

HELPFUL HINTS IF YOUR HEAT GOES OFF

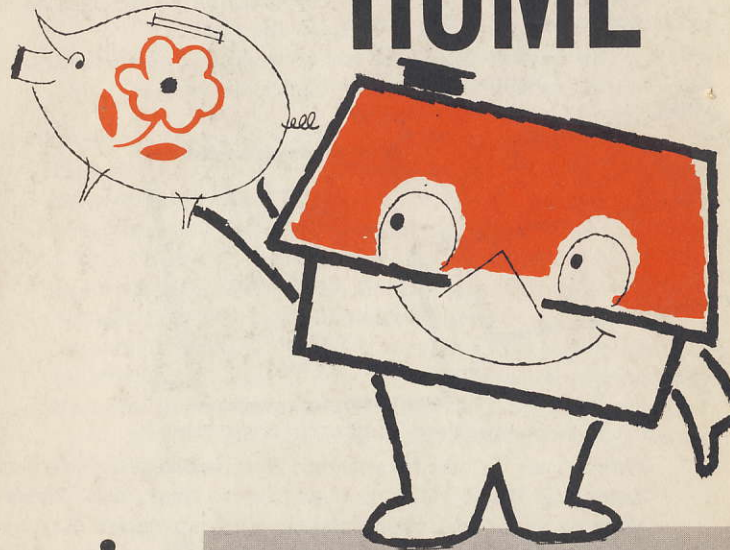
Doing one of these things may start your burner right away...

1. Check the thermostat is set... and working... not shorted, has electricity?
2. Check house and circuit electricity... is it on, fuse does not need replacement?
3. Check burner emergency switch... is it on so burner will operate?
4. Find and push reset button on primary controls (see drawing)... this will activate all controls.
5. Be sure you have fuel... if you're on automatic delivery, you will have.
6. These steps may save you a service call... but if not, phone your oilheating man.



HOW TO HAVE A SMILING HOME

1961 O 7 NMF



a
guide
to

Things to Know
About Home Heating and
How to Have Top Comfort
and Save \$\$\$

This booklet is public information supplied by the
National Fueloil Council — non-profit organization,
at 424 Madison Avenue, New York 17, N.Y., serving the public and the industry.

What this booklet can do for YOU

Thinking of buying a house?... a new house?... an old house?... of renovating your present home?

In this booklet you'll find the answers to all kinds of questions that may be puzzling you about buying or remodeling, and especially about heating your home.

Are you one of the seventeen and a half million families warmed by oil heat? You'll be particularly interested in the dollar-saving tips at the back of this booklet.

This booklet can guide you to sound decisions about home heating as well as to comfort and dollar savings.



... We take modern comforts for granted!

For instance we take for granted: Automobiles, the Telephone, Automatic Home Heating. If we stop to think, these Modern Miracles aren't just happenstance. Their inventors may have been laughed at, at first, but they changed our way of life.

The automobile, for example, started as an expensive toy for the rich and became a necessity so that today American families use and enjoy 55 million of them.

The telephone started with a device to aid deafness. Now there are over 70 million in use in the nation.

Automatic oilheat grew out of a novel experiment on a motor car engine by Detroit researchers. Today it heats millions of homes — these are America's *Smiling Homes*.

Built into all these modern miracles is a dynamic quality—they keep changing, keep improving.

