Dec. 30, 1930. B. ALTHEIMER 1,787,184

RADIATOR SHIELD

Filed March 5, 1929 2 Sheets-Sheet 1

Fig. 1.

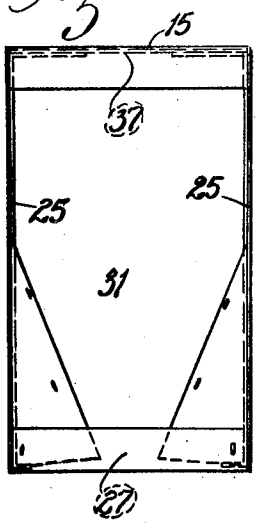


Fig. 2.

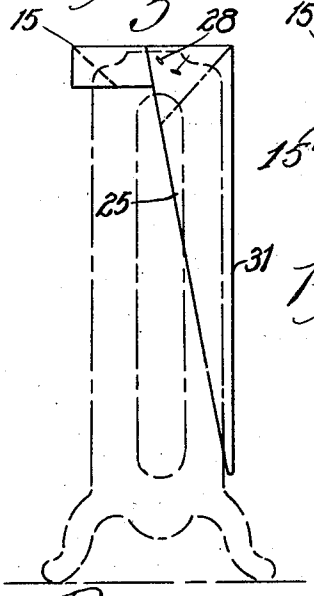


Fig. 3.

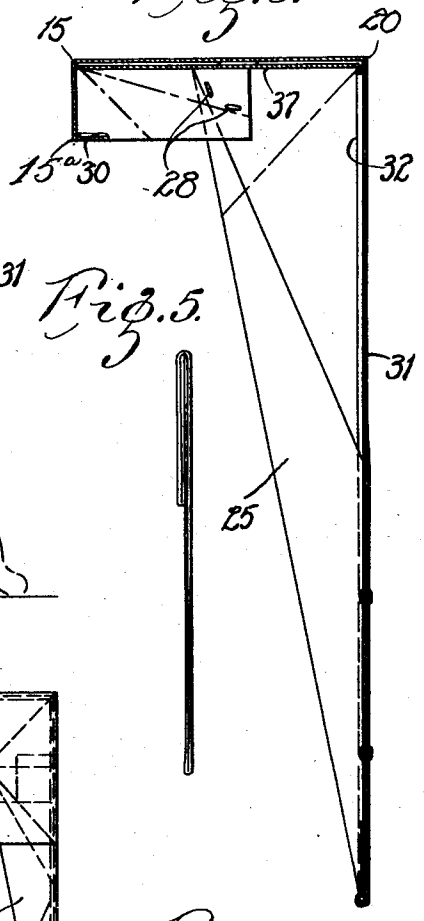


Fig. 5.

Fig. 4.

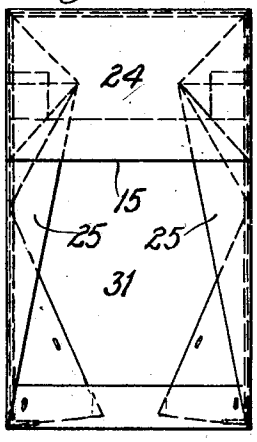


Fig. 6.

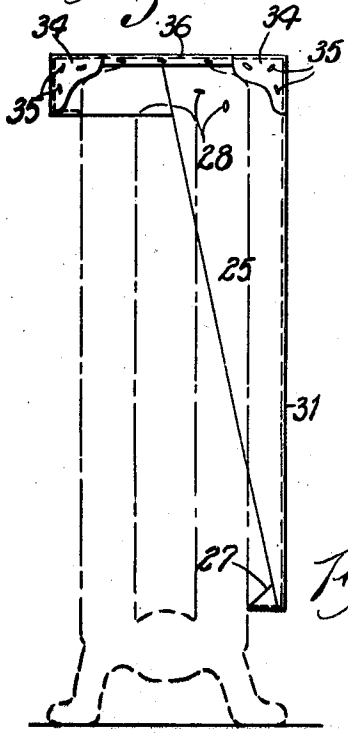
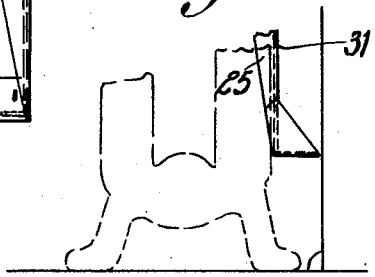




Fig. 13.

