

THE SPEED OF LIGHT

The first astronomer to satisfactorily demonstrate the speed of light was Ole Roemer, a Scandinavian scientist, who read his immortal paper on this subject before the Academy at Paris, on July 22, 1675. Roemer's calculations and conclusions have stood the test of time and subsequent investigations on all important points. Knowledge as to the velocity of light was of tremendous importance to astronomical science since it enabled astronomers to accurately estimate the enormous distances with which their science deals. Roemer found that light travelled at the rate of 186,000 miles in a second. The sun, being distant from earth 92,000,000 miles, flashes light to us in eight minutes and fourteen seconds. Yet the sun is a near neighbor compared with the so-called fixed stars, which in reality move with inconceivable velocity, although the most powerful telescopes will not show that velocity as anything but rest. Beyond the outskirts of our insignificant solar system are other systems, and beyond them still others so far as the sight of man, aided by instruments, may bridge the ghastly chasm of the infinite. Distances beside which the immense line stretching from earth to sun is an invisible point are now measured by means of Roemer's epochal discovery as to the velocity of light.

Diseases of Wood

Wood has contagious diseases! A stick of wood in a lumber yard may be sick and infect other timbers, which later develop the disease when they are supporting great weights in a new building. Some of the diseases are so contagious that in a building they will jump several feet across masonry or brick to some stick of healthy wood.

Most of the diseases are varieties of dry rot caused by a fungus, and most of the varieties of the dry rot fungi cannot stand heat much over 100 degrees; so the most likely cure is to close a building up tight if any beams are infected, and heat it up to 120 or 140 degrees. Even this is not always successful, for ends of beams are buried in the outer brick walls and the heat may not touch them.

Toy Size Fire Engine

A complete steam fire engine, mounted on two wheels and light enough to be handled by two men, has been invented in England for suburban and private use.

Aerial Mail Service

A device has been invented to permit an aeroplane to pick up mail bags and parcels from the ground while in full flight.

1866—Convention of workmen at Baltimore made the first demand for the eight-hour working day.

SCRAPS OF KNOWLEDGE
FROM ALL OVER THE WORLD

Lighthouses and lightships dot the coast of Great Britain at the average rate of one every fourteen miles.

Immigrants landing in Canada between November 1st and March 1st must possess at least \$50, at other periods of the year at least \$25.

A regiment of 1,000 men could readily find shelter under a single banyan tree. In India there is one of these trees which has 400 main trunks and over 8,000 smaller ones.

It is said that the Bank of France has an invisible studio in a gallery behind the cashiers, so that at a given signal from one of them any suspected customer can instantly have his photograph taken without his knowledge.

France has a new device for carrying on correspondence by phonograph. The record is made on a square of prepared cloth, which can be sent through the post in an envelope, and is said to reproduce the voice with great accuracy.

A petrified man was sold by auction in Paris. The man lived some thousands of years ago in Patagonia. He was about 6 feet 3 inches in height. Though he is now a stone statue, the body bears traces of two deep wounds.

Within the Antarctic Circle there has never been found a flowering plant. In the Arctic regions there are 762 different species of flowers.

The scarcity of elephants in India may be inferred from the fact that in 1835 one of these animals could be bought there for \$225; now the price has advanced to \$4,000.

From the summit of Mount Diablo, California, may be seen a phenomenon of a curious description. Four times a year—once every three months—the sun rises at such an angle that a shadow about thirty miles long is thrown on the plain beneath.

In order to attract domestic servants the New Zealand Government decided to pay the whole of women's passage money if the immigrants were unable to pay the prescribed portion of the fare, the money so advanced to be refunded by instalments.

The clock in the facade of St. Lazare Station is the first in Paris to have the newly-adopted official numbers of 13 to 24 for the hours after noon. From 1 a. m. till 12 the figures 1 to 12 appear on the dial. As noon strikes they disappear, and the figures 13 to 24 will take their places.

