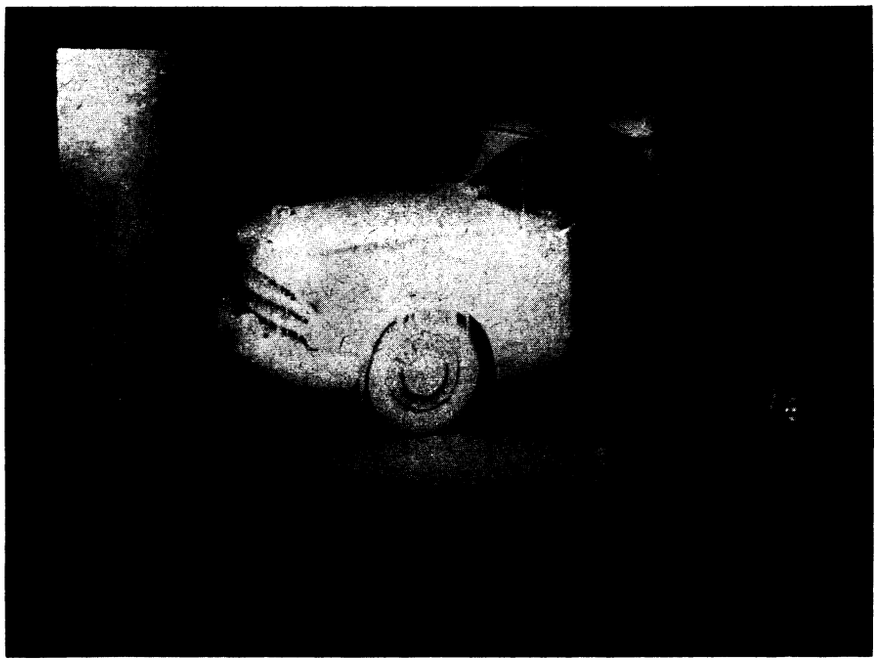

JANUARY IN AUGUST—A technician at a Chrysler Corporation plant watches as a colleague cold tests an automobile under simulated extreme winter conditions. The engineers must wear special cold weather clothing to work in the temperatures as low as 40 degrees below zero Fahrenheit.

ENGINEERING

Hints on Cooling Houses

New booklet gives methods for keeping houses cool in the summer without air-conditioning. Suggestions include use of light-colored venetian blinds outside of house.

➤ YOU CAN do a lot to keep your house cool in the summer without buying air-conditioning equipment.

The Small Homes Council at the University of Illinois advises that sunlight should be prevented from beating down on house walls and windows where possible. Trees, overhangs, window louvers or blinds, awnings, louver-type insect screens and light-colored walls all can help offset the onslaught of a blistering summer sun.

The Council reports that light-colored venetian blinds used outside the house are 70% effective in reducing heat load, but are only 40% effective inside the house. Similarly, a fully drawn, light-colored roller shade is 55% effective in reducing heat load, but a dark shade is only 20% effective.

Since light colors reflect heat, it also is desirable to have a light-colored roof.

Ceilings should be well insulated to prevent heat from getting into the house. The space under the roof should be well ventilated so hot air can escape. Forced-draft ventilating fans can be used to pull cool night air into the house. This gives better results than opening windows and doors.

In an eight-page free circular of its findings, the Council reports air-conditioning equipment can be installed when other methods do not produce the desired summer comfort. Some air-conditioning equipment combines with warm-air or hot-water heat circulation systems, and some machines are complete in themselves. (See p. 92.)

Other points listed in the booklet include: orienting new houses so that major walls and windows get a minimum of strong sunlight, and proper placement of windows and doors to fully use natural breezes.

Simple illustrations and charts show how shadows of overhangs can be calculated for different latitudes, how to select draft fans for houses of different floor space, how roofs and walls should be ventilated and how to select the proper cooling capacity of air-conditioning equipment.

Prepared by S. F. Gilman, W. S. Harris, S. Konzo, R. W. Roose, W. F. Stoecker, R. A. Jones and James T. Lendrum, the circular "Summer Comfort" can be obtained from the Small Homes Council, Mumford House, University of Illinois.

Science News Letter, August 8, 1953

PUBLIC HEALTH

Scientists Declare War on Air Pollution

➤ SCIENTISTS HAVE declared war on air pollution. At least 37 research institutions in the United States and Canada now are looking into various aspects of the problem, the American Society of Mechanical Engineers reports.

Air pollution has been so severe at times that it actually has killed people. The Donora, Pa., smog of October 1948 claimed 20 lives. Prolonged and intense fogs in Europe and London last winter ran up a death toll exceeding 4,000.

In its first report on who is doing what in air pollution, the ASME lists 37 organizations and the nature of work being conducted by them. Among these are:

U. S. Atomic Energy Commission — Studies on radioactive dust from nuclear detonations.

Princeton University—Effect of loss of sunlight on human health.

University of Cincinnati—Establishment of character and source of air pollution; development of analytical methods; health effects on animals and man.

Ontario Research Foundation—Measurements of dustfall; atmospheric dust, gas and vapor concentrations; meteorological studies, and determination of "corrosion potential."

The Johns Hopkins University—Chronic exposures to air pollutants and acute infections; performance of institutional incinerators and disposal of radioactive wastes.

California Institute of Technology—Analysis of Los Angeles smog for organic pollutants and their transformation products.

University of Illinois—Causes of smog in Los Angeles and other cities.

Science News Letter, August 8, 1953

INVENTION

Sparking Machine Chases Birds From Buildings

➤ PIGEONS, STARLINGS and other birds that like to roost in places that annoy city dwellers may get the shock of their lives some day when they find their favorite haunts no longer tenable.

John H. Just of Syracuse, N. Y., has received a patent on his "apparatus for controlling bird nuisance." Installed where birds congregate, it throws sparks at the fowl.

Three wires are strung along building ledges. Two of the wires are connected to ground, the third is fed by a high-voltage generator. When a bird disturbs the field of the high-voltage wire, a spark shoots out and crackles through the bird's feathers so as to "permanently discourage and frighten it away from the gathering place or roost." The spark will not hurt the bird, but it will ruffle his dignity.

Inventor Just assigned rights on his patent, No. 2,647,228, to Eli Gingold, also of Syracuse.

Science News Letter, August 8, 1953

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