

Science AND INVENTION

A faint luminous mist in the bulb and on the fingers has been noted by Professor Sommers on rubbing electric light bulbs that have been not long in use. No satisfactory explanation has been given.

The layer of the sea taken up by the clouds each year is now estimated at fourteen feet in thickness. The winds carry the clouds to land, where the water falls as rain, to find its way in due time back to the ocean.

Late statistics show that a Spaniard lives less than two-thirds as long as a Norwegian. The average duration of life is, in Norway, 50 years; England, 45; Belgium, 44; Switzerland, 44; France, 43; Austria, 39; Germany, 39; Italy, 39, and Bavaria, 38.

A remarkable effect of pile-driving was lately observed at Rotterdam. On withdrawing some piles that had been rammed through quick-sand by 150 to two hundred strokes per minute, the points were found to be charred by friction and they ignited spontaneously on contact with the air.

A new sugar plant from South America, which has been named eupatorium rebandum, is pronounced by Beroni, the German chemist, to be of great industrial value. It grows from eight to ten inches high and is found to contain from twenty to thirty times as much saccharine matter as sugar-cane or the beet.

A physician writes of the effect of London's smoky atmosphere upon the human lungs: "The coal miner's lung is black, the lung of the Eskimo is a pearly white, the lung of the Londoner is a rich gray. Natural selection evolves beings adapted to meet all sorts of natural circumstances—among which a carbon-laden atmosphere is not included. Such an atmosphere is a product of man's own stupidity and nature has had no chance of protecting him against its consequences."

Birmingham, England, is having trouble with its new water supply. The water is "soft." The city's health board has warned hardware dealers and manufacturers that galvanized kettles and utensils are dangerous, as the zinc coating is quickly dissolved by the water. Birmingham plumbers say that their business has increased immensely since the new water arrived. It seems to have no great effect on brass taps, but lead pipes and cisterns are eaten away much faster than before.

Readers of the late Paul du Chailu's travels still recall with many a thrill vivid descriptions of encounters with the gorilla in its native forests. But none of the monsters seen by him could be compared with a gorilla recently shot on the shores of the river Sangha, in French Congo, which measured no less than seven feet six and three-quarter inches in height. The substantial accuracy of this measurement seems to be established by photographs that have been sent to Europe. Prof. E. T. Hamy, the French anthropologist, thinks that this specimen indicates a new race, if not a new species, of gorilla.

Gradually all the great rivers are being harnessed for the great advance that the mechanical powers under the control of man are destined to make during the twentieth century. In the nature of the case, those rivers whose upper courses are marked by many waterfalls possess the greatest available power. Recent calculations by Bavarian engineers show that the Danube is capable of developing, together with its Alpine tributaries, a little less than 2,000,000 horse power. This applies only to that part of the river's course lying in Bavaria. Only 700,000 horse power could be effectively utilized, and only 75,000 has as yet been developed. The principal uses found for water power in the Alps are for mountain railroads, and for electrochemical and electrometallurgical industries.

EARLY DAYS OF THE ERIE.

What Beginnings of Railroads in This Country Were Like.

The monument dedicated at Deposit, N. Y., Nov. 10, in commemoration of the seventieth anniversary of the beginning of work on the Erie, marks an important date in American railroad history, says the New York Evening Post. Few, if any, roads have passed through such vicissitudes as fell to the lot of the Erie from its very inception; none has been more typical in its construction, and certainly none has been more often or more ruthlessly plundered by conscienceless financial managers. The first passenger train with a locomotive had been put in actual service in South Carolina on Jan. 15, 1831. Two and one half years later the New York and Erie Company was organized, upon the assurance that the desired road would cost only \$3,000,000. As a hint of the lawlessness to come, the organizers violated the act incorporating their company by beginning business with only 5 per cent of its capital subscribed, instead of 10.

That James Gore King himself was a visionary appears from the speech he made as he dug up the first spadefuls in the "beautiful meadow" in which the inaugural ceremony took place.

