

tries concerning output in relation to hours of labor and the duration of work spells and rest pauses. A subsequent section of the report deals with the impersonal physical conditions of the worker's environment, such as temperature, humidity, ventilation and lighting, and the effects of these conditions on efficiency. Personal factors, such as vocational selection and guidance, time and motion study, and the effects of such conditions as seating and clothing, are treated in considerable detail, whilst a shorter section deals with such matters as organization and the relative importance of human and mechanical factors in efficiency. Most of the sections are illustrated by diagrams reproduced from the published reports of the board, and they show at a glance the hourly and daily variations of output observed under various conditions, the effect of regular rest pauses on output, the improvement of output caused by more adequate lighting and by better ventilation, and the value of certain psychophysiological tests in measuring the skill of compositors. The future of the board is said to be full of promise, for, in addition to the investigations already made in certain branches of the textile, iron and steel, and boot and shoe industries, others are now in progress in the laundry and the pottery industries, whilst application has been made to the board by various trade boards and research associations for the institution of inquiries into several other important industries."

THE MEDICAL FELLOWSHIPS OF THE NATIONAL RESEARCH COUNCIL

As reported briefly in *SCIENCE* last week, the National Research Council has established fellowships in medicine created for the purpose of increasing the supply of thoroughly qualified teachers in medicine in both clinical and laboratory subjects and in both curative and preventive aspects. The fellowships are supported by appropriations of the Rockefeller Foundation and the General Education Board amounting in total to one hundred thousand dollars a year for a period of five years. Those receiving awards will be known as fellows in medicine of the National Research Council.

To qualify for appointment as a fellow, a

candidate must have the degree of doctor of medicine or doctor of philosophy from an approved university, or preparation equivalent to that represented by one of these degrees. Only citizens of the United States or Canada will ordinarily be appointed, although the fellowship board is authorized to set aside this provision in exceptional cases. The fellowships will be open to both sexes.

Since the principal purpose of establishing these fellowships is to increase the number of competent teachers in the field of medicine, each incumbent will be required to gain experience in teaching. As creative work is regarded as essential to the best teaching, emphasis will also be placed upon research.

Fellows will be at liberty to choose the institutions or universities in which they will work, as well as the men under whose direction they will carry on their researches, subject to the approval of the fellowship board.

Appointments are to be made for a period of twelve months, beginning at any time in the year, with an allowance of six weeks for vacation. The time may be extended, however, if in the judgment of the board the work which the fellow has done justifies it. The stipends are not definitely fixed in amount; but they are intended to enable the individual to live comfortably while carrying on his special work as a fellow.

The fellowships will be administered by a special committee, known as the Medical Fellowship Board of the National Research Council.

Correspondence concerning the fellowships should be addressed to the Division of Medical Sciences, National Research Council, Washington, D. C.

INTERNATIONAL CHEMICAL CONFERENCE AT UTRECHT

IN June of last year, Professors Biilmann, Bruni, Ernst Cohen, Donnan, Victor Henri, Kruyt, van Romburgh, Schenk, Walden and Wegscheider met in conference at Utrecht, and agreed to hold there in 1922 a scientific chemical meeting, the date of which is now fixed for June 21, 22 and 23 of this year. The program will consist of several general papers, to-

gether with a number of shorter scientific communications.

This invitation has been sent to those whose names are given in the accompanying list:

America (United States): L. M. Dennis, M. Gomberg, F. G. Keyes, G. N. Lewis, W. A. Noyes, Th. W. Richards, J. Stieglitz, E. W. Washburn, W. R. Whitney.

Czecho-Slovakia: J. V. Dubsky, A. Simek.

Denmark: E. Biilmann, N. Bjerrum, J. N. Brönsted, J. Petersen, S. P. L. Sørensen, Chr. Winther.

Germany: M. Bodenstein, G. Bredig, F. Föster, O. Hahn, A. Hantsch, P. Pfeiffer, R. Pschorr, R. Schenck, Schlenck, A. Stock, A. Wohl, H. Wieland.

France: M. de Broglie, Mme. P. Curie, Darzens, A. Debiérne, V. Grignard, Victor Henri, P. Langevin, Ch. Marie, C. Matignon, Ch. Moureaux, J. Perrin, G. Urbain.

Great Britain: A. J. Allmand, E. C. Baly, F. G. Donnan, A. Findlay, H. Hartley, W. C. McC. Lewis, F. A. Lindemann, J. W. McBain, W. H. Perkin, N. Sidgwick, F. Soddy, J. Walker.

Italy: A. Angeli, G. Bruni, L. Cambi, A. Mioletti, M. Padoa, N. Parravano, G. Plancher, G. Poma.

Holland: H. J. Backer, J. J. Blanksma, J. Böeseken, Ernst Cohen, A. F. Holleman, F. M. Jaeger, H. R. Kruyt, W. Reinders, P. van Romburgh, F. A. H. Schreinemakers.

Norway: H. Goldschmidt.

Austria: E. Abel, J. Biliter, F. Emich, A. Kailan, R. Kremann, A. Klemenc, W. Pauli, F. Pregl, A. Skrabal, R. Wegscheider.

Russia: M. Centnerschwer, W. Ipatiew, N. Kurnakow, Lasarew, Schiloff, L. Tseitschibabin, L. Tsugajew, P. Walden, N. Zelinsky.

Switzerland: E. Baur, P. Dutoit, Ph. A. Guye, F. Fichter, J. Picard, W. D. Treadwell.

Sweden: S. Arrhenius, S. Oden, Th. Svedberg.

Professor W. A. Noyes is acting as chairman of the committee to select American members of the conference, the other members being Professor Stieglitz, Professor Lewis and Dr. Whitney.

SCIENTIFIC NOTES AND NEWS

At the annual meeting of the National Academy of Sciences to be held at Washington from April 23 to 26, Dr. Hendrik Anton Lorentz, of the Rijks Universiteit, Leiden, will deliver the evening address on April 24, at the invitation

of the Academy and of the Carnegie Institution of Washington.

THE general meeting of the American Philosophical Society will be held in Philadelphia on April 20, 21 and 22. At the reception on Friday evening, Dr. Vernon Kellogg, of the National Research Council, will speak on "The Power and Impotence of Man."

PROFESSOR ALBERT EINSTEIN, of the University of Berlin, delivered the first of a series of four lectures in Paris on the "Theory of Relativity," under the auspices of the Collège de France.

PROFESSOR A. C. SEWARD, professor of botany at the University of Cambridge, was elected president of the Geological Society of London at the annual general meeting.

DR. E. B. POULTON, Hope professor of zoology at the University of Oxford, was elected president of the British Association of Economic Entomologists at the annual meeting, held on February 24.

DR. B. H. RANSOM, chief of the zoological division of the Bureau of Animal Industry, U. S. Department of Agriculture, has been elected a foreign corresponding member of the Royal Academy of Agriculture of Turin, Italy.

PROFESSOR HERBERT M. BOYLSTON, of the Department of Metallurgy and Mining at the Case School of Applied Science, has been appointed on the Board of the Engineering Foundation for a term of three years as representative of the American Institute of Mining and Metallurgical Engineers.

S. M. KINTER has been appointed manager of the research department of the Westinghouse Electric and Manufacturing Company, succeeding C. E. Skinner, who has been appointed assistant director of engineering in the same company.

COLONEL JAMES MILLIKEN has been elected president of the Pittsburgh Testing Laboratory succeeding George H. Clapp, who remains with the organization as a member of the board of directors.

DR. BERTRAND E. ROBERTS has been appointed epidemiologist of the State Department of