

Comet

A NINTH magnitude comet has been discovered by Drs. Schwassmann and Wachmann of the Hamburg Observatory at Bergedorf, a suburb of Hamburg, Germany.

This new arrival in the sky is brighter than any other comet that has come within view of telescopes in recent months but it will take further observations and astronomical computations to determine whether there is a chance that it will become visible to the naked eye.

When discovered on May 2 it was in the area of the sky between the constellations of Hercules and the Crown, directly east in the evening sky and practically overhead at about one o'clock in the morning. Its right ascension is sixteen hours, one minute and forty seconds, while its declination is north 35 degrees and 57 minutes. It has no tail and is moving at a fair heavenly gait of 32 minutes of arc per day as seen from the earth.

Schwassmann and Wachmann are names often connected with comets since they have observed and reported to the International Astronomical Bureau at Copenhagen at least one comet each year for the past few years.

Astronomy
Science News-Letter, May 17, 1930

Fresh at 80°

FOODS do not have to be cold to keep fresh.

Even when the temperature is as high as 80 degrees Fahrenheit, meat and fish stay in a good condition for several days when stored in an atmosphere of carbon dioxide, D. H. Killeffer, of New York City, has reported to the American Chemical Society.

The method is not new, for patents were issued on it long ago, Mr. Killeffer says. The meat and fish absorb the gas but are not injured by it, he found. Of course, carbon dioxide stored foods last much longer at low refrigerating temperatures.

Chemistry
Science News-Letter, May 17, 1930

All-Steel Homes

THE new homes of America will soon be built with steel floors. Then their frames and partitions will be made of steel, and finally the family will be sheltered under a steel roof.

This replacing of the old order of building by new methods and material was visioned by Lee H. Mil-

ler, a New York engineer, before the American Iron and Steel Institute. Mr. Miller believes the use of steel in home building has many advantages now overlooked but which will be realized when people give up their traditional ideas of how a house ought to be built.

The first step in transforming the homes of America to steel is to bring into the humble dwellings the same kind of floor that is used on palatial ocean liners and in steel mills. Ocean liners take advantage of steel's adaptability to beauty by covering it with cork tile in mosaic patterns, while the steel mills give this kind of floor the hardest usage to which it can be put.

Floors have been picked as the logical entrance of steel into home building because through the years they have been the most unsatisfactory part of buildings. Steel floors are fire-proof, they can be given frequent new surfaces of tile, their weight is less than that of floors now in use and they will reduce ceiling-floor thickness several inches.

Once people begin to build homes with steel floors they will more readily accept steel in other parts of the house, Mr. Miller said. Then it is planned to introduce frames, roofs and partitions of steel.

But before that time comes Mr. Miller believes entirely new methods of construction must be devised. The greatest fault he finds with the few steel homes already built is that they were erected too much like frame houses.

Engineering
Science News-Letter, May 17, 1930

Planetarium

SYNTHETIC stars shine upon a man-made celestial canopy since America's first planetarium opened in Chicago recently.

Located on Chicago's lakefront is a new building with a large low dome. Enter it and you will be able to see, upon demand, a light-painted replica of the heavens as they look at any time, past, present or future, and from many places on the face of the globe.

In the center of the dome's interior stands an apparatus containing the eyes and mechanical brain of the Zeiss planetarium. At each end of a complicated cylinder structure, as tall as several men, are large globular knobs studded with lenses. Within are lantern slides with star images upon them and behind are powerful electric lights that project

IN VARIOUS

the light pictures of stars upon the dome above.

Imagine a very clear night sky—the sort of a sky that one sees from a high mountain, far from the lights and dust of a city. Unlike the night sky ordinarily seen by city dwellers, the Milky Way can be seen down to the horizon and thousands of stars gaze down on the observer. And as imagination can have full reign, imagine that by some divinely conferred power, this sky can be altered at the will of the observer. It can be made to appear as the sky would be seen from any part of the earth, from the north pole to the south, or as it has appeared thousands of years ago, or will appear in the distant future. Such effects can not be seen in the real sky but they are obtained through the use of the planetarium.

The Adler Planetarium and Astronomical Museum is the gift of Max Adler, a retired Chicago business man. The instrument is the product of the ingenuity of Dr. W. Bauersfeld, engineer at the Carl Zeiss Optical Works at Jena, Germany. Prof. Philip Fox is director of the Adler planetarium.

While the Adler planetarium is the first in America, some fifteen similar instruments provide entertainment and instruction in European cities.

Astronomy
Science News-Letter, May 17, 1930

Shooting by Compass

GUNFIRE in future naval engagements may possibly be controlled by reference to compass direction instead of by the gunners or fire-control officers laying their sights directly on the target.

In the technical journal, *Engineering*, efforts of British naval authorities toward the solution of this problem are described. They have found that the ordinary magnetic compass is quite unreliable for the purpose of accurately directing fire, but that there is considerable promise in the gyroscope compass, which is not influenced by the masses of steel in the ships' hulls and armor, nor by the numerous motors and other electric appliances with which modern ships are filled.

Artillery on land, both field and coast guns, long since adopted the

SCIENCE FIELDS

method of "indirect fire," wherein the gunners never see their targets, but set their sights according to the directions of officers in observations posts or in aircraft. This was done in order to conceal the guns and thereby protect them.

