

an agreement recently made.

From now on you will say that a military plane has a speed of so many knots. You will never say that it has a speed of so many knots an hour, because "knot" includes the "per hour." One knot is a speed of a nautical mile in one hour. And a nautical mile, the mariner's mile, is about 800 feet greater than the ordinary mile.

The nautical mile is supposed to be one-sixtieth of a degree of the earth's equator. American and English seamen call it 6,080 feet. In other countries it is slightly different, varying up to 8,087 feet.

The nautical mile is about 1.15 times as long as the familiar legal mile of

5,280 feet. Figures giving the speed of a plane in knots are therefore smaller than those giving it in ordinary miles.

When, for instance, the Army states in the future that one of its bombers is capable of 300 knots, it means, in the language to which we are accustomed, about 345 miles per hour. And the commercial transport that averages 300 miles an hour, in Army-Navy language does about 260 knots.

Air-minded people these days are looking forward to a plane that will travel at supersonic speeds; that is, speeds faster than sound travels. At sea level this is around 760 miles an hour. Supersonic speeds in "nautical" language will be those above 660 knots.

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#### MEDICINE

## Protecting Against Polio

► **LATEST ADVICE** to parents anxious to protect their children from infantile paralysis: Have all cavities in the children's teeth sealed off by the dentist, so that the polio virus cannot invade the child's body through the decay-exposed nerves in teeth.

This advice comes in "an urgent plea to parents, physicians and dentists" made by Dr. Hans H. Reese, professor of neurology at the University of Wisconsin, and Dr. John G. Frisch, practicing dentist of Madison, Wis.

These scientists urge that the cavities or decayed teeth be treated early in the summer, before the polio season starts, but even now with infantile paralysis on the increase in many states, it may not be too late to take advantage of this protective measure.

The plea of the Madison scientists is based on findings showing that: 1. the polio virus can invade the body through pulp, nerves and tiny tubes in the dentin of teeth exposed by decay or cavities; 2. exposed tooth pulps occur some two and one-half or more times as often in young polio patients as in persons the same age who have not had the disease; and 3. more polio occurs in communities where the water supply is low in fluorine than where it contains enough of this chemical to prevent tooth decay in those who drink it while their teeth are developing.

Details of the findings are reported in the scientific journal, *Dental Digest* (July).

The Madison scientists confirm the

findings of two other scientists who previously reported that polio occurred two and one-half or more times as often in young polio patients as non-polios of the same age in the same communities. These scientists, Drs. Myron S. Aisenberg and Thomas C. Grubb, of the University of Maryland School of Dentistry, also reported that monkeys developed infantile paralysis after the virus had been dropped into the exposed pulps of their teeth.

Exposed tooth pulp, resulting from decay, is only one invasion route for the polio virus, both groups of scientists point out.

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#### MEDICINE

## Seasickness Drug Overdose Fatal

► **THE FATAL** poisoning of a prisoner by a new seasickness drug taken while aboard a ship returning from England, has led the Army to warn against overdose with it.

This man and other prisoners dosed themselves with the drug for the "intoxicating" effect.

The drug, known as "Motion Sickness Preventive, Army Development Type," will soon be available to the public for air, train, sea, and car sickness.

As few as six tablets can poison a man, it appears from the report of Col. F. H. Foucar, Capt. B. S. Gordon and Capt. S. Kaye, in the *Journal of the American Medical Association* (July 20).

The patient who died is believed from post mortem tests to have taken at least 30 tablets, but another prisoner was admitted to the hospital appearing to be "intoxicated" after taking six tablets.

The new motion sickness preventive contains sodium amyral, atropine sulfate and scopolamine hydrobromide. The sodium amyral is believed to have caused death in the case of fatal overdose, though the medical officers point out that the question of a possible synergism between it and the belladonna alkaloids cannot be ruled out.

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#### CHEMISTRY

## Easily Made Metal-Protecting Coat Available

► **AMERICAN** manufacturers can now make use of a German method of making a temporary coating to protect metal parts during shipment. The formula is available from the U. S. Government.

It is largely a mixture of wool fat, chinawood oil, natural resin and white spirits. It is applied with an ordinary paint brush, dries rapidly, and can be removed by washing with gasoline.

German chemists claim that it is effective against rust, corrosion, and salt water, and that it will not melt in the direct rays of the hot sun. A report, made by the U. S. Naval Technical Mission in Europe, which gives directions for preparing the mixture, can be obtained from the Office of Technical Services, U. S. Department of Commerce.

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#### RADIO

## Science Club 10,000 Is CBS Radio Feature

► **THE 10,000th** science club of the nation to affiliate with Science Clubs of America, the Science Service organization, will be described in the "Adventures in Science" radio program over many of the stations of the Columbia Broadcasting System next Saturday, Aug. 17. The program honors the large growth of this science youth organization.

James F. Sears, sponsor of the Bloom Radio Club of Bloom Township High School, Chicago Heights, Ill., will be guest of Watson Davis, director of Science Service, on the program.

The program will be heard at 1:45 p.m. EST, 2:45 p.m. EDST, 12:45 p.m. CST.

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