

# Special Awards Given

Outstanding finalists were chosen by scientists from Federal agencies and professional organizations for awards in their fields at the 17th International Science Fair

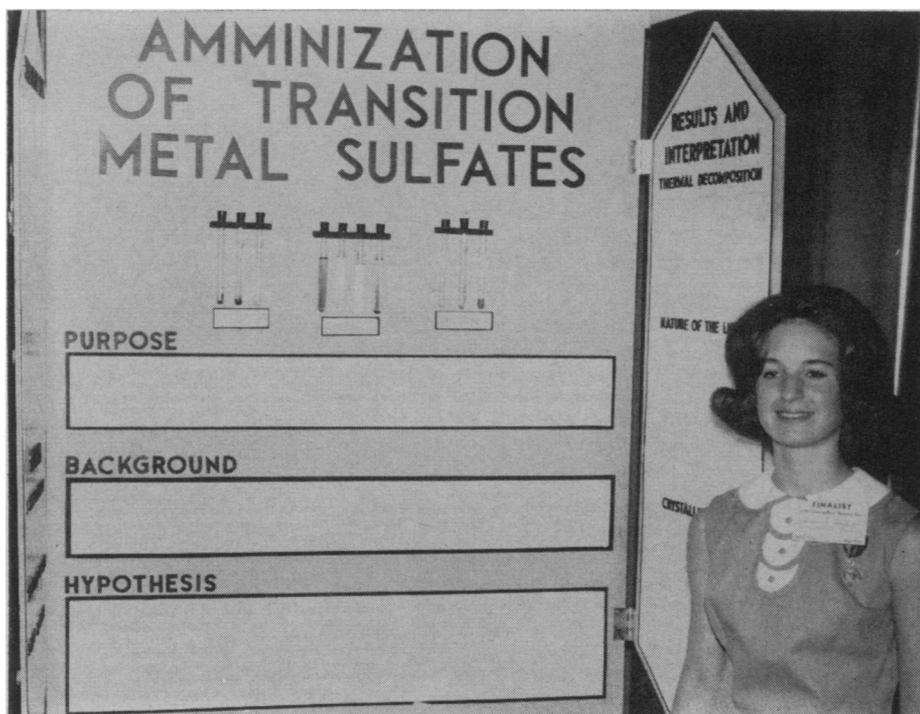
► SCIENTISTS from Federal agencies and professional organizations selected outstanding finalists at the 17th International Science Fair for awards in their specialized fields.

THE AMERICAN ASSOCIATION of PETROLEUM GEOLOGISTS gave a first award of a plaque and expenses-paid trip to attend and exhibit at the AAPG Convention in Los Angeles, Calif., to Larry Chick, 16, Meadowdale Sr. H.S., Lynnwood, Wash., for "Lunar Crater Analysis." He also will receive a summer assignment either at an earth-space research laboratory or a geological field camp. A second award of a plaque and a possible summer assignment went to Gerard C. Moerschell, 16, Arlington Sr. H.S., Poughkeepsie, N.Y., for "Index Fossils Used to Determine Origin of Local Fossils." Certificates were given to Rena M. Bonem, 18, Tucumcari H.S., Tucumcari, N. Mex.; Deborah E. Martens, 17, Newcastle H.S., Newcastle, Wyo.; and Pamela Whitman, 17, Archbishop Prendergast H.S., Drexel Hill, Pa.

THE AMERICAN CHEMICAL SOCIETY gave first awards to Paul R. Herstein, 15, Holy Rosary H.S., Flint, Mich., for "Synthesis of the Aliphatic Alpha-Amino Acids" and to Sharon L. Payne, 17, McLean H.S., McLean, Va., for "Complexing of Ions and Interionic Attractions in the Variation of the KSP." Both won plaques and \$100 awards to be used for science materials or study. First alternate awards of plaques went to Robert L. Jeffcoat, 18, Spartanburg H.S., Spartanburg, S.C., for "Spectral Changes in Chlorophyll Following Flash Illumination" and Maria Klein, 22, Chemischen Instituts Dr. Flad, Stuttgart, Germany, for "Refraction Index Iodine Value." All four students received subscriptions to the Journal of Chemical Education and their teachers received special plaques.

THE AMERICAN INSTITUTE of CHEMICAL ENGINEERS gave a certificate and \$100 to Scott A. Jenkins, 15, Valley H.S., Albuquerque, N. Mex., for "Disturbance Theory for Rocket Drag Reduction."

