

## GERIATRICS

**Four-Point Program To Care for Aged**

➤ A FOUR-POINT program for mobilizing community medical resources to care for the aged is suggested by Dr. Robert T. Monroe, clinical associate at Harvard Medical School and head of the geriatric clinic at Peter Bent Brigham Hospital, Boston. The four points are:

1. A geriatric, or old-age, clinic for the study of diseases and disabilities found in old people.

2. A convalescent type of nursing home, "whose work should be effective enough to keep down the need for custodial-care nursing homes."

3. Home care supervised by hospitals.

4. A chronic ward in each general hospital—to free beds in the acute wards for old people who need surgery and special attention.

Most old people are "normal" in all essential respects, Dr. Monroe says in his new book, "DISEASES OF OLD AGE," published by Harvard University Press.

A large share of the deterioration that has been attributed to old age comes from states of unfitness brought on mostly by idleness, Dr. Monroe finds. "Disuse of the learning process" also adds to the unfitness and deterioration of old people.

Unlike a generation ago, those who reach the age of 65 today have a life expectancy long enough to make it worth while for them to undertake with confidence the pursuit of long-range programs.

With these facts in mind, Dr. Monroe suggests, among other measures, that communities should have schools for the retraining of old people in order to fit them into jobs that are open when they are forced to retire from the work they have previously been doing. Both business and labor groups might sponsor such schools.

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## ENGINEERING

**Silicone Resins Produce Better Electric Insulation**

➤ A RELATIVELY new and superior insulation for electrical uses, already in volume production, was discussed at the meeting of the American Institute of Electrical Engineers in Toronto, Canada, by M. L. Manning, Pennsylvania Transformer Company, Canonsburg, Pa.

He described this insulation as organic materials, such as glass, porcelain, mica, asbestos, bonded or impregnated by the silicone resins or rubbers, or by the fluorocarbons. It is known as "Class H insulation" by the Institute. The main difference of this insulation from others lies in the resins and varnishes used as bonds and impregnants.

Particularly discussed by Mr. Manning were the uses of silicone-glass fiber or asbestos combinations. Among other superior uses of this type of insulation is its use on submarine rotating equipment operating at 230 degrees Centigrade continuous temperatures, he said. It constitutes no health hazard up to 96 hours operating time submerged.

He added that the Navy Department and motor manufacturers have tested Class H insulation on electrical equipment and found such equipment capable of operating hundreds of times longer than conventional insulations.

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## INVENTION

**Improved Arc Welding System Earns Patent**

➤ AN IMPROVED arc-welding system brought William L. Roberts of Pittsburgh, Pa., patent 2,588,102. Westinghouse Electric Corporation, of East Pittsburgh, has secured the patent rights by assignment. It is an arc initiating and stabilizing system, inexpensive to manufacture and effective in operation.

In the system the arc welding circuit, energized from a relatively low voltage continuous current source, provides separate and distinct impulses at relatively widely spaced intervals of time to initiate and stabilize the arc.

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## INVENTION

**Chemicals Help Soil Spread Lightning-Rod Electricity**

➤ GREATER SAFETY from lightning is promised with a soil-treatment process that makes the earth around the ground wire from the lightning rod a better distributor of collected electricity.

The same chemical treatment of the soil is of value also in grounding television antennas, radio transmitters, power lines and transformers. It can be used in the electrolytic protection of pipe lines. The inventor is Ivar Harry Sanick, Stockholm, Sweden. He received patent 2,558,159.

Clay soils, and others containing considerable humus, are satisfactory conductors to dissipate any electrical charges on the ground wire. But sandy and gravelly soils are not. It is particularly for such soils that the treatment is recommended.

The process consists of injecting into the soil in the vicinity of the buried electrode on the end of the ground wire chemicals that form a type of gel which is a good conductor of electricity. The gels recommended for the purpose are those made from soluble salts of copper, nickel or cobalt with soluble ferro- and ferri-cyanides.

