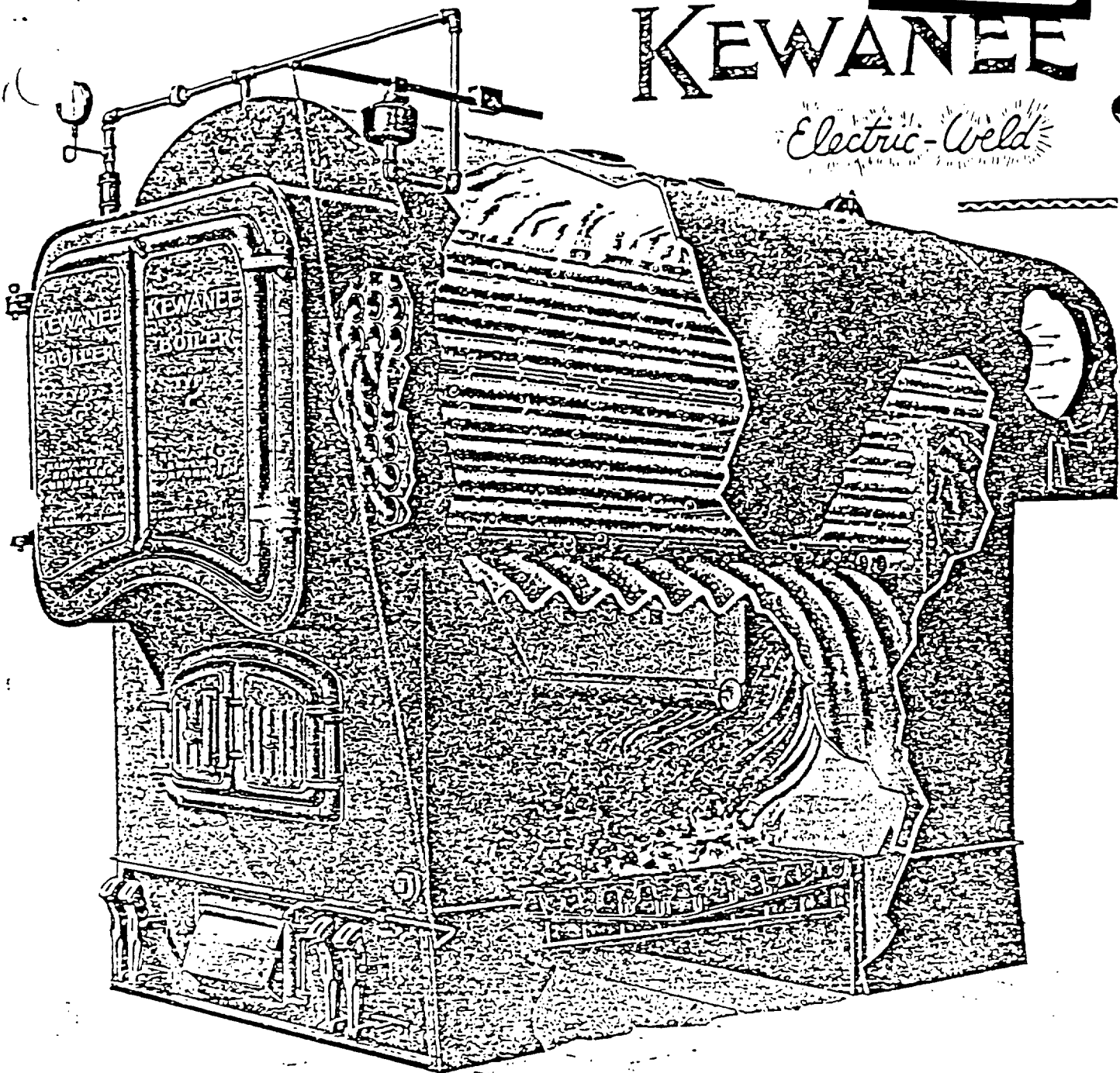


KEWANEE

Electric-Weld

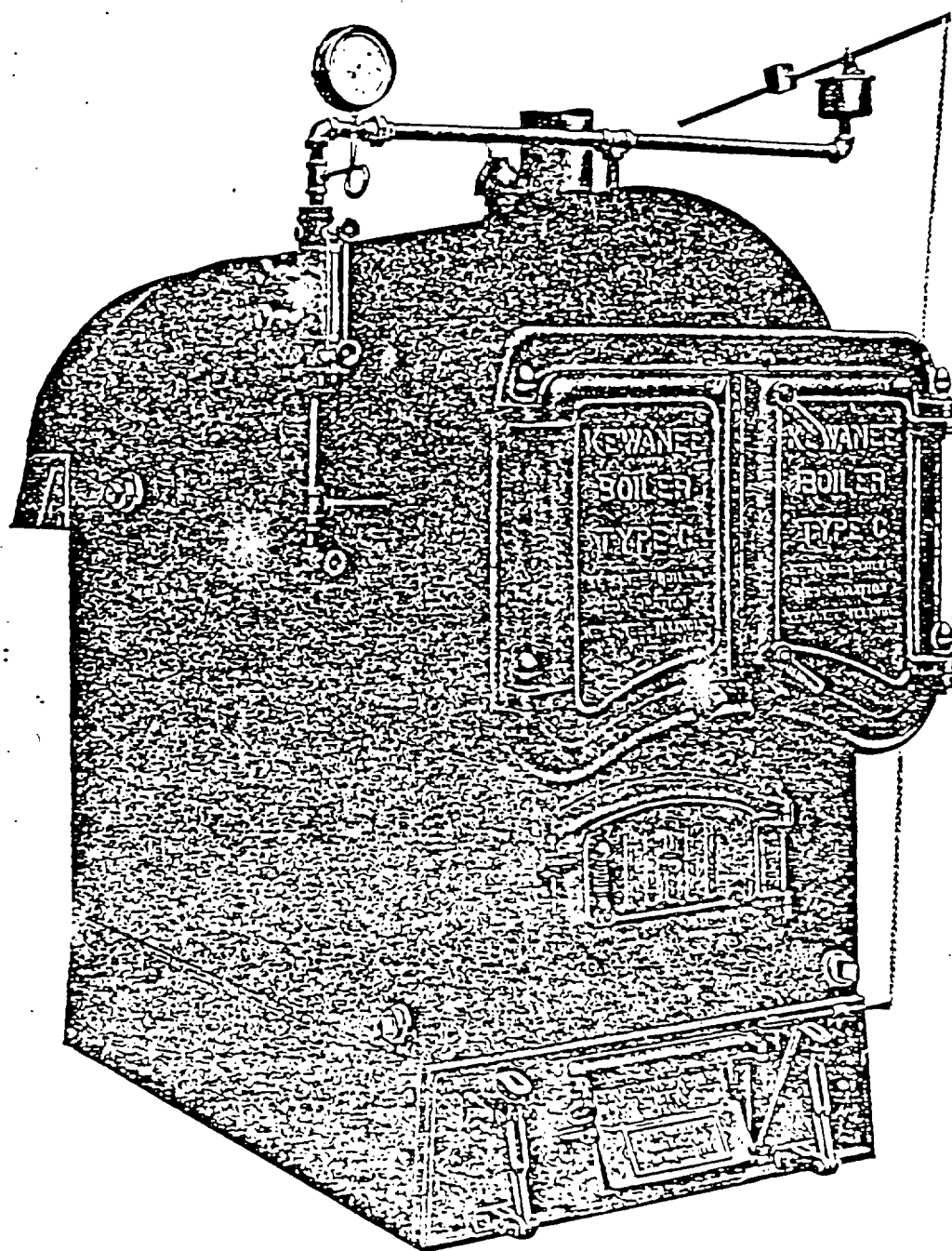
SMOKELESS TYPE C WITH ARCH AND DRUM For Burning Coal

Numbers 749 to 770—to Heat 2300 to 33,070 Sq. Ft. of Equivalent Direct Radiation

EQUIPMENT—Base Complete including Ash Pit Door with Balanced Draft Door and Rear Cleanout Opening, Heavy Rocking Grates, Bridge Wall Firebrick, Refractory Filler for Header, Fire Door, Frame and Liner, Refractory Lined Flue Door, and Frame, Smoke Box Soot Cleanout Doors, Firing Tools consisting of Hoe, Pocker, Bar and Tube Scraper.

Accessories for Steam Boiler—Water Column with Water Gauge and two or three Compression Gauge Cocks, Steam Gauge with Siphon and Cork, Pop Safety Valve, and Automatic ARCO Draft Regulator with Levers, Weights, Pulleys and Chains. No trimmings of any kind furnished with water boilers.

