

**INSTALLATION INSTRUCTIONS**

**AGA**

*Regd. Trade Mark*

**MODEL CB**

**COOKER AND WATER HEATER**

(1946-1972)

# Contents

INTRODUCTION	...	...	...	...	...	...	...	...	PAGE	2
1. LIST OF TOOLS	...	...	...	...	...	...	...	...	„	3
2. CHECKING THE SITE	...	...	...	...	...	...	...	...	„	4
3. CHECKING THE PARTS	...	...	...	...	...	...	...	...	„	5
4. ASSEMBLY OF OVENS	...	...	...	...	...	...	...	...	„	25
5. LINE DIAGRAMS SHOWING CONTACT POINTS AND WHERE TO SEAL	...	...	...	...	...	...	...	...	„	28
6. ERECTION PROCEDURE	...	...	...	...	...	...	...	...	„	29
7. LIGHTING AND DEMONSTRATING	...	...	...	...	...	...	...	...	„	49

# Introduction

The erection procedure outlined in this manual is that which will normally be found to be the simplest, though certain variations may, in practice, be necessary to meet varying circumstances. The photographs and illustrations have been arranged not only to demonstrate a sequence of assembly, but also to show the methods of fitting and the positions of certain parts, and where contact and sealing are essential.

Whatever sequence is adopted it is important to ensure :—

- (a) that all the parts are positioned and levelled correctly in relation to each other ;
- (b) that heat conducting plates, heater castings and machined surfaces make proper contact ;
- (c) that leakages of air and insulating material are prevented by effective sealing ; and
- (d) that all air pockets in the insulating material are eliminated at the time of packing.

The various heat conducting plates and castings in the Aga Cooker are designed to transmit the correct proportions of heat without the addition of "aids" such as iron cement, steel wool or heat conducting sand, and asbestos gaskets and washers are supplied to prevent, or at least reduce, the conduction of heat where conduction is not required. The addition of "aids," or the omission of a gasket, may therefore upset the balanced distribution of heat.

During manufacture care is taken to ensure that the component parts of the Aga Cooker are finished so that they will fit together with ease. Undue force is not necessary and must not be used.

Before starting the actual assembly, the parts of the Aga Cooker should be checked for completeness, and the site it is to occupy should be checked for accuracy. Page 4 deals with the points to be observed in checking the correctness of site preparation and a photographic list of parts, roughly in the order in which they will be required during the erection, is included in this manual to help fitters to identify the major components and arrange them in some sort of order. Ten minutes spent in laying out the parts before starting the assembly may save an hour or more in the time taken on the erection itself.

# Tools and Equipment

## Recommended for the Erection and Servicing of AGA Cookers and Water Heaters

- 1—6' steel tape measure.
- 1—2' engineer's spirit-level.
- 1—8" engineer's spirit-level.
- 1—18" screwdriver (with broad blade or fish-tail).
- 1—6" screwdriver (with  $\frac{3}{16}$ " blade).
- 1—8" chisel.
- 1—14" chisel bar.
- 1— $\frac{1}{4}$ "  $\times$   $\frac{5}{16}$ " spanner.
- 1— $\frac{3}{8}$ "  $\times$   $\frac{1}{2}$ " spanner.
- 1— $\frac{1}{2}$ "  $\times$   $\frac{7}{16}$ " spanner.
- 1—Adjustable spanner (8" King Dick).
- 1—pair 7" footprints.
- 1— $\frac{1}{2}$  lb. Ball-pane hammer.
- 1—Rubber mallet.
- 1—12" Bastard cut flat file with safe edge.
- 1—8" Fine cut flat file with safe edge.
- 1— $\frac{1}{4}$ " round file.
- 1—File handle.
- 1—pair 8" flat-nose pliers.
- 1—pair Thermostat pliers.
- 1—Hacksaw.
- 1—pair 14" Stilsons.
- 4—Corner rod guides.
- 1—Breast drill.
- 1—Set of tapping drills for  $\frac{3}{16}$ ",  $\frac{1}{4}$ ",  $\frac{5}{16}$ ",  $\frac{3}{8}$ ", and  $\frac{1}{2}$ ".
- 1—Tap wrench.
- 1—Die holder.  
    Taps and dies for  $\frac{3}{16}$ ",  $\frac{1}{4}$ ",  $\frac{5}{16}$ ",  $\frac{3}{8}$ " and  $\frac{1}{2}$ ".
- 1—Respirator.
- 1—Tin of waterglass.
- 1—Tin of penetrating oil.
- 1—Tin of jointing compound.
- 1—Tin of fire cement.
- 1—Draught gauge.
- 1—Oven test thermometer (150°-600° F.).  
    Hemp.

# Checking the Site

Adequate information on the subject of site preparation for Aga Cookers and Water Heaters is given in the various Dimension and Flue Layout Sheets. Before proceeding with the erection of any Aga equipment the site on which it is to be installed should be checked to ensure that all the requirements have been met by the Builder or Plumber. These requirements fall under the following main headings :—

**The Hearth**, which must be level to within  $\frac{1}{8}$ " in 3', and strong enough to take the weight of the Aga Cooker.

**The Flue Connections**, which must be correctly positioned.

**The Chimney**, which must be high enough (preferably clearing the highest point of the building, or adjacent objects, by 2 feet) and free from obstructions and cold air pockets.

**Cleaning Doors**, which must be placed to give the easiest possible access for inspecting and cleaning the main chimney and the primary flue (or flue piping).

**Air Ventilation**, which, where necessary, must be provided in the main chimney, from inside the kitchen, 6 feet above the cooker top plate.

**The Hot Water System**, which must conform to the requirements as laid down by AGA Heat Ltd.

Should there be a slight discrepancy in the hearth (but not enough to warrant having it relaid before proceeding with the erection) the base plate of the Aga Cooker should be levelled by raising it where necessary on washers. In this event, support must be given to the threaded bosses into which the three oven supporting bolts are screwed, and arrangements must be made for the gap between the base plate and the hearth to be grouted in when the erection has been completed.

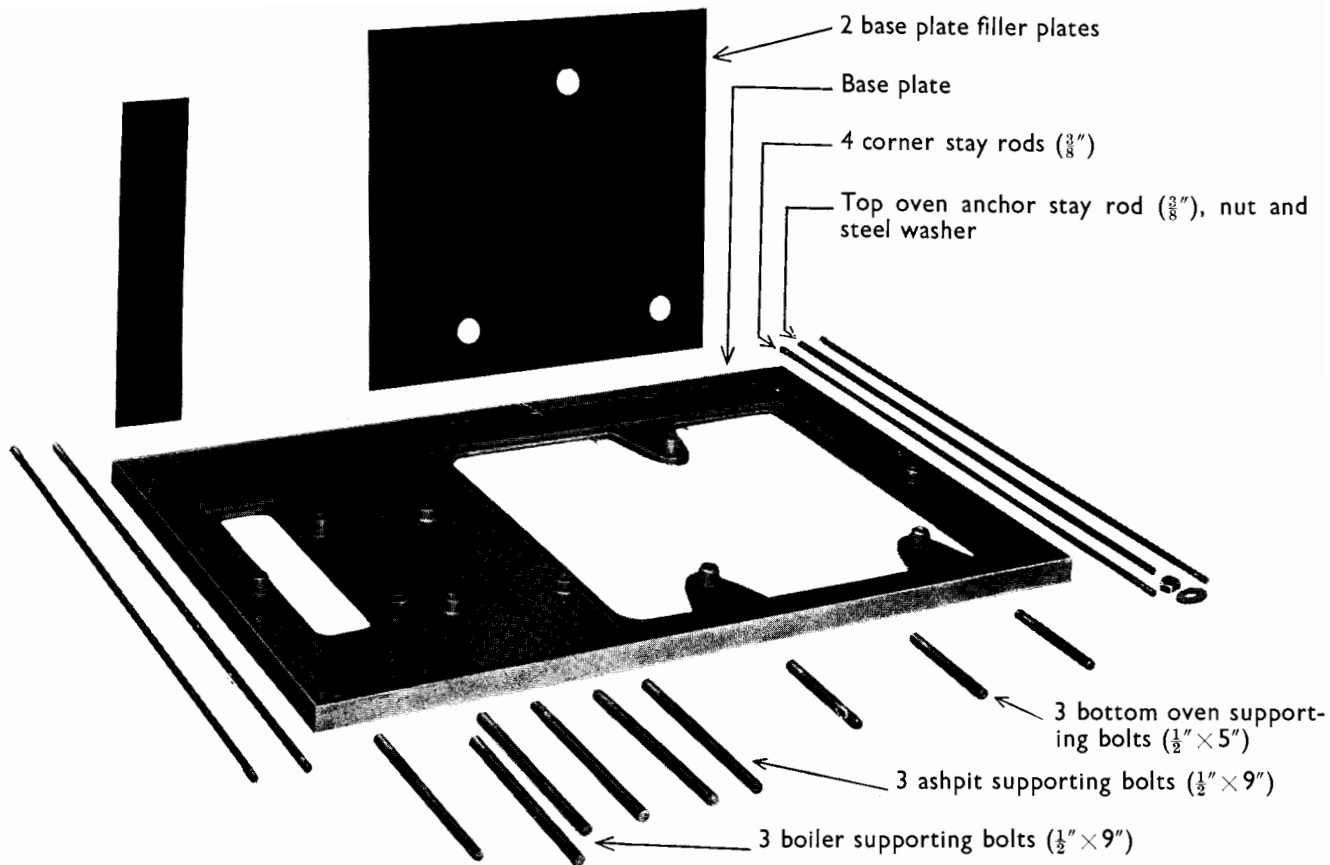
# Checking the Parts

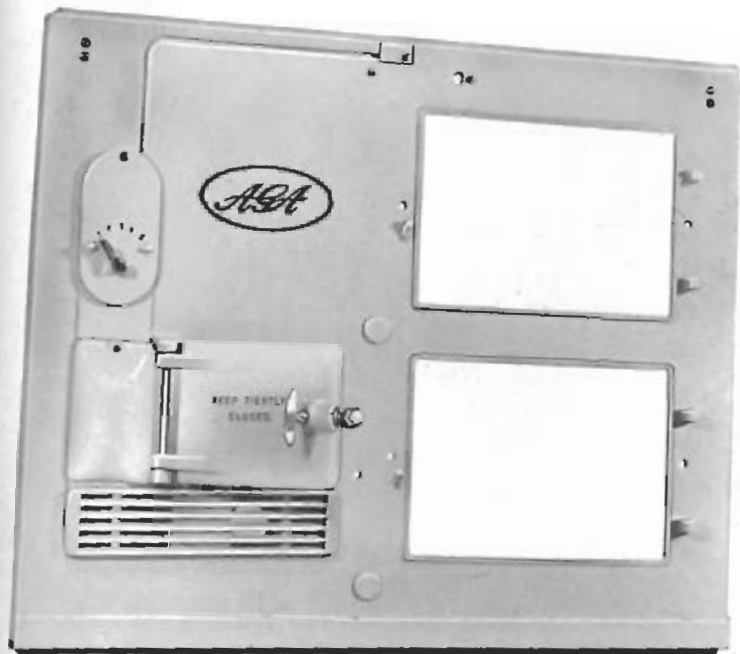
Before starting the erection it is advisable to check over the parts of the Cooker to make sure they have all been delivered to the site.

Time will also be saved during the course of the erection if, while checking the parts, they are arranged and disposed in the order in which they will be required.

Certain components are sent out from Works with a protective coating of varnish or grease which can be readily removed with turpentine substitute. If rusting of any of the parts has occurred during transit or while in storage, it should be wiped off with a thin penetrating oil and a rag.

The following list shows the major components, roughly in the order of their assembly.





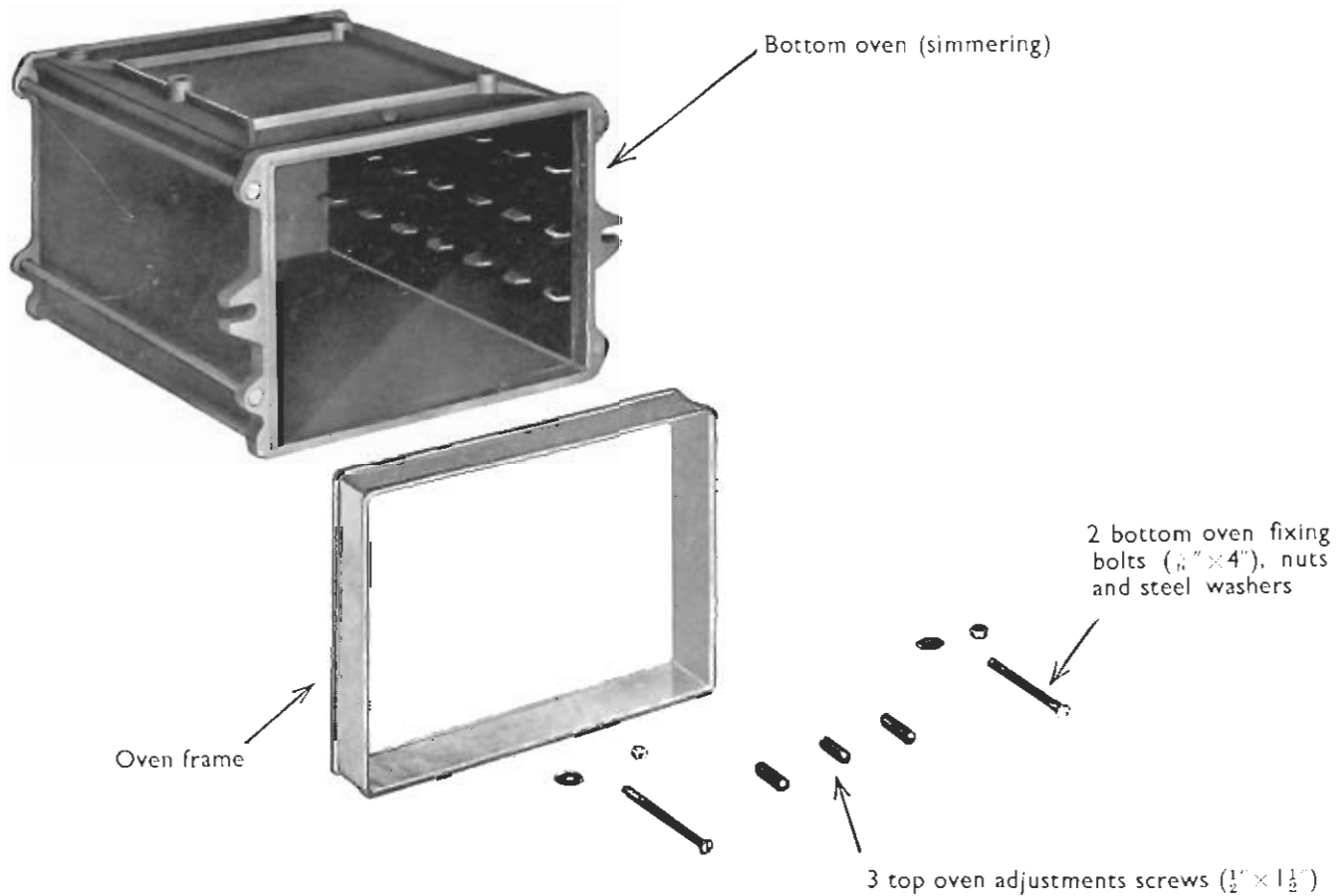
Front plate complete with ashpit door, thermostat plaque, top and bottom thermostat cover plates and air inlet grille

