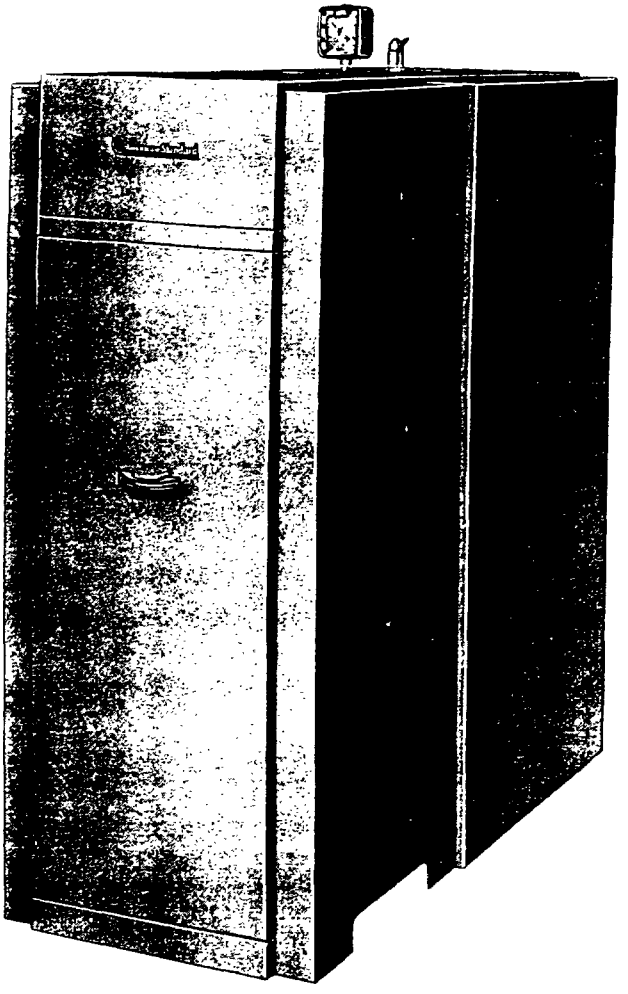


PLAINTIFF'S EXHIBIT
ASI- 323

boiler-burner models
and boilers

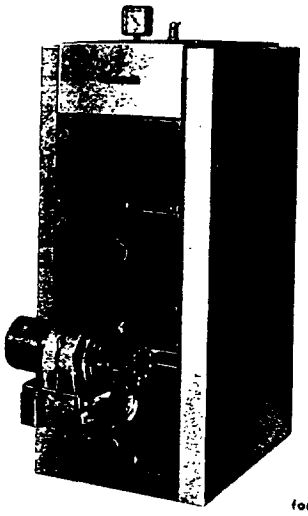
Arcoliner oil-fired heating unit

AMERICAN-Standard

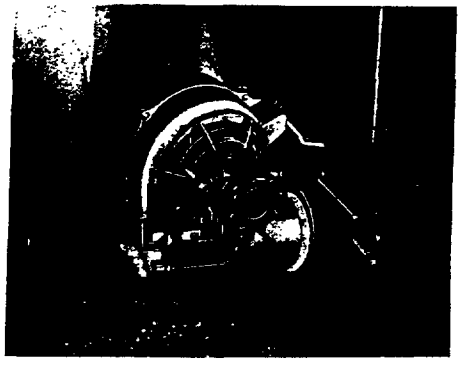
A I A File No. 30 C 1 (October, 1961)

15264

the Arcoliner—rugged construction—expert engineering — outstanding performance



for steam or water



simplified burner mounting

The Arcoliner is a masterpiece of precision engineering that provides magical carefree hot water comfort for small and medium sized homes. All components of the Arcoliner—the boiler sections, burner, primary controls, combustion chamber —have been designed and completely integrated into an oil-fired unit to provide the finest home heating comfort.

Made in four compact models for either steam or water, the Arcoliner is perfect for installation in first-floor utility rooms as well as basements. Sturdy, long-lasting, corrosion resistant cast iron construction of the boiler sections assures a lifetime of clean, efficient hot water or steam heat for any style of home. To assure positive, dependable performance, every Arcoliner assembly is factory tested at two-and-one-half times normal operating pressure before shipment. For ease of installation, boiler sections are completely assembled at the factory. The Arcoliner, with its superior features, makes it the ideal heating unit for either new or modernized homes.