AS 000001



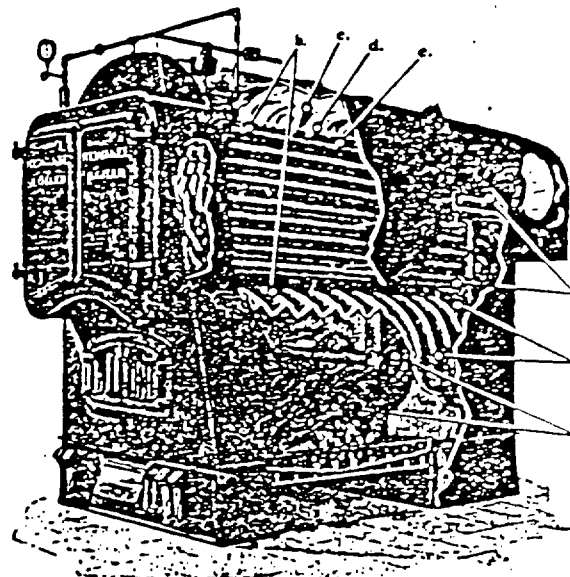
KEWANEE Type C boiler exemplifies the latest in expert thought . . . it is built of steel plate . . . seven simple shapes . . . solidly welded into a homogeneous unit by the well-proven electric metallic-arc-puddling process, same as has been used on welded details of Kewanee boilers for the past ten years or more.

The purchaser who is figuring on a simple, economical boiler that will make plenty of steam efficiently, with low expense for fuel and repairs in the actual operation OF HEATING ALL THE RADIATION LOAD SHOWN BY ITS CAPACITY, will find in this compact Type C boiler the reliable solution of his problem.

Particular attention is directed to an exclusive Kewanee improvement—the CORRUGATED CROWN SHEET shown on opposite page.

STEEL BOILER TYPE C

DESIGN AND CONSTRUCTION CHARACTERISTICS



Material:

The component parts consist of only seven simple shapes compacted together so as to limit the bulk and shorten the seams.
Flange steel plate, extra thickness is used. Tensile strength 50,000 to 60,000 pounds per square inch. This boiler plate is of homogeneous quality with high ductility and low carbon content (not exceeding 0.20%) as required for sound arc fusion welds.

Construction:

The requirements of the A. S. M. E. Code for low pressure heating boilers are fully complied with.
In building Type C boilers there is applied all the skill in manufacture and all the approved procedure evolved by expert boiler makers throughout forty years of continuous practical experience. Fanciful and untried kinks are eliminated and a high degree of workmanship is assured with no unnecessary shop expense. Contact surfaces on door castings are ground to dust-proof finish.

Performance:

Positive proof of actual performance beyond the specified duty is to be found in the figures derived from extended tests on the Type C boiler series made at Kewanee Boiler Corporation laboratory under practical operating conditions. The knowledge gained from this research has been so well applied in the design that the completed product carries handily all radiation loads up to the full catalog rating *plus*, for each size, with high efficiency.

Backing:

The name KEWANEE means as much on the new Type C boiler as it has meant for nearly half a century on all Kewanee boilers. That is, the dependable heating service of Type C boilers is guaranteed by Kewanee.

Design:

Distribution of the materials of construction is so arranged to concentrate most of the effective heating surface around the hot fire zone with a consequent quick transfer of more heat to the water.

- a. The water content is sub-divided so that there is ample volume at all hottest parts, and aided by the header all the water is kept in active circulation, sweeping steam bubbles from the heating surfaces as fast as they are formed thus permitting the absorption of more of the useful heat of combustion.
- b. Although the circulation is rapid it is so orderly that the water level remains steady. There is no danger of a dry crown sheet. No moisture or slug water are carried over into the steam main.
- c. With the high and wide steam space which is provided, there is plenty room for a reserve supply of dry steam.
- d. The disengaging area at the surface of the water line is unbroken and large enough to prevent priming which otherwise might be caused by crowding the expanded bubbles at the moment steam is liberated. In other makes the flues interfere with the liberation of steam as the water line is artificially lowered below the upper flues which in consequence can even make steam.
- e. But in the Type C boiler the top rows of flues are under water, all the flues are effective in making steam.
- f. Grouping the flues in banks not only permits free circulation of water around them, but it also offsets any tendency for sediment to become deposited and lodged thereon. The expanded gases are thoroughly strained through these nests of flues so that as much heat as possible is sifted off during their travel to and fro their full length.
- g. In order to promote perfect combustion, there is extra width and height both in the furnace and in the rear combustion chamber. This gives air for enough air to penetrate the fuel and mingle with the products of combustion. An arch is arranged to deflect any unburnt gases over the glow-fuel bed at the rear. In this way combustion is completed and smoke eliminated at all loads.

