

GENERAL SCIENCE

Student Deferment Urged

Another scientific manpower plan is proposed. Interdepartmental group advises a National Scientific Service and virtually complete science student deferment.

► **DEFERMENT** of virtually all college students in scientific and engineering fields and removal of the drafting of scientists and engineers from the hands of Selective Service has been recommended to the President by the Interdepartmental Committee on Scientific Research and Development.

Selective Service Director Lewis B. Hershey does not agree with these recommendations, he told Science Service in Washington, D. C. Neither do advocates of Universal Military Service.

The Armed Forces members of the Interdepartmental Committee did not go along with the other eight civilian agency members in the recommendations.

The committee suggested that: A National Scientific Service be established as soon as possible. All scientists and engineers, including students in training, be registered in order to provide a basis for enrollment in the National Scientific Service. A Scientific Resources Committee be established under the National Security Resources Board to be responsible for plans and decisions on scientific manpower resources.

This would mean that every scientist, technician and engineer, young and old, male and female, and every student in those fields would be required to register with the National Scientific Service. It is estimated that would be more than a million people. However, it is assumed that only the younger, physically fit males would be drafted into the military service during partial mobilization.

The committee stated that, "we cannot safely decrease the number of college graduates in engineering and science below the number graduating this year. An irreparable loss of young men at any time in the next few years might easily be the difference between success and failure in a war of long duration or total war several years ahead of the present."

General Hershey pointed out that, by deferring students in specific fields, such as science and engineering, the committee was going back to a World War II idea that didn't work.

"In general," he declared, referring to six Selective Service Advisory Committees which recommended deferment of high level college students regardless of fields of study, "I am supporting those committees of mine. They want across-the-board deferment of students with high capacity or superiority—call it whatever you want—rather than students in specialized areas. After all, how much chance for deferment

would an A-scientist or a Japanese culture specialist have had in 1935?"

Local boards rather than a National Scientific Service should do the drafting for everybody, the General thinks.

"If we let bankers, farmers and scientists draft bankers, farmers and scientists, how many do you think will get drafted?" General Hershey asked. "These people are all citizens first and, in a democracy, their fellow citizens on the draft boards can make the decisions."

The four Defense Department representatives on the Interdepartmental Committee were said to have abstained because of differences within the department on manpower. The differences are between personnel officials who must maintain an armed force of 3,000,000 men with only 1,050,000 turning 19 each year, and logistics officials who must supply that armed force with the latest technical advances in weapons and therefore want the scientific manpower deferred.

The personnel officials are among the strongest advocates of Universal Military Service which conflicts with the concept of deferring students in scientific and engineering fields as expressed by the Interdepartmental Committee.

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ENGINEERING

Hums of Transformers Can Be Controlled

► **DISTURBING** "hums" from electric transformer stations in residential sections must be controlled, the American Institute of Electrical Engineers was told in Oklahoma City by Corbett McLean, Pacific Power and Light Company, Portland, Ore. Several methods were suggested.

These transformers, which step-down high-voltage current to voltages suitable for use in houses, give less hum if constructed of the right kind of steel.

But even in identical unit substations included under the same purchase order there may be an extreme variation in sound levels. The solution of this, according to Mr. McLean, is for engineers to press manufacturers for more uniform assembly with noise level as important features in the design.

Other suggestions include the locating of transformers at least 100 feet from the nearest building and also the use of sound confining enclosures. Whether the higher costing low-hum transformers or sound con-

fining enclosures will be used is a question of which is the more economical.

The increasing population and the greater noise consciousness of the public have created a problem which electric power companies must solve, he indicated. Low frequency transformer hum is apparently a noise to which the average resident has not been accustomed. It differs from the routine traffic disturbances which the public knows. Eradication of this disturbance is an important matter to power companies.

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INVENTION

Detector of Flaws in Rail Joints Makes Travel Safer

► **GREATER** safety in railroad traveling is promised with an improved electrical device to detect invisible flaws in rails on which the government issued a patent recently.

This device is an improvement over older types because it will detect flaws near rail joints, which others fail to do. Rail joints actuate the mechanism of ordinary detectors of older types. This results in the concealment of flaws within the region affected by the angle bar connector.

Patent 2,527,002 was issued to Harcourt C. Drake, Hempstead, N. Y., for this device. Rights have been assigned by him to Sperry Products, Inc., Danbury, Conn.

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On This Week's Cover

► **THE FIRST** completely mobile 35 mm underwater motion picture camera used by the U. S. Navy makes the diver-photographer entirely independent of surface assistance. G. E. Darral is shown demonstrating the camera on this week's cover of SCIENCE NEWS LETTER.

Independent of air supply and electric cables leading to the surface, it is designed so that it can be completely operated from the outside of the housing. The wings, acting as a planing surface, enable the diver-photographer when sighting through the view-finder to kick his flippered feet and guide himself by tilting and banking the camera similar to a plane in the air.

The underwater photographer is equipped with an "Aqualung," an automatic compressed air, self-contained diving unit and "swim-fins" for his feet. Outfitted in this fashion, the diver-photographer is able to swim with the camera in any direction or to any depth down to approximately 200 feet.

This new technique of motion picture photography has been developed to provide a series of films to aid in the training of the U. S. Naval Deep Sea Divers. (See SNL, Oct. 28, p. 295 for full story.)

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