FOOD TECHNOLOGY

Creamy-Like Fruit Ice Contains No Milk or Water

➤ THE LATEST thing in desserts is cold and creamy like ice cream but contains no milk or cream. It is a fruit ice without any water.

The new dessert, which can be made in your refrigerator tray or hand freezer, uses the puree of whole fruit instead of water or fruit juice. The puree is made by pressing the pulp through a screen to remove skin, seeds and fibrous parts. Other ingredients are sugar and gelatin.

Dr. J. C. Hening of the New York State Agricultural Experiment Station devised the new dish. He recommends 50% puree in the dessert and has used strawberries, raspberries, peaches and apples individually or in combinations with good results. Dr. Hening conducted food studies for the Army Quartermaster Corps during the war.

Science News Letter, June 7, 1947

HORTICULTURE

Tiny Green Beans Developed Can Be Cooked Whole

➤ GREEN BEANS that don't have to be cut or split when being prepared for canning or cooking have been originated at the New Hampshire Agricultural Experiment Station. They are so small that it is only necessary to snip off the stems and the tips.

The new variety, which has been given the appropriate name of Tiny Green, is a cross between Perfect Stringless, a variety from the Netherlands, and Refugee, an old standard American bean. It was developed by Dr. A. F. Yeager of the Station staff.

Science News Letter, June 7, 1947

CHEMISTRY

Carbon Tet Mixture Keeps Phosgene From Forming

➤ SAFER fire-killing fluid for the "squirt-gun" type of extinguisher has been developed by David A. McLean of the Bell Telephone Laboratories in New York. U. S. patent 2,421,035 has been granted on his invention.

Fire-smothering fluid generally used in this kind of extinguisher is carbon tetrachloride, familiar also as a household cleaning fluid. It is almost ideal for most types of fires, for it evaporates into a gas that displaces oxygen, without which fire cannot keep going.

However, when the fire takes place near metal, as in motor vehicle engine fires, an element of danger arises. On the hot metal surface, which apparently acts as a catalyst, part of the carbon tetrachloride combines with oxygen from the air, forming phosgene, which is one of the most poisonous of the military gases used in World War I. Fear of this danger prevents wider use of this otherwise excellent means of combating small fires, the inventor states.

Mr. McLean has found that phosgene formation can be suppressed by the addition of any of several substances to the carbon tetrachloride. Among these substances are the quinones, sulfur, maleic anhydride and the nitroaromatic compounds.

Science News Letter, June 7, 1947

CHEMISTRY

Two Useful Alcohols Made From Mash by Bacteria

➤ BUTYL and isopropyl alcohols, useful in many industrial applications, are produced from a starch- or sugar-containing mash by fermentation with a special strain of the bacterial genus Clostridium, in a process on which patent 2,420,998 was issued to S. C. Beesch and D. A. Legg of Philadelphia, assignors to Publicker Industries, Inc.

Science News Letter, June 7, 1947

PLANT PATHOLOGY

Tomato Blight Disease Didn't Get Early Start

➤ LATE BLIGHT disease of tomatoes, which spread disaster through thousands of fields in Eastern states last year, has thus far failed to develop to serious proportions this spring. The interstate reporting service on this plague, set up by the U. S. Department of Agriculture, has had relatively little to report.

Late blight did get a start early in the season in the farthest-south tomato-growing areas of Florida, Georgia and Alabama. Then, as the growing season moved northward, there were two or three weeks of warm, dry weather over the Carolinas and Virginia. The fungus that causes this disease thrives on warmth, but cannot stand dry weather.

Tomato-growers who have been standing by with fungicidal sprays and dusts have been told by the Weather Bureau that it will not be necessary, for the immediate future, to go into action.

Science News Letter, June 7, 1947

IN SCIENC

PALEONTOLOGY

Family of Ape-Men Found By Expedition in Africa

➤ THE NEWEST find of the South African ape-man seems to have been of a whole family, for remains of five, possibly six, individuals have been taken out of the stony floor of the cave at Sterkfontein, South Africa, Dr. Robert Broom of the Transvaal Museum has reported to the editor of *Nature* (May 17).

Prize find, of course, is the skull of a toothless, elderly female, lacking only the lower jawbone, which was laid bare by a small blast. Freeing the bones of the limy breccia in which they are embedded is proving a slow and difficult task, Dr. Broom states. Sufficient progress on the skull has been made, however, to enable him to make preliminary estimate of 500 cubic centimeters as its cranial capacity. This is about the size of the brains of some present-day large apes, but only a third or a fourth the capacity of modern human crania.

Says Dr. Broom: "I think there will be very general agreement that the being is not a chimpanzee or even closely allied to any of the living anthropoids, and that, though small, the skull has many resemblances to that of man."

Science News Letter, June 7, 1947

CHEMISTRY

Process Prevents Spoilage Of Seeds Stored in Bulk

➤ A NEW METHOD for preventing the spoilage of cottonseed, flaxseed and other seeds stored in bulk has been developed by four scientists of the Southern Regional Research Laboratory of the U. S. Department of Agriculture.

Seeds thus stored take in oxygen and give off carbon dioxide, heating up and becoming rancid in the process. The research quartet find that this process can be stopped by treating the seed with a number of compounds chemically related to the growth-control hormones. Most effective are diethyl oxalate and ethylene chlorohydrin.

