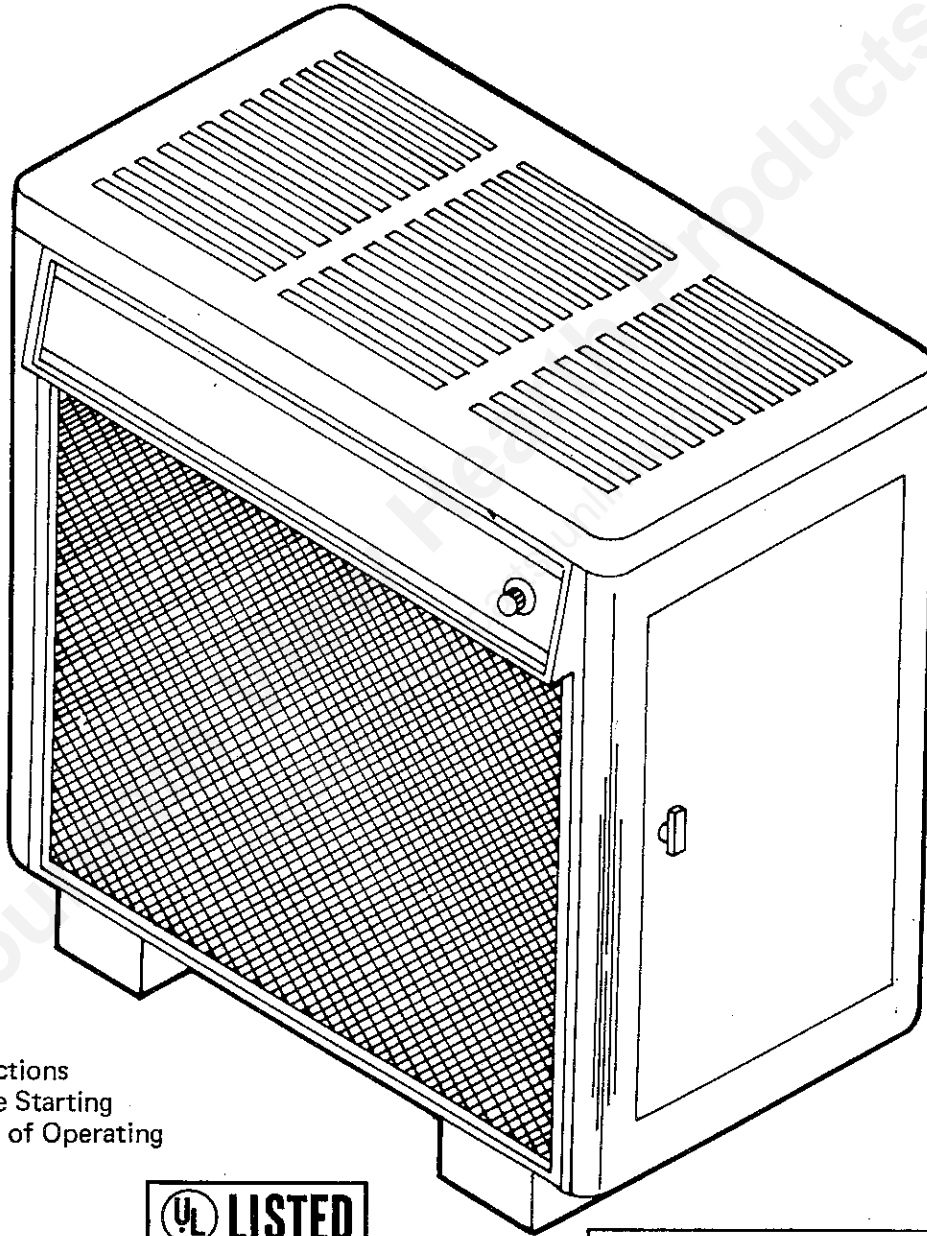


Model 3027 BG owners manual

Coal / Wood

AUTOMATIC COAL BURNING CIRCULATOR



CAUTION:

Read All Instructions
Carefully Before Starting
The Installation of Operating
The Heater

- Assembly
- Installation
- Operation
- Repair Parts



Save This Manual
For Future Reference.

DO NOT USE THIS HEATER
IN A MOBILE HOME OR TRAILER



BELKNAP, INC.

111 E. Main Street
Louisville, KY 40201

FORM 85351 8/81

CONGRATULATIONS!

You've purchased one of America's Finest Woodburning Heaters.

By heating with wood you're helping CONSERVE AMERICA'S ENERGY!

Wood is our Renewable Energy Resource. Please do your part to preserve our wood supply.

Plant at least one tree each year. Future generations will thank you.

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

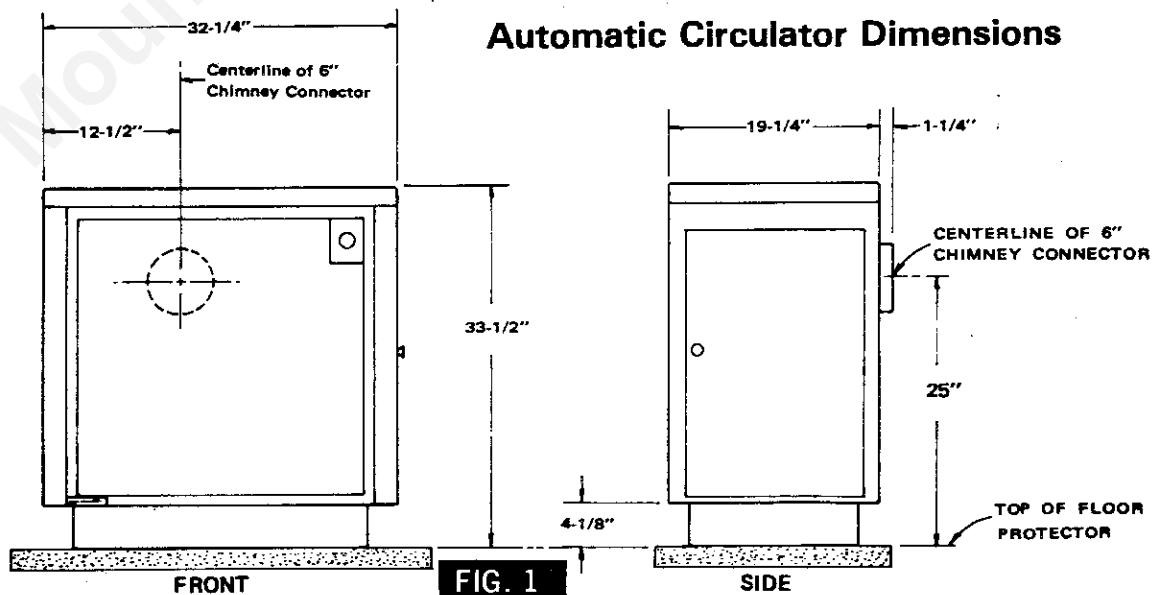
6" Pipe, 6" Elbow, Collar and Thimble;
as required (24 gauge min.)
1/2" Sheet metal screws
6" Inside diameter Underwriters Laboratories (UL)
Listed Residential Type and Building
Heating Appliance Chimney
or existing masonry chimney.
Floor Protector Material 3'-0" x 4'-6"
as specified on Page 4.
Furnace Cement

rules for safe installation and operation

Read these rules and the instructions carefully. Failure to follow them will cause a hazard that could result in death, serious bodily injury, and/or property damage.