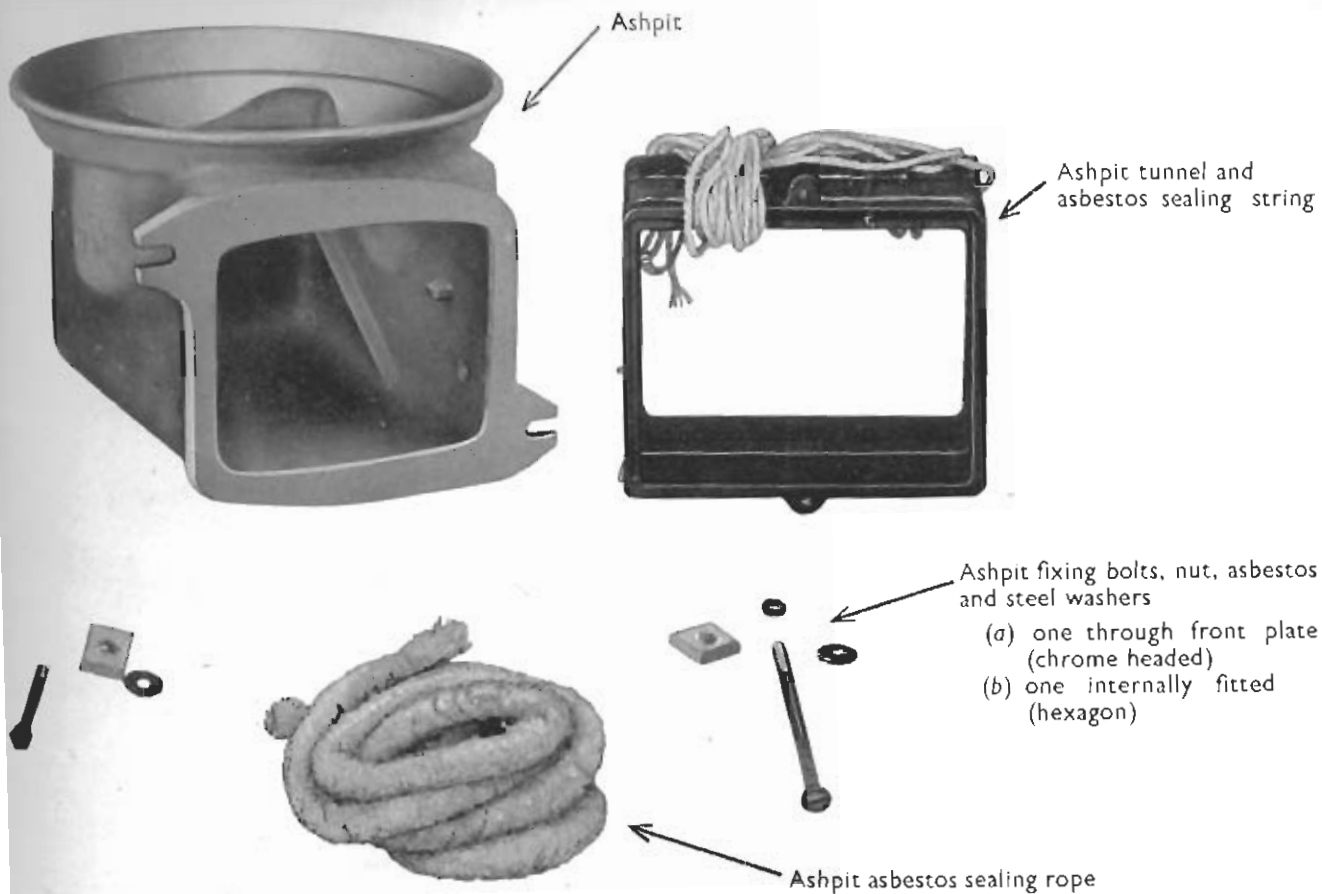
Roasting oven door



Simmering oven door









Grate (7-barred)



Grate carrier

Cast-iron boiler body

1 elbow union (drain)

1 locking nut (drain)

1 cone (drain)

Anchor brackets

Asbestos sealing rope

2 unions (flow and return)

2 cones (flow and return)

2 locking nuts (flow and return)

2 graphite washers (flow and return)

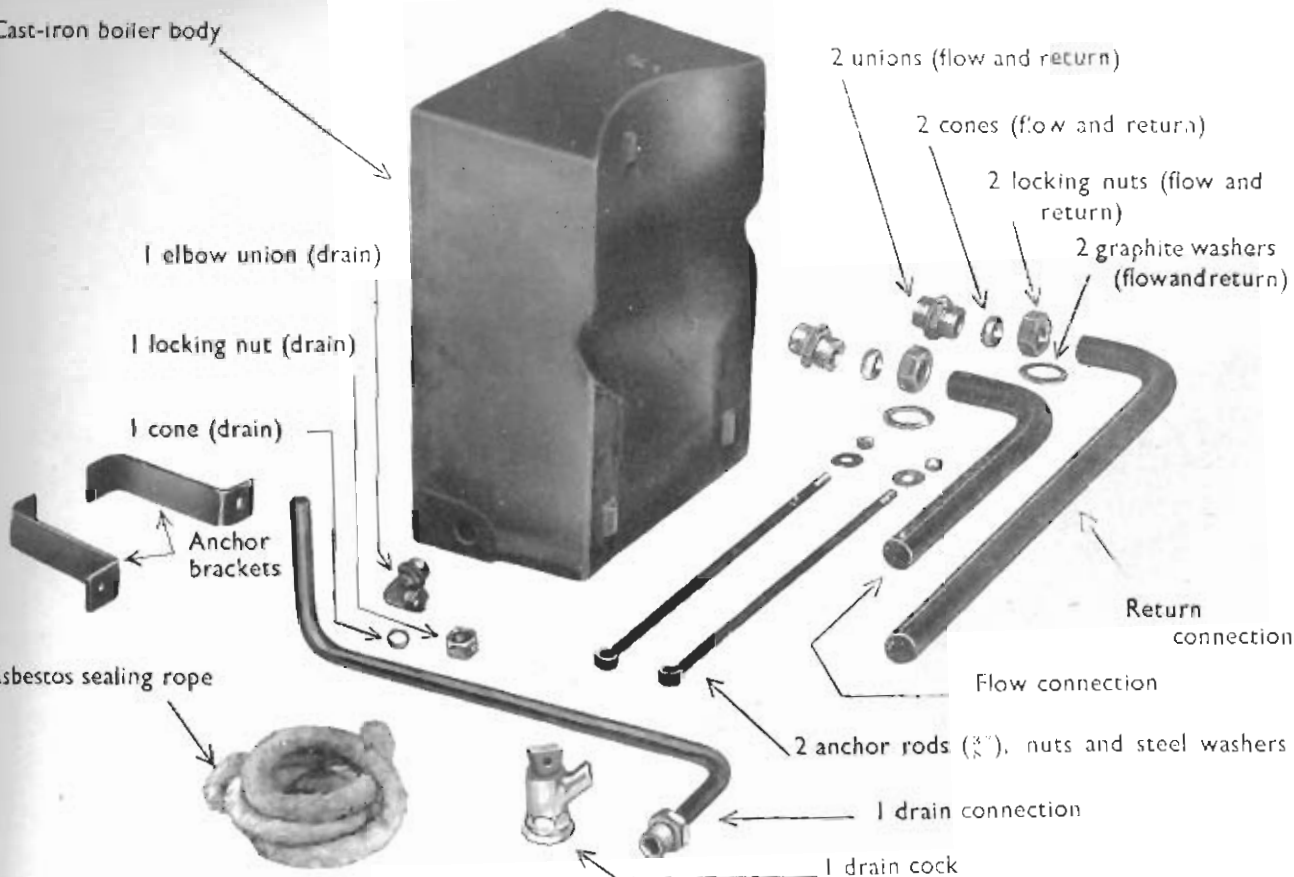
Return connection

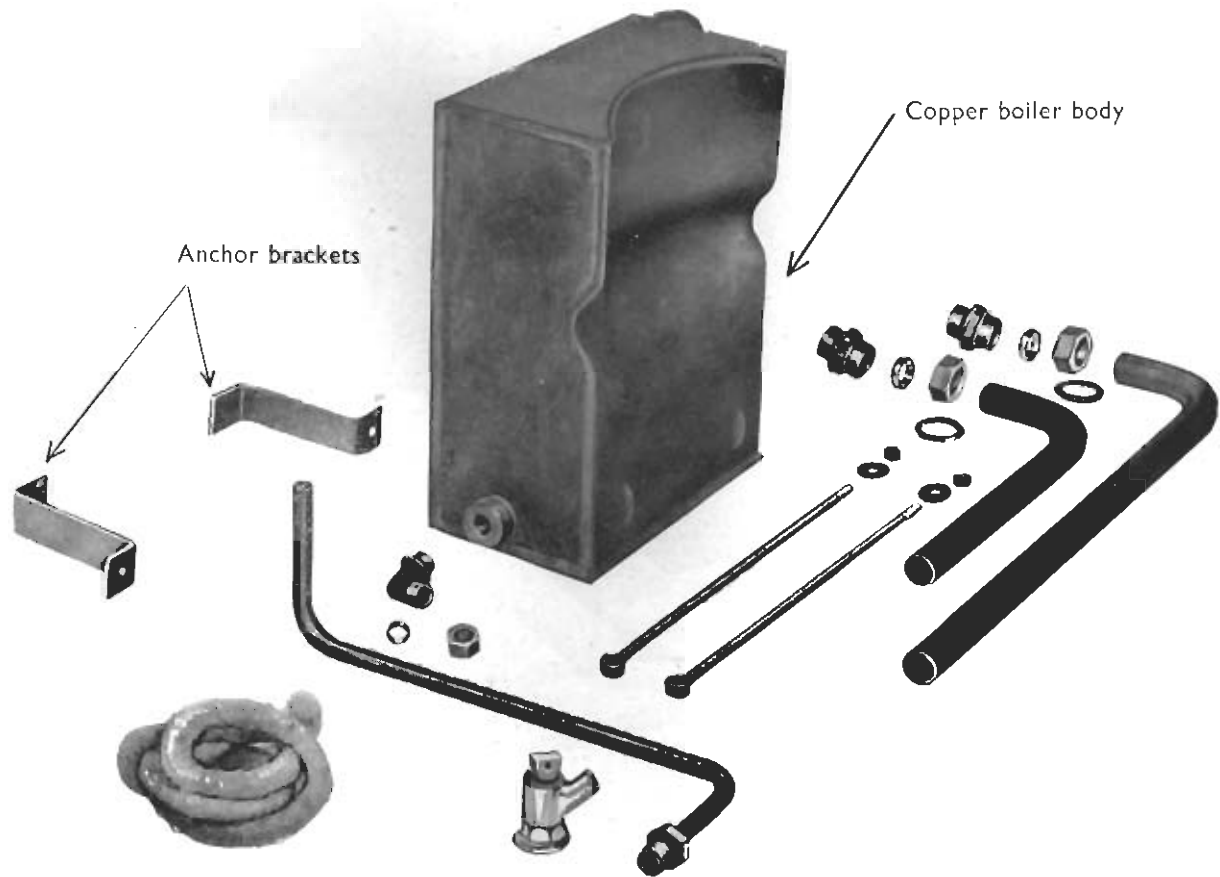
Flow connection

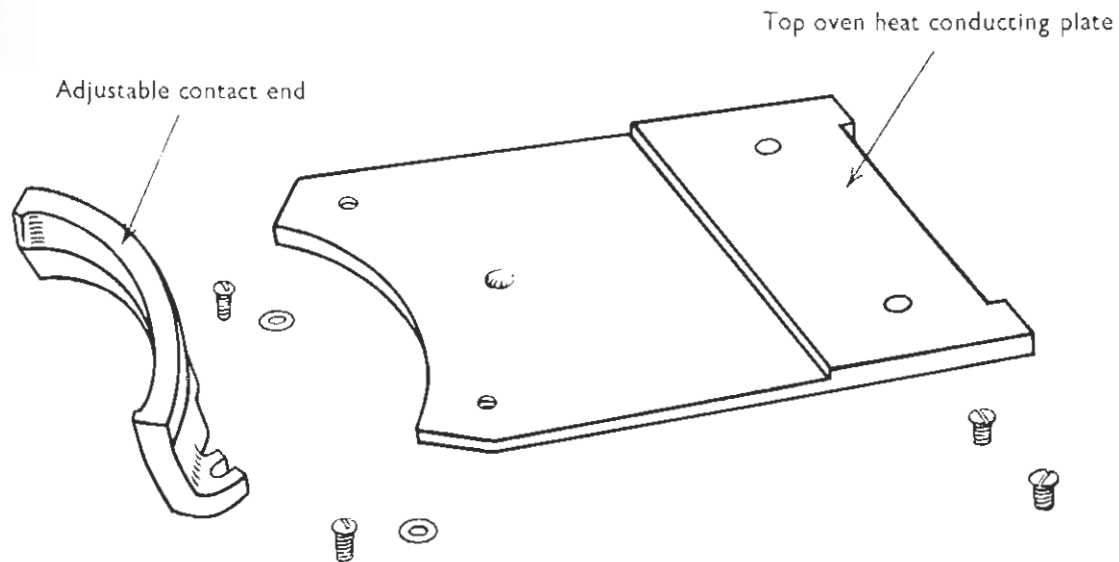
2 anchor rods (3/8"), nuts and steel washers

