Oct. 31, 1939. P. DOMEK 2,177,822

RADIATOR COVER

Filed Dec. 9, 1938

Fig. 1.

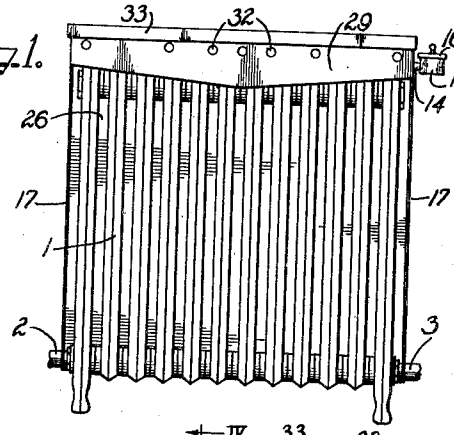


Fig. 2.

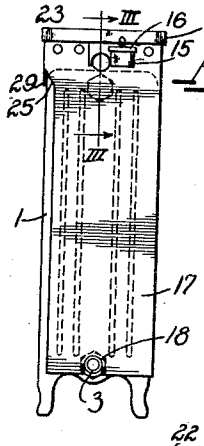


Fig. 3.

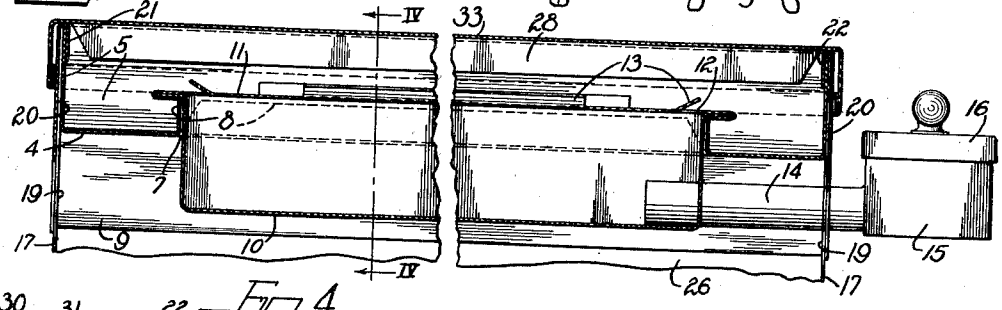


Fig. 4.

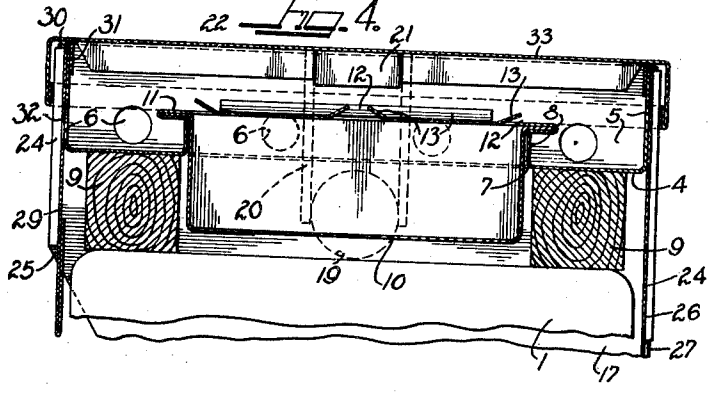


Fig. 6.

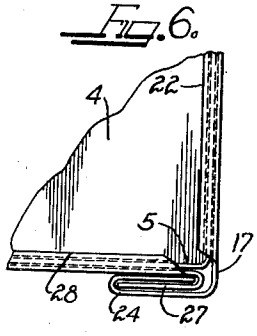
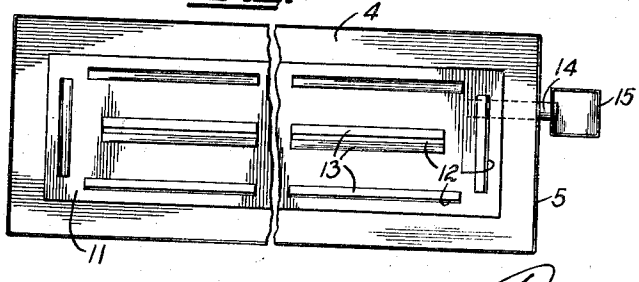


Fig. 5



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UNITED STATES PATENT OFFICE

2,177,822

RADIATOR COVER

Paul Domek, Chicago, Ill.