YOUR HANDY LISTS FOR HEATING COMFORT AND SAVINGS

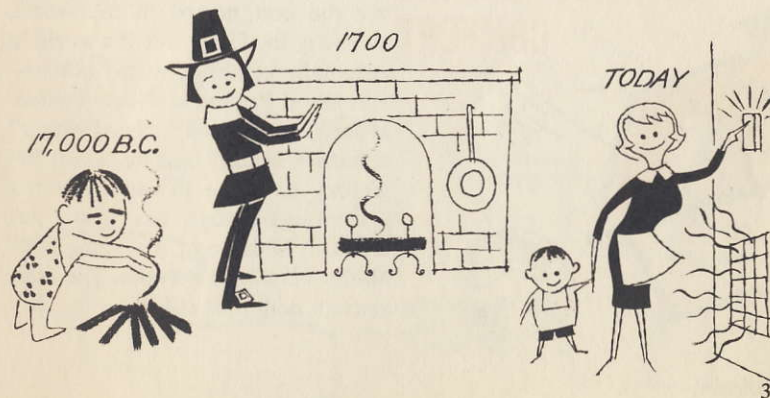
For Basic Heating Facts See These pages —

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MODERN AUTOMATIC HEATING BEGAN WITH OIL

House heating is probably as old as man's knowledge of fire. It started with wood for fuel. Then came coal. Now it's oil, gas, coal and some electricity. Grandpa and Grandma Jones remember the first kind of central heating and its burdensome coal shovel and ashes to haul. Modern heating for health, comfort and convenience only arrived about a generation ago. It stemmed from Colonel Edwin L. Drake's discovery of petroleum in the wilds of western Pennsylvania a century ago. This gave the world a liquid fuel that was destined to revolutionize home heating.

In 1916 after years of many previous experiments, a history-making first automatic oil burner was born out of automobile research. Before the end of World War I, several thousand of these revolutionary burners were heating homes — mostly near Detroit.





END OF SHIVERING, DRUDGERY AND BACKBREAKING LABOR

The first big switch from coal to oil came in 1923 with the introduction of dependable controls that made oil burners fully automatic.

Only a finger to set a thermostat for your heat today! We take it all for granted! But think what it meant—the end of centuries of household drudgery, of back-breaking and time-consuming furnace labor, of being a tied-to-the-house slave.

It gave the family a healthier environment, comfortable leisure, freedom for personal and family life in their home. Automatic oil heating, as much as anything, made the American home truly modern.

THE U.S. LEADS IN HOME HEATING COMFORT

There's no question about U.S. leadership when it comes to comfortable homes. America's 46,000,000 homes are the best heated in the world.

Today the U.S. leads the world in automatic centrally-heated homes—and its oil heating is widely envied. Indeed, in most other "hard winter" countries central heating is just beginning to come in, and Western European countries are "going automatic" because of a surging popularity of oilheat abroad—The Iron Curtain countries still lag.



BACK OF THE OIL HEATING IN YOUR HOME

Back of your home oil burner is a \$51 billion American petroleum industry engaged in exploration, production, refining, transportation and marketing U.S. and world oil reserves that have increased from 70 billion barrels ten years ago to over 273 billion barrels today.

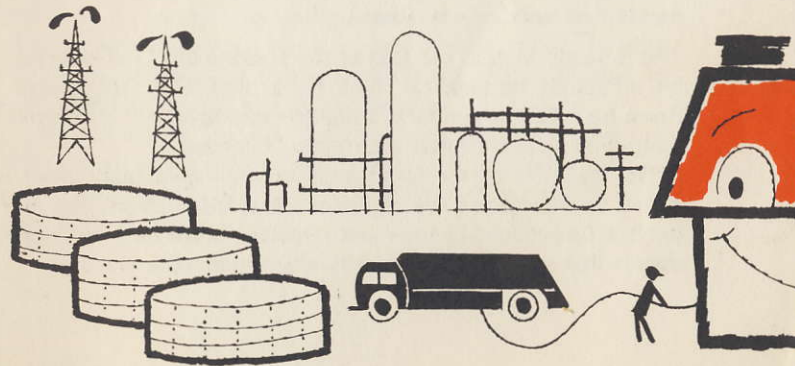
The petroleum industry's growth and scientific achievements in developing new and better fuels for American family use constitute one of the sagas of American business enterprise. For instance, today's anti-knock, high test, chemically built gasoline makes your engine start quickly in sub-zero weather and gives you better mileage.

