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RADIATOR INCLOSURE.

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My invention relates to radiator inclosures and more particularly to devices of this character which are so constructed that they encase the front, ends and top of the radiator and have a back opening by which they may be positioned to encase the radiator and be withdrawn therefrom to give free access to the radiator for any purpose, and which are preferably of ornamental design.

Still more particularly, my invention relates to devices of this character which are provided with radiator inclosing sides having substantially large grille or screen portions to permit the circulation of air and radiation of heat to and from the radiator while, at the same time, the inclosure operates as an effective screen, collecting circulating dust carried by the moving currents of heated air, and which also serves as a shield, preventing injury from accidental contact with the radiator.

One of the objects of my invention is to provide a device of this character, which may be formed with an open back, and which may thereby be conveniently installed in place to encase a radiator and be readily removed therefrom.

Another object is, to provide a device of this character, which shall be of ornamental design, and which shall be provided with side and end walls and a top cover having substantially large screen or grille portions to permit the ready circulation of air and radiation of heat in all directions from the radiator.

Another object is to provide a device of this character, which may completely inclose all exposed portions of a radiator and prevent burning or other injury from accidental contact therewith.

Another object is, to provide a device of this character, which will entirely inclose a radiator and at the same time permit convenient access to the valves and other operating portions of the radiator, without removal of the inclosure from the radiator.

Another object is, to provide a device of this character, which shall be so constructed that the screen or grille portions in the sides, ends and top thereof may be readily removed and replaced independently of each other without other displacement of the inclosure.

Another object is, to provide a device of this character in which the parts exclusive of the screen and grille portions are covered on their inner faces with a heat insulating and fireproofing material, in order to lengthen the life of the device and minimize the fire risk from ignition of the inclosure by the radiator.

Another object is, to provide a device of this character, which shall be of comparatively few parts, of simple construction, of ornamental design, which shall comprise readily detachable members permitting access to all parts of the radiator and which shall have other advantages and results which may hereinafter appear.

My invention consists in the particular combination, organization and construction of parts, shown in the accompanying drawings, described in the following specification and more particularly defined in the appended claims.

In the drawings—

Fig. 1 is a perspective view of my invention is applied to incase a radiator, showing a door at one end open for access to the radiator valves.

Fig. 2 is a longitudinal cross sectional view taken on line 2—2 of Fig. 1, looking in the direction of the arrows, showing the construction and assembly of my inclosure with a radiator inclosed therein.

Fig. 3 is a vertical cross sectional view, taken on line 3—3 of Fig. 1, showing a view of my inclosure removed from the radiator.

Fig. 4 is an enlarged fragmentary view of the assembly at a corner supporting column of my inclosure showing a construction by which the screen or grille is mounted on a detachable frame registering in the inclosure panel openings.

Fig. 5 is a fragmentary view of another form of construction of the screen or grille holding portions of my inclosure, showing slotted side members, in which the screen or grille may be slid and adjustably or removably held independently of each other.

Fig. 6 is a view of a further modified form of the screen and grille holding portions of my inclosure, showing a tongued end against which the screen or grille members are removably held by an independent frame which clamps the screen or grille to the holding frame.

Referring to the drawings, in which like numerals of reference indicate corresponding parts, my invention comprises a box like casing 10, to inclose a radiator 11, which latter is connected, in any suitable manner, to a heat circulating system by an inlet pipe 12 and an outlet pipe 13 and is operatively regulated by a valve 14 controlling the flow of steam or other heating element in the usual manner.

The box like inclosure or casing 10 is of shell like formation, open at its bottom and rear, so that it may conveniently be placed in position incasing a radiator. It is provided with opposite end walls 15 and 16, a front wall 17 and top 18. The front wall 17 comprises a pair of sections or panels 19 and 20 of substantially similar rectangular shape, supported at their opposite ends by upright corner posts 21 and 22 and joined and supported at their adjacent ends, by an upright post 23, the whole front portion forming substantially a panel of unitary construction.

