

CHEMISTRY AND THE METALS.

The Composite Parts of Each Kind of Ore Are Now Very Easily Ascertained.

The chemical laboratory is the workshop of the modern magician, and in it are wrought wonders which not so very long ago would have been regarded as miraculous.

Modern metallurgy is a chemical art. All improvements in the manufacture of steel, for example, have their origin in chemical knowledge.

A DUCK-HUNTING ENGINE.

Locomotive on a Southern Railway That Provided Game Dinners for the Train Crew.

Said a railroad engineer a day or two ago: "The average man has no idea how many animals and birds are killed every year by the cars."

"But these are not the only forms of animal life that suffer. I have run down woodchucks, raccoons, squirrels, hedgehogs and pretty nearly every other sort of small animal."

"The strangest experiences I ever had were in the south," continued the engineer, according to the New York Times.

WOMAN WORKS AS COBBLER.

Wags Shoes on the Beach with Her Husband All Day and Plays the Piano at Night.

Grand Rapids, Mich., has a woman cobbler, the only one in the state, if not in the country.

In the big factories women are, to be sure, employed to do certain parts of the work in making a pair of shoes by machinery, but none of them has to do what Mrs. Harner does.

Ten years ago they came from Canada and Mr. Harner opened a little shop in Grand Rapids. Being a skilled workman, he soon had a brisk little business established, but he could not get competent help.

Seaside News.

A veteran sea captain has this to say as to how seasickness affects women: "They suffer more generally than men, but they don't make such a fuss about it."

Free Postal Delivery.

The free postal delivery system is only 28 years old, having been inaugurated in 1863 under Postmaster General Montgomery Blair.

A SPEECH ON ANARCHY.

Recorder Goff's Utterances Before New York Club Are Attracting Attention.

Recorder Goff has just made an address before the Nineteenth Century club upon "Anarchy," which is attracting considerable attention at New York.

"I think we assume a little too much if we make the mistake of congratulating ourselves on the present state of our society or our position in it. The aristocracy and nobility of France took the same position before the revolution in regard to what they called their rights."

Recorder Goff said that in our efforts to devise legislation for repressing anarchy there was grave danger that we might go to the other extreme.

REVOLUTION OF PLANETS.

Joseph Battell, Novelist and Philosopher, Says Force of Sun's Light is the Cause.

That the revolution of the earth and other planets about the sun is caused by the force of the sun's light moving through the vacuum between the spheres and more or less affected by magnetic currents is the claim of Joseph Battell, novelist and philosopher, of Middlebury, Vt., who claims to have made a careful study of the problem.

"The interstellar space is a vast region into which the air does not extend, and, therefore, is similar to what we call a vacuum. But it is demonstrated by the experiments of Prof. J. J. Thompson, of Oxford university, England, and other eminent physicists, that in a vacuum cathode rays, light, heat and electricity do their work, and it is shown that these particles or corpuscles of light not only move with great rapidity in straight lines, but will cause to move rapidly in a vacuum bodies which they meet in their path."

"It follows, as a matter of absolute certainty, that the light emitted from the sun into the space surrounding it must cause to move whatever bodies are in its path. This means especially the earth and other planets of what we call the solar system. Light moving in straight lines will push these bodies away from the sun. This is the so-called force of repulsion. It is further demonstrated that magnetic currents will deflect or bend the rays of light from a straight to a curved course. Let these two forces be properly adjusted and the revolution of planets about their central sun is accounted for."

GAME PRESERVE FOR ALASKA.

Effort Being Made to Secure Government Protection of Bird and Animal Life of Territory.

At the sixth annual meeting of the New York Zoological society just held Director William T. Hornaday gave a report, illustrated with stereopticon views of the Alaskan expedition, undertaken in March of last year, for collecting specimens of the white mountain sheep. After the report on the expedition Mr. Hornaday introduced a resolution, proposing the establishment of a national game preserve in southern Alaska, to include the Alaskan peninsula, the Kena peninsula and the mainland around Mount St. Elias, and the head of Yakutat bay, including Kadiak island. He displayed illustrations of animals, and maps showing their distribution. It is proposed that congress shall regulate the hunting in this district, which now, with the rest of Alaska, has no restrictions of any kind.

