

PSYCHIATRY

New Year Will Bring Attack On Causes of Mental Ills

THE present year will see battle along a new front to save America's minds.

Inspired by a cooperative program of the U. S. Public Health Service, psychiatrists are placing new emphasis on discovering what social conditions put so much pressure and strain on the human mind that it disintegrates.

The perennial battle between those who regard environment as the determiner of intelligence and mental health, and those who believe our physical heredity settles such matters for us, is by no means settled. But many professional men have considered it wise to assume that both factors play an important part and that of the two environment is far more easily modified, for humans at least.

The idea that the hustle and bustle and complicated conventions of modern civilized life are responsible for our tremendous incidence of mental disease has been exploded by those who find men in far-away South Africa and other primitive societies suffering from the same mental diseases as affect the minds of dwellers in the most up-to-the-second cities.

But one factor has been found in many sorts of societies as contributing to mental illness. That is man's inhumanity to man. Wherever men are humiliated, not for transgressions but for poverty, physical appearance, accidents of birth, or other uncontrollable conditions, there men go mad.

The social outcast, the one who is made to feel that he does not belong, is right now a potential patient for the mental hospital.

Men do not go mad, the scientists con-

clude, because they trouble themselves with problems that are beyond the comprehension of their intellects.

But they do break down in the face of such problems if they are forced by some outside pressure to find an answer, to take some action.

A man who cannot discover how to earn his daily bread may still keep his mind, yet he will lose it when the cries of his children force him to give them food where there is no food.

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ENGINEERING—PSYCHOLOGY

Engineers Coin New Term, Called See-Level

EVERYONE has heard of sea level but did you ever hear of see-levels? Probably not, for the term is one of the newest in the science of illumination and human seeing.

In a report to the Illuminating Engineering Society, Drs. Matthew Luckiesh and Frank K. Moss of the Lighting Research Laboratory, Nela Park, Cleveland, describe the four thresholds of visibility and two supra-thresholds involving performance and ease in seeing. These are the see-levels.

Highest level is known as maximal ease of seeing. It represents seeing with the least wear and tear on human eyesight, to express it in everyday language.

Next highest is the level of maximal production or achievement. Here, as illumination is increased, a stage can finally be reached where additional light will not aid the performance of a given task. Attainment of this see-level, however, gives no thought to ease of seeing as does the first.

Below these two supra-levels comes an upper threshold of visual function; a point where the details of an object can be distinguished correctly all the time. After such 100 per cent. certainty is gained, better seeing cannot produce greater certainty.

Going down the scale, comes minimal threshold of recognition, where seeing is so poor that half the time one cannot distinguish details. Obviously the same record could be made by guessing for identification of details.

Going down farther still, comes the upper threshold of crude seeing, in which only the presence or absence of an object needs to be determined. At this low level of seeing, as in night time driving, it is only necessary to recognize 100 per cent. of the time that some object is in view.

Lower threshold of this same type of seeing is the point at which the presence of an object is determined only half the time. Here again a guess would give the same result. This point is the absolute bottom of the human seeing scale and beneath it comes only blackness and invisibility.

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MINING

Paper Bags of Rock Dust Prevent Dust Explosions

CLOUDS of inert rock dust form an effective way of preventing and limiting disastrous coal mine dust explosions, it is announced by the U. S. Bureau of Mines.

Coal miners may shortly see strange paper bags on little platforms near the ceilings of mines, if the new method, just investigated by the Bureau, is widely adopted.

The paper bags contain limestone treated so that it does not absorb water. When the first shock wave of an explosion sweeps down a coal mine and blows coal dust with it, the vibration makes these bags fall off their teetering platforms. A wire through the bag rips it open and down falls a dusty shower of inert rock powder.

This dust barrier wall, as it is called, has two functions. If it falls into coal dust so heated that it is about to explode, the rock dust will absorb heat and act to lower the temperature below the ignition point of the coal dust and thus help to prevent further explosion. Also the presence of a sizable mass of inert rock powder in the air helps dilute the coal dust and makes the explosion less severe.

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