Fig. 7.



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Fig. 8.

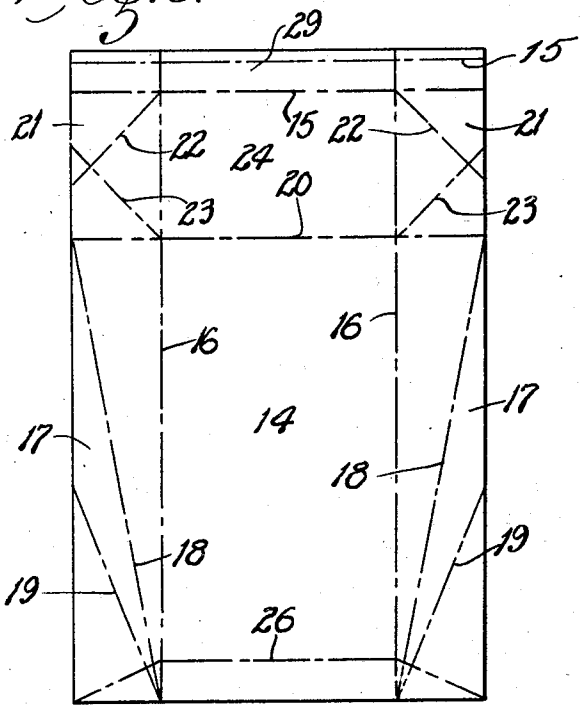


Fig. 9.

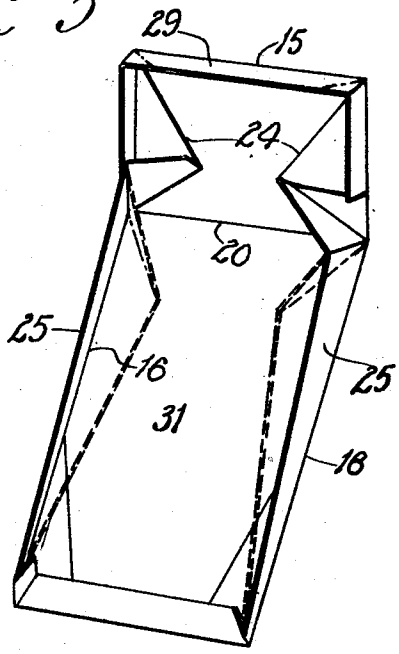


Fig. 11.

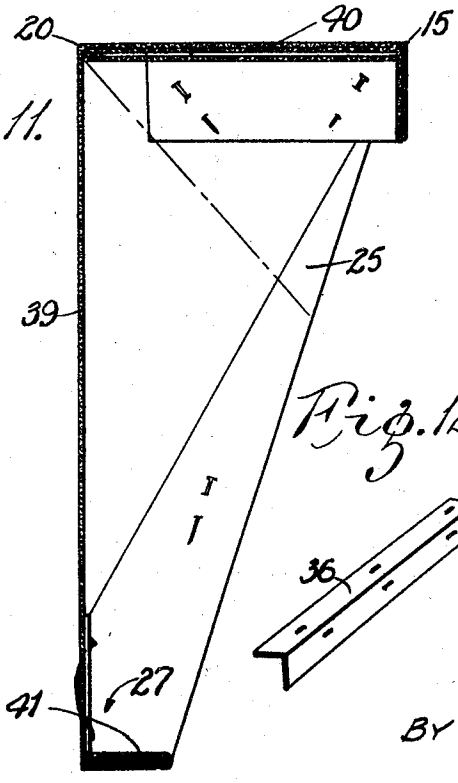


Fig. 10.

