

Anniversaries of Science

May 19, 1884—Discovery of inoculative remedy for rabies announced by Pasteur.

Although it was these experiments at Pouilly-le-Fort and the anthrax vaccinations which first overcame the general skepticism regarding the new doctrines, it was the prophylaxis for rabies which gave them the great place in public confidence which they now enjoy. We cannot fail to recognize that, from this point of view, this disease was well chosen. It has, fundamentally, no importance. The mortality which it causes is slight. Man can protect himself from it without any scientific apparatus, simply by police measures. . . . But rabies has a hold on the public imagination; it evokes legendary visions of raging victims, inspiring terror in all those in their vicinity, bound and howling, or asphyxiated between two mattresses.

The reality is much more simple and calm, and few deaths are more peaceful than certain deaths from rabies, but it was easy to foresee that a victory over this disease would be reckoned none the less a great one. Only it did not seem easy. In the first place, while rabies might pass with the public for a virus disease, it had not that character for the physician or the surgeon, because every man and every animal that contracted it died from it, and it was consequently impossible to know whether it would recur in the same individual.

—Duclaux: *Pasteur: The History of a Mind.*

Science News-Letter, May 14, 1927

May 24, 1543—Nicolas Copernicus died.

I began to consider the mobility of the Earth; and although the idea seemed absurd, yet because I knew that the liberty had been granted to others before me to postulate all sorts of little circles for explaining the phenomena of the stars, I thought I also might easily be permitted to try whether by postulating some motion of the Earth, more reliable conclusions could be reached regarding the revolution of the heavenly bodies, than those of my predecessors.

And so, after postulating movements, which, farther on in the book, I ascribe to the Earth, I have found by many and long observations that if the movements of the other planets are assumed for the circular motion of the Earth and are substituted for the revolution of each star, not only do their phenomena follow logically therefrom, but the relative positions and magnitudes both of the stars and all their orbits, and of the heavens themselves, become so closely related that in none of its parts can anything be changed without causing confusion in the other parts and in the whole universe.

—Nicolaus Copernicus: *Dedication of the Revolutions of the Heavenly Bodies.*

Science News-Letter, May 14, 1927

May 24, 1844—The first message was sent over the Morse telegraph. "What hath God wrought."

Science News-Letter, May 14, 1927

The cat was first domesticated in Egypt.

BOTANY-CHEMISTRY

Plants As Energy Converters

Quotation from PHOTOSYNTHESIS—H. A. Spoehr—Chemical Catalog Co.

We may say that solar radiation is the greatest and an inexhaustible supply of energy for our earth. The chlorophyllous plant is a converter of this energy into potential energy; it is from a chemical viewpoint a great reducing mechanism, producing compounds which can combine with oxygen. The transformation of matter involved in this conversion of energy, that is, the chemistry of photosynthesis and metabolism, present an exceedingly complex picture. The main reason for this apparent complexity is that photosynthesis is intimately connected with the vital process of the plant and hence subject to the many fine adjustments characteristic of living protoplasm. No analysis of the process of photosynthesis in plants is reliable which does not give due regard to this fact. This need not mean, however, that a photosynthesis attaining the same or analogous results can never be achieved without the action of living protoplasm. Only, up to the present time no chemical system has been devised which can approach the but slightly on heating and thus will plant in efficiency or usefulness.

Science News-Letter, May 14, 1927

ENGINEERING

Tests Made in "Padded Cell"

A padded cell to protect people from loose nuts, though not of the human variety, has just been completed at the works of the Metropolitan Vickers Electric Company, of Manchester. It is a protection not only against loose nuts, but against bolts, gears and screws as well, for the "cell" is a chamber for testing high speed machinery, which is liable to fly to pieces under the strain.

When a piece of such machinery is completed, it is tested in the chamber which is underground and has walls nine feet six inches in thickness, composed of wood, steel, bags of sand, air cushioning space and reinforced concrete. It is large enough to take "rotors" 14 feet 6 inches in diameter, or shafts 40 feet long. High speed motors turn the machinery under test, which is watched from outside by means of various electrical devices and fast cameras. In addition, by means of a hole bored through a shaft, a special telescope permits actual scrutiny of the interior of a moving part.

The need for such protection is emphasized in a recent issue of the

scientific magazine, *Nature*, where it is stated that in a 25,000 horsepower electric generator driven by a water or steam turbine, and running at 3,000 revolutions per minute, the rotating part weighs about 20 tons, and the energy is about the same as that developed in a head-on collision between two railroad trains each carrying fourteen cars and running at 35 miles an hour.

Science News-Letter, May 14, 1927

INVENTIONS

Metal Statues From Plaster

A German artist-inventor has devised a new technique for literally turning plaster statues into metal ones, by means of an ingenious "extrusion pistol" which projects a fine stream of melted bronze or other metal against the inside of a hollow plaster cast with such force that it carries on through the porous substance and comes out as a thin film, hardening on the outer surface. The process is said to be extremely rapid, five minutes' operation of the pistol being sufficient to metallize a plaster cast the size of a man's hand.

Science News-Letter, May 14, 1927

AGRICULTURE

Farmers Embattled Again

(The following timely contribution from the New York State College of Agriculture at Cornell University is substituted this week for a Science Service prize poem.)

We read in Emersonian ode
How, down along the Concord road,
"By the rude bridge that arched the flood,"
Stout farmers in the April mud
Made good the challenge they had hurled
And "fired the shot heard round the world."
Right here and now as loud as then
There sounds a call for Minute Men.
A state of war exists once more;
A foreign foe is on our shore.
We rightfully apply the term
To this here new corn borer worm.
He is a cautious coot, dodrot him;
He won't come out where we can swat him.
Within the cornstalk armor snug,
His tunnels, here and yonder dug,
Cause breaking over of the tassels
And likely tell you where he wrestles.
Just cutting up a stalk or so
Will show the cuss in status quo.
Ensil the crop where he is seen,
Plow all the weeds and stubble clean.
If every weed and stalk go under,
You're sure to bother him like thunder.
I aim to land a hearty swat
When he appears on my back lot,
And trust that men with broader acres
Will not be idle belly achers,
But smite instead his solar plexus
Before his sons are born to vex us.
O let us rise and crush the stranger
Who puts the Indian corn in danger.
Or if we can't destroy him quite,
Let's make him know he's in a fight.

—Bob Adams.

Science News-Letter, May 14, 1927