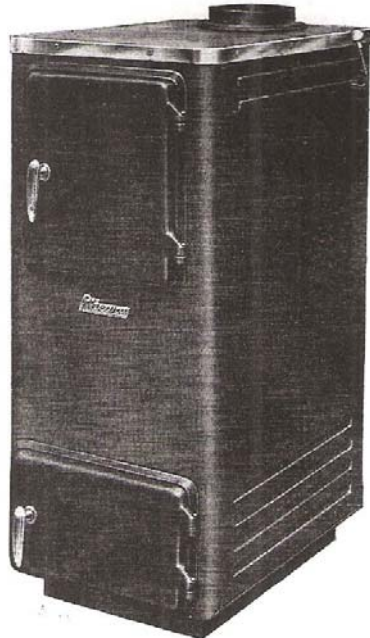


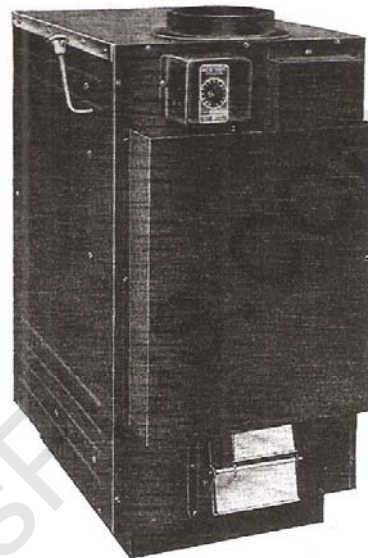
Instructions For No. 38 Riteway Automatic Heater

— WITH DUAL RANGE CONTROL SYSTEM —



We recommend that a metal covered stove board be placed beneath the heater as an added protection to the floor covering.

1. **INSTALL STOVE PIPE** with the crimped end down so that any drainage will be carried back into the heater rather than run down on the outside of the pipe. If the elbow or pipe does not fit very snugly into the cast pipe collar it should be sealed tightly with furnace cement to prevent any possibility of air leakage at this point.
2. **HOW TO BURN WOOD.** Place about one inch of ashes or earth over grate before starting the fire to protect it.
3. **STARTING THE FIRE.** To start the fire turn the control knob on the regulator to Position 6 to open the draft dampers. Open the direct draft damper by pushing the lever on the right side of the heater back as far as it will go. Place a quantity of crumpled paper in the heater first and then kindling and small pieces of wood. Add larger pieces on top. Light the paper and as soon as the fire is burning briskly close the direct draft damper. This damper is opened only when starting the fire or adding fuel.
4. **ADJUSTING THE CONTROL.** When the room temperature reaches the desired degree turn the control knob on the regulator until the lower draft damper is closed. The upper draft damper will then be open from $\frac{1}{4}$ to $\frac{1}{2}$ inch. The heater should then maintain a uniform temperature so long as fuel is available without further attention. Sudden changes in outside temperature may make it necessary to turn the control knob slightly toward "Warmer" or "Cooler" from time to time. We do not advise turning the regulator back more than one position at night and usually it is more satisfactory to allow the heater to operate with the regulator in the same position day and night as it takes no more fuel to maintain the temperature overnight than to bring the temperature back



Rear view of heater. Two bolts will be found at the top of the radiator shield pointing in. Remove the nuts from these bolts and point them out. They make a convenient place on which to hang the poker and shaker handle.

to normal in a cold room in the morning. If the house is not well insulated it may be necessary to turn the control knob back one position overnight.

5. Your heater is equipped with our new Automatic Draft Control Damper and Heated Air By-pass for reducing creosote and therefore if you have a turn-damper in the pipe it should be kept open to permit a free flow of air through the by-pass. The Automatic Draft Control Damper has been preset at the factory to provide the correct amount of draft for the normal working of the heater. If your chimney provides a very strong draft or you are using dry free-burning wood like pine or fir and experience difficulty in holding the temperature down it may be necessary to reduce the draft on the heater still farther. This may be done by removing the shield covering the automatic draft damper at the back of the heater by taking out the two screws at the top of the shield. Loosen the lock nut on the adjusting screw of the draft damper and turn the adjusting screw to the left until it moves toward you about $\frac{1}{16}$ inch. This will cause the damper to open more easily and reduce the amount of draft on the heater. The lock nut should again be tightened to prevent the adjusting screw from shifting its position.
6. **ADDING FUEL.** The proper time to add fuel is when the previous charge has been converted into charcoal, because practically all smoke has been eliminated. Use the poker sent with the heater and rake back and forth through the charcoal bed with the hook on the end of the poker turned so it will be flat on the grate. This will cause the fine ashes to sift through the openings in the grate into the ashpan in the base of the heater. Part of the live coals should be moved to the front of the heater near the air distributor and the remainder pushed back in front of the air distributor at the rear of the combustion chamber. The charcoal bed at the back of the heater should be at least one or two inches below the bottom of

the firebrick baffle so as not to interfere with the draft. Place small pieces of wood in the heater first and then larger pieces. When the weather is cold the magazine should be filled. Add once or twice each day according to weather conditions. Well seasoned wood gives much higher efficiency than green wood and less trouble will be experienced with creosote. Green wood can be burned if necessary. Larger pieces should be split, as smaller pieces dry more quickly, permitting the heater to work more efficiently. In placing wood in the heater it will be well to keep it near the front so as to prevent the pieces of wood closing the draft space under the firebrick baffle wall at the rear of the heater.

