

DENTISTRY

Fluorides Halt Toothaches

Millions of tooth cavities in children now growing up can be prevented if fluoride treatments, simple and inexpensive, are more widely adopted.

► **WHETHER THERE** will be so many toothaches and decayed teeth in American children now growing up is something that Congress can do something about.

For science has discovered and put into practice a simple, inexpensive method of preventing dental decay to an amazing extent. A minute amount of fluoride chemicals, either added to the drinking water or coated on the teeth by the dentist, is the proved preventive measure that health experts hope can be speeded into nation-wide use.

Already federal funds under the U. S. Public Health Service have made it possible for many states to conduct cooperatively for two years demonstrations of teeth coating with fluorides—topical fluoride treatment it is called. Approximately 450 communities have as a result continued on their own this preventive tooth-saving service for their children.

Cities throughout the nation are joining the rush for better teeth through adding a mere one part per million of a fluoride to city water supplies. Mothers and fathers, dentists, doctors and public health officials are demanding fluoridation. This is the simple and cheap addition to drinking water of the chemicals that controlled tests for over a decade demonstrate will cause a reduction of 65% in the cavities in teeth of the children now growing up.

Before Congress now in the annual appropriations for the U. S. Public Health Service is the opportunity for congressmen to vote against toothaches in the future. About two cents per person in the U. S.—that's about \$3,000,000—will allow this demonstration program to continue and be spread in time to save the teeth of the rising generation.

Almost \$40,000,000 annually must be appropriated by Congress each year to provide dental care for veterans of past wars, while the dental bill of the American people is about a billion dollars annually. In the early months of World War II, one-fifth of the rejections under the draft because of physical defects were due to dental trouble.

Experts are confident that relatively small expenditures per inhabitant of the U. S. now will save many dollars in the next one to two decades for every penny now spent. The dental program now underway that would be stopped if appropriations fail is also insurance against the pain of toothaches and the dental chair in the years to come.

It may seem strange for dentists who make money filling teeth, making false teeth and repairing the damage of tooth

decay to be enthusiastic over a method of preventing dental caries. Because only a third of the American population now receive regular or adequate dental care, the prospect of dentists running out of work is very remote. This alone would justify the approval of the American Dental Association and other medical and health organizations, even though the major motivation in all medical and dental practice is making healthier and better citizens.

Discovery of the beneficial effects of fluorides on teeth was made a little over a decade ago, largely through observation by U. S. Public Health Service experts that teeth of people in areas where naturally there is about one part per million of fluoride in the water have little or no decay. Some areas are naturally protected, although where there is too much fluoride the teeth take on an ugly mottle.

Smallpox has been conquered by vaccination, typhoid fever is almost obsolete due to chlorination of water and immunization, typhus has succumbed to DDT attacks on lice and fleas coupled with immunizations. Now tooth decay can be attacked through use of fluorides.

Millions of those now children will have better teeth if they are allowed to benefit from a continuation of Uncle Sam's nationwide fluoride campaign to provide the "know-how" and demonstrations.

No one would like to go on record as favoring cancer or polio. Similarly, now that a means of preventing tooth decay is known, there will be few who will wish to withhold it from the American people.

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INVENTION

Electrically Heated Smudge Pots To Protect Orchards

► **OIL-BURNING** smudge pots, long used to protect orchards from late spring frosts and early fall freezes, have a rival in a non-smoking electrical heater invented by Oscar A. Nelson of Covina, Calif. Patent 2,551,039 was his award. It is a device which can be carried about by hand, and it will cost no more to operate, he claims, than the smudge pots it is designed to replace.

The heating element in the device is composed of coils of suitable electrical resistance filaments, and they are placed in vertical position between upper and lower heat-reflecting plates. The device is constructed to be weather-resistant.

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POWERFUL MAGNET — Eraser-sized cobalt-platinum magnet, on right, lifts a steel bar 16 times longer and 24 times heavier than that lifted by Alnico magnet of similar size, as shown here by Miss Dolores O'Hara of General Electric Company.

ENGINEERING

Split-Winding Method Starts Induction Motors

► **A SPLIT-WINDING** method to give normal-voltage reduced current for starting induction motors was described to the American Institute of Electrical Engineers meeting in Madison, Wis., by three scientists of the General Electric Company, Schenectady, N. Y.

"The scheme," they said, "consists in connecting one phase of a three-phase winding in series during the starting period only, the other phases having circuits in parallel. When full speed is attained, the series connected winding is opened momentarily, and then put back on the line in parallel."

The scientists are P. L. Alger, H. C. Ward, Jr., and F. H. Wright. According to them, the method "gives the advantages of reduced current without any current surge on reclosing, no external impedance, and a low cost of control."

"Although this type of connection will draw unbalanced line currents, this appears unimportant. In most cases there will be other machines on the line to act as phase balancers and absorb the relatively small negative sequence current."

The split-winding method is especially adapted to cases where "soft" starting is desired, without any sudden torque peaks, they added. As compared to the reactor method of starting, the split-winding gives greater torque per ampere and requires less equipment.

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