

*Summer
the Year
around*



HEAT
WITH
Streamaire
COPPER
CONVECTORS

YOUNG

YOUNG RADIATOR COMPANY
RACINE, WIS., U. S. A.



CATALOG No. 4037

THE FACTS ABOUT
Convection Heat

IT'S CLEAN . . . INVIGORATING . . . HEALTHFUL

That is the reason Young STREAMAIRE Convectors, the convectors with copper fins metallically bonded to large elliptical copper tubes, are so popular. The increased volume of warm air which circulates through Young STREAMAIRE Convectors maintains a more pleasant, even temperature in any room. There is less difference between ceiling temperature and floor temperature because the air is kept in constant circulation. Even when standing or sitting close to a Young STREAMAIRE Convector there is no feeling of being overheated, such as is experienced in the case of radiator heated rooms. Whether concealed in the wall or used as free standing cabinets, the results are the same, so for comfort and appearance use Young STREAMAIRE Convectors.

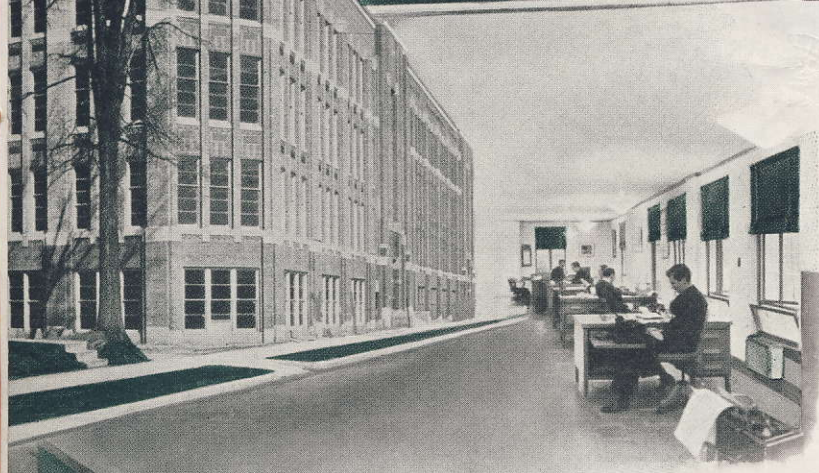
Convectors are often recessed in the wall under windows.



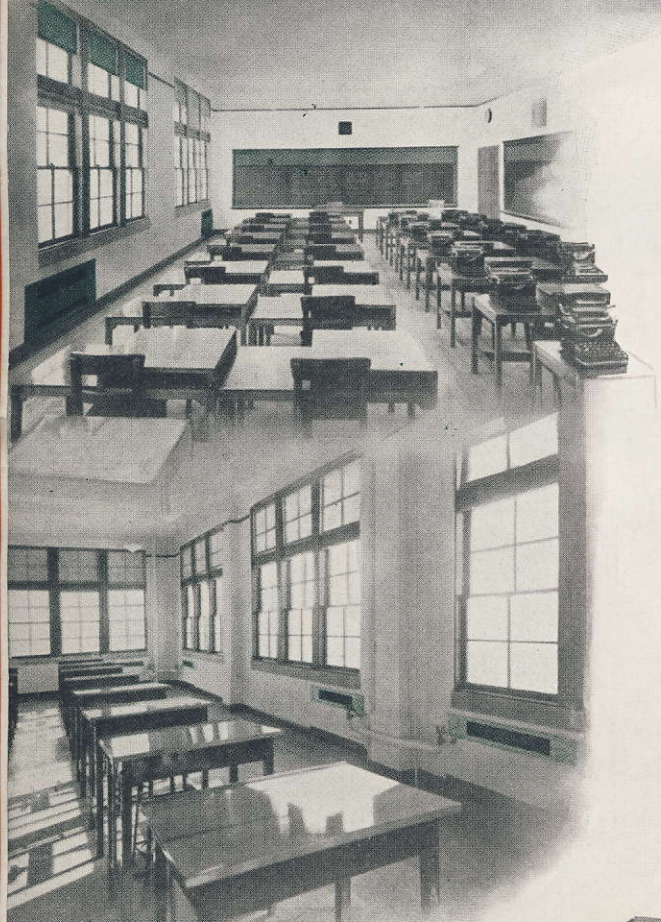


Only a small percentage of the civilized world lives in climates so mild that artificial heat is not required for at least part of the year. Our forefathers used fireplaces to supply heat to their homes during the winter months. These were later supplanted by stoves which were, in many instances, set up in the middle of the living room floor. The stove was an unsightly object, generally taken out in the spring and set up again in the fall. With all its disadvantages, however, the stove was cleaner and more efficient than the fireplace. The next development, the hot air furnace, was again an improvement over the stove. The first of these hot air furnaces were merely stoves set up in the basement with sheet metal housings around them and one main duct leading to the central part of the house. This was a step forward, but shortly after the hot air furnace, the gravity hot water and steam heating systems came into use. These systems are still operating

in many homes, using direct radiators of steel or cast iron to transmit heat to the various parts of the building.

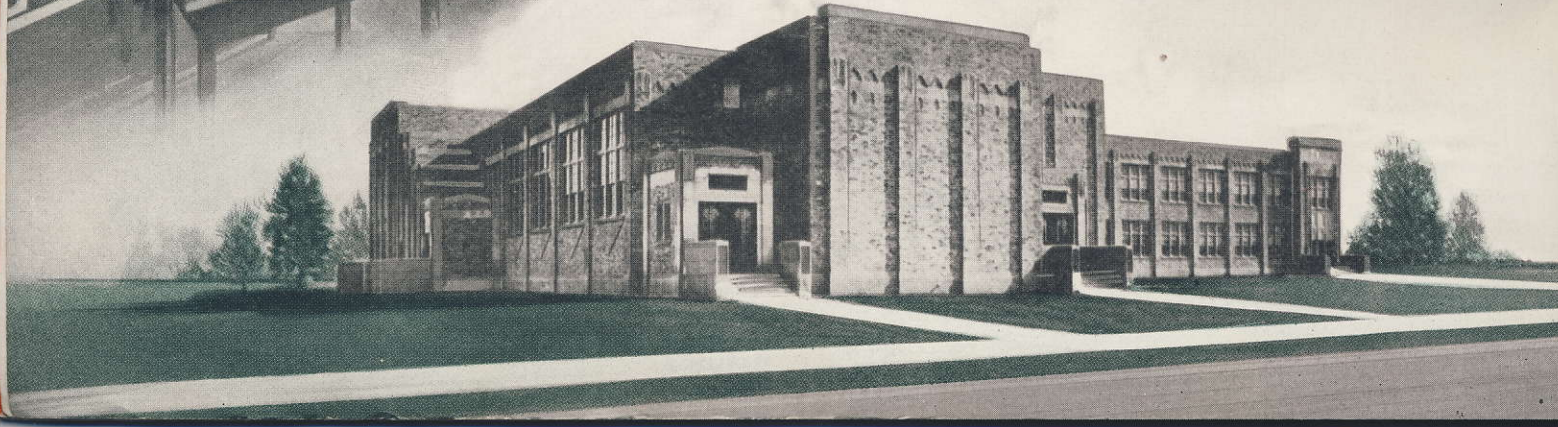



Radiators, however, have not been entirely satisfactory. The heat from steam radiators is, in many cases, too intense. They take up valuable floor space and cause much dirt to gather on the walls and ceiling. Consequently, a yearly decorating job is often a necessity. Radiator covers may be used, and help a great deal to eliminate dirty walls, but they also take up additional floor space and are so high priced that many people cannot afford to buy them. The solution to the problem is a different type of radiator entirely, and as a result, the convection radiator, or "Convector" as it is popularly known, has been developed.



The Convectors offer a new phase of the old principle of conveying heat by convection. This principle is based on the idea of heating air, causing it to circulate by gravity around the space to be heated. Copper, of all metals, was selected for the heating element because of its high rate of heat transfer and its corrosion resisting qualities. Heat from the water or steam passing through the elliptical copper tubes is conducted throughout the entire fin, or extended surface. Hence there is created a continual circulation of air. The air is drawn through the bottom opening or grille in the convector, heated as it passes through the core, and literally forced through the top grille out into the room. The enclosure is as much a factor in the successful operation of the convector as is the core, for it provides a stack action and forces the air to pass through the heating element. Users find that convectors offer a flexibility and ease of control not experienced with the old-fashioned radiator.

STREAMAIRE Convectors are used with all types of architecture and go with any interior decorating scheme.





Young STREAMAIRE Convectors are today installed and operating in buildings of practically all types and styles. Many residential, apartment and office buildings, as well as schools, theatres, hospitals, hotels and institutions are being heated with Young STREAMAIRE Convectors. It makes no difference what type of heating system is used, as STREAMAIRE Convectors operate equally well on two-pipe steam, vapor, vacuum, one-pipe steam, gravity hot water or forced hot water systems.

The Architect is in favor of using STREAMAIRE Convectors because they give him the opportunity to develop his plans in a more artistic manner, giving his main thoughts to the appearance of the various interiors he is designing. With the large variety of enclosures available, the Architect will have no difficulty selecting a type which best meets his requirements. Free standing cabinets, wall-hung cabinets or enclosures that can be partially or totally recessed are available in a number of widths, lengths and heights to meet almost any space requirement.

The Heating Engineer likes STREAMAIRE Convectors because of their mechanical construction and operation, particularly so when used in a heating system automatically controlled. STREAMAIRE Convectors respond instantly to thermostatic control. When heat is required there is no waiting for a great mass of metal to warm up before reaching full heating capacity; neither is there any overheating because of the heat given off by this same mass of metal after the thermostat cuts off the heat supply. Even temperatures and efficient operation appeal to any Engineer designing a heating system.

The Building Owner is also in favor of using STREAMAIRE Convectors for the same reasons that appeal to the Architect and Engineer. Furthermore, the owner is the one who really appreciates the clean, even heat from STREAMAIRE Convectors with the resulting fuel economy and increased comfort.

Air conditioning is making rapid strides in the residential field and is demanding copper convectors for use with the "Split System" type of installation. These systems use an air conditioning unit, consisting of a fan, air filter, heating surface and humidifying device operating in connection with a steam or hot water boiler to heat part of the building, taking care of the balance of the heat loss with convectors or direct radiators. Most of these air conditioning units use copper heating elements which in connection with the copper heating elements in Young STREAMAIRE Convectors make the balancing and control of the system comparatively easy. Air circulation, an important part of air conditioning, is also a main feature of STREAMAIRE Convectors.

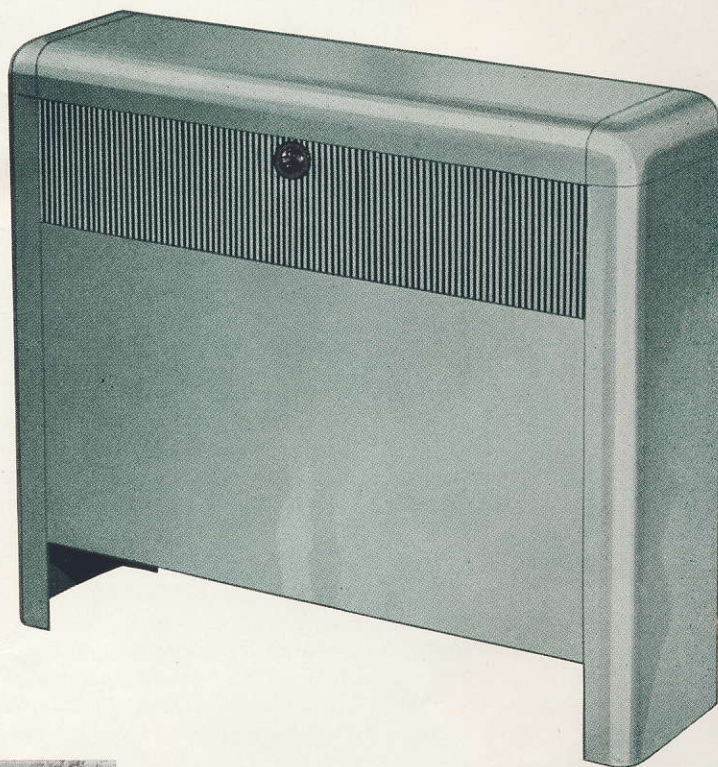
STREAMAIRE Convectors are modern, sensitive to control, and add to the appearance of any room.



Free Standing

CABINET CONVECTORS TYPE C

Free Standing enclosures are modern yet conservative in design, suitable for installation in any type of home or industrial building. They are simple and inexpensive to install, for no wall recesses are necessary. When the hot water or steam heating plant in an old building is being modernized, free standing convectors can be installed in the same location as the old radiators without making any piping changes. These enclosures are designed to harmonize with any type of architecture and any scheme of interior decoration. They give clean, temperate heat, and will totally eliminate the smudge and dirt on walls and ceilings caused by old style radiators.