1. Check your local codes. The installation must comply with their rulings.
2. Do not install this heater in a mobile home or trailer.
3. Always connect this heater to a chimney and vent to the outside. Never vent to another room or inside a building.
4. Do not connect a wood burning heater to an aluminum Type B gas vent. This is not safe and is prohibited by the National Fire Protection Association Code. This heater requires a masonry or a UL Listed Residential Type and Building Heating Appliance Chimney. Use a 6" diameter Chimney or larger, that is high enough to give a good draft.
5. Be sure that your Chimney is safely constructed and in good repair. Have the chimney inspected by the Fire Department or a qualified inspector. Your insurance company may be able to recommend a qualified inspector.
6. Inspect chimney connector and chimney before and frequently during the heating season for any deposit of creosote or soot which must be removed (see Chimney Maintenance, page 11).
7. Provide air for combustion from outside the house into the room where the heater is located. If the intake is not in the same room, air must have free access to the room.
8. **CAST IRON PARTS MUST BE "SEASONED" TO AVOID CRACKING. BUILD ONLY SMALL FIRES ON FIRST USE.**
9. To prevent injury, do not allow anyone to use this heater who is unfamiliar with the correct operation of the heater.
10. For further information on using your heater safely, obtain a copy of the National Fire Protection Association (NFPA) publication "Using Coal and Wood Stoves Safely" NFPA No. HS-10-1978. The address of the NFPA, Battery Match Park, Quincy, MA 02269.
11. Keep the ashpit section free of excess ashes. Do not allow ashes to stack higher than the sides of the ash pan.
12. **DISPOSAL OF ASHES-** Place ashes in a metal container with a tight fitting lid. Keep the closed container on a noncombustible floor or on the ground, well away from all combustible materials. Keep the ashes in the closed container until all cinders have thoroughly cooled. The ashes may be buried in the ground or picked up by a refuse collector.
13. **CAUTION-** The special enamels used on your heater may give off some smoke while they are curing during first few fires. Build small fires at first.
14. **CARING FOR ENAMELED PARTS -** This heater has an enameled outside jacket, which is durable but it will not stand rough handling or abuse. When installing your heater, use care in handling. Clean with soap and warm water when heater is not hot. **DO NOT** use any acids or scouring soap, as these wear and dull the finish. **ENAMEL DISCOLORATION WILL OCCUR IF THE HEATER IS OVERFIRED. FOLLOW OPERATING INSTRUCTIONS CAREFULLY.**
15. Keep the feed door, ash door, cabinet door closed at all times except while tending the heater.

CAUTION: Do not touch the heater until it has cooled.



locating the heater

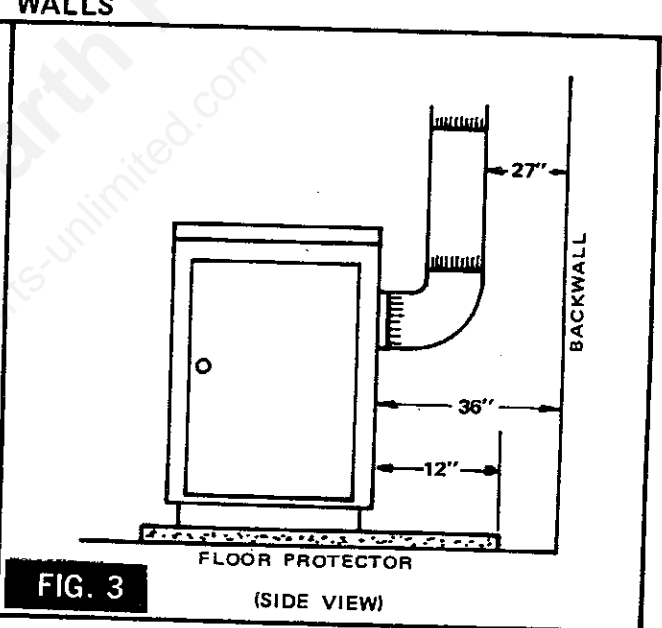
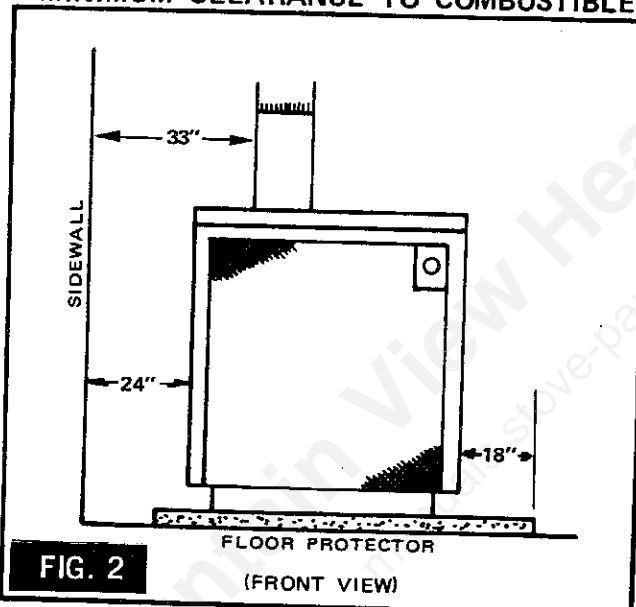
AS A LOCATION IS SELECTED, KEEP THE FOLLOWING IN MIND:

1. The chimney connection should be as short as possible. The heater must have its own chimney. Do not connect this unit to a chimney flue, serving another appliance. If there is no chimney near where you wish to place the heater, you can use a UL Listed Residential Type and Building Heating Appliance Chimney (Fig. 6).
2. Place the heater on solid masonry or solid concrete. When the heater is used on a combustible floor, use a non-combustible floor protector

protector $\frac{3}{8}$ " thick or a U.L. Listed Floor protector. Have the floor protector extend 18" beyond the door side of the heater and under the connector pipe in the back (Fig. 4, 5, and 6).

