MEDICINE

Dozen Two-Headed Babies In Medical History

➤ MEDICAL history has recorded only about a dozen cases of babies born alive with two heads in the human family. Such anomalies are known technically as bi-cephalic monsters, and ancient legend relates stories of such cases.

Such strange births are probably the result of imperfect division of a single ovum or egg. Such accidents are supposedly related to the incidence of Siamese twins, though this theory is not completely established. Among cases recorded not one has ever lived more than a few hours.

The two-headed baby girl born in England recently lived only 50 hours. It is reported to have had two heads and two necks joined at a point on the shoulder. It had a single trunk. The two heads breathed independently and had differnet pulse rates, indicating the presence of two sets of lungs. Because the heads were fed separately, doctors believed it to possess two stomachs. One head was bigger than the other, and a little more active. Otherwise they were almost identical.

Science News Letter, January 19, 1946

MINERALOGY

Huge Vermiculite Deposit Discovered in Wyoming

➤ A HUGE DEPOSIT, amounting to several million tons, of a little-known but widely-used mineral ore, discovered near Encampment, Wyo., is now being mined and shipped. The ore is vermiculite, used in building insulation and as a replacement for sand in cement and plaster, and this deposit is thought to be the second largest yet opened in the United States.

Vermiculite is a non-metallic inorganic mineral with a more or less definite chemical composition that occurs in layers and somewhat resembles mica. It has a peculiar property of expansion upon heating, giving off water and spreading perpendicular to its layers, or plane of foliation, up to 16 times its first thickness. It then weighs only six to 10 pounds per cubic foot, and is said to be exfoliated. Exfoliation, carried out in a simple furnace, results in a material which contains millions of tiny air cells. This accounts for its insulation property.

The principal advantages of good vermiculite are that it is fireproof, insulating, vermin-proof and sound-deadening, and has long life. When used as a loose fill or as an aggregate with cement or plaster, it provides an excellent fireproof insulation for roof decks and refrigeration plants, and can be used around hot pipes and furnaces.

When used to replace sand in cement and plaster, it has the added value of lightness; the expanded vermiculite weighs about one-tenth as much as sand. Vermiculite is mined in Montana, Colorado and North Carolina, as well as in Wyoming. The giant Wyoming deposit is being mined by the Alexite Engineering Company of Colorado Springs.

Science News Letter, January 19, 1946

BACTERIOLOGY

92-Year-Old Canned Food Found in Good Condition

➤ CANNED FOOD, still good although almost 100 years old, was found in a cache on Dealey island in the Arctic ocean north of Canadian orthwest Territory. It was stored there in 1852 by Captain H. Kellett of the English ship "Resolute" during his search for the Northwest Passage.

Eight of the cans of food were sent to the laboratories of the Department of Agriculture at Ottawa for chemical and bacteriological tests. Some of them contained stewed ox-cheek which was still wholesome, as was shown by feeding it to laboratory animals.

Other tests showed that there had been no bacteria in the still-intact cans, and that no chemical preservatives such as borates or nitrates had been used in the food. A can labeled "carrots," on the other hand, was badly corroded and its contents were not recognizable.

The discovery, states a publication of the British Tin Research Institute, was made in 1944 by the crew of a Canadian ship, under the command of Sub-Inspector Larson of the Royal Canadian Mounted Police. They journeyed from Vancouver to Nova Scotia and back by way of Bering Strait and the Northwest Passage.

Members of the crew made many landings during the two long winters when ice-bound in Arctic waters. They traveled hundreds of miles over ice by dog sleds. It was on one of these exploratory trips they found the cache, with some of the canned food intact. It is unlikely, the Institute says, that the cans remained frozen during the short summer seasons, therefore they were subjected to repeated freezings and thawings and to rusting in the moist air.

Science News Letter, January 19, 1946

IN SCIEN

MEDICINE

Alkyl Sulfates May Be Stomach Ulcer Remedy

➤ ALKYL SULFATES, the chemicals used in so-called soapless soaps and shampoos, may provide a remedy for stomach ulcers, it appears from studies reported by Drs. Harry Shay, S. A. Komarov, H. Siplet and Samuel S. Fels, of the Medical Research Laboratory of the Samuel S. Fels Fund in Philadelphia. (*Science,* Jan. 11).

The alkyl sulfates, the Philadelphia scientists discovered, act on stomach tissue to cause it to secrete mucus. A constantly renewed layer of mucus, it is now believed, is the chief protection of the stomach lining against the destructive action of gastric juice and consequent ulcer formation.

Besides stimulating production of this protective mucus layer, the alkyl sulfates can inactivate pepsin under certain conditions. They thus seem to have two-way action as potential stomach ulcer remedies.

The effect on mucus secretion lasts for several hours, but depends apparently on the alkyl sulfate being in direct contact with the stomach tissue. The use of the chemical, therefore, will depend on working out methods of giving it which will allow effective action.

Science News Letter, January 19, 1946

FORESTRY

DDT Saves Largest Tree In Pacific Northwest

➤ DDT RECENTLY saved a giant fir in Clatsop County, Oregon, believed to be the biggest tree in the Pacific Northwest, from destruction by loopers, which are swarming caterpillars that constitute one of the worst of timber pests. The forest giant has a diameter of more than 15 feet and is claimed to be more than a thousand years old.

Rescue of the huge fir was an incident in a general campaign to stop the ravages of the looper in Oregon softwood forests. DDT seems to have scored an outstanding success in this fight. Counts of dead loopers ran as high as 480 on six square feet of ground beneath the trees.