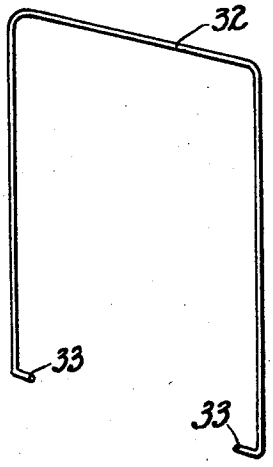


Fig. 12.

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UNITED STATES PATENT OFFICE

BEN ALTHEIMER, OF UNIVERSITY CITY, MISSOURI, ASSIGNOR TO MYRTLE ALTHEIMER, OF UNIVERSITY CITY, MISSOURI

RADIATOR SHIELD

Application filed March 5, 1929. Serial No. 344,239.

My invention relates to improvements in radiator shields, and has for its primary object a shield composed of flexible material, such as paper or starched textile fabric, which is so folded that the shield is made a unitary structure and out of a rectangular piece of material so that no special cutting will be necessary.

A further object is to construct a radiator shield of paper or textile fabric which can be readily folded for shipping purposes.

A still further object is to construct a radiator shield of paper or textile fabric which can be supplied with reinforcements thereby making the same very rigid.

My improved shield has many advantages over the metallic shield now in general use, among these being its extreme cheapness so that it can be frequently replaced, and in the event of it being made of textile fabric, the shield can be periodically washed and starched so as to always present a clean appearance.

Another advantage is that by being made of paper or textile fabric, they can be closely packed so as to occupy a relatively small space, both while being shipped or in storage, and another advantage is that the shields can be decorated in any desirable manner so as to harmonize with the furnishings or color scheme of the various rooms in which they are to be used, and this decoration may be either done at the time of manufacture or the individual may decorate the shields according to his own desire.

My device is especially useful in hotels, apartment buildings, clubs, etc. since it can be furnished at a relatively low cost and, then, after the heating season is over, can be destroyed, thus obviating the unsightly radiator shield during the warm season.

It is to be particularly noted from my construction that the shield will protect the walls as well, if not better, than the expensive radiator shields now in use and it does not take a mechanic to install these shields.

In the drawings:

Fig. 1 is a front view of my device when formed of paper;

Fig. 2 is a side elevation of the same showing it in position on a radiator, the radiator being shown in dotted lines;

Fig. 3 is an enlarged vertical section through the shield showing the reinforced members;

Fig. 4 is a front view of my shield as folded for storage or shipping;

Fig. 5 is a side elevation of the same;

Fig. 6 is a modified form of construction in which the corners at the top are reinforced and the bottom of the shield is turned inward so as to catch any falling dust at the rear;

Fig. 7 is a fragmental view of the lower end of the shield with the bottom turned outward and resting against the wall so as to prevent dust rising from the floor from passing along the wall;

Fig. 8 is a plan view of a sheet of material out of which the shield is formed, the dotted and dash lines showing the folds;

Fig. 9 is a perspective view of the shield showing the same partially folded.

Fig. 10 is a perspective view of the wire reinforcement made use of;

Fig. 11 is a vertical section of the shield when made of textile fabric;

Fig. 12 is a perspective view of the edge reinforcement which may be employed; and

Fig. 13 is a perspective view of the corner reinforcements which I may employ.