The sections 19 and 20 are substantially similar in construction, and similarly joined to their supporting posts 21, 22 and 23. Each of these panels 19 and 20 consist of a framework, comprising upper and lower substantially horizontal members 24 and 25, which extend longitudinally of the casings, between their supporting posts 21, 22 and 23 and are carried thereby, and substantially paralld vertical members 26 and 27, connecting the members 24 and 25 and mounted in connection with the supporting posts 21, 22 and 23, forming a unitary framework comprising the front panel structure of my inclosure. The front panel sections 19 and 20 are held in fixed assembly and operative relation to the supporting posts 21, 22 and 23, by means of angle pieces 28 and 29, which engage the sections 19 and 20 and their supporting posts and hold these parts assembled by screws or other suitable fastening means, which affix the angle pieces in operative position.

The panel sections 19 and 20 are provided with substantially large openings 30 and 31 of rectangular or other desired shape in order to permit the radiation of heat from the radiator and the circulation of air into and out of the inclosure. These openings 30 and 31 are covered with a grille or screen panel 32 and 33, which permit the free circulation of air therethrough to the radiator, prevent the accidental contact with the heated radiator and any injury which might result therefrom, and also serve as a means to collect particles of dust, circulating in the heated air which would otherwise tend to collect on the walls and ceiling producing a soiled and undesirable appearance and an insanitary condition.

The screen or grille sections 32 and 33 are

made of metal or of other material sufficiently unbendable and rigid to retain their intended shape and formation, without other support than that provided to hold them at the margins of the openings 30 and 31. They may be cut out as plates of the desired shape and size and may be mounted in position in the panels by providing recesses or slots 34 and 35 in the side and bottom members of the panels, such as are shown in the sections 26^a and 27^a, in Fig. 5 to represent the vertical side members of one section of the front panels. These plates may be mounted by causing their opposite vertical edges to register in the slots 34 and 35 and then sliding the plates downwardly into position, so that the openings 30 and 31 are closed thereby. The plates 32 and 33 may readily be removed when access to the radiator is desired through these openings, by lifting the plates until they are free of the slots.

In a modified form of construction shown in Fig. 4, the plates 32 and 33 may be mounted by means of screws, or other suitable fastening elements 39, to a suitable framework adapted to fit the openings 30 and 31, which framework may be of joined members such as 40, in Fig. 4. These members 40 have an extending tongue section 41, adapted to seat in a recessed portion of a member 26^b, which is substantially like the members 26 and 27 in Fig. 1, but which is provided with a tongued section 42, in connection with which tongue 41, of the member 40, is held by means of screws or other suitable fastening elements. By this construction, the grille or screen 33 may be removed from the panel portions 19 or 20, by loosening the fastening means 43 and withdrawing from the panel openings 30 and 31 the frame made up of the elements 40 and carrying the screen or grille frame 33. Ready access into the inclosure may be obtained through each panel opening independently, without disassembling any of the other parts of my inclosure. By this construction the grille and screen 32 and 33 may be readily reinstalled into the panel openings as desired.

A still further modification is shown in Fig. 6 in the construction of the members which carry the grille and screen work 33 and hold them in place in the panel openings 30 and 31. In this modification I provide screen carrying members 26^c, which are substantially like the screen members 26^b, illustrated in Fig. 4, and have a tongued portion 44, against which screen members 33 are seated, and which are provided with an incut or grooved portion 45 to receive the screen. The screen is held in place by a framework, comprising members or strips 46, which are separated from the screen and are held against the outer face thereof, by

being attached to the members 26° by screws, or other suitable fastening elements 47. By this construction the screen may be readily removed from its installed position by removing the strips 46 and withdrawing the screen.

These modifications are particularly described and illustrated to show some of the various means which may be employed to securely and removably mount the screen or grille in the panels and effect the convenient access to the interior of the casing.

Arranged substantially at right angles to the front panel portion of my inclosure, I provide end sections 15 and 16, which are substantially unitary with the front sections, but are attached to the corner supporting standards 21 and 22, extend rearwardly therefrom and are securely held in operative relation therewith by angle pieces 50 and 51. These angle pieces are attached at the respective ends to the lateral end sections 15 and 16 and to the vertical supporting standards 21 and 22, by screws or other suitable fastening elements. The end sections 15 and 16, each comprise a substantially rectangularly formed framework, made up of vertical members 52 and 53 and transverse members 54 and 55, joining said vertical members, forming said end members into a unitary structure.