■ **factory-installed steel combustion chamber** means additional American-Standard quality furnished with Arcoliner boiler-burner units. Special factory-molded refractory combustion chamber that saves the labor and expense of a hand-built unit available for boiler only.

■ **sling-mounted Model DH Arcoflame Oil Burner** is an integral part of the Arcoliner boiler-burner unit. The highly efficient burner is installed simply by sliding the pressure plate over the air tube and hooking the burner on the sling mount. All units shown are equipped with the fuel-saving Model DH Arcoflame Oil Burner.

■ **continuous hot water** for household use can be provided automatically both winter and summer when the Arcoliner is equipped with a built-in tank or tankless type hot water heater. Arcoliner units not equipped with a water heater have a heater opening in the back section which takes a heater opening cover plate. A heater may be installed quickly and easily at any time simply by removing the cover plate and inserting the heater coil. No separate storage tank is required when a tankless type heater is installed.

■ **wet base construction** is an important design feature of the Arcoliner. Waterways extend below the combustion chamber providing added effective heating surface and increasing boiler efficiency. This construction also accelerates water circulation, provides lower return tappings, helps keep floor cool, which is important for first-floor installations.

Arcoliner Oil Boilers by American-Standard have ratings approved by the Institute of Boiler and Radiator Manufacturers. They are designed and built to comply with the requirements of the American Society of Mechanical Engineers' Code and American-Standard is authorized to apply the appropriate Code symbols. The Arcoflame Oil Burners are listed by the Underwriters' Laboratories, Inc., for No. 1 and No. 2 commercial fuel oil, comply with Commercial Standard CS-75 and are approved by the New York City Board of Standards and Appeals, by the State Fire Marshal of the Commonwealth of Massachusetts and by the Department of State Police, State of Connecticut.

1—jacket extension — matches jacket; has removable front panel for easy access to burner and controls. Designed to permit ample flow of air for combustion. Optional for all models.

2—boiler sections — made of durable cast iron, the one metal that has proven best over the years for use in heating equipment. Sections are factory assembled and shipped ready to install. Joints between sections are machine ground to assure a tight, close fit.

3—two-pass flues—offer maximum heat-absorbing surface. Multi-finned water tube surfaces extract extra heat units from hot combustion gases.

4—water content — small amount of water to heat in waterways permits more rapid heat transfer and quicker pickup.

5—water heater — provides year 'round domestic hot water automatically. Built-in tank or tankless type. Special tankless type, illustrated, makes use of extruded integral finned tube surfaces to gain maximum heat transfer in coil.

6—jacket—sturdy steel; smartly styled in attractive gray finish. All parts are die cut and formed for easy assembly. Interior surfaces are finished with corrosion-resistant, high-temperature aluminum paint.

7—doors—construction of heavy cast iron, with cast iron heat-protecting baffle linings to prevent warping and heat loss. Precision fitted to eliminate infiltration of air. Provide ready access for cleaning of boiler sections, easy maintenance.

8—observation port — permits observation of oil flame without disturbing combustion or flame characteristics. Convenient cover is designed to conceal port when not in use.

