

## PSYCHIATRY

**Emotions Play Lead in 40% to 60% All Illness**

► DOCTORS SHOULD be as able to take care of their patient's minor emotional and mental upsets as they are to do minor surgery, such as taking care of cuts, boils and the like.

So declaring a Denver psychiatrist, Dr. Clarke H. Barnacle, at the meeting of the American Medical Association in Denver.

Emotional and psychological factors play a leading role in 40% to 60% of all illnesses, he declared. But the time to refer patients to a psychiatrist is when they have serious depressions, complicated psychosomatic illnesses, severe neuroses, delirious reactions and psychoses.

Science News Letter, December 13, 1952

## PUBLIC SAFETY

**How to Figure Safe Distance to Car Ahead**

► A QUICK way to figure the safe distance at which to follow the car ahead of you has been reported to the Highway Research Board in Washington by Harrison Hill of the Connecticut Highway Department.

Divide your speed in miles per hour by 5. Multiply your answer by itself. Add to that your speed in miles per hour.

Thus if you are going 50 miles per hour, you should follow the car ahead of you no closer than 150 feet.

Mr. Hill suggests that drivers use telephone poles to help them estimate the distance between cars. Standard spacing of roadside telephone poles is about 125 feet, he said.

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## TECHNOLOGY

**Sulfur Obtained From Under Marshland****See Front Cover**

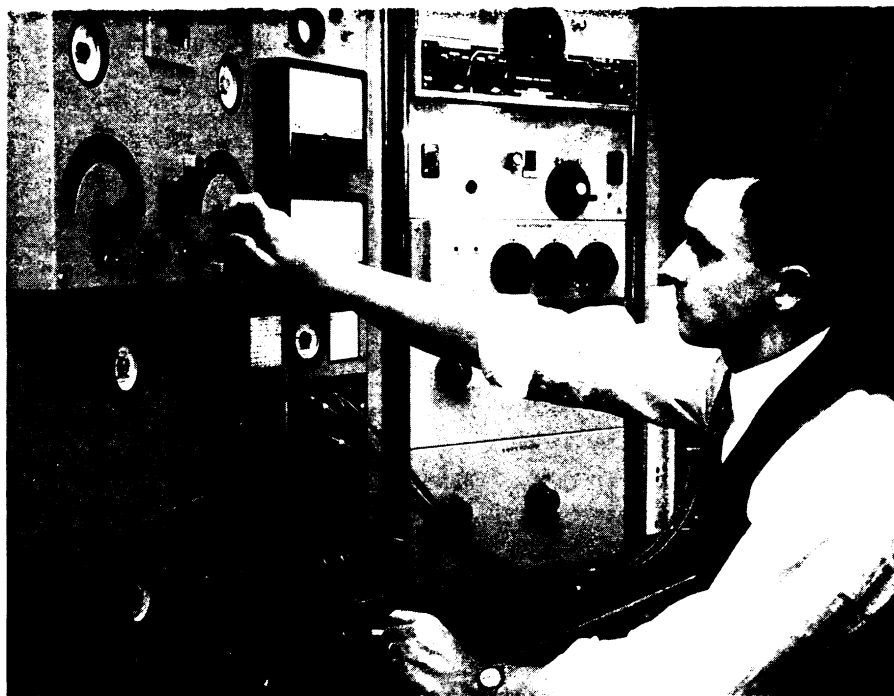
► SULFUR, ONE of industry's most important raw materials, is now being extracted from a deposit deep under the Bay Ste. Elaine in the Louisiana marshland, the Freeport Sulphur Company reported in New Orleans.

A water-borne plant pours nearly 2,000,000 gallons of hot sea water a day into the bed to melt the sulfur, which is then transported in insulated barges to storage 75 miles away. Only one of its kind, the plant will mine 100,000 long tons of sulfur per year.

The pipe-lines for transporting the marshland-mined sulfur are shown on the cover of this week's SCIENCE NEWS LETTER.

The new mining technique employed holds promise for the future development of similarly situated deposits.

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**TESTING L-3 CABLE**—An engineer tests transmission characteristics of the new coaxial cable system, known as L-3 carrier, capable of handling 1,800 telephone conversations simultaneously. It is the first system in which both television signals and telephone conversations can be sent over the same pair of coaxial pipes at the same time.

## TECHNOLOGY

**Coaxial Cable System**

► ABOUT 3,600 persons soon will be able to talk to each other over a new coaxial telephone cable running between New York and Philadelphia.

Scheduled to go into operation in early 1953, the cable and its associated equipment can carry 1,800 separate conversations at once, or it can be set up to carry 600 calls and a television program each way, Bell Telephone Laboratories in New York have announced.

Called the L-3, the new telephone line consists of a pair of coaxial pipes buried within the cable. Each about the size of a pencil, the two tubes can handle three times more conversations than comparable present-day equipment.

The first cable ever to mix telephone calls with video programs, the L-3 can distribute the TV program to local television stations scattered along the cable's length. Special equipment prevents telephone conversations from interfering with the video programs, and vice versa.

The advanced design of the cable made it necessary for engineers to develop new amplifiers with better characteristics than those now in use. The amplifiers use more electric power than the old ones, and twice as many are required for a given length of the cable.

Coaxial cable is one of two types of facili-

ties used by the Bell system to carry TV programs. Radio relay, the other type, sharply focuses radio microwaves and beams them serially along a chain of relay towers.

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## CHEMISTRY

**Chemical Aiding Use Of Oxygen Synthesized**

► THE CHEMICAL that comes right next to the central wheel of life and gets pushed by it has been created in the laboratory.

This vitally important chemical is a coenzyme called flavin-adenine-dinucleotide, or FAD for short. Its total synthesis is announced by Drs. S. M. H. Christie, G. W. Kenner and A. R. Todd of Cambridge University Chemical Laboratory in a letter to *Nature* (Nov. 29).

FAD is indispensable to the utilization of oxygen by almost any organism that requires oxygen for life. It attaches itself to various proteins and then takes on various functions, all of them related to utilization of oxygen.

FAD has previously been prepared by enzymic reactions, but this is the first time that it or any related coenzyme has been synthesized chemically.

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