Uniform Rating

"The ratings published in this catalog are in conformity with the Steel Heating Boiler Institute's Code for Rating Low Pressure Heating Boilers."

Type C rating is Total Radiation Load at boiler outlet expressed in equivalent surface of cast iron radiators emitting 240 units of heat or B. T. U.'s per square foot per hour for Steam, at 2 lbs. pressure and 150 B. T. U. for Water at 11 degrees temperature.

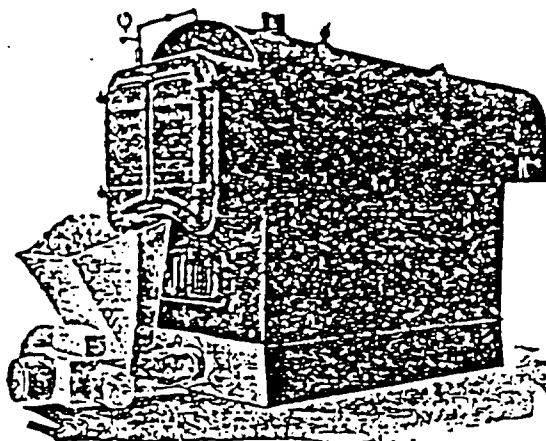
Total Radiation Load corresponds with the estimated design load which is the sum of 3 items—

1. Normal heat emission of connected radiation required to heat the building to 70 degrees.
2. Maximum heat required for water heaters and other apparatus.
3. Heat emission of all mains and piping connections.

Provided the stack and breeching connections are in accordance with the manufacturer's specification, each Type C Boiler will carry all the radiation load listed as its capacity, and in addition will easily handle large overloads with long firing periods and with low stack temperatures.



AS 000003



Type C Boiler with Typical Stoker attachment
Numbers 1749 to 1770—to Heat 2790 to 40,200 Sq. Ft.
of Equivalent Direct Radiation

KEWANEE STEEL BOILER

Electric-Weld TYPE C

BURNS ANY KIND OF COAL, OIL OR GAS

The question what fuel to use may be paramount for the users of other makes of boilers but not so for the purchaser of Type C.

The owner of a Kewanee Compact Style Heating Unit has no difficulty with any fuel. The most available will serve best. Even a change-over from one fuel to another presents no complications.

With this wide adaptability in reserve, the customer may choose any of the Solid Fuels in various grades. Bituminous Soft Coals either for Hand Firing or with modern Stoker feed attachments. Powdered coal, briquettes, coke or processed fuels may be provided for as also may Anthracite Hard Fuel.

For Liquid Fuel any oil burner on the market will perform at its best with Type C.

Wherever Gaseous Fuel is practicable, Natural Gas or the manufactured and synthetic varieties have been used for years with outstanding results under Kewanee Boilers. Those performances are not mere claims. The highly economical results are deduced from careful observations in elaborate tests.

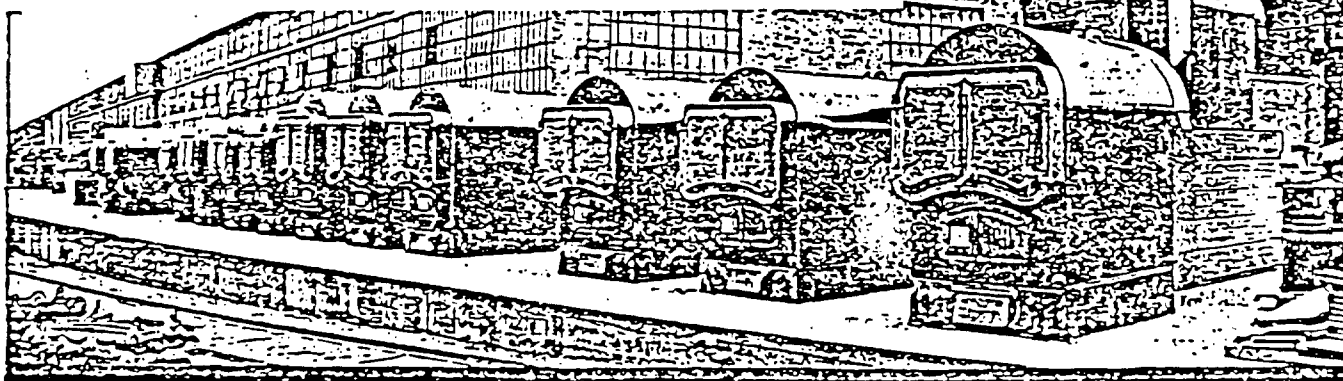
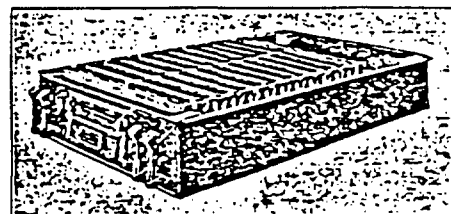
BASE GOES INTO BASEMENT ALL READY ASSEMBLED