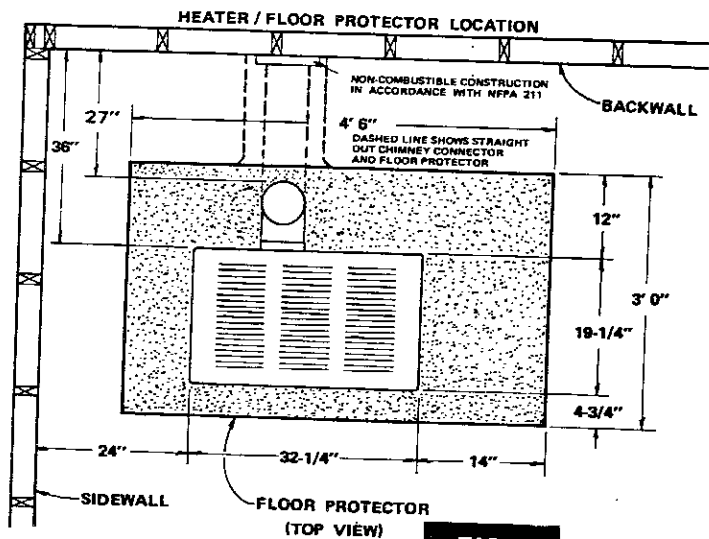
3. Check Figures 2, 3 and 4. Be sure you have the clearances shown from the heater and the connector pipe to combustible surfaces. If you have a solid brick or stone wall behind your heater, you can place the heater as close as you wish to the wall. If the wall is only faced with brick or stone, treat it as a combustible wall.

MINIMUM CLEARANCE TO COMBUSTIBLE WALLS



NOTE: BEFORE FIRING HEATER

1. Remove plastic knob from inside of cabinet door and install on outside.
2. Slide firebricks toward the rear so no gaps remain between them.



chimney connection

MASONRY CHIMNEY

Before using an existing masonry chimney, clean the chimney and inspect the flue liner to be sure it is safe to use. Make repairs before attaching the heater. See Pg. 3 item 5.

Look at Fig. 5. The connector pipe and fittings you will need to connect directly to a masonry chimney are shown.

If the connector pipe must go through a combustible wall before entering the masonry chimney, consult a qualified mason or chimney dealer. The installation must conform to local fire codes, and N.F.P.A. 211.

Do not connect this heater into the same chimney flue as the fireplace or flue from another heater.

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, close it tightly.

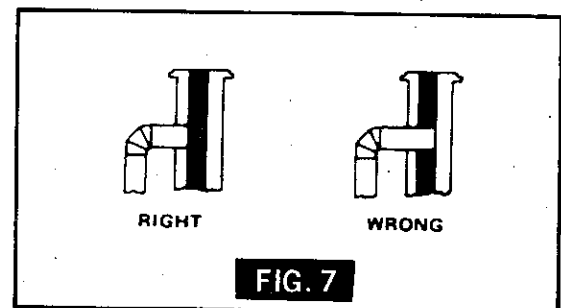
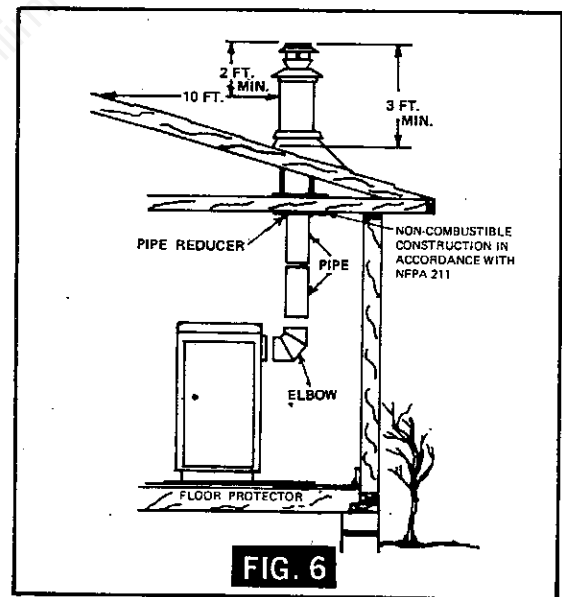
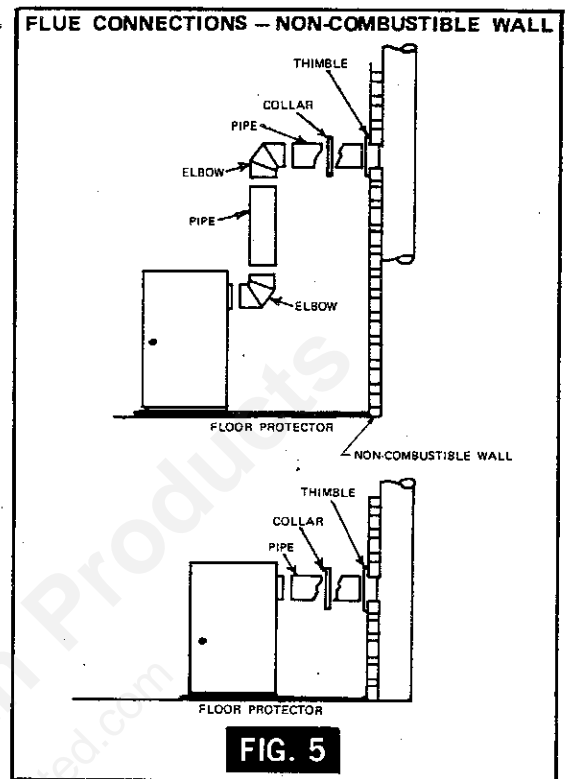
UL LISTED CHIMNEY

Carefully follow chimney manufacturer's instructions. Use only a UL Listed Residential Type and Building Heating Appliance Chimney. If your chimney starts at the ceiling (Fig. 6), you will need a 6" elbow and enough 6" pipe to reach the ceiling.

The top of the chimney must be at least 3 feet above the roof and be at least 2 feet higher than any point of the roof within 10 feet (Fig. 6).

RULES FOR CONNECTOR PIPE INSTALLATION

1. The crimped end of the stovepipe fits inside the heater flue collar. Install additional pipe and elbow with the **CRIMPED END TOWARD THE HEATER**. This will allow any condensation in the flue to run back into the heater.
2. Slope any horizontal pipe upward toward the chimney at least $\frac{1}{4}$ inch for each foot of horizontal run.
3. You must have at least 18 inches of clearance between any horizontal piping and the ceiling.
4. The pipe cannot extend into the chimney flue (Fig. 7).
5. Seal each connector pipe joint with furnace cement. Also seal the pipe at the chimney.
6. Use 3 sheet metal screws at each joint to make the piping rigid.
7. Do not put a damper in a connector pipe.



Installation: Cabinet Door Latch Assembly

Remove Handle assembly from ash pan. Items in bag should include: (SEE FIG. 8)

- (1) Latch
- (1) Spring
- (1) Set Screw
- (1) Allen Wrench
- (1) Knob

Install the latch assembly using the steps shown below.

