

TRANSMITTED ELECTRICITY

Mining Industry the One Most Benefited Through Its Application as Motive Power.

Scientific readers in general are familiar with the remarkable developments during the last few years of power transmission by means of high voltage alternating currents.

The ease with which electric motive power may be conveyed through cables into the most inaccessible parts of mines is another feature that recommends it to the mine owners of the west.

The main line of power transmission near Silver City, Idaho, is 27 miles long from the dam where the power is generated to the distribution point.

UNDERGROUND FIGHTING.

Described by a Japanese Officer Who Took Part in the Port-Arthur Battles.

Where we were digging in an underground tunnel toward the Russian fortification, almost over our heads, we noticed a caving of earth, says a Japanese officer, in Leslie's Monthly.

All of a sudden there was an explosion; earth shook, then shuddered. All was blackness. Six of us were buried. We were dragged out by our comrades by the ropes which were about our feet.

THE RAINY DAY AT HAND.

Came On So Suddenly the Borrowing Man Hung On to His Own Money.

"Archie" Gunn, the artist, tells a story of a fellow worker who was recently in receipt of a letter from a chap who has regularly made it a practice to borrow money of Mr. Gunn's friend, relates Collier's Weekly.

In this letter the chap who is always in financial difficulties surprised his correspondent by saying: "This time I have decided to reverse the usual order of things, and instead of borrowing from you, I enclose herewith \$50, which I am going to ask that you will lay aside for me for a rainy day."

But the friend of Mr. Gunn couldn't find any remittance in the letter. He searched for it on the floor, under the table; in fact, everywhere he thought he might have dropped it. Then quite accidentally he turned over the sheet on which the letter was written and discovered this postscript: "I've just looked out of the window, and find it raining like the very deuce!"

ENGLISH VILLAGE'S RECORD

How Inhabitants Who Have Lived to an Age Beyond the Ordinary.

The little South Lincolnshire village of Eborby, in the words of its inhabitants, "takes some beating in longevity," says the London Express.

Last year there were two deaths— one at the age of 92, the other at 89. The year previously four people aged 82, 93, 82 and 79, died, while during the last four years only two persons under 100 have died.

There is another woman in Eborby, aged 95, one 88, four over 80, and several over 70.

Photographs of All Aged Chinese. During the emperor dowager's birthday celebrations an order was issued by the emperor to the different viceroys, calling upon them to obtain photographs of all subjects from 70 to 100 years of age.—South China Post.

ONE-FAMILY SETTLEMENT.

Households in India Become Formidable by Accretion of Relations.

"No one is a separate unit in India," says Edmund Russell, in Everybody's Magazine. "The sons never leave the parental roof-trees. All marry—marriage with them is as birth and death, inevitable—and their children are added to the family. There are always widowed aunts, other grandparents—no relative is ever left to shift for himself in India—so that households of 150 are not uncommon. Add almost as many servants, and we have some idea of the occupation and cares of the mistress of such a home. The servants' quarters surround the yard or compound, and the ladies of the household care for them as did the stately dames of old Virginia in the plantation life before the war. The great zenana of courtyards stretch back to fruit and vegetable gardens, and there are tanks or artificial ponds where ladies and children bathe in seclusion. Blossoming trees rise above hedges that jealously guard these sacred retreats, where a family may sport in private with freedom unknown to us, and suited to their shy, poetic, playful natures, that only unfold when with each other, caring as little to see the world outside as to be seen by it."

THE STUDENTS OF RUSSIA.

Young Men and Women Who Make Trouble for the Government.

There are more than 4,500 students in the University of Moscow, nearly 6,000 in the University of St. Petersburg and 2,500 at Kiev. The attendance at the Universities of Kharkov, Dorpat, Warsaw, Odessa and Kanan averages about 1,400 students apiece, and there are several smaller institutions of higher education in other cities. Altogether the universities of Russia are educating about 19,000 young men and women, or almost three times as many as attended such institutions 30 years ago.

