

PHYSICS

Paper and Shellac Used In High Voltage Tube

SHELLAC and paper, instead of glass, are used to make the walls of a new type of vacuum tube that will be used with the giant high-voltage generators being developed under the auspices of the Massachusetts Institute of Technology.

Such an insulating fiber cylinder, built up out of laminated paper impregnated with a textolite shellac composition, will be placed between the two large ball electrodes of the 10,000,000 volt electrostatic generator that will soon be used to attack the atom in Col. E. H. R. Green's airship hangar at Round Hill, Mass. Within this tube the high voltages generated will play.

At Princeton University's Palmer Laboratory, Drs. L. C. Van Atta and R. J. Van de Graaff of the Massachusetts Institute of Technology and Dr. H. A. Barton of the American Institute of Physics have built an experimental fiber tube and tested it to 300,000 volts. Details have been reported in the *Physical Review*.

One novel feature is a leakage resistance that was made by drawing a line in India ink along the outside of the tube in the form of a helix.

Science News Letter, March 4, 1933

MEDICINE

Temperature Change Effect On Influenza Studied

WHEN YOU catch cold or get influenza or pneumonia is it all due to disease germs? Or do such things as being chilled, overheated or exhausted play any part? The answer to this question, now being sought at the University of California department of medicine, may lead to a means of preventing colds and kindred ailments.

"If physical or other factors can be discovered which influence the onset of respiratory diseases and which are seasonal, the way may be open to prevention," Dr. William J. Kerr, professor of medicine, explained.

Dr. Kerr and associates have built a chamber where the most variable environmental factors can be controlled. Individuals susceptible to colds are kept there under ideal conditions for comfort and without fatigue. They are then exposed to sufferers in the active stage

of colds, influenza, etc., under controlled conditions.

Attempts are being made to reproduce the common cold by natural exposure and by the use of nasal washings. Physical factors, such as changes in temperature, humidity and atmospheric pressure as well as the influence of fatigue and sudden cooling and similar factors are being studied.

The physiological principles involved in the mechanism of protecting the body against sudden changes in environment are in reality being studied. The common cold, influenza and other respiratory diseases are the ones which offer the best opportunity to study variations from normal.

Dr. Kerr emphasized the fact that the University of California studies have only just been begun and that no report on the progress can be made yet.

Science News Letter, March 4, 1933

PUBLIC HEALTH

Yellow Fever Peril In Orient Feared

AUTHORITIES in London, England, are apprehensive of an outbreak of yellow fever in the Orient. At a meeting of the Ross Institute Advisory Board, Sir Malcolm Watson and others pointed out the grave danger now existing that this disease will be spread from its focus in West Africa to East and South Africa by airplanes.

Air travel has brought various parts of the vast African continent so close together that a person might become infected in West Africa with yellow fever and reach the eastern or southern part of the continent before the three or four day period necessary for the disease to appear in him. Airplanes may also convey mosquitoes, which may spread this disease.

From East Africa it is a short jump to the Orient with its teeming millions who have never been exposed to yellow fever and consequently have probably no resistance to the disease. It would be difficult and perhaps impossible to enforce in oriental countries sanitary and quarantine regulations sufficient to check the disease before it had taken a terrific toll. For this reason, health authorities have always urged every precaution to prevent the spread of yellow fever into eastern or southern Africa.

Quarantine regulations of air travel between South America, where the disease also has a focus, and the United States have been instituted.

Science News Letter, March 4, 1933

IN SCIENCE

PALEONTOLOGY

40-Foot Plesiosaur Bones Brought From Australia

FOSSIL bones of a forty-foot plesiosaur, the largest and most complete specimen ever found in Australia, have been brought back to the Harvard Museum of Comparative Zoology by William E. Schevill, who has recently returned from an eighteen-months' expedition to that country. The bones are now being examined and prepared for permanent mounting.

During the days when dinosaurs lumbered on land, their near relatives the plesiosaurs ruled the seas. They were swimming monsters with paddles instead of legs, and powerful jaws armed with alligator-like teeth, some of them eight inches long. Their favorite prey was fish. Plesiosaurs in other parts of the world were remarkable for their extraordinarily long, snaky necks, but the Australian species had shorter, thicker necks and in general were very massively built.

Science News Letter, March 4, 1933

SEISMOLOGY

Quake Felt in Peru Centered in Bolivia

THE EARTHQUAKE that caused excitement and alarm in Peru on the morning of Thursday, Feb. 23, had its epicenter near the western boundary of Bolivia, scientists of the U. S. Coast and Geodetic Survey reported after examining seismological data telegraphically collected by Science Service from a number of American and Canadian observatories. The approximate location was given as 19 degrees south latitude, 68 degrees west longitude. Since the reports indicated a violent earthquake, destruction of property and loss of life may have occurred in case the epicenter happened to coincide with a populated region. Direct reports may not come out immediately, due to the lack of telegraph lines and other means of communication in the interior.