STEP 1: Open cabinet door

STEP 2: Put spring on latch.

STEP 3: Put latch through bracket on the inside of the cabinet door.

STEP 4: Slide handle on latch.

STEP 5: Insert and tighten set screw in handle with allen wrench.

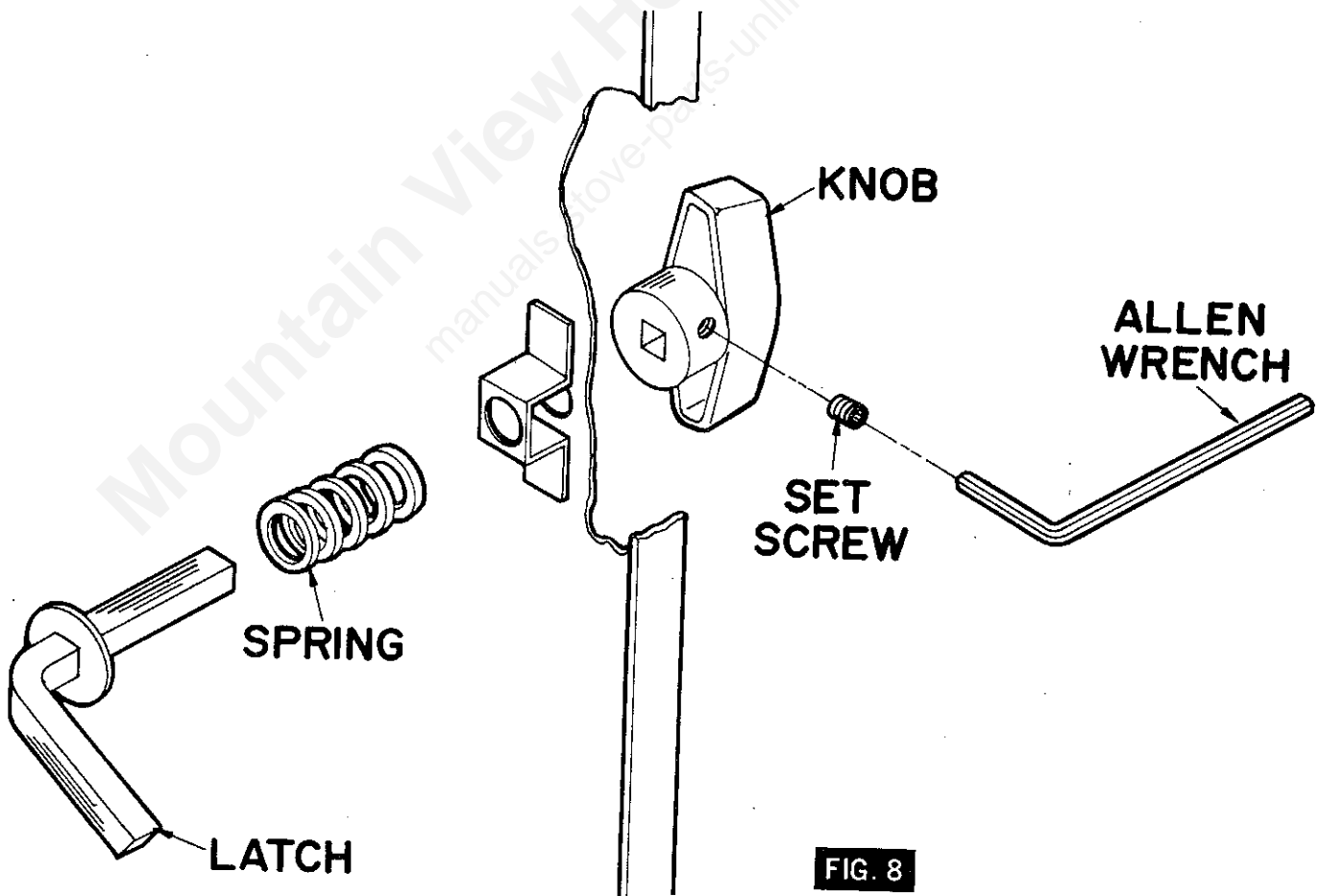


FIG. 8

operating instructions

FUEL

Egg size (1-3/16 or larger) coal for residential furnaces. Coal with a low ash content (2% to 6%) is recommended. Do not use Cannel Coal.

Hardwood, 18" to 22" should be split and air dried (seasoned) for 6 months.

LIGHTING

1. Set the thermostat on "HIGH" for maximum draft.
2. Open the feed door and place paper and kindling on the grate for starting the fire.
3. Light fire and close feed door.
4. Add wood or about 15 lbs. of coal after fire is burning briskly. Be careful not to smother the kindling fire.
5. Set thermostat for desired temperature. "MEDIUM" setting is normally satisfactory. Set higher or lower for your comfort.

ADDING FUEL

When possible, add small amounts of fuel each hour or so instead of adding large quantities of fresh fuel over long periods of time. This will give more complete combustion and less build-up of tars or soot in the chimney.

1. Set thermostat to HIGH before opening feed door.
2. Wood Fire - Do not add fuel above firebox liners.
3. Coal Fire - Never smother the fire when adding coal (see CAUTION below). Gas accumulation and a mild smoky explosion will occur.

CAUTION

GASES THAT ARE DRIVEN FROM FRESH COAL MUST BE BURNED OR THEY WILL ACCUMULATE AND EXPLODE. NEVER SMOTHER A FIRE WHEN ADDING FRESH COAL.

- a. Add fresh kindling if the bed of coals has cooled.
 - b. Add up to 20 lbs. of coal. Never add coal above top of fire brick.
 - c. Stir the coal and watch the fire. Be sure the new coal is burning briskly before you close the doors and turn the thermostat down.
 - d. Adjust air shutter on feed door damper from closed to open position for better burning. (See Fig. 9)
4. Shake grates vigorously 1/2" towards and away from the ash door opening to dump ashes into the ash pan. Do this at least once every 12 hours of operation. Empty ash pan regularly. Do not allow ashes to build up to grate as grate will warp and burnout, and you might spill the ashes when removing the pan. Dispose of hot ashes properly (see Note 12 on Page 3).

CAUTION

DO NOT OPERATE WITH THE FEED, ASH, OR CABINET DOOR OPEN. THIS HEATER IS DESIGNED FOR THERMOSTATIC OPERATION. OPERATION WITH ANY OF THESE DOORS OPEN WILL OVERHEAT AND DAMAGE THE HEATER.

CAUTION

NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID, OR FLAMMABLE LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THE HEATER.

WARNING

NEVER STORE FLAMMABLE LIQUIDS, ESPECIALLY GASOLINE, IN THE VICINITY OF THE HEATER.

