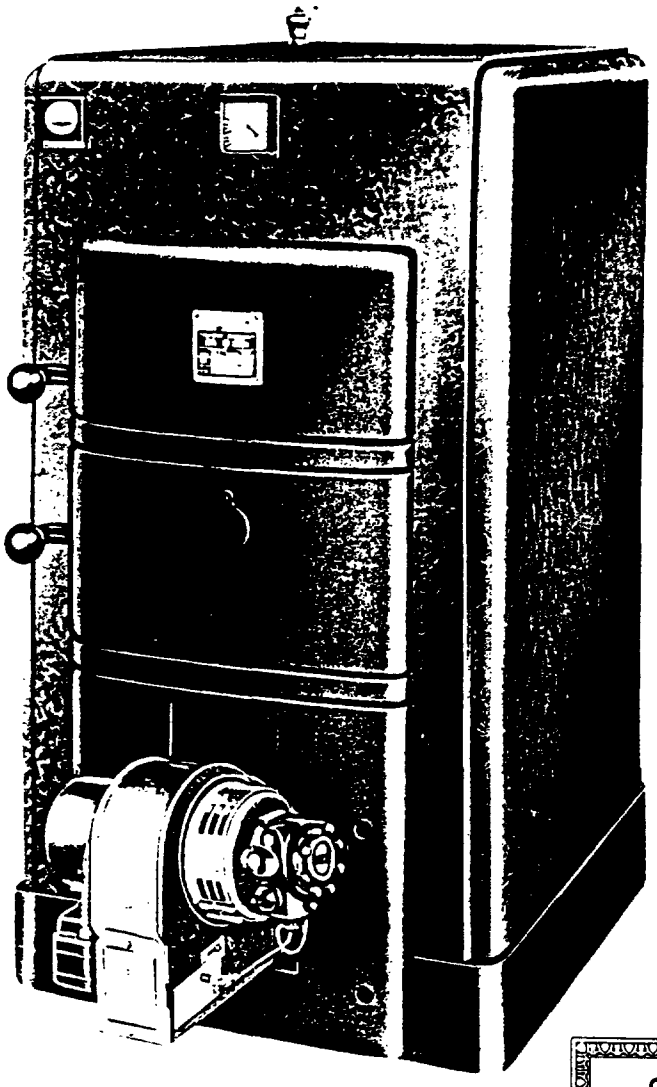


Guaranteed for 25 Years!

The cast iron sections—the working core of this boiler—are guaranteed for 25 years in residences. Note that this guarantee covers the complete sections, not merely the outer "shell." This guarantee applies to the water models of this boiler