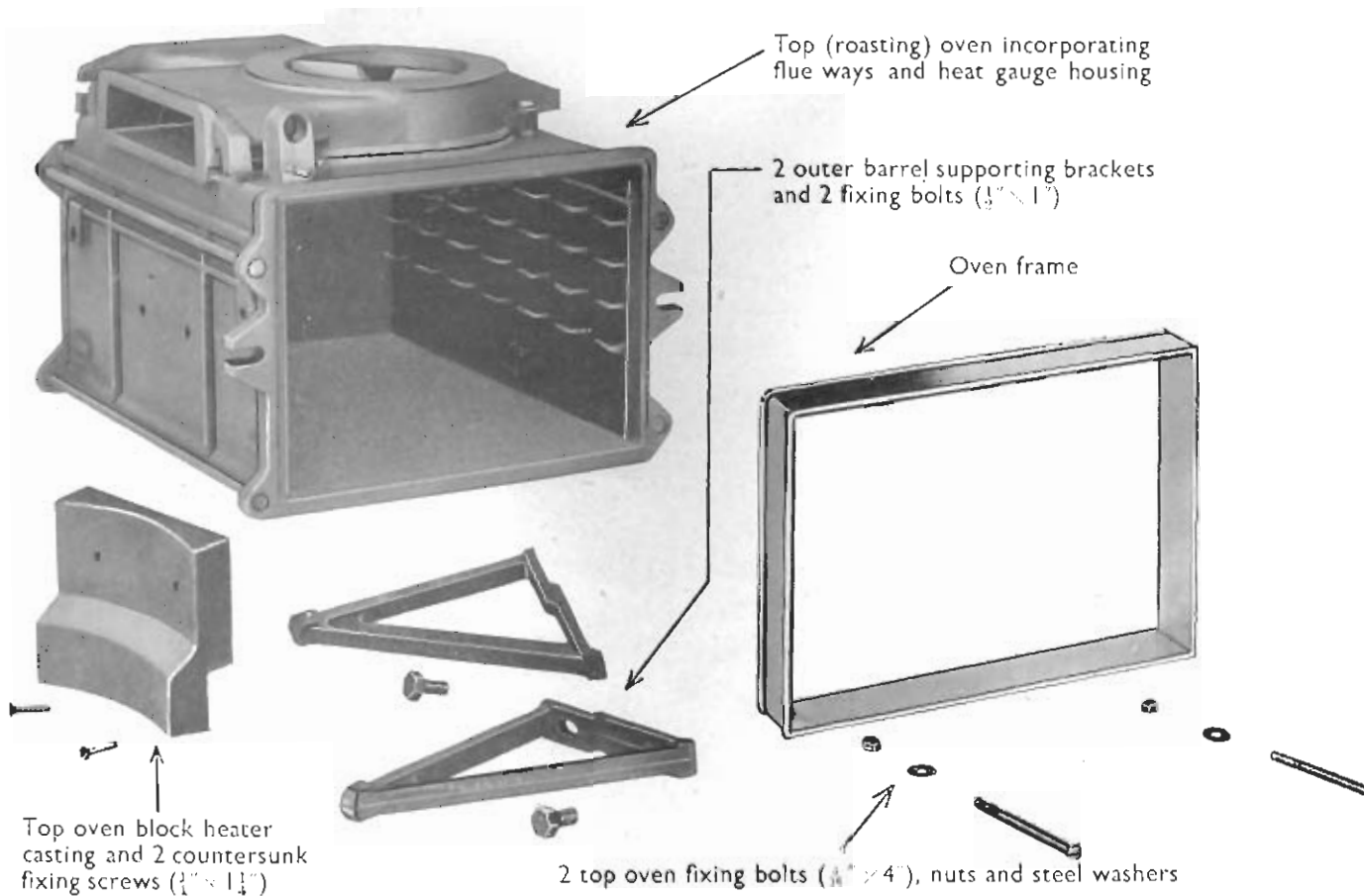
1 drain connection

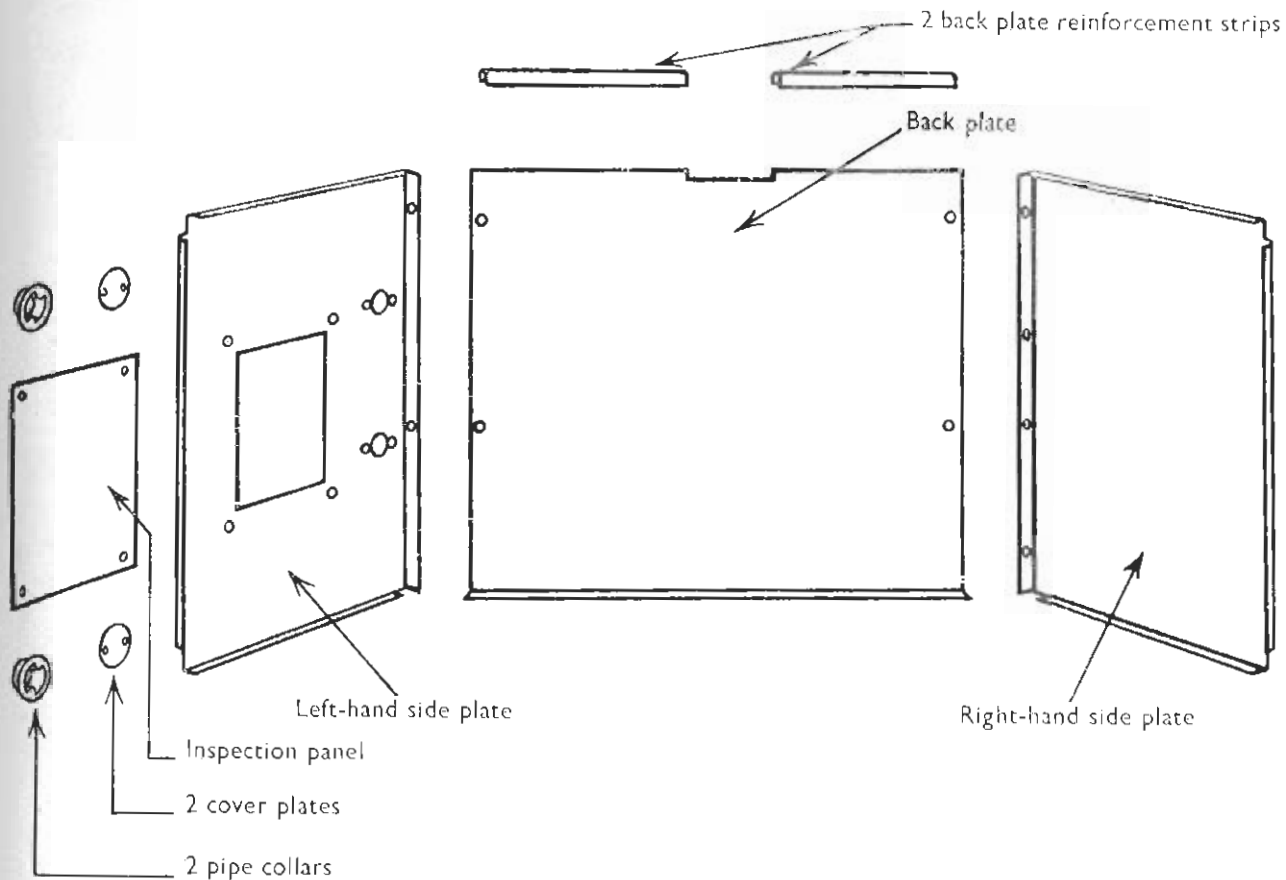
1 drain cock



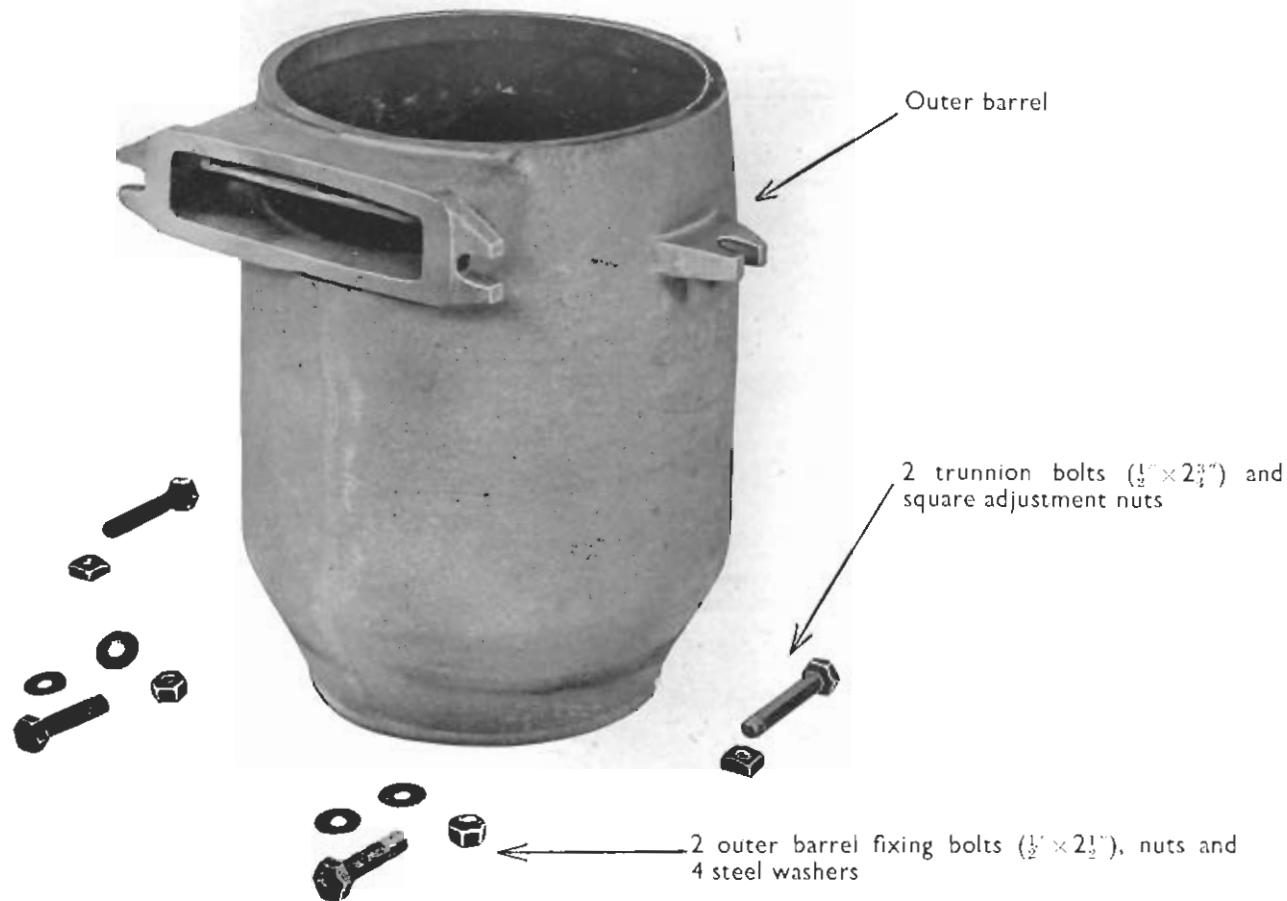


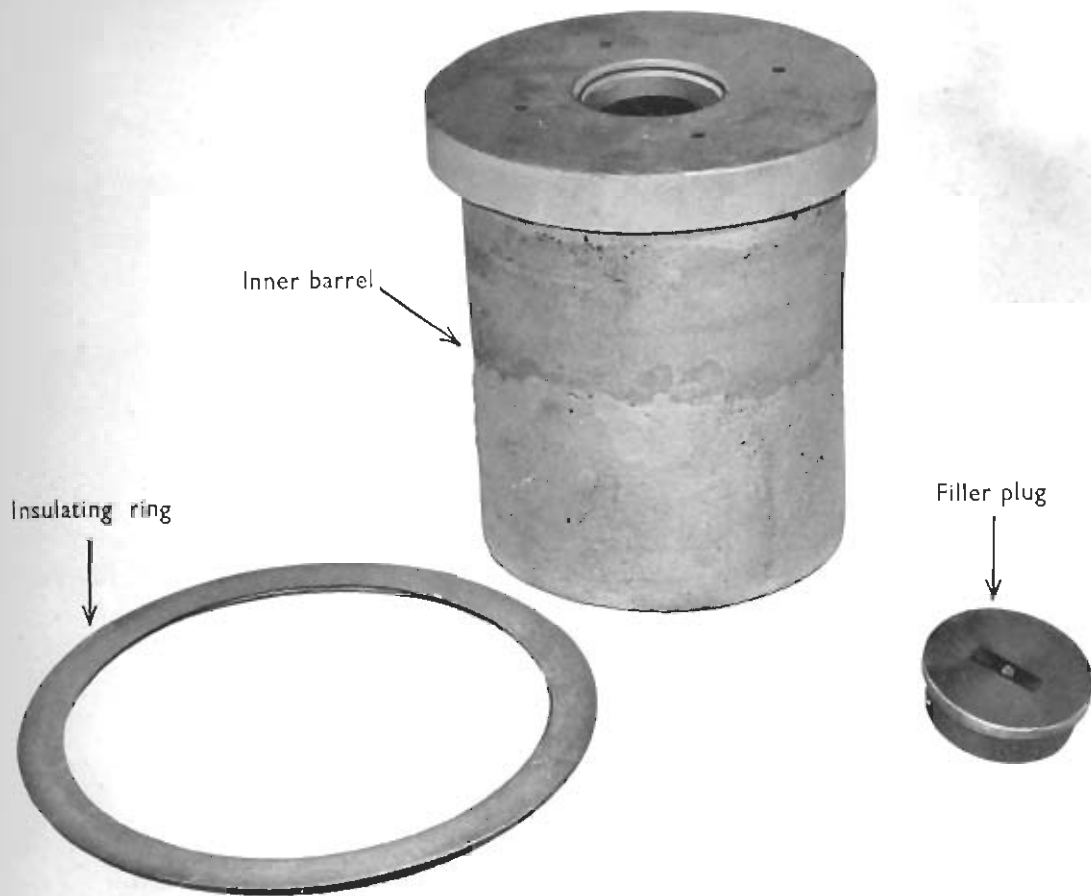


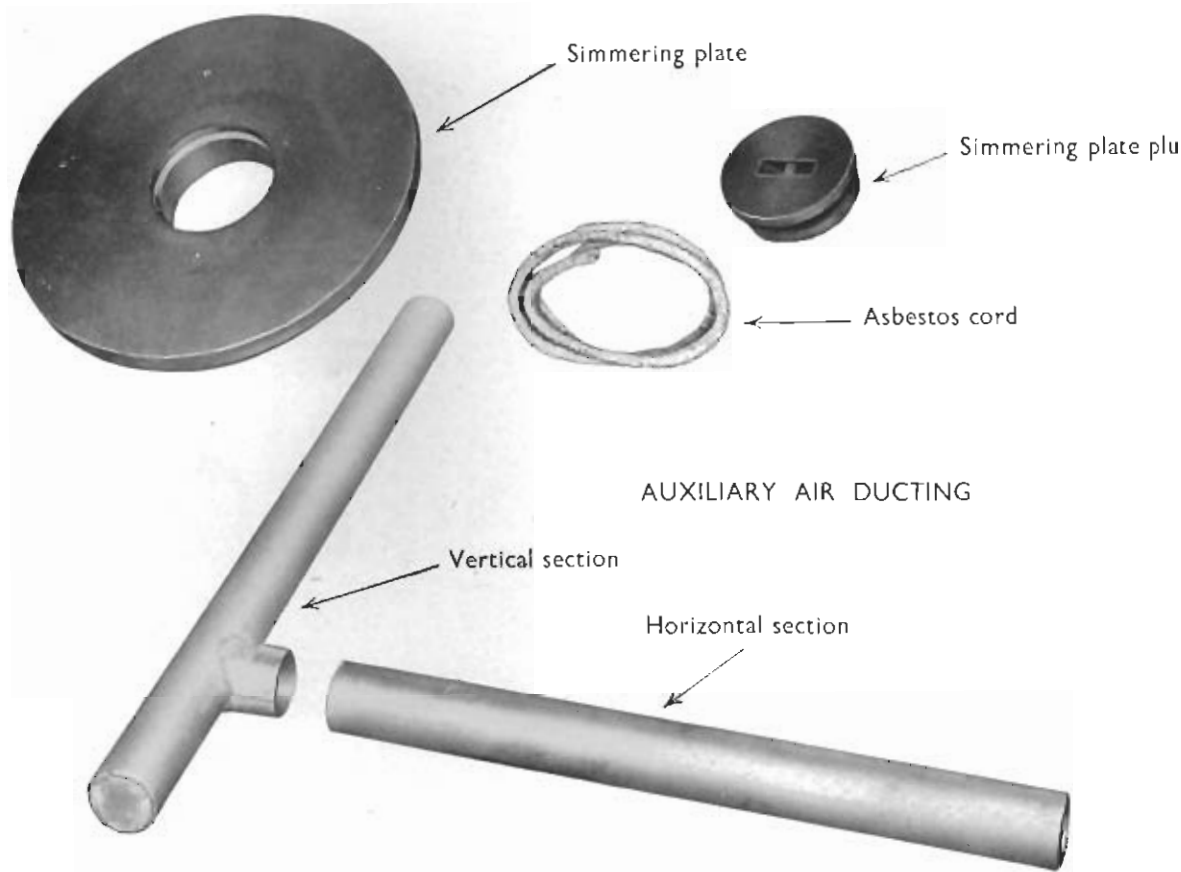


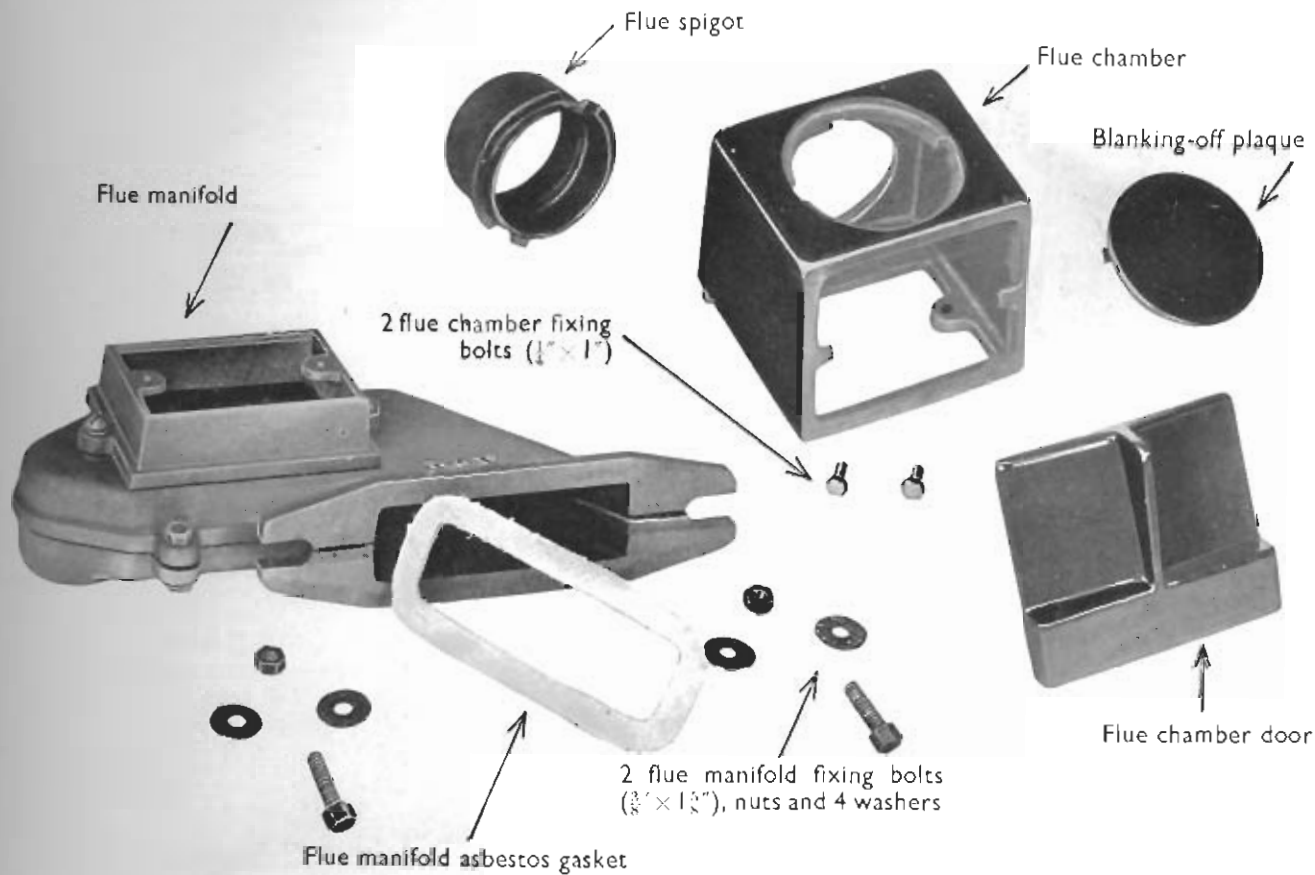


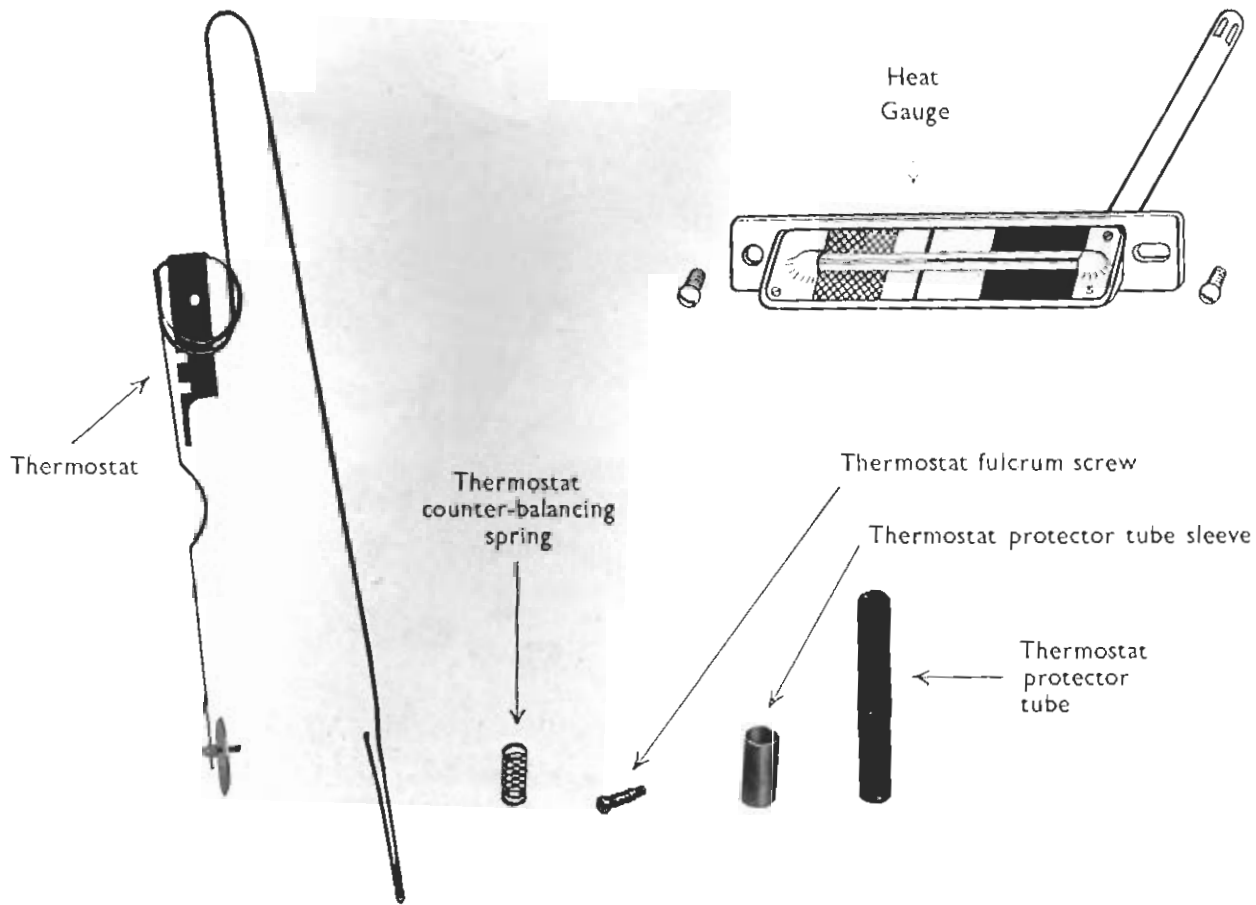


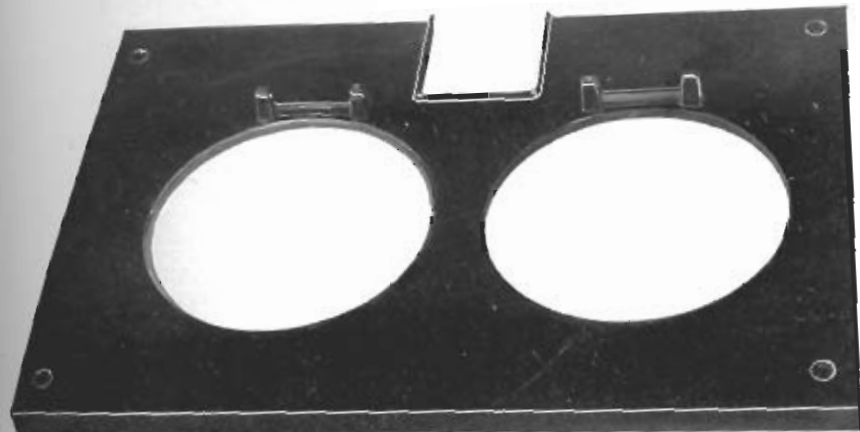