SUGGESTIONS FOR BURNING ANTHRACITE COAL

1. Anthracite coal may be burned in the Model 3027BG Circulator. Always follow instructions that are shown in the Owners Manual.
2. With coal, as with wood, it is important to maintain a clean chimney. The chimney connector and chimney should be inspected at least twice monthly during heating season.
3. Keep the grate clear of ash and cinders. Use the shaker grate to keep the ashes from building up in the firebox.
4. Do not operate the unit with the ash door, feed door, or cabinet door open.
5. Anthracite coal burns with a short, blue flame with the coals having a glowing, red color. Before adding coal, when starting the fire, have a good hot log fire burning.
6. After having a log fire burning, add small amounts of coal until a bed of coal is built up.
7. A draft reading of $-.05$ to $-.06$ in w.c. is required for anthracite to burn.

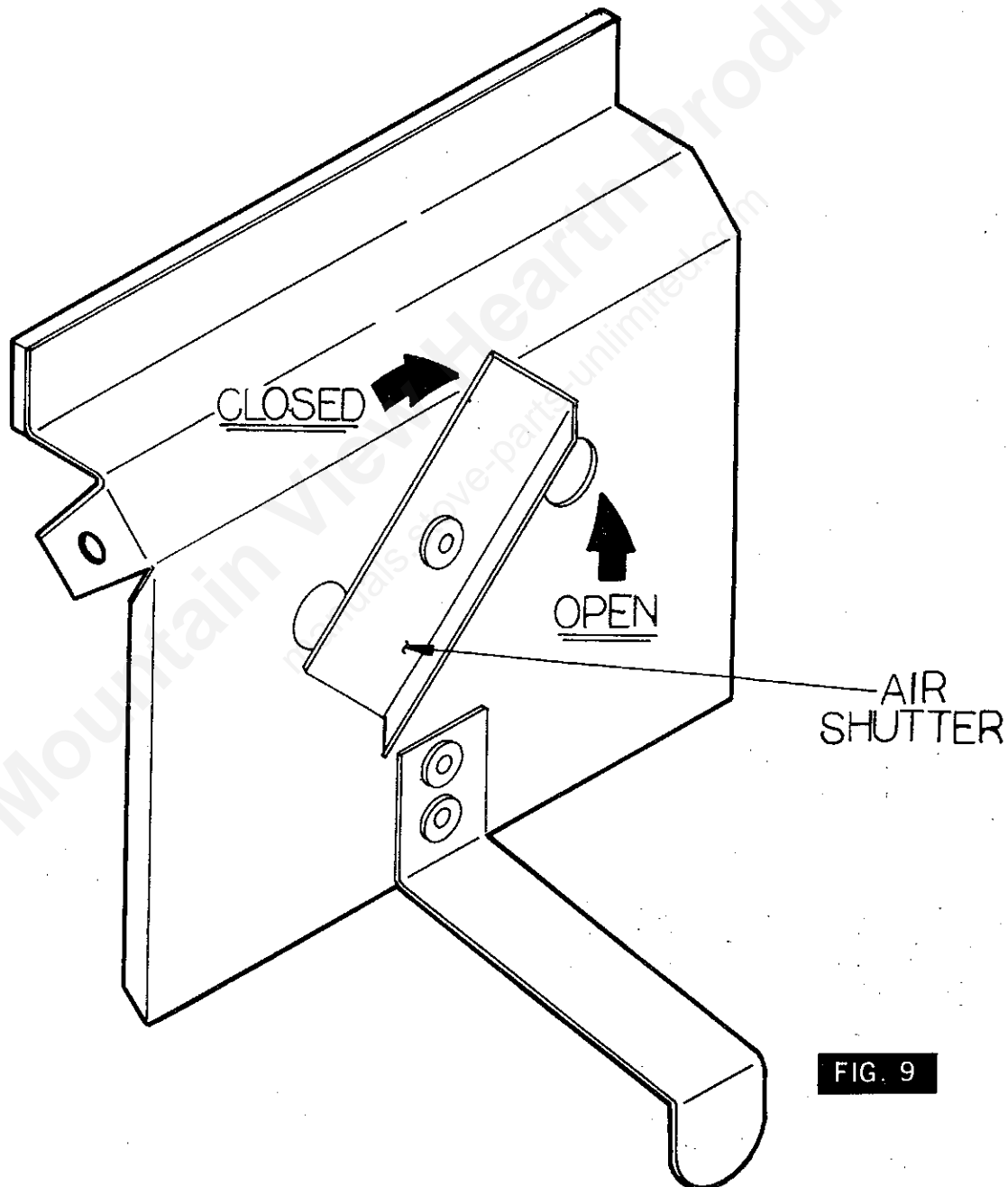


FIG. 9

CAUTION

THIS HEATER IS DESIGNED WITH A FLUE COLLAR DAMPER WHICH OPERATES AUTOMATICALLY WHEN THE FEED DOOR IS OPENED AND CLOSED. IF THE UNIT SMOKES WHEN THE FEED DOOR IS OPEN, CHECK THE FLUE COLLAR DAMPER TO SEE THAT IT IS OPEN ALSO. FAILURE OF THE DAMPER TO OPERATE PROPERLY MAY CAUSE SMOKE AND FLAME TO ESCAPE THROUGH THE FEED DOOR IN THE OPEN POSITION. (FIG. 10)

