

# THARRINGTON

## OIL FIRED ROOM HEATERS

### MODELS

**5135, 5160, 5175**  
**8R35, 10R60, 13R75**



### FEATURES

PREPARATIONS                      INSTALLATION  
OPERATION                      MAINTENANCE                      SAFETY

### SAFETY NOTICE

**IF THIS HEATER IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION INSTRUCTIONS. CONTACT THE AUTHORITY HAVE JURISDICTION (SUCH AS MUNICIPAL BUILDING DEPARTMENT, FIRE DEPARTMENT, FIRE PREVENTION BUREAU, ect.) SHOULD BE CONSULTED BEFORE INSTALLATION TO DETERMINE THE NEED TO OBTAIN A PERMIT. KEEP THESE INSTRUCTIONS FOR FUTURE USE.**

**MANUFACTURED BY NEW BUCK CORPORATION - SPRUCE PINE, NC 28777**

Revised January 2009





READ THIS MANUAL CAREFULLY AND THOROUGHLY FOR DETAILS NECESSARY FOR A PROPER AND SAFE INSTALLATION.

- DUE TO HIGH SURFACE TEMPERATURES, THE HEATER SHOULD BE LOCATED OUT OF TRAFFIC AND AWAY FROM FURNITURE AND DRAPERIES.
- CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARD OF HIGH SURFACE TEMPERATURE AND SHOULD BE KEPT AWAY TO AVOID BURNS OR CLOTHING IGNITION.
- YOUNG CHILDREN SHOULD BE CAREFULLY SUPERVISED WHEN THEY ARE IN THE SAME ROOM WITH THE HEATER.
- INSTALLATION AND REPAIR SHOULD BE DONE BY A QUALIFIED SERVICE PERSON. THE HEATER SHOULD BE INSPECTED BEFORE USE AND AT LEAST ANNUALLY BY A PROFESSIONAL SERVICE PERSON. MORE FREQUENT CLEANING MAY BE REQUIRED DUE TO EXCESSIVE LINT FROM SOME CARPETING, BEDDING MATERIAL, ETC. IT IS IMPERATIVE THAT CONTROL COMPARTMENTS, BURNER, COMBUSTION AND CIRCULATING AIR PASSAGEWAYS BE KEPT CLEAN.

#### CAUTION:

INSTALLER MUST BE FAMILIAR WITH ALL LOCAL AND NATIONAL CODE REQUIREMENTS INCLUDING THE NATIONAL ELECTRIC CODE — ANSI C1 AND NATIONAL FIRE PROTECTION ASSOCIATION, NFPA NO. 31, WITH SPECIAL ATTENTION TO, BUT NOT LIMITED TO THE FOLLOWING:

- (a) Accessibility Clearances and Clearance to Combustible Construction. The heater should be located out of traffic and away from furniture, draperies, and anything combustible due to high surface temperature.
- (b) Venting of Flue Products (Flue and chimney connections)
- (c) Fuel Oil System
- (d) Electrical Wiring

#### UNPACKING

This heater is shipped completely assembled in one package.

Whenever possible, leave the heater in the carton until moved to final location. If any parts are found damaged at the time of delivery, proper notation should be made on the bill of lading from the transportation company. Concealed damages must be filed within fifteen days with carrier. Claims of shortage must be filed with the manufacturer within five days.

#### LOCATION

Heater should be as near the center of the space to be heated with consideration being given to:

- (1) Accessibility to chimney — shortest possible run of flue pipe must be used.
- (2) Accessibility to outside fuel tank.
- (3) Adequate room ventilation to assure complete combustion of oil.

## INSTALLATION AND CLEARANCE

This oil heater must be installed in accordance with the regulations of the National Fire Protection Association, NFPA No. 31. All local authorities having jurisdiction should be consulted before installation is made.

Provisions for adequate combustion and ventilation air must be made. You must also provide adequate clearances around the openings into the combustion chamber.

Heater may be installed on combustible flooring with clearances as follows:

### CLEARANCES-INCHES

<u>HEATER MODEL NO.</u>	<u>SIDES</u>	<u>BACK</u>	<u>VENT PIPE</u>
5135	30	18	11
8R35	30	18	11
5160	30	20	13
10R60	30	20	13
5175	30	20	13
13R75	30	20	13

#### NOTE:

When the heater is installed directly on carpeting, tile or other combustible material other than wood flooring, the heater shall be installed on a metal or wood panel extending the full width and depth of the heater.

## FLUE AND CHIMNEY CONNECTIONS

This heater must be provided with flue connections and chimney that will give a steady draft of .06" WC (at the flue connection of the heater) for trouble free operation.

The draft regulator assembly must be installed as close to the flue connection of the heater as possible and adjusted as shown of page 5.

## NEVER INSTALL A DAMPER IN THE FLUE PIPE

The narrowest internal dimension of the chimney should be not less than 6 inches. Only the heater should be connected to the heater flue. Horizontal runs of the flue pipe must be pitched upwards toward chimney as least ¼ inch per foot. **DO NOT PITCH DOWNWARD.**

The top of the chimney should be at least (3) three feet above the highest point where it passes through the roof and at least (2) feet higher than any portion of the roof or an adjacent building within (10) feet of the chimney (figure 2)

Listed and illustrated in Figure 1 are some common chimney faults, which must be avoided or corrected prior to installation of this heater.

1. Obstructions in chimney liners – accumulated dirt, dislodged or fallen brick, and bird nest.
2. Leaky chimney liner, cleanout doors and flue pipe connections to chimney
3. Excessive flue pipe protrusion into chimney.
4. Other appliance flues, such as water heaters, incinerators and fireplaces sharing the heater flue.
5. Insufficient chimney height above roof peak or presence of close low over-hanging trees.



## WHAT MAKES A GOOD CHIMNEY

1. It must be of proper height and produce .06" water column of draft measured over the fire.
  - a. Top of chimney should be at least 20 feet above the floor upon which the heater stands. This insures adequate draft.
  - b. In case of a flat roof, extend chimney 4 feet to prevent downdrafts. If impractical, use a chimney cap. See Figure 3.
2. It must be tight, i.e., free from leaks. The easiest way to locate leaks is to inspect all suspected places with a candle flame. When leak is encountered, the flame will be drawn toward it by the draft.
3. It must be clear, i.e., free of obstructions. The inside of the chimney flue can be easily examined by inserting a mirror in the stove pipe hole, especially if the chimney is straight up. The light from above will be reflected in the mirror and any defects or openings will be plainly seen. If obstructions are found in the chimney, a heavy weight attached to a rope will usually dislodge them.
4. It must have proper capacity. If the chimney is round, it must be at least 6 inches in diameter. If rectangular, the smallest dimension must be at least 6 inches, and the largest dimension should not be more than 12 inches.

The flue cap must not restrict the outlet of the chimney. Even though an adequate draft may be present at the heater, the products of combustion may not be removed fast enough to allow for complete combustion. See Figure 3.

