NEWS & NOTES

• NEW NUCLEAR STORAGE PLAN: The Atomic Energy Commission has announced plans to build a series of concrete bunkers above ground for the storage of radioactive wastes, a move which indicates that the agency expects it to take considerably longer than originally anticipated to find a permanent underground storage site. Plans to use an abandoned salt mine in Lyons, Kansas, were stymied last year by political opposition and the discovery that the site was not as safe as had been thought. The AEC has since broadened its search for geological formations appropriate to contain the wastes. The new facility, whose location has not yet been determined, would cost $100 million and would be ready by the end of the decade. Aboveground storage modules would require constant surveillance, but AEC Chairman James Schlesinger says they could be used "for centuries, if necessary."

• DEMOGRAPHY UNIT THREATENED: The nation's only graduate department in population studies, the department of demography at the Universiy of California at Berkeley, may be closed next month as a result of state budget cutbacks. The university's decision not to fill any of its professorial vacancies, including three in the demography department, leaves the department with no senior faculty except its chairman, Judith Blake Davis. The department has 30 graduate students, one third of them foreign. In the 5 years of its existence it has gained an international reputation, particularly for its work in the demography of Latin America.

• WIGNER RECEIVES EINSTEIN AWARD: Eugene Paul Wigner, a principal mover in the application of physics to atomic energy, was presented the Albert Einstein Award on 27 April for his contributions to the natural sciences. The Hungarian-born physicist was an early instigator of the World War II Manhattan Project. He has been associated with Princeton University since 1930 and is presently professor emeritus of mathematical physics. He received the Enrico Fermi Award in 1958 and shared the Nobel Prize for physics in 1963. The Einstein award, comprising $5000 and a gold medal, is awarded by the Lewis & Rosa Strauss Memorial Fund.

since the House had voted more severe restrictions on busing than those in the conference measure. The House had taken the unusual step of twice instructing its conferees to stand fast on provisions that, among other things, prohibited the use of any federal funds for busing and forbade federal officials to encourage local officials to use local funds for busing.

An important factor for congressional action, of course, is the White House attitude, which would presumably influence Republican rank and file in Congress. The Administration has consistently opposed proposals for direct institutional aid, but seems prepared to accept, if without enthusiasm, the bill's formula, which stresses cost of education allowances. The Administration appears anxious to see the desegregation aid measures enacted, and word at the beginning of the week was that, at a minimum, no veto was in the offing.

The higher education lobby has exhibited slow reflexes in responding to conference actions. This can be attributed, in part, to the inaccessibility of details and to problems of reaching consensus in the higher education community, which is a somewhat volatile conglomerate. But the sluggishness also owes something to disappointment over the institutional aid and busing features and to other potential difficulties in the bill. As one experienced association staff member put it, "I've never seen a bill so snakebitten in so many ways."

Among the possible booby traps is the prohibition on sex discrimination, which applies to both faculty and students. University officials worry that, in a relatively short time, they may be required to establish equality in representation of sexes among both groups across the board in graduate education, for example, which they say would be very difficult to accomplish.

Similar disquiet is felt about the implications of a proviso requiring the creation of postsecondary education commissions in each state to make studies of postsecondary education and to provide for state planning. There is apprehension in some public universities and colleges that this would require establishment of state boards of higher education that could impose their decisions through control of federal funds. The conference modified the provision to stress the voluntary nature of the commissions and their planning functions, but the misgivings linger on.

As is usual in Congress, neither the conference report nor the record of floor debate will fully reveal the factors that created the state of affairs prevailing at the beginning of the week. The higher education bill is a "Christmas tree" bill, laden with odd legislative ornaments, in part because the Senate, with limited manpower compared to the House, prefers to deal with larger legislative packages. The Senate has a single education subcommittee, while the House has three. The Senate preference was accentuated this year because Pell faces a tough campaign for reelection and made it known he would have time to deal with only one bill.

Whatever its wisdom, the grafting of busing and desegregation measures on the education bill must be seen in the perspective of a Congress trying to deal with busing, the hottest political issue of recent years. In an election year, probably a majority of congressmen were anxious to bring it under control without going to either extreme. When the proverbially conservative House Rules Committee sent the education bill to the floor of the House under a rule that invited the adding of the antibusing amendment, the ingredients were complete.

To be charitable, one can always say in these cases that everything that has been done to the education bill probably looked like a good idea at the time, at least to somebody. But this was hardly the best atmosphere in which to make a fundamental change in the relation between the federal government and institutions of higher education. Whichever way the vote goes, it is unfortunate for higher education that the bill evolved in a year when the accent was on the last syllable of omnibus.

