



Psyche

➤ AT EASTERTIDE we memorialize Christendom's ancient faith in "resurrection, and life everlasting" with such symbols as eggs and little chicks, flowers that spring from seeming-dead bulbs, and rabbits that leap forth out of the dark earth.

Strangely enough, however, one of the



MICROMAX "Watches" ASTM Tests In Dewey and Almy Lab

The above Micromax Recorder, shown being examined by a test engineer of the Dewey and Almy Chemical Co., is doing an important job as the measuring and controlling instrument in tests of the diverse cement ingredients the company manufactures.

This instrument's ability to serve six variously-located thermocouples; to maintain accuracy and micro-sensitivity, under all conditions, in tests requiring long-time observations; and to protect its accuracy by standardizing itself, are a few of the qualities that make it useful for testing jobs.

See Catalog N-33A for further details.

LEEDS & NORTHROP COMPANY 4977 STENTON AVE., PHILA. 44, PA.
LEEDS & NORTHROP
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oldest of Christian immortality-symbols has long been neglected: the butterfly, that breaks the winding-sheet of the cocoon and glories in the new sun. The symbolism is older than Christianity, as a matter of fact: to the Greeks, who also believed in immortality, the word Psyche meant both "soul" and "butterfly." It is quite likely that the butterfly-symbols found here and there in early Christian art were brought in by Greek converts who had heard the sermons, or read the letters, of St. Paul.

Butterflies should be a really good symbol of our concept of the spirit. They are beautiful, they almost seem to float through the air rather than fly, when they do condescend to alight it is usually on a flower, and when they feed it is upon nectar. True, Easter is usually too early in spring for many butterflies to be out and about; but at least we could have their painted or printed images added to the usual floral decorations.

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AERONAUTICS

Aircraft Noise Reduced By Changing Approaches

➤ PROGRESS is reported in the elimination of the noise nuisance of low-flying planes in the neighborhood of airports.

Noiseless planes have not yet been developed although abatement of noise is promised, with new types of propellers under test and with mufflers on aircraft engines.

The present progress comes from government activities to control flying altitudes and approach lanes used by pilots in airport vicinities. The U. S. Civil Aeronautics Administration reports that it finds that much of the annoyance to persons on the ground is eliminated by changing the "traffic pattern" around airports, "and by pilot cooperation in using suitable power and propeller-pitch settings."

Civil air regulations forbid flying below 1,000 feet over congested areas "except when necessary for taking off and landing." Most of the nuisance noise, however, occurs during landings and take-offs from fields close to residential areas. In many cases, the nuisance is lessened by using approach air lanes over water, industrial sections and wastelands. Where this has been done, complaints have been eliminated. Most pilots and airport operators, CAA states, have cooperated wholeheartedly in its program.

Airplane noise comes from two sources, the propellers and the engine exhaust.

Propeller noise dominates engine exhaust noise even though the exhaust has a relatively high intensity. To reduce the total noise, it will be necessary to modify the propeller to operate at low tip speeds, and to have a large number of blades, the National Advisory Committee for Aeronautics has determined. An effective engine muffler will also be required.

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CHEMICAL ENGINEERING

Iron-Smelting Process Uses Heated Oil Fuel

➤ IRON is extracted from ores of high oxygen content, like limonite and magnetite, by a process using oil heated to the cracking-point as part of its fuel, on which U. S. patent 2,417,949 has been granted to Elfego Riveroll of Hermosa Beach, Calif.

Reduction of the ore is carried out in three steps. First the ground-up ore is fed through a chamber where it meets high-temperature flame that drives out all water present and loosens up its texture. Then it passes to a second chamber where it is mixed with oil heated to the cracking-point; the released carbon and hydrogen atoms seize upon part of the ore's oxygen, thus beginning the reduction process. Finally, in a third chamber that is really an electric furnace from which all oxygen has been excluded, it is further heated in the presence of coke or other form of solid carbon, which completes the reduction.

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MEDICINE

X-Rays and Colchicine Together Affect Cells

➤ X-RAYS and colchicine used together can have effects on growing cells that neither the rays nor the drug produces alone, Dr. A. Back of the Cancer Laboratories of the Hebrew University in Jerusalem has discovered. He announces his findings in *Growth*.

In his experiments, Dr. Back sprouted one lot of onion seed in water containing one-quarter of one per cent of colchicine, and another lot in plain distilled water. After the initial root had started to grow, both lots were given an X-ray exposure of 2,000 roentgens. Growth of the untreated roots was checked little or not at all by the X-rays, whereas there was notable inhibition of the colchicine-treated roots.

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