

Feb. 20, 1934.

E. F. PILAND

1,947,954

WALL AND FLOOR STOP

Filed Oct. 31, 1932

2 Sheets-Sheet 1

Fig. 1.

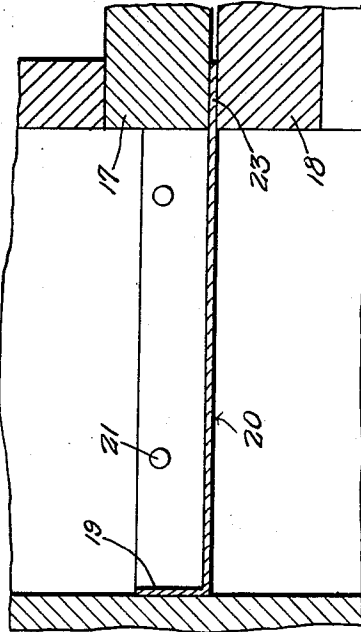
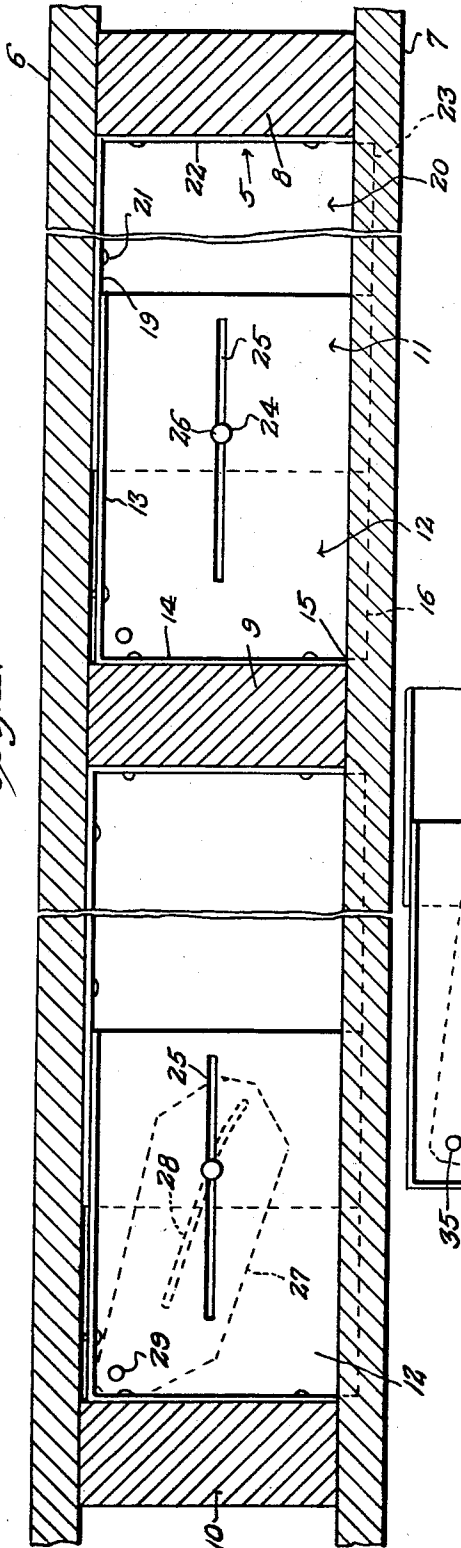


Fig. 3.

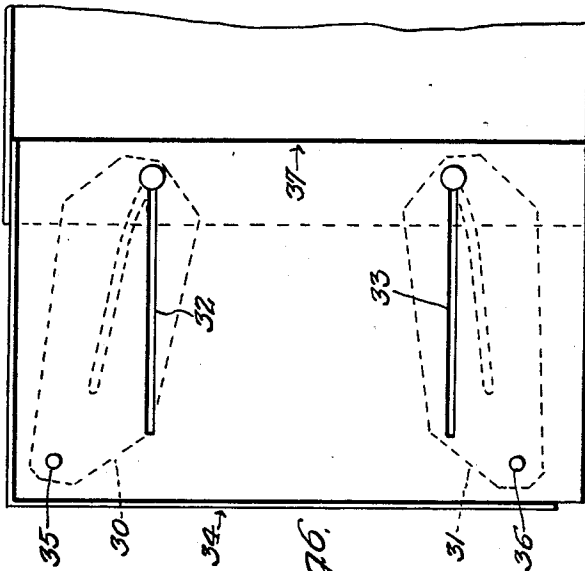


Fig. 6.

