

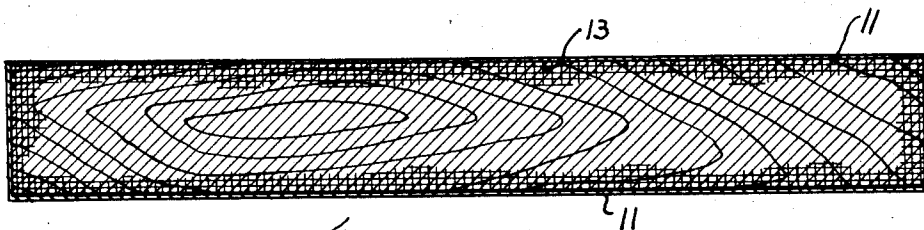
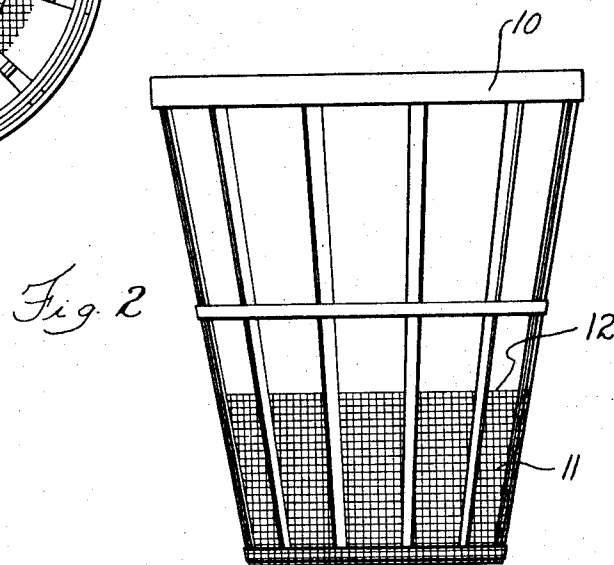
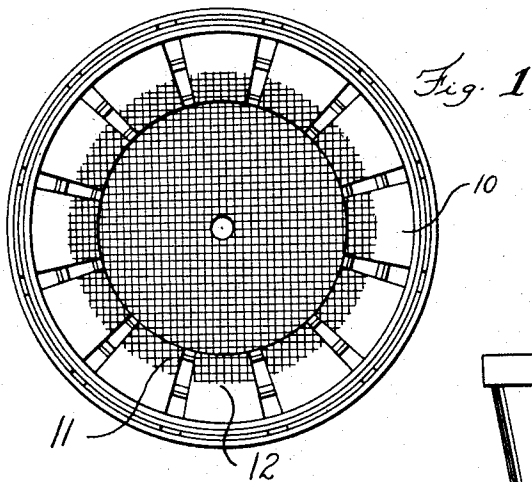
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WOOD PROTECTIVE MEANS

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WOOD PROTECTIVE MEANS

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2 Claims. (Cl. 217-122)

This invention relates to means for protecting wood members from entrance of bacteria and fungus as well as moisture and is particularly adapted for use in creating a waterproof preservative coating for vegetable hampers and containers such as tomato hampers and bean and pea crates and boxes and the like.

Taking as an example the case of tomatoes, tomatoes are picked from the vines in the fields and placed directly into hampers generally made out of a solid wood bottom and spaced apart wood staves extending upwardly therefrom and bound together by surrounding hoops of metal and wood. Before the tomatoes can be delivered to the point of sale or delivery, such as the canning factory, some of the riper tomatoes particularly will crack and the juice thereof run out over the wood members of the hamper. Eventually this juice that has entered the wood supports bacterial or fungus growths that result in what is termed "flat sour" in the tomatoes thereby destroying their value for human consumption. Furthermore the acid from the tomatoes quickly deteriorates not only the wood but the metal hoops and nails employed in holding the hamper together. The result has been a tremendous loss resulting in quite an expense to maintain a supply of usable hampers.

My invention, which has been highly successful in preventing this loss, is described in reference to the accompanying drawing in which a hamper is illustrated as one particular form of structure to which the invention may be employed.

Fig. 1 being a top plan view of a hamper;

Fig. 2, a side elevation; and

Fig. 3, a transverse section on a greatly enlarged scale through a coated part of one of the hamper staves.

Like characters of reference indicate like parts in the several views in the drawing.

A coating product is prepared to consist essentially of a pitch plus a preservative or toxic wood penetrating fluid plus a filler. Bituminous pitch from the common coke oven coal gas tar or water gas tar having a melting point somewhere within the range of 140 to 200 degrees F. or from petroleum is brought into solution by mixing therewith suitable solvents such as coal tar naphtha, petroleum naphtha or any such organic solvent.

