

MEDICINE

Sulfapyridine Saves Eyes Threatened By Type of Ulcer

American Academy of Ophthalmology and Otolaryngology Hears Report on Treatment of Infection Due to Injury

NEW use for sulfapyridine, saving eyes attacked by a highly destructive type of ulcer, was announced by Dr. Cecil W. Lepard, of Detroit, at the meeting of the American Academy of Ophthalmology and Otolaryngology in Chicago.

First patient whose eye was saved by sulfapyridine was a factory worker. While at work he got something in his eye (doctors term the something a foreign body). It was removed at the factory but within 24 hours infection had set in. He was sent to the hospital immediately and sulfapyridine treatment started. Within 24 hours improvement began and on the seventh day the inflammation had disappeared and the man went home.

By contrast, Dr. Lepard reported two previous cases in which factory workers each, in spite of all efforts to prevent it, lost an eye from ulcers caused by the

Bacillus pyocyaneus following removal of a foreign body. The second patient had been given some sulfanilamide late in his illness, but it was too late to have much effect on the eye.

Dr. Lepard urged that no time be lost in beginning sulfapyridine treatment in these cases. The 48 hours required for a laboratory report on the type of infection is too long, he said, to wait before starting the treatment if the eye is to be saved.

Science News Letter, November 1, 1941

Study Eye Operations

IMPROVED results from operations to straighten cross eyes may result from findings reported by Dr. John H. Dunnington and Dr. Maynard C. Wheeler,

of New York, to the American Academy of Ophthalmology and Otolaryngology.

The standard operation consists in shortening or lengthening the muscles that move the eye. Surgeons performing the operation, however, are faced with the difficulty of not being able to determine exactly how much to shorten or lengthen. No way of reducing this to a mathematical formula has ever been devised nor is one likely to be, Dr. Dunnington said. Consequently, it is sometimes necessary to perform a second operation to get the best possible results.

Overcorrection, which would make a turned-in eye turn out too far, is more likely to occur when the operation is performed on children between the ages of three and eight years, the New York doctors found in an analysis of results according to age which they hoped would give the ideal age for the operation.

More extensive surgery is needed, they found, for patients called "alternators," who have the difficulty first in one eye and then the other. For those having the difficulty in one eye only, more conservative operation is advised on the basis of their findings.

Science News Letter, November 1, 1941

CHEMISTRY

Etching Glass Wipes Off Reflections From Surfaces

Vision Through Glass of Show Windows, Pictures, Instruments Made Clear by New Way of Depositing Film

A NEW chemical process that can wipe troublesome reflections off the glass of show windows, pictures, camera screens and lenses, and airplane instruments has come out of current RCA television research and a clue that was dropped in 1900 by Lord Rayleigh, noted English physicist.

The new method, developed by Dr. F. H. Nicoll, RCA Laboratories research scientist, is to expose the glass surface to hydrofluoric acid vapor. This vapor etches away a small amount of surface and leaves a thin, transparent film of calcium fluoride about one-quarter of a light wavelength in thickness.

This almost invisible film not only abolishes most of the reflection from the surface, but the light that otherwise would be lost in reflection is saved and transmitted through the glass. Thus the very thin film is of great usefulness in

speeding up lenses used in photography and television.

Happily, tests show that the film formed by the hydrofluoric etching is very tough, withstanding washing with such things as water and alcohol. It can be heated safely to high temperatures.

The film formed in the glass treatment is purple in color, showing that yellow and green, to which the human eye is quite sensitive, are not reflected.

This discovery was made during experiments to improve contrast of television cathode-ray tubes. It promises to allow television to be viewed in rooms that are not quite so dark as heretofore required. Television images are light-painted on the glass face of the cathode-ray tube, passed through a glass protector plate and then reflected from a mirror. In each case reflection cuts efficiency unless the new film is used.



CLEAR VISION

The troublesome reflections that make it difficult to see clearly through picture frame or show window are removed by a new etching process that leaves a thin film on the glass.

Very thin coatings have been successfully used in the last few years to suppress reflections from glass surfaces as a result of researches by Drs. John Strong, Katherine Blodgett and C. H. Cartwright. In these earlier processes coatings of various sorts have been added to the glass, while Dr. Nicoll's method etches the glass to produce a film. Commercial applications of the new process

are being developed for early use.

Lord Rayleigh over 40 years ago jotted down in his records that hydrofluoric acid diluted in 200 parts of water took off a layer of glass each hour amounting to about a quarter wavelength of light. This was the clue used by Dr. Nicoll in developing his new process of making glass more transparent.

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ANTHROPOLOGY

Open 500 Tombs in Arctic To Identify Mystery Race

At Point Hope, Alaska, Is Unearthed One of Largest Collections of Sort Ever Found at a Site in America

DIGGING into 500 Arctic tombs at Point Hope, Alaska, two anthropologists excavating for the American Museum of Natural History have brought to daylight enough bony evidence, they hope, to clear up a strange mystery of the ancient Far North.

