Oct. 28, 1952 F. R. LINDA 2,615,614

FUNGUS INHIBITING CONTAINER FOR PEAT MOSS AND THE LIKE

Filed Aug. 25, 1948 2 SHEETS—SHEET 1

Fig. 1.

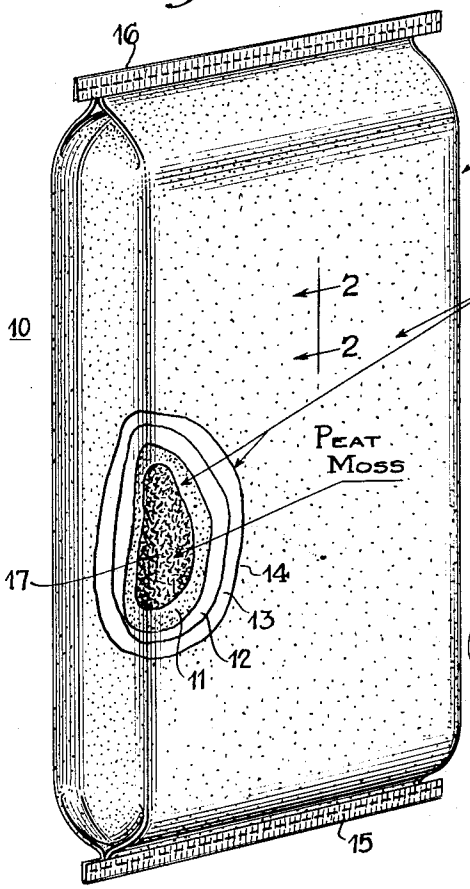


Fig. 2.

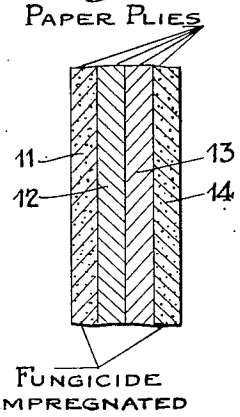


Fig. 2a.

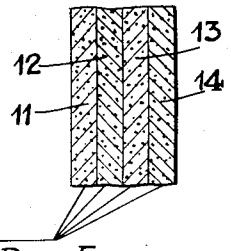
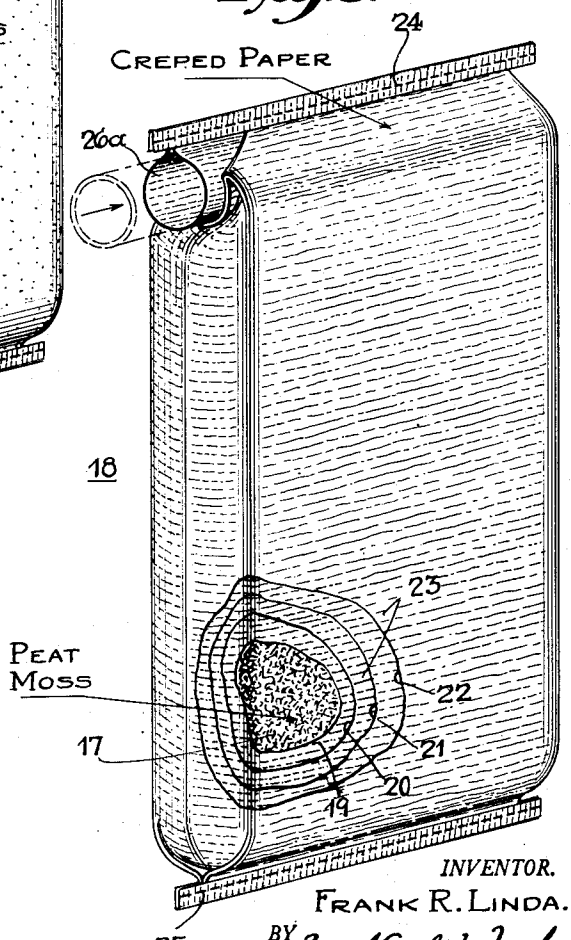


Fig. 3.



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FUNGUS INHIBITING CONTAINER FOR PEAT MOSS AND THE LIKE

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Fig. 4.

