved unsuccessful. This, nevertheless, does not appear to have deterred the City Council of Chicago from again attempting to solve the problem, and a committee has just been appointed by that body to take into consideration the requirement of electric light plants by the municipality. Whatever may be the eventual result of the agitation which is now going on, there is no doubt that there is much to be said in favor of the position taken by Prof. Barrett, the city electrician. He has placed himself on record as opposed to any scheme that will interfere with franchises now held by local companies. The fact that these companies have gone into business, invested large sums of money in the establishment of their plants and the development of their systems, should insure for them recognition of their rights. Prof. Barrett says: "If the city should decide to engage in commercial lighting, it should, in justice to these local companies, buy the franchises and plants now in their possession. Otherwise, the city should allow the companies to continue without opposition until the expiration of the terms of their franchises. These men have invested their money in good faith, and common decency demands that their rights be respected." The issue of this question, which will shortly be decided by the acceptance or rejection of a bill bearing on the subject by the Illinois Legislature, will be watched with great interest by electricians throughout the country.

Electricity in Mining.

E. F. Browne, speaking of electricity in mining, says that miners were quickly alive to the advantages offered by the telephone. Most mines are, to a certain extent, in difficult positions on precipitous mountains. The telephone enabled the manager to be in close communication with his mine at all hours, both night and day. When difficult ground or heavy flows of water were encountered, the telephone could be used to control the situation at once without the loss of hours in communicating the necessity. The electric bell and annunciator now tell the story of what is wanted and what is going on below in deep shafts or inclines. The touch of the button tells the top man what engineers or men are coming up, and what level they are coming from. Another signal tells if timber, wedges, tools, or the foramen is required below. Formerly, when a bell rope from 500 to 1,000 feet in length was used, it was so heavily counter-weighted or held by such a counter spring that it took an able-bodied man with a six foot run to sound the gong above. Wants were only known by tickets attached to the bucket or skin, or after the toilsome climbing of messengers to the surface. Now the tool "signals" and the "powder-monkey" are the only traveling men in the ground below. The remainder of the shift stays at the level, until relieved. When the fact that the human voice cannot be heard over 100 feet under ground is considered, the advantages of electric communication for mining purposes become manifest.

A Safe Mode of Transit.

There are few instruments or pieces of apparatus more delicate and fragile than many of the costly and intricate productions of mechanical skill in general use to-day by electrical companies for the purposes of refined electrical measurement, and it can easily be understood that the difficulty of shipping these expensive and easily damaged instruments from place to place without risk of damage from careless handling, in transit is a perplexing question, both to manufacturers and users. A famous English electrician says that he has adopted a plan that proved so successful that he has adhered to it ever since.

Finding that careful packing and conspicuous labeling of the cases to be "handled with great care," were not always sufficient to prevent breakage and damage to delicate parts, he hit on the idea of sending out all his instruments in neutrally padded mahogany cases with brass handles and mountings. The exquisite appearance of the cases appeared successfully even to the salient nature of porters and dock hands; they positively had not the heart to scratch the immaculate polish by rough handling, and the freedom of the instruments from damage simply repaid the extra cost of the luxurious cases.

Elastic Accumulators.

A novel form of accumulator has just been produced by M. Emile Reynier. This battery affords in a simple compact structure a high voltage, and at the same time improved modifications for securing additional solidity and transportability. The

essential advantage of this battery consists in its possessing a certain amount of elasticity from its peculiar construction. It has 10 plates mounted in flexible pockets, and these elements are placed flat, one against the other, and compressed between two end plates of wood by means of rubber spring bands.

This spring arrangement gives to the active solid matter an artificial elasticity which results in large specific power and storing capacity. This is only one of the many important improvements which have recently been effected in the storage battery, and which are gradually bringing that mode of utilizing electricity to a stage of perfection which will lead to its general adoption for propulsive and other purposes.

The Elephant's Hide.

The tanning of elephants' hides is comparatively a new industry. The method employed is practically the same as in the tanning of cow hides, except that a stronger combination of the tannic ingredients is required, and a greater length of time, about six months, is necessary to perform the work. When the hide is taken out of the vat it is about one and one-half inches thick. Articles made of elephant's hide are expensive luxuries. A small pocketbook of elephant leather, without any silver or gold ornamentation, costs about \$40. A small leather satchel made of the same material costs anywhere from \$300 to \$400. Cigar cases, card cases and similar articles vary from \$25 to \$100. Floor rugs are also made out of the leather. In finishing the hide no attempt is made to gloss or polish it. Everything is done to preserve its natural color and appearance. It is a very enduring leather, several years' wear having but little effect on it. The scarcity of elephants and the great expense entailed in the tanning of their hides precludes the possibility of elephant leather ever becoming a thing of popular and general use.