Application December 9, 1938, Serial No. 244,723

9 Claims. (Cl. 257—138)

It is a well known fact that dust and grime is usually found floating around in the air in rooms. The circulation of the dust and grime is increasd or agitated in heated rooms by the warm air rising from warm or hot radiators, thereby causing the dust and grime to circulate more actively around radiators with a result that the dust and grime carried are forced upwardly and a great portion thereof settles upon walls, curtains and other articles in the immediate vicinity of the heated radiators. The result is that the walls, curtains, drapes, etc., around radiators become soiled much faster than the walls and articles of furniture farther away from the heated radiators.

The present invention relates to an improved knock-down type of radiator cover or shield which may be readily assembled over and around a radiator to provide a cool top radiator cover construction obviating or greatly reducing the upward radiation and instead causing the heat to radiate from the front of the radiator towards the center of the room thereby creating a condition whereby the dust and grime circulating in the air of a room does not have the tendency to concentrate more rapidly on the walls or articles of furniture in the immediate vicinity of radiators, but is more uniformly distributed.

It is an object of this invention to provide an improved type of knock-down cool top radiator cover, the various parts of which are adapted to be assembled around a radiator and the pipes and connections thereof, to provide a cover, the top of which is kept comparatively cool while the heat from the radiator is directed outwardly through the front of the cover into the main body of the room.

It is also an object of this invention to provide a cool top radiator cover wherein a top section or tray is adapted to have removably engaged therewith a humidifying unit as well as the front, back and end walls of the cover, and a top.

It is a further object of this invention to provide a cool top radiator cover of the knock-down type adapted to be assembled around a radiator, and including an enclosed covered type of humidifier equipped with means for filling the same from the exterior of the radiator cover, and including means for directing saturated heated air through the front and side walls of the radiator cover into the room.

It is furthermore an important object of this invention to provide a radiator cover of the knock-down type adapted to be assembled around a radiator, and including a slotted humidifying unit which is removably supported in a supporting tray which is adapted to rest on the top of a radiator in position to removably support the walls and top of the radiator cover in addition to the humidifier.

It is an important object of this invention to provide a cool top radiator cover of the knock-down type, adapted to be easily and quickly assembled around a radiator and embodying a supporting tray in which a moisture distributing pan or humidifier is removably supported, said tray adapted to removably receive the interfitting walls of the cover hung or suspended therefrom beneath a removable top.

Other and further important objects of this invention will be apparent from the disclosures in the specification and the accompanying drawing.

The invention (in preferred form) is illustrated in the drawing and hereinafter more fully described.

On the drawing:

Figure 1 is a front elevation of a radiator having supported thereon a cool top radiator cover embodying the principles of this invention.

Figure 2 is a side elevation of the radiator and the cover supported thereon.

Figure 3 is an enlarged fragmentary vertical detail section taken on line III—III of Figure 2.

Figure 4 is a transverse vertical detail section taken on line IV—IV of Figure 3.

Figure 5 is a top plan view of the supporting tray and the humidifying unit supported therein with the tray top and the filler cup cap omitted.

Figure 6 is an enlarged fragmentary top detail view of one of the corners of the radiator cover with the top removed to show the interfitting relationship of the wall members.

As shown on the drawing:

The reference numeral 1 indicates a radiator, of standard construction, having the steam pipes 2 and 3 connected to the ends of the lower portion thereof.

The improved cool top radiator cover, is of the knock-down construction, and is further adapted to be assembled around the radiator 1 by substantially anyone, without requiring the services of an expert and without necessitating bolting, soldering, brazing or the like for holding the radiator cover parts in assembled relation for use.

