

Water stored in a reservoir flows over a water wheel at low tide and turns an electrical generator, as in the ordinary hydroelectric plant.

The novel trick is to store up the excess power created during the peak production by having the water-wheel shaft revolve against a brake band against which water flows. The heat of friction is sufficient to raise the water temperature to 390 degrees Fahrenheit, corresponding to 200 pounds gage pressure of steam.

Passing to a storage tank, this hot water is saved until the power demands exceed the power available from the hydroelectric generator. Then some of the super-heated water is released from the

tank and turns to steam. This steam passes through a common steam turbine and drives an electric generator.

The similarity and differences between the Quoddy project and the British Avonmouth plant are seen at once. Both have a plan to store up energy for future power generation. The British, small scale plant, does it with super-heated water and a steam generator. The Quoddy project accomplishes the same thing by pumping water into Haycock Reservoir, from which it can later drive hydroelectric turbines. The difference in magnitude of the two projects accounts for the difference in technique.

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PSYCHIATRY

Common Disease of the Mind Affects the Body Also

A CLUE indicating that the mental derangement schizophrenia is a disease of the body as well as the mind was made known to the American Psychiatric Association by Drs. Isidore Finkelman and W. Mary Stephens, of Elgin, Ill., State Hospital.

Sufferers from this, the most common of all mental diseases, do not regain their physical warmth after chilling as readily as do normal persons.

Given a cold water plunge, the body's ability to warm itself automatically was measured by the amount of oxygen burned in the body shortly afterwards. Healthy persons recovering from such a chilling consumed 41 per cent. more oxygen than usual, while schizophrenics consumed only 21 per cent. more.

For persons who had had so-called sleeping sickness or encephalitis, a mental disease known to have a physical basis in an inflammation of the brain, the increase in oxygen consumption after chilling is even less than for schizophrenics, only 14 per cent.

In the case of the sleeping sickness victims, the disturbance of the heat-regulating mechanism is known to be related to a diseased condition of the nerves. Experiments are now being made to find out where the similar disturbance of the schizophrenic patients is centered.

The evidence points to a physiologic disturbance in the hypothalamic region of the brain, the investigators believe.

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MEDICINE

Scientists Find Fresh Lead On Morphine Addiction Problem

BECAUSE it markedly increases the processes of oxidation in living tissues, dinitrophenol has given scientists a fresh lead on the problem of narcotic drug addiction by showing that dogs which have developed tolerance for morphine handle or maybe even store the latter drug in their bodies in a different way from dogs which have no tolerance for the narcotic. What this difference is

will, when discovered, probably give significant information about the question of tolerance and addiction to morphine.

The research which brought to light this fresh lead was done by Drs. O. H. Plant and D. Slaughter of the State University of Iowa and reported to the American Society for Pharmacology and Experimental Therapeutics. The difference in the way morphine is handled by toler-

ant dogs may be one of the important factors in the development of tolerance, they believe.

Development of tolerance is one of the tests for judging the morphine-substitutes that are being developed in the hope of solving the narcotic drug addiction problem.

Dinitrophenol stimulates oxidation, the process by which the body burns food or other fuel to get energy. Dinitrophenol increased the burning of morphine in the bodies of dogs that had no tolerance for the latter drug, the Iowa scientists found. In morphine-tolerant dogs, the general burning or oxidation process was speeded up by dinitrophenol, but judging from the fact that there was no decrease in the amount of morphine excreted, it appears that the burning of morphine itself was not affected by dinitrophenol in tolerant dogs. Consequently the scientists assume that the dog's body handles morphine differently when it has become used to the narcotic.

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ARCHAEOLOGY

Syria Enters Contest Of Cradles of Civilization

FRENCH archaeologists digging at Ras Shamra, in Syria, have uncovered signs of civilization so old as to rival the famed antiquity of Egypt and Mesopotamia. The discoveries show that Syria was a region of cradle cities as far back as 4000, possibly 5000 B.C.

Efforts of scientists to determine which is older in civilization, Egypt or Mesopotamia, will now have to be made a three-way problem to include Syria in the priority contest.

It has heretofore been supposed that the part of the Fertile Crescent where Syria lies, near the Mediterranean Sea, was lagging in progress, while settlers farther south, in Mesopotamia, along the Tigris and Euphrates Valleys, were founding Tepe Gawra, Ur, Kish, and other centers of civilized life.

The director of the French Expeditions to Ras Shamra is Prof. Claude Schaeffer, of the Museum of National Antiquities at St. Germain-en-Laye.

A great temple to Dagon, father of the god Baal, has been found in a less ancient layer of Ras Shamra. The Philistine god Dagon figured in several Bible scenes, notably in the story of Samson. It was in a temple of Dagon that the blind Samson, with a last burst of strength, pulled down the pillars, killing his Philistine captors.

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