Science News Letter, January 19, 1946

CE FIELDS

AERONAUTICS

Jet-Propelled Plane For Carrier Operation

➤A SPEEDY, fast-climbing, high-flying jet-propelled Navy fighting plane, designed for carrier operation, has been announced. It is the first Navy plane powered by jet engines and designed for use on carriers, and the first Navy fighter to attain a speed over 500 miles an hour. It will be known as the FD-1 Phantom.

Power for the Phantom is furnished by twin axial-flow Westinghouse turbo-jet engines built into the wing roots. The engines, which are of exclusive American design, contain no long scoops or ducts.

The plane is built of light aluminum alloy, polished to a glass-like finish, and presents only slight resistance to the air it passes through. It is a single-seat, low-wing monoplane with a wingspan of approximately 40 feet. Its wings fold electrically, and when stored the plane is but 16 feet wide.

The FD-1 has a service ceiling of well over seven miles, an extremely high rate of climb, and a range of approximately 1,000 miles. The plane has now been thoroughly flight-tested, and additional planes will be delivered soon. It was constructed by the McDonnell Aircraft Corporation of St. Louis.

Science News Letter, January 19, 1946

PHYSICS

Problems to Be Solved Before Atomic Application

➤BEFORE atomic power finds wide applications, there is much development work to be done and many problems to solve, declared Dr. John R. Dunning of Columbia University at the meeting of the Society of Automotive Engineers in Detroit. But he forecasted the industrial utilization of atomic fuels and energy as future supplementary sources of power.

"It seems unlikely that atomic power ever will really replace our common fuels in most applications," he said, but "the new fuel is likely to be a supplement to existing methods. The immediate applications seem to be in the premium fuel field, where the special advantages of atomic power outweigh cost."

Cheaper methods of producing U-235 are in sight, he continued, and fissionable materials other than plutonium, some yet to be discovered, may accommodate large-scale production. Uranium, he said, is as abundant as copper, although uncommon in high-grade ores. Industrial applications do not require highly concentrated U-235, he commented, and materials outside the highly explosive range will serve. Burning low-grade materials by conversion with U-235, he continued, offers a promise of reducing atomic energy costs below those of coal.

Science News Letter, January 19, 1946

CHEMISTRY

Something Really New Added to Smoking Tobacco

➤SOMETHING new really has been added to smoking tobacco—and smokers who have tried it have unanimously expressed a preference for it, even without the ritual of a blindfold test. For this simple addition of something that makes tobacco taste better when smoked, three chemists, Dr. C. F. Woodward, Dr. Abner Eisner and P. G. Haines, at the U. S. Department of Agriculture's regional laboratory at Philadelphia, have received U. S. patent 2,392,514.

Actually the "something new" has been in tobacco smoke all along, though it has never been found in tobacco itself. It is an alkaloid known as myosmine, which is said to be responsible for the pleasant aroma of cigar smoke, and which can now be produced synthetically.

The three chemists added microscopic quantities of myosmine to cigarettes, cigars and pipe tobacco, and then invited smokers to compare the treated smokes with similar ones that had no added myosmine. Without exception, the smokers liked the treated tobaccos better.

Rights for government use of this discovery have been assigned, royalty-free, to the Secretary of Agriculture.

Science News Letter, January 19, 1946

AGRICULTURE

High Buffalo Grass Sought By Agriculture Department

➤BUFFALO grass that bears its seed high enough to be harvested readily is being sought by plant breeders of the U. S. Department of Agriculture. Progress is being made, they report, in developing a free-seeding strain needed to reseed areas where buffalo grass is the best grazing plant for the beef animals that succeeded the buffalo herds.

Science News Letter, January 19, 1946

AERONAUTICS

Cornell University Gets Aeronautical Laboratories

➤THE AERONAUTICAL research laboratory and wind tunnel, in Buffalo, built and operated by the Curtiss-Wright Corporation, has been turned over to Cornell University and will be used for the training of graduate students, who will divide their time between the engineering school of the university proper and this laboratory. The Buffalo facilities will be supported by a number of leading Eastern aircraft manufacturers.

The laboratory, built in 1942, contains the most modern scientific equipment and testing devices known to areonautical research. It includes also well-equipped chemistry, physics, hydraulic and electrical laboratories, a model shop and a technical library. Its wind tunnel, however, is its most outstanding equipment.

In this wind tunnel scale airplane models can be tested in air velocities in the speed-of-sound range, under varying pressure conditions. Also there are miniature wind tunnels where air travels at supersonic speeds, and one of the world's largest altitude chambers, where conditions of pressure, temperature and humidity up to 80,000 feet can be reproduced.

Dr. C. C. Furnas, who has headed the laboratory since 1943, will remain to direct its activities for Cornell.

Science News Letter, January 19, 1946

CHEMISTRY

Rubber Industry Gets Research Laboratories

➤GROUND has been broken near Brecksville, Ohio, for new research laboratories for the B. F. Goodrich Company on a 260-acre tract of rolling land almost exactly halfway between Akron and Cleveland. Present plans call for five separate completely air-conditioned buildings made of gray brick. The ground-breaking was a part of the celebration observing the 75th anniversary of the founding of the company.

This building site was selected because of its freedom from dust, cross-country electric lines, vibration and noise. It will permit delicate operations that cannot be carried on close to industrial or manufacturing operations. The new plant will replace research laboratories in Akron, where the company's first laboratory was established in 1895.

Science News Letter, January 19, 1946