

In the past it has been cured by surgical removal of the nerves affecting the blood vessels of the hands and feet, but often the operations were not successful. This was especially true when the disease was limited to the hands. More conservative medical treatment was even less reliable.

Last year, however, a young houseworker with Raynaud's disease was discovered to be existing on a diet of rye bread and coffee three times a day. She was given vitamin capsules and in ten days her hands no longer blanched in cold water and the spasms disappeared.

The case led to vitamin treatment of 21 patients with Raynaud's disease at Mt. Sinai Hospital, with results which implied that vitamin deficiency is an important factor in provoking the disease. The patients were treated with either "total vitamins" or with vitamin B complex for a period of from six weeks to a year. Dr. Spiegel reports that "fifteen showed distinct relief." The vitamin B group, Dr. Spiegel believes, is the effective agent rather than the other vitamins.

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PALEONTOLOGY

Rare Fossil Beast Found Among Wyoming Treasures

BONES of one of the rarest, strange American animals of 40,000,000 years ago, spurned by pot hunters, have been happily saved for science by Smithsonian Institution paleontologists.

Found in Wyoming in the Bridger Basin region, the long-extinct creature is a stylinodont. Dr. C. Lewis Gazin, discoverer of the rare fossil, says that stylinodonts looked very much like sloths, but were not ancestors of South America's present-day sloths, nor of the ground sloths that were in existence in our country as recently as the last Ice Age. Pronounced "one of the most interesting finds of the summer," Dr. Gazin's stylinodont was found partly dug up by amateurs of the un-scientific-minded variety dubbed "pot hunters." Probably, he says, they thought the bones unimportant.

A giant squirrel that was about as big as a woodchuck is another find of the season by Dr. Gazin. Its skull was three to four inches long. Modern squirrels cannot claim *Paramys*, as the big squirrels are called, for their direct ancestors. These giants apparently vanished millions of years ago, while some smaller and more alert relatives survived to perpetuate the squirrel line.

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CHEMISTRY

Gasoline and Rubber Produced By "Freezing" Waste Gases

Process Hitherto Used Mainly by Russians Tried With Promising Results by American Oil Technicians

HIGH octane gasoline and synthetic rubber can be produced from waste gases of the steel and petroleum industries by application of a low temperature technique secretly developed in Russia, Prof. Cecil T. Lane of Yale University announced in an address to the Sigma Xi Society, in New Haven, Conn.

These gases are mixtures of valuable industrial gases, Dr. Lane continued. Each has a different liquefaction and freezing point, so that by lowering the temperature far below the freezing point of water, the different gases may one by one be frozen out and separated into pure components. Then they can be put together again in the various ways and proportions necessary to produce gasoline, rubber, and other vital defense materials, for which they provide an almost inexhaustible source of raw materials.

The surprisingly strong resistance of the Russians to the German invasion, Dr. Lane attributed in large part to their development of the low temperature industry, in which they were far ahead even of Nazi Germany. In this country the industry is only in its infancy, but Dr. Lane foresaw that it would open up many new avenues in synthetic manufacturing.

Dr. Lane demonstrated the Peter L. Kapitza machine for producing liquid helium at a temperature 455 degrees Fahrenheit below zero. It is the only machine of its kind in the Western Hemisphere and there are only five other places in the world where liquid helium can be produced. The machine was built from a sketch sent from England before the outbreak of the present war.

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ASTRONOMY

Mexico To Have Most Powerful Telescope in the Tropics

Site 8,000 Feet Above Sea Level Considered Highly Favorable For Observations in Southern Hemisphere

MEXICO is building a new national observatory which will house a 24-30 inch Schmidt photographic telescope, the most powerful in the tropics, Dr. Bart J. Bok, astronomer of Harvard College Observatory, has announced (*Sky and Telescope*).

Other equipment will include a 12-inch reflector for visual observations and two or three cameras of the Ross type with apertures of three to five inches. All equipment will be purchased with funds provided directly by President Camacho of Mexico.

The observatory will be located on a hill ten miles south of the city of Puebla, which is 80 miles east of Mexico City. This is a very favorable location for observation of the southern hemisphere. Latitude of the observatory is 19 degrees

north of the equator, which means that the sky can be seen to within 19 degrees of the south celestial pole. The site is nearly 8,000 feet above sea level.

The work of the observatory will tie in closely with that of the Harvard College Observatory and of the Mexican observatory at Tacubaya. It will consist largely of observations of southern variables and of star counts, colors, magnitudes and spectra for the southern hemisphere.

Director of the observatory will be Luis Enrique Erro, assisted by Dr. Carlos Graef, both of whom have already spent a year at Harvard College Observatory with its director, Dr. Harlow Shapley.

Formal dedication of the new observatory is expected to be in February.

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