strain placed on certain parts of the steel disks carrying the vanes or buckets by vibrational waves set up as an effect of rapid rotation. Just as a slow wind fans a flag into flapping waves, so the surface of rapidly rotating disk, even though made of steel, can be thrown into slight troughs and furrows, and when these travel around the disk at a speed too near the rate of rotation of the disk itself, they set up strains too great for the material to bear, and the break occurs. The experiments here point the way for the elimination of many present difficulties with turbines, for by finding the natural rate of wave-vibration in a disk, and then seeing that the rotation is enough slower to neutralize it, the accumulation of strains to a potential breaking point can be avoided.

FOOD PALM RECOMMENDED FOR AMERICAN TROPICS

What the date is to Arabia and Egypt and the coconut to the Pacific islands, the Pejibaye palm is to thousands of Central and South Americans. This Costa Rican fruit with the strange-sounding name is being put forward by the Office of Foreign Seed and Plant Introduction of the Department of Agriculture, as a new and distinct possibility in tropical agricultnre.

The fruit of the tree is borne in large clusters near the top. The individual fruits are somewhat topshaped, about the size of an apricot, and bright orange-yellow in color. Each has a single stony seed surrounded by a quantity of mealy pulp. This latter, when boiled, has the flavor and consistency of roasted chestnuts and is an excellent food. At the time of the Conquest, the Indians of Costa Rica subsisted almost exclusively upon pejibayes during a certain part of each year. The fruit has become very popular among Costa Ricans of European blood, and brings a high price in the markets.

Government scientists are recommending the use of this fruit in the West Indies, Hawaii, the Philippines, and other possessions of the United States, as well as in tropical lands of other nations.

A closely related species from the Amazon Valley is called the "peach palm", and this name might well be extended to apply as a common English title to the Costa Rican tree as well.

GAS MILEAGE WASTED BY BAD ADJUSTMENTS

The average motor vehicle wastes about 30 per cent. of the heat value of the fuel through improper carburetor adjustment.

Such is the conclusion reached by scientists of the United States Bureau of Mines as the result of a study of the efficient utilization of gasoline. The figures were obtained largely by measuring and analyzing the exhaust gases. The waste was found in the production of incomplete combustion products - carbon monoxide, hydrogen, and methane.

Loss of heat value, the Bureau officials point out, means also loss of mileage. By properly adjusting the carburetors for maximum power and efficiency a large part of this heat loss can be eliminated. The experiments were carried on with a number of different fuels.

Among the practical conclusions reached by the Bureau are:

1. Change the carburetors adjustment when shifting from low test to high test gasoline.

2. Set the carburetors at a leaner adjustment for benzol fuels than for ordinary gasoline.

3. Use a preheater only when necessary, that is, only with gasoline which will not give satisfactory operation without preheated air during cold weather or for the first half hour after the engine has been started and before it is thoroughly warmed.

FINE JEWELRY FOUND IN OLD SAXON GRAVES

New light has been thrown on that dark period of English history which intervened between the departure of the Romans and the introduction of Christianity by the excavation of a remarkable Anglo-Saxon cemetery at Bidford-on-Avon by a group of British archeologists.

The ancient graveyard, discovered almost in the center of the village, contained more than 150 bodies and more than 200 urns in which human ashes had been deposited. The burials are believed to have been made between 500 and 560 A.D., just at the period when Christianity made its first appearance on the island. A few of the graves, it is possible, were those of Christians since they bear no evidences of the pagan religious rites with which the Saxons laid away their dead. The majority, however, slightly antedated the Christian period.

The warriors were buried with their weapons and the women with their jewelry. Strings of beads, composed of amber, paste, rock crystal and glass of various tints with an occasional Roman coin, were found worn in a festoon across the breast, the ends being suspended from a pair of ornamental pins or hung from the shoulder brooches, and not completely encircling the neck, as does the modern necklace. Bronze and silver finger rings were found, formed of flat bands of metal tweisted into spirals. Among other jewelry was a beaver tooth mounted for use as a pendant, some finely cut and polished garnets delicately mounted in silver, ear-rings with two or three threaded beads, a neat cylindrical work box of bronze with a chain for attaching to the girdle, buckles of bronze and iron, bone combs, bronze-gilt wristlet clasps of various patterns, little sets of toilet implements on a ring, including bronze pins or toothpicks, ear picks and tweezers

Many brooches also were found in pairs, resting on the collar bones or breast many of them of great size and typical of pre-Christian Anglo-Saxon art. One fine specimen measures five and a quarter inches in length and is ornamented with a maze of intricate design. It is heavily plated with gold which was as bright when dug up as when it was buried 1400 years ago. Such jewelry as this, claims Frederick C. Wellstood, F.S.A., one of the excavators, must raise the historical estimate of pagan Anglo-Saxon culture.

A railroad train was bodily overturned by a windstorm in India a short time ago.
