

Scientific Facts

NEWEST NOTES OF SCIENCE.

With a new electric lamp are combined a heating element and a fan.

Poland detests more than 44,000 acres of land to raising basket wool.

Mica deposits of commercial value are known to exist in at least 20 states.

Italy now is permitting private wireless services with simple receiving apparatus.

Beans are thrashed as they are harvested with a new tractor drawn farm implement.

About one third of the silver existing in the world comes from the Mexican mines.

Placing a cooking utensil on a new gas range burner turns on the gas and lights it.

An automatic telephone system of 12,000 lines capacity will be installed in Göteborg, Sweden.

To absorb refrigerator odors is the purpose of a new chemical sponge, enclosed in a perforated can.

The high power radio station at Angora for which the government has contracted will be the third in Turkey.

Spring clips hold a telephone receiver on top of a new coin box that can be attached to any smooth surface.

To obtain a single carat of diamonds from South African mines requires the removal of about two tons of ore.

A holder for a box of shoe polish to enable it to be used with out soiling a person's hands has been invented.

The government of the Irish Free state will erect radio broadcasting stations at Dublin and Cork this fall.

A new mouse trap can be set or a trapped rodent released with the pressure of a person's foot without handling.

The latest crop of Greece this year is estimated at 13,000,000 pounds, or 40 per cent more than last year's.

An attachment for rocking chairs has been invented to operate a palm leaf or other flat fan as the chair is moved.

Experiments are under way with a view to substituting electric pumps for steam power in the Galician oil fields.

The face of a new golf club has been given rounded ridges and grooves by an inventor to prevent hooking or slicing.

The Italian government has authorized the electrification of 90 more kilometers of its railways this year.

A method for using the driving motor as a brake in descending steep hills has been developed for large motor buses.

Textiles for outer garments that closely resemble those worn on fooms are knit with a machine of English invention.

Inflating rubber tubes to be worn like suspenders have been invented to aid persons learning to swim or surf bathers.

Spain has appointed a commission to study the coordination of military, naval and civilian aviation to develop the latter.

An inventor has patented a spritz wire holder for a sponge or wash cloth to enable a person to reach the middle of his back.

Commercial production of radium has been begun in England, the ores found hereafter having been exported for treatment.

A novel radio receiving set resembles a desk telephone and can be held in the hand, most of the parts being inside the pedestal.

An Austrian firm has combined an ice making machine and motor truck that can make ice in quantities to order at the customer's door.

For electroplating small articles a new portable outfit is operated with two dry cells or storage batteries without the use of tanks.

Beneath used in an English school for small children can be inverted and hung from their legs.

Hand operated, a triple hoist has been invented by an Ohio man to lift long loads of lumber articles that would be injured if bent.

Airplanes to carry 75 passengers and fly from Europe to America in a day have been designed by a famous French builder of aircraft.

Chemical treatment by a new process makes the heads of golf clubs waterproof so hard that they do not need to be faced with metal.

Some public bath houses in England have adopted a filtration system that purifies the water by passing it through a sand bed.

Intended for the landing wheels of huge airplanes, the largest pneumatic tires yet built are designed to carry weights of 20,000 pounds.

A photographic process for imitating inland work and wood burning that has been invented in Finland burns the colors into wood.

The height of water in a steam boiler is constantly recorded by a new instrument, which also rings a bell should it get too high or too low.

A canal 42 miles long and costing \$10,000,000 has been built by Holland to give the industrial town of Tilburg connection with the sea.

An inventor has designed a front seat for an automobile having a back that folds down and extends to join the cushion of the rear seat to form a bed.

A method has been discovered in New Zealand for making concrete blocks from native flax, which heretofore has defied the removal of a brown stain.

Drafting pens can be filled with one hand from a new ink well, pressure of the wrist on a lever lifting the cap from the well and with it a filling spoon.

A private corporation, subsidized by the government, will erect four high power radio stations in Japan, taking over the two now in service in that country.

A shield has been invented to prevent a burglar entering a residence by breaking the glass in a door or window and reaching in to operate the lock or catch.

An Englishman has invented a word counter for typewriters that can be operated by the space bar or the letter can be used without registering on the counter.

