

Oct. 16, 1956

K. L. BABCOCK
AIR REGISTER OF THE WALL TYPE COMMONLY
DESIGNATED AS BASEBOARD REGISTERS

2,766,676

Filed Sept. 28, 1953

2 Sheets-Sheet 1

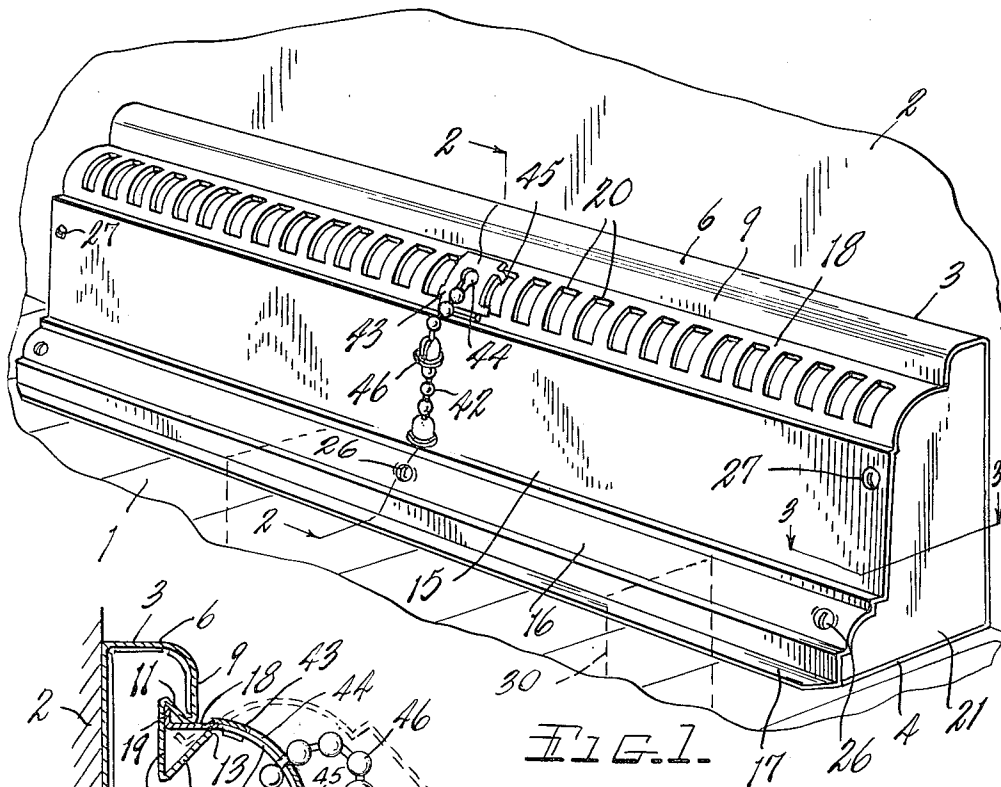


FIG. 1.

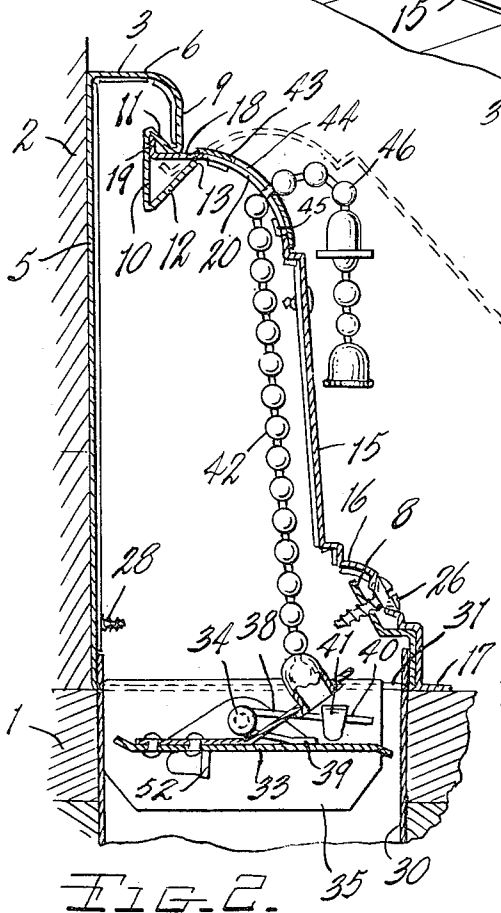


FIG. 2.

