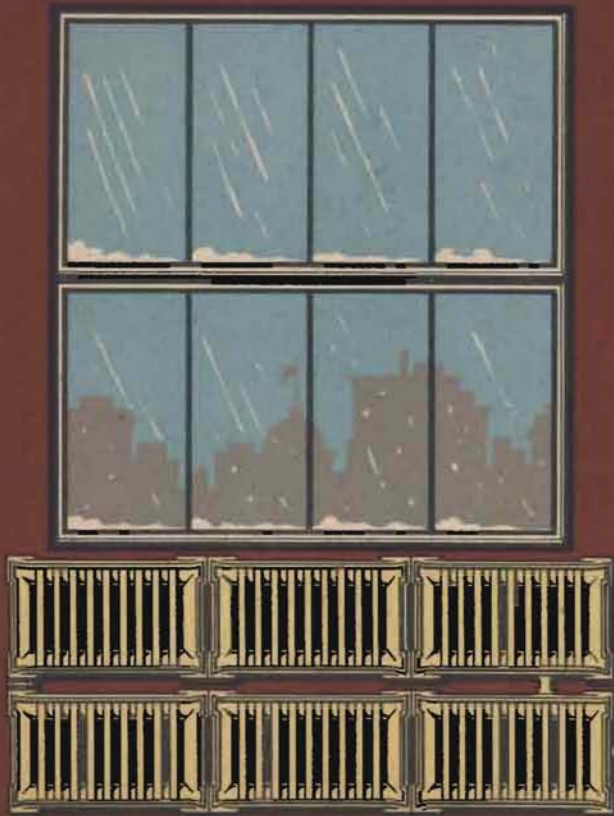


AMERICAN PEERLESS WALL RADIATORS



AMERICAN PEERLESS WALL (FORMERLY ROCOCO WALL) RADIATORS

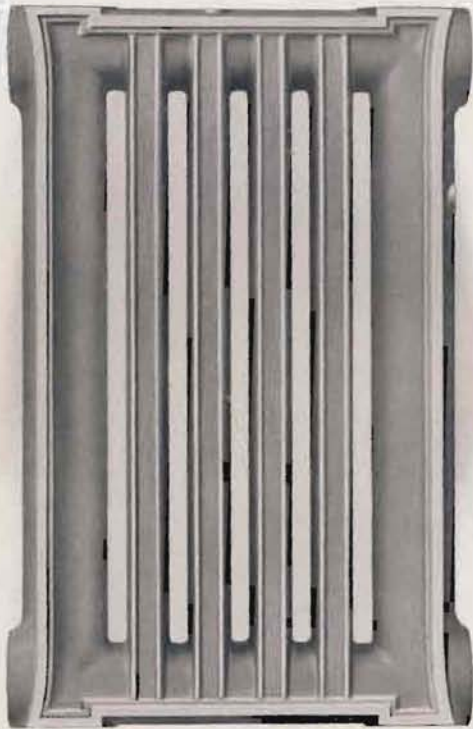
*Information and data for Engineers, Architects,
Contractors and Owners relating to the
Efficient and Economical Heating of many
kinds and classes of structures, of
which many notable examples
are here listed and illustrated*



AMERICAN RADIATOR COMPANY

General Offices, 816-822 South Michigan Avenue, Chicago

Public Showrooms and Warehouses at New York, Boston, Providence, Worcester, Springfield (Mass.), Portland (Me.), Albany, Newark, Philadelphia, Harrisburg, Wilkesbarre, Reading, Baltimore, Washington, Norfolk, Richmond, Syracuse, Rochester, Buffalo, Pittsburgh, Cincinnati, Columbus, Dayton, Louisville, Atlanta, Birmingham, New Orleans, Cleveland, Detroit, Grand Rapids, Chicago, Milwaukee, Indianapolis, Peoria, St. Louis, Minneapolis, St. Paul, Duluth, Des Moines, Omaha, Kansas City, Denver, San Francisco, Los Angeles, Seattle, Portland (Ore.), Spokane, Brantford (Ont.), Toronto.



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Factory Heating Practice

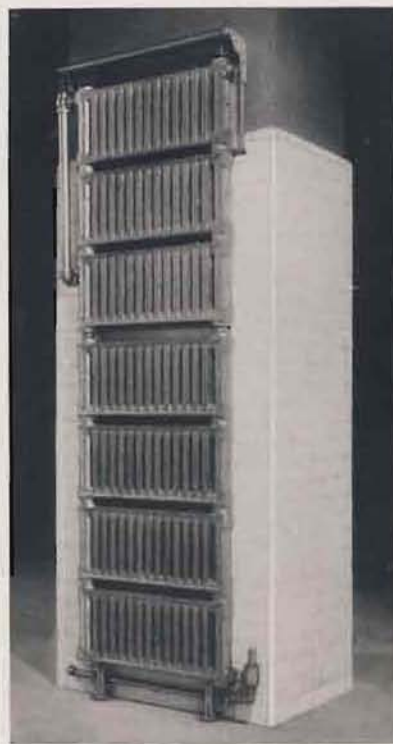
MOST industrial plants are heated by direct radiation—a system in which the heating surfaces are installed directly in the room where the temperature increase is required. For this purpose, AMERICAN PEERLESS (formerly Rococo) Wall Radiators, on account of their many advantages, which cover all features of economy and efficiency, have rapidly superseded old-fashioned pipe coil installations.

Factory heating is no longer a matter of make-shift nor an item to be charged against profit and loss. It is recognized fully that a comfortable working temperature is vitally important—a potent element of the labor question—and means increased efficiency and economy of operation.

The modern type of factory building includes a comparatively high percentage of glass area and a consequently limited wall space available for the installation of heating surface. It is essential to steadiness of temperature that the heating surface be installed in such position as to intercept the body of rapidly descending air which has been cooled by contact with the extended glass areas. PEERLESS Wall Radiators installed beneath the windows fill this requirement to a large degree. With certain construction, however, it is necessary to place the radiation in louvres in sawtooth sections of roof, or on center columns and other parts of building, all depending upon its size and construction.

AMERICAN PEERLESS Wall Radiation is particularly adapted to fit into limited wall space, by reason of its flexibility and varying sizes. Through its use the required amount of heating surface can be installed in restricted spaces where pipe coils could not be used.

AMERICAN PEERLESS Wall Radiators, by reason of their low first cost, flexibility, and adaptability to space conditions, economy in operation and maintenance, and negligible depreciation with a maximum value for rearrangement, have caused manufacturers, engineers and contractors very generally to adopt them as the type of heating surface best meeting their requirements for direct heating.



A clever arrangement of AMERICAN PEERLESS Wall Radiators, installed in billiard room of Gibson House, Cincinnati.

AMERICAN PEERLESS WALL RADIATORS

Why Wall Radiators Should Be Used

AMERICAN PEERLESS (formerly ROCOCO) Wall Radiators are intended for service where pipe coils have heretofore been used. Where wall spaces are restricted and valuable, these Wall Radiators are doubly serviceable.

Made of non-corroding cast iron, AMERICAN PEERLESS Wall Radiators will outlast the building which they occupy. Pitting of their inner or outer surfaces is unknown. The saving which they effect in both floor and wall spaces is highly valuable to both owners and tenants. They are made in sections of many sizes, with provisions for numerous groupings, so that they may be assembled to meet any structural condition—wall or ceiling. They may be installed in long runs or divided into small units.

Where buildings are altered, enlarged, remodeled or entirely torn down and rebuilt, AMERICAN PEERLESS Wall Radiators can readily be taken down and reassembled to meet the new requirements. This is impossible where pipe coils are installed.

Nipples used to connect AMERICAN PEERLESS Wall Radiators are several times the weight of standard pipe (this at the thread line). Being made of malleabilized iron, these nipples exhibit the same remarkable resisting qualities to the action of steam and water as does the radiator surface.

Brackets of various designs are manufactured to support AMERICAN PEERLESS Wall Radiators, either in single or double tier, or in long or short runs.

Heating Contractors have become staunch friends of AMERICAN PEERLESS Wall Radiators. Their workers have become thoroughly acquainted with the manner of installation and greatly appreciate the convenient units in which they are assembled when delivered on the job. Contractors and owners become enthusiasts after their first Wall Radiator job, and never again install pipe coils willingly.

Space Saving of Wall Radiators vs. Pipe Coils

AMERICAN PEERLESS Wall Radiators save one-third to one-half the space occupied by pipe coils—as shown in following comparative table of heating surface that can be installed in wall space 100 feet long.

(See illustrations on pages 7, 8 and 9)

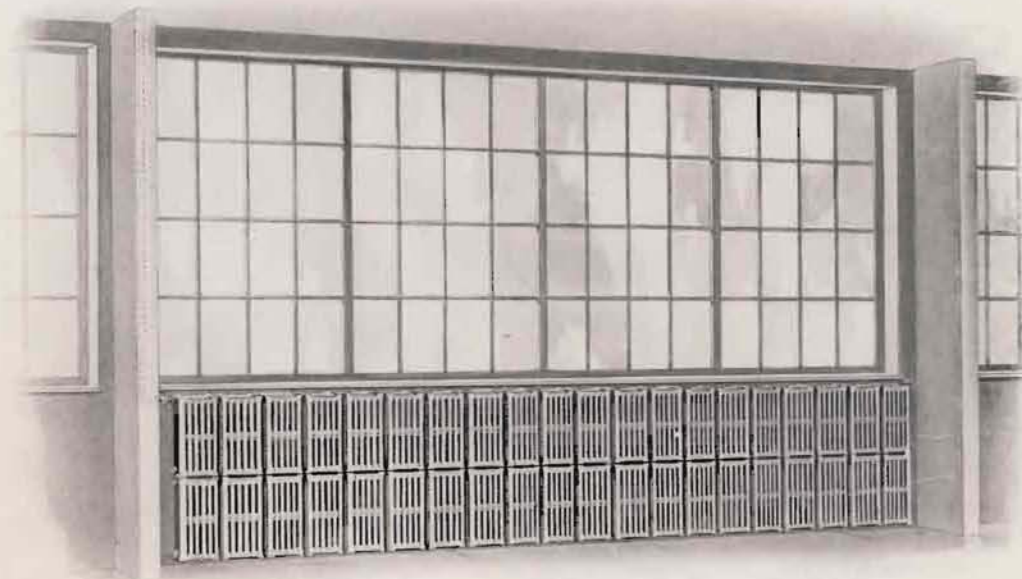
	Pipe 1 1/4 Inches Sq. Ft.	Wall Radiator Sq. Ft.	Number of Sections	Per Cent of Space-saving by Wall Radiators
1 Coil 6-pipe high 1 1/4"	260.4	360	40-9A	38%
1 Coil 7-pipe high 1 1/4"	303.8	360	40-9A	18%
1 Coil 8-pipe high 1 1/4"	347.2	630	90-7B	81%
1 Coil 9-pipe high 1 1/4"	390.6	630	90-7B	61%

AMERICAN PEERLESS WALL RADIATORS

Wall Radiators Leave Windows Clear



An actual installation, showing pipe coils in place. Coil made from 2-inch pipes, 24 high; $3\frac{1}{2}$ -inch centers, containing 390 square feet. The pipes project $2\frac{1}{2}$ feet above the window sill. With $1\frac{1}{2}$ or $1\frac{1}{4}$ -inch pipe commonly used, the height would be still greater. Note that the coil obstructs light and wastes 65 cu. ft. of valuable space for each bay.



Showing neat, compact installation of 360 feet of AMERICAN PEERLESS Wall Radiators substituted in same space as above in railroad warehouse. Distance between pilasters 26 feet, height from floor to window sill 5 feet. Radiators *do not* project above the sill and obstruct the light.

(See, also, illustrations and table pages 6, 8 and 9)

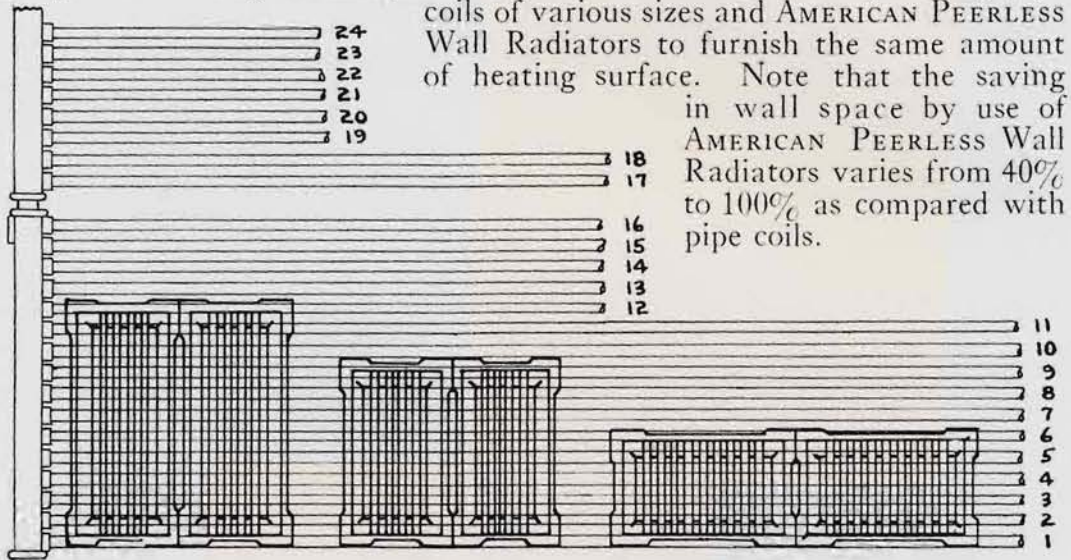
AMERICAN PEERLESS WALL RADIATORS

Space Saving Wall Radiators vs. Pipe Coils

Diagrams showing the comparative amount of wall space required by pipe coils of various sizes and AMERICAN PEERLESS

Wall Radiators to furnish the same amount of heating surface. Note that the saving in wall space by use of

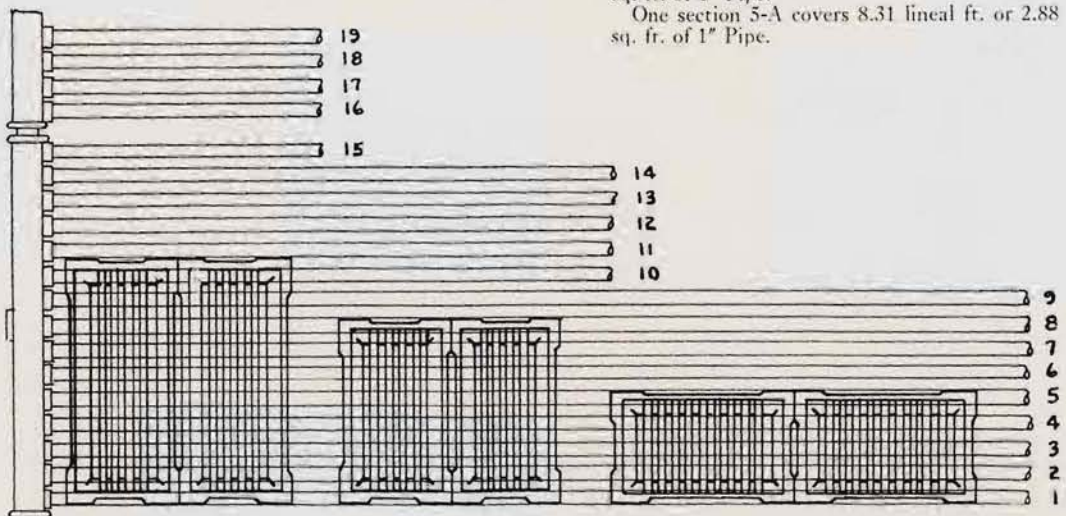
AMERICAN PEERLESS Wall Radiators varies from 40% to 100% as compared with pipe coils.