Moved by hand, a new farm implement will plant from 15 to 25 bushes of various sorts a day in rows a foot apart opening the earth first then covering them.

Exploration to a depth of 3500 feet has been carried on in South African diamond mines without reaching the bottom of the shafts in which the mines are found.

that the average human mind does its best work at eight o'clock in the morning and its poorest at four in the afternoon.

A European gem expert has discovered that bats in freshly gathered honey restors luster to pearls that have become dull, the honey being removed with alcohol.

A broom with renewable bristles is equipped with a spring that increases their resiliency and enables them to be used down to an inch before new ones are inserted.

Apparatus invented by a Swiss engineer to coat one metal with another by spraying has been developed so that metals have been applied to wood, paper and celluloid.

A Chicago man is the designer of a periscope to be mounted on a motor omnibus to enable a driver, seated on the lower deck, to observe conditions on the upper deck.

An English scientist who has been studying the age of animals and fish claims to have proof that a catfish in an aquarium in that country is more than 50 years old.

Floating machinery has been designed by an inventor to remove water hyacinths from streams and convert them into a pulp from which coarse paper can be made.

More than 70 patents have been taken up by two London printers for a new application of photography to printing that they believe will make the use of metal type obsolete.

Research by botanists in a New York state institution has shown that some plants thrive with less repose, while some stand continuous light.

To give navigators clear vision in stormy weather an Englishman has invented a glass disk, mounted on the bridge of a ship and used to keep the motor so rapidly rain cannot cling to it.

After several years of experimenting a photographic expert has discovered a mysterious ingredient in gelatin that facilitates smoothening bullets in flight and radio transmission of pictures.

The Finnish government has established sulphuric acid and sulphate factories to help meet that country's demand for fertilizers.

With Florida the leading state, phosphate rock mines of the United States yielded more than 2,700,000 tons of their contents this year.

Scientists have found that a valuable leather tanning material can be obtained from certain Australian trees heretofore regarded as worthless.

Operated by electricity obtained from a light socket, a portable machine has been invented to seal boxes or packages with melted wax rapidly.

Experiments in both England and France have indicated that airplanes without pilots can be successfully guided and controlled by wireless waves.

An elaborate rubber conveying machine built by a resident of New York carries its loads into lengths as it carries them to their destinations.

The application of electricity to agriculture, particularly for irrigation and drainage, is being extensively developed in some sections of Japan.

Operated by a spring burglar alarm bell sounds if either sash of a window in which it is installed be moved.

Chemists have found that the water of a French town noted for the health of its inhabitants is the most highly mineralized in the world.

Delicate scales have been invented to weigh small hats, tennis rackets and other articles that are too light for ordinary scales.

There are rubber nipple patented openings at each end of a patented nursing bottle to prevent the formation of a vacuum within it as its contents are withdrawn.

Natives of one region of South Africa build their homes with a plaster made from material taken from hills, obtaining a substance harder than brick when dry.

An oil shock absorber controlled by a pump that has been invented for automobiles also can be used as a shock absorber for the wheels of a car equipped with it.

An English design is a mooring mast for dirigible balloons that is equipped with arms to enclose their noses and serve as landing ways for their passengers and crews.

A novel device for taking exercise at home consists of a punching bag attached to a board, a person swinging the board about with handles and making the bag strike it.

Of European invention is a bracket like that used for extensible telephones to carry an electric light to illuminate reading materials or machinery or help in reaching a candle.

An effective enough for fire fighting, a centrifugal pump has been designed that can be carried in an automobile and driven by being belted to a wheel jacked up from the ground.

The telephone system of Birmingham, England where there are more than 15,000 instruments with three years, is being transformed to an automatic basis.

To solve the automobile parking problem in cities an Ohio inventor has designed a tower with any number of revolving floors, to which cars are raised by an automatic elevator.

After five years of tests railway cars with concrete floors have proved so successful in Germany that it is proposed to replace many iron and wooden floors with that material.

All the cutting tools of a new woodworking machine can be mounted directly on the shaft of an electric motor, which is so suspended from a ceiling that it can be moved to any angle.

For transmission of electricity at high power two English engineers have invented apparatus that changes low pressure alternating currents into high pressure direct currents.