## SOME COMMON CHIMNEY FAULTS

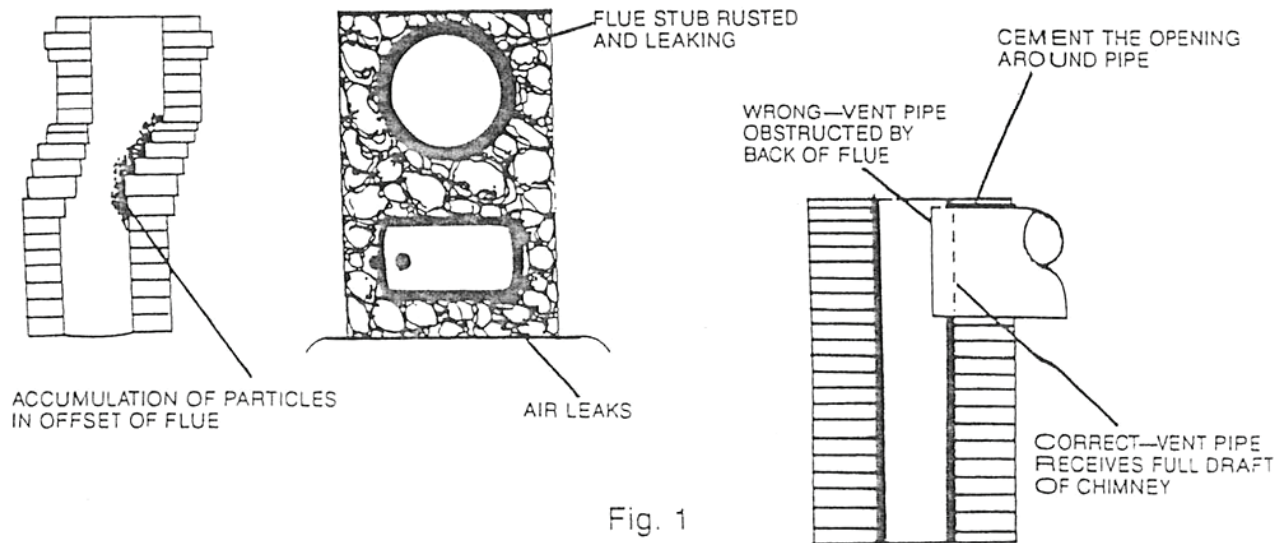
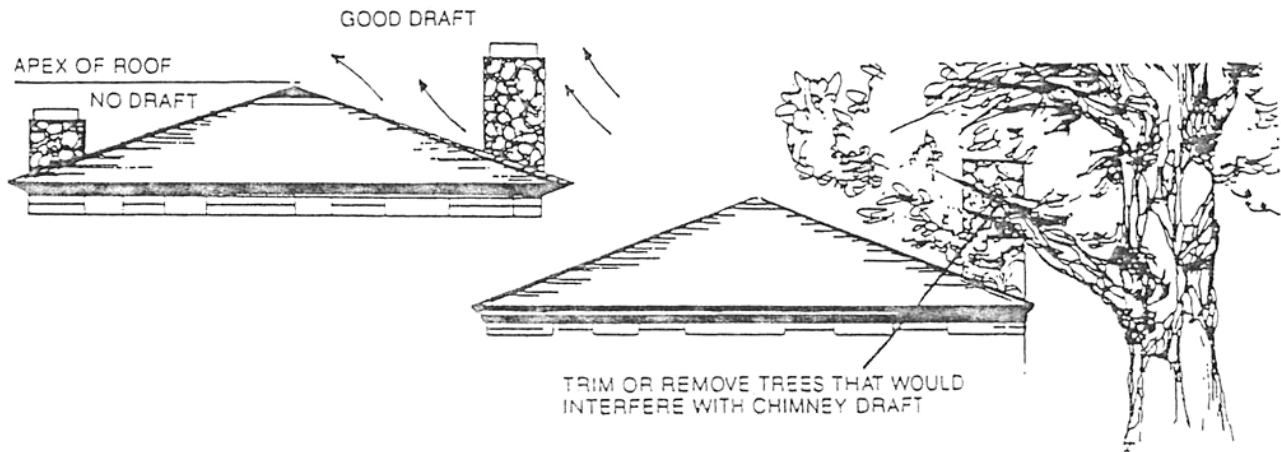


Fig. 1



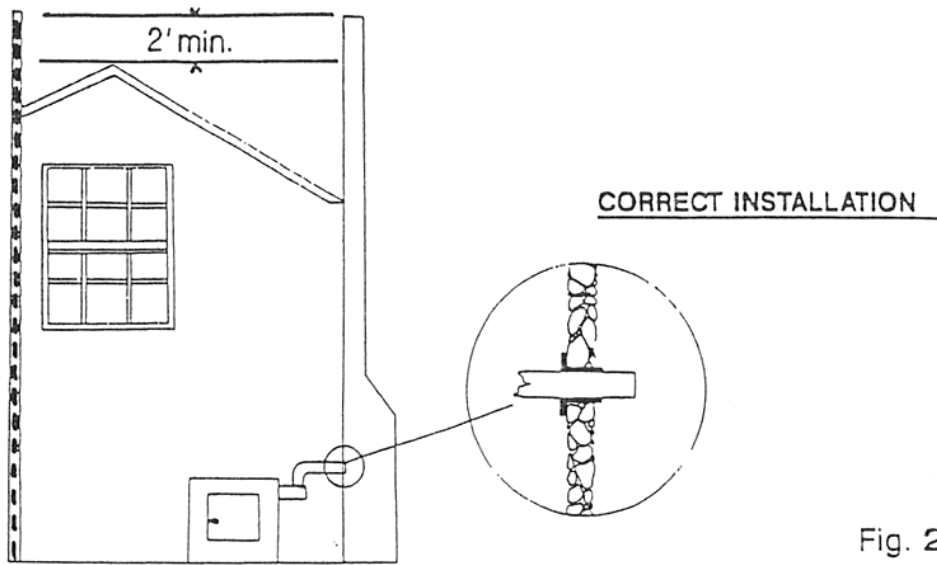


Fig. 2

CONNECT ONLY ONE HEATER TO A CHIMNEY

Best results are obtained when nothing is connected to the chimney except the heater. There are installations where other devices are connected to the same chimney, but usually such installations cause trouble and should be avoided. If this is impossible, try connections as shown in Figure 4.

If one pipe is above the other as A and B, pipe A must have end closed and notched as shown. If one pipe is opposite the other as B & C, pipe C should have end closed and notched. A toothpick joint (Illustration D of Figure 4) will often cure a weak draft. It is particularly useful when pipe enters chimney just above bottom of chimney.