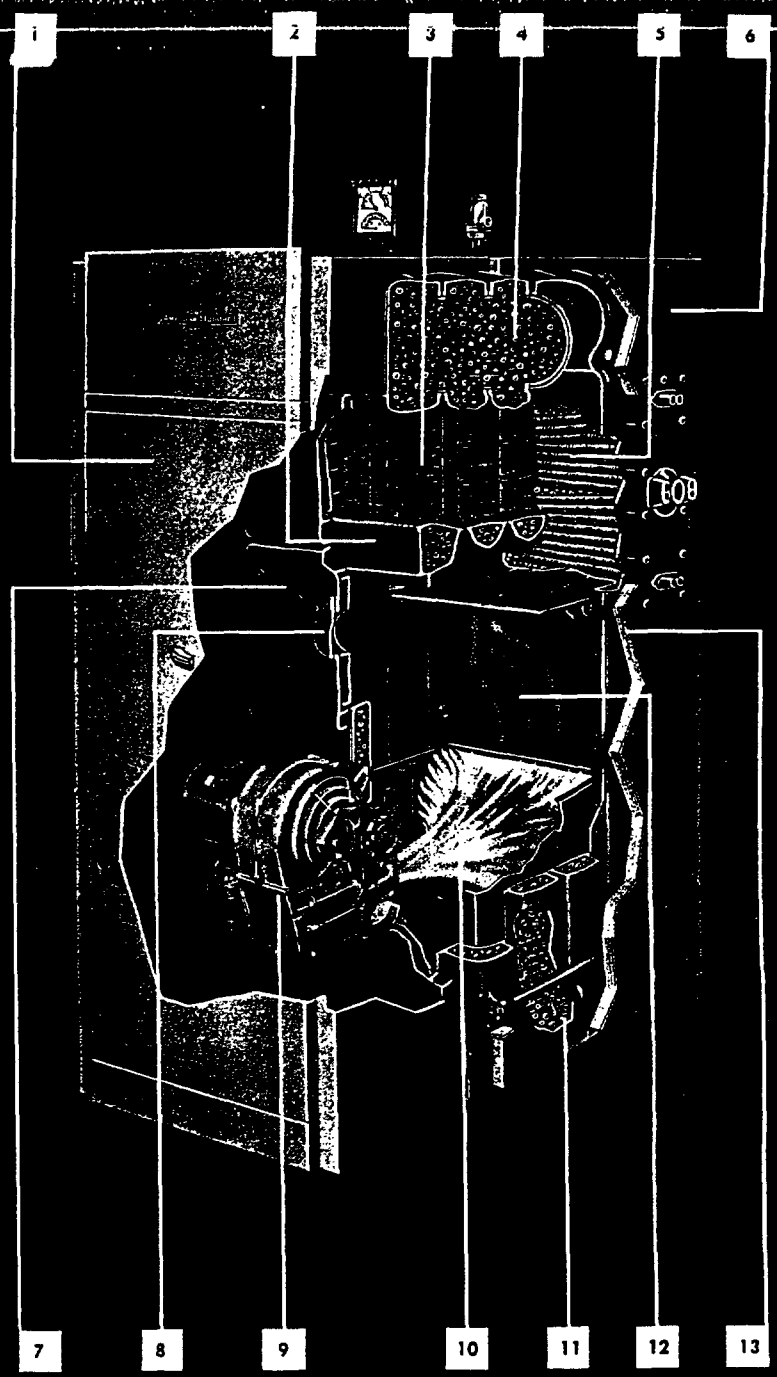
9—Model DH Arcoflame oil burner—special sling-mount model designed for this boiler. Boiler and burner operate as a unit for top efficiency. Other adaptable burners may be used.

10—combustion chamber—Heat Lib-O-Rator combustion chamber, made of high-temperature steel or refractory brick, is especially adapted to size of boiler selected.

11—wet base construction — for extra heating surface and increased efficiency. Waterways extending underneath combustion chamber keep floor cooler; ideal for first-floor or basementless installations.

12—combustion space—scientifically proportioned with correct area of effective heating surface to assure maximum heat from fuel burned. Crown sheet baffle is furnished on three smaller boiler sizes.

13—insulation — heavy Fiberglas insulation beneath the flush metal jacket effectively prevents excessive heat loss, saves fuel and helps keep jacket cool.



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Arcoliner ratings

models for steam or water

boiler-burner unit number ■		oil boiler number		net I=B=R rating•			gross I=B=R output	I=B=R burner capacity	chimney	
				steam		water			size	height
steam	water	steam	water	Btu/hr	sq ft	Btu/hr	Btu/hr	gph	inches	feet
S-O-153-B-T	W-O-153-B-T	S-O-153-T	W-O-153-T	72,800	303	72,800	97,000	1.00	8 x 8	20
S-O-154-B-T	W-O-154-B-T	S-O-154-T	W-O-154-T	99,000	413	99,000	132,000	1.35	8 x 8	20
S-O-155-B-T	W-O-155-B-T	S-O-155-T	W-O-155-T	123,000	513	123,000	164,000	1.60	8 x 8	25
S-O-156-B-T	W-O-156-B-T	S-O-156-T	W-O-156-T	141,000	588	141,000	188,000	1.80	8 x 8	25

