

LIQUID FUEL.

An Immense Saving of Coal and Labor Accomplished by a New Discovery.

The expenditure of ingenuity, time, and money which has been going on for many years past in the endeavor to utilize hydrocarbons as fuel under boilers for raising steam testifies to the importance of the subject, while the persistence with which it continues to be pursued bears witness to the value of the results which are expected to follow practical success. That success would mean an enormous saving in our solid fuel—coal—while our steamships would be relieved of some 50 per cent of their fuel weight, which could either be assigned to cargo or, on long voyages, a double supply of liquid fuel could be carried. So long ago as 1830 Mr. H. Pinkus claimed to have used hydrocarbons in conjunction with streams of vapors for steam-raising purposes and from that time down to the present engineers and inventors have not for any length of time, ceased to labor in the same direction. Richardson's petroleum furnace, as well as that of Bridges Adams, was for many years under the constant notice of the officials in Woolwich dockyard, and in 1868 the government permitted Wise, Field, and Aydon's system of using petroleum by the aid of an induced current to be applied to a marine boiler on board a steam yacht. The same system had been previously applied to a Cornish boiler at some large works in London. The admiral also tried at Sheerness a somewhat similar plan, invented by Mr. S. E. Crew, but, as in the Woolwich trials, without anything practical resulting. In the same year which appears to have been marked by a sudden outbreak of inventive activity in connection with the subject of liquid fuel, Dorsett's petroleum furnace was fitted under the boiler of the steamship *Retriever*, of 90 horse power and 500 tons burden, and some very successful runs were made with her. But as far as the use of the system in England went nothing further appears to have resulted, the reason being, we believe, that directly a demand was created for the class of liquid fuel used, and which at that time was a drug on the market, the price went up to a prohibitive extent. In France corresponding attention was paid to the same subject and in the same year, one system tried there being that of M. Verstraet, a chemist. It was applied to a locomotive on the Eastern of France railway, and upon the occasion of the emperor visiting the camp at Chalons the train was drawn by the engine thus fitted. His majesty rode on the foot-plate of the engine in company with MM. Surcouf, Dieudonne, and Sainte-Claire Deville. In the same year his majesty also made a run in the *Puebla*, a steamer in which mineral oil was employed to raise the steam for the engines. In America liquid fuel has been used both on locomotives and in steamers, at one time, we believe, to a considerable extent. But, notwithstanding the advantages offered in the way of cheap and plentiful liquid fuel, it would seem to have but a very limited application in practice for steam-raising purposes. In Russia a very different condition of matters exists, inasmuch as for some years past petroleum refuse has been used as fuel in the locomotives on the *Grazi* and *Tsaritsin* railway in southeast Russia, the first trials on that line having been made in 1874. Beside this, numbers of steamers are now running on the Caspian sea which are using liquid fuel. Moreover, in consequence of the comparative scarcity and dearth of petroleum in this country, a fleet of large tank steamers is being built by the Russian Black Sea Navigation company to bring the Russian oil to Europe in bulk.

In view of the undoubted importance of the liquid fuel question, it will be interesting now to notice its latest phase as brought under our notice on Wednesday in the steamship *Himalaya*. This is a trading vessel of 100-horse power, nominal, and 800 tons burden. She is 210 feet long, with 28 feet beam, and is fitted with compound engines, driving a screw propeller. The boilers have three furnaces, each of which has a firebrick lining with apertures on the principle of the Siemens regenerative system. At the end of each furnace is a fire-brick baffle having an opening through which the heat passes to the tubes from the furnace, or, as it may more correctly be called, the combustion chamber. In this chamber is a coil of iron pipe, one end of which is connected with the steam space of the boiler and the other opens out at the door of the chamber. This coil is for the purpose of superheating steam taken from the boiler, and by which an induced current is set up which carries the petroleum forward into the combustion chamber. In order to enable it to do this the petroleum nozzle is placed within the steam pipe at the opening where it delivers its jet, so that an annular space is formed, through which the steam rushes, and, combining with the small but regular flow of the oil, produces a large body of flame within the chamber. The oil is stored in tanks on the main deck, whence it flows by gravity to the delivery nozzles at the furnaces. The whole apparatus is very simple and easily adjustable; one important feature is that in the event of oil not being obtainable in any port where fuel is required it can be removed, and the fire-bars for burning coal be replaced in a very short time. Another important feature of the system which we should mention, is the invention of Mr. Percy F. Tarbutt, in the method of starting the furnace, which is effected by a very simple arrangement, whereby sufficient steam is quickly raised to start and maintain combustion until the steam pressure in the boiler is sufficient for that purpose.