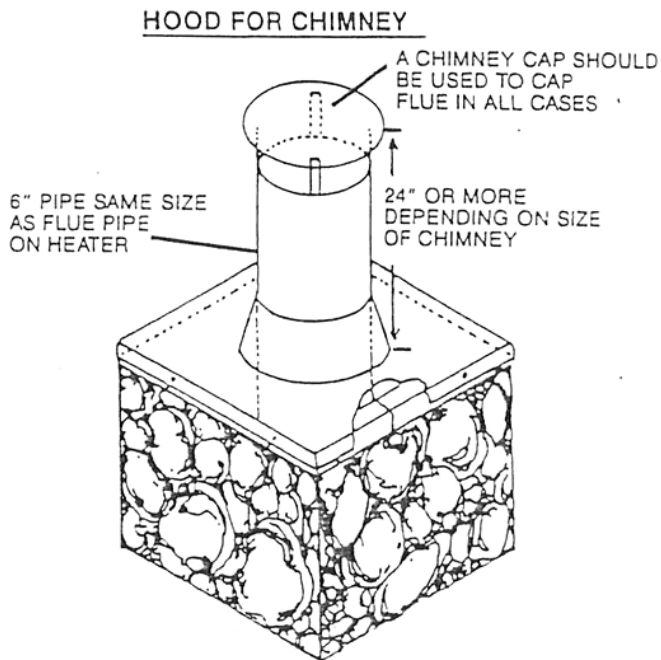


Fig. 3

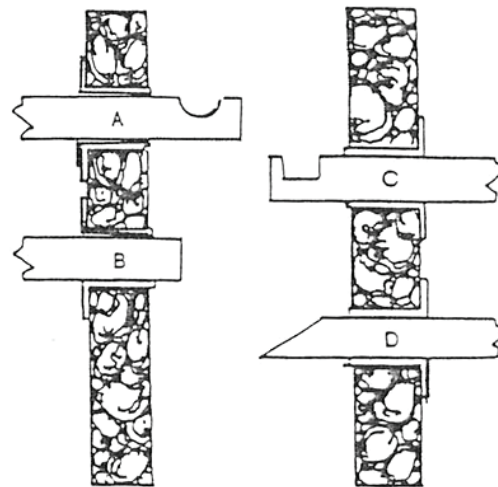


Fig. 4

## ADJUSTING INSTRUCTIONS FOR DRAFT REGULATOR

**IMPORTANT:** The illustration below shows possible position of the draft regulator.

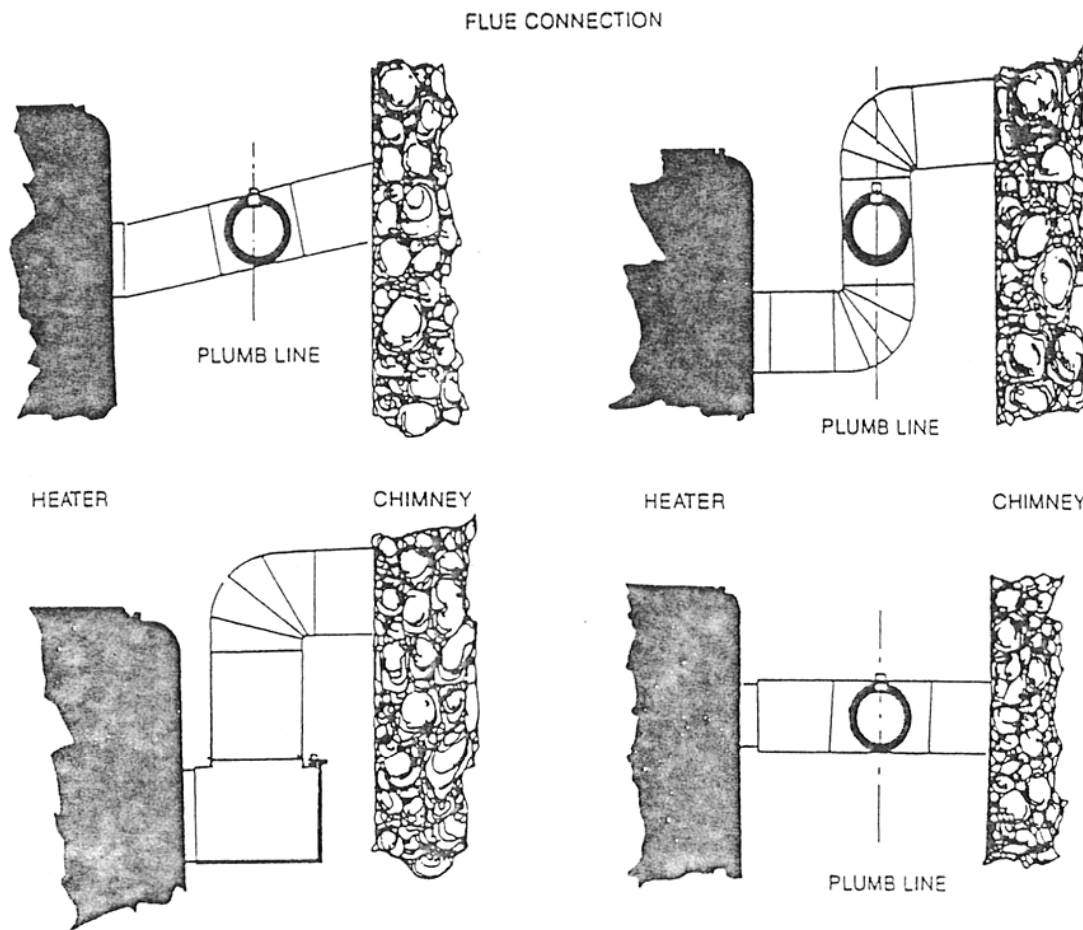


Fig. 5

**CAUTION:** IF A HEATER IS OPERATED AT A DRAFT LESS THAN RECOMMENDED, SOOTING WILL OCCUR IN THE HEATER AND FLUE PIPES. THIS SOOTING WILL TEND TO RESTRICT THE FLOW OF THE FLUE PRODUCTS WHICH WILL PROMOTE INCOMPLETE COMBUSTION AND TEND TO PROMOTE MORE SOOTING.

### ELECTRICAL WIRING

The heater is completely factory wired. All that is required is to connect the heater power cord into a 120 volt, 60 Hz wall receptacle

The optional thermostat is to be connected and mounted by an installer.



## THERMOSTAT LOCATION

The thermostat should be placed on the wall 4½ to 5 feet above the floor of the room most frequently occupied.

It should not be placed on an outside wall or on a partition which would conceal a warm air stack, a hot or cold water pipe, or a chimney. Do not locate it in the path of drafts of cold air from doors or windows, or drafts of warm air from warm-air registers. It should not be placed near a lighting fixture, a fireplace or a radiant heater. Do not place a radio or television under the thermostat.

Also, it should not be placed directly over large articles of furniture or in alcoves where normal air circulation would not reach the thermostat.

## THERMOSTAT INSTALLATION

After choosing the wall upon which the thermostat is to be mounted, any necessary holes in studs, top or bottom plates should be drilled to provide passage of the thermostat wire from heater. Wires from the heater may be allowed to hang freely behind the wall area adjacent to the thermostat location. For finished wall, drill a ½-inch hole through lath and plaster to expose wires for connection to the thermostat. Be sure that the wire ends are clean before connecting them

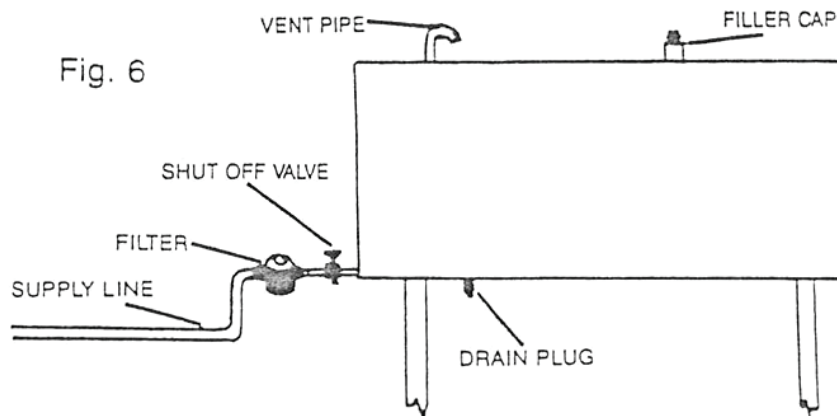
## THERMOSTAT WIRING

The thermostat should be wired to terminals as shown on the Wiring Diagram, included in the optional thermostat kit. All wiring should be done in accordance with the National Electrical Code or with local electrical codes where they prevail.

