

The use of vitamin D for arthritis came about accidentally. Dr. Reed had been using large doses of the vitamin to treat hay fever and asthma patients in accordance with a theory that deficiency of calcium or lime is a factor in these ailments. Vitamin D helps the body to get the full benefit of the lime in the food. One of the hay fever patients, who had suffered from arthritis for 23 years, told Dr. Reed that since getting the vitamin D for her hay fever, her arthritis had improved. She had less pain and the

swelling in her finger joints had gone down so that for the first time in several years she was able to take her wedding ring off. Dr. Reed himself had been an arthritis sufferer for some years so he took large doses of vitamin D, as much as three million units, and found his own arthritis was soon cured. Since then he has been using it regularly for arthritis patients. It seems to help them though as yet Dr. Reed has no explanation for how it works.

Science News Letter, April 27, 1935

PHYSIOLOGY

Finds New Sensory Cells at Root of Nerves From Face

HITHERTO unknown nerve cells, probably of the kind that convey sensations, have been discovered by Dr. Gustavus A. Peters of the Indiana University School of Medicine.

They are located in the roots of the trigeminal nerve that conveys sensation from the face to the brain. It is this nerve that is affected in tic douloureux, a form of trigeminal neuralgia, in which the patient suffers attacks of excruciating pain.

Dr. Peters reported his discovery at the meeting of the American Association of Anatomists. The presence of these newly-found cells, he believes, explains why sensation and pain sometimes return after operation for the relief of tic douloureux.

Alcohol injected into the nerve may

give relief from the pain in this disease temporarily. Surgical operation in which the nerve is severed gives complete relief of the pain and usually results in loss of sensation on that side of the face.

In some cases return of sensation on the operated side has been reported. Dr. Peters believes these hitherto unknown nerve cells at the root of the trigeminal nerve provide the explanation. If these cells lie next to the part of the nerve cut by the surgeon, they may cause the cut ends of the nerve to grow together again and provide a pathway for sensation once more.

Dr. Peters found these nerve cells in the central roots of the facial nerve in dogs, cats, rabbits, guinea pigs, oxen, pigs and humans.

Science News Letter, April 27, 1935

PSYCHOLOGY

"Pinheaded" Boy Has Normal Intelligence

A NINE-year-old boy whose head is smaller than that of a normal baby a year old, but whose intelligence is not deficient, was reported to scientists gathered in Princeton, N. J. for the meeting of the New York Branch of the American Psychological Association by Dr. Wilbert S. Ray of the New Jersey State Hospital.

The child, whose name is withheld by his physician to spare him embarrassment, is not a midget. He is small for his

age, however, his height and weight being about average for a six-year-old. His head is only four and three-quarters inches wide and less than six inches long, (12.1 by 14.9 centimeters) about the size of your breakfast grapefruit. The circumference of his head is less than 17 inches, which has been considered average for a four-months-old infant.

This "pinheaded" boy with normal intelligence must have scant room for his brain, for the cubic capacity of his head

is only 886.9 cubic centimeters, although 945 cubic centimeters is considered average for infants on their first birthday.

Despite difficult home conditions, this boy is not feeble-minded. Although slightly behind his age in intelligence, he is doing well in school and is picking up in mental age as he grows older.

His father is dead, and his mother is feeble-minded. The mother's head is small, but not extremely so as is the boy's. Of eleven brothers and sisters, six are dead. One is in a reformatory, another is a delinquent, but the other three are average citizens of the community with inferior but not sub-normal intelligence.

Science News Letter, April 27, 1935

MEDICINE

Rabbits Help to Test Draughts as Cause of Colds

FIRST steps in an investigation of whether being chilled lowers a person's resistance to such ailments as colds and pneumonia were reported by Dr. Arthur Locke of the West Penn Hospital, Pittsburgh, to the American Association of Immunologists.

The length of time it takes a rabbit to warm up after being thoroughly chilled is an index to one of the animals' four defenses against the invasion of pneumonia germs, Dr. Locke found. He stated that no human application can yet be made of his work but that the research was undertaken to get information on the effect of chilling and exposure on human resistance to disease. When it is finished it may give scientific backing to the old idea that sitting in a draught will bring on a cold.

Rabbits that took longer than 41 minutes to warm up after an icy bath that reduced their temperature to 96 degrees Fahrenheit could not resist pneumonia germs introduced into their bodies. Neither could they survive the attack of pneumonia that followed. The warming time, as Dr. Locke calls it, not only indicates the animal's resistance to invasion by these germs but also tells whether it will be able to withstand the disease.

The warming time is an index of only one of the animal's means of defending itself against infection, Dr. Locke said. He sees resistance to disease as being four-fold.

The first line of defense is the mechanical barrier of healthy, whole skin and mucous membranes. The second defense

is made by immune factors in the tissues of the body. The third line of defense is held by immune factors in the blood. All of these are important in resisting infection, and the fourth factor, which Dr. Locke calls the metabolic defense, is only an emergency defense which carries the animal along until the other defensive forces can be mobilized. It is this

emergency defense which can be determined by measuring the warming time.

