

SCIENCE AND NEAR-SCIENCE UP-TO-DATE

Some New Facts

FOR gathering dust from walls a woman has patented a bag to be placed over a broom and be held in place by suspender-like straps.

A LIME manufacturing plant in Wisconsin is the first in the United States in which the kilns are fired with gas instead of wood.

AFTER testing steel underframes on its cars for several years an English railroad has returned to iron as less liable to corrosion.

FOR metal workers there has been invented a combination shears and hammer, a spring forcing the jaws open after they have made a cut.

A TRIMMING table for drawings and blue prints that is equipped with a motor-driven revolving knife has been patented by a Chicago man.

ALTHOUGH more wool is used by manufacturers in the United Kingdom than in any other country, the United States is the greatest wool-consuming country in the world.

New Process for Auto Bodies

A FRENCH firm of motor car manufacturer makes its car bodies by a novel process of plastering. Builders are familiar with the process of making partition walls by erecting a screen of wire netting and coating it with a layer of plaster. Practically the same thing is done in the new process of making car bodies, except that a very different plaster is used. The framework of the car is made of wood, and on this wire netting is tacked. Then the modeler begins operations with palette and trowel, daubing the wire netting with the plastic material, which he spreads out smoothly. When the coating has set it may be dressed down with a plane and sandpaper, just like wood. After that it is painted and rubbed down with oils and varnish until it assumes a very high polish. It is claimed for the new process that the car bodies can be manufactured with a great saving of time, and also that a very light and durable body is obtained.

Electric Bulb a Healing Power

THE ordinary sixteen candle power electric bulb, attached to an ordinary reflector, has been used by the French physician, Chaput, in a series of interesting experiments. It is said he has succeeded in healing refractory sores and ulcers, such as those caused by burns, or severe abrasions.

The account of his method is given as follows:

The reflector, with bulb attached, is placed on either end of the affected area on folded towels, the bulb being kept as near as possible to the lesion without causing the unpleasant sensation of heat. The treatment is applied daily or on alternate days for an hour. It is observed to cause a copious outpouring of serum at the affected area.

This Carrot Has Bad Habits



HAVE you ever seen a stewed carrot? Of course you have. And ate one, too.

But that is not the kind of a stewed carrot we really had in mind. Perhaps it should be termed the "inebrate carrot," for really in truth, cross our heart, this particular friend of the family table can become fearfully intoxicated, according to Professor Jagadis Chunder Bose, instructor of natural sciences at the University of Calcutta, India.

The professor was lecturing to a select group of professors at the University of Chicago. In the course of his discussion he mentioned that a chemist once left a dish of alcohol near a fine, upstanding, healthy young carrot one day. Sniffing the aroma, the carrot began acting disgracefully.

"Why, this vegetable was actually maudlin," said Professor Bose, "and did not revive until it had been taken out in the fresh air."

Shocking! With the aid of the "emotiograph," which he recently invented, the professor said he is able to prove that plants have emotions which the instruments record in a startling way.

How Healthy Thoughts Will Bring You Health



Select Your Reading Matter With the Idea of Feeding Your Brain on Health-Producing Ingredients, Just as You Do Your Stomach.

YOU are what you think, or if you are not, it is not for lack of hearing the affirmation that you are.

A Washington physician is the latest authority to put his patients on a diet compounded chiefly of the aphorism, "Think well and you will be well."

Instead of sending his wealthy society women patients to sanitariums or summer clinics to rest their overtaxed nerves, he is ordering them into classes in psychology to

learn how to adjust their thinking in such wise that they will not overtax their nerves or anything else in their effort to live twenty-four hours out of a day.

One of these classes meets weekly in the library of one of Washington's feminine leaders of higher thinking, and its teacher is the head of a famous girls' school.

Early in the social swing of the winter debutantes, in the midst of the whirl of a first season, and matrons with the weight of the smartest functions of the season on their shoulders came on medical advice, or without it, to hear the laws of the intellect and the interrelations of the will with instinctive reflexes expounded.

What they expected to get out of it from a health point of view was a helpful understanding of the intimate connection between peace of nerves and poise of body, and the physical reflexes which accompany every grade of emotion.

Towers for Testing Aeroplanes

TWO steel towers, each sixty feet high, are now being used in England for the purpose of testing the effects of different air currents on aeroplanes. At the top of each there is a rotating platform, on which large models of aeroplanes can be exposed to winds from different directions.

The spot has been carefully chosen so that no stress or obstructions can deflect the winds or cause eddies of air which might affect the tests. The models can be placed in any position, and the platforms can be turned so that the wind can strike them in any direction, while delicate instruments register the velocity of the air currents.

By means of these towers different types of flying machines can be tested without danger to human life, and when the best models have been decided on there is an-

"If a person has chronic kidney trouble"—in the words of the teacher of another of these morning society classes in psychology that are interesting Washington this winter—"you may expect to find that that person is harboring a sense of wrong, or is the possessor of a chronic grudge."

"Irritation or worry has its reflex action upon the digestive organs, while happiness enables one to digest meals, if such a thing were necessary."

The elements of psychology are taught by means of James' famous book on this subject. When the novices have mastered that book and have themselves well enough in hand to be able to stand and deliver their reasons for keeping poise through intellectual grip on their nerves, they are taken further along, deeper into the mysteries of human consciousness and psychic control, and are introduced to the

master philosophers of past and present, one after another.