The improved radiator cover unit comprises a supporting pan or tray 4 having an upwardly projecting flange-like rim 5, the end and the front walls or flanges of which are provided with spaced humidifying openings 6. The supporting pan or tray 4 has the middle portion thereof cut away to provide a humidifier opening 7, the mar-

ginal portions of which are bent upwardly at right angles into the pan or tray to provide supporting flanges 6. Rigidly secured on the bottom surface of the supporting tray 4 are a pair of spaced parallel longitudinally disposed wooden rails or runners 9 which seat upon the top of the radiator 1 as illustrated in Figure 4.

Removably supported by the supporting tray 4 is a humidifying unit comprising a water tank or container 10, the upper margins of the walls of which are deflected outwardly to provide flanges around which the marginal edges of a top plate 11 are bent to rigidly hold the top plate secured on the tank or container 10. The humidifier top plate 11 is provided with a plurality of vapor outlet openings or slots 12. Marginal portions of the vapor outlet slots 12 are deflected upwardly at an angle to provide a series of guide blades or deflectors 13 for directing moistened or humidified heated air from the humidifier tank 10 into the supporting tray 4 for even distribution or discharge through the outlet openings 6 in the flanges of the supporting tray.

Rigidly secured in one of the end walls of the humidifier tank or container 10 is a filler tube or pipe 14, the outer end of which is adapted to project through a suitable opening in one of the end walls of the radiator cover. Rigidly secured on the outer end of the filler tube or pipe 14 is a filling cup 15 provided with a removable cap 16 to permit water to be poured into the cup 15 for filling the humidifier tank or container 10 when necessary.

To assemble the humidifier unit in the supporting tray 4, the cap 16 is removed and the cup 15 is then first projected downwardly through the openings 7 in the tray 4, thereby positioning the filling pipe 14 beneath the tray as illustrated in Figure 3 and positioning the filling cup in a projecting position beyond one end of the radiator cover to permit convenient filling of the humidifying unit.

Removably hung or engaged on the end flanges of the supporting tray 4 are a pair of side or end walls 17, each of which is provided with a slot or opening 18 in the lower end thereof to fit over the respective pipes 2 and 3 of the radiator. Each of the end walls 17 is also provided with a top notch or opening 19. After the end walls 17 are hung in position on the end flanges of the tray 4, the openings 19 are adapted to be partially closed by means of a shutter or closure plate 20, the upper end of which is bent over and downwardly to provide a supporting hook 21. The top margin of each of the end walls 17 is bent inwardly and downwardly to provide a supporting hook 22 to engage over the end flange of the rim of the tray 4 to permit the end walls 17 to hang in position supported by said tray. The upper marginal portion of each of the end walls 17 is provided with a series of spaced humidifying openings 23 which register with the openings 6 in the end flanges of the tray rim. The rear margin and part of the front margin of each of the end plates 17 are bent rearwardly at right angles and then forwardly to provide channel-shaped guides 24. The rear guide channel 24 of each of the end walls extends from the top of the end wall to the bottom thereof, while the front guide channel 24 extends from the top of the end wall for a short distance to a set-off at 25. The notch 19 in the upper end of the end wall 17 at the filling end of the humidifying unit is slipped upwardly around the filler pipe 14 to permit the supporting hook 22 to be engaged over the end flange of the tray 4. In a similar manner, the opposite end wall 17 is hung in position on an end flange of the tray 4. Ater the end walls 17 are hung in position, the closure plates 20 are hung n the end flanges of the tray 4 to partially close the openings 19, as illustrated in dotted lines in Figure 4, leaving a portion of the openings 19 for the pipe 14 to project therethrough, and also leaving an opening at the opposite end of the radiator cover to permit a radiator valve pipe, an air line pipe or the like to project through the end wall of the radiator cover.

With the radiator cover end walls 17 suspended in position from the supporting tray 4, the radiator cover back wall or plate 26 is now adapted to be engaged in position to form the back of the radiator cover. The rear plate or wall 26 has the end margins thereof bent forwardly and then inwardly to provide guide flanges 27 which are adapted to slide downwardly in the channel guides 24, as illustrated in Figure 6, until a supporting hook 28 integrally formed on the upper margin of the rear wall 26 seats over the upper edge of the rear flange of the supporting tray 4, as illustrated in Figure 3.