Lion Whipped by Black Bear.

While the animals at the Wittington Zoo at Hot Springs, Ark., were being transferred from one cage to another the other morning a fight occurred between a lion and a black bear which resulted seriously for the lion. When the lion, a large two-year-old, was placed in the bear's cage, Bruin attacked him and caught him by the throat. The fight was terrific while it lasted, but the bear held on and it took the entire force of employees to separate the maddened brutes. The lion was badly worsted and may die. The bear is a common American black and stands seven feet high when on his hind feet.

Frenchmen Harness the Waves.

Some French naval engineers, installed in Lorien harbor two weeks ago a series of balancing boats, which, by utilizing wave power, have been developing 60-horse power regularly. The only expense is one attendant in the day time, one at night, and five cents worth of oil a day.

HER GREATEST NEED

President Palma Discusses the Future Prospects of Cuba.

Believes the Hopes of His Country Depend Much Upon the Plan of Education Adopted - Wants the Latest Methods.

The educational programme of T. Estrada Palma, the president-elect of Cuba, has been matured after careful thought. Mr. Palma in his statement says:

"Agreeing that the future prospects and hopes of my country depend upon the plan of education, I state following what I think of the subject: 'Comparing the poor condition of the public schools in Cuba during the Spanish administration with that which prevails to-day, after three years of American rule, the improvement is so great that we cannot but thank the American government for it. I think, however, that the whole system requires particular attention, in order that the work of general education shall become practically more efficient to the Cuban people. A system of elementary instruction carried out with modern methods, under a compulsory law for all and each one of the Cubans, is the fundamental basis for making citizens fully acquainted with their rights and their duties. It is one of the greatest obligations of the Cuban government to dispel the ignorance, from one end of the island to the other, which has prevailed for centuries there, and to distribute conscientiously the moral bread of instruction and knowledge. In the general system of primary and elementary education both sexes are equally embraced, and the benefits of it ought to be extended to the inmates of the jails and asylums. For the purpose of attaining the best results, we need to keep ourselves in close contact with the leading educational institutions of the United States and other countries, which are at the head of civilization in this important matter. Of course some regular visits by our teachers to those institutions is one of the best ways to keep in touch with the modern improvements in public schools. Besides the proper instruction afforded to the Cuban children it is my opinion that moral teachings, in a general sense, without descending to a special worship, ought to be a part of the public school system."

SOCIETY WOMEN DRINK.

Dr. Wilbur de Lyon Nichols Declares That Habit is on the Increase.

According to a statement made by Dr. Wilbur de Lyon Nichols, who is called the new "Ward McAllister of American society," indulgence in liquors by women leaders of the "400" of New York is greatly on the increase. The declaration was in reply to remarks made by Rev. Minot J. Savage concerning the prevalence of gambling among women of the "smart set." Dr. Nichols said: "That there is more or less gambling going on in society at the present day it would be useless to deny, but the statement that games of chance are as prevalent in the ultra-fashionable set as certain clergymen would have us believe I know to be false. "Indulgence in strong drink is on a more alarming increase to-day among women society leaders than the baneful fascination of the gambling table. "The bridge whist fad is now on the wane, and there has been a consequent decrease in gambling. But while the gambling fever has decreased, drinking has increased at an alarming rate in both London and New York. At many fashionable restaurants to-day one can see well-dressed women who show that they have taken more than they can stand."

Fines for Misent Checks.

Because bank clerks who sort on an average of more than 100,000 checks a day at New York city have made so many mistakes recently, the Clearing House association has made a rule fining each bank one dollar for each "misent" check, the maximum fine collected by one bank from another not to be more than five dollars on any one day. Exchanges of checks are made between banks each morning at ten o'clock. The balance struck must be paid before one o'clock of the same day. Recently, owing to the increase of the business, many errors have been made in "throwing checks." This has caused banks to pay for checks not drawn on them, and in order to get their money out of them they must present them for payment to the proper bank.

Carries Heart on Right Side.