boiler-burner models

and boilers

Severn boilers

oil, stoker or hand fired

15538

AMERICAN-Standard

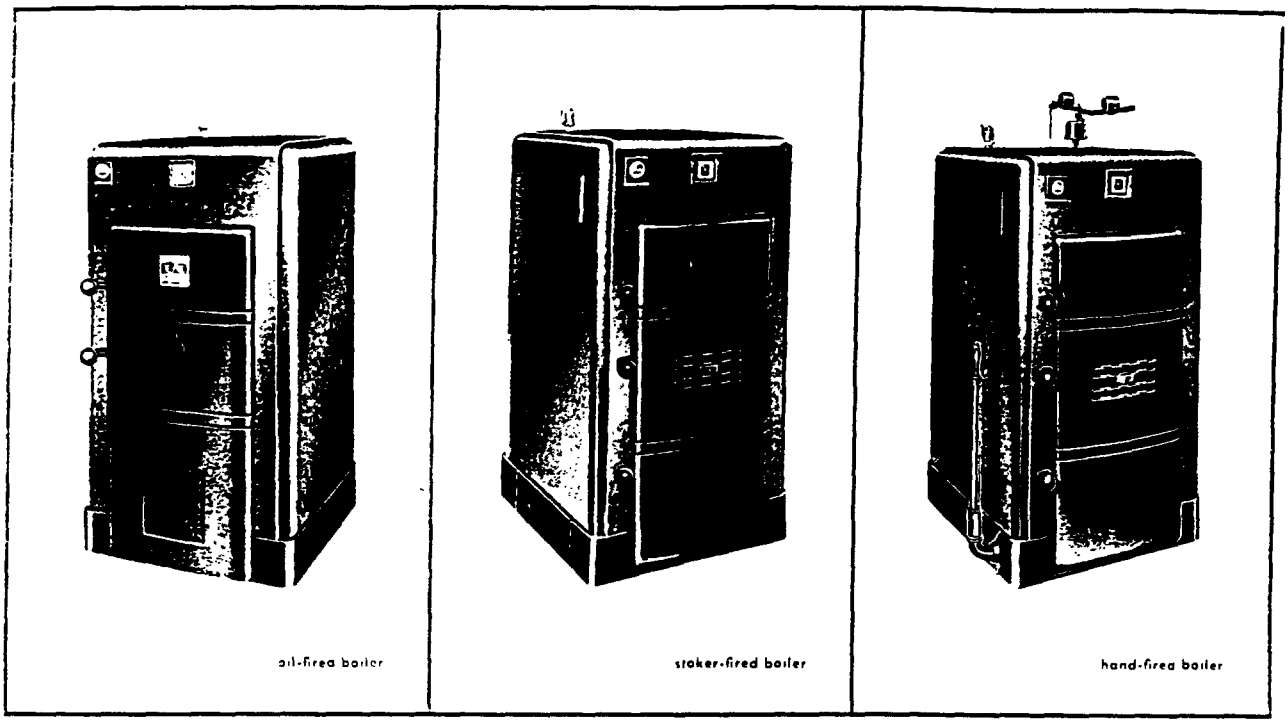
hot water or steam heat

PLAINTIFF'S EXHIBIT

A52-841

September, 1958

The Severn cast iron boiler—economical heating with all fuels



oil-fired boiler

stoker-fired boiler

hand-fired boiler

The Severn is a sturdy, compact cast iron boiler by American-Standard specifically designed for modern hot water or steam heating of small to medium size homes. Manufactured in models for automatic oil and coal firing, plus hand-fired models, it also is easily adapted to gas. No matter what fuel is used, the Severn provides dependable, economical, care-free heating.

Rugged cast iron sections—extensive flue travel—All boiler sections of the Severn are constructed of lifetime cast iron and factory-tested to assure years of dependable service. Scientific arrangement of flueways forms a double gallery of heating surface that causes hot combustion gases to travel twice the length of the boiler, resulting in rapid heat transfer and maximum heat extraction.

Highly efficient, economical oil heating unit—The Severn oil heating unit consists of the sturdy Severn and the specially tested hanger-mounted Arcoflame Oil Burner. For the best firing efficiency, the oil heating unit includes the special Heat-Lib-o-rator refractory combustion chamber that reduces installation time — eliminates the expense of building a hand-made brick chamber. The special chamber also may be used with the Severn oil boiler and is shipped with the boiler when specified.

Built-in water heaters—provision for all controls—An added feature of the Severn is the availability of built-in water heaters—either tank or tankless type—sized specifically for each boiler. Both types of heaters will supply year 'round hot water economically and efficiently with the oil boiler and oil heating unit. Coal-fired steam boilers may be equipped with heaters to supply hot water during the winter. In addition, Severn boilers for automatic firing include a convenient variety of tapping arrangements for conventional controls and piping procedure which simplify and speed up boiler installation.

Severn Oil Heating Units by American-Standard are constructed to the specifications of the American Society of Mechanical Engineers. The Arcoflame burner is listed by the Underwriters' Laboratories, Inc., for No. 1 and No. 2 fuel oil, complies with Commercial Standard CS-75 and is approved by 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 - sturdy, 20-gauge steel with Forge Red finish; highly resistant to heat, chipping and scratching.

2 - water heater - built-in tank or tankless type (optional) for all models; provides abundant domestic hot water.

3 - extra large passages - provide maximum internal circulation of water throughout boiler and around heater coils. High water level assures efficient, quiet heating.

4 - water content - all sections water backed and correctly balanced for fast heat transfer.

5 - sections - constructed of rugged cast iron and factory tested at 2½ times normal operating pressure to assure positive performance.

