PEST REPELLENT ARTICLES

This application is a continuation-in-part of my co-pending application Ser. No. 787,614 filed Oct. 15, 1985, now abandoned.

FIELD OF THE INVENTION

This invention relates to pest repellent articles and more particularly to an improved package which serves to provide the user with an article containing a pest repellent composition ready for use to ward off insects and prevent animals from ravaging receptacles such as trash receptacles.

BACKGROUND OF THE INVENTION

Pest repellent articles and compositions are well known, moth balls deposited in a porous container being a typical example. Similarly U.S. Pat. No. 1,653,710 issued Dec. 27, 1927 discloses an antirodent preparation of an extract of coffee in solution which is impregnated in material from which bags are made. Likewise, containers formed from extracted synthetic resins sheets in which an insect repellent compound has been added is disclosed in U.S. Pat. No. 3,767,785 issued Oct. 23, 1973, the patent disclosing adding a specific organic insect repellent compound to formed sheet material to provide the desired result. An animal deterent composition comprising cinnamic aldehyde which can be applied as a coating to various objects, such as an animal stall, bandage or cast on the animal or a collar on the animal for deterring the animal from chewing or otherwise damaging the objects is disclosed in U.S. Pat. No. 4,097,607, issued June 27, 1978, to Larson. U.S. Pat. Nos. 3,857,934 issued Dec. 31, 1974, to Bernstein et al., and 3,864,468, issued Feb. 4, 1975, to Hyman et al. disclose non-porous, polymeric articles having active properties, such as antibacterial, antifungal, pesticidal, insecticidal, animal repellent, etc., in which the surface of the articles is coated with the active agent, the active agent migrates or moves throughout the body of the article to which it is applied to impart an effective level of activity throughout the body of the article and/or on a surface other than the one to which the active agent has been applied. Mosquito and insect repellents in general have been typically applied to the skin to prevent mosquito and insect bites. U.S. Pat. No. 3,590,118, issued June 29, 1971, to Conrady et al., discloses a variety of such mosquito repellent compositions in which the repellents are dissolved in interpolymer resins of alpha-beta olefinically unsaturated carbonyl monomers. The solutions are found to be slow release systems for the repellent compounds when spread and dried as films on substrates, such as the skin of humans and animals. One such known mosquito repellent disclosed by the patent is oil of citronella, a compound which has long been used to repel mosquitoes. U.S. Pat. No. 4,320,112, issued Mar. 16, 1982 discloses a composition for pest repellent receptacles wherein the active ingredient comprises a mixture of citronella oil and napthalene flakes compounded with the synthetic resin from which the trash receptacles are made. The patent discloses that receptacles made from such material can be used for storing or disposing of trash and deters animals, such as common household pets from disturbing the receptacles.

While such prior art discloses various pest repellent articles which are impregnated with a pest repellent composition, there still exists a need for a simple, inexpensive pest repellent article which is suitable for use with receptacles which have not been treated or impregnated with pest repellent compositions because of the complexity and/or cost involved in producing such an article. There is a great need, for example, for a means to render receptacles for storing or disposing trash repellent to animals, such as, common household pets, rodents and other animals which commonly rip open or overturn such receptacles, necessitating the annoying task of cleaning up the spilled contents.

Accordingly, a desirable object of the present invention is to provide an improved package which will contain and protect repellent compositions in single discrete quantities conveniently carried by an improved disposable carrier compactly carried within the package and wherein the construction and arrangement of the package enables it to be easily opened and the disposable carrier readily employed to render receptacles repellent to pests.

Another desirable object of the present invention is the provision of an improved pest repellent article of the above indicated type which is simple and inexpensive, which is compact and convenient to ship, store, and handle, which can be easily and readily opened when desired but which, while closed, will effectively protect the repellent composition from the environment and contamination as well as loss by evaporation, sublimation, dilution, leakage and the like.

A further desirable object of the invention is the provision of a pest repellent for use with non-repellent receptacles which is inexpensive so that it can be discarded with the receptacle, which is constructed to be absorbent and porous, so as to hold desired quantities of repellent compositions without adversely affecting the repellent composition carrier.

A still further desirable object of the present invention is the provision of pest repellent articles which can easily and readily be disposed upon and/or in the receptacle to be protected.

Other desirable objects and advantages of the present invention will in part appear hereinafter and will in part become apparent after consideration of the specification with reference to the accompanying drawings.

SUMMARY OF THE INVENTION

In accordance with the present invention, there is provided a pest repellent article, more particularly an improved package containing a pest repellent carrier which is constructed and arranged to enable it to be easily employed to render receptacles or areas repellent to pests. The invention contemplates a package comprising an outer cover or envelope which encloses an inner repellent composition material carrier member. The outer cover member is formed of a material which is substantially flexible and impervious to the repellent composition as well as gases and vapors. The cover material is also of a character that can be readily torn by hand to access the repellent material or punctured to release the repellent material. The repellent composition material carrier member is formed of a flexible or particulate material which is absorbent to the repellent material. The repellent material carrier in one embodiment includes an outer porous container. The invention also contemplates attaching members associated with the outer cover and/or the inner porous container for attaching said members to the receptacle to be protected.