The end members 15 and 16 are provided with openings 56 and 57, extending substantially their entire length or height and a screen or grille 58 and 59, suitably set into said openings and held in operative relation therewith in any of the manners described hereinbefore, in connection with the explanation of the means by which the screens 32 and 33 are mounted in the front panels. The screen 58 and 59 may be detached from the end panels, to permit access to the radiator through these end panels in any of the manners hereinbefore referred to, in connection with the screens 32 and 33.

In one end panel, shown in the drawings to be, in this instance, the end panel 15, I provide an aperture 60, which, in Fig. 1, is shown to be near the upper end of the end panel, for the purpose of giving access to radiator controlling valves. The door 61 is hinged to the member 52 to close the opening when desired. This construction is adopted when the radiator valve is near the top portion of the inclosing casing. When the radiator valve is arranged so that more convenient access can be obtained through the lower portion of the inclosing casing, I provide an end section with the door substantially at the base thereof. This may otherwise be accomplished by providing an end section having a door which may be disconnected from the holding brackets 50 and 51 and inverting the end member, replacing it in connection with the supporting ver-

tical standard 22 and attaching the brackets 50 and 51. If desired, the ends 15 and 16 may be swingably joined to the standards 21 and 22, by the provision of hinges connecting these ends and standards so that the ends may be swung upon their hinges as a unit and the doors and unscreened openings may be thereby eliminated from these portions.

The top cover 18 is shaped to conform to the substantially rectangular or other arbitrary outline of the top of my inclosing casing, and for ornamental purposes may be provided to extend beyond the general outline thereof. It may be of unitary construction and is provided with a suitable number of openings, such as 70 and 71 of substantially large area relative to the body portion of the covering. These openings 70 and 71 are provided with a grille or screen 72 and 73 substantially similar to the screens or grille 32, 33, 58, and 59 in the front and end panels. The screens 72 and 73 cover the openings 70 and 71 and may be mounted therein in the manner in which the grille or screens are mounted in the front and end sections of my inclosure. They may be fixed to or detachable from the top portion 18. When detached, ready access is conveniently had to the interior of my inclosure by removal of the screens.

The cover 18 may be held in fixed relation to the body portion of my inclosing casing by means of screws, or other suitable fastening elements, engaging the upper ends of the upright standards 21, 22 and 23, and it will thereby serve to hold the front and end panels of the casing securely in operative relation to each other. If desired, other fastening means may be provided to more securely connect the cover to the end members near their rear edges, in order to retain the inclosing casing in the desired shape. The top, 18, however, may be connected to the top rear edges of the end sections 15 and 16 by hinges, so that it may be swung upwardly as a whole and access to the inclosure be obtained therethrough.

The framework containing the grille or screen covered openings is preferably made of wood or other suitable material, although it may, if desired, be constructed of metal. It is also of such ornamental design as to be of pleasing appearance and useful as a decorative piece of furniture to cover and conceal a less decorative radiator.

Except in the openings occupied by the grille or screens hereinbefore referred to, the framework of my inclosure is lined on its interior surface with asbestos sheeting or other suitable fireproof material in order that the risk of fire from the ignition of the inclosure, by the radiator may be reduced to a minimum. This lining may be cemented or glued to the framework, or may be fas-

tened thereto by tacks or other suitable fastening means. The screen or grille occupying the openings in the panels may be of such fineness of web as to provide a substantial filter for the air passing there-
 5 through, into and out of the inclosure and may serve as a means to collect dust from the dust laden air and thereby purify the atmosphere and prevent dust being carried
 10 thereby and deposited on the walls and ceiling of the room.