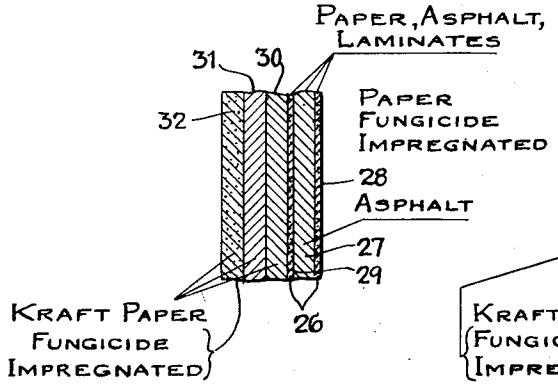


Fig. 5.

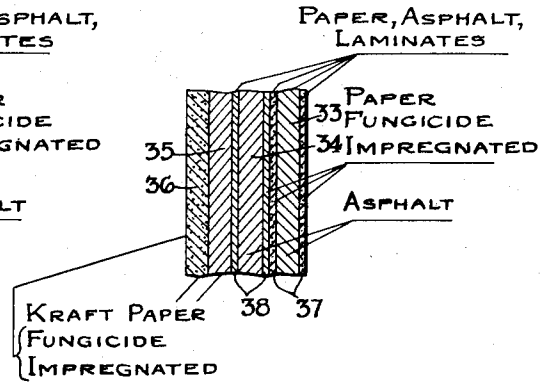


Fig. 6.

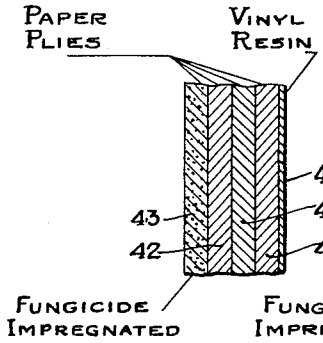


Fig. 7.

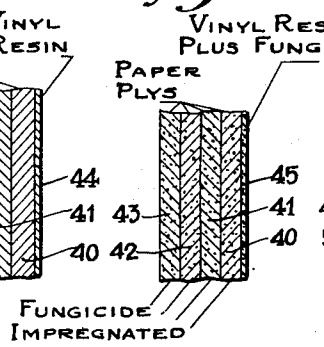


Fig. 10.

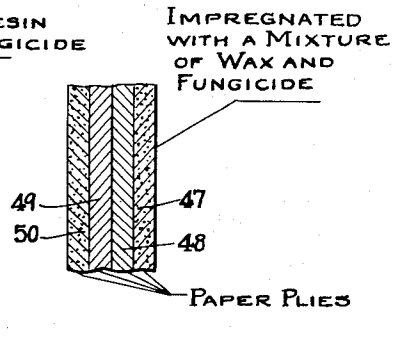


Fig. 11.

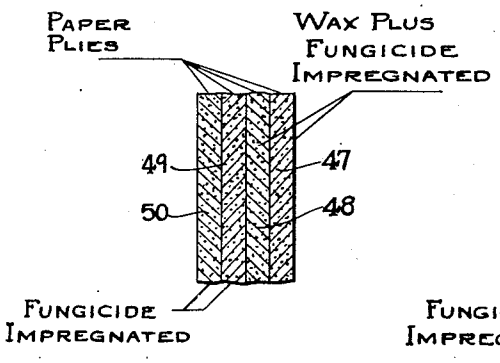


Fig. 8.

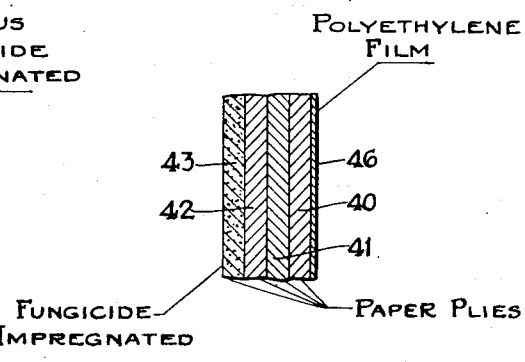
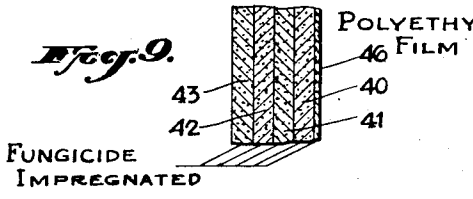


Fig. 9.



