Feb. 25, 1969 B. BREWER 3,429,084

INSECT-PROOF WEEP HOLE

Filed July 10, 1967

Fig. 1

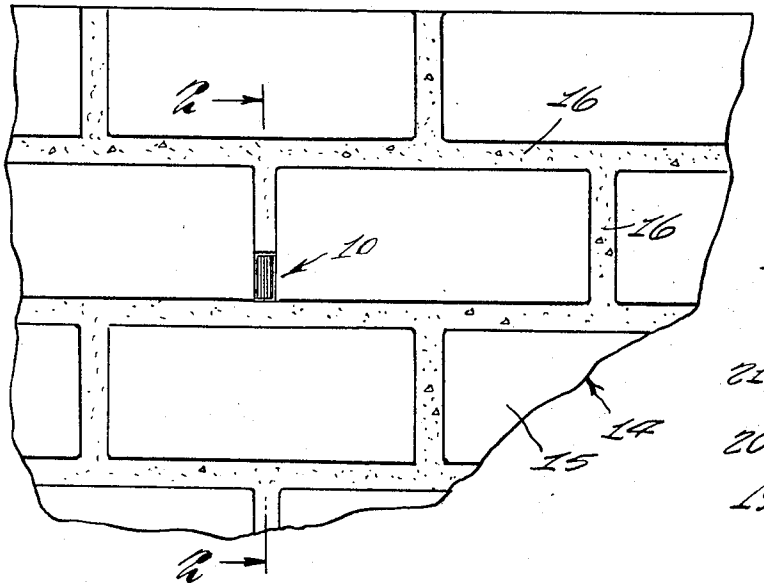


Fig. 4

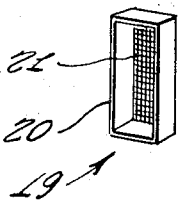


Fig. 2

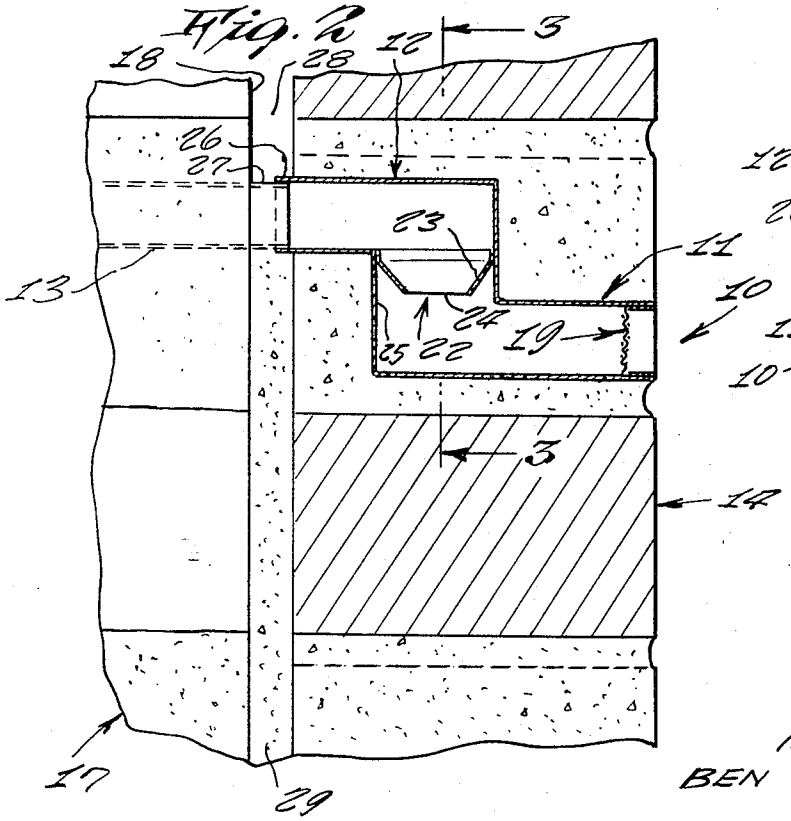
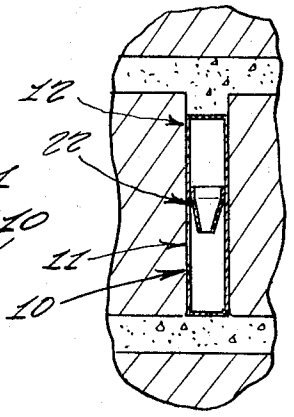


Fig. 3



INVENTOR
BEN BREWER

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INSECT-PROOF WEEP HOLE

Ben Brewer, 1332 Konnarock Road, Kingsport, Tenn. 37662

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Int. Cl. E04b 1/72; E04h 9/16; E04f 17/00

ABSTRACT OF THE DISCLOSURE

A duct assembly, to permit circulation of air, and drain condensation from between walls and to prevent invasion of insects, the duct assembly including a screen and an ant trap chamber.

This invention relates generally to air circulation devices for brick and concrete walls.