Science News Letter, March 4, 1933

CE FIELDS

ENTOMOLOGY

Flies Attracted to Light-Colored Clothes

FLIES go to light colors in preference to dark ones not because they have any color likes or dislikes but merely because they like to be where it is bright and warm. Indeed, in all probability they are totally color blind, and see colors only as brighter or duller degrees of gray.

These are the conclusions presented before the Optical Society of America by Zarmair Zakarian, of New York. Mr. Zakarian conducted his studies on the color choices of flies under actual working conditions as they occur in dry-cleaning establishments, because flies constitute a major problem in the cleaning and dyeing industry by their ill habit of leaving specks on delicately tinted fabrics.

In general, the experimenter said, flies prefer white, cream and other light-colored garments. They favor wet spots over dry, and satin finishes to crepe. All this indicates, he holds, that relative luminosity, rather than any specific color, governs their reactions. Further, he found, the flies seek the spots of most comfortable warmth, even leaving brighter areas to reach them.

Science News Letter, March 4, 1933

METEOROLOGY

Future Inauguration Days To Have Better Weather

WHATEVER the uncertainties of Washington weather may bring Franklin Roosevelt's inauguration as President, he can look forward with reasonable assurance to Jan. 20, 1937, for a day of settled weather. On that day, when according to the Twentieth Amendment future presidential inaugurations will take place, he can begin his second term (if the fortunes of politics so ordain) under kindlier skies than Washington usually provides around the stormy beginning of March.

An examination of Weather Bureau records for the past ten inauguration years, from Cleveland's second in 1893

to Hoover's in 1929, shows that only one of the January twentieths in that time had any measurable snow or rain. That was the first of the series, Jan. 20, 1893, which was a chilly, rainy day with a little snow. Contrasting with this, the March fourths during the same series provided rain or snow seven times out of ten chances. Cleveland's second inaugural took place in a snowstorm, and Taft rode to the White House through a veritable blizzard that dumped nearly ten inches of snow on the streets of the Capital. The most recent inauguration day, Hoover's in 1929, brought a cold, disagreeable rain that began just before the oath of office was administered and lasted all the rest of the day.

January 20 inaugurations not only promise fairer, more settled weather, if past performance can be construed as promise, but they will probably not bring severe cold. The Weather Bureau's records for Jan. 20 in all inauguration years from 1892 to 1929 show mean temperatures above the freezing mark on all but three of the days. The highest mean temperature of the series was Jan. 20, 1913 (Wilson's first inaugural), with 49 degrees. Since the principal ceremonies of the inauguration usually take place during the warmest part of the day, the mean temperature can be expected to be bettered considerably in most years.

Science News Letter, March 4, 1933

PHYSIOLOGY

Eyes Do Not Bleach During Arctic Night

BROWN EYES do not turn blue during the long nights of the polar regions.

This is asserted by the noted Arctic explorer, Dr. Vilhjalmur Stefansson, in a communication to *Science*, following the publication in another magazine of the statement that "After a prolonged absence of sunlight, men on polar expeditions find that their eyes, irrespective of previous color, have turned blue."

Dr. Stefansson, in all his long experience in the lands of long nights, could not recall having observed this phenomenon. The statement was alleged to have been inspired by an entry in the journal of Capt. Scott, British explorer who perished after having reached the South Pole. But inquiries addressed to Capt. Scott's companions and collaborators failed to bring confirmation for this claim.

Science News Letter, March 4, 1933

PSYCHOLOGY

Popularity of Technocracy Due to Sound of Word

TECHNOCRACY has taken such a remarkable hold upon the popular fancy partly because of the sound of the word and the manner in which it is pronounced, Dr. Knight Dunlap, psychologist of Johns Hopkins University, believes.

"The word calls attention to itself, because you cannot read or say it rapidly and smoothly," Dr. Dunlap explained. "When you read a smooth, musical phrase such as 'machine age' in a sentence, the sentence flows right along. But when you come to 'technocracy' with its sharp, harsh, staccato syllables, you necessarily slow up and notice the word."

"The ideas embodied in 'technocracy' are not new, but the public never paid any particular attention to them until the invention of this new attention-attracting name."

Science News Letter, March 4, 1933

ZOOLOGY

Deer Answer Breakfast Gong In Sequoia National Park

DEER at Ash Mountain Headquarters in Sequoia National Park not only recognize the breakfast bell, but are able to distinguish between it and the early rising gong.

Each morning the bachelors at Ash Mountain are rudely awakened from their slumbers by lusty wallops on the messhouse gong, operated by the cook. At this hour, according to Mr. and Mrs. Carl G. Thompson, in charge of the mess, no deer are in sight. Half an hour later, however, when the breakfast gong is sounded, the deer troop toward the messhouse just as the men do.

While the men are at breakfast, the deer peer through the windows, watching for the "handout" which they know will be forthcoming when the men leave the table. In addition to what the men give them, scraps are thrown from the kitchen.

The people at Ash Mountain think the intelligence quotient of the Sequoia deer is high, as shown by their discrimination in ignoring the rising bell but responding at once to the breakfast gong.

Science News Letter, March 4, 1933