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UNITED STATES PATENT OFFICE

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FUNGUS INHIBITING CONTAINER FOR PEAT MOSS AND THE LIKE

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Application August 25, 1948, Serial No. 45,995

12 Claims. (Cl. 229—55)

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This invention pertains to multiwall paper bags which are especially adapted for the packaging and shipment of peat moss and related products, and which are of such moisture resistant construction, and so treated with appropriate fungicidal agents, as to be resistant to attack and disintegration by such products.

Peat moss is employed in large quantities for such purposes as soil enrichment, as a fertilizer, and as a soil anti-packing or loosening agent. It is naturally ocurring in fen and marshy areas, and results from chemical changes affecting the mossy and other plants which abound therein, and often occurs in beds of considerable depth, from which it is dug up and shipped to the point of use. Its moisture content as packed for shipment ranges up to 50 percent of the total weight.

The development of cheap and effective containers for the packaging and shipment of peat moss has presented considerable of a problem, since such containers must be resistant to moisture and to attack by the fungi present in peat moss, which attack and devour cellulose. The principal types of containers which have been employed in the past for the packaging and shipment of peat moss, are thin plywood bales, as well as bags made of burlap, jute, cotton or paper. All such containers have, however, proved wholly unsatisfactory, since the fungi present in the peat moss, together with the moisture conditions to which the containers are exposed, soon causes them to rot and disintegrate. In particular, paper containers, including multiwall paper bags as heretofore constructed, have proved to be wholly unsatisfactory, primarily because the fungi in the moss attack and destroy such containers by consuming the cellulose. An additional objection to the use, for such purposes, of paper containers and bags as heretofore constructed, results from the fact that the containers, in many instances, must be packed for shipment in the damp, marshy bogs in which the moss occurs, in consequence of which the combination of moisture penetration plus the fungi attack of the cellulose rapidly disintegrates such containers, often even prior to the time of shipment.

A primary object of the present invention is to provide a multiwall paper bag which is so constructed and treated with appropriate fungicidal agents as effectively to withstand the attack by the peat moss fungi and also disintegration by the moisture conditions encountered in packaging, stacking and shipping aforesaid.

In order to render the peat moss packing paper

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or bag stock resistant against attack by such fungi as may be found in peat moss, or in the environment in which the peat moss bags are handled or packed, one or more plies of the multiwall bag may be treated with various appropriate fungicidal agents, such as various aromatic and aliphatic mercury compounds, for example, phenyl mercury abietate, phenyl mercury oleate, phenyl mercury-2-ethyl-hexoate, ethyl mercury, etc.; also with such aromatic compounds as pentachloro-phenol or salicyl anilide and the aldehyde condensation products of the latter; also such aromatic copper, zinc, and cadmium compounds as copper naphthanate, zinc naphthanate, and cadmium naphthanate. Particularly effective fungicidal agents for resisting attack by peat moss are the phenyl mercury acetate complexes put out by the W. A. Cleary Corporation of New York, New York, under the trade named "PMAS," which are available in both the water-soluble and also in the oil-soluble modifications.

These fungicidal agents may be introduced into the paper stock, from which the multiwall bags are manufactured, in a variety of ways. Thus, for example, in treating a so-called "wet strength" paper, i. e., a paper which is rendered essentially water resistant by the incorporation therein of a rosin sizing, the mildew proofing agent may be selected from a class that will coprecipitate with the rosin acids, in situ, during the process in the manufacture of the paper, commonly known as "beating." Suitable for this purpose is such a phenyl mercury derivative as a water solution of phenyl mercury acetate, which will form with the rosin acids the highly insoluble phenyl mercury abietate, which then precipitates in situ. In applications where wax is applied to the paper for purposes of waterproofing, the fungicidal agent is selected from the class, which are soluble or entrainable in the wax applied to the paper, either as a hot dipping process or by application of the wax in a suitable solvent, in which latter instance it is preferable that the mildew proofing agent likewise also be soluble in the wax solvent. It is also preferable for such applications that the fungicidal agent selected, also be oil-soluble. Agents having these characteristics and suitable for such applications, are such compounds as phenyl mercury abietate, phenyl mercury oleate, or phenyl mercury-2-ethyl-hexoate. In other applications where it is desired to coat one or more surfaces of the bag plies with a layer or film of a thermoplastic synthetic resin, such for example as poly-

ethylene, the vinyl resins, such as vinyl chloride or copolymers, or styrene resins, etc., the fungicidal agents selected should be such as are compatible with such resins. In such applications the fungicide is milled into the thermoplastic resin prior to its application to the paper. Appropriate fungicidal agents for this purpose, are phenyl mercury abietate, phenyl mercury oleate, or phenyl mercury-2-ethyl-hexoate. In other applications the paper may simply be immersed in or sprayed with a water solution of an appropriate fungicidal agent, such for example as a mercury complex which is water-soluble, for example, phenyl mercury acetate or pyridyl mercury acetate.