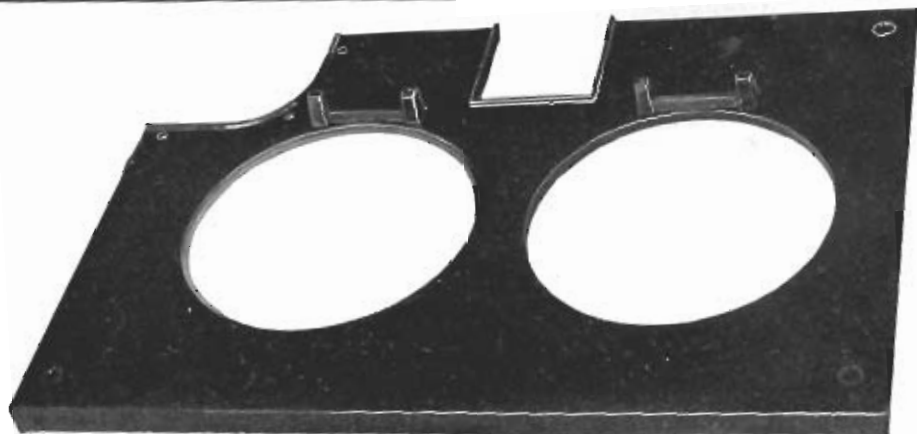






Plain top plate

Cut-away top plate

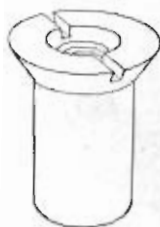




Top plate corner piece for Model CB with top flow and return connections



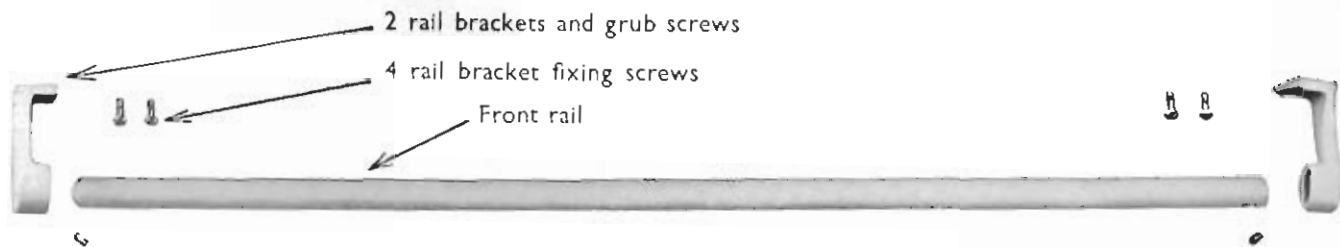
Top plate corner filler piece (plain) for Model CB with side or back flow and return connections