The pension board of Bloomington, Ill., has just discovered a man whose heart is on his right side, instead of his left. This man is George W. Hurst, of Lexington. When he appeared before the board to undergo the physical examination necessary before an application for a pension could be secured, the surprising discovery was made that his cardiac organ was misplaced. The investigation conducted by the board showed that Hurst experienced no discomfort or inconvenience as a result of the odd location. The discovery did not invalidate his possible pension.

Consumed Tons of Sweets.

The French consumed \$2,000,000 worth of candy in December and January, or half the consumption of the whole year.

WANT A WHITE AUSTRALIA.

Plan Adopted in Queensland for the Deportation of Polynesians.

The movement to make a "white" Australia is not receiving such general approval as the Chinese exclusion has in this country, but it is none the less certain that yellow and brown labor must go from England's colony. The bill now being discussed in the commonwealth parliament permits the introduction into Queensland (the state most affected by the measure, for it is there that sugar is grown) during 1902 of 75 per cent. of the number of islanders (Polynesians) who return to their homes during the present year. In 1903 only 50 per cent. may return, and by 1906 there will be none in the colony, for by that year all will have been sent back to their island homes, whether or not they hold property or can pass the education test, says the New York Commercial Advertiser.

The chief opponents of the measure are the sugar planters and manufacturers, who say the white labor in the cane fields is much more expensive and much less effective, and they promise the extinction of a growing industry on which great sums of money have already been spent if it becomes necessary to rely solely on expensive and incompetent labor. Premier Barton's idea, however, is that by a system of import duties and bounties the sugar industry may be so protected that the loss of cheap and efficient labor will not harm it.

SAMPLE OF BRITISH RED TAPE

An Order Issued by a Major General to the Effect That There Were No Orders.

Every once in awhile something is blurted out that tends to indicate a few of the reasons why our soldiers cannot travel as fast as Boers. One of the reasons, it is suggested, is that they are hobbled to some extent with red tape, says the London Express.

Here is a military order which has just come to hand. It shows how at least one officer is wasting time and stationery:

"District orders by Maj. Gen. Boyce Combe, C. B., commanding Rawalpindi district, Murree, Tuesday, October 15, 1901.—No district orders were published yesterday. By order D. G. L. Shaw, major, assistant adjutant general."

This particular brand of mind that secretes performances like these cannot be expected to do much on the field of war. Catch DeWet? The military genius who did this couldn't catch a cold at the north pole.

MISTAKES ON RAILROADS.

An Old Engineer Crashed Into a Passenger Train Through a Blunder.

"It is a pretty easy thing to make a mistake in railroadng," said an old engineer as he thought of the recent wrecks on the Wabash and the Iron Mountain roads in which so many lives were lost, says the Mexican Herald. "As I understand it, those wrecks were caused by defective orders. The train dispatcher sent out his orders directing one train to pass the other at a certain station. The operator did not copy the order on his manifest book, as he should have done. Instead, he wrote it on a slip of paper and handed it to the engineer. But in making the copy the operator made a mistake and changed the name of the station. The collision was the only natural result."

Dined Under the Sea.

A diving bell was used some years ago in the neighborhood of Naples as a dining-room. The table was hung by cords from the roof of the bell, which, suspended a few feet above the water, was submerged while the various courses, of which there were 12, were being partaken by the half dozen guests. The dinner, which was cooked on board a large barge moored near at hand, was transferred to the novel dining-room when the latter was drawn above the surface during the intervals between the courses.

To Tunnel the Bay.

San Francisco bay is to be tunneled to accommodate the traffic between opposite sections of the city which now has to go around. The distance is about five miles, and the subway will pass beneath an island in the bay.

PROVES CHINA'S GUILT.

Document Held by Columbia University Which Shows Government Was in League with Boxers.

Documents now in possession of Columbia university, it is believed, prove that the Chinese imperial government was in alliance with the Boxer uprisings. The documents consist of an original block cut and a copy of a proclamation. The papers are the gift of Rev. Dr. F. D. Gamewell, who constructed the defenses of the allies at the siege of Peking.