9-B
One section covers 13.3 lineal ft. or 4.6 sq. ft. of 1" Pipe.

7-B
One section covers 10 lineal ft. or 3.5 sq. ft. of 1" Pipe.

9-A, 7-A, 5-A
One section 9-A covers 14.53 lineal ft. or 5.03 sq. ft. of 1" Pipe.
One section 7-A covers 10.94 lineal ft. or 3.78 sq. ft. of 1" Pipe.
One section 5-A covers 8.31 lineal ft. or 2.88 sq. ft. of 1" Pipe.



9-B
One section covers 11.09 lineal ft. or 4.81 sq. ft. of 1 1/4" Pipe.

7-B
One section covers 8.88 lineal ft. or 3.86 sq. ft. of 1 1/4" Pipe.

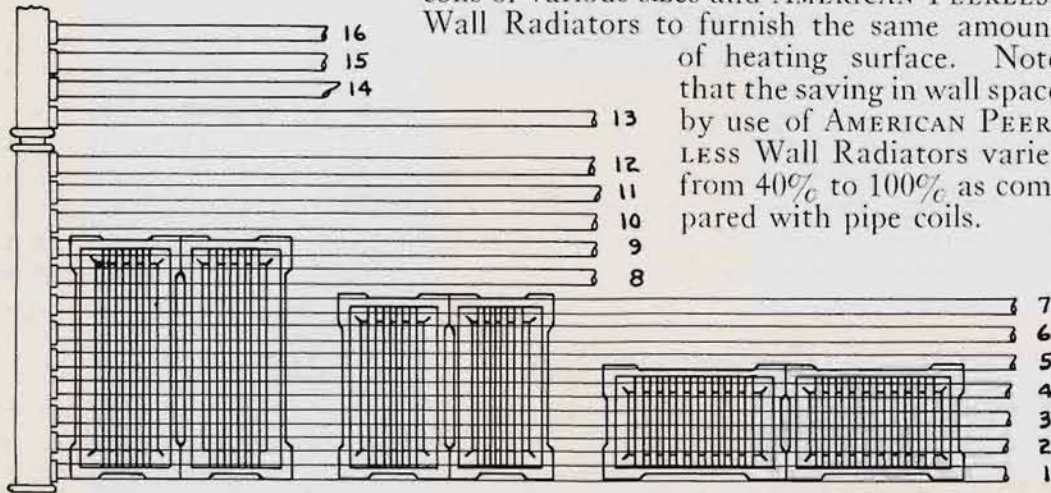
9-A, 7-A, 5-A
One section 9-A covers 12.11 lineal ft. or 5.26 sq. ft. of 1 1/4" Pipe.
One section 7-A covers 9.12 lineal ft. or 3.96 sq. ft. of 1 1/4" Pipe.
One section 5-A covers 6.93 lineal ft. or 3.05 sq. ft. of 1 1/4" Pipe.

(See, also, illustrations and table on pages 6, 7 and 9)

Space Saving Wall Radiators vs. Pipe Coils

Diagrams showing the comparative amount of wall space required by pipe coils of various sizes and AMERICAN PEERLESS Wall Radiators to furnish the same amount

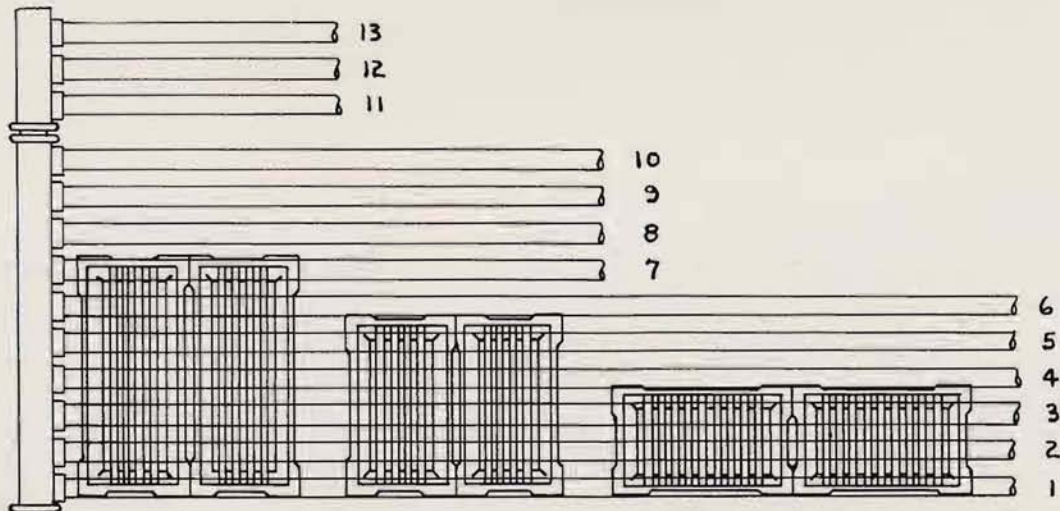
of heating surface. Note that the saving in wall space by use of AMERICAN PEERLESS Wall Radiators varies from 40% to 100% as compared with pipe coils.



9-B
One section covers 10 lineal ft. or 5 sq. ft. of 1½" Pipe.

7-B
One section covers 7.7 lineal ft. or 3.85 sq. ft. of 1½" Pipe.

9-A, 7-A, 5-A
One section 9-A covers 9.6 lineal ft. or 4.8 sq. ft. of 1½" Pipe.
One section 7-A covers 7.28 lineal ft. or 3.64 sq. ft. of 1½" Pipe.
One section 5-A covers 5.52 lineal ft. or 2.76 sq. ft. of 1½" Pipe.



9-B
One section covers 7.77 lineal ft. or 4.83 sq. ft. of 2" Pipe.

7-B
One section covers 5.55 lineal ft. or 3.45 sq. ft. of 2" Pipe.

9-A, 7-A, 5-A
One section 9-A covers 7.87 lineal ft. or 4.9 sq. ft. of 2" Pipe.
One section 7-A covers 5.92 lineal ft. or 3.68 sq. ft. of 2" Pipe.
One section 5-A covers 4.5 lineal ft. or 2.8 sq. ft. of 2" Pipe.

(See, also, illustrations and table on pages 6, 7 and 8)

Economy of Fuel

FACTORY operators, efficiency engineers and experienced architects fully realize the tremendous waste brought about by clumsy heating regulation where climatic conditions are variable. They know that small unit control means economy. When a pipe coil 100 feet long and 8 pipes high of 1¼-inch pipe is hung on a wall, the temperature of the space to be heated is difficult to control with a gravity steam system, because the whole coil must be either turned on or turned off. It is also a well known fact that long pipe coils cannot be vented of the entrained air successfully.

Were this amount of heating surface divided into smaller units such as AMERICAN PEERLESS Wall Radiators, it would be necessary to admit steam into only a part of the units during the average outdoor Winter Temperature (30° F.) in order to maintain a comfortable temperature in the building.

Economy of Floor Space

Factories and many other buildings must have their utmost floor space available for machinery, benches, assembling platforms and other equipment. Lighted space is also exceedingly important. AMERICAN PEERLESS Wall Radiators permit the greatest conservation of space, because they easily accommodate themselves to the building design and window arrangement; especially inside of pilasters (see page 7).

In churches, theatres, and other similar buildings AMERICAN PEERLESS Wall Radiators are often used to great advantage in saving seating space. In apartment building vestibules and hallways, in bathrooms, on stairways and in other restricted places, they are particularly adaptable.

AMERICAN PEERLESS Wall Radiators, used in bathrooms, halls, kitchens, lavatories and similar places, leave a clear space beneath them which can be scrubbed or cleaned easily.

Economy of Wall Space

AMERICAN PEERLESS Wall Radiators are usually placed under windows, as the position of greatest efficiency. They fit into any restricted spaces and may be installed on ceilings or in skylights.

Convincing proof of the economy of wall space through the use of AMERICAN PEERLESS Wall Radiators on such jobs, may be gained from the following comparisons:

Thirty 9-A sections containing 270 sq. ft. of surface take up only 82.5 sq. ft. of wall surface; 600 feet of 1¼-inch pipe (or a pipe coil 100 ft. long and 6 pipes high) containing 260 sq. ft. of surface fill up 150 sq. ft. of valuable wall space. The use of AMERICAN PEERLESS Wall Radiators would save 45% of the wall space needed by a pipe coil.

Thirty 9-A sections of AMERICAN PEERLESS Wall Radiators containing 270 sq. ft. of heating surface will occupy a space 75 ft. long. A 6 pipe coil of 1¼-inch pipe containing 260.4 sq. ft. of heating surface will take up a space 100 ft. long. (See table and illustrations, pages 6, 8 and 9.)

AMERICAN PEERLESS WALL RADIATORS

Roundhouses and Bulkheads

MANY engineers maintain that railroad roundhouses should be equipped with blower systems, but nevertheless a great deal of Wall Radiation is used in this class of buildings. In many cases both systems are used.



AMERICAN PEERLESS Wall Radiator recessed inside wall of engine pit.

AMERICAN PEERLESS Wall Radiators are adapted excellently to roundhouse engine pits. They are narrow and, when mounted on ARCO Adjustable Wall Brackets, do not extend out more than $4\frac{3}{4}$ inches from the wall. They serve particularly well when the heating surface in these engine pits is recessed.

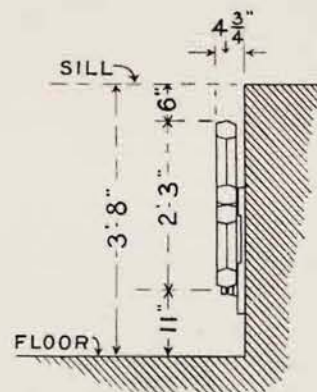
AMERICAN PEERLESS Wall Radiator "A" sections are only $13\frac{5}{16}$ inches in height. Therefore a run of many of these sections, assembled end to end, may be set in an engine pit at a pitch that is sufficient to insure perfect drainage.

When the wall beneath windows is the only space available for radiators or when the face of a bulkhead must be utilized, these AMERICAN PEERLESS Wall Radiators fill the requirements perfectly. Even two rows of sections, one above the other, may be installed safely because the new ARCO Adjustable Wall Bracket carries them securely, its rollers readily permitting expansion and contraction.



Detail of AMERICAN PEERLESS Wall Radiator supported by Arco Adjustable Wall Bracket.

The new ARCO Adjustable Wall Bracket is perfectly suited for the work that is required of it. The fact that its adjustment may be accomplished after the Wall Radiators are set in place is exceedingly important. By reason of this feature the contractor using AMERICAN PEERLESS Wall Radiators rather than pipe coils often finds that his labor item is agreeably reduced.



AMERICAN PEERLESS Wall Radiator in double tier beneath window sill.

Wall Radiators vs. Pipe Coils

SOME persons imagine that a pipe coil will condense much more steam at equal pressure per square foot in a given time than the same amount of surface in Cast Iron Radiators. This theory, however, is not borne out by the facts. Comparative tests of wrought iron pipe coils and AMERICAN PEERLESS Wall Radiators have been made at the Institute of Thermal Research. In these tests, the competing surfaces, under the same steam pressure (2 lbs. at boiler), were placed 4 inches from the wall in the same room, at the same time. In the six tests made, the average coefficients were as follows: AMERICAN PEERLESS Wall Radiators, 2.121; pipe coil, 2.127.

Difficulty in making long lines of pipe coils effective throughout their entire length is another factor acknowledged by Engineers, Erecting Steam Fitters and Contractors, generally, as favoring AMERICAN PEERLESS Wall Radiators. This trouble with pipe coils is due to the presence of entrained air which decreases their heating efficiency. It is almost impossible to remove this entrained air from the coils. On the other hand, the AMERICAN PEERLESS Wall Radiators are so constructed that air is removed easily and effectively, thus allowing the Radiators always to develop their highest efficiency.



Novel treatment of a large window exposure, employing 5,886 square feet of AMERICAN PEERLESS Wall Radiators, in the Second Regiment Armory, Chicago. These long radiator columns successfully offset the cooling effect of the large glass surface without interfering with the light or accessibility of the windows.

Efficiency Tables of Wall Radiators

THE tables on heating efficiency of AMERICAN PEERLESS Wall Radiators given on the six following pages are the result of careful tests and extensive research work. Many of the B. T. U. heating effects given herewith are based on data kindly furnished by the Bureau of Thermal Research of the American Society of Heating and Ventilating Engineers. Their formula for same was used in much of the results given. Other data were secured at our own Institute of Thermal Research from actual tests, and also from field tests made by our Engineers. The entire data given herewith will be found reliable and accurate.

This Company welcomes at all times requests for additional information or the suggestions of needs of special tests or data on Wall Radiators to care for particular or unusual requirements or applications.



Equipment Building of American Radiator Co., at Buffalo, N. Y., where important tests of AMERICAN PEERLESS Wall Radiators were conducted in actual zero weather.

AMERICAN PEERLESS Wall Radiators

Heating Effect of Wall Radiators for Various Pressures and Temperatures

Steam Table

FACTOR column gives ratio of Wall Radiator Transmission to 240 B. T. U. per sq. ft. per hour—for figuring boiler capacity required. To these figures must be added the usual amounts for losses from piping and for working margin.

B. T. U. column gives Heat Units per square foot per hour.

Radiators—Single Row—Single Tier

Temp. of Surrounding Air Deg. F.	STEAM PRESSURES AND TEMPERATURES									
	3 lbs. Pressure 222 Deg. F.		5 lbs. Pressure 227 Deg. F.		10 lbs. Pressure 239 Deg. F.		20 lbs. Pressure 259 Deg. F.		30 lbs. Pressure 274 Deg. F.	
	B. T. U.	Factor	B. T. U.	Factor	B. T. U.	Factor	B. T. U.	Factor	B. T. U.	Factor
40	374	1.56	387	1.61	418	1.74	474	1.98	517	2.16
50	358	1.49	370	1.54	402	1.67	458	1.91	501	2.09
60	341	1.42	353	1.47	385	1.60	441	1.84	484	2.02
70	324	1.35	336	1.40	368	1.53	424	1.77	467	1.94
80	306	1.28	319	1.33	350	1.46	406	1.69	449	1.87
90	288	1.20	301	1.25	332	1.38	388	1.62	431	1.80
100	269	1.12	282	1.17	313	1.30	369	1.54	412	1.72
110	250	1.04	263	1.09	294	1.22	350	1.46	393	1.64
120	231	0.96	243	1.01	274	1.14	331	1.38	374	1.56
130	211	0.88	223	0.93	254	1.06	311	1.30	354	1.48
140	190	0.79	203	0.85	234	0.98	290	1.21	333	1.39
150	169	0.70	182	0.76	213	0.89	269	1.12	312	1.30

AMERICAN PEERLESS WALL RADIATORS

AMERICAN PEERLESS Wall Radiators

Heating Effect of Wall Radiators for Various Pressures and Temperatures

Steam Table

FACTOR column gives ratio of Wall Radiator Transmission to 240 B. T. U. per sq. ft. per hour—for figuring boiler capacity required. To these figures must be added the usual amounts for losses from piping and for working margin.