THE AMERICAN INSTITUTE of MINING METALLURGICAL and PETROLEUM ENGINEERS gave first awards of certificates and \$100 U.S. Savings Bonds to Donald R. Chesnut Jr., 17, London H.S., London, Ky., for "Glen Dean Correlations With Pelmatzoans in Eastern Kentucky"; Richard W. Edelman, 18, Nicolet H.S., Glendale, Wis., for "Internal Friction Effects"; and Gregory



CAROLYN C. GERHARDT

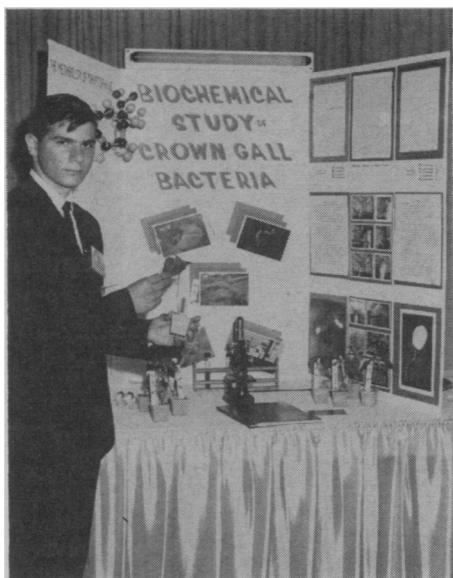
A. Snoke, 18, Central Catholic H.S., Fort Wayne, Ind., for "Modification of a Metal Alloy." Certificates were awarded to: Rena M. Bonem, 18, Tucumcari H.S., Tucumcari, N. Mex.; Marelda G. Fontenot, 16, Holy Ghost H.S., Opelousas, La.; Paul J. Hammon Jr., 15, West Anchorage H.S., Spenser, Alaska; George W. Ingram, 18, Aldine H.S., Houston, Texas; Robert B. Lambeth Jr., 17, Liberty H.S., Bedford, Va.; Steven P. Lund, 17, Bismarck H.S., Bismarck, N. Dak.; Deborah E. Martens, 17, Newcastle H.S., Newcastle, Wyo.; Ronald C. Miller, 17, John Marshall H.S., San Antonio, Texas; Gerard C. Moerschell, 16, Arlington Sr. H.S., Poughkeepsie, N.Y.; Gary F. Pesowski, 16, Aldershot H.S., Burlington, Ontario, Canada; Martin L. Proudfoot, 17, Breckinridge Training School, Morehead, Ky.; Robert A. Shaver, 17, Blytheville Sr. H.S., Blytheville, Ark.; Charles D. Walker, 18, Harding H.S., Oklahoma City, Okla.; and Theodore M. Willer, 17, Pine Village H.S., Pine Village, Ind.

THE AMERICAN PATENT LAW ASSOCIATION presented a first award of a \$100 U.S. Savings Bond to Carl H. Fromer, 15, Port Richmond H.S., Staten Island, N.Y., for "The Laser

and Outer Space Communications." Honorable mention certificates were given to James A. Bennett, 18, Moss Point H.S., Moss Point, Miss.; Robert S. Brubaker, 17, Meeker H.S., Meeker, Colo.; Paul R. Herstein, 15, Holy Rosary H.S., Flint, Mich.; and Howard S. Weiss, 17, Conard H.S., West Hartford, Conn.

THE AMERICAN PSYCHOLOGICAL ASSOCIATION gave a first award of a certificate and \$100 U.S. Savings Bond to Stuart Craig Jarvis, 16, Mayme S. Waggener H.S., Louisville, Ky., for "Blood-Sugar Hormones and the Hypothalamus." Certificates of merit went to Daniel Walker Becton, 18, Melbourne H.S., Melbourne, Fla.; Paul Fleisher, 17, Bel Air H.S., Bel Air, Md.; Ellen Middlecamp, 17, St. Francis Academy, Bethlehem, Pa.; Holt A. Murray Jr., 16, The Hun School of Princeton, Princeton, N.J.; and Debra J. Towry, 15, Northwestern Jr. H.S., Natchitoches, La.

THE AMERICAN SOCIETY for METALS gave a first award plaque and \$100 to Richard Wayne Edelman, 18, Nicolet H.S., Glendale, Wis., for "Internal Friction Effects." The second award plaque and \$75 went to H. Grady Rylander III, 18, Austin H.S., Austin,



ROBERT M. SWIFT

Texas, for "Construction of a Metal-Oxide-Surface Field-Effect Transistor."

THE AMERICAN SOCIETY FOR MICROBIOLOGY gave its first award plaque certificate of merit and \$100 to Robert M. Swift, 15 Mather H.S., Chicago, Ill., for "Biochemical Study of Crown Gall Bacteria." The second award plaque, certificate of merit and \$75 went to Barbara A. Hanson, 17, Highland H.S., Albuquerque, N. Mex., for "Photoreactivating Enzyme and Bacterial Viruses." Honorable mention plaques were awarded to John W. Benge, 17, Lovington H.S., Lovington, N. Mex.; Dan B. Dydek, 17, Arlington Heights H.S., Fort Worth, Texas; and Edward J. Emery, 17, New Albany H.S., New Albany, Ind.