Some few days after the relief of the beleaguered garrison by the foreign troops Dr. Gamewell secured new quarters for the Methodist Episcopal schools, their own building having been destroyed. Two private houses were taken, and it was in a table in one of these that a number of circulars were found, together with the plate from which they were printed. The circulars bear the seal of the government used on imperial documents. The wording of the circular is:

"By imperial command. Let the Boxers of (here follows the names of eight towns near Peking) rise up to united victory."

This, it is supposed, meant the destruction of the foreigners, as shown in the Boxer motto: "Protect the Manchus, destroy the foreigners." The circulars are printed on yellow paper, with black type, excepting the vermilion of the seal, or "imperial pencil," as it is known. Red characters, signifying the seal of the Boxers, are stamped on the lower left hand corner.

NAVAL EXPERIMENTAL PLANT

Congress to Be Asked to Provide a Place Where Important Problems Can Be Worked Out.

At the instance of the navy department Senator Hale has introduced in the senate a bill intended to carry out a long-cherished plan of the naval engineers, and especially of Engineer in Chief Melville, to provide the navy an experimental plant of the first class, somewhat on the lines of the magnificent German naval experimental plant at Charlottenberg which has been of such benefit to the German navy. The bill provides an appropriation of \$400,000 for the construction of a building at the naval academy of Annapolis and its equipment to deal with engineering problems of value and interest to the navy which cannot be properly left to private enterprises to solve. Much pressure has been brought to bear on the navy department by the great manufacturing interests throughout the country, and also by the scientific colleges and shipbuilders, to have the navy undertake this important work. Admiral Melville pointed out important military reasons that make it desirable the government should not be obliged to rely on outside experimenters for this work. Beside being a benefit to the navy proper, the proposed plant, it is said, will be of immense service in solving problems of the greatest importance to manufacturing interests and in stimulating the inventive genius of the navy.

ROMANCE AND MISERY.

Woman Dies in Hovel at New York Who Was Once a Coquette and Moved in Highest Circles.

The death of Mme. Adele Preveau, which occurred in a miserable shelter at New York which she called her home, ends a career of romance and misery. She was born near Paris 72 years ago, and early in life married the Count de Doreau, at that time well known and high in official favor. A dispute in a famous Paris club over a gambling debt resulted in a duel, and the count was killed. The young widow married Henri Preveau, who came to this country to live. The young couple moved in the highest circles in Washington and were received in the diplomatic set. Later Mr. Preveau came to New York. It was here that Mr. Preveau died. His widow inherited from him considerable property, but the fund dissipated and the old lady, driven to the last resort of poverty, made application to a poor house. From this she was taken by a negro woman, and it was in the house of this woman that she died.

Finde Queer Task in Nutsell.

H. A. B. Kelly, of the real estate board of brokers, has on his hands the task of writing an up-to-date description of the city of New York for the benefit of a stranger in Santa Anna, Cal., who is of an inquiring turn of mind. The westerner took a somewhat unusual method of preferring this request. Mr. Kelly was cracking walnuts at dinner when one of the nuts, which resisted his efforts for some time, attracted his attention on account of its peculiar whitish color. Mr. Kelly finally broke it open and found in one-half of the shell a note on which was a request for a description of the place the finder lived in. Mr. Kelly carefully preserves the letter, which he intends to answer.

Can't Shake Her On.

The emperor of China has returned to Peking after quite a stay out in the provinces. Only one thing marred the glory of his triumphal return, says the Chicago Record-Herald. The old empress dowager was there. The Final Test. Sir Algernon says Lady Lennox makes her gowns and gets them up economically. This is all very well as far as it goes, says the Chicago Record-Herald, but does Lady Lennox trim her own hats?

SHOWS BIG INCREASE

Mineral Production of United States for 1901 Is Large.

The Value of the Output of This Branch of Industry for the First Time Exceeds the Billion Dollar Mark.

