

SCIENTIFIC & INDUSTRIAL

The human system can endure heat of 212 degrees, the boiling point of water, because the skin is a bad conductor, and because the perspiration cools the body. Men have withstood without injury a heat of 300 degrees for several minutes.

A non-corrosive, non-poisonous alloy of aluminum has been discovered which may take the place of copper in the manufacture of nails, staples and tacks. The new material is not affected by the weather, and will not deteriorate; it is lighter than copper, and four cents a pound cheaper.

Fall River, Mass., produces more than three-quarters of all the print cloths made in the United States, has one-seventh of all the spindles in the country and about a fourth of those in New England, and more than twice as many as any city in the country. Its mills turn out more than 1500 miles of cotton cloth every working day.

Fossilized tropical fruits have lately been found in coal mined in Spitzbergen. The discovery opens up a marvellous line of geological speculation. Spitzbergen is 400 miles northwest of the northernmost point of Norway, and is subject to extreme cold and lies for half the year in the gloom of the Arctic night. These conditions add to the mystery of the existence of tropical vegetation in the region.

Sawdust mortar—a mixture of sawdust and lime—has lately been mentioned a number of times as a good covering for steam pipes, with the virtue thrown in of affording a means of utilizing waste sawdust. Something like twenty years ago a covering of this general character, made up of sawdust and plaster of paris, was used with satisfaction in one large steam plant, not only for steam pipes, but for the boilers as well; but the development since then of specially manufactured non-conducting coverings in sections at a cost about as low as that of the home-made product, long since led to the abandonment of the latter.

Professor Albert F. Wood, physiologist of the United States Bureau of Plant Industry, undertakes to explain how foliage is covered by frost. "Autumn leaves containing sugar," says the Professor, "such as the maples, sumachs, gums, etc., easily oxidize, and thus form the rich reds, purples and violets so beautiful to the eye. That is why these, especially the hard maples, give the most beautiful autumn leaves. Autumnal oak leaves do not attract admiration, because they contain much tannin. The oxidation color of tannic acid is dirty brown. Leaves which die quickly never give autumnal colors. The most gorgeous autumn leaves are produced by a long-drawn-out fall, whose days gradually cool from summer heat to winter snow."

Although the sale of arsenic is prohibited in that region white arsenic is eaten freely by the peasants of Styria and the Tyrol. Because of its efficiency in warding off fatigue and enabling those engaged in hard physical work to endure the strain it is an article of daily diet among the people of that region. A district physician states that the arsenic is usually taken before meals in a cup of coffee, and while the first dose is minute the amount taken daily is slowly increased until it reaches an average of fifteen grains. Those working in the arsenic factories of Salzburg are said to become arsenic eaters to avoid being overcome by the fumes of the drug. Immunity from infectious diseases, a fresh, youthful appearance and longevity are some of the advantages the arsenic eaters usually enjoy, but there is always a danger of sudden death. Arsenic eating is indulged in by the women as well as by the men.

Carnegie's Earldoms.
The Carnegies, who have been prominent in Scottish history for five centuries, enjoy two separate Scottish earldoms—those of Northesk and Southesk—which were conferred respectively on the eldest and second sons of Sir David Carnegie, in the seventeenth century. The earldom of Southesk was attained in consequence of the participation of the fifth Earl in the rising of 1715, but was restored in favor of the present peer in 1855. Kinnaird Castle, the family seat, on the River Eske, was built some fifty years ago, and with its steep roofs, numerous turrets, long stone balconies and balustraded terraces, is a singularly perfect reproduction of the old Scotch-French baronial castle. Some of the trees in the extensive deer park are from 300 to 400 years old.—London M. A. P.

Hotel Expense For Linen.
The advance in the price of linen adds heavily to the expense of maintaining the equipment of the big hotels. The manager in one of the big hotels said not long ago that he paid \$50,000 a year for linen to keep up his supplies, and that looms were run all the year round at Belfast for his hotel. The wear and tear and loss of hotel furnishings make it a more serious item in the expense account than the patron realizes.

When a Man is Angry.
Every time a man gets mad, the ill temper passes from one to another of those around him until it finally reaches a boy, who slaps his sister, or kicks the dog.—Atholton Globe.

GREATEST TEXAS RANCH.

Given to Men Who Provided the State Capitol.