The *Himalaya* was purchased by the Maratha Petroleum and Oil Produce company, and by them has been fitted with the apparatus we have described in order to practically and commercially test the system. She will, however, eventually be renamed the *Marahu*, after her owners, the Marahu company. The coal-carrying capacity of this vessel is stated to be 240 tons, and her consumption of that fuel is

put at 9 tons per day. She will now carry 90 tons of oil, her consumption of liquid fuel being put at 3½ tons per day, thus giving, as we have already observed, a great increase of cargo capacity. A large party of engineers and other gentlemen interested in the present question visited the *Himalaya* on Wednesday and inspected the furnaces and oil equipment of that vessel. Although only that morning completed, the apparatus worked very well, combustion being nearly perfect, as evidenced by that very small amount of smoke that issued from her funnel. A fairly steady steam pressure of fifty-five pounds per square inch was maintained, the steam, of course, being blown off as made. The demonstration, in fact, was perfectly successful. The ship will start to-morrow upon a trial trip to Leith and back. She will be accompanied on the trip by a board of trade surveyor, as well as by one of Lloyd's surveyors, both of which departments are evincing great interest in the trial. After that she will proceed to Glasgow to take in a cargo which she will carry to Brazil. It is then intended to employ her for trading purposes along the coast of Brazil, her supply of liquid fuel being obtained there from the works of the company to whom she belongs.

Such is the latest phase of the liquid fuel question, which appears to be nearing solution as regards steamships. It appears to be clearly demonstrated that petroleum can be used as fuel. The only disturbing element as regards commercial success here is the uncertainty and the cost of the supply. This difficulty surmounted—and it would seem that Russian enterprise is about to make an attempt to surmount it—and prejudice and conflicting interests overcome, there would appear to be a hopeful future for liquid fuel in this country. In fact, Wednesday's demonstration looks like the beginning of the end.—*London Times*.

Hydrophobia in Its Earlier Stages.

I wish to diminish the terrible effects of hydrophobia by pointing out how the disease may easily be noted in its earlier stages, and preventive measures at once be taken. If an animal slanders from the mouth, and has a hanging of the lower jaw, accompanied by a peculiar change in the bark, it is a clear case of dumb rabies, quite as contagious as the other form. The other form of rabies is more dangerous, because the dog knows his master and is even more friendly than usual, but exhibits a strange nervousness, snapping at anything that offends him and having that peculiar rabid bark which, once heard, can never be forgotten. If there is the slightest alteration in the bark of a dog it should at once be put in quarantine. If any one has the misfortune to be bitten by a mad dog the best thing to do is to suck the wound at once, drawing as much blood as possible. This is far better than cauterization. Police officers or other officials should be empowered to destroy all dogs, whether under the control of their owners or not, who are in a rabid state, and also all dogs which may have been bitten by a rabid animal. By that means I should hope ultimately to exterminate that terrible disease, which, without some check, may develop itself into a real epidemic.—*Cor. London Telegraph*.

Hadn't Long to Wait.

