

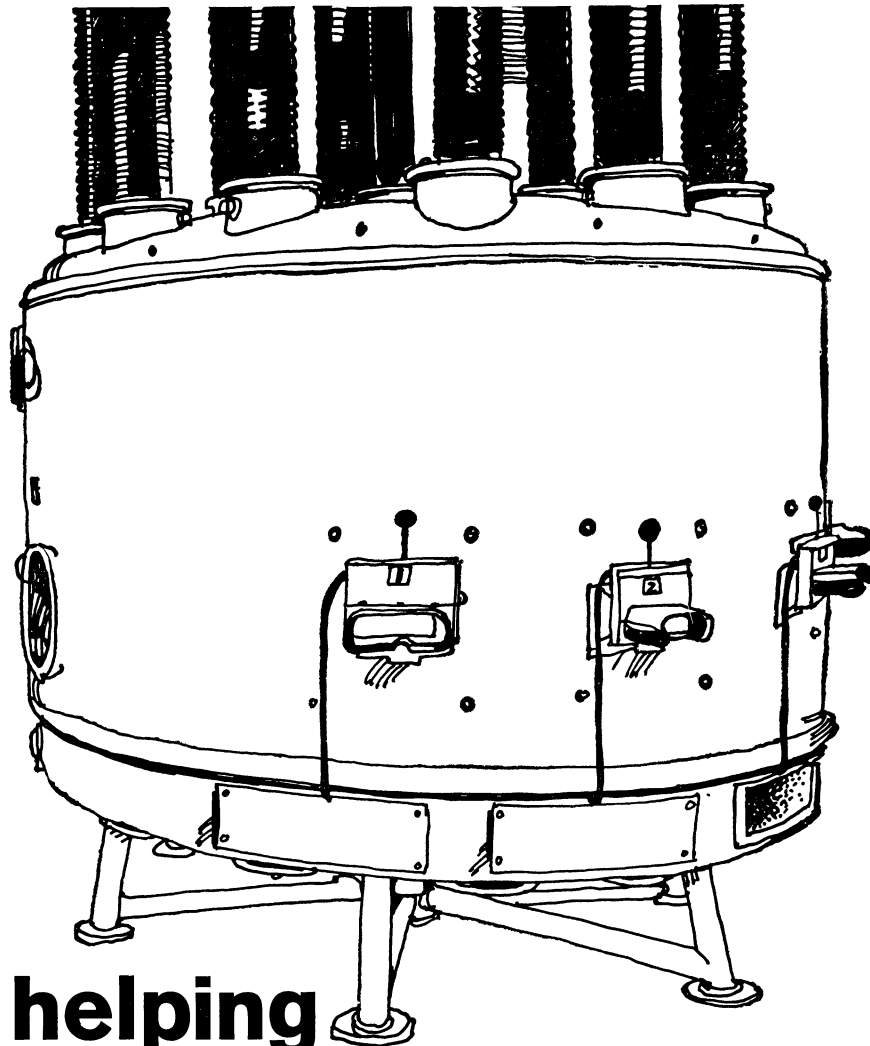
science ■ news

8 February 1969 **25c**
vol. 95 no. 6, pp. 129-152



overbred for science, he's
NOT EVEN A GOOD RAT

Nudging the Nucleus
Letter from Frankfurt
centrifuge consortium



It's helping America breathe easier.

This is a smog chamber.

And regularly a group of carefully screened volunteers gather in a room at the GM Research Laboratories in Warren, Michigan. They seat themselves around the 5-foot by 9-foot stainless steel chamber. At a signal from a researcher, they move close to the chamber and peer in through small individual portholes.

These people are exposing their eyes to artificial smog. It's all part of a study that GM's been working on for years to find out what effects various automobile exhaust mixtures have on smog formation and eye irritation. Inside the chamber, hundreds of lights closely simulate the spectrum of the Los Angeles noonday sun . . . and trigger the complex chemical reactions that result in smog.

GM's research has already paid some rich dividends. Recently, for example, our chemists discovered and identified a compound in the smog chamber that's 200 times more potent than formaldehyde, a known eye irritant.

Their discovery may pave the way to improved fuels and automobile controls. Already such basic research has helped our engineers develop emission controls installed on all new GM cars. These control systems reduce by two-thirds the pollution levels of 10 years ago!

Smog-free America may not arrive tomorrow, but the prospect is brighter. GM is seeing to it.