Inventor
Elisha F. Piland

By *Alvanor A.'Brien*
Attorney

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Fig. 4.

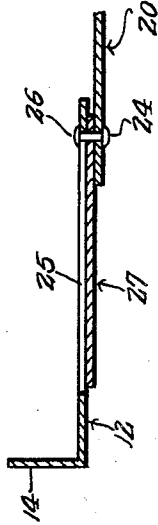


Fig. 5.

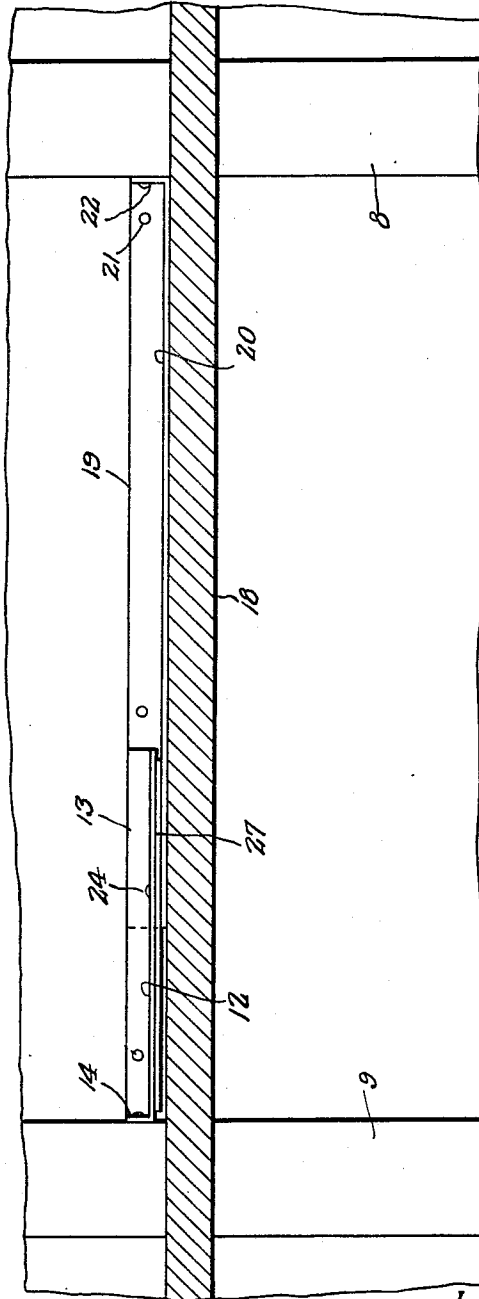
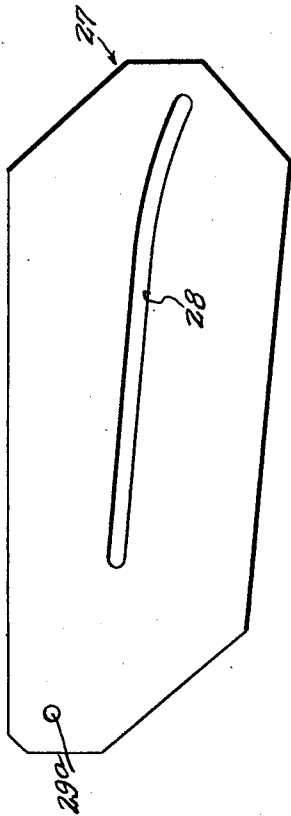


Fig. 2.

Inventor
Elisha F. Piland,

By Clarence A. O'Brien,
Attorney

UNITED STATES PATENT OFFICE

1,947,954

WALL AND FLOOR STOP

Elisha F. Piland, Newport News, Va.

Application October 31, 1932. Serial No. 640,563

7 Claims. (Cl. 20-4)

My invention relates to means for partitioning wall and floor constructions so as to diminish the circulation therethrough of air, fire, vermin, etc., and particularly to adjustable stops for placing in frame walls and floor sections to act to positively prevent circulation of air, fire, vermin, and the like undesirable agencies, whereby to greatly increase the insulating capacity of such constructions and render them resistant to fire, and spread of vermin, and possessed of greater insulating capacity.

It is also an important object of my invention to provide inexpensive stops which can be installed by unskilled labor in a quick and efficient manner.