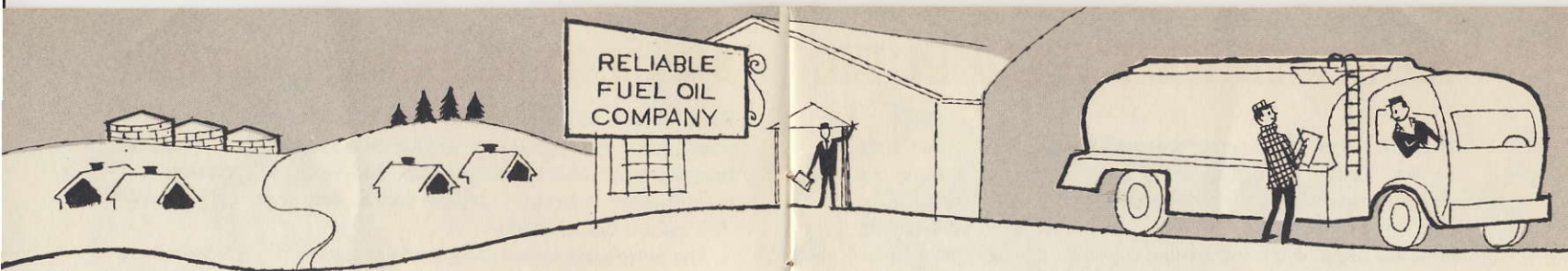
Many millions of dollars are spent annually in field and research laboratories for oil research, development and product improvement. Although the public knows little about this, recent research has improved fueloil for home heating until today it is an entirely different product—lighter, clearer, hotter burning—than it used to be.

No. 2 fueloil—the heating oil for home burners—is brought to its present perfection in today's great shining refineries where almost miraculous processes like hydrogenation clear away any impurities and step up heating values.

As an example of its modern qualities, ten years ago the average annual consumption of oil to heat a home was 1,832 gallons. Now it is 1,458 gallons, a saving of 20 per cent.

Today, home heating oil is petroleum's second most important product.





THE RELIABLE MAN AT THE END OF THE HEATING OIL LINE—YOUR NEIGHBOR

At the end of a world-wide home heating fuel line that begins in the oil fields and moves through pipelines, tankers, oil barges, refineries, railroad tank cars and motor trucks is the reliable oilheat distributor.

He is your neighbor. You know him — a substantial and respected citizen. He shares in your community's activities — often is a leader in civic, school and church affairs.

He is an independent, small business man. There are probably a number in your town or city (more than 11,000 of them serve communities in the U.S.). As your town has grown, he has grown. He has, year after year, increased and changed his fuel storage and distribution facilities. And he has continually modernized his methods.

He's in the local transportation — as well as service — business

The Reliable Man at the End of the Heating Oil Line receives his oil supply by tank car, tank truck, tanker or tank barge. From his office he conducts a highly specialized and strikingly up-to-date local transport and service business.

He has fleets of the latest tank trucks — spankingly clean, driven by men who have high records as safe drivers, and all the latest mechanical equipment — meters, hoses on reels, stop signals that whistle automatically when your tank is full.

His deliveries to fill your tank are almost as automatic as your heat. You don't have to worry about being sure you have your heating oil because of oilheat's automatic degree-day system. This uses weather bureau data to figure the "coldness" of each day and a "demand meter" on the dealer's roof measures the wind velocity, wind direction and sun effect. A running record is kept so that it's simple to compute how much fuel each home has consumed since the last delivery. Your name is on his "tickler" file system and pops out when it's time to fill your tank.

And today's modern heating oil distributor uses the latest routing techniques, quickly instructs trucks by radio-telephone, is ready if you have an emergency.

Being in a highly competitive business, oil distributors continually expand their services and commonly offer equipment and service contracts, as well as fuel to customers. And most of them handle burners, water heaters or other oil equipment. Where needed, special modern additives for free flowing or rust inhibition can be part of his service.