That tale, he declared, would soon see a different spectacle—"a track of rails with cars passing and repassing loaded with merchandise and the produce of the country." "The freight," he continued, "will amount to \$200,000 per annum in a very few years." Frightened at the incredulity expressed on the faces of those who heard this wild prophecy, he hastily added, "at least eventually!" Nine years later, in 1844, only forty-four miles of road were in operation, from which was received in that year the munificent income of \$46,178.84 from passengers and \$79,841.00 for freight. The cost of operation and repairs was but \$63,945. The only other great railways then were the Baltimore and Ohio and the road between Moscow and St. Petersburg.

From that time on the road grew slowly enough, like all the other new roads. But, unlike them, it could not combine with other local railroads. Early construction in this country was almost precisely like the development of electric street railways during the last decade. First were a lot of little railroads between cities. Then came connecting links, and finally an amalgamation of many roads into a trunk line. Of this procedure the New York Central is the best example. It was made out of a chain of ramshackle local roads of different gauges. The Erie itself was forced to lease two roads connecting it with Jersey City, as its passengers disliked getting off at Piedmont, its terminal, and coming down the Hudson on a steamer to this city.

The ceremonies at the Erie's completion in 1851 were attended by President Fillmore and four members of his cabinet, including his Secretary of State, Daniel Webster. Two palatial special trains conducted the guests to Dunkirk—with some difficulty, it is true, as one engine, although a monster capable of pulling forty tons, gave out early in the trip. But Elmira was reached in ten hours, and on the second day the remainder of the forty-six miles was covered in seven hours. "This peaceful victory," said a banner on the special train from Newburg, "is more glorious in its triumph than Austerlitz or Waterloo." Another declared that "this day wanting, the world had not seen the extent of human greatness."

ANCIENT WATER VILLAGES.

Strange Relic of Old Customs Preserved in German Forest.

"One of the most interesting regions in the 'Old Fatherland' is the so-called 'Spreevald,' the forest of the Spree, situated not far from the German capital, in the province of Brandenburg," says Fritz Morris in Technical World Magazine. "Each village is a little Venice, every house a little island; and these islets are connected by bridges sufficiently raised to allow boats to pass under them. Most of the houses, with their barns and stables, rest on piles; and there is generally a strip of artificial terra firma, either in front or at the rear of every building. By means of these land strips and of the bridges, the slender land communication is kept throughout the district; but most of the business and amusement is carried on through the canals, which not only form the main highways but penetrate and cross and recross the whole region. It is on these lagoons that all traffic is conducted in boats, during the period from spring, when the last vestiges of frost and ice are disappearing, until the end of autumn. You see the letter carrier shoot up and down the canals, performing his duties in his frail craft; the police glide leisurely along the banks, watching everything going on; peasants bring the products of their toil to the nearest towns; children go to and from school, young mothers, dressed in their Sunday clothes, are rowed to church, carrying in their arms a small, queer-looking bundle from which two large eyes in a tiny face stare at the stranger in wonderment—baby is going to be baptized, an important event with this strongly religious town."

Mistakes Will Occur.

Recent medical investigation finds scientific excuse for the perpetually tired, and lays the blame for some kinds of weariness on the much-enduring germ. Uncle Eben, in the Washington Star, finds the subject more complicated.

"It takes a mighty conscientious man," says the good brother, "to allude to be able to tell the difference 'tween when he's tired and when he's lazy."

Something New.

"Oh, yes, he's making money running a correspondence school of memory." "Aw! that's a dead scheme; teaching people how to remember—" "You're 'way off. His scheme is to teach you how to forget, and his clients are insurance magnates and Standard Oil officials."—Philadelphia Press.

Too many people mistake dignity for wisdom.



Pea and Asparagus Soup.

Have ready some stock that is highly flavored with various vegetables, and when it is strained, boil one pint of green peas in half of it. Take some asparagus of medium size and cut it in pieces three or four inches long; blanch these in boiling water and then set in cold water, drain and tie in small bundles. Add any of the odd pieces of the asparagus to the peas, and when tender pass through a sieve, add to the remainder of the soup, also a piece of butter, a squeeze of lemon juice, and pepper and salt. Pour the soup into a tureen when it is very hot, and arrange the asparagus on the top.