Test of Quickness in Fencing.

A very interesting method of testing the quickness of a sword thrust consists in photo-chronographic measurement. The movement of the foil-point is too quick to be measured by the eye, but by the aid of the photo-chronographic apparatus it can be plainly shown. The fencer is dressed in white, placed in front of a black background, the foil is enchaîné, and a metallic spangle is fastened to the tip by wax. The photo-chronographic machine being set in rotation, the trajectory of the tip of the foil during the movement of the fencer is shown by a series of dots. As two successive images are one-fiftieth of a second apart in time, it follows that by counting these images the entire time occupied from the beginning to the end of the movement can be determined. In a recent test it was found that the stroke occupied a little less than four-tenths of a second. By this means two swordsmen can be compared, and their relative quickness easily and exactly determined.

Electrical Tricycle.

Several attempts have been made to construct an effective electrical tricycle, and a machine has now been constructed which appears to possess points which entitle it to be considered a practical machine. It is similar in construction to the ordinary tricycle except that it is much larger, and is said to attain a speed of 20 miles an hour. The motive power is the storage battery placed under the seat. This battery will run the vehicle over 120 miles at one charge, at a cost of 50 cents.

The Patent Multiplex Telegraph.

The multiplex telegraph, devised by Lieutenant Patten, is now working 16 circuits on a wire running between New York and Philadelphia, a distance of about 90 miles, at 25 words a minute.

BORSFORD'S ACID PHOSPHATE

Imparts Renewed Strength and Vigor where there has been exhaustion.

EVIDENCE OF CHEAPNESS.

Can you call to mind any wide-awake town of 5,000 inhabitants where lots can be bought at prices we ask and on such easy terms?

\$60 IN PAYMENTS OF 60 CENTS A WEEK!

ONE PER CENT CASH, THEN ONE PER CENT EACH WEEK THEREAFTER UNTIL FULL AMOUNT IS PAID

Secures a Lot in the Great Natural Gas and Oil Field of Portland, Ind.

PORTLAND, the county seat of Jay county, Indiana, is half way between Fort Wayne and Richmond, and 118 miles from Cincinnati by rail, or about 90 miles in a direct line, and 150 miles from Chicago.

It is in the Largest Continuous District of Natural Gas-Bearing Land in the World!

The gas wells now in use at Portland have an output of over 15,000,000 cubic feet daily, and this supply may be increased ad infinitum. The Grand Rapids and Indiana Railroad and the Lake Erie and Western Railroad give Portland a north, south, east and west outlet. The county is one of the richest stock-raising counties in the State. Portland has fine public schools, a Normal College, three newspapers, viz: "Commercial," "Sun" and "Republican"; two banks, a building and loan association, seven churches, two fine hotels, besides lesser ones; an opera house, and does a large wholesale, retail and manufacturing business.

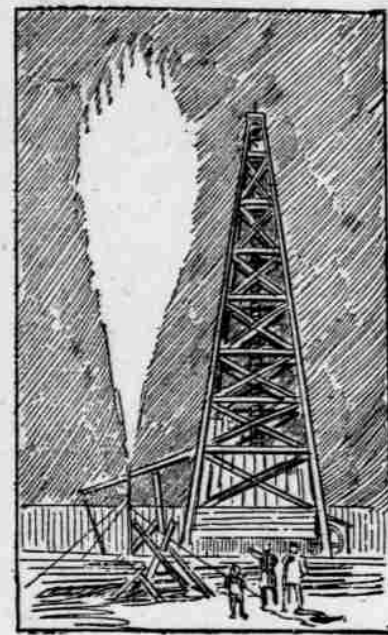
THE EVANS ADDITION

Adjoins the North Corporation Line of the City of Portland, and Lies Directly on the Principal Street of the Town.

Lots are offered in this subdivision upon the following terms, viz: One per cent cash with order, then one per cent each week thereafter (or more if so desired by purchaser) until full amount is paid, when warranty deed will be executed for the property. A rebate of ten per cent will be made for all cash in advance. On receipt of first payment a bond with a deed will be forwarded to the purchaser with the amount duly credited; also a large plat of the property and a colored township map showing the exact location of the addition.