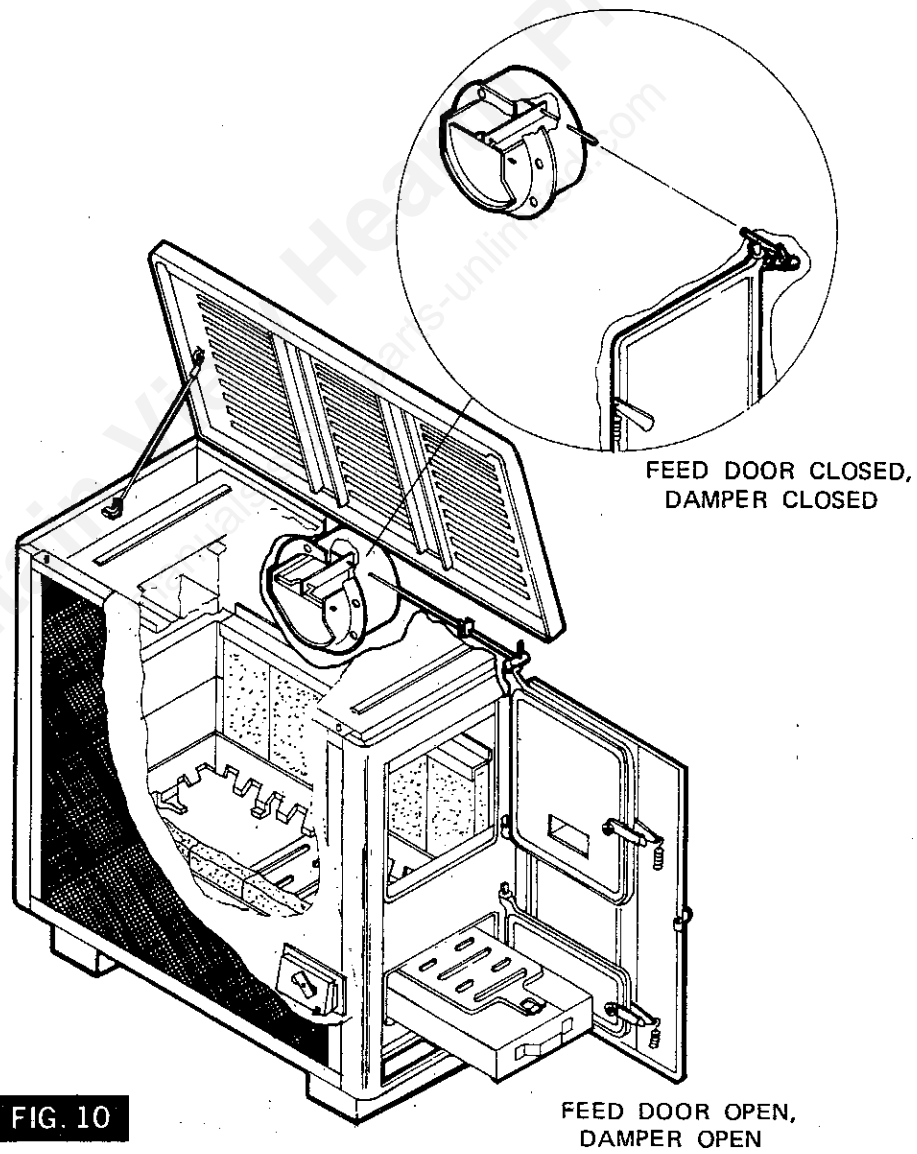


FIG. 10

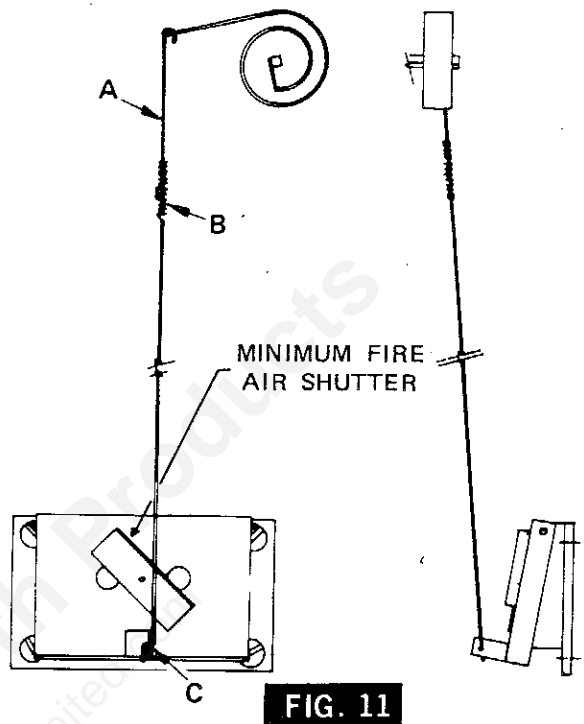
adjusting the thermostat

The thermostat control was adjusted at the factory. The operation of the heater may require a change in calibration. Calibration adjustments should be made at room temperature.

If the thermostat adjustment is not satisfactory, the thermostat operating range may be changed as follows:

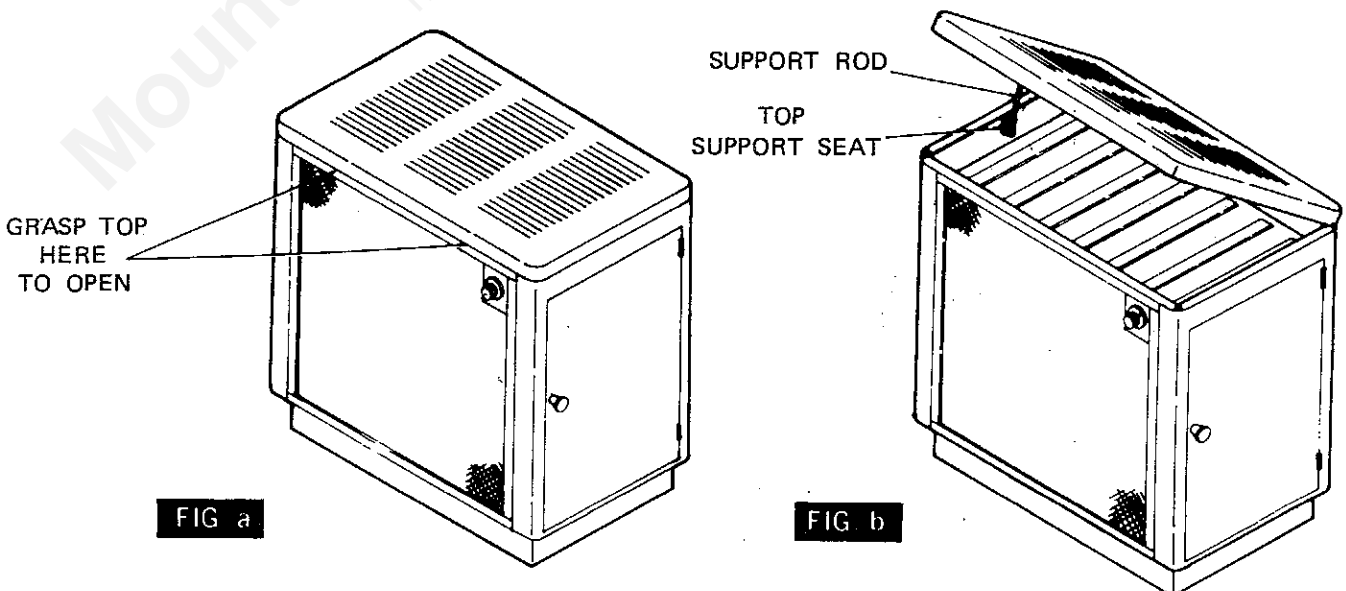
- A. To increase the amount of heat at a "HIGH" setting, adjust the wire linkage to increase the draft damper opening (Fig. 11).
 1. Unhook linkage wire at Point "C".
 2. Take Point "A" in left hand and "B" in right hand, then turn "B" clockwise about 3 turns.
 3. Then hook linkage wire back to draft control damper door at Point "C".
- B. To decrease the amount of heat at "LOW" setting:
 1. Check feed and ash doors to be sure that they are closed tightly.
 2. Check the connector pipe to see that it is sealed at all connecting points.
 3. If no air leaks are found, adjust linkage as above except turn "B" counterclockwise about 3 turns.