In the construction of my device I make use of a rectangular sheet of material 14, which may be formed either of paper or textile fabric. One of the short edges of this sheet is folded over along the line 15. The sheet is then folded over along or parallel to its long edges on the lines 16 after which the sheet is again folded along the line 20, which is parallel to the line 15. This last fold is then again straightened out so that the sheet lays flat and the point where this fold meets the outer edge of the paper is the commencement of the diagonal fold 18, the other end of this diagonal fold terminating at the lower end of the folded line 16. After this fold has been made, the sheet is then again folded over on the lines 16 which form the lines or folds 18, and then the sheet is folded along the lines 22 and 23 as illustrated in Fig. 9. These folds may be either

underneath the portion 24 which forms the top of the shield when the same is assembled in folded position or they may be brought over on the outside of the portions 25 which form the tapering side members of the shield. After these folds have been made, another fold 26 is formed parallel to and adjacent the lower edge of the shield so as to form a pocket 27. After the device has been thus folded, it is secured in folded position by means of staples, eyelets, or other suitable fastening means.

When the device is thus assembled, it is substantially L-shaped in vertical cross section as illustrated in Fig. 3, and U-shaped in horizontal cross section. The lower edge of the turned down portion 29 may be in-turned as indicated by the numeral 30 so as to form a ledge to catch dust. It will be noted from Figs. 2 and 6 that the forward edge of the top 24 extends beyond the radiator at its forward portion so as to completely cover the extreme upper portion of the radiator and thus effectively prevent dust from escaping at the front of the radiator.

In order to hold the depending or rear portion 31 of the radiator shield in extended position, I preferably employ a U-shaped wire 32 which has its lower ends 33 turned inwardly so that these ends will not penetrate through the lower end of the cover. If desired the corners of the cover at the top may be reinforced with metallic, paper, fabric or cardboard corner brackets 34 as illustrated in Fig. 13 which can be secured to the cover in any well known manner such as by means of tongues 35. The upper edges of the top member may also be reinforced by means of angular strips 36 which are formed in the same manner and material as the corner brackets.

To further reinforce the top or render it stiffer an insert 37 may be provided, this insert being either of cardboard, ply-wood, a metallic plate or other stiffening material.

In Fig. 11 I have shown a cover in which the body portion 39 is made of a rectangular piece of textile fabric. This textile fabric is folded in a manner similar to the paper sheet 14 but is provided with additional stiffening fabric 40 at the portion corresponding to the part 24 and with stiffening material 41, which corresponds to the lower end of the shield.

When the shield is formed of textile fabric, it is preferably secured together by means of stitches or other suitable fastening devices so that the sheet out of which this shield is formed can be laundered, starched, and ironed.

When the shield is formed of textile fabric it is also designed to use the U-shaped supporting member 32 for the back portion 39 so as to hold it in taut position.

The purpose of starching the textile shield is mainly to render it practically nonporous but also to stiffen it so that it will have a smooth appearance when ironed.

I do not desire to limit myself to any specific type of textile material as this may be made of various grades and, if made of textile material, can be made of various materials which are washable. My device can be made either in plain colors, it may be made in varigated colors, it may be hand-painted, or otherwise. In fact any material of the kind afore-described, which will harmonize with the interior decorations or color scheme can be used without departing from the spirit of my invention.

I preferably form my device from a paper commercially known as kraft paper, which has sufficient body to retain sharp creases and be stiff enough when folded and assembled to retain its shape without the use of extraneous stiffening means under ordinary circumstances, the stiffening means shown in the drawings, such as the wire member for the rear portion of the cover and the reinforcement for the top, being to guard against unforeseen and accidental occurrences, the one against accidental folding of the back other than the original folding, and on the top to guard against creasing on top of the radiator, either by objects being placed thereon or by persons leaning or sitting on the radiator.

An essential feature of my device is that it is made up from a single flexible sheet of paper and has a body of sufficient stiffness to permanently retain creases formed therein during the folding and to be self supporting after such folding is completed and secured.

In other words, the material from which my radiator shield is made is of a single thickness, flexible enough to be folded and creased without breaking or cracking, and stiff enough to retain its shape when folded to be self supporting.

