

deep embayment up the Mississippi valley, would be thus flooded. The greater part of Holland would disappear, and a goodly share of Belgium, as well as wide stretches of the North Sea coasts of both Britain and Germany. Denmark would be reduced to a mere collection of tiny islands. The Baltic "succession states"—Finland, Lithuania and the rest—would have to cede stretches of their sea fronts to the hungry sea. Every harbor in the world would be rendered useless, and new ones created.

But all these changes would be of little moment after all, for all these countries, or at least the great hinterlands that support them, would be pro-

ducing nothing to ship; so what would be the use of harbors, or the importance of lost coastal lands?

But the Arctic Ocean would be demanding its acres, too, and there the rub would hurt worse. For most of the lands that slope towards the Arctic fall off very flatly and gradually as long, level grasslands becoming sea-swamps and then sea. Up this sea-plane, and spreading out from the banks of the rivers that meander through it, the sea will spread its hundred-and-fifty feet of added elevation, and the lands for which the nations may fight their last Armageddon will be sadly curtailed by the time they are won.

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ENGINEERING

Engineers Test Structures Without Destroying Them

THE ADAGE that states that you cannot eat your cake and have it too expresses tersely the dilemma of the manufacturer or engineer who wishes to test his materials. For true testing by most commonly accepted methods involves the destruction of the material tested. The engineer wishes to know how much strain his material can stand before it will break, and to learn this he finds it necessary to break it. Testing by sample or by model involves a gamble upon the likeness of the sample to the rest of the material.

The examination of materials with X-rays and gamma rays does not provide the immediate solution to this problem, we are warned by an article in the British journal, *Engineer*, abstracted in the current issue of *Industrial Standardization*. For such an examination is no test at all in the technical sense.

"Rapidly as the use and usefulness of X-rays and gamma rays are advancing in engineering practice, it is still true that radiography as applied to metals has as yet barely entered the measurement phase," the report reads. "It serves in a remarkable and valuable way as a means of detecting the existence of certain, not all, types of internal flaw, but it is only with difficulty and with considerable latitude for error that it can at present be used to measure the size of the flaws and their positions within the bodies examined."

Nevertheless, it is anticipated that this radiographic method may be de-

veloped to provide an actual measure of stress as well as a revealing device for detecting flaws.

"The new technique covering the detection of crystal lattice distortion by the reflection of X-rays may soon result in very considerable developments. It is conceivable, for example, that by the application of the reflected ray method to a structure in service it may be possible, not only to detect the existence of strain in it or any of its parts, but to measure that strain and to convert it into terms of the corresponding stress. In such event radiography would provide a unique system of non-destructive testing."

Meanwhile, other methods of true non-destructive testing in use or within possibility should not be overlooked, the report warns. Such, for example is the test commonly applied to a finished bridge, involving the measurement of its deflection under different given loads. A test of this nature confirms the suitability of the design, the accuracy of the calculations, and the soundness of the materials.

Electrical methods are also important, such as placing the specimen in a magnetic field and then sprinkling it with fine iron filings to detect surface cracks, or passing a current through the length of the specimen and noting the extent and manner of the obstruction to the flow as a means of revealing deep-seated defects.

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MEDICINE

Pure Oxygen Piped To Hospital Rooms

PURE oxygen is being piped directly to rooms in the University of Wisconsin State General Hospital at Madison. The new arrangement is to make oxygen available to patients with pneumonia or other ailments which affect directly or indirectly the breathing apparatus.

The bulky oxygen tanks which must be carted from room to room and replaced from time to time are becoming obsolete, hospital authorities said. Oxygen tents and oxygen tubes are more and more frequently called upon in cases even in which there is no direct involvement of the lungs or chest muscles. Pure oxygen administration has been found to increase the constitutional stamina as well as to alleviate the various forms of distress from inability to inhale atmospheric oxygen. The oxygen will now come to the rooms in pipes from a central system from which the necessary supply for the patients may be taken, as water is taken from a sink or faucet.

The Wisconsin General Hospital will be the first in the country to establish this innovation.

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PSYCHOLOGY

Suggestion During Hypnosis Causes Strange Blindness

A PECULIAR temporary blindness in one eye, produced merely by a suggestion when the individual was in a hypnotic trance, was described at the Southern Society for Philosophy and Psychology by Dr. Frank A. Pattie, Jr., of Rice Institute.

The "blind" eye could discern light, but could not make out any form. When looking at a moving flashlight in a dark room, the subject could not tell horizontal from vertical movement, nor could he make out even the largest letter on an illuminated eye-test chart. When the room was illuminated evenly, no evidence was found that this "blind" eye could see anything at all.

With both eyes open, the subject did not have binocular vision, but saw things just as he would if the blinded eye had been covered. When the suggestion was made after the hypnotic spell instead of during the trance, the blurring of vision was not so great.

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