## INSTALLING THE OIL TANK

The heater is equipped with a constant level valve to allow it to be connected directly to an outside fuel tank.

To connect the heater to an outside tank, attach the pipe from the the tank to the inlet connection of the oil control valve. The oil tank and piping must be installed in accordance with the regulations of the National Board of Fire Underwriters for the Installation of Oil Burning Equipment, Pamphlet No. 31 and all local authorities having jurisdiction. Run 3/8" O.D. copper tubing as straight as possible to avoid kinks and air traps. Protect lines from external injury and use a suitable joint compound to insure tightness between fittings. It is recommended that an oil filter and shutoff valve be installed on the fuel supply line as illustrated. The tank must be vented as illustrated in Figure 6.



**CAUTION:** The level of the oil tank must never be more than ten feet above the oil control valve on the rear of the heater.

## LEVELING THE HEATER

Use the bolts installed in the bottom of the heater as leveling screws. The heater must be level so that the oil will feed properly. Check leveling by placing a level on top of the control valve from side to side and front to rear.

## FINAL INSPECTION

CHECK TO BE CERTAIN THE HEATER IS LEVEL. CHECK ALL OIL CONNECTIONS FOR LEAKS.



## FUEL / LIGHTING INSTRUCTIONS

Use No. 1 commercial grade fuel oil or kerosene. Do not use No. 2 grade or heavier fuel oils. The oil should be free from water and sediment.

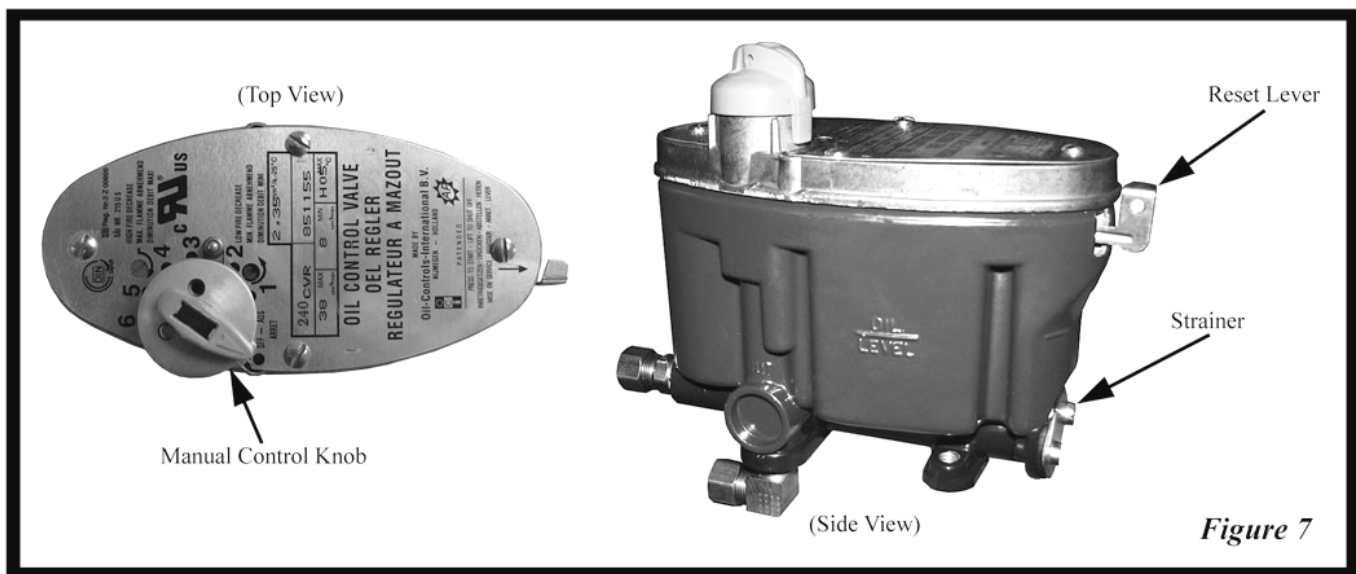
**CAUTION: NEVER USE GASOLINE, OIL CONTAINING GASOLINE OR CRANKCASE DRAININGS.**

- 1 Be sure that there is fuel in the tank, that all valves in the fuel line are open, and that the reset lever on the control valve is in the "DOWN" position. See figure 7.

**CAUTION:** Remember to bleed all air from supply lines.

- 2 Open the door in the side of the combustion chamber.

Make sure Low Fire Ring is located inside burner bowl correctly, supported by the (3) pins located in the side of the burner bowl and beveled side facing up.



- 3 Turn the valve handle to No. 1 setting
- 4 When oil appears in the bottom of the burner bowl, loosely crush a sheet of tissue paper into a ball, place into the opening and light. Be sure lighted paper falls into bottom of bowl.
- 5 **CAUTION:** Never allow the heater to burn without closing the door on the combustion chamber. Never open the door while the heater is operating....
- 6 When it is evident that the oil has ignited and flame has encircled pot, close the door on the combustion chamber. Make sure it is latched.
- 7 If the control has been accidentally left open and a pool of oil has accumulated in the burner before lighting, turn valve to low setting on heater and light as instructed. Be sure the combustion chamber door is closed, while the oil is burning out. Do not turn to High Fire until the excess oil has been consumed.

## HOW TO REGULATE THE FIRE

1. Turn the control handle to the size fire desired, as indicated on the dial. It requires several minutes for the fire to stabilize. The fire may be observed through the glass in the combustion chamber door.
2. Light oil feeds faster than heavy oil, therefore, the valve must not be opened fully on High Fire when light oil is used.  
**CAUTION:** Do not use a High Fire setting that causes smoking. Do not use a Low Fire setting when it burns only part way around the burner. This causes carbon formation in the burner and sooting in the flue pipes.
3. The control is factory adjusted to burn with a low clean fire when the control lever is set to "LOW" (No. 1 setting on valve) using No. 1 oil. But due to variations in oil, the lowest clean fire might be obtained by turning manual control knob slightly above the "LOW" setting. See Figure 7.
4. When heat is not required set the control to the "LOW" position. This eliminates relighting the heater when heat is again needed. See Figure 7.

## TO EXTINGUISH

To shut off all oil supply to heater, pull reset lever to upward position and turn control knob to off position. See Figure 7.

**CAUTION:** DO NOT RELIGHT A HOT BURNER. WAIT UNTIL IT COOLS AFTER THE FIRE IS OUT. DO NOT OPEN THE VALVE UNTIL THE HEATER IS COMPLETELY COOL. ALWAYS KEEP THE VALVE SHUT OFF WHEN THE BURNER IS NOT OPERATING.

## CARE OF HEATER

1. The burner and flue pipes should be cleaned at the start of each heating season to remove carbon and soot. The burner can be cleaned through the door in the combustion chamber. First, clean the upper part around the burner, then scrape the side of the bowl and remove carbon from the bowl. See that all air holes in the burner are open.
2. The strainer in the control valve should be removed periodically and cleaned (See Figure 7). To do this, first shut off the oil supply to the control valve. Make provisions for catching spilled oil and remove the strainer. When replacing the strainer, be sure the small gasket just ahead of the plug is in place.
3. Never use salt, soot remover or other chemicals in the burner to remove carbon. The use of such chemicals may cause metal parts of the burner to corrode and burn out in a short time.

