

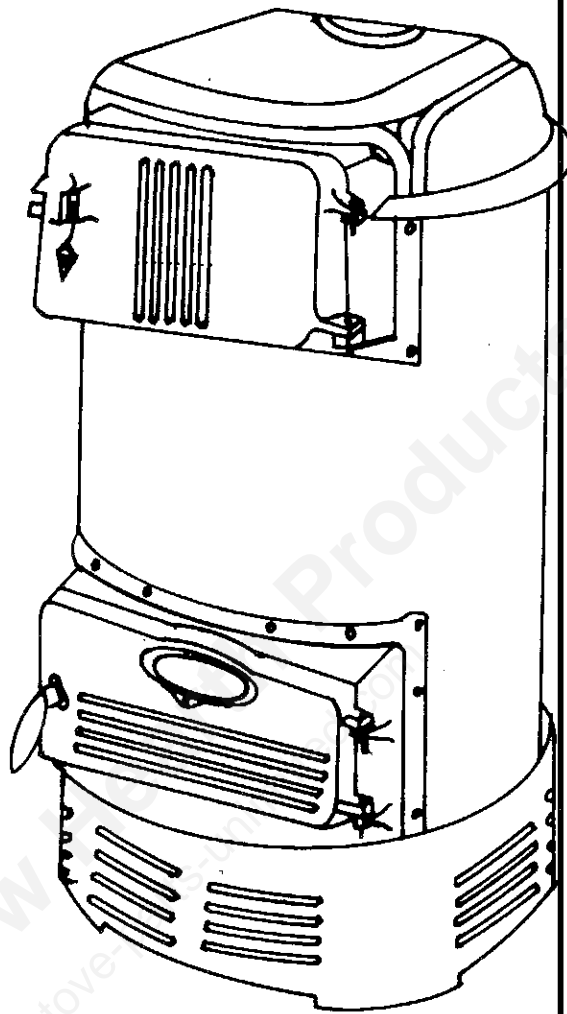
Sears

owners  
manual

**MODEL NO.  
143.841251**

**CAUTION:**  
Read All Instructions  
Carefully Before Start-  
ing The Installation.

Save This Manual For  
Future Reference.



# **RADIANT COAL HEATER**

- Installation
- Operation
- Repair Parts

Sears, Roebuck and Co., Chicago, Ill. 60684 U. S. A.

PRINTED IN U. S. A.

85120

# introduction

Please read our instructions before you install and use your new Radiant Coal Heater. This will help you obtain the full benefits from your Heater. This will also help you avoid any needless service costs that result from causes we cannot control.

If you want your Radiant Coal Heater professionally installed, contact your SEARS SALESMAN. HE will arrange for prompt, quality installation by SEARS AUTHORIZED INSTALLERS.

## **SEARS INSTALLATION POLICY**

All installation labor arranged by SEARS shall be performed in a neat, workmanlike manner in accordance with generally accepted trade practices. Further, all installations shall comply with all local laws, codes, regulations, and ordinances. The customer shall also be protected, during installation, by insurance relating to property damage, workmen's compensation and public liability.

## **SEARS INSTALLATION GUARANTEE**

In addition to any guarantee extended to you on SEARS merchandise involved, which guarantee becomes effective the date the merchandise is installed, SEARS also guarantees all SEARS-arranged installations, as follows: Should the workmanship prove faulty within one year, SEARS will, upon notice from you, cause such defects to be corrected at no additional cost to you.

# rules for safe installation and operation

1. Read these rules and the instructions carefully. Failure to follow them could cause malfunction of the heater. This could result in death, serious bodily injury, and/or property damage.
2. Check your local codes. The installation must comply with their rulings.
3. Do not install this heater in a mobile home or trailer.
4. Always connect this heater to a chimney and vent to the outside. Never vent to another room or inside a building.
5. Do not connect a coal burning heater to an aluminum Type B gas vent. This is not safe and is prohibited by the National Fire Protection Association Code. Use only a Class "A" masonry or, All-Fuel prefabricated chimney. Prefabricated chimneys must be listed by Underwriters Laboratories (UL) Inc. The inside diameter must be at least six inches.
6. If heater is placed on combustible floor, use a stove board or other non-combustible base.
7. Provide air for combustion from the outside into the room where the heater is located. If the intake is not in the same room, the air must have free access to the room.
8. CAST IRON PARTS MUST BE "SEASONED" TO AVOID CRACKING. BUILD ONLY SMALL FIRES DURING YOUR EARLY USE. Never build extremely large fires in your heater. If any part of the heater becomes red hot, damage will likely result.
9. To prevent injury do not allow anyone who is unfamiliar with the operation to use the heater.
10. CAUTION: Do not touch the heater until it has cooled.