A gentleman living at Auburn, Ill., until quite recently was the very unhappy owner of a cat whose happiness was never complete save when stealing something to eat from off the dinner table. He tried coaxing and then beating, but all to no purpose. Finally in an evil moment the idea came to him that perhaps a little sudden surprise would tend to make the feline mend her ways; and the more he thought of it the more he became convinced that that was what she needed. At last, after carrying out several schemes in his mind, he decided to put some dynamite into a saucer of milk, which he did, leaving it on the dinner table. He then stepped out on the porch where he could see the fun from a distance, and waited. He had not long to wait, for no sooner had pussy been left to herself than she sprang up on the table and began to get on the outside of the milk. Softly the man laughed to himself, but his joy was of short duration, for suddenly something burst and he knew no more. When he regained his senses a few hours later he found himself about a quarter of a mile from home in a corn field, with only a rock on to cover his nakedness. He tried to remember what had happened, but couldn't until he arrived at the gate where his home once stood. All there was left to tell the tale was a large hole in the ground, and a piece of cat skin sticking to a tree near by.—*Fleet's Sun*.

Couldn't Stand It.

"Are your parents living?" an Arkansas school teacher asked of a boy. "Mur is, but pap ain't." "What's bad?" "That mur's livin' on that pap's dead?" "It's bad that your father is dead." "Yas, the man that had a mortgage on the crap said so." "What was the matter with your father?" "He couldn't stand prosperity." "Why, how did prosperity kill him?" "Wall, ole Bill Simmons give pap a whole jug o' whisky an' it was mor'n he could stan'. He done his best, but she downed him."—*Arkansas Traveller*.

A Sure Thing of It.

"What interest can you have in reading the list of prizes in the Havana lottery? You never buy any tickets," asked Kosciuszko Murphy, on seeing Col. Yerger pursuing a paper. "I know that I never buy a ticket, but I have more real enjoyment than if I did," replied Col. Yerger. "How is that?" "You see, I pick out a number. If it wins I am as much tickled as a man can be, and go on a tick. If my number don't win, then I have saved the price of the ticket, and I celebrate my escape with the money I've saved. I am bound to win either way. I can't be beat."—*Texas Siftings*.

Keeping Clerks Honest.

Clason Graham drew the money on a check for \$26,000, signed by his employers, Spencer, Trask & Co., oil brokers, and took a train for Canada, but was stopped on the way only four hours later, both man and money being back in town next day. The quickness of suspicion and action in the case of a man whose reputation had been good, writes a New York correspondent to *The Philadelphia News*, was due to the fact that he had given bonds to the firm for honesty, and his bondsmen were one of the several guarantee and fidelity companies that have lately come into use here in New York. These concerns insure employers against loss through the thefts of employees, and relieve the latter of the often difficult task of finding available friends to take the risks.

Not less than six thousand men are already bonded in this way by the companies, among whom brisk rivalry has already arisen. Visits to their offices show large premises and numerous clerks, indicating far more labor than would be requisite for merely making out the papers and dealing with the customers up to the point of completing the bonds. The explanation is that the most elaborate systems of watching the insured men, and registering their habits, is in operation, and already the extent and thoroughness of the espionage has become an acute nuisance to its subjects. To feel that his actions may be under surveillance by a spy is annoying in many cases, wherein the man is well-behaved, and much dislike of the new order of things has developed, but there is no escape, because the existence of the companies provides so reasonable an excuse for individuals to decline to be bondsmen that there is no escape.

Railroad employees, bank clerks, court officers, and all sorts of financial officials are chiefly the men involved. Before making the bonds the persons' characters are investigated as fully as possible, but that is no complete protection, for one company has already lost \$10,000 through Paying Teller Charles A. Hinkley, of the West Side bank, and Teller F. J. Dietrichs, of the Laclede bank, St. Louis, both of whom were above reproach, and one seemingly pious. The preference is for employees of institutions subject to state investigation annually rather than the handlers of money for private firms. Nearly all the men in the New York postoffice and over half of those in municipal offices of finance are now included in the risks. The charges range from a half to 1 per cent, on the amount of insurance.

The principal business is detective. Every insured person is watched, and very closely, too, if the slightest looseness of conduct is observed. In the instance of Clason Graham a detective reported that he was becoming a lounge about town at night, and apparently was spending more money than his salary could provide. At the moment when he cashed the big check a spy had him in sight and did not quit him until he took the cars. Then the detective telegraphed to the company that he was going to go to and would look for orders at Springfield, where the train would make its first stop. Hasty inquiry of Spencer, Trask & Co., brought out the fact that Graham was absconding with \$26,000, and word was wired to Springfield to arrest him.

