

catalyst or by means of a forced-air afterburner.

Chemical catalysts promote full oxidation without themselves undergoing material change. A small tank of platinum pellets in the exhaust system near the motor block, or in the muffler, is efficient, but too expensive. Price alone is not the only drawback to platinum and other catalysts. The lead added to most gasolines to improve anti-knock qualities "poisons" the catalyst by gradually building up a coating that prevents contact with the gases.

Perhaps an effective answer to the automobile air pollution problem would be to reduce the power and so-called "performance" of automobiles. Scientists have implied at public meetings and stated flatly in private that the motorist has brought the exhaust problem on himself with demands for ever-increasing power and more and more "instantaneous performance." The total effort of today's engines is directed toward meeting these demands and there is nothing left to cope with exhausts.

However, as Drs. Friedman and Greifer stated while assembling their new burner in the Alexandria laboratory, "smog is deadly serious, but the most pressing problem brought upon us by the automobile still stems from the person behind the wheel—traffic accidents still lead fumes in killing people."

Science News Letter, November 30, 1957

## Do You Know?

Many *migrating birds* fly at night because they hunt food in the daytime and seek to avoid the turbulent air of daylight hours.

*Porelon* is a new basic synthetic material in which liquid can be contained, as it is being manufactured, then given off at a predetermined rate.

Today, more than 40,000,000 people, approximately 30% of the total U. S. *population*, are over 45.

Hourly *fuel* consumption of turbine aircraft will be from 2,000 to 2,400 gallons, exceeding the yearly consumption of two passenger cars.

## Questions

**ANTHROPOLOGY**—What is another name for pigweed? p. 345.

**GEOPHYSICS**—What is the name of the region of the atmosphere in which airglow occurs? p. 339.

**MEDICINE**—How is the steroid aldosterone related to sodium storage in the body? p. 344.

Photographs: Cover and p. 339, Massachusetts Institute of Technology; p. 343, Bell Telephone Laboratories; p. 346, Stanford Research Institute; p. 352, Mobile Racks, Inc.

### METEOROLOGY

# First Snows Predicted

► A WEATHER Bureau table predicting dates for the year's first one-inch snowfall is now available.

Although the list was published after the first post-summer snow in many parts of the country, it should still prove valuable to snow tire and snow-removal equipment manufacturers, as well as to those responsible for removing snow from streets and highways.

The table shows the first days in fall or winter on which one inch or more of snowfall is likely to occur, and the chances of this occurrence. It was prepared by H. C. S. Thom of the Weather Bureau's office of climatology.

The table lists probabilities for 164 cities in the United States and Canada. Some representative dates for a few scattered cities are:

New York—on the average of once in 20 years the first one-inch snowfall will hit before Nov. 20; once in ten years before

Nov. 27; once in three years before Dec. 10, and nine out of ten years before Jan. 12. A snowfall of at least one inch will occur 98 out of every 100 years.

Washington, D.C.—average of one in 20 years before Nov. 5; one in ten before Nov. 15; one in three before Dec. 7, and nine out of ten before Jan. 28. Occurs every year.

Detroit—average of one in 20 years before Nov. 3; one in ten before Nov. 9; one in three before No. 22, and nine out of ten before Dec. 23. Occurs every year.

Chicago—average of one in 20 years before Nov. 5; one in ten before Nov. 12; one in three before No. 26, and nine out of ten before Dec. 30. Occurs every year.

Seattle, Wash.—average of one in 20 years before Nov. 20; one in ten before Dec. 2, and one in three before Dec. 27. Occurs 72 out of 100 years.

Mr. Thom's report appears in the Weather Bureau's *Monthly Weather Review* (Aug.).

Science News Letter, November 30, 1957

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