The work was done by Marjorie Z. Condon, F. R. Andrews, Madeline G. Lambou and A. M. Altschul.

Science News Letter, June 7, 1947

E FIELDS

INVENTION

Easy-to-Use Microscope Has Adjusters at Base

➤ A MICROSCOPE that should be exceptionally convenient for students and research workers is the subject of patent 2,421,126, issued to Harvey N. Ott of Buffalo. The concentric knobs controlling both coarse and fine adjustment are situated at the bottom of the pillar, below the level of the stage, instead of near the top of the pillar as in present models. The new arrangement makes it possible for the user to adjust his instrument without raising his hands from the table, and also places the tube adjustments close to those of the substage condenser.

Science News Letter, June 7, 1947

RADIOPHOTOGRAPHY

Weather Maps of Pacific Sent by Radiophotography

➤ UP-TO-THE-MINUTE weather maps of the Pacific Ocean along the China-Hawaii-California route are now constantly available to the U. S. Navy. They are facsimile maps, transmitted by radiophotography.

The complete maps are made from sectional maps prepared by central Navy weather stations at Guam, Pearl Harbor and San Francisco, and by the Naval Air Station in Washington. These sectional maps are interchanged between the stations over the Navy's new radiophotographic network that ties in long-range transmission stations from Guam to Washington.

Thirty minutes after the maps are delivered for radio transmission, all receiving stations have map sections available for operational use. By putting them together they have a complete picture of the weather from Washington, D. C., to the China coast.

Facsimile transmission of maps, and of photographs or printed pages, is not new, but improved instruments and methods of the past few years have greatly extended the use of the process.

In it, the copy to be sent is placed on a revolving drum where it is rapidly scanned by a sharp beam of light that cuts across it in closely-spaced parallel lines. The reflected light, which varies in intensity with the light-to-dark spots on the copy, strikes a phototube and sets up electric signals that vary in harmony with the light variation. These signals may be transmitted by wire or radio waves. The receiving instrument follows in reverse the procedure of the transmitter. The copy is made on photographically sensitized paper.

Science News Letter, June 7, 1947

AERONAUTICS

Glass Fiber Makes Best Noise-Reducing Material

➤ GLASS FIBER insulation in aircraft passenger cabins, to decrease outside noises such as those from propellers and engines, is still considered the best neutral cabin treatment, the American Society of Mechanical Engineers was told by Kenneth R. Jackman, chief test engineer of Consolidated Vultee Aircraft Corporation.

Recent tests made with various materials led to this conclusion, he said. Fiber glass provided as light-weight and effective an acoustical and thermal insulating treatment as possible at the time the tests were made.

The noises in an airplane cabin to which passengers are subjected come from propellers, engine exhausts, engine vibrations, ventilation systems, and noise originating within the cabin and aerodynamic noises decreased by better streamlining. For years engineers have attempted to reduce noise at its source. However, the trend in aviation is toward more speed and more power, consequently more external noise at its source. Sound-proofing the cabins seems the best present solution.

Each noise contributor will stand a little investigation since the overall noise level can be reduced only by reduction in all the major noise components, Mr. Jackman stated. There is little to be gained by the installation of mufflers on engines until propeller noises, ordinarily greater than those from engines, are satisfactorily silenced.

Aerodynamic noises, now usually less than those from either propellers or engines, seem to become more important with high speeds. In an English investigation cited by the speaker, when the exhaust noise was reduced below that of the propellers by the use of silencers there was practically no difference in noise levels in level flight under power and in a glide at the same air speed with engines throttled.

Science News Letter, June 7, 1947

ORNITHOLOGY

Juncos Have Caste System Determined by Pecking

➤ IN STUDYING bird behavior, Cornell University ornithologists have discovered a distinct social or "peck" order among the juncos, a variety of small American finches.

The "peck" trait means that one bird can peck every other bird in the flock, a second can peck every bird but the first, and so on until there is one bird that can be pecked by all the rest, but is not allowed to return any of the pecks.

The studies showed that one bird by fighting could work its way up in the society and peck his superiors. The birds with colored feathers, banded for easier identification, showed as much dominance after being marked as before, according to the observations of M. J. Westfall.

Science News Letter, June 7, 1947

CHEMISTRY

Silicone Oil from Sand Makes Better Rubber Tires

➤BETTER TIRES are obtained when a silicone oil made from sand is used in their making, the American Chemical Society in Cleveland was told by Harry J. Collyer and Eli M. Dannenberg of Godfrey L. Cabot, Inc., Boston.

The silicone material is used as a softening oil. The rubber prepared with it defies heat, weather, chemicals and abrasion. In the manufacturing process it is extruded more rapidly and smoothly. Its improved performance is due to its inertness, the scientists said.

The silicones, war-developed synthetic resins made of sand and organic matter, include lubricating oils and greases. Some silicone fluids approach petroleum oils in ability to reduce wear, and silicone greases seem to be suitable for use in ball bearings under severe conditions where long service is essential. Several special uses for silicone oils have been found.

GR-S synthetic rubber, a type widely used for automobile tire treads, when loaded with silicone oil showed remarkable improvement in abrasion resistance, the scientists asserted. The oil can be mixed with the carbon black used to strengthen the rubber, or it can be added directly to the compound during processing.

Science News Letter, June 7, 1947