

Heating the House

By Mary Madison

AFTER two winters of fuel skimping—first on oil, then on coal—most householders have come to appreciate the advantages of a heat-worthy house, properly insulated, weatherstripped, fitted with storm windows. But the average fuel consumer still has much to learn, say heating experts, about the efficient operation of the heater itself to get the maximum amount of heat from every ounce of fuel burned.

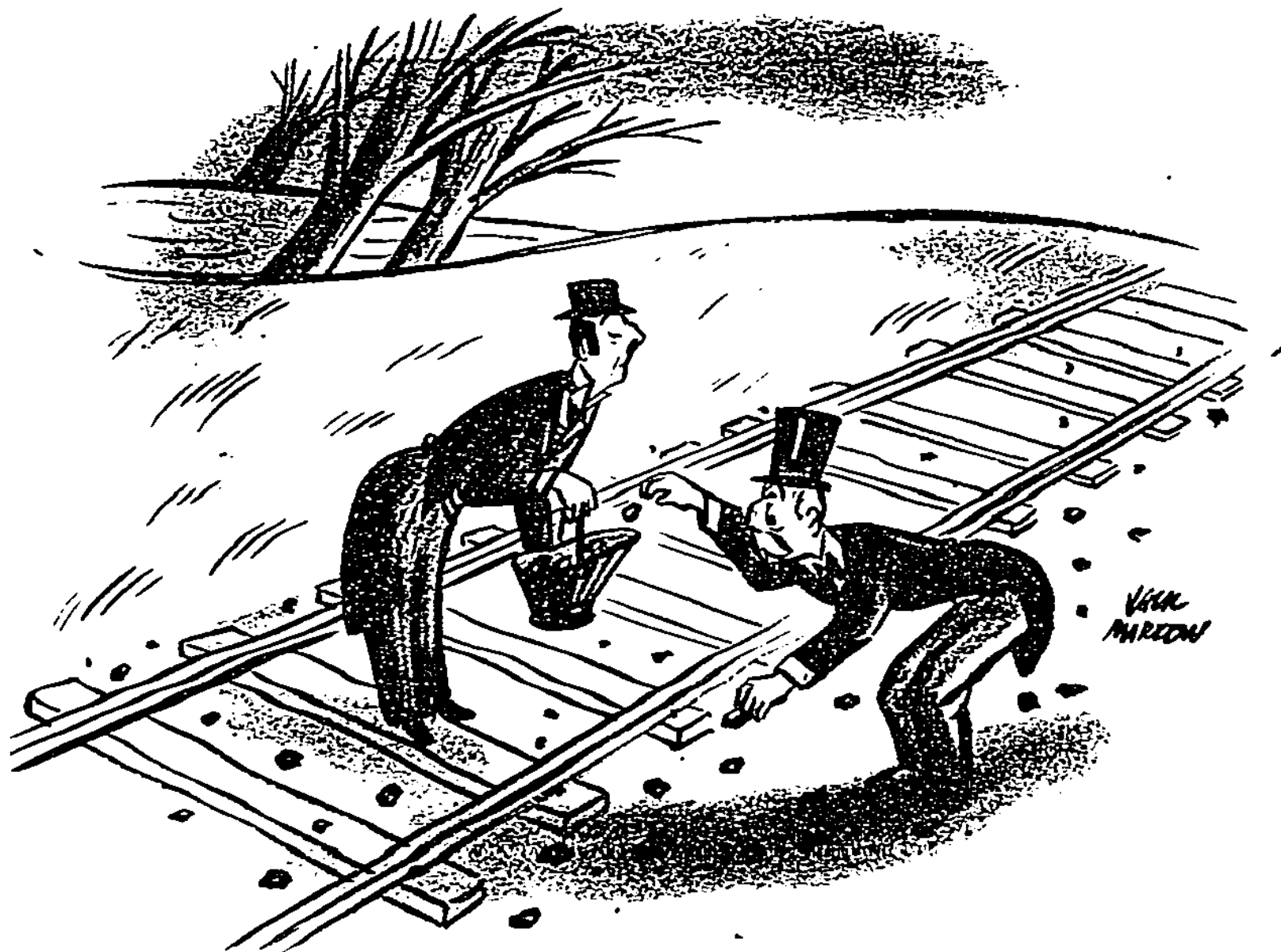
Results of a survey reported at the last meeting of the American Society of Heating and Ventilating Engineers indicated that less than 10 per cent of the heating plants, including those in apartment houses and janitor-operated buildings, are clean and skillfully operated, while only another 20 per cent are even "fairly well" operated. Hence the society's fuel-conservation program this year is stressing the urgent necessity of proper fuel utilization—"so that every ton of coal will do 10 per cent more, or the work of 2,200 pounds, and a thirty-day oil supply will do thirty-three days' heating."