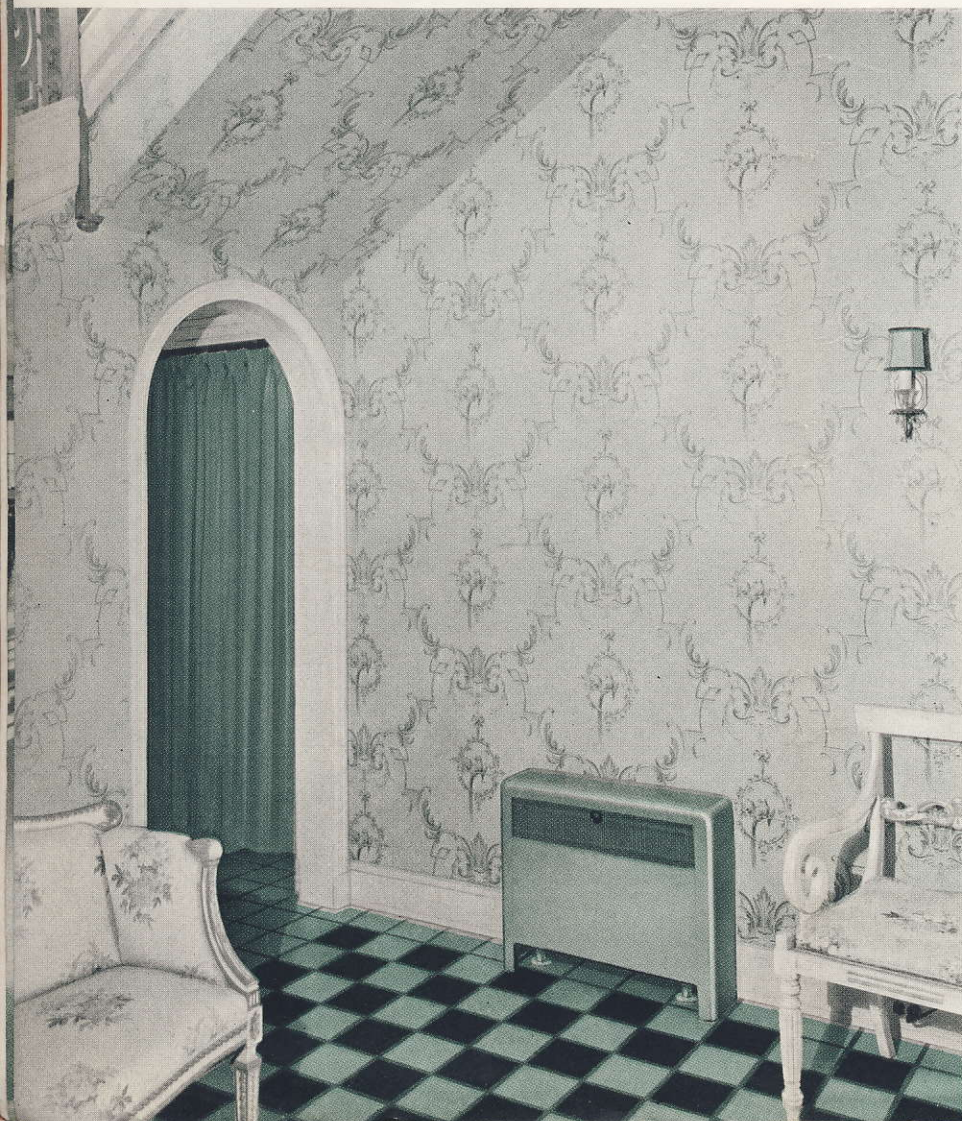


Young Free Standing Cabinet Convectors are available in a number of widths, lengths and heights, as shown in Drawings No. 3 and 4 on Page 16. They are also available with front discharge grilles or top discharge grilles as shown in Drawing No. 2 on Page 15. Heating capacities in square feet of equivalent steam radiation are given in Table No. 1 on Page 12. Heating capacities when used in connection with gravity or forced hot water heating systems are shown in Table No. 3 on Page 13.

On all cabinets with front discharge grilles the new STREAMAIRE Grille is regularly furnished, with the Lattice and Bar Grille an optional choice, with no difference in price. Dampers can be furnished at a slight additional charge. All cabinets with top discharge grilles are regularly furnished with Lattice Grilles.

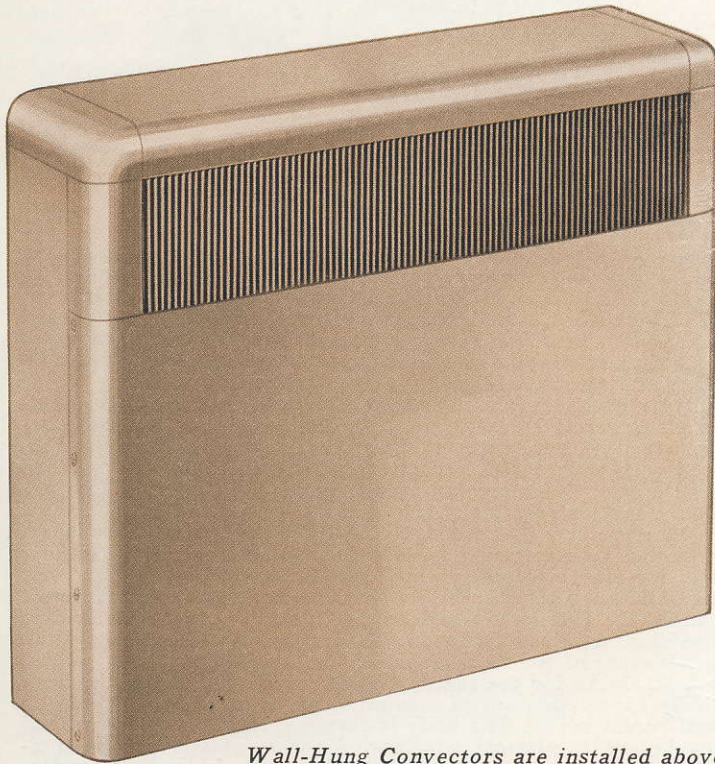
All enclosures are made from heavy gauge steel, thoroughly reinforced and braced, to give additional strength. All corners and reinforcement strips are made with special dies. The fronts, backs and sides are made from No. 18 U. S. gauge steel. The entire assembly is welded together making a strong, solid enclosure. A prime coat of paint is applied to all units at the factory.

*A Free Standing Cabinet Convector
installed in a reception hall.*



Wall-hung

CABINET CONVECTORS TYPE W



This type of enclosure is particularly adaptable for use in hospitals, institutions, office buildings and schools where the floors are scrubbed regularly. These units are fastened to the wall leaving approximately six inches between the bottom of the enclosure and the floor, making the entire space beneath the unit accessible for quick cleaning.

The nominal heights of Wall-Hung Convector on which their heating capacity is based is $4\frac{3}{4}$ inches greater than the actual height.

The sizes in which Wall-Hung Convector are manufactured are shown in Drawings No. 5 and 6 on Page 17. They are available with front discharge grilles or top discharge grilles as shown in Drawing No. 2 on Page 15. Heating capacities for steam are shown in Table No. 1 on Page 12, and for hot water in Table No. 3 on Page 13.

The construction of the Wall-Hung Cabinet is similar to that of the free standing enclosure. The Wall-Hung Cabinets have no legs and the front panels are made removable for ease in fastening to the wall. There is also a heavy channel welded to the back of the cabinet as shown in detail on Page 17, to brace the enclosure and insure a solid wall mounting.

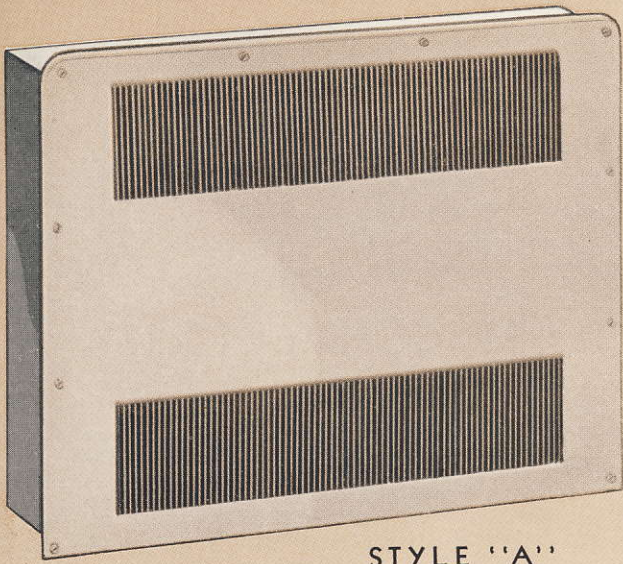
Wall-Hung Convector are installed above the mop board to facilitate easy cleaning.



Fully Recessed

CONVECTORS

TYPE R



STYLE "A"



STYLE "B"

The Fully Recessed Convectors is one of the most popular types used in all buildings where recesses for concealing convectors can be installed. The entire depth of the recess from the face of the plaster to the back of the recess is available for the installation of the convectors. This means that a narrower recess can be used than normally required with the plastered-in type of convectors or a larger convectors can be installed in the same space giving a greater heat output.

Installation details and dimensional drawings of fully recessed enclosures are shown in Drawing No. 7 on Page 18. Fully recessed convectors are made in two styles, as shown in Drawing No. 2 on Page 15. Style "A" with both outlet and inlet grilles and Style "B" with an outlet grille only and a bottom cutout for the air inlet. These enclosures are available with any one of the three grille designs shown on Page 11. The new STREAMAIRE Grille is regularly furnished, but the Lattice or Bar Grille will be furnished if ordered. Heating capacities for steam are shown in Table No. 1 on Page 12, and hot water capacities are given in Table No. 3 on Page 13.

The enclosure for the Fully Recessed Convectors is made in two parts, the body or recess lining, and the front panel. The body of the enclosure is made of No. 20 U. S. gauge steel welded together to form a substantial lining for the recess. An offset is provided in the back of the body for application of insulating material without taking up additional recess room. The body is fastened to the framing around the recess before the plastering is done. After the plasterers have completed their work the heating contractor can make his piping connections to the heating element and screw the front panel in place. The front panel, made of No. 18 U. S. gauge steel covers the entire recess lapping over the plaster joint at the edge of the body making a finished job.

Fully Recessed Convectors may be installed in walls of any width and any construction. The front panel is removable for convenience in installing.



Partially Recessed

CONVECTORS TYPE S

There are many cases in the installation of convectors where free standing cabinets are not desired, and where, due to the building construction it is not practical to try and install completely recessed convectors of either the "R" or "P" type. The Partially Recessed Convector has been designed to take care of this situation. The convector is installed in the recess as shown in Drawing No. 8 on Page 18, leaving part of the enclosure projecting out into the room.

The sizes and types in which Partially Recessed Convectors are available are shown in Drawing No. 2 on Page 15. Heating capacities for use with steam are shown in Table No. 1 on Page 12, and for use with hot water in Table No. 3, on Page 13.

These enclosures are made of heavy gauge steel. The fronts, backs and sides are made of No. 18 U. S. gauge. The fronts are removable for ease in installation. A special steel moulding to be used as a plaster stop is furnished. This moulding is set in place around the enclosure at the plaster line and eliminates the necessity of using a wood trim.

This is an ideal unit to be used where a large convector is needed for heat output, but only a small recess is available in which to make the installation.



STYLE "A"



STYLE "B"

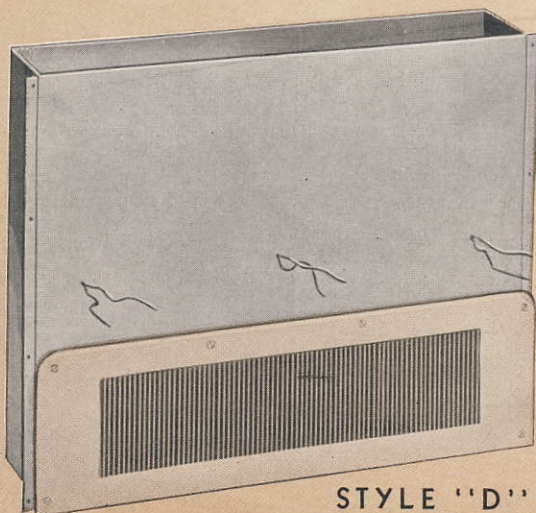
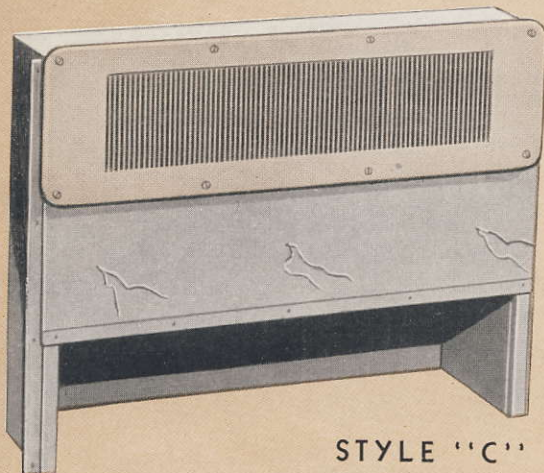
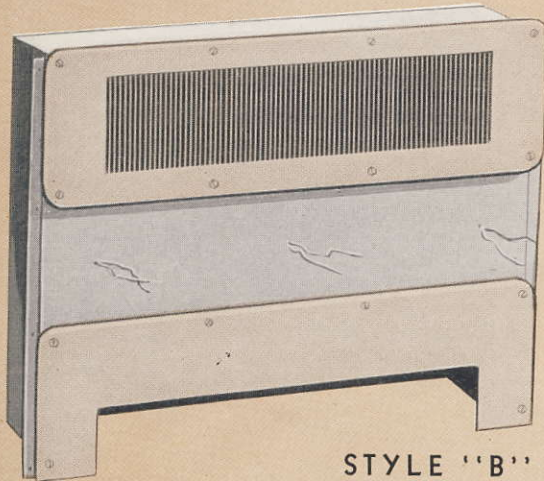
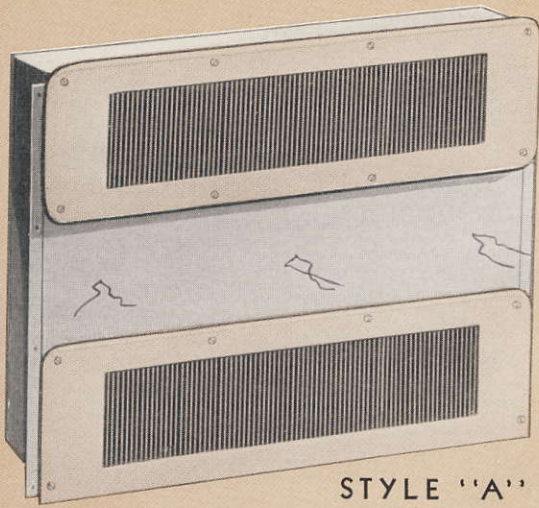
7

When windows are low and walls shallow, the Partially Recessed Convector makes an ideal installation.



