



REACTOR MONITOR—This photograph shows the instrument attached to the Materials Testing Reactor of the Atomic Energy Commission in Idaho that gives an early indication of any break in fuel element cladding. It does this by responding to gamma radiation from fission product iodine in the reactor's cooling water, a sample of which flows continuously through the detector unit of the monitor. The instrument was developed by Phillips Petroleum Company, which operates the reactor for the AEC.

GENERAL SCIENCE

Food Losing Race

➤ **INDUSTRIALIZATION** promises to spread to areas of the world where people are hungry today and destined to remain hungry for a long time in the future, Dr. Harrison Brown, professor of geochemistry of the California Institute of Technology, warned the American Association for the Advancement of Science meeting in New York.

While the industrial production of the world's less advanced areas can be increased rapidly, the similar increase of food productivity is so difficult that hunger faces all the peoples of the world in the future.

Although, in principle, with world-wide extension of the best conventional agriculture, we could feed several times the present world population, this would require the changing of attitudes and beliefs of a great many people.

This process, Dr. Brown fears, would take generations rather than years. It is difficult to increase food productivity at a rate faster than about two percent per year, while populations already hungry can increase at rates as high as three percent a year.

The hungry-world menace stares civilization in the face despite the capability of increasing world-wide industrial produc-

tivity up to a thousand times greater than that of today. This could be accomplished, Dr. Brown said, by use of the almost limitless amounts of energy that could be extracted from the sun's rays and the uranium of rocks.

"We are today in the middle of a revolution," Dr. Williams said. "We are in the middle of a transition from one major level of culture to another—from one primarily agrarian to one primarily urban-industrial.

The closest parallel is the change from a culture of food-gatherers to one of farmers some 7,000 years ago.

The hope for world peace is remote or even unattainable until the pressures from population growth are relieved, Dr. Fairfield Osborn, president of the Conservation Foundation, told the scientists. The pressures resulting from rapidly growing populations are a major cause for the great majority of conflicts between nations, he said.

The question as to whether productivity can continue to gain on population as it has in the past in the United States was raised by Earle L. Rauber, vice-president and director of research, Federal Reserve Bank of Atlanta, Ga.

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SURGERY

Scars Filed Away With Sculpturing Tools

➤ **SCARRED FACES** are being filed smooth with the aid of sculptors' tools, it is reported in *Archives of Dermatology* (Dec., 1956).

Using the type of forged steel rasps that can be found in most sculpture supply houses, Dr. Douglas Torre, Cornell University Medical Center, New York, has developed a new technique for dermabrasion.

Dermabrasion, or skin planing, is a method for removing or improving the scars caused by acne, chickenpox, shingles and smallpox. The scarred areas are actually scraped away, or abraded. Sand paper and revolving wire brushes have both been used to do this, but the rasp technique is simpler, cheaper and easier to control, Dr. Torre reports.

The rasps are used in a crisscross and circular motion on the scarred skin which has been injected with a local anesthetic.

One advantage of the rasp method is that the skin is not "frozen" with an anesthetic as it is before wire brush treatment, Dr. Torre says. This allows the doctor to evaluate the scarred area during the operation.

Usually, both the wire brush and the rasp are used by Dr. Torre. Large areas are done with the wire brush, and the "finishing off" is done with the rasp.

Twenty-four patients got the rasp treatment, Dr. Torre reports, and the results varied from an estimated 20% to 75% improvement in appearance.

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EDUCATION

TV Show on Elements Stars Nobelist Seaborg

➤ **AN EFFORT** to present a picture of the true structure of the world and its surroundings will be made in a series of educational television programs featuring Dr. Glenn T. Seaborg, Nobel Laureate and co-discoverer of plutonium and other synthetic elements.

The television series, produced by San Francisco's station KQED, will be nationally distributed beginning this month by the Educational Television and Radio Center, Ann Arbor, Mich., through educational TV stations.

The title of the series of ten programs is "The Elements." It concerns the characteristics of the fundamental building blocks of the universe, the 101 elements, how they were discovered, how they are put together to shape the world of millions of substances known to man.

Dr. Seaborg is the discoverer of more of these fundamental building blocks than any other man in history. He participated in the discovery of eight elements, all synthetic, starting with plutonium.

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