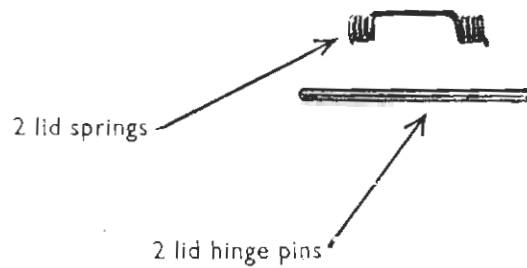
Corner stay nut



Chromium plated corner stay nut button



2 cream vitreous enamelled cast iron insulating lids

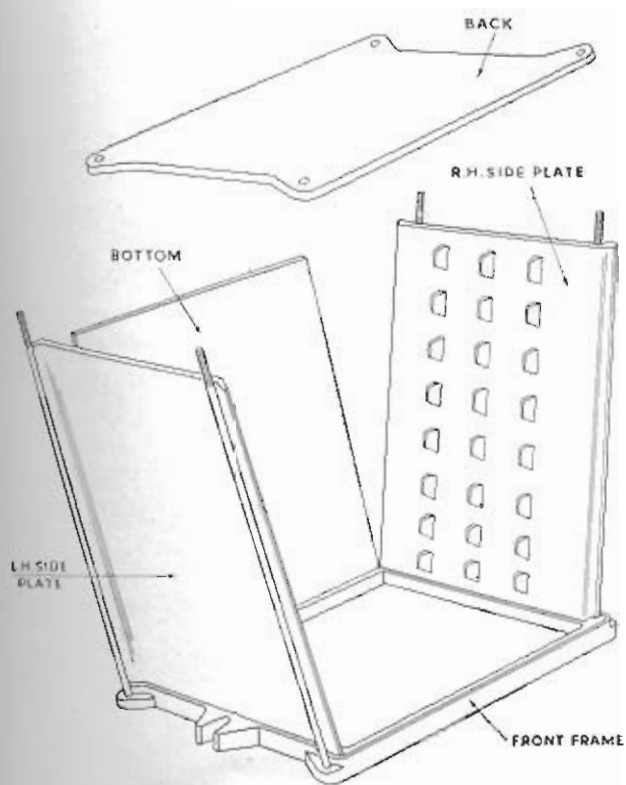




# OPERATING TOOLS



# Assembly of Ovens



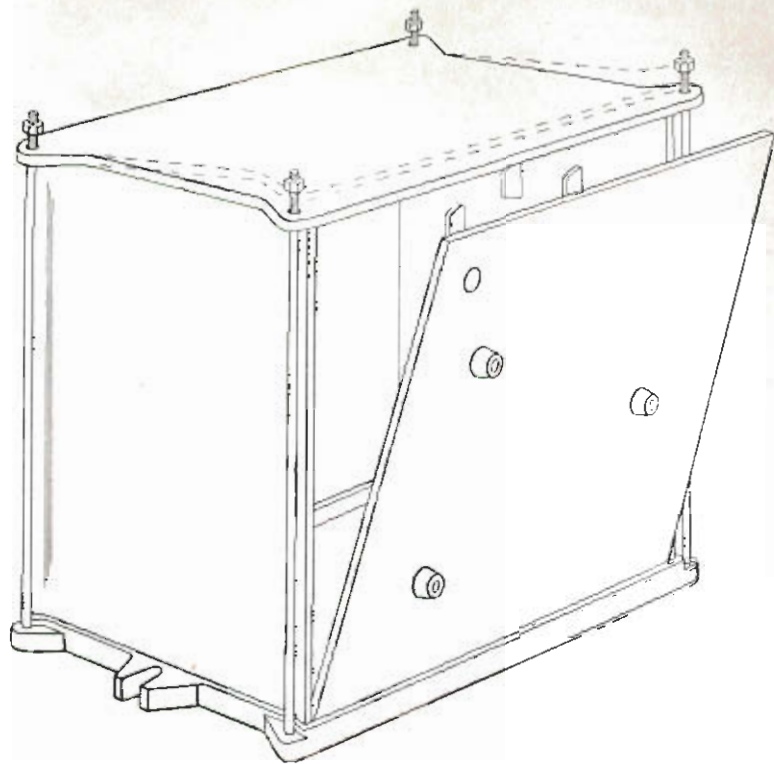
## Oven Assembly Bottom Oven

Cement all mating surfaces.

Thread the four stay rods through the front frame and place on bench or table.

Place the side plates in the front frame, letting them rest against the stay rods.

Place the bottom plate in the front frame; gather the three plates together and then drop the back plate over the stay rods.

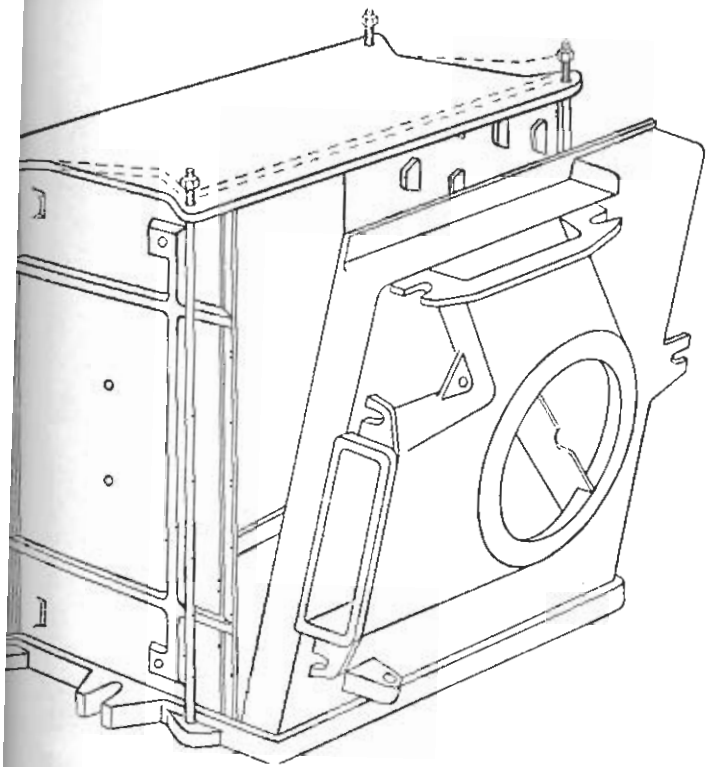


Screw the nuts on to the stay rods, leaving about  $\frac{1}{2}$ " clearance between the nuts and the back plate.

Place the top plate in the front frame, raise the back plate slightly and push the top plate into position.

Replace the back plate and tighten the nuts.

Remove all excess cement from inside the oven.



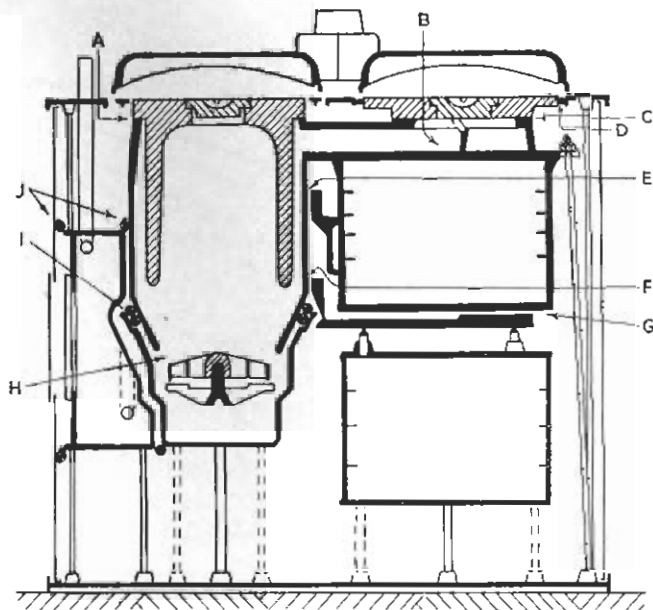
### *Top Oven*

The same procedure is used for assembling the top oven.

# Contact Points and Where to Seal

- A. Machined surfaces on the underside of the inner barrel flange and on the outer barrel, must make perfect contact.
- B. Seal between the flue way above the top oven and the flue manifold with the asbestos gasket.
- C. Machined surfaces on the underside of the simmering plate and on the flue way above the top oven must make perfect contact.
- D. Seal between the simmering plate and the top plate with asbestos cord.
- E. The correct clearance between the top oven block heater casting and the outer barrel is  $\frac{1}{16}$ ". Seal with asbestos string.
- F. The top oven heat conducting plate must make contact with the outer barrel.
- G. The top oven heat conducting plate must make contact with the top oven.
- H. The correct clearance between the grate and the bottom of the outer barrel is  $\frac{3}{4}$ ".
- I. Seal between the ashpit and the outer barrel with asbestos rope.
- J. Seal with asbestos rope between the boiler body and the fire unit, and between the boiler body and the side plate.

Seal with asbestos string and waterglass the joints between the ovens, the oven frames and the front plate, and between the ashpit, the ashpit tunnel, and the front plate.

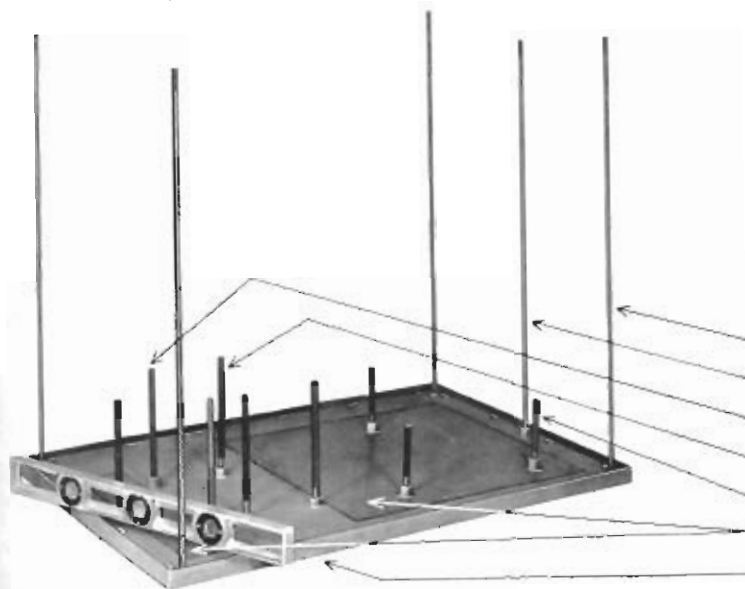


Seal with Stillize and waterglass the joints between the side plates and the front plates, round the base plate filler plates, round the auxiliary air ducting where it enters the front plate, and round the oven frames and the ashpit tunnel.

# Erection Procedure

Lay the base plate on the hearth, centralize with the flue, and level up.

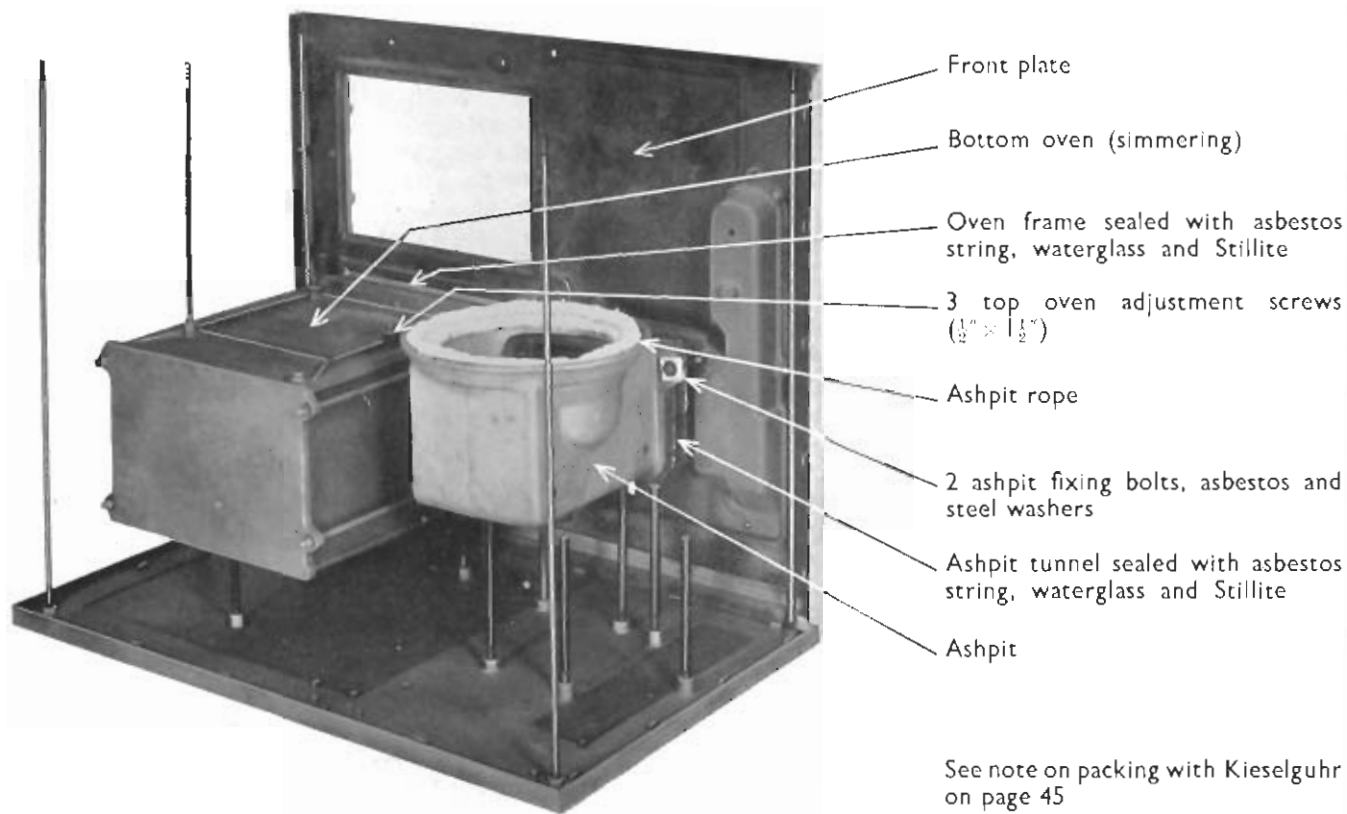
Insert the two sheet-metal filler plates and seal round the edges with waterglass and Stillite.



