

March 21, 1939.

O. FALLS

2,151,589

CONTAINER FOR TERMITES

Filed July 8, 1937

Fig. 1.

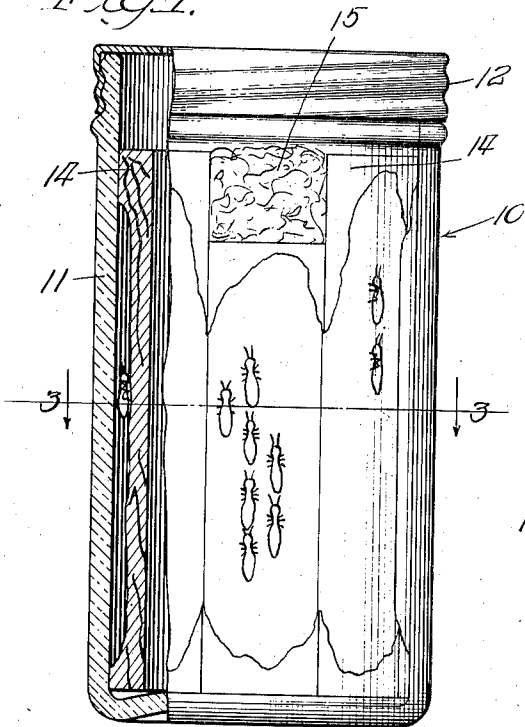


Fig. 2.

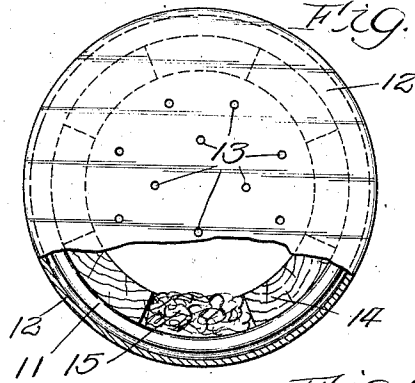


Fig. 3.

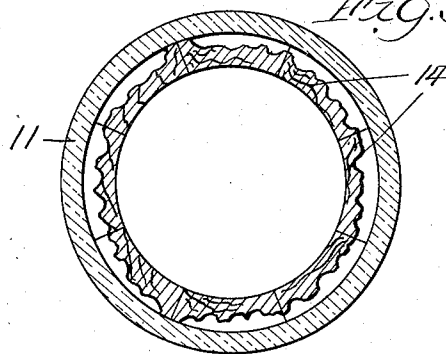


Fig. 6.

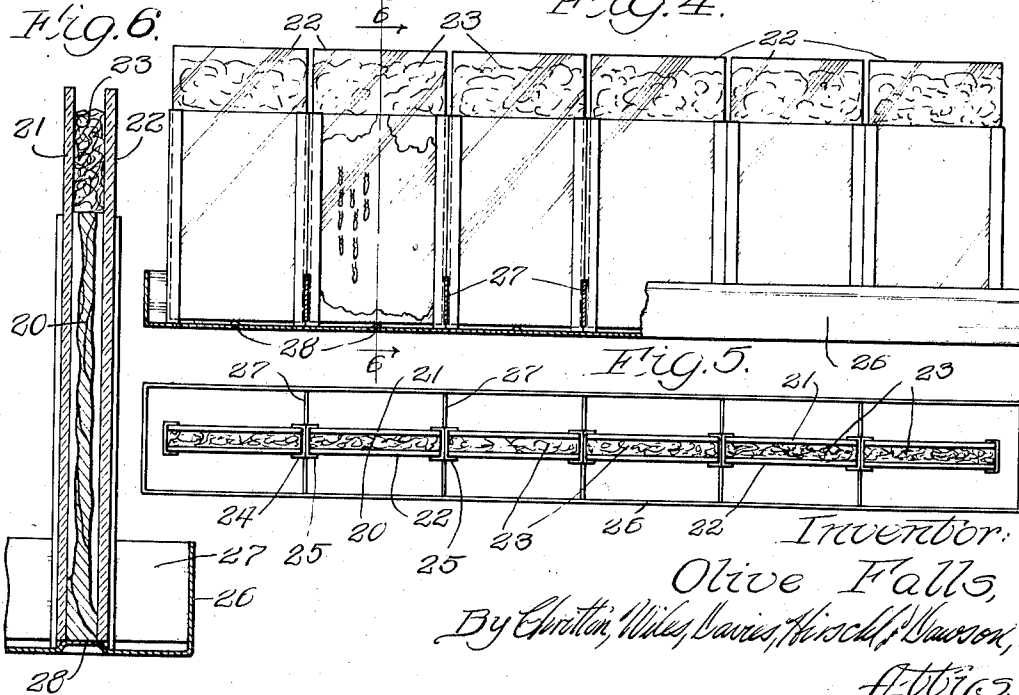


Fig. 4.

