

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.