The introduction of smoke screens and other concealing devices in naval tactics, together with the immensely increased ranges of modern naval guns, make it increasingly difficult for a ship's battery to be directed from the ship itself. It is expected that in possible future naval warfare most if not all of the gunfire and even the torpedo discharges will be directed by officers in observation aircraft high above the battle.

Military Science
Science News-Letter, May 17, 1930

Seek Earliest Americans

TWO scientific expeditions have just set out from the Smithsonian Institution for Alaska, to seek clues to the origin of the Eskimos and to pursue the quest for the mysterious first American immigrants.

Dr. Ales Hrdlicka, who has measured and studied thousands of Eskimos, both living and prehistoric types, is en route to the Kuskokwin River in southwestern Alaska. He hopes to fill in missing links in his chain of evidence as to what the relation may have been between the Eskimos and other American tribes, and how they link with the Asiatic tribes.

The second expedition about to depart is conducted by Henry B. Collins, Jr., archaeologist at the Smithsonian, accompanied by James A. Ford, of the Mississippi Department of Archives and History. This expedition is heading for St. Lawrence Island in the Bering Strait, where it will explore four ancient Eskimo villages a thousand years old or older.

"Until very recently it was not realized that the prehistoric Eskimos of Alaska were artistic and ambitious craft workers, far surpassing any modern Eskimos in their attainments," Mr. Collins said in outlining his plans. "St. Lawrence Island was a strategic center of this rare, lost culture of the Arctic. Two previous years of digging have revealed three stages of Eskimo life, showing that the artistic taste and the energy of the oldest known Eskimos eventual-

ly dwindled and degenerated.

"This year we hope to dig through the frozen soil into unprobed levels and so find out what led up to the Eskimo golden age."

The possibility of finding traces of far more ancient men, that is, some of the original immigrants who found their way from Asia into America, is another hope that spurs on the efforts of excavators in this Bering Strait region. Even if the earliest men entered America in inter-glacial times, when there was a land bridge across to Alaska, all the clues of their passing might not be lost, for the islands and shores remaining above water might still hold some of their tools or their bones, Mr. Collins believes.

Anthropology
Science News-Letter, May 17, 1930

Rescue

A SIMPLE, inexpensive radio set, made up of a fixed receiving coil and head phones, will enable trapped miners to receive messages from those working to rescue them.

Such a set has been found to receive Morse signals sent through 300 feet of sandstone and limestone over Mammoth Cave in Kentucky, said Prof. A. S. Eve, of McGill University, Montreal.

Radio
Science News-Letter, May 17, 1930

Fossil Leaves

LEAVES millions of years old which still hold all the colors of autumn have recently been found in the newly discovered fossil leaf beds of Wheeler County, central Oregon, by Dr. Ralph W. Chaney, paleobotanist of the Carnegie Institution of Washington. The perfect preservation of the coloring in the leaf impression is attributed to minerals in the matrix.

The fossil flora found in the region is millions of years older than was first surmised, Dr. Chaney says, and probably will throw interesting light on numerous extinct plant species that formed a semitropical jungle in the Mitchell area of primeval Oregon.

Dr. Chaney found in volcanic shale an intact leaf, bearing virtually the appearance it did when it fell from a jungle tree millions of years ago. This leaf was carefully sealed in its matrix and will be sent to the University of California at Berkeley.

The plant horizon is just above the beds of the Cretaceous seas which swept over ancient Oregon, leaving an abundance of marine fossil in the Mitchell area.

Paleobotany
Science News-Letter, May 17, 1930

Theelin

PATENT rights on the female sex hormone recently isolated by Drs. E. A. Doisy, C. D. Veler and S. A. Thayer have been assigned by these scientists to St. Louis University. The product, which was first announced at the Physiological Congress in Boston, has been called "Theelin." This hormone is responsible for the development of feminine characteristics in women and has been likened in its effect to the "love potion" of old romances. It may be used in treating disorders of women and girls.

Ever since the announcement of the isolation of the hormone, the scientists and the university have been faced with many troublesome problems. Quack remedies of various kinds have used the discovery in unjustifiable advertising appeals.

In the interest of public health, ethical advertising and recognized standards of pharmaceutical manufacture, the president of St. Louis University has created a Committee on Grants for Research to deal with the problem. The Committee is composed of the dean of the School of Medicine, the associate dean and the professor of biochemistry.

One manufacturing concern in the United States has been given the exclusive right to manufacture and sell the new product for eighteen months. By the terms of the agreement between this firm and the Committee on Grants for Research, all developments in the preparation of the new product, its practical applications, and the discovery of its properties must be shared alike by the university and the licensee or licensees under the patent rights. In this way cooperative research by all those interested in the manufacture and sale of the product seems assured. The eventual income, if any, is to be used entirely for the furtherance of research in the School of Medicine.

Medicine
Science News-Letter, May 17, 1930

Forced

THAT married women do not seek employment because they prefer to work is indicated by a study just completed by the United States Women's Bureau. Of a group of married women applying for work in Denver, Colorado, 90 per cent. said that need compelled them to work, and 74 per cent, reported that they received no support from their husbands.

Economics
Science News-Letter, May 17, 1930