Type C base consists of four substantial cast iron corner posts which take the weight of the boiler. The front plate is cast iron with balanced draft door and hinged frame which swings open to facilitate cleaning out the ash pit.

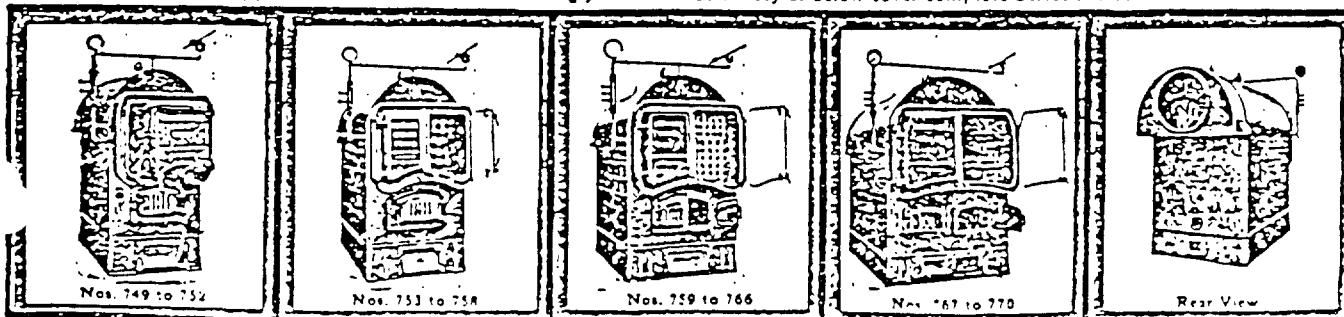
The sides and back are heavy steel plate flanged over at top to hold boiler cover.

Opening at rear has removable cover plate to permit cleaning out back of brickwall under rear combustion chamber.

The complete base is shipped out from the factory fully assembled with grate bars, shaker arms, rods and levers in place all ready to operate after it is laid down on foundation with boiler shell set on top.



