

# SCIENTIFIC FACTS

In Tabloid Form for Busy Readers of Daily Press

One of the revolutionary discoveries of the last few years is the presence in our food of certain substances that in minute quantity are essential to life and health. Man, pigs, fowls and rats develop beri-beri on an exclusive diet of rice that has been polished, but are cured by a very small amount of watery or alcoholic extract of the rice polishings. In a paper to Liverpool chemists, Prof. W. Hanesdun lately mentioned that "anti-beri-beri vitamins" is now proven to be neither protein, fat, carbohydrate, nor other previously known constituent plants or animals. It exists in sufficient proportion in most foodstuffs, but is absent from white flour, polished rice, and arrowroot, and probably also from corn-flour, sago, and tapioca. The absence of another vitamin, which may be also indispensable to man, has been shown by other researches to be a cause of sore eyes and arrested growth in rats and mice. It exists in quantity in yolk of egg, cod liver oil, most animal fats, milk, cheese, green leaves, soya beans, millet, and flax seed, but is absent from lard and all vegetable oils. A third vitamin, indicated, its lack being chiefly responsible for scurvy. It is present in all fresh vegetables, fruit and meat, but lacking in dried vegetables and dried seeds.

One Spanish substitute for petroleum for miners' lamp, contains 77.5 per cent of 96 per cent alcohol and 22.5 per cent of benzol. This lamp fuel seems to have met with some approval, but an objection is its low efficiency, the lamp using it developing only 77 per cent of the illuminating power of the standard petroleum lamp. A new mixture designed to yield this brilliancy is made up of 62 per cent by volume of the alcohol, 16 of benzol, 7.5 of rectified turpentine and 14.5 of fusel oil.

Heated quenching tends to change the shape of steel. In a recent experiment, a small tank of water was heated by raising to redness a soft steel cylinder 3.5 inches in diameter, and then plunging it into the water. After 800 quenchings the metal was found to have been shortened the fourths of an inch, with a corresponding increase in width. The steel contained 0.05 per cent of carbon, 0.01 of silicon, 0.8 of phosphorus, 0.005 of sulphur, and 0.45 of manganese. Myopia, or near-sightedness, results from elongation of the eyeball produced in some way not clearly understood. The view that close attention to near work produces this change has not been satisfactory, and Dr. F. W. Edridge Green has now suggested that it is excessive muscular work, just as that sets up the processes of deformation. In The Lancet he claims that the primary or immediate cause is an obstruction of the lymph that should empty into the lymph space of the optic nerve from that between the retina and choroid. The accumulation of fluid distends the choroid coat at its weak posterior part, and thus gives the eye an altered shape. Severe muscular effort may produce the obstruction, lifting heavy weights, producing a few days of tension in the eyes, and may even make them seem to be starting from their sockets. Among porters and others doing much lifting or excessive work, this is the usual cause of myopia. In persons of sedentary occupation, the wearing, rowing, or other form of violent exercise may be the inciting cause, and even severe coughing may be responsible. It is advised that, with the appearance of myopic symptoms, anything likely to increase eye tension be avoided; reading need not be dropped.

From what we know of the surface conditions and climates of the various members of the solar system, Prof. Svante Arrhenius concludes that Venus is the only planet besides the earth where life is possible. Venus has a dense, warm atmosphere of high humidity. With everything dripping wet, life near the equator should be luxuriant, that of low order on account of the specialization; but nearer the poles, the climatic diversity is greater, suggesting a more varied development. Absence of any atmosphere makes life on Mercury and the moon impossible. Mars, too, must be uninhabitable, with a temperature averaging about 37 degrees Celsius above zero, and scarcely rising to freezing point even at noon on the equator; and its water supply is small.

Many of the so-called "egg substitutes" examined by the U. S. bureau of chemistry are reported to consist essentially of starch and baking powder colored with a coal tar yellow. The few contain casein from milk. These substitutes for which extravagant claims have been made, have small food value as compared with eggs, and in cooking experiments about 37 degrees Celsius above zero, and scarcely rising to freezing point even at noon on the equator; and its water supply is small.

The exhaust gases from an oil or gas engine are said to have a temperature of about 1,000 degrees F., while the water cooling the cylinders is also made to be of the same temperature. The country home lighting plant of F. A. Wilkinson in the English agricultural district of Hertfordshire, employs a five-horsepower oil engine to drive the dynamo and a storage battery. The current is available at any time. The utilization of the engine waste in conjunction with electric heating makes the plant supply heat for the home as well as light. The exhaust gases and jacket-heated water are conducted through suitable radiators and pipes, and water for a bath being also obtainable in a few minutes. A gas chamber in the bottom of the cooking oven is connected with the exhaust pipe of the engine, electric resistance heating also provided to make up any deficiency of heat. Tubular rings receiving exhaust gases provide for heating, but these also have electric heating.