It may be understood, that although I have shown in Figs. 4, 5 and 6 and have described in connection therewith, different
 15 means by which the screens or grilles may be detachably mounted in the openings 30, 31 etc. of the panels comprising my inclosure, yet the screen or grilles may be readily attached directly to and in the openings of
 20 the panels comprising my inclosure framework. This may be accomplished by fastening these screens or grilles to the framework by screws, nails or other suitable fastening means during the process of construction of the inclosure device. When the screen
 25 or grille work is so attached they are removable by withdrawing the inclosure from the encased radiator and detaching the grille or screen work from its frame.

The bottom members 25, which extend longitudinally between the upright standards 21, 22 and 23, and the members 25^a and 25^b which extend between the standards 21
 30 and 22 and the upright portions 52 of the framework comprising the end panels, are connected to these parts 21, 22 and 23 and to uprights 52 so that a space is left between the supporting floor, upon which the inclosure
 35 stands, and the lower edge of these members 25, 25^a and 25^b. By this assembly I provide a space substantially at the floor level for the intake of air within the inclosure, to be heated by the radiator and to be
 40 radiated and circulated out through the top, front and end screen openings thereof for heating the room.

The supporting vertical end standards 21 and 22 are of substantially similar construction, size and cross-sectional shape but differ
 45 in cross-sectional shape from the intermediate standard 23. The standards 21 and 22 are of generally rectangular formation and have a front portion 85, lying in a substantially straight line and have an outer lateral
 50 side, adjacent the end panel sections which are provided with a tongue 86 and a grooved portion 87, lying adjacent thereto, to receive and position the vertical member 53 of the end panels. They have also a rear
 55 inner side 88 lying in a substantially straight line, adapted to receive and have connected thereto angle pieces 28 and 29, by which the end panels are held in fixed operative position in my inclosure. They have further an
 60 inner lateral side adjacent the vertical mem-

bers 27 of the front panel framework, which is provided with a frontal laterally extended tongue portion 89, and a recessed portion, which is adapted to receive the front panel
 65 members 27, while the tongued section 89 positions these panel members. The recessed section 90 also presents a surface to which the angle pieces 29 are attached, to hold the members 27 in assembled position in the inclosure device.

By reason of the peculiar construction and formation of the vertical standards 21 and 22 I am enabled to readily, securely and detachably assemble the end and front panels in co-operative relation with the other parts
 70 of my device, with a minimum of expense and parts, and a maximum of adjustability, and thereby effect the standardization of my device.

The intermediate vertical standard 23, which engages and supports the vertical
 75 members 26 of the front panels, is of substantially T shape cross sectional formation, having the cross-arm of the T formation lying in front of the vertical members 26 and forming a portion 91^a and 91^b on either
 80 side of the stem 92 of the T shaped standard 23. There is thereby formed, on either side of the stem 92, channelled or incut sections 93, which receive and hold the vertical members 26 of the front panels of my inclosure. These members 26 are so placed that the
 85 tongued portions 91^a and 91^b are in front thereof and contact therewith, and prevent the forward displacement from their intended position of the members 26 and the frame of which they are a part. These members 26 may be held to the vertical standard 23 by any suitable fastening means, such as
 90 brackets (not shown), screws, or other fastening elements.

By this formation of the intermediate supporting standards, I am likewise enabled to produce an ornamental supporting member of extremely simple construction, which securely holds the parts connected thereto in
 95 operative relation, readily detachable therefrom and readily attached thereto, and of such design that it readily lends itself to convenient assembling and standardization in the construction of devices of this character, which is of minimum cost, of the fewest parts and of substantially unlimited adjustability.

My device may be made in any special form or size to inclose radiators of a straight
 100 line type of any length, or it may be made of circular formation, oval, or of angular construction, to suitably inclose radiators having any usual or unusual contour. It also may be provided with panels in either form of radiator inclosure, which may be either rectangular, or curvilinear, or of regular or irregular formation, which may be
 105 readily adjusted to or displaced from the

inclosure framework with equal facility, regardless of the shape of the inclosure or the panels therein.

My device may be applied to straight line radiators placed near a wall, by providing a closure of a box like type having an open bottom and back, and through their openings, installing the cover or inclosure around the radiator, so that the rear ends of the end panels abut substantially against the wall. My device may, however, be made as a complete inclosure, having all of its side portions closable around the radiator, and having one side portion removable or hinged, in order to permit its introduction around the radiator in inclosing position.

