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THE AGRICULTURAL APPROPRIATION BILL AND REPRESENTATIVE LAGUARDIA

REPRESENTATIVE Fiorello LaGuardia, Republican lame-duck from New York, has just emerged as one of the most fiery and eloquent defenders of scientific research, in the lower House.

During the debate on the Agricultural Appropriation bill, Representatives Allgood of Alabama, Summers of Washington, Snell of New York, Tabor of Ohio, McGugin of Kansas and others sought to pare or eliminate altogether item after item which would have dealt the scientific work of the department several severe blows.

Due to the masterly defense of Representative LaGuardia and others who joined him in his work, the majority of these amendments to the bill were defeated on the floor.

"Science knows no politics," declaimed the brilliant Italian-American from New York City. "Are we, in the frenzy of economy, brought about by those who control the wealth of this country, seeking to put a barrier on science and research? . . . Science will go on when existing political parties will long have been forgotten."

At another point in the discussions when it seemed that the appropriation for dry land agricultural stations was in danger, Representative LaGuardia defended the past accomplishments of this branch of the Bureau of Plant Industry, and said: "The most humble research scientist in the Department of Agriculture is at this time contributing more to his country than the most useful Member of Congress. The most humble engineer in the General Electric Laboratory or the Radio Corporation of America laboratory is more useful to humanity than the most brilliant orator of this House. The trouble is that the legislative branch of the government has not kept abreast with science. Government has lagged, science has advanced. We have permitted an unbalanced system of distribution to continue while science has increased production. We are living in the paradoxical state where there is great overproduction, on the one hand, and want and misery, on the other. This is not the fault of science. This is the fault of government."

Among the amendments offered by congressmen who saw in the scientific items a place to save money, were:

An attempt to reduce the item for cereal crops and diseases from $488,200 to $465,915; cotton production and diseases from $200,000 to $100,000; foreign plant introduction from $163,574 to $50,000; elimination of the entire amount of $209,955 for forest pathology; genetics and biophysics from $33,617 to $20,000; entire amount for rubber, fiber and other tropical plants, $69,474, because, said Representative Allgood, "This is a subsidy to Ford and other rubber manufacturers"; entire amount of $130,000 for western irrigation agriculture; general administrative expenses in Forestry Service, from $327,819 to $250,000. All these were voted down by the House.

An amendment offered by Representative Summers, of Washington, reducing the $215,000 in the bill for forage crops and diseases to $201,014 was accepted by the House, Summers explaining that the reduction would be applied to work on the corn borer, which he termed the "bogy-man of agriculture."

Other amendments offered and rejected were one to cut Bureau of Chemistry and Soils' Washington appropriation from $1,095,695 to $750,000 (by Allgood, Democrat, of Alabama); another to cut federal highway aid to states from $35,000,000 to $10,000,000.

An amendment accepted by the House was offered by Representative Summers, of Washington, eliminating an item of $25,000 for the development of mechanical equipment for corn borer control by the Bureau of Agricultural Engineering.

Barring slight alterations, however, the bill passed the House, substantially as reported out from the House Appropriations Committee.

SUPPORT OF COLLEGES URGED AT NATIONAL CONFERENCE

BECAUSE of the value of the scientific research being conducted in institutions of higher learning and because of the training they afford for modern complex life, the support of colleges and universities was strongly urged by a special committee of the Citizens Conference on the Crisis in Education, meeting in Washington.

From these institutions has come a large proportion of the trained personnel of the established professions and the leadership of our complex industrial and social life, the report pointed out.

Furthermore the results of the scientific research carried on by such institutions have been of well-nigh incalculable worth to the economic life of the nation. When viewed from these two standpoints alone the general scheme of higher education of the country must be regarded as a principal, productive asset, the conservation and further development of which are matters of permanent concern for the states and for the nation.

No reduction of the extent to which the youth of the nation is given education at public expense was recommended by this committee.

The effective, economical and non-political operation and adaptation of the plan of popular education, at all levels, from the elementary schools through the universities, are fundamental obligations of the American state.

During a period of economic stress such as that now existing, there is imposed upon all of those in positions of responsibility, whether in government, industry or cultural activity, a clear responsibility of affirming the inherent basis of our American plan and of promoting confidence among the people in their educational institutions.

With the rapid changes occurring throughout the world and especially in our own country, we face problems vastly more numerous and more difficult and more immediate than those we have faced in the past. There will consequently rest upon the publicly supported higher institutions a greatly increased responsibility for research and guidance. Adult education in particular should open opportunities for preparation for a new civic era. It is imperative that nothing should be done now to impair the service of our higher institutions in this field of all important democratic education.