Yet the students are always a source of uneasiness and often of grave anxiety to the imperial court and the ministers of the czar. They are generally very advanced in their views, only a few, comparatively, siding with the reactionary imperial princes and their retainers.

HAS MULE-FOOTED HOGS.

Kansas Senator Has Drove of Porks with Remarkable Underpinning.

Not many people know that probably the only herd of "mule-footed" hogs of any size is located in Kansas and is the property of a state senator. The herd is in Labette county, near Labette, and belongs to Senator W. J. Connor, reports the Topeka Capital.

Senator Connor has been breeding these hogs for a number of years, and says they will live and prosper where an ordinary hog will starve to death. The name "mule-foot" comes from the fact that the hoof is not split like that of an ordinary hog. It does not greatly resemble the hoof of a mule, except that it is round.

HATCHED IN POLAR WINTER

Bird of the Antarctic Region Has But Recently Become Known.

Dr. E. P. Wilson's lecture at the Royal Institution on the emperor penguin was illustrated by skins, eggs and a number of lantern pictures of the birds and their rookeries, reports the London Telegraph of recent date.

This fine species, larger than the king penguin, which has been exhibited in the Zoological gardens, was discovered during Capt. Cook's second expedition, but until the return recently of the Antarctic expedition, nothing was known of its life history or habits. The curious thing is that the birds are hatched in the depth of the Polar winter.

A single egg is laid which is brooded between the birds' feet and the soft plumage of the body. The chick is clothed in grayish white down, which is moulted after five months, and when about a year and a half old the immature plumage is exchanged for that of the adult. One young bird was taken on board the Discovery and kept alive for five months.

He Was It. "Did he actually ask old Roxley for his daughter's hand?" "Yes, and he claims he compelled the old man to toe the mark."

"Indeed?" "Yes, but he was the mark."—Philadelphia Press.

In 1955. He—That chap over there is one of the best sky-plant in the business. She—Airship or theological?—Chicago Daily News.

HOW THE JAPANESE FIGHT.

Little Soldiers of the Mikado Slash at the Legs of Their Russian Adversaries.

I had heard that the Japanese infantry charged on their stomachs, writes Helen Hyde, at Shoji, to the Argonaut, but I had no idea how they did it until I saw Uchiyama charging around my room—not exactly on his stomach, but away over on his left knee, propelling himself along with his right leg, which trailed out behind him. He was firing madly as he went, and in an instant he was his own officer—standing, forging ahead, sword in hand, addressing his men, who a second ago, were represented by this same lightning-change artist, Uchiyama.

"Where I lead you follow!" shouted the officer; "if any man falters or makes a move to retreat, I myself with my sword in pieces will cut him. Forward!" "Oh," said Uchiyama, turning, panting with his exertions. "No words can describe the strong actions of our officers or the strong words they speak. They are found dead, shot through the mouth while shouting to their men—shot in the breast. There was Capt. Tachibana; a shell tore away his right hand; never mind—he caught his sword with his left and led on his men, never faltering. Another shell tore away a great piece of his body, but when they found him his sword was still clutched tightly in his hand."

All this because a friend of Uchiyama was just back from the Liaoyang and out in the servants' quarters had spent the afternoon telling them wondrous tales.

I found on my return that day a century-old dwarf pine and some white roses. "A Liaoyang bazaar present from Toku San," explained Tojo. "He said, of course, if you wanted them, he had bits of shells and such things from the battlefield, but he thought you would rather have the pine."

I met a hero the other day—at least so considered by the Japanese, for he received a coveted "kanzo" before the troops—a quiet, unassuming country boy, cavalryman of the imperial body-guard. Why Gen. Kuraki had conferred this honor upon them and why three medals adorned his brilliant uniform, he did not say, but he did say

that he was allowed to keep the Russian officer's overcoat that he brought with him, because he, with two comrades, came unexpectedly upon 20 Cossacks, and, moreover, gave them battle. He simply bowed when some one asked how the officer died and one felt repelled; and yet, when one looked at the little Japanese horseshoe and the massive Russian one—at the overcoat, which must have been worn by a huge man, and then at the strapping—one with American sympathy for the underdog could not help being glad the fortunes of war were with the boy.