NOTE: More than one readjustment may be necessary. At room temperature (72° F) and "LOW" setting, the draft damper door should be closed.



How to lift top

CAUTION- DO NOT OPEN OR CLOSE TOP WHEN HEATER IS HOT! To open, lift the front edge of the cabinet top to the full open position. Then gently lower the TOP until the TOP SUPPORT ROD latches in the Top support seat, to hold the top. (Fig. a) To close, lift TOP until the TOP SUPPORT ROD is unlatched. Pull the ROD forward and lower the TOP (Fig. b).



minimum fire

The burning rate at the low setting can be further adjusted by opening or closing the minimum fire air shutter (Fig. 11) on the draft control door.

1. Partially close the shutter to make the fuel burn longer.
2. Open the shutter, exposing a large opening, to reduce the formation of creosote or soot (see notes on Chimney Maintenance).
3. Do not operate the heater with the minimum fire air shutter completely closed.

service hints

Do not expect a heater to draw. It is the chimney that creates the draft. Smoke spillage into the house or excessive build-up of water or creosote in the chimney are warnings that the chimney is not functioning properly. Correct the problem before using heater. Possible causes are:

1. The connector pipe may be pushed into the chimney too far, stopping the draft (Fig. 7).
2. Do not connect two heaters into the same chimney flue.
3. 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.
4. If the chimney is operating too cool, water will condense in the chimney and run back into the stove. Creosote formation will be rapid and may block the chimney. Operate the heater at a high enough fire to keep the chimney warm preventing this condensation.
5. 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. The top of the chimney should be at least 3 feet above the roof and be at least 2 feet higher than any point of the roof within 10 feet (Fig. 6).

chimney maintenance

Creosote - Formation and Need for Removal

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited this creosote makes an extremely hot fire.

The chimney connector and chimney should be inspected at least twice monthly during the heating season to determine if a creosote buildup has occurred.

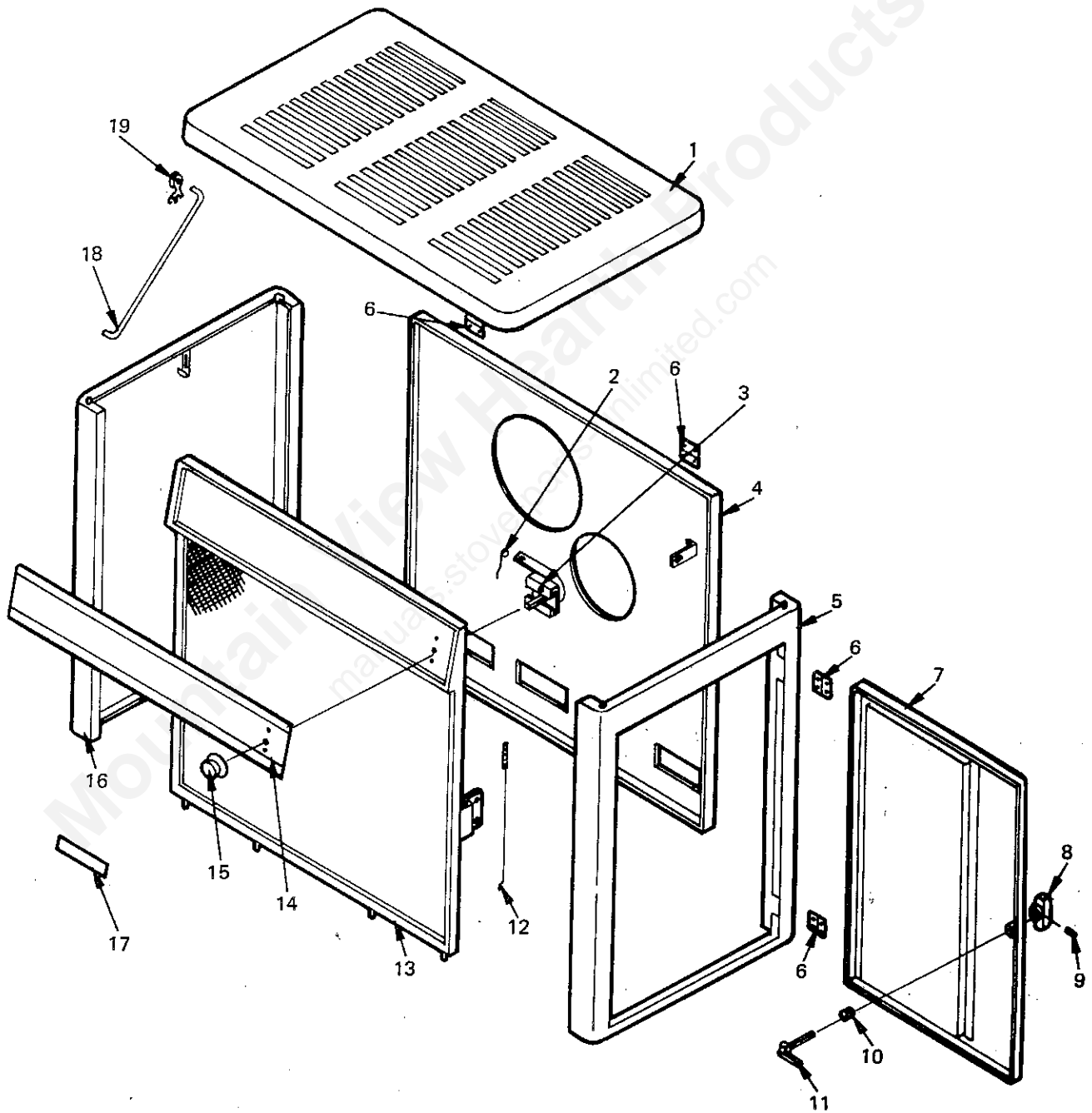
If creosote has accumulated, it should be removed to reduce the risk of a chimney fire.

