



GETS MORE HEAT—With the "down-draft burner," being placed into the firing door of a furnace by Prof. Julian R. Fellows of the University of Illinois, soft coal can be burned without smoke, thus getting more heat from the fuel.

The coal is carefully piled in a cone in the center of the fire-box. The larger pieces roll to the walls of the firebox where the air will flow freely through them and make a hot ring of flame next to the heating surface. The finer pieces remain in the center and give off gases that are lighted by the flame from the larger outer pieces.

When high-volatile bituminous is used, the V method of piling is recommended. This means heaping the coal in a sloping pile on one side of the fire-box. This leaves red coals on one side and fresh coal on the other. The top of the fresh coal is quickly lighted by the flame from the other and the gases coming from it are consumed as they pass through the burning layer. On the next firing the fresh coal is put on the opposite side.

Burns Evenly

When burning anthracite in the shovel-feed furnace, the top surface of the coal is kept about on a level with the bottom of the feed door. It burns evenly throughout. Care should be taken not to shake the grates too much. Some ashes should be left on them or the hot coals may warp or burn them. Enough of the ashes must be shaken out to permit air to pass to the burning coals above, otherwise complete combustion will not take place.

The principal loss of heat from a poorly constructed house is through crevices around windows and doors, or under the

eaves, through the glass in the window panes or through spaces between window sashes and frames.

Stuffing the crevices with rags or with some of the commercially available special materials will stop most of the losses through them. Storm windows prevent leakage through the glass itself. Weather stripping on windows and doors closes the spaces between them and their frames.

Science News Letter, November 3, 1945

AERONAUTICS

Restricted Data by NACA To Be Released Now

► **WITHHELD** from the public by wartime restrictions, over 300 technical reports and notes on aerodynamics, aircraft structures, power plants and general scientific operation problems will soon be released to technical libraries, schools and to the aircraft industry by the National Advisory Committee for Aeronautics.

The announcement of declassification of these reports was made by Dr. G. W. Lewis, director of aeronautical research of NACA. Covering every problem encountered by aeronautical engineers, these data will be of great value to aeronautical engineering students as well as

to manufacturers. The data were compiled at the NACA laboratories at Langley Field, Va., and its newly announced supersonic research laboratory in Cleveland.

Science News Letter, November 3, 1945

ASTRONOMY

Scientists on Trail Of Brilliant Fireball

► **SCIENTISTS** are on the trail of a fireball momentarily of full moon brilliance that flashed across middle eastern United States at about 3 a.m. on the morning of Oct. 21.

Fragmentary reports have been received from the New York and Philadelphia area by Dr. Charles P. Olivier of the Flower Observatory, Upper Darby, Pa., who is president of the American Meteor Society.

This visitor from outer space plunging into the earth's atmosphere was accompanied by bluish flashes as seen by some observers. Those who saw this meteor are asked by Dr. Olivier to send in reports to aid in location of its path and where it exploded.

Science News Letter, November 3, 1945

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