

## NEWS AND VIEWS

### The World at War

It is one of the conditions of the existence of a group of individuals as a society that certain rules for the guidance of the individual be obeyed. This applies as much to nations in their association with other nations as to individuals. A fundamental rule in international relations is that no nation should carry out an act of war against another without giving notice of its intentions. In spite of all the facilities of modern means of communication, Japan has thought fit to ignore this elementary procedure in its attack on the United States, thereby aligning its foreign policy even more emphatically with those of Germany and Italy in its total disregard of international law. It is yet another demonstration of the Nazi 'new order' of the supremacy of armed force, and of the worthlessness of any pretensions on the part of the totalitarian nations of conceding any rights or liberties to other nations. Japan is a relatively young nation which choose deliberately to model its future on that of the Western world. She has chosen bad mentors, and it must be a source of grief and despair to those Japanese men of science of international reputation like Honda and Yukawa, as it would have been to those of the older generation such as Kitasato, Noguchi, Omori, and Jogi Sakurai, that the nation should have allowed itself to be carried away by the machinations of the military party.

With the extension of war to the Pacific, Japan's so-called "China incident" becomes now a part of a vast conflagration which has girdled the earth. The greater part of Europe, Africa, Canada and the United States, most of the States of South America, the myriad isles of the Pacific in the hands of the United States, Great Britain, Australia and New Zealand, the eastern sea-board of Asia from Siberia to Singapore, the Dutch East Indies, Australia and New Zealand—all are directly involved; and it is safe to add that no nation or people at present at peace is unaffected. When the totalitarian powers have been finally broken, the Allies, who are pledged to democracy and freedom, must go forward with a world programme for reconstruction, the fundamentals of which will be based on the Atlantic Charter. President Roosevelt put the position bluntly in his radio address on December 9: he said that Americans "must begin by abandoning once and for all the illusion that we can ever again isolate ourselves from the rest of humanity . . . there is no such thing as security for any nation, or any individual, in a world ruled by the principles of gangsterism. . . . We are now in the midst of a war not for conquest, not for vengeance, but for a world in which this nation and all this nation represents will be safe for our children. . . . We are going to win the war, and we are going to win the peace that follows."

### Dr. V. K. Zworykin: Rumford Medallist

THE American Academy of Arts and Science has awarded the Rumford Gold and Silver Medals to Dr. V. K. Zworykin for his invention of the iconoscope and other television devices. Dr. Zworykin was born in Russia, and educated in Petrograd, Paris and Pittsburg. Since 1929 he has been connected with the Radio Corporation of America and has been associate director of the research laboratories of that Corporation since 1934. Zworykin's name is world-renowned for his far-reaching researches in electronics and photo-electric cells, culminating in his invention and development, with a group of associate workers, of the iconoscope or 'electric eye', which forms the basis of the television system adopted in Great Britain and still in active development in the United States.

The iconoscope is a special form of cathode ray tube in which the fluorescent screen is formed of a mosaic of tiny photo-electric cells, on which is focused the television picture to be transmitted. The electron beam of the tube is caused to scan this screen, and the resulting fluctuations of potential, depending upon the relative illumination of different parts of the screen, are used as the source of the picture modulation signals for the television radio transmitter. Zworykin's work has also led to the electron-multiplier, for amplifying the signals produced by a photo-electric cell, and to other devices used in television transmission and reception. All this work is described in a number of papers by him and his co-workers published principally in the *Proceedings of the Institute of Radio Engineers*, New York, and in the *Journal of the Institution of Electrical Engineers*, London.

### Training of the Disabled

AN interim scheme for the training and re-settlement of disabled persons, which is for the benefit of women and girls as well as of men and boys, is described in a leaflet issued by the Ministry of Labour and National Service. In addition to members of the Fighting Services, the Merchant Navy and the Civil Defence Services disabled on war service, the scheme is intended to cover civilians injured through air raids, factory accidents or in other ways, and is open to all persons above the age of sixteen. Some degree of preference may be given to those whose disablement is due to war service or to enemy action, but foreigners who have been disabled since the beginning of the War are also eligible. Training will be given in occupations connected with munitions work such as draughtsmanship, fitting, instrument making, machine operating, welding, inspecting and viewing, and for this purpose the courses of training will be similar to those in the existing schemes of the Ministry, but modified to suit disabled persons or particular types of disablement. It also will be given in other