Chimney fires burn very hot. If the chimney connector should glow red, immediately call the fire department, then reduce the fire by closing the inlet air control and pour a large quantity of coarse salt, baking soda or cool ashes on top of the fire in the firebox. CAUTION: A chimney fire may cause ignition of wall studs or rafters which you thought were a safe distance from the chimney. If you have a chimney fire, have your chimney inspected by a qualified person before using again.

repair parts

AUTOMATIC COAL BURNING CIRCULATOR

MODEL NUMBER 3027BG



repair parts

AUTOMATIC COAL BURNING CIRCULATOR

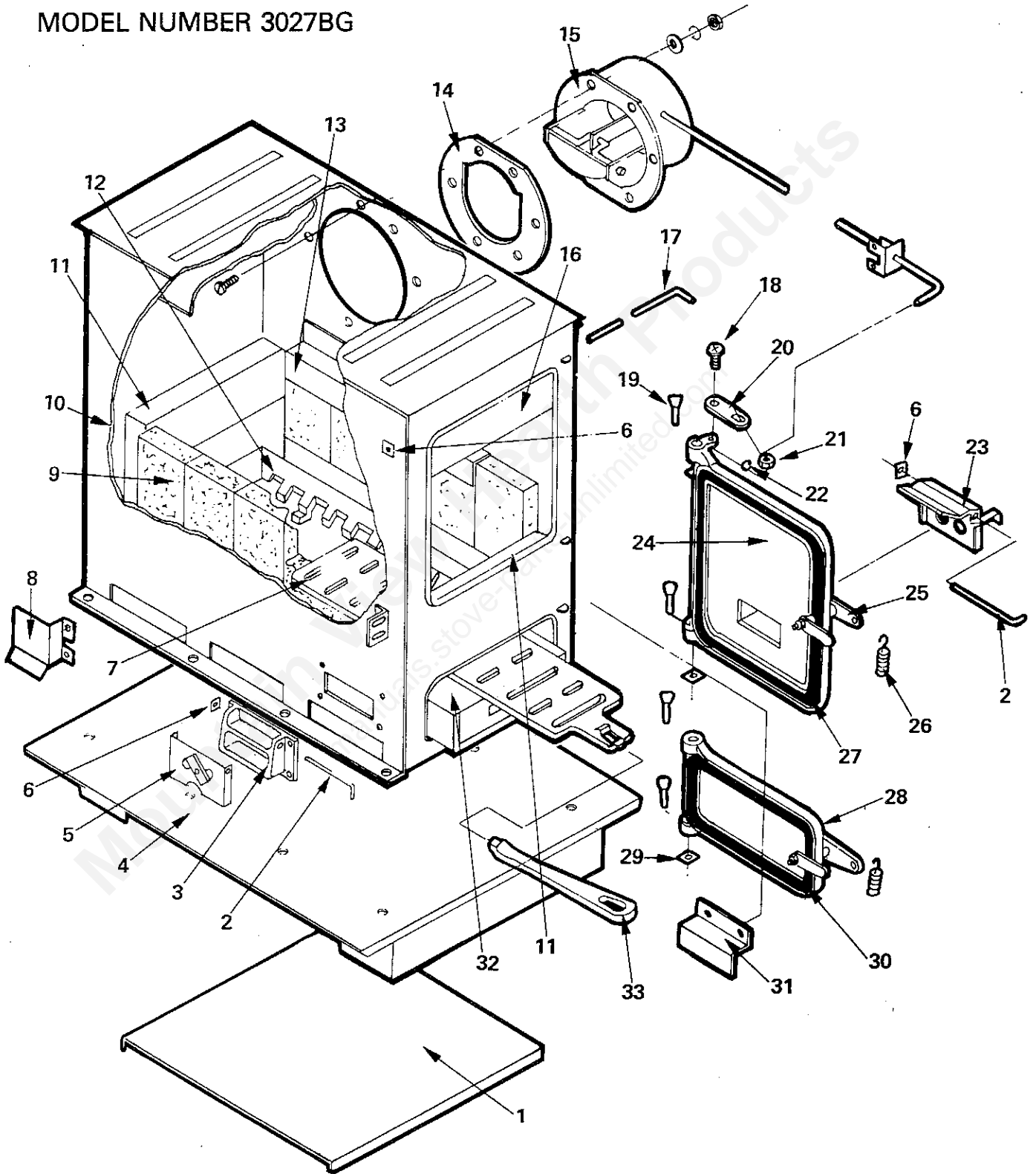
MODEL NUMBER 3027BG

Key No.	Part No.	Description	Qty.
1	67739	Cabinet Top	1
2	86192	Thermostat Linkage	1
3	67187	Thermostat Assembly	1
4	67514	Cabinet Back	1
5	67741	Cabinet Door Frame	1
6	89065	Door Hinge	4 Req'd
7	67742	Cabinet Door	1
8	89173	Door Handle	1
9	83210	Set Screw	1
10	89041	Spring	1
11	67724	Door Latch	1
12	86191	Thermostat Linkage Adj.	1
13	67725	Cabinet Front	1
14	85347	Control Panel Plate	1
15	89172	Thermostat Knob	1
16	67740	Cabinet Left End	1
17	85330	Wonder Coal Label	1
18	21593	Hinge Support	1
19	83833	Hinge Clip	1

repair parts

AUTOMATIC COAL BURNING CIRCULATOR

MODEL NUMBER 3027BG



repair parts

AUTOMATIC COAL BURNING CIRCULATOR

MODEL NUMBER 3027BG

Key No.	Part No.	Description	Qty.
1	21887	Shield, Heat	1
2	17200	Pin, Draft Damper Hinge	1
3	40075	Frame, Draft Damper	1
4	67664	Base	1
5	67668	Damper, Draft Control	1
6	83818	Clip	3
7	40101	Grate, Coal	1
8	21831	Baffle, Thermostat	1
9	89066	Firebrick	10
10	67665	Firebox	1
11	40100	Liner	3
12	40102	Frame, Coal Grate	1
13	40172	Retainer, Top Firebrick (LH)	2
14	88051	Gasket, Flue Collar	1
15	67672	Flue Collar Assembly	1
16	21548	Smoke Curtain	1
17	17210	Pin, Smoke Curtain Hinge	1
18	83119	10-24 x 1 Machine Screw	1
19	83177	Rivet	4
20	21842	Arm, Control Rod	1
21	83004	Nut, 10-24	1
22	83020	Lockwasher	1
23	67687	Damper, Feed Door	1
24	21834	Door Feed	1
25	LK-26	Door Latch Kit Includes Handle & Gasket	1
26	67567	Handle, Wood	2
27	21804	Gasket, Rope Feed Door	1
28	67368	Door, Ash (Includes Handle & Gasket)	1
29	83819	Clip	4
30	21803	Gasket, Rope Ash Door	1
31	40173	Retainer Firebrick Top (RH)	2
32	67444	Pan, Ash	1
33	40045	Shaker	1
*	85351	Owners Manual	1

* Not Shown

owners manual

HOW TO ORDER REPAIR PARTS

THIS MANUAL WILL HELP YOU TO OBTAIN EFFICIENT, DEPENDABLE SERVICE FROM THE HEATER, AND ENABLE YOU TO ORDER REPAIR PARTS CORRECTLY.

KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.

WHEN WRITING, ALWAYS GIVE THE FULL MODEL NUMBER WHICH IS ON THE NAMEPLATE ATTACHED TO THE BACK OF THE HEATER.

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 SERIAL NUMBER



Belknap, Inc.

111 E. Main Street
Louisville, KY 40201

Manufactured for Belknap Inc.

by U. S. Stove Company - P. O. Box 5349 - Chattanooga, TN. 37406