Reference should be made, at this point, to the fact that it has been discovered by experimentation that the peat moss organisms, or the peat moss itself, give rise to a certain leaching action which is prone to remove mildew proofing agents, and this invention consists in large measure of so designing a multiwall bag as to obviate this effect.

The appropriate amounts or quantities of the aforesaid fungicidal agents to be employed are generally determined by laboratory tests. That is to say, a concentration is so chosen that when the treated material or paper stock is placed in contact with the actively growing fungi to be controlled, a halo of inhibition around the specimen is noted. A 2 mm. halo is generally considered sufficient for effective fungicidal action. Other tests may be resorted to, such, for example, as whether or not the treated material or paper stock is weakened, degraded or destroyed by the microorganism, or whether discoloration of the treated material takes place, and further, to what extent the treated material is resistant to leaching, either by water or by the chemical components of the exudate of the peat moss.

In general the pentachloro phenol and the aldehyde condensation products thereof are incorporated as a percentage of not less than a tenth of one percent and not more than two percent by weight of the composition treated, such as by weight of the base paper stock. The amount of phenyl mercury derivatives to be added generally is selected from the range between .05 and .2 percent by weight of the base paper stock. In the case of the copper derivatives or cadmium derivatives a value is selected wherein the applied composition shall allow to retain on the paper approximately 0.8 of one percent of copper expressed as metallic copper, by weight of the paper stock. A like or lesser figure may be chosen for the cadmium derivatives. The salicyl anilide itself is generally incorporated to the extent of one or two percent based on the weight of base stock.

As an example of how a phenyl mercury derivative may be precipitated, in situ, in the beater-stage in order to render the paper resistant to water-leaching, the following procedure may be employed. To 1000 lbs. of pulp in a paper mill beater, suspended in sufficient water to maintain fluidity, there is added two percent of a solubilized phenyl mercury acetate, by weight of the suspended pulp. After uniform dispersal has been assured, there is now added two percent, or 20 lbs. of rosin in the form of the sodium salt. This will serve to form the highly insoluble phenyl mercury abietate, which will be entrained on the pulp fiber and subsequently carried over into the paper stock, thus rendering it mildew resistant or mildew proof. Subsequent to this second operation, there is added a quantity of alum sufficient to precipitate the unreacted rosinate, of which there is a preponderance, to form the aluminum rosinate which is the true sizing agent. The flocculum resulting from the addition of alum to the sodium rosinate in the presence of the pulp fiber, serves to add entrainment of the phenyl mercury abietate, thus rendering it wholly mildew resistant.

In accordance with one specific modification of the present invention, a multiwall paper bag, consisting, for example of four plies of natural kraft paper, is impregnated in all plies, or in at least the inner and outer plies, with a fungicidal agent as aforesaid, the preferred fungicide being one of the above mentioned oil-soluble phenyl mercury compounds, such as the abietate, oleate, or hexoate or PMAS, since the oil-soluble varieties are not leached out of the paper by moisture to the extent as are the water-soluble modifications. The reason for impregnating at least the outer ply as well as the inner ply of the multiwall bag, with a fungicidal agent as aforesaid, is to protect both the exterior as well as the interior of the bag against attack by the peat moss fungi during the packaging of the peat moss, and subsequent stacking of the packed bags in the peat moss bogs prior to shipment, since under these circumstances the exterior as well as the interior of the bag is exposed to contact with the peat moss. It is also advisable to impregnate all plies of the bag with the fungicidal agent, since during the packing thereof a certain amount of the peat moss is apt to sift down between the various plies, and thus attack the intermediate plies if they have not been so treated.