It is also an important object of my invention to provide stops which are adjustable and yet which may be rendered non-adjustable by a simple means.

It is also an important object of my invention to provide stops of the character described for constructing dead-air chambers in wall and floor constructions, which can be quickly and inexpensively installed and form a permanent construction.

Other objects and advantages of my invention will be apparent from a reading of the following description taken in connection with the drawings wherein for purposes of illustration I have shown preferred embodiments of the invention.

Figure 1 is a transverse vertical sectional view through a frame wall construction showing the manner of installation of the devices of the invention.

Figure 2 is an enlarged sectional view taken approximately at right angles to Figure 1 showing the installation of one of the devices shown in Figure 1.

Figure 3 is a horizontal view through the wall construction of the device.

Figure 4 is a vertical transverse sectional view through one of the devices, and

Figure 5 is a plan view of one of the slot shields.

Figure 6 is a view of the construction of a double device especially adapted to large sizes thereof.

Referring in detail to the drawings, wherein like numerals refer to like parts throughout the same, the numeral 5 refers generally to a wall construction involving the side members 6 and 7, the studding or joists 8, 9 and 10, of a conventional frame wall structure divided into dead air spaces. The spaces between the studding or joist for instance 8 and 9 and the side members 6 and 7 I provide the expansible stop structure generally designated 11. This comprises a slotted plate 12 which is generally rectangular and vertically elongated and provided on one longitudinal edge with a right angle flange 13 and

on the adjacent end with the right angle flange 14. It will be observed that the flange 14 stops short of the far side of the plate as indicated at 15, and this side of the plate is positioned as indicated at 16 in the joint between two of the wall or floor members 17 and 18, while the flange 13 of the plate 12 as well as the flange 19 of the plate 20 are secured to the side member 6.

The plate 20 is formed similarly to the plate 12 and has the flange 19 already mentioned secured to the side member 6 with suitable nails 21. Joining the flange 19 the upper plate has a similar rectangular end flange 22 which is secured to the side of the studding or joist 8. The end of the plate 20 projects between the members 17 and 18 as indicated at 23.

The plate 20 has centrally located thereon and passing therethrough a slotted rivet 24 having a washer whose shank is arranged in a slot 25 which is longitudinally arranged within the sides of the plate 12. The head 26 of the rivet 24 couples the plates together in slidable relation. It will be observed that the flange 13 is inside of the flange 19. As indicated in dotted lines in the lower part of Figure 1 there is interposed between the plates 12 and 20 a peculiarly shaped slot shield 27. This is polygonal in form and elongated in one direction and provided with a longitudinally extending partially straight and partially curved slot 28. The shank of the rivet 24 passes through this slot also, the member 27 being located between the plates 12 and 20 and pivoted off center as indicated at 29 to one corner of the plate 12. This off center pivoting of the shield plate 27 causes it to move across the slot 25 as the stop is extended or expanded. In the completely telescoped relation of the plates the shield may project slightly from the side of the plates opposite the pivot 29 but this circumstance works no harm, as the portion of the shield which has thus extended can easily be embedded in the material of which the wall or floor or the coatings thereof is made.

It will be obvious that the expansible or adjustable feature of the stops of the invention permits their use between studding or joists which are spaced at different distances.

Where the stops required are of an arbitrary size say stops over the six inch size, they will be constructed with a pair of slots instead of a single slot. The double slotted stops are illustrated in Figure 6 where it is shown that the shields 30 and 31 cover parallel slots 32 and 33 in a side plate 34 and the shield plate pivots 35 and 36 are arranged at opposite corners at the same end of the plate 34, and the plates have opposite movements, that is they move toward or away from each other in the adjusting movements of the plates 34 and 37.

The shields 27 and 30, 31 are provided for closing the slots 25, and 32 and 33 respectively so that there is no passage through the plates when the

same are properly assembled and installed, whereby to preserve the desired condition of insulation.

It will also be observed that the apron portions 16 and 23 of the plates 12 and 20 extend into the space between the wall or floor plates 17 and 18 and render this joint air tight. A similar construction is arranged for in the case of the embodiment shown in Figure 6.

10 The split rivet 24 is provided to enable solidly connecting the plates simply by placing the head of the rivet on a solid surface and striking the legs of the rivet, so as to rivet the legs against the back of the plate.