THE ARMY AVIATION ASSOCIATION OF AMERICA presented five first awards of plaques and \$100 to Bruce W. Broding, 15, Edison Sr. H.S., Tulsa, Okla., for "Weather Pictures via the Satellites"; John Degallier, 18, Winona Sr. H.S., Winona, Minn., for "Foil Experiments in a Circular Wind Tunnel"; Rick L. Moncrief, 16, Bonnevillie Sr. H.S., Ogden, Utah, for "Electronics in Flight"; Gary M. Rudd, 17, Maplewood H.S., Nashville, Tenn., for "Ion-Propelled Aircraft"; and Greg Solberg, 17, Bottineau H.S., Bottineau, N. Dak., for "Aerospace Instrumentation and Trajectory Analysis."

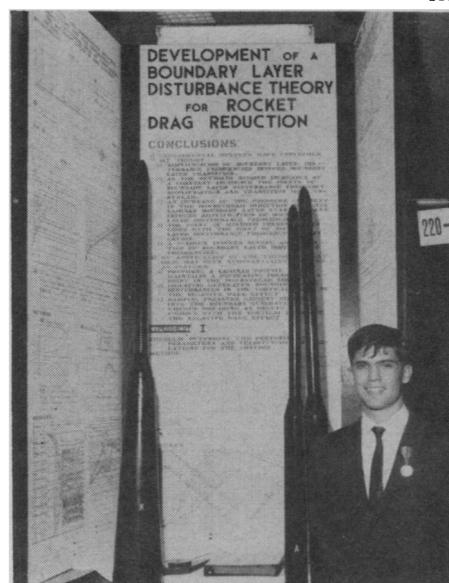
THE ENTOMOLOGICAL SOCIETY OF AMERICA awarded a \$100 Savings Bond and the current issue of the Annual Review of Entomology to Theodore I. King II, 17, St. Philip H.S., Battle Creek, Mich., for "Drosophila Genetics."

THE FEDERAL AVIATION AGENCY awarded plaques and escorted trips to Agency facilities to winners in three categories: Aviation Medicine—William Kirsch, 17, Alcee Fortier H.S., New Orleans, La., for "A Unialgal Culture of Chlamydomonas Algae for Space"; Aircraft and Engineering De-

sign—Michael C. Yaksh, 17, W. F. Dykes H.S., Atlanta, Ga., for "Shock Waves—Correlation of Experimental to Ideal Shock Mach Numbers for Different Gases"; Aviation Electronics—Carl H. Fromer, 15, Port Richmond H.S., Staten Island, N.Y., for "The Laser and Outer Space Communications."

THE NATIONAL AERONAUTICS and SPACE ADMINISTRATION awarded certificates of merit and two-day visits to NASA facilities to six winners for their creative scientific endeavor in space exploration: James Duggan, 17, Groveton H.S., Alexandria, Va., for "A Study of Cavitation"; Jeffrey S. Harris, 17, Valley H.S., Albuquerque, N. Mex., for "Effects of Various Electromagnetic Radiations on Photosynthesis"; H. Grady Rylander III, 18, Austin H.S., Austin, Texas, for "Construction of a Metal-Oxide-Surface Field-Effect Transistor"; Edward C. Svendsen, 17, Washington-Lee H.S., Arlington, Va., for "Derivation of the Maxwell-Lorentz Equations"; Theodore M. Willer, 17, Pine Village H.S., Pine Village, Ind., for "Plasma Jet Studies of Reentry Materials"; and Michael C. Yaksh, 17, W. F. Dykes H.S., Atlanta, Ga., for "Shock Waves—Correlation of Experimental to Ideal Shock Mach Numbers for Different Gases." Each of the six winners will name a teacher to accompany him on the trip.