Alexandria Pudding.

Take three large apples, a little lemon peel, four ounces of sultanas, a little candied peel, one ounce of sugar, light suet crust. First peel, core and slice the apples, put them in a saucepan with a little nutmeg, grated lemon rind and sugar. Stew till the apples are soft, then add the chopped candied peel. Roll out the suet pastry, then spread the apples, etc., on it. Scatter the sultanas on it, make into a roly-poly, wet the ends and squeeze together. Boil for two hours and a half in a floured cloth. Turn out to serve and sift sugar over.

Apple Trifle.

Pare, core, and stew with sugar and lemon peel two pounds of apples, and cook till quite soft. Cut some sponge cake in slices and arrange them in a pie dish. Then spread a layer of the apple mixture, more sponge cake, and so on till all is used up. Make a pint of thick custard and pour over the trifle. Beat up the white of an egg till stiff, and pile on to the custard, and lightly brown in the oven. Place a pie collar round the dish when serving. This sweet is equally good, hot or cold.

Care of the Range.

Constant care both in regard to blacking and fire is the price to be paid by every housewife if she would have a nice looking range. The better grades of stove polish will not burn off except the range is allowed to become red hot. In most cases this is a waste of fuel and careful and judicious use of the dampers. Of course where a range is used all day under what might be called forced draft it will require blacking every other day, but under ordinary circumstances twice a week should be ample.

Crabapple Marmalade.

Quarter the apples and remove the cores. Boil in enough water to cover fruit well, till all the pieces are ready to fall from the skin. Run through the colander. Measure the pulp, add a pint of sugar for each pint of pulp. Stir constantly till thoroughly incorporated. Put a teaspoonful into a saucer, and draw the spoon through the mass; if it leaves a path, the marmalade is cooked enough. Another test is to invert the saucer; if it adheres to the saucer, the marmalade is done.

To Test the Heat of Lard.

To test the heat of lard in deep frying put in a slice of bread, and if it browns while you count sixty the fat is hot enough for raw materials. If it browns while you count forty it is right for food prepared from cooked meat or fish, such as croquettes. Use plenty of fat, which should be carefully strained before it is put away for future use.

Compote of Bananas.

Peel and halve the fruit, and arrange in a saucepan with enough light syrup to cover it. Let it boil up, but only just boil, and lift out and arrange in glass or silver dish. Boil up the syrup again almost to the crack, flavor with a teaspoonful of flavoring, allow to cool, and pour over the fruit.

Flannel Cakes.

Beat two eggs in a bowl and add a teaspoon of salt, a tablespoon of sugar and a pint and a half of milk, with a teaspoon of cream tartar and half a teaspoon of soda; add flour to make a thin batter. Bake on a greased griddle, spread with butter, and send to the table hot.

Cold Slaw.

Cut one medium sized cabbage head, salt and let lay two hours, and squeeze out all the salty juice and place in a dish; add to this one-half cup sugar and two-thirds cup of cream (either sweet or sour) and stir until it is foamy; then add two-thirds cup lemon juice.

Spanish Turnips.

Boil separately turnips and macaroni; when the latter has boiled rapidly twenty minutes, place in a baking pan with small lumps of butter, placed over it; mash the turnips when tender, thin with milk to a thick batter; grate cheese over it and bake well.