Any correspondence regarding this heater must include the Model Number taken from the number plate mounted on the back of the heater.

## SERVICE HINTS OIL SPACE HEATERS

Most complaints on these burners are due to inadequate draft. Do not neglect this important part of the installation.

Listed below are most of the problems that could occur with these units and how they can be corrected.

### **1 No heat, cannot light burner, fire goes out, etc.**

- (A) Safety shut off tripped on control valve. Reset trip lever.
- (B) Valve strainer plugged. Clean strainer.
- (C) Main tank valve closed. See that all valves are open.
- (D) Water in oil. Clean tank, fuel lines and valves.
- (E) Fire snuffs out. Down draft presence caused by a defective chimney. Correct condition of chimney.
- (F) Thermostat out of calibration. Set thermostat above desired room temperature.

### **2 Insufficient Heat**

- (A) Inside of unit covered with soot – caused by low draft or incorrect grade of oil. Correct condition of chimney so that it will provide sufficient draft. Clean and check unit to make sure correct grade of oil is being used.
- (B) Fuel flow obstructed. Clean strainer and fuel line. Remove carbon from burner.
- (C) Excessive draft pulls heat up chimney. Adjust draft regulator per Draft Regulator Instructions. (Page 5)
- (D) Unit not large enough for space being heated. Have an experienced serviceman check heat loss of space against heater's rating.

### **3 Chimney smokes Excessive soot in heater. Burner burning with a Smokey fire.**

- (A) Low draft or down draft. Check chimney and correct any defect. Look for air leaks, objects partially blocking chimney, etc.
- (B) Burner air holes clogged. Inspect burner to make sure all air holes are open and clean.
- (C) Burner door not closed. Close door. Do not operate with door open.
- (D) Control valve flowing too much oil. Turn manual control rod on top of oil valve to a lower setting.
- (E) Control valve out of level. Level heater and control valve.

### **4 Hard carbon accumulates in burner.**

- (A) Incorrect draft - either too high or too low. Check draft and set draft regulator per instructions. Correct any defect in chimney if low draft condition is present.
- (B) Too much oil flowing at high fire. Turn control rod to a lower setting.
- (C) Wrong grade of oil. Catalytic oil produces more carbon than straight run. Try another brand of oil.

### **5 Noisy burner – woofs, pulsates, roars.**

- (A) Draft too strong. This makes an intense white noisy fire. Reduce draft by resetting draft regulator. If necessary, add a second draft regulator.
- (B) Fluctuating Draft. This will result in intermittent burner noises and the draft regulator will close and open violently. Correct chimney condition.
- (C) Flooded burner. Turn control valve to off until excess fuel is consumed.