—JOHN WALSH

APPOINTMENTS

Steven Muller, former vice president, Cornell University, and provost, Johns Hopkins University, to president, Johns Hopkins University. . . . **Henry J. Duel**, executive vice president, Southeastern University, to president of the university. . . . **John G. Truxal**, academic vice president, Polytechnic Institute of Brooklyn, to dean, College of Engineering, State University of New York,

Stony Brook. . . . **Paul D. Minton**, chairman, statistics department, Southern Methodist University, to dean, School of Arts and Sciences, Virginia Commonwealth University. . . . **Allen G. Debus**, professor of history, biological sciences division, University of Chicago, to first director, Morris Fishbein Center for the Study of the History of Science and Medicine at the university. . . . **Neil G. McCluskey**, dean-director, Institute for Studies in Education, University of Notre Dame, to dean of education, Herbert H. Lehman College, City University of New York. . . . **Wesley J. Matson**, assistant dean, School of Education, University of Wisconsin, Milwaukee, to dean of education, Winona State College. . . . **Thomas R. Tephly**, associate professor of pharmacology, College of Medicine, University of Michigan, Ann Arbor, to director, Center for Toxicology and Biochemical Pharmacology, University of Iowa. . . **Roland H. Good, Jr.**, professor of physics, Iowa State University, to head, physics department, Pennsylvania State University. . . . **Robert L. Williams**, chairman, psychiatry department, University of Florida College of Medicine, Gainesville, to chairman, psychiatry department, Baylor College of Medicine. . . . **Harry J. Lowe**, acting chairman, anesthesiology department, biological sciences division, University of Chicago, elevated to chairman of the department.

RECENT DEATHS

John D. Akerman, 74; professor emeritus of aeronautics, University of Minnesota; 8 January.

Paul M. Althouse, 55; provost, Pennsylvania State University; 4 February.

George M. Bateman, 74; professor emeritus of chemistry, Arizona State University; 28 January.

Allan A. Blatherwick, 57; professor of aerospace engineering and mechanics, University of Minnesota; 31 December.

Walter H. Boone, 66; chairman, chemistry department, Potomac State College; 15 January.

Ng. Ph. Buu-Hoi, 56; director of research, Centre National de la Recherche Scientifique, Paris, and former director-general, Office of Atomic Energy of Vietnam; 28 January.

Carlton M. Carson, 73; retired micropaleontologist, Tidewater Oil Company, California; 7 January.

Antonio Ciocco, 63; professor of biostatistics, University of Pittsburgh; 5 January.

Andre G. Clavier, 77; electrical engineer and technical consultant, International Telephone and Telegraph Corporation; 9 January.

Richard Courant, 84; founder and former director, New York University Institute for Mathematics and Mechanics; 27 January.

Albert E. Dimond, 57; chief, plant pathology and botany department, Connecticut Agricultural Experiment Station; 4 February.

Franklin G. Ebaugh, 76; professor emeritus of psychiatry, University of Colorado; 4 January.

Earle J. Fennell, 66; retired associate chief topographic engineer, U.S. Geological Survey; 22 January.

Raymond L. Garner, 66; first chairman, biochemistry department, New Jersey College of Medicine and Dentistry; 13 November.

Chester S. Keefer, 74; professor emeritus of medicine, Boston University School of Medicine; 3 February.

Edgar B. Keemer, 93; former professor of pharmacy, chemistry and bacteriology, Howard University; 15 January.

Jacob Priman, 79; professor emeritus of anatomy, University of Pittsburgh; 23 November.

Richard B. Turner, 55; professor of chemistry, Rice University; 22 December.

Richard A. Waterman, 57; professor of anthropology, University of South Florida; 7 November.

Orland E. White, 85; director emeritus, Blandy Experiment Farm, University of Virginia; 10 January.

George C. Williams, 97; former president, Ithaca College; 28 December.

RESEARCH NEWS

Bioengineering: "Drop Foot" Corrected by Electrical Stimulation

More than 400 stroke victims in Yugoslavia and the United States have used an electrical device that eliminates "drop foot" and enables them to walk almost normally. Not all can use the new procedure, called functional neuromuscular stimulation, to overcome the spasticity of the calf muscles that normally accompanies a stroke, nor do all patients who try muscle control by electrical stimulation continue to use it. However, some patients have used the device for more than 3 years, still like it, and report no unpleasant side effects. One type of device for electrical stimulation is being evaluated at clinical rehabilitation centers in the United States by investigators who hope to see it widely distributed. Preliminary estimates indicate that, if the devices are manufactured in large numbers, they may be as cheap as some leg braces.

The leg stimulator is just one example of the marriage of artificial devices with natural limbs and organs. Doctors and engineers working together have perfected many substitutes for parts of the human body, ranging from artificial blood vessels to pacemakers. For example, a very large effort is being undertaken by many federal agencies (with 99 research contracts outstanding) to produce an effective artificial heart. Electrical stimulation of groups of muscles is an extremely attractive potential method for rehabilitating hemiplegics and paraplegics because usually the neuromuscular systems in the extremities of these patients are intact. Optimistic researchers even talk about the ambitious goal of programming a paraplegic to walk under the control of a set of carefully orchestrated electrical stimuli.

For the past 6 years the leading figures in research on functional stimulation of muscles have been investigators at the University of Ljubljana (Yugoslavia). The Ljubljana rehabilitation center has a strong program in