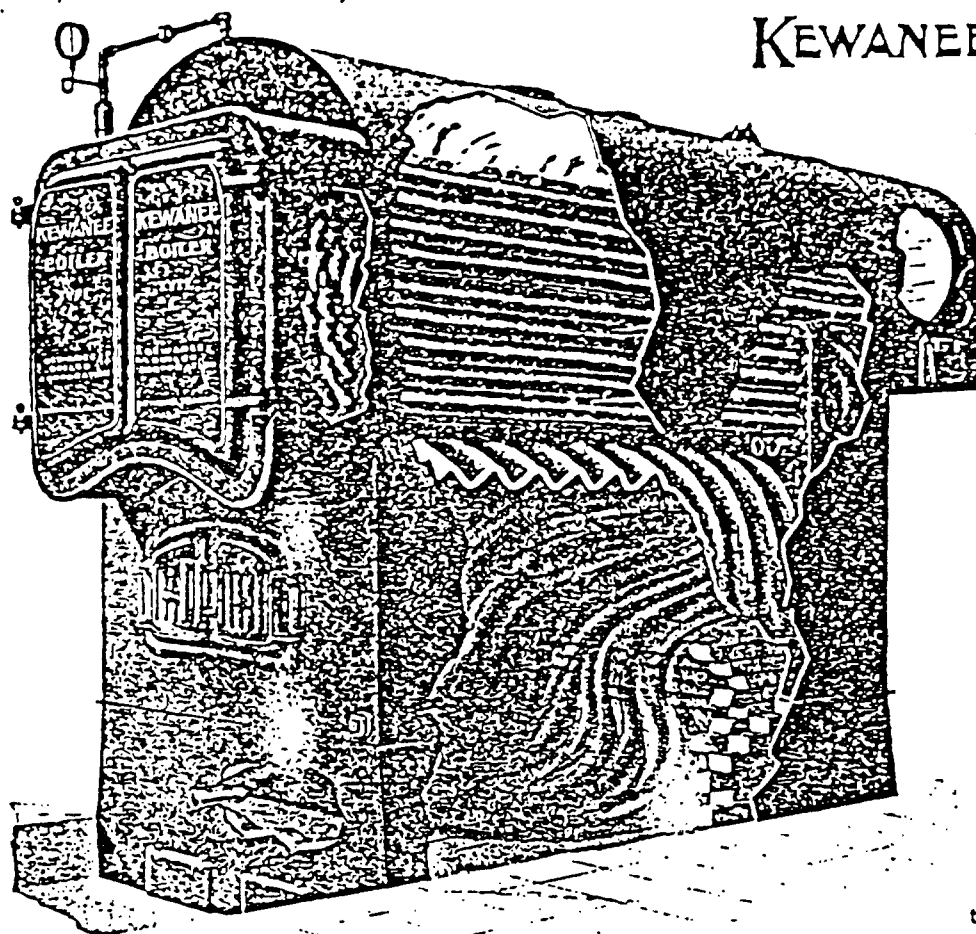
Type C Boilers 750 to 761 on loading platform. The 4 styles below cover complete Series 749-770



KEWANEE STEEL BOILER

Electric-Weld

TYPE C



EQUIPMENT—Base with four cast-iron corner posts, heavy steel flanged sides with rear cleanout opening; cast-iron front plate (not shown); fire-door(s), frame and Liner(s); Refractory lined fire door(s) and frame; smokebox and soot cleanout doors, tube scraper. Steel plate for mounting oil burners and for dampered hearth openings not furnished by K. B. Corp.

Trimnings for Steam Boiler—Water column with water gauge and three (or 2) compression gauge cocks; steam gauge with syphon and cock; pop safety valve(s). No trimmings of any kind furnished with water boilers.

DIRECT DRAFT For Burning Oil

Numbers 1749 to 1770—
to Heat 1790 to 40,200 Sq. Ft. c
Equivalent Direct Radiation

THE same predominant qualities which make the Kewanee Type C Boiler so well adapted for burning coal, apply just as emphatically in making this boiler suitable for burning oil.

Extensive tests have been carried on in the laboratory at Kewanee during the last five or six years with the purpose of developing ideal conditions as to boiler settings, furnace requirements, etc., for burning oil with satisfactory results under all types and sizes of Kewanee boilers when equipped with leading commercial oil burners.

In view of the remarkably high efficiencies attained in numerous instances, we feel that Kewanee is well qualified to give expert advice to customers regarding the methods of installing any oil burners of recognized standing, for either front or rear firing. As a matter of fact, blue prints will be cheerfully furnished showing foundation and setting plan recommended in each particular instance.

It has become an axiom with experts in heating that "if you burn oil and expect to get steam, you must have a boiler that will steam just as well with coal or any other fuel." That is precisely what the Type C steel boiler will do. It will give very high figures for efficiency with any kind of fuel.

And whatever fuel may be under consideration, the purchaser is sure of an economical "buy" in the Kewanee Type C steel boiler. That is to say the first cost will be moderate and the upkeep cost which includes both fuel bill and repairs will be low. Every dollar expended for fuel will produce a high percentage of heat units.

The strong steel plate construction consisting of simple shapes compactly united by the electric-weld method is done in the same shops where the well known Kewanee boilers have been made for 40 years. This is a guarantee that nothing is skimped in workmanship on Type C boilers.

The well balanced features which make Type C a real boiler, designed on the scientific principles enumerated on previous pages, of the coal burning section in this catalog, also hold good for the oil burning boiler, proving its ability to fulfill a definite demand in the heating business for a boiler of minimum advisable dimensions for handling the load for which it is rated.

Type C Oil Burning Boiler Settings—Front or Rear Fired