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## tools and materials needed

### TOOLS

Pencil  
6 Foot Folding Rule or Tape  
Tin Snips  
Drill, Hand or Electric  
Drill Bit (For Sheet Metal Screws)

### MATERIALS

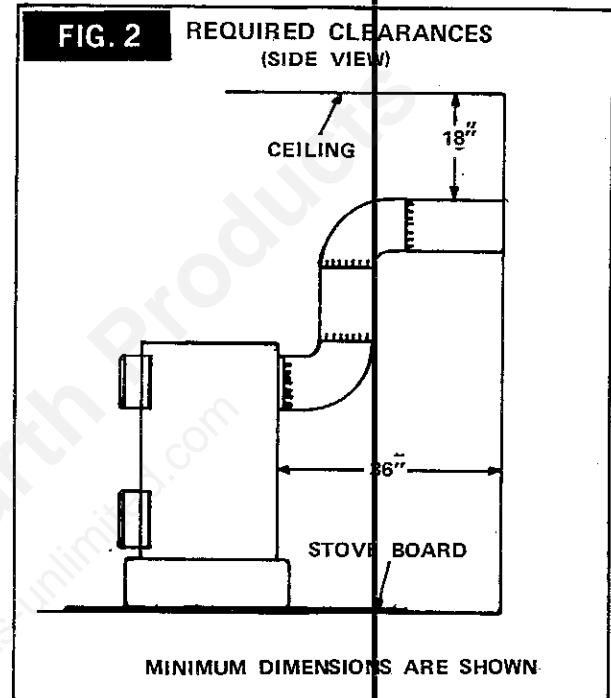
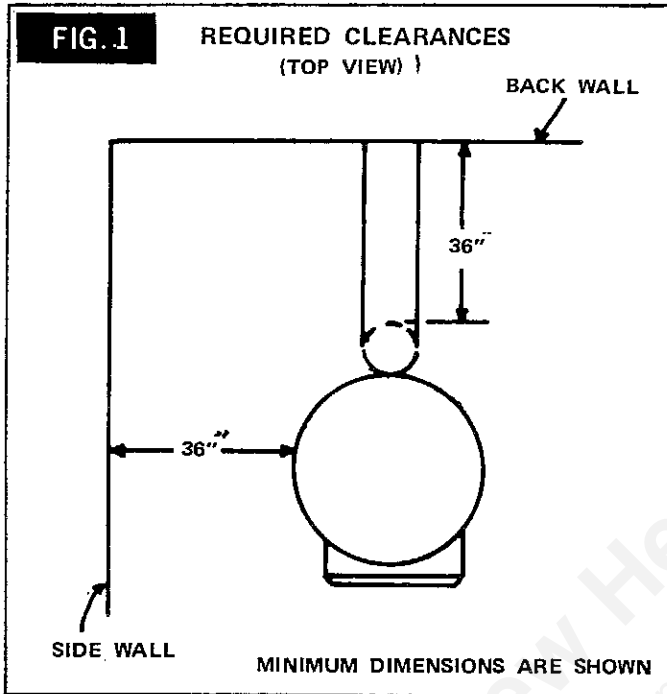
6" Smoke Pipe  
1/2" Sheet Metal Screws  
6" Twist Damper  
6" Flue Thimble  
6" Collar  
6" Elbow

# locating the heater

As a location is selected, keep the following in mind:

1. The chimney connection should be as short as possible. The heater must have its own chimney. Do not connect any other appliance to the same flue. If there is no chimney near where you wish to place the heater, you can use a Sears Type "A" prefabricated All-Fuel Chimney. See your Sears Salesman.

2. This heater should be placed on a non-combustible floor. If your floor is combustible set the heater on a stove board.
3. Check Figs. 1, 2, 3 and 4. You should have at least the clearances shown from the heater and the smoke pipe to combustible surfaces.