Plastered-in

CONCEALED CONVECTORS TYPE P



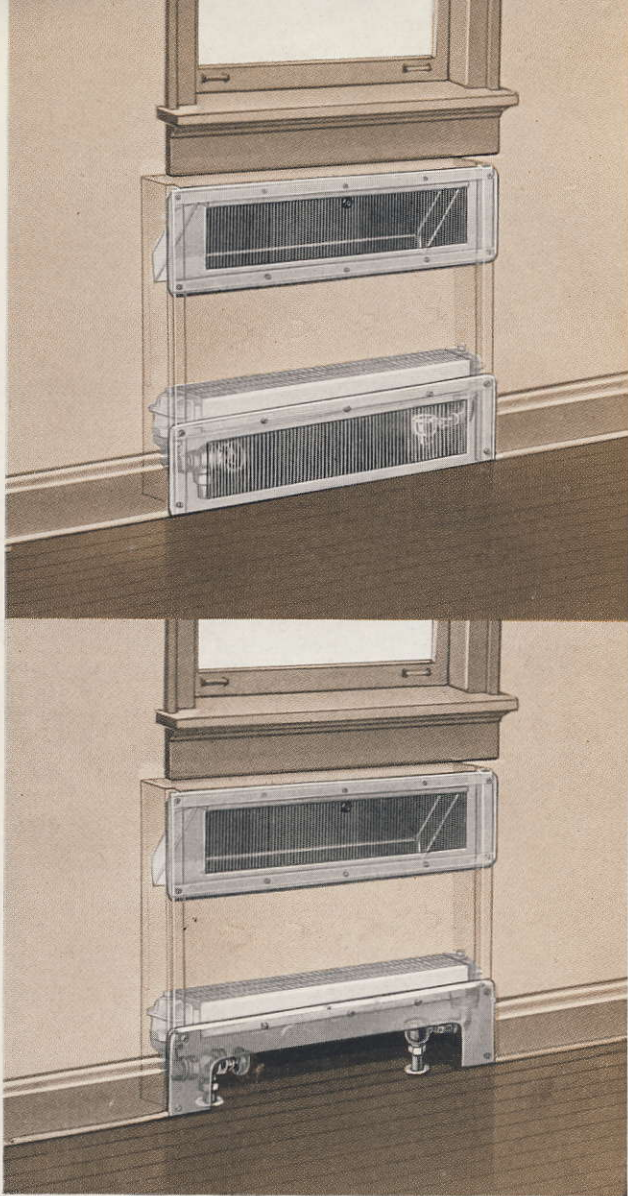
The Plastered-in type of concealed convector is truly all that the name implies. The opening for the air inlet, whether it be a grille or a baseboard cutout, and the discharge grille are the only parts of the convector that are visible. The balance of the enclosure is completely concealed in a recess in the wall, whether the wall be plaster, tile or wood paneling. It is the ideal type of installation for home and apartment, for when equipped with a damper control the heat output can be modulated as desired by simply turning an attractive control knob in the discharge grille, which sets the damper at the required position.

These enclosures are made in a variety of types and styles, as shown in the illustrations, and also in Drawing No. 2 on Page 15. Style "A" is equipped with both inlet and discharge grilles. Style "B" has a discharge grille but the air inlet is a metal front panel with a bottom cutout. Style "C" is furnished with a discharge grille only. The bottom of the front panel is arranged so that the baseboard can be extended across the front of the convector. A cutout must be made in the baseboard at least 3 inches high. The length of this cutout must be equal to the nominal convector length minus 5 inches. Style "D" is designed for use where conditions require the outlet grille to be in a window sill or some other location demanding a top discharge grille. An inlet grille only is regularly furnished, but the discharge grille can also be supplied if required.

As with the other types of enclosures, Plastered-in type convectors are regularly furnished with the new STREAMAIRE Grille, but Lattice and Bar Grilles can be furnished if ordered. With this selection of grilles to choose from, and the various types of enclosures available, each type made in a number of widths, lengths, and heights, it becomes rather a simple matter to select a Plastered-in concealed convector for practically any installation. Ease of installation and accessibility after installation are very important features found in Young STREAMAIRE Plastered-In Convectors.

Type P Style D, with top outlet grille makes an ideal window installation.





Phantom views showing typical views of Plastered-in Concealed Convectors.

Plastered-in

CONCEALED CONVECTORS TYPE P

Installation details for Plastered-in convectors are shown in Drawing No. 9 on Page 19, while the two adjacent phantom views give an excellent idea as to how this type of enclosure fits into a wall of ordinary construction. Note how the channels to which the inlet and discharge grilles are fastened act as plaster stops. Note, also, the edges of the grille panels are turned over so that when the grille is screwed in place there is a tight connection between this turned edge and the plastered wall.

The bodies of these enclosures are made from No. 20 U. S. gauge steel, thoroughly braced and welded together. The backs of the enclosures are offset so that insulation may be used without requiring a deeper recess. The front panel and grille panels are made from No. 18 U. S. gauge steel thoroughly reinforced. Provision is made in the front panel to fasten on metal lath eliminating the danger of cracked plaster, making an installation just as substantial as the wall itself.



STYLE "LE"

STYLE "LB"

Bathroom

CABINET CONVECTORS TYPE L

Bathroom Cabinet Convectors have been designed for installation underneath any average size lavatory fixture. They are similar in design to the free standing cabinet with top outlet Lattice Grille. They are small and compact and are ideal for installation in bathrooms where it is not practical to put in recessed convectors, but where all of the available floor space is needed.

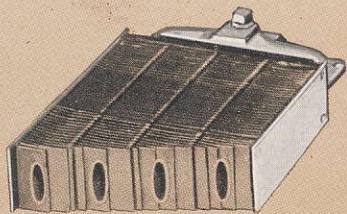
Installation details and dimensions are shown in Drawing No. 10 on Page 19. Heating capacities for these convectors are shown for steam in Table No. 2 on Page 13, hot water capacities are shown in Table No. 3 on Page 13.

These units are made in the $3\frac{1}{2}$ " and $5\frac{1}{4}$ " widths only, and in actual heights of 8", 10", and 12", with heating capacities large enough to take care of any ordinary bathroom.

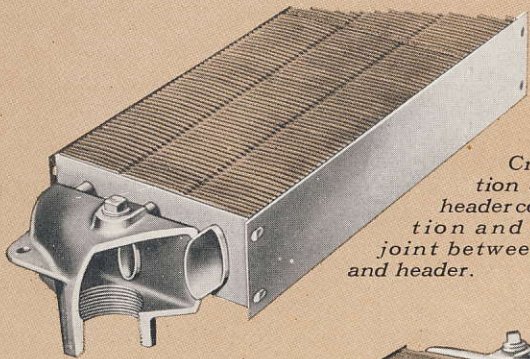
Bathroom Cabinet Convectors are designed with top grilles to give them the highest possible heat output.



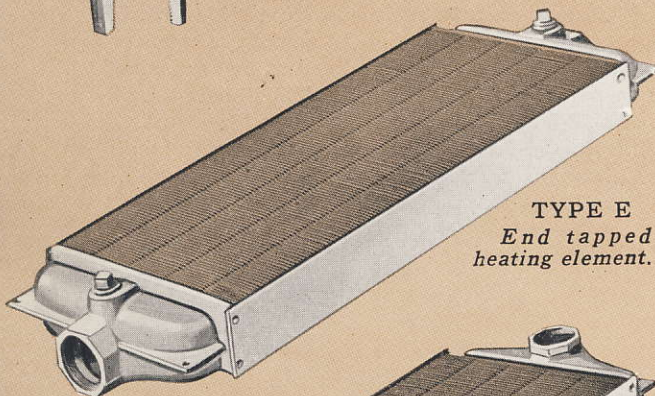
The Heating Element



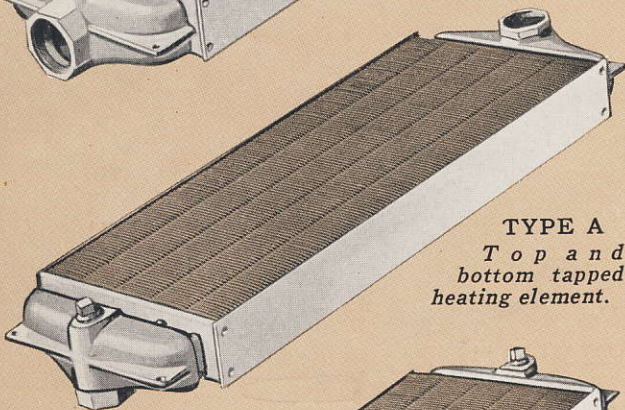
Cross section of heating element showing large elliptical copper tubes and bond between tube and fins.



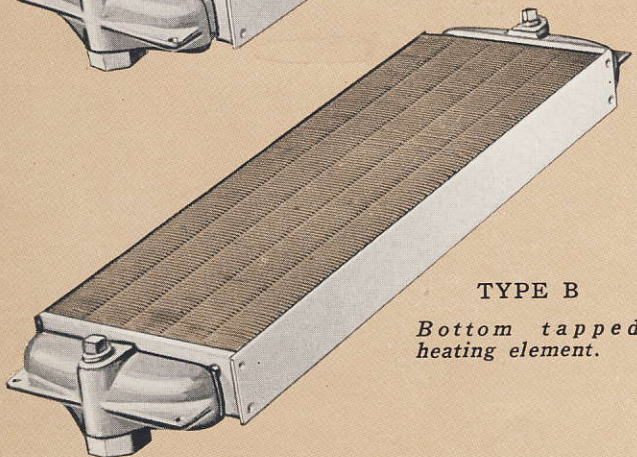
Cross section showing header construction and brazed joint between tubes and header.



TYPE E
End tapped heating element.



TYPE A
Top and bottom tapped heating element.



TYPE B
Bottom tapped heating element.

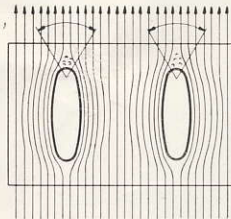


Figure No. 1.

The large elliptical copper tubes used in the heating elements of Young STREAMAIRE Convectors play an important part in developing the high rate of heat transfer. The shape and size of these tubes, a cross section being 1.440" high and .450" wide, with an area of .509 sq. inches, makes these units suitable for use on one pipe steam systems as the condensate can flow along the bottom of the tube leaving most of the tube surface exposed to the steam.

In Figure No. 1, the arrows show the path of the air flow around the elliptical tube used in STREAMAIRE construction. Note, that 95.3% of the tube surface is in direct contact with the air. Figure No. 2 shows the path of the air flow around the smaller round tubes used in so many other types of construction. Only 67% of the tube surface is in direct contact with the air, and the resulting dead air pockets lower heating efficiency.

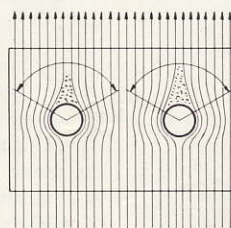


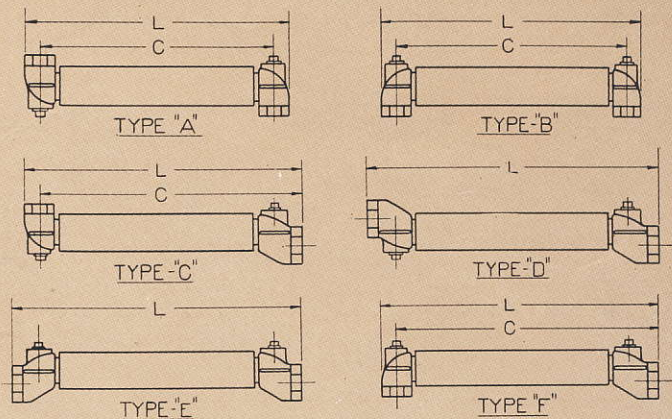
Figure No. 2.

The fins, or extended surfaces, are stamped from pure Lake copper, vertically crimped for strength, and metallicly bonded to the elliptical tubes forming a permanent bond between these surfaces. The tubes are brazed by a patented Young process into one-piece malleable iron end tanks designed to give an even distribution of steam or water through the tubes. Heavy gauge steel side plates protect the edges of the fins.

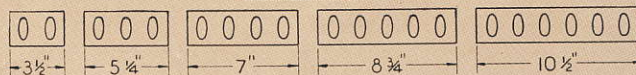
The heating element will withstand an operating pressure of 50 lbs. per sq. in. saturated steam, or 100 lbs. per sq. in. hydrostatic.

DRAWING No. 1

LOCATION OF SUPPLY AND RETURN TAPPINGS AVAILABLE



STANDARD WIDTHS



END TAPPED SUPPLY AND RETURN 1/2" PIPE TAP.
BOTTOM TAPPED SUPPLY AND RETURN 1/4" PIPE TAP.
ALL AIR VENT TAPPINGS 1/2" PIPE TAP.

STANDARD LENGTHS DIMENSIONS IN INCHES

NOMINAL LENGTH	15	17 1/2	20	22 1/2	25	30	35	40	45	50	55	60	65
TYPE C	11 5/16	14 7/16	16 15/16	19 7/16	21 5/16	26 15/16	31 5/16	36 5/16	41 5/16	46 5/16	51 5/16	56 5/16	61 5/16
A & B	L	13 7/8	16 3/8	18 7/8	21 3/8	23 7/8	28 3/8	33 3/8	38 3/8	43 3/8	48 3/8	53 3/8	58 3/8
TYPE C	L	13 1/2	16	18 1/2	21	23 1/2	28 1/2	33 1/2	38 1/2	43 1/2	48 1/2	53 1/2	58 1/2
C & F	L	14 7/8	16 5/8	19 3/8	21 3/8	24 3/8	29 3/8	34 3/8	39 3/8	44 3/8	49 3/8	54 3/8	59 3/8
TYPE C	L	15	17 1/2	20	22 1/2	25	30	35	40	45	50	55	60
D & E	L	15	17 1/2	20	22 1/2	25	30	35	40	45	50	55	60

Patented:
April 12, 1932; Aug. 8, 1933; March 20, 1934; Aug. 28, 1934

Grilles DAMPERS AND ACCESS DOORS

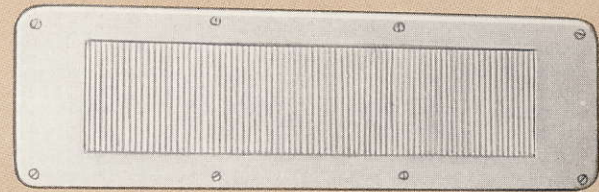
All types of enclosures with front outlet grilles are regularly furnished with the STREAMAIRE Grille. This Grille has been designed to fit in with any interior decorating scheme. The narrow, deep bars formed in special dies are spaced close together, giving wonderful air distribution in combination with strength and neat appearance.