The front marginal portions of the radiator cover end or side walls 17 have the upper portions thereof releasably connected to one another by means of a front panel or apron 29. The end margins of the front panel or apron 29 are bent forwardly and then inwardly to prvide guide flanges 30 which are adapted to slide downwardly in the front guide channels 24 of the side walls 17 (similar to the arrangement illustrated in Figure 6) until a supporting flange hook 31 formed on the upper end of the front panel or apron 29 engages or seats over the upper edge of the front rim flange forming part of the supporting tray 4. The front panel or apron 29 thus locks the front margins of the end walls 17 together and completes the formation of the body portion of the radiator cover around the radiator 1. The front panel or apron 29 is provided with a series of spaced humidifier apertures or openings 32 which register with the openings 6 in the front flange of the supporting tray 4 to permit the escape of humidified heated air through the upper front portion of the radiator cover.

To complete the assemblage of the knock-down type of cool top radiator cover, a rimmed or flanged top 33 is provided to seat over the upper suspended ends of the radiator cover walls and to close the supporting tray 4 and enclose the humidifying unit contained therein.

With the cool top radiator cover assembled on the radiator 1, as illustrated in Figures 1 and 2, the cap 16 of the filler cup 15 is removed and water is poured therein passing through the pipe 14 to fill the humidifier tank or container 10. Heat from the radiator 1 heats the water in the container 10 and causes vaporization of the water which with the heated air in the humidifier escapes through the top slots 12 of the humidifier and the heated saturated air is directed outwardly in substantially all directions by means of the deflectors 13 to cause an even distribution of the saturated heated air outwardly from the tray 4 through the openings 6 and the openings 23 and 32 registering therewith so that the warm saturated air is discharged into the room from the sides of the radiator cover as well as from the front thereof.

Due to the escape of the saturated air through the openings in the side and front walls of the

radiator cover, the radiator cover top 22 is kept cool thereby obviating the upward radiation of heat from the radiator thereby reducing the possibility of the walls, ceiling and draperies and the like in the immediate vicinity of the radiator from becoming soiled or dirty quicker than the other parts of the room. The large front opening in the radiator cover permits the heated air from the radiator to escape towards the center of the room and is consequently evenly directed in all directions. It is the substantially closed type of water tank or container within the radiator cover and the slotted top of said container which permits vapor to escape from the container into the closed tray 4 to be directed by means of the deflectors 13 against the inner face of the top 33 which acts as a baffle to direct the vapor out through the side and front openings in the radiator cover. It is the foregoing arrangement for the circulation of the vapor that maintains the top of the radiator cover cool and provides for the escape of the heated air through the front of the radiator cover into the room for even circulation.

It will of course be understood that various details of construction may be varied through a wide range without departing from the principles of this invention, and it is therefore not the purpose to limit the patent granted hereon otherwise than necessitated by the scope of the appended claims.

I claim as my invention:

1. A radiator cover of knock-down construction comprising a supporting tray for seating on a radiator, a closed top water container removably supported in the tray and projecting outwardly therethrough, vapor deflecting means struck upwardly from the closed top of the container leaving vapor outlet openings, a filling means connected with the water container for filling the container from the exterior of the radiator cover, slidably interfitting back, front and end walls removably suspended on the tray for surrounding the back and sides of the radiator and leaving the major portion of the front of the radiator exposed, said front and side walls having vapor escape openings therein registering with vapor escape openings in the tray, and a removable top engaged over the upper margins of the radiator walls and closing the top of the tray to serve as a baffle above the water container to be contacted and maintained cool by the escaping vapor when the water in the water container is vaporized by the heat from the radiator.