The skirts of the coat were slashed with cuts as clean as if made with the scissors, and when we asked the meaning he said that the horses of the Japanese and their men were much too small to enable them to strike at the bodies of their big antagonists—so that they were obliged to unhorse them if possible by wounding them in the legs. I had not realized at what a great disadvantage the Japanese cavalry fought.

But this was not the story the young fellow came to tell. It was decided to give the greater part of the knitted cholera-bands over which all the winking of Tokio was busy for so many weeks, to the cavalry of the imperial guards, as sent ahead on scouting duty, they were apt to be without proper food and shelter, and exposed to more danger of sickness than the other branches of the service.

It was one o'clock in the morning, he said, with much exactness, when the bands were distributed to his company. There was only one to every three men—but the soldiers redistributed them to suit their own humanitarian ideas. And many times they changed owners; if one man was weaker, or if he felt ill, there was no way to do anything for him with fire or hot water. Off came the bands, and they piled one on top of the other, until the sick man was as warm as toast. They were used for wounds, for wrapping around the enemy's captured guns to prevent concussion; they were used to relieve their horses; to clean their guns.

"In fact," finished the soldier, "we had nothing that we put to more general use than those damki, and if you want to send things to the soldiers, by all means send them those." He had found the name of a certain girl's school written inside his and had used this first opportunity to come and express to the workers his gratitude and that of his comrades.

He Had Cried.

At a reception given for President Hadley one individual asked him what he thought of a recent baseball game. An Yale had met with a disastrous defeat the subject might be called unpleasant. Without hesitation President Hadley said: "There was a boy living in a village whose uncle died. The next day a man driving along the road was surprised to find the boy working in the field. Thinking this did not show proper respect for the dead uncle he called the lad to him and said: 'Johnny, didn't you know your uncle was dead?' Johnny slowly approached and drawled out: 'Yes, I know it; I have cried.'"

Bishop Brooks and Matrimony. The late Phillips Brooks, being a bachelor, was greatly annoyed by receiving offers of marriage from women all over the country. One woman told him that she had a fortune at his disposal if he would accept her hand and heart. He replied: "Give your money to the poor, your heart to God, and your hand to the man who asks you for it!"

THE BIGGEST FERRYBOAT.

Southern Pacific Steamer Is the Largest of Its Kind in the World.

The steamer Solano, the largest ferryboat in the world, crosses the Straits of Carquinez, carrying the trains of the Southern Pacific between Port Costa, Contra Costa county, and Benicia, Solano county, Cal. The vessel, says the Scientific American, was built in 1879 and launched in November of the same year. Her construction resembles that of a huge scow, stiffened lengthwise by four wooden trusses, one under each of her four tracks. Her hull measured 64 feet 10 inches in beam and 116 feet 8 inches over the guards. She is a double ended, with four-balanced rudders at each end controlled by hydraulic steering gear. The Solano is propelled by two simple walking beam engines of low pressure. Each engine has a 60-inch cylinder, with an 11-foot stroke, and its horsepower is 2,252. Each engine drives one wheel and works independently of the other. The wheels are 30 feet in diameter and each has 24 buckets.

The steamer has eight steel boilers, 24 feet 10 inches long and 84 inches in diameter and carrying 40 pounds of steam pressure. Six of these boilers are in use every day. Once in three weeks two are laid off, when the scale that has accumulated is removed with crude soda. Petroleum is used for fuel. Every 24 hours 3,200 gallons are consumed. The tanks hold 8,300 gallons. It takes 50 minutes to fire up.

The Solano has 424 feet of deck length and is 106 feet 7 inches on her keel. Approximately she has been handling 115,000 freight cars and 56,000 passenger cars a year. She is double crewed, with 17 men in each crew, and runs night and day, making from 26 to 46 crossings in 24 hours.