A feature of the new business is a registry called the "List of Unreliables," in which the particulars of every obtainable case of probable or actual misdoing by an insured man are noted. The books of one establishment contain about twenty thousand names, another fourteen thousand, and there are not less than fifty thousand altogether thus recorded, comprising railroads, bankers, public officials, and other fiduciaries. The amount of money stolen by trusted employees is not dreamed of by the public, as proved by the aggregate of nearly \$300,000 paid from one office. But the bonded men are aware of their positions, and a consciousness of being under scrutiny has become one of the common sensations of their lives.

Low Water in the Wabash.

A rural schoolmaster in Indiana asked a pupil named William Scott, the other day, which was the longest river in the world, and William persisted in crediting that honor to the Wabash. As a result, he went home with a taned jacket. As another result, a stranger appeared and knocked on the door.

"Is this the skule teacher?" he pleasantly inquired.

"He ar?"

"Are you the critter as licked Bill Scott fur sticking up fur the Wabash?"

"The same, sir."

"Wall, Bill happens to be my son, and I've come fur to gin you the autulstest whalin' ever you writ down in geography."

"Can you wait until I am through with the class in spelling?" asked the teacher.

"Oh! I s'pose so, but under the circumstances I hope ye'll cut it as short as possible. Haven't got my corn husked, ye know."

"Certainly. I never keep a gentleman waiting when I can help it. Sit down on the wood pile, Mr. Scott. I'll come out and pulverize you in just nine minutes."

At the end of the appointed time the teacher reappeared and at once rushed upon the waiting Mr. Scott and blacked his eyes, broke his jaw and flattened his nose. By and by Mr. Scott said he had all he wanted, and added:

"Which is the longest river in the world?"

"The Amazon, sir."

"Am-a-zon. Please write it down for me. You've licked it into me in fast-class style, and when I get home and git my paws onto my son Bill he'll come to believe that there ain't nuff water in the Wabash to wash mother's feet with! Am-a-zon! Good by, critter!"

Mexico has under way a scheme for importing Chinese labor for the development of her agricultural and mineral resources, native labor being inefficient.

A PROPHETIC DEATH.

An Aged Man Fulfills a Prediction and Drops Dead—His Autobiography—His Medical Life—His Will.

Early last spring an aged man walked briskly into the *Enquirer* office, and, with a very brief, preliminary statement that he wished to leave in charge of the editor his autobiography, to be published after his death, which would probably occur some time this fall. He also wished to leave the names of friends to whom papers containing an account of his death were to be sent. The old man was Richard Bissell, a naturalist. His prediction was fulfilled yesterday morning at the Hummel House, where, in the office of the hotel, while walking, he threw up his hands, and, with no other sign, fell to the floor a corpse. He had been exceptionally cheerful all the morning, and at the breakfast table had eaten heartily.

He had confidently predicted that he would die this fall, and, as the orthodox people say, "had his lamp trimmed and burning." In his pocket was found a sealed envelope addressed to the editor of the *Enquirer*, and on it was written: "Drop this letter in the letter box at my death." The following was found enclosed:—"CINCINNATI, 1885.—DEAR EDITOR—When you get this I'll be dead at the Hummel House. I left in your absence with Mr. a letter for publication at my death. Please do not forget it, as Mr. said he would look it up and publish it at the proper time. Yours confidently,

RICHARD BISSELL, "Eighty-five years."

The following directions were also found on his person:—"CINCINNATI, September 2, 1885.—N. B.: I have a letter in the hands of the editor of the *Enquirer* for publication. Please call on him and give particulars of my death, etc. I am very feeble in mind and body, and can not live but a short time."

R. BISSELL, 85 years. To Mr. J. C. Coplock, Esq., Sr.: I have about \$90 in my trunk to pay board while I live. R. BISSELL.