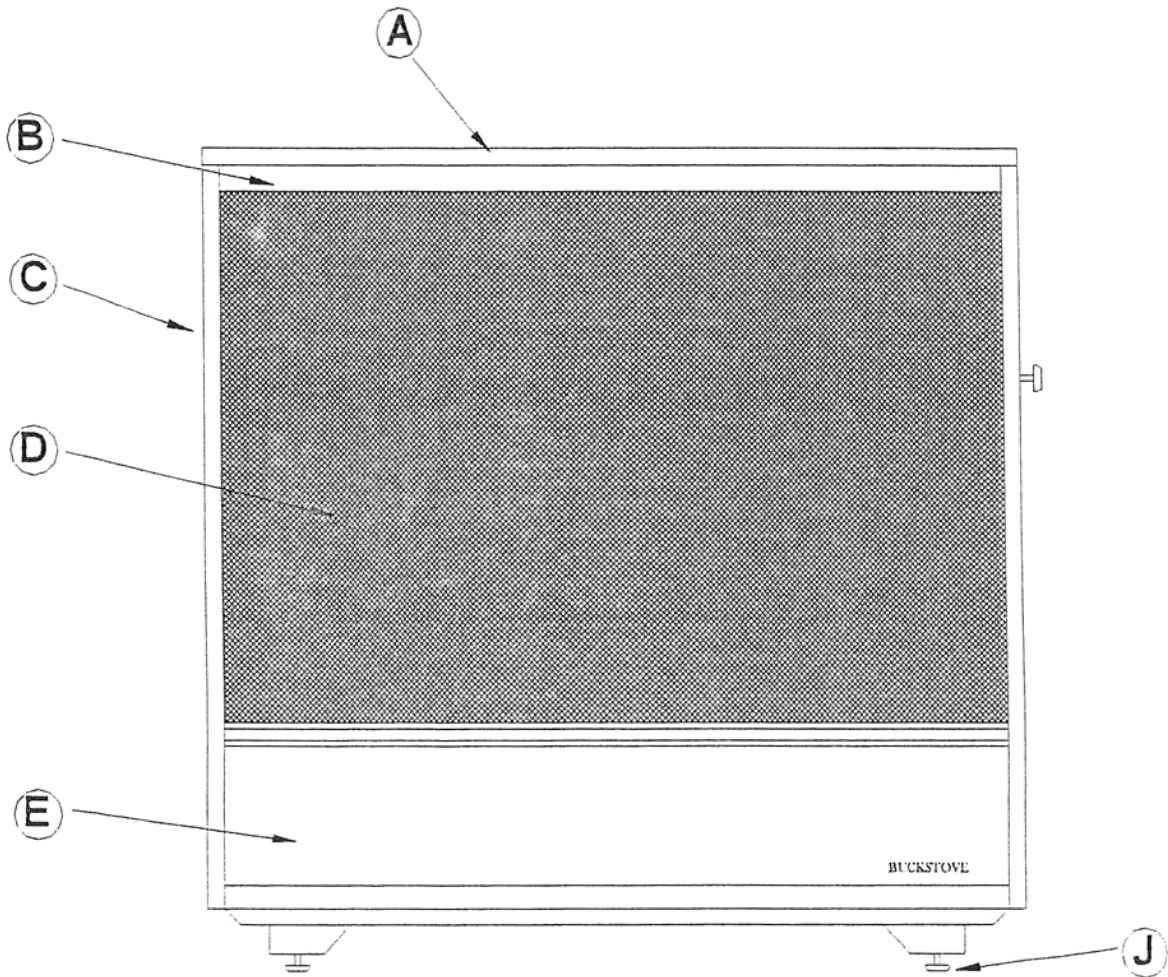


Fig. 8



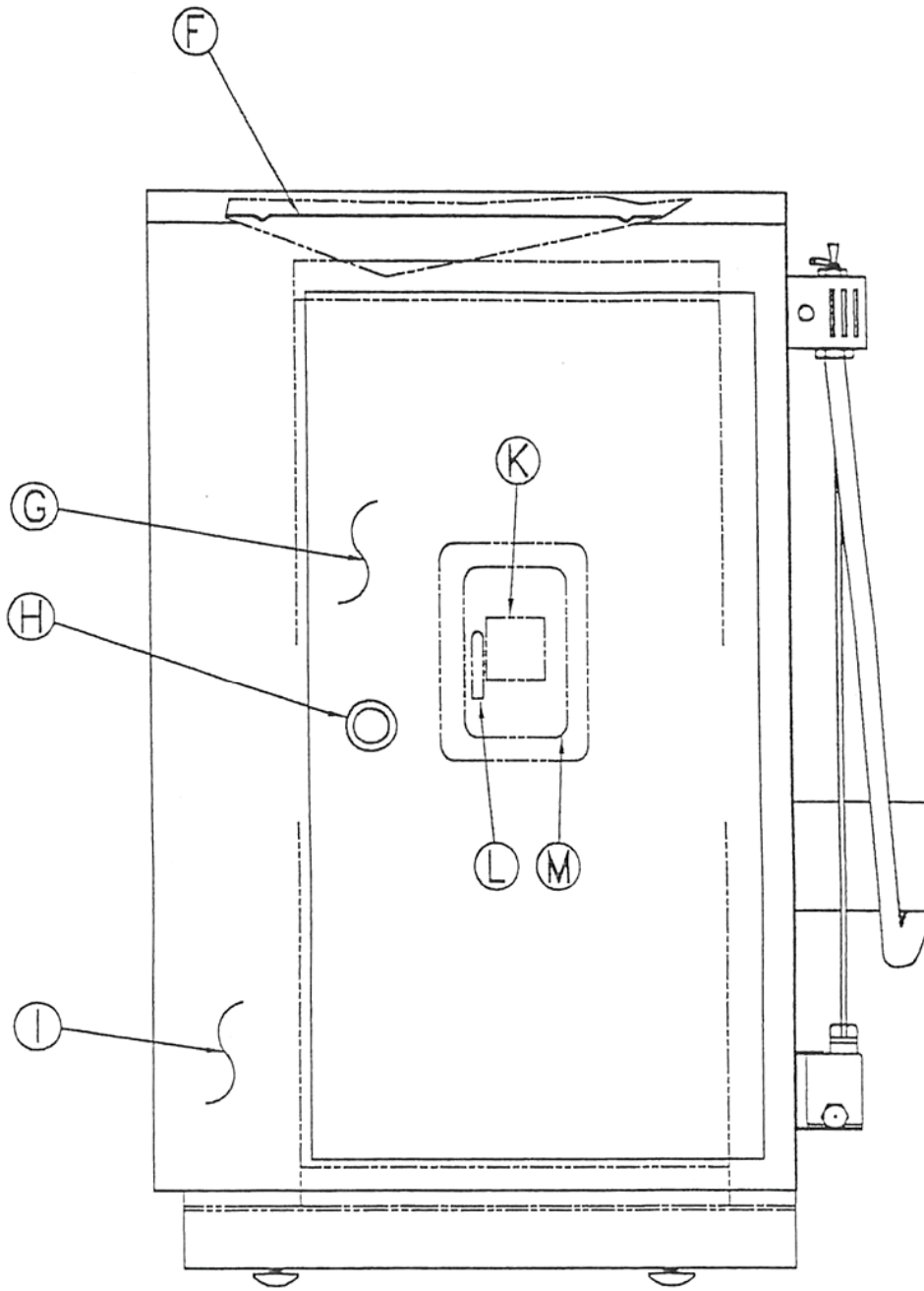


Fig. 9

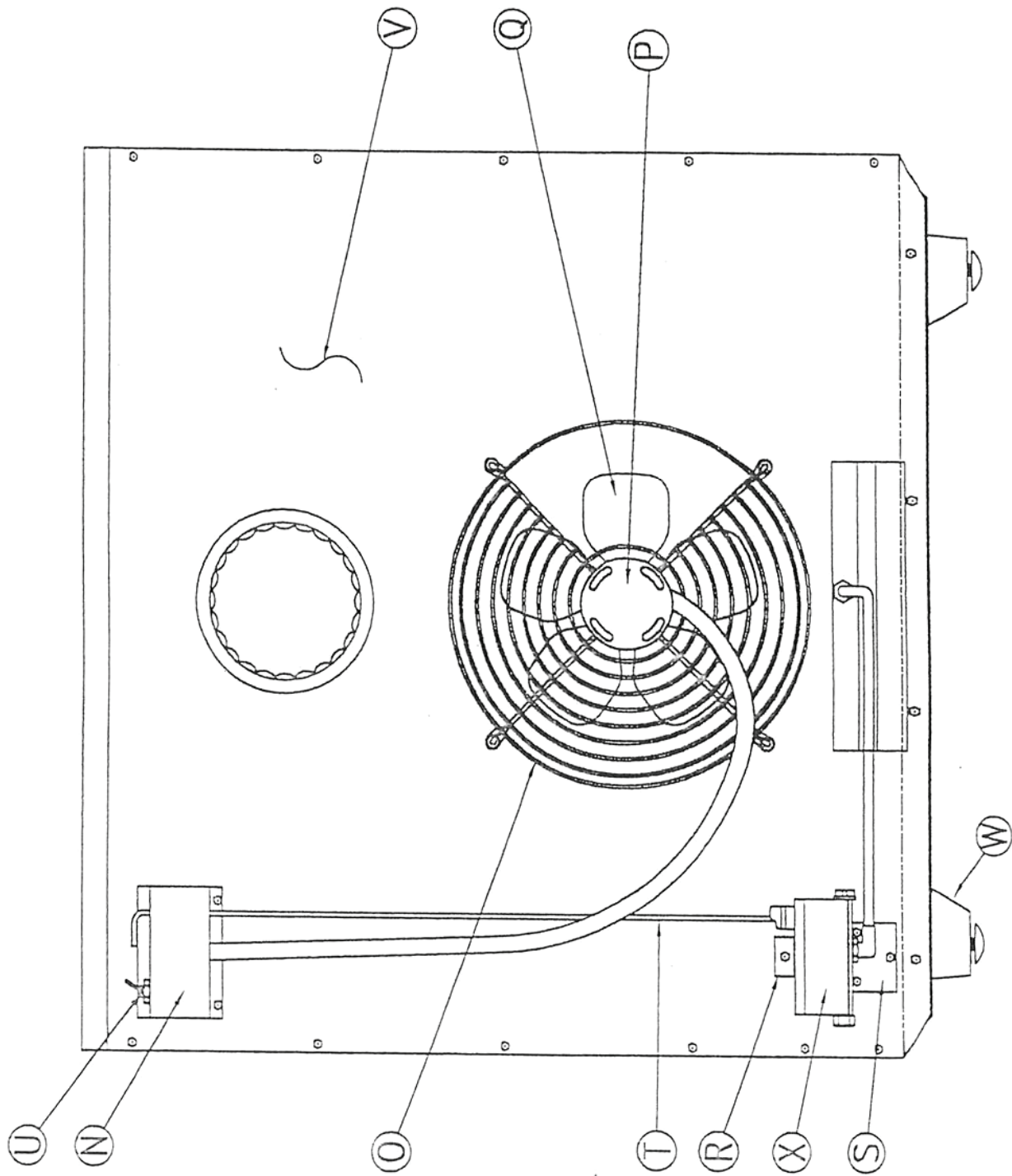


Fig. 10

KEY LETTER	PART NAME	MODEL 5075 PART NUMBER	MODEL 5060 PART NUMBER	MODEL 5035 PART NUMBER
A	CABINET TOP	5175-005	5160-011	5135-022
B	FRONT TOP	5175-012	5160-014	5135-028
C	LEFT SIDE PANEL	5175-007	5175-007	5175-007
D	FRONT CENTER	5175-011	5160-015	5135-029
E	FRONT BOTTOM	5175-012	5160-014	5135-028
F	RADIATION SHIELD	5175-022	5160-022	5135-032
G	DOOR	5135-026	5135-026	5135-026
H	DOOR KNOB	5035-044	5035-044	5035-044
I	RIGHT SIDE PANEL	5175-008	5175-008	5175-008
J	ADJ. FOOT (4)	99-082	99-082	99-082
K	DOOR GLASS	51-013	51-013	51-013
L	DOOR HANDLE	13R7-012	13R7-012	13R7-012
M	DOOR FRAME	5060-010	5060-010	5035-020
N	CONTROL BOX	5135-036	5135-036	5135-036
O	FAN GUARD	5175-FG01	5175-FG01	5175-FG01
P	FAN MOTOR	51-019	51-019	51-019
Q	FAN BLADE	51-018	51-018	51-018
R	CARBURATOR CLIP	5035-008	5035-008	5035-008