The length of her trip is one mile. The average time of transfer, including time required to cut trains, place them on the boat, cross the straits, unload and couple on the other side, is about 11 minutes. Road engines handle one out on and off the boat; a switch engine handles the other cut. The boat draws, light, 6 feet 4 inches, but draws 10 feet 7 inches when loaded.

The hinged steel aprons, weighing 130 tons, over which the cars are transferred from the dock to the boat, are four-track spans, 100 feet long. These are controlled by air-tight pontoons and counter weights which are handled by hydraulic power from pressure pumps located on the boat itself, connection being made by means of pipes and ordinary hose coupling.

As the boat enters the slip the counter weights are raised by hydraulic power, leaving part of the apron unbalanced. This sinks the pontoon. The apron descends to the level of the deck, the end fits into a recess on the boat and is firmly latched down. The counter weights are released and the apron and the boat are free to rise and fall with the tide.

MATERIAL FOR BUTTONS.

Much of It Found in the Ivory Nut, the Product of a Peculiar Plant.

According to an official of the department of commerce and labor almost all the buttons made in the United States, whether called ivory, pearl, rubber, horn or bone buttons, are manufactured from the ivory plant. The cultivation of this plant rewards its growers with no inconsiderable returns.

The best ivory nut for commercial purposes is found on the banks of the Magdalena river in Colombia, where it is called the Tagua palm. The fruit forms a globular head about twice the size of a man's cranium and weighs from 20 to 30 pounds. The head forms what might be called a cluster of bulbs, containing from 50 to 60 seeds. These seeds are allowed to dry and are harvested several times each year by the natives.

The ivory plant also grows in California, but the nut there found is of an inferior quality to the Colombia variety and will not make up as well into buttons. It is, however, believed that with cultivation the California nut may be made as valuable as the South American.

The nuts exported to the United States are shipped by way of the Pacific coast and thence across the continent to the big button factories, from which they come forth in every conceivable design, color, grade and classification of button.

Although the ivory plant is used almost exclusively for the manufacture of buttons, yet some factories use it for the making of poker chips. The nut has not, it should be added, entirely superseded the old-time rubber and bone buttons in vogue for so many years. But it admits of wider and more varied treatment for the purposes for which it is used than any other known substance and, furthermore, is easily worked. The United States, it is said, consumes more than one-half of the world's product of ivory nuts and nine-tenths of the vegetable is made into buttons.

Upon reaching the factory the nut is cut into three slabs. In this process of cutting it is contrived that the button be partially shaped. Then the thread holes are drilled and countersunk and the button is forwarded to the polisher, who turns it out smooth and clean for the designer. The latter runs it into a pressing machine fitted with dies of the pattern desired.

It Ran. Gunner—Yes, it was a great banquet. Some chap bet me ten dollars that a Welsh rabbit could run. I thought he was full and took the bet. Guyer—You won, of course? "I'll be hanged if I did. Just then the waiter led a Welsh rabbit run all over my dress-suit."—Chicago Daily News.

LEPER COLONY OF MOLOKAI

The Unfortunate Victims on the Island Now Number About Eleven Hundred.

Dr. William C. Wile, of Danbury, Conn., who has achieved special prominence by reason of his investigations of that dread disease, leprosy, in pursuance of which he has spent a great deal of time of late in the leper settlements of Hawaii, says: "The unfortunate victims of the leper colony on the island of Molokai now number about 1,100. They are well cared for and have everything done for them that can alleviate their pitiable plight."

"From the period of infection, which occupies about two years, the leprosy patient may have his existence prolonged from four to six years, rarely longer than the latter period. Curiously enough, the taint of leprosy is not always transmitted; a child of a leprosy father and an uninfected mother may grow up in good health."