Texas is noted for the number and extent of its ranches. Of a total of several thousand to several million acres, the large ones averaging 50,000 acres. The greatest is the "X. I. T." in the Panhandle, which embraces half a dozen counties and contains nearly 3,000,000 acres. It belongs to the Capitol syndicate, a company of men who received this vast territory some twenty years ago in return for providing the magnificent state house at Austin. The ranch is divided into several sections, each managed by a foreman and each connected with the headquarters by means of telephones. The whole is run with the system and dispatch which characterizes all great industries. On this ranch now run considerably over 100,000 head of cattle, and an idea of the size may be gained from the fact that the pasture fence extends 210 miles in one direction and 25 miles in another, making a total of about 5,000 square miles. From time to time small parcels of land have been sold, and meanwhile valuations have appreciated from 50 cents an acre to four times that amount.

Insuring the King's Life.
London life insurance companies are fairly besieged with applications from people who are anxious to insure the life of the king until after the coronation next June. The rush is so great that insurance rates have jumped to a surprising figure. Ordinarily the annual premium for a policy on the sovereign's life is about \$15 for each \$500, now it is \$75. Most of the persons taking out these policies are making special business arrangements in connection with the coronation—theatrical managers, hotel proprietors, real estate agents, etc. The temptation to embark in speculation in the same direction is, however, proving too strong for many financiers, notably members of the London stock exchange, who are taking out policies on all sorts of pretenses, generally giving as their basis of risk certain mythical "holdings in seats along the route of the coronation procession."

Uniform German Postage.
Stamp collectors will be interested in learning that one of the German states will disappear as a stamp issuing country in a few months. At present the kingdoms of Wurttemberg and Bavaria are the only states of the German confederation which have their own special postage stamps. It has long been the desire of the German emperor to have uniformity in this respect. Quite recently the Reichsanzeiger announced that after April 1, 1902, Wurttemberg will cease to issue its stamps and will use those now in use in Germany generally.

Hereditary Naval Families.
There are British naval families which have supplied officers to the service for the greater part of two centuries and in some cases for longer. Nothing, indeed, is much more common than to find in the navy of to-day an officer whose great-grandfather has served before him, and most of whose relatives have been either the children or the parents of naval officers, if not themselves naval officers or the wives of such.

Six Thousand Questions Asked.
During the session of the British Parliament that began on January 23 and ended on August 17 no fewer than 6,448 questions were asked in the house of commons. This number has only once been exceeded, in recent years at any rate, namely, in the session 1893-4, when the number of questions was 6,534. But the house sat on 225 days during that session, whereas there was only 118 sittings during the recent session.

Ten years ago about 60 foreign fire insurance companies carried on a lucrative business in Chile, experienced but little competition from the half-dozen Chilean companies then existing. Now Chile counts 23 fire and marine insurance companies.

TILLEY TELLS OF SAMOA.

Extreme Hospitality of the Natives Had to Be Curtailed.

While Commander Benjamin F. Tilley, commandant of the United States naval station at Tutuila, Samoa, who has just been vindicated on a charge of intoxication, was in Washington recently he submitted to Secretary Long his annual report. He says that the Tutuilans are a gentle, kindly, simple-minded people, and that the form of government instituted by the United States has proved popular with them. He recounts the numerous improvements in the system of self-government suggested by the people and eagerly agreed to by them. Every once in a while, says the report, the whole village would make up its mind to go on a "melanga," or visiting party. All work would be abruptly stopped and all ages and sexes would start on a wandering holiday. The spirit of hospitality is cultivated to an extreme among the natives, and at every village visited by the voyagers the hosts felt it their bounden duty to entertain lavishly. The visiting party would stay at one village as long as their entertainers could provide food for them. When supplies ran out they bade hasty adieus and moved on to the next village to be "entertained." Another custom was the bestowing of presents of great value at weddings and other ceremonies, a practice which was carried to such excess that a single wedding often impoverished a whole village. But much of these practices were stopped upon the suggestion of Commander Tilley.

BUFFALO BILLS ISSUED.

New Ten-Dollar Notes Have Largest Figure Ever Used.