The warming time is impaired by excessive loss of blood, infection, prolonged starvation, morphine poisoning, being kept in too warm an environment and by other influences which impair vitality.

Science News Letter, April 27, 1935

SEISMOLOGY

Formosa's Tragic Earthquake Recorded by Seismographs

Four Heavy Shocks Wrote Their Stories on Instruments in U. S. on Thursday, Friday, Saturday

FORMOSA'S tragic earthquake, heralded through the press on Easter Sunday, tried to tell the world about itself for three days before it finally succeeded in getting a hearing.

Seismograph records, reported to Science Service through a cooperative arrangement with the U. S. Coast and Geodetic Survey and the Jesuit Seismological Association, show that there were four heavy shocks, one each on Thursday and Friday and two on Saturday. The records indicated severe earthquakes at a long distance, but were not clear enough to permit an exact location of the epicenter, which is frequently possible by these means before cabled or wireless news can come through.

The first intimation came late on Thursday, April 18, when observers at St. Louis University and the Pennsylvania State College wired that an earthquake had occurred at a little after five o'clock in the afternoon, eastern standard time.

On the following day, seven stations reported another quake in about the same place, this time at ten in the morning, eastern standard time. The reporting stations included two of the previous day, together with those of the Dominion Observatory, Ottawa; Georgetown University, Washington, D. C.; the private observatory of Mrs. M. M. Seeburger at Des Moines, Iowa; and the U. S. Coast and Geodetic Survey stations at Chicago and Honolulu.

Saturday, April 20, was not more than a few minutes old when the instruments again did their dance of death, and again at about five in the morning of the same day another shock was recorded. The Saturday quakes were reported by seismolo-

gists at the University of Michigan, Ann Arbor; the Philippine Observatory, Manila, and the U. S. Coast and Geodetic Survey station at Tucson, Arizona, and Honolulu.

Delay in getting out direct wire or radio reports from Formosa is ascribed to the disruption of all communication facilities. It was stated on Monday that the Japanese authorities were still using carrier pigeons.

Science News Letter, April 27, 1935

PHYSICS

Hope of "Cold Light" Called Romantic Delusion

"COLD LIGHT" like that of fireflies and shining sea-creatures is a delusion, so far as hopes of producing similar illumination cheaply by human agency is concerned. Experiments at the laboratories of the General Electric Company produced "cold light" with entire success by means of chemical mixtures—but the cost was 25 million times as great as that for the same amount of light produced by the most economical new illuminating unit, the sodium vapor lamp.

Science News Letter, April 27, 1935

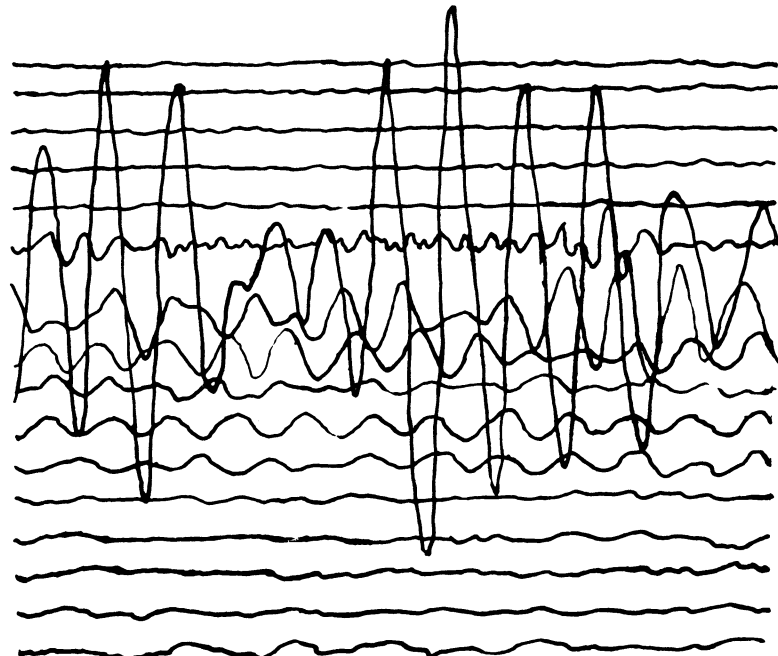
PHYSICS

Artificial Lightning Makes Electrical Fountain

See Front Cover

WHITE hot is the shower of metal particles shown on the front cover of this week's SCIENCE NEWS LETTER. It was caused by an artificial lightning bolt striking a resistance wire. The photograph was made at the General Electric Company's high-voltage laboratory at Pittsfield, Mass.

Science News Letter, April 27, 1935



AN EARTHQUAKE "COVERS" ITS OWN NEWS

How the record of one of the terrible shocks that devastated Formosa looked in its own "handwriting" on a Georgetown University seismograph. The sudden change from little "wiggles" in the line to big ones (near upper right corner of record) indicates the moment when the other side of the earth began to heave and shake, bringing death and terror to thousands of bewildered Orientals.