## INJUNCTION ASKED ON FILM SLURRING MRS. BERNSTORFF

New York, March 7.—Application was made in the supreme court here today, for an injunction to restrain exhibition of a moving picture, in which "Countess von Bernstorff, wife of the former German ambassador to the United States, is shown with her husband in a banquet scene which bears a caption reading: "Bernstorff and his American wife, who were engaged in murder and other crimes in the United States."

The injunction was asked in behalf of Countess von Bernstorff by Pauline Lewis, who declared in her affidavit the wife of the German diplomat, who was Jean Luckmeyer, daughter of Edward Luckmeyer, a New York importer, forfeited her American citizenship by her marriage, "but not her loyalty to the United States, where she was born in 1867."

elements for duty when the engine is stopped. Running the engine an hour and a half a day is stated to have been found sufficient for both lighting and heating, even in midwinter.

The waste of a Vermont marble quarry is reduced by crushers and rolls to fragments of one-half inch, or less, and is then burned into quicklime. The rotary kiln for this purpose is eight feet in diameter and 20 feet long, inclined four per cent from the horizontal. It is driven by a belt from a 30-horsepower motor, and has a speed of 0.5 to 1.5 revolutions per second. Producer gas introduced at the lower end yields a temperature of 2,200 degrees F. This converts the rock fragments into quicklime by driving off the carbonic acid gas, and the hot material drops from the lower end of the kiln into a rotating cooling cylinder. In this cylinder the draft of air passing to the burning gas cools the product for the storage bins.

The new electromagnet alloy of F. M. Beckwith consists of iron and cobalt, with two to six per cent of silicon, a typical analysis showing 62.93 per cent of iron, 32.05 of cobalt, 4.69 of silicon, and 0.33 of carbon. The notable properties claimed—low hysteresis combined with very high capacity for magnetization—give the alloy special advantages for use in transformers, dynamos and all electromagnetic apparatus. Up to a certain point, adding silicon increases these properties, the desirable proportion of this element being the maximum possible without destroying malleability.

A fine book could be written about the medicinal springs of America. This country is wonderfully rich in them. There is hardly a section of the United States that has not a hot spring, or a warm spring, or a sulphur spring, or a spring containing some mineral which checks the ravages of age, restores lost beauty, cures rheumatism and inspires the liver, or otherwise benefits afflicted humanity.

In the east there are not so many of these springs but that each has attained some local prosperity, and a good many of them are nationally or even internationally known, like Hot Springs, Va., and Saratoga Springs, N. Y. Why these springs should have attained a greatness while others just as good remain only local resorts known thru a few counties at best, is one of the mysteries of destiny.

In the west a medicinal spring has a hard life. There are too many of them and too few people. One needn't be a millionaire to own a private hot spring in some parts of the west.

And yet there is hardly one of these western springs that has not been taken in hand by some enterprising individual, capitalized and put on the market.

Such—to get down to our mittens at last—is the Coyote mineral springs in an arid canyon 17 miles east of Albuquerque, N. M. It is a natural soda fountain. That is, the water bubbles out of it highly charged with gases and having a bite and tickle that no commercial product can hope to rival. A traveler across the barren wastes that lie before Coyote canyon, when he squeezes a lemon into a cupful of this delicious water and drinks it down, feels that after all some things are where they should be.

## Vladivostok Arrests Anger Allied Chiefs

Washington, March 7.—Vladivostok has been thrown into a commotion by the arrest and deportation of six non-bolshevik municipal officials by General Ivanoff Rinoff, commander of the Vladivostok military district under the Omsk Siberian government.

It was intimated in official quarters here that the allies and the United States would warn Admiral Kolchak, dictator of the Omsk government that General Rinoff must be restrained from interfering with the Vladivostok or local authorities.

The truth would seem less brutal if people were better acquainted with it.

## NEWMAN RETURNS, STARTS CAMPAIGN

Representative Louis Newman returned to his home in this city last night after having been in attendance upon his duties in the legislature during the session now history. Mr. Newman will at once take up his campaign for the democratic nomination for mayor of Great Falls before the city primary to be held March 24.

Senator J. M. Burlingame and Representative James Roberts arrived in the city last night from Helena.