Science News Letter, July 7, 1951

**IN SCIENCE**

## GENETICS

**Fat Mice Have Hereditary Diabetes**

➤ SCIENTISTS NOW know that diabetes can be inherited, thanks to a new kind of obese, or very fat, mouse. The obesity is inherited and with it goes an inherited diabetes. Reporting their findings to the journal, SCIENCE (June 29), Dr. Jean Mayer, Margaret W. Bates and J. J. Vitale of Harvard School of Public Health, and Miss Margaret Dickie of the Jackson Laboratory, Bar Harbor, Me., state:

"For the first time the existence of hereditary diabetes, clearly independent of environmental influences, has been established."

The fat, diabetic mice when given a choice will follow the kind of high fat, low carbohydrate and high protein diet often prescribed for human diabetics. They are resistant to insulin and often have ulcers not unlike those seen in fat human diabetics.

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## ASTRONOMY

**Exploding Stars Found By Limited Sky Searching**

➤ A NEW technique is being used successfully to hunt "exploding stars." Within four months last fall it led to the discovery of three novae in the Milky Way, a good record as only about a hundred "new stars" have been found during the past two centuries.

Instead of looking for "exploding stars" throughout the entire sky, Dr. E. R. Herzog and Prof. Fritz Zwicky of the California Institute of Technology, Pasadena, picked out 16 areas where novae have been found most often. They include the constellations of Scorpius, the scorpion; Sagittarius, the archer and Aquila, the eagle.

All three novae were found in Scorpius. These same novae were found independently by Dr. G. Haro of Mexico's Tonanzintla Observatory.

Spectral photographs of eight areas were made each night and the rest every other night for three weeks of every month between July and October last year. The 18-inch Schmidt-type telescope was used, the astronomers report in the PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF THE PACIFIC.

In examining the photographs, they put a new film slightly off-center over an old one of the same area, and studied the pair with low power binoculars. Exploding stars showed up as images where no corresponding image was visible on the old film.

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# E FIELDS

## SURGERY

### Plastic Operation Helps Women to Motherhood

► WOMEN WHO can not have babies because their Fallopian tubes have become blocked can be helped to motherhood by a new plastic operation involving the use of polyethylene plastic tubing, Drs. Mario A. Castallo, Amos S. Wainer and John M. Stack of Jefferson Medical College and Hospital, Philadelphia, reported to the American Medical Association meeting in Atlantic City, N. J.

The Fallopian tubes are the ones down which the ova or eggs travel to the uterus. Infection and various other conditions may cause blocking of these tubes. Sometimes the blocking exists at birth.

When the blocked portion of the tube is cut out, a small piece of the polyethylene tubing will bridge the gap satisfactorily until the cut ends of the tubes grow together, when the plastic is removed.

Other materials that have been used for this purpose such as steel wire, catgut and whalebone either cause inflammation and more blocking or do not stay in place long enough to let the tubes regenerate.

Although they have been working on this new technique for two years, Dr. Castallo and associates have worked chiefly with rabbits. But other doctors have reported to them that their patients have become pregnant.

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## MEDICINE

### Mix Sense with Sunshine For Summer Health and Fun

► MIX COMMON sense with the sunshine you take for health, fun and beauty this time of the year. If you try to get all your tan in one big day at shore or mountains, you are likely to end up with long hours of suffering and no tan.

Many people forget that a burn is a burn, whether it comes from an atom bomb explosion or the sunshine. Blistering is a sign of a second degree burn. How sick you get when you are burned to blistering will depend on how much of your skin is that seriously burned. You can suffer shock from sunburn as well as from other kinds of burns.

The sensible way to get an enviable coat of tan plus the health benefit of the sun's rays is to take sunshine in small doses at first. Start with only a few minutes the first day and increase the dose by just a few minutes each day.