Freezing their has been invented a heater to be permanently inserted in the water manifold, current being obtained from a light socket.

The Czechoslovak government has begun legal proceedings to expropriate certain patent rights for the manufacture of radio equipment to strengthen its practical monopoly.

FOR THE WOMAN READER BY FLORENCE RIDDICK BOYS

AN APPLE A DAY Keeps the doctor away. The apple is the most common fruit...

A green apple a day keeps the doctor away. The apple is the most common fruit...

Apples are good for the person with a weak liver. They contain malic acid, calcium and phosphorus.

Apples are rich in pectin—a substance which makes fruit juicy. If your jelly will not set, add apple juice to it.

There's more to an apple than just an apple. There's the romance of childhood, the memory of a mother's smile...

There's plenty of boys will come bankroll and gruvellin' around when you've got an apple, and beg the core off you; but when THEY'VE got one, and you beg for the core, and remind them how you gave them, they are one day they make a mouth at you, and thank you most to death, but there ain't a-going to BE no core.

SELECTING A HAT One should never buy merely a pretty hat. Though the hat itself may be ever so pretty, it will not enhance your beauty unless it is becoming to you.

It has sometimes been hinted that the merely mother has no great requirement for a college education. Of course, the woman lawyer or doctor or lecturer or writer must be educated—but to be wife and mother...

One of the highest duties of mothers is to encourage their children to go on and on intellectually. The mother begins this when her child first starts to school, many a happy half hour in these primary days, she sits beside the young child and teaches it how to read.

SELF-SUPPORTING AT COLLEGE. On an average about a third of women students and twice as many men students are either wholly or in part supporting themselves while in college, in the United States.

SMILES FIGURATIVELY SPEAKING One of his own town folks asked the senator when he came home from his term in the Senate, "Can you really figure out your own expenses?" "No and I'm not going to try," said the senator sheepishly. "Most of those figures were only figures of speech."

THE FARM WOMAN'S WAGE \$4,004.14 a year, that is what an economist has estimated the work of the woman on the farm is worth at a reasonable rate, per the effort and time and brain put into it.

COST IN FURNITURE. What you buy in furniture is the finish, not the wood. "Solid mahogany" or "solid walnut" means little, even the most expensive piece is largely made up of gum wood in unimportant parts.

MRS. SOLOMON SAYS Fall is a good season to add some lovely plants to your garden. It is the time to set out bulbs.

HOME SEWING NOT OUT OF DATE Women still make a large percent of their clothing at home, so the census figures tell us. The home sewing machine has not at all gone out of date.

ETIQUETTE A man lifts his hat when he greets a woman on the street. He removes it when he stops to speak with her, but if the weather is cold, he may put it on again, after asking her permission to do so.

WOMEN AS JURORS "When women go into the jury room, if they regard the evidence as sufficient to convict, they will not make any bones about seeking the verdict, whether the defendant is a man or a woman."

Gibraltar Helpless Against Air Attack

GIBRALTAR'S strength and solidity were long ago coined in a figure of speech, and the phrase is known wherever the English language is spoken.

Now it appears that a military expert instead of saying as "strong as Gibraltar" would say as "weak as Gibraltar" or as helpless. For a British military commission is said to have come to the conclusion that the famous rock is useless from a military point of view, and that the most sensible thing to do is to get rid of it.

A still more sensible thing to do is to get something valuable for it, and it may be that negotiations will be begun with Spain, which has hungered for Gibraltar since it first became a British possession. The probability will be that Gibraltar shall be traded for Ceuta on the opposite side of the straits.

It would require a considerable amount of money to make it what the British experts are looking for, namely, a base near Gibraltar which could stand the air attack which would be the most powerful of modern bowlers. It is said that Gibraltar would be helpless in an attack from the air, and that even she might be cut off from her base.

We need a revival of public responsibility, that both good women and good men shall be willing to do jury service, and a strengthening of the backbone that they will render verdicts according to the evidence and not from sentimentality.

SHINING SAVES SHOES. To lengthen the life of a pair of shoes, shine them frequently. If the leather loses its natural oil, it becomes brittle and cracks easily.