The 500 skeletons, unearthed by Dr. Harry L. Shapiro and Dr. Froelich G. Rainey, are pronounced one of the largest collections of the sort ever found at a site in America. The two anthropologists sought remains of an ancient and unknown people, whom Dr. Rainey first discovered in expeditions of 1939 and 1940. Also they sought later Eskimo burials which would aid in showing what relationship the lost ancients had to the later Eskimos.

The mysterious unknowns had a remarkably big town with well-planned streets, over 100 miles north of the Arctic Circle; and about 2,000 years ago they abandoned this settlement. A lost race, American Museum scientists have rated them, because their ivory arts are unlike those of known Alaskan Eskimos, ancient or modern. Also, it is explained, they lacked many typical Eskimo implements, and were more dependent on land than sea for resources.

In his laboratory at the museum, Dr. Shapiro plans to examine the physical traits of the forgotten Northerners, to place them more definitely in the melting-pot story of prehistoric America. The Ipiutaks, as they are now called from the Eskimo name of a spit of land near their old home, may have come from as far away in Asia as north China.

A new glimpse into curious burial

customs of the Ipiutaks is revealed by a carved ivory mask with staring inset ivory eyes, which was found covering the body of a little child. The child lay resting on the knees of a man, and a woman also accompanied it. Masks with ivory eyes have been found before in the graves of these mystery people, but what their significance was for a future life remains one of the unsolved puzzles of the Arctic.

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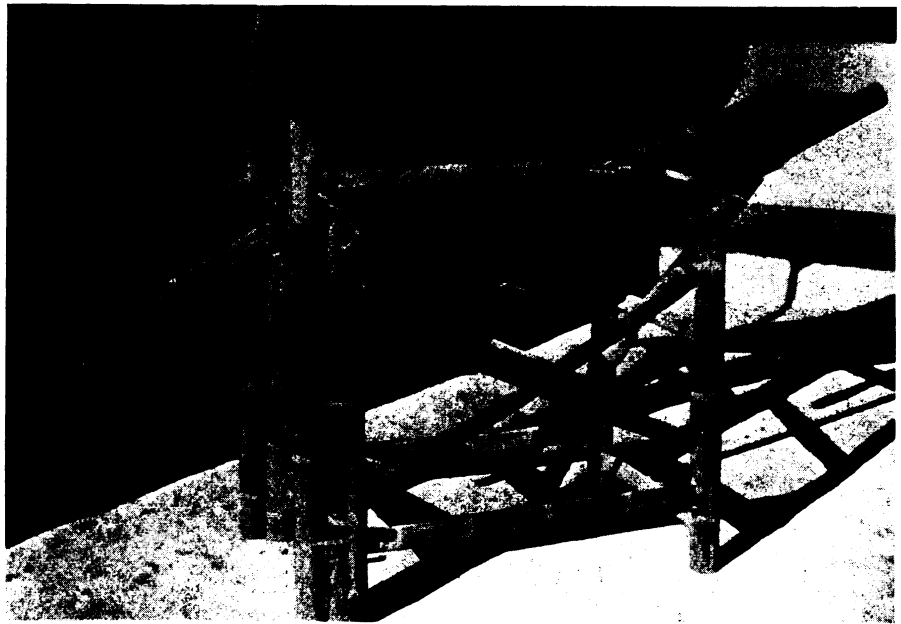
Chinese Doctor In U. S. Wanted To Run Blood Bank

WANTED—a young Chinese doctor somewhere in the United States who is willing to go back to China to run China's blood bank, vital in saving thousands of lives there.

Dr. John Scudder of the Presbyterian Hospital, New York City, creator of the blood plasma bank for Great Britain, has offered to teach this young Chinese volunteer the technique of running China's bank and preparation of the plasma as a blood substitute. He must be a medical graduate with laboratory training.

The Chinese bank is under the Medical Relief Corps of the Chinese Red Cross. A fellowship of \$1,000 for the young doctor during a year's training at Columbia Presbyterian Medical Center, has been provided by the American Bureau for Medical Aid to China, a member agency of United China Relief at its New York headquarters, 1790 Broadway.

Declaring that lack of trained personnel is a serious bottleneck in China's medical relief, Dr. Donald D. Van Slyke, who heads the American Bureau for Medical Aid to China, said that his bureau is recruiting as many Chinese



COST—TEN CENTS

Surgeons trained in the finest hospitals in Europe and America going to China to serve in the Medical Relief Corps, find that they must make their own equipment out of primitive materials. One ingenious surgeon built his own operating table out of bamboo, at a total cost of ten cents in American money.