

When the article 10' floats on the surface of the water 20, as shown in FIG. 7, it gradually disintegrates (dissolves or erodes away) to form a plurality of individual particles or "satellite" carriers 21 which continue to float. This is another important distinction over the sawdust particles resorted to in the prior art. The sawdust particles will quickly absorb moisture and sink; and for that reason, the prior art has resorted to oversized wood blocks to provide an external flotation means.

These floating satellite carriers, as shown in FIG. 8, comprise a cork particle or center 22 surrounded by the molding plaster 23 containing the *B.t.i.* (or other larvicidal micro-organism). The cork particles or granules which are cellular, are formed by a cutting or chopping process. This process results in numerous open "pockets" on the external surface of the cork center, as at 22A in FIG. 9. These pockets become filled with the molding plaster and the *B.t.i.* After the plaster dissolves (and releases the *B.t.i.*) the cork particle 22 continues to float and further releases additional *B.t.i.* entrapped on its external surface. The combination provides a sustained release of the *B.t.i.* over a sufficient period of time (for example thirty days) and over a wide surface area where the mosquito larvae breed in order to achieve an effective mosquito control program.

In lieu of the *B.t.i.*, the larvicidal micro-organism may comprise a *Bacillus sphaericus* or aquatic fungi.

FIGS. 10-12 are schematic illustrations of three respective applications of the article 10' in relatively-shallow bodies of water. FIG. 10 illustrates the free-floating application (similar to FIG. 3). FIG. 11 illustrates the restrained-floating application including a string 15' and anchor 17' (similar to FIG. 4). FIG. 12 illustrates a further (and more) restrained application, wherein a stake 24 (similar to a surveyor's marking stake and having a length of up to two feet) is used to secure the article 10' to the muddy bottom 25 of the body of water. This allows the article 10' to "ride" up and down on the stake, as indicated by the broken lines, as the water level varies.

The present invention has met with widespread acceptance and immediate recognition by the mosquito control agencies. Indeed, out in the field the articles 10' of the present invention are being referred to as the "mosquito doughnuts". While these "doughnuts" were intended primarily for the myriad of ponds and other small bodies of water generally isolated from one another, it was recently reported that one group is actually throwing them out of helicopters—in lieu of spraying—over a relatively large area. This group is located in Northern Worcester County, Mass.; their responsibility covers 2000 acres of swamp and 200 acres of ponds, and many of these areas are inaccessible to ground equipment.

These "mosquito doughnuts" of the present invention may be manufactured easily and economically to facilitate widespread usage; they constitute a clean and convenient delivery system, not only for small ponds, but also for relatively large bodies of water; they will remain floating for about thirty days for a sustained release of the larvicidal micro-organism contained therein, thereby assuring an effective mosquito control program without the necessity for repeated applications; means are provided for restrained-floating applications in lieu of a free-floating application, at the option of the mosquito control agency; and all of the ingredients of the present invention are non-toxic, found in nature, and will not affect the environment, the wild-

life therein, or the personnel of the mosquito control agency. Thus, a quantum improvement has been achieved, one heretofore not available in the art. Accordingly, the present invention—as contrasted with the abandoned experiments and proposals made in issued patents and other publications in the prior art—has satisfied a long-felt need and has met with substantial commercial success.

Obviously, many modifications may be made without departing from the basic spirit of the present invention. For example, the molding or casting type of plaster (gypsum) and the cork particles or granules are just one example of a base material and a compatible buoyant material, respectively, and it will be understood that various substitutes may be made for a substantially equivalent result consonant with the objects and teachings of the present invention. Accordingly, it will be appreciated by those skilled in the art that within the scope of the appended claims, the invention may be practiced other than has been specifically described herein.

What is claimed is:

1. A floating dispenser for the sustained release of a larvicidal micro-organism consisting of *Bacillus thuringiensis* for the destruction of the larvae of aquatic insects which breed on the surface of a body of water, comprising a unitary substantially homogenous non-layered molded article consisting of a plurality of cork granules, a molding plaster, and the *Bacillus thuringiensis*, wherein the article has a specific gravity of less than 1.0 and may be randomly and conveniently dispensed on to the surface of a body of water without regard for the orientation of the article with respect to the surface of the water, wherein the article will continue to float on the surface of the water where the larvae breed and will gradually disintegrate into a plurality of individual particles which will continue to float for a sustained release of the *Bacillus thuringiensis* and over a relatively wide area of the surface where the larvae breed, and wherein all of the ingredients in the article are non-toxic to non-target organisms and will not adversely affect the environment.

2. The improvement of claim 1, wherein the larvae of the aquatic insects are the larvae of the mosquito and black fly.

3. The improvement of claim 1, wherein the article has a substantially-toroidal slightly-tapered shape and is formed with a central bore, whereby, if desired, the article may be used in a restrained-floating application.

4. The improvement of claim 1, wherein the individual floating particles comprise a plurality of cork granules each substantially covered with the plaster containing the *Bacillus thuringiensis*.

5. The improvement of claim 1, wherein the larvicidal micro-organism comprises *Bacillus thuringiensis* Berliner var. *israelensis* and its accompanying proteinaceous particles which contain protoxin.

6. A floating dispenser for the sustained release of a larvicidal micro-organism consisting of *Bacillus thuringiensis* for the destruction of the mosquito or black fly larvae which breed on the surface of a body of water, comprising a unitary substantially homogenous non-layered molded article consisting of a plurality of cork granules, a molding plaster and the *Bacillus thuringiensis*, wherein the article comprises a substantially-toroidal slightly-tapered molded article having a central bore, whereby if desired, the article may be tethered or staked in a restrained-floating application, said larvi-