ASTRONOMY

Moving Giant Telescope Disk Provides a Problem

See Front Cover

LIGHT softly suffused through the great 200-inch disk for the world's largest telescope gave the photographer a rare opportunity to show its beauty.

The tricky problem of moving this important and delicate astronomical treasure from the Corning Glass Works in Corning, N. Y., to California, is giving engineers, scientists, and designers an unusual task. First protecting layers of felt and rubber, then a great sheet steel housing reinforced by steel beams, were part of the "crating" which alone weighed 15 tons. A specially constructed freight car was needed, and this attached to a special train.

For this unusual train, high speed will not be required nor desired. And as it slowly moves across the continent, instruments will record any unusual vibrations.

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HERPETOLOGY

St. Patrick Never Visited This Island of Japan

WHERE did the snakes go when St. Patrick, in the legend, drove them from Ireland? Maybe they went to Ireland's utter opposite, on the other side of the world off the coast of Korea. Although it is an ideal site for a lighthouse, the Japanese have left the island to its half-million venomous inhabitants.

This island belongs to the province of Kwantung, which, after the Russo-Japan war, was leased by Japan from China for a term of ninety-nine years. Small-Dragon-Mountain Island, as it is called, lies at the entrance to the Gulf of Pechili, eight nautical miles from the westernmost point of the province of the same name and twenty-three miles from Port Arthur.

In 1931, when an expedition of Japanese scientists was sent to Manchuria to study the natural resources of the country, Mr. Jumpei Sato, the biologist who led the party, was instructed to investigate Small-Dragon-Mountain Island as a possible site for a lighthouse. The investigators, although warned that the island was overrun with venomous snakes, were astonished at the snakes' paradise which they discovered.

The snakes belong to a species of moccasin not found in Japan. They are not swift in attacking human beings, preferring rather to escape. They are so numerous that it is impossible for a person to walk even a few feet without encountering them, and they are easily captured by means of a forked stick. The island lies in the path of the migratory birds of Manchuria; and in migrating seasons those birds which stay their flight to rest here are devoured by the snakes, which wind their coils around the branches of bush and tree and wait for their prey. When quail or siskin or swallow are not to be had, these snakes live upon wild soybeans, maize, arrowroot, mugwort, etc.

While one member of the party was taking moving pictures of the snakes, another suggested that the only way to rid the island of them would be by burning off the brush. But this suggestion was quickly set aside, because of the Chinese respect for the snake as the "little one" of the serpent family, the "big one" being the dragon, the Chinese national emblem.

Still another reason for protection is that the snake is—and has been for thousands of years—the source, the raw material, from which patent medicines have been made in China and throughout the Orient; and it would be an insult to Nature's bounty to destroy wantonly such a valuable supply.

Dr. Shuji Hassegawa, director of the Bacteriological Institute of the Government Dental College in Tokyo, a member of the expedition, made a report concerning this island to the Biological Club of Nippon. He stated that the scientists who made the investigation have recommended to the Government that Small-Dragon-Mountain Island be set aside as a permanent paradise for the rare snake species.

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GEOLOGY

Smithsonian Collector Gets Meteorites from Chile

THREE iron meteorites, and a large fragment of a fourth, have been brought back from Chile by Mark C. Bandy, who has just returned from a collecting expedition for the Smithsonian Institution and Harvard University in the northern part of that country. The largest of the meteorites weighs 65 pounds.

In addition to the "irons that fell from the sky," Mr. Bandy has brought with him a considerable collection of mineral specimens of terrestrial origin, some of which are of previously unknown types.

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IN SCIENC

ASTRONOMY

Astronomers Visit Harvard As Tercentenary Feature

HARVARD will attract astronomers from all over the world this summer as the result of the Harvard summer school of astronomy, Harvard's tercentenary celebration, and a meeting of the American Astronomical Society. During July, August and September visiting lecturers will include: Sir Arthur Eddington, Dr. Henry N. Russell of Princeton, Dr. Megh nad Saha of Allahabad, India, Dr. Antonie Pannekoek of Amsterdam, Dr. Knut Lundmark of Sweden, Dr. Frank Schlesinger of Yale, Dr. Paul W. Merrill of Mount Wilson Observatory, Dr. Peter van de Kamp of the University of Virginia, and Dr. Alfred C. Lane of Tufts.

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MEDICINE

Alcohol Injections and Diet for Heart Disease

INJECTIONS of alcohol into the nerves alongside the spine, removal of the thyroid gland and a diet of few calories are among the new methods of treating heart disease. These and many others were described by Dr. W. D. Stroud of Philadelphia at the meeting of the American College of Physicians.

Too often the heart is treated for symptoms that are brought on by disturbance of the sympathetic nervous system, Dr. Stroud pointed out. Doctors are finding more and more that prolonged constant antisyphilitic treatment is of definite value in preventing heart disease due to syphilitic infection.

As yet no vaccine has proved beneficial in arresting rheumatic heart disease, Dr. Stroud said.

Digitalis, nitroglycerin and rest continue to be standbys in treating certain forms of heart disease.

