heater and temperature measuring sheet which will enable cloth-pressing to be carried on by less empirical methods than at present. The Rothamsted Experimental Station displayed a "pachimeter" made out of meccano parts for testing the plasticity of soils and clays. This, it is thought, may be useful also for millers and bakers in the preparation of flours.

Apparatus for studying speech visually were to be seen in many parts of the exhibition, the most interesting, perhaps, according to the *Times,* being that developed by Professor E. W. Scripture and the adaptations used at the Speech Laboratory of the West End Hospital for Nervous Diseases by Miss F. Janvrin. Speech curves, it appears, can be produced upon smoked paper, so as to provide clearly recognizable tests for the presence of such diseases as epilepsy, disseminated sclerosis, or general paralysis when the symptoms can not be directly recognized in listening to the patient's voice. Another interesting application of physical apparatus to physiological problems was shown by Professor A. V. Hill, in photographic exhibits of the minute heat-production curves which are produced by the stimulation of a nerve or the twitch of a muscle.

In the trade section the experimental sound-film projector for sub-standard (16 millimeter) film shown by the Ensign Company, the "tong-test" for alternating and direct current measurement produced by Crompton Parkinson, and the giant epidiascope with a throw of 70 feet made by W. Edwards and Company were typical of the more popular apparatus.

THE FEDERAL APPROPRIATIONS FOR AGRICULTURAL RESEARCH

SCIENCE SERVICE reports that items in the agricultural appropriation bill, which were reduced below the Bureau of the Budget estimates for 1933 by the House Committee on Appropriations included many lines of scientific research, which had already felt the pruning knife of the agricultural chiefs and the bureau.

The Bureau of the Budget estimates had pared the $235,664,694 agricultural supply act of 1932 down to $186,243,405—a decrease of more than $60,000,000. Much of this was concerned with decreased appropriations for road building and relief loans—in fact almost all of it except about $10,000,000 to be cut from regular departmental activities. Actual savings of more than three millions, to revert to the treasury, were planned in various agricultural bureaus.

The house appropriations committee cuts from budget estimates, amounting to an additional ten million dollars, were made all along the line, and touched the following scientific investigations:

Administration of agricultural experiment stations, $13,646. (Bureau of the Budget had recommended increase.)

General weather service and research in Weather Bureau, $30,500. (Already cut $71,482.)

Aerology, $26,900. (Already cut $225,000.)

Animal husbandry, $20,505. (Already cut $29,495.)

Diseases of animals, $6,000. (Already cut $31,050.)

Dairy investigations, $9,900. (Already cut $69,442.)

Barberry eradication, $3,600. (Already cut $177,140.)

Cereal crops and diseases, $3,700. (Already cut $19,575.)

Citrus canker eradication, $2,100. (Already cut $7,900.)

Cotton production and diseases, $2,600. (Already cut $12,100.)

Rubber, fiber and other tropical plants, $1,500. (Already cut $25,031.)

Protection and administration, national forests, $76,500. (Already cut $119,746.)

Forest products investigations, $2,200. (Already cut $25,460.)

Agricultural chemical investigations, $5,600. (Already cut $5,851.)

Color investigations, $800. (Already cut $2,500.)

Insecticide and fungicide investigations, $1,100. (Already cut $10,000.)

Soil chemical and physical investigations, $200. (Already cut $30.)

Cereal and forage insects, $4,900. (Already cut $42,500.)

Insects affecting man and animals, $4,300. (Already cut $10,200.)

Agricultural engineering investigations, $6,600. (Already cut $58,550.)

Home economics investigations, $900. (Already cut $12,335.)

Pink boll worm control, $5,600. (Already cut $61,000.)

Gypsy and brown-tail moth control, $5,700. (Already cut $65,000.)

European corn borer control, $500,000. (Already cut $155,000.)

Japanese beetle control, $25,000. (Already cut $45,000.)

Among other cuts made by the Bureau of the Budget and not touched by the committee was one of $40,840 from the soil erosion investigation appropriation last year.