The first of the new issue of ten-dollar bills have just been placed in circulation by the treasury department. The note is named buffalo bill because of the central figure, which is a large buffalo, standing in a position as though to charge on an enemy. It is the largest single figure ever placed on a treasury note. Although the buffalo bill has been in circulation only a short time a number of them have found their way back to the treasury for redemption, being either too mutilated or smeared or disfigured for further use. In all of the bills thus returned the buffalo has been sadly disfigured. The explanation for the short life of these bills is that they were put into circulation before being properly cured. There was a great demand for ten-dollar notes at about the time the new ones came from the engraving and printing bureau and the buffalo bills had to go out before they were properly cured.

OCEAN-TO-OCEAN RECORD.

Sixteen Hours and a Half Cut Off By Railroads.

The recent 15,000-mile race of the mails over the Pacific ocean, across the mountains and prairies of the United States, brings to notice the wonderful gain in time of American mails from ocean to ocean, and this within a period of less than three years. Since January 1, 1899, there has been taken off 16 hours and 30 minutes of time between New York and San Francisco. A gain of 1 hour and 40 minutes of this time has been made since November 3 of this year by the Northwestern, Union Pacific and Southern Pacific systems.

Colorado Colony for Consumptives.
An interesting experiment is in progress near Barnum, Col., which if successful may prove of great value to many people who find themselves suffering from consumption in an incipient stage and cannot afford to stay in Colorado long enough to effect a permanent cure, or even to go there at all. A co-operative colony for consumptives has been started on a ten-acre tract of fruit land, and the patients there live in tents and work outdoors.

A promising substitute for rubber has recently been made from the shoots of the Rocky Mountain grease-wood plant.

There are 250 clocks in Buckingham Palace, and it is a work of no small importance to keep them all going. Some of them are as old as the time of Louis XVI, and the works are still in good order. The King does not like a useless clock, and when the works of an antique timepiece are worn out he has them replaced with new ones.

Prostrate With Rheumatic Fever Six Times Within Twenty Years.

This was the case of Mr. Eli Wiltshire, of Lansdown Terrace, Calne, Wis., who, during this time, suffered the most intense agony. He writes:
"I heartily endorse the testimonials which you publish of St. Jacobs Oil as a pain killer, for I have been a sufferer from rheumatism and kindred complaints at different times during the last twenty years. I have been laid prostrate with rheumatic fever six times during that period, therefore I consider I know something about rheumatism. During all of these twenty years I have tried various advertised rheumatic remedies, oils, ointments and embrocations. None of them gave me much relief, but when I tried St. Jacobs Oil I found quite different results. It eased the pain almost immediately, and has done for me what all other remedies put together never began to do."

"I could give you several cases that have been cured, which have come under my notice, and through my recommendation; also one of toothache, one of faceache and one of sore throat."

"I have recommended St. Jacobs Oil and shall continue to do so by every means in my power, as I consider you deserving of every support."

A barrel of gasoline confined in a cellar has twice the explosive force of a barrel of gunpowder.

Wish All a Happy New Year.
Happiness that comes with good health is given to all who use Nature's gift, Garfield Tea. This Herb Cure cleanses the system, purifies the blood and removes the cause of disease.

Australia has more than 1000 newspapers.

Electric currents from lightning, of 10,000 volts intensity, have been measured while passing down the conductors of the Eiffel Tower.

Each package of PUTNAM PADELESS DYE colors either Silk, Wool or Cotton perfectly at one boiling. Sold by all druggists.

Jerusalem's Ancient Water Supply.
The aqueducts and reservoirs of Jerusalem show that there was abundant provision for running water in the ancient city. Within the last few weeks they have brought again into the service of the city, which for many centuries has been dependent upon small accumulations of rain water. The water is piped from Solomon's pools, nine miles south of the city, drawing water from the sealed fountain mentioned in the "Song of Solomon." It is a deep subterranean spring, which flows through an arched channel to a distributing chamber.

A Christmas Dinner That Was Not Eaten.
Most things grow smaller as they are contracted except debts.
We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.
F. J. CHENEY & Co., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligation made by his firm.
WERTZ & TRUX, Wholesale Druggists, Toledo, Ohio.
WALDING, KINMAN & MARVIN, Wholesale Druggists, Toledo, Ohio.
Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c. per bottle. Sold by all Druggists. Testimonials free.
Hall's Family Pills are the best.

The cost of painting the Tower Bridge, London, is \$25,000.