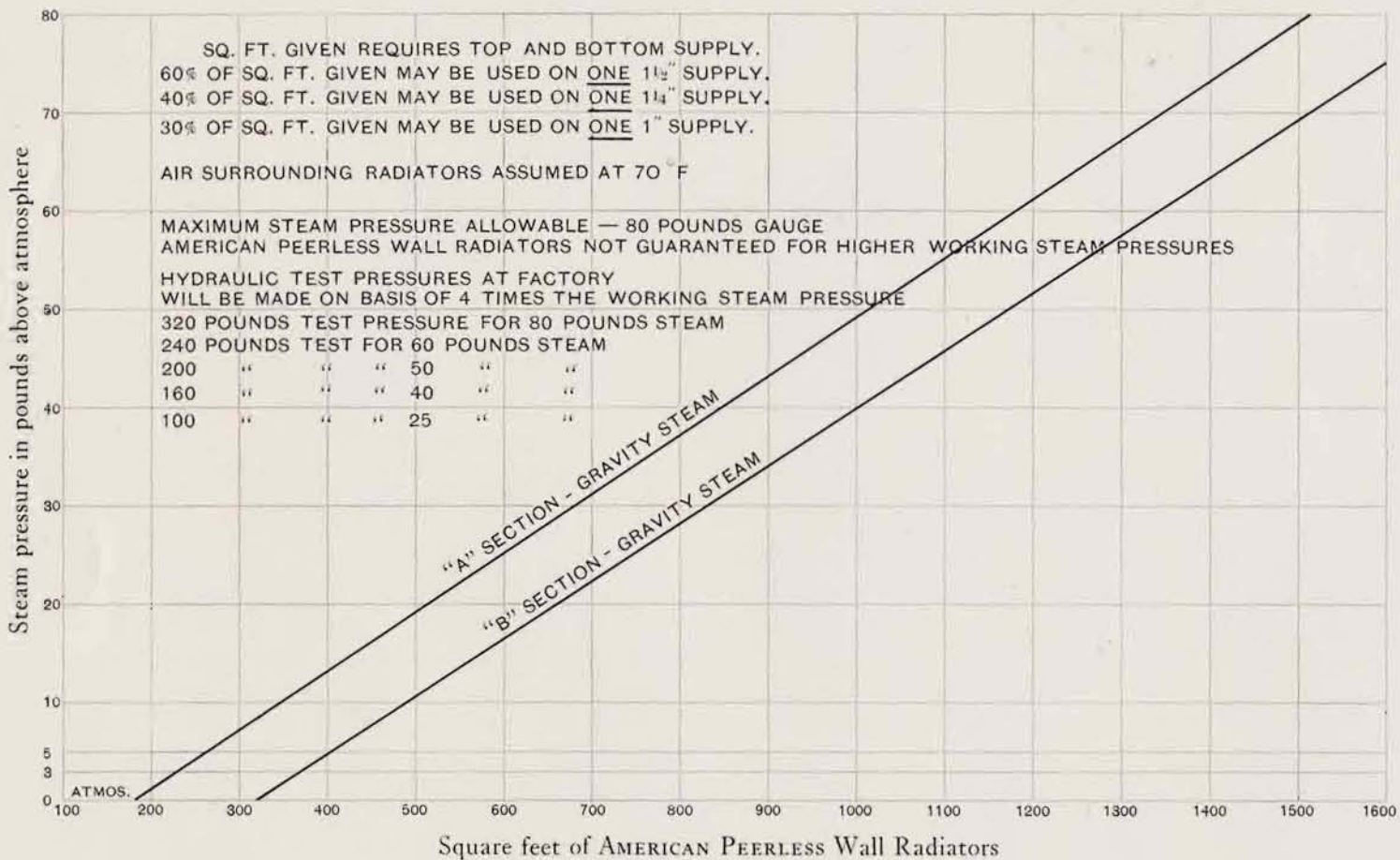
B. T. U. column gives Heat Units per square foot per hour.

Radiators—Single Row—Single Tier

Temp. of Surrounding Air Deg. F.	STEAM PRESSURES AND TEMPERATURES									
	40 lbs. Pressure 287 Deg. F.		50 lbs. Pressure 298 Deg. F.		60 lbs. Pressure 307 Deg. F.		70 lbs. Pressure 316 Deg. F.		80 lbs. Pressure 324 Deg. F.	
	B. T. U.	Factor	B. T. U.	Factor	B. T. U.	Factor	B. T. U.	Factor	B. T. U.	Factor
40	556	2.32	592	2.46	620	2.58	650	2.71	676	2.82
50	540	2.25	575	2.39	603	2.51	633	2.64	660	2.75
60	523	2.18	558	2.32	586	2.44	616	2.57	643	2.68
70	506	2.11	541	2.25	569	2.37	599	2.50	626	2.61
80	488	2.04	523	2.18	551	2.30	581	2.43	608	2.54
90	470	1.96	505	2.11	533	2.22	563	2.35	590	2.46
100	452	1.88	487	2.03	514	2.14	545	2.27	571	2.38
110	433	1.80	468	1.95	495	2.06	526	2.19	552	2.30
120	413	1.72	448	1.87	476	1.98	506	2.11	533	2.22
130	393	1.64	428	1.79	456	1.90	486	2.03	513	2.14
140	372	1.55	407	1.70	436	1.82	465	1.94	492	2.05
150	351	1.46	386	1.61	415	1.73	444	1.85	471	1.96

Size of AMERICAN PEERLESS Wall Radiator Unit—Limited by Steam Pressure

For length of wall radiator unit see page 22



AMERICAN PEERLESS WALL RADIATORS

AMERICAN PEERLESS Wall Radiators

Heating Effect of Wall Radiators for Various Temperatures of Water and Air

Forced Hot Water Circulation

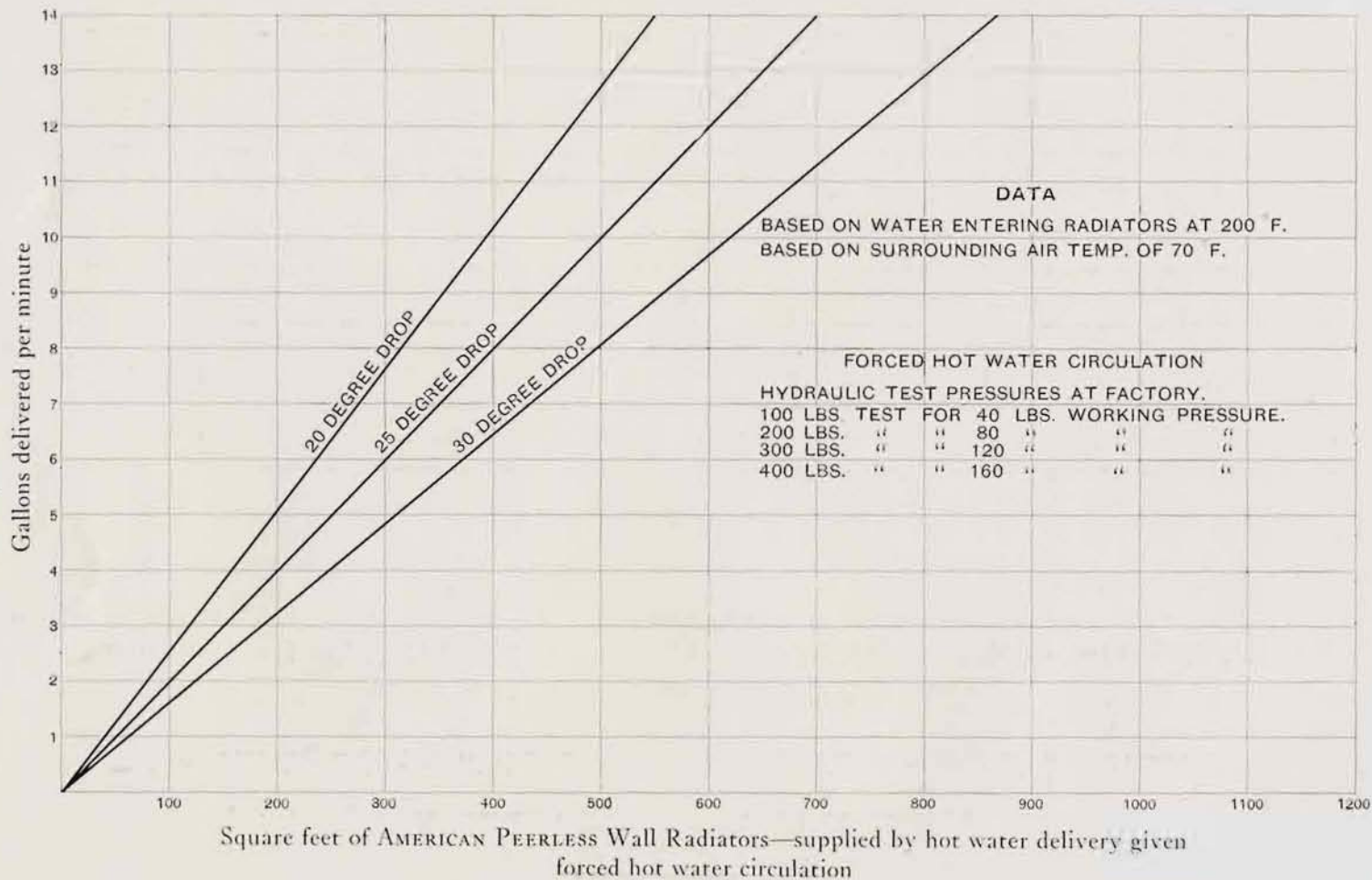
FACTOR column gives ratio of Wall Radiator Transmission to 150 B. T. U. per sq. ft. per hour—for figuring boiler capacity required. To these figures must be added the usual amounts for losses from piping and for working margin.

B. T. U. column gives Heat Units per square foot per hour.

Radiators—Single Row—Single Tier

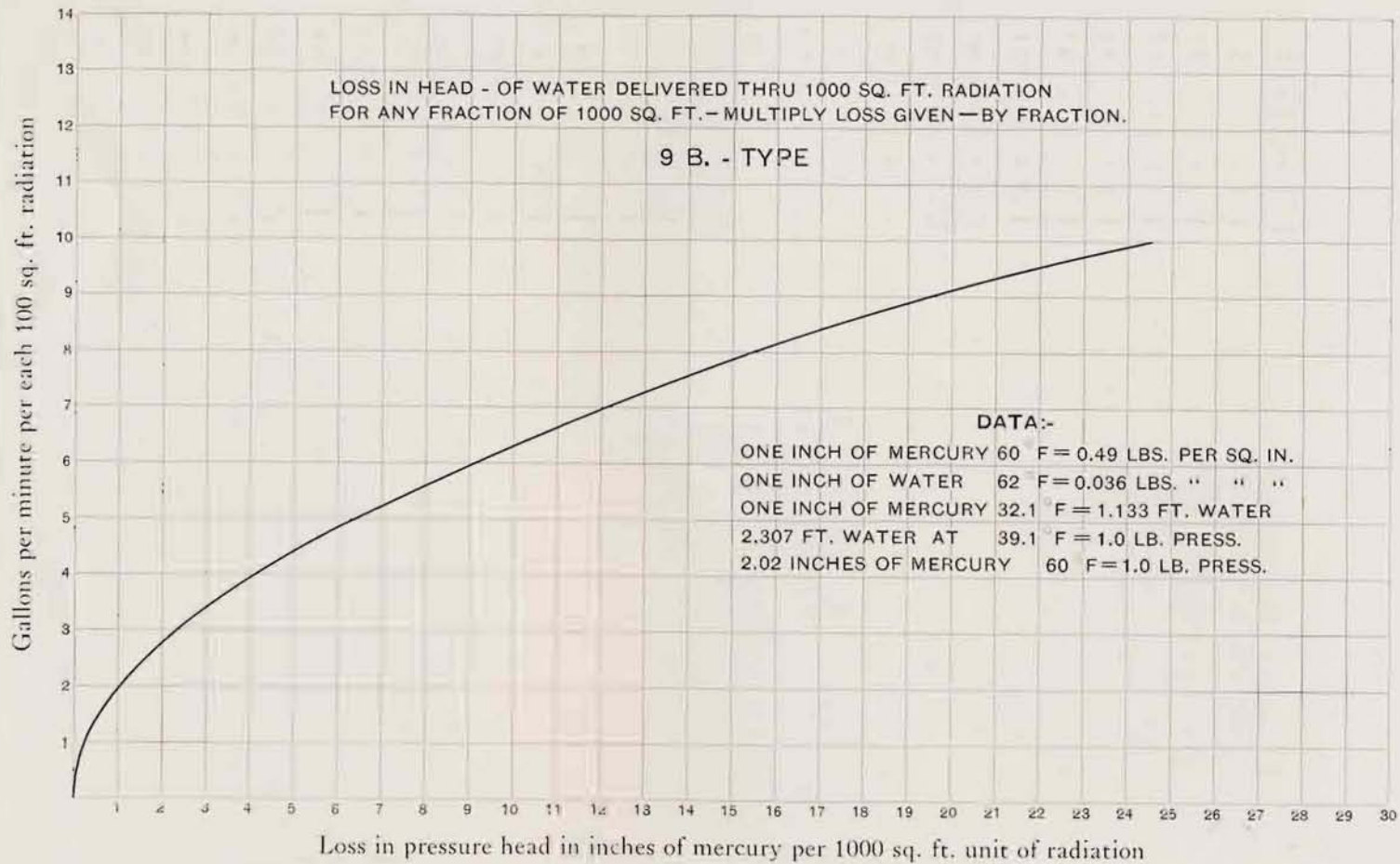
Temp. of Surrounding Air Deg. F.	AVERAGE TEMPERATURE OF WATER INSIDE RADIATORS—INITIAL WATER TEMPERATURE 200° F.					
	20 Degrees Drop Average Temp. 190° F.		25 Degrees Drop Average Temp. 187.5° F.		30 Degrees Drop Average Temp. 185° F.	
	B. T. U.	Factor	B. T. U.	Factor	B. T. U.	Factor
40	296	1.97	290	1.93	284	1.89
50	279	1.86	273	1.82	267	1.78
60	262	1.75	256	1.71	250	1.67
70	245	1.63	239	1.59	233	1.55
80	227	1.51	221	1.47	215	1.43
90	209	1.39	203	1.35	197	1.31
100	190	1.27	184	1.23	178	1.19
110	171	1.14	165	1.10	159	1.06

Forced Hot Water Circulation Through AMERICAN PEERLESS Wall Radiators

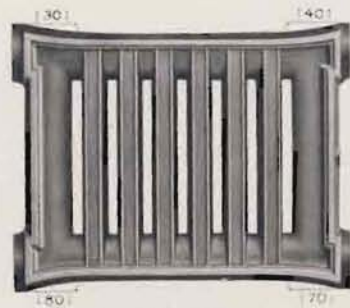


Forced Hot Water Circulation Through AMERICAN PEERLESS Wall Radiators

AMERICAN PEERLESS WALL RADIATORS



AMERICAN PEERLESS WALL RADIATORS



No. 5-A



No. 7-B



No. 7-A



No. 9-B



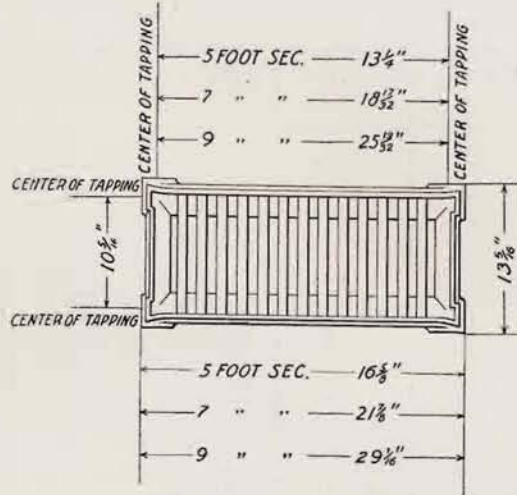
No. 9-A

Sections are always assembled with bars vertical for greatest heating efficiency. Nos. 7-B and 9-B are regularly tapped as shown for connecting side by side. Nos. 5-A, 7-A and 9-A are regularly tapped as shown for connecting end to end. No. 5-A can be furnished, when specially ordered, with tappings at 30, 40, 70 and 80.