In addition to the STREAMAIRE Grilles, these enclosures can also be furnished with the Lattice or Bar Grilles, if so ordered. The Lattice Grille has $\frac{1}{2}$ inch square openings, stamped $\frac{1}{8}$ inches apart, answering certain architectural requirements as to grille design. The Bar Grille with plain vertical bars, die formed to give strength and depth, is an attractive addition to many interior decorating schemes.

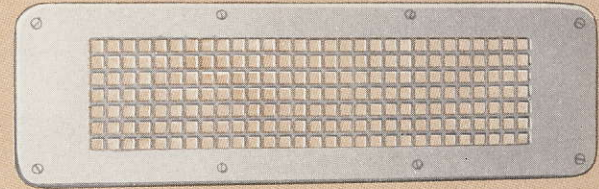
The Bottom Cutout, as illustrated, may be furnished in place of the inlet grille on any Type R or Type P Convectors.

The Damper as shown in the illustration below is a distinct asset to any STREAMAIRE Convector. The Damper gives modulated heat control to any individual convector. By use of the Damper control certain rooms can be kept at lower temperatures than the balance of the building without constantly regulating the steam or water supply valve. The patented Damper control is neat in appearance and easy to operate.

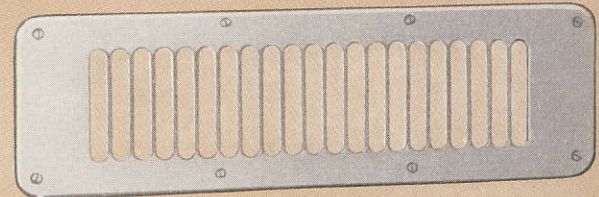
The Access Door, as illustrated in the phantom view of the cabinet illustrated below, is regular equipment on free standing cabinets, but can be furnished as optional equipment on other types of enclosures at a slight additional cost. See Page 22 for locations of Access Doors on various types of enclosures. Access Doors provide an easy means of access to air vents and steam or hot water supply valves.



STREAMAIRE Grille.



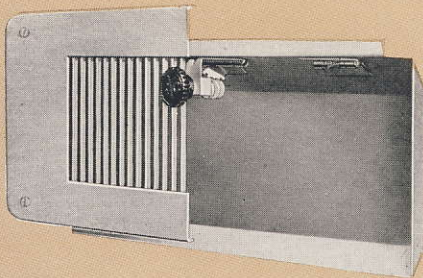
Lattice Grille.



Bar Grille.

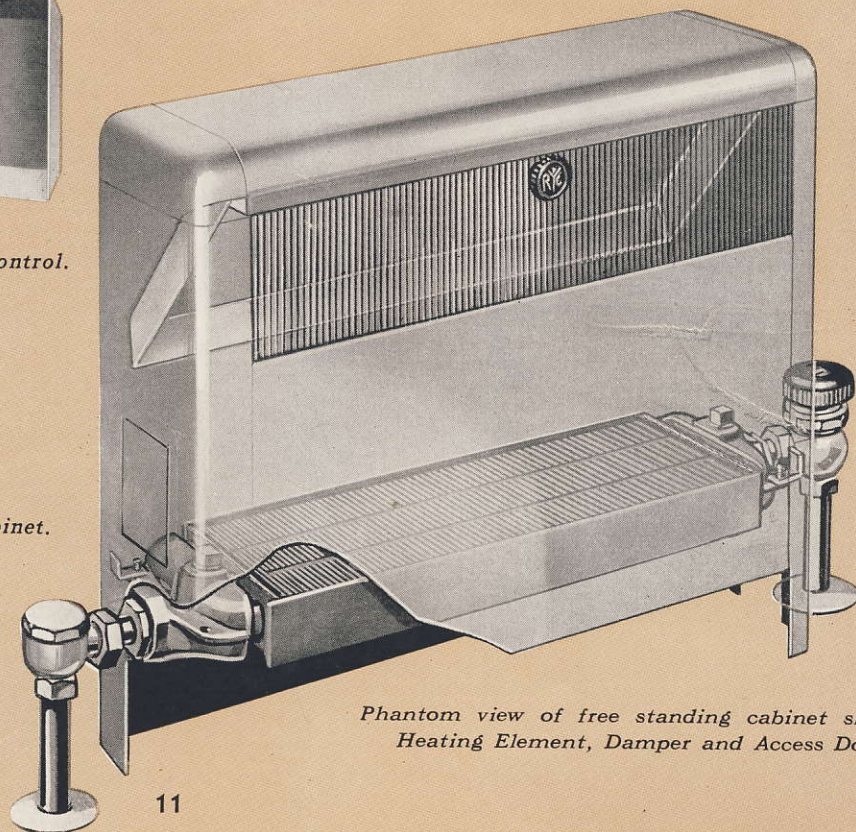


Bottom Cutout.



A sectional view of Damper and control.

*Access Door in free standing cabinet.
For locations see Page 22.*



*Phantom view of free standing cabinet showing
Heating Element, Damper and Access Door.*

TABLE No. 1

C. M. C. RATINGS STEAM

STEAM PRESSURE 1 LB. GAUGE ENTERING AIR 65° F.

Table with 22 columns and 31 rows. Columns represent overall height (18, 20, 22, 24, 26, 28, 30, 32, 36, 40, 45, 50 inches) and core width (3 1/2, 5 1/4, 7, 8 3/4, 10 1/2 inches). Rows represent nominal length of core in inches (15, 17 1/2, 20, 22 1/2, 25, 30, 35, 40, 45, 50, 55, 60, 65). Each cell contains a model number and square footage rating.

See Page 14 For Information On Ordering

Handwritten notes: 'Bakery' and 'Dep. Room' written vertically in the left margin.

Handwritten note: 'New add' with an arrow pointing to the 32" Overall Height section.

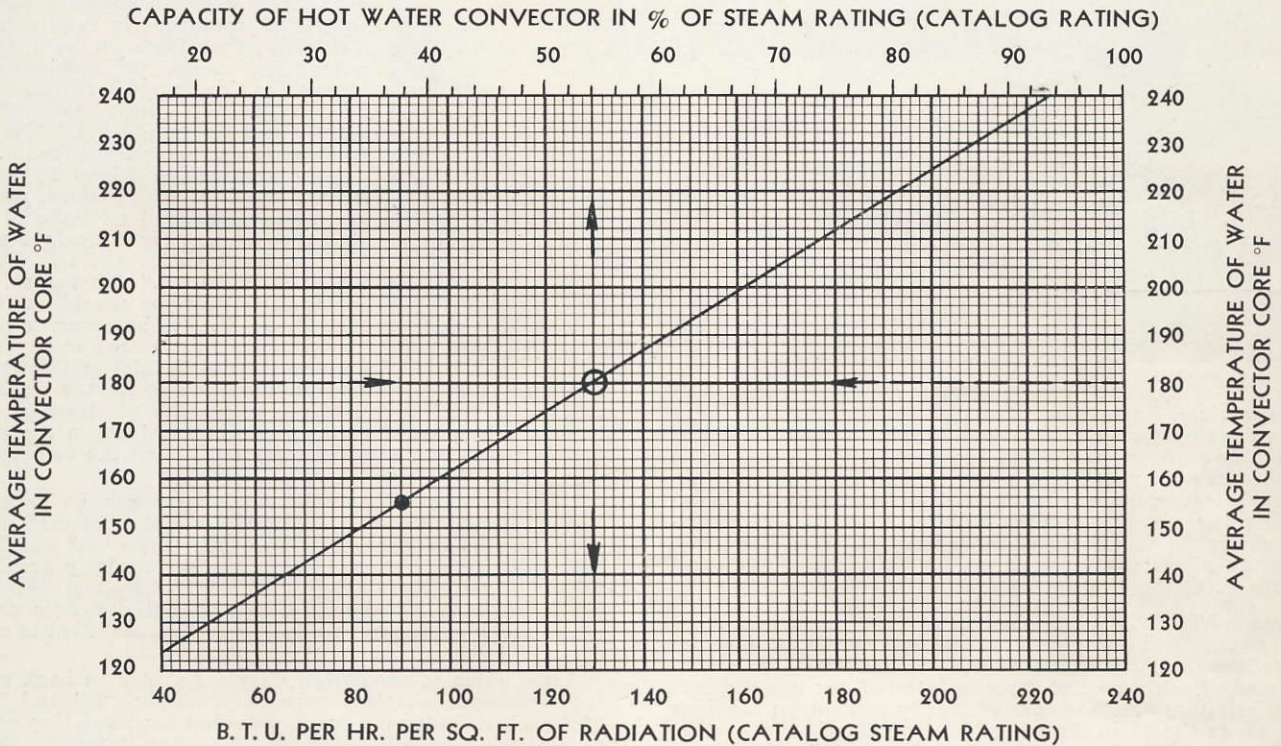
TABLE No. 2

C. M. C. STEAM RATINGS BATH ROOM CONVECTORS												STEAM PRESSURE 1 LB. GAUGE ENTERING AIR 65° F.	
Overall Length of Core in Inches	8" HEIGHT 3½" WIDTH		10" HEIGHT 3½" WIDTH		12" HEIGHT 3½" WIDTH		8" HEIGHT 5¼" WIDTH		10" HEIGHT 5¼" WIDTH		12" HEIGHT 5¼" WIDTH		
	Model No.	Sq. Ft. Rad.	Model No.	Sq. Ft. Rad.	Model No.	Sq. Ft. Rad.	Model No.	Sq. Ft. Rad.	Model No.	Sq. Ft. Rad.	Model No.	Sq. Ft. Rad.	
10	L310-8	4.6	L310-10	4.8	L310-12	5.1							
12½	L312-8	6.2	L312-10	6.5	L312-12	6.8							
15	L315-8	7.8	L315-10	8.2	L315-12	8.6	L515-8	10.7	L515-10	11.6	L515-12	12.3	
17½	L317-8	9.5	L317-10	10.0	L317-12	10.4	L517-8	13.2	L517-10	14.3	L517-12	15.0	
20	L320-8	11.1	L320-10	11.7	L320-12	12.2	L520-8	15.6	L520-10	16.9	L520-12	17.7	
22½	L322-8	12.7	L322-10	13.4	L322-12	14.1	L522-8	18.1	L522-10	19.5	L522-12	20.5	
25	L325-8	14.3	L325-10	15.1	L325-12	15.8	L525-8	20.6	L525-10	22.1	L525-12	23.2	

RATINGS FOR USE WITH HOT WATER

TABLE No. 3

Based on 65° F, entering Air Temp.



GRAVITY WATER CIRCULATION

Assume 30° drop in water temp.
 Entering water 195°
 Leaving water 165°
 Average water 180°

FORCED WATER CIRCULATION

Assume 10° drop in water temp.
 Entering water 185°
 Leaving water 175°
 Average water 180°

With 180° average water temperature the heat output of Young STREAMAIRE Convectors is equal to 130 BTU/Hr/sq. ft. of radiation, catalog (Steam) rating.

To find amount of radiation required for any average water temperature, divide the heat loss by the BTU/sq. ft. of radiation corresponding to this average water temperature.

The heat output of a Young STREAMAIRE Convector with any average water temperature, as compared to the heat output when used with steam at 1 lb. gauge pressure, is shown in above chart. For example, with 215° average water temperature the heat output is 77% of the capacity with steam.

RATINGS WITH TOP DISCHARGE GRILLES

All ratings shown for both steam and hot water, (except bathroom cabinet convectors which are made only with top discharge grilles) are based on front discharge grilles. Young STREAMAIRE Convectors with top discharge grilles have ratings equal to convectors with front dis-

charge grilles of 6 inches greater overall height. For example, a 5¼" wide, 30" long, 26" overall height free standing convector with front discharge grille has a rating of 33.3 sq. ft. of radiation, but with a top discharge grille the rating is 35.8 sq. ft. of radiation.

RATINGS OF YOUNG STREAMAIRE CONVECTORS

Ratings of Young STREAMAIRE Convectors are given in sq. ft. of equivalent direct steam radiation. All ratings are based on tests made in accordance with the A.S.H. & V.E. code for testing convection radiators and follow the standard method of rating adopted by The Convector

Manufacturers Association. C.M.C. ratings are Convector Manufacturers Certified ratings, and are equivalent in heating capacity to a direct radiator giving off 240 BTU/Hr./sq. ft. of radiation.