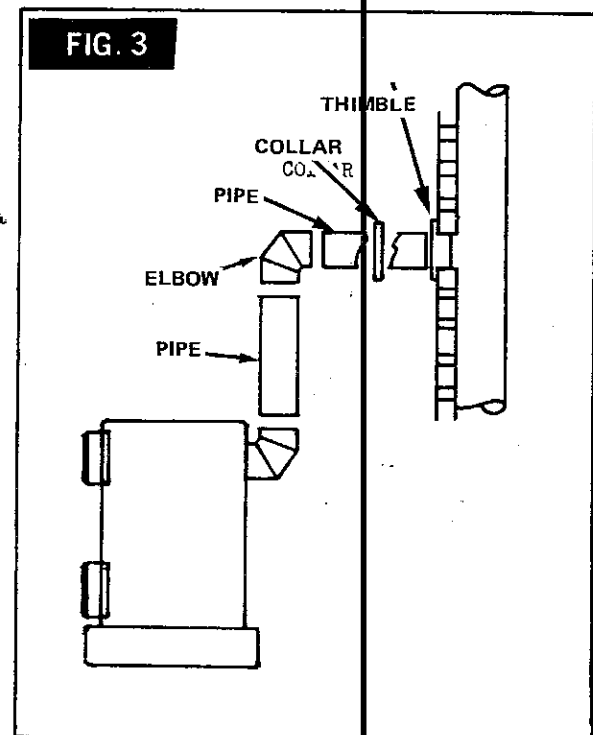
# installation

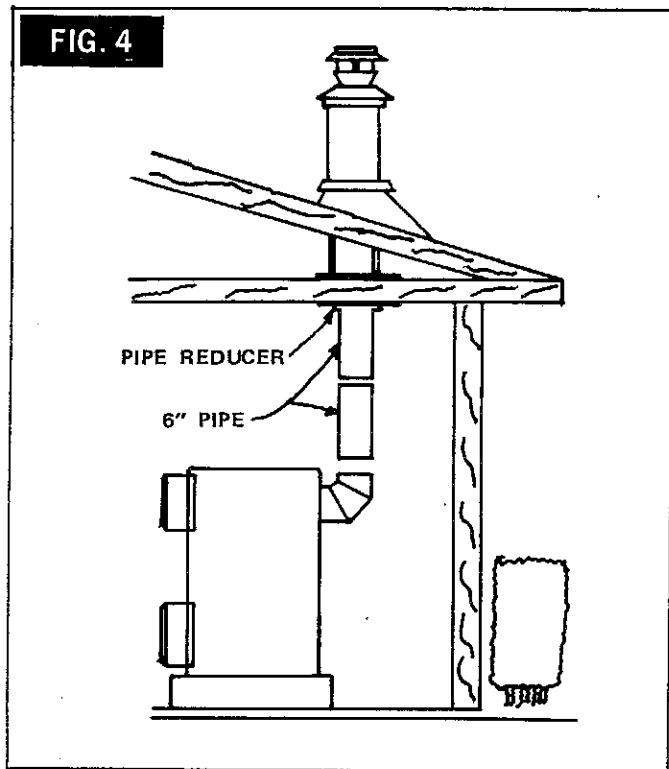
Look at Fig. 3. The smoke pipe and fittings you will need to connect to a masonry chimney or a Sears ALL-FUEL CHIMNEY on the outside wall are shown.

If your Sears ALL-FUEL CHIMNEY starts at the ceiling (Fig. 4) you will need an elbow, a pipe reducer (6"x8"), a twist damper, enough pipe to reach the ceiling and a finish collar.

Connect the heater to the chimney. The crimped end of the vent pipe fits inside the heater flue collar. Additional pipe and elbows should be installed crimped end toward the heater.

Install a twist damper to control the fire. It should be placed in the first pipe section as near as possible to the heater. The damper can be purchased at your local hardware store.

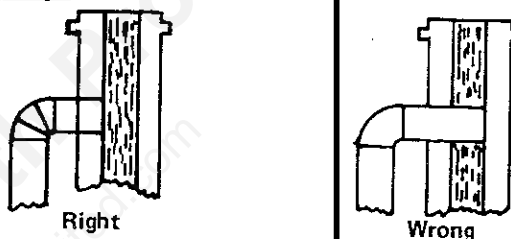


**FIG. 4**

These rules apply to the vent pipe installation:

1. Avoid using more than one elbow.
2. Any horizontal pipe should be pitched upward toward the chimney at least 1/4 inch for each foot of horizontal run.
3. Be sure that you have at least 18" of clearance between the horizontal piping and the ceiling.
4. Be sure the pipe does not extend into the chimney flue (Fig. 5).

For better performance seal each vent pipe joint with furnace cement. Also seal the pipe at the chimney. Finally, use three sheet metal screws at each joint to make the piping rigid.