In addition to other arrangements for his last sleep, which will be read further along, this methodical old gentleman recently purchased a handsome monument, paying for the same \$250, and had it inscribed, even to the year 1885, leaving only in blank the month and the day of the month.

His last will and testament was not forgotten, and here it is:—"CINCINNATI, Oct. 15, 1885.—MY DEAR ALICE WHEELER: I send you in another envelope my Pomeroy National Bank stock for \$2,000, and my Norton Iron stock for \$1,000, and my Ohio Machine Company stock for \$750, all of which I present to you as a free gift; also, I give you my house you live in in Middleport, and the money I have placed to your credit in the Pomeroy National Bank, all to be used for the benefit of Nellie, Nellie, Carbon and yourself, children of my nephew, Carbon Wheeler, deceased. I advise you to choose Samuel Bradbury your trustee, to do your business, by all means, and keep under his control, and the whole of my gift as still as possible. Yours confidently,

RICHARD BISSELL. The autobiography for which the old gentleman expressed a good deal of solicitude is herewith inserted as it came to the editor's hands:—"ATYORGRAPH OF RICHARD BISSELL, NATURALIST OF CINCINNATI, IS DEAD. I DIED, AS I HAD LIVED, IN LOVE WITH ALL NATURE. Lament. When these lines are read I'll be confined with no tears shed, Because no ki dred in the West To lay me lonely at rest. Adieu, I've world of sinners; I go where graces are winners. Pay no young priest to pretend to pray me out of my grave for money. They come and dance the jigs of life; away they go like shadows playing before moving objects. Time brings all on a level, the king with the beggar, and all sleep together in the great womb of Nature. My turn has come when I must join the innumerable throng of billions of dead and sleep with them the sleep that knows no waking in that vast graveyard covering the whole earth. Every step taken on soil presses on what was once vegetable and animal life.

Fall and winter are the right seasons of the year to die, when other things decay and are locked up in the icy embrace of winter, but vernal spring and summer are the right times to live, when birds in early spring their sweetest love songs sing and all nature bursts into new life, and in summer the green earth is covered with gaudy flowers.

The great drawback on dying is that one does not wake up mornings to greet friends and to read the daily papers, thereby losing all that transpires in this live world of ours.

If life was a thing to buy, the rich would live and the poor would die at once. But life is like a snowflake on the river—a moment white, then gone forever. It brings a pang to know life comes not again to the same individual, but out of its sad decay other creations of lives arise spontaneously, as matter never dies, but lives on in other forms, like the leaflets that fall to the ground all serene and brown ere long mingle with the soil and buds arise, giving births to new-born flowers. The elements of bones and feathers are in the new-born egg, and the nature, too, making the strutting flowery peacock.

Life is a struggle full of care and trouble; its greatest pleasures are of shortest duration. Yet if I was asked what I most desired I would say give me back my youth.

It should be considered a sin and a disgrace to die prematurely, proving violations of natural laws, but to die with old age should be regarded as the most honorable of all deaths.

My philosophical religion enabled me to live alone with myself and to die alone without a mourner. I am not like the Irishman, who, when he thought he was dying, became alarmed and sent for his priest, who said: "Pat, I hope you are not afraid of your God?"

"No, your Holiness; it is the other gentleman I'm afraid of."

As I have none here to linger by my

grave, I invite passing friends to call at my lot, No. 141, section 110, Spring Grove Cemetery, where I can be found at home by my monument at all times, since none move out of the city of the jaded dead of over 40,000 inhabitants.

SKETCH OF MY LIFE.

I made my first yell in my mother's bed-room without a shirt on January 1, 1801. Life left me—1885.

I have lived in Cincinnati since 1860. I grew up on a farm in Connecticut. I am of French-Huguenot stock and English origin. My ancestors came over 235 years ago and settled on a farm in Massachusetts. I never had a doctor nor took any drug-store poisons in my life, and thereby died a natural death in my 85th year. I was self-raised and educated from 4 years old, when I was left on the stormy sea of life without compass or rudder to steer through a long voyage.