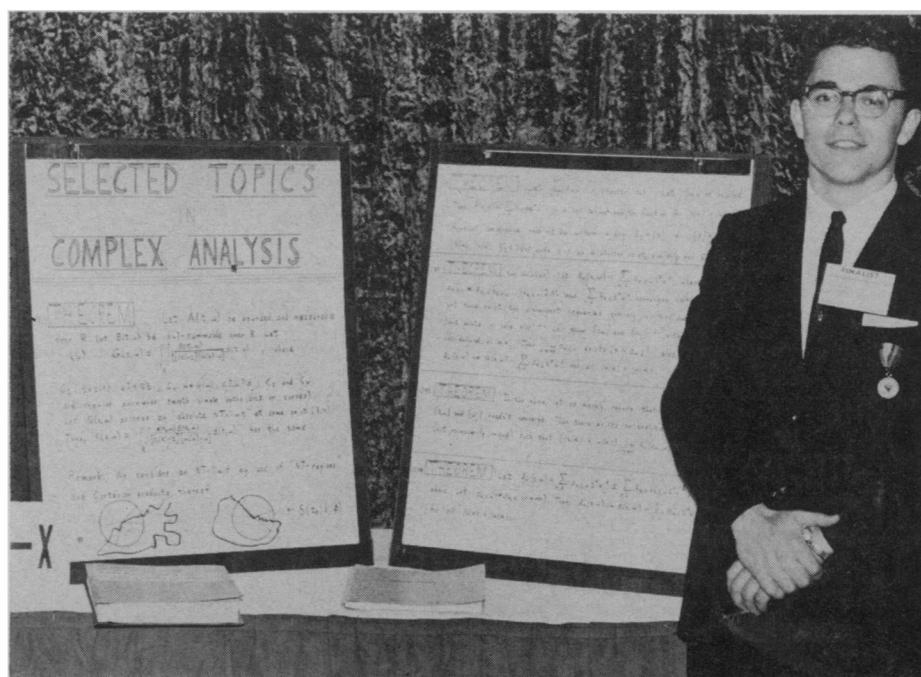
THE NATIONAL COMMITTEE for CAREERS in MEDICAL TECHNOLOGY gave a first award of a certificate and a summer job with the American Registry of Pathology at the Armed Forces Institute of Pathology in Washington, D.C., plus travel expenses and a subscription to Laboratory Investigation to Edwin R. Collier, 17, Mesquite H.S., Mesquite, Texas, for "The Immuno-



SCOTT A. JENKINS

logical Study of the Thymus Gland and Its Role in Transplanting." A citation was given to the winner of the second award: Laura Jones, 17, Copper Basin H.S., Copperhill, Tenn., for "Agglutination Induced by Seed and Fruit Extracts." Honorable mentions were received by Bettye J. Fortner, 18, South Pemiscot H.S., Steele, Mo., Martina E. Green, 17, Largo Sr. H.S., Largo, Fla.; Frank R. Rudy, 17, Susquehanna Twp. Sr. H.S., Harrisburg, Pa.; and Eugene E. Wolfel, 17, Central Catholic H.S., Allentown, Pa.

THE NATIONAL PEST CONTROL ASSOCIATION gave a certificate and \$100 for science materials and experimentation in biology to Donald Howard



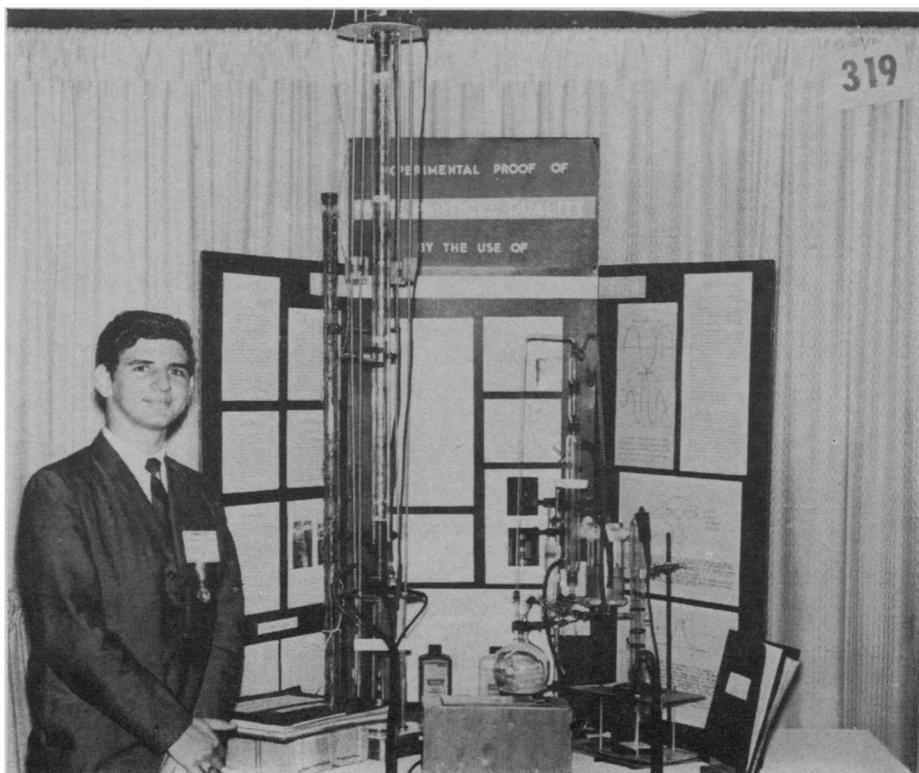
DENNIS A. HEJHAL

Atha, 17, Mission Bay H.S., San Diego, Calif., for "Regulation of Oxidation and Phosphorylation in Mitochondria."