"One noteworthy feature of the colony is the baptism often displayed by non-leprosy husbands, who go to dwell in the disease-stricken settlement, to be the side of a wife who is marked for death; and of an equally devoted wife, who take the same risks. Indeed, I think the number of women who do this unselfish deed is greater than is the case of men."

FOR IDENTIFYING ROPE.

Means Used in the British Naval Service and in This Country Commercially.

"Every rope used in the British naval service, from heaving line to hawser, and wherever it may be used on ship-board or in dockyard," said a cordage manufacturer, relates the New York Sun, "has woven into one of its strands for purposes of identification a red thread. The presumption is that any rope with the red thread found outside of such uses is in improper hands. This custom in the British navy has prevailed since the days of Nelson, or since long before that for aught I know."

"A like means of identifying rope is employed in this country to some extent commercially. Some railroads have their rope marked in this way, and this method is sometimes employed for marking rope used for the transmission of power in operating machinery and on lighters where it might be exposed to depreciation."

"Ropes have been marked with a single red thread, or with two red threads, or with single threads of some other color as a distinctive mark of ownership. We have marked ropes with a single tarred thread. We would mark ropes in any manner which might be desired on large orders."

AN INAUSPICIOUS MOMENT.

Society Belle Was in No Fit Condition to Be "Seen" by Telephone.

Ting-a-ling! Ting-a-ling! The telephone was ringing. Yet it was only eight a. m., relates the Louisville Courier-Journal.

"Ting-a-ling! Ting-a-ling-ling-ling!" The society belle was very sleepy, but there was nothing to do but climb out of bed and answer it. "Hello!" she called, hoarsely. "Hello!" is that you, George?" called her sweetheart. "Yes." Excuse me for rousing you up so early, but I've got to go out of town in an hour."

"It's all right," replied the girl, kindly. "What is it, George?" "Why, you see, there's an agent here with one of these new-fangled patent seeing devices for telephones. Enables you to see the person you're talking to, you know. He wants to demonstrate it to me, so I'll have him put it right on, eh?"

There was a maidenly shriek and a mad rush into the adjoining room, and a few minutes later the young lady's mother came to the telephone and sharply told George to ring off.

WORK OF THE SHIP RIGGER

His Is a Vocation That Is Among the Most Perilous Followed by Man.

Men who delve deep into the bowels of the earth and those who rear buildings to great heights in the skies represent the extreme in perilous endeavor. The men who work downward, according to statistics, face far greater danger than those who toil slowly skyward. Yet here is an altitudinous calling fraught with peril every minute. It is the ship rigger's job, and compared with steeply climbing, it is much the more onerous.

The men engaged in it are as well trained as circus athletes, though in the rigging of a ship the performers are carefully safeguarded. The ship rigger, however, does not know at what minute a rotten bit of timber or a worn rope may give way and precipitate him to death. With a wider use of steam vessels, the decline of sailing ships is a natural result, so that now the rigger does not find as much work to do as in the palmy days of the fast clipper ship, when American commerce whitened every sea.

Her Bosom Friends. Esmeralda—So Imogene decided to marry the young naval officer instead of the young army captain, did she? Gwendolyn—Yes; she decided that his uniform was ever so much more becoming than the captain's.—Chicago Tribune.

Ladies Always Thank. Gubb—Yes, I always keep my seat in a car. I gave my seat to a lady once and she didn't even thank me. Hoop—You didn't give your seat to a lady, then.—Chicago Sun.

THE WILD DOGS OF INDIA.

Very Shy and Cunning Creatures That Are Not Easily Captured.

Mrs. Nora Gardner describes an experience while hunting big game in the central provinces of India, relates the Chicago Daily News, as follows: "We had been shooting for some months, and up to a certain date had had very good luck. Tigers and other beasts were plentiful, and our bag was a good one. Suddenly, our luck changed. Blank day followed blank day—not because we had missed easy shots or had to reproach ourselves for losing wounded beasts; but simply that we had seen nothing in the shape of a wild animal to shoot. Parkmark, the hot weather station of those parts, was just above us, so my husband and I, with a few servants and baggage coolies, started to climb up the hill. He and I were riding a little in front, when he drew my attention to a number of kites and vultures circling in the air just ahead. Here this, of course, meant carrion or a dying beast of some kind, and we went on a 'scent' to see what it was. The man came creeping back on all fours. 'Wild dog, sahib! Wild dog!' he said."