It will be obvious that I have, provided a device of simple construction, of ready adjustability as a radiator inclosing device, which may be assembled and disassembled conveniently, which is of a minimum of parts, which may be readily placed to inclose a radiator of any type, which operates efficiently to collect dust and purify the atmosphere, and protect the walls and ceiling of the room from becoming disfigured from particles of dust carried in the circulating heated air, that is a safety device preventing burning or other injuries from accidental contact with a heated radiator, and which may be constructed so that it is an ornamental piece of furniture, and may have other advantages and results not herein specifically set forth.

Although I have shown and described my invention in detail, I do not wish to be limited thereby, except as the state of the art and the appended claims may require, for it is obvious that various modifications and changes may be made in the combination, organization and arrangement of the parts, without departing from the spirit and scope of my invention.

What I claim as new and desire to secure by Letters Patent is:

1. A radiator inclosure comprising a box like casing adapted to inclose a radiator, having front and end walls, a top cover and open bottom, said end walls being spaced apart to permit the passage of a radiator therebetween, said front and end walls and top cover being divided into panel sections, each panel having a substantially large opening and a screen detachably mounted therein and adapted to permit the circulation of air and radiation of heat therethrough and detachable from said opening to permit access to the inclosed radiator, said front and end walls being supported by and detachably connected to a pair of vertical standards, each disposed at the front corner of the inclosure and adapted to hold said front and end walls in unitary relation thereto spaced vertically above the supporting surface of said inclosure, to provide an air intake to

the interior of the inclosure, and having angle pieces engaging said end walls and said vertical standards and said front walls and said vertical standards to securely hold these members in operative relation.

2. A radiator inclosure comprising a box like casing adapted to inclose a radiator, having front and end walls, a top cover and open bottom, said end walls being spaced apart to permit the passage of a radiator therebetween, said front and end walls and top cover being divided into panel sections, each panel having a substantially large opening and a screen detachably mounted therein and adapted to permit the circulation of air and radiation of heat therethrough and detachable from said opening to permit access to the inclosed radiator, said front and end walls being supported by and detachably connected to a pair of vertical standards, each disposed at a front corner of the inclosure and adapted to hold said front and end walls in unitary relation thereto, spaced vertically above the supporting surface of said inclosure, to provide an air intake to the interior of the inclosure, the panel sections of the front wall being, at their adjacent ends, connected in unitary relation with, and supported by an intermediate vertical standard disposed between said corner standards.

3. A radiator inclosure comprising a box like casing adapted to inclose a radiator, having front and end walls, a top cover and open bottom, said end walls being spaced apart to permit the passage of a radiator therebetween, said front and end walls and top cover being divided into panel sections, each panel having a substantially large opening and a screen detachably mounted therein and adapted to permit the circulation of air and the radiation of heat therethrough and detachable from said opening to permit access to the inclosed radiator, said front and end walls being supported by and detachably connected to a pair of vertical standards, each disposed at a front corner of the inclosure and adapted to hold said front and end walls in unitary relation thereto spaced vertically above the supporting surface of said inclosure, to thereby provide an air intake to the interior of the inclosure, the panel sections of the front wall being, at their adjacent ends, connected with, supported by and in unitary relation to an intermediate vertical standard, disposed between said corner standards, said corner standards and intermediate standard having laterally extending tongued portions engaging the vertical members of the front wall panel sections and adapted to prevent the forward displacement of said panel sections from the inclosure.

4. A radiator inclosure comprising a box like casing adapted to inclose a radiator,

having an open bottom and walls inclosing said radiator provided with openings therein and screens detachably mounted in said openings adapted to permit the circulation of air and the radiation of heat therethrough, and having laterally tongued vertical supporting standards adapted to support said box like casing in unitary formation and in spaced relation above a supporting surface, having means to securely, detachably hold said casing in operative relation to said standards, and having an aperture in said casing adapted to permit access to the radiator control valves.

Signed at the city of New York in the county of New York and State of New York this eighth day of August, A. D. 1925.
DANIEL PRIORE.