COAL users in the East who normally burn anthracite will get no more than seven-eighths of their normal year's supply of anthracite this winter, and maybe not so much, depending upon production. But Frank W. Earnest Jr., president of Anthracite Industries, Inc., believes that consumers can get by comfortably on the supply available if they will take the trouble to use it properly. (Anthracite engineers in a recent survey, he said, found that many families waste upward of 10 per cent of the coal they burn.)

In addition to pre-season measures such as cleaning the heater, making it airtight and checking the condition of grates and the fitting of doors, Mr. Earnest stressed the importance of starting the first fire of the season correctly and then learning how to control it so that it will give the most heat from the least coal.

Here is the formula he outlined for starting a fire that will stay going:

Cover the entire grate area with a four-inch bed of new coal, or better yet, if you have it, a two-inch bed of ashes left over from last season. Place a generous amount of crumpled newspapers and kindling over the coal or ash bed. Set the dampers for maximum draft—the flue-pipe turn damper and the ashpit damper wide open, the check damper closed. Then light the fire and when



papers and kindling are burning briskly add a thin layer of fresh coal. When the coal is well ignited add more gradually until you have a deep fuel bed. Then set the dampers for heat and weather requirements.

Here are the rules for daily care: Keep a deep fuel bed at all times, starting on a level with the bottom of the firing door in front and sloping upward slightly toward the back. Leave a bright spot of burning coal uncovered at the fire-box door when you add fresh coal. Shake the grates only when necessary—in mild weather only when you need to add enough more coal to keep the fire going, since the ashes left on the grates help to hold the fire back.

DO not poke or stir the fire; to do so causes clinkers. Keep the TURN damper two-thirds closed in average weather and three-quarters open in very cold weather. (if left unnecessarily wide open, valuable heat is wasted up the chimney.) Open the CHECK damper wide to hold back the fire; close it tight for greatest heat. Keep the ASHPIT damper in exactly opposite position—shut tight to check the fire, open wide for greatest heat. Never throw refuse or garbage on the fire.

Probably the cardinal sin of fuel wasters is the practice of rushing the fire up one minute and drastically retarding it the next. It takes more coal to speed up a fire that has been too severely banked than it does to maintain it at an even speed. But keeping the house at a uniform temperature will be an easier job this year since the War Production Board recently released materials for the manufacture of thermostats and a fair supply are already on the market. Another bright note for coal users is the authorization by WPB of the production of 44,000 domestic-type coal stokers which may be expected to reach dealers around Christmas time.

Local offices of the Solid Fuels Administration report that many anthracite consumers have put off placing their fuel orders because of reluctance to accept substitutes, i.e., bituminous coal or reclaimed coke. These people are only deluding themselves, the local offices say, since everyone will have to accept at least one-eighth, and possibly one-

fourth, of his winter fuel supply in a substitute, and procrastinating may mean that consumers will find themselves without any fuel when the cold days come.

Some heating experts suggest that anthracite consumers use bituminous during the mild days of fall and spring and save their anthracite for the cold days of midwinter. The two may be used together but it takes expert firing.

Those who have never used bituminous probably dread the smoke proverbially connected with soft coal. But the smoke can be considerably reduced by firing a little at a time and firing often, and also by keeping a bed of bright coals exposed to insure that the gases coming from the fresh fuel will be lighted and burned.

The Bituminous Coal Institute recommends the following "V" method of firing: Push all of the red coals over against one side of the furnace, sloping them high against the side and disturbing the ash as little as possible. Fire the fresh coal onto the bed of ash left on the grate on the opposite side and pile the coal high against this side. This makes a V-shaped bed, live red coals on one side and fresh coal on the other. On the next firing repeat the process, firing on the opposite side.

SINCE oil burners work mechanically, efficient operation depends upon the condition of the burner itself. Normally the home owner leaves this to the care of the service man. But today service men are not numerous and the services of those who are available are being taxed to the limit. This year's edition of The Heaters Digest, published by the Mobilheat Advisory Service of the Socony-Vacuum Oil Company, is entitled "A Simple Home Course in Burner Care."

Following an introduction announcing that "The oil burner's your baby now," the booklet elucidates the anatomy and care of oil burners, contains a chapter on the home treatment of chronic burner ailments (smoke and soot, burning smells, faulty flame, annoying noises, gluttonous fuel consumption) and another on first aid in burner emergencies (when the burner doesn't start, when the burner starts and stops, when it starts but produces no flame).