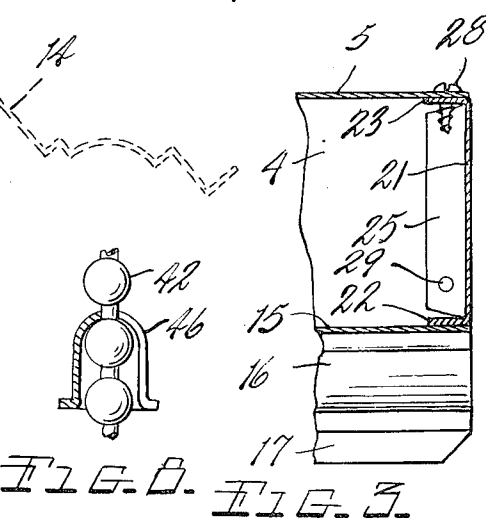


FIG. 3.

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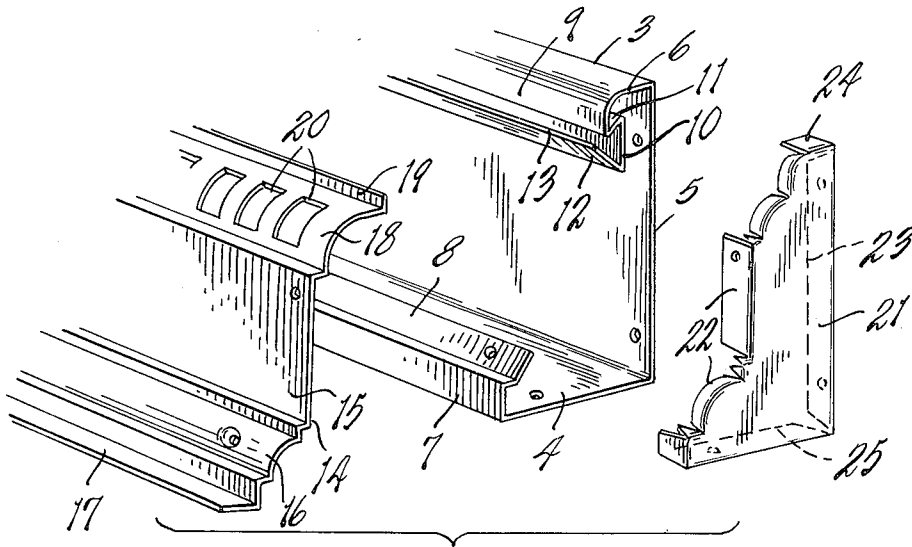


FIG. 4.

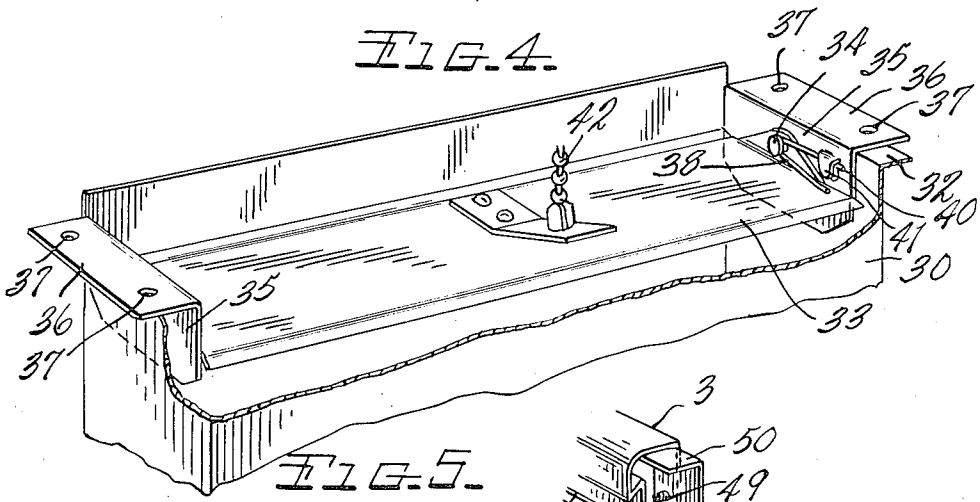


FIG. 5.

