PHYSICS

French Make New Storage Battery Using Iodine

IODINE, the same chemical element that is used as an antiseptic for cuts, is the active material in a storage battery of new type invented by Francois Boissier and announced to the French Academy of Sciences.

The storage battery looks like an ordinary dry cell, with a rod electrode of carbon in the center surrounded by an absorbent material saturated with zinc iodine, contained in an electrode shell of metallic zinc. When the battery is charged the zinc iodine breaks down into metallic zinc, which is deposited on the zinc sheeting, and iodine, which accumulates on the carbon electrode and in the absorbing material which may be an absorbent carbon powder. The zinc iodine is re-formed during the discharge of electricity.

M. Boissier claims that the iodine storage battery is superior to the conventional storage batteries of the lead or nickel-iron varieties. The plates do not disintegrate, there is no acid or caustic liquid to spill, no dangerous gases or vapors are given off, and continual maintenance is not necessary. The iodine battery is very rugged and easily transported. A disadvantage is high internal resistance, but high output is obtained by making the batteries long and of small diameter and placing them in parallel.

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ANTHROPOLOGY

Fingerprints May Protect In Kidnapings

BECAUSE of their usefulness in identifying criminals, fingerprints are not considered exactly respectable. Nevertheless fingerprints are being used more frequently as a sort of personal seal, more individual than the signet rings that kings used in ancient times. Clever penmen can forge signatures but skin patterns are peculiarly one's own.

In these days when kidnapings are frequent and accidents happen, a fingerprint record stored away in a safe deposit box or given to a friend may prove its usefulness. Such a record is good insurance. Many hospitals take the footprints of new-born babies to guard against baby mix-ups. All new U. S. civil service employees have their fingerprints recorded as a matter of routine.

In the great collection of fingerprints in the federal Department of Justice's division of identification, now numbering nearly three million and increasing at the rate of 1,200 daily, any print having a mate on file can be matched in a few hours. The efficient working of this national bureau would amaze even Sir Francis Galton who forty years ago classified and proved the usefulness of fingerprints.

If you wish to fingerprint yourself, just hold the finger to be printed in your other hand and roll it firmly once from side to side on a clean rubber stamp ink pad and again on a sheet of clean white paper on which you wish the print recorded.

A single clear print made in this way will enable any expert to identify you, though of course it is preferable to make, label and sign prints of all fingers. A date is unnecessary, for your fingerprints remain the same from your birth until even after your death.

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CONSERVATION

Tax For Game Refuges Unlikely This Session

A FEDERAL tax of one dollar to be paid by all hunters of migratory birds will not become an actuality this year, and will be bitterly fought in the next congressional session.

This became apparent today when the bill providing for such a tax, reported out favorably by the Senate Committee on Conservation of Wild Life Resources, was attacked in the Senate by Senator C. C. Dill of Washington, when it came up on the calendar.

The Senate Committee on the Conservation of Wild Life Resources, in reporting the bill favorably, stated that hearings had shown that there is a shortage of wild fowl in certain but not all sections of the country. Purchase of sanctuaries was seen as the only method by which the choicest of birds could be kept in existence. In order to raise money for purchasing sanctuaries and extending Federal enforcement over the hunting of migratory birds, the committee said, the only practical method was to tax the persons who did the shooting.

The penny-a-shell tax met too many objections to be reported favorably by the committee, it was asserted.

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IN SCIENCE

PUBLIC HEALTH

States Reach Standards In Health Reporting Service

MAINE and Montana have been added to the list of states which have attained the standards for accurate reporting of communicable diseases set by the U. S. Public Health Service. The states reaching this standard now number twenty-six.

The U. S. Public Health Service has computed the number of cases of a disease which occur, on the average, for every death from that disease. States which report this average number or more, for every death from the disease in the state, are considered as having reached the standard in reporting.

Eleven cases of diphtheria, for example, occur for every diphtheria death, on the average. If there are five deaths from diphtheria reported in Maine for one month there should be 55 cases reported, the public health officials have figured. They have computed ratios also for measles, scarlet fever, typhoid fever and whooping cough.

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ZOOLOGY

Muddy Mississippi Yields Pearls That Rival Orient's

See Front Cover

PEARLS we usually picture as coming up from limpid greenish tropical sea depths, in the fingers (or perhaps the mouth) of a swimming brown-skinned native. It seems a bit of a comedown to think of pearls coming out of the prosaic waters of the muddy Mississippi—and as a mere adjunct of the button industry, at that.

Yet so it is. The $3,000 handful of pearls photographed for the cover of this issue of the SCIENCE NEWS LETTER by Cornelia Clarke were taken out of river mussel shells somewhere near Muscatine, Iowa. Every mussel fisherman spends his time hoping that the next pair of shells he pries apart will yield not only their quota of button blanks, but a pearl that will drop a month's pay in his lap in a minute.

