

## MEDICINE

**Chronic Dyspepsia Serious For Persons Over 40**

**I**F YOU are over 40 and gastronomically unhappy, don't take the advice of a radio announcer or a drug clerk.

What you need is an examination by a well qualified physician, for chronic dyspepsia, coupled with advancing age, may mean peptic ulcer, gallbladder disease or even cancer of the stomach.

Two Mayo Clinic physicians issue this warning after analyzing 4223 cases of chronic indigestion among persons of various ages.

Among persons under 40 the chances are usually fifty-fifty that digestive upsets are the result of too much hurry or worry. These functional types of indigestion are fairly common among younger persons. Chronic appendicitis is the cause of only half as many cases of dyspepsia.

After 40 dyspepsia must be considered of grave significance until it is proved otherwise, according to Drs. Andrew B. Rivers and Antonio E. Mendes Ferreira of the Mayo Clinic (*Journal, American Medical Association, June 25*).

The two doctors were surprised to find how common dyspepsia is. About half of 10,000 patients between the ages of 30 and 40 complained of varying degrees of digestive difficulties.

The fact that slightly more men than women were so affected was also a surprise.

Among the worst procrastinators when it comes to checking up on chronic indigestion are doctors themselves, the Mayo physicians found.

Doctors seem to assume that some sort of professional immunity to gastrointestinal disease exists. This accounts for the fact that cancer of the stomach is detected no earlier among them than among the rest of the population, according to Drs. Rivers and Ferreira.

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## DOCUMENTATION

**Doctoring Documents Keeps Soviet Lab Busy**

**D**OCTORING frail and important documents is proving scientific ingenuity.

Some one brings in a wad of mouldy papers or a mass of papyrus and says hopefully, "Can you fix it?" and often enough the expert does, by aid of chemicals, lights, or electricity.

The Soviet Union has a laboratory

for preserving documents, which is doing ingenious work, judging by a report from the Soviet telegraph agency, Tass.

Explorer Peter Kozlov brought from Khara Khoto in Mongolia a great library of 2,000 Chinese scrolls. So mouldy and matted were the thin sheets of Chinese paper that they looked like sticks. To dry them, the laboratory scientists used a special table charged with static electricity of high potential. Gradually, the fragile paper opened.

A bundle of birchbark inscriptions from the Volga German republic was so crumbly that it had to be fixed into thin plates of plastic. Then, by aid of infra-red light, the text was revealed. Eighteen sheets of it are in language of the Uigur tribe, dating from the thirteenth century when the Golden Horde overran Europe. These sheets are believed to be the only writing in this language known.

Even tree trunks and branches, inscribed in the little-known Sogdian language, were brought to the laboratory, for first-aid in their preservation.

The future, as well as the past, is the concern of any document laboratory. The Soviet establishment is attacking the problems of space-saving and permanence of records by adopting micro-documents, tiny in size. Instead of microfilm, the most usual form, it plans to use thin layers of platinum containing 20 pages of text, enclosed between layers of special glass. Boxes of smelted diorite or basalt will be made to hold these records. The constitution of the Soviet Union in the numerous languages of its people will be the first document thus prepared.

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## INVENTION

**Bridge With Eight Suits Forecast By Inventor**

**T**HE DAY of an even more intricate game of bridge—played with six or eight suits of cards—was forecast in a new patent issued by the U. S. Patent Office.

Bridge, ordinarily, is played with the usual four-suit deck of 52 cards. The current more intricate variety has five suits. But patent No. 2,124,941 has just been issued to Albert Ellis, New York City, for a solo bridge-playing device which permits a person to play all four hands of a bridge game with a choice of four, five, six or eight-suit decks of cards.

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**IN SCIENCE**

## PALEONTOLOGY

**Horned Crocodile Fossil Found at Field Museum**

**A**N OVERLOOKED specimen in the Field Museum has turned out to be a rarity, never before known—a fossil crocodile with horns.

The horned crocodile fossil was collected by the Field Museum Paleontological Expedition of 1937 but its unique character was unnoticed while the scientists were collecting in the field. Only when the specimen was being prepared for exhibit did its extraordinary aspect come to light.

A horned crocodile, states Henry W. Nichols, chief curator of geology, is more rare than a toothed hen for while some prehistoric birds have been found to have teeth there is no previous record that the order of Crocodylia ever possessed horns.

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## METEOROLOGY

**Weather Bureau Scientists To Study Hurricanes**

**P**EOPLE living in southern states can earn \$3 and help science by returning to the U. S. Weather Bureau the instruments which may drop out of the sky in their vicinity.

These sky visitors, marked by red cloth streamers and a surrounding bamboo frame, will contain the devices by which the Weather Bureau hopes to trace the path and atmospheric conditions which mark a hurricane.

The hurricane detectors will be released, when a storm comes, from stations at Raleigh, N. C., Columbia, S. C., Macon, Ga., and Montgomery, Ala., Vicksburg, Miss., and Houston, Texas.

The project is part of a general research on hurricanes which will include work by Massachusetts Institute of Technology scientists at Cuba and Puerto Rico.

There is a chance that no authentic hurricane will pass over the selected stations. None did in 1936 or 1937 although the Weather Bureau was then prepared for similar observations.

