

EVOLUTION OF THE AUTO

Will it develop along line shown here? Engineer Edwin L. Allen of the Standard Products Company thinks so, and told the World Automotive Engineering Congress not only of the streamlining to come, but also of such conveniences as movable seats, a roof fitted with transparent plastic panels that let in ultra violet light, and air conditioning (See SNL, June 3). The chief change required to give autos the shape shown in the last drawing is putting the engine in the rear.

## PHYSIOLOGY

## May Fight Tooth Decay Through Drinking Water

### "Startling Finding" Reveals Possibility That Fluorine or Other Chemical May Prevent Caries

DRINKING water may be the weapon of tomorrow for fighting and conquering tooth decay or dental caries. This possibility looms as a result of a "startling finding" reported by Dr. H. Trendley Dean and associates of the U. S. Public Health Service.

The amount of tooth decay among school children is not the same in one town after another, as might be expected. There was double and treble as much found among children in two Illinois cities, Macomb and Quincy, for example, as in the nearby cities of Galesburg and Monmouth. The difference, it appears, is related to differences in the water supplies, and particularly to differences in the amounts of fluorine in the drinking water.

Fluorine in drinking water is the cause of the ugly tooth condition of mottled enamel. But in Galesburg and Monmouth, where the water contains 1.8 and 1.7 parts per million of fluorine, the threshold of safety for mottled enamel, the children's teeth showed much less

decay than in the towns of Macomb and Quincy where the drinking water contained only 0.2 parts per million of fluorine.

Dr. Dean is not yet ready to advise adding fluorine to drinking water to prevent tooth decay. Before recommending such a step he wants more evidence to show that it is the fluorine and not some other constituent of the drinking water that makes the difference in the amount of dental decay. But he called the latest findings "startling" and said that they show the drinking water may be "decidedly important" in connection with the tooth decay problem.

Dental caries or tooth decay is second only to the common cold as the commonest of mankind's ills, affecting at least 19 out of 20 persons.

*Science News Letter, June 10, 1939*

A polar bear shot in Quebec Province last autumn must have traveled nearly 400 miles from James Bay through dense forest and along rivers.

## PSYCHOLOGY—SOCIOLOGY

## Marriage Courses Neglect Practical Topics Desired

BOWING to the demands of practical-minded students, more and more conservative colleges are adding to the curriculum courses of preparation for marriage.

This is applauded by social scientists who look upon the failure of any marriage as a concern of society as well as the individual husbands and wives.

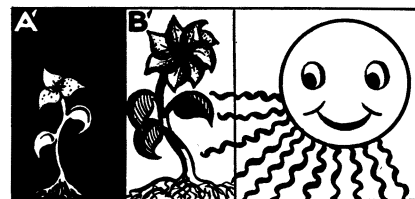
But the content of the courses still falls far short of what the students want and society needs, in the opinion of an expert in this field, Dr. Paul Popenoe, director of the Institute of Family Relations in Los Angeles.

Too much emphasis is placed, he thinks, on divorce, which leads all other topics in the frequency with which it is discussed in marriage courses.

"Divorce," declares Dr. Popenoe, writing in the *Journal of Social Hygiene*, "is not an evil; it is merely the symptom of the real evil, which is unhappy marriage."

Altogether too much time is devoted to philosophizing and reviewing the institution of marriage as it existed in earlier times and remote places. Eugenic aspects of marriage are discussed, and legal aspects and religion in the home.

Contrast such generalized topics with the practical questions asked by boys in Haverford College for Frank D. Watson



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to indicate what they wanted from such a course. They concern:

1. The problems that parenthood brings. (Probably, it is suggested, these boys are aware of difficulties in their relations to their own parents.)
2. The problems that sex presents before marriage becomes economically possible.
3. The wise choice of a mate.
4. The husband-wife relationship and the individual adjustment necessary in

marriage if it is to be a happy one.

5. The problem of family limitation or birth control.

6. The problem of the break-down of family life and divorce.

7. Possible variations in the form of marriage, such as the companionate marriage. The latter topic, of lively interest among high school students, has only minor concern for the more practical college boys.

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### PUBLIC HEALTH

## No Typhoid List Topped By Bridgeport, Conn.

NEW low records for deaths from typhoid fever in the large cities of the United States are reported by the American Medical Association for the year 1938.

The *Journal of the A. M. A.* (May 13) publishes its honor roll of cities with no typhoid deaths.

First place on the list goes to Bridgeport, Conn., with no fatality from typhoid fever in five years.

Fort Wayne, Ind., is runner-up, with no typhoid deaths for four years.

South Bend, Ind., and Utica, N. Y., have had none in three years.

Canton, Ohio; Fall River and Lynn, Mass.; Milwaukee, Wis.; New Bedford, Conn.; Reading, Pa.; Seattle and Tacoma, Wash., and Wichita, Kan., have had no deaths from the disease in two years.

Other honor roll cities with no typhoid deaths in 1938 are: Buffalo, N. Y.; Cambridge and Lowell, Mass.; Elizabeth, N. J.; Erie and Scranton, Pa.; Grand Rapids, Mich.; Kansas City, Kan.; Minneapolis, Minn.; Omaha, Neb.; Peoria, Ill.; Portland, Ore.; Providence, R. I.; Salt Lake City, Utah; San Diego, Calif., and Youngstown, Ohio.

Seven other cities are placed in first rank rather than on the honor roll because they have been charged with deaths among non-residents. These are: Toledo, Ohio; Hartford, Conn.; Syracuse, N. Y.; Worcester, Mass.; Springfield, Mass.; Evansville, Ind., and Camden, N. J.

No outbreak of epidemic proportions was recorded during 1938. Routine vaccination of the population is not practiced except under flood conditions. However, in progressive communities vaccinations are urged for contacts to cases

and for persons who travel widely in insanitary countries.

In this annual survey, the A. M. A. notes a trend in some places, particularly in the southern states, to encourage the inoculation of food handlers.

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### BOTANY

## Iodine Is Apparently Necessary For Plants

IODINE may prove to be as necessary for plant health and growth as it is for that of humans, Prof. W. L. Powers of Oregon State College suggests, (*Science*, May 12) in the preliminary report of ten years of experiments with plant species ranging all the way from spinach to bacteria.

The plants were grown in soil-less cultures, with nutrient solutions constantly flowing around their roots. The amounts of iodine found necessary were very minute: one part of iodine in from two to four million parts of water was sufficient.

Iodine seems to be in some way necessary for chlorophyll formation, and reaches particularly high concentration in spinach and head lettuce. Yet lower plants without chlorophyll, including yeasts and the nitrogen-fixing root-nodule bacteria, also thrive better on iodine-containing media.

Prof. Powers points out that one of the values in using seaweed as a fertilizer, a common practice along all sea-coasts, may be in the iodine thereby added to the soil. He suggests also that putting potassium iodide into irrigation water may eventually become standard horticultural procedure.

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