Best For the Bowels.
No matter what ails you, headache to a cancer, you will never get well until your bowels are put right. Cascarets help nature, cure you without a gripe or pain, produce easy natural movements, cost you just 10 cents to start getting your health back. Cascarets Candy Cathartic, the genuine, put up in metal boxes, every tablet has C. C. C. stamped on it. Beware of imitations.

When a man is dropped for non-payment of dues he is generally broke.

A Good Way to Begin 1902.
Cleanse the system, purify the blood and regulate the liver, kidneys, stomach and bowels with the Herb medicine, Garfield Tea, insuring health and happiness for the New Year.

The feminine surplus in Massachusetts is 70,398.

FITs permanently cured. No fits or nervousness after first day's use of Dr. Kline's Great Nerve Restorer. 21 trial bottle and treatise free. Dr. R. H. KLINE, Ltd., 931 Arch St., Phila., Pa.

There are three telephone circuits between New York City and Atlanta.

Mrs. Winslow's Soothing Syrup for children teething, softens the gums, reduces inflammation, allays pain, cures wind colic. 25c a bottle.

It takes a wise man to get others financially interested in a fool scheme.

Piso's Cure cannot be too highly spoken of as a cough cure.—J. W. O'Brien, 322 Third Avenue, N., Minneapolis, Minn., Jan. 6, 1900.

The man who knows the least shows it the most.

A Union Soldiers' Home.
A remarkable soldiers' home will be that now building at Johnson City, Tenn., where both Union and Confederate soldiers in the Civil war and volunteers in the war with Spain are to be harbored. This home will comprise 35 buildings, among them a memorial hall, a mess hall, a chapel and a canteen. They will occupy a site a mile and three-quarters long and three-quarters of a mile wide in the heart of the mountains. The grounds will be laid out by a landscape gardener.

Sugar exists not only in the cane, beet-root and maple, but in the sap of 187 other plants and trees.

Bronchitis

"I have kept Ayer's Cherry Pectoral in my house for a great many years. It is the best medicine in the world for coughs and colds."
J. C. Williams, Attica, N. Y.

All serious lung troubles begin with a tickling in the throat. You can stop this at first in a single night with Ayer's Cherry Pectoral. Use it also for bronchitis, consumption, hard colds, and for coughs of all kinds.

Three sizes: 25c., 50c., \$1. All druggists.

Consult your doctor. If he says take it, then do as he says. If he tells you not to take it, then don't take it. Ho knows. Leave it with him. We are willing.
—J. C. AYER & CO., LOWELL, MASS.

P N U 52, '01

Capsicum Vaseline

Put up in Collapsible Tubes.

A Substitute for and Superior to Mustard or any other plaster, and will not blister the most delicate skin. The pain allaying and curative qualities of this article are wonderful. It will stop the toothache at once, and relieve headache and neuralgia. We recommend it as the best and safest external counter-irritant known, also as an external remedy for pains in the chest and stomach and all rheumatic, neuralgic and gouty complaints.

A trial will prove what we claim for it, and it will be found to be invaluable in the household. Many people say "it is the best of all your preparations."

Price, 15 cents, at all druggists, or other dealers, or by sending this amount to us in postage stamps we will send you a tube by mail.

No article should be accepted by the public unless the same carries our label, as otherwise it is not genuine.

CHEESEBROUGH MANUFACTURING CO.,
17 State Street, New York City.

Why Syrup of Figs is the best family laxative

Because

- Its component parts are all wholesome.
- It acts gently without unpleasant after-effects.
- It is wholly free from objectionable substances.
- It contains the laxative principles of plants.
- It contains the carminative principles of plants.
- It contains wholesome aromatic liquids which are agreeable and refreshing to the taste.
- All are pure.
- All are delicately blended.
- All are skillfully and scientifically compounded.

Its value is due to our method of manufacture and to the originality and simplicity of the combination.

To get its beneficial effects—buy the genuine.

Manufactured by

CALIFORNIA FIG SYRUP CO.

San Francisco, Cal. Louisville, Ky. New York, N. Y.

FOR SALE BY ALL LEADING DRUGGISTS.

- It is pure.
- It is gentle.
- It is pleasant.
- It is efficacious.
- It is not expensive.
- It is good for children.
- It is excellent for ladies.
- It is convenient for business men.
- It is perfectly safe under all circumstances.
- It is used by millions of families the world over.
- It stands highest, as a laxative, with physicians.