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FIELDS

ENGINEERING

Oil Yields Predicted From Pressures at Well Bottoms

OIL men are dropping gages down their wells to measure accurately pressure several thousand feet below the surface of the earth. This rapidly spreading practice, described before the American Petroleum Institute by H. D. Wilde, Jr., of Houston, Texas, enables them more economically to get oil from the well and to conserve it better.

Pressure at the top of a well cannot be taken as an accurate indication of pressure at the bottom, Mr. Wilde said. So the deep measurements are made. From a record of the decline of these pressures an engineer can predict when the field will change from flowing to pumping and how much oil it will ultimately produce, he declared.

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SEISMOLOGY

California Earthquake Center Located off Coast

THE EARTHQUAKE that destroyed part of the city of Eureka, Calif., on Monday, June 6, was the most severe felt on the Pacific Coast since the Santa Barbara quake of 1925, U. S. Coast and Geodetic Survey scientists stated after examination of data from eleven seismological observatories in the United States and Canada. However, neither Eureka nor any of the other towns that were shaken stood directly over the point of greatest earth movement, for the quake's epicenter was located at sea, a short distance off the mouth of the Klamath river. It was in latitude 42 degrees north, longitude 124 degrees west.

In the excitement over the California earthquake, a second shake, which also occurred at sea, off Santiago de Cuba, was overlooked by everyone but the scientists. They traced the epicenter of this second earthquake to latitude 18.5 degrees north, longitude 76 degrees west. Its time of origin was 6:50 a. m., eastern standard time.

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ARCHAEOLOGY

To Explore Ruins of One of Oldest Pueblos

RUINS of a very ancient Indian settlement near Allentown, Ariz., called one of the most remarkable archaeological sites in America, are to be excavated this summer by an expedition from the Bureau of American Ethnology. Dr. Frank H. H. Roberts, of the Bureau, is in charge of the work.

Dr. Roberts, who explored the site last season, declared that from three to five seasons of work would be necessary to restore the ancient site to something like its original condition. The settlement is of special importance scientifically because it was inhabited not only by Pueblos of the Southwest, but also by some of the Basket Makers, who preceded the Pueblos. This gives the village a history which began in a very early century of the Christian era and continued into the Golden Age of the Pueblos, which occurred about 900 to 1200 A. D.

"Complete excavation of the site," Dr. Roberts explained, "will throw light on the closing days of the Basket Makers, show the beginnings of Pueblo culture, and trace its growth through two subsequent periods. For some reason, as yet unrevealed, the place was abandoned during the third Pueblo period and never reoccupied."

Dr. Roberts has already found the pit houses, set mostly underground, built by the early inhabitants. This summer he plans to make progress in excavating the larger buildings which were constructed by the later Pueblo inhabitants.

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PUBLIC HEALTH

Washington's Bonus "Army" Called Epidemic Menace

DANGER of epidemics breaking out in the camp of the "bonus army" in Washington, D. C., and spreading across the country in the wake of the men when they return to their homes was pointed out to state health officers throughout the nation in a special message from Surgeon-General Hugh S. Cumming of the U. S. Public Health Service.

After a personal visit to the camp, Surgeon-General Cumming declared that the camp facilities are "entirely inadequate and dangerous." He urged the state health officers as a public health protective measure to use their utmost influence and power to prevent any more men from marching to Washington to join those already camped on the outskirts of the city.

"The assembling of the so-called bonus army in Washington presents a serious problem in the interstate spread of disease," his message read.

The gathering of these men here represents a menace to the public health and a consequent danger to the people of the states when they return.

"For the protection of the public health everything should be done to discourage the departure from your state of groups of marchers for Washington," he concluded.

When such large groups of men are assembled without adequate sanitary facilities and health inspection or medical care the appearance of one or two cases of a contagious disease, whether it be a cold or smallpox or typhoid fever, is most apt to result in a wide and rapid spread until epidemic proportions are reached. The public health officials are now concerned with guarding against such an occurrence and with protecting the rest of the population if epidemics do arise in this camp.

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ENTOMOLOGY

Longer Lives Sought For Mexican Jumping Beans

THE MEXICAN Ministry of Agriculture is trying to make the national jumping bean jump longer. The demand for jumping beans has grown in leaps and bounds since the world depression, the greatest market being Europe.

But the merchants of this product say that when their beans arrive in Europe, they have almost finished jumping. So they have asked their government to help, and make the beans last longer. Dr. Alfons Dampf, director of scientific research of the Mexican Ministry of Agriculture, thinks this can be done by selection and propagation of longer-jumping varieties.

The jumping bean is not a bean, but the fruit of a euphorbia native both in southern desert United States and Mexico. The larva of a tiny moth enters the seed and makes it jump. It eats the contents, and the contortions of the fattened larva cause the movements of the hollow shell. The moths come out in spring and fall, and then the "bean" is dead.

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