RHEUMATISM BODY RACKED WITH PAIN

No other bodily suffering is equal to that produced by the pain of Rheumatism. When the poisons and acids, which cause this disease, become entrenched in the blood there is hardly any part of the body that is not affected. The muscles become sore and drawn, the nerves twitch and sting, the joints inflame and swell, the bones ache, every movement is one of agony, and the entire body is racked with pain. Rheumatism is brought on by indigestion, stomach troubles, torpid liver, weak kidneys and a general inactive state of the system. The refuse matter instead of passing off through nature's avenues is left to sour and form uric acid, and other acrid poisons which are absorbed into the blood. Rheumatism does not affect all alike. In some cases it takes a wandering form; it may be in the arms or legs one day and in the shoulders, feet, hands, back or other parts of the body the next. Others suffer more seriously, and are never free from pain. The uric acid and other irritating substances find lodgment in the muscles and joints and as these deposits increase the muscles become stiff and the joints locked and immovable. It matters not in what form the disease may be, the cause is always the same—a sour, acid condition of the blood. This vital stream has lost its purity and freshness, and instead of nourishing and feeding the different parts with health-giving properties, it fills them with the acids and salts of this painful and far-reaching disease. The cold and dampness of Winter always intensify the pains of Rheumatism, and the sufferer to get relief from the agony, rubs the affected parts with liniments, oils, lotions, etc., or uses plasters and other home remedies. These are desirable because they give temporary ease and comfort but have no effect on the real trouble which is in the blood and beyond the reach of such treatment. S. S. S. is the best remedy for Rheumatism. It goes into the blood and attacks the disease at its head, and by neutralizing and driving out the acids and building up the thin, sour blood it cures the disease permanently. While cleansing the blood S. S. S. tones up the stomach, digestion and every other part of the system, soothes the excited nerves, reduces the inflammation, dissolves the deposits in the joints, relieves all pain and completely cures this distressing disease. S. S. S. is a certain cure for Rheumatism in any form; Muscular, Inflammatory, Articular or Sciatic. Special book on the disease and any medical advice, without charge, to all who write. **THE SWIFT SPECIFIC CO., ATLANTA, GA.**

About fifteen years ago I had a severe attack of Rheumatism and could not work with any satisfaction. My legs were badly swollen and drawn so I could scarcely walk. I tried many remedies but could get no relief. I was finally recommended to try S. S. S. and it soon cured me sound and well. I am now 74 years old and have never had any return of the trouble.

JOSEPH FROME HAWLEY, Box 104, Aurora, Ill.

Sometime ago I had Rheumatism and had to quit work. The pains in my back and between my shoulders was so intense I could not rest or sleep. I tried everything but nothing did me any good till I heard of and took S. S. S. This medicine cured me sound and well. It purified my blood and made me feel like a new man.

CONRAD LOHR, Anderson, Ind. 122 E. 19th St.

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Practical Building.

The new Custom House takes its place beside the rest of the modern architecture of New York as an eminently practical building. The old structure on Wall street, with its domical interior, its tremendously deep and gloomy porch, its row of twelve monolithic columns, is full of concessions to the fashions of the day in which it was erected. For that period it was a much more notable undertaking than is the present structure for this. Like many buildings in New York, it was not adapted to the narrow street on which it raises its gloomy, prison-like walls. The new building shows a better adaptation. Though skyscrapers surround it, yet they cannot shut out the light nor interfere with the view. Mr. Gilbert has taken advantage of the site and has met the problems well. Everything points to the likelihood that the officials and the public will find the transfer from Wall street to Battery Park particularly conducive to comfort and prompt dispatch of business.—From Charles De Kay's "The New New York Custom House" in the March Century.

Very Unusual.

"Say, Smith, your boy is about 3 or 4 years old now, isn't he?" "Just three and a half." "How is it you never tell us any of the bright things he says?" "Never says any to tell." "Look here, Smith! Take great care of that child! He is destined for great things."—Baltimore American.

Quieting Suspicion.

"Mr. Blank seemed rather uneasy when I told him you were going to apply for the position of typewriter." "He was, but I soon got him over his alarm." "What did you say to him?" "Told him I had no matrimonial designs whatever; that I merely wanted to be assister to him."—Baltimore American.

Its Natural Place.

"Where would you go to look for the spirit of the times?" "My dear sir, in the body of the people."—Baltimore American.

Striking Example.

"For instance," mused Dr. Osler, "there's Bob Fitzsimmons. He ought to have been chloroformed a year ago."

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