In order to protect the so-treated multiwall bags against rupture or disintegration due to the extreme moisture conditions to which they are exposed in the packaging, stacking and shipment as aforesaid, one or more plies, particularly the outer and inner plies, are, in the modification of the invention above described, preferably made of a "wet strength" paper, that is a paper which has incorporated therein, in the process of manufacture, a small percentage of a rosin sizing or of a thermosetting synthetic resin, such for example as an urea-formaldehyde resin to the extent of about 3 to 5 percent thereof by weight of the finished paper, or a melamine-formaldehyde resin, to the extent of about 2 percent by weight of resin to that of the finished paper, the resin so incorporated being thereafter cured or converted to the thermoset condition, during the drying operation of the paper manufacture. By the employment of a rosin sizing alone or in conjunction with a thermosetting synthetic resin, the fungicide may be precipitated, in situ, in the paper stock in the manner above described, in the form, for example, of the phenyl mercury abietate.

In accordance with another embodiment of the invention, one or more plies of the bag are so constructed as to be substantially impervious to moisture penetration, particularly the inner ply, inasmuch as peat moss, as packaged contains as above stated, varying degrees of water content, up to about 50 percent. Accordingly, and in accordance with this modification, the innermost bag ply comprises a paper-asphalt laminate, consisting of a lamina of asphalt interposed between two outer laminae of paper, all bonded together, with the outer paper laminae being impregnated with a fungicidal agent as aforesaid, such as a phenyl mercury compound aforesaid. The remaining or outer bag plies may be of nat-

ural kraft or "wet strength" paper, all of which plies are, or at least the outermost ply of which is, also impregnated with the fungicidal agent. As a refinement of this modification of the invention, and for assuring resistance against moisture penetration, the two innermost bag plies may be made of the paper-asphalt laminates aforesaid, while the remaining outer bag plies may be made of natural kraft or "wet strength" paper, again with all or at least the outermost ply impregnated with the fungicide, and with the paper laminae of the inner paper-asphalt ply so treated.

In accordance with still another modification of the invention, the various bag plies may be made of a natural kraft or "wet strength" paper, to the inner surface of the innermost ply of which there is applied an adherent coating or layer of a tough and impervious plastic composition, such as a thermoplastic synthetic resin, such as polyethylene, or polystyrene or various other styrene resins, or any of the vinyl resins, for example, a pure vinyl chloride resin or one obtained from the copolymerization of vinyl chloride and vinyl acetate in the proportions of about 95 percent of the vinyl chloride to 5 percent of the vinyl acetate. In accordance with this modification at least the outermost bag ply is impregnated with a fungicidal agent as aforesaid. The resinous coating may or may not have the fungicidal agent likewise incorporated therein, but in accordance with the preferred construction, the resin as well as the outer paper bag ply contains the fungicidal agent. In such case the fungicide is milled into the resin prior to its application to the paper. And for this purpose a fungicide should be used which is compatible with the resin, such as the phenyl mercury abietate, oleate or hexoate aforesaid. Also, the paper stock to which the resin coating is applied should also preferably be treated with the fungicide.

In the modification of the invention above described, a particularly effective construction is obtained if the innermost bag ply is coated, on its inner surface, with an adherent film of polyethylene. Polyethylene has the advantage of being a particularly inert, thermoplastic resin, which is unattacked by peat moss fungi, as well as by other chemicals that may be present therein, including acids, salts or bases. A multiwall bag of this construction, in which at least the outer paper bag ply is impregnated with the fungicidal agent, provides an extremely effective container for packaging and shipping of peat moss. The polyethylene film in addition to being inert and resistant to chemical or fungi attack, is also completely impervious to moisture penetration, and is, moreover, tough and flexible, thereby greatly enhancing the bag strength. As a precautionary measure there may be incorporated in the polyethylene film, an appropriate fungicidal agent as aforesaid, and also the paper stock to which the coating is applied may likewise be treated with the fungicide.

In accordance with still another modification of the invention, the innermost paper ply of the bag may be impregnated with a wax composition incorporating the fungicidal agent therein, such for example as a composition consisting of 25 per cent by weight of a paraffin wax and 75 percent of microcrystalline wax, in which is incorporated, for example, an oil-soluble phenyl mercury as aforesaid, such as the abietate, oleate or hexoate. In this modification the remaining bag plies may be made of a natural kraft or "wet strength" paper, all of which are, or at least the outermost ply of which is, impregnated with the fungicidal agent. Also, as a refinement of this modification and to increase the moisture imperviousness of the container, the two innermost bag plies may be impregnated with the wax composition aforesaid. Another suitable wax base plastic for this purpose is that comprising about: 80 percent microcrystalline wax, 10 percent refined paraffin wax, and 10 percent low molecular weight polyethylene plus a small amount of fungicide.