If it does no more than keep the society woman's mind off herself and the symptoms of her particular sort of nervous unrest, the astute physician who started the fad of studying psychology o' mornings proclaims that it is doing as much as he expected, and more.

Here's a Foolproof Poison

THE latest thing on the drug market is "foolproof" bichloride of mercury. During the last year or so there have been so many cases of accidental poisoning from this dangerous but highly effective antiseptic that manufacturers racked their brains to produce a tablet that could not be mistaken for anything else—even in the dark.

"Foolproof" bichloride of mercury was

Flaw in U. S. Patent Laws

IN GERMANY a person who is granted a patent of any kind must work that patent in Germany within three years of the time the patent is granted or forfeit the patent right. In the United States you can take out a patent and never work it, if you don't wish to, and still retain the rights and privileges which the patent grants.

Aniline or coal dyes are patented in Germany and in the United States at the same time, but as the German manufacturer is not obliged under our patent laws to manufacture the dyes in the United States he manufactures them in Germany and at the same time controls the United States market for his goods through the patent granted him here.

Copper Colored Beauties Who Are Exact Duplicates of One Another

NO, THE accompanying picture is not a likeness of copper-colored triplets.

It is a group of Samoan girls who, like all of the girls of their race, are exact duplicates of one another. How their parents are able to distinguish between them is a puzzle they alone can solve.

The portrait fails to show the wonderful luster of the skin of these dark damsels. It looks like nothing so much as dark, polished copper.

Dark as is their skin it is fair compared with their eyes and hair. Their hair is black, soft and wavy, and it is usually worn hanging until they are married. The dark luster is embellished by the brilliant flowers which they twine in their hair—flowers which invite and entice by their rich coloring and rare perfumes.

Their eyes are almost as black as their hair, warm and pleasing. Their figures are no less attractive, for the Samoan girls are generally slight, especially when they are young. Their forms are symmetrical, and they are easy and graceful in their movements. This is especially true of the village girls, who are as happy and free from care as they are attractive.

These girls are naturally clever, but after they have learned to read and write and have mastered the first steps in arithmetic they do not worry their heads about more knowledge.

The climate is so warm in these islands that the girls wear scant clothing, not



These Samoan Beauties Are Not Triplets—They're Chams.

much more than some bright colored scarf wound about their hips. Their chief decoration are flowers and several chains of bright beads.

They are skilled at weaving cotton and working in the fields, but a good deal of their time is spent singing and dancing, pastimes of which they are very fond.

You May Not Know

A FRENCH invention is a revolving fan which may be carried in the pocket and operated by pushing buttons with the thumb and fingers.

BY TOUCHING a pedal an automobile driver can drop a new bumper so as to form a fender that will prevent anything going under the wheels.

A NEW Italian aeroplane with numerous wing surfaces is designed to act as its own parachute and come to earth safely in event of a mishap.

THE top of a new gas range is equipped with pipes through which water circulates and is heated while the burners are being used for cooking.

TO ENABLE a motorist to smoke while driving a New York inventor has patented a perforated metal shell to inclose a cigar and retard the draft.

How to Drill Holes in Glass

THE following is a satisfactory method of drilling holes in glass: Take a piece of straight copper the size of the hole that it is required to drill. The tubing should have a wall of one-thirty-second of an inch or more in thickness, depending upon the diameter. The tube is set up in a drill chuck and driven at a speed corresponding to that of a twist drill of the same size. The tube is fed down onto the glass with an intermittent movement, and a mixture of emery and oil is dropped onto the glass at the point where the hole is to be drilled. After a ring has been cut in the glass on one side the work is turned over and the drilling completed from the opposite side. This will prevent chipping the glass when the drill nears the opposite side. The copper tubing is soft, so that it holds the emery, and as copper is an excellent conductor of heat it draws the heat away from the glass, preventing it from being cracked. An idea of the rapidity with which holes can be drilled in this way may be gathered from the fact that a five-sixteenths inch hole can be drilled through an ordinary sheet of window glass in seven minutes.

Here's a Foolproof Poison

the answer. The tablets are strung permanently on a thread, like beads, and in addition they are dispensed in a bottle having a distinctive shape—unlike the ordinary bottle. Furthermore, the tablets themselves have a peculiar shape, are bright blue in color, and each one is labeled "poison."

The manufacturers say, and it seems with reason, that a person would have to lose all his mental faculties in order not to be able to detect these pellets from headache or other tablets. He might not notice the shape of the bottle or the peculiar shape of the tablet, its color and marking of "poison." But he would not be expected to ignore the string, which must be cut before the tablet is detached.

New Plan for Summoning Waiter



"O H, WAITER!" But said waiter seems not to have heard.

"Oh, waiter!"

Again no response. You grow annoyed. The head waiter passes by. You endeavor frantically to signal—with as little success. If you are a woman you perhaps stamp your French heel. If you are a man you probably eschew naughty words under your breath.

Such experience is familiar to most all of us. Appreciating this fact, those looking toward efficient table service in hotel dining-rooms and cafes have struck upon a novel idea for attracting the attention of different waiters and indicating the desires of a patron. It consists of a standard carrying three electric lights, each of a different color.

The lights are operated by push buttons—a different button for a waiter, head waiter, or wine server. A light remains burning until a diner has received attention.

The scheme is still in its infancy. But we may see these signal standards in our hotel dining-rooms and cafes in near future.

INK can be removed from light colored fabrics by washing with milk, then with turpentine, rolling up the goods for half an hour and washing in water.

COLORADO is the leading state in the production of tungsten ores and vanadium minerals.