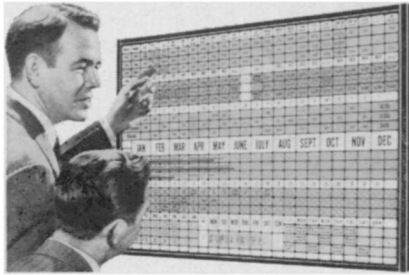


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INVENTION

Patents of the Week

A system for relating satellite cloud photographs to the earth's surface has been patented. A method for extracting drinking water from salt water was invented.

► A SYSTEM by which photographs of clouds taken from earth satellites can be related to earth's surface won patent No. 3,026,765 from the U.S. Patent Office.

The system could be used to help meteorologists determine which areas are cloudy and which are clear. Satellites taking pictures of earth's weather very rarely take them from directly above the earth's surface but mostly take their photographs at an oblique angle.

This makes it very difficult to correlate the features shown in weather satellite photographs with the exact area on the surface over which the pictures were taken. The equipment patented to do this job of correlation consists of a miniature replica of the earth-satellite system. The portion of the earth over which a particular picture was taken is represented by a dome of light-transmitting material.

The picture taken by the satellite is projected onto the outside, or convex, surface of the dome from a projector that is auto-

matically adjustable to a height above the dome proportional to the satellite height and automatically aimed in the same direction as the satellite was. At the same time, the lines of earth's latitudes and longitudes are projected onto the back, or concave, side of the dome. A camera then photographs the combined image.

A keyboard-operated system can be used to place the projector and the globe in the proper position. This system is more complicated than that used for photographs taken by the Tiros weather satellites, which does not relate the pictures exactly to earth's man-made lines of latitude and longitude.

Joseph Guarricini of Trenton, N. J., Gerald J. Herskowitz of Queens, N. Y., and Dr. John E. Keigler of Princeton, N. J., assigned rights to the method of "satellite picture rectification" to the U.S. Government through the Secretary of the Army.

Making Salt Water Potable

A method now being tested for extracting drinking water from salt water was awarded patent No. 3,027,320. Inventor Ben B. Buchanan of Bartlesville, Okla., assigned rights to Phillips Petroleum Company.

He devised a method for desalting sea water to take advantage of the favorable conditions for the formation and decomposition of hydrates at certain levels in the sea. This is done by using a pipe of fairly large diameter set vertically into the sea. The top end is closed, the bottom end, open.

Pumps and compressors are used to force a light hydrocarbon or other hydrate-forming compound to the bottom of the pipe. Since the hydrates formed are lighter than water, they rise in the pipe. In so doing, they melt and pure water can then be pumped from the top of the pipe.

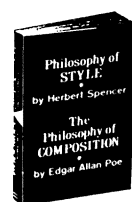
The only substantial amount of energy required, the inventor claims, is for recycling the hydrocarbon. Variations of this method are being tested in laboratories around the country, and the U.S. Department of Interior's saline water conversion section expects to build a pilot plant in Wrightsville Beach, N. C.

Russian Given Patent

The first Russian in several years to receive a U.S. patent was Nicholas Vladimirovitch Soodnizin of Moscow, USSR, who was awarded patent No. 3,025,733 for devising power-driven tongs that can be used to turn one section of pipe with respect to another.

Other Patents of Interest

Other patents of particular interest were: Patent No. 3,027,222, awarded to William Kenneth Wilkinson, Waynesboro, Va., for a method of making acrylonitrile fibers fire-



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proof. Rights were assigned to E. I. du Pont de Nemours and Company.

A rocket propulsion method for ejecting pilots from airplanes traveling at high speeds, granted patent No. 3,027,125. Inventor Nathaniel David Fulton of Bernardsville, N. J., assigned rights to Hydro-Space Technology, Inc., Wilmington, Del.

Patent No. 3,027,334, won by Harold A. Wright of Beaver, Pa., who assigned rights to Koppers Company, Inc. He devised a method of foaming styrene plastics using isopentane as the foaming agent.

A method of making buildings using tetrahedral building blocks to form the units, awarded patent No. 3,026,651. Inventor Donald L. Richter, Oakland, Calif., assigned rights to Kaiser Aluminum & Chemical Corporation, also of Oakland.

• Science News Letter, 81:238 April 14, 1962

IMMUNOLOGY

400 African Youths Given Safe Live Measles Shots

➤ SOME 400 West African children have been safely and effectively immunized with a live measles vaccine, the National Institutes of Health (NIH), Bethesda, Md., reported.

The vaccine (the live attenuated Edmonston strain) was used by an NIH medical team in a two-month pilot study in Ouagadougou, Upper Volta.

Measles claims an unusually high number of African children. It reportedly kills 25% to 50% of the youngsters in Upper Volta during the first few years of life.

The study, under the leadership of Dr. Harry Meyer Jr., was to learn whether the vaccine would be effective and safe when used on these children, as it has been found for American children.

Those immunized for the tests were 94% susceptible. All of the children safely developed antibodies after inoculation.

No serious reactions were encountered in any of the children, although most of them were suffering from one or more infections such as malaria, diarrhea, dysentery or pyogenic skin lesions.

The NIH medical team feels certain that the vaccine will provide a means of preventing West Africa's most dreaded childhood disease when it becomes available in large quantities in that region.

• Science News Letter, 81:239 April 14, 1962

Questions

IMMUNOLOGY—What are the percentages for children killed by measles in Upper Volta during the first years of life? p. 239.

OCEANOGRAPHY—How many feet below sea level can the new Seapup VI operate? p. 231.

PUBLIC HEALTH—How many children were referred to the courts for delinquency acts in 1960? p. 229.

Photographs: Cover, National Aeronautics and Space Administration; p. 227, U. S. Air Force; p. 229, Lederle Laboratories; p. 231, General Mills; p. 234, Marion A. Williams; p. 240, Tri-Play Toys Co.

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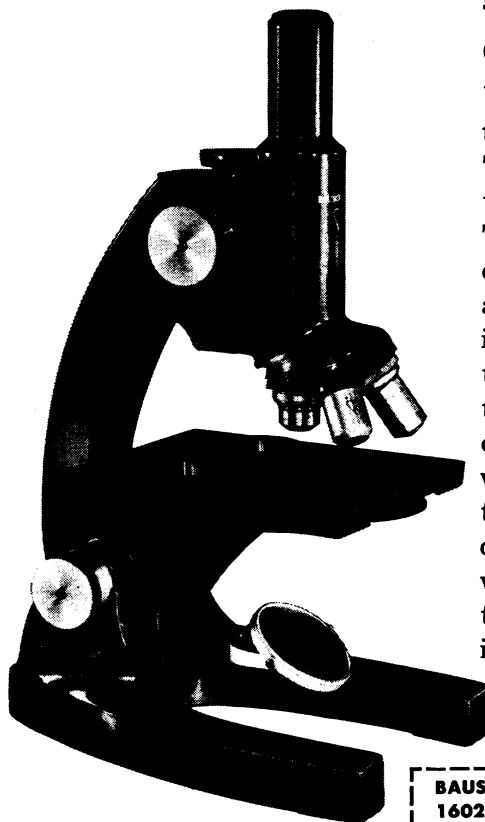
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