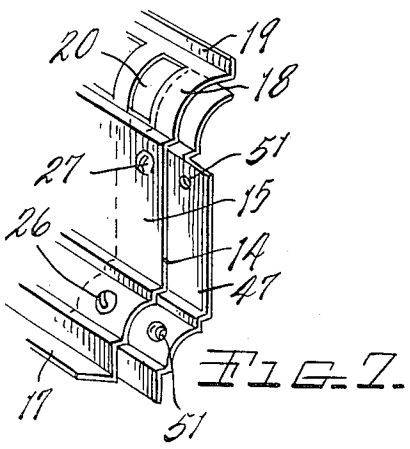
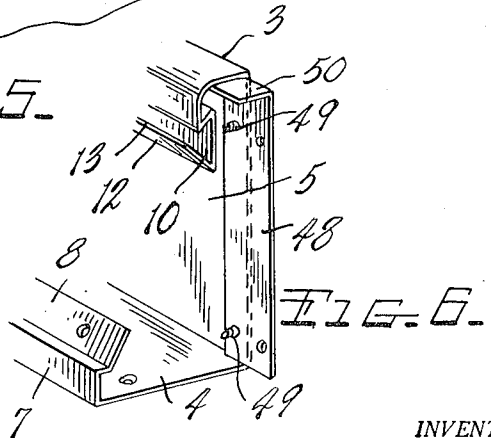


FIG. 6.



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AIR REGISTER OF THE WALL TYPE COMMONLY DESIGNATED AS BASEBOARD REGISTERS

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Application September 28, 1953, Serial No. 382,683

3 Claims. (Cl. 98—40)

This invention relates to an air register of the wall type commonly designated as baseboard registers.

The main objects of this invention are:

First, to provide an air register or diffuser which is simple and economical in its parts and may be readily installed and at the same time is attractive in appearance.

Second, to provide an air register in which the air is effectively discharged upwardly into a room to blanket the wall without "scrubbing" action on the wall.

Third, to provide units of a register having these advantages which may be produced in a standard length and where desired two or more units may be assembled in end to end relation to constitute a single register.

Fourth, to provide a register with a damper structure which is simple and economical and at the same time very convenient to manipulate.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is defined and pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of a register embodying my invention shown in relation to the floor and the wall of a room, these parts being conventionally shown.

Fig. 2 is an enlarged fragmentary view mainly in vertical section on a line corresponding to line 2—2 of Fig. 1; a step in assembling being indicated in dotted lines.

Fig. 3 is a fragmentary view in horizontal section on a line corresponding to 3—3 of Fig. 1.

Fig. 4 is an exploded view showing in fragmentary perspective the main parts of my register.

Fig. 5 is a fragmentary perspective view illustrating the details of the damper and its relation to a flue or conduit.

Fig. 6 is a fragmentary perspective view illustrating details of a rear joint or coupling member used in coupling a pair of the registers in end to end relation.

Fig. 7 is a fragmentary perspective view illustrating the front coupling member and its relation to the face plate.

Fig. 8 is a fragmentary view illustrating details of the adjustable stop on the damper control chain.

In the accompanying drawing 1 represents the floor of the room and 2 a wall thereof. The register of my invention is designed to simulate a baseboard in appearance but is of dimensions exceeding the dimensions of the average baseboard both in height and width but is designed to generally harmonize with baseboard sections of which may be removed or omitted to permit installation of the register.

There are four main parts to my register proper, these being a unit 3 comprising a bottom 4, a rear wall 5 and top wall 6. The bottom has an upstanding flange 7 at its front edge terminating in an offset rearwardly inclined portion 8. The top wall 6 is relatively narrow as compared to the bottom and terminates in a downturned flange 9 which is conformed to provide a forwardly facing rearwardly offset channel 10, the top wall 11 of which is downwardly and forwardly inclined and the bottom wall 12 of which projects forwardly of the face of the flange 9

with its edge 13 approximately in alignment with the bottom edge of the flange 9. These parts are formed integrally of sheet stock.