It is generally well known to those skilled in the art that in the construction of two walls adjacent each other, the removal of water condensation therebetween and the circulation of air therebetween is a necessity. At the same time it is also desired to prevent the invasion of insects through any method used to provide an air circulation and drain condensation removal. Heretofore it has been the practice during the wall construction to place an oil soaked sash cord in the joints and to remove the sash cord after the job was completed, or simply to punch a hole in the joint. This method, however, was not insect-proof. Thus there is a need for an improved system for circulation of air and a drain for the condensation.

Accordingly it is a principal object of the present invention to provide a duct assembly to permit circulation of air and to drain condensation from between walls while at the same time preventing an invasion of insects therethrough.

Another object of the present invention is to provide an insect-proof weep hole which is made in a singular unit and which can be readily inserted and moulded into the concrete during structure of a joint.

Yet a further object of the present invention is to provide an insect-proof weep hole which includes a screen over the enrance thereof.

Still a further object of the present invention is to provide an insect-proof weep hole having an ant trap chamber therewithin so as to prevent the movement of ants through the duct even if the ant is sufficiently small to have entered through the screen.

Other objects of the present invention are to provide an insect-proof weep hole which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawing wherein:

FIGURE 1 is a front elevation view of a wall showing the present invention installed therein;

FIGURE 2 is a cross-sectional view taken on the line 2—2 of FIGURE 1;

FIGURE 3 is a cross-sectional view taken on the line 3—3 of FIGURE 2; and

FIGURE 4 is a perspective view of the screen unit that forms a parts of the present invention.

Referring now to the drawing in detail, reference numeral **10** represents an insect-proof weep hole, according to the present invention, wherein there is an outer duct **11**, and an inner duct **12** which is connected at one end removably to a duct extension **13**.

The insect-proof weep hole **10** is installed in the brick wall **14** comprised of a plurality of bricks **15** in an interlocked fashion and which are spaced apart by joints **16** formed of a concrete mixture placed around the sides and bottom of each brick. As is shown in FIGURE 2 of the drawing, the wall **14** is adjacent a wall **17** between which is a relatively narrow space **18**, the wall **17** being of a like construction as the wall **14**. The insect-proof weep hole **10** is installed in the wall **14** and may be connected to a duct extension **13** that is installed in the wall **17**.

The insect-proof weep hole **10** is of generally Z-shaped configuration when viewed from a side, the configuration being formed by the positions of the inner and outer ducts. Each duct may be of any cross-sectional configuration such as rectangular as shown, round, square or oval. The weep hole unit may further be made of any material desired such as plastic, metal or the like.

At one end of the outer duct **11**, there is a screen unit **19** installed which includes a frame **20** having a screen **21** installed therein. The screen is of a relatively very fine mesh so as to discourage the passage of insects therethrough. At the opposite end of the outer duct there is an ant trap chamber **22** installed which is adjacent one end of the inner duct **12**. The ant trap chamber comprises a frame fitted between the inner and outer ducts, the frame being formed having downwardly converging sides **23** so as to form a lower lip **24** that is spaced away from the inner side **25** of the duct **11**. Thus an ant traveling within the outer duct **11** cannot readily locate the relatively small opening formed by the edge **24** and which leads from the outer duct into the inner duct. The opposite end of the inner duct **12** is provided with an extension **26** extending out of the wall **14** and for the purpose of receiving the end **27** of the duct extension **13** located extending through the wall **17**.

The entire insect-proof weep hole device comprises a singular unit wherein the screen unit may be removed and replaced. The outer duct could be made round if preferred and threaded on its outer side, having a nut, gasket and lock nut for purpose of connection with walls other than masonry such as metal, Masonite or the like. The nut could be screwed on, then the weep hole inserted through a hole drilled for this purpose with the lock-nut outside.

In operative use, it will be noted that there is an air space **28** between the walls **14** and **17** which extends downwardly to the insect-proof weep hole. Therebelow there is a concrete fill **29**. Condensation formed within the space **28** will thus drain out through the weep hole which will prevent the passage of insects thereinto from the outer side.

I claim:

1. In an insect-proof weep hole, the combination of an assembly including an outer duct and an inner duct having an ant trap therebetween, one end of said outer duct having screen means to prevent the entry of insects therethrough, and one end of said inner duct having connection means to a duct extension, said assembly being of Z-shaped configuration when viewed from a side, said outer duct being positioned at a lower elevation than said inner duct, said screen means comprising a frame fitted within the end of said outer duct, said frame having a screen integrally formed thereacross, said ant trap chamber comprising a frame between said ducts and being located below one end of said inner duct and above the opposite end of said outer duct, said frame being formed with downwardly converging sides having a lower edge forming a relatively small opening, said edge of said open-

ing being spaced apart accordingly from the inner walls of said lower outer duct to prevent an ant or other insect to readily locate said opening and pass therethrough.

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FRANK L. ABBOTT, *Primary Examiner.*

PRICE C. FAW, JR., *Assistant Examiner.*

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43—121; 52—303