

GENERAL SCIENCE

Charter Bill Progresses

► A BILL to give a Congressional charter to SCIENCE SERVICE, Inc., of Washington, D. C., a privately supported non-profit organization to further encourage young people in science youth activities was favorably acted upon by the full Committee on the Judiciary of the House of Representatives. The Bill, H.R. 11711, has gone to the floor of the House of Representatives for action. (See SNL 81:334, May 26, 1962.)

Representative Francis E. Walter (D.-Pa.) introduced the Bill in the House of Representatives on May 10, as a means to fulfill the obligations set forth by Congress when it passed Public Law 85-875, calling for the charter of an organization to encourage, foster and assist in the establishment of science clubs throughout the country.

SCIENCE SERVICE was founded in 1921 and since 1941 has been operating a continually broadening science youth program, which

includes Science Clubs of America, the annual Science Talent Search and the National Science Fair-International.

Science Clubs of America consists of more than 20,000 affiliated clubs. Sponsors are provided with books and other teaching aids at no cost. More than a million young science students in junior and senior high schools do science projects annually and show them in science fairs which culminate in the National Science Fair-International each May.

The Science Talent Search is held annually with entries from public and parochial high schools in all 50 states and the District of Columbia.

Both the directors of the national council on science fairs and the National Science Teachers Association are on record favoring a Congressional charter for SCIENCE SERVICE.

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GENERAL SCIENCE

Top Jobs for Scientists

► ROOM ON TOP in Government in the United States must be given scientists, since the future of the world will be determined by science, Dr. George C. Sponsler, chief scientist for research and development in the U.S. Navy Department's Bureau of Ships, has said.

The scientist in U.S. Government today "is kept in the role of technical adviser—on tap but not on top," Dr. Sponsler declared in the Bulletin of Atomic Scientists, June, 1962. This, he said, reflects a public attitude that adheres to the myth scientists are unqualified to run any but their own affairs and contrasts sharply with the national attitude of the Soviet Union towards science and scientists.

Eight out of 15 members of the Communist party presidium have a technical background. In the U.S. corresponding positions are held by businessmen and lawyers.

Russia's remarkable growth in the last generation, according to Dr. Sponsler, is due to the strengthening of the position of science and scientists in Government in the USSR and the fact that Soviet leaders recognize science as "the real surging force of the future."

The importance and promise of science to the power and growth of the U.S. demands that science be given a cabinet status in the Government and a Secretary of Science replace the Special Assistant to the President who will head the Office of Science and Technology just created by Executive Order.

As now contemplated, the Special Assistant would be limited to an advisory role. However, a Secretary of Science would be responsible for assuring that all domestic and foreign policies are made with full understanding of any and all scientific implications. The Secretary of Science also would

serve as a member of the National Security Council.

He would determine the emphasis to be given to Federal research and development programs and apportion the budget accordingly. He would have the authority to cut across department lines and thus coordinate research and development efforts of all Federal agencies. In doing this, he would assess the importance of various projects to the national security and welfare, allotting support and funding accordingly.

The third major responsibility of the Secretary of Science would be to mobilize all technical and scientific resources throughout the nation and improve cooperation among industries working in the same areas as well as between industries, government and universities.

These powers and responsibilities would give the Secretary of Science broader authority than any other administrative officer. They also would provide new status to science, thereby attracting more competent scientists and engineers to Government. This new respect and prestige would overcome the present lag in recruitment, which is not wholly due to the low salary scale in Government compared to industry, Dr. Sponsler said.

Science, given the status due it, could serve as a unifying force nationally, providing the goal of "the exploitation of science and technology for the betterment of our country and the world." To achieve this goal, it is imperative that a scientist be on top, the Navy physicist said.

However, in the same Bulletin, Dr. Hans Bethe, leading nuclear and theoretical physicist, states that in his view the right response to the impact of technology, particularly war technology, cannot come from science but must come rather from examining human values.

Dr. Bethe takes the position that there is room enough on top for the scientist today. His impact is made sufficiently and properly at the top level of Government. The scientist may, however, have too much influence, through the press, in lower levels of Government. He observed that this is particularly true in the military where scientists who foster weapons development are heard and those who warn against the dangers of an unlimited arms race get a more hostile reception in Government circles.

Dr. Bethe emphasized that there is no uniform response from scientists to problems today, even among atomic scientists toward nuclear testing.

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ENGINEERING

New Method of Electron Beam Welding Developed

► INERT GAS takes the place of vacuum in a new method of electron beam welding.

In the technique developed by the General Electric Company's Large Jet Engine Department, Cincinnati, the weld metal is completely surrounded by a continuous flow of inert gas (see photo below), eliminating the expense and difficulty of enclosing a work piece in a high vacuum. It is especially significant in the welding of large pieces such as large diameter rocket cases where housing in a vacuum is not practical.

Electron beam welding is especially important in many space age applications involving extremely hard metals which cannot be welded by ordinary means.

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NEW WELDING METHOD—Electrons produce a bright glow as they emerge into the air from the new apparatus for electron beam welding in inert gas. The electron beam and workpiece are enveloped in a continuous flow of inert gas during the welding process.