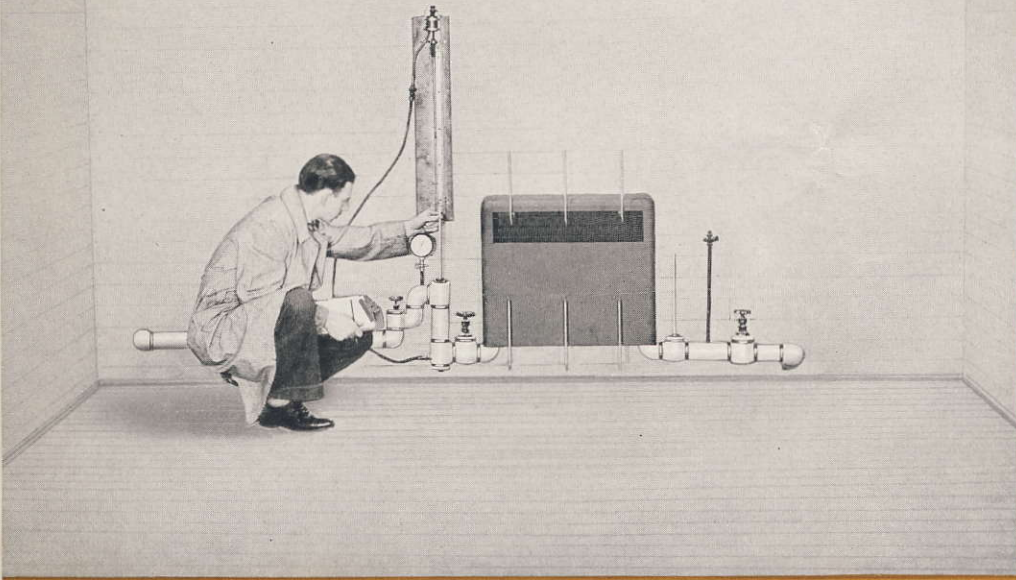


Illustration Showing Special Room and Test Equipment Used in Rating Young STREAMAIRE Convectors

In 1933 after a long period of research and investigation the American Society of Heating and Ventilating Engineers developed a code for testing and rating convectors. This code provides for a test room, open at one end, with a floor area 12' x 15', and a ceiling height of 9'. Certain standard test equipment is specified and the method of conducting the test is plainly outlined. The above illustration shows the test room of the Young Radiator Company, in which all rating tests on STREAMAIRE Convectors are made, strictly in accordance with this code.

Young STREAMAIRE Convectors are made in a number of types and designs. These are all shown on Page 15, as well as the sizes in which the various types are manufactured. Each type and style is lettered for convenience in ordering, as are the types of supply and return tappings desired, as shown in Drawing No. 1 on Page 10. The free standing cabinet convectors are Type "C." Wall-hung convectors are Type "W." Fully recessed convectors are Type "R." Partially recessed convectors are Type "S." Plastered-in convectors are Type "P." Bathroom convectors are Type "L," but are only manufactured in one style, although various types of supply and return tappings are available.

GUARANTEE

The Young Radiator Company guarantees all of its STREAMAIRE Convectors against defects in material and workmanship for a period of one year from date of shipment. All obligations and liabilities under this guarantee are limited to furnishing, F.O.B. our factory, re-

placement of such defective parts as are returned, transportation charges prepaid. All replacements are made subject to factory inspection of returned parts. No liability will be assumed for consequential damages or reinstallation labor.

SUGGESTED SPECIFICATIONS

The heating contractor shall install Young STREAMAIRE Convectors of the types and sizes shown on the plans with (or without) dampers.

The heating element shall consist of elliptical shaped, seamless copper tubes, each tube with a cross sectional area of not less than .509 sq. in. brazed into one piece malleable iron end tanks. The fins shall be of copper, die formed and metallically bonded to the tubes.

All enclosures shall be as shown in Young Radiator Com-

pany Catalog No. 4037, and made of cold finished steel. Grilles to be of the STREAMAIRE (Lattice, Bar) type. Enclosures are to be neatly constructed, securely welded and braced, and finished at the factory with a prime gray paint.

The heating contractor shall, after the installation is complete, clean out all dirt, plaster and other matter collected in the convectors during construction, and leave in perfect operating

All STREAMAIRE Convectors with the same nominal length, width and height, provided with front outlet grilles, have the same heating capacities, which for steam are shown in Table No. 1 on Page 12. Hot water heating capacities are shown in Table No. 3 on Page 13. Convectors with top discharge grilles have ratings equal to convectors with front discharge grilles of 6" greater overall height.

The use of these various tables, showing the correct way to order STREAMAIRE Convectors, is shown as follows. A convector 26" high, with a steam capacity of 46.1 sq. ft. of radiation is required. In Table No. 1 on Page 12, we find that a unit 5 1/4" wide, 40" nominal core length, has this rating. It is model 540-26 denoting 5 1/4" width, 40" nominal length, and 26" height "H." Turning to Page 15 and selecting a free standing cabinet, we find this is Type "C." As end tappings are required, we find from Drawing No. 1 on Page 10 that this type of tapping is designated as "E." A front outlet grille is wanted which is Style "B." Therefore, this particular convector would be called CE 540-26 B. If, however, a plastered-in convector of the same size is wanted with both inlet and discharge grilles, and with bottom tappings, the convector would be designated as PB 540-26 A. If, in the plastered-in convector, a baseboard cutout is to be used and a top grille only wanted, that would be Style "C" and the designation would be PB 540-26 C.

Type "C" and Type "W" enclosures can be regularly furnished with any combination of supply and return tappings shown on Page 10. Type "R," Type "S," and Type "P" enclosures, however, can only be regularly furnished with "A" or "B" tappings. "C," "D," "E" and "F," tappings, however, can be furnished at a slight extra charge with special enclosures made longer than standard to cover the end connections.

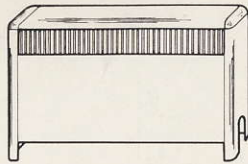
Some form of insulation should be used in back of all recessed or concealed convectors. Type "R" and Type "P" enclosures have a space provided for insulation which, though not furnished by Young Radiator Company, should be supplied by the contractors and used on all installations.

All types of enclosures for STREAMAIRE Convectors are regularly shipped from the factory furnished with a prime coat of gray paint, over which any finish coat can be applied by the decorator, matching the interior color scheme of the room.

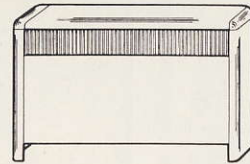
**FREE STANDING
CABINET CONVECTORS
TYPE C**

Furnished in heights of 18", 20", 22", 24", 26", 28", 30", 32" and 36".

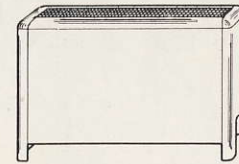
In widths of 3½", 5¼", 7", 8½" and 10½".



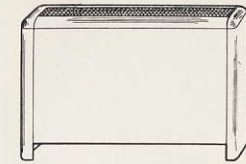
TYPE CE STYLE B



TYPE CB STYLE B



TYPE CE STYLE T

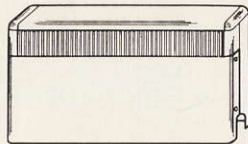


TYPE CB STYLE T

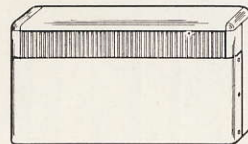
**WALL-HUNG
CABINET CONVECTORS
TYPE W**

Furnished in nominal heights of 18", 20", 22", 24", 26", 28", 30", 32" and 36".

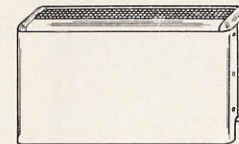
In widths of 3½", 5¼", 7", 8½" and 10½".



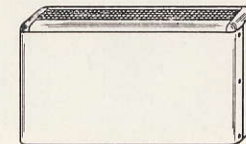
TYPE WE STYLE A



TYPE WB STYLE A



TYPE WE STYLE T

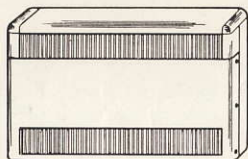


TYPE WB STYLE T

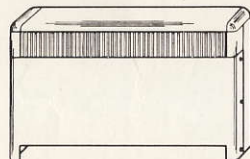
**PARTIALLY RECESSED
CABINET CONVECTORS
TYPE S**

Furnished in heights of 18", 20", 22", 24", 26", 28", 30", 32" and 36".

In widths of 3½", 5¼", 7", 8½" and 10½".



TYPE S STYLE A



TYPE S STYLE B

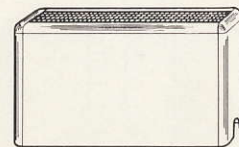
**BATHROOM
CABINET CONVECTORS
TYPE L**

Furnished in heights of 8", 10" and 12".

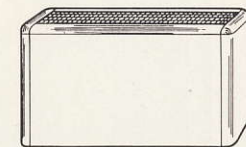
In widths of 3½" and 5¼".

REFERENCE PAGES

- 12-13 for ratings
- 12-13 for catalog numbers
- 10 for tappings available
- 11 for grilles available
- 22 for access doors
- 23 for piping diagrams



TYPE LE STYLE T

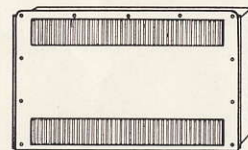


TYPE LB STYLE T

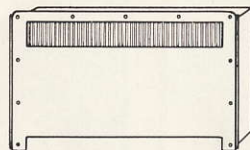
**FULLY RECESSED
CABINET CONVECTORS
TYPE F**

Furnished in heights of 18", 20", 22", 24", 26", 28", 30", 32", 36", 40", 45" and 50".

In widths of 3½", 5¼", 7", 8½" and 10½".



TYPE RB STYLE A

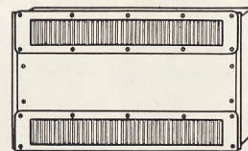


TYPE RB STYLE B

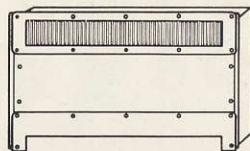
**PLASTERED-IN
CONCEALED CONVECTOR
TYPE P**

Furnished in heights of 18", 20", 22", 24", 26", 28", 30", 32", 36", 40", 45" and 50".

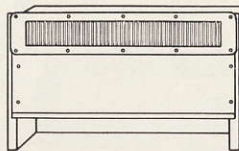
In widths of 3½", 5¼", 7", 8½" and 10½".



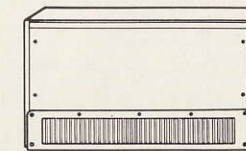
TYPE PB STYLE A



TYPE PB STYLE B



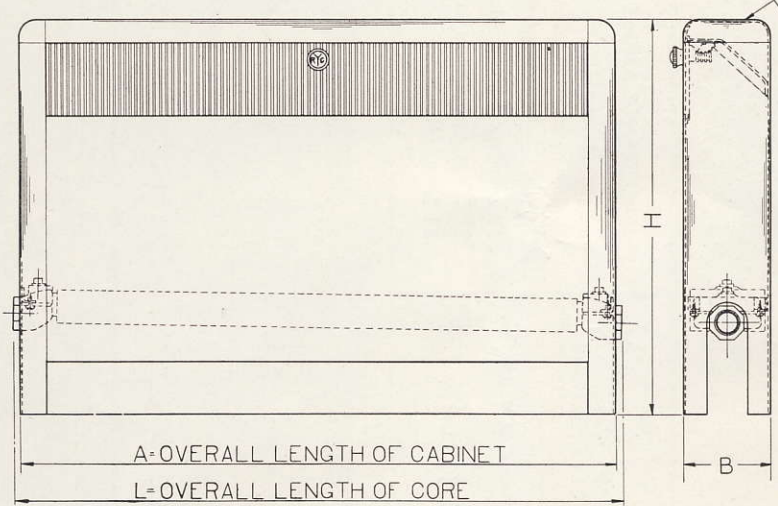
TYPE PB STYLE C



TYPE PB STYLE D

DRAWING No. 3 FREE STANDING CONVECTOR CABINET

END TAPPINGS TYPE "C"



NOTE- LATTICE GRILLE IS FURNISHED ON ALL TOP DISCHARGE CONVECTORS

NOTE- SEE PAGE 22 FOR LOCATION OF ACCESS DOOR

ADDITIONAL
 DRAWING No. 3: Center line of supply tapping to bottom of enclosure 6".
 DRAWING No. 4: Face of supply tapping to bottom of enclosure 4 7/8".
 DRAWING No. 5: Center line of supply tapping of bottom of enclosure 1 1/4".
 DRAWING No. 6: Face of supply tapping to bottom of enclosure 1/8".
 DRAWINGS Nos. 7, 8, 9: Face of supply tapping to bottom of enclosure 6".