The value of the mineral products of the United States in 1900 exceeded the \$1,000,000,000 mark according to the geological survey report on mineral resources which has just been issued. The exact figures were \$1,067,000,000, as compared with \$917,900,000 in 1899, a gain of \$150,700,000, or 16.5 per cent. Iron and coal alone yielded more than half of the total, their combined value being over \$500,000,000. The statistical summary of the production of the various minerals already has been published. Of the total iron ore output of 27,583,161 long tons, the Lake Superior region, embracing mines in Michigan, Wisconsin and Minnesota, produced its maximum output of 20,584,238 long tons, or 75 per cent. of the total for the United States. The Mesabi range in Minnesota alone produced 8,158,450 long tons, or 30 per cent. of the total domestic production.

The total value at the mines of the 27,583,161 long tons produced in 1900 was \$66,590,504, as compared with \$31,990,077 in 1899, a gain of 90.26 per cent. The average price was \$2.52 per long ton as compared with \$1.42 per ton in 1899, a gain of \$70.4 per cent. The most important gains in gold production were in the Seward peninsula in Alaska, the Cripple Creek district of Colorado, and in Arizona. The yield for the year was valued at \$79,171,000, a gain of \$8,117,000 over 1899. The silver output was of the commercial value of \$35,741,140. The report notes great activity for the year in old and new copper properties.

In 1899 the production of coal in the United States exceeded for the first time that of Great Britain; in 1900 the lead over Great Britain was much increased; thus fixing the United States firmly in the first place among the world's producers. The production in 1900 was 269,841,827 short tons, valued at \$305,891,364, the increase over 1899 being more than 16,000,000 tons in amount and more than \$50,000,000 in value.

The crude petroleum production exceeded all records, a large increase being especially noted in West Virginia, California, Ohio, Indiana and Texas. The Texas development was chiefly in 1901. Over 91 per cent. of the total production came from the Appalachian and Lima (Ind.) fields. The indications for 1901 are for a largely increased output of petroleum over 1900.

THE MULE OF PALESTINE.

Introduction of the Trolley Will Drive the Patient Animal Out of Business.

Trolley cars are to displace the mule as a means of locomotion in one of the last strongholds of that patient animal. Cleveland and Chicago capitalists, incorporated as the Cleveland Construction company, have been successful in negotiations with Signor J. P. Spanier, of Rome, Italy, for concessions for electric lines from Cairo, Egypt, to Mount Sinai, and thence along the coast of the Red sea through Syria and Arabia to Mecca. A branch is to connect Damascus with the system at Mount Sinai.

It is figured that the business during a single one of the annual Mohammedan pilgrimages to Mecca, whence it is the pious duty of every Mohammedan to go, will pay a handsome profit on the cost of construction. Letters received from Signor Spanier say that the sultan of Turkey has granted an important part of the concessions for the system.

Already trolley cars are running from Jerusalem to Galilee, and the progress of the Zionist movement, with Jerusalem as its center, promises a network of trolley lines centering there. The Cleveland Construction company is working under an agreement to finance all the undertakings, if given the construction contracts.

Russell Sage Changes Churches.

Announcement was made by Rev. Dr. Donald Sage Mackay, of the Collegiate Presbyterian church, Forty-eighth street and Fifth avenue, that Mr. and Mrs. Sage had become communicants of that church by letter from the West Presbyterian church. This marks the end of a misunderstanding among the congregation and the board of trustees, of which Mr. Sage was a member, over the pastorate of Rev. Dr. Anthony H. Evans in the spring of 1899. It was a misunderstanding which almost disrupted the church. Mr. and Mrs. Russell Sage, Dr. Mackay said, had begun to attend services at his church about two years ago, and shortly afterward rented a pew. They had been regular attendants and had given largely. "Although," he added, "to my mind no man gives as much as he should."

Predicts Another Ice Age.

Sir Robert Ball, professor of astronomy and geometry at the University of Cambridge, England, delivered a lecture at Columbia university on "The Cause of an Ice Age." He explained that the ice age was due to the influence of the planets Venus and Jupiter on the course of the earth's revolution around the sun, and the change of orbit from a circle to an ellipse. He said also that there would be another ice age when Venus, Jupiter and the earth were in a certain position as regarded one another. This would not happen for several thousand years.