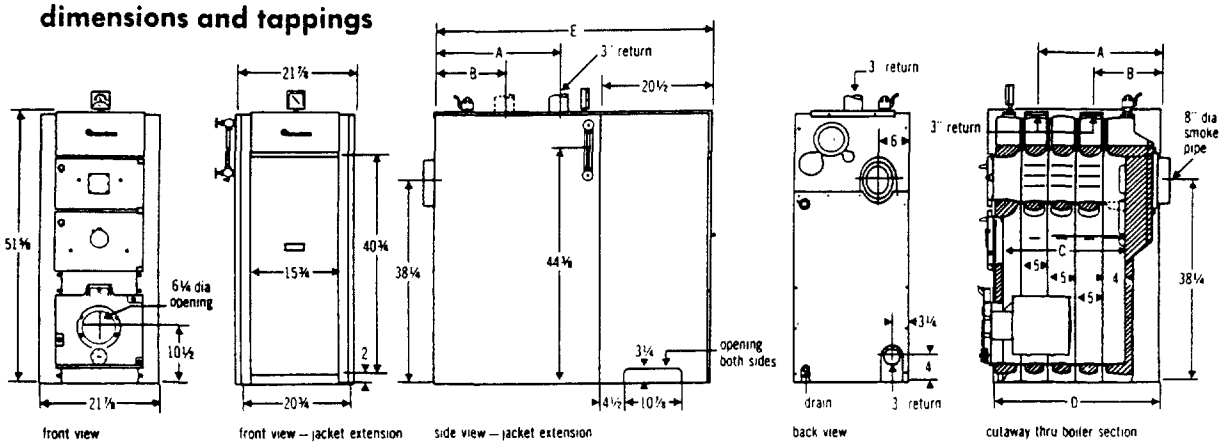
When furnished less Arcoflame Oil Burner, it is recommended that boiler be fired at specific firing rate and with an oil burner that complies with Commercial Standard CS-75.

■ Oil heating unit number includes Arcoflame Oil Burner (suffix B). Suffix T indicates that unit is designed for, but not equipped with, a built-in tank or tankless type water heater.

• *The ratings for these boilers represent the net loads that may be* connected to the boilers. Allowances have been made for normal piping and pick-up loads.

NOTE: Nozzle sizes, gph, furnished with Arcoliner boiler-burner units are as follows: No. 153, 0.90–70° H; No. 154, 1.25–60° H; No. 155, 1.50–60° S; No. 156, 1.65–60° S.

dimensions and tappings



boiler number	dimensions - inches					number and size tappings inches	
	A	B	C	D▲ flush jacket	E▲ jacket extension	flow	return
S or W-O-153-T■	13	–	12⅜	20⅜	40⅞	1-3	1-3
S or W-O-154-T■	18	–	17⅜	25⅜	45⅞	1-3	1-3
S or W-O-155-T■	23	13	22⅜	30⅜	50⅞	2-3	1-3
S or W-O-156-T	28	13	27⅜	35⅜	55⅞	2-3	1-3

▲ Add 1½" to length for smoke collar ■ equipped with crown sheet baffle

built-in water heaters

type of boiler	recommended water heater	capacity–gallons 180° boiler water temp.	system size of water connections–inches	type
steam or water	589	3 per min	½	tankless (flange)
	596	3½ per min	½	tankless (flange)
	587	85■	1	tank (flange)

■ Tank type water heaters rated on basis of raising temperature of domestic hot water 100° F. in 3 hours–tankless type rated in gallons per minute, dependent upon oil firing rate.

▶ American-Standard Arcoliner Oil Boilers are another development in hydronics – the science of heating and cooling with water.

AMERICAN-Standard PLUMBING AND HEATING DIVISION
AMERICAN RADIATOR & STANDARD SANITARY CORPORATION
40 WEST 40TH STREET • NEW YORK 18, NEW YORK

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