Having thus generally described the invention, reference will now be had, for a more detailed description thereof, to the accompanying drawings, wherein:

Fig. 1 is a perspective view of a sewn end, multiwall paper bag in accordance with the modification of the invention, the innermost and outermost plies of which are impregnated with a fungicidal agent as aforesaid, the bag illustrated having peat moss packaged therein, a portion of the bag broken away to show the various bag plies and the peat moss content. Fig. 2 is an enlarged sectional detail, of the Fig. 1 bag, as taken at **2—2** of Fig. 1. Fig. 2*a* is a sectional detail, similar to Fig. 2, but showing a slightly modified version of the Figs. 1 and 2 construction, wherein all plies are treated with the fungicide.

Fig. 3 is a perspective view, similar to Fig. 1, of a modification of the invention as applied to a valve type multiwall, sewn end bag, which is made of crepe paper.

Figs. 4 to 11 inclusive are enlarged sectional details, corresponding to Fig. 2, of multiwall bags in accordance with the various other modifications of the invention above mentioned. Fig. 4 illustrates a section of a four ply multiwall bag, the inner ply of which comprises a paper-asphalt laminate as aforesaid, the exterior paper laminae of which are treated with the fungicidal agent, the remaining bag plies being of natural kraft or "wet strength" paper, the outer paper ply being also impregnated with the fungicide. Fig. 5 illustrates a modification, generally similar to Fig. 4, with the exception that the two innermost bag plies consist of the paper-asphalt laminates aforesaid.

Figs. 6, 7, 8 and 9 illustrate modifications wherein the innermost bag ply is coated on its inner surface, with a synthetic resin, either incorporating or omitting the fungicide, Fig. 6 illustrating a modification in which a vinyl resin coating is employed but containing no fungicide; Fig. 7 a modification wherein the vinyl resin coating incorporates the fungicidal agent; Fig. 8 a modification in which the resin coating is polyethylene, incorporating no fungicide; and Fig. 9 a similar construction wherein the polyethylene film contains a fungicide. In all of these modifications the outermost ply is impregnated with the fungicide, while in Figs. 7 and 9 all plies are so impregnated.

Figs. 10 and 11 illustrate modifications wherein all bag plies are made of paper, the innermost ply in Fig. 10 being impregnated with a wax composition containing a fungicide as aforesaid, the outermost ply being also impregnated with the fungicide; while Fig. 11 is similar to Fig. 10 except that the two innermost bag plies are impregnated with the wax composition, and all plies impregnated with the fungicide.

Referring to Figs. 1 and 2, there is shown generally at **10**, a four-ply, multiwall paper bag con-

sisting of plies 11–14, inclusive, the bag being of the sewn-end type, provided at each end with sewn seam closure strips 15, 16, and having peat moss packaged therein as indicated at 17. In accordance with this modification of the invention, the inner and outer bag plies 11 and 14 are impregnated with a fungicidal agent as aforesaid, such, for example, as the PMAS or other phenyl mercury compounds aforesaid, the fungicide being present in the ratio of about one part by weight thereof to one hundred parts by paper weight in the bag plies impregnated therewith. For imparting resistance to disintegration by moisture, certain or all of the bag plies may be made of a wet-strength paper, for example the inner and outer plies 11 and 14. The modification of Fig. 2*a* is similar to that of Figs. 1 and 2 except that, in this instance, all four paper plies 11–14 inclusive of the bag are treated with the fungicide.

In these modifications the fungicide is preferably precipitated, in situ, in the paper, for example, in the form of phenyl mercury abietate, in the manner above described.

In the Fig. 3 modification, there is shown generally at 18, a four-ply, multiwall bag consisting of plies 19–22 inclusive, made of creped paper as indicated at 23, this bag being of the sewn-end enclosure type, as at 24 and 25, and being constructed with a tuck-in valve sleeve as at 26*a*, and filled with peat moss, the latter as indicated at 17. In the Fig. 3 embodiment, the inner and outer bag plies 19 and 22 may be impregnated or treated with a fungicide, as in the Figs. 1 and 2 modification, or alternatively, all plies may be impregnated with a fungicide, in accordance with the Fig. 2*a* modification. Likewise, the inner and outer plies 19 and 22, or all of the plies 19–22, inclusive, may be made of a wet-strength paper for imparting increased resistance to moisture.