THE VIENNA MEDICAL FACULTY ON YEAST TESTIMONIALS

MEMBERS of the Vienna medical faculty who have given medical testimonials in favor of yeast have been "officially sharply reproved by the dean," that official, Professor Dr. Ernst Pick, has just informed the American Medical Association. All members of the faculty were forbidden to give any testimonials intended for advertising purposes in the future.

The statement to the American Medical Association was signed by both Professor Dr. Pick, dean of the medical faculty and director of the pharmacological department, and by Professor Dr. Roland Grassberger, formerly dean of the medical faculty and director of the hygienic department.

An investigation by the faculty showed that not a single member of the Board of Professors (heads of departments) of the medical faculty is involved in the yeast testimonials, and that the only ones concerned were seven privat-docents not included on the board, not one of whom has the official position of teacher or is in charge of a department.

Privat-docents, according to the statutes of the universities of Austria, explains the American Medical Association, are not appointed by the state but merely permitted by the state to teach.

The Vienna medical faculty statement contended that the testimonials favoring yeast were "spread and misused for advertising in American illustrated and other magazines in quack-fashion."

The medical faculty is concerned lest through the impropriety of these advertisements the reputation and esteem of the Vienna Medical School be seriously affected among the medical profession and people in America, and requested the American Medical Association to spread the explanation of the situation among its members and also publicly.

DEFICIENT DIET AND MENTAL EFFICIENCY

THE fear that a diet deficient in essentials might have an immediate effect on ability to do mental work may be groundless, if results of an experiment with rats apply to human beings.

The ability of white rats, 90 to 100 days old, to do the mental task of threading a maze, when they were suffering the effects of faulty diet, was tested by Dr. Martin F. Fritz, of the Iowa State College.

The 148 animals were divided into three groups, only one of which had a normal diet of bread and milk. One group received a diet containing too much iron salt and iodine and too little chlorine. The diet of the third group was also deficient in vitamin B.

The animals having the faulty diets took somewhat longer to find their way through the maze, but there was very little difference between the groups in number of errors. Even those animals who died during the experiment showed no significant differences from others in the same group.

Dr. Fritz makes three suggestions as possible explanation of this preservation of mental ability in the face of physiological breakdown. Storage, he said, may be an important factor. Since the rats were 90 days old, they had had opportunity to store vitamin B in the liver.

There is also the possibility that in mature rats the nervous system is afforded a certain amount of protection so that a breakdown in other parts of the physiological organism resulting in death will occur before there are marked effects upon the nervous system, he said, and cited an experiment which showed that the muscles of a starved cat had lost 30 per cent. while heart, brain and cord lost only 3 per cent.

Finally, it may be that even though the nervous system is subject to degeneration, only a part of the fibers are necessary to carry on the task.

THE WORLD'S LARGEST SHIP

WHEN the *Normandie* puts to sea, the French merchant marine will more than recapture its position lost by the tragic burning of the *Atlantique*, the world's twelfth largest steamship.

The *Normandie* is the largest vessel in the world, clearly exceeding the *Leviathan* and the *Majestic* in both tonnage and length. She was launched during the past fall at St. Nazaire to be put in transatlantic service in 1934.

France now has only one vessel larger than the *Atlantique*, that is, the *Ile de France* of 43,153 registered tons, the tenth largest steamship, according to Lloyds. It is exceeded in both tonnage and length by the *Leviathan*, U. S.; *Majestic* and *Berengaria*, British; *Bremen* and *Europa*, German; *Olympia* and *Aquitania*, British, and *Rex* and *Conte di Savoia*, Italian.

The *Normandie* has an overall length of 1,027 feet, 963 feet between perpendiculars, and will be rated at approximately 75,000 gross tons. The *Leviathan's* registered tonnage is approximately 60,000, more than the *Majestic's* 56,000, but her length between perpendiculars is only 907 feet 6 inches compared with 915 feet 5 inches for the *Majestic*.

The *Normandie's* breadth of 119 feet 6 inches accounts chiefly for her greater tonnage. The vessel is a little more than 19 feet wider than either the *Leviathan* or the *Majestic*.

In addition to excessive size, the *Normandie* will contain the largest electric motors ever built. Rated at 40,000 horsepower each, the new motors will give the vessel a total horsepower of 160,000; but even then she

will not be the most powerful ship. The U. S. S. airplane carriers *Saratoga* and *Lexington* bear this title with 180,000 horsepower plants in each. Each contains eight motors rated at 22,500 horsepower, connected in pairs to four propelling shafts.