THE INTERNATIONAL CONGRESS OF PURE AND APPLIED CHEMISTRY

THE Ninth International Congress of Pure and Applied Chemistry will be held in Madrid from April 3 to 10. The officers of the congress are: J. R. Mourelo, vice-president of the Academy of Sciences and professor emeritus of the School of Arts, *honorary president;* O. Fernandez, professor at the University of Madrid, member of the Academy of Sciences and dean of the Academy of Pharmacy, *president;* and E. Moles, professor at the university and at the

National Institute of Chemistry and Physics and president of the Spanish Society of Chemistry and Physics, *general secretary.*

The city of Madrid is of interest as a scientific and art center and during the week of the congress Spanish cities, including Seville and Granada, are holding festivals and religious ceremonies and the Andalusia fairs that many members will wish to attend will be in progress. It has therefore been decided to confine the congress to three days, leaving three days during which the meetings of the ninth conference of the International Union may be attended and one day devoted wholly to excursions.

The provisional program follows:

Sunday, April 3

6:30 P. M. Reception of delegates and families by organizing committee.

Monday, April 4

10 A. M. Congress opens.

11 A. M. to 1 P. M. General lecture on "The Raman Effect in Connection with Chemical Constitution," followed by discussion. Sir R. V. Raman, K. W. F. Kohlrausch, and J. Cabannes.

4 to 6 P. M. Meeting of groups and sections. Presentation and discussion of reports.

Tuesday, April 5

Morning left free.

6:30 P. M. Reception.

Wednesday, April 6

9:30 A. M. to 1 P. M. General lecture on "The High Polymers in Chemistry," followed by discussion. K. H. Meyer, A. Staudinger, and W. Bragg.

3:30 to 6 P. M. Meeting of groups and sections.

6:30 P. M. Reception.

Thursday, April 7

Reserved for excursions.

Friday, April 8

9:30 A. M. to 1 P. M. General lecture on "The Chemistry of High Temperatures," followed by discussion. C. Matignon, O. Ruff, and A. Day.

4 P. M. First meeting of council of International Union of Chemistry.

4 to 6 P. M. Meeting of groups and sections.

9 P. M. Official dinner for members of congress.

Saturday, April 9

10 A. M. Meeting of council of International Union of Chemistry.

10 A. M. to 12 M. Meeting of sections and drafting of conclusions.

4 P. M. Closing session.

5 P. M. General assembly of International Union of Chemistry.

Sunday, April 10

Reserved for trips.

The organizing committee has issued a bulletin which includes an account of events leading to the invitation to meet in Madrid. This statement is in part as follows:

In April of 1928, at the celebration of the twenty-fifth anniversary of the Spanish Society of Chemistry and Physics, the president of the society, Professor Palacios, interpreting the heartfelt desire of all Spanish chemists, placed before the King, Alfonso, who was presiding at the function, the plea that he would authorize the delegates of Spain in the International Union of Chemistry to petition that the ninth gathering should be held in Madrid, and, that on the occasion of this meeting, the first post-war congress should take place. This would be the ninth of those held up to the present and would undoubtedly prove to be the best possible means of strengthening the friendly relations among the chemists all over the world. The petition met with a most favorable reception.

In response to this proposal, at the conference which was held at The Hague in July of 1928, by the International Union of Chemistry, the delegation from Spain then present drew up the invitation, which was unanimously accepted.

In view of this agreement, the National Council of the Spanish Federation of Chemical Societies, a Spanish Organization Affiliated to the Union and Comprising the Delegations of the Spanish Society of Chemistry and Physics, of the Society of Spanish Mining Engineers, of the National Union of Chemical Experts, of the Academy of Sciences, of the Institute of Oceanography, and of the National Chamber of Chemical Industries, at that time, negotiated and obtained from the public authorities of the country the entire approval which took the form of a solemn resolution of the government, with the inclusion of credits for the preparatory expenses of the congress in the general state budget of 1929.

AWARD TO DR. CHARLES H. HERTY

THE medal of the American Institute of Chemists has been awarded to Dr. Charles H. Herty.

This medal is awarded annually for "noteworthy and outstanding service to the science and profession of chemistry in America," and is given to Dr. Herty in recognition of his efforts over a long period of years on behalf of American chemists and the American chemical industry. Recently, Dr. Herty has aided the economic rehabilitation of the South by his researches on the paper pulp possibilities of the slash pine. This work is being perfected commercially in the new laboratory built for the State of Georgia by the Chemical Foundation.

In making announcement of the award Dr. Frederick E. Breithut, president of the institute, has issued