6 - tight joints - connecting surfaces machine ground to smooth finish; assure tight fit, prevent air infiltration from interfering with combustion.

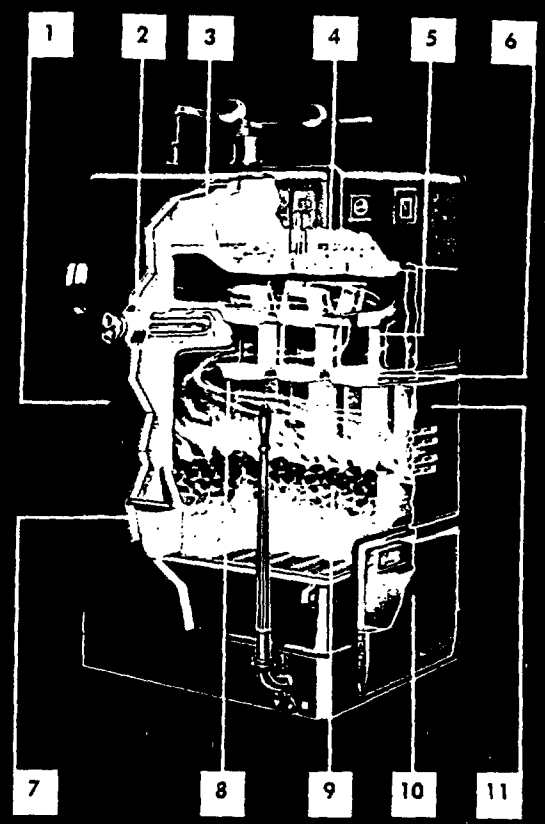
7 - insulation - thick Fiberglas insulation keeps jacket cool, saves fuel and prevents excessive heat loss.

8 - large heating surface - designed to extract maximum heat from combustion gases for efficient heat transfer; flue passages carry hot gases twice the length of boiler for peak efficiency.

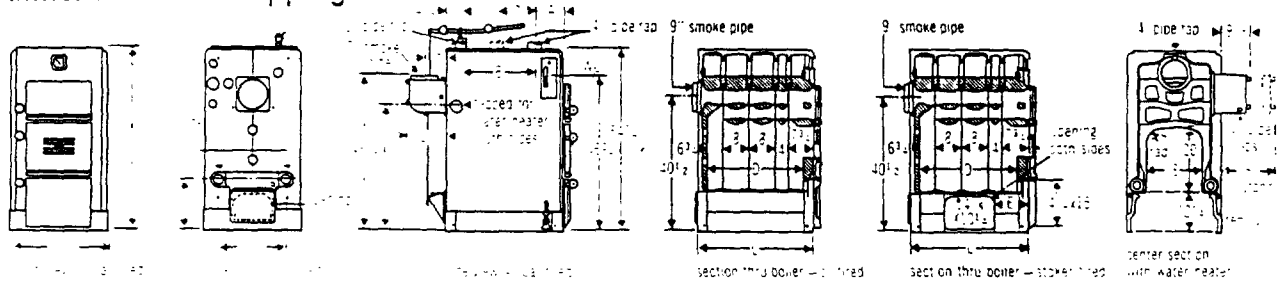
9 - combustion area - correctly proportioned for oil or stoker firing; assures efficient fuel consumption.

10 - base opening plate - permits rapid installation of burner; opening plate in side base for stoker firing, constructed of cast iron. Regular ashpit door in hand-fired boilers.

11 - fire and clean-out doors - protected by cast iron baffle linings against warping and damage; large size for easy access to boiler interior.



dimensions and tappings



dimensions-inches

boiler number	dimensions A	B	C	D	L	number of 3" flow tappings	number of 4" flow tappings	number of 3" return tappings
S or W-17	11¾	7¼	—	17	23¼	1	1	2
S or W-21	15¾	7¼	—	21	27¼	1	1	2
S or W-25	11¾	15¼	—	25	31¼	1	1	2
S or W-29	15¾	15¼	—	29	35¼	1	1	2
S or W-33	19¾	15¼	—	33	39¼	1	1	2
S or W-37	15¾	23¼	16	37	—	1	1	2

