

giving the same effect as a reversal of airplane propellers that is familiar to airline passengers in their landings. These blades are closed and tucked out of the way when the jet plane is actually in flight.

In the demonstration, a jet plane was actually made to move backwards on a landing strip through the use of this device, which is shown on the cover of this week's SCIENCE NEWS LETTER.

To provide wheel brakes of sufficient size to stop jets in their landing runs would require too much weight.

Aeronautical designers are looking forward to long-range missiles that will travel at the high speeds of 6,600 miles per hour. The temperatures reached at such speeds would be enough to melt any presently known materials. Such aerodynamic heat has been most pronounced when missiles that have climbed outside the earth's atmosphere re-enter it at an extremely high rate. The temperatures thus reached are sufficiently high to vaporize even diamonds.

Science News Letter, June 19, 1954

PSYCHIATRY

Attendance at School

► MANY A school child who answers "present" at daily roll call is nevertheless absent from school, as many teachers know.

The child is present physically, not playing truant, but he is absent "psychologically." He attends school but stops learning. Yet he is average or above average in intelligence and has had good marks and passed from grade to grade up to a certain point.

The point is when emotional conflicts grow too much for the child to handle. He feels that disaster is about to overtake him and his only defense is to stop learning.

This explanation for psychological absence from school was discovered in the case of five boys by Dr. Mira Talbot and Mrs. Isabelle Henson, psychiatric social worker, of the Board of Education, City of New York. Details of the study are reported in the *American Journal of Orthopsychiatry* (April).

The five boys were treated through psychiatric social work without psychoanalysis. Four of them made a complete recovery and were able to continue learning again.

The fifth was a failure in treatment from the social worker's viewpoint because he gave up school and went to work as soon as old enough. However, he and his mother are satisfied with the results and he is enjoying his work and social life and "acts as though he had been relieved of an overpowering burden."

All five boys had lost their fathers, three through serious illness and death, one through divorce and one through complete domination by his wife. All the boys had been "pressured" by their mothers for academic success and at the same time prevented from achieving it by their mothers who had conflicts of their own. All the

ASTRONOMY

Publish Sky Atlas

► THE FIRST section of a unique sky atlas, result of the most comprehensive survey of the heavens ever attempted, will be published next year.

As outstandingly beautiful as some of these photographs of the heavens are, probably only astronomical observatories and research institutions will place orders for the volume, since the cost is expected to be from \$1,600 to \$2,000 a copy, depending on the total number ordered.

The atlas will include a total of 1,758 14-inch-square photographs, covering all the sky visible from Palomar Mountain, taken with the 48-inch Schmidt telescope of Palomar Observatory. The negative prints will be copies of glass plates exposed in this telescope, each covering an area about as large as the Big Dipper's bowl.

The areas overlap slightly, and each one is photographed twice, on blue-sensitive

and red-sensitive plates, in immediate succession. Some features are present only on plates sensitive to one of these two colors.

The atlas, to be issued in three or four annual sections beginning next year, is the result of the National Geographic Society-Palomar Observatory Sky Survey. Mount Wilson and Palomar Observatories are jointly operated by the Carnegie Institution of Washington and the California Institute of Technology.

Science News Letter, June 19, 1954

SCIENCE NEWS LETTER

VOL. 65 JUNE 19, 1954 NO. 25

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N. St., N. W., Washington 6, D. C., NORTH 7-2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

Change of address: Three weeks notice is required. When ordering a change please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.

Copyright, 1954, by Science Service, Inc. Reproduction of any portion of SCIENCE NEWS LETTER is strictly prohibited. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicate services issued by Science Service. Science Service also publishes CHEMISTRY (monthly) and THINGS of Science (monthly).

Printed in U. S. A. Entered as second class matter at the post office at Washington, D. C., under the act of March 3, 1879. Acceptance for mailing at the special rate of postage provided for by Sec. 34.40, P. L. and R., 1948 Edition, paragraph (d) (act of February 28, 1925; 39 U. S. Code 283), authorized February 28, 1950. Established in mimeographed form March 18, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Readers' Guide to Periodical Literature, Abridged Guide, and the Engineering Index.

Member Audit Bureau of Circulation. Advertising Representatives: Howland and Howland, Inc., 1 E. 54th St., New York 22, Eldorado 5-5666, and 435 N. Michigan Ave., Chicago 11, Superior 7-6048.

SCIENCE SERVICE

The Institution for the Popularization of Science organized 1921 as a non-profit corporation.

Board of Trustees—Nominated by the American Association for the Advancement of Science: Karl Lark-Horowitz, Purdue University; Kirtley F. Mather, Harvard University; Paul B. Sears, Yale University. Nominated by the National Academy of Sciences: Homer W. Smith, New York University; Edward U. Condon, Corning Glass Works; Harlow Shapley, Harvard College Observatory. Nominated by the National Research Council: Duane Roller, American Association for the Advancement of Science; Ross G. Harrison, Yale University; Leonard Carmichael, Smithsonian Institution. Nominated by the Journalistic Profession: Neil H. Swanson, Baltimore, Md.; O. W. Riegel, Washington and Lee University; Michael A. Gorham, Flint Journal. Nominated by the Scripps Estate: Charles E. Scripps, Cincinnati, Ohio; Edward J. Meeman, Memphis Press-Scimitar; John T. O'Rourke, Washington Daily News.

Officers—President: Leonard Carmichael; Vice President and Chairman of Executive Committee: Charles E. Scripps; Treasurer: O. W. Riegel; Secretary: Watson Davis.

Staff—Director: Watson Davis. Writers: Jane Stafford, Marjorie Van de Water, Ann Ewing, Allen Long. Science Clubs of America: Joseph H. Kraus, Margaret E. Patterson. Photography: Fremont Davis. Sales and Advertising: Hallie Jenkins. Production: Priscilla Howe. Interlingua Division in New York: Alexander Gode, Hugh E. Blair, 80 E. 11th St., GRamercy 3-5410.

PUBLIC HEALTH

TB Major Problem Among Merchant Seamen

► TUBERCULOSIS IS a major problem among seafarers, an expert committee sponsored jointly by the World Health Organization and the International Labor Organization reports.

Crowded living conditions on board ship favor the spread of the disease. So do long voyages during which adequate treatment is not available. Visits to ports where there may be much more than the average amount of tuberculosis also favor its spread among seamen.

For these reasons, the committee recommended that all new men entering the merchant marine should be examined for tuberculosis, and that everything possible should be done to prevent their going to sea until the results of the examinations show they do not have TB.

Periodic reexaminations and rehabilitation of tuberculous seamen so they can return to the sea or to other work were further recommendations of the committee.

Science News Letter, June 19, 1954