Delivery trucks are now equipped with modern meters and a fool-proof valve system; and dealers and inspecting officials ensure oil's traditional and reliable delivery of exactly the right quantities of fuel.

OIL-HEATED HOMES LEAD IN THE "HARD WINTER" AREA

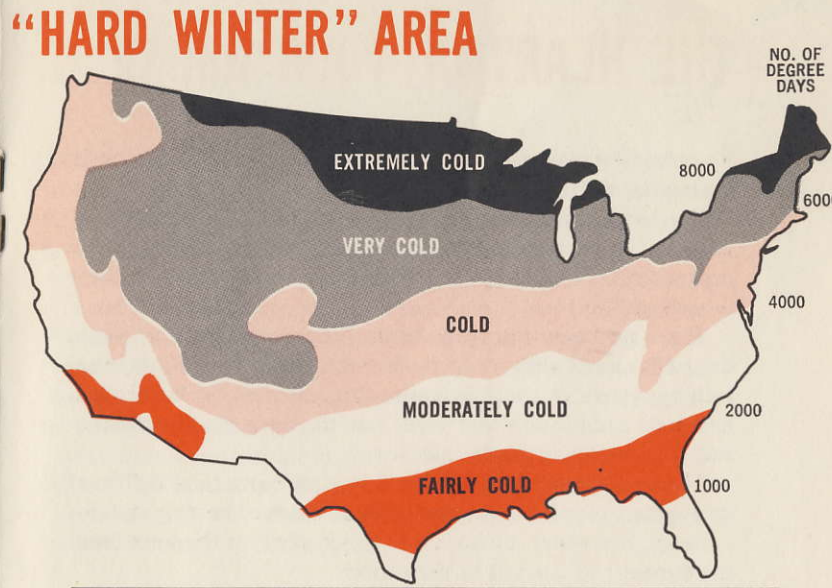
Oilheat has had a growth frequently phenomenal over four decades. Today annual demand is growing faster than for gasoline, evidencing the ever increasing popularity among consumers of oilheat. Over 630,000 oil burners were sold last year alone. Oil supplies about a third *more* of the total heat units than gas and about twice as many as coal to keep all American families warm each year.

NEW SWING TO OIL

Back of your oil heated home is a \$3 billion-plus segment of the petroleum industry, exclusively devoted to oil marketing and equipment manufacturing. It employs many thousands of trained and skilled men. Oilheat manufacturers and the industry today are bringing out new types of equipment to take full advantage of the wonderful new fuel.

There has been a "quiet revolution" in fueloil and oil heating equipment which has stepped up sharply in the last couple of years. Many hundreds of thousands of dollars are being spent annually in research on fueloil and heating equipment in the laboratories of oil companies and manufacturers.

Revolutionary new oil heating equipment already is on the market; additional developments, embodying remarkable new principles, are in late experimental stages or in laboratories.

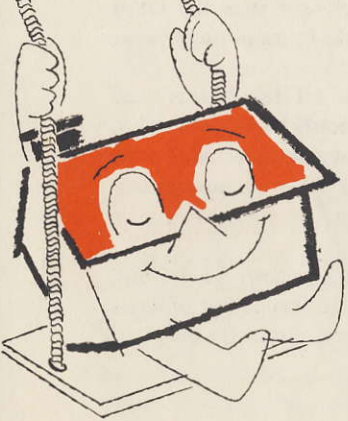


JUST WHAT IS A DEGREE DAY?

A degree day is a unit of weather coldness. It's based on the mean temperature—average of the highest and the lowest for 24 hours. This average is then subtracted from 65—the point at which you'll want to turn on the heat. Say the highest temperature has been 50, the lowest 30, then the average is 40. Subtract this 40 from 65 and you have a total of 25 units of coldness or degree days for that period.