S	CARBURATOR BRKT	5035-005	5035-005	5035-005
T	CONTROL ROD	5135-037	5135-037	5135-037
U	FAN SWITCH	11-053	11-053	11-053
V	CABINET BACK	5175-006	5160-012	5135-023
W	CABINET BASE	5175-009	5160-013	5135-027
X	CARBURATOR	51-010-38	51-010-30	51-010-22
-	INSTRUCTION BOOK	5075-013	5075-013	5075-013

Fig. 11

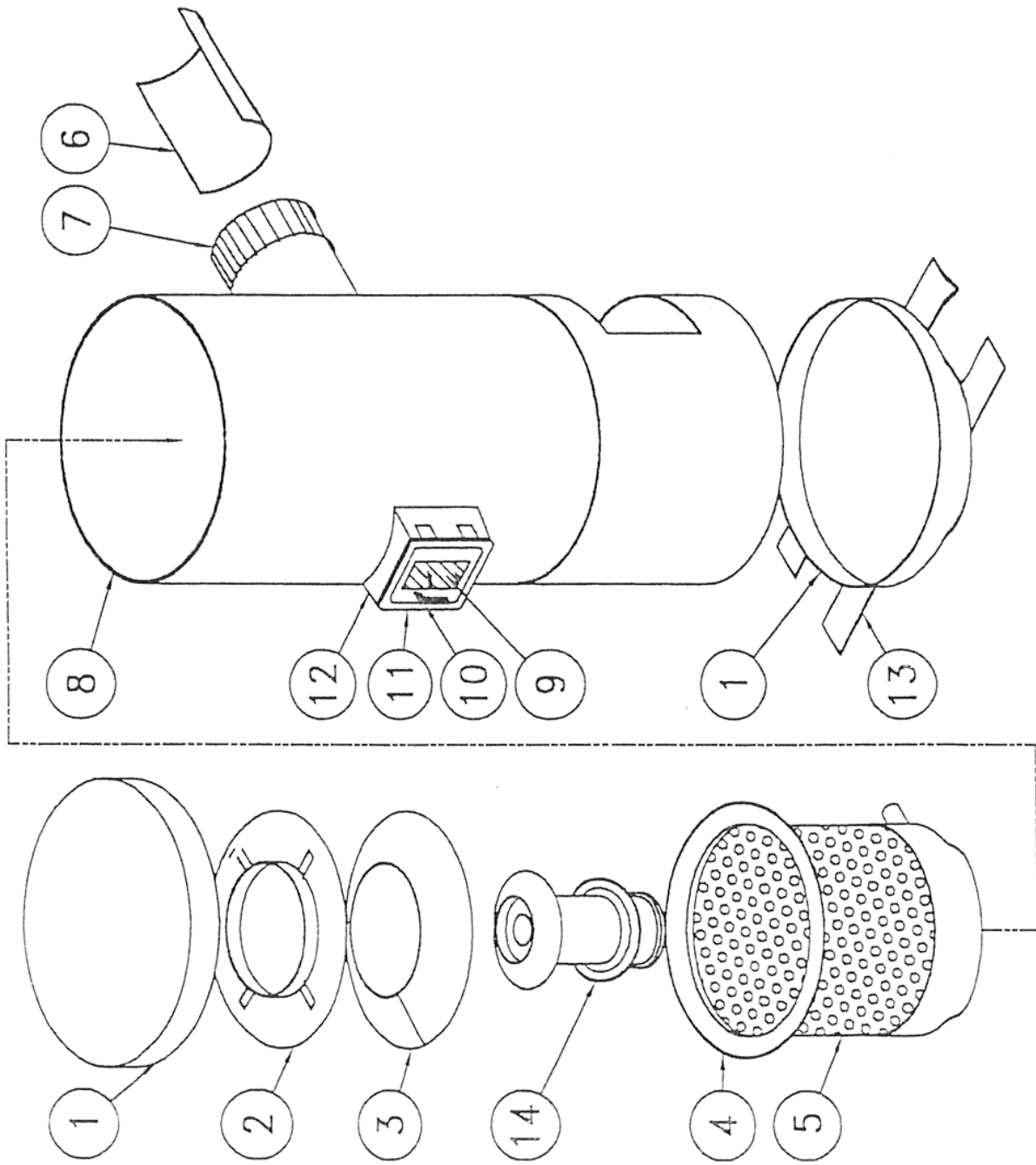


Fig. 12



KEY NUMBER	PART NAME	MODEL 5075 PART NUMBER	MODEL 5060 PART NUMBER	MODEL 5035 PART NUMBER
1	LID (2 REQ'D)	13R7-001	13R7-001	5035-010
2	COMBUSTION RING	51-008	N/A	51-006
3	PILOT RING	51-003	51-004	51-001
4	SUPPORT RING	13R7-004	5060-007	5035-015
5	POT	5075-003	5060-008	5035-016
6	NECK BAFFLE	5035-018	5035-018	5035-018
7	NECK	5035-017	5035-017	5035-017
8	COMBUSTION CHAMBER	5075-004	5060-009	5035-019
9	DOOR GLASS	51-013	51-013	51-013
10	DOOR HANDLE	13R7-012	13R7-012	13R7-012
11	HEAT EXCH. DOOR	5035-021	5035-021	5035-021
12	DOOR FRAME	5060-010	5060-010	5035-020
13	SUPPORT RAILS (2)	5060-002	5060-002	5035-002
14	DIFFUSER	N/A	51-005	N/A