The face member 14 has a panel-like upright central portion 15 and a forwardly offset stepped bottom portion 16 terminating in a floor engaging flange 17. The face member has a rearwardly offset top or upper portion 18 terminating in an upturned flange 19. This upper portion being curved in the embodiment illustrated and provided with a longitudinal series of slat-like or discharge openings 20. This face member is also formed of sheet stock.

The end walls 21 are conformed to fit within the bottom, rear wall, top wall and the face member and are provided with inwardly projecting front flanges 22, rear flanges 23, top flanges 24 and bottom flanges 25. The flanges 22, 23 and 25 are perforated or adapted to receive attaching screws. The face plate, rear walls and bottoms having corresponding screw holes. Only one of the end walls is illustrated but it will be understood that they are of the same structure except that they are made as rights and lefts.

In assembling, the upper edge of the face member is inserted within the channel on the top wall as is generally indicated by dotted lines in Fig. 2 and the face member swung downwardly to the position shown in Figs. 1 and 2. This brings the flange 19 of the front member into locking engagement with the angle formed by the downwardly inclined top wall 11 and the rear wall of the channel with the inner side of the face member in supported engagement with the edge 13 of the front wall of the channel. With the parts thus engaged the screws 26 are inserted, it being practical to use, so called, sheet metal screws for this purpose. The screws 26 engage the rearwardly projecting portion 8 of the bottom flange 7 which is sufficiently springable so that a very secure clamping action results and this yields sufficiently so that the bottom flange 17 of the face member is urged firmly against the floor. The end members are then inserted and the screws 27, 28 and 29 are inserted to engage the flanges on the end walls. This provides a complete unit.

In installing, the bottom and rear walls may be nailed to the floor and wall against which the register is disposed. The top wall 6 is relatively narrow but is of such width that the air discharged or diffused through the openings 20 is directed away from the wall.

The relation to the flue or riser 30 to the register is illustrated in Fig. 2. As these flues or conduits may be of various dimensions applicant prefers not to form an opening in the bottom to receive the same but an opening 31 in the bottom of the register may be readily formed of such dimensions as to receive the end of the flue or conduit desirably with the conduit projecting into the register, as illustrated in Fig. 2. The opposite end edges of the flue are then flanged outwardly at 32 to overlap the bottom and to aid in supporting the flue in proper relation to the register.

In many installations control dampers are provided in the flue delivery to the register. Where such regulating means are not provided the applicant provides a flow regulator or balancing damper 33 which is pivotally mounted at 34 on the hangers 35 having supporting flanges 36 secured by means of fasteners disposed through openings 37 provided therefor. The damper is urged to open position by the U-shaped spring 38 engaged with one of the pivots 34 and with one arm 39 engaging the damper and the other arm 40 engaged with a lug 41 struck out from the hanger.

The control chain 42 illustrated is the beaded type and is disposed through the keeper 43 mounted on the top portion of the front member and having a keyhole slot 44 through which the chain is passed. This keeper is a sheet metal stamping and is provided with lugs 45

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clamped around adjacent edges of discharge openings 20. The pull chain is provided with an adjustable stop 46 to limit the opening movement of the damper at any desired position.

In the accompanying drawing the damper is shown in fully closed position but it is usually desirable to limit the opening movement at a predetermined point with the damper partially open and the stop member 46 may be adjusted to that end but the damper may be further closed or opened as occasion may require. The stop 52 is engaged by the damper when it is fully closed.

In some installations it is desired to install a longer register, that is, of a greater length than that of the standard unit. However, it is found commercially economical to provide registers to meet such conditions. The applicant has therefore provided means for meeting such conditions by connecting two or more registers in end to end relation. To accomplish this the end members of the ends to be joined are removed and front and rear coupling members 47 and 48 are provided. The coupling members 47 are conformed to the shape of the face members and disposed against the inner sides thereof in joint overlapping relation. The coupling members 48 which have top wall supporting flanges 50 at their upper end are secured to the rear walls by the screws 49. The coupling members 47 have screw receiving holes 51 therein positioned to receive the face member attaching screws 26 and 27 used for attaching the face member to the end walls. The end edges of the bottom, rear wall, top and front walls of these joined sections abut. The coupling members not only serve to connect these units but also serve to close the joint between them.