For the much-dreaded angina pectoris, Dr. Stroud said that a cheerful outlook, reassurance of the patient as to his condition, and a readjustment of his daily routine with mild sedatives continues to be beneficial.

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E FIELDS

ENGINEERING

Dean Vannevar Bush Is Awarded Lamme Medal

FOR his development of automatic machines for solving intricate equations of higher mathematics, Dr. Vannevar Bush, vice-president of Massachusetts Institute of Technology and Dean of Engineering, has been awarded the Lamme Medal of the American Institute of Electrical Engineers.

The Lamme medal is awarded annually for "meritorious achievement in the development of electrical apparatus or machinery."

Dr. Bush's calculating devices include the differential analyzer, which can solve difficult equations of calculus the solution of which by ordinary means would take days. It takes the drudgery out of higher mathematics, and thus is proving of great value in engineering problems.

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PUBLIC HEALTH

Escape Meningitis By Avoiding Crowds

AVOID crowds and crowded sleeping quarters if you wish to escape meningitis, serious epidemic disease which is fairly common in many parts of the country right now.

This is the best and, in fact, just about the only advice health authorities can give on the prevention of the disease. There is no way of vaccinating against it.

Meningitis is caused by a "germ," the meningococcus, which may be carried in the throats of healthy persons. Patients suffering from the disease should of course be isolated, but there is no practical way of isolating the healthy, unknown carriers. So the isolation has to be reversed. In other words, the person who wants to escape the disease when there is much of it in his neighborhood should isolate himself as much as practical.

Here are the rules for protecting himself against meningitis during an epidemic:

1. Avoid crowds, particularly crowded sleeping quarters.
2. Avoid chilling, bodily fatigue and strain, particularly if you know you have been exposed to the disease.
3. Be especially careful as to personal cleanliness and of course don't use another person's handkerchief, towel or eating utensils unless they have been well washed before you use them.
4. Increase the separation of individuals and the ventilation in living and sleeping quarters for such groups of people as are especially exposed to infection because of their occupation or some necessity of living conditions. This applies especially to barracks, camps, ships and dormitories.

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MEDICINE

Nervous Breakdown Termed State of Mind, Not Body

SICKNESS in which the patient's mind and nerves are upset—a nervous breakdown, for example—is not an ailing condition like typhoid fever or tuberculosis but a state of mind, Dr. Louis Casamajor of New York City told members of the American College of Physicians.

Typhoid fever is something which has happened inside the patient's body. Nervous and emotional sickness, on the other hand, is something "which has happened to the relationship of the patient to the world in which he has to live," Dr. Casamajor explained. The patient suffering from such nervous sickness is up against a situation or influence in his life which he cannot take in his stride. So he becomes ill just as he would if a disease "germ" got him down.

The conflict between his instinctive urge for security or satisfaction of personal wants and the demands of civilized society makes him sick. Some of the factors which may cause this kind of sickness are the stress of war, of modern business competition, Dr. Casamajor said.

Another theory of the causes of such nervous sickness is that the patient is over-sensitive to either emotion or physical sensation such as pain. This view was presented by Drs. Austen Fox Riggs and Horace K. Richardson of Stockbridge, Mass. In treating such patients, these doctors try first to make the patient understand the cause of his nervous ailment—psychoneurosis is the technical term—and then to help him use this understanding of himself in learning how to live more efficiently.

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ASTRONOMY

New Minor Planet Anteros "Just Missed" the Earth

THE NEW-FOUND minor planet, now christened Anteros by its Belgian discoverer, Prof. E. Delporte, may be only the size of a small mountain but it relatively just missed the earth as it rushed by on February 7.

The chances are remote, but direct impact with the earth on a later visit cannot be ruled out.

"The chances that it will actually collide with one of the planets is, of course, remote, although eventually that might happen," declared Dr. Harlow Shapley, director of Harvard College Observatory, in an announcement describing the newest find of astronomy.

At its nearest distance to the earth Anteros was only 1,500,000 miles away, said Dr. Shapley. For a science like astronomy, which measures distances in billions upon billions of miles, such proximity is almost grazing the surface. Most minor planets never come within 50,000,000 miles of the earth; or more than thirty times as far away.

"Since the plane of Anteros' orbit is near the plane of the orbits of the four inner planets," declared Dr. Shapley, "the gravitational disturbance of its motion can be very great. Mercury, Venus, Earth, Moon and Mars all disturb the asteroid's motion. Eventually the object may be thrown into a very long orbit, with a long period, or even ejected from the planetary system."

Anteros has sped nearly 21,000,000 miles in the last three weeks.

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PHYSIOLOGY

Report Milk Protein Aids Rickets Prevention

A PROTEIN substance found in milk and called lactalbumin helps in the prevention of rickets, Dr James A. Tobey, director of the health service of the Borden Co., reported at a Farm and Home Week meeting held at Cornell University.

The lactalbumin apparently does not have any rickets-preventing effect by itself, but when vitamin D is added to milk by irradiation with ultraviolet light, the dispersed lactalbumin increases the effectiveness of the vitamin's rickets-preventing power, Dr. Tobey explained. The discovery was made by Dr. George C. Supplee at Bainbridge, N. Y.

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