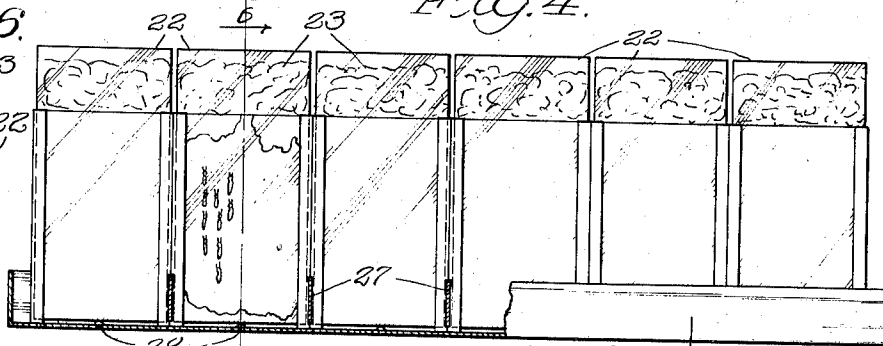
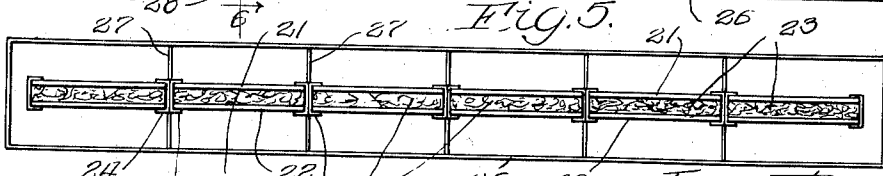


Fig. 5.



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UNITED STATES PATENT OFFICE

2,151,589

CONTAINER FOR TERMITES

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Application July 8, 1937, Serial No. 152,644

7 Claims. (Cl. 119—1)

This invention relates to apparatus for housing termites under conditions favorable to their existence and such that their activities are readily visible.

5 One feature of this invention is that it enables a colony of moisture-requiring termites to be kept in favorable conditions, so that they will follow a normal course of life and work; another feature of this invention is that the activities of the termites are visible; yet another feature is that it provides a termite colony particularly adapted for display, teaching, or research purposes; other features and advantages of this invention will be apparent from the following specification and the drawing, in which:

10 Fig. 1 is a side elevation, partly in section, of a device embodying this invention; Fig. 2 is a top plan view, partly broken away, of the device of Fig. 1; Fig. 3 is a horizontal sectional view along the line 3—3 of Fig. 1; Fig. 4 is a modified form of the invention particularly adapted for research purposes; Fig. 5 is a top plan view of the device of Fig. 4; and Fig. 6 is a vertical sectional view along the line 6—6 of Fig. 4.

25 While the existence and destructive nature of termites have long been known, particularly in tropical regions, the termites have always worked and lived inside of cellulosic material, preferably wood, and thus it has been well nigh impossible to study their activities and the conditions favorable or unfavorable to their existence.

30 The present invention provides a device adapted to house termites and so arranged that moisture-requiring termites, of their own preference, carry on their activities immediately adjacent a transparent wall, so that their life and activities may be studied.

40 Devices constructed in accordance with the present invention and housing colonies of termites have been used for research purposes, both to study the life of the termites and make movies thereof and to determine what sort of treatments will render cellulosic material termite-proof; the devices have also been used for display purposes, merely to attract attention at fairs and the like or to develop consciousness of the necessity of termite protection in certain localities; and the devices have also been used

50 for teaching purposes. Termites have been found not to have any particular dislike to light, as was once thought. On the other hand, it appears that the moisture content or humidity is the important factor in the existence of the subterranean and damp wood

groups. Thus, if cellulosic material, such as wood, is arranged adjacent a wall of transparent material, such as glass, termites of these two groups can be caused to work on the face of the wood adjacent the glass if the humidity conditions there can be kept within the proper range, and the conditions in the rest of the wood kept too dry, for example, for these termites. The word termite, as hereafter used, is intended to describe only the subterranean and dampwood groups, and to exclude the drywood group, of which only a very small percentage are present in the United States.

In the particular embodiment of the invention illustrated herewith in Figs. 1 to 3, a substantially cylindrical container 10 is illustrated having walls 11 of glass or some other glassy material. "Glassy", as used, is intended to describe material which is not necessarily glass-like in nature, but rather any transparent non-cellulosic material which is impervious to, and unaffected by, moisture, other examples of such material being quartz, mica, and transparent plastics. The container is threaded at the top and provided with a closure here shown as a metal cap 12 having openings 13 there-through for ventilation.