DIMENSIONS IN INCHES

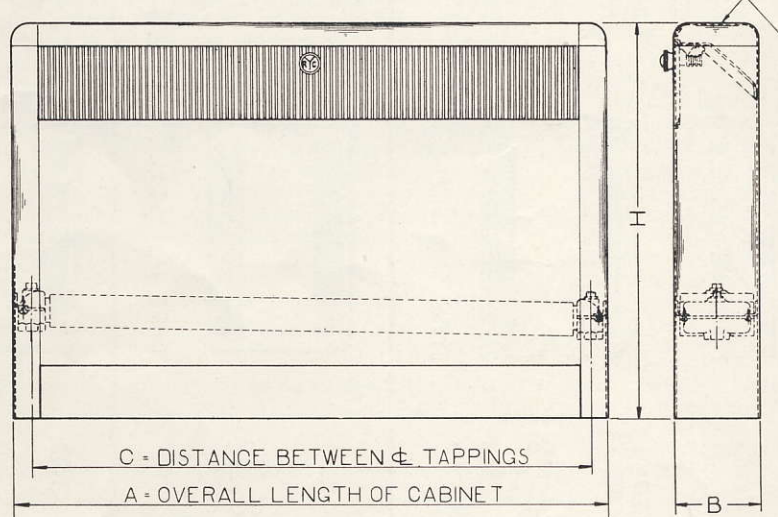
NOMINAL CORE WIDTH	3 1/2	5 1/4	7	8 3/4	10 1/2
B	3 7/8	5 5/8	7 3/8	9 1/8	10 3/8

NOMINAL HEIGHT	18	20	22	24	26	28	30	32	36
H	18	20	22	24	26	28	30	32	36

NOMINAL CORE LENGTH	15	17 1/2	20	22 1/2	25	30	35	40	45	50	55	60	65
L	15	17 1/2	20	22 1/2	25	30	35	40	45	50	55	60	65
A	14 1/8	16 9/16	19 1/16	21 9/16	24 1/8	29 1/8	34 1/8	39 1/8	44 1/8	49 1/8	54 1/8	59 1/8	64 1/8

DRAWING No. 4 FREE STANDING CONVECTOR CABINET

BOTTOM TAPPINGS TYPE "C"



NOTE- LATTICE GRILLE IS FURNISHED ON ALL TOP DISCHARGE CONVECTORS

NOTE- SEE PAGE 22 FOR LOCATION OF ACCESS DOOR

DIMENSIONS IN INCHES

NOMINAL CORE WIDTH	3 1/2	5 1/4	7	8 3/4	10 1/2
B	3 7/8	5 5/8	7 3/8	9 1/8	10 3/8

NOMINAL HEIGHT	18	20	22	24	26	28	30	32	36
H	18	20	22	24	26	28	30	32	36

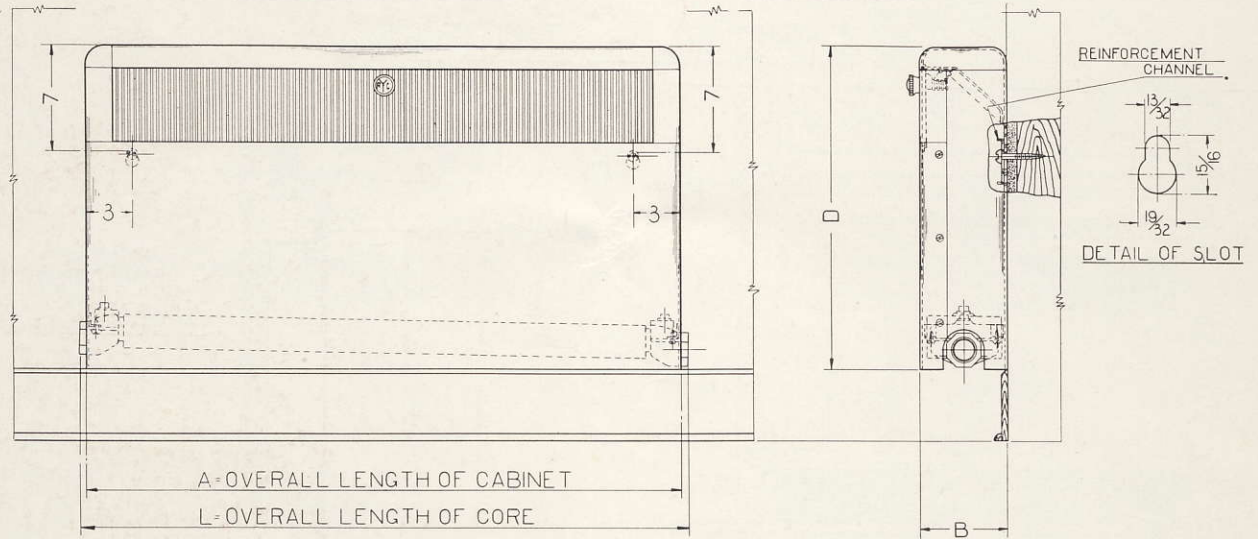
NOMINAL CORE LENGTH	15	17 1/2	20	22 1/2	25	30	35	40	45	50	55	60	65
C	11 3/16	14 7/16	16 5/16	19 1/16	21 5/16	26 3/16	31 1/16	36 3/16	41 1/16	46 3/16	51 1/16	56 3/16	61 1/16
A	14 1/8	16 9/16	19 1/16	21 9/16	24 1/8	29 1/8	34 1/8	39 1/8	44 1/8	49 1/8	54 1/8	59 1/8	64 1/8

WALL-HUNG CONVECTOR CABINET

DRAWING No. 5

END TAPPINGS

TYPE "W"



DIMENSIONS IN INCHES

NOMINAL CORE WIDTH	3 1/2	5 1/4	7	8 3/4	10 1/2
B	3 7/8	5 5/8	7 3/8	9 1/8	10 1/8

NOTE - LATTICE GRILLE IS FURNISHED ON ALL TOP DISCHARGE CONVECTORS.

NOMINAL HEIGHT	18	20	22	24	26	28	30	32	36
D	13 1/4	15 1/4	17 1/4	19 1/4	21 1/4	23 1/4	25 1/4	27 1/4	31 1/4

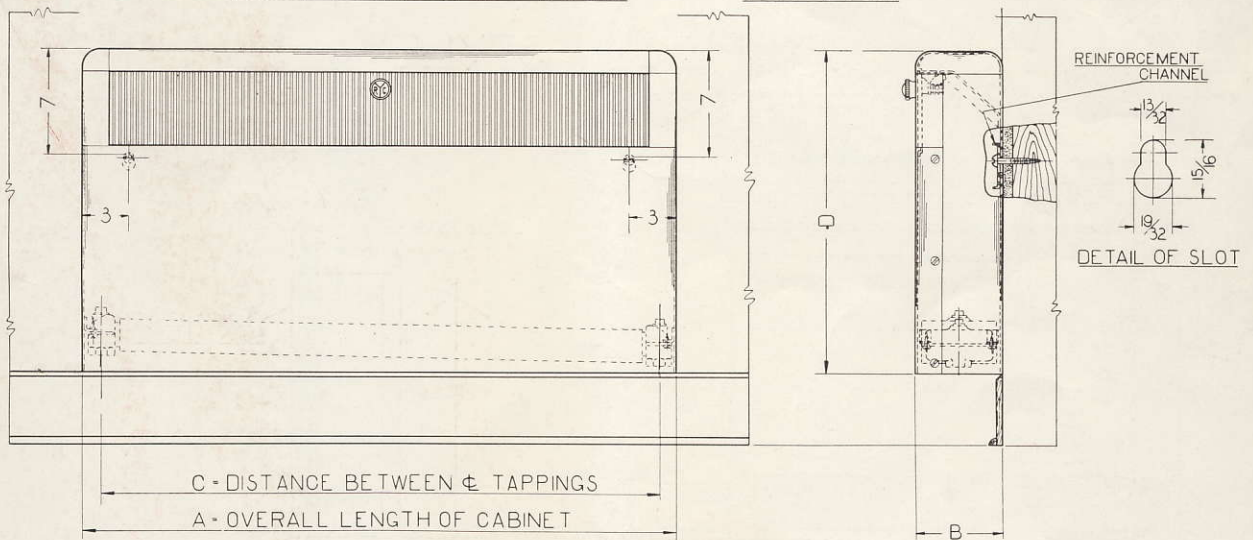
NOMINAL CORE LENGTH	15	17 1/2	20	22 1/2	25	30	35	40	45	50	55	60	65
L	15	17 1/2	20	22 1/2	25	30	35	40	45	50	55	60	65
A	14 1/8	16 3/8	19 1/8	21 3/8	24 1/8	29 1/8	34 1/8	39 1/8	44 1/8	49 1/8	54 1/8	59 1/8	64 1/8

WALL-HUNG CONVECTOR CABINET

DRAWING No. 6

BOTTOM TAPPINGS

TYPE "W"



DIMENSIONS IN INCHES

NOMINAL CORE WIDTH	3 1/2	5 1/4	7	8 3/4	10 1/2
B	3 7/8	5 5/8	7 3/8	9 1/8	10 1/8

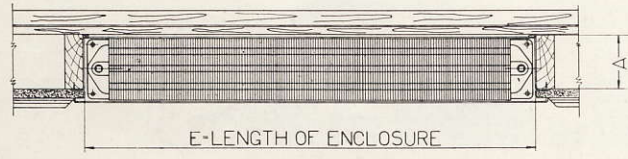
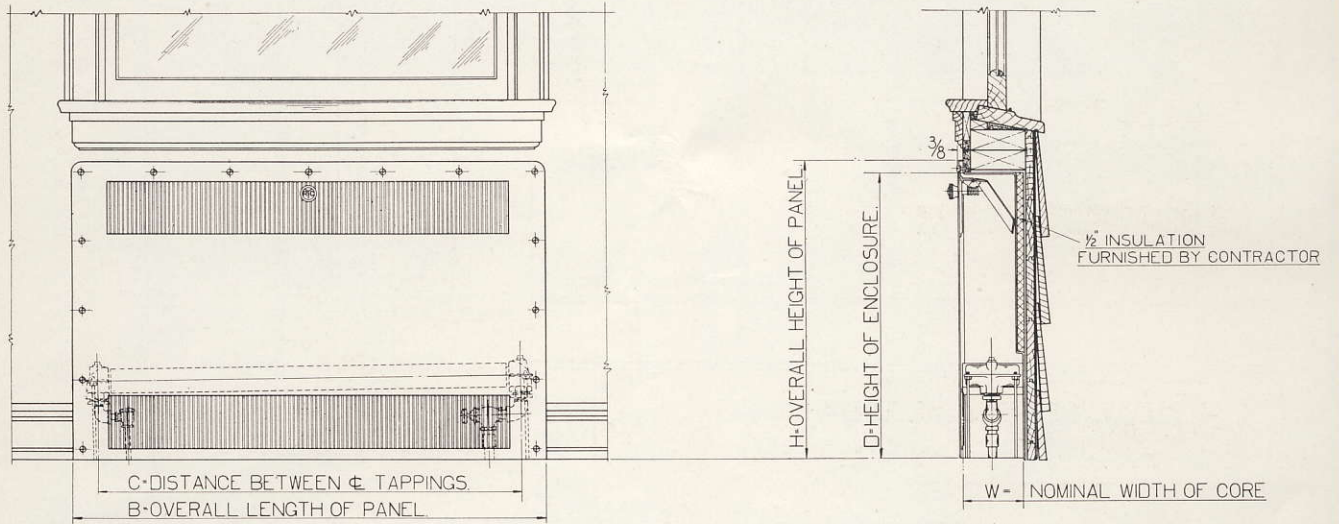
NOTE - LATTICE GRILLE IS FURNISHED ON ALL TOP DISCHARGE CONVECTORS.

NOMINAL HEIGHT	18	20	22	24	26	28	30	32	36
D	13 1/4	15 1/4	17 1/4	19 1/4	21 1/4	23 1/4	25 1/4	27 1/4	31 1/4

NOMINAL CORE LENGTH	15	17 1/2	20	22 1/2	25	30	35	40	45	50	55	60	65
C	11 5/8	14 7/8	16 5/8	19 3/8	21 5/8	26 5/8	31 5/8	36 5/8	41 5/8	46 5/8	51 5/8	56 5/8	61 5/8
A	14 1/8	16 3/8	19 1/8	21 3/8	24 1/8	29 1/8	34 1/8	39 1/8	44 1/8	49 1/8	54 1/8	59 1/8	64 1/8

DRAWING No. 7

FULLY RECESSED TYPE CONVECTOR
TYPE "R" STYLE "A"



DIMENSIONS IN INCHES

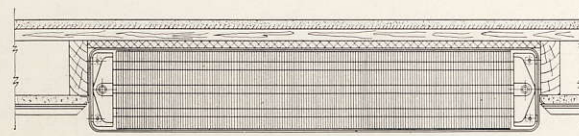
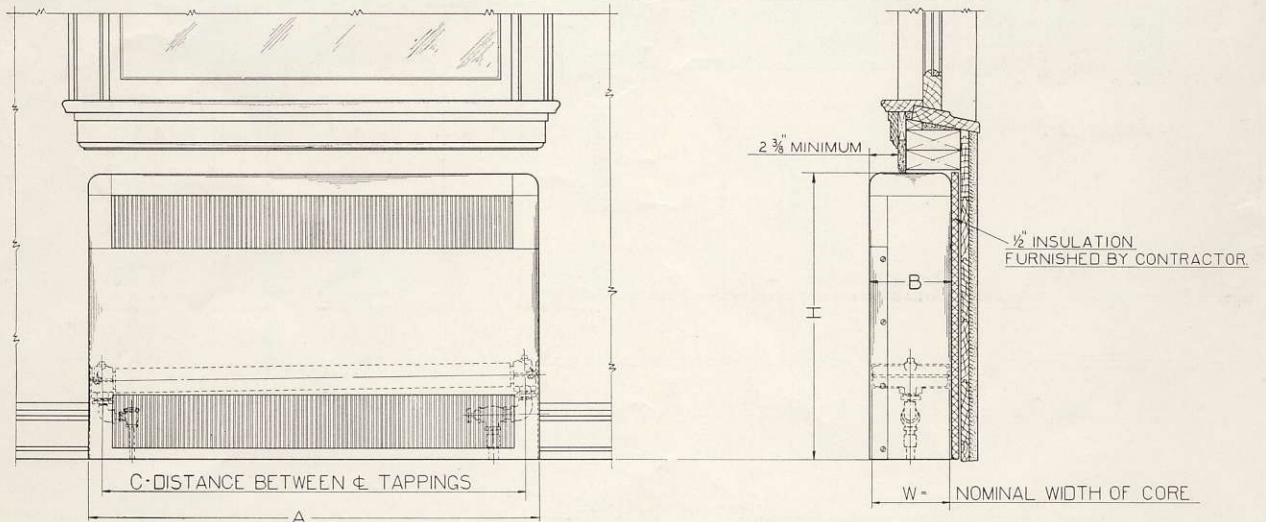
A	2 5/8	4 3/8	6 1/8	7 7/8	9 5/8
W	3 1/2	5 1/4	7	8 3/4	10 1/2

D	16 5/8	18 5/8	20 5/8	22 5/8	24 5/8	26 5/8	28 5/8	30 5/8	34 5/8	38 5/8	43 5/8	48 5/8
H	18	20	22	24	26	28	30	32	36	40	45	50