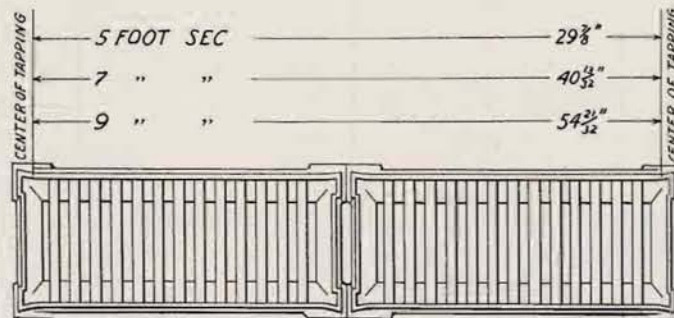
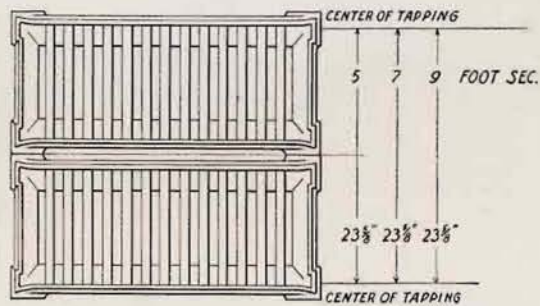
See notes on Assemblages and Tappings, pages 27 to 31.

AMERICAN PEERLESS WALL RADIATORS

Wall Radiator Measurements



Above measurements apply to either "A" or "B" styles.



For tables of dimensions, see pages 22 and 23.
For assemblages, see pages 27 to 31.

AMERICAN PEERLESS WALL RADIATORS

Dimensions and Heating Surface

No. of Sections	Length of Space Occupied				Heating Surface, Square Feet		
	Type 5-A Ft. In.	Type 7-A Ft. In.	Type 9-A Ft. In.	Types 7-B, 9-B Ft. In.	Type 5	Type 7	Type 9
1	1- 4 ³ / ₈	1- 9 ⁷ / ₈	2- 5 ¹ / ₁₆	1- 1 ⁵ / ₁₆	5	7	9
2	2- 9 ¹ / ₄	3- 7 ³ / ₄	4-10 ³ / ₈	2- 2 ⁵ / ₈	10	14	18
3	4- 1 ⁷ / ₈	5- 5 ⁵ / ₈	7- 3 ³ / ₁₆	3- 3 ¹⁵ / ₁₆	15	21	27
4	5- 6 ¹ / ₂	7- 3 ¹ / ₂	9- 8 ¹ / ₄	4- 5 ¹ / ₄	20	28	36
5	6-11 ¹ / ₈	9- 1 ³ / ₈	12- 1 ⁵ / ₁₆	5- 6 ⁹ / ₁₆	25	35	45
6	8- 3 ³ / ₄	10-11 ¹ / ₄	14- 6 ³ / ₈	6- 7 ⁷ / ₈	30	42	54
7	9- 8 ³ / ₈	12- 9 ¹ / ₈	16-11 ⁷ / ₁₆	7- 9 ³ / ₁₆	35	49	63
8	11- 1	14- 7	19- 4 ¹ / ₂	8-10 ¹ / ₂	40	56	72
9	12- 5 ⁵ / ₈	16- 4 ⁷ / ₈	21- 9 ⁹ / ₁₆	9-11 ¹³ / ₁₆	45	63	81
10	13-10 ¹ / ₄	18- 2 ³ / ₄	24- 2 ⁵ / ₈	11- 1 ¹ / ₈	50	70	90
11	15- 2 ⁷ / ₈	20- 0 ⁵ / ₈	26- 7 ¹¹ / ₁₆	12- 2 ⁷ / ₁₆	55	77	99
12	16- 7 ¹ / ₂	21-10 ¹ / ₂	29- 0 ³ / ₄	13- 3 ³ / ₄	60	84	108
13	18- 0 ³ / ₈	23- 8 ³ / ₈	31- 5 ¹³ / ₁₆	14- 5 ¹ / ₁₆	65	91	117
14	19- 4 ³ / ₄	25- 6 ¹ / ₄	33-10 ⁷ / ₈	15- 6 ³ / ₈	70	98	126
15	20- 9 ³ / ₈	27- 4 ¹ / ₈	36- 3 ¹⁵ / ₁₆	16- 7 ¹¹ / ₁₆	75	105	135
16	22- 2	29- 2	38- 9	17- 9	80	112	144
17	23- 6 ⁵ / ₈	30-11 ⁷ / ₈	41- 2 ¹ / ₁₆	18-10 ⁹ / ₁₆	85	119	153
18	24-11 ¹ / ₄	32- 9 ³ / ₄	43- 7 ¹ / ₈	19-11 ⁵ / ₈	90	126	162
19	26- 3 ⁷ / ₈	34- 7 ⁵ / ₈	46- 0 ⁸ / ₁₆	21- 0 ¹⁵ / ₁₆	95	133	171
20	27- 8 ¹ / ₂	36- 5 ¹ / ₂	48- 5 ¹ / ₄	22- 2 ¹ / ₄	100	140	180
21	29- 1 ¹ / ₈	38- 3 ³ / ₈	50-10 ⁵ / ₁₆	23- 3 ⁹ / ₁₆	105	147	189
22	30- 5 ³ / ₄	40- 1 ¹ / ₄	53- 3 ³ / ₈	24- 4 ⁷ / ₈	110	154	198
23	31-10 ³ / ₈	41-11 ¹ / ₈	55- 8 ⁷ / ₁₆	25- 6 ³ / ₁₆	115	161	207
24	33- 3	43- 9	58- 1 ¹ / ₂	26- 7 ¹ / ₂	120	168	216
25	34- 7 ⁵ / ₈	45- 6 ⁷ / ₈	60- 6 ⁹ / ₁₆	27- 8 ¹³ / ₁₆	125	175	225
26	36- 0 ¹ / ₄	47- 4 ³ / ₄	62-11 ⁵ / ₈	28-10 ¹ / ₈	130	182	234
27	37- 4 ⁷ / ₈	49- 2 ⁵ / ₈	65- 4 ¹¹ / ₁₆	29-11 ⁷ / ₁₆	135	189	243
28	38- 9 ¹ / ₂	51- 0 ¹ / ₂	67- 9 ³ / ₄	31- 0 ³ / ₄	140	196	252
29	40- 2 ¹ / ₈	52-10 ³ / ₈	70- 2 ¹³ / ₁₆	32- 2 ¹ / ₁₆	145	203	261
30	41- 6 ³ / ₄	54- 8 ¹ / ₄	72- 7 ⁷ / ₈	33- 3 ³ / ₈	150	210	270
31	42-11 ¹ / ₈	56- 6 ¹ / ₈	75- 0 ¹⁵ / ₁₆	34- 4 ¹¹ / ₁₆	155	217	279
32	44- 4	58- 4	77- 6	35- 6	160	224	288
33	45- 8 ⁵ / ₈	60- 1 ⁷ / ₈	79-11 ¹ / ₁₆	36- 7 ⁵ / ₁₆	165	231	297
34	47- 1 ¹ / ₄	61-11 ⁵ / ₄	82- 4 ¹ / ₈	37- 8 ⁵ / ₈	170	238	306
35	48- 5 ⁷ / ₈	63- 9 ⁵ / ₈	84- 9 ³ / ₁₆	38- 9 ¹⁵ / ₁₆	175	245	315
36	49-10 ¹ / ₂	65- 7 ¹ / ₂	87- 2 ¹ / ₄	39-11 ¹ / ₄	180	252	324
37	51- 3 ¹ / ₈	67- 5 ³ / ₈	89- 7 ⁵ / ₁₆	41- 0 ⁹ / ₁₆	185	259	333
38	52- 7 ³ / ₄	69- 3 ¹ / ₄	92- 0 ³ / ₈	42- 1 ⁷ / ₈	190	266	342
39	54- 0 ³ / ₈	71- 1 ¹ / ₈	94- 5 ⁷ / ₁₆	43- 3 ³ / ₁₆	195	273	351
40	55- 5	72-11	96-10 ¹ / ₂	44- 4 ¹ / ₂	200	280	360

To above lengths add 1/2 inch for each end bushed, and 1 1/8 inches for each hexagon nipple used in assembling.

Where steam pressure above 25 pounds is to be used, hexagon nipples will be furnished in place of the internal nipple, and 1 1/8 inches additional space must be allowed for each nipple.

By additions or multiplications, dimensions and heating surfaces can be calculated readily for any greater number of sections.

AMERICAN PEERLESS WALL RADIATORS

Ratings and Measurements of Sections

Section Number	Height Inches	Length or Width, Inches	Thickness Inches	Thickness (with bracket) Inches	Heating Surface Sq. Ft.
5-A	$13\frac{5}{16}$	$16\frac{5}{8}$	$2\frac{7}{8}$	$3\frac{1}{2}$	5
7-A	$13\frac{5}{16}$	$21\frac{7}{8}$	$2\frac{7}{8}$	$3\frac{1}{2}$	7
7-B	$21\frac{7}{8}$	$13\frac{5}{16}$	$3\frac{1}{16}$	$3\frac{11}{16}$	7
9-A	$13\frac{5}{16}$	$29\frac{1}{16}$	$2\frac{7}{8}$	$3\frac{1}{2}$	9
9-B	$29\frac{1}{16}$	$13\frac{5}{16}$	$3\frac{1}{16}$	$3\frac{11}{16}$	9

Directions for Ordering

Where working pressures (steam or water) higher than 10 to 40 pounds are required, order must so specify. For such special pressure tests an extra charge will be made.

For convenience in handling and shipping, unless otherwise ordered,

No. 5-A Radiators will be assembled in stacks not exceeding 8 sections;

No. 7-A Radiators not exceeding 6 sections;

No. 9-A Radiators not exceeding 5 sections;

Nos. 7-B and 9-B Radiators not exceeding 10 sections.

When fitter intends to erect a stack consisting of more sections than above mentioned, or when the sections or stacks are to be set in rows or series, we provide a right- and left-hand threaded nipple having hexagon nut at center, easily enabling the fitter to connect the stacks on the job.

Orders should refer to figure number showing assemblage (see pages 27 to 31). The figures shown on these pages illustrate the common ways of assembling comparatively small units. AMERICAN PEERLESS Wall Radiators can be assembled in any number of sections, either longer or higher than shown in the figures. It is our practice, however, when a greater number of sections of a given figure than exactly shown in the figure are specified, always to build onto the length, maintaining the height as shown in the figure. The safe way in ordering is always to send sketch, unless you are ordering exactly the number of sections as shown in the figure.

AMERICAN PEERLESS Wall Radiators are tapped $1\frac{1}{2}$ -inch supply and return and bushed as desired. They are connected with $1\frac{1}{2}$ -inch right- and left-hand threaded internal nipples. These nipples have two heavy inside lugs, so that a piece of 1-inch round iron flattened at one end can be inserted, and by applying a wrench to bar, the nipple can be screwed or unscrewed and sections added or removed. We can furnish these bars (Direct Radiator Wrenches) in 4-foot lengths.

Labor Economy in Erecting

IN a study of the comparative cost for installation of Wall Radiation versus pipe coils, it is ordinarily a matter of agreeable surprise to learn how cheaply AMERICAN PEERLESS Wall Radiators, with their indestructible features and low depreciation, can be installed. There are many contractors who are installing this heating surface at the same and frequently at a less cost than for pipe coil. This is due to the limited amount of labor required to erect an AMERICAN PEERLESS Wall Radiator unit, regardless of size, as compared with that of a pipe coil. The contractor who systematizes finds that this lessened labor item has a material effect on the probability of his closing the contract, and also on his profits. The labor cost is largely influenced by the method of handling on the job, which is greatly facilitated by the right- and left-hand hexagon connecting nipples. To further facilitate the grouping of AMERICAN PEERLESS Wall Radiator units, and to reduce labor cost, we show several illustrations of correct method of erecting.



Fig. A. Chalking location of Arco Adjustable Wall Bracket, and drilling bolt-holes.

The labor cost is largely influenced by the method of handling on the job, which is greatly facilitated by the right- and left-hand hexagon connecting nipples. To further facilitate the grouping of AMERICAN PEERLESS Wall Radiator units, and to reduce labor cost, we show several illustrations of correct method of erecting.



Fig. B. ARCO Adjustable Wall Brackets in position. Right- and left-hand hexagon nipples ready for use in connecting up two stacks of AMERICAN PEERLESS Wall Radiators.

AMERICAN PEERLESS WALL RADIATORS

Labor Economy in Erecting



Fig. C. AMERICAN PEERLESS Wall Radiation in two stacks, connected by right- and left-hand hexagon nipples, being lifted into position on lower spools of two Arco Adjustable Wall Brackets.



Fig. D. Using short piece of scantling as lever to level up AMERICAN PEERLESS Wall Radiators. Fitter at left with wrench tightening bolt-head of adjustable spool to level.