7. REMOVING ASHES. If the charcoal bed is stirred thoroughly before adding fuel fine ashes will fall through the grate into the ashpan. As a general rule it is not necessary to remove the ashpan more than once every week or ten days. However it will be best to check it from time to time to make sure that it is not allowed to run over into the base of the heater. When removing the ashpan door it is not necessary to completely remove the wing nuts fastening the clips which secure the door but merely loosen them two or three turns to permit turning the clips into a vertical position which will release the door. Be sure to draw the wing nuts snugly into position again when replacing the door so that it will be held tightly against the front of the heater as an air leak at this point will prevent proper control of the temperature.

8. KINDS OF FUEL. Seasoned hard wood is the best fuel. However, other types of wood can be burned successfully. Green wood may be used but the efficiency will be lower because the evaporation of moisture in the charring process absorbs a lot of heat. When burning block wood it is important that smaller pieces be placed on the charcoal bed first as they will ignite more freely and insure proper distillation and combustion of the larger pieces. If the fire has burned low so that very little charcoal is present it will be necessary to use more small wood first in order to secure a quick response.

After adding fuel it is best not to open the stove again for several hours—or until the wood is well charred. This will help prevent smoke from being discharged into the room.

9. MILD WEATHER OPERATION. The best performance is secured by adding only a sufficient amount of fuel at one time to last approximately 12 hours. This means that in mild weather a small amount will be needed. This method of firing is more important if the wood is green because it contains a lot of creosote. If a large amount of fuel is placed in the heater and the fire merely smolders along for a long time it may cause a deposit of creosote to form in the smoke pipe.

10. HOW TO BURN COAL. The No. 38 heater is designed to burn either wood or coal. When burning hard coal we suggest the use of either pea or nut size. If the chimney provides poor draft, stove size should be used. When burning soft coal use either nut or stove size. Usually a low volatile coal gives best results.

In burning coal the fire should be started as already outlined in Paragraph 3 and as soon as the kindling is burning freely add a scuttleful of coal. When the coal is well ignited one or two more scuttles can be added. However, the fuel should not come above the top of the firebrick. This is important. When adding additional fuel the poker should be used to pull the live coals out from beneath the firebrick baffle at the back so that there is a draft space of at least 2" beneath the brick. Push the live coals toward the back of the heater and add the fresh

charge of coal in the front but avoid covering all the live coals with fresh coal. The draft damper in the fuel door should be open slightly at all times when burning coal to prevent puffing. The damper should be open about $\frac{1}{4}$ " when burning soft coal and only about $\frac{1}{8}$ " when burning hard coal. This damper must be kept tightly closed at all times when burning wood.

When burning coal it will be necessary to shake the grate morning and evening. Shake until live coals begin to fall. If the fire does not respond promptly when the regulator dampers open it may be necessary to shake the grate again to remove more of the ashes. Be sure that the grate bars are in a level position and do not permit the ashes to pile high in the pan as there must be an air space of a few inches between the ashes and the grate bars to prevent damaging them through overheating.

HELPFUL SUGGESTIONS

We suggest the use of cotton gloves when tending the heater.

Placing an open newspaper on the floor in front of the heater when adding fuel or removing the ash pan will protect the floor covering.

If trouble is experienced with smoke being discharged into the room when the fuel door is opened it usually indicates that the previous charge of fuel has not been completely charred or that the chimney provides a small amount of draft.

Always turn the regulator knob to close the draft dampers and open the direct draft damper before adding fuel or shaking the grate.

A WORD ABOUT CREOSOTE. If Riteway Heaters are operated according to these instructions very little creosote should form in the stove pipe. However, usually a small amount of dry scale forms inside the pipe which may burn out occasionally. Because of the small amount of creosote the burning out of the pipe is not a serious matter.

There will be no creosote deposit in the pipe nor any possibility of dripping if the stack temperature does not drop below 250°. If trouble is experienced with creosote in the pipe it therefore usually occurs during mild weather when the heater is operated at a very low level. Also burning wood with a high moisture content increases the tendency to form condensate in the pipe. If the formation of creosote proves troublesome it can usually be eliminated completely by insulating the smoke pipe with asbestos paper. Use at least three plies of not less than 12 lb. weight. Asbestos paper can be secured at hardware stores or shops doing warm air heating. Paper can be held in place by metal straps such as are used for holding asbestos covering on steam pipes. These straps are inexpensive and are sold by plumbing shops.

SUMMER CARE. Riteway Heaters are made from polished blued steel. To avoid having the finish of the heater spoiled by rusting during the months when it is not in use, saturate a cloth with any good grade of household oil or lubricating oil and wipe the sides and top of the heater. This film of oil may be removed with a dry cloth before again starting the fire. Of course all ashes should be thoroughly cleaned from the heater before storing for the summer.