



PATHWAYS OF PARTICLES

New view of the world's largest and newest cyclotron, the 200-ton giant of the University of California, showing the vacuum chambers down which the atomic particles are speeded, with energies as great as 32,000,000 electron volts after they have been accelerated in great spirals in the cyclotron proper.

now with present cyclotrons and its evidence can be detected by the radioactivity produced in normally stable elements like beryllium, boron and almost all the rest of the familiar 92 elements of the periodic table. But the amounts are most minute. While the alchemists' dream of transmutation has been technically ful-

filled the production of transmutation on a practical scale is far ahead.

And yet the day may not be so far off at that for it is estimated that three years of construction only would be needed to build a new 2,000-ton cyclotron. It is much more than pure day-dreaming to say that such an instrument might not only discover a new, cheap and almost inexhaustible source of power but it might (shall one say as a by-product) turn out to be the long-sought philosopher's stone—a means of transforming base metal into gold.

Science News Letter, December 16, 1939

ENGINEERING

Plastics Engineers Draft Plain Water As Lubricant

PLAIN ordinary water is now being used successfully as a lubricant for bearings in giant steel mill rolls and large ship propeller shafts through advances in the plastics industry, L. M. Tichvinsky, of the Westinghouse Research Laboratories, told the meeting of the American Society of Mechanical Engineers in Philadelphia.

Woven textile fabrics are impregnated with an organic binder and then treated by temperature and pressure to create these bearings, which require no oil or grease but perform efficiently when lubricated with water, which serves both as a cooling agent and as a lubricant.

Science News Letter, December 16, 1939

GENERAL SCIENCE

Marx "John the Baptist" Of Modern Social Science

An unofficial scientific ambassador from Great Britain to the United States is Julian Sorell Huxley, F.R.S., D.Sc., head of the London Zoo, grandson of the famous Thomas Henry Huxley of Darwin's day and an eminent biologist in his own right. Dr. Huxley comes to America as an exchange lecturer to represent British science at the Columbus, Ohio, meeting of the American Association for the Advancement of Science during Christmas week with a preliminary honoring banquet at Washington, under the joint auspices of the Association, the Smithsonian Institution, and of the Scientific Monthly.

KARL MARX, founder of the modern Socialist movement, was declared to be "the true John the Baptist of Social Science" by Dr. Julian Huxley, speaking in Washington.

Some thinkers claim for Herbert Spencer, contemporary of Darwin and the elder Huxley, the distinction of being the first to point toward an eventual application of the findings and methods of objective science in the problems of human society, but Dr. Huxley relegated Spencer to a position analogous to that of one of the Hebrew prophets, rather than that of a direct precursor.

"He demonstrated that social science was an inevitable development," Dr. Huxley stated, "but his notions of what form it would actually take and what methods it should employ were vague and essentially erroneous."

"Marx, on the other hand, developed a system directly based on social facts and directly applicable to them. He did

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