The swing toward increased oil-heat sales will rise faster in the future for more Smiling Homes.

This oil swing includes present and future hot water heaters, new air conditioning, clothes dryers, oil-fired refrigerators, ranges and incinerators. Serious work is being done on the concept of the all oil house — oil creating all the electricity needed in the home right on your own property.



THE HEART OF YOUR HOUSE IS

Your heating plant is really the heart of your house—especially during the heating season's seven to nine chill months.

The job it does is very simple. It taps the packages of heat packed into each gallon of fueloil in your storage tank. (The experts call these packages Btu's; there are 140,000 of them in each gallon.)

These packages are turned into house-warming heat when the oil is mixed with air in the burner, and a marvelous interlocking system of controls ignites this and runs the burner in a balanced combustion that gives just the amounts the thermostat in your living room calls for.

The packages of heat produced in your burner are delivered throughout your house by one of three kinds of heating systems—steam, hot water, or hot air—which pick up the heat from the burner and carry it to the rooms.

WHY OIL? HERE ARE THE ANSWERS FOR YOUR SMILING HOME

Today's oil is modern—and so is today's oilheat. Today's No. 2 fueloil is about the color of champagne, and it is clear and light like champagne—without the bubbles. It

burns with a yellow or blue pure flame. It is super-refined. It's clean. It gives a healthy, "balanced" heat. It doesn't "steal" oxygen from your rooms or coat your walls with moisture.

It is safe. You can dip a lighted match into it and the match will go out. But it burns beautifully under controlled conditions in your burner. There's no chance of spontaneous combustion or of noxious gases. Heating oil can't contribute to air pollution. Oil heats with efficiency equal to any natural fuel. Tests show 75 to 80 per cent efficiency in modern burners.

Yes, you may pay a little more to put in its extra-sturdy equipment, but this is worthwhile. And you may well save the difference in oilheat's lower fuel bills in most areas, over a reasonably short period. Oil's cost trend is generally down.

YOUR HEATING PLANT



Modern oilheat equipment is growing in popularity. Oil adds to the resale value of your property. Builders and developers know the dollar advantages to you in oil heating and how it helps in securing mortgages and construction loans.

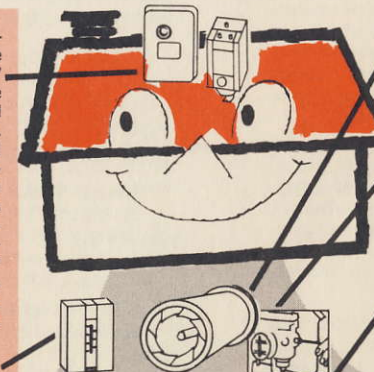
City or country, anywhere wheels can go, oil is available—it is not limited to pipelines or other lines—and you can buy this fuel at lower summer rates, store a good supply at your home. Oil is the cheapest—and easiest—fuel in the world to ship. Gas, for example, costs four times as much to transport from the wellhead to you.

Once you have oilheat in your home, you can easily add the fine oil appliances on the market and being developed. For instance, oil's new water heater gives you floods of almost instant hot water and at low cost.

HOW YOUR HEATING PLANT WORKS

1. **Automatic Controls**—they are the "heating brains" and comprise the Primary Control and the Limit Control. The Primary Control relays the Thermostat's messages to electrical circuits and the burner—starts and stops normal operations. The Limit Control keeps watch—stops operations if anything is wrong.

2. **The Thermostat**—is like the skin—it registers heat and cold and sends messages to the brain.



3. **The Fan**—like lungs—it provides oxygen needed to burn the fuel and make heat.

4. **The Pump**—like the heart—it pumps fuel to the burner.

5. **The Storage Tank**—like the stomach—it stores the fuel or "food" which the burner consumes.

6. **The Burner**—the "muscles" of your heating plant—it changes fuel into heat to warm your home.