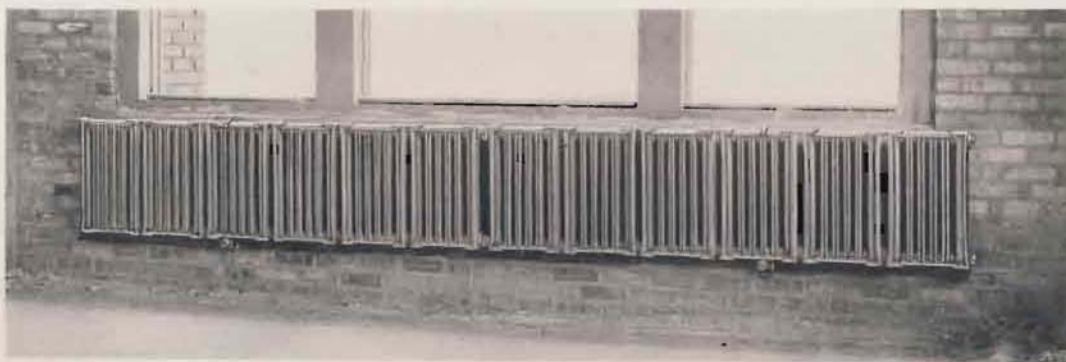


Fig. E. After four operations, AMERICAN PEERLESS Wall Radiation shown in position, ready for piping connections—or ready in after years to be changed at owner's will in size, in position, etc.

Good Practice for Installing AMERICAN PEERLESS Wall Radiators

THE increasing use of AMERICAN PEERLESS Wall Radiators, hung on ARCO Adjustable Wall Brackets to walls and partitions, prompts us to suggest the following simple and practical methods of installation, which insure good jobs.



Expansion Bolt Shield.

For attaching ARCO Adjustable Brackets to stone, cement or brick walls the proper use of the expansion bolt always gives the best results. Ordinary nails and screws frequently work loose, pull out or break and cannot be depended upon for secure and permanent work.



Lag Screw in Expansion Bolt Shield.

Progressive fitters have found that the following method saves time and gives best results:

To start the hole in the wall use a "rose drill." After carefully locating the hole centers, start the hole with light blows of the hammer, being careful not to allow the drill to jump about. Thus a smooth bore



Wing Bolt for Hollow Tile Walls.

is started without cracking the surface of the wall adjacent to the hole. After hole has been drilled about $\frac{1}{4}$ inch use more force, being careful to turn the drill slightly between blows as this prevents the cutting edges striking the same point twice and produces more rapid work. (Fig. B.) Drill hole slightly deeper



Fig. B. Drilling Hole.



Fig. C. Inserting Shield.

than the length of the shield to be inserted so that the lag screw will project beyond the inner end and enable turning the work up tight to the wall when the screw is turned in.

Where few holes are to be drilled a hand hammer with a rose drill will give good results, but for larger work requiring numerous holes, a great saving in time may be made by using a "Rapid Fire" drill. (Fig. E.) This drill works similarly to a pneumatic hammer.

After the hole is drilled accurately the shield can be inserted by hand or lightly driven in by hammer. (Fig. C.) Drive beyond the face of the wall. Then place the plate or bracket to be attached, over the shield, then insert lag screw by hand as far as can be turned and continue turning with hand wrench or socket wrench in a brace until it has tightly drawn the work up against the wall. (Fig. D.)



Fig. D. Turning up Lag Screw.



Rapid Fire Drill.

If lag screw binds at any point due to grit from wall, give it a reverse turn and then continue.

By the use of the expansion bolt as above described the ARCO Adjustable Brackets are held tightly and permanently against the wall in the simplest manner, making the installation enduring and "ship shape."



Fig. E. Using "Rapid Fire" Drill.

Assemblage Figures and Tappings

Key to Figure Numbering—Orders should refer to figure number showing assemblage (see pages 27 to 31). The first numeral in each of the following Figure Numbers indicates the size of section, thus:—Fig. 517 means 5-foot sections arranged in the manner as shown in sketch above the number; Fig. 717 refers to 7-foot sections and to the same assemblage, and Fig. 917 refers to 9-foot sections and to the same assemblage.

Assemblages—The figures shown on these pages illustrate the common ways of assembling comparatively small units, but AMERICAN PEERLESS Wall Radiators can be assembled in any number of sections, either longer or higher than shown in the figures. It is our practice, however, when a greater number of sections are specified than exactly shown in the figure, always to build on to the length, maintaining the height as shown in the figure. The safe way in ordering is always to send sketch unless you are ordering exactly the number of sections as shown in the figure.

Regular and Special Tappings—The regular tappings of AMERICAN PEERLESS Wall Radiators, as shown on the following pages, are indicated by Nos. 2, 3, 4, 5, 6, 7, 8 and 9. Nos. 20, 30, 40, 50, 60, 70, 80 and 90 indicate special tappings which can be furnished if desired and for which an extra charge will be made. Tappings are $1\frac{1}{2}$ inches, supply and return, and bushed as desired. See also "Directions for Ordering," page 23.

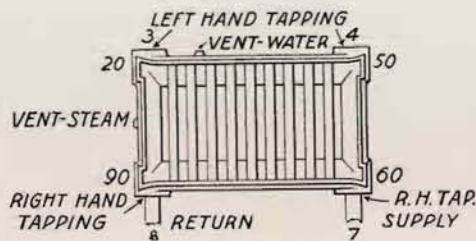


Fig. 51, 71 or 91.
Water and One- and Two-Pipe Steam.

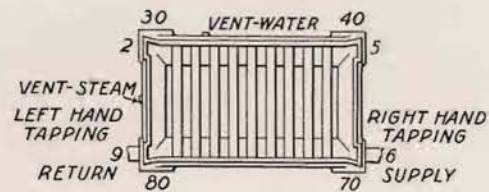


Fig. 57, 77 or 97.
Water and One- and Two-Pipe Steam.



Fig. 54, 74 or 94.
One- and Two-Pipe Steam.

Fig. 58, 78 or 98.
Water.

Assemblage Figures and Tappings—Continued



Fig. 511, 711 or 911.
Assembled Three Sections in Single Tier—
Water and One- and Two-Pipe Steam.

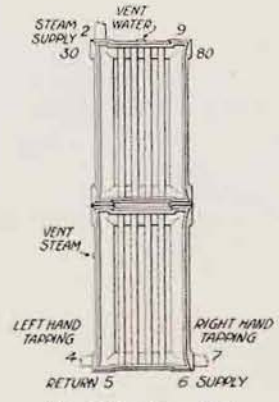


Fig. 513, 713 or 913.
Three Sections in Three Tiers—
Water and Two-Pipe Steam.

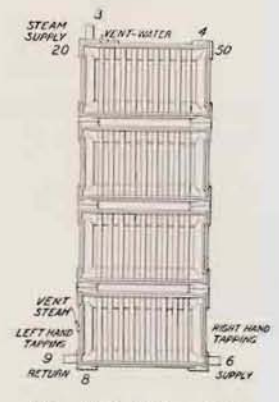


Fig. 515, 715 or 915.
Assembled Four Sections in Four Tiers—
Water and Two-Pipe Steam.

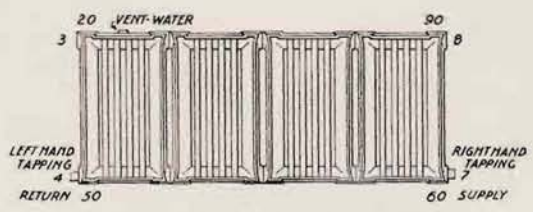


Fig. 517, 717 or 917.
Assembled Four Sections in Single Tier—Water.

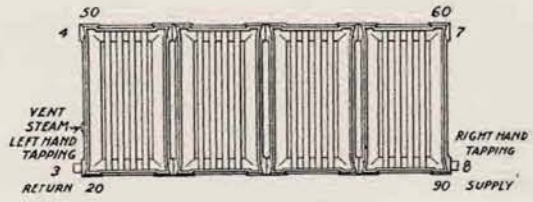


Fig. 518, 718 or 918.
Sections in Single Tier—One- and Two-Pipe Steam.

See notes on Assemblages and Tappings, page 27.

AMERICAN PEERLESS WALL RADIATORS

Assemblage Figures and Tappings—Continued

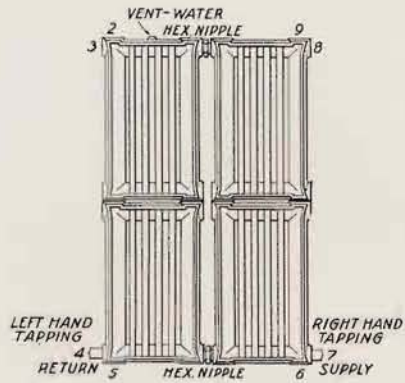


Fig. 519, 719 or 919.
Assembled Four Sections in Two Tiers—Water.

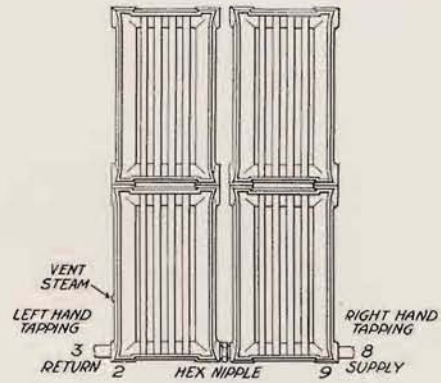


Fig. 520, 720 or 920.
Assembled Four Sections in Two Tiers—
One- and Two-Pipe Steam.

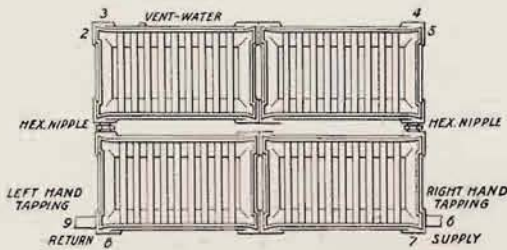


Fig. 521, 721 or 921.
Assembled Four Sections in Two Tiers—Water.

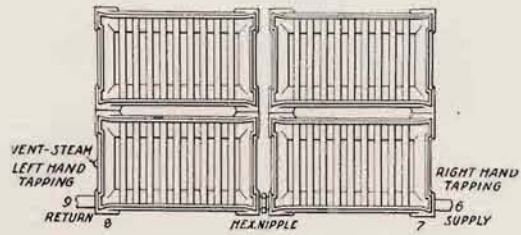


Fig. 522, 722 or 922.
Assembled Four Sections in Two Tiers—
One- and Two-Pipe Steam.

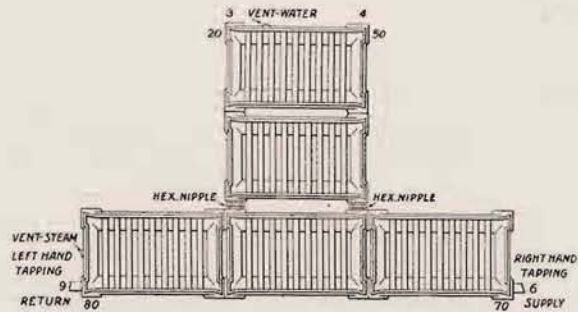


Fig. 523, 723 or 923.
Assembled Three and Two Sections with Three Tiers in Center—Water and One- and Two-Pipe Steam.
See notes on Assemblages and Tappings, page 27.

AMERICAN PEERLESS WALL RADIATORS

Assemblage Figures and Tappings—Continued

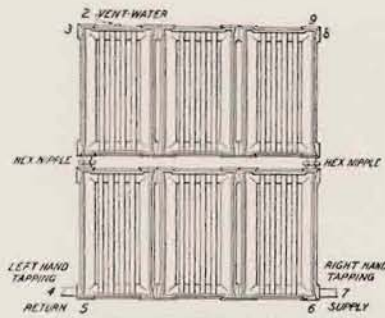


Fig. 525, 725 or 925.
Assembled Six Sections in Two Tiers—Water.

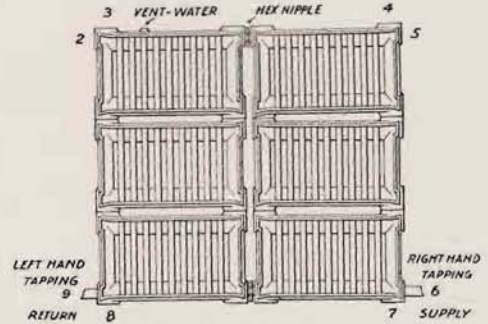


Fig. 527, 727 or 927.
Assembled Six Sections in Three Tiers—Water.

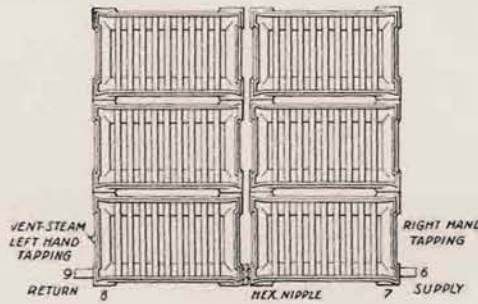


Fig. 528, 728 or 928.
Assembled Six Sections in Three Tiers—One- and Two-Pipe Steam.

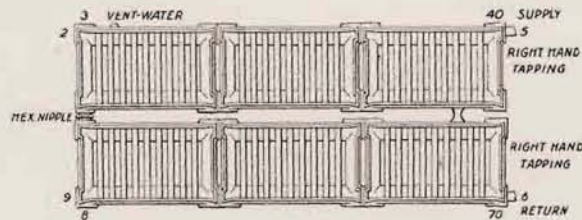


Fig. 531, 731 or 931.
Assembled Six Sections in Two Tiers—Water.

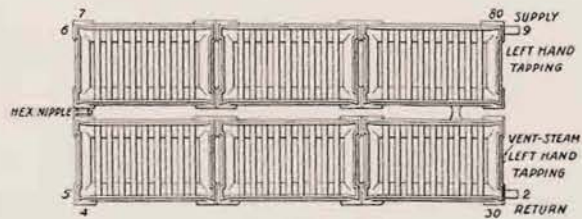


Fig. 532, 732 or 932.
Assembled Six Sections in Two Tiers—Two-Pipe Steam.

See notes on Assemblages and Tappings, page 27.

AMERICAN PEERLESS WALL RADIATORS

Assemblage Figures and Tappings—Continued

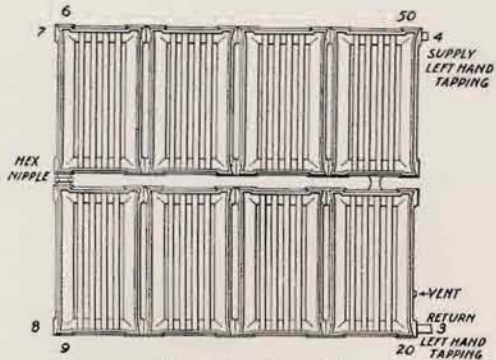


Fig. 540, 740 or 940.
Assembled in Eight Sections in Two Tiers—For Two
Pipe Steam. Using Spacing Saddle.

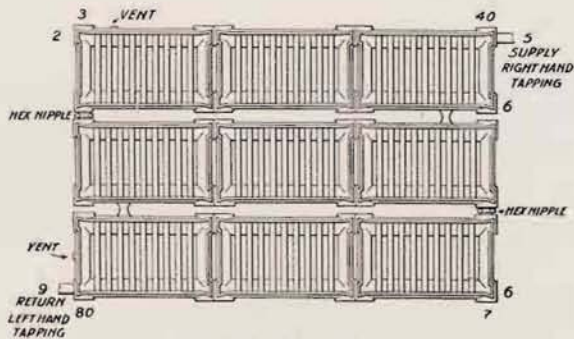


Fig. 541, 741 or 941.
Assembled Nine Sections in Three Tiers.
Using Spacing Saddle.

