

General anesthesia for prolonged dental operations, Dr. Teuscher said, is particularly useful in very young children with a large amount of dental work to be done, children who cannot be managed successfully in a conscious state, children with cerebral palsy, mentally retarded children, and those with heart conditions who must avoid undue fear.

Children and grown-ups alike can be assured of safe and effective dental anesthetics, Dr. Sidney Epstein of the School of Dentistry, College of Physicians and Surgeons, San Francisco, declared.

But even with the effectiveness of the drugs, the dentist still has to use some psychology with patients who think they feel pain when they actually do not, Dr. Epstein said.

Science News Letter, October 10, 1953

DENTISTRY

Cold Sores, Fever Blisters Hit Over Half Population

► MORE THAN half of the population has suffered fever blisters or cold sores, Dr. John B. Macdonald of the University of Toronto division of dental research declared at the meeting of the American Dental Association in Cleveland.

The condition, termed scientifically herpes simplex, is caused by a virus. Aureomycin ointment, he said, controls many of the symptoms of virus infections, though there is no specific antibiotic treatment for them.

Science News Letter, October 10, 1953

DENTISTRY

Dentists Drill Fast To Hurt Patient Less

► WHEN A dentist drills at high speed to prepare a cavity for filling, it hurts less and is less tiring to the patient, Dr. Donald C. Winans of the University of Michigan School of Dentistry told members of the American Dental Association meeting in Cleveland.

"We now have some newer cutting aids that, if properly used, will reduce to a minimum the most irritating and destructive forces in operative dentistry—heat, vibration and pressure," he said.

An abrasive machine was one of the cutting aids he described. It utilizes gas propulsion to blast an abrasive material through a small nozzle for cutting. The material travels at supersonic speeds of more than 1,000 feet per second to blast out cavities rather than grinding them out.

While airbrasive equipment can not duplicate all the work of the commonly-used rotary drill, it is valuable in cutting through enamel and removing stains and heavy deposits, Dr. Winans said.

With the new high speed drills, greater heat is generated, but this can be controlled very simply by use of a water and air spray.

Science News Letter, October 10, 1953

METEOROLOGY

Smoother Airplane Rides

► AIRPLANE PASSENGERS would have "considerably" smoother rides than at present if transport planes were equipped with radar, Dr. H. B. Tolefson states.

A meteorologist at the National Advisory Committee for Aeronautics Langley Aeronautical Laboratory at Langley Field, Va., Dr. Tolefson estimates that heavy, passenger-throwing gusts would be met about one-eighth as frequently as now by using the radar equipment. Another advantage of radar in planes, he states, is that designers and operators of transports could safely design airplanes for an approximate 10% reduction in the maximum gust loads.

The radar equipment would aid in two ways: 1. Some thunderstorms could be spotted and completely avoided. 2. The least turbulent paths through unavoidable storms could be charted. A contour attachment for the radar is needed to pick the smoothest route through unavoidable thunderstorms. Dr. Tolefson has found that, within storms, the areas of greatest turbulence are usually found where the rainfall is making a sharp change from light rain to heavy rain.

The number of times an airplane encounters, in clear air, the small and more numerous gusts that eventually cause discarding of airplanes cannot be reduced using radar equipment, Dr. Tolefson concludes.

Sufficient turbulence to throw passengers from their seats is met, according to Dr. Tolefson, when the change in wind speed is about 25 feet per second at the cruising speed of a modern transport, which ranges from 200 to 300 miles an hour. A 25-foot-per-second gust is encountered once in about 80,000 miles under present operating conditions.

If the thunderstorms could be avoided, Dr. Tolefson states in the *Bulletin of the American Meteorological Society* (May), such gusts would be experienced once in about 600,000 flying miles, or only once over a distance nearly eight times as great as that which included flight through thunderstorms.

ENGINEERING

Florida's White Sand To Yield Black Ilmenite

► THE WHITE, sandy land of north central Florida soon will be made to yield greater amounts of jet-black ilmenite, the ore from which tough, heat-resistant titanium metal is extracted. A new mine and processing plant will be constructed near Lawtey to help the Du Pont Company meet the increasing demand for the metal and its pigments. One plant already is situated in the area.

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"By making allowances for the cases where storms could not be avoided, the passenger might still expect a rough ride on approximately 20 to 25% of the rough flights he experiences under present conditions. It would appear, therefore," Dr. Tolefson concludes, "that quite a sizeable increase in passenger comfort would be obtained on radar-equipped transports."

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