

MILITARY SCIENCE

USES Advises on Deferment

Draft boards must consult local employment office before inducting any man who is alleged to be in a critical war occupation.

► DEFERMENT of military service for physicists, chemists, engineers and other men in critical war occupations is now up to the U. S. Employment Service, not solely to the local draft board.

Latest directive of the National Headquarters, Selective Service System, requires local boards, whenever they decide that a man alleged to be in a critical occupation is not entitled to occupational deferment, to refer the case to the local office of the USES.

Then, within 30 days, USES must decide whether the man is actually fully employing his qualifications in a critical occupation in the war effort. If he is not, but is qualified to do so, it is then up to USES to get him a job where he will use his talents in some essential job.

If USES certifies to the local draft board that the man was in a critical job or that they have placed him in one, then the draft board is required to consider this new evidence as basis for deferment. If the 30 days go by and the USES fails to certify that he is essential in a civilian occupation, then the draft board may go ahead with the induction.

Meanwhile, the War Manpower Commission has notified local offices of USES of the importance of expediting all such requests from the local draft boards. In the case of scientists and other profes-

sional men, they are urged to consult the National Roster of Scientific and Specialized Personnel. The occupations listed as "critical" are those which in the judgment of the War Manpower Commission can not have any substantial number withdrawn from them without serious shortages resulting.

"It is imperative," Director Lewis B. Hershey said, "that registrants engaged in critical occupations in war production or in support of the war effort should be given grave consideration for occupational deferment by the agencies of the Selective Service System. Administrative action will be taken to insure such consideration by the Selective Service System."

In case a professionally qualified employee considered to be working in an essential activity is kept in Class 1-A and scheduled for induction by his local board after the matter has been referred to the USES, the individual or his employer is urged by Dr. Leonard Carmichael, director of the National Roster, to let the Roster know immediately, giving the registrant's name, address, local Selective Service board address, order number, name and address of employer, description of present job, and Roster registration number.

Science News Letter, November 13, 1943

of the irradiated substances keep on glowing briefly after the ultraviolet lamp has been turned off. This glow, in many cases lasting for only a fraction of a second, has been termed phosphorescence. Among the substances showing this property are human teeth, wool, coral, dried potato and several other materials of both animal and plant origin.

Because of the short duration of this phosphorescence, ordinary microscopic observation has not been possible. Drs. Harvey and Chase, however, thought of the expedient of getting a large number of intermittent flashes, so close together that they appear to merge into one continuous illumination, like the rapidly succeeding "frames" of a motion picture.

Several different means for achieving this end have been devised. In some, the ultraviolet ray source is an intermittent spark, with a rotating shutter shielding the object-lens of the microscope while it is "on" and opening it for the passage of the phosphorescent flash when the spark is "off." Simpler, however, is a continuous source of ultraviolet with a double rotating shutter having staggered openings that alternately admit the ultraviolet rays and open the path for the phosphorescent light to the lens.

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MEDICINE

Sex of Twins in Doubt; Case Rare in History

► THE QUESTION, Is it a boy or a girl? can not yet be answered for two babies of New York City, although they were born nearly a year ago. The babies are identical twins. Their strange case is reported by Dr. Adrian Rhodes, of the department of pediatrics, New York Medical College, Flower and Fifth Avenue Hospitals. (*Archives of Pediatrics*, October)

The babies were thought to be girls when they were born. One of them was brought to the Flower-Fifth Avenue Hospital, when seven weeks old, because of a bad cold and intestinal disturbance. At first glance, the infant was again considered a girl but further examination showed that it was a pseudohermaphrodite. The other twin was sent for and found to have exactly the same condition.

Hermaphroditism is a condition in which sex organs of both sexes are found in one individual. The word comes from the old Greek myth about the child of Hermes and Aphrodite whose name was Hermaphrodite. Pseudohermaphroditism

PHYSICS

New Microscope

Instrument which permits examination of objects by their own shortlived glow after ultraviolet irradiation, opens new field to research.

► A NEW KIND of microscope, that promises to open up new fields for exploration in biology and mineralogy, has been devised by Dr. E. Newton Harvey and Dr. Aurin M. Chase of Princeton University. It is called the phosphorescence microscope because it makes use of the short-lived phosphorescent glow given off by many substances just after they have been exposed to the action of ultraviolet radiation.

That many things shine in the dark with peculiarly-colored visible light when invisible ultraviolet rays strike them is a well-known phenomenon. This light is called fluorescence; and it has been much used in research during recent years. Special fluorescence microscopes have been devised to aid in this work.

When the ultraviolet irradiation stops, fluorescence stops with it. However, it has frequently been noticed that some