GIRLS SERVE WOMEN'S CLUB. In one rural district, where it is most convenient for the women's club meetings to be held in the night, the members must come to attend, they are served a dinner by the Home Economics Class of the school.

IMPROVED NAPKIN "RINGS". If you are having a week end party, and wish to serve the same napkin to your guests for several successive meals, you may identify these by means of common spring clips.

MAKING THE GRADE. It has sometimes been hinted that the merely mother has no great requirement for a college education. Of course, the woman lawyer or doctor or lecturer or writer must be educated—but to be wife and mother...

PRETTY SERVICE. Daintiness is always an asset in the service of food. It helps to bring out the best in the people served and makes for better manners and better digestion.

WHEN DOORS STICK. Changes of moisture in the atmosphere make the doors do things which test our tempers. They will swell and stick at top or bottom where they are not painted, because it will not show. We then plane them off.

TWENTY-SEVEN PERCENT FOR FOOD. Ten years ago, twenty percent of the family income paid the food bill for the household. Now figures show that it takes twenty-seven percent for the average family.

of any sum rather than part with Gibraltar. They could easily be led to the purchase of Ceuta, even if Ceuta had no better recommendation than that it would be a bitter pill to swallow.

But the point is that Spain owns Ceuta and would not likely part with it for a money consideration alone. Gibraltar is almost as precious in the eyes of Spain as in the eyes of England.

Gibraltar was captured from the Spaniards in 1704 by the English Admiral Sir George Rooke, with the aid of the Dutch fleet, and this regarded as the greatest of all England's many treasured naval victories.

This defence is one of the most famous in the world, indeed, the object of a single siege which lasted virtually four years and which it successfully withstood, despite the fact that experts of this day declare that it could not withstand a four-day siege with all the modern armaments.

The mere suggestion of abandoning Gibraltar, therefore, is certain to give rise to a tremendous public outcry, and it is highly doubtful if Ceuta could be obtained in any way except through an exchange of Gibraltar for it.

Spain would make the exchange if the offer were made, few doubt. Feeling because of the British capture of Ceuta, and during recent Ministerial crises, of which there have been so many, demanded, as they have ever since the loss of the fortress, some action on the part of the crown which would compel England to hand back the rock.

The British demand always has been regarded by the British as amusing and has not been taken seriously by the Spaniards. They have been mere political bombast, a sport popular in Spain as elsewhere.

proposition to give back the rock now, however, these same politicians scarcely could refuse to accept it, even if they were convinced that they would be getting the worst of a bargain which gave Ceuta for it.

The main advantage of Ceuta is that it is not a gloomy rock. Although the promontory consists of seven steep hills, the highest of which is one of the "Pillars of Hercules," it is protected from air attack in the rear by the rough nature of the country, and any plans to attack it would have to be for three hundred feet, which is not a very high wall for the maintenance and manœuvring of a large army, and the place could not be starved out.

But the experts are not likely to let their own way, according to David Edwards, the London correspondent of a chain of American newspapers. Gibraltar is a good deal more than a fortress.

It is an article of faith, a superstition of the most powerful character, to destroy it on the way to an expert or of an army of experts is hardly in the British character.

When the debate about Gibraltar is brought up in the House of Commons, the speaker usually begins by saying that it should be scrapped. The British people would hardly shrink from the expenditure of a few millions of pounds to dress the rock in a new style, which would make it a wholly new Gibraltar.

My name is Mary and my sister's name is Mary, so we have the same initials. We were always dressed alike as children, though I can remember distinctly having a dress that was different from my sister's.

How do you know them apart? Do you really never get mixed? Then my mother would laugh in her good-natured way and say: "They are really completely different." My mother certainly was this.

Magpie superstitions. The magpie has a lot of stories connected with its career. What I am going to tell you seems like nonsense, but it is a straight fact. The "magpie" was originally Marguerite or Margaret, slimmer down into a nickname. Just as a lot of humbug, Margarets are affectionately called "Mag" by their friends.

INSIDE A WASP'S NEST Wasp's nests—Those big, grey, top-shaped things of paper that one sees clinging to trees or nestling to some convenient corner of the house, those strange paper cities contain wonders comparable only to the marvels in the hive of the honey bee.

