

## GENERAL SCIENCE

**Science Program Over CBS Nation-Wide Radio**

► "ADVENTURES in Science," a radio program over the Columbia Broadcasting Company's nation-wide network which in the past 13 years has presented over 700 leading scientists in person to the radio audience, is again on the air.

Each Saturday afternoon at 2:15 p.m. EWT, Watson Davis, director of Science Service, will conduct this program, bringing to the microphone guest speakers and presenting the current news of science.

*Science News Letter, June 10, 1944*

## MEDICINE

**War Blinded and Deafened Fewer Than Expected**

► REASSURANCE to those worried about the number of men who will be blinded and deafened in this war and how they will be cared for appears in a report by Brig. Gen. Charles C. Hillman, U. S. Army (*Journal, American Medical Association, June 3*).

"Untrue," he declares, are all of the rumors "that many thousands of cases of deafness among servicemen may be anticipated as a result of this war, that every combat aviator may expect to suffer serious impairment of hearing, that there are thousands of war blinded and that a gigantic breeding program for dogs to guide blinded soldiers will be necessary to meet the demand."

The number of blinded registered with the Office of the Surgeon General was 73 as of the first of March this year, he reports. In addition, two blinded prisoners of war were under treatment.

Deafness has increased over that in World War I. On Feb. 12, 1944, the statistical division of the Surgeon General's Office predicted that the discharge rate for men with defective hearing will be about 34 per 100,000 annually, compared with 20 per 100,000 annually in World War I.

"Not as many cases have developed as might have been expected from the increased hazards in this war due to blast and noise," Gen. Hillman comments. "Persons with impaired hearing have not been received for rehabilitation from the Army Air Forces in greater proportion than from other branches of the service to date."

Many hard of hearing cases can, after adequate medical treatment, be trained in speech and lip reading, equipped in

most cases with a hearing aid and returned to limited duty in the military service. The Army has designated three hospitals for special care of the deaf and two for special care of the blind.

Spiking further the rumors about a large breeding program for guide dogs, Gen. Hillman states that many blinded soldiers will develop the ability to get about with the minimum of assistance. Only about one-tenth of the blind can use dogs to advantage, experience has shown, and the Army Medical Department and the Veterans Administration believe that a veteran should secure a guide dog only when it is shown that this is the best solution to his problem.

Private guide dog agencies have agreed, he states, to provide dogs to blinded soldiers either gratis or at nominal cost. These agencies will be able to furnish all the dogs that are likely to be needed and government aid in supplying dogs will not be required.

*Science News Letter, June 10, 1944*

## INVENTION

**De Luxe Amphibian Car Has Retractable Wheels**

► A DE LUXE "duck" is the invention put forward by four Buffalo inventors, R. W. Hofheins, Carlos E. Harrington, C. D. Thomas, and Paul P. M. Dubosclard, for patent 2,350,037. Their amphibian car has a water-tight body, with propeller and rudder aft, for use on water, and has either two- or four-wheel drive when operating on land. A special feature is an arrangement for retracting the wheels when in the water, to give the hull a better "ship shape" and interpose less drag in navigating. The inventors have assigned rights to their patent to the Amphibian Car Corporation of Buffalo.

*Science News Letter, June 10, 1944*

## INVENTION

**Grain Cars May Have New "Roll-Top" Doors**

► FOR GETTING farm products to market, M. I. Beaudine of Abercrombie, N. Dak., has invented an improved grain car door, on which he has been granted patent 2,349,934. It is built on the general principle of the roll top of an old-fashioned office desk, and slides up under the car roof when it is opened. It may be opened and closed from the outside of the car.

*Science News Letter, June 10, 1944*

**IN SCIEN**

## PUBLIC HEALTH

**New Contagious Disease Discovered in Children**

► A NEW CONTAGIOUS disease with symptoms so mild the sickness may go unnoticed is reported by Dr. Carl H. Smith, of Cornell University Medical College and the New York Hospital (*Journal, American Medical Association, June 3*).

The chief feature of the disease is an increase in the lymphocytes, one of the kinds of white cells in the blood. Although the number of white cells may be increased almost ten-fold, the lymphocytes are not abnormal or atypical.

Fever and vomiting, pain in the back of the head and neck, or pain in the abdomen suggestive of appendicitis may occur in this new disease, but when they do, these symptoms last only a few days. In one case Dr. Smith reports, the child had fever, vomiting and abdominal pain, but a brother and sister had only symptoms of a mild cold.

Only since 1939 have cases of this disease, called acute infectious lymphocytosis, been reported. The cause has not been identified but is believed to be a virus. The disease apparently attacks young children chiefly and they all seem to recover.

*Science News Letter, June 10, 1944*

## ENGINEERING

**Separate Cylinder For Engine Compression Stroke**

► A RADICAL departure in internal combustion engine design is embodied in an invention by Henri L. Javal of Vichy, France. Compression of the fuel mixture in the cylinder, in the conventional four-cycle engine, is admittedly wasteful of power. M. Javal proposes to accomplish compression much more efficiently by providing each working cylinder with a separate compression cylinder alongside it, so geared and valved that the charge of compressed fuel mixture will be delivered for ignition at the right instant of the working stroke.

As is the case with all patents issued to citizens of enemy-dominated lands, this patent, No. 2,349,967, is vested in the Alien Property Custodian.