THE OPTICAL SOCIETY OF AMERICA presented a first award of \$100 for materials, equipment or books to Henry B. Garrett, 18, Roswell Sr. H.S., Roswell, N. Mex., for "Photometric and Photographic Study of the Asteroids." The second award of \$75 went to Curtis Bryant, 16, Le Mars Community H.S., Le Mars, Iowa, for "Studying the Solar Atmosphere." Honorable Mentions were awarded to: James E. Harper III, 17, Oxon Hill Sr. H.S., Oxon Hill, Md.; and Ralph A. Kennedy, 15, Peru Prep. H.S., Peru, Nebr.

THE SOCIETY OF WOMEN ENGINEERS presented a \$100 U.S. Savings Bond to Carolyn A. Ross, 16, Governor Livingston Reg. H.S., Berkeley Heights, N.J., for "Experiments With Sonic Location." A second award of a \$25 U.S. Savings Bond was presented by the Chicago Section of SWE to Carolyn C. Gerhardt, 18, Terry Parker Sr. H.S., Jacksonville, Fla., for "Aminization of Transition Metal Sulfates."

THE U.S. ATOMIC ENERGY COMMISSION gave certificates and trips to Argonne National Laboratory to Dwight N. Bass, 18, Decatur H.S., Decatur, Ala., for "Induced Mutations as Applied to Bacterial Antibiosis"; John W. Benge, 17, Lovington H.S., Lovington, N. Mex., for "Isolation of the Radiation Protection Factor in *Micrococcus radiodurans*"; David C. Church, 15, Trinity H.S., Louisville, Ky., for "Determining Blood Cycles With Radio Tracers"; Mel Graham, 16, St. Anthony H.S., Baton Rouge, La., for "Effects of Radiation on Different Periods of Incubation"; Barbara A. Hanson, 17, Highland H.S., Albuquerque, N. Mex., for "Photoreactivating Enzyme and Bacterial Viruses"; James Kopel, 18, Miami Beach Sr. H.S., Miami Beach, Fla., for "Experimental Confirmation of Wave-Particle Duality by the Use of Electron and Ion"; Eddie G. Napps, 18, Longview H.S., Longview Texas, for "Van de Graaff Particle Accelerator"; Frank W. Nobles, 15, Hereford H.S., Hereford, Texas, for "Uptake and Movement of Radioactive Phosphorus in Plants"; Edward C. Svendsen, 17, Washington-Lee H.S., Arlington, Va., for "Derivation of the Maxwell-Lorentz Equations"; and Mary L. Wade, 18, Gilmer H.S., Gilmer, Texas, for "Oral Roentgenotherapy." Each winner will designate a teacher who also will be honored with an expenses-paid trip. Alternates were John G. Boland, 15, Wichita Falls H.S., Wichita Falls, Texas; Antoinetta Capriglione, 16, Mother Cabrini H.S., New York, N.Y.; Michael J. Cenko, 17, Marist H.S., Bayonne, N.J.; Larry E. Goad, 17, Mayme S. Waggener H.S., Louisville, Ky.; Jeffrey S. Harris, 17, Valley H.S., Albuquerque, N. Mex.; Danny M. Hyder, 17, Ardmore H.S.,



JAMES KOPEL

Ardmore, Okla.; Letantia B. Jankowski, 18, Immaculate Conception H.S., Lodi, N.J.; Kathryn M. Kondrasky, 17, Bishop Reilly H.S., Fresh Meadows, N.Y.; Gregory S. Martinelli, 17, Mora Central H.S., Watsonville, Calif.; and Donna L. Ray, 15, Jones Valley H.S., Birmingham, Ala.

THE PATENT OFFICE SOCIETY OF THE U.S. PATENT OFFICE of the U.S. Department of Commerce awarded certificates and \$75 U.S. Savings Bonds to winners in five categories. They are: Mechanical—Randal D. Crum, 16, Central H.S., Baton Rouge, La., for "Rocket Aerodynamics"; Chemical—Robert A. Lipson, 15, Curtis H.S., Staten Island, N.Y., for "Semiquinones as Electron Transfer Intermediates"; Electrical—Carl H. Fromer, 15, Port Richmond H.S., Staten Island, N.Y., for "The Laser and Outer Space Communications"; Medical—Joseph Hobbs, 17, T. W. Josey H.S., Augusta, Ga., for "Psychophysiological Effects of Rocket Flight on Albino Swiss Mice"; Design and Visual Impact—Jean M. Carlson, 18, Lewiston Sr. H.S., Lewiston, Idaho, for "Study of a Virus."