The *Normandie's* claim to fame would probably not be so clear-cut had work on the new British Cunard liner, *R–534*, continued. But, because of economic conditions, construction was suspended almost a year ago on this vessel which, it was announced, would be rated at 73,000 tons and would have a length of 1,018 feet.

The *Normandie's* hull is divided into 12 water-tight compartments. There are eleven decks, five of which are continuous from stem to stern. Accommodation will be provided for 930 first-class, 680 tourist and 560 third-class passengers, which, with 1,320 officers and men, will allow the ship to carry 3,490 persons.

The turbo-electric machinery has been designed for a service speed of 30 knots to enable the vessel to cross the Atlantic from Havre to New York by way of Plymouth, under all conditions, in less than five days.

ITEMS

COSMIC rays raining on the meeting of the American Physical Society at Atlantic City were seen as flashes of light on a novel electric sign arrangement devised by Dr. Thomas H. Johnson, of the Franklin Institute. To sensitive cells which were discharged electrically whenever they are hit by an incoming electric ray, Dr. Johnson connected neon flash lamps in such a manner that they were lighted whenever a cosmic ray hit. The "hodoscope," as he called the new detector after the Greek for "way" and "aim," had a panel of 58 lamps and the direction from which the rays came was shown by the streaks of light upon it.

FOR the first time, evidence on the possible shape of the active particles in the filtrable viruses that cause such diseases as smallpox, yellow fever, hog cholera and plant mosaics was placed before a scientific body, when Drs. William N. Takahashi and T. E. Rawlins, of the University of California, presented their report to botanists attending the meeting of the American Association for the Advancement of Science. If the invisible, filter-passing particles in these viruses have the shape of tiny rods they should present a bright appearance if light waves arranged all in one direction fall on them at the proper angle. Accordingly, a beam of polarized light, in which all wave-fronts are parallel, was directed on a solution of a virus flowing from a small tube. The solution did present a bright appearance, confirming the hypothesis.

COMPLETE success in protecting dogs and other animals against distemper is claimed in the final report of "The Field" Distemper Council, of which the Duke of Portland is president, as the result of ten years' research and subsequent enterprise of commercial laboratories. A virus, a vaccine and an anti-serum have been produced, and a healthy dog can be given lasting protection against distemper infection by the inoculation of vaccine followed a fortnight later by one of virus. If the anti-serum, used alone, is given sufficiently early in the disease, it will lessen the severity of an attack of distemper. A survey of the results with the vaccine-virus method showed that, where exposure to infection was certain, the incidence of distemper among 650 foxhounds belonging to 23 hunting packs was only 1.4 per cent., and the deathrate 0.3 per cent. Without inoculation the incidence among young foxhounds is nearly 100 per cent., and the deathrate frequently 50, and sometimes more than 75 per cent.

AN epidemic of plague may break ont in London sooner or later if present conditions continue. This suggestion was made by one of England's eminent professors of medicine, Dr. W. Langdon Brown, Regius professor of physic at Cambridge University. The plague-carrying flea lives on rats, but black or dark rats are a worse plague menace than brown ones. In Britain black rats are gradually increasing. If they are allowed to continue to multiply a plague epidemic in London is likely to follow. In big cities such epidemics tend to break out as soon as carriers of the germ become sufficiently numerous. London's freedom from plague epidemics since the "Great Plague" of 1664–5 has been due to the dominance of the brown rat, which came to England on ships, bred very rapidly and almost exterminated its natural enemy, the black rat. During recent years, however, there have been so many campaigns against rats in general that millions of the brown rats have been destroyed. The race of black rats has thus been able to make headway.

WHATEVER may be the cause of common colds, bad weather brings on epidemics of them, scientific studies have shown. "Keeping dry is an elementary precaution in avoiding colds," the Metropolitan Life Insurance Company advises. Officers of the company offer the following explanation of how chilling of the body from clothing that has become wet during stormy weather may induce a cold: "A child who goes out in a storm without proper protection collects a certain amount of water in his shoes and clothing. If he has just had a good meal and is well nourished, during the time he is physically active, he generates enough heat from his food or stored-up energy to compensate for the extra demand which the evaporation of this water makes. At the end of his journey to school, his shoes and stockings may carry a large quantity of water. From a condition of marked physical activity, he becomes relatively quiet. His heat output decreases just at the time that evaporation of the water in his shoes and stockings—the drying process—calls for extraordinary quantities of heat. This unusual demand comes at a time of decreased production and evidently places a strain on the body's heat-regulating mechanism so great, at times, as to break down the ordinary defense, and a cold frequently follows."