*Science News Letter, June 10, 1944*

# CE FIELDS

## ASTRONOMY

### Faint Comet Discovered In South Africa

► A COMET has been discovered by D. du Toit at Harvard Observatory's southern station at Bloemfontein, South Africa, according to a cablegram received from Dr. J. S. Paraskevopoulos, superintendent of the southern station. When discovered on May 16, the comet was of about the tenth magnitude and therefore much too faint to be seen without a telescope.

The comet was found near the southern constellation Pavo, the peacock. On May 25 its right ascension was 21 hours, 1 minute, and its declination 63 degrees, 44 minutes south. At that time its daily motion was 9 minutes east and 14 minutes south.

Mr. du Toit, young member of the Bloemfontein staff, is also credited with having discovered a comet in the summer of 1941. This comet, however, was independently spotted a few days later by Astronomer Neujmin at Simeis Observatory in the Soviet's Crimea.

*Science News Letter, June 10, 1944*

## CHEMISTRY

### Synthetic Alcohol Produced From Coal and Water

► SYNTHETIC production of alcohol, light fuel gases and formaldehyde out of water-gas produced from coal, wood or other source of carbon is claimed for apparatus devised by an Australian inventor, Paul Xavier Spillane of Ashfield, N.S.W., who has just been granted U. S. patent 2,349,915. Distinguishing his process from others undertaking the same end is the use of an ultra-high-frequency electrical field, of from 60,000 to 100,000 volts at between 6,000,000 and 37,000,000 cycles per second, in addition to the high temperatures and pressures customarily employed in organic syntheses in the presence of catalysts.

The carbonaceous raw material is first subjected to destructive distillation, and the gases driven off are burned to produce power in the plant. The hot carbonized residue is then treated with steam to produce the mixture of hydrogen and carbon monoxide known as water gas. Proportions of the two gases are adjusted

according to the product desired. Working pressures also vary, each product having its optimum. For methanol (wood alcohol) for example, the pressure is raised to as much as 250 atmospheres, or 3750 pounds per square inch.

*Science News Letter, June 10, 1944*

## ENGINEERING

### "Water Spider" Boat Has Legs, Propeller, Wings

► A WEIRD water craft, that looks like something that Orson Welles might have dreamed up but is claimed to be of real military value, is the offering of two Los Angeles inventors, V. B. Moore and S. P. Tsoneff, assignors to the American Marine Engineering Corporation. The patent number is 2,347,985. It seems to have received its inspiration from those odd, long-legged predatory insects that skim about on most quiet water surfaces, known as water-striders.

The water spider has a body (hull or fuselage, as you may prefer) with an airplane propeller and stubby wings. The latter are not intended to lift it into flight, but only to balance it. It stands, with hinged and braced legs, on four small hulls that rest on the water surface. The idea appears to be for the strange craft to skim the surface at high speed, while its operators, well above spray and local wave disturbances, can carry out their military mission.

*Science News Letter, June 10, 1944*

## INVENTION

### Process Dehydrates Kelp For Use as Cattle Feed

► IN THIS WAR as in World War I, the giant kelps or seaweeds of the Pacific coast are attracting considerable attention. One use to which they are being put is in cattle feed, to which they contribute valuable minerals, iodine and certain vitamins. Dried in the sun on the beach like hay in the hayfield, however, they lose much of their vitamin content.

For this reason four California inventors, D. E. Clark, L. D. Pratt and S. A. Coleman of San Diego and H. C. Green of El Cajon, have invented a two-stage kelp drier, on which they have received patent 2,350,209. In the first stage, the chopped kelp, still exceedingly wet and pulpy, is put through a rotary drier. From this it is discharged onto a conveyor through which a current of hot air is blown, completing the drying process.

*Science News Letter, June 10, 1944*

## ENGINEERING

### New Quick-Assembly Bridge Now in Use Under Fire

► THE BAILEY bridge, most successful quick-assembly spanning bridge now in use under fire, will speed the movement of United States and British Armies into Europe.

Already in use on the Fifth and Eighth Army fronts in Italy, the Bailey bridge is now standard U. S. Army equipment.

The bridge is made up of a series of prefabricated metal panels, which can be put together very rapidly and flung over a river or chasm to support the heaviest artillery, armor, and transport.

Further details of the bridge, especially those regarding its fast assembly, are still secret.

Named after its inventor, Donald C. Bailey, British civil engineer and adviser to the Royal Engineers, the bridge has been described by Gen. Bernard Montgomery at "the best thing in that line we have ever had. It will be needed wherever we operate in Europe."

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## MEDICINE

### Malnutrition May Cause Pain After Tooth Pulling

► PAIN and the dry socket condition that plague patients and dentists after a tooth has been pulled are often due to the patient's being undernourished and below par physically, Dr. Vernor H. Eman, dental surgeon of Grand Rapids, Mich., reports in the Journal of Oral Surgery, published by the American Dental Association.

"The majority of patients for extraction are taken, we might say, literally 'off the street,'" Dr. Eman states. "They come in because they have a toothache or because, for some reason or other, and possibly without the advice of a physician, they have decided that certain teeth should be removed. A satisfactory and complete evaluation of the patient's physical condition is, under such circumstances, hardly possible.

"An undernourished patient is a poor risk for any operation, and that applies quite as definitely to minor as to major surgery. Undernourishment may be present, of course, for reasons other than deficiencies of diet, but the most impressive of all cases have been the dietary deficiency cases."

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