THE U.S. ARMY awarded a certificate and a week's trip to an Army Research facility to: Dennis A. Hejhal, 17, Lane Technical H.S., Chicago, Ill., for "Selected Topics in Complex Analysis"; Kenneth L. Hurst, 16, Ephrata Union H.S., Ephrata, Pa., for "Artificial Photo-Reduction," Robert L. Jeffcoat, 18, Spartanburg H.S., Spartanburg, S.C., for "Spectral

Changes in Chlorophyll Following Flash Illumination"; Steven P. Lund, 17, Bismarck H.S., Bismarck, N. Dak., for "Fort Union Group"; Alice E. Mitchell, 18, William Byrd H.S., Vinton, Va., for "Discovery of the Genotype of *Phasinus colchicus*"; Eddie G. Napps, 18, Longview H.S., Longview, Texas, for "Van de Graaff Particle Accelerator"; Beth A. Romanowich, 17, Point Loma H.S., San Diego, Calif., for "Establishing a Blood Group System in the Laboratory Rat"; Robert M. Swift, 15, Mather H.S., Chicago, Ill., for "Biochemical Study of Crown Gall Bacteria"; Lee A. Weisbecker, 16, High Point Central H.S., High Point, N.C., for "Perfusion of VX2 Carcinoma With Alkylating Agents *in vitro*"; Howard S. Weiss, 17, Conard H.S., West Hartford, Conn., for "The Injection Iraser in Communications." Eighteen alternates were given certificates: John W. Benge, 17, Lovington H.S., Lovington, N. Mex.; James A. Bennett, 18, Moss Point H.S., Moss Point, Miss.; Robert S. Brubaker, 17, Meeker H.S., Meeker, Colo.; Michael J. Cenko, 17, Marist H.S., Bayonne, N.J.; Larry Chick, 16, Meadowdale Sr. H.S., Lynnwood, Wash.; Dean G. Christakis, 17, Horace Mann H.S., Gary, Ind.; Carl H. Fromer, 15, Port Richmond H.S., Staten Island, N.Y.; Henry B. Garrett, 18, Roswell Sr. H.S., Roswell, N. Mex.; Larry E. Goad, 17, Mayme S. Waggener H.S., Louisville, Ky.; Paul R. Herstein, 15, Holy Rosary H.S., Flint, Mich.; Theodor Hildebrand, 19, Evangelischen  
(Continued on p. 422)

## Operation Cherry Blossom Selects Three

► **THREE TEEN-AGED** finalists at the 17th International Science Fair have been selected to go to Japan to exhibit their winning projects as representatives of the United States Armed Forces. The special award was sponsored jointly by the three services.

Kenneth L. Hurst, 16, Ephrata Union H.S., Ephrata, Pa., for "Artificial Photo-Reduction," selected by the U.S. Army; Felice R. Tillman, 18, Metairie Park Country Day School, Metairie, La., for "Survival at 40G—Hypothermic vs Normothermic Mice," selected by the U.S. Navy; and Letantia B. Jankowski, 18, Immaculate Conception H.S., Lodi, N.J., for "Radioprotection and Immunosuppression," selected by the U.S. Air Force, will be flown to Japan to exhibit at the 10th Annual Japan Student Science Awards' Science Fair in Tokyo early in November 1966.

Alternates for "Operation Cherry Blossom" are: Steven P. Lund, 17, Bismarck H.S., Bismarck, N. Dak. (U.S. Army); Larry G. Ferren, 17, Emporia Sr. H.S., Emporia, Kans. (U.S. Navy); and Curtis Bryant, 16, Le Mars Community H.S., Le Mars, Iowa (U.S. Air Force).

• *Science News*, 89:422 May 28, 1966



**OPERATION CHERRY BLOSSOM**—The three winners selected to exhibit their projects in Japan are (left to right) Kenneth L. Hurst, Felice R. Tillman and Letantia B. Jankowski.

## Special Awards Given

(Continued from p. 416)

Gymnasiums Zum grauen Kloster, Berlin, Germany; Allen P. Ho, 16, Arlington Sr. H.S., Poughkeepsie, N.Y.; Robert H. Roswell, 16, College H.S., Bartlesville, Okla.; Gunnar Selstam, 20, Goteborgs hogre samskola, Goteberg, Sweden; Robert L. Shuler Jr., 15, Greenwood H.S., Greenwood, Miss.; Douglas A. Simay, 15, Indio H.S., Indio, Calif.; Yoshito Suzuki, 17, Shizuoka H.S., Shimizu, Shizuoka-ken, Japan; Felice R. Tillman, 18, Metairie Park Country Day School, Metairie, La.