I have illustrated and described my invention in a highly practical embodiment thereof. I have not attempted to illustrate or describe other adaptations or embodiments which I contemplate as it is believed this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A wall register comprising a base unit having a bottom, a rear wall and a top wall, said bottom having an upturned flange at its front edge provided with a rearwardly offset and rearwardly inclined upper portion, said top wall being relatively narrow as compared to the bottom and having a downward flange at its front edge terminating in a forwardly facing rearwardly offset channel, the top wall of the channel being downwardly and forwardly inclined, the bottom wall of the channel being upwardly and forwardly inclined and terminating in forwardly spaced relation to the lower edge of the top wall flange and in approximately the horizontal plane thereof, the aforesaid parts being formed integrally of sheet stock, a face member comprising a rearwardly stepped lower portion embracing the flange on said bottom and secured thereto, said face member having a forwardly projecting floor engaging flange on its bottom edge, said face member having a substantially upright panel-like intermediate portion and a rearwardly curved upper portion offset rearwardly from said intermediate portion and provided with a longitudinal series of slot-like discharge openings and terminating in an upturned flange disposed within said channel of said top wall in rearwardly supported engagement with the rear wall of the channel and with the edge of the upturned flange on said upper portion of the face member in retaining engagement with the top wall of the channel and with the face member in supported engagement with the forwardly projecting edge of the bottom wall of the channel, and end walls conformingly fitting within the bottom, rear and top walls and

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said face member and having inturned edge flanges secured thereto.

2. A wall register comprising a base unit having a bottom, a rear wall and a top wall, said bottom having an upturned flange at its front edge, said top wall being relatively narrow as compared to the bottom and having a downturned flange at its front edge terminating in a forwardly facing rearwardly offset channel, the top wall of the channel being downwardly and forwardly inclined, the bottom wall of the channel being upwardly and forwardly inclined and terminating in forwardly spaced relation to the lower edge of the top wall flange and in approximately the horizontal plane thereof, the aforesaid parts being formed integrally of sheet stock, a face member comprising a lower portion embracing the flange on said bottom and secured thereto, said face member having a substantially upright panel-like intermediate portion and a rearwardly curved upper portion provided with a longitudinal series of discharge openings and terminating in an upturned flange disposed within said channel of said top wall in rearwardly supported engagement with the rear wall of the channel and with the edge of the upturned flange on said upper portion of the face member in retaining engagement with the top wall of the channel and with the face member in supported engagement with the forwardly projecting edge of the bottom wall of the channel.

3. A wall register comprising a base unit having a bottom, a rear wall and a top wall, said bottom having an upturned flange at its front edge provided with a rearwardly offset and rearwardly inclined upper portion, said top wall being relatively narrow as compared to the bottom and having a downturned flange at its front edge terminating in a forwardly facing rearwardly offset channel, the bottom wall of the channel terminating at its front edge in forwardly spaced relation to the lower edge of the top wall flange, a face member comprising a rearwardly stepped lower portion embracing and secured to the flange on said bottom, said face member having a substantially upright panel-like intermediate portion and a rearwardly curved upper portion offset rearwardly from said intermediate portion and provided with a longitudinal series of discharge openings and terminating in an upturned flange disposed within said channel of said top wall in rearwardly supported engagement with the rear wall of the channel and with the edge of the upturned flange on said upper portion of the face member in retaining engagement with the top wall of the channel and with the face member in supported engagement with the forwardly projecting edge of the bottom wall of the channel, and end walls disposed within said bottom, rear and top walls and said face member and secured thereto.

References Cited in the file of this patent

UNITED STATES PATENTS

1,907,527	Erskine	May 9, 1933
2,139,775	Simoneau	Dec. 13, 1938
2,250,330	Eastwood et al.	July 22, 1941
2,355,629	Carrier	Aug. 15, 1944
2,555,978	Kooiker	June 5, 1951
2,567,789	Sawyer	Sept. 11, 1951
2,627,800	Brandes	Feb. 10, 1953
2,656,156	Wilcox	Oct. 20, 1953
2,660,945	Osterkorn	Dec. 1, 1953
2,662,747	Trane et al.	Dec. 15, 1953
2,708,869	Grossenbacher et al.	May 24, 1955

FOREIGN PATENTS

525,222	Great Britain	Aug. 23, 1940
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