Fig. 13

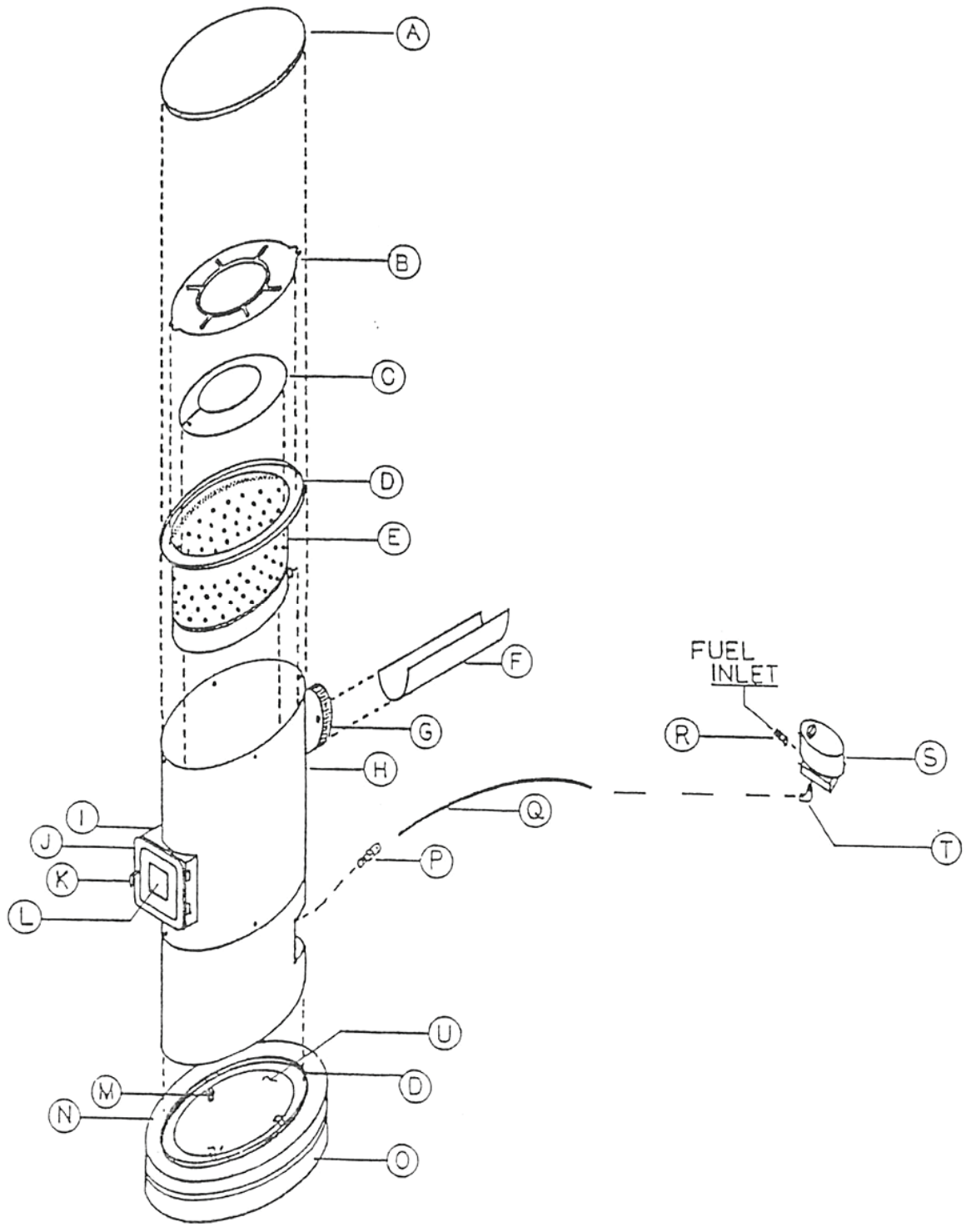


Fig. 14

KEY LETTER	PART NAME	MODEL 8R35	MODEL 10R60	MODEL 13R75
A	LID	8R35-001	10R6-001	13R7-001
B	COMBUSTION RING	51-006	NA	51-008
C	PILOT RING	51-001	51-004	51-003
D	SUPPORT RING	8R35-004	10R6-004	13R7-004
E	POT	5035-016	5060-008	5075-003
F	NECK BAFFLE	5035-018	5035-018	5035-018
G	NECK	5035-017	5035-017	5035-017
H	COMB. CHAMBER	8R35-008	10R6-008	13R-008
I	DOOR FRAME	5035-020	5060-010	5060-010
J	DOOR	5035-021	5035-021	5035-021
K	DOOR HANDLE	13R7-012	13R7-012	13R7-012
L	DOOR GLASS	51-013	51-013	51-013
M	SUPPT.LOW.RAD.SHLD.	10R6-022	10R6-022	10R6-022
N	BASE LID	8R35-021	10R6-033	13R7-023
O	BASE RING	8R35-020	10R6-017	13R7-017
P	BRASS CONN.3/8-3/8	34-054	34-054	34-054
Q	COPPER TUBING	01-060	01-060	01-060
R	BRASS CONN.3/8-1/4	34-009	34-009	34-009
S	CARBURATOR	51-010-22	51-010-30	51-010-38
T	BRASS ELB.3/8-1/4	34-010	34-010	34-010
U	LOWER RAD.SHIELD	8R35-016	10R6-015	13R7-015
V	AIR DIFFUSER	NA	51-005	NA

FIG. 15





**OIL FIRED ROOM HEATERS  
LIMITED PARTS WARRANTY**

To the original owner-user of a Tharrington Vented Oil Space Heater:

New Buck Corporation promises to repair or, at New Buck Corporation's option, to replace any part of your Tharrington Oil Space Heater, which proves to be defective in material or workmanship under normal use and services for a period of one year from date of original purchase. During this one-year, we shall provide all parts necessary to correct such defects. All labor, diagnosis and transportation are to be paid by the original owner-user.

New Buck Corporation also promises to repair or, at New Buck Corporation's option, to replace any part of the Oil Burner or Combustion Chamber Assembly, which proves to be defective in material or workmanship under normal use and services for a period of two years from the date of original purchase. During the two-year period, we shall provide all parts necessary to correct such defects. All labor, diagnosis and transportation cost are to be paid by the original owner-user.

**THIS WARRANTY DOES NOT COVER, AND NEW BUCK CORPORATION SHALL NOT BE LIABLE FOR, ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES RESULTING FROM USE OF A CHEMICAL SOOT REMOVER, OVER-FIRING OF THE HEATER, CORROSION DUE TO EXCESSIVE BUILDING MOISTURE OR HUMIDIFIER OVERFLOW, USE OF A DIFFERENT FUEL FROM THAT SPECIFIED ON THE HEATER PLATE, CAUSED BY IMPROPER INSTALLATION, MISUSE, ABUSE, ACCIDENT, TAMPERING, ALTERATION, PAINTED SURFACES, REMOVAL AND RE-INSTALLATION COST, LABOR COST FOR REPLACEMENTS OR REPAIRS, OR ACTS OF GOD.**

Some states do now allow the exclusion of limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

**ALL IMPLIED WARRANTIES, WHICH MIGHT ARISE, INCLUDING THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN WARRANTY CREATED HEREIN.**

Some states do not allow limitations on how an implied warranty last, so the above limitations may not apply to you.

This warranty is given by New Buck Corporation, Spruce Pine, NC 28777. Services under it must be obtained through the following procedure. Any defect should be brought to the attention of the Buck Stove dealer from which you purchased your Tharrington Heater.

If any part of your Tharrington Oil Spaced Heater proves to be defective under this warranty, your dealer will repair that part or, at its option provide you with a replacement. Tharrington (NBC) may require, however, that defective parts be returned to its factory before a determination is made that a defect exists. No part is to be returned to the factory without written authorization from New Buck Corporation (Phone # 828-765-6144). *All transportation, diagnosis and labor costs associated with warranty service are to be paid by original owner-user.*

*No person is authorized to change, and to, or creates any warranty or obligation other than that set forth herein. This warranty gives you specific rights, and you may also have other rights that vary from state to state .*

*CUT OUT CARD ON THIS LINE* ←-----→

***Warranty Card Not Available On Web And Replacement Manuals***