

may be prevented by an injection of the drug, acetyl-choline. This announcement was made before the New Haven Medical Society by Dr. Louis H. Nahum, of the Yale Medical School, who told of his work in this field with Dr. H. E. Hoff, also of Yale.

Benzol vapor, Dr. Nahum explained, produces an abnormal sensitivity of the heart to adrenalin, a common constituent of the blood, bringing about an irregularity in the heart beat which causes death. Adrenalin, incidentally, is sometimes injected into a heart that has stopped beating, in an effort to restore life. Excitement and physical activity predispose to the occurrence of sudden death by benzol vapor, the Yale scientists found. Excitement, moreover, is a condition in which the adrenal glands pour into the blood large amounts of adrenalin. Animals deprived of adrenalin did not die of ventricular-fibrillation, the fatal irregularity of heart action which appears to be the cause of death in benzene poisoning.

"We found, further, that an injection of acetyl-choline counteracted the action of the adrenalin and protected the animals against this fatal irregularity," Dr. Nahum said.

This finding, while important in itself, opens up a new field of investigation of the causes for death by heart failure. Adrenalin under abnormal conditions, one of them being exposure to benzol vapors, produces ventricular-fibrillation.

Whether other conditions, heretofore overlooked by physicians, predispose the heart to the lethal action of the adrenalin remains to be investigated.

Science News Letter, April 28, 1934

ASTRONOMY—PHYSICS

Corona May Be Seen Without Eclipses By Means of Television

ASTRONOMERS will not need to chase eclipses around the world for a fleeting few minutes in which to observe the sun's corona if a new method of observing the corona suggested to the National Academy of Sciences by A. M. Skellett of the Bell Telephone Laboratories proves practical.

Television apparatus promises to solve the problem of viewing the corona at any time that the sky is clear. Mr. Skellett's scheme is to scan the image of the sky around the sun's disk with an "electric eye" photoelectric cell in much the same way that a television image is obtained. The glare around the sun is caused by scattering of light and it prevents the seeing of the corona because it is many times brighter. This glare will produce, Mr. Skellett finds, a kind of photoelectric current in the television apparatus different from that of the light of the corona. It will be possible to sort out with electrical filters the high frequency components of the photoelectric current caused by the corona and then feed them into a television receiver which will reproduce the main features of the corona.

The method proposed has not yet been used upon the sun but Mr. Skellett has tested with success the essential features using television apparatus and bright lights in his laboratory.

The corona was photographed through the unclipped sun's glare by use of special photographic methods developed in Europe two years ago, but Mr. Skellett's method promises better results.

Mr. Skellett hinted that other uses for the television method of discriminating between conflicting lights of different sort are planned.

Science News Letter, April 28, 1934

MEDICINE

Football Bladder Keeps Man Breathing

A FOOTBALL bladder strapped to his chest has kept an almost completely paralyzed patient, S. Crosby Halahan, breathing continuously for the past six months, it appears from a report by Dr. Phyllis Tookey Kerridge of the London School of Hygiene to *The Lancet*. Dr. Kerridge has just designed a new apparatus to replace the football bladder.

Mr. Halahan is a man now 63 years old. He is suffering from a progressive wasting of the muscles which started in 1927. Although almost completely paralyzed he is still mentally alert and contented. By 1931 he began to have difficulty in breathing as a result of the gradual paralysis of his muscles.

From June, 1932, until September, 1933, he was kept alive by manual artificial respiration maintained continuously by relays of relatives and nurses. Then his friend, Sir William Bragg, Fellow of the Royal Society, designed a hand-operated machine for inflating a football bladder bandaged to Mr. Halahan's chest. In October, 1933, he designed hydraulic bellows for inflating the football bladder, which have worked successfully ever since, except once when the water froze.

An old injury to the right side of Mr. Halahan's chest has made it extremely sensitive to pressure, so Dr. Kerridge designed a rubber bag which surrounds the left side of his chest only and is now successfully taking the place of the football bladder apparatus.

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