The paper wasp, industrious builder of grey-walled, combed-inlaid nests, manufactures its material much as do the bees; but instead of producing wax it makes a real paper, much like man's wood-pulp and of almost the same consistency.

This paper with marvellously painstaking ingenuity, it moulds into six-sided cells. These cells have not the geometrical regularity of the bee's cell in fact, as an engineer, the wasp must run second to his domesticated cousin. But in one respect the wasp proves superior to the bee—the latter must have some form of hive in which to work, if only a hollow tree.

The wasp starts with just exactly nothing and builds its own hive to house the cells that shelter the young. A few twigs are all that is necessary—anything that will be strong enough to support the finished nest with its teeming life. Given that much the wasp will do the rest.

On the inside of the nest the cells are arranged in regular stories like the stories in a man-made apartment house. There the eggs are deposited, the larvae and pupa take form, and finally emerge as the complete insect.

If you wish to see a true marvel of nature, when you find a wasp's nest taking pains to ascertain that the family isn't home at the time, slip it from the supporting twigs and take it home to be examined at your leisure. There are many deserted nests in the country round about, and a study of

Doesn't hurt one bit! Drop a little "Freezone" on an itching, instantly you corn stops hurting, then shortly you lift it right off with fingers. Your druggist sells a tiny bottle of "Freezone" for a few cents, sufficient to remove every hard, corn, soft corn, or

Keep the System Clear! Take BEECHAM'S PILLS THE NATION'S LAXATIVE

THE FUNNY MAN

LAMPS FOR THE EYES A new optical instrument consists of a high-powered incandescent lamp which can be taken into a person's eye to illuminate his eyes through the retina, enabling them to be examined through the pupils.

RUGS MADE FROM TISSUE PAPER Rugs are now being made entirely from fine tissue paper and mixtures of paper and wool. The tissue paper is twisted into threads and woven into a compact heavy mat or fabric.

DAILY THOUGHT. We reap what we sow; but nature has love over and above that Justice has a shadow and blossom and fruit that springs from no planting of ours.—George Eliot.

UNCLE EBEN. "Do queerest thing about a fault finder," said Uncle Eben, "is dat he kin always git a few people worryin' deir heads off tryin' to please 'im."

LET THE OTHER FELLOW DO IT. "It is not necessary to hate a man who is going to fight," said George Mittlecker. "Let him do the hating. It'll help to rattle him."

CHEERING. Hub—"I met that old lover of yours on the street to day. He looked awfully blue." Wife—"Poor fellow! I hope you tried to cheer him up." Hub—"Oh, yes. I showed him that new tie you bought me and pointed out where a button was off my coat."—Boston Transcript.

CONSOLATION. "Do you think the baby looks like me?" asked the proud father. "I'm afraid it does," admitted the old bachelor. "But cheer up, old chap. Maybe the little duffer will outgrow it."

POSTHUMOUS! Teacher—"Now, boys, can any of you say what is meant by posthumous works?" Boy at the head of the class—"Yes, sir, I can." "Well, now, let me hear what it means?" "Sir, a posthumous works are books which a man writes after he is dead."

CLOWN AND PANTALON According to a little book on symbolism which Lady Glenconner had privately printed for her friends, the harlequinade is of sacred origin; the harlequin (Who is Unknown) and columbine (The Pass) are the tribulations of the spirits in the material phase of existence. The clown represents the body, possibly, the many clowns and pantaloons all over the country are unaware of this.

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REDUCING Sigmund Romberg, the composer, tells of meeting a circus swordswallower one time. He asked him to demonstrate his art, and the fellow suddenly swallowed some pins and needles. "But," protested Mr. Romberg, "those aren't swords; they're pins and needles." "I know it," replied the circus freak, "but I'm on a diet."

THE MAN'S VIEW-POINT. They were climbing a lofty peak of the Alps, and she was standing a few feet above him. She turned around and gazed in wonderment. "What," he was asked, "what do you see?" "Far, far below," she cried, "I see a long, white sheet stretching like a paper ribbon almost back to our hotel."

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CORNS Lift Off—No Pain! FREEZONE

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