NOMINAL CORE LENGTH	15	17 1/2	20	22 1/2	25	30	35	40	45	50	55	60	65
B	16 1/2	19	21 1/2	24	26 1/2	31 1/2	36 1/2	41 1/2	46 1/2	51 1/2	56 1/2	61 1/2	66 1/2
E	14 1/8	16 3/8	19 1/8	21 3/8	24 1/8	29 3/8	34 3/8	39 3/8	44 3/8	49 3/8	54 3/8	59 3/8	64 3/8
C	11 5/8	14 1/8	16 5/8	19 1/8	21 5/8	26 5/8	31 5/8	36 5/8	41 5/8	46 5/8	51 5/8	56 5/8	61 5/8

DRAWING No. 8

PARTIALLY RECESSED TYPE CONVECTOR
TYPE "S" STYLE "A"



DIMENSIONS IN INCHES

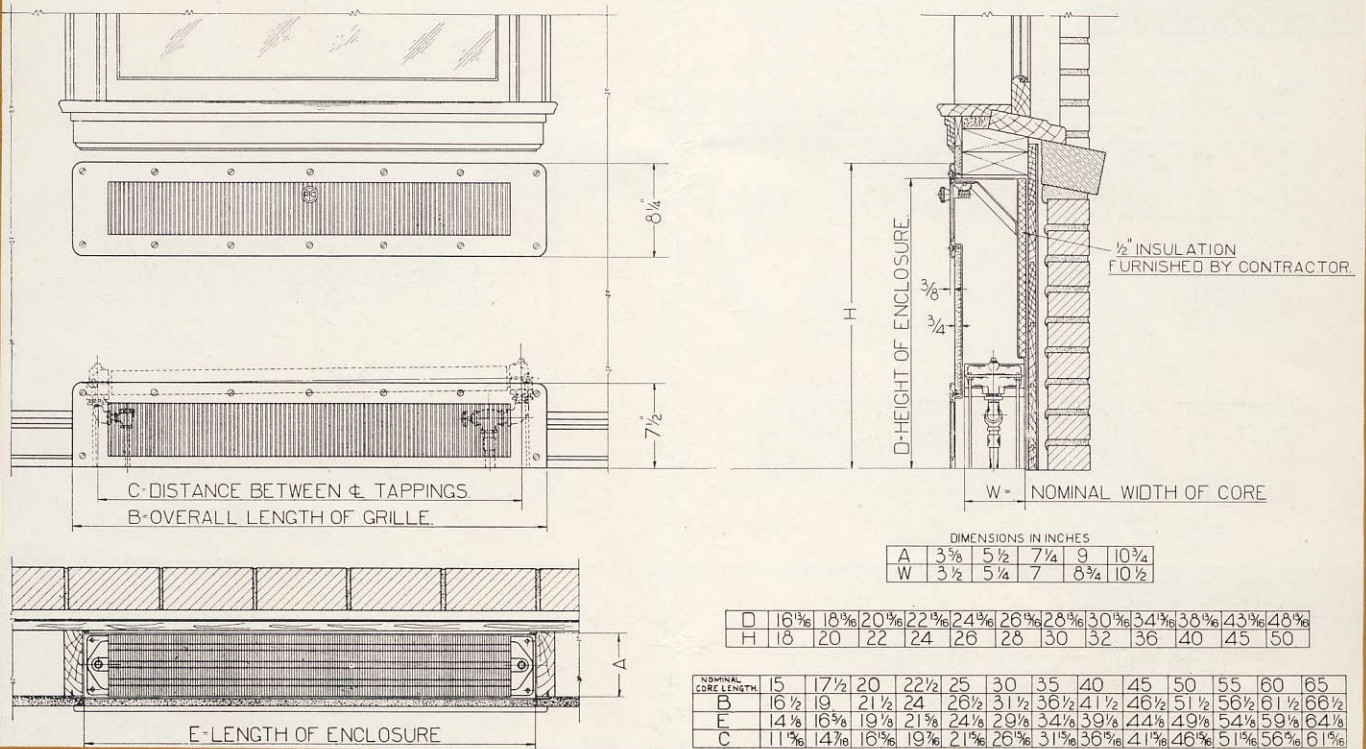
B	3 3/8	5 3/8	7 3/8	9 1/2	10 3/8
W	3 1/2	5 1/4	7	8 3/4	10 1/2

H	18	20	22	24	26	28	30	32	36
---	----	----	----	----	----	----	----	----	----

NOMINAL CORE LENGTH	15	17 1/2	20	22 1/2	25	30	35	40	45	50	55	60	65
A	14 1/8	16 3/8	19 1/8	21 3/8	24 1/8	29 3/8	34 3/8	39 3/8	44 3/8	49 3/8	54 3/8	59 3/8	64 3/8
C	11 5/8	14 1/8	16 5/8	19 1/8	21 5/8	26 5/8	31 5/8	36 5/8	41 5/8	46 5/8	51 5/8	56 5/8	61 5/8

PLASTERED-IN TYPE CONVECTOR

TYPE "P" STYLE "A"



DIMENSIONS IN INCHES

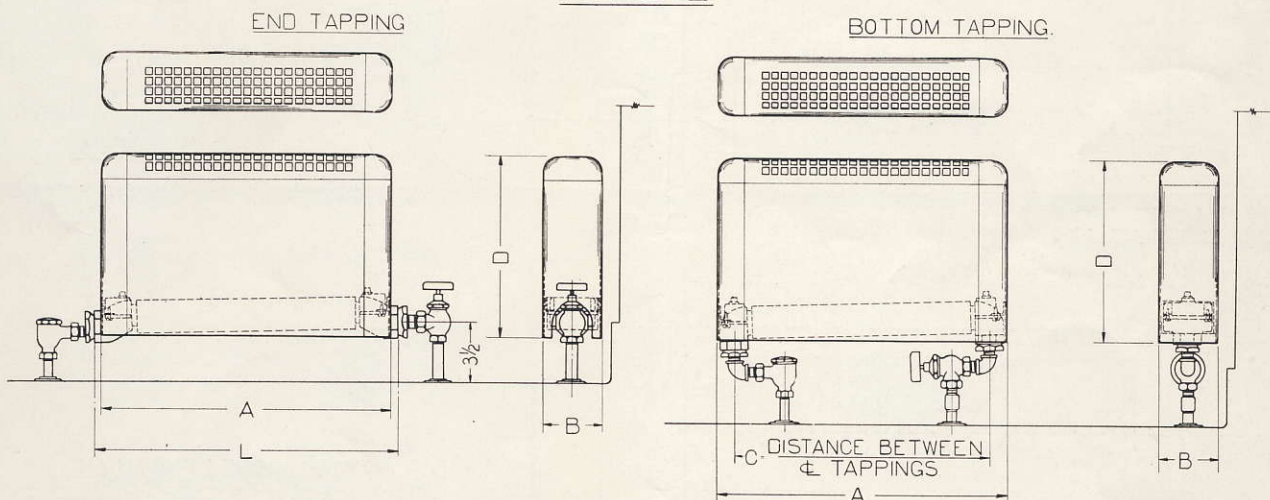
A	3 3/8	5 1/2	7 1/4	9	10 3/4
W	3 1/2	5 1/4	7	8 3/4	10 1/2

D	16 1/8	18 3/8	20 1/8	22 1/8	24 1/8	26 1/8	28 3/8	30 1/8	34 1/8	36 3/8	43 3/8	48 3/8
H	18	20	22	24	26	28	30	32	36	40	45	50

NOMINAL CORE LENGTH	15	17 1/2	20	22 1/2	25	30	35	40	45	50	55	60	65
B	16 1/2	19	21 1/2	24	26 1/2	31 1/2	36 1/2	41 1/2	46 1/2	51 1/2	56 1/2	61 1/2	66 1/2
F	14 1/8	16 3/8	19 1/8	21 3/8	24 1/8	29 3/8	34 3/8	39 3/8	44 3/8	49 3/8	54 3/8	59 3/8	64 3/8
C	11 3/8	14 1/8	16 3/8	19 1/8	21 3/8	26 3/8	31 3/8	36 3/8	41 3/8	46 3/8	51 3/8	56 3/8	61 3/8

BATHROOM CONVECTOR CABINETS

TYPE "L"



DIMENSIONS IN INCHES

NOMINAL CORE WIDTH	3 1/2	5 1/4
B	3 7/8	5 3/8

D	8	10	12
---	---	----	----

ONE-PIPE STEAM CONVECTORS ARE PROVIDED WITH INTEGRAL LEGS - ACCESS DOOR CAN BE FURNISHED AT ADDITIONAL COST. SEE PRICE LIST.

DIMENSIONS IN INCHES

NOMINAL CORE WIDTH	3 1/2	5 1/4
B	3 7/8	5 3/8

D	8	10	12
---	---	----	----

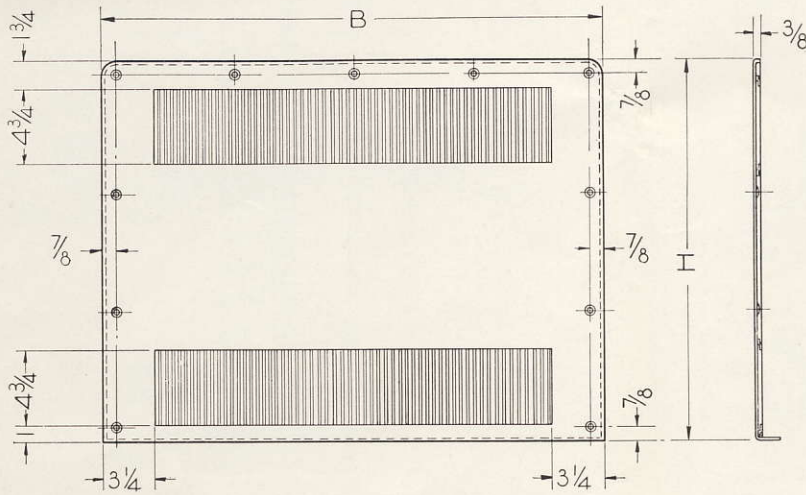
NOMINAL CORE LENGTH	10	12 1/2	15	17 1/2	20	22 1/2	25
L	10	12 1/2	15	17 1/2	20	22 1/2	25
A	9 1/8	11 1/8	14 1/8	16 3/8	19 1/8	21 3/8	24 1/8

NOMINAL CORE LENGTH	10	12 1/2	15	17 1/2	20	22 1/2	25
C	6 3/8	9 3/8	11 3/8	14 1/8	16 3/8	19 3/8	21 3/8
A	9 1/8	11 1/8	14 1/8	16 3/8	19 1/8	21 3/8	24 1/8

FRONT PANELS ONLY

FURNISHED WITH OR WITHOUT DAMPER - PRIME GRAY FINISH - NO SCREWS SUPPLIED
HOLES FOR #10 OVAL HEAD WOOD SCREWS SPACED FROM 6" TO 8" APART

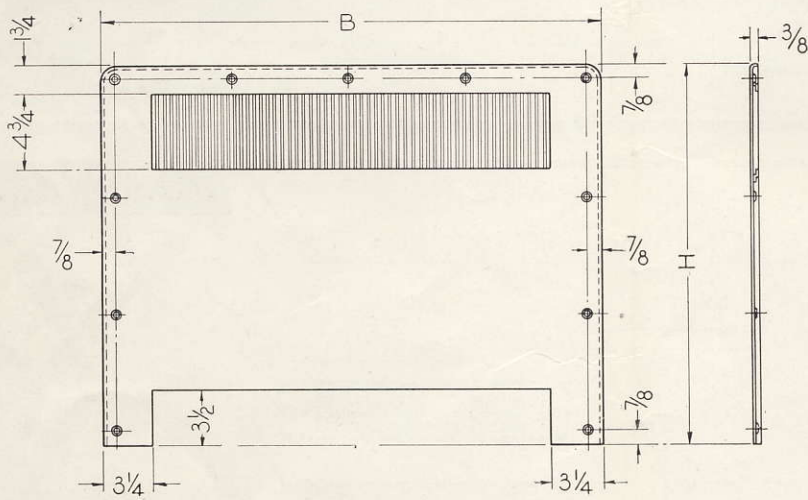
DRAWING No. 11



FOR NOMINAL CORE LENGTH AND
DIMENSIONS "B" AND "H" SEE PAGE 18
FULLY RECESSED CONVECTOR.

TYPE-R STYLE-A

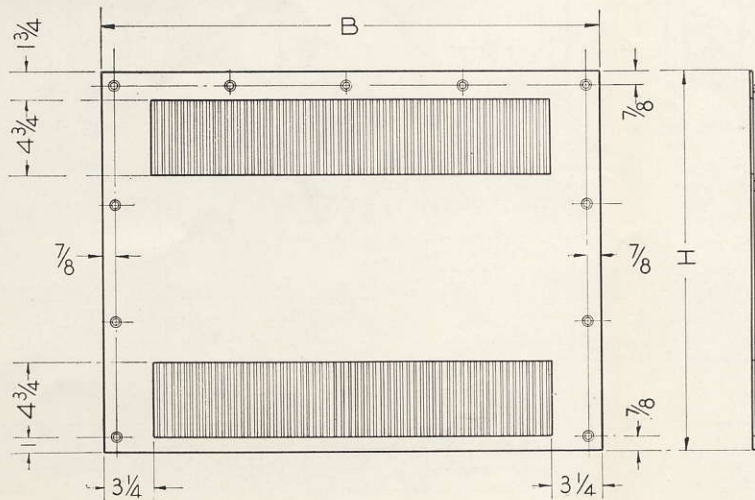
DRAWING No. 12



FOR NOMINAL CORE LENGTH AND
DIMENSIONS "B" AND "H" SEE PAGE 18
FULLY RECESSED CONVECTOR.

