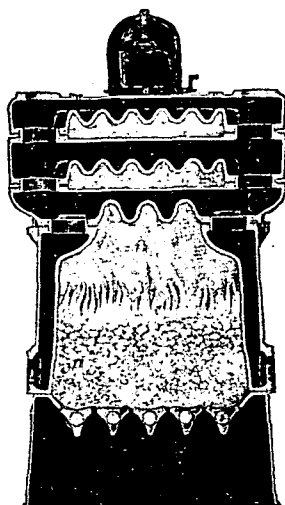


Weil-McLain

SCIENTIFIC COMBUSTION

BOILERS

WEIL-McLAIN COMPANY—Michigan City, Ind.—Chicago, Ill.



The Weil-McLain ROUND TYPE BOILER with its CORRUGATED FUEL-SAVING HEATING SURFACES and its long "back and forth" fire travel embraces the newest and best conceptions of heating engineers.

Other points of merit in the Weil-McLain Round Type Boiler are: fire-pot and crown sheet cast separately to permit easier handling; large fire door; handy front clean-out doors in every section and triangular type grates which cut and shake out all ordinary clinkers.

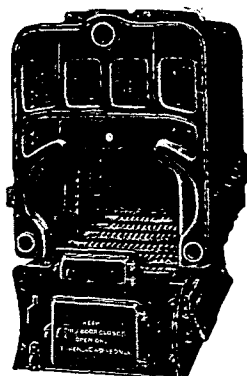
STEAM		WATER		Actual Diam. Grate and Fire Pot Inches (Both Steam and Hot Water)
Size Boiler	Rating Sq. Ft.	Size Boiler	Rating Sq. Ft.	
5-S-17	395	5-W-17	650	17
5-S-19	480	5-W-19	795	19
5-S-22	660	5-W-22	1090	22
5-S-25	865	5-W-25	1430	25
5-S-28	1065	5-W-28	1760	28
5-S-31	1350	5-W-31	2225	31
6-S-17	410	6-W-17	675	17
6-S-19	500	6-W-19	825	19
6-S-22	695	6-W-22	1145	22
6-S-25	915	6-W-25	1510	25
6-S-28	1130	6-W-28	1865	28
6-S-31	1425	6-W-31	2350	31

NOTE: Table is not complete; these boilers are also made four section.

The Weil-McLain SECTIONAL or SQUARE TYPE BOILER like the Round Type has corrugated heating surfaces directly above the fire, has a long "back and forth" fire travel—features that add greatly to the efficiency and economy of this boiler.

WATER				STEAM				Grate Area Sq. Ft. (Steam and Water)
Number	Water Rating Sq. Ft.	Total Length Inches	Grate Area Sq. Ft.	Number	Steam Rating Sq. Ft.	Total Length Inches	Water Line Inches	
22-W-5	1500	51	4.88	22-S-5	900	51	46	4.88
22-W-6	1825	58	5.96	22-S-6	1100	58	46	5.96
22-W-7	2150	65	7.03	22-S-7	1300	65	46	7.03
25-W-5	1825	51	5.70	25-S-5	1100	51	51	5.70
25-W-6	2225	58	6.90	25-S-6	1350	58	51	6.90
25-W-7	2650	65	8.10	25-S-7	1600	65	51	8.10
25-W-8	3050	72	9.30	25-S-8	1850	72	51	9.30
28-W-5	2700	63	7.97	28-S-5	1650	63	55	7.97
28-W-6	3275	72	9.72	28-S-6	2000	72	55	9.72
28-W-7	3850	81	11.47	28-S-7	2350	81	55	11.47
28-W-8	4425	90	13.22	28-S-8	2700	90	55	13.22
36-W-5	3850	66	10.25	36-S-5	2350	66	58	10.25
36-W-6	4725	75	12.50	36-S-6	2875	75	58	12.50
36-W-7	5600	84	14.75	36-S-7	3400	84	58	14.75
36-W-8	6475	93	17.00	36-S-8	3925	93	58	17.00
35-W-9	7350	102	19.25	36-S-9	4450	102	58	19.25

NOTE: Table is not complete; this type boiler is also made in a 48" size.



No. 157

UNITED STATES RADIATOR CORPORATION

GENERAL OFFICES: DETROIT, MICHIGAN

Branch Offices in Principal Cities

Manufacturers of Capitol Boilers and United States Radiators

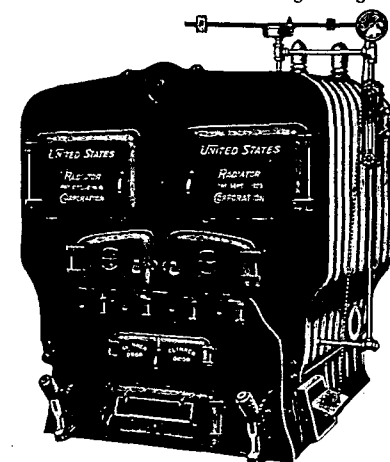
The Capitol Smokeless Boiler has been developed to meet a growing demand on the part of the public for boilers which will burn the bituminous coals of the United States without smoke. This demand has been brought about by the educational work of civic societies, which have taught the public to realize the destructive effect and the menace to health of soft coal smoke in our large cities, and, as a consequence, the public has come to understand the large monetary loss due to the escape of unburned gases in the form of dense black smoke. These facts are now so well understood that confirmative argument is unnecessary.

The UNITED STATES RADIATOR CORPORATION has developed a line of cast-iron boilers built upon the highly effective "wing-wall" principal which is well-known in power boilers where smokeless combustion is desired.

Capitol Smokeless Boilers contain a large fire box or furnace where bituminous coal is burned at a rapid rate of combustion. The air is admitted through the grates and fuel bed, with an auxiliary supply admitted at the front of the furnace, which mixes with the volatile gases distilled from the fuel bed.

These volatile gases pass from the furnace into a mixing chamber through two horizontal openings in the back or bridge wall of the furnace. This mixing chamber back of the furnace is formed by the bridge wall at the front and ignition walls or "wing-walls" of fire brick at the rear. The fire brick used in the ignition walls have a fusing temperature of 2700 deg. fahr. The temperature of the burning gases coming in contact with these ignition walls does not reach this fusing point by several hundred degrees so that the fire brick used in the ignition walls are practically indestructible. Because of the continuous volume of burning gases pouring from the furnace through the bridge wall and against these ignition walls they are constantly maintained at a temperature of approximately 1600 deg. or about 400 deg. above the ignition point of the gases.

All the gases from the furnace must pass through this mixing chamber and while they enter the mixing chamber through two horizontal openings, their escape from the mixing chamber to the combustion chamber at the rear of the boiler is through a long vertical opening between the ignition walls, the area of which is slightly less than the area of the two horizontal openings into the mixing chamber. The effect of this



No. 511 Steam Boiler