15 Though I have shown and described herein preferred embodiments of my invention, it is to be definitely understood that I do not desire to limit the application of the invention thereto, and any change or changes may be made in material, structure and arrangement of parts, within the spirit of the invention and the scope of the sub-joined claims.

Having thus described my invention, what I claim as new is:

25 1. A wall or floor stop of the type described for installation between the side members and studding or joists of a wall or floor construction, comprising a pair of plates having flanges for attachment to one of the side members and to each of 30 two adjacent joists, said plates being slidable relative to each other, the stop being thereby adjustable in length, pin and slot connection means connecting the plates slidable relative to each other, and shield means on the plates for covering 35 the slot means of the pin and slot connection means.

2. A wall or floor stop of the type described for installation between the side members and joists 40 of a wall or floor construction, comprising a pair of plates having flanges for attachment to one of the side members and to each of two adjacent joists, said plates being slidable relative to each other, the stop thereby being adjustable in length, pin and slot connection means connecting the 45 plates slidably relative to each other, and shield means carried by one of the plates and engaged with the pin and slot connection means for maintaining the slot of the pin and slot connection means covered.

50 3. A wall or floor stop of the type described for installation between the side members and studding or joists of a wall or floor construction comprising a pair of plates having flanges for attachment to one of the side members and to each of 55 two adjacent joists, said plates being slidable relative to each other, the stop thereby being adjustable in length, pin and slot connection means connecting the plates slidably relative to each other, and shield means carried by one of the plates 60 and engaged with the pin and slot connection means for maintaining the slot of the pin and slot connection means covered, said shield means comprising a plate disposed between the plates of the stop and pivoted near one corner of said 65 one of the plates.

4. A wall or floor stop of the type described for installation between the side members and studding or joists of a wall or floor construction, comprising a pair of plates having flanges for attachment to one of the side members and to each of two adjacent joists, said plates being slidable 70 relative to each other, the stop thereby being adjustable in length, pin and slot connection means connecting the plates slidably relative to each other, and shield means carried by one of the

plates and engaged with the pin and slot connection means for maintaining the slot of the pin and slot connection means covered, said shield comprising a plate disposed between the plates of the stop and pivoted near one corner of 80 said one of the plates, and an apron portion on said plates for disposition between the members of a joint in one of said side members for closing the space therebetween.

5. A wall or floor stop of the class described for 85 installation between the side members and studding or joists of a wall or floor construction comprising a pair of plates having flanges for attachment to one of the side members and to each of two adjacent joists, said plates being slidable 90 relative to each other, the stop thereby being adjustable in length, pin and slot connection means connecting the plates slidably relative to each other, shield means having slot means engaged with the pin and slot connection means, 95 said shield means being arranged for maintaining the slot means of the pin and slot connection means covered, said pin and slot connection means comprising a pair of slots, headed pins 100 carried by one of the plates and disposed in said slots.

6. A wall or floor stop of the type described for installation between the side members and studding or joists of a wall or floor construction comprising a pair of plates having flanges for attachment 105 to one of the side members and to each of two adjacent joists, said plates being slidable relative to each other, the stop thereby being adjustable in length, pin and slot connection means connecting the plates slidably relative to each 110 other, and shield means carried by one of the plates and engaged with the pin and slot connection means for maintaining the slot of the pin and slot connection means covered, said shield means comprising a plate disposed between 115 the plates of the stop and pivoted near one corner of said one of the plates, said shield means being formed with a slot with which the pin and slot connection means engages so as to maintain the shield means continually in covering relation to 120 the slot means of the pin and slot connection means.

7. A wall or floor stop of the type described for installation between the side members and studding or joists of a wall or floor construction comprising a pair of plates having flanges for attachment to one of the side members and to each of two adjacent joists, said plates being slidable 125 relative to each other, the stop thereby being adjustable in length, pin and slot connection means connecting the plates slidably relative to each other, and shield means carried by one of the plates and engaged with the pin and slot connection means for maintaining the slot of the pin and slot connection means covered, said shield 135 means comprising a plate disposed between the plates of the stop and pivoted near one corner of said one of the plates, said shield means being formed with a slot with which the pin and slot connection means engages so as to maintain the 140 shield means continually in covering relation to the slot means of the pin and slot connection means, the shield slot having a curved portion for causing the shield means to keep the said slot means covered as the stop is increasingly elongated by moving the plates relative to each other. 145

ELISHA F. PILAND.