Screw in :—

1. The four corner stay rods with the ends with the shorter threading **screwed into the bosses** on the base plate. Tighten with footprints.
2. The top oven anchor stay rod with the end with the shorter threading **screwed into the boss** on the base plate. Do not tighten.
3. The three bottom oven supporting bolts ( $\frac{1}{2}'' \times 5''$ ). (As an initial adjustment these three bolts should project  $4\frac{3}{4}''$  above the bosses.)
4. The three ashpit supporting bolts ( $\frac{1}{2}'' \times 9''$ ). (As an initial adjustment these bolts should project  $8\frac{1}{2}''$  above the bosses.)
5. The three boiler supporting bolts ( $\frac{1}{2}'' \times 9''$ ). (As an initial adjustment these three bolts should project  $8\frac{1}{4}''$  above the bosses.)

- 4 corner stay rods ( $\frac{3}{8}''$ )
- Top oven anchor stay rod ( $\frac{3}{8}''$ )
- 3 boiler supporting bolts ( $\frac{1}{2}'' \times 9''$ )
- 3 ashpit supporting bolts ( $\frac{1}{2}'' \times 9''$ )
- 3 bottom oven supporting bolts ( $\frac{1}{2}'' \times 5''$ )
- 2 base plate filler plates
- Base plate



Place the bottom oven on its three supporting bolts.

Tie two lengths of asbestos string round the oven frame and fit the frame on to the projecting flange on the front of the bottom oven.

Place the front plate in position.

Insert the two oven fixing bolts ( $\frac{1}{2}$ "  $\times$  4" with chromium plated heads) and engage them behind the lugs on the oven with nuts and washers. Do not tighten.

Adjust the oven so that it is in line with the opening in the front plate and level it by raising or lowering it on the three supporting bolts.

Make sure the front plate is vertical. Tighten the oven fixing bolts and caulk the asbestos string into the joints between the frame and the front plate and the oven. Undue pressure should not be used in tightening up the ovens, otherwise distortion of the front plate may result.

Place the ashpit on its three supporting bolts and centralize it with the opening in the front plate.

With waterglass stick asbestos string into the grooves on the front and back edges of the ashpit tunnel and insert the tunnel between the ashpit and the front plate, making sure that it is in line with both.

Fit the ashpit fixing bolts :—

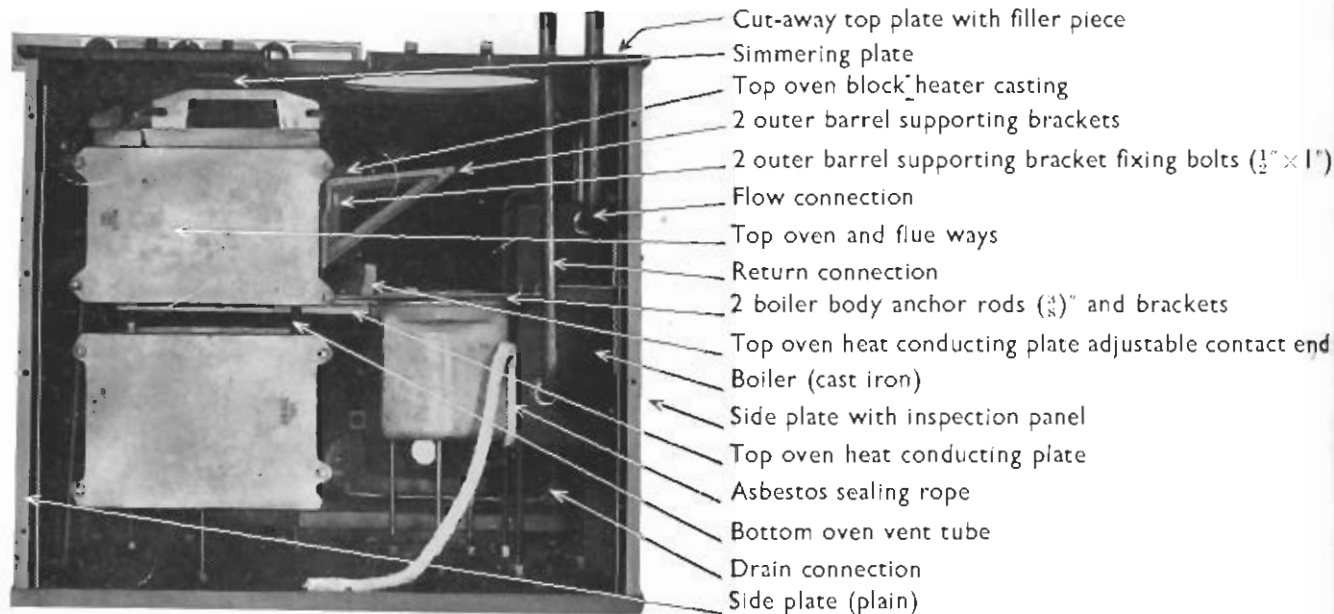
1. The right-hand bolt ( $\frac{1}{2}$ "  $\times$  6 $\frac{1}{2}$ " with chromium plated head) is inserted through the front plate and secured with a nut.
2. The left-hand bolt ( $\frac{1}{2}$ "  $\times$  5 $\frac{1}{2}$ " with hexagonal head) is inserted internally and screwed into the threaded boss on the back of the thermostat housing.

Both these bolts engage behind the lugs on the ashpit and must be fitted with asbestos and steel washers. Do not tighten as the position of the ashpit may have to be adjusted later.

Lay asbestos rope round the rim of the ashpit.

Insert the three top oven adjustment screws into the threaded bosses on the top panel of the bottom oven.





Before lifting in the top oven, attach to it :—

1. The top oven heat conducting plate (minus the contact end) with two  $\frac{3}{8}'' \times 1\frac{1}{2}''$  countersunk screws, nuts and washers.
2. The top oven block heater casting with two  $\frac{1}{4}'' \times 1\frac{1}{4}''$  countersunk screws ; and
3. The two outer barrel supporting brackets with  $\frac{1}{2}'' \times 1''$  fixing bolts.

Place the oven on the three adjustment screws, making

sure that it is in line with the opening in the front plate, and attach the contact end to the heat conducting plate with the two  $\frac{3}{8}'' \times 1\frac{1}{4}''$  dome-headed screws and steel washers. Do not tighten.

Fit the top oven frame, with two lengths of asbestos string, and secure the oven to the front plate with the two fixing bolts, using exactly the same method as that used for fitting the bottom oven. Do not tighten the fixing bolts.

Put an offset in the top oven anchor stay rod and engage it between the lugs on the top oven. Fit the  $\frac{3}{8}$ " nut and steel washer to the stay rod, but do not tighten.

Place the simmering plate in position on the flue ways above the top oven after cleaning the machined surfaces to ensure perfect contact.

Insert the vent tube through the hole in the back left-hand corner of the top oven, making certain that it fits into the cupped recess on the bottom oven.

Insert the unions into the boiler body, using the graphite washers and jointing compound for the flow and return unions and a hemp grummet and jointing compound for the elbow union for the drain connection. Tighten up securely.

Place the boiler on its three supporting bolts and hook the two anchor rods on to the bottom left stay rod of the top oven. Insert the threaded ends of the rods through the holes in the anchor brackets and fit the  $\frac{3}{8}$ " nuts and steel washers. Engage the brackets behind the boiler so that they hold it in position. By turning the two nuts, draw the boiler towards the ashpit but do not tighten.

Fit the back plate, back plate reinforcement strips, and the two side plates and secure them together with the dome-headed  $\frac{1}{2}$ " screws, nuts and washers. If top flow and return connections are used, add the top plate corner piece with the holes for the two pipes, securing it with one of the corner stay nuts.

(If right-hand side flow and return connections are used, two lengths of 1" pipe, each measuring 3' 1" long and with 8" radius right-angle bends on the ends

connecting to the boiler, will be required. Holes should be cut in the right-hand side plate with their centres 1" higher than the centres of the holes in the standard left-hand side plate.)

Complete the flow and return and drain connections with the cones and locking nuts and screw on the drain cock with a hemp grummet.

If possible, the boiler should be connected up at this stage to the hot water system, filled with water and all connections tested for leaks before proceeding with the installation. In any event, the boiler itself should be filled with water in the hope that if a connection has not been properly made, it will be discovered at once.

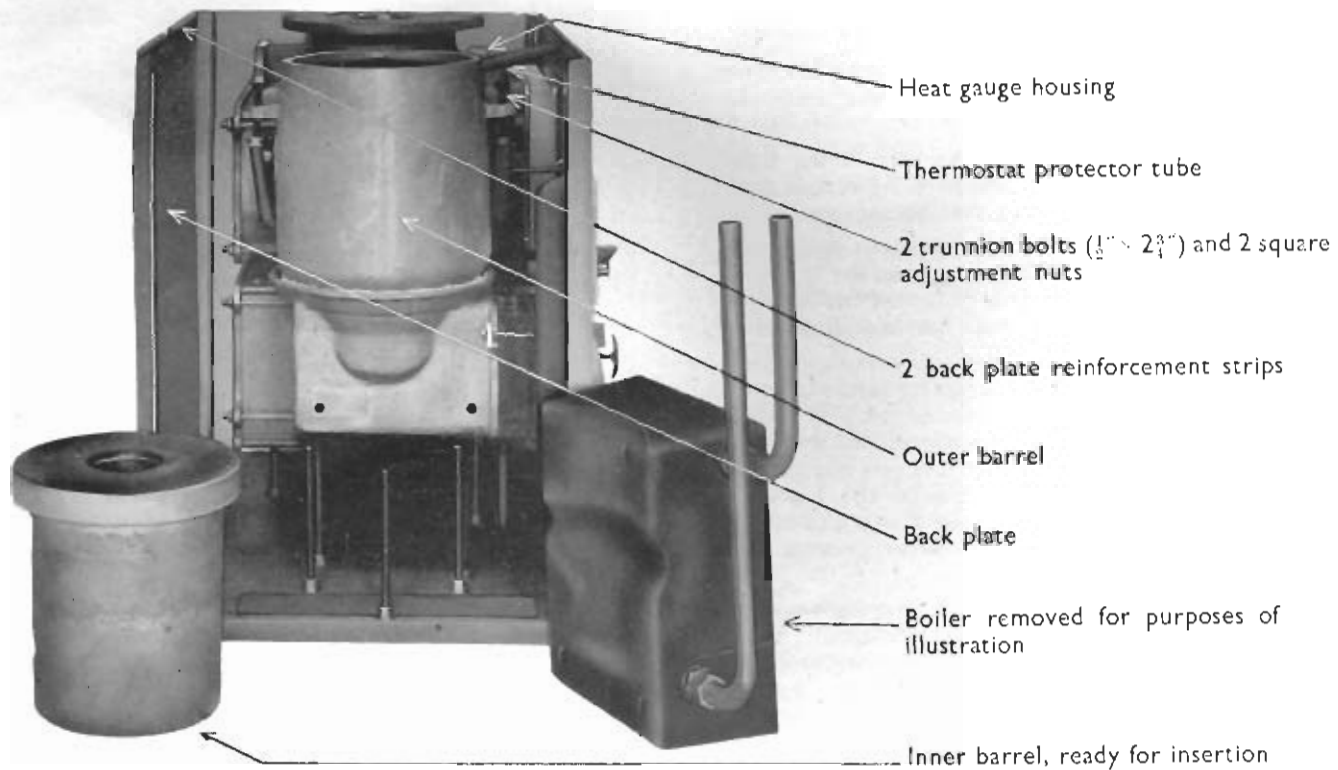
The correct and final level of the simmering plate should now be achieved and this is best done by making a trial fitting of the top plate.

Place the top plate in position and level it, but do not tighten it down with the corner stay nuts.

By turning the three adjustment screws in the top panel of the bottom oven, raise or lower the simmering plate until it is level and flush with the top plate.

Leave a spirit-level on the simmering plate, remove the top plate and—

- 1, tighten the nut on the anchor stay rod ;
- 2, tighten the two top oven fixing bolts ; and
- 3, caulk in the asbestos string round the oven frame (as before). Observe that the reading of the spirit-level has remained unaltered and make sure that both ovens are properly supported on their respective bolts and screws.



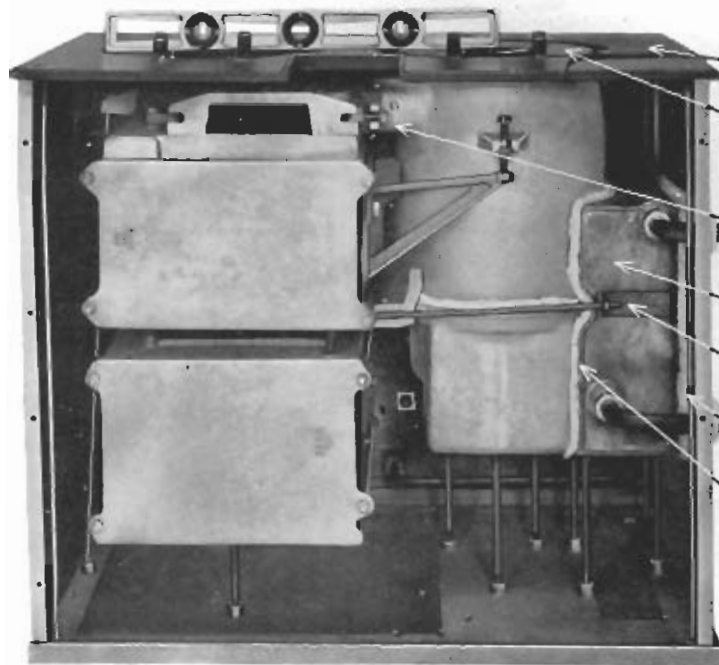
Fit the outer barrel by supporting it on the two trunnion bolts ( $\frac{1}{2}'' \times 2\frac{3}{4}''$ ) and square adjustment nuts which engage with the lugs on the front and back of the outer barrel, and rest in cupped recesses in the outer barrel supporting brackets.

Secure the outer barrel to the flue ways above the top oven with the two outer barrel fixing bolts ( $\frac{1}{2}'' \times 2\frac{1}{2}''$ ), nuts and two steel washers each. Do not tighten.

Insert the inner barrel after cleaning the machined surfaces on both the inner and outer barrels so that they will make perfect contact.

Adjust the trunnion bolts until the surface of the inner barrel is level with the surface of the simmering plate.

(The boiler has been removed for the purposes of illustration and the thermostat protector is illustrated here merely to show its position when fitted later.)