At 17 I was a school teacher and taught boys of 13 years how to think properly.

Subsequently I practiced the humbuggery of medicine, which is experimenting and guess-work, like a half-blind man going out to shoot birds or rats. I refer to doctors, not surgeons.

Then I was a traveler and stood upon the banks of the Rio Grande, visited the tombs of the Presidents and saw some of the renowned people of our country and the nobility within the tropics.

I have now gone where lodgings are free, into my house the grave-digger made for me; to play hermit for my own amusement, till Gabriel calls for saints and sinners to arise and put on their running clothes.

Thus ends my eventful life in my 85th year, yet my evil deeds will live in voices, while my virtues will be written in sand. I gave my assets to relative orphans and otherwise before my death. I have many distant relatives living in New England and York State, but my near ones have gone to kingdom come, or where the "wood-bine twineeth." RICHARD BISSELL, Naturalist.

Coroner Carriek held an inquest on the body of the eccentric and prophetic old gentleman and found that death was from exhaustion consequent on old age.—*Cincinnati Enquirer*.

History of the Match.

[From an Address by President Payfair, of the British Association.]

"Let me take a single example of how even a petty manufacture, improved by the teachings of science, affects the comforts and enlarges the resources of mankind. When I was a boy, the only way of obtaining a light was by the tinderbox, with its quadruple materials, flint and steel, burnt rags or tinder, and a sulphur match. If everything went well, if the box could be found and the air was dry, a light could be obtained in two minutes, but very often the time occupied was much longer, and the process became a great trial to the serenity of temper. The consequence of this was that a fire or a burning lamp was kept a light through the day. Old Gerard, in his herbal, tells us how certain fungi were used to carry fire from one part of the country to the other. The tinderbox long held its position as a great discovery in the arts. The *pyrotechnia igniaria* of the Romans appears to have been much the same implement, though a little ruder than the flint and steel which Philip the Good put into the collar of the golden fleece in 1429 as the representation of high knowledge in the progress of the arts. It continued to prevail till 1833, when phosphorus matches were introduced, though I have been amused to find that there are a few venerable ancients in London who still stick to the tinder-box, and whom a few shops keep a small supply. Phosphorus was no new discovery, for it had been obtained by an Arabian called Bechtel in the eighth century. However, it was forgotten, and was rediscovered by Brandt, who made it out of very stinking materials, in 1669. Other discoveries had, however, to be made before it could be used for lucifer matches. The science of combustion was only developed on the discovery of oxygen a century later. Time had to elapse before chemical analysis showed the kind of bodies which could be added to phosphorus to make it ignite readily. So it was not till 1833 that matches became a partial success. Intolerable they then were, dangerously inflammable, horribly poisonous to the makers, and injurious to the lungs of the consumers. I required another discovery by Schrotter in 1845 to change poisonous wax into innocuous red brick phosphorus in order that these defects might be remedied, and to give us the safety match of the present day. Now, what have these successive discoveries in science done for the nation in this single manufacture, by an economy of time? If before 1833 we had made the same demands for light that we do now, when we consume eight matches per head of the population, the tinderbox could have supplied the demand under the most favorable conditions by an expenditure of one-quarter of an hour. The lucifer match supplies a light in fifteen seconds on each occasion, or in two minutes for the whole day. Putting these differences into a year, the venerable ancient who still sticks to his tinder-box would require to spend ninety hours yearly in the production of light, while the user of lucifer matches spends twelve hours, so that the latter has an economy of seventy-eight hours yearly, or about ten working days. Measured by cost of production at 1s. 6d. daily, the economy of time represented in money to our population is £26,000,000 annually. This is a curious instance of the manner in which science leads to economy of time and wealth even in a small manufacture."

A Quick Response.

A New London boy, with a milk picher in hand, fell headlong down the back stairs. He had regained his feet and was brushing the dirt from his clothes when his mother appeared at the head of the stairs and asked: "Did you break the picher?" "No, I didn't; but I will," was the quick response. And he did.—*Hartford Times*.

