



FLYING MATTRESS—The British have developed a plane with inflated wings that looks like a flying mattress. In a wooden body reminiscent of World War I models, the pilot sits beneath a single wing that is pumped full of compressed air with an automobile tire pump before take-off. The propeller is placed at the rear of the craft, which is known only as the M.L. Utility.

ANTHROPOLOGY

Indians Owned Trees

► **THE COFFEE** you sip with your breakfast can be considered responsible for the development of private land ownership among the people of Central America.

Private ownership of coffee plantations in its turn led to division into social classes.

The obscure links in this chain of events in the history of primitive peoples are traced by Dr. Rene F. Millon of Columbia University in *American Anthropologist* (Aug.).

Among the people of the Sierra Popoluca, in Mexico, it was customary for a man to own a tree long before land was privately owned. Ownership of the tree was recognized because it seemed obvious that the man who planted a tree was entitled to its fruit.

Private ownership of trees occurred among the primitive people in other parts of the world besides Middle America. The anthropologist, Dr. Melville J. Herskovits, reported the practice in East and West Africa, in India, in Melanesia, throughout Polynesia, and the southwest and northern areas of aboriginal North America.

Usually only trees that had to be planted and cared for by man were claimed for private ownership. Before the coming of the white man, however, the Ojibwa Indian would "stake out claims" to wild sugar maple trees, blazing to show the limits of his claim that comprised as many trees as he could care for and work for sugar. This is the only known case of private ownership of wild trees.

Coffee trees are not the only trees privately owned among the Popoluca, but the

other trees did not lead to land ownership. That is because only coffee trees are grown in concentrations in orchards or plantations, and because they require continuous care year after year.

Before the coming of the white man, cacao trees were widely cultivated in Middle America, as coffee trees are today. Active trade among the indigenous peoples was an important factor in development of cacao as a major crop. Cacao trees also were privately owned.

Cacao beans were used as money, and they were always counted out one by one to prevent the substitution of inferior or "counterfeit" kernels.

Counterfeiting was accomplished by removing the interior of a bean and substituting earth. When the cacao money changed hands, the seller tested individual beans, not by biting them as was done later with silver coins, but by pressing them between forefinger and thumb. If the bean was soft to touch, it was counterfeit.

A wide variety of things could be bought with cacao beans, Dr. Millon reports, from rabbits and slaves to the services of a prostitute.

The antiquity of cacao growing in Middle America is demonstrated by finding a growing cacao tree depicted on a mural at the Tepantitla Palace in Teotihuacan, a structure that probably existed a thousand years before the Conquest. Actual tree cultivation would have begun at some previous, undetermined time.

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DENTISTRY

Freeze Mouth to Kill Tooth Filling Pain

► **DENTISTS** in the future may be freezing your mouth before they fill cavities instead of giving a local anesthetic to kill the pain.

Good results with a refrigerating device for this purpose are announced by Dr. Robert J. Eustice of Biloxi, Miss., formerly on the staff of the U.S. Naval Dental School at Bethesda, Md.

With the device, a stream of air is directed at the mouth tissues. The machine gradually reduces the temperature of the stream from 98 degrees Fahrenheit to 33.8 degrees, thus anesthetizing the tissues.

Of 100 men and women who had the mouth freezing treatment at the Naval Dental School, 94 reported little or no discomfort from having cavities filled. The other six who reported pain had cavities mainly involving the so-called wisdom teeth. Dr. Eustice attributed the discomfort to the relative inaccessibility of these teeth.

The new freezing method is expected to be especially helpful to those who cannot tolerate the chemical in the usual local anesthetic and to those who, because of illness, cannot be given local anesthetics.

Dr. Eustice said the device was developed in France and its trial use at the school was made possible through the courtesy of a French dentist, Dr. Pierre D. Bernard of Paris.

Trials of the new device are announced in the *Journal of the American Dental Association* (Sept.).

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AGRICULTURE

Too Much Heat Robs Tomatoes of Red Color

► **EVEN TOMATOES** on the vine can get too much heat.

Temperatures above 86 degrees Fahrenheit break down the red pigment, lycopene, of tomatoes, robbing them of their ripe-red coloring, reports the New York State Agricultural Experiment Station, Geneva, N. Y. When this occurs continuously, the yellow pigment, carotene, takes over, turning the tomatoes an orange-red.

In spite of high daytime temperatures, red pigment will develop again at night if the temperature drops below 86 degrees, allowing the tomatoes in most areas eventually to develop the ripe-red color needed for grading as U. S. No. 1.

The third tomato pigment, green chlorophyll, holds sway with young tomatoes until a certain stage of maturity is reached, when the red and yellow take over. If the temperature remains below 50 degrees Fahrenheit, the chlorophyll will not change, and the tomatoes stay green no matter how ripe they are.

This is why tomatoes in cold storage do not change color.

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