HERE ARE HANDY HEATING CHECK LISTS —FOR WHEN YOU BUY, BUILD OR REMODEL

Over all the years you live in a house, you can save money, add comfort by looking ahead now—the house heating part is five to ten percent of the value—fuel bills run \$200 to \$400 a year. Get the advice of financial institutions—mortgages come long and short term—look into low down-payment FHA and GI mortgages—also construction loans. . . .

CHECK IN BUYING OR BUILDING A NEW HOUSE

LOCATION: Wintry wind can boost fuel consumption a sizable percent in 24 hours. Sunny location protects—also hill, trees, other wind-breaks.

MATERIALS: Wood is warmest—brick, stone lose heat, also metals—glass loses heat rapidly.

INSULATION: Insulate all walls, roof and basement; also have tight windows and door frames. Attic floor insulation alone saves a lot.

LOCAL ADVANTAGES: With oilheat you choose your own local supplier. Oil is clean, comfortable . . . has high heat value. Costs less in major hard-winter areas. Tank insures supply. Only fully automatic heat. No year round pilot light.

ADVICE OF EXPERTS: Can suggest best place for burner—oil burner fits in utility room, garage, basement or even the attic—advise how to lay out heating system . . . for economy, direct heat, room looks . . . whether set tank above ground, under, or in basement.

ABOUT FUEL CONTRACTS AND SERVICE AGREEMENTS: Choose—full service, including emergency—service on call—heater conditioning. Budget plans can equally space fuel payments over whole year. Regardless of fuel, heating contract should assure heat adequate for your comfort and needs in all weather.

HEATER CONDITIONING STEPS UP PERFORMANCE, CAN SAVE SCORES OF DOLLARS ANNUALLY, THOUSANDS OVER THE MORTGAGE LIFETIME.

An oil heating plant has a good lifetime of 17 to 20 years, many from 25 to 30 years. Putting it in tip-top shape adds years of comfort, saves hundreds of dollars in fuel bills. If you replace, check the advantages of today's modern oil heat equipment for your house.

YOUR HEATING EXPERTS SAVE YOU DOLLARS BY CHECKING AND TUNING UP:

- 1 Burner Head:** Adjust for best air-oil mixture, check if needs cleaning, replace if necessary. (This is cheap and efficient like changing a spark plug.)
- 2 Test and check electric controls:** May need contacts tightened, adjustment, sometimes cleaning or replacement; means heat saving, assures top performance.
- 3 Motor, pump and blower:** Same tests and checks by expert as with controls. Also assures heat saving, top performance.

HEAT LOSS • All houses lose some heat—through walls, windows and other ways—although this can be kept to a comfortable minimum. The heating plant output for your home should take in the particular heat loss. Rough rule of thumb is a heating plant should produce around 75,000 Btu's (British thermal units) per hour for a typical 6-room house.

4 Miscellaneous: Chimney, fire box, piping, air-tight joints. Double check whether in top condition. After years these may need repair. Simple steps often ensure greatly improved draft and raised efficiency.

5 Ask for a report on results: You can rely on modern instruments, for example, CO₂ combustion tester, draft gauge and stack thermometer, scientific devices that report accurately (like a check of your body's metabolism) whether everything is now at top efficiency.

YOU CAN DO THESE THINGS YOURSELF TO SAVE DOLLARS:

6 Well adjusted oil or gas burners give off no soot, but lack of attention over the years may result in some accumulation. This insulates, blocks heat. Use a wire brush to scrape soot off the inner surfaces of the fire chamber, then a vacuum cleaner to pick it up.

7 In warm air systems lift out and change the air filters (they look like a small, thick screen and are located where outside air enters the heating system). For a dollar or two, you speed up circulation and get cleaner air.

8 Oil motors, blowers, mechanical moving parts outside the burner chamber with a light machine oil. This done once a year saves wear, makes for easier running.