General Motors



Chevrolet • Pontiac • Oldsmobile • Buick • Cadillac • Opel • Fisher Body • Frigidaire • GMC Truck & Coach • Detroit Diesel • United Delco • AC Spark Plug • Allison • Electro-Motive • Earthmoving Equipment Division

NOTE: This advertising is being sponsored by General Motors in several youth publications. It is hoped that the subjects featured will serve to increase teen-ager interest in scientific studies and can be used, perhaps, to show how the things your students are learning are utilized in actual industrial activities. Reprints of this ad are available upon request. Simply write to General Motors, Advertising & Merchandising Section, General Motors Building, Detroit, Michigan 48202.

132 Our man in Amazonia

OF THE WEEK

134 To save the Green Hell

136 Deserting the quark

137 Exploring the sun
Trouble in the turbines

138 Pumping for quake prevention

139 At the root of progress

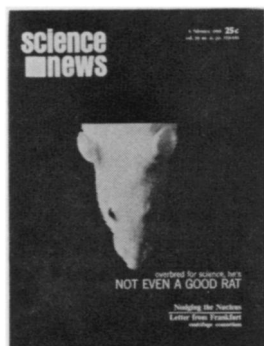
140 Talent search winners

141 **Life Sciences:** Inbred rabbits achieved; Light pollution poses threat to biologic rhythms; Dye technique salvages kidneys; Drug and cooling treatment for cancer; Enzyme package found in spinach; Tumor substance inhibits normal cells

142 **Medical Sciences:** Henry VIII was punch drunk; Pregnancy: high weight gain urged; Vitamin A promising for the treatment of acne; Drugs for mountain sickness being used in India; When to stop driving

143 **Chemistry:** Death in a spray can; Ice build-up prevented; No more Torrey Canyons; Double attack on sewage; Hydraulic fracturing tested; Rubber to combat disease

144 **Aerospace:** Supersonic transport revised design is smaller; Whither Australian space tracking program; B-70 program ends; Larger data flight recorders suggested to aid crash investigators; European airbus shrinks; Queen Elizabeth 2 to follow man-made star



White rats, bred from sports of the original Norwegian strain, are a mainstay of many behavioral laboratories. There is increasing evidence that what is measured from them is not true, even for rats. p. 145

A Science Service Publication
Vol. 95/February 8, 1969/No. 6
Science News Letter ©

Watson Davis, 1896-1967
Publisher: E. G. Sherburne Jr.

Editor: Warren Kornberg
Managing Editor: Frank Sartwell
Ass't. Managing Editor: Carl Behrens

DEPARTMENT EDITORS

Aerospace: Jonathan Eberhart
Behavioral Sciences: Ivan Kaye
Chemistry and Engineering: Edward Gross
Life Sciences: Barbara J. Culliton,
Christopher Weathersbee

Medicine: Faye Marley

Physical Sciences and Astronomy:
Ann Ewing, Dietrick E. Thomsen

Illustrations: Marilyn Raleigh

Production: Marilyn Binn

New Ideas: Ruby Yoshioka

Books: Margit Friedrich

Assistant to the Editor:
Nadine Clement

Editorial Assistant: Marjory Scarlet

Advertising Director: Louis D. Young
Circulation Manager: Marcia Nelson

FROM ABROAD

150 **Letter from Frankfurt:** Centrifuge to the fore

IN SCIENCE FIELDS

145 **Research animals:** Not even good rats

147 **Physics:** Nudging the nucleus

133 Films of the Week

133 Letter to the Editor

148 Books of the Week

SCIENCE SERVICE

Institution for the Popularization of Science founded 1921; a non-profit corporation

Board of Trustees—Nominated by the American Association for the Advancement of Science: **Athelstan F. Spilhaus**, Franklin Institute; **Wallace R. Brode** (Treasurer), American Chemical Society, Washington, D. C.; **Bowen C. Dees**, University of Arizona. Nominated by the National Academy of Sciences: **Henry Allen Moe**, The Clark Foundation; **Harlow Shapley**, Harvard College Observatory; **Allen V. Astin**, National Bureau of Standards. Nominated by the National Research Council: **Glenn T. Seaborg** (President), U.S. Atomic Energy Commission; **Leonard Carmichael**, National Geographic Society; **John R. Whinnery**, University of California, Berkeley. Nominated by the Journalistic Profession: **O. W. Riegel** (Secretary), Washington and Lee University; **Gordon B. Fister**, Call-Chronicle Newspapers; **John Troan**, Pittsburgh Press; **Ludwell Denny**, Scripps-Howard Newspapers; **Edward W. Scripps II** (Vice President), Edward W. Scripps Trust.

Director: E. G. Sherburne Jr.; Assistant Director: Dorothy Schriver; Staff: Youth Division: Howard Weisbrod; Photography: Fremont Davis.