**FIG. 5**

## operation

### CAUTION

BE SURE THE FIREBRICK LININGS AND GRATES ARE IN PROPER POSITION BEFORE STARTING A FIRE.

### TO START A FIRE

1. Open the ash door draft slide.
2. Lay a fire using crushed paper and kindling wood. Let it burn freely before adding the first coal.
3. Add the first charge of coal, about 15 pounds. Let it get a good start. Then add the next charge of coal. Continue this until the heater is filled (about 2 inches below the top tier of brick).

### NOTE

Keep the ash door draft slide open only long enough to get the fire started.

### RECHARGING

Recharge the heater when the coal has burned down to about 6" above the grate.

1. Shake the grate until some red coals fall through. Then open the ash door draft slide.

2. Let the coals burn to a glowing red. Then add fuel as when starting the fire.

Open the feed door only a very little at first. Then open it slowly all the way. This will avoid the chance of the heater smoking. The amount you add depends on the weather and the heat wanted. The draft should stay open until the fuel bed is coked. This means that all the gases have been driven from the new coal. Then regulate your fire with the vent pipe damper.

### HOLDING FIRE OVER NIGHT

Put a fair amount of coal in the heater. Coke it. (Get it well started) Then close the ash door draft door. Set the vent pipe damper to control the fire. Set it 15 degrees or less if the draft is low.

Never allow ashes to pile up in the ash pan to within 2 inches of the grates. This will shorten the life of the grates.

Keep the top of the fuel at least 1 inch below the top of the fire brick. Coal will swell and push upward when it starts to burn.

NEVER OVERHEAT the heater. This will shorten its life. Egg size coal is recommended. Other sizes may be used but do not use oil or chemically treated coal.

# helpful hints

Do not expect a heater to draw. It is the chimney that creates the draft.

1. Chimney should extend at least 3 feet above the highest point where it passes through the roof. It should also be at least 2 feet higher than any portion of the building within 10 feet.
2. The heater chimney should have no other appliances attached to it. All unused openings and the clean-out door at the chimney base should be sealed.
3. The draft or "drawing" of the heater is fully dependent on the chimney. A chimney must be high enough and warm enough to provide draft. Adding chimney height should improve draft.
4. The smokepipe may be pushed into the chimney too far, stopping the draft.
5. Do not connect two heaters into the same chimney flue. If it cannot be avoided, be sure that one pipe is higher than the other so that the two openings will not be opposite each other.
6. The chimney used for a heater must not be used to ventilate the cellar or basement. If there is a cleanout opening at the base of the chimney, it must be closed tightly.
7. If the fire burns well but sometimes smokes or burns slowly it may be caused by the chimney top being lower than another part of the house or a nearby tree. The wind blowing over a house or a tree, falls on top of the chimney like water over a dam, beating down the smoke. Increase the chimney or flue height so that it extends 2 feet above the roof peak.
8. Some chimneys will have very high or fluctuating drafts. In this case install a barometric damper control in the vent pipe just above the first length and above the twist damper. The barometric control is available at Sears (stock No. 42-91481).