2. A knock-down type radiator cover for enclosing the top, back and sides of a radiator, said radiator cover comprising an apertured tray supported on the radiator and having an opening in the bottom thereof, a closed water container removably engaged in the tray and projecting downwardly through the opening in the bottom thereof, means for filling the closed container from the exterior of the radiator cover, the said closed water container having vapor deflectors struck upwardly from the top thereof leaving vapor escape openings communicating with the interior of the tray, apertured side walls suspended from the ends of the tray and having vapor escape openings therein registering with the vapor escape openings in the tray, guide members formed on the end walls, a back wall suspended from the back of the tray for closing the back of the radiator, guide means formed on the back wall and slidably interfitting the guide members on the end walls, an apertured front wall suspended from the front of the tray and having the apertures therein registering with the apertures in the tray, guide means on the front wall slidably interfitting the guide members on the end walls, and a top for closing the tray and the upper ends of the radiator cover walls and leaving the vapor escape apertures in the tray and the front and side walls of the radiator cover exposed.

3. A knock-down type radiator cover for enclosing the top, back and sides of a radiator, and leaving the major portion of the front of the radiator exposed, said radiator cover comprising a supporting tray supported on the radiator and having a plurality of vapor escape openings therein, slidably interfitting front, back and side walls suspended on the tray, said front and side walls having vapor escape openings therein registering with the vapor escape openings in the tray, a humidifying unit removably supported in the tray and projecting downwardly through the bottom thereof, means for filling the humidifying unit with water from the exterior of the radiator cover, and a top removably engaged on the tray and covering the upper ends of the front, back and side walls of the radiator cover and leaving the vapor escape openings exposed.

4. A knock-down type radiator cover adapted to be assembled around a radiator, said radiator cover comprising a tray, runners thereon for supporting the tray on the top of a radiator, a humidifying unit removably engaged in the tray and projecting downwardly through the bottom thereof between the rails, front, back and end walls slidably interfitting one another and supported on the tray, and a top removably engaged on the tray and covering the upper margins of the radiator cover walls.

5. A knock-down type radiator cover constructed to be assembled around a radiator and supported thereon, said radiator cover comprising a tray supported on the radiator, front, back and end walls slidably engaged with one another and hung from the tray to close the back and sides of the radiator and a minor portion of the front thereof, said tray and said front and side walls having registering vapor escape apertures therein, a closed water container removably engaged in the tray and projecting therefrom, vapor deflectors struck from the water container and leaving vapor escape openings therein communicating with the interior of the tray, and a top for the tray serving as a baffle for vapor escaping from the water container into the tray to direct the vapor downwardly and out through the vapor escape apertures in the tray and in the front and side walls of the radiator cover.

6. A radiator cover comprising a tray, front, back and end walls having hooked members formed thereon for suspending the walls from the tray, guide means on the walls slidably interfitting one another for connecting the walls together, said front wall being shorter than the back and side walls leaving the major portion of the front of the radiator cover open, a closed water container in the tray and having vapor escape openings therein communicating with the interior of the tray, said tray having vapor escape openings therein registering with vapor escape openings in the radiator cover walls, and a top removably engaged on the tray to close the same and serve as a baffle for the vapor escaping through the openings in the water container within the tray.

7. A knock-down type radiator cover con-

structed to be assembled around a radiator and supported thereon, said radiator cover comprising an apertured tray, an apertured housing supported on the tray with the apertures in said housing registering with the apertures in the tray, said housing and tray covering the top, back and sides of the radiator and leaving the major portion of the front of the radiator exposed, humidifying means in the tray, and a top for removably covering the tray and the upper end of the housing.

8. A radiator cover for engagement over a radiator, said cover comprising an apertured housing closed at the back and at the sides and having the major portion of the front thereof open to expose the front of the radiator, a tray member in the upper end of the housing seated on the radiator, said tray having apertures therein registering with the apertures in the housing to form vapor escape openings, a top for the housing, a vapor supply unit supported by the tray member, and deflectors struck from the vapor supply unit and forming vapor escape openings in the unit.

9. A radiator cover formed to cover the top, back and sides of the radiator and leaving the front of the radiator exposed, said cover comprising an apertured tray member seated on the top of the radiator, a housing hung from the tray member and having apertures therein registering with the apertures in said tray member, a humidifying unit hung on the tray member, said unit having vapor deflectors thereon and a top for the tray member positioned above the deflectors and serving as a baffle for vapor escaping from said unit.

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