**THAT WONDERFUL "EFFICIENCY"**  
Chicago pork-packers now admit that their method of handling pigs has been wasteful. In Germany, as we gather from the appeals for modification of the armistice, even the squeal of the pig is utilized.—Punch (London).

Why does a man always say that he's out of practice when he is beaten at any kind of a game?



**THEDA BARA**  
In Her Newest Success  
**THE LIGHT**

Now Playing!

It's New

First Time in Great Falls

Famous For Her Wickedness

All Paris gossips about this notorious woman, little knowing that an angel's goodness is hiding within her.

The story of a woman who had no honor until a man taught her to see the light.

Better Come Early!

Fishing for Fish—Bruce Wonder

Love's Young Scream—Harold Lloyd Comedy

Always In High When It Comes To Merit!

# IMPERIAL

Coming Next Monday March 10



ONLY A TYPIST

is what his friends said, when he turned his back upon the world; upon his brilliant business career; and upon the girl to whom he was affianced, in order to be with the pretty stenographer.

Was he justified?

DAVID GRAHAM PHILLIPS  
**THE GRAIN OF DUST**  
with LILLIAN WALKER  
is the answer!  
See it at—

AT THE IMPERIAL

## HARLEM TO HAVE \$6,000 BUILDING FOR LODGES AND DANCES

Stock Company Formed by Odd Fellows and Masons to Erect Auditorium.

Special to The Daily Tribune.  
Harlem, March 7.—The Odd Fellows and the Masons have been conferring over plans for a meeting place for the lodges. As the finances of neither of the lodges, or of both of them together, are sufficient to build a hall, it is proposed to form a stock company to build an auditorium that can be used for public amusements and entertainments as well as a lodge hall. Under this plan the lodges would rent the hall for lodge purposes on certain nights each month and the rest of the time it could be rented for dances or any other purpose for which it might be desired.

At present a building costing about \$6,000 is planned. W. H. Reed and C. M. Davy have been appointed a committee to interview every person in Harlem interested in the erection of a hall that can be used as a kind of community center. They are selling shares at \$25 each and have already placed more than \$2,500 worth. They figure that they will not have much trouble in raising the amount needed.

To build such a structure as many people would like in the business district would cost a great deal of money at this time, more than could be raised by subscription, so the plan now is to build a wooden structure, about 40 by 100 feet. There would be a half basement under the building, half of it in the ground and half out so that it could be fixed up to include a dining room or

club room in addition to the heating plant. The main floor would be fitted out with a hardwood floor for a dance hall, and would also be arranged so that it could be used as a lodge room.

## Heavy Snowfall Boon to Logging Contractors

Special to The Daily Tribune.  
Whitefish, March 7.—The recent heavy fall of snow has been a boon to logging and the contractors, and all along the Great Northern right of way thousands of ties are being piled up at sidings. Up until the last two or three weeks the weather was ideal for cutting and skidding ties and logs, and with the advent of snow there is nothing remaining to do but haul them to the railroad.

One enterprising small mill a few miles out of Trego has been utilizing a tractor for the purpose, 12 trips being made daily.

## CREDENTIALS WANTED.

The applicant for the job of office-boy presented his credentials in a manner that bespoke his entire confidence that the position would be his. The sour-looking old gentleman at the head of the establishment read the paper carefully and then surveyed the boy searchingly.

"It is certainly a very nice thing for you to have these recommendations from the minister of your church and your Sunday-school teacher," said he, "and I must admit that you look honest. All the same, I'd like to have a few words from some one that knows you on weekdays."—Harper's.

**TOO, TOO TRUE.**  
"Don't you think a real friend ought to feel sympathetic when one needs money?"  
"I think a good many friends in such cases are touched."—Baltimore American.

Perhaps all things come to him who waits, but there are many things not worth waiting for.

# GEM THEATER

THE PEOPLE'S THEATER  
High Class Musical Comedy Best Motion Pictures

TO OUR PATRONS:  
We positively guarantee Frank Kelly's Newest Show, "The Chinese Ambassador," to be the BEST and the FUNNIEST play that he has presented during his entire stay here.  
W. W. FREEMAN.

We Strongly Advise and Urge You to See

## Casey, Cohan and the Kelly Kutie Kids



## KELLY & HIS CHICKENS

### THE CHINESE AMBASSADOR

A Riot of Fun, Mirth and Melody. See the Great Chinese Chorus.

### A Thriller—"THE LURE OF THE CIRCUS" STARRING Eddie Palo

## EDITH ROBERTS

- IN -

## THE LOVE SWINDLE

Five reels of intense dramatic interest, pathos and delightful comedy.