distillate fuel, range and space heater fuels and for many other purposes.

Future emergency requirements of military fuels, such as high-grade aviation gasoline and jet fuels, have an effect on the composition of motor gasoline, the meeting was told by Maj. Ray W. Whitson, Munitions Board Petroleum Committee, Washington, D.C.

During an emergency it becomes necessary to remove alkylate, catalytically cracked gasoline and other high octane number components from civilian motor fuels to produce more high-grade aviation fuel, he said. Also it is necessary to remove straight run from civilian motor fuel, kerosene and diesel fuel to produce more jet fuels. Motor fuel, both military and civilian, will consist of those components not required for aviation fuels.

A brighter note in regard to the total supply was struck by Dr. Gustav Egloff, Universal Oil Products Company, Chicago. The oil industry is producing 3,000,000 barrels a day of motor fuels, and another 500,000 barrels a day could be produced from a million barrels of crude oil production which is now shut in. The oil industry can supply any demand made by the Armed Forces for motor fuels, and the chemical industry can also supply antioxidants, metal suppressors and tetraethyl lead.

Science News Letter, October 21, 1950

GENERAL SCIENCE

Small Schools May Suffer

➤ MANY smaller colleges for men may well collapse if the proposed system of deferring college students for the draft is adopted.

This is only part of the drastic effect the system would be bound to have on the American colleges, college presidents think. They cannot quite fathom how extensive the effect will be, but there are several possibilities.

The deferment policy, a result of advice to Selective Service Director Lewis B. Hershey by six advisory committees made up of educators and scientists, would establish a nation-wide aptitude test for all draftable high school seniors and all draftable men already in college. Those who received a grade on the test higher than a cut-off point to be established would be given deferment, those who failed would not be deferred. The suggested cut-off mark is one equivalent to 120 on the World War II Army General Classification Test.

Once a man is in college, he must do good work to continue his deferment. Only those in the upper 50% of the freshmen class would be deferred to become sophomores, the top 66 2/3% of the sophomores could become juniors and the top 75% of the juniors could complete college and graduate.

This policy has been generally accepted by General Hershey and is now being studied on the policy making levels of the executive branch of the government.

Under present Selective Service law, most high school seniors will be able to go through the college freshman class without worrying about the draft, since they will be 18 years old and they cannot be drafted until 19. It has not yet been decided whether to wait until a man is 19 before giving the test or to give it upon his graduation from high school regardless of his age.

Approximately 300,000 males now enter college every year. It is estimated that 60% of these could pass the aptitude test, and thus receive a student deferment for their freshman year. However, this will have a quite different effect on different colleges. For such places as M. I. T., Harvard, the University of Chicago, it is believed that most, if not all, students who could meet the institution's qualifications would pass the Selective Service aptitude test. But, under the law, half of these could not receive student deferments to become sophomores.

On the other hand, for many smaller colleges, it is estimated that only a little more than 16% of the applicants could pass the aptitude test. The test therefore would cut out most of the male freshmen except the 30% who would be deferred for other reasons. That 16% who remained, however, would be likely to stay in the upper portions of their classes throughout the college life.

For smaller colleges for men, this might well be a serious blow.

But the "selective" institutions, those that select students with high aptitude for college work before admitting them, face a problem of a different kind. Practically all entering freshmen would be, by Selective Service standards, capable of doing good college work. Yet the institution must lose 75% of these to the armed forces before they graduate.

Large state universities will be least affected. Partly because they are dependent on state legislatures for funds and partly because of the American idea that everyone who wants to should have a chance at a college education, state universities take almost everybody who applies. Then they do their weeding out after the freshman year. The net result of this proposed system of weeding out by Selective Service regulation would be quite similar to the normal process.

The nation's educators are particularly worried about the possible "plowing under" of smaller colleges with lower standards. These institutions are usually in sections of the country where education is needed the most.

However, General Hershey's six advisory committees took the attitude that any other system of deferment might well be even more unfair. The aptitude test was the point of greatest discussion in the committee meetings. In a session of the American Council on Education recently, committee members challenged the college presidents to come up with something better which still would keep the needs of the armed forces in mind.

Science News Letter, October 21, 1950

AERONAUTICS

Gas Turbine in Heater Warms Arctic Planes

➤ SIX-ENGINED giant bombers of the B-36 type can be warmed up ready for take-off in sub-zero weather within 15 minutes with a new portable gas turbine heater developed in Los Angeles, Calif. It is a product of AiResearch Manufacturing Company, and warms up all mechanisms as well as the engines.

It is claimed to be the first portable ground heater using a gas turbine engine. The engine is a lightweight compact affair which is started by electric push button and a single battery. One heater has now been delivered to the Air Force for which it was developed.

During extreme cold weather when mechanical equipment freezes tight, this heater will be used to heat up engines and aircraft cabins, de-ice wings, control surfaces, landing gear and to free hydraulic lines.

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BIOLOGY

Anti-Fungus Chemicals From Earth Mold

➤ TWO anti-fungus chemicals from a mold-like organism of the earth were reported by Elizabeth L. Hazen and Rachel Brown of the New York State Department of Health at the New York Academy of Sciences meeting.

One of the chemicals, named fungicidin, promises on the basis of mouse studies to be useful in treating at least one serious fungus infection which attacks brain and central nervous system as well as the skin and other parts of the body. The causative fungus is called *Cryptococcus neoformans* and the disease it causes is known by several names: cryptococcosis, European blastomycosis, torulosis and Busse-Buschke disease.

Mice infected with this fungus had their lives prolonged by repeated sublethal doses of crude preparations of fungicidin.

Fungicidin in laboratory tests has shown activity against a large number of other fungi, some of them disease-producing, but in much higher concentrations it is not effective against some common bacteria. Its value as a remedy for human patients is now being tested.

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