CHECK IN BUYING AN OLD HOUSE OR REMODELING

LOCATION: Note the degree day zone your city is in (see map, page 9). You may need to add heat, if house is more than 20 years old or you build more rooms. (Also see points under this heading, page 12.)

INSULATION AND MATERIALS: Older houses sometimes need more storm windows. The more you have, the warmer you'll be. If adding inside insulation is a problem, then use outside sheathing— asbestos shingles or special types of siding can help cut heat loss. (Also see points under headings, page 12.)

GENERAL ON HEATING: See points on page 12—about consulting heating expert, looking into contracts and oilheat advantages. The ideal climate for you to live in is 70 degrees, 40% humidity. Be sure your heating plant and system are ready to do their job.

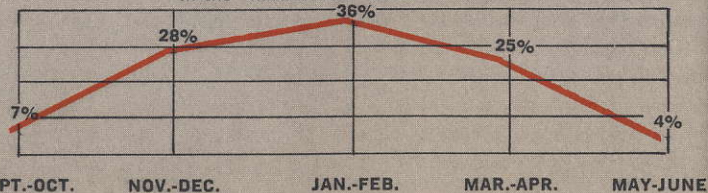
9 Oilheating is the one modern fuel in millions of homes which is completely automatic—no pilot light to burn the year round—so if you want, snap off your emergency switch in the summer—you can save running your burner and fuel.

8 "GOOD HABITS" TO SAVE HEATING DOLLARS FOR MILLIONS OF HOMES

1. Going away for a day or two? Lower thermostat, 55 degrees is plenty for an empty house. The same lowering at night regularly can save you 15 percent on your heating bill.
2. It seems elementary, but many people forget to turn off heat and close off rooms not in use. Coolness can't hurt unused rooms, so shut their doors.
3. Don't let your heat "run away." Overheating, then cooling off by opening windows is plain waste. Keep temperatures moderate.
4. Don't place upholstered furniture, drapes, rugs where they block flow of room heat from outlets such as radiators or registers. Arrange so there is clear, even circulation of warmth.
5. Raise the humidity and you'll feel warmer, more comfortable, even at lower than usual temperatures.
6. Close outside doors promptly. Heat pours out during those wide-open-door good-byes. Teach children, the dog and the cat, "quick entrances" and "quick exits."
7. See that radiator and ducts balance the heat supplied to each room — adjusting heat outlets, radiator valves or duct closures, for more flow or less, gives even heat throughout the house.
8. Check your thermostat. It should always be in a location that's central and average for the house—otherwise overworks (or underworks) burner and heats rooms unsatisfactorily.

HOW TO FIGURE AHEAD ON YOUR FUEL COSTS

Here's the amount of fuel the average home consumes each month in the "hard-winter" areas:



New things to know about...

- New Electro-static filters can super-filter warm air heat... of unusual value for those with allergies.
- New ceramic liners for fire-boxes... these line the box inside so that worn surfaces are reinforced, ceramic reflects and intensifies heat.
- Fuel tanks can be given extra-long life... by inexpensive welding of new bottoms or inserting plastic liner; new additives inhibit possible rust, others ensure free fuel flow.
- Draft inducers... mechanical draft — fans operating automatically — can be installed to improve troublesome draft.

And...

Did you know that heating oil has many special and novel uses... Warming swimming pools, melting snow, heating outdoor movie patrons, maintaining perfect temperatures for poultry brooder sheds, curing tobacco, maple syrup and other farm crops... are some of these.

HOW TO COMPARE FUEL COSTS

(Rule of Thumb)

First, remember that all natural fuels in modern fully automatic equipment burn at just about equal efficiencies. A simple formula then for comparing the cost of fuels in your town is: For coal, divide the local current price of a ton of coal (anthracite) by 186. For gas, divide local price for 100,000 cubic feet by 714. For electricity, divide local price of 100 kilowatt hours by 3. Then compare with the local price of a gallon of No. 2 fueloil.