

the police force—double it, if you wish—and put the men on the beat with a stick in their hand and a gun at the side.”

Young people will stay out of trouble if they keep busy, said Charles Gubser (R-Calif.). “Let them work,” he recommended, “and you solve the delinquency problem.”

Others referred to the “age of anxiety” children live in, to violence on television and in comic books, to lack of love, lack of education, lack of job opportunities, to slums and poverty, to the deterioration of human values. A variety of approaches and alternatives was suggested, but thanks largely to the efforts of Education subcom-

mittee chairman Edith Green (D-Oreg.) the legislation was finally passed. It became a law on Sept. 22, 1961.

Supporters of the Act recognize that no city in the U.S. is yet coping successfully with its juvenile delinquents. But they believe that the marshalling of all relevant approaches in a well-planned and well-coordinated effort will provide successful models for future programs. And eventually, they hope, this multifaceted attack on the multifaceted problem of juvenile delinquency will enable this country to find useful roles for its purposeless, destructive young.

• Science News Letter, 84:202 Sept. 28, 1963

PUBLIC HEALTH

## Leaf-Burning Pollutes Air

► THE FRAGRANT CUSTOM of burning fall leaves is doomed in modern American civilization.

Burning leaves and trash in the backyard is an “enormous source” of air pollution, Charles D. Yaffe, sanitary engineer director at the division of air pollution, U. S. Public Health Service in Washington, told SCIENCE SERVICE.

Autumn leaves should be hauled away or put in a compost pile—but never burned at home, he said.

The smoke that smells so good actually is ashes and half-burned particles that contribute dangerous litter to the air.

Another source of air pollution is an improperly working furnace, Mr. Yaffe pointed out. Apartment and homeowners should have their furnaces inspected by official agents who can offer suggestions for improving the furnace operation and for cutting expensive waste.

Cars in poor working condition not only cost money but contribute to the ever-thickening haze of chemicals in the air. In essence, Mr. Yaffe explained, you are paying out money to pollute the air.

More frequent checks at the garage to correct faulty piston rings and exhaust equipment would lower the working costs on the car and also help keep the air a bit cleaner.

Effective solutions to our air pollution problems lie in large-scale clean-up practices in industries and cities. In an effort to keep the air clean before it gets dirty, air pollution authorities here believe that many regulations and inventions are already clearing the skies.

For instance, cars are now manufactured with an exhaust hose that sends half-burned fumes back to the engine where they are completely burned.

In certain parts of the country, industries maintain filtering devices in their furnaces to keep the belching smoke clean. Cities such as Los Angeles, St. Louis and Chicago have enforced rules that are successfully keeping back the gray pall of smoke, smog and dust.

Americans are gradually becoming more aware of this black problem that costs the nation as much as \$11 billion a year in destroyed crops and damaged property.

They are hoping for fast action on a needed air pollution bill now before the Senate which will obtain more research and enforce more regulations to control the littering of America's air.

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GENERAL SCIENCE

## NSF Hopes to Double Top Research Centers

► THE NATIONAL SCIENCE FOUNDATION is planning to start next year an enormous project aimed at doubling the number of first-class scientific centers in the country within ten years.

The effect would be to allow more colleges to get bigger shares of federal science grants. Although 1,107 institutions qualify at present for the grants, half of the money goes to the same 20 large universities, known as “centers of excellence.”

The plan, which must be approved by Congress, is to give large sums of money to a selected score of schools. These schools would be those already having top-rate teaching staffs in particular fields of science but lacking funds to get them over the hump and into NSF's “excellence” category.

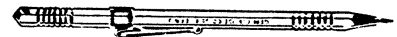
NSF, which is charged with doling out federal money for basic scientific research, also is planning to start next year a “traineeship program.” It is designed to build up the number of first-year graduate students engaged in significant studies.

Science departments of colleges would send NSF their ideas for postgraduate research projects. If the NSF staff likes the projects, it will send money to the departments, which in turn would give the money to the graduates picked to do the research.

The traineeship program is an outgrowth of a recent manpower study which showed that by 1970 the country will need two and a half times its present number of Ph.D.'s in the engineering, mathematical and physical sciences.

The President's National Science Board has approved both the center development and traineeship programs in principle, but not in detail, Dr. Geoffrey Keller, assistant director of NSF, told the American Chemical Society meeting.

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