Makes Sure of Unconsciousness

Apparatus for pumping an anesthetic into a person's lungs and insuring the administration of a definite dose has been invented by a Paris doctor.

Less conversation with the bleachers and more ball playing in the infield is wanted.

WHAT THE TONGUE TELLS

The latest "scientific" whim, a substitute for palmistry, hailing from Germany, is the pastime of reading character and telling fortunes by the tongue.

A sensitive, quivering tongue denotes the artistic temperament. A tongue of a brilliant carmine hue denotes long life; a pale, pink tongue, delicacy and weakness of character.

The man with a short tongue usually is of a secretive nature, and likely to succeed in life either as a lawyer or as a detective; but, although he may acquire money by economy and cunning, he has not the largeness of mind necessary to the amassing of a great fortune.

Long tongues suggest generosity and openhandedness. But the man with a long, broad tongue is apt to be a dangerous gossip; just as the man with a short, broad tongue is addicted to craft, and even deceptiveness.

Very thin, pointed tongues may be found in people of all temperaments, and are indications of failure. The man with such a tongue, it is said, will never make a success of life.

JOT DOWN YOUR IDEAS

They Are Worth Money and May Quickly Slip the Mind

You've had ideas, of course? Brilliant ones, maybe? What's become of them? You will remember them, with a gnash of the teeth, when you read that the idea you let slip went on to someone else—someone who nursed it, developed it, and cashed it! You will look into the shop windows and see the idea that came to you—but which you didn't keep—making money for someone else!

Next time, make a record—and make it at once! Wherever you are—and ideas come anywhere, at any time—make a record of that fleeting thought. Smart men have an idea book, that nothing shall escape them. They build on ideas; it is their valuable raw material.

Track the great inventions, and what were they in origin? Just ideas! Think of the safety-pin. A pin with a covered point, that's all. But a fortune for the maker.

The pneumatic tire. Dunlop watched his boy at play, and suddenly the great idea came to him.

The screw bottle-stopper. Another brilliant idea.

Boots will wear down at the heel. Hence the boot protector—a new idea, and a fortune.

The perforations in the stamp sheets. Just an idea!

Many a workman who has slipped his "idea" into the idea-box in the works has his own house to-day, and draws a royalty larger than his wages, because he had an idea and did not let it go until he had cashed it! There's always a market for ideas.

PLENTY OF WORK
FOR EXPLORERS

Huge Tracts of Globe's Surface Are Desolate Wastes or the Home of Savages

On a rough estimate, about seven millions of square miles, or one-eighth of the total land surface of the world, are waiting to be discovered. Some 200,000 square miles of this lie in the Arctic regions of the North, but among the frozen tracts that form "Antarctica" in the South, where Scott and his gallant followers perished, nearly 3,000,000 square miles are relegated to the sole use of whales, seals, penguins, petrels, and other animal and bird inhabitants of frozen homes.

It is true that human communities could never be formed in such climates as these, but the scientific world is ever eager for the discoveries of explorers, and even among uninhabited districts their work is never wasted.

In Arabia there exists a tract of unexplored country nearly five times as large as Great Britain. It stretches from Mekka almost to the south-east coast, and is called Dahna, or "The Dwelling of the Void."

A Riverless Tract

Probably no more desolate waste is to be found on the globe, for not a single river is estimated to flow throughout its entire 400,000 square miles. Some authorities state that the whole desert is not worth a dollar. Others give credence to the legend that treasures and hidden cities lie in the heart of the sands.

Of quite a different character are the enormous mountain-fastnesses of South America, which lie along the Upper Amazon and in the districts of Columbia and Peru. The celebrated treasure of Cuzco lies secreted among the Peruvian heights. Impenetrable forests, mountain jungles, and innumerable fever-spreading rivers hold the most intrepid adventurers at bay, to say nothing of carnivorous ants, malignant snakes, water-moccasins, and those most deadly of serpents, anacondas. During recent years over a dozen expeditions were either wholly or partially wiped out in their efforts to wrestle with these regions.