THE U.S. NAVY designated ten Navy Science Cruisers and awarded them Principal Award certificates and official Navy binoculars, in addition to science-oriented trips on Naval vessels and at land-based USN research facilities. The Cruisers are: Robert E. Bruninga, 18, Coffee H.S., Florence, Ala., "Ultrasonics—Principles and Applications"; Daniel C. Dugan, 17, Parkview H.S., Springfield, Mo., "Convection Current Crystallizer"; Larry G. Ferren, 17, Emporia Sr. H.S., Emporia, Kans., for "Brown Fat Implants in Mice"; Carl H. Fromer, 15, Port Richmond H.S., Staten Island, N.Y., for "The Laser and Outer Space Communications"; Henry G. Garrett, 18, Roswell Sr. H.S., Roswell, N. Mex., for "Photometric and Photographic Study of the Asteroids"; Henry R.

Halperin, 16, Benjamin Franklin Sr. H.S., New Orleans, La., for "Electrolysis and Fuel Cells Combined for Desalinization"; Dennis A. Hejhal, 17, Lane Technical H.S., Chicago, Ill., for "Selected Topics in Complex Analysis"; Charles Douglas Walker, 18, Harding H.S., Oklahoma City, Okla., for "Differential Thermal Analysis of Geological Specimens"; Eugene E. Wolfel, 17, Central Catholic H.S., Allentown, Pa., for "Biochemical Analysis of Carcinoma and Sarcoma in the Human Species"; and Jay E. Yourist, 17, Roy C. Start H.S., Toledo, Ohio, for "Bacterial Contamination in the Extracorporeal Circulation During Total Body Perfusion." This year for the first time two girls were awarded certificates and official Navy binoculars. They are: Patricia A. Farabaugh, 18, Grainger H.S., Kinston N.C., for "Liesegang Ring Formation"; and Felice R. Tillman, 18, Metairie Park Country Day School, Metairie, La., for "Survival at 40G—Hypothermic vs Normothermic Mice."

THE U.S. NAVAL OCEANOGRAPHIC OFFICE awarded cruises on oceanographic ships for two weeks to a month to Danny M. Hyder, 17, Ardmore H.S., Ardmore, Okla., for "Nuclear Magnetic Resonance"; and Carolyn A. Ross, 16, Governor Livingston Reg. H.S., Berkeley Heights, N.J., for "Ex-

periments With Sonic Location." Certificates were presented to four alternates: Tom Chiles Clark, 16, Jonesboro H.S., Jonesboro, Ark.; James E. Harper III, 17, Oxon Hill Sr. H.S., Oxon Hill, Md.; Thomas J. Hysong, 17, Woodward School for Boys, Washington, D.C.; and Deborah E. Martens, 17, Newcastle H.S., Newcastle, Wyo.

THE SOCIETY OF EXPLORATION GEOPHYSICISTS awarded expenses and transportation to ships and return for Danny M. Hyder, 17, Ardmore H.S., Ardmore, Okla., and Carolyn A. Ross, 16, Governor Livingston Reg. H.S., Berkeley Heights, N. J., winners of the U.S. Naval Oceanographic awards. Alternates are: Deborah E. Martens, 17, Newcastle H.S., Newcastle, Wyo., and Gary F. Pesowski, 16, Aldershot H.S., Burlington, Ontario, Canada.

THE U.S. AIR FORCE awarded plaques and expenses-paid trips to USAF research facilities in ten categories. USAF winners and alternates to their awards are: Aerospace Biological Sciences—Jeffrey S. Harris, 17, Valley H.S., Albuquerque, N. Mex., for "Effects of Various Electromagnetic Radiations on Photosynthesis" (Alternate: John W. Bengel, 17, Lovington H.S., Lovington, N. Mex.); Aerospace Chemistry—Steven G. O'Neal, 18, Elston Sr. H.S., Michigan City,

(Continued on p. 423)

# Current U. S. Patents

► A CONTRACEPTIVE device that is finding increasing use around the world to control human births and reduce the population explosion, a curved piece of plastic known as the Lippes Loop, was granted a patent by the U.S. Patent Office.

Its inventor, Dr. Jack Lippes of the State University of New York at Buffalo, was in India to check on use of the device there when the patent was awarded. India has one of the highest birth rates of any country in the world.

The Lippes Loop is cheap, safe and has proved effective during widespread testing. Although future research is expected to bring other birth control methods fulfilling these basic requirements, many millions of the Lippes type may be used before that day comes.

At least half a million Lippes Loops are now being used in the U.S., India, Taiwan and Korea. They are distributed abroad through Planned Parenthood Federation of America.

A key feature of the device for which Dr. Lippes was awarded patent 3,250,271 is the kind of plastic from which it is made. This plastic has a "memory" so that after it is molded into the desired shape, it can be straightened out for insertion, but will then return to its previous curved shape.

No one knows exactly how the Lippes Loop or any other form of intrauterine contraceptive device, or IUCD, actually prevents conception. All that is known is that any foreign object in the uterus in some way stops fertilization.