In the Fig. 4 modification of the invention, applicable either to the closed-end type of bag shown in Fig. 1, or to the valve type shown in Fig. 3, the innermost ply 26 comprises a paper-asphalt laminate consisting of an asphalt lamina 27 interposed between two paper laminae 28 and 29. The remaining bag plies 30, 31 and 32 are made of paper, either natural kraft or wet-strength, the outermost ply 32 and the paper laminae 28, 29 of the inner ply 26 being impregnated or treated with a fungicidal agent as aforesaid.

In the Fig. 5 modification, the two inner bag plies 33 and 34 comprise paper-asphalt laminates, while the two outer plies 35 and 36 are natural kraft or wet-strength paper. The paper laminae 37 of the inner ply are impregnated or treated with the fungicidal agent, as is also the outermost paper ply 36. If desired, also the adjacent paper ply 35, as well as the paper laminae 38, of the paper-asphalt laminate 34 may be impregnated or treated with the fungicide.

The multiwall bag construction of Fig. 6 comprises four paper plies 40, 41, 42 and 43, the innermost ply 40 of which has bonded to its innermost surface a thin coating 44 of a synthetic resin such as a pure vinyl or vinyl-acetate resin, containing no fungicidal agent. The outermost paper ply 43, however, is impregnated with a fungicidal agent. The modification of Fig. 7 is similar to that of Fig. 6 except that, in this instance, a fungicidal agent is incorporated in the resinous inner coating 45, and all paper plies are treated with the fungicide.

The modification of Fig. 8 is similar to that of Fig. 6 except that the resinous inner coating 46 comprises a polyethylene film. As above pointed out, the polyethylene film is not attacked by the peat moss fungi, and is substantially inert with respect to such chemicals as may be present therein, so that it need not incorporate a fungicidal agent, although it is within the contemplation of the present invention that a fungicidal agent may be incorporated therein.

Such a construction is shown in Fig. 9, according to which the fungicide is incorporated in the polyethylene film and also in all paper plies of the bag.

The multiwall bag construction of Fig. 10 comprises four paper plies 47, 48, 49 and 50, the innermost ply 47 of which is impregnated with a wax composition, for example that above mentioned, consisting of 25% by weight of a paraffin wax and 75% of microcrystalline wax, in which there is incorporated a fungicidal agent of the character above mentioned. Likewise, the fungicidal agent is incorporated in the outermost paper ply 50 and may, if desired, additionally be incorporated in the intermediate paper plies 48 and 49. The multiwall bag construction of Fig. 11 is similar to that of Fig. 10 with the exception that the two innermost bag plies 47 and 48 are impregnated with the wax composition aforesaid, containing the fungicidal agent, while the two outer paper plies incorporate the fungicide.

It will be understood that any of the Figs. 4–11 modifications of the invention may be applied to closed-end bags of the type shown in Fig. 1, or to valve type bags such as shown in Fig. 3, or to multiwall bags of other constructions, such as stepped-end, pasted bags, without departing from the spirit of the present invention. It will also be understood that the fungicidal agents employed for impregnation purposes, in the manner indicated in the individual modifications, may be any of the fungicides above mentioned, although as above stated, superior results are secured by employment of the phenol- or phenyl-mercury compounds aforesaid, particularly that sold under the trade name PMAS. In all modifications, the fungicide is sufficiently effective, when present in the ratio of about one part by weight of the fungicide to one hundred parts by weight of the paper ply or resin film in which the fungicide is incorporated, although a ratio of as little as one part by weight of the fungicide to 200 parts by weight of the paper ply or resin film, is highly effective.

Although the present invention is primarily directed to the construction and fungicidal treatment of multiwall paper bags for packaging peat moss and similar products, it will be understood that the same principles are applicable to single-wall or single-ply bags, within the spirit of the present invention. Thus, an effective single-wall or single-ply bag in accordance with the present invention, is one made of a wet-strength paper impregnated with a fungicidal agent as aforesaid or in which the fungicide is precipitated in situ as aforesaid. Another modification comprises a single-ply bag, made of a natural kraft or wet-strength paper impregnated with a fungicidal agent as aforesaid, the inner surface of the bag having applied thereto an adherent coating of a synthetic resin such as a vinyl resin or polyethylene, and wherein such resinous coating may or may not incorporate the fungicidal agent. Another modification comprises a single-wall

or single-ply bag made of natural kraft paper impregnated with the aforesaid wax composition containing the fungicidal agent.

