

## MINING

# Uranium Mining, Milling

► URANIUM mining for the essential atomic energy mineral is private business in the United States.

Under the policy of the U.S. Atomic Energy Commission the job of finding, mining and processing uranium ores is left to the mining industry, the American Mining Congress was told in Salt Lake City.

The government is the only buyer. It fixes the ore-buying price. Prices are fixed to encourage prospecting and mining. The Commission is helping the industry by making geological surveys, by furnishing free testing and assaying service and, more important, by guaranteeing a market for the uranium ores.

The domestic uranium policy of the Atomic Energy Commission was explained by Jesse C. Johnson of the Commission. When the policy was first announced two years ago, there were only 15 individual uranium mining operations employing a total of 55 men, he said. Today there are over 200 different mining operations with total employment in excess of 1,000, and production is at an all-time high.

This increase in production has been achieved without government financing of private operations. All the ore is produced from privately-owned mines and over 80% is processed in privately-owned plants.

This indicates, he declared, that uranium mining can be a profitable business. It indicates also that the prices paid are sufficiently attractive to induce mining companies to develop and operate mines and construct uranium milling plants.

Uranium milling, introduced in 1942 and now boasting six mills, is destined to play an important role in the field of mining and milling.

The American Mining Congress was given a review of uranium production by F. W. McQuiston, Jr., of the U.S. Atomic Energy Commission. Uranium is widely distributed in the rocks of the earth's crust, he said, but it occurs sparingly as high-grade ore deposits. It is more plentiful than gold and silver, and almost as plentiful as lead and zinc.

The six mills now operating are in Colorado and Utah. One other is under construction and two more are planned for the near future. First important operations were the leaching of accumulated piles of tailings from milling vanadium ores in Colorado. It is definitely indicated, he declared, that in the near future several million tons per year of low-grade materials will be milled for the recovery of uranium.

Canadian and other foreign operations are producing uranium. The largest milling operations on which information is available are those at the Shinkelowbe mine,

Belgian Congo; Eldorado mines, Great Bear Lake, Canada; and on the Colorado plateau in Colorado and Utah. Gold production in South Africa, oil shale in Sweden and marine phosphate deposits in the United States offer potential by-product uranium production.

Of the great variety of uranium occurrences, pitchblende ores have been by far the most productive. Uraninite, another primary mineral, has considerable economic importance. Certain secondary minerals have also contributed to uranium production.

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## INVENTION

## Steam-Heated Chair For Winter Comfort

► STEAM-HEATED chairs, to give comfort to persons in a theater or auditorium, may also be used for cooling in summer by circulating cold water through the pipes that carry steam or hot water in the winter. This "temperature-controlled seat" was awarded a patent by the government recently.

The support that holds the seat is a pipe to carry steam, hot water or cold water. The seats, including the backs, are made of endless metal straps. Being metal, they are conductors of heat. Since the straps are attached to the pipes that carry the hot or cold liquid, they pass the temperatures on to the users.

The inventor is Eric G. Pophal, St. Pauls, N. C. Patent 2,521,091 was awarded to him.

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## GENERAL SCIENCE

## Nursing Students Ignorant of Sex Matters

► NURSING students are "abysmally ignorant" on matters of sex, Drs. Albert Ellis and Earl W. Fuller found from study of questions asked by third-year students at the New Jersey State Hospital, Greystone Park, N. J.

The questions were raised at round table discussions held by the director of the Mental Hygiene Clinic. They were dropped anonymously in a closed question box. The girls were free to bring up any problems, particularly those they would hesitate to discuss with parents or teachers.

A total of 1,908 questions were asked by over 2,000 students. It was found that 39% were concerned with love, marriage and family affairs, 31% with specific sexual topics, and only 30% with non-marital, non-sexual topics.

The most naive questions were asked by these girls regarding sex, revealing their lack of sexual education not only at home and in school, but in their nursing training.

Even though the girls were preparing for nursing, a career notable for its high percentage of unmarried women, they were particularly concerned with all aspects of marriage, from dating and falling in love to the bringing up of children.

Drs. Ellis and Fuller compared the questions asked by these nursing students to questions asked by American soldiers in sex talks reported by Dr. Fred Brown of Mount Sinai Hospital, New York.

The girls were more concerned than the soldiers about pre-marital and extra-marital intercourse, birth control, petting and sex education. The soldiers were more interested than were the girls in abstinence, sex "perversions," menstruation, pregnancy and abortion.

Some of the questions asked by the nursing students:

What is love? Can there be love at first sight? What do you think of blind dates? What is the ideal length of time for an engagement? What is your opinion of trial marriage? How far should a girl go in petting? What is sex? Should a girl be ashamed to undress in front of other nurses?

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## AERONAUTICS

## Rear-Facing Plane Seats For Greater Safety

► A FORWARD step toward the adoption of rear-facing seats in airplanes was revealed in Dayton, Ohio, at the Wright-Patterson Air Force Base. It is the development of a strong, light-weight aft-facing seat that can withstand forces almost three times as great as its front-facing predecessors.

Rear-facing seats in airplanes have long been advocated by airplane safety engineers. The backs and headrests provide a far greater degree of support in case of a crash landing than the present straps around the front of the body. Tests made show that the human body can withstand very high forces when sitting in the backward-facing seats.

Light weight in these new seats is obtained by the use of aluminum sheet, replacing the customary steel tubing. Foam rubber is used for padding. Plastic seat covers are used over the foam rubber. This plastic, already in use in automobiles, is a long-wearing type, resistant to moths, mildew, fungus and fire.

The new seats were developed by the Aero Medical and Aircraft Laboratories at the Air Force Base in Dayton. Beech Aircraft Corporation will build the seats. The first large installations will be in 20 C-54s used to carry soldiers by the Military Air Transport Service.

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