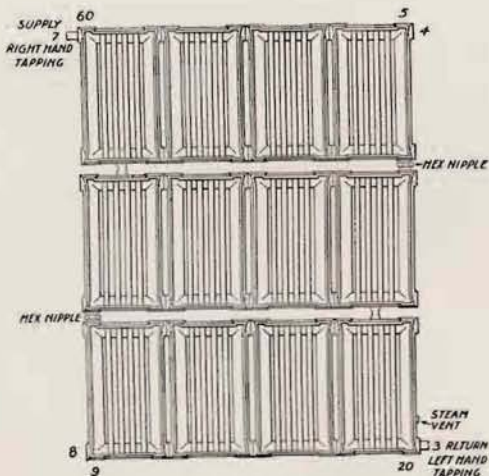
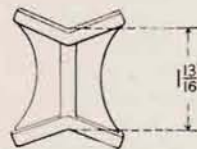


Fig. 542, 742 or 942.
Assembled in Twelve Sections in Three Tiers. Using
Spacing Saddles (see opposite).

See notes on Assemblages and Tappings, page 27.

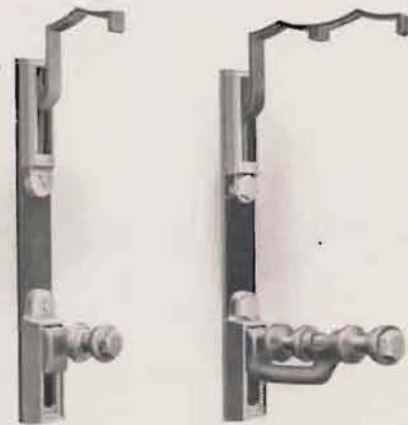
Wall Radiator Spacing
Saddle



Furnished between sections in assemblages of
AMERICAN PEERLESS Wall Radiators like figures above.
Saves using extra brackets.

Arco Adjustable Wall Brackets

(Patented July 5, 1910; March 18, 1913)



Single Spool
Bracket for single
row of radiation.

Double Spool
Bracket for double
row of radiation.

5- 8 Sec.	None
9-14 "	1 Additional
15-24 "	2 "
25-32 "	3 "
33-45 "	4 "

Made to support all runs of wall radiators in factories, warehouses, theatres, railroad stations, garages, schools, churches, residences—any building in which floor space is valuable and wall space available.

Brackets are made in one style only and with suitable bearing plates can be screwed to the wall to accommodate any possible assemblage of wall radiators.

On SPECIAL ORDER we furnish the ARCO Adjustable Wall Brackets with two spools—to carry two runs of radiation separated about $\frac{3}{4}$ inch.

Where double row of AMERICAN PEERLESS Wall Radiators are to be carried, add the number of brackets called for in table opposite to the number given on page 34.

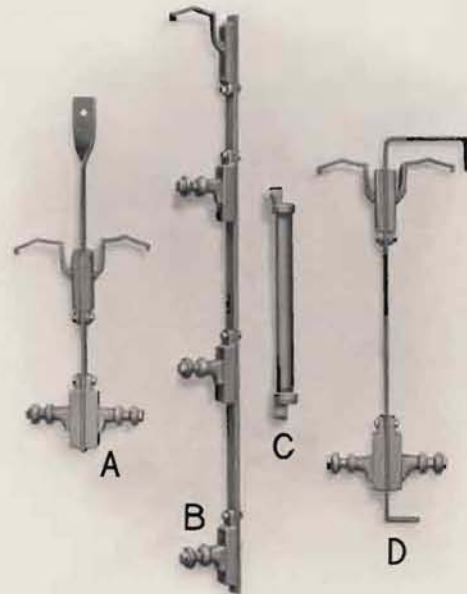
Assemblages of Arco Adjustable Wall Brackets

Figure "A" shows a combination ARCO Adjustable Support suspended from the ceiling, permitting the duplex arrangement of the wall pattern radiators.

Figure "B" shows a multiple support used preferably with the "A" section, permitting a number of radiators to be supported one above another, the intermediate roll in each case serving the double purpose of carrying the weight of the section as well as guiding the top of the lower one.

Figure "C" shows a trapeze hanger which is used for supporting wall radiators which are hung flat and parallel to the ceiling. The end fittings are screwed into a 1-inch pipe or long nipple and the rods which extend at right angles pass through the fittings and permit a vertical adjustment.

Figure "D" shows a combination which may be used in place of the double spool support, the brackets being fastened to a bent bar and the latter bolted to the wall at the top and to the floor at the bottom.



Arco Adjustable Wall Bracket

(Patented July 5, 1910; March 18, 1913)

THIS Arco Adjustable Wall Bracket has many unusual features and fulfills the demands of the most difficult installations. It is strong, easy to erect, adjustable and makes a neat and attractive job.

Expansion and contraction are provided for, no matter how long the run of Wall Radiators may be. The spools on the bottom bracket allow a free horizontal movement of the radiators, thus taking care of any difference in "roughing in" measurements, and affording free play for expansion and contraction. Unsightly, sagging,

air-bound runs of pipe coil need no longer be tolerated.

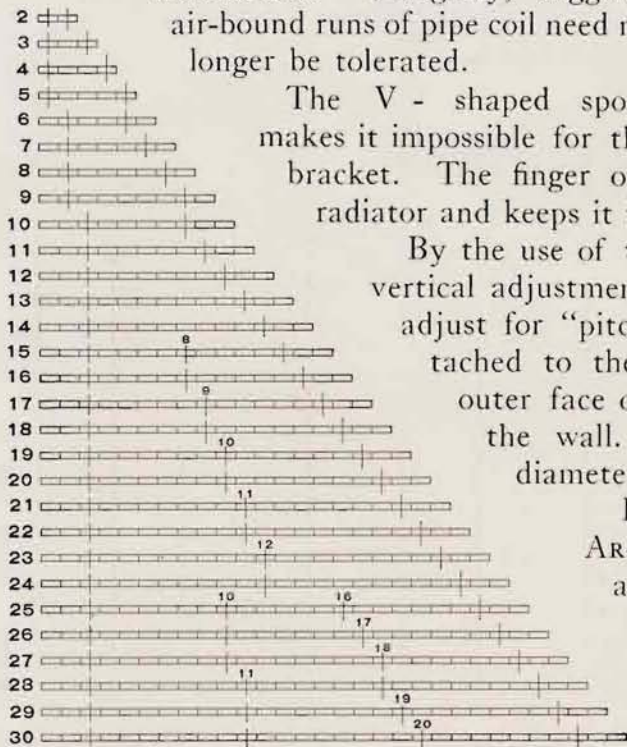
The V - shaped spool makes it impossible for the radiator to jump from the bracket. The finger of the top bracket guides the radiator and keeps it from tipping forward.

By the use of these brackets, which permit a vertical adjustment of 2 inches, the fitter can adjust for "pitch" after they have been attached to the wall. The brackets set the outer face of the radiator $4\frac{3}{4}$ inches from the wall. Retaining bolt is $\frac{1}{2}$ inch diameter.

Bearing plate, and bolt of the Arco Adjustable Wall Bracket are of wrought iron. The finger is made of malleable iron. The balance of bracket is of heavy cast iron.



Shadow view showing how AMERICAN PEERLESS Wall Radiators are held by the Arco Adjustable Bracket.



Shows number and location of Arco Adjustable Wall Brackets on AMERICAN PEERLESS Wall Radiators from two to thirty "B" sections long.

NOTE.—On runs of 30 to 50 sections or more, the brackets should be placed approximately 10 feet apart.

Seidel Wall Radiator Bracket



Seidel Bracket for vertical sections.

SEIDEL Wall Radiator Brackets are designed to support assemblages of AMERICAN PEERLESS Wall Radiators. They are made in two sizes for vertical and horizontal AMERICAN PEERLESS Wall Radiator Sections.

The same sized bracket is used to support the 5-, 7-, and 9-foot sections.

Estimate one Seidel bracket for every three of the 9-foot sections, every four of the 7-foot sections, and every five of the 5-foot sections.

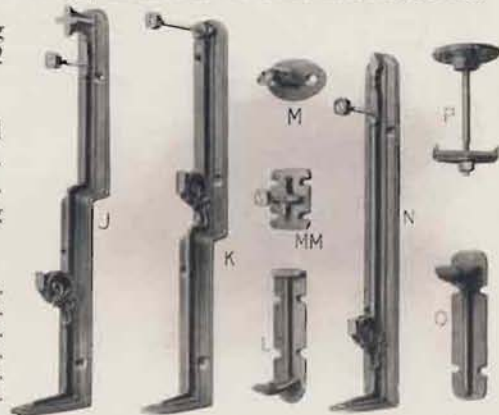
Other Wall Radiator Brackets

Bracket "J": Fits over 9½-inch high baseboard, and supports Wall Radiator No. 7-B or 9-B. Furnished with one ¼-inch stove bolt and button.

Height from floor to center of lowest tapping (supply or return):—J-1 Bracket, 9½ inches; J-2 Bracket, 7½ inches; J-3 Bracket, 5½ inches.

Bracket "K": Fits over baseboard and supports Wall Radiator Nos. 5-A, 7-A or 9-A. Furnished with one ¼-inch stove-bolt and button. Height from floor to center of lowest tapping (supply or return):—

K-1 Bracket (will fit over 11½-inch high baseboard), 16 inches.
K-2 Bracket (will fit over 9½-inch high baseboard), 14 inches.
K-3 Bracket (will fit over 7½-inch high baseboard), 12 inches.
K-4 Bracket (will fit over 5½-inch high baseboard), 10 inches.
K-5 Bracket (will fit over 3½-inch high baseboard), 8 inches.
K-6 Bracket (will fit over 1½-inch high baseboard), 6 inches.



Brackets "L," "O," "MM" and "M": Screwed to wall baseboard or wainscoting. "L" and "O" Brackets are bottom supports for all sizes of Wall Radiators. "MM" and "M" Brackets are top guides to hold radiator in place. "L" and "MM" Brackets are concealed, "O" and "M" Brackets are not. One "MM" or "M" Bracket should always be provided for use with each "L" or "O" Bracket. "L," "O" and "MM" Brackets are slotted for four, and the "M" Bracket for two wood screws—not furnished by us. With each "MM" Bracket we furnish one ¼-inch stove-bolt and button.

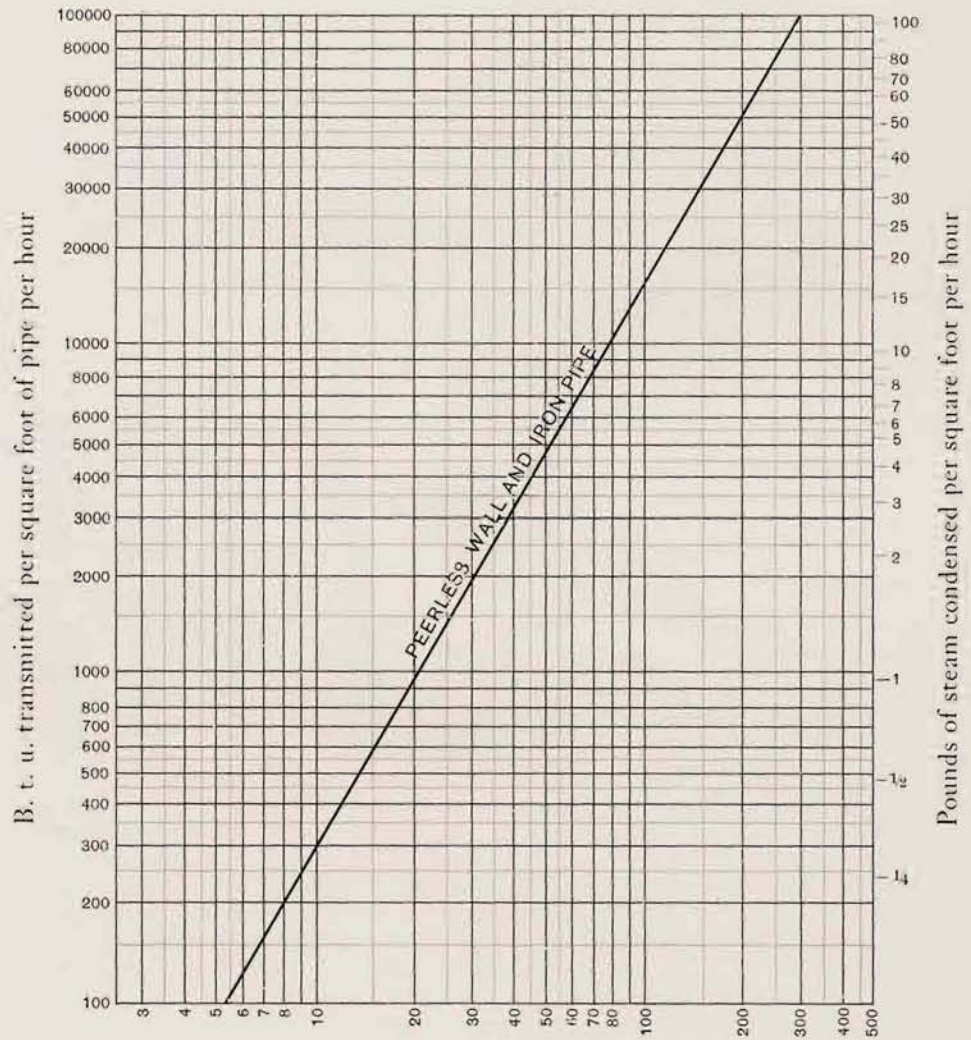
Bracket "N": Is a straight right-angle Bracket, without offset, for supporting all sizes of Wall Radiators; height from floor to center of end tapping bosses, 5½ inches. With each "N" Bracket we furnish one ¼-inch stove-bolt and button.

Ceiling Bracket "P": Made of cast plate, 3½ inches diameter and screwed to ceiling joists by four screws—not furnished by us. The bolt furnished gives a distance of 3½ inches to 5 inches from bottom of Radiator to ceiling. Other length bolts can be furnished on special order.

NOTE.—In ordering buttons and stove-bolts separately, state for which bracket, because of different lengths of bolts.

**Heating Power of Peerless Wall and Iron Pipe
For Water Storage Tanks**

For use with Low Pressure Steam, up to 10 pounds by gauge. A "factor of safety" of 50% is included, to allow for fouling of pipe.



Temperature difference in Fahr. degrees between steam in coil and mean or average temperature of water in tank.



The space between windows in this garage is occupied by AMERICAN PEERLESS Wall Radiators. A mild, uniform and safe heat is insured to the motor cars all winter.