The Title to the Land is Absolutely Free and Unincumbered.

A complete abstract of title furnished free to all purchasers on receipt of first payment. THE LOTS ARE 25x140 AND LARGER, fronting on 50-foot street with 15 1/2-foot alley, and are equal in value to lots selling in other localities of the gas belt at \$200. We advise taking two or more lots to secure a good frontage. There are twelve lots to the block.



WE OFFER LOTS AT PRICES AS FOLLOWS: \$60, \$65, \$70, \$75, \$80, \$85, \$90, \$95, \$100, \$105, \$110, \$115, \$120, \$125, \$130 and \$135 each; Meridian street lots are \$130 and \$135. All without interest, and free of taxes until deed is executed.

If any application is received after all the lots are disposed of the money enclosed for first payment will be returned. Remember the number of lots is limited, and "first come, first served."

The Royal Glass Company has located a plant on the addition, covering an entire block, and have already turned out some of the finest cathedral glass ever made in this country. The company expects within a few days to be running to their full capacity.

ANYWHERE UNDER THE ENTIRE SUBDIVISION GAS CAN BE SECURED. EVERY LOT-OWNER MAY HAVE HIS OWN GAS WELL, AND REGULATE THE SUPPLY TO ANY DESIRED QUANTITY. A well properly sunk is sure to strike gas. Three wells have already been sunk and in each a large and satisfactory flow was obtained. The natural gas obtained in the immediate vicinity of Portland is so pure that it is used for illuminating purposes equal to the best manufactured gas. This claim cannot be made for natural gas found in any other locality.

PORTLAND, IND., March 1, 1888. I have made the survey and plat of the land comprised in the Evans Addition to the city of Portland, Jay county, Indiana, and hereby certify that there is not a lot in said subdivision that is not suitable for building purposes and susceptible of good drainage. The subdivision adjoins the corporation line of the city. Meridian street, which passes through the property, is the principal street of the city and the main thoroughfare of the county leading into the city. Sixteenth street is also an important highway. C. E. ROGERS, Ex-County Surveyor and Present City Civil Engineer.

PORTLAND has developed quite rapidly since the discovery of Natural Gas and Oil in that locality. Population is increasing and land advancing. A number of new factories, business blocks, and over 100 dwellings have been built within the past year. The census of 1890 shows a gain in population of 179 per cent over 1880. There is every reason to believe that an investment made now will bring to the purchaser large returns in the near future.

A. H. EVANS, Trustee, Portland, Ind., or 49 West Pearl Street, Cincinnati, O.

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Largest Stock in the City.

Description will convey no idea of this truly gigantic variety. You must come and see for yourself. We call your attention, however, to our great specialty: Real Antique Oak Rockers (not Ash), first-class goods, can be had with Plush or Tapestry Seats, at only

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These chairs are the biggest bargains ever offered in this or any other city.

- Parlor Tables, Sideboards, Extension Tables, Dining Chairs, Baby Chairs, Child's Rockers, Kitchen Tables, Sewing Tables, Dressers, Medicine Chests, Blacking Cases, Foot Stools, Carpet Sweepers, Office Desks, Office Chairs, Mirrors, Pianos, Table Covers, Blankets, Divans, Tete-a-Tetes, Sofas, Rockers, Arm Chairs, Cabinets, Hall Stands, Hat Racks, Book Cases, Secretaries, Wardrobes, Chiffoniere, Sofas, Couches, Bedsteads, Pillows, Mattresses,

DON'T

Buy trashy Christmas Gifts. Give something that you yourself would like to receive. Let your present to friend or relative be something sensible and substantial.

THIS "AD."

Contains many suggestions that you would do well to consider carefully. There is not a poor or trashy present in the entire list, and everything is offered at

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If you can't come in the day time, come in the evening. You will find Keech's store Open till 9 o'clock every night till Christmas. Saturdays till 10 o'clock.

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Good, Reliable Makes AND Bed-Rock Prices.

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A WORD

to Young Married Couples.

Keech will furnish your new home better and cheaper than any house in either city. Call, see and judge for yourselves. Don't let any dealer persuade you to buy before you have learned Keech's prices and easy terms.

KEECH'S 923, 925 and 927 PENN AVENUE. KEECH'S