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# E FIELDS

## ARCHAEOLOGY

### Mexico Used Cotton Cloth About 2,000 Years Ago

**D**EFINITE evidence that cotton was used as a textile in Mexico in the earliest archaeological period yet discovered there, at about the time of Christ, will shortly be presented to the scientific world by Dr. G. C. Vaillant of the American Museum of Natural History.

This discovery resulted from some cloth fragments that were found by Dr. Vaillant in the skull of a poorly preserved skeleton dug up at Zacatenco, Mexico. Recently Dr. A. C. Whitford of Alfred, N. Y., pronounced this cloth composed of cotton threads spun in one direction with yucca strands in the other.

The burial from which this evidence of cotton was exhumed is what archaeologists call the Early Zacatenco period, and Dr. Vaillant concluded that the date would fall in the centuries immediately prior and subsequent to the birth of Christ.

Scientists have taken for granted the early cultivation of cotton in Central and South America but this research brings definite archaeological evidence. Dr. Vaillant is publishing details in the *American Anthropologist*.

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## PHYSICS—PHYSIOLOGY

### Eyes Alone Do Not Give Third Dimension

**I**T IS seldom realized that it is not the eyes which enable man to see three dimensions but a combination of his two eyes, a brain and experience.

Each eye alone can see only two dimensions, width and length. But the curious optical trick of the two eyes, in the normal human head, is that they take these two-dimensional views and produce the effect of a third dimension. It is the difference in the appearance of what the two eyes see which determines the magnitude of this third dimension, says C. D. Moriarty, engineer, in the *General Electric Review*.

Mr. Moriarty cites a simple experi-

ment, which illustrates this point, that takes only a few moments to try.

Hold a pencil horizontally in one hand at arm's length and pointing across the line of vision; in the other hand hold another pencil vertically about halfway between the horizontal pencil and the eyes. Look at this combination, first with one eye closed and then with the other closed.

The vertical pencil will appear to shift, with the alternating closing of the eyes, back and forth about half the length of the horizontal pencil.

Move the vertical pencil farther from the eyes and note that the apparent shift becomes less and less until, when the two pencils touch, there is no shift.

"There is a mathematical relation between this shift and the distance between the pencils, or the third dimension," states Mr. Moriarty. "The greater the shift, the greater is the third dimension and vice versa."

A one-eyed person, a drunk and a baby are three types of people who lack the ability to "see" the third dimension. The one-eyed person lacks the two eyes needed to obtain the two different views of the object. The drunk sees two images but his befuddled brain cannot combine them properly. And the baby sees the proper images but lacks experience to know what the third dimension is in the terms of nearness or farness.

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## ENTOMOLOGY

### Pale Blue Light Is Fatal To Grape Leafhopper

**P**ALE blue light, beckoning through the darkness, proves a fatal lure to the grape leafhopper, serious pest in vineyards, it was reported by J. K. Ellsworth of the University of California.

Females of the species responded most readily to the deadly blue will-o'-the-wisp. Counts of large sample catches showed 88 per cent. female insects. Which, of course, is all to the good, from the viticulturist's standpoint: females are the ones that produce new crops of leafhoppers.

Many light colors were experimented with, before the attractiveness of pale blue was discovered. Other colors attract other insects. The lights have also been used as an easy means for obtaining insects to feed to laboratory animals.

The lights lure the flying victims. When they arrive at their gleaming goal, they fly against high-tension wires that kill them instantly.

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## PUBLIC HEALTH

### America Urged to Develop "Human Conservation"

**C**ONSERVATION of America's mental health should obviously be one of the first concerns of the nation. Yet it is receiving much less attention at present than is the conservation of soil.

The functioning of a democracy presupposes that the citizens must be intelligent, informed, and in their right minds. Yet, an estimated 1,500,000 persons in the United States are mentally defective. Another 1,500,000 to 2,000,000,000 are mentally diseased.

Mental disease is America's worst health problem. Six of every ten hospital beds are occupied by mental patients. Unknown numbers are being cared for outside institutions. Yet the facts behind mental disease are as unknown scientifically as are the facts about cancer.

An extensive series of surveys of mental health in typical American communities is strongly urged by the Committee on Population Problems of the National Resources Committee, whose report has made public these facts.

#### Might Reveal Cause

Such surveys might assay the nation's intellectual resources, reveal the need and suggest methods for conservation, and possibly throw light on disease causes.

Economic factors, including unemployment, may be found to contribute to mental breakdown, and the differential birth rate which brings the largest families to the worst homes may be found to contribute alike to mental defectiveness, mental disease and social inadequacy.

"In the past we have as a Nation considered our natural and our human resources alike to be virtually inexhaustible," warns the Committee. "It has come as rather a shock in recent years to learn that the acreage of formerly fine farm land that has been permanently destroyed runs into a staggering number of millions.

"In exactly the same way our human heritage is not inexhaustible. Millions of years have gone into building it up, just as in the case of the soil. The possibility of the wastage of genes favorable to human development through social conditions causing adverse selection suggests a more serious national problem than any amount of soil erosion."

The development of a "human conservation" policy is urged.

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