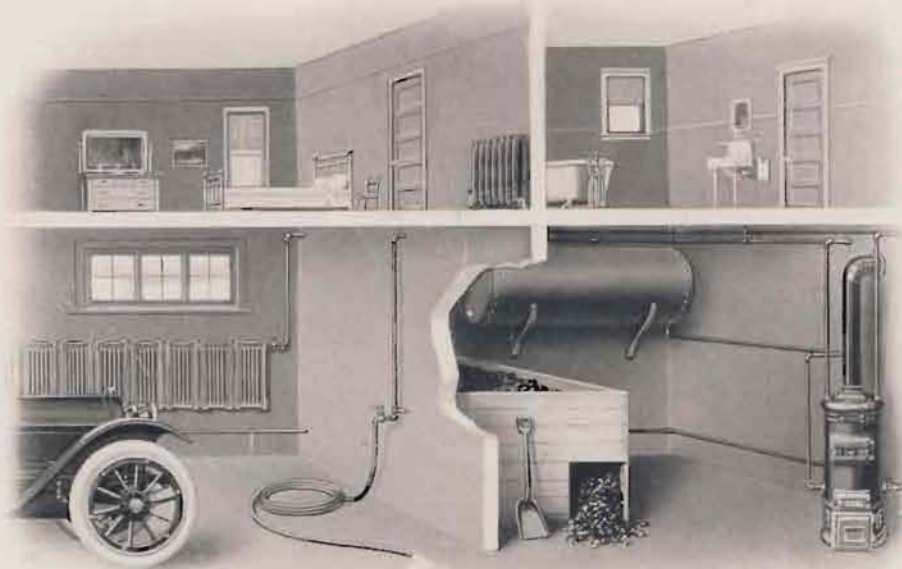
Heating of Garages

CHAUFFEURS and attendants, who work around a motor car, are much more likely to give the car the careful attention it needs if they work in comfortable surroundings. Many needed repairs and much important cleaning of engine parts are likely to be put off or neglected, if the work must be done with cold-benumbed fingers in a chilly, barn-like garage. At best, under such conditions, the work is probably done in a hurried, careless manner, which is sure to prove detrimental to the car and expensive to the owner. Further, when a car is brought in from a day's service in rain or snow, it is much easier to clean and polish it in a warm atmosphere.

Small individual garages are heated to advantage by AMERICAN PEERLESS Wall Radiators as a part of the IDEAL Garage Hot Water Heating Outfit or when supplied with steam or hot water from another building.

Many of the large service garages throughout the United States are equipped with AMERICAN PEERLESS Wall Radiators. Ask for special pamphlet on "Garage Heating."

In the great automobile factories VENTO Blower systems as auxiliaries are required for testing rooms and varnish-drying rooms.



Two-story garage with quarters for chauffeur. Plenty of heat and hot water for washing the cars and for toilet purposes from the IDEAL Hot Water Supply Boiler. Safe, dependable, economical.

Many Applications and Combinations

IN factories AMERICAN PEERLESS Wall Radiators serve many purposes other than heating. Through their use liquids in tanks may be kept at any desired working temperatures. Pipe coils in such tanks often are quickly destroyed by chemical action which Cast Iron Wall Radiators resist. Wall Radiators are much used in drying rooms of all kinds.



AMERICAN PEERLESS Wall Radiators used to heat creosote in a railroad tie creosoting tank.



AMERICAN PEERLESS Wall Radiators below windows and along skylights in the Centaur Film Co. building—13,600 square feet of glass surface.

Yachts, houseboats, boat-houses, public and private garages, small summer cottages, lodges, mine and factory wash-houses, chemical works and other places where acid fumes are in evidence, are a few of the many places that have limited spaces for heating surface. They can best be heated by AMERICAN PEERLESS Wall Radiators.

The elastic feature of AMERICAN PEERLESS Wall Radiators should not be overlooked. Changes of tenants often necessitate changes of partitions to make rooms of different sizes. If Wall Radiators have been used, their number may easily be increased or decreased to meet the new demands.



AMERICAN PEERLESS Wall Radiators used in large winter garden or greenhouse. Note great expanse of glass.

Factory Ventilation

SOME classes of manufacture require blower equipment to insure proper ventilation and humidity. This may include the entire heating equipment or it may be installed in combination with AMERICAN PEERLESS Wall Radiators as direct heating surface.

Some manufacturing processes develop moisture much in excess of that of the carrying capacity of the air under normal conditions. Such is the case in the manufacture of paper. Here a blower system, including VENTO Hot Blast Heaters, is required to take up the excessive moisture. Some kinds of factories—particularly textile mills—require varying ranges of humidification and humidity control, and such conditions can be effected only through the installation of blower systems. If interested in this type of heating and ventilation, send for our special Vento Catalog, which deals exhaustively with this subject.

Foundries, roundhouses or any manufacturing plants whose processes evolve excess gases, fumes, dust or moisture, should be equipped with a fan system in conjunction with Vento Hot Blast Heaters. Usually they should, in addition, include AMERICAN PEERLESS Wall Radiators as direct heating surface.

Buildings in which great numbers of employees are crowded into limited space also should be fitted with fan systems or combination systems, including Vento Hot Blast Heaters with AMERICAN PEERLESS Wall Radiators as direct surface. This applies to all buildings in which a considerable number of people congregate, such as schools, churches, court houses and auditoriums. Installation of a fan system is in many cases not optional with the owner, but is a requirement of the City or State law which should be studied carefully with a view to avoiding preventable annoyance and expense later on. The type, dimensions, location and exposure of building, and the kind of manufacture, should be taken carefully into account in choosing the type of heating plant.

Exhaust ventilation, including a fan system, makes a satisfactory adjunct for use in connection with toilets, coat rooms, rest or welfare rooms and crowded offices.

The heating requirements of a manufacturing plant or other large building are most satisfactorily and economically determined under the supervision of a consulting engineer. The appointment of a competent consulting engineer to co-operate with the architect during preparation of the building plans and specifications is an act of wisdom on the part of the owner. Such action insures him not only the heating plant best suited to his requirements, but also the one involving the greatest economy in first cost as well as economy in operation. It also makes possible the installation of the heating plant simultaneously with the construction of the building—preventing costly delays in the occupancy of the building.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



AMERICAN PEERLESS Wall Radiators in Finishing Room of Liberty Motor Car Co., Detroit, Mich.



160,000 square feet of AMERICAN PEERLESS Wall Radiators used in plant of Fisher Body Corporation, Detroit, Mich.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



There are 60,000 feet of AMERICAN PEERLESS Wall Radiators in the plant of Central Supply Co., Saginaw, Mich.



AMERICAN PEERLESS Wall Radiators in plant of American Brake Shoe & Foundry Co., Erie, Pa.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



Interior of factory of Philadelphia Textile Machinery Company at Philadelphia. Note the effective placing of AMERICAN PEERLESS Wall Radiators in skylights.



Another view in Philadelphia Textile Machinery Company's factory for building drying machinery. AMERICAN PEERLESS Wall Radiators are placed effectively, yet entirely out of the way of workers and machinery.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



Interior view of plant of Hood Rubber Company, at Watertown, Mass., showing AMERICAN PEERLESS Wall Radiators placed in skylights and under windows.



This is a typical floor and heating arrangement of AMERICAN PEERLESS Wall Radiators in the building of the Coca-Cola Company, at Baltimore. Over 60,000 square feet used.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



A portion of one floor in factory of Excelsior Motor Mfg. & Supply Co., Chicago. 36,000 square feet of AMERICAN PEERLESS Wall Radiators supported on ARCO Adjustable Brackets are installed in this modern reinforced concrete building. Note how these radiators conform to the design of this fire-proof construction.



View of an effective and compact installation of AMERICAN PEERLESS Wall Radiators on ARCO Adjustable Brackets around a window, in factory of Merk & Co., Rahway, N. J. Note how the radiators are held up off the floor and close to the wall. Such distribution of radiation by means of pipe coil would hardly be feasible.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



Garage of the National Electric Lamp Company, at Cleveland, Ohio, heated with AMERICAN PEERLESS Wall Radiators, arranged in separate units for heat control. Forced circulation of hot water with overhead supply and return.



AMERICAN PEERLESS Wall Radiators in the new building of the Pierce-Arrow Company, Long Island City. Forced Hot Water circulation. The radiators fit snugly against the walls, saving space and not obstructing the light.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



A forceful example of AMERICAN PEERLESS Wall-installation in the plant of the Hinde & Dausch Paper Company, Sandusky, Ohio.



Color proving pressroom of The Curtis Publishing Company, Philadelphia, showing fresh air ducts (A) and delivery of warm air (B) from VENTO Heaters; also showing how thoroughly AMERICAN PEERLESS Wall Radiators provide heating surfaces under large side and mansard windows which insure ample light for exacting operations. A good example of combined direct and indirect heating.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



A six tier installation of AMERICAN PEERLESS Wall Radiators (in 42 sections) to maintain a high temperature in Burns' Hamman Baths, San Francisco. Compared with pipe coils (of same area) they occupy 296 square feet less wall surface, and are much more attractive in appearance.



The new buildings of Thomas A. Edison, Inc., Orange, N. J., are equipped with AMERICAN PEERLESS Wall Radiators, as they filled the exacting requirements of the builder of this great scientific factory and research institution.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



Yacht "Natoma." Owner, C. H. Foster. 120 ft. long; 17 ft. beam; twin screw. Heated with IDEAL Premier Boiler and AMERICAN PEERLESS Wall Radiators.



Oil Barge No. 5 of Pure Oil Co., New York, equipped with AMERICAN PEERLESS Wall Radiators. Their use herein is an aid to "Safety First" heating.



Many thousands of square feet of AMERICAN PEERLESS Wall Radiation were used in the vessels of the Emergency Fleet Corporation during the war. Picture shows AMERICAN PEERLESS Wall Radiators made of special non-magnetic material, used in over a hundred steamers built by the Submarine Boat Corporation at Port Newark, New Jersey.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



View of portion of River Works of General Electric Co., at West Lynn. Equipped with AMERICAN PEERLESS Wall Radiators.



Machine Shop of Baldwin Locomotive Works, at Eddystone, Pa. Equipped with AMERICAN PEERLESS Wall Radiators.

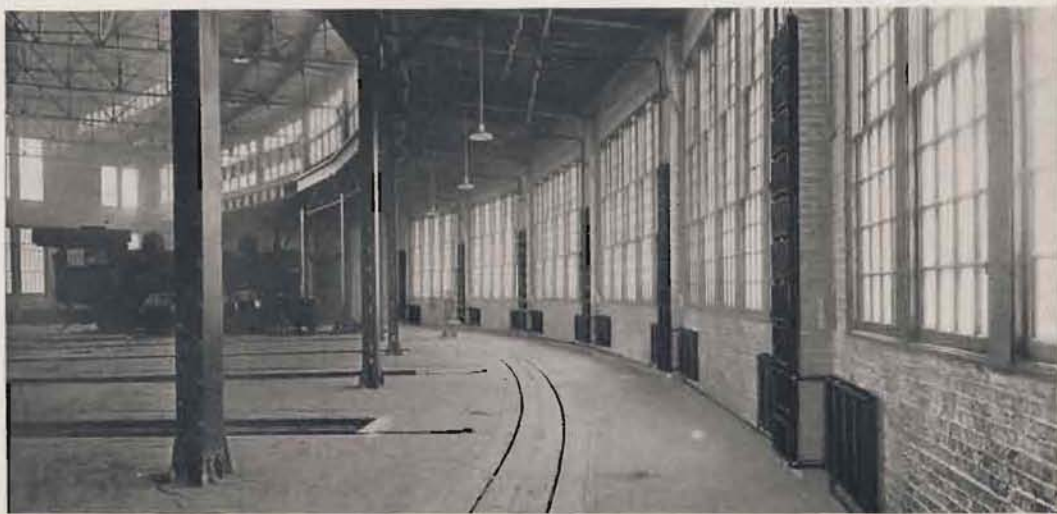


AMERICAN PEERLESS Wall Radiators installed in the plant of the Diehl Manufacturing Co., at Elizabeth, N. J. This installation is exceedingly simple and is typical of the arrangement of wall radiators in numerous factory buildings.

Some Notable Installations



Illinois Central R. R. Roundhouse. Note the use of AMERICAN PEERLESS Wall Radiators, with ARCO Adjustable Brackets under windows and in the pits for cleaning cars of ice and snow. See details of the space-saving feature on page 11.



Part of the Roundhouse of the Illinois Central R. R. at Centralia, Illinois, showing AMERICAN PEERLESS Wall Radiators ten high on the pilasters, with additional sections on the wall, each side. Out of way and effective near windows.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



Paramount Knitting Company, Kankakee, Illinois. Equipped with AMERICAN PEERLESS Wall Radiators. Compact arrangement allows for greatest floor space, light and freedom for workers.



Garage at Nottingham, England. Heated with AMERICAN PEERLESS Wall Radiators, and showing a neat way of connecting up flow and return piping around pilasters.



Typical floor of Hyatt Roller Bearing Company's factory at Harrison, N. J., showing 756 square feet of AMERICAN PEERLESS Wall Radiators in single run of seven units of 12 sections each—with one supply and one return connection—operating under vacuum system and with an initial pressure of $1\frac{1}{2}$ pounds.

Some Notable Installations



AMERICAN PEERLESS Wall Radiators in plant of The Bullard Machine Co., Bridgeport, Conn., wherein the nature of the operations requires a steady temperature of 70 degrees.



Installation of AMERICAN PEERLESS Wall Radiators in plant of Muirson Label Corporation at San Jose, Calif., showing a very satisfactory method of counteracting the cooling effect of a saw-tooth roof, insuring even heat over a large floor area.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



New York Dock Company Buildings, Brooklyn, N. Y.
The rented warehouses lighted by large areas of
glass surface are warmed by AMERICAN
PEERLESS Wall Radiators.



Hyatt Roller Bearing Co., Harrison, N. J. Heated
with AMERICAN PEERLESS Wall Radiators on
Vacuum Heating System
throughout.



AMERICAN PEERLESS Wall Radiators in Cutting Room of Jennings Mfg. Co., at Harrisburg, Pa.

Some Notable Installations



Willys-Overland plant at Toledo, Ohio. This most modern and marvelous factory is equipped with 540,000 square feet of AMERICAN PEERLESS Wall and Direct Radiators. An equally large amount of these Radiators are used in the plant and assembling factories of the Ford Motor Co.; also used by the Pierce-Arrow Co., Packard Motor Car Co., and other auto manufacturers.



Plant of the Hood Rubber Company, Watertown, Mass., the modern buildings of which contain a large amount of AMERICAN PEERLESS Wall Radiators. These Radiators are also used in many of the modern buildings of the Goodyear Tire & Rubber Co. and other rubber manufacturing companies.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



Plant of the Nash Motor Company (formerly Thos. B. Jeffery Company), Kenosha, Wis., which is equipped with a vast quantity of AMERICAN PEERLESS Wall Radiators. Many other large automobile factories in the United States are also thus equipped.



orks of the Firestone Tire and Rubber Company, Akron, Ohio. Note that more than half the wall surface is filled with windows—a tremendous area of glass surface to insure ample lighting for particular manufacturing processes. The constant chilling effects of this surface are offset by about 150,000 square feet of AMERICAN PEERLESS Wall Radiators supplied by a forced circulation of hot water—overhead delivery.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



Many new buildings of this plant of Thomas A. Edison, Inc., at West Orange, N. J., erected after their great fire, are equipped with AMERICAN PEERLESS Wall Radiators, and offer excellent testimony to the value, economy and safety of these heating surfaces.