Cut-away top plate with plain filler piece  
(could be plain top plate)

Inner barrel inserted

2 outer barrel fixing bolts ( $\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " ), nuts  
and 4 steel washers

Boiler (copper) with left-hand side  
connections

Anchor bracket

Asbestos sealing rope between boiler and  
side plate

Asbestos sealing rope between boiler and  
fire unit

Insert the grate and carrier.

Refit the top plate to ensure that the inner barrel surface is level and flush with it and that both barrels are properly centralized. Adjust by means of the two trunnion bolts. Remove the top plate and, leaving a spirit-level on the inner barrel, tighten the two outer barrel fixing bolts. Observe that the level has not altered.

(See the special note on page 48 about the left-hand hot plate level.)

There must be a clearance of  $\frac{3}{4}$ " between the top rim of the grate and the bottom of the outer barrel. This correct grate clearance can be obtained by raising or lowering the ashpit (which has not yet been tightened) on its three supporting bolts. If it is necessary to move the ashpit in carrying out this adjustment, make sure that the two lengths of asbestos string on the ashpit tunnel have not been displaced before tightening the ashpit to the front plate.

Undue pressure should not be used in tightening up the ashpit, otherwise distortion of the front plate may result. After adjusting, make sure the ashpit is properly supported on its three supporting bolts.

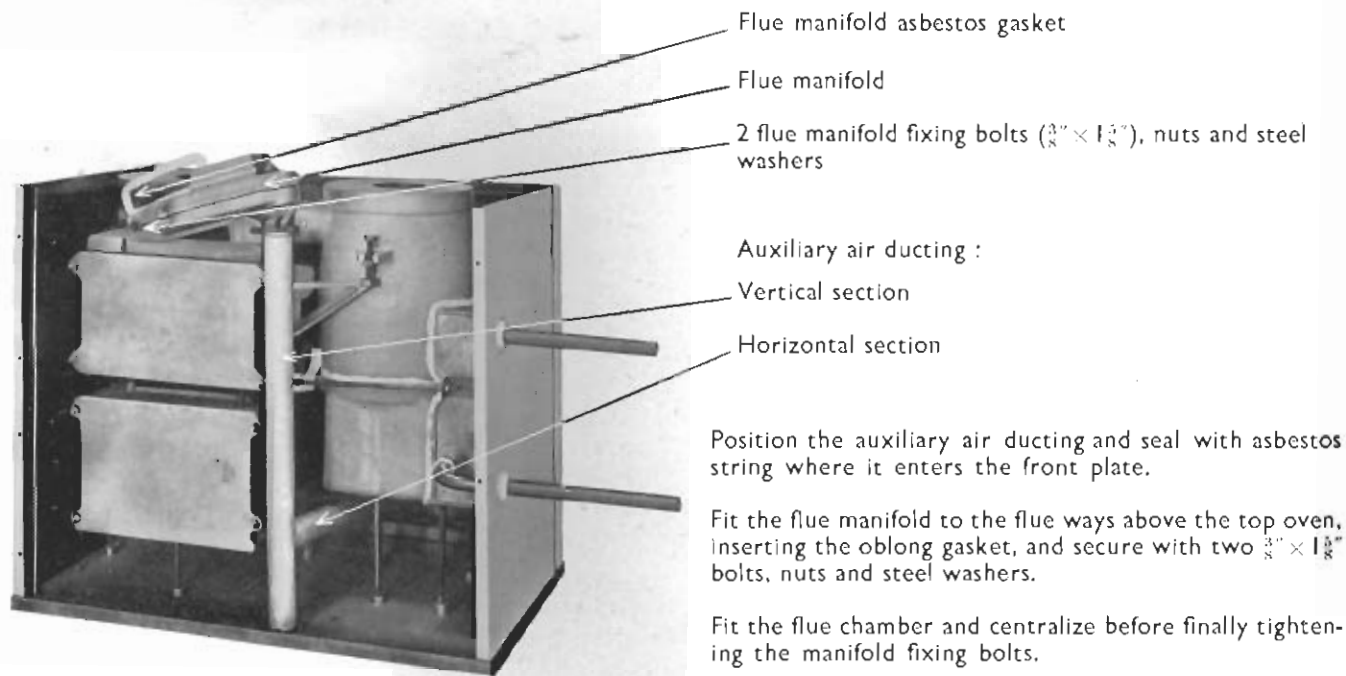
Seal the holes in the left-hand side of the ashpit with fire cement.

Caulk in the ashpit rope between the ashpit and the outer barrel.

Make sure the adjustable end to the top oven heat conducting plate is making contact with the outer barrel and secure firmly by tightening the two dome-headed screws.

In order to ensure an even input of heat into the top oven, seal around the space between the top oven block heater casting and the outer barrel with asbestos rope.

Having firmly secured all parts of the fire unit, draw up the boiler to it by tightening the nuts on the anchor rods. The position of the boiler in relation to the fire unit is determined by the three distance lugs cast on the boiler. These must be in contact with the ashpit and the outer barrel, but it is not their purpose to conduct heat. They must neither be filed down nor padded round with heat conducting material. Nothing but air must be allowed in the space between the boiler and the fire unit, so that, when all the parts are in position and firmly secured, asbestos rope must be caulked in all round the boiler.



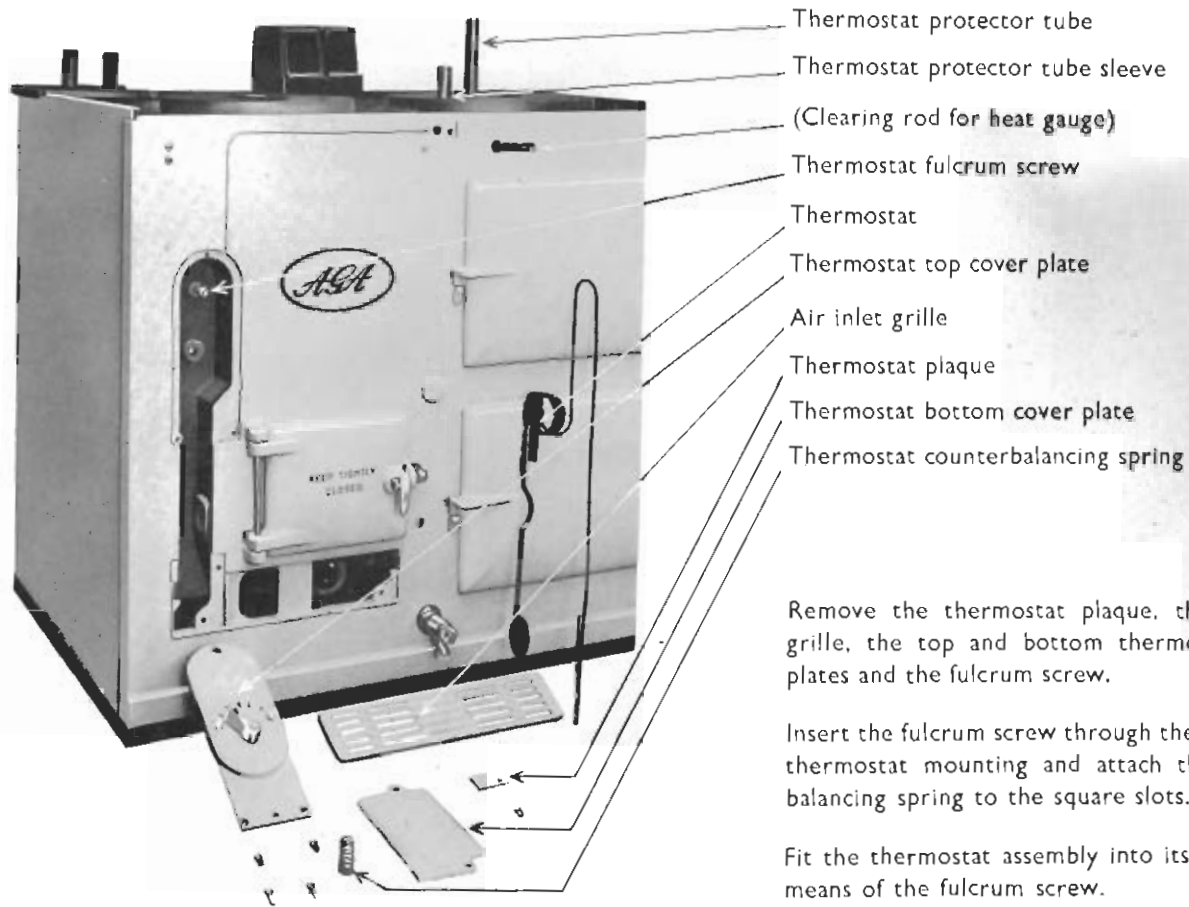
Position the auxiliary air ducting and seal with asbestos string where it enters the front plate.

Fit the flue manifold to the flue ways above the top oven, inserting the oblong gasket, and secure with two  $\frac{3}{8}'' \times 1\frac{1}{2}''$  bolts, nuts and steel washers.

Fit the flue chamber and centralize before finally tightening the manifold fixing bolts.

Fit the thermostat protector tube and sliding sleeve between the recess on the front plate and the projection of the fixed tube in the outer barrel.

Paint with waterglass the joints between the side plates and the front plate and dab on some Stillite. Check the asbestos string round the oven frames and the ashpit tunnel to make sure it is effecting a proper seal.



Remove the thermostat plaque, the air inlet grille, the top and bottom thermostat cover plates and the fulcrum screw.

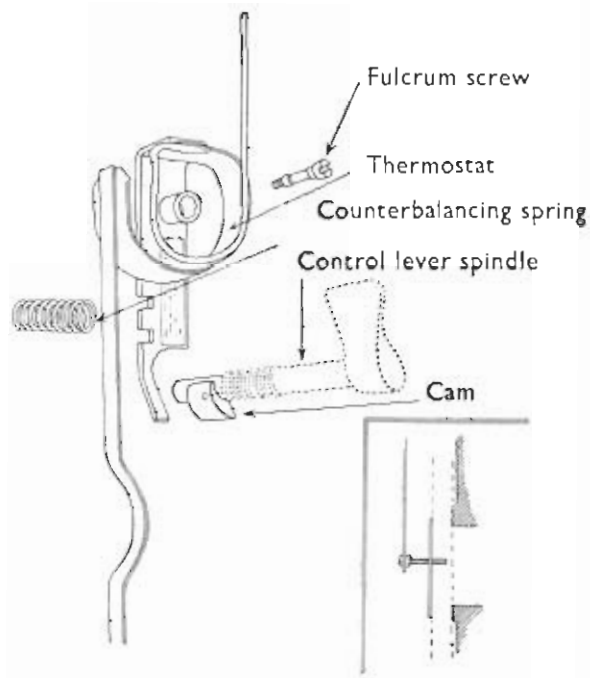
Insert the fulcrum screw through the hole in the thermostat mounting and attach the counterbalancing spring to the square slots.

Fit the thermostat assembly into its housing by means of the fulcrum screw.





Bend the capillary tube into a horizontal position and make a mark on the brown paint at the point where the tube will pass at right angles through the hole in the front plate.





Remove the fulcrum screw and the thermostat assembly from the housing and bend the capillary tube back at right angles at the point marked.

Refit the thermostat assembly as before and gently push the capillary tube through the hole in the front plate and the protector tube, making sure that the end enters the fixed tube in the outer barrel. Adjust the capillary tube so that it rests neatly in the channelling on the front plate.

Refit the thermostat plaque.



Refit the top cover plate. It is essential that when this cover plate is in position, the cam on the control lever spindle should engage with the leg on the bottom of the thermostat mounting.

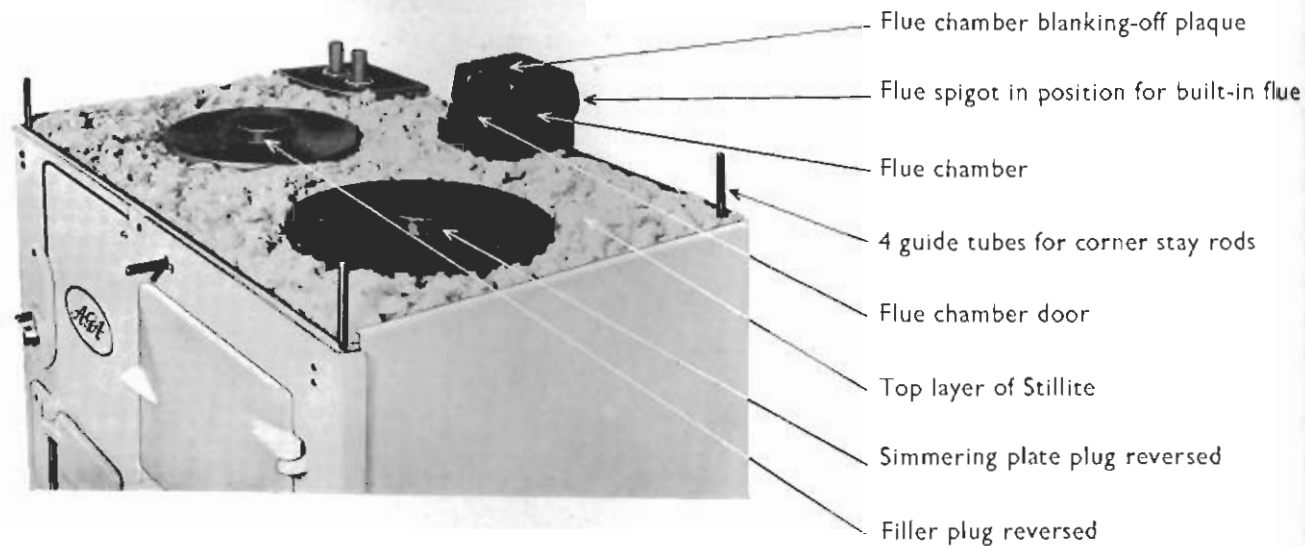
Turn the control lever back to 1 and "offer" the cover plate to the front plate of the cooker so that the spindle touches the right-hand side of the leg on the thermostat mounting. Move the cover plate towards the left until the screw holes are in line with the holes in the front plate and then press gently home. If the valve disc moves when the control lever is turned the cam is engaging as it should.

(The leg on the thermostat mounting is set forward and it is sometimes necessary to bend it slightly further forward before it will engage with the cam. Ordinary flat-nose pliers may be used though care should be taken to avoid disturbing the thermostat mounting.)

Each thermostat bears a label on which is stated, in millimetres, the distance that should exist between the valve disc and the air inlet orifice with the control lever set on 2 and the cooker cold.