"My husband got his rifle as quickly as possible. He crept forward and suddenly came on the pack making off nearly 300 yards away. He took a hurried shot at the last in the pack and missed. The rest galloped off to the right, the one he had aimed at going to the left. While we were bemoaning our lack the 'scent' touched my husband. 'Look, sahib, he comes back!' and sure enough, away to the right, we saw the dog going back to join the pack. How he crossed the track without our seeing him is a mystery. He was already 200 yards off. My husband made a most brilliant shot, and got the dog just as it was crossing the bank to the river."

"Wild dogs are not only very shy but very cunning, and very seldom shot. They do an immense amount of damage. As soon as a pack takes possession of a jungle every thing else leaves it. Even a tiger will go if he smells wild dog. This accounted for our recent bad luck and the little game we had been seeing. The one we got was a young dog, rather like a fox, but with longer legs and body, thinner brush and rounder ears. There were six in the pack and only one was favouring a young buck they had just pulled down."

JAPANESE NAVAL SURGERY.

First Time Science of Shell Wounds Has Been Studied Under Good Conditions.

The essential feature of the work at Sasebo naval hospital is that 90 per cent. of the cases of ordnance wounds are inflicted by shell and not by bullet. Here, then, says the National Review, for the first time in history, the science of shell wounds is being studied under good modern conditions. For in South Africa hardly five per cent. of wounds, even early in the war, were inflicted by shell, and these were scattered up and down the country through a dozen different hospitals, so that a concrete study of their peculiar features was impossible. In the Spanish American and Chinese wars there were few casualties from artillery, and where there were, as in little use to the modern surgeon as to the modern chief of artillery. During the first six months of the present war 150 cases of naval shell wound had survived to reach Japan. The report, therefore, of the medical department of the Japanese navy at the conclusion of the war will make a definite addition to surgical science. It will be of all the greater interest in that the three surgeon-generals of the navy know English well, and will, it is to be hoped, issue a report in our language on the precedent of their valuable report after the war with China, in 1894. The director general, Baron Sanyoshi, was educated at St. Thomas' hospital, and is a Fellow of the Royal College of Surgeons of England. In both of these spheres he is on common ground with Surgeon General Totsuka, and with one of his predecessors, Dr. K. Takaki, who at the age of 25 became director general of the medical department of the navy, improved the rice diet, stamped out the scourge of beriberi from the ships by introducing a thorough system of sanitation. The director general ranks as a vice admiral, with two small stars on a broad gold stripe down the shoulder strap. The other two surgeon-generals rank as rear admirals, with one star on a small stripe of gold; and medical officers of lower degree are called doctor, rank with captains, commanders and lieutenants, according to seniority, and wear the corresponding marks of rank.

Emblem of a Swift Era.

Because it is quick, the telephone is peculiarly adapted to the needs and temperament of the American people, and though now finding general employment abroad, it has reached its highest development in the country which gave it birth. Long distance conversations ceased years ago to be a novelty and are now a necessity of every-day business and social life. In a few minutes' talk by phone matters can now be arranged which would require hours for settlement by telegraph, and days if the mails had to be employed. The phone is perhaps the truest emblem of this swiftly living age.—Cleveland Plain Dealer.

King's Christmas Dish.

Cygnets on King Edward's menu Christmas day. A cygnet is young swan. At St. Helen, in Norwich, about 100 swans are fattened for the table in the swan pit. The birds are liberally fed with the best barley and maize, which is placed in troughs below the surface of the water. A fat cygnet weighs about 16 pounds and costs more than \$10. Its flavor is said to be between geese and hare.