J. I. Case Threshing Machine Co. Works, at South Racine, Wis., are equipped with AMERICAN PEERLESS Wall Radiators, which are cleverly distributed to occupy a minimum of the valuable floor space.

AMERICAN PEERLESS WALL RADIATORS

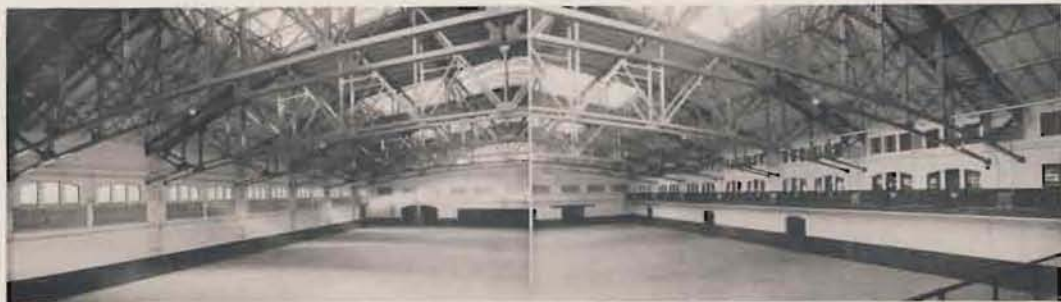
Some Notable Installations



This far-stretching plant of the Eddystone Ammunition Corporation, at Eddystone, Pa., is equipped with many thousands of square feet of AMERICAN PEERLESS Wall Radiators, and offers exceptional proof of the easy-erection and space-saving qualities of this form of modern heating surfaces.



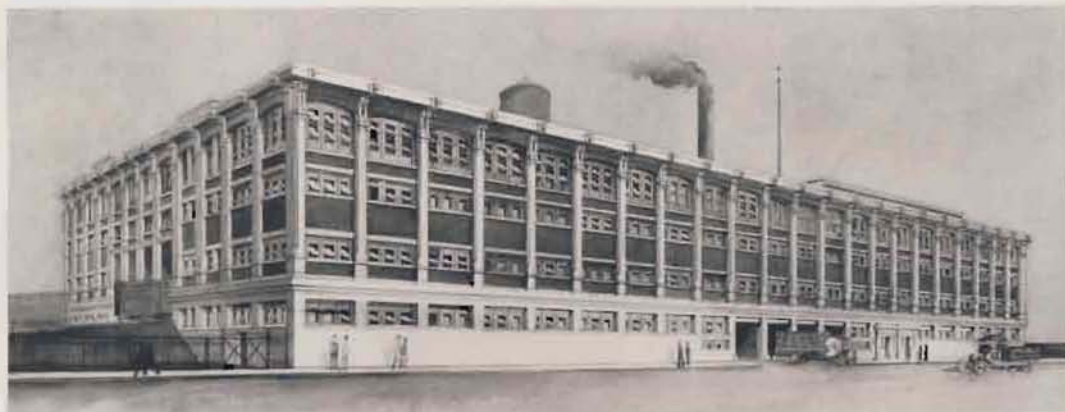
Lehigh Valley R. R. Terminal, Pier 8, North River, New York, is equipped with AMERICAN PEERLESS Wall Radiators, which stand up under all the rough conditions implied in freight transfers from both land and water.



Allston State Armory, Allston, Mass., largest cavalry armory in United States. Heated with 27,000 square feet of AMERICAN PEERLESS Wall and Direct Radiators.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



This very large factory of the American Can Company, at Maywood, Ill., equipped with AMERICAN PEERLESS Wall Radiators.



Warehouse of the great Department Store of H. Snellenburg & Co., Philadelphia, equipped with AMERICAN PEERLESS Wall Radiators.



Coca-Cola Building at Baltimore, Md., equipped with AMERICAN PEERLESS Wall Radiators. For erecting view, see page 43.

AMERICAN PEERLESS WALL RADIATORS

Some Notable Installations



Pierce-Arrow Company Assembling Plant, Long Island City, N. Y. Heated with AMERICAN PEERLESS Wall Radiators. Forced Hot Water Circulation.



Exhibition (Centennial) Hall, Philadelphia. Equipped with AMERICAN PEERLESS Wall Radiators, saving space, yet providing ample warmth.



Excelsior Motor Mfg. Supply Co., Chicago. Main Building, 600 x 132, by six stories high. Built of reinforced concrete—no wood used in any part of the building. Heated with AMERICAN PEERLESS Wall Radiators and VENTO Hot Blast Heaters.



Standard Oil Company Building, San Francisco. Fuel oil is used to heat this ten-story office building. Equipped with IDEAL Sectional Boilers, AMERICAN PEERLESS Wall Radiators and VENTO Blast Heaters.

AMERICAN PEERLESS WALL RADIATORS

List of Notable Installations

MORE than twenty thousand installations of AMERICAN PEERLESS Wall Radiators have been made in about every form or class of structure or place that can be imagined. This large number of shipments precludes the showing of a complete list here, but we offer the following representative installations. In them more than seven million square feet of AMERICAN PEERLESS Wall Radiators are used. Special list of installations in any specified locality will be supplied on application.

General Electric Company	Albany, Erie and Lynn
Hood Rubber Company	Watertown, Mass.
Crucible Steel Co. of America	Harrison, N. J.
E. W. Bliss Company	Brooklyn, N. Y.
Hyatt Roller Bearing Company	Harrison, N. J.
Thomas A. Edison (Inc.)	West Orange, N. J.
Colgate & Company	Jersey City, N. J.
American Brake Shoe & Foundry Company	Erie, Pa.
Hewitt Rubber Company	Buffalo, N. Y.
Schoellkopf Aniline & Chemical Works	Buffalo, N. Y.
Morrow Manufacturing Company	Elmira, N. Y.
Lunkenheimer Co. Factory Building	Cincinnati, Ohio
Heekin Can Company	Cincinnati, Ohio
Eddystone Ammunition Corp. Plant	Eddystone, Pa.
Firestone Tire and Rubber Co.	Akron, Ohio
Big Four Railroad Plant Shops	Beech Grove, Ind.
Fort Wayne Electric Works	Fort Wayne, Ind.
Illinois Central Railway Shops	Centralia, Cherokee, Memphis, Fort Dodge
Goodyear Tire & Rubber Company	Akron, Ohio
Standard Welding Company	Cleveland, Ohio
Cleveland Akron Bag Company	Cleveland, Ohio
Cleveland Foundry Company	Cleveland, Ohio
National Electric Lamp Company	Cleveland, Ohio
The W. Bingham Company	Cleveland, Ohio
Cleveland Railway Company	Cleveland, Ohio
Epson Nut Company	Cleveland, Ohio
Willys-Overland Company	Toledo, Ohio
Warren City Tank & Boiler Company	Warren, Ohio
Eastman Kodak Company	Rochester, N. Y.
Schleit Manufacturing Company	Syracuse, N. Y.
Vacuum Oil Company	Rochester, N. Y.
Excelsior Motor Manufacturing & Supply Co.	Chicago, Ill.
Merk & Company	Rahway, N. J.
Pierce-Arrow Company	Long Island City, N. Y.
Hinde & Dausch Paper Company	Sandusky, Ohio
Curtis Publishing Company	Philadelphia, Pa.
Paramount Knitting Company	Kankakee, Ill.
Nash Motor Company	Kenosha, Wis.
J. I. Case & Company	Racine, Wis.
Lehigh Valley Railroad Terminal	New York, N. Y.
Standard Oil Company	San Francisco, Cal.
Ford Motor Company	Detroit, Mich.
Buick Motor Company	Flint, Mich.
Chevrolet Motor Company	Flint, Mich.
Detroit Shipbuilding Co.	Detroit, Mich.
Fisher Body Corp.	Detroit, Mich.
Central Foundry Company	Saginaw, Mich.
Lincoln Motor Company	Detroit, Mich.
Frederick Stearns & Co.	Detroit, Mich.
Liberty Motor Car Company	Detroit, Mich.
Cadillac Motor Car Co.	Detroit, Mich.
Union Switch & Signal Company	Swissvale, Pa.
P. & L. E. R. R. Shops	McKees Rocks, Pa.
Pennsylvania R. R. Shops	Pitcairn, Pa.
Manistique High School	Manistique, Mich.
Oneida Motor Truck Co.	Green Bay, Wis.

List of Notable Installations—Continued

Four Lakes Ordnance Co.	Madison, Wis.
Briggs & Stratton Co.	Milwaukee, Wis.
Pierce Motor Works	Racine, Wis.
Hummel & Downing Co.	Milwaukee, Wis.
Nunn & Bush Shoe Co.	Milwaukee, Wis.
Paramount Knitting Co.	Waupun, Wis.
Ontonagon High School	Ontonagon, Mich.
Gold Medal Camp Furniture Co.	Racine, Wis.
Van Dyke Knitting Co.	Milwaukee, Wis.
Milwaukee Lace Paper Co.	Milwaukee, Wis.
Curler-Hammer Co.	Milwaukee, Wis.
Fairbanks-Morse Mfg. Co.	Beloit, Wis.
International Harvester Co.	Milwaukee, Wis.
The Palmolive Company	Milwaukee, Wis.
General Motors Co.	Janesville, Wis.
Y. M. C. A.	Milwaukee, Wis.
Ladish Stratton Milling Co.	Milwaukee, Wis.
Downing Box Co.	Milwaukee, Wis.
Aluminum Goods Mfg. Co.	Manitowoc, Wis.
Lloyd Mfg. Co.	Menominee, Mich.
Johnston Candy Co.	Milwaukee, Wis.
The Haynes Automobile Company	Kokomo, Ind.
General Electric Company	Fort Wayne, Ind.
The Stutz Motor Corporation	Indianapolis, Ind.
The Diamond Chain Company	Indianapolis, Ind.
American Can Company	Indianapolis, Ind.
Diehl Manufacturing Company	Elizabeth, N. J.
Second Regiment Armory	Chicago, Ill.
Gandy Belting Company	Baltimore, Md.
Coca-Cola Building	Baltimore, Md.
Baldwin Locomotive Works	Eddystone, Pa.
H. Snellenburg & Company	Philadelphia, Pa.
Harris Building	Philadelphia, Pa.
Philadelphia Textile Machinery Co.	Philadelphia, Pa.
Welsbach Company	Gloucester, N. J.
Allston Armory	Allston, Mass.
Payne Furniture Company	Boston, Mass.
Bankers Realty Trust Building	Boston, Mass.
New York Dock Company Building	Brooklyn, N. Y.
Sperry Gyroscope Company	Brooklyn, N. Y.
Canadian Car & Foundry	Kingsland, N. J.
Scoville Manufacturing Company	Waterbury, Conn.
Waterbury Manufacturing Company	Waterbury, Conn.
Adriance Machine Company	Brooklyn, N. Y.
Sprague Electric Company	Bloomfield, N. J.
Aluminum Goods Manufacturing Company	Newark, N. J.
Great Lakes Naval Training Station	Lake Bluff, Ill.
American Can Company	Maywood, Ill., and Brooklyn, N. Y.
Montgomery Ward & Company	Chicago, Ill.
Western Electric Company	Chicago, Ill.
Fisher Building	Detroit, Mich.
Studebaker Corporation	Detroit, Mich.
Packard Motor Company	Detroit, Mich.
Morgan & Wright Company	Detroit, Mich.

Uses of Wall Radiators

AMERICAN PEERLESS Wall Radiators for heating, cooling, drying or curing are used in:

Arcades	Fire Engine Houses	R. R. Round Houses
Art Galleries	Freight Houses	R. R. Waiting Rooms
Asylums	Garages	Sanitariums
Auditoriums	Greenhouses	School Buildings
Automobiles	Gymnasiums	Ships' Cabins
Battleships	Hotels	Skating Rinks
Barns	Interlocking R. R.	Steamships
Book Binderies	Towers	Storage Warehouses
Bowling Alleys	Laundries	Stores
Breweries	Libraries	Street Car Barns
Churches	Machine Shops	Sun Rooms of
Commission Ware-	Mills	Hospitals
houses	Movies	Sun Rooms of Hotels
Conservatories	Oil Refineries	Tanks, Vats, etc.
Depots	Offices and Banks	Tanneries
Distilleries	Photo Galleries	Theatres
Dock Offices	Post-offices	Tobacco Barns
Dry Kilns	Printing Houses	Turkish Baths
Dyeing Works	Restaurants	Warehouses
Factories	Residences	Weighing Rooms
Fire Dept. Towers	Rope-walks	Yachts

This Company welcomes at all times requests for special information covering the heating, drying, cooling and ventilating needs of these and other classes of buildings or processes.

Inquiries and correspondence cordially invited.

Engineer, Architect, Contractor and Owner

A REVIEW of the foregoing pages of this catalogue, we believe, brings out clearly and forcefully the value of AMERICAN PEERLESS Wall Radiators in many situations where their use has not been apparent previously.

Engineers find the book one of constant usefulness because of its efficiency tables and its description and illustration of the various methods for installation and connection of AMERICAN PEERLESS Wall Radiators.

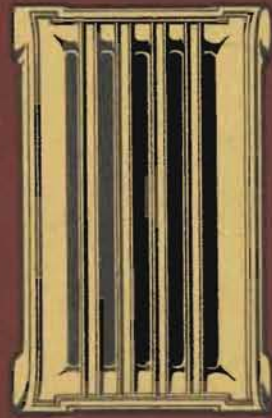
Architects find examples here of a great variety of installations in almost every type of building. To them, the space saving advantages of AMERICAN PEERLESS Wall Radiators, their fine appearance and their value as permanent fixtures, are of particular appeal.

The Contractor who installs AMERICAN PEERLESS Wall Radiators finds that his labor cost is much less than with pipe coils. The efficiency of AMERICAN PEERLESS Wall Radiators is always dependable. When the installation is completed he finds a satisfied Architect and Owner, and he himself cannot help but be pleased with his work. Every Contractor becomes a staunch friend and supporter of AMERICAN PEERLESS Wall Radiators after the first installation.

Owners who have in view a permanent investment should know that an installation of AMERICAN PEERLESS Wall Radiators will last without repairs longer than the building; that there will be no depreciation; that their appearance always will be pleasing. Should he decide to dispose of his building he will find that AMERICAN PEERLESS Wall Radiators appeal to the prospective buyer much more strongly than pipe coils.

The American Radiator Company submits this new catalogue of AMERICAN PEERLESS Wall Radiators to the Engineer, Architect, Contractor and Owner with confidence in the accuracy of its data and in the reliability of the information contained herein. The company knows that the everyday use of these radiators bears out all claims made for them, and asks your careful consideration of the merits and usefulness of the AMERICAN PEERLESS Wall Radiator.

Scores of competent Engineers are maintained at our Department of Research and at our Branches. Their services are available for information and advice not only on AMERICAN PEERLESS Wall Radiators, but also on the application and installation of any and all of our products. We invite prospective users to avail themselves of their services.



AMERICAN RADIATOR
COMPANY