Adjustments should be made to obtain this setting by rotating the valve disc until it is in the centre of the threaded spindle on which it is mounted, and then making an offset in the pendulum. Final minor adjustments can be made by rotating the disc one or two turns on its spindle.

Care must be taken to ensure that the valve disc does not foul the back of the thermostat housing or the bottom cover plate (when this is fitted) and it is also essential that the valve disc should be adjusted so that it will hang in line with, and fit evenly against, the air inlet orifice when the cooker is up to temperature.



If Kieselguhr is being used which is slightly damp, or which does not "flow" readily, the spaces under the bottom oven, the ashpit and the boiler should be packed as soon as these parts are fitted. Otherwise proceed as follows :—

Before packing the cooker with Kieselguhr insert a clearing rod through the hole in the front plate for the heat gauge so that it ends in the heat gauge housing on the top oven.

Put on your respirator.

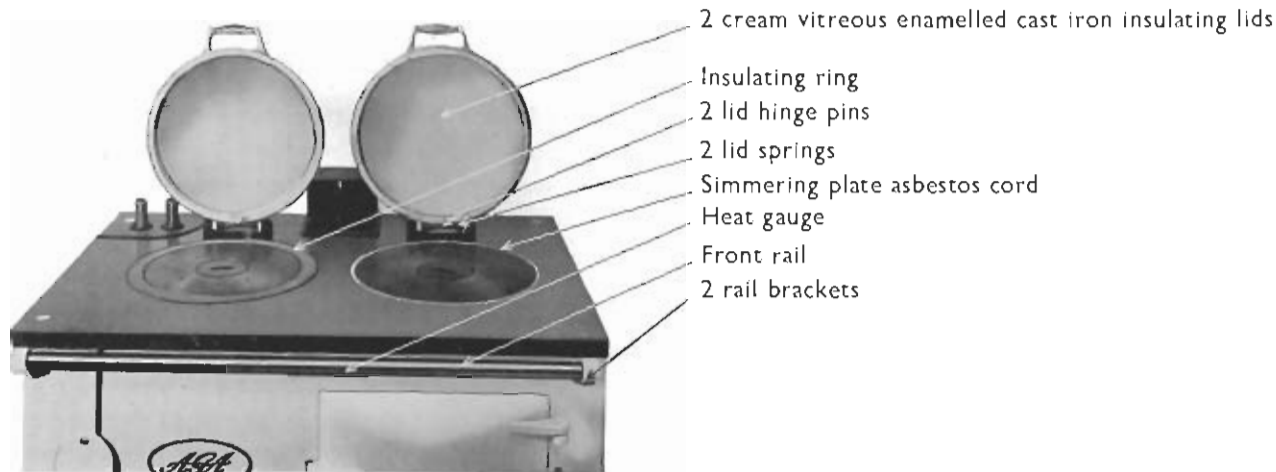
Pour in a sack or a sack and a half of Kieselguhr and gently ram it down with a rod so that it penetrates and packs tightly under and around the bottom oven and the ashpit and between the ovens.

Add more Kieselguhr and continue ramming it gently home until the whole amount is in the cooker. It is important to ensure that no airpockets or empty spaces are allowed to remain.

A damp cloth will be found useful when packing with Kieselguhr. It will lay the dust and make it easier to press the powder into the cooker.

Spread a top layer of Stillite about 2" above the level of the top of the cooker so that it will press down firmly when the top plate is finally fitted.

Remove the clearing rod from the heat gauge hole and fit the heat gauge, making sure that the housing has not filled with Kieselguhr. It is as well to pack round the housing with Stillite.



Fit the top plate and tap it down gently into position with a rubber mallet.

Insert the four corner stay nuts, but do not exert undue pressure in screwing them home. Fit the chromium plated buttons.

Place the loose insulating ring round the left-hand hot plate and adjust it to the level of the hot plate and the top plate by filing the four small projections cast on the undersurface.

Flatten the asbestos cord and press it into the space

round the simmering plate and caulk it in until it is slightly below the level of the simmering plate.

Fit the lids and lid springs and position the hinge pins so that the grub screws in the hinge lugs engage in the recesses on the pins.

Insert the filler plug and the simmering plate plug. The correct simmering plate plug for Model CB has an overall depth of 33 mm.

Fit the front rail brackets and the front rail and secure with grub screws.



Put on the oven doors and make sure that they fit correctly. Slight adjustments can be made to the fitting of the oven doors by bending the hinge pins, should this be necessary.

Test the fitting of the ashpit door to verify that the machined surface makes perfect contact all round with the machine surface on the front plate.

Clean out the ovens and the whole of the exterior of the cooker. See that the oven vents are clear and have not become blocked with Kieselguhr.

Connect the flue chamber to the chimney :—

1. If the flue is built in, seal round the flue spigot where it enters the brickwork or, if necessary, leave instructions for the Builder to do so.
2. If flue piping is used, it should be  $3\frac{1}{2}$ ' inside diameter heavy gauge asbestos cement pipe and all joints should be sealed with fire cement.

Where there are doubts about the draught, it should be measured after the cooker has been alight some time and adjusted to 0.4-0.6 mm. w.g., the reading being taken at the simmering plate and with the thermostat closed.



### **SPECIAL NOTE ON LEFT-HAND HOT PLATE LEVEL**

In the assembly of earlier models of the AGA Cooker, notably those with the long inner barrel, allowance had to be made for expansion of the fire unit by fixing the level of the left-hand hot plate about  $\frac{1}{8}$ " below the level of the top plate. In the standardized AGA Cooker, however, the expansion of the fire unit above the point of suspension (i.e., above the trunnion bolts) is negligible and the left-hand hot plate must, therefore, be fixed exactly level with the top plate during assembly.

It is essential that the ashpit should be accurately centralized in relation to the outer barrel, and the rope sealing the joint between the two parts should not be jammed in too tightly. The outer barrel will thus be given enough tolerance to expand downwards into the ashpit.

If it is found that, on lighting the AGA, the level of the left-hand hot plate rises through inattention to this point, the ashpit fixing bolts should be slackened and the position of the ashpit correctly adjusted.

# LIGHTING and DEMONSTRATING THE AGA AFTER INSTALLATION

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The following accessories, in addition to those illustrated in the parts list, are supplied with each new AGA Cooker.

- I Large Meat Tin
- I Half-size Meat Tin
- I Oven slide or solid shelf
- I Open-barred Shelf
- I Toaster
- I Instruction Booklet (with  
Registration Card)
- I 5-lb. Bag of Charcoal

Before lighting the AGA, the Instruction Booklet should be given to the new owner, and the demon-

stration should normally start with a description of the functions of the ovens and the hot plates. Collect together all the accessories and explain and demonstrate their uses as follows :—

**Flue Cleaning.** Remove the plug from the simmering plate and insert the long flexible flue rake, with the scraping edge pointing downwards, into the left-hand section of the cooker flues. Demonstrate the method of scraping the flue deposit towards the dividing bar and withdrawing it through the hole in the simmering plate. Then insert the same rake in the right-hand flue and repeat the operation in the same way. Any deposit that remains in the flue chamber

can be removed with the short flue rake. Explain that the top edge of the dividing bar and the undersurface of the plug must also be scraped clean.

This routine operation, which merely takes a matter of minutes, must be carried out by the owner, or staff, once every month.

**Riddling the Fire.** Remove the grate and carrier and separate them.

Demonstrate the method of lifting the grate and carrier by engaging the crook on the riddling tool in the groove on the underside of the carrier, and also demonstrate the method of rotating the grate by engaging the crook on the riddling tool round the centre spindle on the carrier and engaging the shaft of the tool in the ratchets on the grate. The movement should be level, and from right to left, so that the grate is turned gently in a clockwise direction. Jerky move-

ments with an upward thrust are unnecessary and should be avoided.

Insert the grate and carrier in the ashpit, making sure that the front right-hand leg of the carrier engages behind the stop-lug on the ashpit wall, and repeat the riddling demonstration.

**Ash Removal.** Although this procedure is so simple and seemingly obvious, it will impress the new owner if it is pointed out that the shovel is made to fit the ashpit and that therefore ash removal can be effected cleanly in one simple operation.

Riddling and ash removal do not result in dust if the owner is recommended to remove the ashes, once in twenty-four hours, **before** riddling, and to leave the ashes which fall from the fire during riddling until the next day. They will then have cooled down and will be less inclined to rise from the shovel when removed from the ashpit.

It will also avoid dust if the plug on the simmering plate is reversed when the fire is being riddled. Reversing this plug will have the effect of increasing the speed of the draught passing through the cooker, thus tending to draw the lighter and more volatile particles of ash into the flue where they will be carried away with the flue gases.

**Lighting the Fire.** It is recommended that the fire of the AGA should be kindled with paper and charcoal. A 5-lb. bag of charcoal is supplied with each new cooker. (As an alternative, the fire may be lit with a gas poker in which case no kindling material will be required.)

When lighting the fire it is necessary to increase the draught passing through the cooker : (a) by opening the ashpit door ; (b) by reversing the plug in the simmering plate ; and (c) by blocking the auxiliary air inlet. This last can be done by removing the grille

below the ashpit door and plugging the 2" diameter air inlet with a piece of rag or paper. Reversing the simmering plate plug will allow freer passage for the gases passing through the cooker flue ways, and blocking the auxiliary air inlet will ensure that all the draught being drawn through the cooker will have to pass through the fire itself.

Next remove the filler plug in the left-hand hot plate and insert six to eight loosely screwed-up balls of newspaper into the fire unit, pushing them down on to the grate. Then pour in about a shovelful of charcoal and ignite the paper through the ashpit door after having cleaned the filler plug seating with the wire brush and replace the filler plug.

While waiting for the charcoal to catch, the opportunity should be taken of giving the owner some hints on the proper care of the AGA.

Explain the uses of the wire brush for cleaning the hot plates and stress the need for cleaning the filler plug seating after refuelling. The machined edges on the ashpit door and on the front plate should be cleaned regularly with the wire brush to ensure that they make perfect contact and are free from air leaks.

An occasional rub over with a damp rag is all that is normally required for keeping the vitreous enamel surfaces of the AGA clean and bright. New owners should, however, be warned that milk and fruit juices, for instance, contain acids which will permanently discolour the enamel if they are not promptly removed. Ordinary furniture polish, preferably with a wax base (rather than an oil or cream base) is excellent for preserving the vitreous enamel, the wax providing a hard, thin film through which acid will be less likely to penetrate.

The lid linings and oven door linings can be kept clean

with any good proprietary make of semi-abrasive cleanser or with wire-wool.

Explain that the ovens, which are always hot, keep themselves clean and merely need to be brushed out occasionally with a long-handled stiff brush. Show the owner how simply the oven doors can be removed, but explain that they must not be immersed in water.

When the charcoal is thoroughly alight, add a small quantity of coke, anthracite or "Phurnacite," and as soon as this has caught, fill up with more fuel to within 2" of the filler plug. Then remove the blockage from the auxiliary air inlet, replace the grille, close the ashpit door and close the left-hand lid. The plug on the simmering plate should remain reversed for about one hour, to dry out any condensed moisture and warm the chimney. Leaving the right-hand lid open is a reminder that the plug is still reversed.

**The Thermostat.** Explain the operation of the thermostat and stress the fact that it is not a damper or an oven regulator. Its purpose is to control the rate of burning of the fire by automatically shutting off the supply of air to the fire when the cooker has absorbed the maximum required amount of "stored" heat, and by reopening the supply of air to replace heat which has been used in cooking.

Maximum stored heat is indicated by the mercury in the heat gauge reaching the black line after a long period of idleness, such as overnight. It should be explained to the owner that the thermostat is set internally when the cooker is installed but that a lever is provided to give finer adjustment to the setting when the cooker has been under fire for some time and the chimney has been warmed. The owner should be asked to note the position of the mercury in the heat gauge first thing in the morning for two or three days after installation and to make any adjustments

that may be necessary by advancing or retarding the thermostat lever half a degree at a time until the mercury consistently reaches the **black** line on the heat gauge. This will indicate that the correct thermostatic setting has been achieved and thereafter the lever will require no further adjustment at all.

The heat gauge is not a thermometer as such. It merely indicates whether or not the AGA, as a whole, contains the correct amount of stored heat. If the mercury in the heat gauge reaches the black line, it can be assumed that the ovens and the hot plates are at the correct temperatures for the purposes for which they were designed.

**Barrel Rotation.** It will usually be found that it is easier to turn the inner barrel when the cooker is hot, and it is therefore wiser to delay this part of the

demonstration until the fire has been alight for as long as possible. Explain the reason for rotating the barrel and show the owner how to engage the tool in the holes drilled in the surface of the inner barrel. The barrel should be given one complete turn after the routine monthly flue cleaning.

**The Chimney.** It was noted earlier that the chimney used by the AGA must be provided with access for cleaning purposes. If an AGA Cooker has a standard 9" x 9" brick chimney (or larger) to itself, the owner can be assured that the services of the chimney sweep will seldom be required, though inspection is advisable at yearly or two-yearly intervals. Where a boiler shares a chimney with an AGA Cooker, however, normal yearly cleaning is recommended.

A chimney used by an AGA Cooker only must be

provided with air ventilation at the correct point. Air ventilation is also sometimes advisable in a chimney shared by an AGA Cooker and a boiler. Explain to the owner that the purpose of this ventilation is to prevent the harmful effects that would result if the moisture in the flue gases were allowed to condense. Air bricks, where fitted, should therefore be left open and on no account should they be blocked up by, for instance, an uninitiated member of the owner's staff. Where a "hit-and-miss" or adjustable, air brick is fitted into a chimney used by an AGA Cooker and by a boiler which is not permanently alight, explain that the air brick must be opened, and left open, when the boiler is not working and the AGA Cooker only is using the chimney.

**Utensils.** Assist the owner as much as possible in the choice of utensils and explain, where necessary, the uses of special-purpose utensils. Demonstrate the

toaster and the griller and advise the owner not to leave the oven slide permanently in the oven—there are times when it is required as a cold blanking-off sheet.

**The Registration Card.** Having completed the demonstration, tear the Registration Card from the back of the Instruction Booklet, fill it in with the name

and address of the owner, and the name and address of the Agent, ask the owner to sign it and then post it to AGA Heat Ltd. On receipt of this card the 10-year Guarantee will be issued.

Before you leave, take a last look around to make sure that everything is just as it should be and that both the AGA and the kitchen are clean and tidy.