A new chapel to cost \$250,000 is in process of erection at Lehigh University.

PERSONAL AND IMPERSONAL.

A BILL to prohibit prize-fighting is pending before the Oregon legisla ture.

THE new Philadelphia postmaster Mr. Harrity, has 790 appointments in his gift.

SULPHUR is deposited on the top of Mount Popocatepetl at the rate of a ton a day.

A HEAVY shower of angle-worms fell upon the snow at Truckee, Cal., last week.

THE latest list of American beetles describes 9,490 species on this continent alone.

THE four sons of Lieut. Kislinsky, of Arctic fame, receive a pension of \$10 per month.

THE rector of a fashionable church in Utah is spoken of as the "Apostle of the Gentiles."

JOEL CHANDLER HARRIS is credited with \$7,500 as the annual product of his humorous pen.

SENOR V. QUESADA, the Argentine Confederation's minister at Washington, is at home a writer of eminence on legal topics.

ARCHBISHOP GIBBONS, of Baltimore, is now taking his annual vacation, and is visiting his sister, Mrs. Swarbrick in New Orleans.

J. B. DOWNS and wife, of the Isle of Shoals, both nearly 80 years old, propose to spend the cold weather this season in Portsmouth, which will be their first winter on the main land.

A YOUNG bridal couple of South Carolina are on their bridal tour in a wagon with ten bushels of apples and one bushel of chestnuts. They are said to be quite young and to appear extremely happy.

REV. EDWARD BICKERSTETH, a son of the bishop of Exeter, who worked so hard as head of the Cambridge mission at Delhi, has resigned one of the best livings in Suffolk, England, for the missionary bishopric of Japan.

THE supply of coal on the globe is not likely to be exhausted very soon. Enormous deposits have been discovered in China, the area including a district larger than the coal fields of Pennsylvania, yielding the best anthracite.

EXAMINATIONS of the painted windows of the ancient cathedrals of England and continental Europe show that their superiority consists really in the imperfection of the glass. The waves and threads and blisters refract and reflect the light, thus giving the window panes an added beauty.

It may be said that one-half the world does not know what the other half eats. At a large bakery in New York the bread that is two days old and hard as a rock is sold to Italian for almost nothing. After they soak the dry bread in stale lager and partly rebake it they sell it for the nourishment of other Italians.

A PROJECT is on foot for introducing in London a new style of four-wheeled cab with many improvements on the existing vehicle, an important modification being that the cab can be readily used as an open one. The new cab will be well-horsed and well-driven by men in uniform. Improved hansom are also contemplated, and it is proposed that for both descriptions of vehicle the fare shall be sixpence per mile.

THE Indians of Guiana have only four numbers in their system of numeration. They count by the hand and its fingers. Thus, when they reach five, instead of saying so they call it a hand. Six is, therefore, a "hand and first finger," seven "a hand and second finger," and ten is "two hands," but twenty, instead of being "four hands," is a man. Forty is "two men," and thus they go on by twenties. Forty-six is expressed as "two men, a hand, and first finger."

THE pass on for relics has curious phases. Sticks and stones, grass and weeds are common forms of gratification of the relic-hunters; articles of personal apparel, furniture, and chips are other means enjoyed. A cat-o'-nine-tails is certainly unique and would not be supposedly a desired relic, but after the sheriff at Chester, Del., had performed his duty of chasing two offenders at the whipping post, a New York gentleman purchased the cat-o'-nine-tails for \$5 and carried it off with him as a memento of the occasion.

MANY of the old railroads in the south in existence in 1880 have been purchased since by syndicates and vastly improved and extended so as to develop new territory or make new connections. Besides, this, however, many millions of dollars have been expended in building new roads, and a wonderful impetus has been given to the development of the resources of the south. The increase in mileage alone in five years has been 9,322 miles. The smallest increase of any state has been in Maryland—4 miles—and South Carolina comes next in smallness with 136 miles. Virginia shows an increase of 794 miles, which is exceeded by only two states—Texas and Arkansas.