If you use it you have the best laxative the world produces.

The Beet Sugar Industry.

A most important article giving Messrs. Oxnard's and Cutting's views on the beet sugar industry in this country appeared on the editorial page of the New York Evening Post of December 12 last, and as every household in the land is interested in sugar the article will be of universal interest.

THE BEET SUGAR INDUSTRY.

The Evening Post bids the heartiest welcome to every American industry that can stand on its own bottom and make its way without leaning on the poor rates. Among these self-supporting industries we are glad to know, is the production of beet sugar. At all events, it was such two years ago. We publish elsewhere a letter written in 1890, and signed by Mr. Oxnard and Mr. Cutting, the chiefs of this industry on the eastern side of the Rocky Mountains, showing that this was the happy condition of the trade at that time. If parties masquerading as beet sugar producers are besieging the President and Congress at this moment, and pretending that they will be ruined if Cuban sugar is admitted for six months at half the present rates of duty their false pretences ought to be exposed.

The letter of Messrs. Oxnard and Cutting was probably written for the purpose of inducing the farmers of the Mississippi Valley to go more largely into the cultivation of beets for the sugar factories. This was a laudable motive for telling the truth and showing the large profits which awaited both the beet grower and the manufacturer if the industry were perseveringly and intelligently prosecuted. To this end it was pointed out that farmers could clear \$65 per acre by cultivating beets, and might even make \$100. But in order to assure the cultivator that he would not be exposed to reverses by possible changes in the tariff, they proceeded to show that the industry stood in no need of protection.

The beet sugar industry, these gentlemen say, "stands on as firm a basis as any business in the country." They point out the fact—a very important one—that their product comes out as a finished article, refined and granulated. It is not, like cane sugar grown in the West India Islands, a black and offensive paste, which must be carried in wagons to the seaboard and thence by ships to the United States, where, after another handling, it is put through a costly refinery, and then shipped by rail to the consumer, who may possibly be in Nebraska, alongside a beet sugar factory, which turns out the refined and granulated article at one fell swoop. Indeed, the advantages of the producer of beet sugar for supplying the domestic consumption are very great. We have no doubt that Messrs. Oxnard and Cutting are within bounds when they say that sugar can be produced here cheaper than it can be in Europe." The reasons for this are that—

"The sugar industry is, after all, merely an agricultural one. We can undersell Europe in all other crops, and sugar is no exception."

It follows as naturally as the making of flour from wheat. If we can produce wheat cheaper than Europe, then naturally we can produce flour cheaper, as we do.

But the writers of the letter do not depend upon a priori reasoning to prove that they can make sugar at a profit without tariff protection. The point to the fact that under the McKinley tariff of 1890, when sugar was free of duty, the price of the article was four cents per pound. Yet a net profit of \$3 per ton was made by the beet sugar factories under those conditions, not counting any bounty on the home production of sugar. They boast that they made this profit while working under absolute free trade, and they have a right to be proud of this result of their skill and industry. Many beet sugar factories had been started in bygone years, back in the sixties and seventies of the nineteenth century, and had failed, because the producers did not understand the business. Since then great progress has been made, both here and abroad, in the cultivation and manipulation of the beet. What was impossible thirty years ago is now entirely feasible. The industry is already on a solid and enduring basis. There are factories in the United States, these gentlemen tell us in their letter, capable of using 350,000 tons of beets per annum at a profit of \$3 per ton, and this would make a profit of \$1,650,000 as the income to be earned under absolute free trade.

It must be plain to readers of this letter, signed by the captains of the beet sugar industry, that the people in Washington who are declaiming against the temporary measure which the President of the United States urges for the relief of the Cuban people, are either grossly ignorant of the subject, or are practising gross deception. The tenable ground for them is to say: "Other people are having protection that they do not need, and therefore we ought to have more than we need." This would be consistent with the letter of Messrs. Oxnard and Cutting, but nothing else is so.

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DROPSY NEW DISCOVERY gives quick relief and cures water on the feet, dropsy, and 10 days' treatment. Free. Dr. B. H. Sears & Sons, 114 E. Atlanta, Ga.

Gold Medal at National Exposition.

McILHENNY'S TABASCO

DRIPS, QUICK, SURE. CURES WHERE ALL OTHERS FAIL. Best Cough Syrup. Tastes Good. Use in Time. Sold by druggists.