BIOCHEMISTRY

Chemical Study Promises Cheaper Vitamin D

➤ CHEAPER WAYS of making vitamin D and various hormones were forecast through discovery of the manner in which NBS chemical, once a mere laboratory curiosity, takes part in transforming cheap sterols into valuable medicinal chemicals.

Dr. Geoffrey R. Buckwalter, research manager of F. H. Levey Co., Philadelphia, and Prof. Roderick A. Barnes of Rutgers University reported to the American Association for the Advancement of Science meeting in Philadelphia, new chemical substances that can cause transformations similar to the N-bromosuccinimide (NBS) chemical.

Science News Letter, January 5, 1952

ASTRONOMY

Short-Cut to Figuring Path of New Comet

➤ A SHORT-CUT to determining where a newly-discovered comet is going was reported by Dr. Allan D. Maxwell of Howard University at the American Astronomical Society meeting in Cleveland.

No all-night sessions to calculate a comet's position, Dr. Maxwell promised astronomers, if the comet is observed at approximately equal intervals. Much involved computation can be omitted. With a simple slide rule, within a few hours experts can calculate where to look for the comet a month or so ahead.

Use of the differences between given quantities rather than the quantities themselves is the secret of Dr. Maxwell's method. A trigonometric table is consulted at the beginning of the computation, but is not used again.

This new method was tried with good success on Comet Pajdusakova, the first comet reported this past year, Dr. Maxwell said. The results agreed fairly well with other, more involved computations requiring many hours. They were accurate enough to indicate where to look for the comet among the stars.

Science News Letter, January 5, 1952

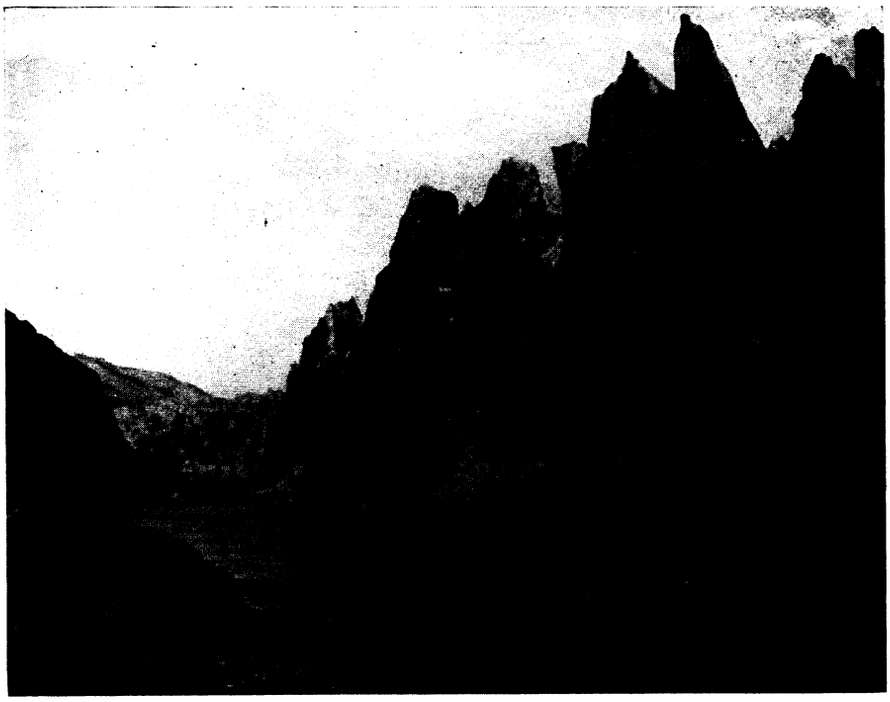
INVENTION

Picture Frame That Wafts Odors Gets U. S. Patent

➤ DELIGHTFUL AND appropriate odors will surround pictures of landscapes on the wall, a tangy smell of the ocean in the case of a seascape, with a picture frame, patented recently, which contains means of emitting the odors.

The theory behind the invention seems to be that a good picture should satisfy the nose as well as the eye. Patent 2,577,320 was issued to Julius Fenyo, Freeport, N. Y.

Science News Letter, January 5, 1952



***SELF-DUMPING LAKE**—Lake George, in the mountains of southeastern Alaska, dumps itself about Aug. 1 of each year, dropping the water level by more than 100 feet. Details of the water flow through a gorge in the ice and into the sea were studied last summer by Prof. Kirk H. Stone of the University of Wisconsin.*

ASTRONOMY

Spiral Nebulae Studied

Gigantic pinwheels in the heavens trail behind their spinning centers, series of short exposures of spiral nebulae, mostly edgewise, show.

➤ THE ARMS of spiral nebulae, those gigantic pinwheels in the heavens, trail behind their spinning centers, new evidence indicates.

A series of very short exposures were used by Dr. John B. Irwin of Indiana University to study these heavenly pinwheels of stars and hot gases, most of which are seen edgewise rather than full-view.

The longest exposure of the series was just over three minutes, in contrast with exposures of 20 minutes or more frequently used by astronomers to study these faint, hazy clouds of light.

The short exposures showed the position of the central "hot spot" of the nebulae with great accuracy, Dr. Irwin told the American Astronomical Society meeting in Cleveland. The brightest part of these watch-shaped galaxies is not centered in the apparent center of the spiral as it appears to us, he pointed out. Dust and gas dim our view of part of the nucleus. Thus the apparent center of brightness is displaced toward the galaxy's nearby edge.

The edge of the bright nucleus nearest us is always sharper and less diffuse than the far side, he stated. These two additional tests will help astronomers determine which way a particular galaxy is rotating.

The direction of rotation is of rather fundamental importance in the dynamical theory of these huge systems of stars and gases. Astronomers are not yet agreed as to which direction the spirals are spinning, or whether some are winding their arms up on themselves while others are unwinding.

The Milky Way galaxy, of which the sun is one star in a hundred billion, is believed to be a gigantic spiral. But because we are inside the spiral, we have been unable to discover whether the arms are being drawn inward or are moving outward.

To find which way a galaxy is rotating, astronomers must not only measure the