To the selected bituminous pitch solution is added the fungicide or bactericide or both, the pitch solvent normally carrying the preservative medium added thereto. This preservative may be any of the well known preservatives which are

soluble in the bituminous pitch solution being any one of the following types, the selection depending upon the particular solvent employed so that the preservative will be compatible therewith. Such preservatives are as follows: creosote oil or any toxic oil derivative of coal tar; wood tar creosote; beta naphthol; chlorobetanaphthol; tetrachlorphenol; pentachlorphenol; and 2-chlororthophenylphenol.

To the pitch and its solvent is added a filler or pigment made out of silica, soapstone, or any siliceous material such as clay, for a purpose which will hereinafter become apparent.

When the selected pitch and filler and solvent and the selected preservative are thoroughly mixed, the wood to be waterproofed and preserved is simply immersed therein, withdrawn, and allowed to dry out. In the example illustrated herein, the tomato hamper 10 is shown in Figs. 1 and 2 as having been immersed by its lower portion only to have the coating 11 over the bottom of the hamper and on the lower ends of the staves up to the line 12. Of course, the entire hamper may be immersed if desired but for the sake of economy the lower portion only is immersed since that is the portion that receives the greatest amount of tomato juice and the like.

After the coating has been allowed to dry, a cross section through the wood stave will have an appearance somewhat as indicated in Fig. 3 wherein the pitch and filler will have remained largely on the wood as the coating 11, and, as indicated by the color lining black, and most importantly, the lighter preservative part 13 of the mixture will have penetrated the wood a distance depending upon the wood structure.

A number of things have occurred which are highly important to the success of the invention. The wood being quite dry in the beginning will by its very nature absorb and draw out of the surface application of the mixture to a large extent the solvent for the pitch and to a greater extent the lighter preservative. Then the heavier pitch with its loading of clay will fill the surface pores or capillary ends and also the irregularities in the surface of the wood, leaving a dense tough film of pitch and clay which not only forms the waterproof surface but very effectively forms a seal against return of the lighter materials within the wood to the surface of the wood and, therefore, prevents evaporation of those preservative materials. Not only are these materials sealed within the wood in this manner against loss but, very importantly, the seal prevents any of the odors or vapors of the preservative material from

coming into contact with and contaminating the tomatoes or whatever may be carried in the hamper or basket that has been treated.

It is well known, of course, that many of the creosote oils and the like or other toxic bactericides and fungicides are very effective in killing bacteria and preventing the growth thereof as well as preventing the growth of fungus but such materials have heretofore been prohibitive in that the contents of the hamper or basket became contaminated therewith to render the contents unfit for a food.

The clay filling in the pitch serves not only to aid in plugging up the capillary ends in the wood as indicated but also serves to spread out the pitch further so as to require less pitch. The clay filling does give a good smooth exterior finish in addition.

Thus it is to be seen that by employing the invention above indicated, the preservative initially carried in the pitch mixture is withdrawn from that mixture by the capillary action of the wood and is thus stored within the wood and sealed therein by the heavier pitch and clay coating which is too viscous to penetrate the capillaries to any great extent and which, moreover, will dry readily and quickly to form the tough waterproof seal around the wood so that neither can the preservative escape nor can water enter the wood. Of course, should the coating be broken at any place in use, the preservative is immediately available at that break to destroy bacteria and fungus as they may tend to institute growth at that zone. In this manner, wood hampers and

baskets as well as any other wood materials are rendered highly resistant to entrance of moisture and more importantly, highly resistant to maintenance of growth of bacteria and fungus. Of course, the presence of the pitch in the surface film will in itself prevent or retard mold growth. Decay of the wood is greatly delayed by use of the invention.

While I have herein shown and described my invention in the one particular form, it is obvious that various changes may be made without departing from the spirit of the invention and I, therefore, do not desire to be limited to that precise form beyond the limitations as may be imposed by the following claims.

I claim:

1. A vegetable hamper designed for reuse and having sides and bottom made of wood, creosote oil absorbed in the bottom and at least the lower end portions of the sides, and a coal-tar pitch coating over said bottom and said portions.

2. A vegetable hamper designed for reuse and having sides and bottom made of wood, a preservative and fungicide absorbed in the bottom and at least the lower end portions of the sides, said preservative being one of the group consisting of creosote oil and tetrachlorophenol, a coal-tar pitch coating over the said portions whereby a substantially waterproof surface is presented as a barrier against outward passage of said preservative and inward passage of moisture there-through.

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