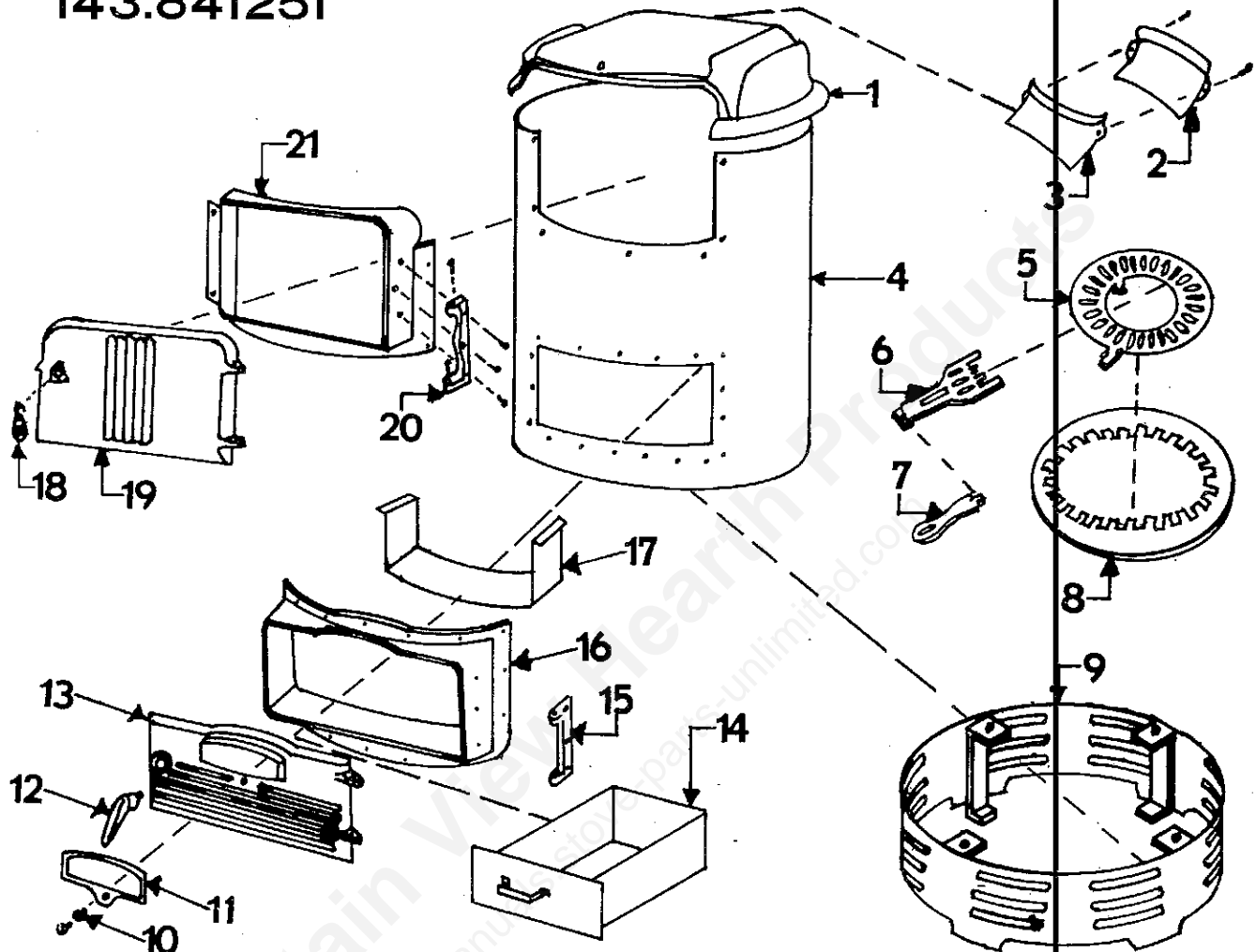
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# maintaining your heater

Polish the heater drum regularly, especially if the heater is not in use. Use a good grade of stove polish.

# repair parts

**Model No.**  
**143.841251**



Key No.	Part No.	Description	Key No.	Part No.	Description
1	2683	Main Top	14	2707	Ash Pan
2	2686	Collar Section, Back	15	2709	Ash Door Hinge
3	2687	Collar Section, Front	16	2701	Ash Pit Front
4	2753	Body	17	2941	Brick Support, Front
5	2696	Round Grate	18	1200	Wire Drop Handle
6	2697	Draw Grate	19	2692	Fire Door
7	2704	Shaker	20	2751	Fire Door Hinge
8	2698	Brick Support Ring	21	2693	Fire Door, Front
9	6691	Skirt Base	*	2694	Brick, Large (9 Req.)
10	1001	Draft Slide Spring	*	2695	Brick, Small (7 Req.)
11	2703	Ash Pit Draft Slide	*	2756	Name Plate
12	2706	Ash Pit Door Handle	*	2699	Brick Ring Support
13	2700	Ash Pit Door			Owners Manual
				F-642-22073	

\* Not illustrated

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**MODEL NO.**  
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HOW TO ORDER  
REPAIR PARTS

SEARS SERVICE  
IS AT YOUR SERVICE  
WHEREVER YOU LIVE  
OR MOVE IN THE U.S.A.

# RADIANT COAL HEATER

The Model Number will be found on a plate mounted on the back of the heater body. Always mention the Model Number when requesting service or repair parts for your Coal Heater.

All parts listed herein may be ordered through SEARS, ROEBUCK AND CO., c/o Repair Parts Department 98. When ordering parts by mail, selling prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST.

1. The PART NUMBER
2. The PART DESCRIPTION
3. The MODEL NUMBER
4. The NAME OF ITEM

Your Sears merchandise takes on added value when you discover that Sears has over 2,000 Service Units throughout the country. Each is staffed by Sears-trained, professional technicians using Sears approved parts and methods.

Sears, Roebuck and Co., Chicago, Ill. 60684 U. S. A.

F642-22073