The container has therewithin a thin annular sheet or wall of cellulosic material, here shown as comprising segments 14 of wood. These segments are preferably not over one-quarter inch in thickness, and are several times longer than their width. They are preferably cut so that their edges are substantially radial, and they are fitted tightly into their container so that originally, at least, they are in contact with the glassy wall 11 on the inner side thereof. The wall of cellulosic material may be readily assembled by cutting the segments to fit, and then swelling them after they are placed in the container by the effect of water. They should be in close enough relation to the glassy wall so that they are practically sealed thereagainst, that is, there should be no chance for any circulation of air between the wall of cellulosic and that of glassy material. As may be particularly seen from Fig. 1, one of the segments 14 is preferably shorter than the others, so that a socket or recess is formed adapted to receive a wad of absorbent material 15, here shown as cotton. While wood and other materials are absorbent to a certain extent, the absorbent materials contemplated for use in the container, such as the wad of cotton 15, are materials which

pick up several times their own weight in water relatively fast.

After the container has been assembled as described termites are introduced thereto by merely dropping them to the bottom of the container in the center. They will at once burrow into the wood or cellulosic wall 14, and, because the surface adjacent the glassy wall is more moist than the inner surface of the cellulosic material, exposed to the circulation of air in the center of the container, the termites will cut channels and work in the cellulosic wall immediately under the glassy wall, as illustrated.

At frequent intervals, about twice a week or every third day, water must be added to the absorbent material 15 in order to maintain the proper moist condition within the container. This condition must not be too dry; nor must it be too wet, since too much moisture facilitates the growth of fungus or mites, detrimental to the termites. The amount of water added depends, of course, on the size of the container. A container of the character illustrated and of a size from about 2 oz. to 4 oz. should have a $\frac{1}{4}$ teaspoonful of water added twice a week; a larger jar such as a pint, should have about a teaspoonful added twice a week; and a gallon container should have added thereto a tablespoonful, or a little more, of water. In this regard, it is preferable in the larger containers to have more than one piece of absorbent material. In general, it may be said that about every third day an amount of water should be added which is the equivalent of about 10% to 20% of the weight of the cellulosic material in the container.

In the particular embodiment of this invention illustrated in Figs. 4 to 6, a plurality of identical segments is shown, here being illustrated as six in number. Each of these segments comprises a flat sheet of cellulosic material 20, preferably about one-eighth of an inch in thickness. On each side of the sheet and against the surfaces thereof are disposed flat walls of glassy material, here indicated as 21 and 22. The sheet of cellulosic material is not as high as the glassy wall, and room is provided thereabove for a wad of absorbent material 23, such as cotton. Small channel members, such as 24 and 25, serve to hold the glassy material and cellulosic material in the desired position, these elements being here illustrated as tin or the like. It will be noted that the segments are all supported in a box or base 26 of tin or like metal, and supporting members 27 are provided adjacent certain channel members. In order to permit the termites to pass from one segment to another the glassy walls are preferably held slightly above the bottom of the container 26, as by the humped up portion 28.

This embodiment of the invention is particularly adapted for research work, since different conditions can be simultaneously created in the various segments; that is, different pieces of wood can be used in each segment, the same wood used with different termite-proofing treatments, various conditions of moisture may be tried, and the like.

While I have shown and described certain embodiments of my invention, it is to be understood

that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as disclosed in the appended claims, in which it is my intention to claim all novelty inherent in my invention as broadly as possible in view of the prior art.

What I claim as new, and desire to secure by Letters Patent, is:

1. Apparatus of the character described for housing termites under conditions inducing visible activities, including: a wall of glassy material; a wall of cellulosic material adjacent said glassy wall and having one surface of said cellulosic wall in contact throughout its entire area with the wall of glassy material; and means for keeping said cellulosic material moist.

2. Apparatus of the character described for housing termites under conditions inducing visible activities, including: a wall of glassy material; a wall of cellulosic material having one surface thereof, throughout its entire area, adjacent said glassy wall and sealed thereagainst; and means for keeping said cellulosic material moist, said means comprising absorbent material adjacent thereto.

3. Apparatus of the character described for housing termites under conditions inducing visible activities, including: a wall of glassy material; a wall of cellulosic material against said glassy wall and sealed thereagainst over a large area, said cellulosic wall being less than one-quarter of an inch thick; and means for keeping said cellulosic material moist.

4. Apparatus of the character described for housing termites under conditions inducing visible activities, including: a container having a wall of glassy material; a thin wall of cellulosic material adjacent said glassy wall and having one side sealed thereagainst, the other side being exposed to the air; and means for keeping said cellulosic material moist.

5. Apparatus of the character described for housing termites under conditions inducing visible activities, including: a substantially cylindrical container of glassy material; a thin annular wall of cellulosic material therein having the outer side adjacent said glassy material and sealed thereagainst, the inner side being exposed to the air; and means for keeping said cellulosic material moist.

6. Apparatus of the character described for housing termites under conditions inducing visible activities, including: a compartment comprising a thin sheet of cellulosic material, a pair of flat walls of glassy material, means for maintaining said walls in contact with said sheet on each side thereof over a large area and sealed thereagainst, and absorbent material adapted to keep said cellulosic material moist.

7. The method of keeping a small, substantially closed portable container having cellulosic and absorbent material therein in a condition favorable for termite life, comprising adding water to said absorbent material at a rate equivalent to the addition every third day of water having a weight of about 10 to 20% of the weight of said cellulosic material.

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