Another feature I desire to stress is that no scoring of the paper used in my construction is necessary prior to folding because the paper used is thin and flexible enough to obviate this.

It will also be seen from the foregoing description that the paper of which my radiator shield is constructed, while being flexible enough so that sharp folds can be made therein, is still thin enough so that the surface of the paper will not be broken while the folds are made, it still being rigid enough or having sufficient body so that extraneous supporting devices, such as wire frames and the like, are not needed.

It is also my intention to so fold the radiator shield from paper that it will snugly hug the radiator and that the edges of the shield due to their being doubled-over or folded become sufficiently stiffened so as not to wave or vibrate due to the action of the heat emanating from the radiator.

It will also be noted from my construction that the various edges of my assembled device are reinforced by means of the papers being doubled upon itself. This also tends to stiffen my structure and render it self supporting.

It will be further noted that the shield made acording to my application is not draped around or over a radiator nor does it require a supporting frame but the device is self supporting and lies smoothly and snugly around the radiator.

It will be observed, especially from Fig. 9, that when the device is folded triangular portions are formed in the side members, which may be either located below or above the top 24 of the radiator shield and, when so located and secured in position, tend to stiffen or support the top of the shield.

The material which I prefer to use in the construction of the shield which has been described is not only tough and flexible so that it may be properly shaped without seams, from a single piece, thus making it in all of its portions integral, but it is also impervious, so that the pocket or upper portion of the shield covering the radiator will not permit the passage of any air, which may be dust laden, through the material of which the shield is composed, this being an important feature in protecting the wall above and to the rear of the radiator from being soiled by a deposit of dust and dirt carried by the currents of air rising from the radiator.

Having fully described my invention, what I claim is:—

1. An impervious radiator shield formed from a single sheet of flexible material having a top portion, a back portion, a depending portion integral with said top portion, said depending portion extending entirely across the upper front portion of a radiator and partially along its sides, a dust ledge integral with that portion of the depending portion that extends along the front of the radiator, and substantially triangular side members adapted to extend along a portion of the sides of said radiator whereby substantially the entire front and a major portion of the sides of the radiator are left exposed.

2. The radiator shield of claim 1 in which all of the edges of the material are folded upon themselves so as to form reinforcements for said shield.

3. An impervious shield formed from a single sheet of flexible material, folded to form a back, a top, a front apron and sides joining the ends of the top, apron and back, all the said parts being formed by folding the material and forming an unseamed, impervious cover open below, the material employed having sufficient body to permanently retain the folds and make the shield self-maintaining as to shape, and means for securing the portions of the sheet in folded position.

4. A radiator shield formed from a single sheet of flexible, impervious material, folded to form a back, a top, a front apron, and sides at the ends of the top and apron, whereby there is formed an unseamed impervious cover for the top and back of a radiator, leaving it exposed at the front and sides, the said sides of the shield being doubled, whereby the top and apron of the shield are reinforced.

5. A radiator shield formed from a single sheet of flexible, impervious material, folded to form a back, a top, an apron at the front edge of the top, a ledge inturned from the lower edge of the apron, and sides at the ends of the top, apron and ledge, the said parts constituting an unseamed impervious cover for the top and back of the radiator, leaving it exposed at the front and sides, with the said sides of the shield doubled, whereby the top, apron and ledge of the shield are reinforced.

6. A radiator shield formed from a single sheet of flexible, impervious material, folded to form a back, a top, an apron at the front of the top, and sides at the ends of the top and apron, having a plurality of thicknesses of the material, whereby these parts are reinforced, the sides extending downward along the edges of the back, the construction being such as to form a cover for the top portion of the radiator, impervious and unseamed.

7. A radiator shield as in claim 4, formed also with a dust ledge carried by the front apron and having portions of the folded sides resting against the top and secured thereto to assist in supporting and stiffening the same.

In testimony whereof I have affixed my signature.

BEN ALTHEIMER.