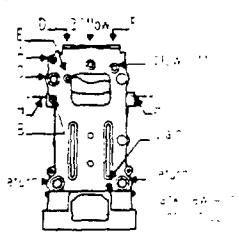
assemblage of sections

arrangement of sections ■	
F-CX-BO	F = 7¾" section
F-NC-CX-BO	C = 8" center section
F-CX-C-BO	CX = 8" center connecting section
F-NC-CX-C-BO	
F-C-CX-C-BO	NC = 4" center section
F-NC-CX-C-CX-BO	BO = 6¾" back section

■ On "T" type boilers, for use with built-in tank type water heaters Numbers 594 and 595 and built-in tankless heater Number 590, a "CXT" 8-inch center connecting section, interchangeable with regular "CX" section, is furnished on special order.

control applications

location on boiler	size inches	steam	vapor	water
A & B	1	external low water control or feeder	external low water control or feeder	"A" alternative water limit control—"B" not used
C	2½	internal low water control	internal low water control	water limit control
D	1½	pressure control	vapor control	not used
E	1	water temperature control	water temperature control	water temperature control
F	1¼	safety valve	safety valve	relief valve
H	2½	built-in water heater	built-in water heater	built-in water heater
smoke pipe	—	stack control	stack control	stack control



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Severn ratings

oil fired

oil heating unit number	boiler number	installed radiation: steam mbh	installed radiation: steam sq ft	installed radiation: water mbh	gross output mbh	firing rate gal per hour	chimney: size inches	chimney: height feet
■S or W-17-OB(T)	■S or W-17-O(T)	109.5	456	109.5	146	1.5	8x8	20
■S or W-21-OB(T)	■S or W-21-O(T)	126.0	525	126.0	168	1.7	8x8	25
■S or W-25-OB(T)	■S or W-25-O(T)	141.0	588	141.0	188	1.9	8x8	25
S or W-29-OB(T)	S or W-29-O(T)	162.0	675	162.0	216	2.2	8x12	25
S or W-33-OB(T)	S or W-33-O(T)	185.3	772	185.3	247	2.5	8x12	30
S or W-37-OB(T)	S or W-37-O(T)	208.6	869	208.6	278	2.8	8x12	30

■ Equipped with crown sheet baffle.

Note: Arcoflame Oil Burner furnished with oil heating units. Add suffix "T" to boiler number when Center Connecting Section for tank or tankless-type (flange) heater is desired. Regular boiler number furnished for tank-type, screw-in heater only.

stoker fired

boiler number	installed radiation: steam sq ft	installed radiation: water mbh	gross output mbh	firing rate lbs per hour	chimney: size inches	chimney: height feet
SC or WC-17(T)	456	109.5	146	16	8x8	20
SC or WC-21(T)	525	126.0	168	18	8x8	25
SC or WC-25(T)	588	141.0	188	21	8x8	25
SC or WC-29(T)	675	162.0	216	24	8x12	25
SC or WC-33(T)	772	185.3	247	27	8x12	30
SC or WC-37(T)	869	208.6	278	31	8x12	30

Note: Add suffix "T" to boiler number when Center Connecting Section for tank-type (flange) heater is desired. Regular boiler number furnished for tank-type, screw-in heater only.

hand fired

boiler number	installed radiation: steam sq ft	installed radiation: water mbh	gross output mbh	chimney: size inches	chimney: height feet
S or W-17	353	84.7	194	8x8	30
S or W-21	453	108.7	244	8x8	30
S or W-25	553	132.7	292	8x12	35
S or W-29	630	151.3	328	8x12	35
S or W-33	710	170.5	364	8x12	40
S or W-37	783	187.9	396	12x12	43

water heaters (built-in)

boiler (type)	recommended heater	capacity-gallons: 180° water	capacity-gallons: 212° water	type
hand-fired steam	701	–	60	tank
hand-fired steam	702	–	40	tank
hand-fired steam; oil & stoker; oil heating units	703	66	100	tank
oil & stoker, oil heating units	594	100	–	tank (for "T" type boiler)
oil & stoker, oil heating units	595	160	–	tank (for "T" type boiler)
oil; oil heating units	590	3½ per min.	–	tankless (for "T" type boiler)

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

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