Rich in Minerals

Although the famous El Dorado which set the sixteenth century ablaze has never been unearthed, the country generally might fittingly be called El Dorado, from the rich minerals and priceless stones emanating therefrom. Strange, wild-eyed men descend occasionally from the mountains, bringing wonderful fragments with them. But they refuse to act as guides to those who would accompany them back.

It is curious to realize that vast portions of our own Empire have never been seen by British eyes or the eyes of any white men. Nearly a quarter of Australia is still unexplored, mainly in the west, where the population averages only one person in about twenty square miles. According to this basis, England's total population would work out at 2,500.

New Guinea has baffled countless expeditions, though many are still trying to fight their way inland from the coast. Despite the fact that the interior of this island is practically a geographical blank, it is neatly divided on the maps between Britain, Germany, and Holland. Among its products are birds of paradise, spices, and cannibals.

An Amazonian Empire

Another particularly interesting district which has so far defied civilization lies secreted among the Himalaya Mountains. Rumor says that it is presided over by women, who are responsible for such rude laws as are necessary even in a lawless district, manage the affairs of state, and live in a luxury of inverted Mormonism by possessing four or five husbands apiece.

The foregoing selection does not exhaust by any means the list of geographical blanks waiting to be filled. Before the Atlas Complete can lie on our shelves we must penetrate the darker haunts of Borneo, North America, the Congo basin, the seven-hundred-mile mountain range that stretches from Der Fur into the heart of Sahara, and numerous other spaces.

CHEAP FARES TO
TORONTO EXHIBITION.

In connection with the Canadian national exhibition at Toronto, which will be held this year from August 23rd until September 8th, the Intercolonial Railway will give very low excursion rates which will give the opportunity to many to visit the Queen City on the occasion of its great annual fair.

The Toronto fair is the largest and most attractive of annual exhibitions in America, and this year new permanent buildings have been constructed and its extensive boundaries enlarged by new boulevards. Aside from the attractions of the exhibition a visit to Toronto at this season is sure to be enjoyable especially in view of the very low rates prevailing. From Fredericton the round trip will be \$22.90 good going August 21, 23, 25, 26 and 27 and Sept. 3 and 4. A special rate of \$16.45 will prevail on August 22 and 23 and on September 2. All tickets are good to return September 10. Maritime Province travellers will have their choice of two through vestibuled trains, the Ocean Limited and the Maritime Express, both of which connect at Bonaventure union station, Montreal, with the through Grand Trunk trains for Toronto. It will be well for intending travellers to apply early for reservations.

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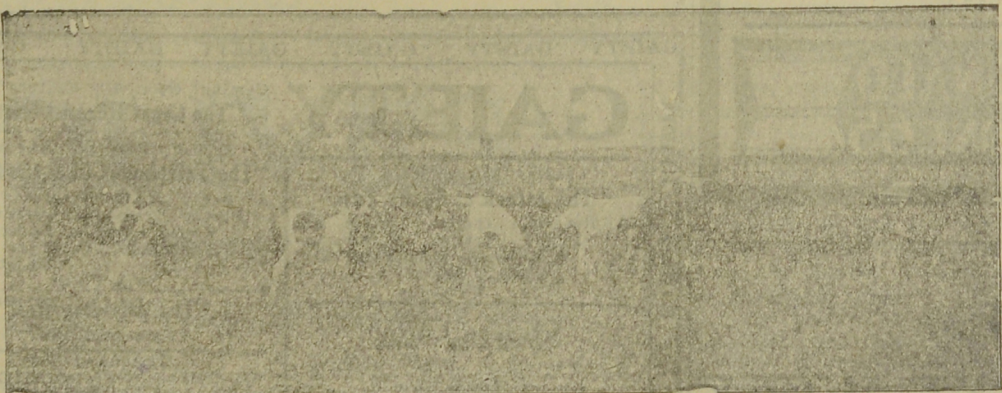
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