TYPE-R STYLE-B

DRAWING No. 13



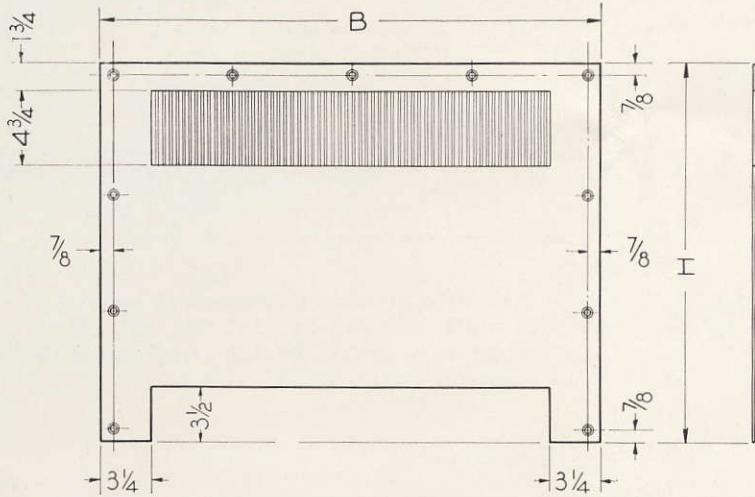
FOR NOMINAL CORE LENGTH AND
DIMENSIONS "B" AND "H" SEE PAGE 18
FULLY RECESSED CONVECTOR.

TYPE-R STYLE-AF

FRONT PANELS ONLY

FURNISHED WITH OR WITHOUT DAMPER - PRIME GRAY FINISH - NO SCREWS SUPPLIED
HOLES FOR #10 OVAL HEAD WOOD SCREWS SPACED FROM 6" TO 8" APART

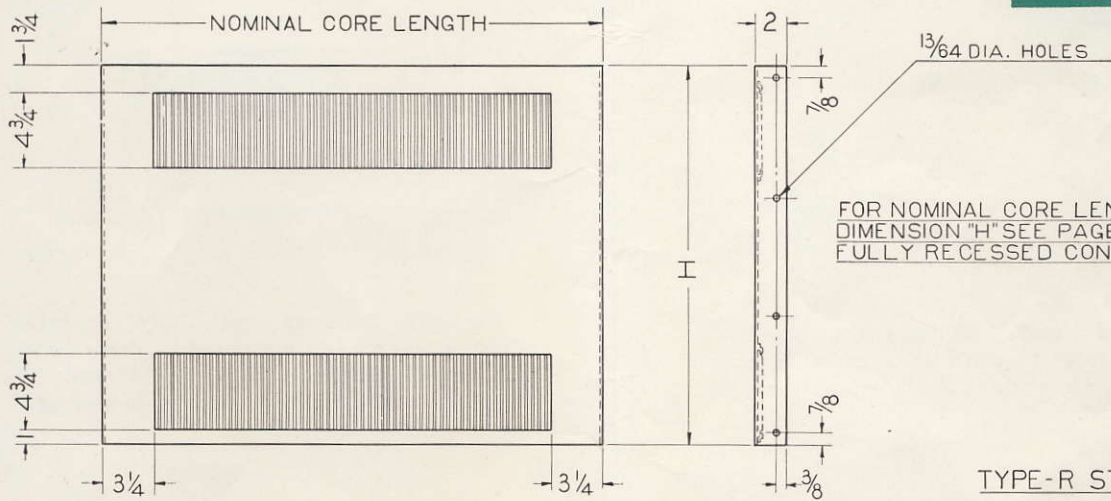
DRAWING No. 14



FOR NOMINAL CORE LENGTH AND DIMENSIONS "B" AND "H" SEE PAGE 18 FULLY RECESSED CONVECTOR.

TYPE-R STYLE-BF

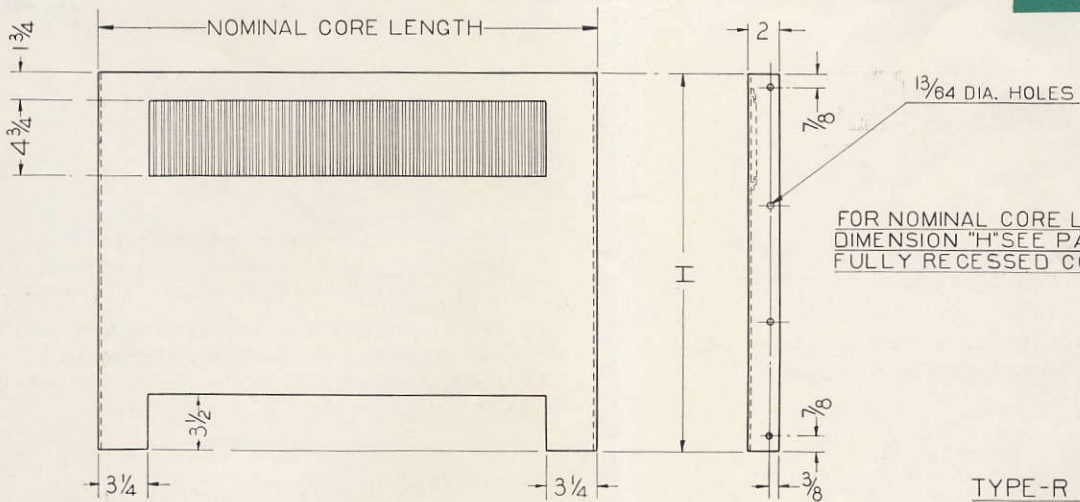
DRAWING No. 15



FOR NOMINAL CORE LENGTH AND DIMENSION "H" SEE PAGE 18 FULLY RECESSED CONVECTOR.

TYPE-R STYLE-AX

DRAWING No. 16

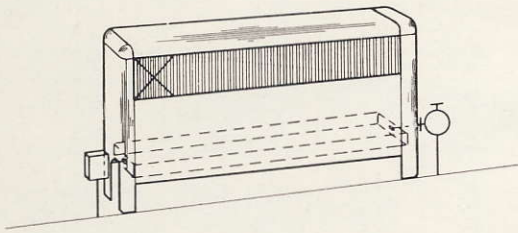


FOR NOMINAL CORE LENGTH AND DIMENSION "H" SEE PAGE 18 FULLY RECESSED CONVECTOR.

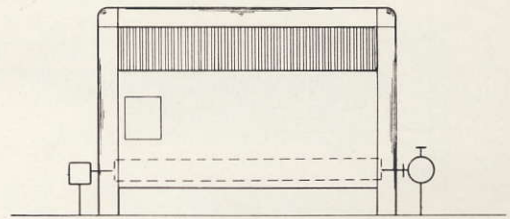
TYPE-R STYLE-BX

ACCESS DOORS

DRAWING No. 17

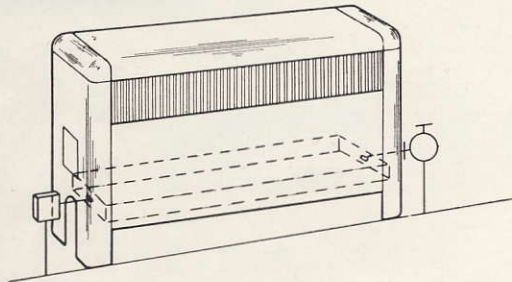


All Free Standing Cabinets with cores $3\frac{1}{2}$ " in width, 18" in height have access door in grille, as standard.



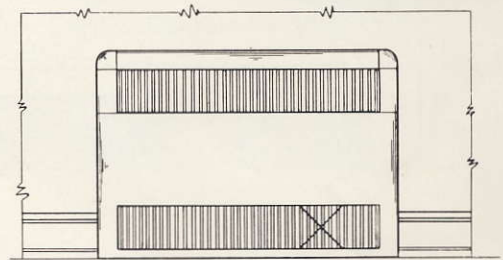
All Free Standing Cabinets with cores $3\frac{1}{2}$ ", in width, 20", 22", 24", 26", 28", 30", 36", in height have access door in front panel, as standard.

DRAWING No. 18



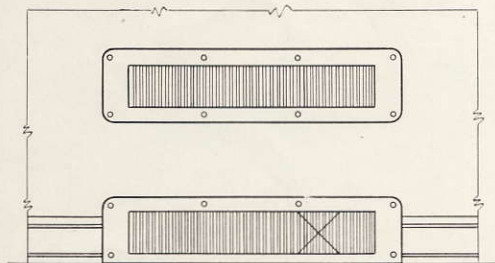
All Free Standing Cabinets with cores $5\frac{1}{4}$ ", 7", $8\frac{3}{4}$ ", $10\frac{1}{2}$ " in width have access doors located on end opposite steam or water supply, as standard.

DRAWING No. 19



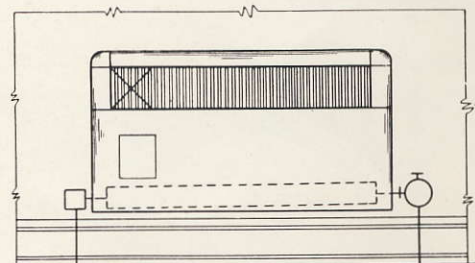
Partially Recessed and Fully Recessed Cabinets may be furnished with access doors at a small additional cost. In 18" and 20" heights, doors are in grilles, in higher cabinets, in front panel.

DRAWING No. 20



Plastered-In Cabinets may be furnished with access doors in grilles at a small additional cost.

DRAWING No. 21

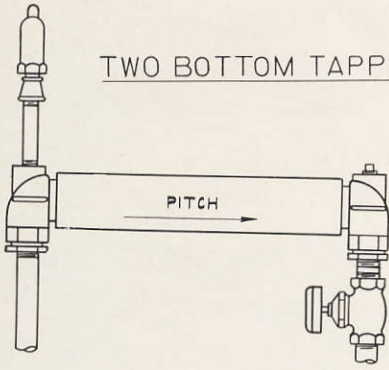


Wall-Hung Cabinets may be furnished with access doors at a small additional cost. In 18" heights, doors are in grille. In higher cabinets, the access door is in front panel.

PIPING DIAGRAMS

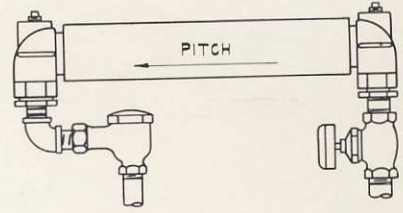
DRAWING No. 22

TWO BOTTOM TAPPINGS.



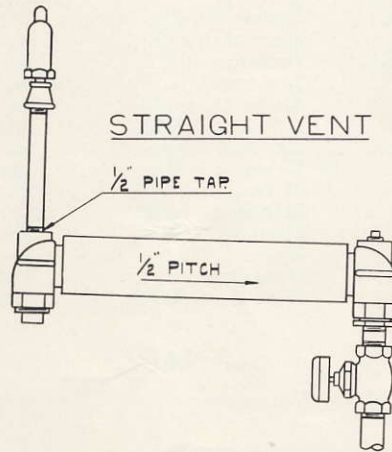
HOT WATER SYSTEM

TWO BOTTOM TAPPINGS.



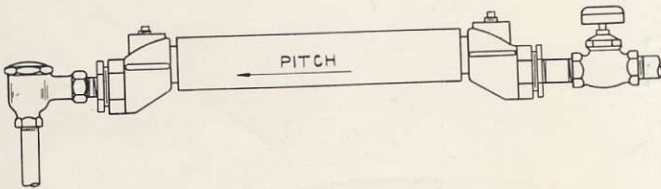
TWO-PIPE STEAM SYSTEM

STRAIGHT VENT



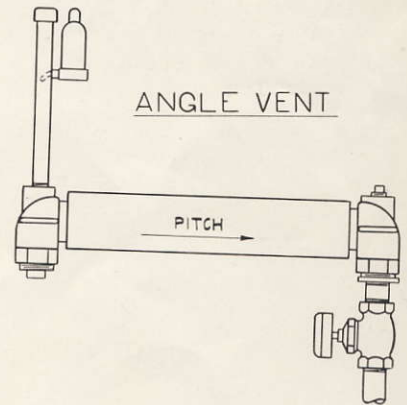
ONE-PIPE STEAM SYSTEM

TWO END TAPPINGS



TWO-PIPE STEAM SYSTEM

ANGLE VENT



ONE-PIPE STEAM SYSTEM

The above illustrations show typical piping diagrams that can be used with various types of steam and hot water systems. On one-pipe steam systems and hot water systems the location and application of the air valve is very important. It is the purpose of these diagrams to show the proper way to install air valves to get the best results. The air storage feature of these air vent installations is very important. For example, on a one-pipe steam installation it means the air vent will work properly, while on a hot water installation it makes frequent venting unnecessary.

SALES AND ENGINEERING OFFICES

Albuquerque, N. Mex.	Detroit, Mich.	Omaha, Neb.
Atlanta, Ga.	Elkhart, Ind.	Philadelphia, Pa.
Baltimore, Md.	El Paso, Texas	Pittsburgh, Pa.
Beaumont, Tex.	Erie, Pa.	Portland, Ore.
Birmingham, Ala.	Grand Rapids, Mich.	Richmond, Va.
Boston, Mass.	Harrisburg, Pa.	Rochester, N. Y.
Bridgeport, Conn.	Indianapolis, Ind.	Saginaw, Mich.
Buffalo, N. Y.	Jacksonville, Fla.	St. Louis, Mo.
Butte, Mont.	Kansas City, Mo.	Salt Lake City, Utah
Charlotte, N. C.	Lansing, Mich.	San Francisco, Calif.
Chattanooga, Tenn.	Los Angeles, Calif.	Scranton, Pa.
Chicago, Ill.	Louisville, Ky.	Seattle, Wash.
Cincinnati, O.	Milwaukee, Wis.	Sioux Falls, So. Dak.
Cleveland, O.	Minneapolis, Minn.	Spokane, Wash.
Columbus, O.	Muskegon, Mich.	Syracuse, N. Y.
Dallas, Texas	Newark, N. J.	Tucson, Ariz.
Dayton, O.	New Orleans, La.	Tulsa, Okla.
Denver, Colo.	New York, N. Y.	Washington, D. C.
Des Moines, Iowa		Worcester, Mass.

CANADA

Toronto

Vancouver

Winnipeg

YOUNG RADIATOR COMPANY
RACINE WISCONSIN, U. S. A.