If you use one of the creams or lotions designed to protect against sunburn, remember that it will rub off, dry off and be washed off when you go in the water for a cooling dip or swim. So do not count on one application to protect you for too long a time.

Never look directly into the sun, no matter how dark your sunglasses, warns the National Society for the Prevention of Blindness. No glasses can keep out all the burning ultraviolet rays of the sun and these rays can actually burn the retina of the eye, causing permanent damage.

Be extra careful driving home at night after a day at the beach. Your eyes may be temporarily more sensitive to light, which means you cannot see as far at night as you ordinarily could. If you are driving 40 m.p.h. you could stop your car in 126 feet. This means you would avoid hitting an object just visible 130 feet away. But if the sun has temporarily weakened your vision so that you can only see the object 109 feet away, you may not be able to stop in time.

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## EDUCATION

### U. S. Summer School in Guatemala Highlands

► THIRTY TULANE University students, accompanied by six professors, are attending a special summer school in Guatemala's highlands.

This is the first time that a group of students have gone from the United States to Central America for summer school sessions. The school has headquarters at Guatemala's second largest city, Quezaltenango, in the northwest section of this Republic's highlands.

Most of the students are taking advanced courses in anthropology. Guatemala's historic San Carlos University and the U. S. Embassy are cooperating. After inspecting ancient Mayan ruins in and around the Guatemala City area, they are staying at Quezaltenango for approximately a month.

The summer school itinerary and plans include field trips to various sections of northwest Guatemala for the purpose of studying the many Indian tribes in that area, most of which are Mayan in origin and live under primitive conditions little changed in the past 500 years.

In order to talk to the Indian population, native interpreters will be needed. About 40% of Guatemala's population speak no Spanish and are limited to one of the 17 Indian dialects, stemming from the three major Indian languages used. The languages have no similarity to Spanish and apparently originate from Mayan and Aztec languages.

Plans for the summer school session were made by members of Tulane University's faculty, including Dr. W. J. Griffith, chairman of the School of Latin Studies.

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## PUBLIC HEALTH

### Younger Generation Gets Praise for Brains, Maturity

► TODAY'S YOUNGER generation of Americans were praised as an "astonishingly sound and intelligent group of young citizens" in a report to the American Home Economics Association meeting in Cleveland.

The raised eyebrow "what are we coming to" attitude of oldsters toward youth is no longer justified, it appears from the report by Dr. Bernice Milburn Moore, Texas mental health consultant and educator.

"Far fewer young men and women are escaping into boredom in 1951 than in 1921," she declared.

"Families and schools, churches and communities, have done well by their youth," she stated, pointing out that "no group of young men and women have been handed such knotty international problems. No group of young persons have come to majority in a time when contention within the nation was more intense. No group of young persons have faced such impermanence in their personal lives.

"Yet those who are 'running out' on what the world offers are at a minimum. Few in comparison are the youth who are seeking release in unsocial behavior. Scapegoat hunters and name callers are not many in the younger years of maturity. Fanatics—the most dangerous escapists of all—are found in the main later age categories."

Dictatorial relationships in families have not been eliminated and authoritarian schools are not extinct, she said. However, amazing strides have been made and are being made in democratic living, often with the help of public schools, universities, and colleges.

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## GENERAL SCIENCE

### Government and Industry Short 60,000 Engineers

► MORE THAN 60,000 engineers will be needed by government and industry, even after this year's June graduates have all started working.

A just-completed survey of over 378 companies and government agencies showed this shortage, Carey H. Brown, chairman of the Engineering Manpower Commission of the Engineers Joint Council told members of the American Society for Engineering Education meeting in East Lansing, Mich.

He blamed the increased demand for engineers on mobilization needs and on the extreme advances in technology in the last several years. Engineering graduates will not be so numerous in the coming years, he predicted. Although this year's classes furnished 38,000, only about 26,000 are expected next year, with the number falling off to about 12,000 in 1954.

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