Although IUCD's cost only a few cents, the physician's charge for insertion can be quite high. However, once inserted, the device can remain effective for years. It is, therefore, more desirable for use in developing countries than today's birth control pills that have to be taken regularly and may cost as much as \$25 for a year's supply.

## Other Interesting Patents

Using optical fibers to transmit images and a method of making a bundle of such fibers so that the light in each does not interfere with the others was awarded patent 3,247,756. Dr. Walter P. Sigmund of Woodstock, Conn., assigned rights to American Optical Company, Southbridge, Mass.

Tiny semiconductors can be made even smaller, thanks to a method of applying a protective coating to them developed by Drs. John A. Perri and Jacob Riseman of Poughkeepsie, N.Y., who assigned rights to patent 3,247,428 to International Business Machines Corporation.

Patents 3,248,667 and 3,248,668 covering lasers made from calcium tungstate having small added amounts of either thulium or holmium were granted to Leo F. Johnson of North Plainfield, N.J., and Kurt Nassau of Springfield, N.J., who assigned rights to Bell Telephone Laboratories.

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## MEDICINE

### Diet Helps Children With Acute Leukemia

► CHILDREN suffering from acute leukemia, a fatal malignancy of the blood-forming organs, could live longer on a special low-protein diet free of the substance purine, it is hoped.

A team of Polish scientists reported that a greater number of children with leukemia must be studied, but that 13 leukemic children have responded to the special diet.

"The encouraging results of our observations require confirmation on a larger series of cases," the scientists said. However, the use of such a diet or some modification of it in acute leukemia, if their observations are confirmed, "may contribute to the prolongation of the life-span of children."

Drs. Boguslaw Halikowski, Jerzy Armata and Stanislaw Garwicz of the Second Paediatric Clinic, Medical Academy, Cracow, Poland, reported the findings.

• Science News, 89:423 May 28, 1966

### Special Awards Given

(Continued from p. 422)

Ind., for "Effect of Surface on the Cholesteric Phase" (Alternate: Carolyn C. Gerhardt, 18, Terry Parker Sr. H.S., Jacksonville, Fla.); Aerospace Dynamics—Scott A. Jenkins, 15, Valley H.S., Albuquerque, N. Mex., for "Disturbance Theory for Rocket Drag Reduction" (Alternate: Greg Solberg, 17, Bottineau H.S., Bottineau, N. Dak.); Aerospace Electronics and Communications—Howard S. Katz, 17, Springbrook H.S., Silver Spring, Md., for "Complete Video Recording System" (Alternate: Howard S. Weiss, 17, Conard H.S., West Hartford, Conn.); Aerospace Environmental Sciences—Curtis Bryant, 16, Le Mars Community

H.S., Le Mars, Iowa, for "Studying the Solar Atmosphere" (Alternate: Dale E. Fitz, 17, Arnett H.S., Arnett, Okla.); Aerospace Medicine—Letantia B. Janowski, 18, Immaculate Conception H.S., Lodi, N.J., for "Radioprotection and Immunosuppression" (Alternate: Felice R. Tillman, 18, Metairie Park Country Day School, Metairie, La.); Aerospace Physics—H. Grady Rylander III, 18, Austin H.S., Austin, Texas, for "Construction of a Metal-Oxide-Surface Field-Effect Transistor" (Alternate: Eddie G. Napps, 18, Longview H.S., Longview, Texas); Aerospace Psychological and Social Sciences—Rick P. Johnson, 17, North H.S., Evansville, Ind., for "Physical and Psychological Effects of Rapid Acceleration on Mice" (Alternate: Debra J. Towry, 15, Northwestern Jr. H.S., Natchitoches, La.); Aerospace Propulsion—Jeffrey B. Bentley, 16, Temple H.S., Temple, Texas, for "Effects of Oscillations on Solid Propellant Burning Rate" (Alternate: Lewis Perdue, 17, Murrah H.S., Jackson, Miss.); Mathematical and Computational Sciences—Jon Pitts, 18, Austin H.S., Austin, Texas, for "Automatic Location of Points From Stereoradiographs" (Alternate: Lawrence D. Meisel, 16, Yorktown H.S., Arlington, Va.).

THE AEROSPACE EDUCATION FOUNDATION OF THE AIR FORCE ASSOCIATION presented precision slide rules to each of the ten winners of the U.S. Air Force Awards.

• Science News, 89:414 May 28, 1966



With artificial satellites already launched and space travel almost a reality, astronomy has become today's fastest growing hobby. Exploring the skies with a telescope is a relaxing diversion for father and son alike. UNITRON's handbook contains full-page illustrated articles on astronomy, observing, telescopes and accessories. It is of interest to both beginners and advanced amateurs.

#### CONTENTS INCLUDE:

Observing the sun, moon, planets and wonders of the sky • Constellation map • Hints for observers • Glossary of telescope terms • How to choose a telescope • Astrophotography

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