What is claimed is:

1. A paper container for the packaging of peat moss and related products, said container being treated with a synthetic plastic composition for rendering the same moisture resistant, said composition having mixed therein a substantially non-volatile fungicidal agent of a character and in an amount sufficient effectively to protect said container against attack by fungi present in said products.

2. A paper container for the packaging of peat moss and related products, said container being treated with a synthetic plastic composition for rendering the same moisture resistant, said composition having mixed therein a substantially non-volatile fungicidal agent comprising an aromatic-mercury compound, in an amount sufficient effectively to protect said container against attack by fungi present in said products.

3. A paper container for the packaging of peat moss and related products, said container being treated with a synthetic plastic composition for rendering the same moisture resistant, said composition having mixed therein a substantially non-volatile aromatic compound containing the radical —C_6H_5Hg, said compound being present in an amount sufficient effectively to protect said container against attack by fungi present in said products.

4. A paper container for the packaging of peat moss and related products, said container being coated, on its inner surface, with an adherent layer of a synthetic resin for rendering the same moisture resistant, said layer having mixed therein a substantially non-volatile fungicidal agent of a character and in an amount sufficient effectively to protect the container against attack by fungi present in said products.

5. A paper container for the packaging of peat moss and related products, said container being coated, on its inner surface, with an adherent and substantially impervious layer of a synthetic resin, for rendering the container moisture resistant, said layer having mixed therein a substantially non-volatile aromatic fungicidal agent containing the radical —C_6H_5Hg, said agent being present in an amount sufficient to protect said container against attack by fungi present in said products.

6. A multiwall bag for packaging peat moss and related products, comprising a plurality of paper tubes, disposed one within another and secured together at at least one end thereof to form a permanent closure, the inner surface of the innermost ply of which is coated with an adherent and substantially moisture and fungus impervious layer of a synthetic plastic composition, effective to impart moisture resistance to said bag and to prevent said inner ply from being attacked by fungi present in said products, and at least the outer ply of said bag being treated with a substantially non-volatile fungicidal agent of a character and in an amount sufficient effectively to prevent said outer ply from being attacked by said fungi.

7. A multiwall bag for the packaging of peat moss and related products, comprising a plurality of paper tubes, disposed one within another and secured together at at least one end thereof to form a permanent closure, at least the innermost ply being impregnated with a wax composition containing a substantially non-volatile fungicidal agent of a character and in an amount sufficient effectively to protect the same against attack by fungi present in said products, and at least the countermost ply of said bag being also impregnated with said fungicidal agent.

8. A paper container for the packaging of peat moss and related products, said container comprising a layer of a fibrous material having admixed with the fibers thereof phenyl mercury abietate and rosin.

9. A paper container for the packaging of peat moss and related products, said container comprising an absorbent material impregnated with a moisture resisting composition admixed with a substantially non-volatile fungicidal agent of a character and in an amount sufficient effectively to protect said container against attack by fungi present in said products.

10. A paper container for the packaging of peat moss and related products, said container comprising a plurality of layers, at least one of said layers including a moisture resisting composition admixed with a substantially non-volatile fungicidal agent of a character and in an amount sufficient effectively to protect said container against attack by fungi present in said products.

11. A multiwall bag for packaging peat moss and related products, comprising a plurality of tubes disposed one within another and secured together at at least one end thereof, an inner one of said tubes being formed from a material which is substantially impervious to moisture and which is resistant to fungus and the outer one of said tubes being treated with a substantially non-volatile fungicidal agent of a character and in an amount sufficient effectively to protect the same against attack by fungi present in said products.

12. A multiwall bag for packaging peat moss and related products, comprising a plurality of tubes disposed one within another and secured together at at least one end thereof, an inner one of said tubes being formed from a synthetic plastic which is substantially impervious to moisture and which is resistant to fungus and the outer one of said tubes being treated with a substantially non-volatile fungicidal agent comprising an aromatic mercury compound.

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